

OPUSCULA HUNGARICA



ARCHAEOLOGY
OF THE OTTOMAN PERIOD
IN HUNGARY

HUNGARIAN NATIONAL MUSEUM

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ARCHAEOLOGY OF THE OTTOMAN PERIOD IN HUNGARY

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EDITORS:

IBOLYA GERELYES and GYÖNGYI KOVÁCS

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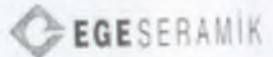
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The Contributors

- Yann ARDAGNA
Centre Archéologique du Var, Toulon
Department of Anthropology, Szeged University of Sciences,
Szeged, Hungary
- László BARTOSIEWICZ
Institute of Archaeological Sciences, Eötvös Loránd University,
Budapest
- Beatrix BASICS
Hungarian National Museum, Budapest
- Zoltán BENCZE
Budapest History Museum, Budapest
- Ferenc CSORTÁN
Directorate for National Minorities, Ministry of Culture and
Cults, Bucharest
- Géza DÁVID
Department of Turkish Studies, Eötvös Loránd University,
Budapest
- Támás EMÓDI
Str. Ep. Pavel Nr. 4/5, Oradea, Romania
- Erika GÁL
Archaeological Institute of the Hungarian Academy of
Sciences, Budapest
- Atila GAÁL
Wosinsky Mór Museum, Szekszárd, Hungary
- Ibolya GERELYES
Hungarian National Museum, Budapest
- Győző GERŐ
Budapest, I., Tárnok utca 5.
- Gábor HATHÁZI
Ministry of National Cultural Heritage, Budapest
- Klára HEGYI
Institute of History, Hungarian Academy of Sciences, Budapest
- István HORVÁTH
Balassa Bálint Museum, Esztergom, Hungary
- Katalin IRÁS-MELIS
Budapest History Museum, Budapest
- Gyula KOCSIS
Department of Ethnographical Artefacts, Eötvös Loránd Uni-
versity, Budapest
- Elizabeta KONESKA
Museum of Macedonia, Skopje
- Gyöngyi KOVÁCS
Archaeological Institute of the Hungarian Academy of
Sciences, Budapest
- László KOVÁCS
Archaeological Institute of the Hungarian Academy of
Sciences, Budapest
- László KÖLTŐ
Rippl Rónai Museum, Kaposvár, Hungary
- Orsolya LAJKÓ
Cultural Heritage Office, Szeged, Hungary
- Gheorghe LANEVSCHI
Museums Complex, Oradea, Romania
- József LASZLOVSZKY
Institute of Archaeological Sciences, Eötvös Loránd Uni-
versity, Budapest
- Department of Medieval Studies, Central European Univer-
sity, Budapest
- Sarolta LÁZÁR
Balassa Bálint Museum, Esztergom, Hungary
- Kálmán MAGYAR
Rippl Rónai Museum, Kaposvár, Hungary
- Károly MAGYAR
Budapest History Museum, Budapest
- Zsuzsa MIKLÓS
Archaeological Institute of the Hungarian Academy of
Sciences, Budapest
- Burcu ÖZGÜVEN
Faculty of Arts and Sciences, Mediterranean University,
Antalya, Turkey
- Sándor PAPP
Károli Gáspár Calvinist University, Budapest
- György PÁLFI
Anthropological Collection, Museum of Natural Sciences,
Budapest / Centre Archéologique du Var, Toulon
- András PÁLÓCZI HORVÁTH
Museum of Hungarian Agriculture, Budapest
- Támás PUSZTAI
Hermann Ottó Museum, Miskolc, Hungary
- Judith RASSON
Department of Medieval Studies, Central European Uni-
versity, Budapest
- Michael ROGERS
School of Oriental and African Studies, University of London
- Márton RÓZSÁS
Dráva Museum, Barcs, Hungary
- Tibor SABJÁN
Open-air Ethnographical Museum, Szentendre, Hungary
- Gyula SIKLÓSI
Archaeological Institute of the Hungarian Academy of
Sciences, Budapest
- György V. SZÉKELY
Katona József Museum, Kecskemét, Hungary
- Gábor TOMKA
Hungarian National Museum, Budapest
- Anikó TÓTH
Budapest History Museum, Budapest
- László VÁNDOR
Göcsej Museum, Zalaegerszeg, Hungary
- Dimitri D. VASSILIEV
Institute of Oriental Studies, Russian Academy of Sciences,
Moscow
- András VÉGH
Budapest History Museum, Budapest
- Márta VIZI
Wosinsky Mór Museum, Szekszárd, Hungary
- István VÖRÖS
Hungarian National Museum, Budapest
- Erika WICKER
Katona József Museum, Kecskemét, Hungary

LECTORI SALUTEM

The most comprehensive survey of Ottoman-Turkish architectural monuments in Europe was performed by a delegation led by Dr. Ekrem Hakkı Ayverdi during its forty-two trips; the results were published in Turkey in 1975 in the four-volume work *Ottoman-Turkish Architectural Monuments in Europe*. The first volume, covering Romania and Hungary and based in part on the Ottoman-Turkish documents, includes the monuments built in Hungary during the 146 years of Ottoman sovereignty that survive to this day. The number of monuments built and left behind totalled 710 and embraced mosques, medreses, schools, caravanserais, market-halls, drinking fountains, palaces, clock towers, Turkish baths, gunpowder magazines, thermal baths, fortresses, cemeteries, *tekkes*, etc.

Unfortunately, most of these monuments were demolished or otherwise destroyed as a result of antagonism and hostility during the course of history. In his *Abrégé Nouveau de l'Histoire des Turcs* (Paris 1689), M. Vanel describes, three years after the Ottoman-Turks had left Buda, how the city was sacked and set on fire after its reoccupation. Moreover, in his *Monuments Turcs en Hongrie*, which is based on a variety of documents, József Molnár mentions how mosques and Hungarian churches were looted and how countless artworks, including many ecclesiastical objects, were taken from Hungary. He mentions a military stores officer by the name of Gallo Tesch who secretly pulled down Sultan Süleyman's *türbe*, sold the polished stones for the construction of military buildings and made a handsome profit of 3000 florins on the deal.

On the other hand, it is a fact that, in Central Europe and the Balkans, Ottoman-Turkish architectural monuments have been best preserved, restored and looked after by the Hungarian people. In his above-mentioned work, Dr. Ekrem Hakkı Ayverdi notes: "The Hungarians regard Ottoman-Turkish monuments as their own. They look after even the smallest Turkish stone as evidence of a building. In fact, they not only preserve it, but also show it to the public. They are happy to possess a Turkish relic. This is an interest based on feelings, one which has become an established tradition." I can tell you with pleasure and pride that during my term in Budapest I often personally experienced this noble and art-loving attitude.

At the "Conference on Turkish Archaeology Research in Hungary" held at the Hungarian National Museum in Budapest between 24 and 26 May 2000, presentations by distinguished Turkologists, historians and ethnographers made it clear that considerably more archaeological investigation needs to be performed to uncover fully the common heritage of Turkish-Hungarian history. The Turkish and Hungarian governments support this work. As a matter of fact, this common interest was particularly emphasised in the "Turkish-Hungarian Educational, Scientific and Cultural Co-operation Protocol for the years 2000-2003". Furthermore, at the meetings during the official visit of Hungarian Prime Minister Viktor Orbán to Turkey from 24 to 27 May 2000 it was confirmed that both sides would support the improvement of co-operation in the field of archaeological research. It is indeed a duty for all of us to undertake research, uncover the historical remains, preserve them, and place them at the disposal of humankind.

We sincerely congratulate those who contributed to the preparations for the conference, those scholars who enriched the conference with their presentations, and also those who, with hard work, have collected and published the presentations. We wish them success in their future work. We believe that this co-operation will be a good example to other countries also.

ENDER ARAT
Ambassador of the
Republic of Turkey

FOREWORD

“We should preserve and look after our relics and collect together the fragments we have to prevent them being lost irretrievably, lest the past be emptier, the present more impoverished and the future less sure.” Thus wrote Arnold Ipolyi, an eminent researcher of Hungarian cultural history, in 1878. His words are deeply true literally as well as figuratively. Even today they deserve to be taken to heart by archaeologists, historians, art historians, and engineers, by all those dealing with what is currently referred to as the “constructed past”.

We believe that one of the most important phases in the research process is the verbal presentation of findings, and the debate of methods and conclusions. This conference hopes to provide a platform for both. It should be stated that in the past two decades the Hungarian National Museum has organized relatively few scientific congresses. Partly to make up for the missed opportunities, we should, in the future, like to organize at least one national conference every year, and an international conference every two or three years. The thematic possibilities are quite broad in both time and space, as the archaeological and historical profile of the National Museum covers research from the Palaeolithic age to the present, along with the preservation and evaluation of the history of the early peoples of the Carpathian Basin and historical mementos from the Hungarian past, which goes back more than one thousand years. It might be added, however, that in the last half century conferences dealing with the Age of the Hungarian Conquest and the medieval period have predominated. The material of many of these conferences has been published, for example, “Középkori Régészeti Tudományos Ülészak – Wissenschaftliche Tagung der Archäologie des Mittelalters”, in: *Régészeti Füzetek Ser. II.* 13. Budapest 1971; *Fifth International Congress of Turkish Art*, ed. Géza Fehér, Budapest 1978; and *Középkori Régészetünk újabb eredményei és időszzerű feladatai – Neuere Ergebnisse und aktuelle Fragen der Mittelalter-Archäologie in Ungarn*, eds. István Fodor & László Selmeczi, Budapest 1985.

We are confident that in the very near future the National Museum will assume the role of a truly scientific workshop, in research into the majority of eras if not all of them. It is ordained to do so by its past and by its goals, and perhaps also by professional expectations of it. And, we may quietly add, the existence of such workshops and their participation in research into genuine topical issues is the basis for the holding of “useful”, successful conferences. What is it, exactly, that makes a conference useful or successful? We believe that, among other things, the following are necessary:

- That it provides the opportunity to present and interpret fresh new sources;
- That it represents a platform for the re-evaluation of previously known data according to new criteria (we would add that often this can only be done by a new generation of researchers);
- That the collective presence of co-professionals and friends, both inside and outside the session rooms, provides the means for confronting new ideas and original theories with “immutable truths”, in frequently heated, yet proper, debate.

There is no better proof of the topicality of this conference than the fact that nearly forty researchers have come in order to give presentations. Most are from Hungary, but many are from other countries (Great Britain, Macedonia, Romania, Turkey and the Ukraine). They include internationally recognized representatives of Ottoman research. It is also worth noting that this conference is interdisciplinary in nature, in that, in addition to reports by archaeologists, historians and art historians, the schedule also features presentations based on physical anthropology, palaeozoology and other natural sciences.

Nevertheless, the most important thing is the following, namely that this is the first time, not counting a session in the *Castrum Bene* conference series a few years ago at which the topic was Ottoman-era castle research, that the archaeology of the Ottoman period in Hungary has

received a major role, with investigations extending to the entire area of historical Hungary in many topics.

One might justly ask why there has been such a delay in the organisation of a conference to provide a full cross-section of research into the Ottoman era in Hungary. Very probably there are a number of reasons, but in all likelihood the crux of the matter is to be found in the way the sciences were structured in Hungary. For a long time, research into Ottoman-era castles and other buildings was rather isolated, under the heading of historic monument protection. Even in the best of cases it was rare to find a researcher attempting to identify and interpret the full settlement system of the sixteenth and seventeenth centuries. This had a natural impact on the shortcomings in research into the socio-economic life of the period and the lifestyles of the population. Of course, it is also true that in the post-1945 period the training of archaeologists dealing with the late medieval period was not particularly productive in Hungary. This was compounded by the fact that, from the archaeological perspective, the sixteenth and seventeenth centuries long constituted the borderline (often neglected and frequently changing in its evaluation) between the medieval and modern periods in this region.

The increase in the global demand for inter- and multidisciplinary studies has recently brought changes in Hungary, as elsewhere. This and other factors have created an almost automatically homogeneous platform for the representatives of the sciences involved in the topic in question. At the same time – owing in part to the impact of the above – there has also been a change in university education perspectives. Last but not least, over the past twenty-five years it has become possible in Hungary, as elsewhere, to construct an effective network of international connections.

We hope that this conference will promote the expansion of research into the Ottoman era in Hungary from all points of view. In addition to the study of the Turkish buildings unearthed and preserved in Hungary (which are more numerous here than in other countries of Central and Southern Europe), it may also strengthen the demand for thematic research in archaeology, which may in turn result in the identification of new settlements and a series of planned excavations. All of this would of course serve not only knowledge of the period, but also the recovery of the hitherto-hidden finds (historical sources potentially more numerous than the written documents).

For myself, as an archaeologist not dealing with the medieval period, another exciting question is how much of all this will come about, and when and how productively, in the interests of a fuller general understanding of the Ottoman era. Perhaps it will not be until a later conference, on a topic similar to the present one, that this question will truly be answered.

TIBOR KOVÁCS
Director General
Hungarian National Museum

The Connection between History and Archaeology in Researching Ottoman Rule in Hungary

INTERRELATIONSHIPS AND PERSPECTIVES

I first began to deal with the issues regarding the connection between historical and archaeological research in a joint presentation with Ibolya Gerelyes at a conference in Heidelberg. At that time the focus was mainly on social and economic life, but we also touched on broader interrelationships.¹ In this article a general overview of the topic will be given.

It should be noted at the outset that while the excavation and preservation of explicitly Ottoman remains has accelerated in recent decades, there has been no similarly active study of concurrent Hungarian material to be found on territories formerly occupied by the Turks. For instance, the excavation of lost villages has, with the exception of a few promising examples,² yet to receive the place it deserves in archaeological studies. The reason for this neglect stems from financial as well as subjective factors: few are willing to devote themselves to an excavation, which is more demanding than customary archaeological work (and which promises less spectacular results). Another problem is that aerial photography procedures, which have been applied successfully in other countries, have only recently been introduced in Hungary,³ meaning that it is sometimes unclear where excavations could most profitably be started. There is hope that well-chosen future sites will yield helpful findings. Another possibility is access to satellite photographs, or a project to have photographs taken using similarly modern technology.

The researching of sixteenth- and seventeenth-century settlements is important because it would facilitate comparison of the archaeological findings there with the message of the Hungarian and Ottoman archival sources. To date three sites are known where such a comparison is possible.⁴ A somewhat surprising aspect of the matter is that the numbers of houses determined by earlier excavations happen to approximate to those in the written documents, while at Szentkirály, a very recent project led by András Pálóczi Horváth and presented elsewhere in this volume, the number of houses un-

earthed was considerably lower than the number anticipated on the basis of the *defters*, or tax records.

One project currently under way is attempting to excavate the remains of a vanished market town (*oppidum*).⁵ This is Ete in Tolna County, where 199 heads of families were registered in 1565, 162 in 1580, and 100 in 1590.⁶ The full depopulation of the settlement is estimated by József Holub to have occurred between 1620 and 1627.⁷

At the present moment all that we can conclude is that in villages where the *defters* listed the inhabitants individually, the archaeological evidence raises no doubts as to the reliability of the Ottoman surveys. Clearly, one factor here is that the loose structure of villages often makes it difficult to decide where settlements ended; moreover, it is not always easy to determine the age of buildings found or their relationship to one another (which is of course a point in favour of the *defters*, since these always contain the minimum number of a given population, and not a maximum figure, as in the case of houses of various ages.)

A few other examples are known in which, according to archival sources, the Christian/Hungarian inhabitants of a major settlement temporarily or permanently disappeared. For instance, in 1566 the Ottomans captured Babócsa for the second time. The 1579 *Szigetvár defter* lists the town as uninhabited, which implies that the earlier civilian population had fled, with no Ottoman civilian elements arriving in its place, while several hundred soldiers were stationed in the fortresses of the settlement.⁸ Does archaeology confirm the absence of a Christian population here and in other similar administrative or military centres?

Evidence of a continued Hungarian presence in Babócsa, formerly an important market town, comes specifically from the archaeological finds. Although when Kálmán Magyar investigated the site, he was not – and could not have been – familiar with the tax records that showed the town to be uninhabited, he rightly deduced that after 1566 the Hungarian

¹ DÁVID – GERELYES 1999.

² For example, PAPP 1931 and SZABÓ 1938, especially the chapter on the houses of settlements depopulated in the sixteenth century (pp. 79–87).

³ Zsuzsa Miklós is one of those who have endeavoured tirelessly to make advances in this field.

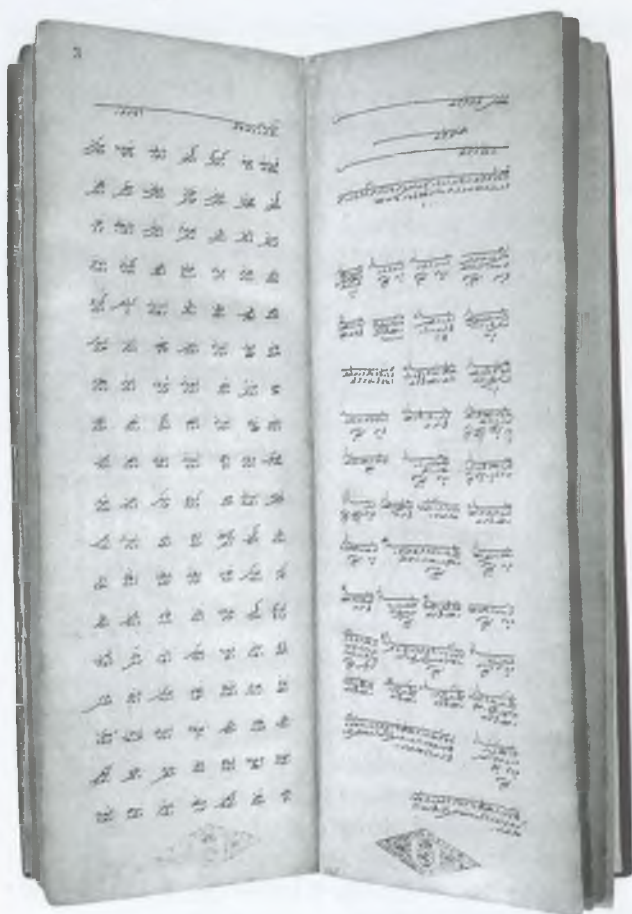
⁴ For BARACS cf. PAPP 1931; KÁLDY-NAGY 1985, 101, No. 47. For MÓRIC cf. MÉRI 1954, 140; GYÓRFFY 1956, 22; ÁGOSTON 1988, 272. For Szentkirály cf. PÁLÓCZI HORVÁTH 1993, 59; KÁLDY-NAGY 1985, 570, No. 528.

⁵ MIKLÓS – VIZI 1999.

⁶ Istanbul, Başbakanlık Osmanlı Arşivi, Tapu defteri 665, ff. 13r–15r, Tapu defteri 593, ff. 7r–8r, Tapu defteri 632, ff. 7r–8r.

⁷ HOLUB 1958, 39.

⁸ Munich, Bayerische Staatsbibliothek, Cod. Turc. 138, f. 78v.



III. 1. The detailed register of the *sancak* of Nógrád, 1579/1580, ff. 2v-3a

population abandoned its earlier settlement among the fortifications. At the same time, however, he found traces of a Christian community characteristic of the period somewhat away from the centre, which was fully controlled by the Ottomans. North of the newly constructed Turkish bath, remains of houses made of plastered mud came to light, along with stove tiles, glazed ceramics, and fragments of various iron and bronze tools. The ruins of the returning Christians' church and adjoining cemetery were also identifiable. Coin finds attest that burials were made in this cemetery at least until the end of the sixteenth century.⁹

From this starting point, analogous situations may be conjectured in the cases of Szigetvár, Esztergom and, after 1559, Visegrád, from where, according to the *defters*, Christians also disappeared. So far, excavations in these three towns have concentrated mainly on the castles and their immediate surroundings, while the civilian districts have

not been studied, partly owing to the continuing high concentration of buildings there. In Visegrád, typically Ottoman objects have been unearthed only from the Upper and Lower Castles; at the same time on the site of the medieval town of Visegrád Hungarian pottery and other artefacts have been found that can be linked with a Hungarian population there, albeit a modest one.

Yet another aspect of settlement and demographic history arises with the unearthing of a village derelict from the beginning of the Ottoman era whose inhabitants perished or fled and whose existence is not mentioned in the written sources. An example of such a village is Sarvaly in Transdanubia. This settlement, the remains of which were discovered in a forest, was uninhabited after 1531. From the exemplary excavation and the published findings it becomes clear that some of the houses were destroyed by fire while the rest were evacuated, i.e. they were intentionally abandoned. The excavation identified seventeen houses, two cellars – each located separately from any other structure –, three farm buildings, and one workshop. While these tell of a more or less ordinarily sized Hungarian village with approximately 100 to 120 inhabitants, it should be emphasized once again that they constitute the only evidence of the village's dimensions.¹⁰

A further group consists of those sites that can be connected with the internal migration on settlement areas inhabited throughout the Turkish period. Two sub-types can be distinguished here. These cover cases (a) where the entire population left the village itself but stayed on the village's lands, remaining there after the perceived danger had passed; and (b) where just a few families chose temporary dwelling-places for themselves on the village's lands, in geographically unfavourable and often cramped locations. In the case of one village no less than eight such sites have been found. In Veszprém County, north of Lake Balaton, ninety such sites have been discovered, although the specialist dealing with the issue believes that this number would have been even higher had field surveys been made more carefully.¹¹

The importance of field surveys cannot be emphasized enough, since in some cases the only way to locate a lost village registered in the *defters* is to find an archaeologist very familiar with the region.

Castles have been mentioned above. Here it should be noted that in the case of castles that are less known and in the case of those of which only a small part remains, archaeological investigation is the only way to obtain authoritative data concerning their size and the composition of their fortification systems. One such example is Babócsa, where Kálmán Magyar identified three fortification struc-

¹⁰ HOLL – PARÁDI 1982. It is similarly interesting when medieval arable land is identified in a now-abandoned area: cf. TORMA 1981.

¹¹ MÜLLER 1970.

⁹ MAGYAR 1993.

tures. One is the stone castle now known as the Turkish Castle, which is in relatively good condition and which has three surviving bastions. The second, further to the east, is an earthwork fortification of the motte type; dating from the eleventh to thirteenth centuries, this was still in use in Ottoman times. The third, and largest, is a late thirteenth-century double earthwork fortification where the ramparts – one to two meters high – and the foundations of seven round bastions were found.¹² (In other cases the Turkish military payrolls may contain information that sheds light on the structure of individual fortifications.)

The more thorough investigation of castles hitherto subjected to somewhat hasty excavation is also important, as is the examination of their immediate environs. Firstly, there are hopes for the excavation of Ottoman building remains (e.g. the recently discovered castle section in Szász,¹³ or the gate-tower in Gyula¹⁴), and also for the finding of artefacts, including hidden treasure (such as the Ozora example).¹⁵ Secondly, conclusions could perhaps be drawn regarding the number of people killed in the sieges. I am curious to know how many indisputably Muslim bodies have been found so far around castles that were besieged. In this regard it may be worthwhile to look through the relevant excavation logs. (Here it should be noted that a study has recently been published on the *defter* containing the expenditures for the 1543 military campaign. The study reveals that at Siklós, prior to the major battles, 14,957 court soldiers received their pay while after the capture of Székesfehérvár the number of those rewarded for their valour was 13,826. The difference is 1131 soldiers, the overwhelming majority of whom could be regarded as killed in battle, although the figure may include a few deserters and others. Total losses were a mere 7.5 per cent, the proportion being slightly higher for the infantry, while below 5 per cent for the cavalry. Additionally, of the nearly 3600 employees of the Seraglio, a total of 82 died or disappeared, amounting to 2 per cent. These losses were concentrated among the stable personnel, of whom 60 perished or went missing, but in many sub-groups there was no depletion during these two months.¹⁶ I mention all this because in the siege of a castle total casualties among the attackers – including irregulars and timariots – may have been in the order of one to two thousand, meaning that approximately this number of bodies should be reckoned with.)

The non-Turkish cemeteries of the Ottoman era also offer potential for making certain comparisons between the archaeological and archival materials. A specific example would be the Eflak-Vlach graves unearthed at Békátó by Attila Gaál.¹⁷ Until 1565

this location was uninhabited, but in 1570 the first wandering-pastoral settlers appeared. At this time, seven taxation units paid lump-sum tax, a number that grew to eight in 1580, when the number of heads of families reached ten.¹⁸ The excavation – careful yet (for reasons beyond the archaeologist's control) not fully complete – uncovered 260 graves from the sixteenth and seventeenth centuries. Assuming that only the inhabitants of the Vlach settlement of Békátó were buried here, then in approximately 120 years the population produced that number of dead.

What can we deduce from such a find? We can examine it from an anthropological point of view. Complex laboratory analysis has determined the sexes and approximate ages of the deceased. Although various factors prevent exact calculation of the age structure and mortality indexes, an attempt could be made to examine whether an initial population of 50 persons could have produced 260 dead (or approximately 300, if we include those missing) in 120 years. According to our calculations, if there was no significant migration into or out of the area, if the annual birth rate remained between 32.5–40 per thousand, and if the death rate was no higher than 20–35 per thousand (these figures are within the typical range for the era), the inhabitants of Békátó could indeed have left that many graves.¹⁹

As mentioned, this cemetery is linked to the Vlach ethnic group. This is confirmed not only by the *defters*, but also by archaeological parallels with graves of Southern Slavs near Zombor in Serbia, and by ethnographical characteristics which have been observed in Slavic groups still living in southern Hungary. Having compared the skeleton finds from Békátó with Balkan material from the present day, the anthropologist concluded that the original homeland of the Vlachs who settled at Békátó around 1570 was probably in the vicinity of Crna Gora (Montenegro), or possibly in the neighbouring Greek or Albanian highlands.²⁰ This assumption is reinforced by the names of the individuals, which are Southern Slavic in nature, and not Romanian at all.

The relationships between artefact finds and ethnic groups are, then, occasionally unclear. In such cases the historian can come to the aid of the archaeologist, as in the above instance. The same co-operation is needed in the case of ceramics finds that cannot easily be associated with a specific ethnic group.

Within ceramics, which make up the largest category of archaeological finds, there emerges a clearly distinct group of crude, thick-walled cooking and

¹² MAGYAR 1993, 220–221.

¹³ GERŐ 1999c, 131–132.

¹⁴ Excavated by Ibolya Gerelyes and István Feld.

¹⁵ This virtually unparalleled coin hoard was unearthed during an excavation conducted jointly by István Feld and Ibolya Gerelyes.

¹⁶ İPÇIOĞLU 1990.

¹⁷ GAÁL 1979–80. (Re-published in abridged form in the present volume.)

¹⁸ *Tapu defteri* 563, ff. 80v–81r, 676, f. 85r.

¹⁹ For details see the paper quoted in note 1.

²⁰ GAÁL 1979–80, 167–176, 180.



III. 2. Turkish cemetery in Szentmiklós castle. Engraving by Hoefnagel, 1595

storage vessels made on a hand-driven wheel. These artefacts differ radically from contemporary Hungarian ceramics, as well as from the sophisticated, perfectly glazed Ottoman peasant wares appearing in Hungary during Ottoman rule. The area in which this group appeared can be clearly delineated and is confined to southern Transdanubia; such ceramics are unknown north of the line of Lake Balaton or east of the River Danube. (Only now and then do they appear in a more northerly location, in the palace of Buda, where anything could have ended up, by way of the multiethnic soldiery.)²¹

We believe that this primitive ceramics ware can be associated with the Vlach ethnic group, which, as noted above, appeared in southern Transdanubia in 1570, primarily in the *sancak* of Koppány, and, in smaller numbers, in the *sancak* of Simontornya. In these two administrative districts they occupied mainly abandoned village sites, but their exponents and products may have spread further. Since they subsisted on semi-nomadic animal husbandry, their culture was at a level lower than that of the other Southern Slav (Serb) elements that had settled elsewhere in the country earlier on.²² (Another possibility is that this ceramics ware is linked with a Gypsy ethnic group, but these appear very rarely in Hungarian territories under Ottoman rule.)

Also originating from the southern regions is Balkan-Turkish jewellery.²³ Here again archaeo-

logical finds and the sixteenth-century *defsters* harmonize well: larger numbers of Serbs were registered only in the east and southeast, in the *sancaks* of Temesvár (today: Timișoara, Romania), Csanád (today: Cenad, Romania), Gyula, and Mohács (and only in the southern parts of the last two).²⁴

This now brings us to a point where it is necessary to rely almost entirely on the archaeological evidence: the question of Hungarian village structure, and the size and distribution of the individual houses.

Experience to date indicates some differences in this regard between the Great Plain, which is poor in stone, and Transdanubia, which is rich in stone and wood.²⁵ It is unlikely that this picture will change to any major extent in the future, but it may take on a clearer hue. In other words, there is a great need for the village research mentioned above.

The artefact finds unearthed in the excavations of villages should yield answers to numerous questions to which the written sources provide incomplete ones or none at all. These questions relate primarily to everyday life. For example, an investigation of eating habits based on unearthed animal bones or surviving plant remains may be instructive.²⁶

With regard to the living conditions and circumstances of the contemporary village population, the archaeological finds indicate that these

²¹ GERÓ 1978, 351–352; 1985; GAÁL 1985, 189; GERELYES 1988, 280; 1991, *passim*; KOVÁCS 1998, 156–162.

²² VELICS – KAMMERER 1886–1890, I, 331–333; DÁVID 1982, 67–68.

²³ KÖVÉR 1897, 227–253.

²⁴ DÁVID 1997, 168–169. For Temesvár: Tapu defteri 290, 364, 579; for Csanád: Tapu defteri 365, 580; for Gyula: KÁLDY-NAGY 1982; for Szeged: HALASI-KUN 1964, 1–72; for Mohács: Tapu defteri 441, 443, 593, 632.

²⁵ SZABÓ 1938, 80–84, 86; BÁLINT 1939, 148–150; GYÖRFFY 1943; PÁLÓCZI HORVÁTH 1986b; 1993, *passim*; HOLL – PARÁDI 1982, 115–117.

²⁶ SKOFLEK 1984–85.



Ill. 3. Balkan-type jewellery from the Battonya hoard, 17th century

were fairly modest. Simple farming implements and everyday utensils make up the majority of the objects unearthed.²⁷ This conclusion is consistent with the impression gained from the probate inventories: even presumably better-off town dwellers – such as barbers or harness-makers – had homes equipped in a similarly modest way.²⁸ An exception is the inventory of Ali Çelebi (analysed by Lajos Fekete), who even had a small library,²⁹ or a *sancakbey* named Ali and mentioned by Peçevi who inherited considerable wealth from his wife.³⁰ It is no accident that excavations have unearthed virtually none of the high-standard Ottoman goldsmith's works or other valuable applied arts works found in Hungarian public collections. Nevertheless, sums of money, generally hidden in simple jugs,³¹ represented a degree of purchasing power and indicated – not surprisingly – the development of a trader stratum within the Hungarian peasantry that possessed a certain amount of capital (or the beginnings thereof).

This brings us to our last major topic, namely the question of the coins in circulation in the conquered areas. Everyone who deals with this period knows that the *akçe* was the basis of the Ottoman monetary system. Taxes, the annual incomes of office-holders and timariots, the pay of soldiers, and virtually all other financial transactions were expressed in this currency. But to what extent was the *akçe* the actual means of payment? There are quite a few archival sources that could provide an answer to this question. One exceptional source is

the account book of the treasury of Buda from 1558–59.³² This source carefully records the composition of revenues, indicating the different currencies in which they were paid and also the exchange rates that were used in their conversion. Here it should be noted that in this text the word *akçe* is never used: the word *nakdine* occurs instead. However, according to Lajos Fekete, who has analysed and published the document, *nakdine* was another name for the *akçe*.³³ From this starting point Klára Hegyi carefully added up the main currencies, in two separate operations.³⁴ First she examined the number of occurrences of the individual currencies and their occurrences relative to each other, as well as their values in *akçe* and their share in the total amount of revenue paid in. The second calculation dealt only with the main Hungarian towns that we know paid their taxes in Buda; in other words, they themselves generated the sums they handed over.

Of the findings obtained, the most interesting is the preponderance of the *nakdine/akçe*, particularly with regard to numbers of occurrences. An even more remarkable aspect of the matter is that the *akçe* occurs even more frequently in direct Hungarian payments than in general, amounting to 97.9% of the coins specified. Thus, this Ottoman currency appears to have been circulated in enormous quantities in the Ottomans' Hungarian provinces in this period. This seemingly confirms the suggestion that in the first decades of their rule in Hungary the Ottomans attempted to im-

²⁷ HOLL – PARÁDI 1982, 51.

²⁸ GERELYES 1979; 1985.

²⁹ FEKETE 1960.

³⁰ DÁVID 1994, 153–154, notes 56–57.

³¹ See PARÁDI 1963

³² Published by FEKETE – KÁLDY-NAGY 1962.

³³ FEKETE 1955, 238, note 7.

³⁴ HEGYI 1987–1988.

plement – in public administration, in the introduction of the timariot system, and in many other areas – the model they generally followed in Rumelia, and this also meant promoting the use of their own currency.

To what extent is this picture confirmed by the archaeological finds?

An examination of the coins unearthed at castle excavations and of the 508 hoards from the Ottoman period that are preserved in the numismatic collection of the Hungarian National Museum³⁵ brings the astonishing finding that *akçes* make up an almost negligible percentage of these coins: only in seven finds were there as many as five or more small silver *akçe* coins.³⁶

How can this contradiction be resolved? Is it enough to refer to the fact that when sultans changed the old *akçe* were removed from circulation and new ones were minted? Certainly not, since this occurred in the case of the other coin types too, of which more have been found. Another possibility is that everyone tried to rid himself of *akçe* received in payment or remuneration, and whenever possible kept his savings in another form of currency. There must surely have been efforts to this effect, but they do not explain this degree of under-representation in the finds. Or was it perhaps that behind the *nakdine* stood not the *akçe* but rather the Hungarian denarius?

This suspicion is strongly reinforced by the findings of János Buza. Studies by this researcher indi-

cate that the denarius was extremely popular in the sixteenth century, not only in Hungary, but also throughout Europe, and even in the Ottoman Empire.³⁷ One reason was that it was readily obtainable, since in the 1570s some 17 million such coins were struck annually in Körmöcbánya (today Kremnica, Slovakia). But it is vain to advance historical arguments, since these are insufficient in themselves to undermine the credibility of the Buda treasury account book. Ultimately it is the negative testimony of the archaeological finds that causes us to reject the hypothesis of large quantities of *akçe* in circulation.

In closing it is perhaps enough to stress how good it would be if we could rely on adequate financial support for future archaeological research into the Ottoman period in Hungary. This is the eleventh hour, so to speak, since – as noted by András Pálóczi Horváth in one of his articles – earthworks over the last twenty-five to thirty years have been affecting precisely those soil layers in which remains from this era are to be sought.³⁸ Regrettably, the present state of affairs gives little cause for optimism. All we can do is trust in the resourcefulness and perseverance of our archaeologists, who had their share of difficulties in the 1950s as well, yet managed to find solutions, albeit often with compromises. Fortunately, the documentary sources are available, so that the data obtainable from them can always be depended on. The combination of archaeology and the written sources may enable us to resolve many issues that are still unclear.

³⁵ "Éremleletek, 1867–1989" [Coin Finds, 1867–1989]. MS. Numismatic Collection of the Hungarian National Museum.

³⁶ See also GEDAI 1988. This remains essentially true despite Ibolya Gerelyes's recent discovery of two *akçe* hoards at

Ozora: one relatively small but still containing a higher number of these coins than any previous find, the other one enormous with four thousand *akçe* coins.

³⁷ BUZA 1992.

³⁸ PÁLÓCZI HORVÁTH 1993, 60.

The History of Ottoman-Turkish Archaeological Research in Hungary

As a discipline, archaeology in Hungary can look back on a noteworthy past. Rapid development of the archaeology of Roman period dates mainly from the discovery of the Peter and Paul Early Christian burial vault in Pécs in 1780,¹ and from the unearthing of Óbuda's *termae maiores*.² The investigation of prehistoric relics started in the nineteenth century, in the second half of which medieval archaeology, too, made findings of increasing importance. The publication of the findings quickly brought international recognition and renown for the early scholars of archaeology in Hungary.

In the following I shall offer a survey of the beginnings and growth of a fairly new field in Hungarian archaeology, namely the study of the archaeology and architecture of the Ottoman era. At the outset I should remark that for me "Turkish" and "Turkish-period" have two different meanings. The archaeological relics of the Hungarian-inhabited regions at the time of the Turkish occupation constitute an organic part, as well as a continuation, of late medieval Hungarian culture, while the material appearing in Turkish-inhabited settlements and differing from the Hungarian belongs to "Turkish archaeology".

At first, interest was primarily directed towards surviving buildings from this time; and although artefacts were also collected, little attention was paid to them. In other words, the study of this period stemmed largely from the archaeology of buildings.

In the late seventeenth century Jakob Tollius copied certain inscriptions in Buda's Matthias Church – then the Süleyman Cami – and in the *cami* at Érsekújvár (today: Nové Zámky, Slovakia).³ Later on, J. P. Hammer, the renowned nineteenth-century Turkologist, copied, translated and published some of the Turkish, Arabic and Persian inscriptions in the Sultan Süleyman Cami at Szigetvár (these survive *in situ* to this day).⁴ Mihály Haas published the Turkish and Persian inscriptions found in Pécs during the reconstruction of the cathedral.⁵ The collecting of epigraphs, which was performed largely out of interest only, was supported by the Archaeologi-

cal Committee at the Hungarian Academy of Sciences, and thus took root as an aspect of archaeology in Hungary.

Ottoman architectural remains, such as the Valide Sultana Baths in Eger⁶ and the Malkoç Bey Cami in Siklós,⁷ aroused the interest of Flóris Rómer, too, prompting him to draw them in his notebooks. At this period, then, material was being collected in many fields, although research was still confined to the collecting stage.

The second half of the nineteenth century saw the start of widespread restoration of historical monuments in Hungary, but this did not mean the beginning of research into the archaeology of buildings. At this time research was less goal-orientated than now and did not always extend to the discovery of connections, in the establishment of which chance still played a significant part. Turkish details that came to light (examples were those uncovered during the rebuilding of Pécs Cathedral and those in the Matthias Church⁸) were documented, but were not preserved.⁹

The twentieth century brought a significant change; a series of studies appeared describing the various Turkish details found during reconstructions, demolitions and earth-moving operations. Ottó Szőnyi published a monograph on the Ferhád Paşa Baths in Pécs,¹⁰ based on the excavation of the monument. Besides the collection of artefacts, shorter studies were also published, such as Ottó Szőnyi's work on Turkish fountain (or wash-) basins¹¹ and Gyula Gosztonyi's description of the Ottoman-age aqueduct in Pécs and of the water pipes in the Pécs Museum.¹²

The nineteenth-century reconstruction of the Royal Palace in Buda and the rebuilding of Szent György tér in the Buda Castle District¹³ offered excellent opportunities for the collection of artefacts dating back to the Ottoman period. These finds are now housed in the Hungarian National Museum, and have been described and discussed in various papers.

Authority for the Protection of Historical Monuments, inv. no. 899/35.

⁸ CSEMEGI 1955, 124, Ill. 149, 126, Ill. 36.

⁹ The inscriptions in Pécs Cathedral seen and recorded by HAAS (1845) were destroyed during the restoration work.

¹⁰ SZŐNYI 1928a.

¹¹ SZŐNYI 1928b.

¹² GOSZTONYI 1941.

¹³ BÁRÁNYNÉ OBERSCHALL 1944.

¹ FÜLEP 1984, 36–41; GOSZTONYI 1939, 93.

² NAGY 1942.

³ TOLLIIUS 1700, 198.

⁴ HAMMER 1844.

⁵ HAAS 1845, 377–378.

⁶ GERŐ 1972.

⁷ GERŐ 1983; Rómer-jegyzőkönyvek [The Rómer Notebooks] 35, 81. Entry for 15 July 1872. Library of the National

The first archaeological investigation of a Turkish architectural monument to extend to an entire building and its immediate surroundings was conducted at the Gazi Kasim Paşa Cami in Pécs. In the course of this, the architect Gyula Gosztonyi¹⁴ and the archaeologist Gyula Török examined the Turkish parts of the mosque that had been reconstructed in the eighteenth century, along with the stratigraphy of the site all the way back to Roman period. In actual fact, it was this investigation that launched systematic research into the archaeology of Ottoman buildings in Hungary; this was also the first time that the findings of such an investigation were taken into account during restoration of an edifice. In this period the investigation of buildings was still directed by architects.

The large-scale reconstruction activity after the Second World War and the high number of monument restorations provided ample opportunities for archaeological excavations in general and for the archaeological investigation of buildings in particular. These operations now formed an integral part of local research; at the same time individual excavations and the uncovering of individual buildings were preceded by thorough and systematic historical and archival research.

The proliferation of projects also meant that Hungarian archaeologists could now specialize in particular fields and periods. In this regard the systematic uncovering and processing of "Turkish" relics from the Turkish period in Hungary was fully uncharted territory. In actual fact, it was this period that saw the birth of "Ottoman-Turkish archaeology" in Hungary. With regard to the archaeology of buildings, themes derived from the buildings themselves, but in the case of excavations the composition of the material recovered determined the main direction of further study.

The 1950s saw major projects for the archaeological investigation of extant Ottoman buildings. The first such was at the Yakovalı Hasan Paşa Cami in Pécs.¹⁵ Below I should like briefly to review some of these major projects, without making claims to completeness.

The excavation of the medieval Royal Palace and the associated fortifications in the Buda Castle District was begun in the late 1940s.¹⁶ Although researchers brought to light an abundance of Turkish artefacts, with regard to the remains of buildings relatively little was found. The fortifications of the Buda Castle District were later again investigat-

ed and partly excavated,¹⁷ and a systematic survey of the residential buildings was conducted in the late 1950s and early 1960s. The many Ottoman-period remains that were found refer to the alterations large and small made to these houses in the Turkish time.¹⁸

Returning now to the Yakovalı Hasan Paşa Cami in Pécs (shown on page 2 of the present volume), it proved possible to excavate the vestibule, and a part of the Mevlevi dervish cloister (*mevlevihane*) standing next to the building.¹⁹ Following the investigation and restoration of the Yakovalı Hasan Paşa Cami in Pécs, the archaeologists turned their attention to the Sultan Süleyman Cami²⁰ in the fortress of Szigetvár. Certain parts of this Turkish monument had come to light in the 1920s; the building had been turned into the castle's riding-hall after the expulsion of the Turks. Szigetvár's Ali Paşa Cami, later transformed into a parish church, was also studied. The southeast wall of this one-time *cami* was demolished during the 1912 reconstruction of the building and the *mihrab*, the niche facing Mecca, destroyed. Only some of the ogee-arched windows were discovered at this time.²¹ The new excavations in the late 1960s²² brought to light other remains of the *cami*, including details of the vestibule, thus clarifying a number of earlier assumptions about the minaret.²³

Beside the *camis*, the fortress of Szigetvár was also investigated in the early 1960s. This involved the examination of not only Zrínyi's inner castle, but also the timber framework and the wood-clad interior of the northwest bastion of the Ottoman fortress.²⁴ The so-called "Koran school" located in the Yenişehir, the Ottoman-age "New Town", was also examined.²⁵ Attempts were made to locate the mausoleum (*türbe*) of Süleyman the Magnificent in the village of Turbék, near Szigetvár, but without success.

The investigation of the Malkoç Bey Cami in Siklós also represented a significant advance.²⁶ Systematic research work uncovered previously unknown Turkish parts of Pécs's Ferhad Paşa Cami in Pécs,²⁷ as well as of Buda's Toygun Paşa Cami, situated in the Capuchin church of the Víziváros ("Water-Town") quarter.²⁸ Uncovered in the second mentioned were the remains of the *kibla* wall with a window, as well as details of the *mihrab* and the pulpit. Although the Öziçeli Hacı İbrahim Cami (later converted into a residential building) in the Víziváros quarter of Esztergom had already been studied,²⁹ new research there covered the entire site.³⁰

¹⁴ GOSZTONYI n.d.; GERÓ 1980, 14.

¹⁵ GERÓ 1980, 54–58.

¹⁶ GEREVICH 1966.

¹⁷ GERÓ, Gy. 1956; 1963a.

¹⁸ GERÓ 1981.

¹⁹ GERÓ 1980, 58–59.

²⁰ GERÓ 1966.

²¹ SZÓNYI 1911.

²² GERÓ 1980, 59–63.

²³ GERÓ 1980, 62–63.

²⁴ KOVÁTS 1966.

²⁵ KOVÁTS 1969–70.

²⁶ GERÓ 1983.

²⁷ NÉMETH 1903, 4–8; GERÓ 1980, 67–68.

²⁸ GERÓ 1973; 1980, 67.

²⁹ GERÓ 1965.

³⁰ I would here like to thank István Horváth for his kind oral communication; cf. also HORVÁTH, I. *RégFüz* Ser. I. 23 (1970) 82.



Ill. 1. Gül Baba's türbe, Buda. 1543–1548

Türbes, or mausoleums, represent yet another type of Ottoman architecture. There are two such monuments in Hungary: the mausoleum of Gül Baba in Buda (Ill. 1) and that of Idris Baba in Pécs; both have been investigated.³¹

When speaking of the archaeology of Ottoman buildings, we should not forget the baths. Of Buda's Turkish baths that are still in use today, the Király Baths (Horozkapı Ilıcasi) were subject to an investigation in the 1950s that brought to light additional Turkish parts (Ill. 2).³² New research was conducted into the Turkish part of the Császár Baths (Veli Bey Ilıcasi),³³ and, in 1958, at the largely rebuilt Rácz ("Serb") Baths (Küçük Ilıcasi) in the Tabán quarter of Buda.³⁴

Several Turkish baths or remains of them have been identified over the past few decades. These were without exception steam baths (*hamam*). The excavation of the Valide Sultana Baths in Eger³⁵ and the Memi Paşa Baths in Pécs³⁶ contributed to a better knowledge of the structure and layout of

such buildings. Two other important *hamams*, the Rüstem Paşa Baths in Székesfehérvár³⁷ and the baths in Babócsa, should also be mentioned here.³⁸

Perhaps the most neglected area is research into the Turkish residential buildings of the former Ottoman-occupied territories of Hungary. During excavations at Visegrád, the remains of houses were found in the Alsóvár ("Lower Castle"). Houses from this period were also uncovered in the one-time palisade built around the tower at Földvár (Dunaföldvár).³⁹ The seventeenth-century palace of the *paşa* of Buda was uncovered and some of the findings published;⁴⁰ excavations around the Toygun Paşa Cami in Buda's Víziváros brought to light remains of Turkish houses.

During research into military structures serving defence purposes, it was primarily the research conducted in castles and on castle walls that yielded important new information. The telling apart of medieval Hungarian and Ottoman-age constructions was often problematic in castles; it was also

³¹ GERÓ 1980, 77–80.

³² GERÓ 1958; 1963b.

³³ GERÓ 1980, 103–106.

³⁴ GERÓ 1959, 266–267; 1980, 96–98.

³⁵ GERÓ 1962; 1972; 1980, 107–109.

³⁶ GERÓ 1987a; 1987b.

³⁷ GERÓ 1980, 109–110; SIKLÓSI 1989c.

³⁸ MAGYAR 1994.

³⁹ KOZÁK 1970.

⁴⁰ GERÓ 1999b; for the its baths cf. GERÓ 1980, 112–115.



III. 2. Király Baths (Horozkapı Ilıcasi), Buda. 1566–1578

difficult in connection with town walls, as well as the defence works, towers and bastions that strengthened them. In this regard I should mention the comprehensive excavations of the Buda Castle District fortifications and the clarification of their different periods, as well as the similar excavations in Pécs,⁴¹ Vác⁴² and Esztergom.⁴³ Investigations into the town walls in Pest,⁴⁴ Pécs⁴⁵ and Székesfehérvár⁴⁶ also yielded important findings. With regard to repairs to Székesfehérvár Castle and its wall, the Turkish *defters*, too, yielded much data.⁴⁷

Research into the fortifications of the Buda Castle District and those of the City of Pest has greatly improved the state of our knowledge of these structures.⁴⁸

In the last decades the directions of research in Turkish archaeology have become clear and particular themes have emerged. One special field is research into palisades, the small strongholds built

of wood and earth that I shall discuss from several points of view. Turkish palisades were mostly military Ottoman posts, usually not too large in size. The artefacts from these strongholds offer insights into the lives of small, closed communities. The architectural finds, as well as various observations made during the excavation of these sites, provide information on one method of building defences and on the technology it employed. Remains of the dwellings erected inside these modest fortifications afford some idea of the simplest, one might say rudimentary, houses put up in the Ottoman-occupied parts of the country.

Ottoman, as well as Hungarian, written sources provide a wealth of information useful for dating the palisades. Those playing highly important roles in the Turkish defence system were sometimes destroyed by marauding Hungarian troops and sometimes burnt by the Turkish army. Since these forti-

⁴¹ GERÓ 1999b.

⁴² TETTAMANTH 1990; *MRT* 9, 379–406, 418–427.

⁴³ *MRT* 5; Cf. also István Horváth's study in the present volume.

⁴⁴ IRÁSNÉ MELIS 1973.

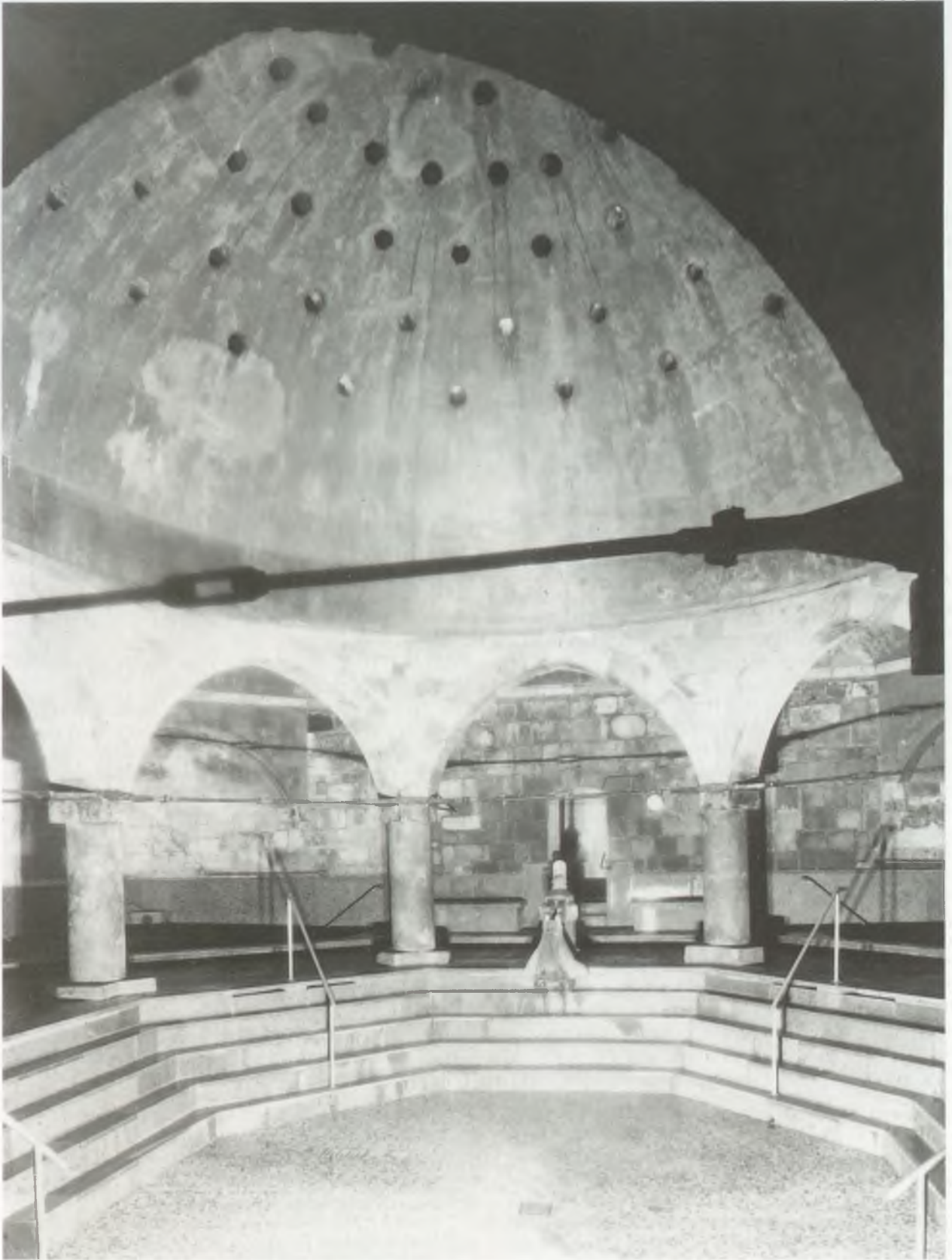
⁴⁵ In Pécs the entire length of the northern town wall, as well as several sections of the western town wall and the north-

eastern corner-bastion in the eastern part, were excavated. A significant section of the southern town wall was restored near the Siklós Gate, on the basis of excavation findings.

⁴⁶ SIKLÓSI 1989b; 1999.

⁴⁷ FODOR 1979.

⁴⁸ Cf. the studies of Károly Magyar and Katalin Irás-Melis in the present volume.



III. 3. Interior of the Turkish-era part of the Rudas Baths (Yeşil Direkli İlçası), Buda. 1566–1578

fications were often rebuilt at least once, the various layers of destruction can offer good opportunities to observe different periods and to date more accurately any finds unearthed.

In the early 1960s, during the excavation of Márévár,⁴⁹ the remains of a small, single-wall palisade were found in front of the entrance to the medieval castle and connected to its walls. It became clear, however, that this had not been inhabited and had probably been used as an animal pen.

Géza Fehér uncovered the remains of the *cami* belonging to the minaret in Érd-Ófalu (Turkish: Hamzabey palankasi). Essentially this served a larger palisade that had earlier been burnt down but later rebuilt.⁵⁰

In actual fact, interest in these sites began with the excavation of the palisade at Újpalánk (Turkish: Yenipalanka),⁵¹ situated by the River Sió near Szekszárd. The entire palisade, built in 1595 during the Fifteen Years War, was unearthed. Another important palisade was the one at Vál, near Buda; the excavation of its central building and its finds have recently been published.⁵² Other palisade excavations, too, can be listed, such as those at Békés,⁵³ Törökszentmiklós,⁵⁴ Barcs,⁵⁵ and Bátaszék.⁵⁶

Although excavations of palisades have yielded many significant findings, a number of questions remain unanswered. These concerns are, among others, the comparative examination of finds from the individual Turkish strongholds, collation of the finds with the ethnic make-up of garrisons (discernible from surviving soldiers' pay-rolls) and the parallel comparison of a Hungarian and a Turkish palisade. These are tasks for the future.

Very important finds from the period of the Ottoman occupation have come to light by excavation. Here I shall only mention three major excavations conducted before the Second World War, at the royal palace in Esztergom, at the castle of Eger and in the Tabán quarter of Buda. The Turkish kiln and its assemblage found on Szent Tamás-hegy in Esztergom⁵⁷ and the Turkish finds uncovered during the rescue excavations in the Víziváros ("Water-Town") quarter of Buda should also be noted.

The evaluation of Turkish-era finds according to the types began with the material from Buda. This served as the basis for the processing work nationally. In this respect, Sándor Garády, who analysed pottery and ceramics, was a pioneer.⁵⁸ In his study – which, incidentally, was not free of

errors – he raised many questions that were answered only by later research. He dealt briefly with Iznik fragments – although he regarded them as Anatolian without giving a more specific indication of their place of origin –, and devoted special attention to the pottery kilns uncovered in Buda and Esztergom.

Copper vessels and other copper metalwork artefacts represent another large group of Turkish finds. This rich material was examined and published by Magda B. Oberschall in her study of Turkish applied arts.⁵⁹ In her work she endeavoured to present relics found across the whole territory of the country. When explaining individual types of vessel, she also touched upon the way they were made and the uses to which they were put. She devoted a separate section to candlesticks and other utility items. She also published relics of Ottoman goldsmith's art, among them silver artefacts, first and foremost the silver beakers in the collection at the Hungarian National Museum. After Magda B. Oberschall's article many new and up-to-date treatments of this material were published.⁶⁰

The large-scale, nationwide excavations begun after the Second World War and later on, mainly after 1956, brought to light huge quantities of material from the Turkish time in Hungary. Investigations at the Royal Palace in Buda, the Víziváros in Buda, in Pest, Eger, Pécs, Szigetvár, Siklós, Márévár, Simontornya, Gyula, and at other sites yielded numerous Turkish artefacts that enriched museum collections to a significant degree.

To begin with, the processing work that continued in parallel with the excavations rested on the material already held in museum collections. The work of this type conducted by Gyula Mészáros and Olivér Soproni represented the initial phase.⁶¹ Their activity was restricted primarily to ceramics. In actual fact it was Géza Fehér who began to remedy the omissions of the past, namely up-to-date scientific processing, by publishing the Turkish finds in the Hungarian National Museum and in the museums of Pécs, Esztergom and Eger.⁶² In the quarter century since the publication of his studies, a succession of such treatments – short and long alike – have made their appearance.⁶³

In the above I have briefly outlined the genesis and first phase of Ottoman-Turkish archaeology in Hungary. Without its achievements this conference could never have been held.

⁴⁹ SÁNDOR 1966; 1975.

⁵⁰ FEHÉR, G. *RégFüz* Ser. I. 15 (1963) 67; 16 (1964) 74; 18 (1965) 65; 19 (1966) 59.

⁵¹ GAÁL 1985.

⁵² HATHÁZI – KOVÁCS 1996.

⁵³ GERELYES 1980; 1982.

⁵⁴ KOVÁCS, GY. 2000a.

⁵⁵ KOVÁCS – RÓZSÁS 1996; 1998.

⁵⁶ Ilona Valter's excavation. Cf. VALTER 1996; 1998 and Tamás Pusztai's study in the present volume.

⁵⁷ FEHÉR – PARÁDI 1960; FEHÉR 1968b.

⁵⁸ GARÁDY 1944.

⁵⁹ BÁRÁNYNÉ OBERSCHALL 1944.

⁶⁰ FEHÉR 1963a; 1963b; 1964; 1965; 1970; and GERELYES 2001.

⁶¹ SOPRONI 1981.

⁶² FEHÉR 1959; 1962; 1963c; 1968a; 1972.

⁶³ Cf. the Bibliography in the present volume.

Balkan Garrison Troops and Soldier-peasants in the *Vilayet* of Buda

In 1541 Sultan Süleyman I occupied Buda, the capital of the Kingdom of Hungary, and then, up to his death in 1566, the remainder of central Hungary. Under his successors the area subject to Turkish dominion grew, although it was never more than the southern third of the country. In the western and northern regions the Kingdom of Hungary, now with Habsburg monarchs on the throne, lived on, while in the east the Principality of Transylvania emerged. The rulers of this last state formation were vassals of the Porte, but until the late 1650s enjoyed broad autonomy.

The Ottoman Turks introduced in Hungary what seemed to be the same administrative system as the one they had long employed in the Balkan Peninsula. Behind the outward appearance, however, there were differences of content. The reasons for these lay ultimately in the division of Hungary, in the fact that the Turks were unable to conquer the entire territory of the country. Armed struggle, especially between the Kingdom of Hungary and the Hungarian part of the Ottoman Empire, became an enduring reality. This continued even in the absence of official hostilities: Hungarian and Turkish fortress-troops regularly penetrated each other's territory, pillaging, forcing settlements to pay taxes, attacking soldiers outside the safety of their castles, and abducting travellers. Soldiers from the larger Hungarian fortresses – first and foremost Szigetvár in the west, Eger in the north and Gyula in the east – even harassed the southernmost and innermost points of the Turkish zone. For two centuries Hungary was the scene of the Habsburg–Ottoman confrontation.

This state of affairs served to increase the importance of everything that was military. The majority of the Turks who settled in Hungary were soldiers; their numbers in the castles alone can be put at 20,000. The most important task of the Turkish administration was the continuous replenishment and supply of these troops.

The soldiers lived in the castles; archaeologists conducting research there look for evidence of Muslim-Turkish culture. Of considerable importance, then, is whether these soldiers actually were Turks. The following study attempts to address itself to this issue.

In a broad southern swathe of Hungary the wars destroyed villages and caused the disappearance of

the earlier Hungarian population, whose place was taken by new inhabitants migrating northwards from the Balkan Peninsula. In this southern belt Balkan inhabitants settled around the “islands” represented by Turkish castles: it was they who provided replacements for the fortress-troops, assisted the professional army in their capacity as soldier-peasants, produced the necessary foodstuffs, and crafted the simple, day-to-day manufactures that were sold to the troops and their families. The ethnicity and religion of these inhabitants are not matters of indifference in the assessment of the culture unearthed by archaeologists. The second part of this study examines these newcomers from the Balkans.

The Balkan origins of the garrisons

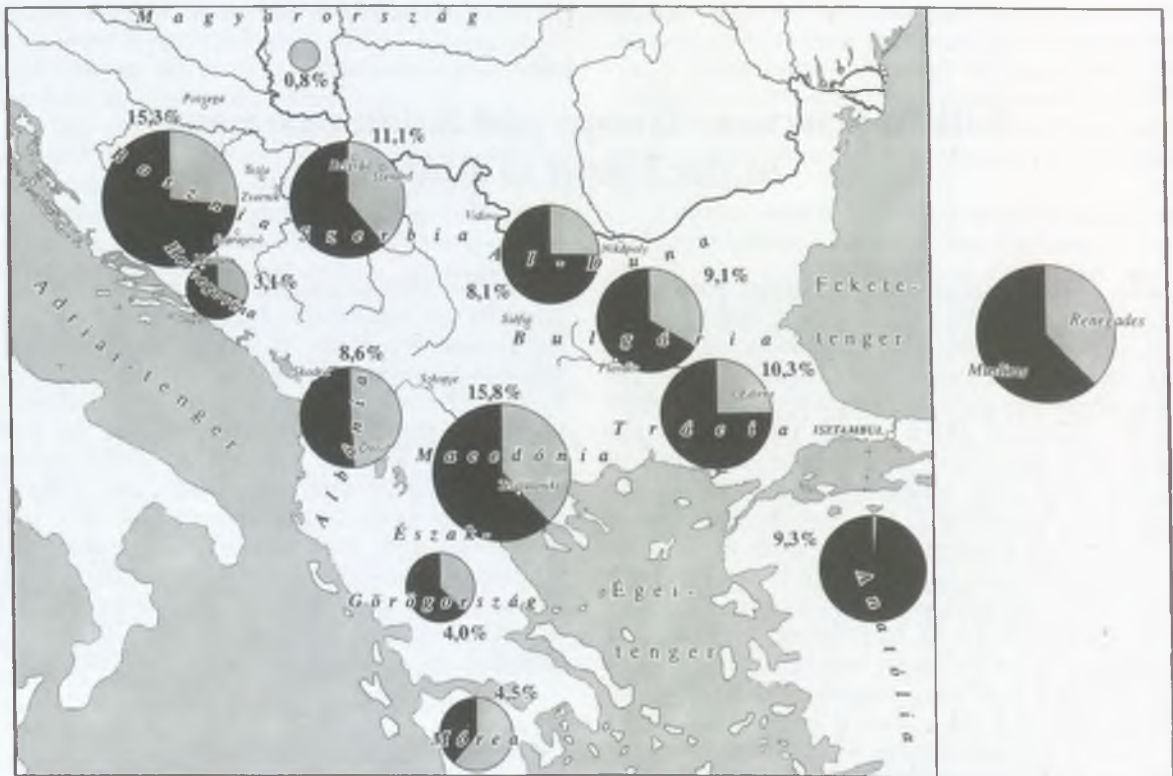
Based on their study of a diverse array of documentary materials, scholars studying this period have already noted that the “Turkish” population that lived in the sixteenth- to seventeenth-century military and administrative centres in Hungarian territories occupied by the Ottoman Empire actually reveal a number of Balkan traits. The historian Lajos Fekete pointed out that Ottoman rule in Hungary could more aptly be called a “Bosnian or Serbian dominion” instead of the customary “Turkish dominion”.¹ In a Turkish grammar book compiled by Hungarians in 1668, the linguist Gyula Németh discovered a western Rumelian dialect that showed a number of striking similarities with the Turkish language of Bosnia.² From her analysis of the Ottoman Turkish loanwords in Hungarian, Zsuzsa Kakuk concluded that “Hungarians heard Turkish words from the lips of Turkish and Slavic speakers alike and thus these words were adopted from Turkish and Slavic sources simultaneously.”³ Archaeologists investigating forts and castles from the Ottoman period have brought to light countless pottery and other finds produced using Balkan techniques, especially in the southern centres of the Ottoman-dominated territories.

Even in the absence of a precise knowledge of the approximate proportions, it is rarely contested that the majority of the Turks in Hungary were soldiers. Although soldiers were unable to rise to the ranks of the religious, legal and administrative officials, time and again we come across soldiers with second jobs

¹ FEKETE 1944, 197.

² NÉMETH 1970, 8, 113.

³ KAKUK 1996, 13.



Ill. 1. The districts of origin of the Fehérvár *müstahfizs*, 1543. In the circles, the black segments indicate Muslims while the grey ones show converts to Islam

as tax-farmers, craftsmen, shopkeepers and merchants, indicating that a respectable proportion of the civilian population consisted of soldiers. It would obviously be an exaggeration to claim that the Turkish population of Hungary and the soldiery stationed in the region were one and the same, but a closer look at the origins of the military will no doubt bring us closer to knowledge of it.

A series of detailed payrolls has survived concerning the sixteenth-century garrison troops in the forts and fortresses of the *vilayet* of Buda; these documents record the soldiers of the garrisons by name in a breakdown according to fortress and branch of service. As a result of the bureaucratic zeal of the mid-sixteenth century, there are a number of registers that contain, next to the names of individual soldiers, a wealth of other data deemed important for identifying them. These personal data tend to include the place of origin, closest relatives and the earlier career of the individual in question, rather than a description of the soldier's outward appearance, such as medium height, black eyebrows or moustache.

The first in this series of registers is the list of the garrison of Fehérvár (today: Székesfehérvár) – Istolni Belgrad in Turkish – describing the state of affairs between 5 and 29 September 1543. Süleyman I had occupied this fort on 2 September;⁴ the

payroll thus records the very first garrison of the fort. Clearly, it was owing to the care surrounding the establishment of a new and important garrison that the places of origin of the soldiers were entered in the register of the so-called *müstahfiz*, the infantry troops held in the highest esteem.⁵ This unit consisted of 853 soldiers; the names of 831 of these were accompanied by ethnic background – *arnavut* = Albanian, *macar* = Hungarian – and most frequently by the geographic area from which they came. The last mentioned often designated a country or a country part – such as *Bosna* = Bosnia, *Hersek* = Herzegovina, *Mora* = Morea – but, more often than not, a large place. The toponyms Edirne, Sofia, Smederevo (Szendrő) and Saloniki had a double meaning: they could equally designate the city or the town itself and the smaller administrative district (*kaza* or *nahiye*) in which it lay. Since the two are indistinguishable, I have regarded every toponym of this kind as a district.

Although the many studies on the Balkans are very useful in this respect, the identification of these place-names was often quite difficult since the scribes drawing up the records did not enter the name of the *vilayet* or the *sancak*, and the soldiers could thus – at least theoretically – have originated from any corner of the Ottoman Empire. Only the origins of 28 soldiers remained uncertain.

⁴ BARIA 1993, 10–11.

⁵ The document is housed in the Österreichische Nationalbibliothek, Wien, Türkische Handschriften

Mxt 550 (abbreviated as ÖNB Mxt in the following). The list of the *müstahfizs* appears on pp. 1–11.

The overwhelming majority of the 803 ethnonyms and toponyms could be identified with certainty, only a few were controversial. The last mentioned included a word that could be read as "Konya" (which is in Anatolia) but also as "Fonya" (which is in Greece). Since soldiers arriving from the place in question were without exception born into Muslim families and since soldiers from the Morea were usually new converts to Islam, I read this word as "Konya". The number of uncertain readings is so low that they do not essentially modify the final proportions.

The fact that the scribe only recorded the origins of the *müstahfizes* and that only the district of origin was recorded sets up certain limitations to an analysis of this kind and to possible conclusions that can be drawn. Soldiers from Muslim families were usually assigned to this branch of the infantry, and although a few converts also appear, there are no Christians. If we knew the origins of the entire garrison, the Christian *martoloses* would no doubt give Serbia a greater weight than the *müstahfizes* alone. The breakdown according to district does not allow the separation of soldiers originating from forts and towns and those coming from smaller villages.

In spite of these limitations, the results are most interesting since they show the composition of an important unit of the new garrison. The mobilisation order for the Esztergom–Fehérvár campaign sent by Sultan Süleyman to the *beylerbeyi* of Rumelia is dated 21 March 1543; the sultan himself set out from Edirne with the army on 23 April and crossed the River Drava in late June.⁶ Volunteers had a good three months to join the army from the mobilisation to the beginning of the actual fighting in Hungary. The first wave of volunteers arrived from Asia Minor, the second from Istanbul and from all areas of the Balkan Peninsula. New recruits who joined the marching army from the all areas of the Balkan Peninsula are represented in roughly similar proportions.

The districts of origin of the Fehérvár *müstahfizes* are shown in Ill. 1. I have divided the Balkans into ten areas, taking into consideration the chronology of their conquest by the Ottomans, the rate and extent of Islamisation, linguistic boundaries, and the Turkish administrative divisions. These areas, marked by circles on the map and naturally bordering on each other, are the following.

(1) Thrace, including Istanbul and Edirne; the western boundary of this area lies east of the Plovdiv–Drama line. The area had been strongly Islamised and Turkicised by the second half of the fifteenth century, following the destruction in the wake of the battles for Constantinople and Mehmed II's ambitious settlement policy.

(2) The line of the Lower Danube, from Vidin to the forts in the Danube Delta region. The strongly

garrisoned forts lying mainly along the southern banks of the river protected the eastern Balkan provinces of the empire. This area, too, had been strongly Islamised.

(3) Bulgaria, an area that roughly corresponds to the present-day country, excluding the Danube zone. Islamisation was strong in the northernmost and southernmost areas, as well as in the Sofia region, but weaker elsewhere.

(4) Serbia, including Kosovo and the area between the Drava and Sava rivers,⁷ i.e. the Serbian-speaking territories, if this meant anything in the period.

(5) Macedonia, extending from the eastern shores of Lake Ohrid to the Plovdiv–Drama line in the east, to Skopje in the north and to Thessaloniki in the south. By the mid-sixteenth century Islam had spread primarily in the towns, but had also gained a foothold in the villages.⁸

(6) Albania. In this period only the leading layer of Albanian society had entered Turkish service and had converted to Islam. The rural population remained Christian (Greek Orthodox and Roman Catholic), although a part of this population fled to Italy and Greece after the Ottoman conquest.⁹

(7) The northern part of the Greek peninsula.

(8) The Peloponnese (Morea). From an ethnic and linguistic point of view, the two Greek districts should be regarded as one; I have divided the territory into two in order to measure the degree of Islamisation.

(9) Bosnia or, more precisely, the area called the *sancak* of Bosna by the Ottoman administration. The border with Serbia ran along the Drina, extending beyond the river to the east at Visegrad. The swift and widespread Islamisation of the Bosnians, in rural areas also, is a well-known fact.

(10) Herzegovina together with Montenegro, or to be more precise the area that in 1543 coincided with the *sancak* of Hersek and in the 1550s included the small coastal area around Klissa (called the *sancak* of Kilisa in Turkish). This area extended to Bosnia in the north, Albania in the south and Foča in the east.

Finally, two other areas that provided soldiers garrisoning the Turkish forts of Hungary should also be mentioned in this respect. The first is Asia Minor, the second the Ottoman-dominated areas of Hungary that in 1543 meant only the Buda region and the southernmost part of the region between the Danube and Tisza rivers.

The map speaks for itself, and only calls for more detailed or additional explanations concerning a few points. Exactly nine-tenths of the 803 *müstahfizes* of Fehérvár came from the Balkans, and only 9.3 per cent from Anatolia. Six soldiers (0.7 per cent) came from Hungary. They were probably Hungarians who had converted to Islam since four of them had the ethnonym *macar* entered beside their names; two persons came from Buda or the Buda region.

⁶ GÖKBILGIN 1967, 30; İPÇIOĞLU 1990, 146–147.

⁷ The population of the Sirmium was almost purely Serb in this period. Cf. MCGOWEN 1983.

⁸ Cf. the studies in the volume *La Macédonie et les Macédoniens dans le passé*. Skopje 1970.

⁹ Cf. FINE 1987, esp. 595–602 and DUKA 1991, 70–71.



Ill. 2. The districts of origin of the new recruits in the forts of the *vilayet* of Buda, 1558. In the circles, the black segments indicate Muslims, the grey ones converts to Islam, and the lined ones Christians

Soldiers from all areas of the Balkan Peninsula had joined the army. Taking the Greek mainland as one unit, and reducing the number of districts to nine, we find that six of these nine districts uniformly provided 8–11 per cent of the recruits. Three areas differ significantly from this pattern. Most of the soldiers, a total of 127 men, came from Macedonia; Bosnia came second with 123 soldiers. Neighbouring Herzegovina, occupied not long before and in a considerate way, and Montenegro, which preserved its tribal autonomy,¹⁰ are hardly represented; they account for just 3.1 per cent of the *müstahfiz*es of Fehérvár. The breakdown of the Serbian areas is also instructive: 79 soldiers came from Serbia, while only 10 arrived from the region between the Drava and Sava rivers, an area whose conquest and occupation had begun two decades earlier. Although the size of these areas no doubt also played a role, the dominance of Macedonia can hardly be explained by this single factor, since it was by no means among the largest areas.

A few cities and their districts stand out with high numbers of recruits. The name of Edirne appears in 37 cases, Nikopol in 29, Smederevo in 23, Istanbul in 22, Belgrade in 19, and Skopje in 18. It is fairly clear from later payrolls that these military and administrative centres also acted as the reserve and supply centres for men who wanted to join the army, and we can assume a similar function in this case also.

It would appear that this 800-strong sample is large enough to reflect the degree of Islamisation. With the exception of a single new convert to Islam only soldiers of Muslim origin had come to Hungary from Anatolia.¹¹ Exactly three-quarters of the recruits from Thrace and the Lower Danube had been born into Muslim families, and the degree of conversions was almost identical in Bosnia. The Islamisation of the Bulgarian, Macedonian, Serbian, Herzegovinan and northern Greek territories was less extensive, since only about 61–68 per cent of the recruits from there had been born into Muslim families. The mass Islamisation of the Albanians had just

¹⁰ CVETKOVA 1978, 68.

¹¹ Muslim background, conversion or Christianity is indicated by the name. Names are usually made up of two parts, the individual's name and his father's. Two cases are unambiguous: Mehmet Mustafa was a Muslim, while Nikola Stojan was a Christian. The converts were designated as N. N. son of Abdullah: since the new converts could not have a Christian name after their newly gained Muslim name, their father was uniformly designated as Abdullah, as in the case of

Ibrahim Abdullah, for example. At this time not one single child in the Ottoman Empire had been named Abdullah; the few Abdullachs appearing among the many thousand names in the payrolls were all Arabs. The second name was occasionally an ethnonym or a country name, such as Bosna, Arnavud, Hersek or Sirem. Individuals with names of this type were probably also fresh converts to Islam.

begun, and about one-half of the recruits from those parts were first-generation converts. The lowest number of Muslim recruits came from distant Morea: only 39 per cent of the converts as opposed to the 61 per cent made up by the Serbs. The soldiers from Hungary were all new converts.

A few smaller groups less suited to statistical analysis also appear in the larger garrisons set up in the Ottoman-dominated areas, but even so their closer investigation yielded results similar to those of the Fehérvár garrison. In 1543, for example, the *müstahfiz*es of Esztergom included 35 soldiers¹² whose second name was an ethnonym or a toponym. One came from the Danube Delta area, another from Trebizond on the Pontic littoral, three were Arabs, and the rest came from the Balkans: twelve soldiers had been recruited from the southwest Greek–Albanian–Macedonian area of the peninsula, eleven from the Bosnian–Serbian area in the northwest, and seven from the eastern Balkans.

Our most informative payroll, one that records a wealth of personal information, lists all the salaried soldiers of the forts in the *vilayet* of Buda for the year 965 of the Hegira, i.e. for the period between 24 October 1557 and 13 October 1558;¹³ in other words, it offers an overview of not simply of one branch of service, but of all garrisons in the *vilayet* of Buda. The register was compiled in the autumn of 1557 and although according to the dating the changes were only recorded for one year, in fact they were conscientiously noted down for two. The lists of effectives, including recruits arriving over the two year period, contains almost 13,000 names, and personal data were entered in 819 cases, obviously in the case of new recruits. The clerk clearly took great pains to be as accurate as possible in recording the relevant data. The place of origin was recorded multiply: he indicated the *sancak*, as well as its smaller administrative unit, the *kaza* or the *nahiye*, followed by the actual locality. The status of the latter was also noted down: fort (*kale*), town (*kasaba*), civilian town beside the fort (*varoş*), or village (*kariye*). In the case of larger cities even the town quarter (*mahalle*) was recorded. Descriptions of places in Asia Minor begin with the words “on the other side” (*öte yakada*), and thus Anatolian Konya and Greek Fonya could not be mistaken for one another. Place of origin is followed by the closest male relative – or female relative, if there was no male relative –, usually his brother or brothers, to whom the treasury paid out the inheritance. An interesting detail of the personal information is that the new Muslims had converted voluntarily. The scribe also recorded if a soldier was the freed slave of a high-ranking individual. The few entries describing the previous career of individual soldiers are especially valuable.

As a result of these carefully kept records, only the place of origin of a single soldier out of the 819 new recruits could not be determined. Four soldiers represented rather unusual cases. One was a Slovene, another a Croat, a third was a Czech (who had been taken captive during a “Czech–Moravian raid”), although it is unclear where they had lived previously. The fourth was unable to specify where he had grown up. I analysed a total of 814 cases. I assigned the places of origin to one of the ten Balkan districts described above. The results are shown in Ill. 2.

A historical situation differing considerably from the one in 1543 lay behind this register. The year 1557 was one of peace, since no imperial Ottoman army had entered Hungary for five years. The recruits were not needed for replenishing the imperial army for a new campaign or for garrisoning newly conquered forts, but for replacing losses among the garrisons already established. Since fluctuation within the military was fairly strong, the new recruits who joined the army each year became the core troops within one or two decades.

Only 20 of the 814 soldiers came from the “other side”, from Asia Minor.¹⁴ The Ottoman-occupied areas of Hungary gave a larger number of soldiers: a total of 52 men (6.4 per cent), including soldiers who had been born into the Muslim faith, converts to Islam, Southern Slav Christians, and Hungarian Christians. About nine-tenths of the new recruits came from the Balkans, primarily from its northwest territories: Bosnia gave roughly 40 per cent, Serbia and the region between the Drava and Sava rivers almost 29 per cent, and Herzegovina with the *sancak* of Klissa 13 per cent, a total of 82 per cent. The other districts of the Balkan peninsula contributed a mere 9 per cent. The districts in the northwest bloc did not play a similar role. Bosnia and Herzegovina provided Muslims, and hardly any Christians. The Christian *martoloses* came from the area inhabited by Serbs, and, within this, especially from the region populated by Vlachs (*Eflaks* in Turkish).

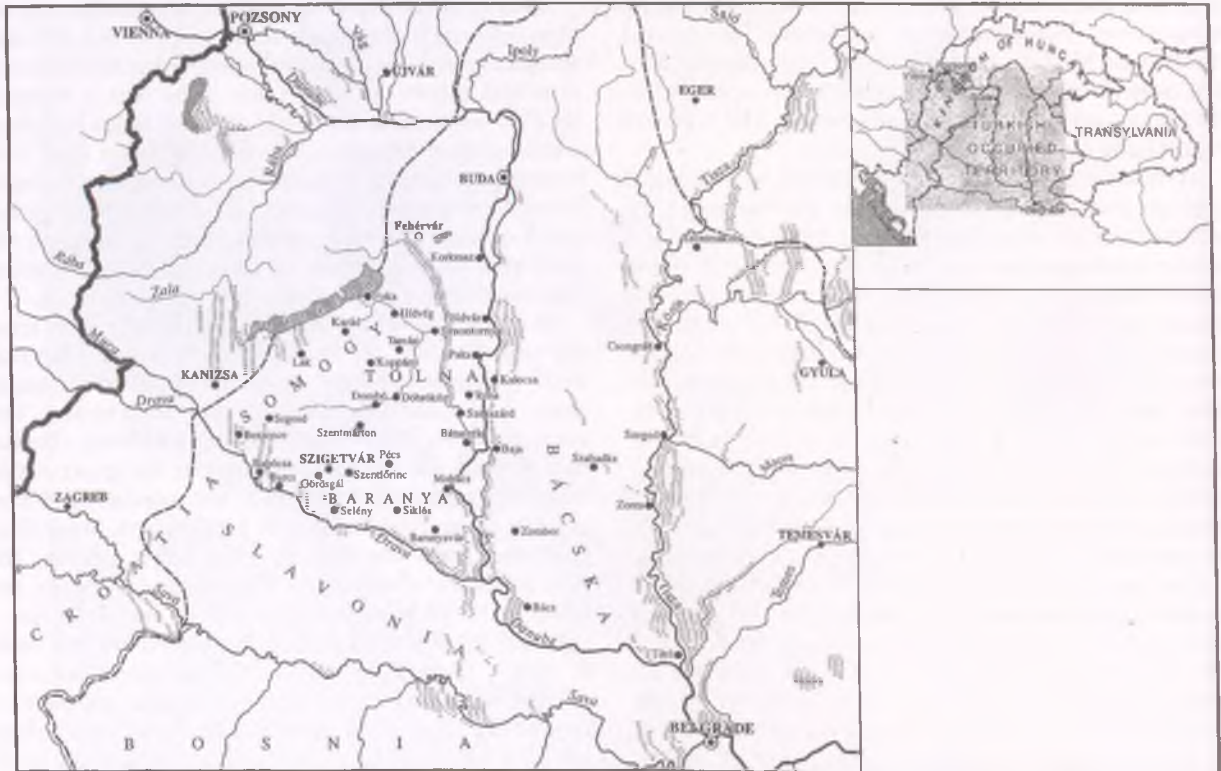
It is worth dividing the districts further. In Herzegovina and the recently established *sancak* of Klissa – that also included a section of the Dalmatian coast – Islamisation had progressed fairly rapidly. Three-quarters of the recruits from this region were Muslims by origin; the rest were new converts to Islam. Bosnia was divided into two *sancaks*: Bosna, with Sarajevo as its centre, and the smaller Zvornik, whose eastern settlements already lay in Serbia. The conversion of the Bosnians was so swift that 80 per cent of the recruits from Bosnia had been born into the Muslim faith and over one-half of them (59 per cent) came from villages, indicating that conversion was also widespread among the rural population. By con-

¹² ÖNB Mxt 566, 84–90.

¹³ ÖNB Mxt 614.

¹⁴ We may confidently assume that some of these soldiers had a Balkan background since many had come from Trebizond

and we know that many from the Balkans served in the garrison there. Cf. VILLAIN-GANDOSSI 1983, 127–147. It is therefore possible that some of the soldiers coming from Trebizond were in fact Serbians and Bosnians.



Ill. 3. Left field: Regions and localities mentioned in the text. Right-hand corner: Hungary in 1570, showing the location of the left field

trast, only 68 per cent of the recruits from the *sancak* of Zvornik had been born Muslims and only about one half of them (47 per cent) came from villages.

The Serb district included Serbia and the region between the Drava and Sava rivers. In 1543 Serbia contributed 79 recruits for the *müstahfiz*es of Fehérvár, while the region between the Drava and Sava provided 10 soldiers. By 1557 this ratio had changed spectacularly: 116 recruits from the Serbian *sancaks* and 120 from the Drava–Sava area had joined the garrisons of the *vilayet* of Buda. Clear centres can be noted within these two areas. Under the Ottoman administration Serbia covered four and a half *sancaks*: the *sancak* of Smederevo (the largest), the *sancak* of Alacahisar (Kruševac); the *sancaks* of Vučitrn and Prizren in the south and southwest (whose joint territory barely totalled that of the Smederevo one); and the southwest part of the *sancak* of Vidin. Of the 116 Serbian soldiers in the *vilayet* of Buda, 107 came from the *sancak* of Smederevo, i.e. from northern Serbia, with only 9 recruits arriving from the more southerly *sancaks*. A similar pattern can be noted in the Drava–Sava region. Here the core area was the *sancak* of Syrmium (Sirem in Turkish) that gave 85 soldiers, in contrast to the more westerly ones from where only 35 recruits had arrived. In other words, there was a veritable outpouring of recruits from the Serb-inhabited area consisting of northern Serbia and the adjacent Syrmium region, while only a trickle came from other areas.

The proportion of Muslims by origin among the soldiers from Syrmium and northern Serbia is conspicuously high (almost 50 per cent), while that of new converts is low (13 per cent in Serbia and 18 per cent in the region between the rivers). An explanation of this phenomenon can be gained from a closer look at the proportions of soldiers arriving from fortresses, towns and villages. The majority of the soldiers from both areas came from fortresses: 69 per cent of the new arrivals from Serbia and 82 per cent of those coming from the region between the rivers. There can be no doubt that the creation of the Turkish fortress system in Hungary played a major role in this. By the mid-sixteenth century the importance in the defence system of the forts lying south of the River Drava had diminished. Some of the forts in the region between the two rivers were evacuated and the strengths of the remaining garrisons were cut.¹⁵ Many soldiers found themselves unemployed; and their sons, who had reached adulthood since the Ottoman occupation of the territory, swelled their numbers. The reserve and supply role of the military and administrative centres lying along the two great rivers can also be felt.

The place of origin of the Christian soldiers serving as *martoloses*, or, more rarely, as artillerymen or salaried artisans, was northern Serbia and the region between the Drava and Sava rivers. The Chris-

¹⁵ ZIROJEVIĆ 1976, 100–116.

tians from Serbia (they were Serbs and Vlachs) serving in Hungary had without exception arrived from the *sancak* of Smederevo and from the western half of the *sancak* of Vidin. Three-quarters of the newcomers from the Drava–Sava region came from the *sancak* of Syrmium (Sirem) and one-quarter from the *sancak* of Požega; most came from rural areas.

The third payroll, again containing a full list of the salaried garrisons in the *vilayet* of Buda, was drawn up the following year, in the year 966 of the Hegira, i.e. in the period between 14 October 1558 and 2 October 1559.¹⁶ If the clerk had been conscientious throughout, this would no doubt be the best of all possible payrolls. When he was so inclined, he recorded personal data not just for new recruits, but also for every soldier. Some pages he filled with writing while others he supplied merely with a list of names. Nor was he consistent even for individual forts, since he paid special attention to certain branches of service and neglected others. For some soldiers he recorded personal data, while for others he wrote down the family background and relatives, every now and then making a note of whether a man was married. Although a detailed and complete picture cannot be pieced together from these odds and ends, the relevant albeit slightly erratic personal data of some 1300 soldiers can nevertheless be studied to good effect. I tried to discover the areas from which the ranks of the different formations – whose fighting value, tasks, prestige and remuneration varied considerably – were replenished. I found that as one proceeds from west to east, from Bosnia to Nikopol across the northern sweep of the Balkans, one encounters, successively, the pools of branches of service in decreasing order of estimation, the single exception being the artillerymen (*topçıs*), who required a certain specialized knowledge and training and who were recruited from a number of regions, including those of Edirne and Istanbul.

Concerning the two most valuable branches of service, the infantry *müstahfiz* and the cavalry (*farıs*, called also *ulufeciyan-ı sıvvari* or *beşli*) garrisoning the forts, the former places of residence of only 613 soldiers are known. Sixty-four per cent of these soldiers came from Bosnia and Herzegovina and 23 per cent from Serbia, from the Vidin area and from the Drava–Sava region. One-third of the less prestigious infantry *azabs*, whose branch of service absorbed the majority of the men who took up soldiering, originated from Serb-speaking territories. The *martoloses* came from Serb and Vlach districts: 278 of the 331 new *martolos* recruits arrived from these areas. Most had come from northern Serbia, with villagers setting out for Hungary from the Danube–Morava–Timok region, the largest settlement area of the semi-military Vlach population in the northern Balkans.¹⁷

Study of the payrolls reveals that the garrisons in the *vilayet* of Buda were almost exclusively replenished from the northwest regions of the Balkan Peninsula, from Herzegovina, Bosnia, northern Serbia, and the region between the Drava and Sava rivers. The first two regions provided men born into Muslim families, from forts and civilian settlements in roughly equal proportions. These men were usually assigned to the more highly valued branches of service with a better record of combat worthiness in the garrisons of Ottoman-ruled territory of Hungary. Most of the Christian soldiers came from northern Serbia, mostly from the Vlach area. The proportion of Bosnians was probably higher than the records show, since the Drava–Sava region appears to have been as much a transit station in the south–north flow as a provider of soldiers. This impression is supported by a few cases in which the place of origin of an individual soldier lies somewhere in Syrmium (Sirem), but when his name is, for the sake of argument, Hasan Bosna, i.e. Hasan of Bosnia. In other words, the majority of the “Turks” garrisoning the forts in Hungary were drawn from Balkan peoples: Bosnians, Serbians and Vlachs, who – with the exception of the *martoloses* – had exchanged their original Greek Orthodox faith for Islam.

In the absence of relevant documentary evidence it is impossible to determine the situation in the *vilayet* of Temesvár, or to know whether this situation changed in the seventeenth century. It would not come as a particularly great surprise if a similar analysis of the records reflected a comparable dominance of Serb and Lower Danubian elements. Knowing as we do that the destroyed and deserted villages of the *vilayet* of Temesvár were repopulated by groups from neighbouring northern Balkan areas, it seems likely that the soldiers garrisoning the *vilayet's* forts came from the same region. At the moment, however, we cannot be sure that this was the case, nor can we say whether the situation changed in the seventeenth century. It should here be recalled that the Turkish grammar book drawn up in Hungary in 1668 recorded the Bosnian Turkish dialect. In his description of Buda, which dates from the same period, Evlia Çelebi noted that “the entire population of Buda is made up of Bosnians from Bosnia”.¹⁸

Soldier-peasants in Hungarian Baranya

The first soldiers of the Ottoman Turks as they expanded into Asia Minor and the Balkan Peninsula were drawn from the ranks of mounted nomads. A long path led from this initial force to the Ottoman army that occupied one-third of Hungary in the mid-

¹⁶ ÖNB MxI 633.

¹⁷ BELDICEANU – BELDICEANU-STEINHERR 1955; BELDICEANU 1957; 1966; BOJANIĆ-LUKAČ 1968–1969.

¹⁸ EVLIYA ÇELEBI 1900, 247.

sixteenth century. The main elements of this army are fairly well known. By contrast, considerably less is known about the many thousands of "tax-exempt soldier-peasants" who supported the sultans' field armies and fortress garrisons in the occupied territories with both arms and labour. They had already participated in the western Anatolian campaigns of the early fourteenth century. From Anatolia they were transferred to the Balkans, where groups joined them that had already served in a soldier-peasant capacity under Byzantium and other Balkan states. The peasant masses that took up soldiering under Ottoman rule are usually called "privileged *re'aya*". Their tasks included genuine military service, defence of the empire's frontier and various auxiliary services for the army, as well as tasks that can hardly be regarded as military, such as mining, the grooming of the sultan's horses and the raising of falcons used in the sultans' hunts. The privileges of these "privileged *re'aya*" included partial or total tax exemption in exchange for military or semi-military services.

Some important groups of these privileged *re'aya* are known from Hungarian history. These included the *martoloses* and Vlachs living in villages whose task was the defence of the border. They can be compared to one of the earliest such groups originating from Asia Minor, the *müsellems*. The last mentioned were exempt from taxation (the name itself means "tax-exempt") and in the fifteenth century still performed genuine military service, although by the sixteenth they performed auxiliary services only. These were the three soldier-peasant organizations set up by the Turks in their Hungarian provinces also. There were initial attempts to base this system on the Hungarian population, but these were met with total failure. The organizations of these *müsellems*, the *martoloses* and the Vlachs proved successful in the southern areas of the *vilayets* of Buda and Temesvár, whose destroyed and deserted villages were repopulated by Serbs and Vlachs from whose ranks these soldier-peasants were traditionally replenished.

The creation of these soldier-peasant organizations was based on the 'Turks' first population and tax surveys in 1545–1546. It seems an unusual and not particularly shrewd decision that while the southern part of the region between the Danube and Tisza rivers had been strongly Serbicised as a result of a rather sweeping population change, the first privileged semi-military organization of *re'aya* entrusted with the protection of the border had been set up in Baranya, which at the time had a purely Hungarian population. This experiment could at the time be

justified by means of several rationales. From a military point of view, Ottoman-ruled Baranya was considerably more vulnerable: the occupied territory in which the survey had been carried out in 1545–1546 extended all the way to the Szigetvár area and only the lone Turkish fort at Görösgal protected the border, while two major strongholds – Pécs and Siklós – lay much too far to the east. Another major difference was that while the arrival and subsequent migration of Balkan groups continued for some decades in the southern areas of the abovementioned Danube–Tisza region, in Baranya the system could be based on a stable population. The Turks no doubt deceived themselves that this population could be used for the same purposes as the Serbs and Vlachs south of the Drava and Sava rivers.

Be that as it may, the 1545–1546 survey¹⁹ for Baranya and those drawn up five and six years later²⁰ indicate that *müsellems*, tax-exempt peasants, abounded in fairly wide zones along the western boundary of the Ottoman-dominated region. Forming two crescent-shaped zones, their villages framed the occupied territory of Baranya, first and foremost the unfortified centres of the smaller administrative units, the *nahiyes*, set up along the border. The upper crescent began at Szentmárton, a *nahiye* seat, connecting it with Szentlőrinc, another centre lying to its south. From here, the zone turned south-east, its furthest points being Felpós, west of Siklós, and Kövesd east of it. The villages inhabited by the *müsellems* were most dense in the section protecting Szentlőrinc, becoming scarcer around Siklós. The other, southern, crescent began at the villages of Hatvan and Kálmán, both lying north of Görösgal, and extended southward to the Drava, following its northern bank towards the east. The densest cluster of villages encircled two *nahiye* seats, Vaskaszentmárton and Selény (present-day Sellye). Relatively few *müsellem* villages ringed the sole fortified place, Görösgal; the protection of this border-section was the task of the 105-strong garrison of salaried troops stationed in that stronghold.²¹

Müsellems were registered in a total of 69 villages lying in the border zone between Szentmárton and Siklós, in the northern crescent, while a total of 21 villages were allocated to the *müsellems* in the south, in the crescent between Görösgal and the Drava. In practice this meant that there were at least 90 villages from whose inhabitants *müsellems* were picked out. One important feature is that this system was introduced exclusively in the villages along the boundary of the territory taxed by the

¹⁹ For the survey of the *sancak* of Mohács, cf. Başbakanlık Osmanlı Arşivi, Istanbul (abbreviated as BOA in the following) Tapu 441; KÁLDY-NAGY 1977, 11.

²⁰ In 1550–1552 the area was divided into two *sancaks*, the *sancak* of Mohács and the *sancak* of Görösgal: These two together contained those settlements included in the earlier Mohács *defter*. For the Mohács survey, cf. BOA Tapu 443, dated to 1550–1551; KÁLDY-NAGY 1977, 12. For the survey of the Görösgal, cf. BOA Tapu 646; for its dating cf. FODOR 1981, 370, note 98. I identified the toponyms mentioned in

the survey in part from KÁLDY-NAGY 1960, and in part from P. Engel's maps. Cf. *Magyarország a középkor végén. Digitális térkép és adatbázis a Középkori Magyar Királyság településeiről* [Hungary in the Late Middle Ages. Digital map and database of the settlements in the medieval Kingdom of Hungary]. Budapest 2001.

²¹ ÖNB Mxt, 581, 55: the accounts of the Buda Treasury for the soldiers and their salaries in the forts of the *vilayet*, for the quarter year between 6 December 1545 and 3 March 1546.

Ottomans, as shown by the *defter* of the roughly one thousand settlements in the *sancak* of Mohács, suggesting that the defence of the western border and the Drava was seen as the duty of these peasants picked for military service.

According to the general practice of the Anatolian and Balkan soldier-peasant organizations, peasants participating in the system were assigned to three-, four-, five-, ten-, fifteen- and, occasionally, fifty-strong units called *ocak* from which one man had to report for service, while the others had to bear the costs. The organization of the Baranya *müsellems* differed from this system. A total of 543 men – mostly heads of families and a few unmarried men – were registered as *müsellems* in these 90 villages. Fortunately for us, at one place the list records what the authorities expected from these men, otherwise we could no more than guess whether they were enlisted for military service, road construction or horse grooming. Following the enumeration of the five heads of families and two unmarried men in their families living in Artesház, a tiny village lying between Szentlőrinc and Görösgal, the *defter* notes that “one part of the aforementioned are *müsellem*, the others are *müsellem re'aya*; if the sultan or the *sancakbeyi* leads a campaign, the *müsellems* mount their horses in exchange for their [exemption from] tithe and taxes; this is how they were entered into the new sultanic *defter*.”²² The *defter* records neither the number of tax units, nor the taxes of the villages, implying that the *müsellem* inhabitants of Artesház enjoyed total tax exemption and they had to perform military service for the sultan. A glance at the tax units listed for the other villages reveals that the *müsellems* in Baranya did not take turns in performing various services: each and every one of them enjoyed tax exemption and they were all obliged to take up arms in time of war. They had a few helpers, the *müsellem re'ayas*, who enjoyed partial tax exemption. Seventy-eight such *müsellem re'ayas* are mentioned and there is no apparent rationale as to why some *müsellems* had twelve such helpers while others only had one, seven or none at all. Their role, too, remains unclear. The remark quoted above would suggest that they did not perform military service, while examination of tax units and taxes reveals that they were only exempt from the so-called “gate tax” (a kind of tax paid in cash by houses) paid to the landholder. The most likely explanation seems to be that sixteen *müsellems* acted as some kind of headmen and that their helpers were the *müsellem re'aya*.

The bottom line was as follows: at the time of the first survey in 1545–1546, a total of 543 peasants in 90 villages were granted tax exemption as *müsellems* and obliged to render military service along the western border of the Ottoman-dominat-

ed area in Baranya, while 78 were given partial tax exemption as *müsellem re'aya* and were obliged to render assistance to the former. These privileged men made up a good third of the entire population in their villages, indicating that the Treasury was willing to forego one-third of the potential revenue from these villages in exchange for the protection of the empire's southwest border in Hungary.

The registers drawn up five years later in 1550–1552 show that this system did not fulfil the hopes attached to it. Since there was no serious fighting in this area following the occupation of the forts in Tolna and the conclusion of a peace treaty in 1547, the *müsellems* could enjoy their tax exemption in peace. Nothing came of the idea that the 44 *müsellems* living in Nagyváty would mount their horses and, after receiving a blessing from their three priests, they would set out for Szigetvár led by their four scribes. After little more than half a decade the system was already on the decline. In the second survey of this territory, contained in two *defters*,²³ only 191 *müsellems* in 59 villages are mentioned in contrast to the earlier 543 in 90 villages. No mention is made of *müsellem re'aya*.

The 59 villages in question still formed two crescent-shaped zones, but followed the line of the border more loosely. The 46 villages in the first zone protected Szentmárton from the south. These villages were dense in front of Szentlőrinc, but scarcer in the eastern areas towards Siklós. The second, Görösgal, zone had a total of 13 villages. Although its location remained unchanged, its density was a thing of the past and its section extending to the Drava had all but disappeared. The first survey had registered an average of six *müsellems* per village, this *defter* recorded slightly more than three, even though the population did not change; the *müsellems* of five years earlier remained in their villages, but as tax-paying *re'aya*. Only 16 per cent of the 1203 heads of families in the 59 villages were tax exempt.

The records from the 1570s reflect the total collapse of the system. The *defters* of the *sancak* of Pécs from around 1570²⁴ mention *müsellems* in only three settlements: two in Szentgál, two in Szentmárton and one in Siklós, i.e. a total of five, three of whom were town-dwellers. None remained by the time of the 1579 survey.²⁵ The organising of tax-exempt Hungarian peasants performing military service as border guards and in various combat units simply ceased, since it became apparent that it was much too alien to the region and its population. True enough, there was no longer any need for it as a chain of Turkish forts and fortresses had already been created along the western border of Baranya and in Somogy. Troops were temporarily garrisoned in Szentmárton, Szentlőrinc and Selény during the

²² BOA Tapu 441, 144.

²³ See note 20.

²⁴ BOA Tapu 1012. The three settlements mentioning the *müsellems* can be found on pp. 40, 101 and 133 of the *defter*.

²⁵ BOA Tapu 585.

1550s, and the villages of the *müsellems* ringed these settlements during the period when they were still unfortified. From 1566 onwards a number of strongholds, such as Szigetvár, Babócsa and Berzence, protected the border. To these was added the palisade at Barcs on the Drava, and in the 1570s Turkish troops were also posted at Segesd and Szócsény. The chain of forts in southwest Transdanubia became one of the strongest defence zones of the Ottoman-dominated territories. This chain proved unable to hold up the Hungarian raids from Szigetvár and, after its fall, from Kanizsa, all the way to the Danube, but it also became clear that the *müsellems* would hardly remedy this situation.

The Balkan population and soldier-peasant organizations of the southern part of the region between the Danube and Tisza rivers

The creation of soldier-peasant organisations seemed more promising in areas that had been inundated by Balkan population groups in the sixteenth century.

This population change first occurred in the Bácska area. Süleyman's campaigns in the 1520s and the destruction that followed in the wake of Jovan Černi's 15,000-strong army effectively swept out the Hungarian population, which was eventually replaced by Balkan groups. This "cleansing" was finished by the time of the first Turkish survey in 1546 and although the mass immigration was over by 1560, a trickle of newcomers continued. Only three Hungarian heads of family (they lived in Nagyszonta, in the *nahiye* of Bács) were registered in the 83 settlements of the *nahiye* of Bács and the 27 settlements of the *nahiye* of Titel, the two southernmost districts of the *sancak* of Szeged; the rest of the population was Balkan.²⁶ North of these two districts, the newcomers settled in only ten villages of the *nahiye* of Szeged. Populated by a mixed Hungarian/Serbian population, Adorján, the northern neighbour of Zenta, was the last village containing Balkan groups; the other settlements up to Szeged and beyond were Hungarian. Likewise, the *nahiyes* of Csongrád and Kalocsa were Hungarian inhabited.²⁷

The Bács and the Titel districts were similar in that their populations had become entirely Balkan by 1546, although there is a difference as to when

the population change actually occurred. The villages of the *nahiye* of Bács were small; their inhabitants were poor and the surviving documents clearly reveal that they were impoverished immigrants. The *nahiye* of Titel gives an inkling of slightly more consolidation, suggesting that the re-settlement of these villages had begun somewhat earlier. The villages were larger and clearly wealthier: the inhabitants of the 27 villages included 13 priests and 6 *kalud'ers* (monks). (By contrast, only 11 priests were listed for the 83 villages of the Bács district.) This impression of the sequence of immigration is fully borne out by the 1560–1561 survey of the *sancak* of Szeged.²⁸ The *sancak* was divided into seven *nahiyes* at this time. The population of three southern districts, the *nahiyes* of Bács, Titel and Zombor, was purely Balkan, while that of the *nahiye* of Szeged, lying roughly in line with the *nahiye* of Zombor, was for the most part Hungarian. Moreover, the *nahiye* of Vásárhely was predominantly Hungarian, and the northernmost *nahiyes* of Kalocsa and Solt had purely Hungarian populations. According to the survey, extensive migrations continued in the southern areas of the *sancak* between 1546 and 1560. The newcomers settled in 163 deserted settlements not mentioned in the *defter* at the time of the first survey (*haric-iz defter*). The census reveals that of the 41 inhabited settlements of the *nahiye* of Titel, 16 had been freshly settled, while 71 of the 120 inhabited settlements in the *nahiyes* of Bács and Zombor were similarly "new"; in other words, the majority had been founded recently. There were only nine Hungarian heads of family in the three southern *nahiyes* that were in effect Balkanised (these Hungarians were registered in the settlement next to the Turkish fortress at Szabadka); and only 21 of the 55 heads of family in Kolud (Küllöd) in the *nahiye* of Zombor, which had a mixed population, bore Hungarian names.²⁹

By the 1570s the *sancak* was reorganized into nine *nahiyes*.³⁰ The two new districts were the *nahiyes* of Baja and Szabadka, the latter incorporating the northern part of the *nahiye* of Titel. The southern part of the *sancak* was now divided into five *nahiyes*, all of which had a Balkan population. Küllöd had a mixed population until the end of the decade, as did Berjeg, its northern neighbour, and Magyszonta in 1578. Apart from these, only four villages of the 29 inhabited places in the *nahiye* of Baja had a Hungarian population (Szeremle, Monostor, Csanád and Besnyő). Three Balkan villages

²⁶ For the edition of the surveys in the two *nahiyes*, cf. DJURDJEV – ZIROJEVIĆ 1988. The authors dated the survey to between 1545 and 1548. It can most probably be dated to 1546, most likely being part of the first surveys by Candarlizade Halil Bey. FEKETE 1968 dated the Hatvan survey, prepared at the same time as the Szeged one, to 1550; this earlier dating was suggested by Ferenc Szakály after his study of the Gyöngyös survey: he noted that a few men whose names appeared in the 1550 Turkish *defter* were represented by their widows in the 1548 tithe register and the same conclusion can be drawn from a comparison of the surveys drawn up for other settlements. It thus seems probable that the first survey in

the *sancaks* of Hatvan and the Szeged was carried out at the same time as in the *sancak* of Buda, i.e. in 1546.

²⁷ Published by VASS 1979a; 1979b. These surveys can similarly be dated to 1546.

²⁸ BOA Tapu 332, dated to the year 968 of the Hegira (22 September 1560–10 September 1561).

²⁹ Pp. 254 and 241 of the *defter*.

³⁰ Two detailed surveys have survived from this decade, the first from the time of Selim II (1566–1574), more specifically from around 1570 (BOA Tapu, 554), the other from 1578 (BOA Tapu, 570). The second is available for study in Tibor Halasi-Kun's handwritten transcription. A third *defter* is a copy of the 1578 one with a few corrections.

appeared along the southern boundary of the *nahiye* of Kalocsa in 1570 that had hitherto been purely Hungarian, and an additional three were registered in 1578 that lay in a cluster southeast of Kalocsa (Orbágy, Hajósszentgyörgy and Ild). This cluster represents the northernmost Balkan expansion along the Danube, while Szeged represents the northernmost one along the Tisza. The area north of the line connecting these settlements was Hungarian inhabited. The same boundary can be observed in the survey of the *cizye* taxpayers of the *sancak*, completed on 20 November 1591.³¹

It is difficult to determine which nation, or nations, these Balkan groups came from. It would be useful to be able to separate the Serbs and the Vlachs, but this is virtually impossible. Similarly, one may also only surmise, albeit with a high degree of probability, that most of the salaried *martoloses* who served in the forts of the *vilayet* of Buda (they arrived from the largest northern Balkan settlement territory, from the Vidin, Smederevo and Braničevo areas) were indeed Vlachs. This is suggested not only by their places of origin, but also by the Vlach practice of rotational service that can sometimes also be noted among the salaried troops garrisoned in the forts. In cases when there is no indication of these features, or of the Vlachs' legal status, the names in themselves do not allow conclusions of this kind. The Vlachs had mingled with the Serbians and the Bulgars in the northern Balkans; they had adopted each other's names and this mingling continued in Hungary. Moreover, when written in Arab letters the names Niku and Niko appear the same. So do the names Ilie and Ilia, and the names Ioan and Jovan. Nor is there any difference between names beginning with Drak- and Drag-; for example, Drakul and Dragul are written identically.

Many Romanian names crop up in the registers not only of soldiers, but also of inhabitants of villages. These include Drakul and Drakula, Ion, Radul, Avram, Vlad, Mircea, Barbul, Bogdan and Grigor, Gheorghe (as opposed to G'ura and G'urik), Mihail (as opposed to Mihal and Mihaylo), and Petre (as opposed to Petar and Petri), and it seems quite probable that many Vlachs were called Vuk, Ilie or Nikola. If the Romanian form of the most often occurring Ioan/Jovan makes up just half of the total, this would still mean several hundred men. The problem is that Southern Slavs often bore a Vlach name and the Vlachs a Southern Slav name. The names listed in these registers are made up of two parts, the name of the individual in question and the father's name. A certain degree of mingling can already be observed here, and if the names of the registered individual's unmarried sons and brothers are also recorded, the confusion is even greater. In one case the grandfather is called Vujić, the current head of the family is one Nikola

and his sons go by the names of Bogdan and Ilie; elsewhere a randomly chosen generation has Skrasov, Nikola and Mircea. (It is most instructive that a mingling of the names can be noted even in rare cases when Hungarians and Balkanic groups lived together in the same village: a certain Ambrus Gáspár in the town of Kolut named his son Ivaniš, while Gál Borbás of Nagyszonta called his son Živko.) Purely Romanian names are very rare.

In this period Vlach designated not only an ethnic group, but also the name given to transhumant pastoralists on both sides of the Carpathians. In the Turkish usage, Vlach designated a community of soldiers-peasants that was granted certain privileges, so-called Vlach rights (termed *ius valachium* in Latin, *vlaški običaj* in Serb and *adet-i eflakiye* in Turkish). The nature of these rights will be discussed below, in the section on the Vlachs in Somogy, since I did not find any groups with Vlach legal status in the *sancak* of Szeged. This region had a mixed Balkan population that also included Vlachs, both in the ethnic and the military sense of the term, as indicated by the names and a few smaller telltale signs. We may add that smaller and larger Muslim communities appeared in the southern *nahiyes* of the *sancak* of Szeged, primarily those lying along the Danube. These Muslims were, like the Muslim soldiers serving in the garrisons, probably of Balkan origin, as shown by their "neo-Muslim" names – such as Abdullah's son –, and by the fact that these Muslim communities were headed by a *kethüda*, a Turkish village judge, and a *primikur*, his Southern Slav–Vlach counterpart.

There are no signs of the existence of soldier-peasant organizations in 1546 in the Balkan population of the *sancak* of Szeged. By 1560–1561, however, we find that 11 per cent of households, 397 of the 3644 Christian tax units, the *hane*, were tax exempt to some extent in the three southern districts, the *nahiyes* of Titel, Bács and Zombor. Twenty-five *müsellems* were registered in the *nahiye* of Bács and 131 *müsellems* in the *nahiye* of Zombor. A minority lived dispersed in villages, but the majority – a total of 102 men – were settled in just three earlier depopulated villages between Zombor and Baja: Aranyas, Gara and Borsód. They appear as a separate entry in the *defter*, following the survey of the *nahiye* of Zombor,³² and they are listed not according to their village, but according to their military unit, serving under a commander and various corporals. The reason for their settlement is given at the beginning of the roster of these *müsellems*. The three villages lay on the Buda road that was constantly subject to ambushes by the "mounted and foot *haiduks* [soldiers]" from Eger, Gyula and Szigetvár, three Hungarian fortresses. The task of the *müsellems* company was to "staunchly protect the travellers and the population of the area from the ambushes of the *haiduks* and to prevent the damage and harm they cause". Its members enjoyed full tax exemption for

³¹ ÖNB Mxt 534.

³² BOA Tapu 332, 249–252.

this service. Perlek, on the opposite side of the Tisza, was settled in a similar manner to protect the road from Petrovaradin to Szeged.³³ Although the text does not specifically mention *müsellems*, the pattern was almost the same: the fifty mounted peasant soldiers of the village protected the road and its environs from the Hungarians' raids and enjoyed tax exemption in return.

As well as these *müsellems*, the *nahiye* of Zombor raised 60 *martoloses* who were not salaried soldiers, nor were they stationed in forts; they lived in various villages. Since *martoloses* were entrusted with the protection of the empire's borders in the northern and western Balkans, it seems fairly likely that they had to perform a similar task in this area, too. Although the southern areas of the *sancak* of Szeged can hardly be regarded as the borderland of Ottoman-dominated territory, to all intents and purposes it functioned as such owing to the continuous raids and tax-collecting sorties of the Hungarians.³⁴ It seems like that, as with that of the *müsellems*, the organization of the peasant *martoloses* was established to counter the Hungarian raids. Its members were appointed by means of a diploma issued by the sultan. Unfortunately, because of the existence of different types of freeman, their privileges cannot be specified exactly, but it seems that some were exempt from the *cizye* while others were exempt from the gate tax. In other words, some were exempt from a tax payable to the state while others were exempt from a tax payable to the landholder.

Although the soldier-peasant organizations set up in the *sancak* of Szeged did not collapse as swiftly as the ones in Baranya, they, too, did not live up to the expectations attached to them, at least as regards the peasant *müsellem* and *martolos* organisations. The register drawn up sometime around 1570 mentions only 31 *müsellems*, most of them in the *nahiye* of Zombor. In rural areas not one *martolos* is mentioned; they appear only as salaried troops stationed in various forts. The villages of Aranyas, Gara, Borsód and Perlek – where the *müsellems* had been settled in groups of fifty and one hundred mounted men – were taxed in the standard way. Comparison of the register of their inhabitants compiled in 1560 with the one drawn up in 1570 clearly reveals that the *müsellem* organization did not fulfil the role intended for it. In one decade the population of these four villages had changed almost totally: in Borsód and in Aranyas respectively, only five of the former inhabitants remained, while in Gara the figure was three and in Perlek just one.³⁵ I compared the lists of the inhabitants of several villages: as it turned out, population movements were quite strong in other regions too, and their effect could still be felt in 1578. An efficient and enduring military organization could hardly be based on a constantly shifting and migrating population. As in Baranya, it soon

became clear that if the forts and their garrisons were unable to stop the Hungarian raids, the soldier-peasants would not be able to do so either.

The military command did not give up so easily, and tried another approach up until 1578. Only two of the remaining *müsellems* were left in a village, the others were relocated to the two northernmost fortified *nahiye* seats of the region inhabited by the Balkan groups: thirty-six *müsellems* were stationed at Szeged and seven at Baja. The *müsellems* thus shared the fate of the *martoloses*: instead of remaining soldier-peasants, they became professional soldiers. At the same time, among the peasants two new categories – whose interpretation is rather uncertain – appear in the registers. The word *miri*, meaning “belonging to the state” or “belonging to the Treasury” appears above one group of individuals, and the word *maktu*, meaning the payment of a lump sum in collective taxes, above another. A closer look at the tax units and tax revenues reveals that the *miris* enjoyed partial tax exemption and paid their taxes to the Treasury, while in the *maktu* system they were obliged to reach an agreement concerning their tax through bargaining, even though this tax, too, was paid to the Treasury. In other words, these were privileged peasants, ninety-four in all, but it is unclear whether they were obliged to perform military service.

To some extent, the uncertainties concerning the peasant soldiers can be resolved by taking an additional aspect into consideration, namely their officials and commanders. A multi-tier system was introduced in the Balkans. *Beys* independent of the territorial division were appointed to head the largest organizations: these were the *müsellem beys*, the *akıncı beys*, etc. who represented the central government. Local officials all came under their authority. The highest-ranking among these was the *kenez*, a member of the Ottoman military hierarchy who, in a given district, was the military commander of the soldier-peasants on the one hand and their civilian official on the other. *Kenezes* were appointed to their posts by, and received their *ex officio* estates from, the sultan; they attempted to make both hereditary within their families, with higher official consent.³⁶ The lowest tier in this hierarchy consisted of village headmen, *primikurs*, who for a long time simply carried out orders from above and occasionally also helped out with the performance of military tasks. In the sixteenth century, when the Balkan peninsula was no longer a battlefield, this system underwent a slow transformation. The soldier-peasants had fewer military duties, their privileges were cut back and their headmen set out on the path that would eventually transform them into civilian officials as the representatives of local communities.

The headmen of the Ottoman-dominated territories of Hungary settled by Serbs and Vlachs essentially

³³ *Ibid.*, 30–31.

³⁴ SZAKÁLY 1981, esp. 60–91.

³⁵ BOA Tapu 554, 160, 171–172, 185–186.

³⁶ Cf. DJURDJEV 1948, 132–166, of the many excellent studies on the *kenezes*.

followed the same path, although it seems likely that they acted as military leaders for a longer period of time than their counterparts south of the River Sava. In 1560 the *nahiyes* of Bács and Zombor, the two districts of the *sancak* of Szeged that had the highest number of *müsellems*, each had 4 *timar*-holding *kenezes*, and most of the villages were headed by a *primikur*. By around 1570 the number of *kenezes* had risen to 12 in the *sancak* as a whole. By 1578 this number was 31, and there was hardly a village that did not have a *primikur*. Although the *kenezes* had by this time been ousted from the ranks of those enjoying *ex officio* estates, their full tax exemption far surpassed the partial tax exemption of the leaders of Hungarian villages and it seems quite certain that in 1578 they were more military commanders than village headmen. It is also probable that the enigmatic *miri* and *maktu* peasants of the 1578 survey had, in some way or other, performed genuine military service, since the rise in the number of their headmen would not make sense otherwise. Be that as it may, the 1578 *defter* shows that the five districts of the *sancak* of Szeged that were inhabited by Balkan groups included 45 *müsellem*, 65 *miri*- and 29 *maktu*-status individuals, as well as 31 *kenezes*, i.e. a total of 170 tax-exempt soldier-peasants all serving the army in one form or another. It is possible that they were only required to perform auxiliary services since if the wholly tax-exempt, "full-time" mounted *müsellems* were found to be incapable of checking the raids of Hungarian soldiers serving in the border fortresses, then the partially tax-exempt peasants who only performed military duties "part-time" were even less likely to be able to do so. The figure of 170 peasant soldiers perhaps seems too low, but this is number is slightly misleading since we know that at this time the garrisons in the forts of the *sancak* of Szeged numbered around 300 (excluding the garrison of the Szeged fort).

Vlachs in the counties of Somogy and Tolna and along the Danube

In the absence of surveys, the subsequent fate of the soldier-peasants in the *sancak* of Szeged remains unknown. Beginning in 1570, however, we witness the appearance of settlers in the counties of Somogy and Tolna up to Földvár on the Danube who are called Vlachs (or *Oláh* when the Turkish authorities wrote in Hungarian). There can be no doubt that this was an ethnically mixed population (the overwhelming majority of the names are Southern Slavic) with a Vlach legal status.

The Vlach legal status was clearly defined in the code of Mehmed II (1451–1481), and it did not change under his successors.³⁷ The Vlachs were privileged peasants (mostly herdsmen) obliged to

perform genuine military service who paid a most favourable lump sum tax to the state. The basic unit of their community was the family (household); in the last decades of the fifteenth century every five families were obliged to furnish a soldier for the ongoing defence of the Smederevo–Vidin region (the stipulation was every ten or, more rarely, fifteen families in Bosnia and Herzegovina), although in time of war each family had to provide one mounted soldier. The greater part of the tax due was levied on the family. The basis of this tax was the *filori* tax, this being the reason that *filorici*, or *filori*-payer, became a synonym for Vlach. Each Vlach household had to pay a gold *filori* (florin), the equivalent of 45 *akçe*, to the Treasury; to this sum were added a few smaller payments during the year, such as the calculated value of a ram and ewe. The other obligations were transferred to the *katun*, as the Vlach communities were called (the name *katun* designated both the group that herded its animals together and their permanent camps). Twenty *filori*-paying households were regarded as one *katun* in northern Serbia in 1476, while in later laws this number rose to around fifty, and the other obligations – one tent, one set of horse-harness, two rams, etc. – were levied on this unit. Converted into money, this initially meant a burden of some 75–83 *akçe*, later of around 90 *akçe*, per household. This was a fairly modest sum that covered all obligations towards the Treasury, and since Vlachs were partially tax-exempt, seigneurial taxes and tithes were not payable in their case.

A most unpleasant change occurred in the life of the Vlachs in the sixteenth century as more and more of them came under seigniorial authority. A Vidin law from the later sixteenth century mentions that the *filorici* appealed to the sultan, asking that even if their former privileges based on the *filori* tax were to be abolished, at least their tithes and other taxes should not be placed in the hands of the more ruthless *sipahis*, but should remain part of the sultan's revenues.³⁸ A brief summary of the household and seigneurial taxes of the Vlachs of Syrmium (Sirem) from 1558³⁹ reveals that taxpayers were divided into five categories: the wealthiest paid an annual 81 *osmani* (about 61 *akçe*), while the poorest – the widows – paid an annual 6 *osmani* (about 4.5 *akçe*). If we add to this the old tax of 90 *akçe* that was paid to the Treasury, even the wealthiest did not have to pay more than 150 *akçe*. (This overview also indicates the extent to which those with Vlach status migrated to areas north of the River Sava: a total of 10,018 households were registered in the *sancak* of Syrmium.)

Vlachs first appear in the *defters* for the counties of Somogy and Tolna in 1570.⁴⁰ The 61 registered heads of families settled in 7 deserted villages, most

³⁷ For Mehmed II's Herzegovina and Smederevo *kanunname*, cf. AKGÜNDÜZ 1990a, 494, 527–528; for Bayezid II's *kanunname* for the Vlachs of Braničevo, Vidin, Smederevo, Bosnia and Herzegovina, cf. AKGÜNDÜZ 1990b, 73, 380–381, 406–409.

³⁸ CVETKOVA 1978, 63.

³⁹ ÖNB Mxt 591, 67.

⁴⁰ BOA Tapu 563, 81–84 and 117–118; for a detailed discussion of the *sancak* of Simontornya, cf. DÁVID 1982.

of which lay around Tamási in the *sancak* of Simontornya. By 1580 the number of these villages had risen by one, while by 1590 one Vlach village had been abandoned.⁴¹ As opposed to this rather faint presence, the inflow of the Vlachs into Somogy or, to be more precise, into the *sancak* of Koppány was continual. The 1570 tax register lists 29 villages, while the contemporary *timar defter* (the register of the landholders) mentions a further 3 villages, giving a total of 32. The regulation of their tax burdens was from the very beginning based on the fact that both in Somogy and in Tolna they had to pay seigneurial taxes as well. Their tax obligations were practically identical with those of their brethren in Syrmium: a tax of 150 *akçe* that also included the *filori* tax and payment of the seigneurial tithe was imposed on each tax unit. Most villages also had to pay two smaller taxes specifically tailored to the abilities of the entire community: the bride tax and the fines, each determined as a lump sum. The actual amounts were part of a bargaining game, as a result of which all the taxes to be paid by the village were eventually rounded into a neat sum: there can be no doubt that such a sum was levied on the Vlach villages and had to be paid in cash. The officials came up with an ingenious solution for the seigneurial subjugation of the newly arrived groups. Although the Vlach communities did not remain under the authority of the Treasury, neither were they placed under a *sipahi*. Most of them came under the authority of the *bey*, the leading official of the *sancak*, while three villages were assigned to the next most important, the *miralay* (the commander of the landholding *sipahis*).⁴² This in effect meant that the Vlachs were allowed to keep their privilege of paying their tax as a lump sum, even within the framework of the *ex officio* estate system.

The inflow of the Vlachs into Somogy intensified during the next decade. Two lists of the Vlach villages in the *sancak* of Koppány have survived from 1580–1581; even though they overlap to some extent, they reflect the same pattern. One is the Vlach chapter of the *sancak* survey.⁴³ This register lists 89 villages, 38 of which lay in the *nahiye* of Koppány, 34 in the *nahiye* of Dombó, 13 in the *nahiye* of Karád, and 4 in the *nahiye* of Lak. The second⁴⁴ was compiled in 1581 when the Vlachs and the authorities “struck a deal” concerning the new taxes. This register lists 81 villages and 3 “settlements” (*mahalle*), but since there are five “double” villages, the actual number of the deserted villages settled by the Vlachs comes to 89. The difference between the two lists is that 18 settlements of the 1581 list do not appear in the 1580 register, while 20 villages of the latter are missing from the 1581 list. If both lists are taken at

face value we may draw the tentative conclusion that by around 1580 the Vlachs had settled in at least 100 villages in Somogy. A comparison of the population lists suggests that the 1581 register is more complete, since it lists 1110 individuals. The immigration was continuous because the word *doselac/preselac* (settler, newcomer) was jotted down beside many of the names, meaning that they represented the latest wave of settlers.

In 1581 a separate list of the Vlachs was drawn up because the authorities forced a higher tax on them. The text of the decree recording the quasi-bargaining notes that “the majority of the Vlachs, representing their community, agreed to pay a tax of four *guruşes* to the [landholding] *sipahi* and a tax of one *guruş* to the Treasury.” The silver *guruş* was officially valued at around 39–40 *akçe* until the depreciation of 1585–1589,⁴⁵ and thus the total of the state (the former *filori*) and the seigneurial tax rose to 160 *akçe* from the 150 *akçe* of a decade earlier. In essence, this was the sum with which the tax survey reckoned. The text of the “bargain” is tactfully silent about the bride tax and the fines, as well as about a new “tent dwellers” (*haymanegan*), i.e. transhumant herdsmen, tax, revamped with dues on their pasturage and animal pens. This new tax was rarely a high sum, but it nonetheless indicates that beside the settled Vlachs, a new group, a “tent-dweller” pastoralist population, had appeared in Somogy.

The main landholder for the Vlachs remained the *sancakbeyi*, but the overwhelming majority of their villages came under the authority of the *sipahis* and the garrison troops.⁴⁶

The newcomers either brought their organizations with them, or swiftly created them. In 1570 the landholders of the *sancak* also include Vlach officials. The highest-ranking among these was the “bishop”, their religious leader, with an estate yielding 10,000 *akçe* annually. Next came the *voyvoda* of the Vlachs of the *sancak* of Koppány, with an estate yielding 3000 *akçe* annually; he was followed by two *kenezes* with an income 2000 *akçe* per year.⁴⁷ The tax *defter* names another three tax-exempt *kenezes*, as well as two corporals (*serbölük*) and the *primikurs* heading the villages. The ranks of the officials were quite populous: the soldier-peasant organization of the 32 Vlach villages was under the command of eight headmen, who were helped by the *primikurs*. The next decade saw a loss of prestige by this body of officials, the result, no doubt, of a general tendency to curtail the Vlachs’ privileges, even though their number increased. In 1580 there is no mention of a bishop; only the “*voyvoda* of the Vlachs” held an estate;⁴⁸ the register also lists 15 tax-exempt *kenezes*. Two military officials, a *harami* commander and a *sermiye*, resided in the village of Lóta, while a *seroda* lived in the village of

⁴¹ DÁVID 1982, 67–68.

⁴² BOA Tapu 505, 4: the *timar defter* of the *sancak* of Koppány.

⁴³ BOA Tapu 676, 61–100.

⁴⁴ ÖNB Mxt 591, 39–47.

⁴⁵ FODOR 1999; new edition: FODOR 2001, esp. 104–105.

⁴⁶ BOA Tapu 659, the *timar defter* of the *sancak* of Koppány.

⁴⁷ BOA Tapu 505, 16.

⁴⁸ BOA Tapu 659, the *voyvoda*’s estate is mentioned on p. 14.

Szentmiklós; *harami* was a term for the Vlachs and the *martoloses*, sometimes used as a synonym, the *sermiye* was the second highest-ranking official of the *martoloses*, while *seroda* meant corporal. The presence of these commanders clearly indicates that the newcomers in the *sancak* of Koppány performed the usual service of the Vlachs and *martoloses*, namely the defence of the border, in an organisation similar to those in the Balkans. The defence of the border was necessary in the counties of Tolna and Somogy, too, since after 1566 Hungarian soldiers from Kanizsa and Palota, stepping into the shoes of those from Szigetvár and levying tax on the territory up to the Danube and Pécs,⁴⁹ conducted regular raids against this region. In 1583, Ali, the *paşa* of Buda, complained that György Zrínyi, captain of Kanizsa, was raiding and burning the Vlach (*Oláh* in the Hungarian texts) villages and forcing them to pay tax.⁵⁰

The Ottoman authorities also set up the organization of the tax-exempt and *müsellems* (*müsellem-i eflakan*) who were all obliged to render military service within the earlier rotational system of the Vlach soldier-peasants. In 1570 the community had 16 members, a number that had risen to 53 by 1580.

In the absence of surveys it is impossible to trace the fate of the Transdanubian Vlachs; only the main direction of their subsequent migration can be tentatively outlined. It would seem that around the turn of the sixteenth and seventeenth centuries, perhaps as a result of the Fifteen Years War, the Vlachs migrated to Tolna County and to the southern part of Fejér County. Only a few account books of the Buda Treasury have survived from the seventeenth century. These for the most part contain summarised figures that are not particularly reliable. The account book of the *vilayet* of Buda for the year 1613 is, in fact, a brief list of the individual tax units, the *cizye*-payer *hanes* of the individual *sancaks*,⁵¹ entitled "The *Cizye* of the Infidels of the *Vilayet* of Buda, the Hungarian and Vlach *Hanes*" (*hane-i macaran ve eflakan*). The summary reckoned with 800 Hungarian and 500 Vlach tax units in the *sancak* of Koppány, with 260 Hungarian and 300 Vlach units in the *sancak* of Simontornya, and with 350 Hungarian and 200 Vlach units in the *sancak* of Szekszárd; the Hungarian *hane* were obliged to pay 180 *akçe*, while the Vlach ones paid a *cizye* tax of 120 *akçe*. This *hane* was no longer the peasant household based on a nuclear family that it had been in the sixteenth century, but the larger, so-called *avarız hane* that emerged at the turn of the seventeenth century and whose nature remains unclear (it is not even possible to make a reasonable estimate of the population size at this time). The figures reveal only that in these three *sancaks* the Treasury reckoned with 1410 Hungarian and 1000 Vlach tax units, suggesting that the overall population was three-fifths Hungarian and two-fifths Vlach.

The Vlach population continued to increase along the Middle Danube. The accounts of the Buda Treasury dated 13 November 1662⁵² also listed the 300,000 *akçe* tax revenue expected from the Vlachs living in the Földvár region. The size of this sum can only be comprehended if set against the other revenues of the Treasury: of the Danube crossing-points, the very busy Buda bridge was expected to yield a toll revenue of 784,281 *akçe*, the Vác ferry one of 393,330 *akçe* and the Földvár ferry one of 328,000 *akçe*. Although these figures have to be treated with caution since the scribes of the Treasury often simply copied the earlier registers from decade to decade without any change, they nonetheless indicate that in planning the revenues and expenditures the Buda Treasury certainly reckoned with a Balkan population – called Vlach – in Tolna County whose moderate tax amounted to two-thirds of the revenue expected from the Vác toll.

The military service of the Balkan population in the early seventeenth century

The nature of the evidence for the genuine military service performed by Balkan population groups is indirect, rather than direct, even for the decades when surveys were still conducted on a regular basis; by the close of the sixteenth century, however, even these indirect pieces of evidence are fading away. We may justly assume that if large portions of the Vlach population entered the royal service, their soldiering in the Hungarian border region of the Ottoman Empire could hardly have dwindled away since the system for this soldiering had been perfected by the empire and also because there was also need for this military service during the seventeenth century in those of the empire's Transdanubian territories that bordered on the Austrian provinces. Unfortunately, there is no direct evidence to support this reasoning and in the following I shall therefore concentrate on what can be gleaned from the available evidence, namely that in the early seventeenth century we may note the mass presence of Balkan Christian soldiers in the Turkish forts of southern Transdanubia and the Danube region, Ottoman-dominated regions inhabited by Balkan groups.

It has been shown in the above that the soldiers serving in the "Turkish" garrisons of the Ottoman-ruled territories originated essentially from the Balkans and that the majority of them were already Islamised. In the first decades of Ottoman sway Christians served in certain branches of service according to very strict rules: they were to be found among the artillerymen and the craftsmen of the forts and a few Serbians sometimes cropped up in cavalry units and among the infantry *azabs*, while the *martolos* units were made up almost exclusively of Christians since

⁴⁹ SZAKÁLY 1981, 102–105.

⁵⁰ TAKÁTS – ECKHART – SZEKFÜ 1915, 290–291.

⁵¹ BOA Maliyeden Müdevver (abbreviated as MAD in the following) 4133, 34.

⁵² This account book has survived in two copies: BOA Bab-i defteri, Budun hazinesi kalemi 16727 and 16728, 6.



Ills 4–5. "Greek" [i.e. Balkan] soldiers in the Ottoman army (after HEGYI – ZIMÁNYI 1986)

no Muslim in his right mind would serve there. This clear-cut order first began to break down among the *martoloses* when they began to convert to Islam, although it survived until the close of the century.

By the early seventeenth century, however, it had collapsed fully. As shown by a payroll of the *vilayet* of Buda from 1613,⁵³ Christians from the Balkans inundated the forts in Transdanubia and along the Danube. The garrisons of most palisades along the right bank of the Danube, lying at roughly one day's journey from each other, had a comfortable Christian majority: 63 per cent of the soldiers in Hamzabey Sarayı (Érd), 36 per cent at Földvár, 58 per cent at Paks, 26 per cent at Tolna, 52 per cent at Bátaszék, 67 per cent at Mohács, and 41 per cent at Baranyavár.⁵⁴ (Counter-examples can also be cited: for example, not one of the 122 soldiers garrisoning the

key stronghold of Cankurtaran – sometimes also called Korkmaz in Turkish; Adony in Hungarian – on the southern tip of Csepel Island was a Christian.) The general pattern was that the Christians who in the previous century had served mainly in the infantry and the fleet now also appeared in the cavalry units, although for example Baranyavár fort, which was formerly garrisoned exclusively by the élite *müstahfiz* infantry recruited exclusively from Muslims, now also had Christian soldiers.

A similar situation can be noted in the forts of the counties of Somogy and Tolna. The two *sancak* capitals, Koppány and Simontornya, had a moderate portion of Christian soldiers (38 and 22 per cent respectively), while Christians made up 52 per cent of the garrison at Bolondvár, 31 per cent at Lak, 38 per cent at Karád, 56 per cent at Dombó,

⁵³ BOA MAD 4000.

⁵⁴ Pp. 121–125, 132–143, 250–260, 263–267, 345 and 348–352 of the payroll.

57 per cent at Foka (Siófok), 35 per cent at Hídvég, and 24 per cent at Döbrököz.⁵⁵ (No counter-example can be quoted for forts that did not have at least a few Christians in their garrisons, even if their proportion was low: 10 per cent at Endréd and 16 per cent at Tamási.)

This proportion changed over time. Very few Christians are listed in the 1619 payroll of the *vilayet* of Buda,⁵⁶ and they only appear (together with Muslims) among the *martoloses* stationed in the strongholds along the Danube and in southern Transdanubia. The Turkish financial and military administration recovered after the wars of the early decades of the century and set about bringing order to the forts. The conscious removal of Christians is reflected in a decree dated 30 June 1613, issued by the sultan,⁵⁷ in which the *beylerbeyi*, the *defterdar* and the officers of Kanizsa are instructed to remove the Christians from the garrison and to settle them beyond the fortress. This policy explains the disappearance of Christian soldiers from the forts in the *vilayet* of Buda. The sultan's order was carried out almost to the letter, as shown by the later payrolls: in 1628 the roughly 1700-strong garrison of Kanizsa only included 53 Christians,⁵⁸ while about one-half of the garrison was probably made up of fresh converts. In 1653 the proportion of Christians and converts was almost identical in the garrison.⁵⁹ It would appear that the sultan's decree resulted in a wave of conversions.

If the military service of the Southern Slavs and Vlachs settling in the Ottoman-occupied territories of Hungary is interpreted in a wider context, a few starting points can be found even in the scanty evidence from the seventeenth century. The Balkan population retained its importance in the overall Ottoman defence system of the Ottoman-dominated territories even after the peasant military organizations, adopted from the Balkans, lost their significance with the decline of the need for genuinely military tasks. While the mission of the Vlachs and the *martoloses* remained the defence of the border, it is my belief that many of the soldiers garrisoning the forts also came from this Balkan group. After their settlement in this region, the Turkish garrisons in the southern part of the Ottoman-occupied territory no longer needed to replenish their ranks from Bosnia and Serbia in the south. The zone of the Ottoman occupation – one that was in a certain sense Balkanised – became self-sufficient as far as the military was concerned. The new arrivals were willing to perform both non-regular and regular service, to be tax-exempt soldier-peasants and salaried troops, retaining their Christian faith if the Turkish authorities permitted this, but converting to Islam if necessary.

Conclusions

The soldier-peasants of the Balkans played an important role not only in the Ottoman military structure, but also in their own society. Their mobility, their partial or total tax exemption, their occasional state salary, and their share of the war booty elevated them above the average peasant both financially and in prestige. They also contributed significantly to the survival of post-Byzantine Orthodox religion and culture. The territories that in the fifteenth to sixteenth centuries saw the construction of many beautiful monasteries and, even more importantly, village churches by and large coincide with the territories settled by this privileged semi-military population.⁶⁰ Of this mission no trace has remained in Hungary. The soldiers of Balkan origin garrisoning the forts changed quickly and had a mixed culture, while the privileged soldier-peasants of the villages were often on the move, migrating from one place to another, while their material well-being and prestige began to decline in this very period.

The Turkish military and administrative centres of the Ottoman-occupied territory varied. Most of them were military settlements whose population numbered a few dozen Balkan Muslim and Christian soldiers, the keeper of the inn and the caretakers of a humble mosque. The sole representative of genuinely Muslim culture was often a single *imam* who in terms of his daily remuneration was esteemed by the Treasury no more highly than a cavalry soldier. At the same time, in the southern, Balkanised zone of the Ottoman-dominated territory in Hungary during the sixteenth century a number of Turkish centres emerged that had a population of estate-holding soldiers and a civilian Muslim population that greatly outnumbered the garrison troops: *timar*-holding *sipahis*, tax farmers and scribes, craftsmen, merchants, and the servants of religion. It is rather difficult to pinpoint these centres as entire Muslim populations rarely appeared in the surveys. Their presence is documented in a few rare cases, as in Bács, where around 1570 one-quarter of the Muslim population was made up of craftsmen and merchants, about one-fifth were agriculturalists and one-fifth were "intellectuals", whose ranks included the nine wardens and the thirty-eight *sufis* of the town's three mosques. At the same time, the caretakers of the *cami* in the fort are not included here since, together with the inhabitants of the fort, they were omitted from the survey.⁶¹ There is little evidence on how Bács – and the other similar towns, if any – survived the seventeenth century: the Western travellers visiting the palisades along the Danube describe them as wretched military settlements, a

⁵⁵ Pp. 294–308, 268–278, 326–332, 309–325, 333–347, 280–281 and 279–284 of the payroll.

⁵⁶ BOA MAD 7320.

⁵⁷ BOA Kepeci 71, 374/3. Here I would like to thank Pál Fodor for calling my attention to this decree.

⁵⁸ BOA MAD 7208, 6–61.

⁵⁹ BOA MAD 6188.

⁶⁰ KIEI. 1985; 1990.

⁶¹ HÉGYI 2001a.

view that can in part be ascribed to the settlements and in part to the European prejudices of these travellers.

The major Turkish centres, the *vilayet* and *sancak* seats, represent another type, within which there was much diversity. The largest were singularly important military posts, as well as industrial and trade centres. It was in these seats that the wide stratum of the administrative officials of the *vilayets* and *sancaks* resided, and also the religious leaders attending to the spiritual needs of Muslim populations many thousands strong. Of the middle-sized ones, the best off were those seats that were the centres of larger administrative units that lay in more protected areas and thus had need for "intellectuals" rather than soldiers. The model for this type of centre was Pécs, whose garrison dwindled to a quarter of its initial size between its capture in 1543 and the mid-seventeenth century and whose inhabitants were mostly civilians, including various officials and religious leaders.⁶² Szigetvár also belongs to this category, since, relieved by the military strength of Babócsa, Berzence, Barcs, and especially Segesd, it could rise above the sombre role of a border garrison and become an intellectual centre, as in the case of Pécs.⁶³

As a historian I believe that the origins and the quality of the artefacts recovered during excavations are determined by the culture, the needs, and the traditions of the populations that made and used them. We may rightly assume that the wealthier Muslim inhabitants of the multi-functional Turkish centres – such as the erudite Ali Çelebi of Buda who assembled an impressive library,⁶⁴ or the learned dervishes of Pécs and Szigetvár – were discriminating in their choice of objects, especially when these had something to do with their religion. By contrast, the poorer inhabitants of Balkan origin who lived in the military settlements and who had a mixed culture were probably uninterested in what their cooking pots looked like. They used artefacts that they could buy cheaply from the craftsmen of their neighbourhood. At Törökszentmiklós, lying to the north along the River Tisza and surrounded by Hungarian villages, Hungarian pots were found in the Turkish castle, while in the strongholds of southern Transdanubia, a strongly Balkanised area, the soldiers cooked their meals in Balkan pots.⁶⁵

⁶² Cf. the various studies in *Pécs a törökkorban* [Pécs in the Ottoman Period]. Ed. SZAKÁLY, F. Pécs 1999. (Tanulmányok Pécs történetéből 7).

⁶³ ÁGOSTON 1993.

⁶⁴ FEKETE 1959; 1960.

⁶⁵ This study is the summary of two papers, both being chapters of a monograph on the garrisons of the Turkish occupation period: HEGYI 1998 and 2001b. The original papers are supplied with more copious footnotes and more detailed data.

Ottoman Archaeology in Eastern Europe

It is appropriate that the present seminar should be held in Budapest because of the leading role of Hungarian archaeologists, among them the doyen of Ottoman archaeology, Professor Győző Gerő, in the excavation of Ottoman sites. As the theoretical discussion and the very varied contributions have shown, their preoccupations are no less wide than in any other branch of the subject.

Inside Turkey things are somewhat different and a very few examples must suffice. Monuments no longer extant may, of course, be documented in contemporary historians, especially in illustrated chronicles that owe much to the Ottomans' concern for topographical accuracy; in registers of Palace repairs and restorations; or in the accounts of Western travellers – even where the site excludes excavation as an option. In the case of the Topkapı Sarayı, Gülru Necipoğlu¹ has used documentary sources to reconstruct its history, her task being much facilitated by the sultans' tendency to make good damage to its buildings from fires, earthquakes or sheer wear and tear rather than demolishing them or, where repairs were no longer possible, simply to rebuild them in the same spot.

Reconstruction of the major sixteenth-century Ottoman garden-palaces on the Golden Horn and the Bosphorus is considerably more difficult.² One such palace was the Kavak Sarayı at Üsküdar, built probably by Süleyman the Magnificent, on a point overlooking the Marmara and the Golden Horn on two sides, just south of the modern Harem landing stage. It was enlarged under Selim II and Murad III, with baths added by Sinan and a *mescid* by Ahmed I; and under Murad IV (1623–40), stables, barracks and a “Revan Köşkü” were built. In the eighteenth century it fell into disuse, and in 1241–4/1825–8 it was replaced by the Selimiye barracks, where survey and excavation are no longer practicable. On the basis of drawings by the French architect Jean-Baptiste Lep`ere (1761–1844), however, Müller-Wiener,³ taking into account our knowledge of pavilion construction in the Topkapı Sarayı

and its environs, has suggested a restored plan. Of two pavilions on a terrace overlooking the sea to the south of the palace one presumably is the “Revan Köşkü”. Lepère also shows earlier elements, perhaps attributable to Süleyman, including a tower pavilion and a two-storeyed building, the upper storey with dense fenestration.

This reconstruction may fairly be described as “para-archaeological” and, clearly, would not render excavations superfluous. A newer trend is the correlation of historical evidence with evidence from aerial photography, as in a recent study of two ancient canals in the area between Lake Sapanca and the Gulf of Izmit, apparent on 1:35,000 aerial photographs.⁴ Despite constant demand in both Byzantium and Istanbul for marble, timber, firewood and grain, between the Bithynian kings (294–74 BC), whose canal Pliny the Younger noted in 111 AD, and the Ottomans, who made at least six attempts,⁵ between, probably, the 1550s and the late nineteenth century, no canal was dug. The shorter canal is doubtless that attributed by Pliny the Younger to the Bithynian kings; the longer must be either that of the 1550s or that of 991/1591, the only two of the Ottoman attempts which, so to say, got off the ground. The latter was preceded by a hydraulic study ordered from Sinan in 1582,⁶ indicating the required depth of each thousand-metre section of the proposed canal's extent. The works, begun on 25 Ra 999/21 January 1591, were, however, abandoned only three months later.

The reasons for the repeated failures – the competing demands of the Ottoman army and fleet (for such operations certainly required an effort on the scale of mobilising for a major campaign); opposition from the local population and the landowners; expense; and the swampy nature of the terrain – also go to explain the Ottomans' surprising record of failure in canal-building elsewhere: redigging the Mamluk canal from the Nile to the Red Sea (938/1531–2); a Suez Canal (January 1568) proposed by Sokollu Mehmed Paşa; and a Don-

¹ NECİPOĞLU 1991.

² Despite the detail in which Palace registers often discuss works in the Imperial gardens, in my experience their topography is not usually determinable from the features mentioned, watercourses, ponds, terraces, arbours, aviaries, bridges, etc. It should also be said that, in the authorities' eyes, there was little distinction between ornamental gardens, parkland and agricultural smallholdings. This puts a new gloss on Grand Vizier Rüstem Paşa's alleged meanness in selling the produce of the Palace gardens on the open

market. That such was regular practice is shown by the stipulation in the *vakfiye* of Süleymaniye (cf. ROGERS 1999) that the produce of the *evkâf*, including the gardens of the mosque, was to be sold for the benefit of the foundation.

³ MÜLLER-WIENER 1988.

⁴ FINKEL – BARKA 1997.

⁵ Historical documentation in UZUNÇARŞILI 1940.

⁶ Printed in the Müteferrika edition of the *Cihânnümâ*.

Volga canal he also proposed (1563, 1568–9), though in this last case the Ottoman supply-lines were grossly over-extended.

One other, necessarily ancillary, pursuit is the analysis of census returns, defterology (with which one could assimilate material from *vakfiyes*, *mülknames*, etc.), which has contributed to the study of patterns of rural settlement and population change, but is not much of an index of social or, except in very vague terms, of economic change. To some extent, of course, that depends upon the site. Settlements that have suffered sudden total destruction, such as Pompeii or many of the cities of Iran and Central Asia in the Mongol invasions, will furnish quite different data and demand different treatment from rural sites with a slow rate of secular change. The latter offer relatively little information on the development of industries – and indeed it is probable that under Turkish domination there was very little in Hungary that counted as such. The situation is, of course, very different in metropolitan Turkey, with the pottery industry centred on Kütahya, Iznik, and various sites in Istanbul.

For these defterology is much less relevant than excavation, and it is its contribution to date that has to be evaluated here.⁷

Urban excavation in Turkey, as elsewhere, has mostly been in reaction to urban development, and publication of the finds has had low priority.⁸ Museum collections of surface sherds thus play an important role: they include those at the Victoria & Albert Museum and the Benaki Museum (both seemingly acquired from the site of the Istanbul Post Office built in 1905); the British Museum (especially Iznik material from Fustat); the Bursa Museum (from the town centre); Kütahya (where waters of all the principal types of early blue and white were discovered);⁹ and Saraçhane in Istanbul (material in the Istanbul Archaeological Museum and the Çinili Köşk).¹⁰

As Nurhan Atasoy rightly observes,¹¹ the archaeologist has a ready-made typology of shapes and sizes in the fixed-price registers (*narh defter*) periodically issued by the authorities to regulate the markets. For Iznik china wares (*çini*) that for 1009/1600 is particularly detailed.¹² Since such

⁷ Oluş Arık (ARİK 1999) has shown how, for various reasons, the contributions of Turkish archaeologists have so far been less significant than one would have hoped.

⁸ It is proper that archaeological material still being worked on by the excavators should *pro tem* be inaccessible to anyone else. But abuse of this privilege has led to considerable delays in its publication.

⁹ ŞAHİN 1979–80.

¹⁰ HAYES 1992.

¹¹ ATASOY – RABY 1989, 37–49: “The types and forms of Ottoman pottery: Standard shapes and sizes”. The 1009/1600 defter, revealingly, ends with the remark at the types of china wares are too numerous to list” (*çinin envâ’i(?) bi-haddır: tahriiri imkân yoktur*), possibly referring by implication to imported wares (from Europe or from the Far East) as well.

¹² KÜTÜKOĞLU 1978, 90–93, 99–100. I give the whole list in the 1009/1600 defter with Professor Atasoy’s glosses (omitting, however, a small group of imported Southeast Asian wares). We can probably assume that, unless specifically otherwise described, they were all Iznik. Not surprisingly, they are all table wares.

ÇİNİCİLER: (a) price before 1600 (if known); (b) 1600 price; (c) percentage cut in price

Büyük Iznik badyası, kapağı ve tepsisi ile ((Steingass) large or deep jugs, cups or bowls (for wine), with covers and saucers) (b) 65 akçe

Hoşab kâsesi müzehheb, kapağı ve tepsisi ile (gilt compote or dessert bowls, with covers and saucers) (b) 40 akçe

Hoşab kâsesi müzehheb, tepsisiz (gilt compote or dessert bowls, without saucers) (b) 28 akçe

Büyük yoğurt kâsesi (large yoghurt bowls) (b) 18 akçe

Büyük yoğurt kâsesi mâvi (large yoghurt bowls, blue-glazed) (a) 28 akçe (b) 20 akçe (c) 28.5 per cent

Büyük yoğurt kâsesi yeşil (large yoghurt bowls, green-glazed) (a) 35 akçe (b) 20 akçe (c) 42.8 per cent

Büyük cam tası (şiç) şeklinde olan (large basins like glass bowls (??)) (a) 70 akçe (b) 20 akçe (c) 62.8 per cent

Orta, kapaklı, yeşil ve mâvi altınlı (safa) (not in Redhouse: perhaps mugs or jugs, medium-sized, covered, green and blue-glazed and gilt) (a) 80 akçe (b) 37 akçe (c) 53.7 per cent

Büyük safa müzehheb (large gilt *safas*) (a) 80 akçe (b) 32 akçe (c) 60 per cent

Büyük safa mâvi ve yeşil (large *safas* glazed green and blue) (a) 45 akçe (b) 22 akçe (c) 51 per cent

Orta safa (medium sized *safas*) (a) 40 akçe (b) 20 akçe (c) 50 per cent

Yekmerd kâse altınlı (exceptionally fine (?) gilt bowls) (a) 80 akçe (b) 36 akçe (c) 55 per cent

Kahve fincanları altınlı (coffee-cups, gilt) (a) 14 akçe (b) 5 akçe (c) 64 per cent

Kahve fincanları sade (plain coffee-cups) (b) 2 akçe

Çini kavanoz 6 vakiyye (6-okka china pots) (a) 50 akçe (b) 20 akçe (c) 60 per cent

Salata ve helva tabakları, Iznik (plates for salad or helva) (a) 14 akçe (b) 10 akçe (c) 8.5 per cent

Çini legen ve ibrik (bir ustada mahsus dur, nadir gelür, 100 akçeye verirse işleye) (china ewers and basins, the work of one potter only, rarely found) (b) 100 akçe

Çini kavanoz 4 vakiyye (4-okka china pots) (a) 16–20 akçe (b) 10 akçe (c) 37.5–50 per cent

Iznik divanı (Iznik pottery pen-boxes) (b) 2–3 akçe (!) – perhaps a scribal error.

ÇÖMLEKÇİLER (sellers of household pottery, generally unglazed)

Eyyüb-i Ensârî ibriği bir abdestlik (ablution ewers from Eyüp) 100 for (b) 70 akçe (manufacture); 100 akçe (selling price)

Eyyüb destisi (ibriğe kiyâs oluna) (Eyüp flasks, prices as for ewers)

HVRa destisi ağzı dar (narrow-mouthed HVRa flasks) (b) 3 akçe

HVRa destisi ağzı bol (wide-mouthed HVRa flasks) (b) 2 akçe

Dimetoka bardağı küçük kahve ibriği ile (Dimetoka mugs with small coffee pots) (b) 3 akçe

Harc abdest ibriği (bardağa kiyâs oluna) (imported ablution ewers, prices as for mugs)

Pergelli Dimetoka bardağı bir saykallı süt ibriği (burnished Dimetoka mugs and tall (?) milk jugs: *pergelli* (with compasses, dividers) may be a market term) (b) 3 akçe

Gelibolu'nun suhte sırlı çanağı (Gelibolu terra cotta jars) (b) 2 akçe

Yoğurt çanağı (yoghurt pot) (b) 1,5 akçe

Badya çanağı, sırlı (large glazed jugs, cups or bowls) (b) 3 akçe

Ayaklı sırlı çanaklar (footed glazed jars) (b) 3,5 akçe

edicts were, however, issued in response to specific complaints of overcharging or declining standards, they are not intended to give a complete survey of the markets,¹³ and though we might suppose that, for example, pottery would be comprehensively treated here, there is no mention of Kütahya wares, which would certainly have been on sale.¹⁴ It is difficult to interpret divergences from the list in the *defter* of 1640,¹⁵ which not only goes into far less detail on Iznik and Kütahya wares but also, to unglazed or coarsely glazed wares (*çömlük*, *çölmek*) from Eyüp,¹⁶ Dimetoka¹⁷ and Gelibolu, adds wares from Inoz, Selânik and Midye (in Bulgarian Thrace), which can scarcely have been new manufactures.

There has been considerable progress in the identification and recording of Ottoman pottery from excavations in Turkey, from the Great Palace of the Byzantine emperors in Istanbul onwards.¹⁸ Here the contents of a rubbish pit, which may not, however, have been undisturbed, included many almost complete vessels of a great variety of types, largely undifferentiated but including an early Iznik blue and white bowl; a (Faenza) maiolica jug similarly dated; and a Longquan celadon fragment. The abundant surface-finds of Iznik and other Ottoman fabrics are not, however, described, and the primacy the excavators accorded the pre-Ottoman levels is only too apparent.¹⁹

The precision of the report on finds from the Agora of Athens²⁰ is scarcely more impressive. The material was from ten different deposits, the relative chronology of which was uncertain. Kiln material of 'blue and white painted wares', sometimes with touches of yellow, green or red, with a terminus of c. 1650 may or may not have been a local type of Miletus ware.²¹ There was virtually no Iznik, so the deposits can scarcely have been typical. Many of the pieces illustrated are italianate in shape and it is not impossible that they were in fact imported maiolicas.

The publication of the pottery from Saraçhane in Istanbul, the site of the Byzantine Church of St. Polyeuktos, is the fullest report to date of a Turkish urban site with Ottoman occupation levels.²² The remains were discovered in the course of road building, which destroyed much of the later levels. In some of the seasons (1964 to 1969) the volume

of material precluding complete recording, so the report is based on 80–90 per cent of the finds, the Ottoman material being from fifteen deposits of late fifteenth- to mid-seventeenth-century date and nine of early eighteenth- to nineteenth-century date: the fine wares (Iznik, Chinese porcelains, etc.) represented from 1 per cent to 10 per cent of the total; plain-glazed wares from 25 per cent to 35 per cent; and coarse unglazed wares approximately 50 per cent.

Because of the almost total absence of coin-finds, dating of the deposits depended very largely on the Iznik material they furnished, and the dating of the coarse wares is therefore parasitic upon the conventional dating of the fine wares. Of the Iznik wares 25 per cent to 30 per cent of the total was represented by monochromes, turquoise, blue or green. There were rather more of the "Damascus" group than of the bole-red wares, which, by 1600 or so, seem to give way to Chinese porcelains. Few new types seem to have come to light, though the monochrome wares are poorly represented in traditional museum collections of Iznik. An interesting group, however, is sub-conical basins (Hayes's "X-1" wares) with motifs characteristic of the "Damascus" group but more sketchily drawn, sometimes with rather thick black outlines, which do not appear to have come to light at Iznik but which are well represented in the sherd collections at the Victoria & Albert Museum and the Benaki Museum. Glaze decay from contact with organic acids is recognisably different and shows greater similarities to the behaviour of the late seventeenth-century sherds from Kütahya. These "X-1" wares, or imitations of them, have also come to light in recent excavations at the Citadel of Damascus.²³ The question of their provenance may be decidable by technical analysis.

For the coarse unglazed wares, Hayes gives a type series of twenty different fabrics,²⁴ some mica-ceous, though clay analysis must be undertaken before any of them can be properly localised. They include ware (J), some markedly finer unglazed water jugs with incised decoration and filters in the neck, from deposits dated "c. 1500", distinct, however, from the fine sixteenth-century "terra sigillata" (*tin-i mahtûm*), which did not occur at all.²⁵ The

¹³ For example, in the *narh* *defters* issued on 4 and 5 Safer 1034/18 and 19 November 1624 (KÜTÜKOĞLU 1983–1984, 165–166, 171–172, 180) those for Bursa and Tekirdag list pottery sellers (*çölmekçiler*) but that for Istanbul is largely restricted to provisions. *Narh* *defters* are also subject to the defects of catalogues: names and forms only imperfectly coincide; and some names are obscure or their functions are difficult to identify. Not all recorded types, moreover, may have reached the market.

¹⁴ Miletus ware is not mentioned at all, perhaps an indication that it was by this time obsolete.

¹⁵ KÜTÜKOĞLU 1983.

¹⁶ Ç. YENİŞEHİRLİOĞLU 1995.

¹⁷ BAKIRTSIS 1980.

¹⁸ R. B. K. Stevenson 1947, in BRETT et al., 1947, 60.

¹⁹ The only pottery noted in TALBOT-RICE 1958, is Byzantine.

²⁰ FRANZ 1940.

²¹ Many of the pieces illustrated are italianate in shape and it is not impossible that they were in fact imported Italian maiolicas.

²² HAYES 1992.

²³ I am grateful to Mme Sophie Berthier for bringing them to my attention.

²⁴ HAYES 1992, 271–298.

²⁵ The material from the "Çölmekçiler/Çölmekçiler Mahallesi" at Eyüp was (YENİŞEHİRLİOĞLU 1995) all whitish-pinkish bodied, rarely glazed, but then with a green or a brownish lead glaze. The finds are difficult to date from the photographs but much of the material must have been recent (nineteenth – twentieth century).

coarse glazed wares are very probably from Dime-toka, known on the Istanbul market from the *narh* defters of 1600 and 1640.²⁶ Once again, there is no reason to suppose that they were not made considerably earlier. A remarkable find, possibly from the same source, is a glazed bowl,²⁷ the sides decorated with ten concentric lines of carefully written invocations in Ottoman *nesih* pointing inwards the centre. On the exterior is an incised inscription, *al-fakir çanakçı*. Nothing comparable has so far been brought to light.

There have now been annual excavation seasons in the centre of Iznik for more than twenty years. The virtually complete absence of coin finds has made it impossible to determine how long kilns remained in production, though with high technology ceramics the possibility of an adequate typology is not totally dependent upon a stratified chronology. The finds raise a series of questions relating to the industry as such: kiln technology and production capacity; innovation, both technical and decorative; workshop practice – specialisation, the development of particular “lines”, the use of designs, and their repetition over time; and the differentiation of production at Iznik and at Küta-hya in the later sixteenth century. Sad to say, none of these questions has yet been answered.

Inadequacies, not all unavoidable, in the reports so far published²⁸ included a failure to co-ordinate them with the concurrent excavations in the Roman theatre of Iznik, where kilns were also brought to light.²⁹ Because of the rich finds in some seasons much of the material was not even inventoried and only a small number of pieces for exhibition or for further study were selected. Although the massive body of sherd material which has now accumulated may lend itself to statistical treatment, there is no indication that this is being done or how. And there has been the usual archaeologist’s bad luck: almost inevitably, kiln finds have been of Miletus and other coarse wares, rather than of characteristic Iznik types.

Miletus wares, for which Hayes posits an early sixteenth-century terminus, were abundant at both Iznik and Saraçhane, though Hayes notes that a third provenance must now be taken into account, Akçaalan near Ezine in the Troad.³⁰ The prevalence of cockspurs, often decorated, in the kiln-furniture, batons and rings,³¹ is significant, for cockspurs were not used in the firing of Iznik pottery. The simultaneous production at Miletus³² and Akçaalan makes detailed study necessary to determine local peculiarities. The overall chronology of these mass-produced wares, and especially the terminus for their manufacture, has, however, not been significantly advanced. Though they certainly overlapped chronologically with the earlier types of Iznik blue and white, the divisive break in technology the latter represent³³ is complemented by a totally different decorative repertory, following at some distance the mass-produced wares of later Mamluk Syria and Egypt,³⁴ before these were subjected to the overwhelming impact of Chinese blue and white porcelains.³⁵ They also bear very little relation to the Timurid wares so far identified, though, as Hayes remarked,³⁶ some resemble the fifteenth-century “Kubachi” wares in their decoration.

To this conclusion there are two exceptions that make it dangerous to posit an early end to the manufacture of the group. A bowl fragment³⁷ bears fat chinoiserie cloud-scrolls of a type not recorded pre-1520; and a bowl or dish³⁸ has a wave and rock scroll at the rim, typical of Iznik wares from 1530–40 onwards. An even more striking exception is a biscuit-fired red-bodied sherd,³⁹ with a white slip finely painted in black (evidently unfired cobalt) copying patterns of the reign of Mehmed II which Atasoy and Raby have identified on early Iznik blue and white.⁴⁰ This seems to be evidence for a phase, possibly short-lived, of experimental adaptation of Iznik designs to Miletus wares.

For “Iznik” wares the excavations produced some completely new types, particularly with respect to imitations of Chinese porcelains in the

²⁶ BAKIRTISIS 1980.

²⁷ HAYES 1992, Pl. 42, d, f, h.

²⁸ ASLANAPA 1965; 1986; 1987; 1988; 1989; 1992; 1993a; 1993b; ASLANAPA – ALTUN 1996; ALTUN – ASLANAPA 1997; ASLANAPA – YETKIN – ALTUN 1989.

²⁹ YALMAN 1988a; 1988b; 1989; 1991; 1993; 1995. Subsequent reports on excavations in the theatre have dealt with pre-Ottoman levels. The theatre site had been used as a Byzantine cemetery, probably from the eighth – ninth century up to the Lascarid occupation, which is documented by coin finds. There was also a mass of Byzantine pottery. The kilns in question seem to have functioned, perhaps continuously, in the sixteenth and seventeenth centuries, with evidence for “Miletus”, “Damascus” and bole-red wares, as well as rich kiln furniture, including rods, cockspurs, testers, etc.

³⁰ AKARCA 1979. Interestingly, late wares from Akçaalan (HAYES 1992, “ware E”) have decorated cockspurs, characteristic of the kiln-furniture of Iznik.

³¹ ASLANAPA 1987; 1989; ASLANAPA – ALTUN 1996; YALMAN 1989.

³² DURUKAN 1982. Seemingly, no post-Miletus wares were recorded. It should be unnecessary to add that my use of “Miletus”, “Damascus” and “Golden Horn” for types of Ottoman wares is not intended to suggest a particular, or a unique, provenance.

³³ HENDERSON 1989, 82–89.

³⁴ To the extent that turquoise and black and green and black sherds (ASLANAPA – ALTUN – YETKIN 1989, 284, 1988/unnumbered) look more like thirteenth-century Raqqa wares than anything else.

³⁵ Whether that is relevant to their chronology is, however, difficult to say.

³⁶ Cf. ASLANAPA – ALTUN – YETKIN 1989, 1981/83, 1982/12 and 1985/16.

³⁷ ASLANAPA – ALTUN – YETKIN 1989, 115, IZN 83-3.

³⁸ ASLANAPA – ALTUN – YETKIN 1989, 309, 1987/unnumbered.

³⁹ ASLANAPA – ALTUN – YETKIN 1989, 83, 1981/6.

⁴⁰ ATASOY – RABY 1989, no. 65, after drawings in the so-called “Baba Nakkaş” album, Istanbul University Library F 1423.

later sixteenth century. The fixation of early Ottoman taste on Yuan and early Ming prototypes is well known,⁴¹ as is the practice of copying porcelains in the Treasury at Iznik, not after the pieces themselves, which were far too precious to travel, but after stencils. The influence of contemporary Chinese porcelains is far less evident. Here the appearance of imitation character marks on small bowls or coffee cups, and sherds with decoration after sixteenth-century export wares,⁴² is testimony to the greater availability of Chinese imports in later sixteenth-century Ottoman Turkey, bearing out their listing in both probate inventories and *narh* defters.

This somewhat limited contribution of excavation to the chronology and typology of Ottoman pottery has been usefully supplemented by analyses of its distribution in the Ottoman provinces and outside the Ottoman Empire. The following comments, which partly relate to unpublished material, are intended to supplement the survey in the most recent monograph.⁴³ Paradoxically, Anatolia remains a virtual blank, which can scarcely reflect the reality. It is, however, worth remarking that Safavid pottery shows no influence from Iznik prototypes and that the only piece known to me from the Safavid sphere of influence is an unpublished dish fragment with vine clusters from the palace of the Shirvanshahs in Baku, doubtless an import during the decades when Baku was an Ottoman governorate. In Syria and Egypt all the main groups, including Miletus wares, are represented in material excavated in the Citadel at Aleppo (Aleppo Museum) and Fustat (British Museum) and demonstrate a constant demand. The significance of exports to Egypt is also shown by sherds of mass-produced cheap Egyptian copies of early Iznik blue and white wares in the Benaki Museum's collection.⁴⁴

In Western and Northern Europe the corpus of imported Ottoman material has remained static for many decades, and the only addition, an extraordinary one at that, has been the recent discovery of

late sixteenth-century Iznik sherds in excavations at a Daimyo site near Osaka,⁴⁵ which, I assume, must have come on a Dutch ship.

In Central and Eastern Europe the range of Ottoman pottery from urban sites covering the period 1480–1620 is fairly comprehensive, though it gives little indication of the volume of imports nor of those who used it. Excavated material from various sites in Sofia included various fine pieces: Damascus wares; a flat Golden Horn ware dish with a vertical rim; early blue and white Iznik bowls, and late sixteenth-century coffee cups with pseudo-Chinese square character marks.⁴⁶ To my knowledge no other Ottoman material has been published from any other Bulgarian site.

In Romania stratified Ottoman material, together with large quantities of local wares, from palaces at Suceava and Iași reflects the status of the Danubian principalities as relatively privileged vassals of the Ottoman sultans.⁴⁷ It includes Iznik tiles (conspicuously absent from Hungary and not so far documented in Bulgaria), among them a commemorative plaque with a Greek inscription for the family of the ruler Vasile Lupu (1636–40). Further north, material from Akkerman/Alba Cetatea/Belgorod Dnestrovsky now in the Odessa Archaeological Museum also included an Iznik border-tile fragment with bole-red.⁴⁸ Iznik sherds, mostly chance finds, have been recorded from Mangup, Solkhat/Eski Krym, Theodosia/Caffa, Bakhchisaray, Kalamita, Kherson, Eski Kermen and Tana/Azak/Azov.⁴⁹ East of the Crimea, however, sixteenth-century Iznik wares seem to have been collected as exotic grave-goods by the largely pagan tribes of the Northern Caucasus, who in earlier centuries collected Islamic metalwork and Mamluk glass for the same purpose.⁵⁰

Iznik wares have also come to light in Moscow, mostly from the Kremlin and the medieval commercial centre, Zaryad'ye/Kitaigorod, which suggests that they were traded here.⁵¹ These included

⁴¹ RABY 1983; 1986.

⁴² ASLANAPA 1965; cf. ASLANAPA – ALTUN – YETKIN 1989, 176, IZN/85 BHD/E-8 Mb10. A lid, decorated with medallions in greyish blue (cf. ATASOY – RABY 1989, nos. 47–48, which they date to the 1560s–1570s). The one complete medallion has a stylised tower-pavilion with cypresses. Even more interesting is a fragmentary bowl (ASLANAPA – ALTUN – YETKIN 1989, 180 1985/unnumbered); puzzlingly, this was also in the 1990 excavation report (ASLANAPA 1992, Fig. 10) with a *nasta'liq* (?) inscription in cartouches at the rim: ... *der sarāb ... gözlerdir* and central design after a contemporary Ming export ware prototype. The sides have open-work decoration, and the base has a pseudo-Chinese square character-mark. Also compare a later sixteenth-century fragment (ASLANAPA – ALTUN – YETKIN 1989, 181, 1985/unnumbered) with extensive drilled or pierced ornament.

⁴³ ATASOY – RABY 1989, 71–74, 264–272.

⁴⁴ The pottery of Ottoman Egypt has long been neglected, partly because of the prejudice among historians of Egypt that the conquest put an end to the local mass-production industry which flourished spectacularly in the Mamluk period.

⁴⁵ I am most grateful to my colleague Dr. Nicole Roumanièere for this interesting information and for slides of the finds.

⁴⁶ STANCHEVA 1960; 1962.

⁴⁷ For these palaces see ANDRONIĆ et al. 1967; NICOLESCU 1967.

⁴⁸ DZIS-RAIKO et al. 1983, Pl. 183.

⁴⁹ MILLER 1972, 139 ff.

⁵⁰ MILLER 1972. They include (1889) a handled jug with a lid (and two bowls), blue on white, from a burial outside Rayevskaya near Novorossiisk, Northern Caucasus, now in the Historical Museum in Moscow; (1899) a handled jug from a burial in the Makchesh area, to the west of Vladikavkaz; (1915) a cut-down jug with cloud-scrolls from Maikop, doubtless also from a burial, St. Petersburg, Hermitage VG 2006; (1925) a cut-down jug from a burial at Gelendzhik, near Caffa; (1930s) fragments, votive offerings to a shrine at Rekom, Northern Ossetia; and (1962) a cut-down late sixteenth-century flask from a burial at Tsarge, Abkhazia. Since the area is, archaeologically, under-exploited, this list will doubtless grow.

⁵¹ KOVAL' 1997.

fragments with underglaze red; fragments of a large Golden Horn jar (not recorded anywhere else in Rus'); and fragments of one or more Damascus-type dishes. Further evidence for Iznik imports is part of a late sixteenth-century dish – now in the Historical Museum in Moscow – from the Church of the Trinity at Khoroshevo outside Moscow⁵² (1590s), the sole survivor of the eighteen *bacini* that originally decorated it, – though the others, of course, were not necessarily Iznik too.

In this rapid survey Hungary is particularly important, because of the scale of archaeological activity and because of the availability of supplementary materials to determine chronology where stratigraphy is lacking. Professor Gerő's work is too well known to rehearse at length, but his conclusions are important. The most abundant material – mostly table wares – has been from Buda. In his view,⁵³ it all post-dates the Ottoman occupation of 1541, though fifteenth-century material from Visegrád and Buda, "Persian Albarelli" (actually, from the fabric, more probably of Syrian manufacture) testifies to the import of Near Eastern wares well before the Turkish conquest. Consequently, Golden Horn wares (including a Humpen handle with greenish scrollwork) and Damascus wares found at Buda and elsewhere must be rather later than has sometimes been held. Imports were considerable. A customs register for 1573 records nine boatloads of china-ware (*denk çini*)⁵⁴ brought by two Greek merchants, Nikola and Dimitri: because of the dan-

ger of breakages it would have mostly been imported by water, which doubtless hindered its distribution in areas far from the rivers. The finds raise the important question of how far imports were catering to the taste of the Ottoman garrisons and how far to the Hungarians themselves. Certainly, finds of Safavid coffee cups and blue and white wares, perhaps imported by Greek, Armenian and Jewish merchants, are significant, for they have no parallel in Istanbul, where they do not seem to have been competitive on the market: these must have been a response to local demand.

What of the future? Providing that finds and research staff are available, the Iznik excavations offer the best prospect of augmenting our knowledge of the production of Ottoman pottery; but perhaps these conditions will not be fulfilled, at least not in the near future. One promising development, which will do much to raise the profile of Ottoman archaeology in Turkish eyes, is the work of a group of younger scholars on Ottoman fortresses on the Dardanelles and in the Ukraine.⁵⁵ This will contribute substantially to our knowledge of Ottoman material culture as well as architecture, and the status of the Iznik excavations can only benefit as a result. But excavation is only one aspect of the progress: both technical analysis and sheer physical description still have a vital role in answering the important unsolved questions our indisputably enhanced knowledge now poses.

The Nour Foundation, London

⁵² MILLER 1972, 54.

⁵³ GERŐ 1978; 1990. Coincidentally, in the course of salvage excavations in the City of London, a number of blue and white albarelli, some of them virtually intact, have recently come to light. They are plainly of Near Eastern provenance, probably from Syria, and must have been containers for drugs, spices or dyestuffs. There have also been a few finds of Iznik sherds, including a fragment of a Golden Horn dish. I am grateful to Nigel Jeffries of the Museum of London and Jean Martin, the secretary of the Oriental Ceramics Society for their kindness in showing them to me.

⁵⁴ FEKETE – KÁLDY-NAGY 1962, 216; FEKETE 1979: *Denk* (Red-house) is also used for "bale", but boats are a much more appropriate way of transporting pottery and indicates the considerable volume of the trade. These imports are reflected in the markedly greater quantity of wares with bole-red found at the Citadel of Buda.

⁵⁵ For example (KOŁODZJECZYK 1994), a pioneering topographical and historical survey, which well merits translation, of the Polish province of Podolia (now the Ukraine) in the late seventeenth century when, for almost three decades, the fortress of Kameniec Podolski was in Ottoman hands.

Problems of Authenticity in the Depiction of Hungarian Castles during the Time of the Ottoman Occupation

The depiction of forts and fortresses, as a distinctive genre, actually means several different types of depiction. One of these is the *veduta*, the precise depiction of a landscape, town or group of buildings, although the portrayal of events as illustrations for books, on broadsheets or in different series is equally important. A great many such depictions were made during the Ottoman era, in part because graphic reproduction techniques became fairly widespread from the sixteenth century onwards, and in part because this genre was at its most popular at this time. In practice this meant that a great many townscapes were drawn during this period, usually for some publication that purported to collect and present illustrations of the major towns of the then known world. At the same time, broadsheets on the events of the European war against the Ottomans were published continuously. Pictures supplied with text were also produced. Battle scenes without accompanying text were also published, as a kind of topical variation of the battle-scene genre evolved in painting.

The problem of accuracy was a prime consideration in the case of broadsheets since their authors usually indicated in the title that they intended to create "true and accurate depictions". Before turning to actual examples, we must briefly survey the works that contain the majority of the graphic works to be discussed below and that qualify as very important sixteenth and seventeenth-century productions in this respect. As our theme, we have chosen the townscapes of Esztergom. The reason for this choice is that as a royal seat the town has played an important role in Hungarian history. Moreover, its architectural history is well known, as is its topography, with its castle hill and the castle of Párkány on the opposite side of the Danube.

One of the earliest depictions of Esztergom is a copper engraving – signed by Georg Hoefnagel and dated 1595 – that appeared in volume 5 of Braun – Hogenberg's *Civitates orbis terrarum* (Cologne 1598, p. 57) (Ill. 1).¹ Hoefnagel was an artist from Amsterdam who moved to Rudolph II's court after employment as a papal miniature painter in Cardinal Farnese's service in Italy. His individualistic style and compositional solutions are obvious to the layman even, and the divided field he often employed also appears in his prospect of Esztergom. The upper part contains Tamás Bakócz's coat of arms and the text of the dedication, as well as the Latin and the German name for Esztergom. The castle hill is shown from a bird's eye view, along

with the Danube Bend and Párkány. In the lower field the castle together with its buildings and fortification works are shown from a lateral view. The small, framed fields contain explanations concerning certain details of the depiction, a common practice in that age. Hoefnagel used very fine landscape elements, e.g. the detail of the lower left-hand side of the picture that is a popular motif on sixteenth- to seventeenth-century Dutch landscapes. The use of *staffage* figures is similarly characteristic: the scene with clashing lancers often appears on his other *vedutas*. By employing two different prospects or a number of views in combination, the artist intended to enhance accuracy and authenticity, although the accuracy of the smaller details varied from page to page. This panorama of Esztergom is probably one of the more accurate depictions in the light of what we know about the architectural history, archaeology and topography of the town.

The broadsheet genre appeared during the first phase of the Fifteen Years War (1593–1606). Before the appearance of broadsheets the general public had few opportunities to keep up with the events of the war by means of illustrated sources. Portraits, depictions of events and townscapes, often together, now accompanied the written news reports. Obviously, this did not always mean that claims of accuracy were in fact warranted, since artists often copied each other's work or else a particular composition. These pictures achieved fame throughout Europe, becoming the period's best-known category of visual culture.

Dominicus Custos (c. 1550–1612) played a leading role in documenting military events in Hungary and in immortalizing important personalities of the age. He was trained in Augsburg, one of the major centres of copper engraving in Europe. He also made individual folios in connection with the Fifteen Years War, although his best-known work is the *Atrium Heroicum* (4 volumes, Augsburg 1600–1602), in which – drawing on the Ambras collection of Archduke Ferdinand of Tyrol – he celebrated the chief protagonists of the wars against the Turks. One folio in this collection is devoted to the 1595 siege of Esztergom, showing it from a bird's eye

¹ View of Esztergom. Paper, copperplate etching. 38.5 x 55 cm. Inv. no. T. 1206.



Ill. 1. Georg Hoefnagel: View of Esztergom. Engraving. 1595

perspective (Ill. 2).² The castle, the town and Párkány can be identified from their details. Pontoon bridges are depicted either side of Körtvélyes Island; camps of the Christian soldiers are shown on both banks of the Danube. We see the gun emplacements on Primate's Island, and also the wall and palisade protecting the Víziváros ("Water-Town"). The castle is being bombarded from Szent Tamás-hegy ("Szent Tamás Hill"). The engraving also shows the two rectangular towers of the basilica, along with its round tower that had been transformed into a minaret. Párkány, on the opposite side of the Danube, is in flames, and the battle fought against the Ottomans on 3–4 August 1595 can be seen on the right side of the picture. This is again a very characteristic battle scene: the elaborate composition, the accurate details and the inscriptions are all important accessories.

Wilhelm Dilich (1571–1650), who was from Kassel, became famous on account of his views of Hungarian castles published in 1600. Many of these were still being copied a century later. His view of Esztergom was part of a series of copper engravings published in his *Ungarische Chronica* (Ill. 3).³ Dilich had a predilection for faithfully depicting a landscape in the foreground as the starting point from which he offered his bird's eye view. His views of Visegrád and Pest-Buda follow the same pat-

tern: the wide, meandering river plays the role of focal point in these depictions. Dilich's view of Esztergom also includes Párkány: the castle, the town and the defensive works. His finely executed *vedutas*, rich in minute details, were usually accurate and it is perhaps no coincidence that the Visegrád album published by Häufler – Szerelmey in 1847 copied Dilich's engraving or else used it as an aid to composition.

Hans Silbermacher (d. 1611), a painter and etcher from Nuremberg, was one of Dilich's earliest followers. Another was Wilhelm Peter Zimmermann (1589–c.1630). Each had a highly distinctive and easily identifiable style. Silbermacher's depiction of the 1595 siege is almost an aerial view, with the small figures entirely filling the space (Ill. 4).⁴ He had little interest in buildings and their details, and despite the explanatory inscriptions these can be identified only with difficulty. The copper engraving reproduced here appeared in Hieronimus Ortelius's *Chronologia* (Nuremberg 1603), the example in the Historical Gallery of the Hungarian National Museum comes from p. 175 of a later edition (*Ortelius Redivivus et continuatus...*) published in Nuremberg in 1665. Besides his portrayal of events, Silbermacher also made various portraits to illustrate Ortelius's text, and their joint work resulted in one of the most popular volumes on the Fifteen Years War.

² Siege of Esztergom. 1595. Paper, copperplate etching. 41.5 x 35.5 cm. Inv. no. 5515 T. Inscription: STRIGONIUM AT CAESARIANSIS OBSESSVM / ANNO CHR. M. D. XCV. / Signature: Viro Clariss. Et strenuo D. / MATTHIAE THALMANO / Equiti Aur. Augustae Vind. / Praetori VRb. DD. Dominio Cust.

³ View of Esztergom. Paper, copperplate etching. 15 x 24 cm. Inv. no. 71.27.

⁴ Siege of Esztergom. 1595. Paper, copperplate etching. 18.7 x 28.4 cm. Inv. no. T. 281.



III. 2. Dominicus Custos: Siege of Esztergom. Engraving. 1595



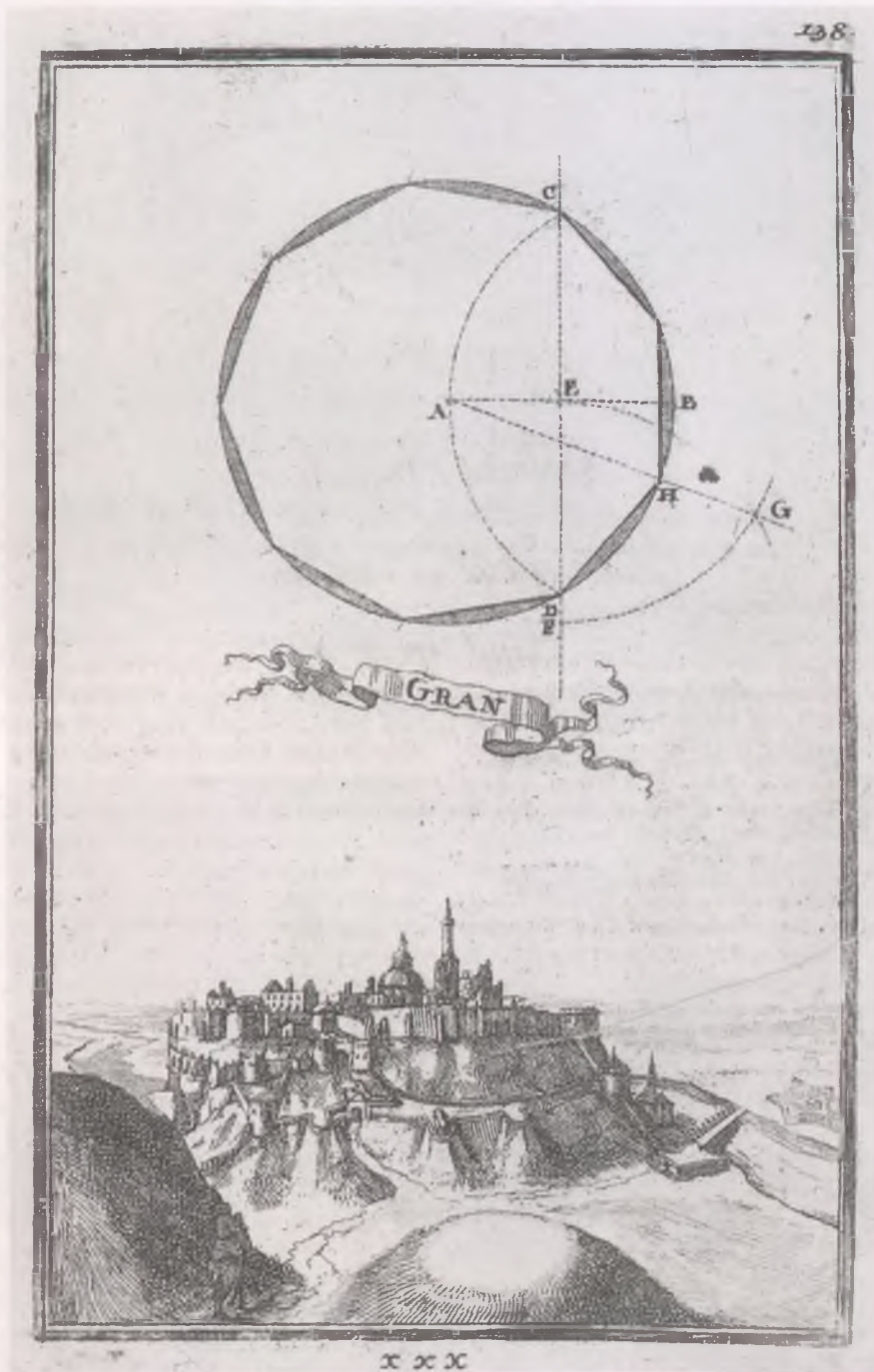
III. 3. Wilhelm Dilich: View of Esztergom. Engraving. 1600



Ill. 4. Hans (Johann) Sibmacher: Siege of Esztergom. Engraving. 1603



Ill. 5. Wilhelm Peter Zimmermann: Siege of Esztergom. Engraving. 1603



Ill. 6. Justus van den Nypoort: Siege of Esztergom. *Veduta*. 1683



Ill. 7. Gaspar Bouttats: View of Esztergom. *Veduta*. Second half of the 17th century

Wilhelm Peter Zimmermann, too, made copper engravings for a volume on the Fifteen Years War: Samuel Dilbaum's *Eikonographia*, published in two volumes between 1603 and 1607 in Augsburg. The 1595 siege of Esztergom is shown from above – from a bird's eye view –, and according to the inscription in verse depicts the scene in which “Archduke Matthias routs the Turks” (Ill. 5).⁵ Inscriptions in verse appear on all Zimmermann's illustrations, together with explanations to aid orientation. These explanations are certainly useful since his depictions are rather schematic and the details can be identified only with difficulty.

Over a century had to pass before the Turkish siege of Vienna in 1683 and the recapture of Buda from the Turks in 1686. Between these two notable events, there was need to inform the European public of the many battles fought in Hungary. Graphic depictions of these events, published in many thousands of copies, were made by a wide variety of artists. These depictions reflect efforts to combine topographical accuracy and authenticity with the stylistic richness of Baroque art. This is why during this period we mostly encounter works satisfying the demands not only of artistic quality, but also of accuracy with regard to detail.

The name of the Dutchman Justus van den Nypoort (1625–1692) should be mentioned first. He came to Central Europe in 1683, in same year illustrating the title page of the Nagyszombat almanac with a view of that town. He also made two pictures showing the siege of Vienna and one showing the siege of Esztergom. The year 1686 saw the publica-

tion of his most important and best-known work, a collection of 110 copper etchings and engravings for a geometry textbook produced for Joseph I, who had been crowned king of Hungary at the age of nine. Anton Ernst Burckhardt von Birckenstein, a military engineer who served in the rank of lieutenant colonel as the chief engineer of Győr, wrote the text. Nypoort's townscape illustrations are usually quite accurate, and the same is true of his works showing castles in western Hungary and the castles on Esterházy estates along the Danube. (Nypoort received quite a number of commissions from the palatine, Pál Esterházy.) Besides their accuracy, these depictions are also important on account of the genre scenes shown in the foreground. It has often been noted that they are unique in the history of Hungarian Baroque, despite the fact that they reflect the usual clichés of this period, albeit at a high level artistically. Nypoort's folios have a geometric design at the top, a view of the castle in question in the middle, and a genre scene in the foreground. On the folio depicting Esztergom there is a lone figure on horseback slogging among the hills instead of the usual lively scene (Ill. 6).⁶ The depiction of the castle and the hill is accurate and to some extent quite rich in detail, insofar as this is possible in the case of a distant prospect.

With regard to style and composition, Gaspard Bouttats's *veduta* series showing the castles of Hungary has much in common with Nypoort's illustrations. Bouttats (1640–1695) rarely gives bird's eye views: his depictions are – as in the case of his prospect of Esztergom – usually frontal views

⁵ Siege of Esztergom. 1595. Paper, copperplate etching. 15.8 x 26 cm. Inv. no. T. 4212.

⁶ View of Esztergom. Paper, copperplate etching. 19 x 12.8 cm. Inv. no. T. 3444.



Ill. 8. Johann Jacob von Sandrart: Siege of Esztergom *Veduta*. 1683



Ill. 9. Franz Jaschke: View of Esztergom. Aquatint. First half of the 19th century

featuring well-identifiable details (Ill. 7).⁷ Nor, as in Nypoort's case, is the genre scene in the foreground lacking. This is a typical Baroque motif.

The German painter Johann Jacob von Sandrart (1655–1698) was one of the best copper engravers of the High Baroque. His style reflects a careful attention to detail and a striving for artistic perfection. His depiction of the liberation of Esztergom on 27 October 1683 is a real masterpiece (Ill. 8).⁸ Although we still find the alphabetically listed explanations characteristic of the preceding century, the *veduta* itself – however beautiful or important it may be – is relegated to the background. The focus is on the battle raging in the foreground, on the figures drawn with a poetic touch and a virtuoso technique.

The genre now came to an end in its old form and was completely transformed. Two examples will be sufficient to show the changes that had taken place by the late eighteenth and early nineteenth centuries.

The prospect of Esztergom made by Friedrich Bernhard Werner (1690–1778) employs the old

bird's eye view and takes pains to offer an accurate topographical portrayal.⁹ But at least as important are those artistic qualities that were the most characteristic of the genre favoured by early nineteenth-century Romanticism: the landscape.

The aquatint by Franz Jaschke (1775–1842) is an excellent example of this landscape depiction, in which accuracy and authenticity are important considerations but in which emotional elements – a bucolic scene in the foreground, a bold and unusual perspective, and an emphasis on the beauty of the landscape itself – are also decisive (Ill. 9).¹⁰

As we have seen, accuracy was of prime importance in all these depictions, which were made over a period of 200 years. The extent to which this accuracy was achieved varied. Still, we should bear in mind that these works of graphic art are not merely good visual sources and documents – although their usefulness in this regard cannot and should not be overlooked –, but works of art of varying standard and occasionally special quality.¹¹

⁷ View of Esztergom. Paper, copperplate etching. 10.6 x 26 cm. Inv. no. T. 2286.

⁸ Liberation of Esztergom. Paper, copperplate etching. 16.6 x 28.9 cm. Inv. no. T. 299.

⁹ View of Esztergom. Paper, coloured copperplate engraving. 24.3 x 35.5 cm. Inv. no. T. 298.

¹⁰ View of Esztergom. Paper, aquatint. 35 x 45 cm. Inv. no. T. 5122.

¹¹ BUBICS 1880, 21; LEPOLD 1944, 17–18, No. 19; RÓZSA 1955, 11, No. VI; GENNER-WILHELM 1957, 191, 198, No. 22; 1966–67, 232–233; FAUSER 1978, 267, No. 4841; GALAVICS 1986; 1993; FÜLEMÜLE 1989, 128, No. 10; BASICS 2000.

Recent Research into Ottoman-period Remains in Buda

On the territory of Budapest it is the Budapest History Museum that performs archaeological research work. The tendency of the recent past is that these excavations and rescue excavations are usually made in association with various construction activities. The archaeologists of the Medieval Department at the Budapest History Museum carried out excavations at several spots in Buda in the 1990s, and in most places Turkish remains and finds were brought to light. In order to demonstrate the scale of the research work, I should like to mention that between 1995 and 2000 we excavated at ninety-nine different locations, representing an average of sixteen excavations per year. In this paper I shall describe the most important results of these investigations.¹

I start my list with excavations in the suburbs of Buda.

Important new information has been discovered with regard to the medieval and Ottoman-period topography of the Víziváros ("Water-Town") quarter of Buda, especially as a result of András Végh's researches.² Town walls were built round the suburbs of Buda as early as the fourteenth century.³ During excavations (Ill. 1. 1) preceding the construction of an underground car park in Lovas út, a short section of the town wall by the eastern side of the Esztergom Round Bastion was uncovered.⁴ During Ottoman rule there used to be three gates in this town wall.⁵ Kakas kapu (Cockerel Gate; Horoz Kapusu) – located in present-day Fő utca – can probably be identified with the medieval Felhévizi kapu. The line of the modern Várfoke utca follows a one-time thoroughfare connecting the Bécsi kapu (Vienna Gate) with the former Mészáros kapu (Butchers' Gate; Kasap Kapusu). The predecessor of today's Ostrom utca used to connect the Bécsi kapu with the Új kapu (New Gate; Yeni Kapu), the remains of which were found at present-day Széna tér. Mészáros kapu can probably be identified with the medieval Tótfalu kapu, while the identification of Új kapu is uncertain; in view of the name it is possible that there was no gate on that

site in the Middle Ages. The medieval Tótfalu, a suburb located beyond the Bécsi kapu, was sparsely populated in the medieval period and had a relatively large area made over to gardens. The character of this area remained unchanged during the Ottoman occupation.⁶

Before construction of the car park in Lovas út, not only the fortification wall, but also the triangle between Lovas út and Várfoke utca was excavated, and a Turkish dwelling house was uncovered. The cellar of the house was made of stone and the upper part of wood; the house burnt down during the siege of 1686. Very many tools were found in the cellar (including a gimlet and a hammer) that indicated the occupation of the owner.⁷ A faience jug, a copper mug (*ibrik*) and many ceramic artefacts (footed bowls, pots and a jug) were recovered from Pit 39 at Ostrom utca 13 (Ill. 1. 2). Mention should also be made of a seventeenth-century bronze medallion depicting St. Leonhard and St. Sympert.⁸

In 1995, during the rebuilding of the Ministry of Foreign Affairs at Bem tér 4 (Ill. 1. 3), the artillery tower (or round bastion) of the Víziváros town wall was uncovered in the cellar of the building. The wall of the tower was 5 metres thick, vertical, and made of crushed, coarse limestone and firm lime mortar. Its inner side was covered with large pieces of limestone. The outer side had been faced with thin sandstone after 1686. There were two embrasures in the wall,⁹ one facing the Danube, the other the gate of the castle. In view of the depictions of the artillery tower – e.g., Fontana's engraving (Ill. 2) –, these two embrasures were part of the series on the ground floor of the tower. In the course of the excavations the archaeologists did not succeed in identifying the original surface levels. The written sources name Arslan Paşa of Buda (1565–1566) as the creator of the tower. By making it he was attempting to improve the defensibility of the Víziváros town wall, which had been militarily insignificant up until then.¹⁰

During the building of a residential and office block at Medve utca 22–30 (Ill. 1. 4), a foundation

¹ I would like to thank my colleagues for their generosity in sharing with me their unpublished findings.

² Excavations and rescue excavations conducted by the archaeologists of the Medieval Department between 1981 and 1991: *BudRég* 29 (1992) 237–240, sites 1–6. and 8. VÉGH 1998; 1999.

³ VÉGH 1997, 296.

⁴ Anna Gyuricza excavated this site in 1997.

⁵ FEKETE – NAGY 1973, 352–353.

⁶ VÉGH 1999, 331–333.

⁷ Here I would like to thank Anna Gyuricza for kindly informing me of these unpublished observations and finds.

⁸ VÉGH 1999, 336–340.

⁹ RÓZSA 1963, 78–82, cat. no. 27.

¹⁰ VÉGH 1998, 332.

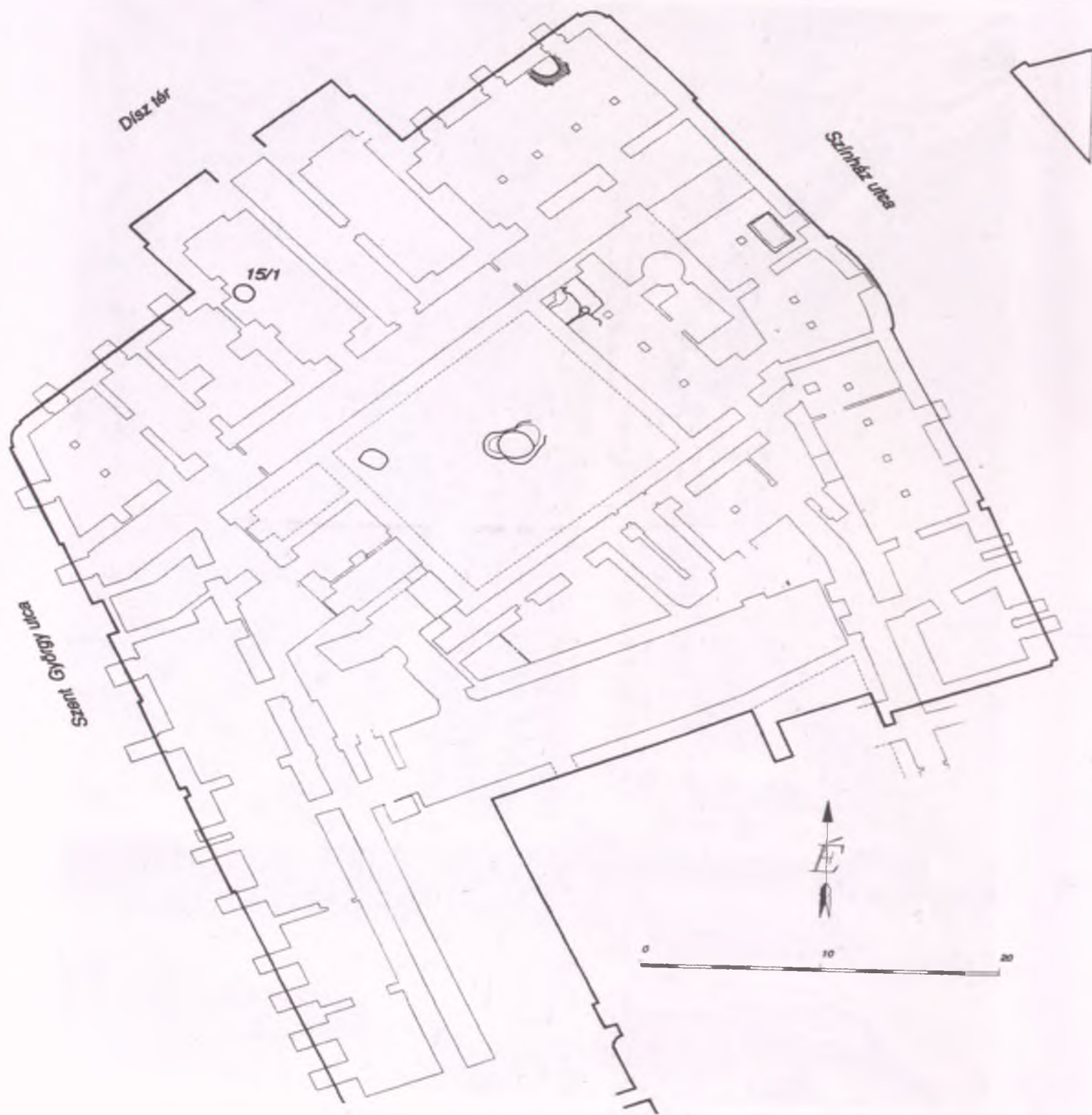


Ill. 1. Sites of the main excavations carried out in Buda:

1. Lovas út; 2. Ostrom utca 13; 3. Bem tér 4; 4. Medve utca 22-30; 5. Toldy Ferenc utca 8-10 and Szabó Ilonka utca 7;
 6. Szent György tér, Sándor Palace; 7. Dísz tér 17, the building of the former Armed Forces Headquarters;
 8. Országház utca 33-34, the building of the former State Printing House; 9. Kapisztrán tér 2-4; The courtyard of the Insitute
 and Museum of Military History; 10. Gyorskocsi utca 26, 11. Lovarda utca



Ill. 2. The Víziváros ("Water-Town") district as depicted on a Fontana and Nessenthaler's engraving



III. 3. Map of the excavations at Dísz tér 17



Ill. 4. Selection of the ceramic finds from Pit 15/1 at Dísz tér 17

covering an area three metres by four metres came to light two metres down. This foundation was made of smaller and larger layers of crushed limestone, with original timbers inside. A few remains of the timbers, circular in section, together with the trusses hammered into them, were excavated. This building technique was typical for Ottoman architecture, and similar architectural features can be cited from the Ali Paşa Cami in Szigetvár and Malkoç Bey Cami in Siklós.¹¹ The remains at Medve utca were identified as parts of the minaret of the Çemberci Ağa Cami. A map from 1686 drawn by De la Vigne shows its exact location,¹² and it is also depicted on Fontana's engraving (Ill. 2). On Marsigli's map it appears as No. 74.¹³ The foundations of the minaret disturbed the graves of a former cemetery and a total of five graves without any grave goods were also uncovered during its investigation.¹⁴

The graves of a cemetery from the Ottoman period were unearthed in the area between Toldy Ferenc utca 8–10 and Szabó Ilonka utca 7 (Ill. 1. 5). The houses on the eastern slopes of Castle Hill were demolished in the early sixteenth century and the area was used as a burial ground.¹⁵

The remains of the Franciscan cloister dedicated to St. John the Evangelist – situated in the area

of the Sándor Palace (Ill. 1. 6) on the eastern side of Szent György tér – were excavated by Júlia Altmann. The history of this area in the Ottoman time, and the archaeological remains from this period, are being processed by Eszter Kovács.¹⁶

The middle part of Szent György tér, towards Dísz tér, is flanked by the former Armed Forces Headquarters (Ill. 1. 7). During the investigation of this area in 1999 (Ill. 3), several pits from Ottoman times were uncovered. The evaluation of the finds is still in progress. A selection of the pottery finds from Pit 1, dug into rock in Cellar 15 towards Dísz tér, is shown in Ill. 4. Besides household pottery, an Iznik faience plate decorated with plant motifs on a pink ground was also brought to light. Comparable Ottoman decorated wares were found near this site, on the western side of Szent György tér in a cellar near the former Riding School.¹⁷ Pit 15/1 yielded, besides pottery, a number of metal objects, such as copper plates, the fragment of a decorated knife handle, nails, a copper plug, iron fittings from doors, and a horseshoe, as well as a glass bottle, various glass fragments and a rich assemblage of animal bones.

Mention must also be made of the most important findings of the investigation conducted in the courtyard of the Institute and Museum of

¹¹ GERÓ 1983, 117.

¹² RÓZSA 1963, 69–72, cat. no. 21.

¹³ VERESS 1906, 142–148.

¹⁴ VÉGH 1998, 332.

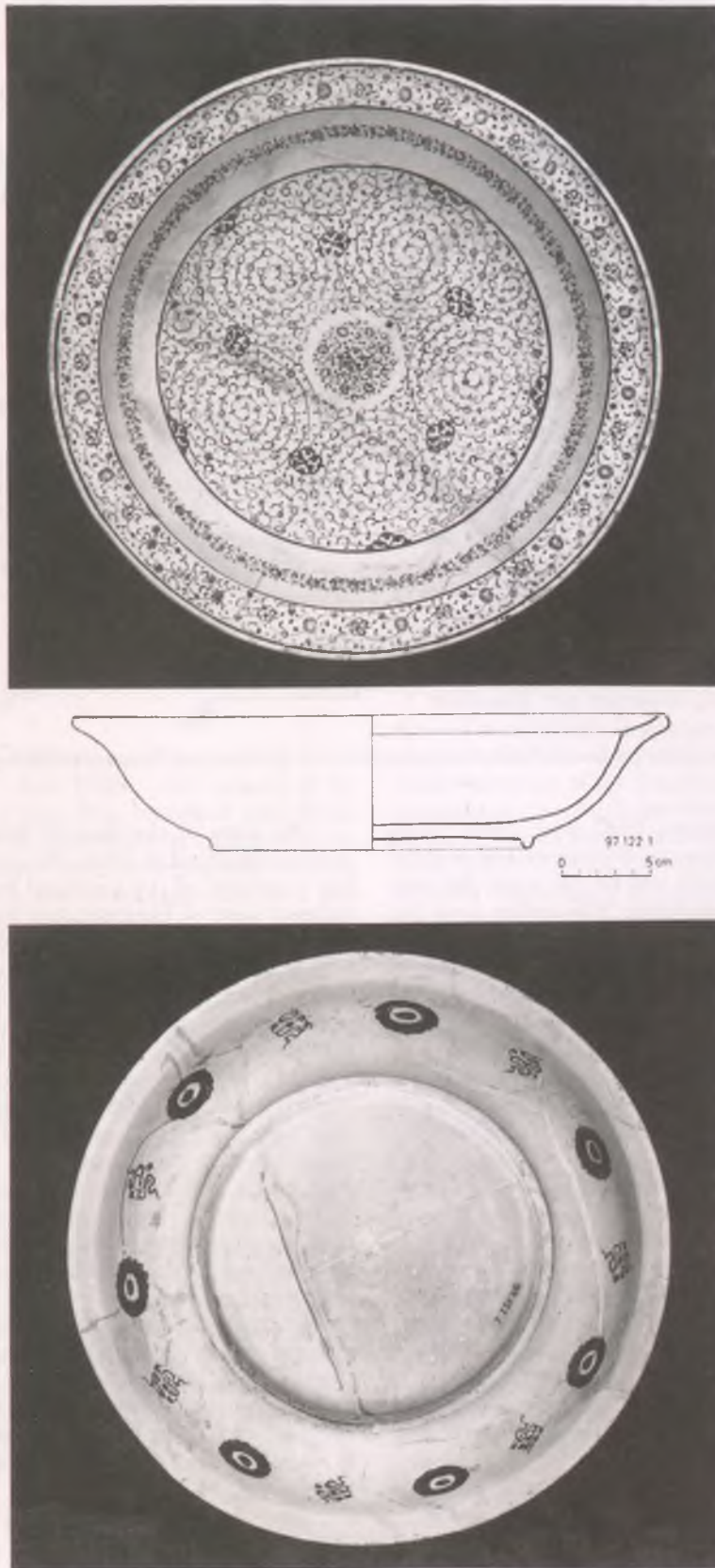
¹⁵ The excavation was conducted by Eszter Kovács in 1997 and 1999.

¹⁶ This work is still in progress.

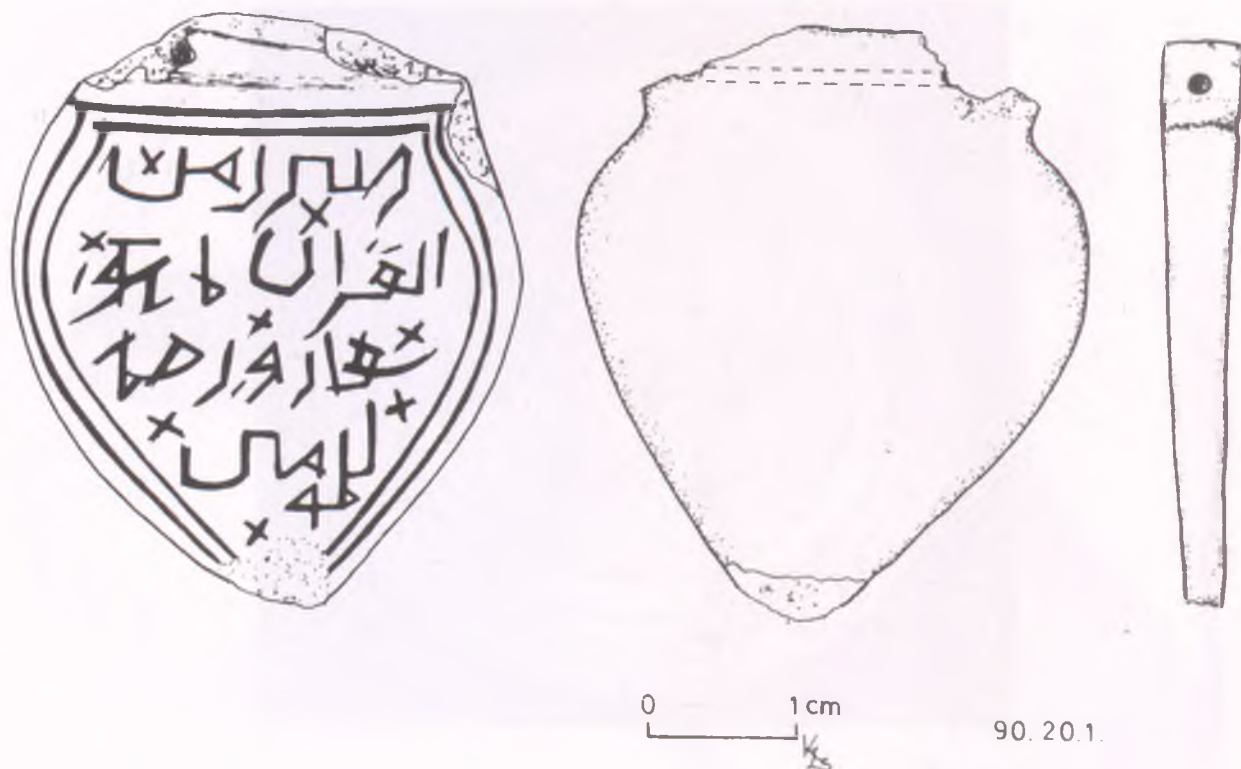
¹⁷ Cf. TÓTH in the present volume.



Ill. 5. Copper vessels from the courtyard of the Institute and Museum of Military History



Ill. 6. Iznik dish ornamented in Golden Horn style from the cellar of the building at Országház utca 33



Ill. 7. Amulet from a pit uncovered in the courtyard of the Institute and Museum of Military History

Military History between 1987 and 1990.¹⁸ On the southern side of the courtyard we uncovered a medieval house, which was in use until the end of the Ottoman occupation. The cellar was cut into the rock and its ceiling was held up by corbels. The passage down to the cellar opened from the north; the threshold was found at a depth of 165.25 metres above sea level. The bottom of the cellar lay at a depth of 161.4 metres above sea level, and the contemporary floor surface lay 60 centimetres above this.¹⁹ On the floor of the cellar, among charred remains of old timbers, we found a set of household pots consisting of copper vessels. Some or perhaps all of these copper vessels may have been kept in a sack, since we noted burnt textile fragments on one of the cauldrons.²⁰ A selection of these vessels is shown in Ill. 5. The house had probably burnt down during the 1686 siege. Outstanding among the many finds from the re-occupation of Buda is a sapper's armour. An amulet (Ill. 7) came to light from a Turkish pit lying next to the eastern side of a semicircular tower constructed during the time of the Árpád dynasty.²¹

The area of the former State Printing House was investigated in 1996. We succeeded in excavating a section of the external buttressed town wall located west of Janicsár Aga út, marked "No. 55" on the map prepared by Marsigli.²² This wall section is not depicted on the map. The excavation also proved that this was the same stretch of town wall uncovered in the area of the electricity works installation by Katalin H. Gyürky earlier on.²³ Finally, I should like to mention an Iznik dish made in the so-called Golden Horn style (Ill. 6). This dish was found in the area east of the towers of the Árpádian-age town wall. The plate is decorated with plant and geometrical patterns in blue on a white ground. The decorative motifs on the inner part, small flowers growing out of larger ones, are outlined with a thicker line. The floral ornament in the centre is surrounded by a scrollwork pattern with larger flowers and a similar pattern runs around the broad rim. The exterior, too, is decorated with a floral pattern. The object can be dated to the period between 1520 and 1540,²⁴ suggesting that highest quality import ceramics appeared shortly after the 1541 Ottoman occupation of Buda.²⁵

¹⁸ BENCZE 1987a, 370–385; 1987b; 1988; 1989; 1990, 194–198.

¹⁹ BENCZE 1988, 183–184.

²⁰ BENCZE 1989, 131–134.

²¹ BENCZE 1987b, 793–794, Pl. II. Ill. 3.

²² See note 13.

²³ GYÜRKY 1976, 381–386.

²⁴ ATASOY – RABY 1994, cat. nos. 30 and 309.

²⁵ Ills. 1 and 9–10 were drawn by Zsuzsanna Kuczogi and Ills. 5–8 by János Major. Photographs: Bence Tihanyi (Ills. 2 and 10) and Margit Bakos (Ill. 4). The survey and drawing (Ill. 3) were prepared by Zsolt Viemann.

Turkish Defences in the Southern Part of Buda Castle

Before proceeding to the main theme of this paper, a brief explanation of its title seems to be in order. "Buda Castle" (budai vár) is here used to denote the Buda Castle District in the modern and in the thirteenth- to fourteenth-century sense of the term, i.e. the territory of the civilian town and the former royal palace as well. This point needs to be emphasized since in the age preceding the period in question, in the fifteenth and the early sixteenth century, the term "castle" – *castrum* or *arx* – was, more often than not, used to denote the fortified palace that was separate from the town. The southern part of this area is the territory south of present-day Dísz tér.

Historical introduction

A more precise definition of the period – the time between 1541 and 1686 – also seems to be needed. Ottoman troops first marched into Buda shortly after the Battle of Mohács in 1526 (on 11 or 12 September) without encountering any serious resistance.¹ In 1529, the Ottomans captured the castle again, this time from the supporters of King Ferdinand I of Habsburg (1526–1564); after the occupation the Ottomans handed the castle over to the rival king John I Szapolyai (1526–1540), their ally and vassal. At the time it seemed sufficient to leave Gritti, a confidant of the sultan, and a few Ottoman troops behind to ensure their control over Buda. These troops were soon needed since Ferdinand I made an unsuccessful attempt to retake the castle the very next year.² The town nonetheless continued to enjoy relative independence.

Following the death of John I, two further attempts were made to recapture Buda (in 1540 and 1541).³ Ottoman troops were sent to Buda in 1541 to relieve the besieged followers of John I. Following the defeat of the besiegers (who found themselves wedged between the relieving troops and the besieged), events took a new turn. The sultan graciously received King John I's followers in his camp and did not allow the more important among them

to return to their own people. In the meantime, Ottoman troops simply infiltrated Buda and occupied it. The town's strategic role had definitely grown in importance and the sultan deemed it wiser not to leave control of the town in the hands of Isabella, the widowed queen, and the child-king, John Sigismund, or in those of Szapolyai's leading followers who, if so inclined, might well start negotiations with the Habsburgs. This well-known episode in Hungarian history signalled the beginning of the 145-year-long period of Ottoman rule over Buda. The town became one of the most important border-fortresses and provincial centres of the Ottoman Empire. At the same time, it also became one of the most significant strategic objectives of the Christian forces.

Although the intent to recapture Buda was reflected in relatively few siege attempts, the constant threat called for the continuous construction and modernisation of the fortification system. In all, six campaigns were launched for the liberation of Buda in the next one and a half centuries (in 1542, 1598, 1602, 1603, 1684, and 1686), and none save the last actually culminated in success.⁴

In the past two decades three defences of the Turkish fortification system were uncovered on the territory of the palace; another three in its northern foreground, in the civilian town; and a defence work, or part thereof, in the suburb but still belonging to the castle's system of defences (Ill. 1). The seven locations represented seven different, but nonetheless interrelated, solutions, depending on the "challenge" posed by the actual site. In the following I shall describe just two of these defences (Ills. 1, 7).

A Turkish defence work in the Western Zwinger⁵

The first defence work to be discussed here was uncovered in the so-called Western *Zwinger* of the medieval palace, in its northern section (Ill. 2).⁶ This section of the *zwinger*, consisting of two parts and lying on the western slope of Castle Hill, was incorporated into the palace's defence system as a subsid-

¹ IVÁNYI 1941, 33–34; KUBINYI 1973, 200–201.

² IVÁNYI 1941, 39–40, 43–45; KUBINYI 1973, 201–203, 208–209, 213–214.

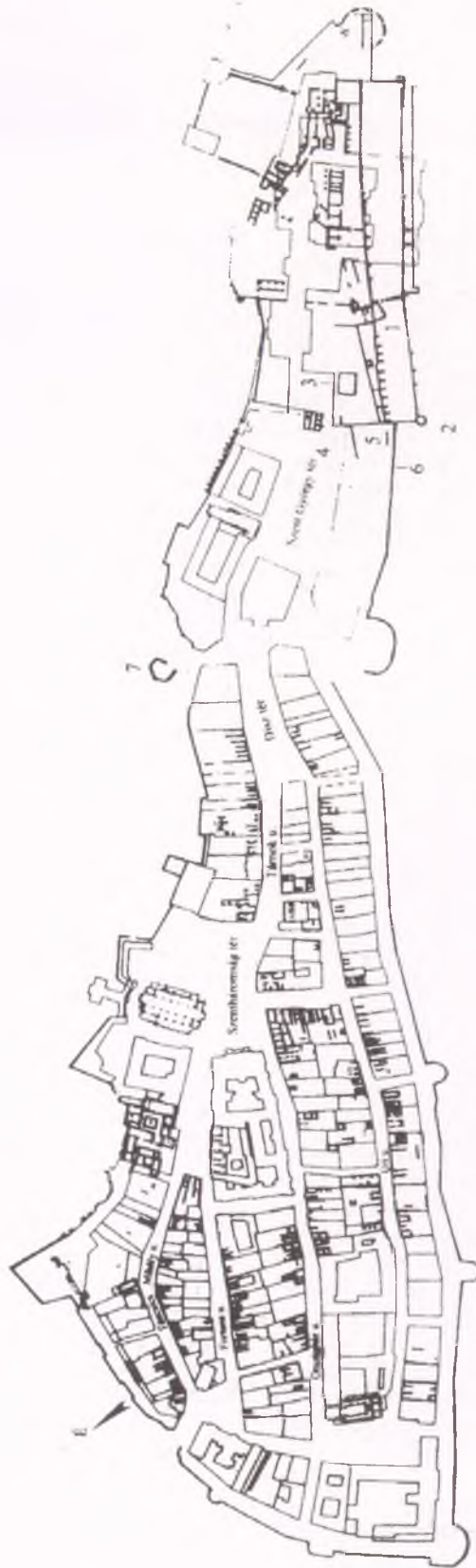
³ IVÁNYI 1941, 58–60, 68–74; KUBINYI 1973, 227–230.

⁴ In 1542 only Pest was besieged: FEKETE – NAGY 1973, 337–338; 1598: FEKETE – NAGY 1973, 338; 1602: FEKETE – NAGY 1973, 338–340; 1603: FEKETE – NAGY 1973, 342; 1684: FEKETE

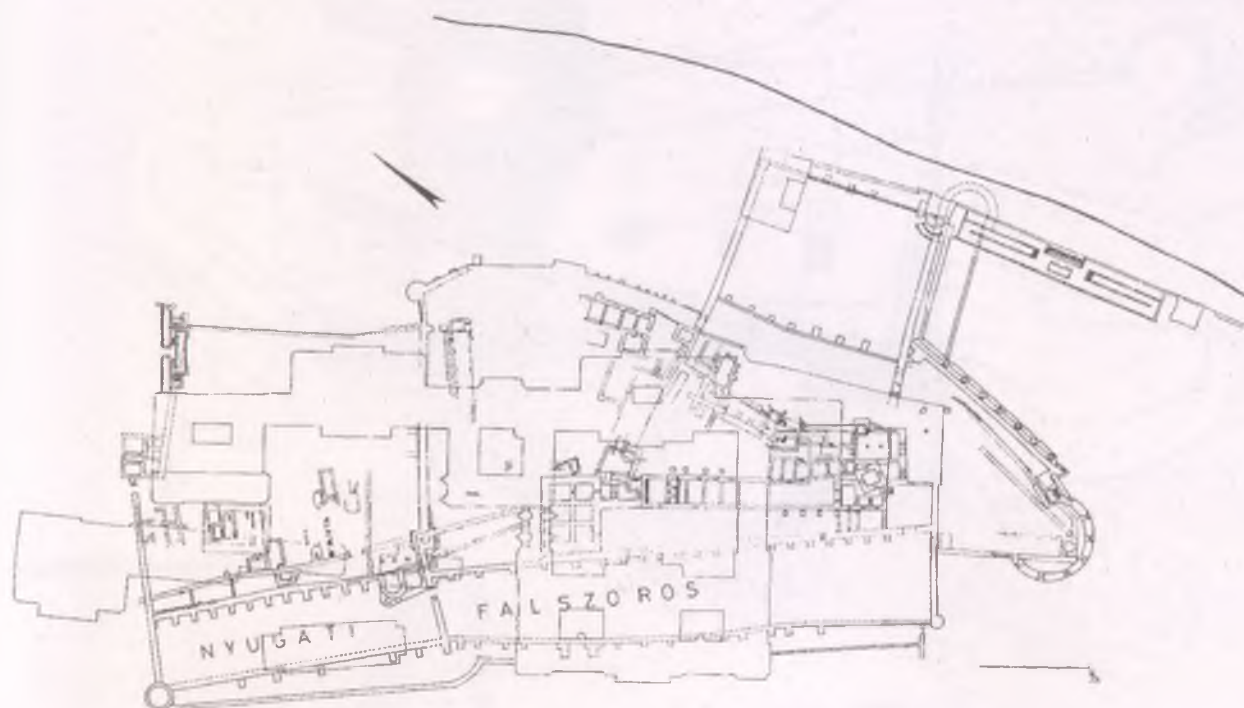
– NAGY 1973, 423–425; KÁROLYI – WELMANN 1936, 5–9; 1686: FEKETE – NAGY 1973, 425–434, and KÁROLYI – WELMANN 1936.

⁵ For the lack of an appropriate English word we have used the German term *Zwinger*, i.e. a space between two curtain walls whose main function was to keep besiegers away from the inner part of the castle.

⁶ For a brief description of the excavations, cf. MAGYAR 1992, 109–114, esp. 112–114.



III. 1. Modern plan of Buda Castle with the excavated sites in the southern part



Ill. 2. The Western *Zwinger* (NYUGATI FALSZOROS) on the map showing the medieval and modern-age buildings of the Royal Palace of Buda

iary element in the Middle Ages, its two parts being connected by the Northern Gate – called the Arányi kapu today – of the earlier section. The defence works at the inner, southeast juncture of the two parts had been somewhat vulnerable even during the medieval period. This vulnerability was caused by the fact that the western end of the Dry Moat that had divided the royal palace complex from the town since the reign of King Sigismund of Luxembourg (1387–1437) was situated there. This western end of the moat was closed off by a section of the inner castle wall that was strengthened by buttresses on its outer face. (Buttresses were positioned at intervals along the entire length of the inner castle wall on the northern stretch. There were three buttresses along the section at the end of the moat (Ill. 3. Tp1–2–3).⁷ It seems likely that there were problems with the statics of this rather short part of the castle wall from the very outset, since it was not reinforced or supported from the inside (the same wall functioned as a revetment along all the other parts),⁸ and also

since the rainwater occasionally accumulating in the moat may have seeped in at this point.

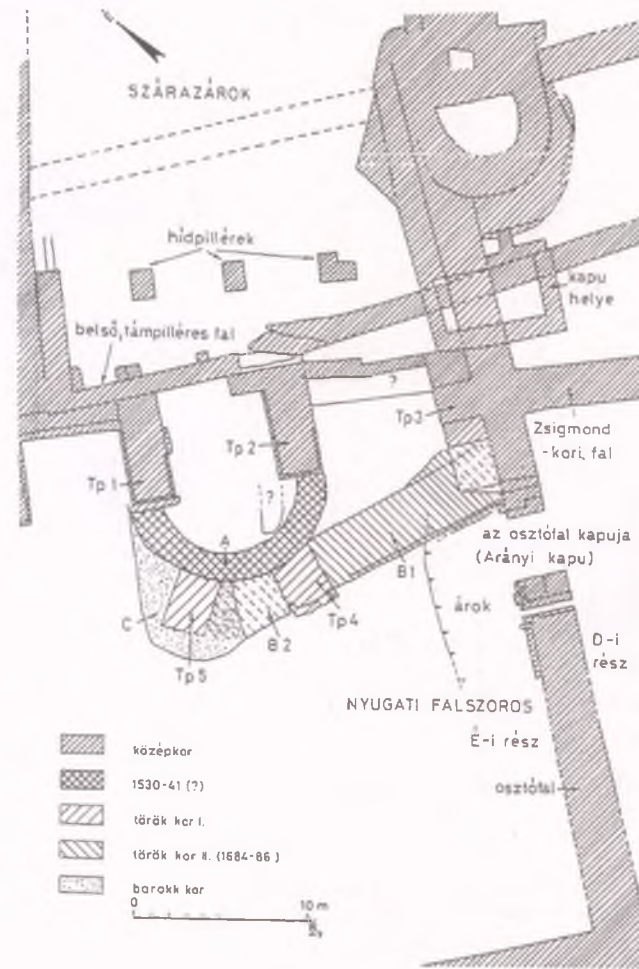
Another difficulty, too, had to be resolved from the late 1520s onwards, namely that this section of the palace's fortifications was now within the range of any siege artillery positioned on the neighbouring Madárhegy ("Bird Hill"), the present-day Naphegy ("Sun Hill"). Since the bridge and the gate leading to the inner parts of the palace lay directly behind this section, as a strategic target it was no doubt often damaged by artillery fire. All these facts would explain the "patched-up" character of the wall sections between the excellently built buttresses (Tp1–2–3). The construction of the smaller, semicircular tower or bastion⁹ (Ill. 3. A. Outer diameter: 11.4 metres; inner diameter: 7.6 metres; wall thickness: 1.6–1.8 metres) built between the middle buttress (Tp2) and the northern buttress (Tp1) can most certainly be ascribed to the development of cannon. This semicircular defence work, of which only the foundation walls have been exca-

⁷ The southern buttress – in fact a group of buttresses – can be dated to the period of King Sigismund of Luxembourg. It consists of two transverse buttresses (supporting the NW angle of the Palace complex in an earlier phase of the Sigismund era) and a third, slightly later one that was built next to them from the north at the same time, when buttresses Tp1 and Tp2 were erected.

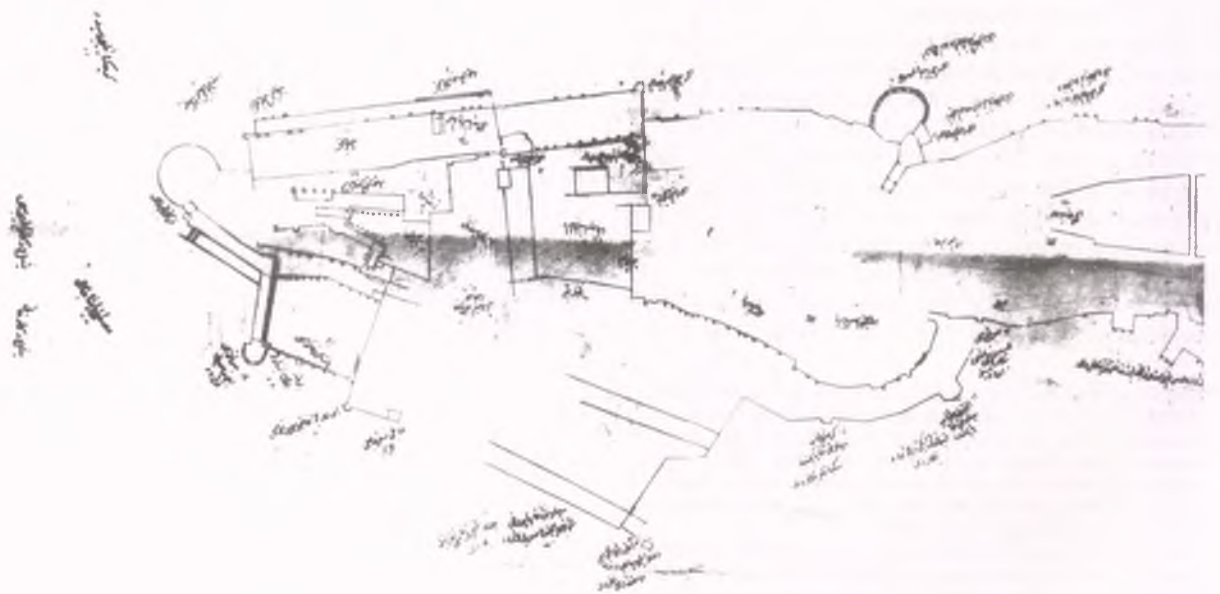
⁸ The section of the internal castle wall extending from the northern wall of the Palace to the Dry Moat is essentially identical with the town wall of the Angevin (Anjou) period (the northern courtyard of the Palace had originally been part of the town). This wall section had been constructed

along the outer verge of the rock-plateau of the Castle Hill. It consisted partly of wall built along the edge of the plateau and partly of facing on the vertical rock surface below this edge. The section of the internal Angevin (Anjou)-age wall situated to the south of the Dry Moat was replaced by a new wall built further out on the slope in the time of King Sigismund. The area behind both walls was filled up. In other words, both sections of this wall also functioned as buttresses, except for the short section behind which the original fill was removed when the Dry Moat was dug.

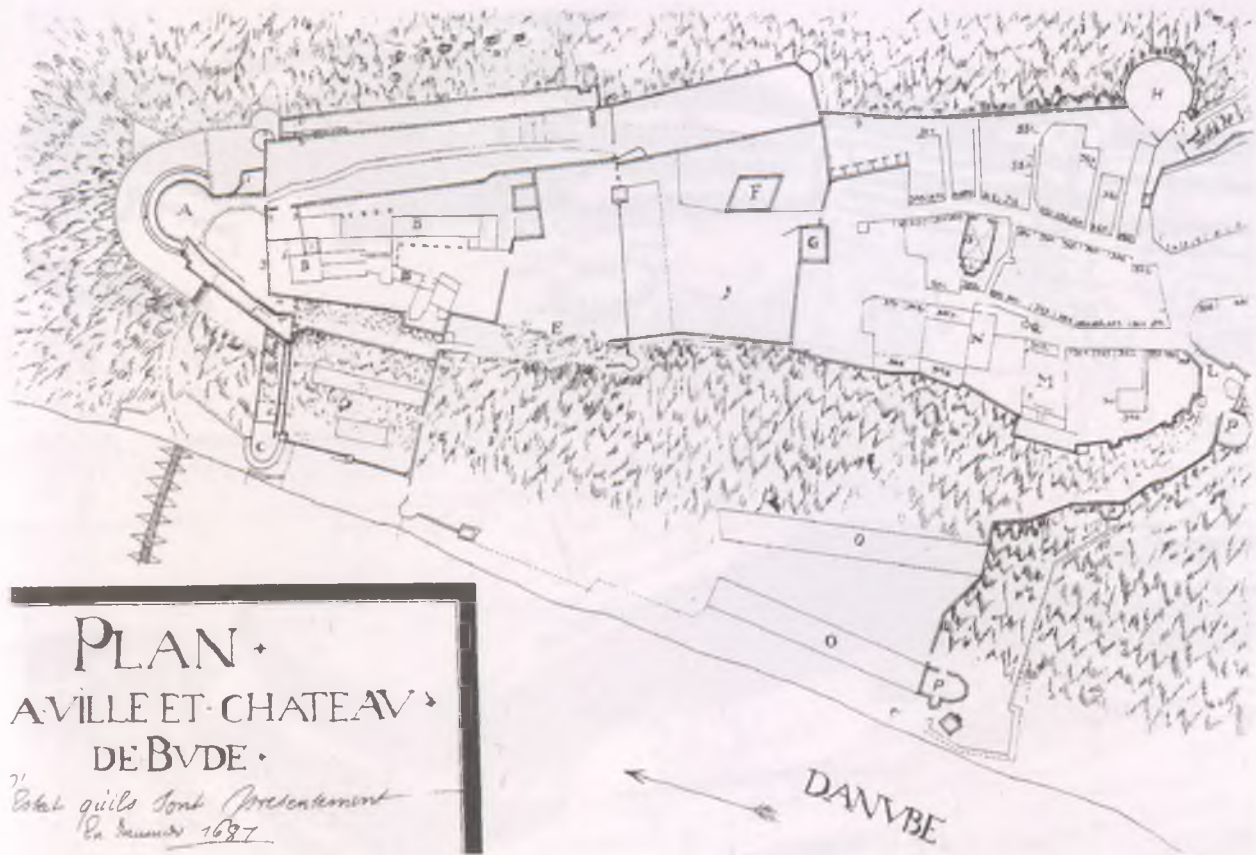
⁹ We have no data as to the inner structure of the bastion.



Ill. 3. The Turkish defence work and its environs in the Western Zwinger of the Royal Palace. Key: NYUGATI FALSZOROS = Western Zwinger; SZÁRAZÁROK = Dry Moat; TÖRÖK KOR = Ottoman period; Tp = buttress. (Survey and drawing by Zsuzsanna Kuczogi)



Ill. 4. Southern part of Buda Castle on a Turkish map by L. F. Marsigli (1686)



Ill. 5. Southern part of Buda Castle on Haüy and Rabatta's plan (1687). Detail

vated, can be tentatively dated to between 1530 and 1541, albeit merely on the basis of its position and architectural features, since the level at which its construction begins could not be observed.

The problem was not solved by the completion of the new defence work. This semicircular tower was later reinforced with two buttresses (Tp4–5). Since several medieval stones were incorporated secondarily into the buttresses and since the mortar differed from that of the original defence work, the buttresses can be dated to the period of Ottoman conquest. Towards the south a small ditch or pit dug in front of the Northern Gate (Arányi kapu) as a western, narrow continuation of the Dry Moat can be dated to the Ottoman period as well; it was built in all likelihood immediately before the 1684 siege.¹⁰ This ditch or pit (width 4.6 metres,

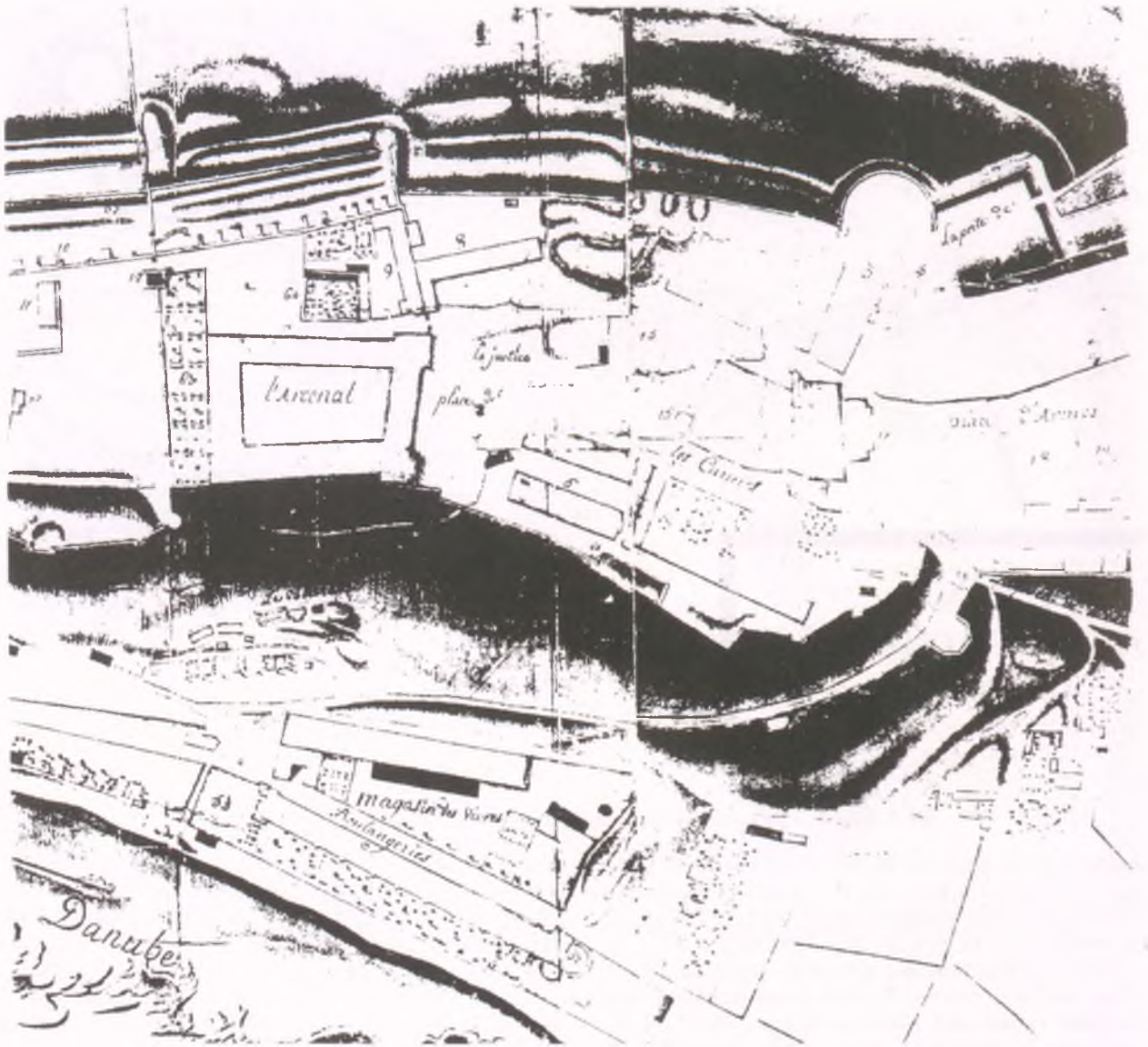
depth approximately 3 metres) was in use for a relatively brief period of time since we did not find any silt layers at the bottom. Its fill of rubble mixed with refuse and the odd cannon ball would suggest that it was filled after one of the sieges – most probably after the 1684 one – that followed soon after it had been dug out.¹¹ It seems likely that the rubble came from a section of the castle wall above it that lay beyond the shelter provided by the semicircular defence work. It was clear that a better solution had to be found.

The new fortification, a bastion resembling a half-fan, incorporated the earlier semicircular tower reinforced with the two buttresses. A thick (approximately 3.5 metres) and massive wall (B1) was built up to the southern buttress (Tp4) of the semicircular defence work above the filled-in ditch. Its

¹⁰ Interestingly enough, there was no such pit here in the Middle Ages. The double gate (a carriage gateway and a footway) was originally designed to function together with a drawbridge. A shallow opening was made for the raised drawbridge in the outer surface of the wall and stone brackets or corbels for supporting the axis of the bridge were positioned at the contemporary level. However, no sockets for holding the ends of the cross-shaft of the drawbridge were cut into these brackets and it is therefore most unlikely that a drawbridge was actually used there.

¹¹ The makeshift nature of the pit or ditch is also suggested by the fact that no traces indicating a more stable walling were

found. Only in the southern side, between the two pillars of the cavalry gate, did we observe two larger postholes suggesting that the original fill had been supported with some sort of wooden structure. Only an earthen rampart was found on the other sides. A large rock protruding from the earth was left intact in the middle of the pit, most likely because there was simply no time to cut it away. This and the fact that the ditch was cut through medieval layers prove that it can be dated to a rather late period. Because of later disturbances we could not identify the western end of this ditch or pit.



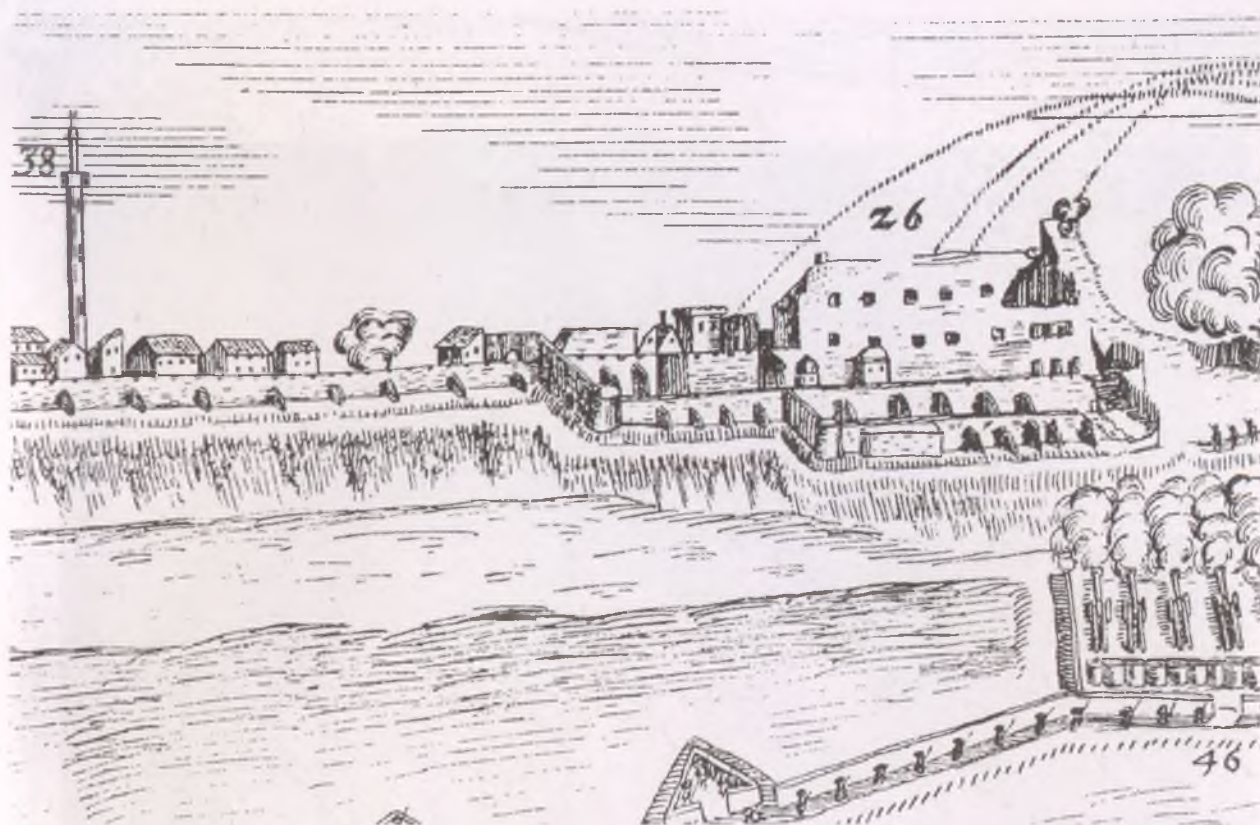
Ill. 6. Fortifications of Buda Castle and the Palace on Langer's plan (1749). Detail

outer surface was faced with reused medieval ashlar, while the core of the wall was constructed from crushed stone. The span between the two buttresses (Tp4–5) was walled, too, (B2) and it is also possible that the northern side of the semicircular defence work was walled round or faced in some form. If this was indeed the case, the facing either collapsed or was removed since the original form of the semicircular defence work north of the northern buttress (Tp5) can be made out on Marsigli's¹² and Haüy's¹³ plans of 1686–87 (Ill. 4–5), and even on Langer's plan from 1749 (Ill. 6). The investigations conducted on this site also indicated that the foundation of the facing (C) was post-Ottoman as its foundation trench lay much deeper than that of

the more southerly diagonal Turkish wall from which it differed as regards both its mortar and its stone material. The thick Turkish wall (B1) had another distinctive feature: the beam sockets of decayed timber posts could be seen in its foundation, indicating that it had originally rested on timber posts. This solution was probably applied because the otherwise monumental wall rested on a rather shallow foundation that, moreover, overlaid the loose fill of the earlier ditch or pit. (To this we may add, on the basis of our excavations, that the vertical and horizontal timber structure in the foundation and the walls proper is a characteristic feature of each and every Turkish fortification in Buda. It is rather obvious that the lattice-like wooden

¹² VERESS 1906, 103–170, esp. 143–150.

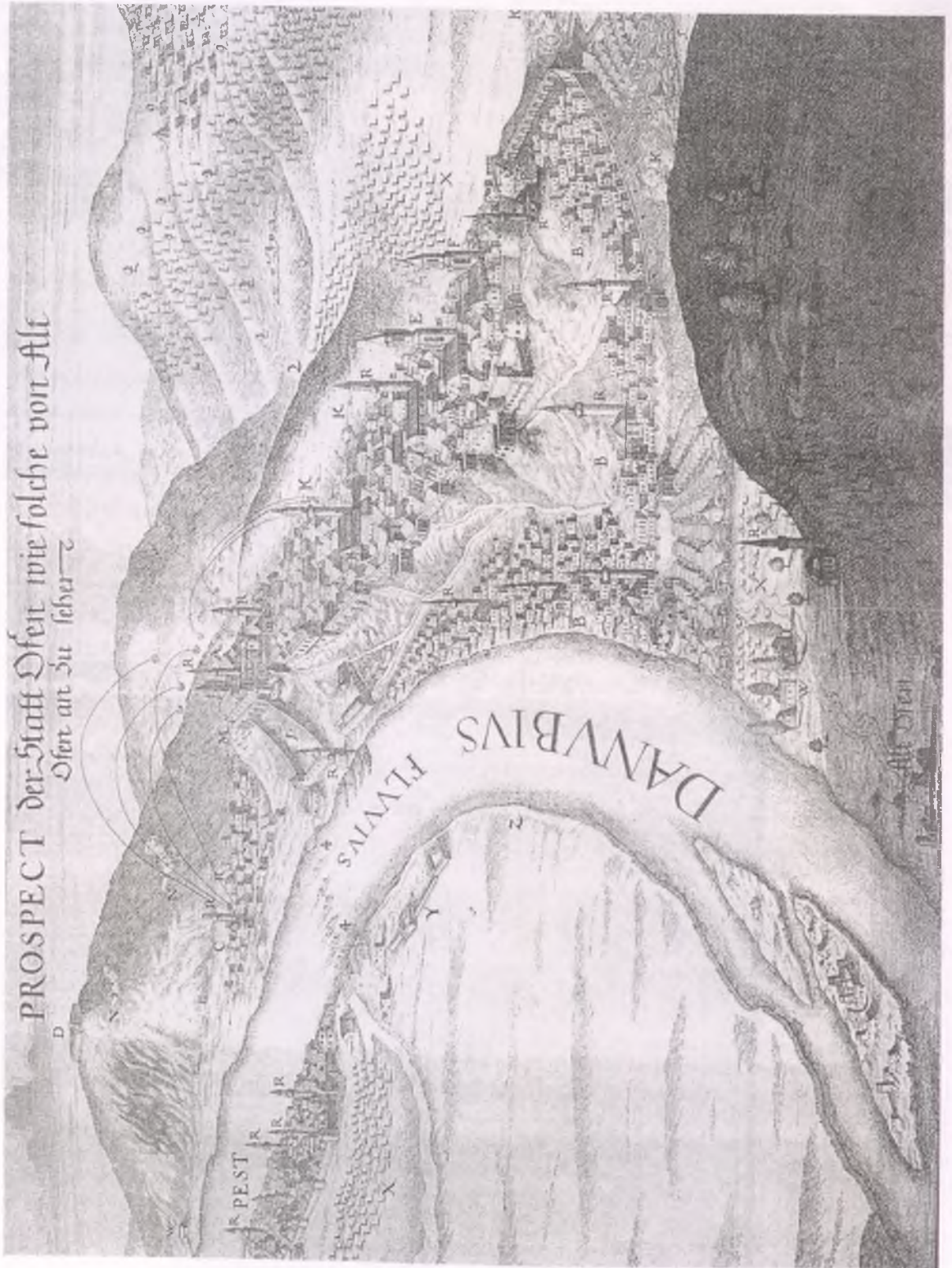
¹³ WEIDINGER – HORLER 1956, appendix.



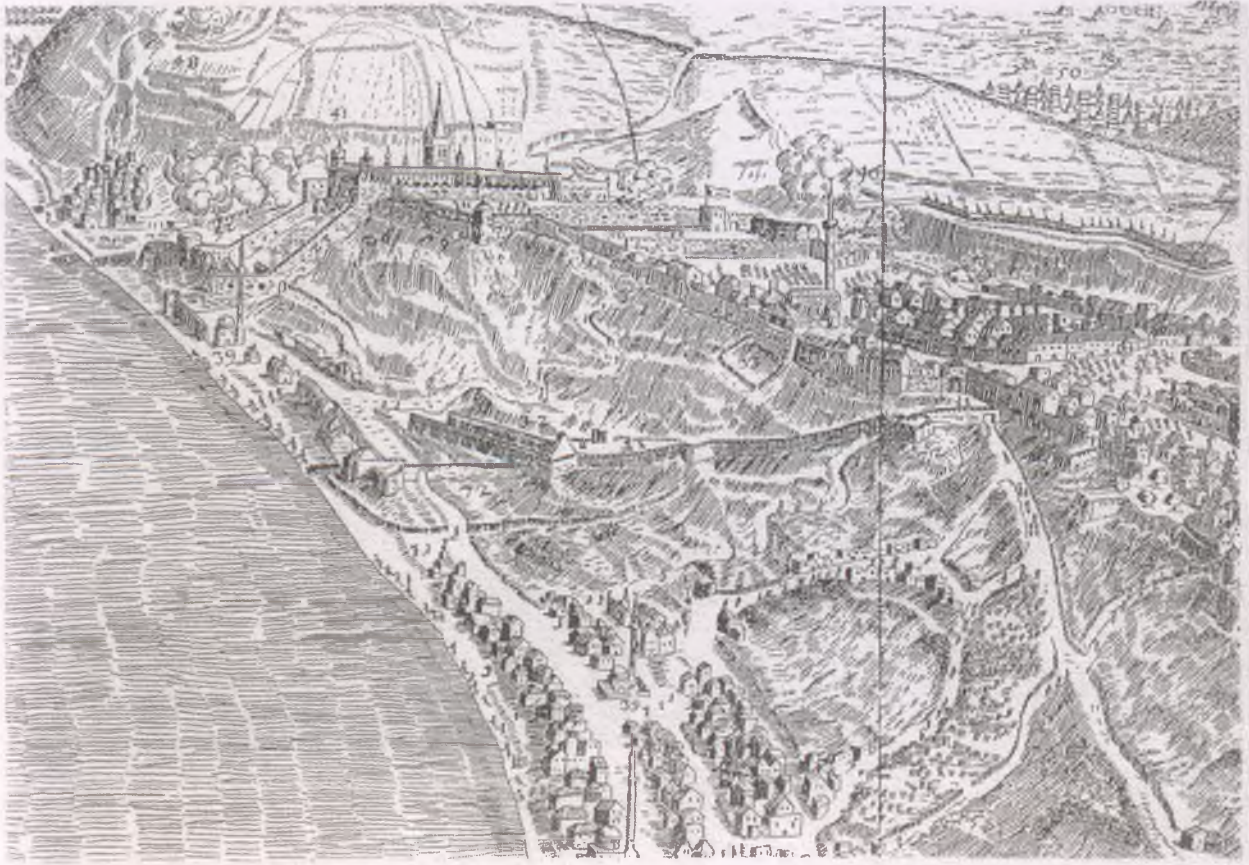
Ill. 7. Western defences of the town and the palace on Fontana and Nesselthaler's western view (1686). Detail



Ill. 8. Turkish defence work and its precursor in the Western *Zwinger* during the excavation. (Photograph by Margit Bakos)



Ill. 9. Eastern fortifications of Buda town on Hallart and Wening's northern view (1684). Detail



Ill. 10. Southeast part of Buda town with the new line of fortification works on Fontana and Nesselthaler's northern view (1686). Detail

structure gave some elasticity to the wall, at least until it decayed. Győző Gerő found similar structures during the excavation of Kasim Paşa Bastion and on the territory of the Royal Palace.¹⁴

The area between the new wall and the medieval castle wall, as well as the area of the semicircular defence work, was probably filled with earth, although the uppermost level appears to have been left unfilled. A nineteenth-century ground plan and a cross-section drawing shows in this area a vaulted room with five windows, and it seems likely that the windows were designed to replace the earlier gun loopholes.¹⁵

The relative and absolute chronology of the defence work, built in several successive phases, can be summarized as follows:

(1) The internal western wall can be dated to the Angevin (Anjou) period (c. 1380); the buttresses and the Northern Gate (Arányi kapu) were added under King Sigismund; minor and major renovations can also be dated to this period;

(2) The semicircular defence work between the two northernmost buttresses was added sometime under King John I Szapolyai (1530–1540);

(3) The semicircular defence work was reinforced with two buttresses in the Ottoman era (a more precise dating is impossible as yet);

(4) A ditch or pit was dug between the buttressed defence work and the gate to its south, probably immediately before the 1684 siege, but this ditch was almost immediately infilled with rubble during the siege;

(5) A diagonal wall was erected above the infilled ditch that completely covered the earlier semicircular defence work from the southwest and west (before the 1686 siege);

(6) The earlier semicircular defence work was faced from the northwest in post-Ottoman times. Finally the whole structure was used as the terrace of the nineteenth-century "Stöckl-Gebeude" building.

These building operations essentially resulted in a rather makeshift defence work of unusual form. Surprisingly enough, this fortification fulfilled its function. Engravings from the late Ottoman period (Ill. 7)¹⁶ reveal that it was not heavily damaged during the 1686 siege and, more importantly, that it offered adequate protection for the wall behind it, as well as for the bridge leading into the palace.

¹⁴ GERŐ, GY. 1956, 263, 268, Ills. 10–11, 275, note 16.

¹⁵ The documentation is preserved at the Budapest History

Museum's Kiscelli Museum., in the Plans Collection.

¹⁶ RÓZSA 1999, cat. no. 33.



Ill. 11. Western part of the Golden Bastion with the earlier Ottoman-era paved road and modern-age walls, after the 1997 excavation

It survived in its original form until the 1880s, when it was demolished during the modern enlargement of the palace (Ill. 8).

Golden Bastion (Altun Tabie)

The so-called Golden Bastion on the opposite side of the castle is a considerably simpler case. The investigations earlier carried out here by Győző Gerő clarified the ground plan of this bastion in its main outlines.¹⁷

This Turkish defence work was built as a consequence of the 1684 siege. On earlier depictions, such as engravings from the turn of the seventeenth century or those presenting the 1684 siege (Ill. 9), it was not shown; the two-carriageway route leading from the Vízi kapu (“Water Gate”) – the eastern gate of the castle, called Su Kulesi in Turkish, that was identical with the medieval St. John’s

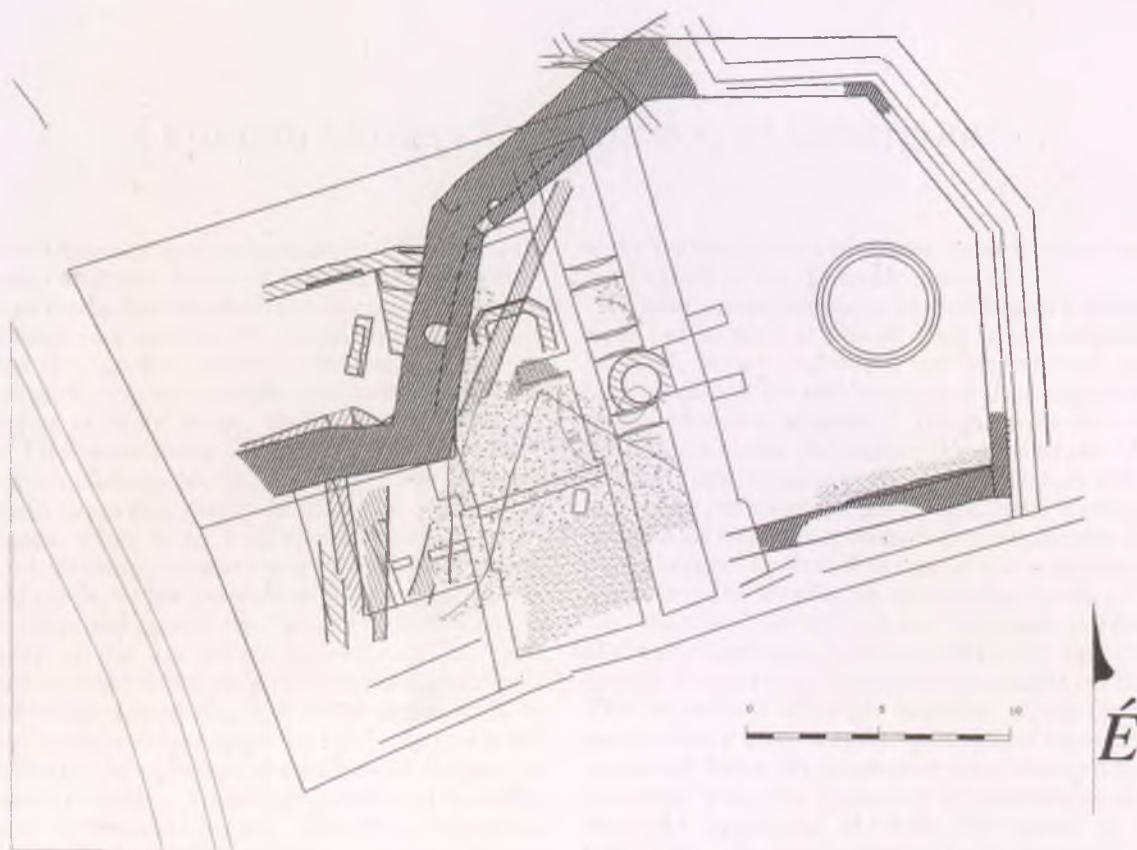
Gate – to the suburb, the present-day Víziváros (“Water Town”), is still visible on the open hillside.¹⁸ The various sieges – and especially the one in 1684 – made it painfully clear that this suburb of Buda, lying on the Danube, was practically indefensible despite the fact that since the Middle Ages it had been protected with a wall in the north. Besiegers capturing this suburb could easily reach the eastern fortification (Eastern *Zwinger*) of the palace extending to the Danube in one swift attack. By so doing they could cut off the waterworks on the Danube bank from the town, as well as the stables, also situated there, from the garrison of the castle. This problem could only be resolved by constructing a new, coherent line of fortifications extending to the Danube. This semicircular line of fortifications, incorporating two bastions on the slope of the hill and the third one further down, on the bank of the Danube, was soon built.¹⁹ Its form can be followed on plans (Ills. 5. and 10) and en-

¹⁷ A brief excavation report by Győző Gerő appeared in *BudRég* 20 (1963) 555–556.

¹⁸ “The Reception of Imperial Envoys at Buda”, aquarelle, c. 1600, unknown painter: RÓZSA 1999, cat. no. 211; “Prospect of the Siege of 1602”, pen-and-ink sketch, W. J. Strömer: RÓZSA 1999, cat. no. 213; “The Siege of Buda, 1684. View from the North”, engraving, Hallart and Wening: RÓZSA

1999, cat. no. 97; “The Siege of Buda, 1684. View from the East”, engraving: RÓZSA 1999, cat. no. 105.

¹⁹ It would appear that a rather weak wattle fence was constructed in the late sixteenth century, although this is not depicted on the picture quoted. (It must in all fairness be added that this depiction has not been dated precisely.) The new fortification was built by Siavus Aga after the 1684 siege. Cf. FEKETE – NAGY 1973, 347.



Ill. 12. Ground plan of the Golden Bastion after the 1997 excavation. (Survey and drawing by Zsolt Viemann)

gravings from the late seventeenth century.²⁰ The Golden Bastion (Turkish: Altun Tabie) lay closer to the castle wall, while the smaller Silver Bastion (Turkish: Gümüş Tabie) lay farther away.

The massive walls of the Golden Bastion were constructed on an irregular polygonal ground plan (external width: 25 metres; internal width: 20.5 metres; depth: 18.5 metres; thickness of the wall: 2.25 metres). No traces of loopholes were observed in the walls of the western part. The bastion was filled with earth and cannon were placed on top. Their positioning is depicted on Fontana's engraving (Ill. 10). The remains of a timber stiffening structure were found in the walls, as in the aforementioned cases. Since there was no need to accommodate to any pre-existing structure, there was no need for *ad hoc* solutions. The bastion and its continuations to the east and west were parts of a carefully planned system.²¹

The investigation of the inner part of the bastion in 1997 (Ills. 11–12)²² also brought some sur-

prises: although the defence work was the first such structure on the site, some earlier remains were identified within its walls. One of these was a carefully constructed and paved road from the Ottoman period, with the remains of an earlier, late medieval road beneath it.²³ The Ottoman road was problematic in the sense that its incline was rather steep and it was rather difficult to visualize its continuation towards the Water-Town (Víziváros). Finally, we should note that some late medieval and earlier architectural remains came to light as well.

Summing up, we may say that this bastion, too, fulfilled its function. It was still in use in the eighteenth century along with the other elements of defence line (Ill. 6), and only lost its importance in the nineteenth century, as did the other fortification works of Buda Castle. The area was filled and built on. Unfortunately, the eastern side collapsed during the siege in 1944–45; the walls were replaced by concrete retaining walls.

incorporated a gate between the castle wall and the Golden Bastion. The latter essentially functioned as the outer entrance to the Vízi kapu ("Water Gate") and it could easily be defended since it was exposed to crossfire from the castle wall and the bastion.

²² The excavations were continued by Anikó Tóth in 2000–2001.

²³ According to Anikó Tóth's research, this road can be dated to the Ottoman period.

²⁰ See Fontana and Nesselthaler's northern view (RÓZSA 1999, cat. no. 98) and Greischer's eastern view (RÓZSA 1999, cat. no. 123).

²¹ The eastern end of the fortification lay by the Danube where a third bastion, the so-called Stable Bastion (Turkish: Ahorluk kulesi), was also built. The two large medieval stables, after which the bastion and the gate beside it were named, lay within the line of fortifications. The western end of the line of fortifications extended to the castle wall, and it also

Ottoman Military Construction in Esztergom

The first Ottoman armies appeared at Esztergom a few weeks after the Battle of Mohács and the occupation of Buda that followed it. Although considerable damage was done to the town, and despite the fact that the captain, András Orbánczi, had deserted, the castle was successfully defended under the leadership of Máté Nagy, back from the Mohács defeat. The presumably minor siege could not have done much damage to the castle since the counter-king John Szapolyai spent the winter of 1526–27 in Esztergom, while King Ferdinánd I and his court spent the following winter there (after a brief siege). The old castle, in the possession of the archbishops at that time, still lacked the “modern” fortifications necessary in the age of gunpowder and in 1529 Archbishop Pál Várdai yielded to the armies of Sultan Süleyman appearing before the castle walls in order to avoid another siege. In 1531, the castle fell to Ferdinand, who moved the cathedral chapter to Nagyszombat (today: Trnava, Slovakia) and the archbishopric to Pozsony (today: Bratislava, Slovakia), leaving the vicar-general and the royal army at Esztergom castle. In 1532, Gritti, a general in the service of the John Szapolyai, unsuccessfully laid siege to Esztergom, causing considerable damage particularly to the settlement areas just outside the castle.

With the fall of Buda (1541), Esztergom became the “last bastion” protecting the mining towns and the northwest regions of Hungary now that the Ottoman peril was constant.¹ Ferdinánd commissioned Italian military engineers Alessandro Vitelli and Filippo Tornielli to modernise the fortifications, and these experts reinforced the two most vulnerable sections of the castle: the southeast section of Castle Hill and the southern end of the Water-Town (Víziváros), which was linked by walls to the former. These parts could be easily bombarded from nearby Szent-Tamás-hegy (“St. Thomas’s Hill”), so a huge round bastion with an escarpment underneath was built to the south of the southeast gate; the “Buda” Tower on the north side of the gate may also have been built at this time.²

These same two engineers also built the Old Italian-type “Mill” (Malom) Bastion – most of which is still standing today – at the north end of the Water-Town. This protected the water tower that

supplied the castle with water, as well as the waterworks built in the fifteenth century.³

These modernisations of Esztergom’s defences were put to the test shortly after their completion. In 1543, Sultan Süleyman laid siege to the castle, bombarding it for two weeks and then capturing it after numerous assaults. A plaque with an Arabic inscription in the arch above the gate by the “Mill” Bastion commemorates the sultan’s victory (Ill. 1).⁴ Following Süleyman’s 1543 triumph, Esztergom became an important border-fortress for the Ottoman Empire. It served as one of the main launching points for attacks on the mining towns of Upper Hungary, as well as on west and northwest Hungary (and also Vienna), while for the Christians it became a key objective in attacks on Buda. The important strategic location of the fortress meant that a large number of soldiers were always stationed there. Its possession was contested by the Christian forces in a number of destructive sieges, the most significant of which were those of 1594 and 1595. The last-mentioned was successful and led to the liberation of Esztergom for ten years. In 1604 the Turks laid siege to the castle of Esztergom, but failed to retake it. The following year, however, they were successful and the castle remained in Ottoman hands from this time on until 1683. The last Ottoman siege took place in 1685, this time ending in defeat for the Turks.

In this way there were two Ottoman periods in Esztergom. The first lasted from 1543 until 1595 and the second from 1605 until 1683. In these two periods of Ottoman occupation, and in the ten-year interval between them, tremendous damage was inflicted on the buildings of Esztergom’s town and castle, while at the same time the fortifications underwent considerable modernisation.

The structure of the medieval settlement was also changed: the suburbs were destroyed and the stone from the major buildings used for military construction. The former archbishop’s castle now housed the garrison. Combined with the wall built in the medieval period, it formed one enormous fortification stretching along the banks of the “Little” and “Big” Danube and enclosing so-called “Archbishop’s Town” (Érseki város), or “Water-Town”

¹ For the Ottoman sieges of Esztergom, cf. NÉMETHY 1898; 1900a; CSORBA 1978.

² LEPOLD 1936, 65; CSORBA 1978, 77.

³ MRT 5, 119

⁴ For its depiction, cf. NÉMETHY 1900a, 22; inscription translated by Ignác Goldzieher in *ArchÉrt* 1898, 288, and also by

GERÓ 1960b, 53–54, who did not consider the stone to be original. By contrast, Ekrem Hakkı Ayverdi, who inspected the stone *in situ* in 1976, considers the inscription (and the stone carving) to be original and quite legible. Cf. AYVERDI 1977, 168, 176–177.



Ill. 1. Sultan Süleyman's memorial plaque in the wall of the Water-Town

(Víziváros), which was inhabited primarily by Turks. Maintaining its separateness was "Royal Town" (Királyi város), protected by a medieval wall and a moat. The town was renamed "Serb Town" (Rácváros) in the sixteenth and seventeenth centuries, after the new inhabitants moving in during the Ottoman era. Protected by medieval walls, these two towns (quarters of Esztergom) were inhabited by the civilian population and by part of the soldiery.

A small stockade (*palanka*) was constructed on Szent-Tamás-hegy, which towered 250 metres to the east of Castle Hill. There was a smaller civilian settlement in its "shadow" (to the southeast), and a similar settlement on the banks of Lake Hévíz, which was fed by hot springs from the southern foot of the hill. Here the abovementioned two town-quarters, the castle and the Szent-Tamás-hegy fortification provided protection. The other old suburbs were uninhabited (Ill. 2).⁵

After the fall of Esztergom, Süleyman I (1520–1566) ordered the rebuilding of the severely damaged castle. According to tradition, the work was begun under the sultan's chief architect Sinan (d. 1588),⁶ and extended beyond merely military construction. Obviously, there was always major construction after a siege (or before an expected one),

but occasionally there is data concerning "peacetime" construction also.⁷

Military building work during the 130 years of Ottoman rule cannot always be clearly separated from Christian efforts, as the appearance of Esztergom castle was significantly influenced by the contributions of castle commander Miklós Pálffy between 1595 and 1600, as well as by those of castle commanders Ádám Erős and Maximilian Schuchknecht in the first half of the eighteenth century and beyond.⁸

The sections below will present the unequivocally Ottoman constructions, as well as a few constructions thought to be Ottoman whose former Ottoman designations are also generally known, based on Evila Çelebi or other sources.

The Castle

(1) "Gate" Round Bastion (mistakenly called Telgedy Bastion, Csókás Tower; in Turkish: Mahmud Paşa Kulesi) (Ill. 3. 1). József Molnár considers it to be an Ottoman construction.⁹

Standing on the southern side of the castle gate, twenty metres in diameter with a small neck moulding and escarpment wall below, this originally two-

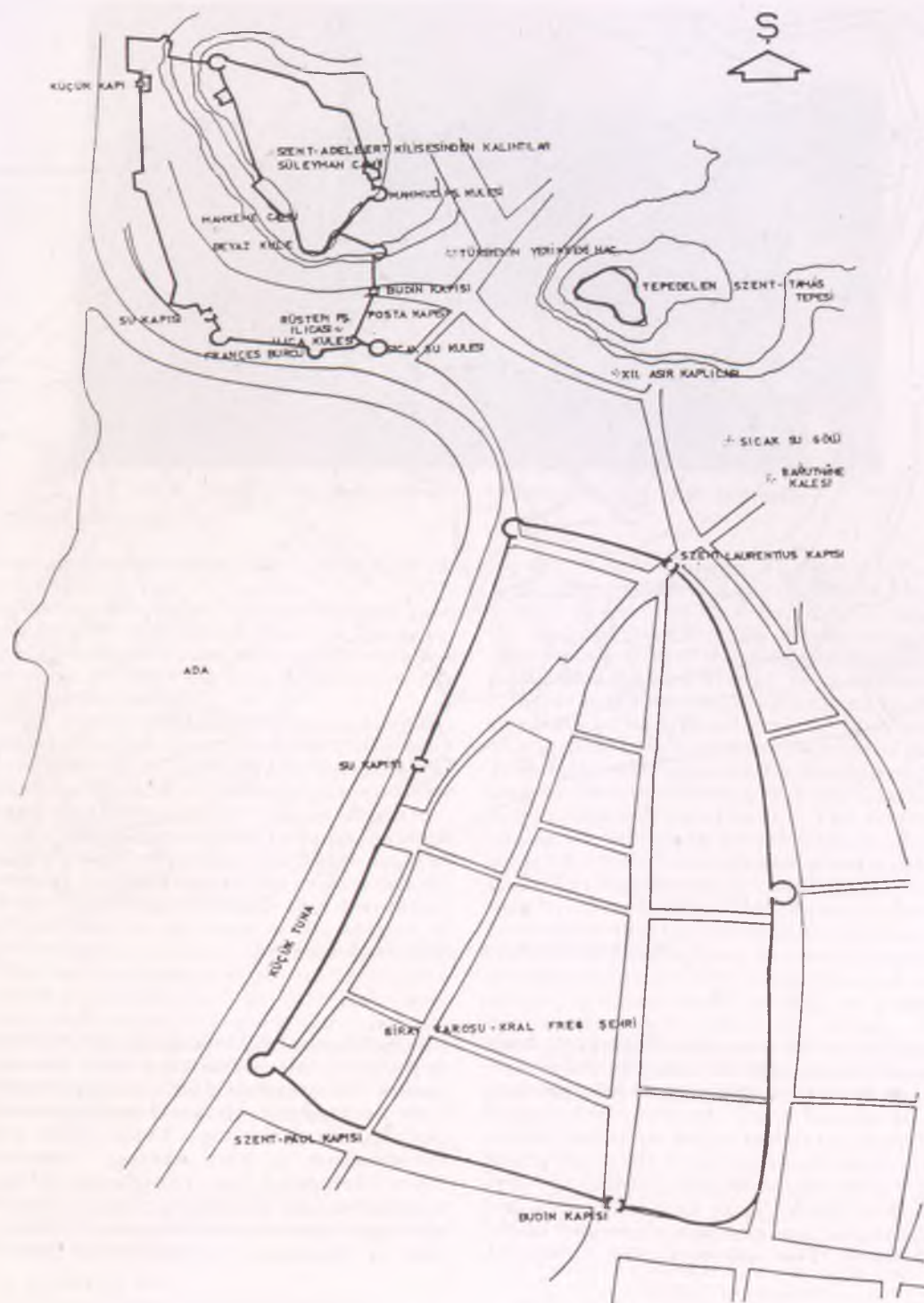
⁵ MRT 5, 79–211; according to the Ottoman housing records of 1570 no original inhabitant then had a house in Esztergom. Cf. KÁLDY-NAGY 1970b, 141.

⁶ KARÁCSÓN 1904, 273; MOLNÁR 1972, 25–28.

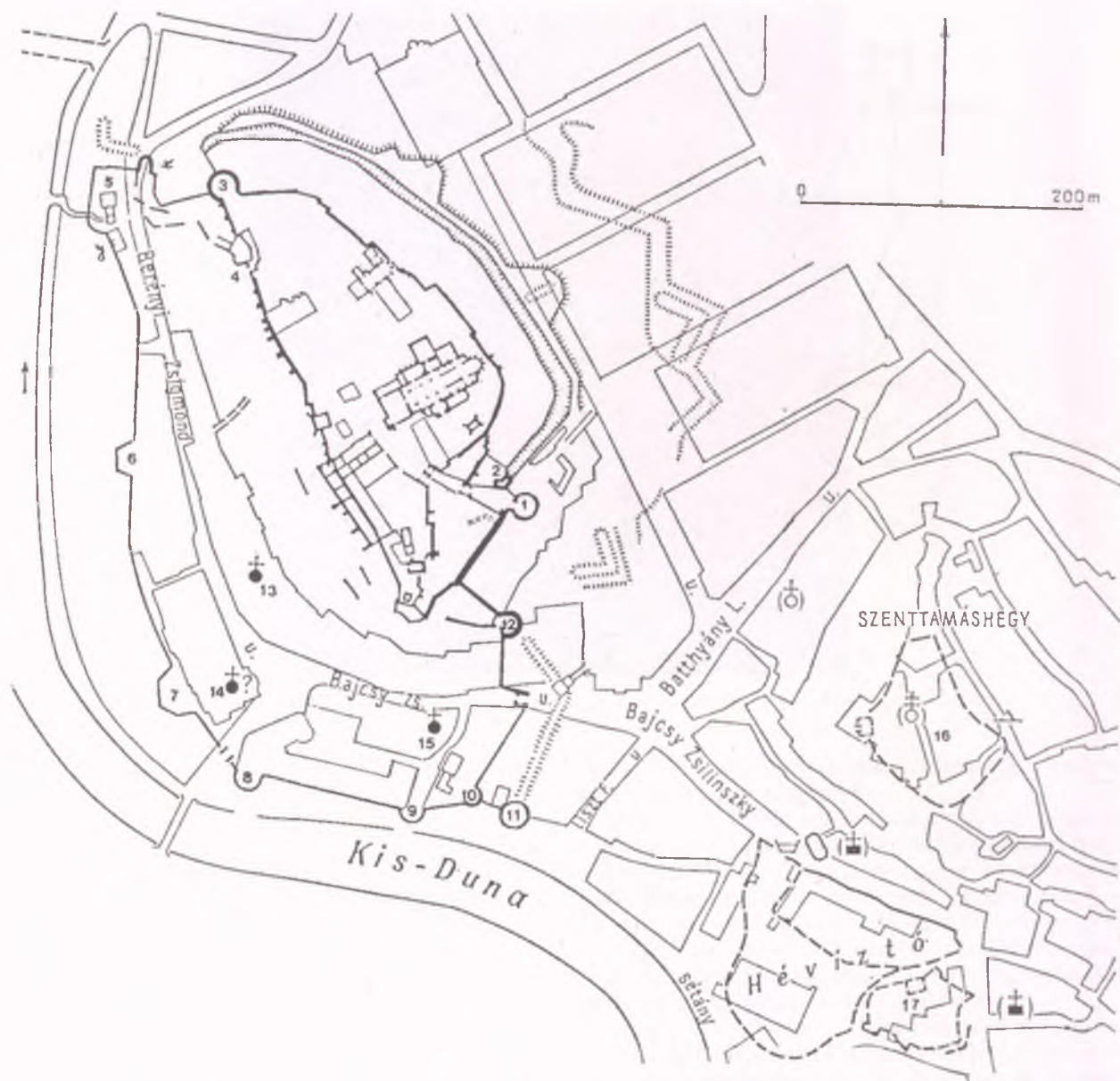
⁷ NÉMETHY 1900a, 46–47; MRT 5, 30–168.

⁸ LEPOLD 1936, 53–54.

⁹ MOLNÁR 1967a, 85.



III. 2. Map of Esztergom in the Ottoman era (after AYVERDI 1977)



Ill. 3. Ottoman military edifices in Esztergom

storey arched round bastion may have been built by the Italian military engineers Vitelli and Tornielli during the major fortification works prior to 1543, since it played a role in the 1543 siege.¹⁰ Villányi attributes its construction to Sultan Süleyman;¹¹ others claim that it is the work of Mohamed Paşa (1605).¹² The round bastion, which was supplied on the two levels inside with casemates and cannon embrasures, was severely damaged in the sieges of 1594–95. The southern wall collapsed.

Engravings by W. Meyerpeck and W. Zimmermann depict it in this condition.¹³ After the second occupation of Esztergom (1605), major construction may have been performed by Hoca Mohamed Paşa, and perhaps for this reason Evlia Çelebi attributes the construction to him, writing: "Outside the gate Hoca Mohamed Paşa, conqueror of the castle, had a large bastion with three rows of cannons built on the right-hand side of the gate."¹⁴ The round bastion is depicted in seventeenth- and eighteenth-

¹⁰ ISTVÁNYFI 1962, 185; RÉCSEY 1894, III. 2.

¹¹ VILLÁNYI 1891, 21, 54.

¹² MOLNÁR 1967a, 85.

¹³ LEPOLD 1944, 49, 52.

¹⁴ KARÁCSON 1904, 271.



Ill. 4. "Earth" Tower (left) and the round bastion of the gate for pedestrians

century engravings and maps,¹⁵ and was still standing around 1820.¹⁶

During the construction of the basilica the round bastion was largely dismantled down to the cylindrical ledge, and the rest later covered. Its remains were unearthed in 1937–38 and restored to the height of the upper storey.¹⁷

(2) "Buda" Tower. Standing north of the gate, this unusual L-shaped tower was also originally one storey higher (Ill. 3. 2). Earlier it was thought to have been the work of Archbishop Csanád Telgedy in the fourteenth century.¹⁸ The embrasures – with turning cylindrical wooden or multi-branch apertures – are suited to gunpowder weapons, and the flues serving to carry away gunpowder smoke from the lower casemates indicate that the tower may have been built at the time of the spread of gunpowder weapons, around the mid-sixteenth century.¹⁹ The earliest depiction is from 1596, on a map preserved in Stockholm.²⁰ In 1820 the tower still stood at its full height.²¹ During the construction of the basilica the top floor was dismantled and the rest covered. The remains were unearthed in 1937–38. The tower was built before 1595, either by the Italian engineers or by the Turks.

(3) "North" Round Bastion or "Earth" Tower (also called Danube Round Bastion, Csonka [Truncated] Tower; in Turkish: Toprak Kulesi) (Ill. 3. 3). Built by the Ottomans in the sixteenth century at the north end of the castle, this enormous round bastion is girded round by a cylindrical ledge. (Gothic stone carvings can be seen in its walls.) On the basis of the round ground plan and neck-like shape, the two-storey arrangement and the size, József Molnár suggested a kinship with the "Esztergom" Round Bastion of Buda Castle,²² and considers Sinan the architect.²³ The round bastion is shown on Wolfgang Meyerpeck's engraving of the siege of 1595,²⁴ and also on a map dated 1595 by Claudio Cogorano.²⁵ According to a 1663 description by Evlia Çelebi, "the Toprak Kulesi is a newly constructed two-storey bastion of stout stone, with cannons on every floor. From this tower one dares not look down."²⁶ The round bastion was converted into a water tower in 1822, at which time 280 centimetres were taken off its top. (The brick-vaulted tunnel leading to the round bastion from the "Mill" Bastion of the Water-Town was also built at this time and is still partly traversable today.²⁷)

¹⁵ LEPOLD 1944, 155–156, 161, 173, 178, 183–185.

¹⁶ From the coloured engraving by Jaschke around 1820 and several subsequent depictions in the collection of the Balassa Bálint Museum in Esztergom.

¹⁷ *MRT* 5, 88.

¹⁸ ZOLNAY 1960, 41; *MRT* 5, 88.

¹⁹ *ArchÉrt* 118 (1991) 132, report by István Horváth.

²⁰ GYÖRFFY 1977, 662, Ill. 25a.

²¹ See note 16.

²² MOLNÁR 1967a, 88.

²³ MOLNÁR 1972, 27–28.

²⁴ LEPOLD 1944, 52. According to the note on the engraving, the southwest side of the round bastion was blown apart by Christian artillery in the island bastion. The casemate behind the collapsed wall can be seen in the picture. The thick protective wall of stone mixed with rows of bricks that was erected here was not (contrary to earlier opinions) Ottoman work: the archbishop strengthened the round bastion in 1848 because of a crack in the wall. Esztergom Primatial Archives, Drawings Collection.

²⁵ LEPOLD 1944, 172.

²⁶ KARÁCSON 1904, 271.

²⁷ *MRT* 5, 88; for the latest research see TOLNAI 2000, 321–351.



Ill. 5. "Buda Gate" Round Bastion below Castle Hill

Evlia continues: "Near the Toprak Kulesi the castle has a small gate. This path leads downward and cannot be negotiated by a horse, and even a man has much trouble going down it. Consisting of five hundred stone steps, this is Hungarian work. Brave warriors, hurrying down to the town or upwards from there, pass through this stairway gate." This pedestrian gate still exists today, next to the southern side of the small bastion protecting the gate; in view of its construction, it is in all likelihood Ottoman work (Ill. 4).

It is certain that other Ottoman fortifications were built in the castle (especially on the eastern and southern sides); however, these were for the most part dismantled or buried during the major landscaping that preceded the construction of the basilica (1822–56).²⁸

The Water-Town (Víziváros), also known as the Lower Castle (Alsóvár) or Little Town (Kis-város) in the Ottoman era

After Sultan Süleyman I's occupation of Esztergom in 1543, large new round bastions and gun-towers with thick walls better able to resist artillery fire were built in the place of the thin medieval walls (and towers) that had been blown to pieces.

(1) Although connected to the walls of the upper castle (Ill. 3, 12), the "Turkish" Bastion or "Buda Gate" Round Bastion (in Turkish: Budun Kapu Kulesi) was in fact built to defend the "Buda" Gate of the Water-Town, in 1543. From Miklós Istvánffy we know that Sultan Süleyman built this round bastion after the capture of the castle, using stones from the destroyed choir of St. Adalbert's Cathedral. It was built into the southern side of the hill to protect the gate and castle.²⁹

Nothing is known of the antecedents of this round bastion, which was built on a cylindrical outcropping at the semicircular southern tip and equipped with a round guard tower; in all probability it was built to augment the town walls of the Water-Town that were medieval in origin and connected to the upper walls of the castle (Ill. 5). The earliest depiction of these walls is from a 1595 engraving by G. Houfnagel. On this, however, the round bastion itself cannot be seen, although there is a tower-like structure. That it did in fact exist prior to 1595 is confirmed by written sources and by an engraving by Sibmacher (Ill. 6), which shows a round bastion on the side of the hill.³⁰

It is also depicted in seventeenth-century engravings (e.g. A. E. Burkhardt von Birkenstein's panoramas of 1688 and 1689, and Nypoort's 1685 *veduta*). The round bastion and the cortina walls are shown to be in good condition in F. B. Werner's panorama from around 1735.³¹ The precise measurements are shown on several eighteenth-century military maps. Among these the 1756 plan by Andreas Krey stands out in accuracy, with supplementary engravings marked A and B giving a cross-section of the area in front of the round bastion and a drawing of its southern facade with the cortina wall and the gate to Water-Town,³² along with a cross-section of the Water-Town town wall, the earthworks before the wall and a picture of the outer "Postal" Gate.

The round bastion is depicted from this direction in György Jaczyg's 1784 drawing as well.³³ The cortina walls and round bastion were still largely intact around 1820, as can be seen in Franz Jaschke's 1820 panorama and in several others made after it. At this time the pointed top of the guard tower was also intact.

The walls are still visible on a map by Mathes published in 1827 (this partly reflects the earlier

²⁸ LEPOLD 1936, 57.

²⁹ ISTVÁNFFY 1962, 186, 189, 190; according to József Molnár, its architect was Sinan. Cf. MOLNÁR 1967a, 85.

³⁰ LEPOLD 1944, 19, 32.

³¹ RÓZSA 1974, 43, 46.

³² LEPOLD 1944, 184.

³³ PROKOPP 1979, 87.



- | | | |
|--|---|-----|
| 1. Die Vefung oder Schlos. | 6. Der Türcken Begebtbaus. | 12. |
| 2. S. Thomas berg. oder Blochhaus. | 7. Alte Gebäu etwan Teufche heüßer. | 13. |
| 3. Die Neu oder wafferftaß. | 8. Gockern. oder Blochhaus. | 14. |
| 4. Die Alte oder Karzsaftaß. | 9. Der Türcken Schiffbrück. | 15. |
| 5. Ein Becklein von warmen wasser dar.
an ein Bülffer mühl. | 10. Die Inſel. darinea der Chriſten
großs Schantz. | 16. |

Ill. 6. The siege of Esztergom in 1595. Engraving by Sibmacher (detail)



Ill. 7. The cleared Turkish gate leading from the Water-Town to the "Buda Gate" Round Bastion

reality).³⁴ It was at this time, however, that landscaping related to the construction of the new basilica may have caused the walls to be covered, since significant parts of the castle's south and southeast fortifications were in fact overlaid using the enormous amount of earth extracted from the middle of Castle Hill. This situation is reflected in György Orbán's illustration from 1825,³⁵ although the northeast cortina wall is still visible on it, holding back the earth infill. Later the infill "spilled over" the wall, covering up the gap between the two walls and eventually part of the southern cortina wall itself.

This state of affairs is reflected in H. Hummizsch's 1842 panorama, as well as in A. von Reiffenstein's of 1865. The cadastral map of 1868 marks only the round bastion, although smaller

sections of the southern cortina wall could still be seen at this time at the edge of the fill.³⁶

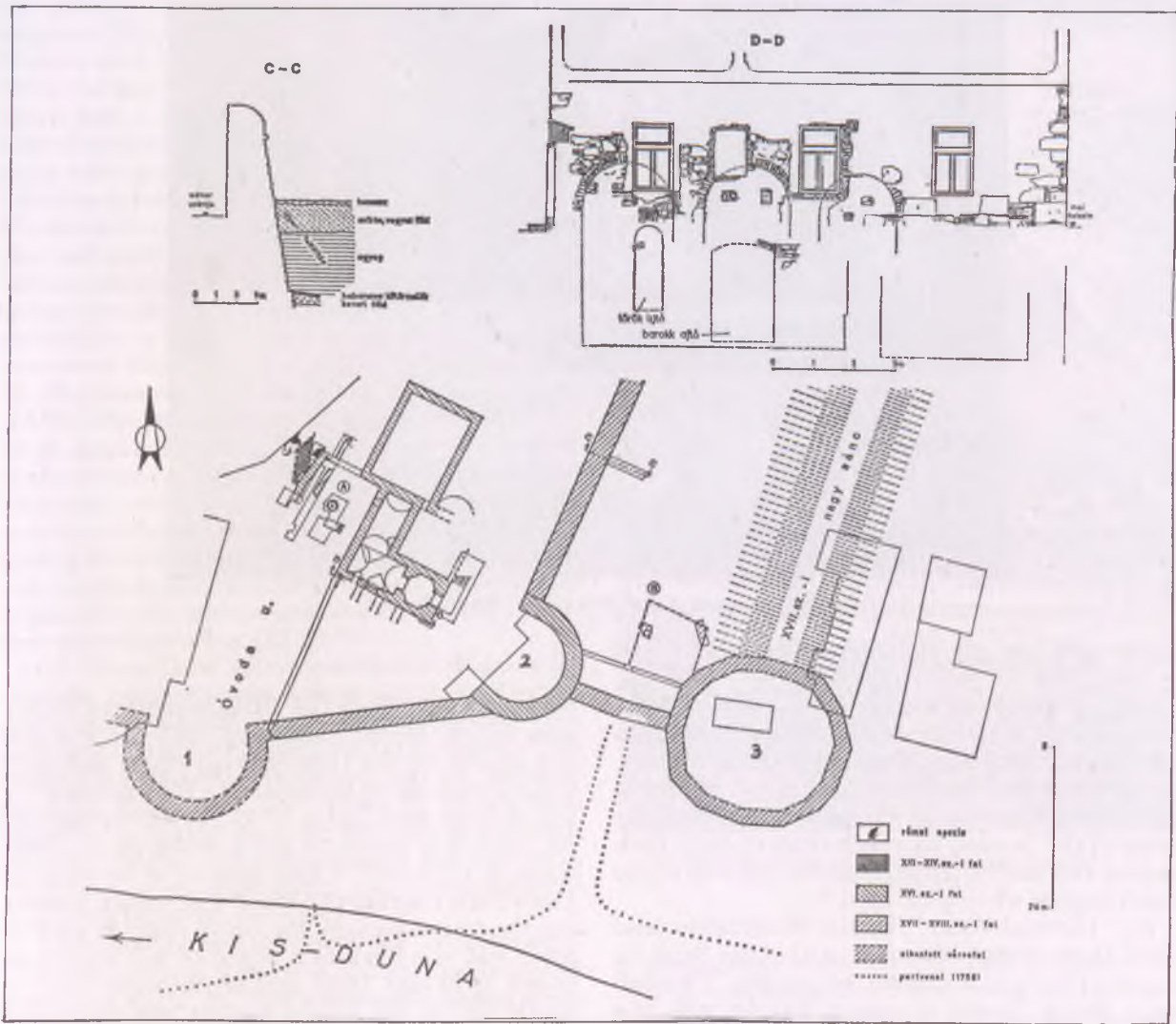
The final filling up of the southern cortina wall took place in 1936–38, when some of the earth and rubble removed in the excavation of the royal palace was deposited between the two cortina walls, at the same time as a smaller excavation was being conducted at the northeast foot of the round bastion. It was in the latter excavation that a north-facing embrasure was found at the base of the wall. In 1938, a concrete cupola was placed on the then decapitated guard tower.

Between 1971 and 1977, approximately 3000 cubic metres of earth were removed from the area of the round bastion and the walls to free them completely from their earth covering. Also brought

³⁴ MATHES 1827, Table II.

³⁵ In the collection of the Balassa Bálint Museum, Esztergom.

³⁶ On a photograph from c.1890 in the collection of the Balassa Bálint Museum.



Ill. 8. 1. "Franciscan" Round Bastion; 2. "Thermal Water Baths" Tower; 3. "Thermal Water" Fortification; 4. Section of the southern wall of the Water-Town and the ground plan of the Rüstem Paşa Baths, after István Horváth's excavations

to light at this time was the double-arched "Turkish" Gate made of stone leading from the Water-Town to the round bastion (Ill. 7).³⁷ During these operations the tower built by Süleyman and mentioned by Istvánffy was identified. At the same time it was determined that the ledges of the round bastion and guard tower were not Ottoman work (instead they probably were made from medieval foundation elements taken from St. Adalbert's Cathedral),³⁸ and that the substructure of the guard tower was massively built from stone.³⁹

(2) "Thermal Water Baths" (Hévízfürdő) Tower (in Turkish: Ilica Kulesi) (Ill. 3. 10). At the south-

east end of Water-Town stands a round corner-bastion in the shape of a three-quarters circle. Along with the nearby Ottoman baths, this round bastion was the work of Rüstem Güzelce, *paşa* of Buda. It was built between 1559 and 1563, probably on the site of a medieval tower.⁴⁰ It was severely damaged during the sieges of 1594–95,⁴¹ as depicted by W. Meyerpeck and C. Cogorano in 1595.⁴² Between 1595 and 1600 Miklós Pálffy had it rebuilt, at which time the town wall connecting it to the "Buda" Gate was renovated.⁴³ The round bastion and town wall appear on a number of seventeenth-century engravings and maps.⁴⁴ In the siege of 1706 the west-

³⁷ For the 1971–77 research and excavations, cf. *RégFüz* Ser. I. 26 (1973), 101–102; 31 (1978) 108. The reports are by István Horváth.

³⁸ *RégFüz* Ser. I 26 (1973) 102; cf. MOLNÁR 1967a, 85, Ill. 6.

³⁹ Earlier on MOLNÁR 1967a, 85; 1976, 100; we, too, had expected a spiral stairwell in the interior of the cylindrical building. *RégFüz* Ser. I 25 (1972) 91–92; cf. *MRT* 5, 117.

⁴⁰ MOLNÁR 1967a, 85–86 identifies these – mistakenly – with the "Small Baths" outside the wall, and with the "Thermal Baths" (Hévíz) Fortification.

⁴¹ NÉMETHY 1900a, 99; ISTVÁNFFY 1962, 278.

⁴² LEPOLD 1944, 52, 172.

⁴³ NÉMETHY 1900a, 113.

⁴⁴ LEPOLD 1944, 137, 171.



Ill. 9. Remains of the "Ferry Gate" Round Bastion

ern wall of the tower and the town wall itself were blown down. They were rebuilt in the early eighteenth century.⁴⁵ Then, in the nineteenth century, the northern side was buried under 4–5 metres of earth filling.⁴⁶ During an excavation in 1969, fragments of the re-used sixteenth-century early Renaissance red marble ledge from the east wall of the round bastion were unearthed.⁴⁷

(3) "Thermal Water" (Hévíz) Fortification (also called Mattyasovszky Bastion; in Turkish: Sıcak Su Kulesi) (Ill. 3. 11). Connected to the "Thermal Water Baths" Tower by only a linking wall, this fifteen-sided "round" bastion had a diameter of 22 metres.⁴⁸ It was made of grey andesite ashlar. The southern half stands today at full height, while the northern half was partly dismantled. József Molnár considers it to have been built by Sinan in 1543,⁴⁹ although elsewhere he points out a kinship with the tower of Karakaş Paşa built in Buda between 1618 and 1621.⁵⁰ Molnár also deals, separately, with the masons' marks and the interesting ledge work on the round bastion.⁵¹ The construction of the fortification can be dated to the period

between 1605 (when the Turks recaptured Esztergom for the second time) and 1663, since it does not appear on the 1594–95 engravings and maps but does feature in Evlia Çelebi's 1663 account.⁵² It was severely damaged in 1706, but was reconstructed, since it is shown as being intact on A. Krey's maps of 1754–56;⁵³ it also appears to be intact on János Pach's survey of 1830.⁵⁴ The trench separating the round bastion, the outer rampart and the town wall was filled to a depth of 4–5 metres between 1830 and 1850; and at the same time the north side of the round bastion was dismantled down to the new ground level.⁵⁵

(4) "Franciscan" Round Bastion (Ill. 3. 9). This round bastion stood at the southern end of Katona István utca, on the banks of the Little Danube. The Ottomans probably built it, between 1543 and 1594.⁵⁶ It first appears on C. Cogorano's 1595 map. Engravings and maps from the seventeenth and eighteenth century invariably show it.⁵⁷ Although it still existed in 1756 when a map by A. Krey described it as the "Franciscan Round Bastion",⁵⁸ on a map made around 1763 it no longer appears.⁵⁹ It

⁴⁵ LEPOLD 1944, 178, 180, 183–184.

⁴⁶ *Régfűz* Ser. 1 (1970) 82; István Horváth's excavation report and documentation: Balassa Bálint Museum, Archives, inv. no. 317/6.

⁴⁷ Balassa Bálint Museum, inv. no. 70.384.3. Cf. *MRT* 5, 117.

⁴⁸ According to measurements by János Pach in 1830. Photocopy of the original drawing held by Esztergom Primate's Archives: Balassa Bálint Museum, Archives, inv. no. 317/2.

⁴⁹ MOLNÁR 1972, 27–28; DERCSÉNYI – ZOLNAY 1956, 57 also consider it to be from the sixteenth century.

⁵⁰ MOLNÁR 1967a, 87.

⁵¹ MOLNÁR 1967a, 87; 1967b, 122–125: the ledge elements carved of sandstone were fashioned from the era of Árpád

dynasty pedestals, whose original forms are preserved on the sides facing the inside of the wall (one such stone is in the collection of the Balassa Bálint Museum).

⁵² LEPOLD 1936, 57; 1944, 19, 49, 52, 172; KARÁCSON 1904, 275.

⁵³ LEPOLD 1944, 178, 183–184.

⁵⁴ Balassa Bálint Museum, Archives, inv. no. 317/2.

⁵⁵ Balassa Bálint Museum, Archives, inv. no. 317, István Horváth's excavation documentation. See also: *MRT* 5, 118.

⁵⁶ *MRT* 5, 118.

⁵⁷ LEPOLD 1944, 152, 161, 172–173, 178, 180.

⁵⁸ VILLÁNYI 1891, 24/100.

⁵⁹ MATHES 1827, Table I.

was probably Ferenc Barkóczy, archbishop of Esztergom (1761–1765), who ordered its demolition. When a new main sewage line was constructed in 1979, the pipe passed through the round bastion, which had a diameter of 16 metres and a thick stone foundation across its entire area. The tower's posts were set close to each other in muddy soil, 6 metres below the level of the present-day road. The spaces between the posts were filled with quicklime and rubble. On the upper part of this was a horizontally placed grid-like structure made of thick beams dowelled and nailed together using enormous nails. In the interstices and on top of it was a mixture of slaked lime and rubble, to a thickness of 20–30 centimetres. There followed, from a height of 550 centimetres upwards, a massive wall of stones set in quicklime, from which a number of reused Gothic stone carvings were recovered. The wall of the round bastion was dismantled to a depth of 250 centimetres below the road.⁶⁰ Most of the town wall leading to the “Thermal Waters Bath” Tower (which was repaired and reconstructed on a number of occasions in the seventeenth and eighteenth centuries) still stands today (Ill. 8).

(5) “Ferry Gate” (Révkapu) Round Bastion (in Turkish: Iskele Kapusu Kulesi) (Ill. 3. 8). The remains of this partially dismantled and partially covered round bastion can be seen at the western end of the Little Danube Promenade, on the banks of the Little Danube (Ill. 9).⁶¹ Although Elemér Soós regards it as dating from the fifteenth or sixteenth century,⁶² this bastion fails to appear on Cogorano's 1595 map or on Meyerpeck and Zimmermann's 1595 map or on Meyerpeck and Zimmermann's engraving from the same year.⁶³

This round bastion was built by the Turks between 1605 and 1683 and appears on all the engravings and maps after 1683.⁶⁴ In 1892 a substantial part of it was buried under earthworks when the overpass to the present-day Kossuth Bridge was constructed. The bastion served to protect “Ferry” Gate, and has reused medieval stone carvings (Renaissance window-frame elements and so on) in its wall.⁶⁵

(6) “Jesuit” Bastion (Ill. 3. 7). A substantial part of this bastion still exists today, overlaid by the garden of the present-day Primate's Palace (Mindszenty tér 2).⁶⁶ Elemér Soós dates it to between 1304 and 1534.⁶⁷ Open on the inner side, this pentagonal Old Italian-type bastion may indeed have been built in the sixteenth century.⁶⁸ József Molnár believes it to be of Ottoman origin.⁶⁹ It is depicted on engravings and maps of Esztergom made between 1594 and 1685.⁷⁰ Antal Felkiss' survey of 1773–1776⁷¹ marks its precise location, while



Ill. 10. Tepedelen palisade, 1683. Engraving by J. van Nypoort (detail)

a photograph taken around 1880⁷² shows it still almost completely intact, along with the northwest (medieval) town wall. When the Primate's Garden was laid out in 1882, the top of the wall was partially dismantled and most of the rest covered by the earthworks of the garden.

A section of the town wall was discovered in 1971 in front of the southwest corner of the Primate's Palace, in a drainage ditch in the garden.⁷³ A frame element of a Romanesque window, a fragment of a Gothic window-inset and a few smaller pieces of carved stone were recovered from the wall and are now in the collection of the Balassa Bálint Museum in Esztergom.⁷⁴

(7) “Little” Bastion (Ill. 3. 6). This three-sided trapezoid bastion still stands today, in the courtyard of the buildings at Berényi Zs. utca 6–8. It probably was built in the early sixteenth century.⁷⁵

⁶⁰ Balassa Bálint Museum, Archives, inv. no. 285, booklet 31, 5–6, 14, István Horváth excavation diary.

⁶¹ VILLÁNYI 1891, 23/96. Ill. 1, 96; MOLNÁR 1967a, 87.

⁶² SOÓS 1927, 28 g.

⁶³ LEPOLD 1944, 49, 53, 172.

⁶⁴ LEPOLD 1944, 152, 161, 173, 178, 180, 183–184.

⁶⁵ MRT 5, 118–119.

⁶⁶ For its modern name, cf. VILLÁNYI 1891, 22–23.

⁶⁷ SOÓS 1927, 18.

⁶⁸ GERÓ 1955, 67.

⁶⁹ MOLNÁR 1967a, 87.

⁷⁰ LEPOLD 1944, 19, 172, 183–184 ff.

⁷¹ PROKOPP 1973, 68, 71 note 9.

⁷² Balassa Bálint Museum, H. 63.4.1.

⁷³ Balassa Bálint Museum, Archives, inv. no. 285, booklet 22, 14, excavation by István Horváth.

⁷⁴ Not inventoried. Cf. MRT 5, 119.

⁷⁵ SOÓS 1927, 18; MOLNÁR 1967a, 87–88.

It definitely existed by 1594–1595, and was renovated around 1750.⁷⁶ Based on the large cannon embrasures opening to the north and south, it may have had casemates; in the parapet wall above there are other embrasures.

(8) “Little” Gate (in Turkish: Küçük Kapu) (Ill. 3. 5y). This gate to the Water-Town opened at the north end of the town wall. Originally it was a gate for pedestrians leading to the ferry at the northern end of the Water-Town, and between 1605 and 1663 a mosque was built on top of it, as another storey. Evlia Çelebi describes it as follows: “One of the gates to this large lower suburb is the little gate (*küçük kapu*) under the mosque of Öziçeli Hacı İbrahim, opening to the west toward the Danube. Although a horse may enter it, a cart may not. Outside this gate the town has no houses, and inside it is a building for the machinery which carries water upwards to the inner town by means of wheelwork.”⁷⁷ Together with the considerable remains of the *cami*, the Turkish gate structure still has a tower-like appearance.

(9) “Mill” (Malom) Bastion (also called Verpéci Castle; in Turkish: Su Kulesi) (Ill. 3. 5). Built in the time of gunpowder weapons, this bastion with multiple embrasures today survives only as a semi-arch segment at the northern end of the Water-Town. József Molnár considers it an Ottoman construction. In fact, it is part of an enormous Old Italian-type bastion, the west and northwest walls of which are still standing.⁷⁸ Archbishop Pál Várdai had the fortification built to protect the medieval mill and the fifteenth-century water-lifting machinery prior to the siege of 1543; its creators were probably the Italian military engineers Vitelli and Tornielli, who were working on Esztergom’s fortifications at that time.⁷⁹ It appears in engravings from 1594–95 and also on maps by C. Cogorano.⁸⁰ As it protected the waterworks, it was a main target in the sieges of the sixteenth and seventeenth centuries.⁸¹ At its north-east corner the Turks built a projecting semicircular gun-tower supplied with casemates;⁸² the first engravings on which this appears are from the late seventeenth century (Ill. 3. 5x).⁸³ Supplied with vaulted casemates, the gun-tower was partly dismantled and partly covered in the eighteenth cen-

tury. Significant remains of one of the embrasures and of the casement vaulting were unearthed during a landscaping project in 1978.⁸⁴ The wall, supplied with small doors, stretched from the bastion to the “Northern” Round Bastion of the castle, and the walls from the Water-Town gate bastion to the Veprech Tower formed a fortification (the so-called “Water” Fortification) separate from the Water-Town. The northern wall of the bastion was severely damaged in 1683.⁸⁵ It was restored in the early eighteenth century, and in 1763 a road was opened on the west side of the semicircular gun-tower.⁸⁶ It is depicted in this form in Ferenc Feigler’s drawing of 1815.⁸⁷ In 1818, Emperor Francis I renovated the Danube wall of the bastion.⁸⁸

Szent-Tamás-hegy (“St. Thomas’s Hill”)

This hill rises to a height of 250 metres and is situated east of Castle Hill (which is almost exactly the same height). In 1594 the Turks built a fortification on it that they named “Tepedelen” or “Depedelen”, around the ruins of the twelfth-century Church of St. Thomas (Ill. 3. 16).⁸⁹

Able to hold a garrison of 200 in all, this palisade fortification was captured and recaptured repeatedly in the sieges of Esztergom of 1594 and 1595, and, owing to the importance of its role in the defence of the town, it was rebuilt in both years.⁹⁰ The site-plan of the fortification is marked on a 1595 map by Italian military engineer Claudio Cogorano.⁹¹ Palisade walls follow the edge of the hilltop in the shape of an irregular pentagon, on the area delineated by the present-day Calvary, the southeast hillside and the three streets named Hegytető, Lépcső and Beckett. On the lower plateau to its north lay a smaller Ottoman settlement (this included a pottery workshop and occupied an area probably earlier inhabited by the provost’s servants) that was destroyed in 1594–95.⁹² The fortification often appears on engravings from 1594–95.⁹³

In 1599, Miklós Pálffy strengthened the palisade,⁹⁴ but in 1605 it again passed into Ottoman hands,⁹⁵ together with the castle of Esztergom. Hoca Mohamed Paşa then ordered the repair of the palisade.⁹⁶

⁷⁶ LEPOLD 1944, 19, 52, 172 and other engravings.

⁷⁷ KARÁCSON 1904, 276; GERÓ 1965, 207; *MRT* 5, 119–120; VILLÁNYI 1891, 22/78, Ill. 1. 78.

⁷⁸ MOLNÁR 1967a, 87; BALOGH – HORVÁTH 1972, 10.

⁷⁹ LEPOLD 1936, 65.

⁸⁰ LEPOLD 1944, 13, 16, 52, 172.

⁸¹ NÉMETHY 1900a, 76–171.

⁸² VILLÁNYI 1891, 22/70, Ill. 1. 70.

⁸³ LEPOLD 1944, 173, 161, 178. The remains of the tower can be seen on the hillside.

⁸⁴ *RégFüz* Ser. I 32 (1979) 119, report by István Horváth.

⁸⁵ VILLÁNYI 1891, 22/68; LEPOLD 1944, 173, 178; PALUGYAI 1853, 40.

⁸⁶ LEPOLD 1944, 180, 184; VILLÁNYI 1891, 22/70; HNM Gallery I 4062. I. P. Suhr’s lithograph from the early nineteenth century shows the bastion from the north.

⁸⁷ Esztergom Primatial Archives, Drawings Collection. Published by PROKOPF 1979, 85.

⁸⁸ NÉMETHY 1898, 67. A plaque commemorating the construction can still be seen on the old bastion wall.

⁸⁹ NÉMETHY 1900a, 96. The name means “head-piercer”. Cf. FERETE 1943, 32 note 5.

⁹⁰ VILLÁNYI 1891, 10, 32; NÉMETHY 1900a, 98, 111; SINKA 1925, 104–105.

⁹¹ LEPOLD 1944, engraving 172.

⁹² FEHÉR – PARÁDI 1960, 43; FEHÉR 1968a, 274, 1968b, 330; GERÓ 1960b, 46.

⁹³ LEPOLD 1944, engravings 5–6, 13–16, 27–28, 32, 40, 44, 49, 52.

⁹⁴ NÉMETHY 1900a, 150, 168; SINKA 1925, 104–105.

⁹⁵ NÉMETHY 1900a, 207–208.

⁹⁶ KARÁCSON 1904, 279.

In 1663 Evlia Çelebi described it as follows: "The palisade of Tepeleden. East of the castle of Esztergom, beyond a valley, there is a high hill. It was built anew by Hoca Mohamed Paşa, who retook it from the enemy, in the time of Sultan Ahmed in the year 1014 of the Prophet [1605 A. D.], and who gave the castle the name of Tepedelen. Located on a wide grassy place above a red cliff, the castle has a gate and walls of posts and earth. Its circumference extends to roughly 500 paces. It has a small wooden gate on the Esztergom side. It cannot be entered by carriage. It has a hundred houses with plank roofs and plank fences. The streets and houses are narrow. It has a *cami*, a headquarters, 200 soldiers, a sufficient armoury, and good cannon. This fortification stands on a wide egg-shaped hilltop with steep cliffs on all sides, therefore it has no moat except for a trench cut in the east side. There is a well with wholesome water cut into the rock inside the fortification. Should an enemy approach, in the first clash it would be a good idea, in order to prevent penetration of this castle by the enemy, to level it to the ground with mines." (Ill. 10).⁹⁷

When Esztergom was retaken in 1683 the Ottomans themselves burnt this small palisade.⁹⁸ It is not mentioned in 1685,⁹⁹ and contemporary engravings of the siege show it in ruins on the hilltop beside the artillery battery.¹⁰⁰ The remains of the fortification were destroyed around 1730 on orders from castle commander Maximilian Schuchknecht.¹⁰¹

Fortification around the gunpowder mill

The abundant hot springs at the foot of Szent-Tamás-hegy powered a water mill dating from the time of the Árpád kings that the Turks converted into a gunpowder mill (*baruthane*) after 1543. The two-wheel mill appears in a 1595 engraving by Sibmacher and Meyerpeck.¹⁰² According to Evlia Çelebi, the Ottomans built a small palisade fortification in 1605 to protect the gunpowder mill (Ill. 3. 17). However, on Cogorano's 1595 map the outlines of a small fortification can be made out at the southeast end of Lake Hévíz,¹⁰³ it is therefore likely that the fortification was built in the sixteenth century, destroyed in the sieges of 1594–95, and merely rebuilt in 1605. Evlia wrote the following about it in 1663: "Descending from the fortification of Tepedelen to the flat clearing, there is a hot spring at the banks of the Danube. Behold! At this hot spring

is the palisade of Baruthane. It is a strong palisade on the banks of the Danube, on a smooth flat clearing, in the shape of a square, with earthen walls. Its circumference extends to six hundred paces. Since it is on low ground, it has no moat. On the north side there is a trench and drawbridge in front of the gate. In four bastions at its four corners there are *şahi* cannons and muskets. It has a headquarters, two hundred soldiers, *cebeci*, *topçı* (artillery) and *barutçı-başı* (munitions quartermaster) *agas*, and in a separate division inside the castle are the soldiers' quarters. The manufactory of Baruthane is separate. Like the Buda gunpowder mill, it has wheelwork, rollers and mortars all of bronze. Its water is slightly cooler."¹⁰⁴ To date the remains of this small fortification have not been found.¹⁰⁵

Royal Town (Királyi város)

As a separate fortification, Royal Town played an important role in the sieges of the castle, although it could not be defended for long.¹⁰⁶ In the era before gunpowder weapons, slender towers probably defended the medieval castle walls here.¹⁰⁷ Between 1543 and 1594 the Ottomans constructed round bastions at the northwest and southwest corners of the town on the banks of the Little Danube, and near the water moat half way along the east town wall.¹⁰⁸ According to W. Zimmerman and W. Meyerpeck's siege drawings, there were other, similar, ones between the north and south round bastions on the banks of the Little Danube.¹⁰⁹ The last-mentioned depictions attest that the town walls had battlements with places to pour pitch on attackers, and that on the outer side of the moat (a double moat to the south) there was a palisade strengthening the protection of the town.¹¹⁰

* * *

The above has been a presentation of the most important remains of Ottoman military architecture in Esztergom. In addition to these, a number of smaller military structures were built during the Ottoman conquest. These, and other buildings not mentioned here (*camis*, minarets, thermal water baths and steam-baths, dervish monasteries, etc.), resulted in a characteristically Oriental townscape in the seventeenth century.¹¹¹

⁹⁷ KARÁCSON 1904, 279–280.

⁹⁸ VILLÁNYI 1891, 10; NÉMETHY 1900a, 402.

⁹⁹ SINKA 1925, 105.

¹⁰⁰ VILLÁNYI 1892, appendix 1 (possibly the ruins of the provostship).

¹⁰¹ PROKOPP – ZSOLNAY 1957, 20.

¹⁰² LEPOLD 1944, 16, 32–33.

¹⁰³ LEPOLD 1944, 172.

¹⁰⁴ KARÁCSON 1904, 280.

¹⁰⁵ *RégFüz* Ser. I 36 (1983) 99, report by Erzsébet Molnár. Cf. *MRT* 5, 160.

¹⁰⁶ Royal (Serb) Town (Királyi [Rác] Város) was always the first

to be taken by besieging forces, followed by Szent-Tamás-hegy (Tepedelen), then Water-Town (Víziváros). With these in enemy hands, the castle could not be held for long.

¹⁰⁷ *MRT* 5, 1979, 133–134; HORVÁTH 1993, 11.

¹⁰⁸ The round bastions are depicted on C. Cogorano's 1595 map: LEPOLD 1944, 172.

¹⁰⁹ LEPOLD 1944, 48, 52.

¹¹⁰ The town walls were taken down in successive stages in the eighteenth century. Nevertheless, traces of the round bastions of the eastern side were still visible in the eighteenth and nineteenth centuries.

¹¹¹ HORVÁTH 1991, 131–140.

Military Events and Fortification Work at Székesfehérvár in the Sixteenth and Seventeenth Centuries

Székesfehérvár's fortifications up to 1543

Until its reconstruction following a siege by the Tartars in 1242, Fehérvár (now known as Székesfehérvár) had two fortified locations: the early royal castle and palace at the highest point of the town around what is today Cathedral Hill, and, to the northeast, the royal basilica and provost's building complex. A wall surrounded this second location.¹

Both complexes had been built in the eleventh century, with localised settlements stretching around them on what later became the site of the inner town.² According to the findings of our excavations so far, these settlements were at this time not yet fortified.

Following the Tartar invasion, town walls were built in accordance with the new defence policy thinking of King Béla IV (1235–1270).³ These walls were provided with rectangular and horseshoe-shaped towers in the late thirteenth or early fourteenth century; to make way for these towers, parts of the town wall were knocked down.

It was this period that saw the construction of the new royal castle and palace⁴ in the northeast corner of the town. The new complex was an integral part of Fehérvár. We have no further data on fortification work in the town until the reign of King Matthias (1458–1490). In 1473 Matthias began a major modernisation, in which round bastions were built to protect the most important points in the town.⁵

In 1485 Matthias also ordered the construction of the sepulchral chapel attached to the choir of the royal basilica. This new structure broke through the eastern wall.⁶ The late fifteenth century and in the first half of the sixteenth century – the eve of the Ottoman conquest – saw the raising of outworks and round earthen bastions for the three suburbs. It was at this time that the ditches for the suburbs were dug, and a palisade for the so-called 'western dry area' erected.⁷

In 1490, King Maximilian besieged the starving Fehérvár, and a year later István Báthory, Pál Kinizsi and King Wladislas II of Bohemia did the same. The sieges, however, did not damage the fortifications to the extent that modernisation was necessary. Nevertheless, in the late winter of 1529 King Ferdinand (1526–1564) intended to strengthen Fehérvár's town walls.⁸ It is not known whether the plans were acted on, nor whether the military events of 1540 (the entry into Fehérvár by Leonhard Vels) caused damage to the fortifications.

In 1541, the Ottomans twice attacked the town, whose inhabitants took up arms against the occupying foreign troops in 1542. After the capture of Buda, Sultan Süleyman I (1520–1566) demanded that a number of castles be taken, including Fehérvár.⁹ At the news of the approaching siege, the city strengthened its outer defences and ditches, and transformed the Franciscan monastery located next to the earthworks of the Buda suburb into a fort. The new captain of the town, György Varkocs, also strengthened one of the suburbs.¹⁰

Istolni Belgrad's fortification endeavours prior to the Fifteen Years War

Despite the efforts, Fehérvár fell to Süleyman's army on 2 September 1543.

Following the assault, the Turks performed only minor maintenance of, and repairs to, the fortifications, in 1543, 1545, 1546, 1547, and 1560.¹¹

Nevertheless, between 13 May and 16 July 1572 new wall amounting to 225 ells in length was built; this Jenő Fitz identifies as the buttressed north wall depicted in a French engraving of 1601.¹² In addition, the palisades for the suburbs were reinforced, and new areas were fenced in. Despite these repairs and additions, the fortification system of Fehérvár essentially preserved its pre-Ottoman state until the time of the Fifteen Years War.

¹ SIKLÓSI 1989a, 104–120; 1990, 7–17; HATHÁZI – SIKLÓSI 1994; KRALOVÁNSZKY, A., "Előzetes jelentés az 1965. évi ásatásokról" [Preliminary Report about the Excavations of 1965], *Alba Regia* 8–9 (1969) 253–262.

² SIKLÓSI 1992.

³ SIKLÓSI 1990, 25–36; 1993, 121.

⁴ SIKLÓSI 1990, 25–36; 1993, 121.

⁵ SIKLÓSI 1990, 25–36; 1993, 121.

⁶ SIKLÓSI 1990, 25–36; 1993, 121.; FITZ – CSÁSZÁR – PAPP 1966, 14; based on an Italian sketch of 1601 and Tubero's description.

⁷ SIKLÓSI 1990, 85–94; 1993, 123.

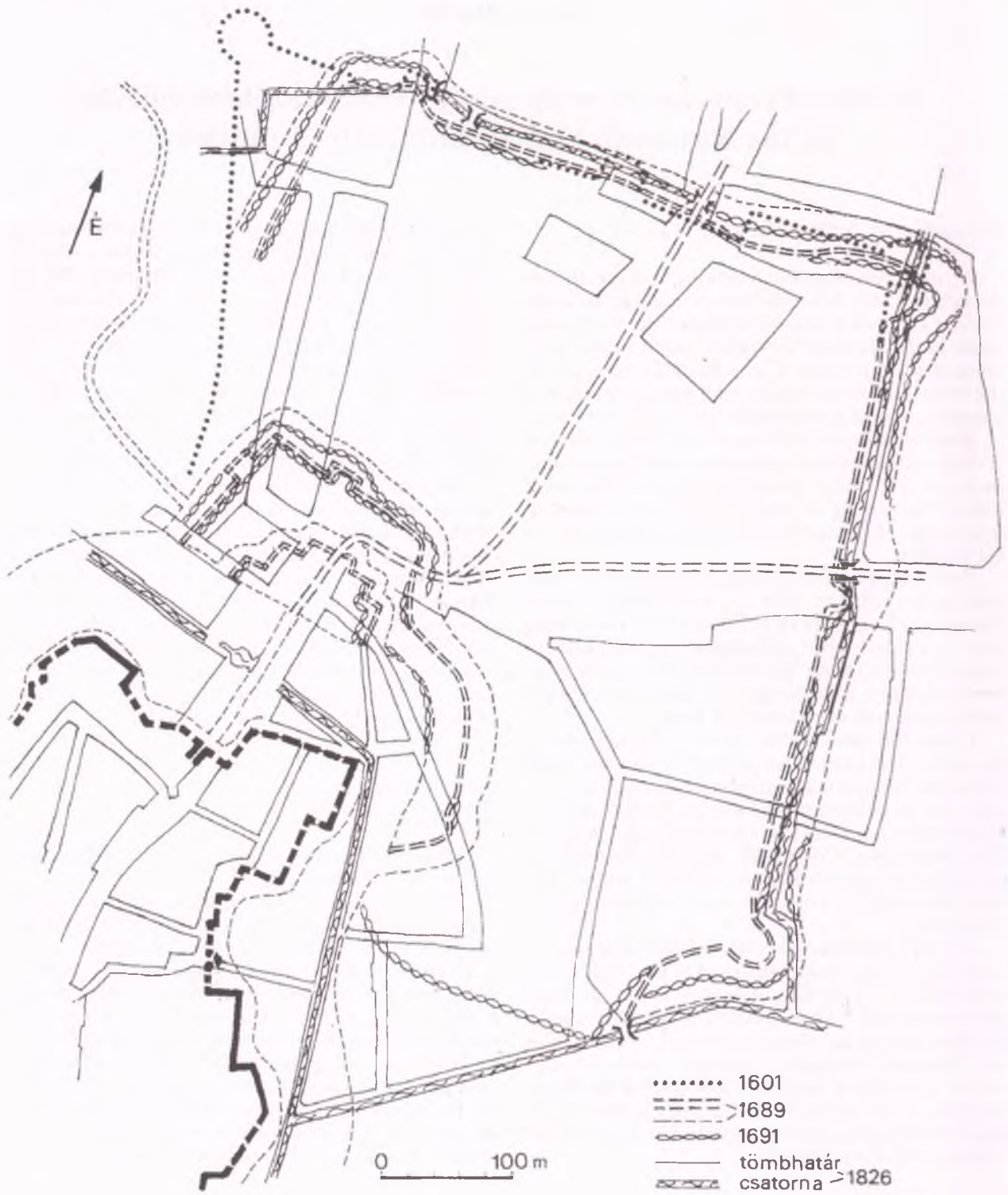
⁸ GEREVICH 1966, 257.

⁹ JUHÁSZ 1934, 3.

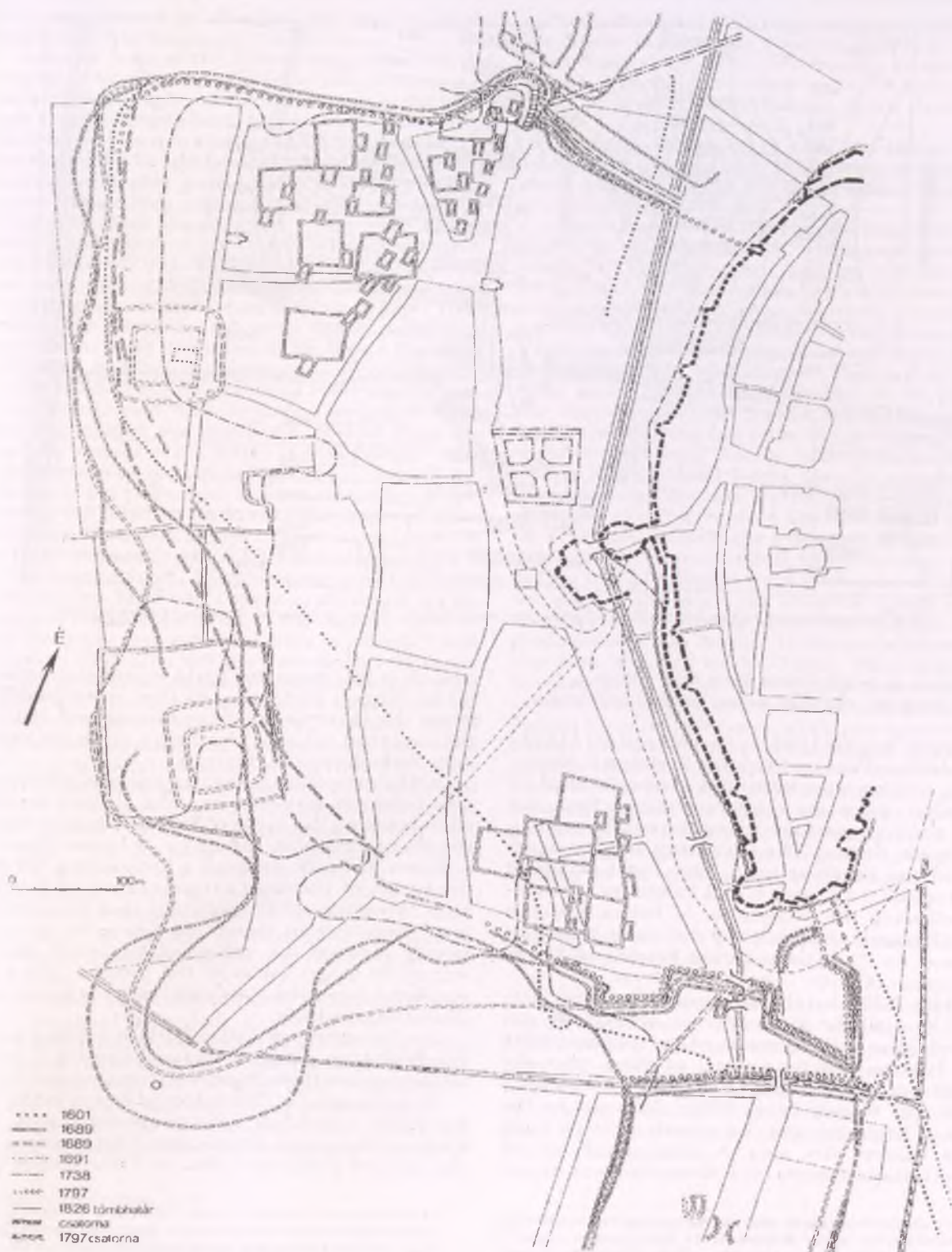
¹⁰ JUHÁSZ 1934, 9.

¹¹ SIKLÓSI 1990, 19–20.

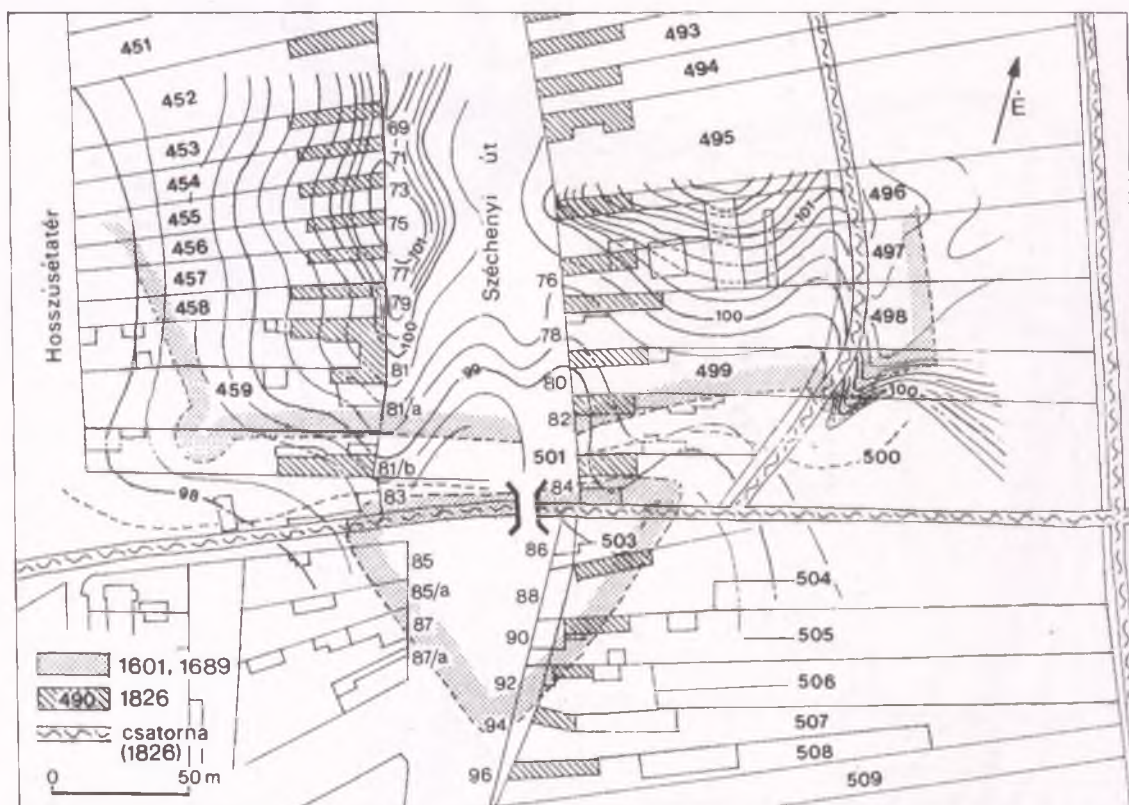
¹² FITZ – CSÁSZÁR – PAPP 1966, 24.



II. 1. Fortified parts of the Buda suburb and of the northern section of the inner town based on historical maps of the town and excavation findings. (Photograph and drawing: Endre Egyed)



III. 2. Fortified parts of the so-called 'western dry area' and of the western part of the inner city based on historical maps of the town and excavation findings. (Photograph and drawing: Endre Egyed)



Ill. 3. Reconstruction of the Sziget (Palotai) kapu and its environs. (Photograph and drawing: Endre Egyed)

Military events of the Fifteen Years War¹³ in and around Fehérvár, and their impact on the fortifications

In early August 1593, Sultan Murad III (1574–1595) declared war on Emperor Rudolph I. Nevertheless, military operations did not begin until 27 September, when the soldiers of Sinan Paşa, the grand vizier, crossed the River Drava at Eszék (today: Osijek, Serbia). The advancing army soon arrived in the Fehérvár area. The Turks occupied Veszprém on 6 October and Palota on 10 October; following the occupation of Palota, Captain Péter Ormándy surrendered the castle there. In response, on 28 October Count Ferdinand Hardegg, captain of Győr, besieged Fehérvár.

Miklós Pálffy led the advance guard, and Bernath Leo Gall the German foot soldiers. It was primarily due to the heroism of the soldiers under Péter Huszár, captain-general of Pápa, that the Christian army managed to capture the southern suburb (the former Nova Villa), followed by the village of Ingovány and the suburb of Sziget lying on the western dry area. A joint assault on the northern Buda suburb on 1 November was un-

successful: at this point the Turks repulsed the troops led by Jörgen Hermann. As they were unable to storm the inner town, after pillaging and burning the captured suburbs Hardegg's army encamped near Sárkeresztes (Keresztes).

At the same time as the unsuccessful attempts to take Fehérvár, however, imperial soldiers succeeded in retaking the castle of Palota. While on its way to relieve Fehérvár, the army of Hasan Paşa, the *beylerbeyi* of Buda, suffered a humiliating defeat at the hands of Hardegg's troops north of Fehérvár on 3 November 1593. Believing that the Christian army would again assault the town, the *bey* of Fehérvár ordered the village of Ingovány and the suburb of Sziget burnt to the ground. On 4 November 4, however, Hardegg's army began to withdraw towards Győr.

In the spring of 1594, Turkish raiding parties from Fehérvár pillaged Ajka and Rendek,¹⁴ and on 29 September 1594 Ottoman troops captured Győr.

In response, in 1598 imperial forces led by Miklós Pálffy and Adolf Schwarzenberg retook Tata, Gesztes, Veszprém, Palota, and Nagyvázsony, all in the area of Fehérvár.¹⁵ But on 3 November 1598,

¹³ Many scholars have dealt with the military operations around Székesfehérvár in the Fifteen Years War (VERESS – SIKLÓSI 1990, 108–164; FITZ – CSÁSZÁR – PAPP 1966, 24; KÁROLY 1896–1904, II (1898), 506–559; GÖMÖRI 1892, 299–322; WATHAY 1976, 1–197). For this reason a detailed description

of them is not necessary here. Discussion is limited to the effects these events had or might have had on the destruction, reconstruction and modernization of the defences.

¹⁴ VERESS – SIKLÓSI 1990, 118.

¹⁵ MO. TÖRT. KRON. II. 1982, 418.

they were forced to abandon the siege of Buda Castle they had begun on October 5.

A major issue of the Fifteen Years War was the strategy to be adopted in order to take possession of the Buda region, the northernmost part of the Ottoman Empire: should Buda be taken first, followed by Fehérvár and then by Esztergom, or should Fehérvár and Esztergom be taken first, followed by Buda? The imperial strategists were unable to decide on this matter. Hence they attempted to gain military successes at all three locations. On 9 May 1599, Miklós Pálffy, Tamás Nádasdy and Adolf Schwarzenberg attacked Fehérvár with 5000 soldiers from Győr, which had been retaken in the meantime. They succeeded in blowing up the suburban Batthyány kapu (Batthyány Gate), but now, too, were unable to take the inner town. They therefore again burnt Ingovány and Sziget, and then withdrew.

The saddest military event of 1600 was the mutiny of French and Walloon troops serving at Pápa. After the mutiny was put down, 500 of them entered the service of the Turks at Fehérvár.¹⁶

Influenced by the inconclusiveness of military operations to that point, both sides made further efforts to bring the other to his knees. The imperial army command attempted to inflict three major blows on the Turks: in Transylvania, at Kanizsa and at Fehérvár.¹⁷

The repeated raids, however, prompted the Turks to strengthen Fehérvár. Data is available on six instances of fortification prior to the siege of 1601: in 1582 the walls and palisades were repaired,¹⁸ and between 1596 and 1599 the *timar*-holder Mohammed Divane was prominent in construction projects in Fehérvár.¹⁹ In the course of major modernisation operations in the 1600s, the Buda suburb, which was gradually becoming depopulated, may have been converted to military purposes.²⁰ In 1601 the town's military-type buildings were reinforced.²¹ On 6 April 1601 the Ottomans spent 33,222 *akçe* on the repair of the fortifications, on the purchasing of wood, and on wages.²² On the basis of a French engraving of 1601, it is certain that between 1600 and 1601 a portcullis was added to the gate of the southern suburb. On 13 September 1601, immediately prior to the siege, Ali, the *ağa* of Esztergom, was sent to the *serdar* in the matter of the urgent strengthening of Fehérvár.²³

On 8 April 1601, the emperor appointed Prince Philip Emanuel Mercoeur as commander of the army corps to march on Fehérvár. However, according to some data the army, which numbered 28,361 soldiers, did not begin the siege until 9 September. This was crowned with success on 20 September.

During the siege the Christian forces occupied the castle of Csókakő and the stronghold of Csíkvár

(at Szabadbattyán). The siege was begun in front of the Budai kapu (Buda Gate) in Fehérvár's Buda suburb and at the southern suburban fortifications. On 14 September the three suburbs were taken; these were completely burned down during the battles.

A French engraving of 1601, an Italian sketch and a German pen-and-ink drawing all show precisely where the walls fell down under the impact of cannon-fire and mines.

The occupation of the city was followed immediately by restoration work, which took nearly two weeks.²⁴ Then, Mercoeur and his army marched on Fehérvár and pitched camp there, then withdrew to the walls of the castle of Csókakő. On 9 October the newly reinforced army advanced towards the combined armies of Grand Vizier Yemişçi Hasan Paşa and Mohammed, *beglerbeyi* of Buda. After many days of fierce clashes, on 22 October the Turks began their retreat towards Buda, and on 25 October the last units of the Ottoman army withdrew towards Adony. After reinforcing Fehérvár, the imperial forces likewise withdrew. In the meantime Giovanni Marco Isolano was appointed by the Court to replace Starhemberg as captain of Fehérvár. Despite the efforts, Yemişçi Hasan's army of 70,000 men retook Fehérvár after a siege lasting from 12 August until 29 August 1602. After the start of the siege, the imperial troops quickly abandoned the already destroyed bastions in the Buda suburb. On August 18 the so-called western dry area, too, fell to the Turks. Then began the bombardment of the walls of the inner town: four cannon bombarded the section of wall south of the Palotai kapu (Palota Gate), while two cannon bombarded the tower next to the southern bastion and another three the southern bastion itself. Four cannon fired on the barbican of the Palotai kapu, and between 22 and 23 August the Turks attempted unsuccessfully to blow up the Monostor Bastion. The garrison had to work urgently to repair the damage to the walls caused by the siege.

Construction in 1601–1602 and its conclusion during the second phase of the Ottoman era

The greatest amount of construction in Fehérvár during the Fifteen Years War undoubtedly took place between 1601 and 1602. In September 1601, after the successful siege by the imperial army, Captain Gottfried Starhemberg put the costs of restoration work at 30,000 forints.²⁵ By October there were 1500 people employed on the construction of the castle.²⁶

¹⁶ VERESS – SIKLÓSI 1990, 119.

¹⁷ RÁZSÓ 1977, 151.

¹⁸ FODOR 1979, 375–398.

¹⁹ VELICS – KAMMERER 1886–1890, I. 392.

²⁰ FITZ 1954, 3.

²¹ FITZ – CSÁSZÁR – PAPP 1966, 24.

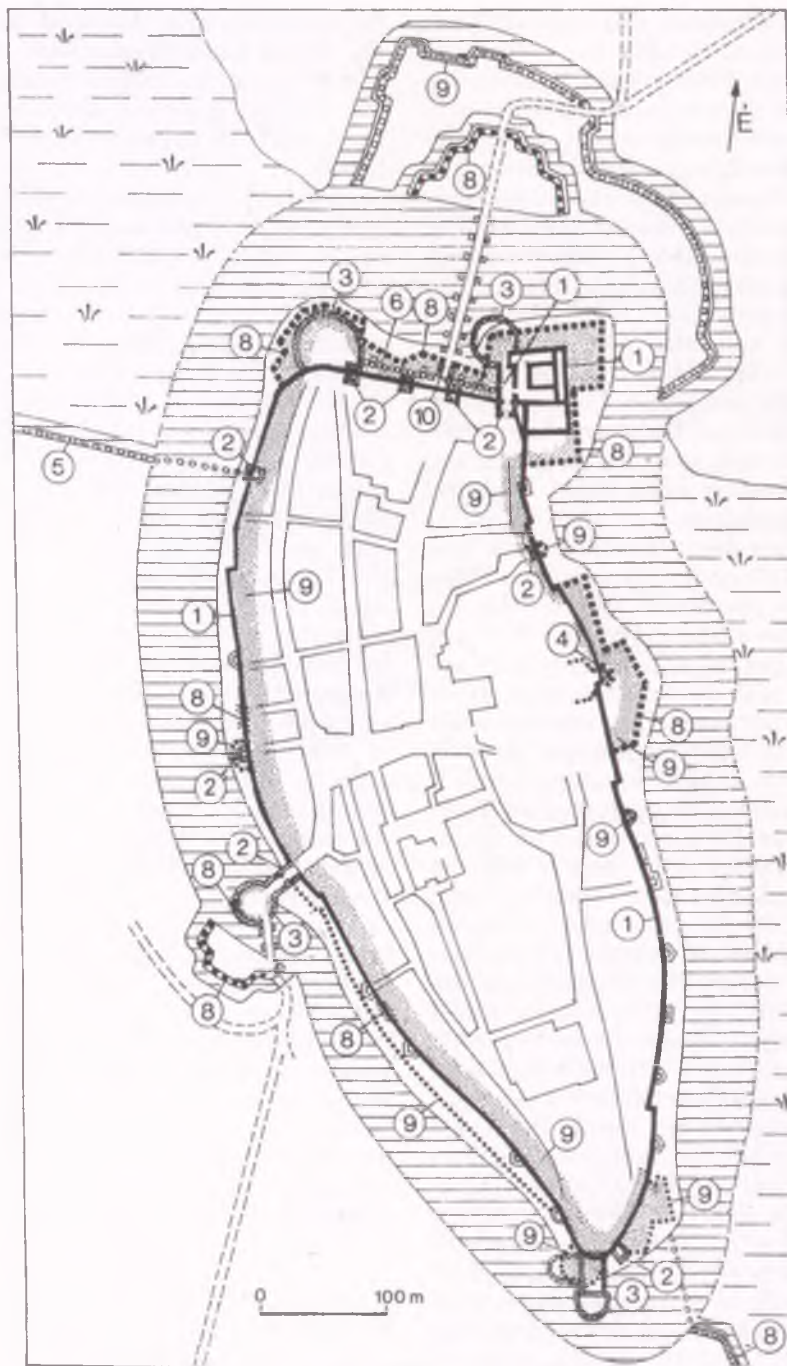
²² VELICS – KAMMERER 1886–1890, II. 696.

²³ VELICS – KAMMERER 1886–1890, II. 707.

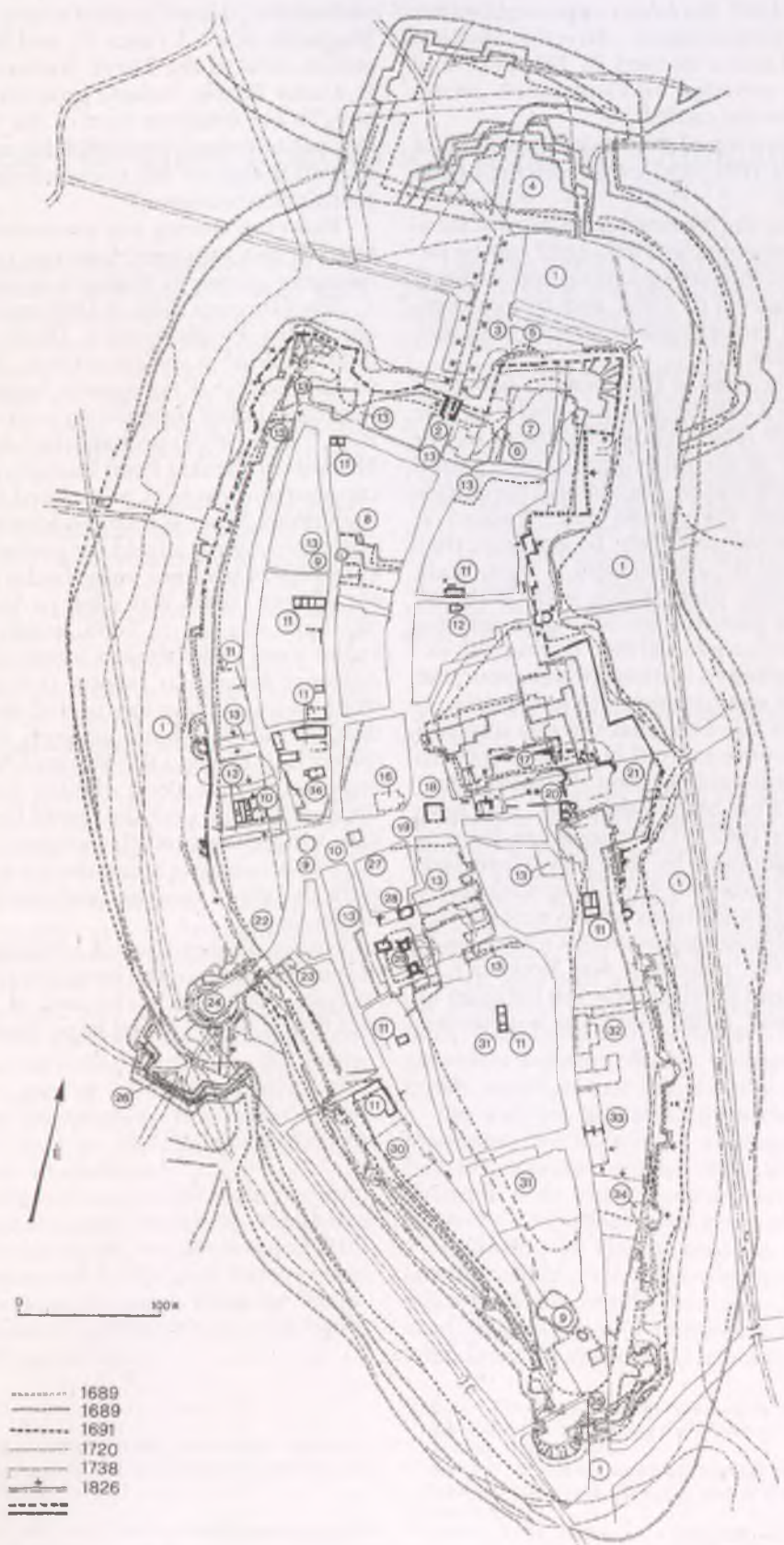
²⁴ VERESS – SIKLÓSI 1990, 135.

²⁵ FITZ – CSÁSZÁR – PAPP 1966, 24.

²⁶ KÁROLY 1896–1904, II. (1898) 542.



Ill. 4. Fehérvár, inner town; fortification construction periods (photograph and drawing: Endre Egyed): 1. Second half of the 13th c.: Town walls, "citadel"; 2. Late 13th–early 14th c.: Rectangular and horseshoe-shaped towers, Palotai kapu Tower; 3. 1473: First construction operations by King Matthias: round bastion protecting the Budai kapu, northwest round bastion, Palotai kapu barbican, southern round bastion; 4. 1485: Second construction operations by King Matthias: Sepulchral chapel built into the fabric of the town wall; 5. Late 15th–early 16th c.: Ditches, ramparts, round earthen bastions in the three suburbs, the palisade along the western dry area (see Ills 1–4); 6. 1572: Northern buttressed outer wall; 7. 1600–1601: Wedge-shaped fore-rampart in front of the southern gate of the southern suburb (see Ill. 4); 8. 1601–1602: Northwest Italian bastion, Király Bastion, Monostor Bastion, northern outer wall, Új Budai kapu, earthen defences in front of two inner city gates (the one in front of the Budai kapu may be post-1602), the ramparts in front of the Palotai (Sziget) kapu and the Ingóvány kapu, the new Ingóvány kapu and two (earthen) Italian bastions, two earthen defences on the so-called western dry area (see Ills 1–3). Repairs: Reconstruction of the collapsed town wall at the western edge of the plot at Megyeház (Csók 1.) utca 17, restoration of the collapsed part of the Palotai kapu barbican, rebuilding of the section next to the Fürdő Bastion; 9. 1602–1688: Construction of outer wall section between the Palotai kapu (Suret Kapusu) and the Murteza Paşa Tower (repaired along with the Palotai kapu as early as 1663), Fürdő Bastion, southern – winged – bastion, southern cannon tower, ramparts along the side of the town walls, and possibly the earthen defence in front of the Budai kapu, the outer rampart and ditch in front of the Budai kapu; 10. 1647: Új Budai kapu Tower



III. 5. Fehérvár town wall on the basis of excavated sections and historical maps of the town.
(Photograph and drawing: Endre Egyed)

In November 1601 the Court approved further expenditures. Construction director Johann Schneider von Lindau arrived in Fehérvár, and Colonel Isolano travelled to Vienna with reconstruction plans for the castle.²⁷

Military fortification of the city continued right up to the siege of 1602, and even after the beginning of that siege.

Information on the location and nature of fortification work performed in 1601–1602 can be derived from Ferenc Wathay's painting and verses,²⁸ from the siege-journal of 1602, and from a comparison of a 1601 engraving and ground plan with a 1689 ground plan.²⁹

We know from Wathay that Isolano had serfs brought in from Lesence and Keszthely for the construction work. They rebuilt the entire northern defence line of the inner city. Also repaired were the northwest Italian bastion and the Király Bastion, along with the cortina wall – broken at many points – between the two. In addition, they created a new gate (Új Budai kapu = New Buda Gate) in the middle part of this wall. With the exception of this gate, the ground plan for this northern defence line was clarified during our excavations.³⁰ According to Wathay's watercolour, the Monostor Bastion was completed to half height. It may have been at this time that the two terraced earthen defences were erected in front of the two gates to the inner town to protect the two bridge-heads (the one in front of the Budai kapu may have been erected after 1602). The rampart in front of the two gates to the suburbs, the two earthen Italian bastions at the Ingovány kapu (Ingovány Gate) and the two earthen defences at the western dry area were probably contemporaneous with them.³¹

During the 1601 repairs it was necessary to restore the damaged fortifications: the barbican of the Palotai kapu and, to the south, the bombarded

wall section located in what is now the courtyard of Megyeház (Csók I.) utca 17, and the collapsed wall section next to the Fürdő Bastion.³² According to D. Csaba Veress, Isolano ordered a traverse to be built in the southern part of the inner city, along the line of today's Petőfi Sándor utca, thereby cutting off the inner city proper from the part to the south of the traverse.³³

However, during our excavations we found no trace of this supposed traverse, postulated on the basis of a section in Wathay's verses.

The Ottoman siege of 1602 caused serious damage to the fortifications.³⁴ These required urgent repair following the investment. The damage was so extensive that the repairs begun in 1601–1602 may have lasted until the term of office of Karakaş Paşa,³⁵ since it was probably he who completed the Monostor (Karakaş Paşa) Bastion. These large-scale construction projects performed in the middle of the Fifteen Years War to modernize Fehérvár's defences brought to an end the period of major changes to Fehérvár's town walls. In the period following the Fifteen Years War (and perhaps even during it), there was, up to 1688, minor rebuilding and repair work to Fehérvár's fortifications, but its significance lagged far behind that of earlier operations. It was during this period that the outer section of wall was built between the Palotai kapu (Suret Kapusu) and the Murteza Paşa Tower (it was repaired in 1663 along with the Palotai kapu). Also built at this time were the Fürdő Bastion; the southern, winged bastion; the southern cannon tower; the earth ramparts along the town walls; and, possibly, the outer rampart and ditch in front of the Budai kapu.

Finally, timber-framed buildings characteristic of this period were the irregular pentagonal tower recently excavated in the area of Táncsics Mihály utca 6, and the Új Budai kapu Tower built in 1647.

²⁷ FITZ – CSÁSZÁR – PAPP 1966, 24.

²⁸ WATHAY 1976.

²⁹ SIKLÓSI 1988, 221–251.

³⁰ SIKLÓSI 1993, 28–61.

³¹ SIKLÓSI 1993, 25.

³² SIKLÓSI 1993, 127.

³³ VERESS – SIKLÓSI 1990, 155.

³⁴ BENDA – NEHRING 1978, 269–284; WATHAY 1976; SIKLÓSI 1993, 127.

³⁵ FITZ – CSÁSZÁR – PAPP 1966, 156.

Babócsa–Nárciszos: a Settlement from the Ottoman Age

Systematic archaeological investigations were conducted on the territory of Babócsa between 1979 and 1992 as part of the research project focusing on the study of so-called land-stewardship areas (*ispánság*) and centres of kinship groups centres.¹ In this paper I shall not discuss the entire settlement history of this early kinship-group centre, nor shall I offer an overall analysis of the archaeological material (Ill. 1).²

The investigation of the roads along the River Drava and of the Roman and late medieval roads has shown that many major routes led through the Babócsa area in the Roman period and the early Árpáadian Age. The Nagyatád–Babócsa road along the River Rinya and the crossing-place over the Rinya had to be secured with forts and castles. One such stronghold was at Babócsa, where it lay along the road leading from Segesd via Nagyatád, while another may have stood by the River Rinya on the Barcs–Bélavár road along the River Drava.³

The early hillfort (earthwork) and fortified manor house of the Tibold kinship group was probably located in the area of the medieval castle, today known as “Török vár” (“Turkish Castle”) in the centre of the present-day settlement.⁴ Described as a *castrum* in various fifteenth- to sixteenth-century sources, the medieval castle was the seat of estates held by the Marczali and Báthori families; it functioned as a Hungarian, and later as an Ottoman, border fortress in the sixteenth to seventeenth centuries.⁵ The three surviving bastions on its northern side lie on an area of 1.5 hectares, while two corner-bastions on the southern side (and the medieval settlement next to the castle) are known from contemporary documents.⁶

A small, eleventh- to thirteenth-century stronghold, covering an area thirty metres by thirty-five metres, lies east of this castle; the site is called “Hill 33”. A survey conducted in this area has revealed that it was once enclosed by water from the Rinya. This motte-type hillfort (earthwork) was still being used during the Ottoman era.⁷

The fourteenth- to seventeenth-century counter-fort of these two fortifications has been identified on the opposite bank of the River Rinya.⁸ This counter-fort is called Nárciszos (the name means a garden planted with daffodils); it also has another name: “Basakert” (“Paşa’s Garden”). It covers an area of 4.3 hectares, and is a large rectangular space measuring 230 metres by 220 metres with ramparts 2 metres high (in some places 1 metre). This stronghold from the Ottoman period consisted of two parts and had seven round bastions (Ill. 2).⁹ It was investigated in several campaigns between 1984 and 1992, in the course of which important Turkish architectural remains were uncovered (Ills. 3–4).

*Results of the archaeological investigations at Nárciszos*¹⁰

I shall first briefly survey the pre-Ottoman period remains uncovered during the excavations.¹¹ A monastery originally under the patronage of the Tibold kinship group occupied the highest, and therefore most important, site. This was a Benedictine abbey dedicated to St. Nicholas: an ornate, 25–30-metre-long and 10–15-metre-wide stone church with an apse and a monastery.¹² The cemetery of the monastery was enclosed within an oval wall and ditch. The houses of the laymen and the service-providers lay west of the monastery, as did the rather simple manor house of the Tibolds (Ill. 2).

On another hill, some 50 metres south of the monastery, we uncovered a village parish church built of bricks and supplied with a horseshoe-shaped chancel. This church measured 13 metres by 8 metres. The village itself lay to its west.¹³

Following the Mongol invasion, sometime in the late thirteenth or early fourteenth century the Benedictine monks rebuilt their church and erected a new, larger L-shaped monastery. An ossuary was added to their cemetery. Members of the Babócsai

¹ MAGYAR 1981, 43–81; 1994, 73–93. This study offers an overview of the findings of the investigations carried out between 1984 and 1992.

² MAGYAR 1990.

³ NOVÁKI – SÁNDORFI 1985, 1–13; JANKOVICH 1976, 3–6, 21–37; MAGYAR 1990, 47–50, 56–57.

⁴ MAGYAR 1993, 219–221.

⁵ SZAKÁLY 1971; DÁVID 1993, 165–166, 174–175.

⁶ JANKOVICH 1976, 3–6, 21–37.

⁷ Gyula Nováki and György Sándorfi found Ottoman-period sherds on this site during their 1986 survey.

⁸ MAGYAR 1994, 73–93.

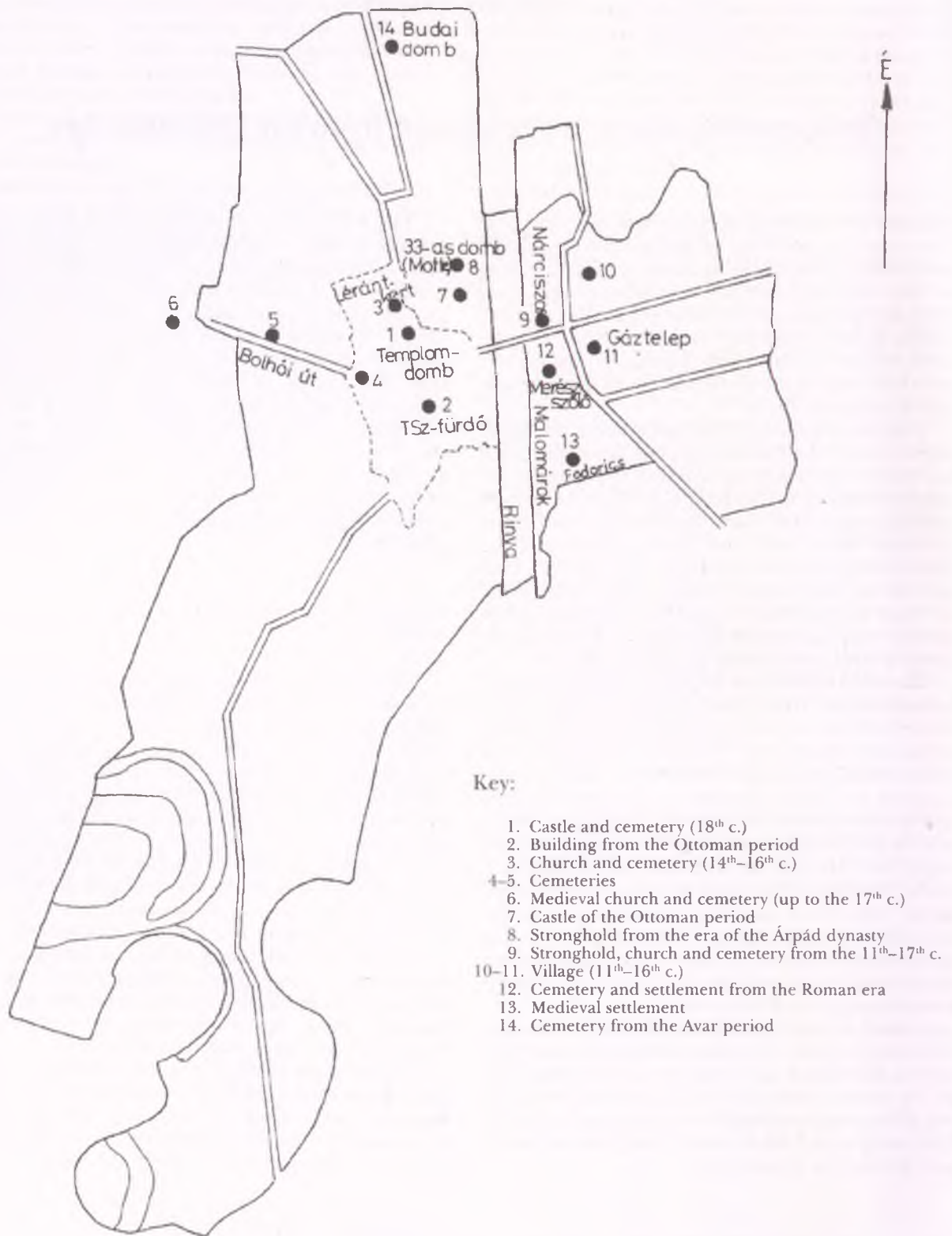
⁹ Surveys carried out by Gyula Nováki and György Sándorfi between 1984 and 1986. Cf. also MAGYAR 1993, 221, 236, note 14.

¹⁰ MAGYAR 1994, 73–93.

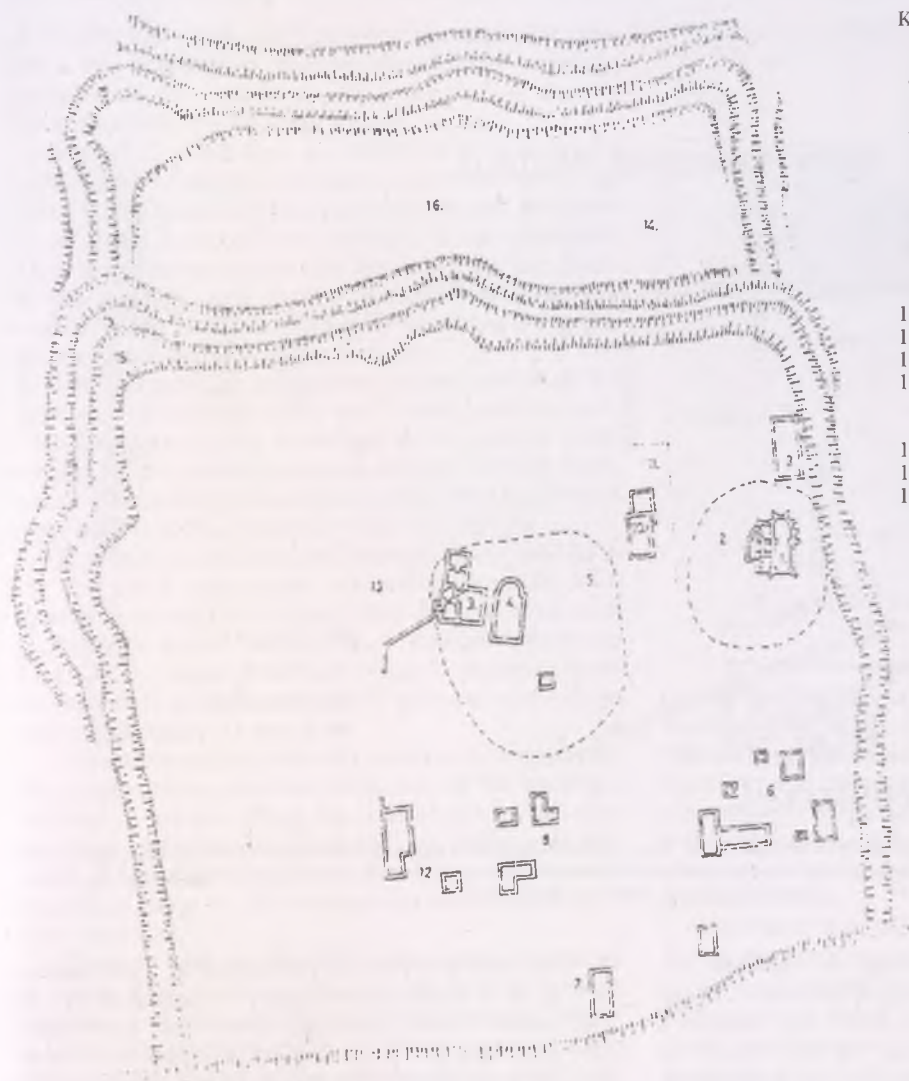
¹¹ For a detailed description, cf. MAGYAR 1990, 109–140; 1994, 73–93.

¹² NAGY 1990, 373–374.

¹³ NAGY 1990, 375–376.



III. 1. Archaeological sites in Babócsa



Key:

1. Parish Church of St. Giles
2. Cemetery
3. Pilgrims' hostel
4. Church of St. Nicholas
5. Cemetery
6. Residential building from the era of the Árpád dynasty
7. Residential building from the 16th c.
8. Offering found in an Árpadian-era residential building
9. Turkish bathhouse
10. Turkish *seray* with a private bath
11. Garden of the *seray*
12. Turkish residential building
13. Remains of buildings from the era of the Árpád dynasty and the Ottoman period
14. Oven
15. Rampart
16. Castle district

Ill. 2. Plan of the excavations at Babócsa-Nárciszos (Basakert) up to 1992

family, which belonged to the Tibold kinship group, built a large manor house at roughly the same time. Simultaneously, the rural settlement south of the Benedictine monastery began to flourish. The entire area was provided with a ditch and rampart. A district with a craftsmen's quarter also evolved.¹⁴

Between the close of the fourteenth century and the beginning of the fifteenth century the village in the fortified centre developed into a market town. The small parish church from the era of Árpád dynasty was replaced by a large brick church (measuring 25 metres by 10 metres) – built in the Gothic style and supplied with buttresses – that had an elongated chancel ending in six sides of a decagon.¹⁵ In 1390 this enlarged parish church, dedicated to St. Giles, was granted the right to hold fairs. The inhabitants of the village that was now becoming a market town developed it primarily as

a place of pilgrimage: we uncovered the remains of brick and stone walls of a large (measuring at least 30 metres, 25 metres and 20 metres, respectively) pilgrim's hostel at the eastern end of the cemetery. It would appear that the ramparts and ditches for the protection of the area were made prior to the construction of the pilgrim's hostel, since the last mentioned was cut into the southern rampart.¹⁶ We were able to establish that the importance of the Benedictine monastery declined as the importance of the market town and its church grew.

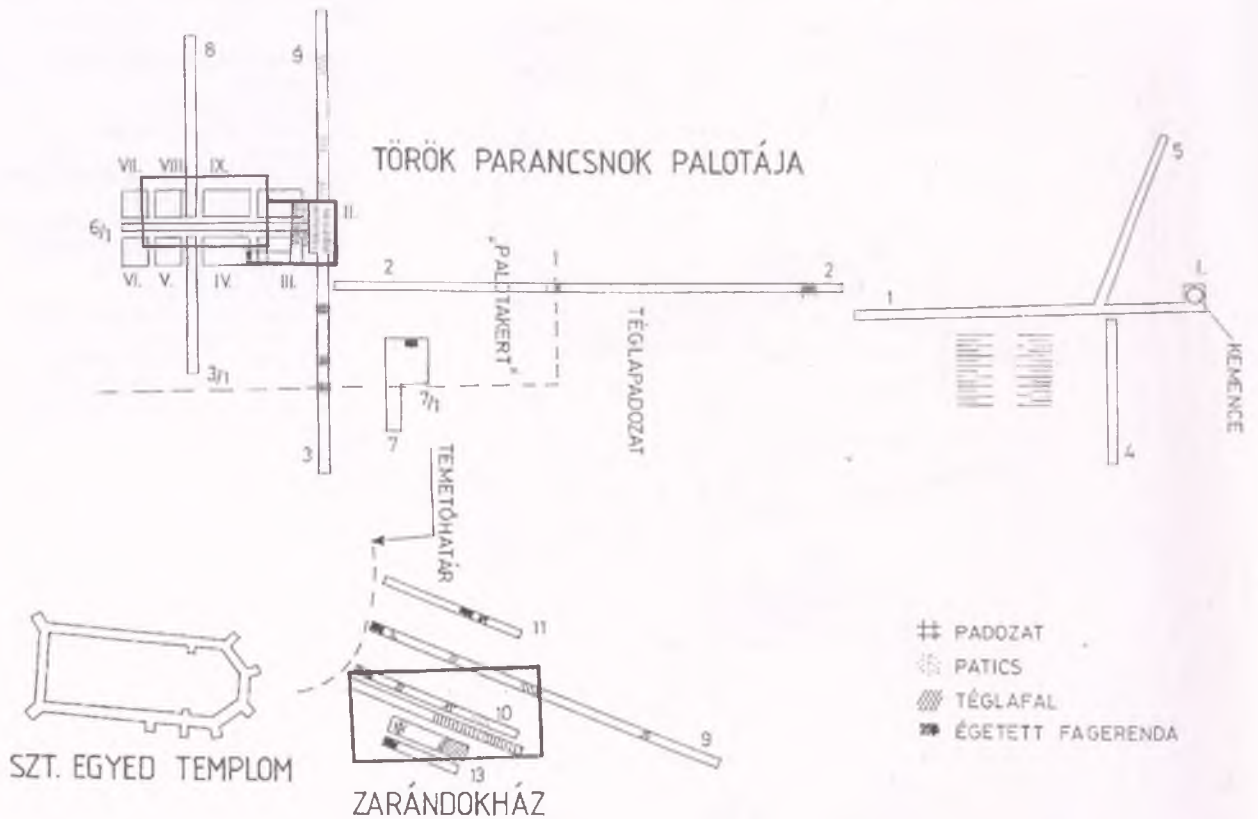
During the years from the fifteenth century to the mid-sixteenth century, the period in which the area passed into the possession of the Marczali and Báthori families, the Benedictines declined and their buildings fell into disrepair. Both families patronized the Franciscans, for example those at Segesd.¹⁷

¹⁴ MAGYAR 1994, 86.

¹⁵ NAGY 1990, 380–382.

¹⁶ MAGYAR 1994, 79.

¹⁷ MAGYAR 1988, 73–83.



Ill. 3. Excavation of the Turkish commander's *seray* in 1989. Key: TÖRÖK PARANCSNOK PALOTÁJA = *Seray* of the Turkish commander, PALOTAKERT = garden of the *seray*, ZARÁNDOKHÁZ = pilgrims' hostel, KEMENCE = oven, SZT. EGYED TEMPLOM = Church of St. Giles, TEMETŐHATÁR = cemetery boundary

The investigations conducted on this site revealed that the large stronghold of Nárciszos, occupied by the Ottoman forces in 1566, was used as a fortification and as a settlement. We uncovered the remains of the Turkish houses of the settlement, together with a Turkish bathhouse and the commander's residence with a private bath (Ills. 2–6).¹⁸

Archaeological remains of settlements dated to the Ottoman age

Following the fall of the Szigetvár fortress in 1566, almost all of Somogy County came under Ottoman control. It was at this time that the Turks built up a chain of fortifications and settlements that stretched as far as Segesd. Important archaeological remains from the Ottoman period have come to light at Babócsa, too.

Situated next to the Roman Catholic church in the centre of the present-day community, the Báthory family's brick castle – provided with bastions in

the Old Italian style and protected by a palisade as well as by a ditch and rampart – continued in use. The outer double entrance tower on its western side indicates the presence of an outer fort encircled by a palisade. The excavations conducted in 1978–79 brought to light the remains of this outer fort, as well as the remains of a multi-roomed Ottoman-period building on a hill rising above the marshland at the foot of the castle (Ill. 1).¹⁹

On the basis of ceramic finds, the area of the motte-type fortification from the time of Árpád dynasty was used as a lookout post during the era of Ottoman rule.

Excavations conducted between 1984 and 1992 showed that the stronghold at Nárciszos was in use during Ottoman times. In 1989 we cut through the eastern side of the fortification by means of a trench 250 metres long and 1 metre wide. The remains of the timber structure were uncovered during the investigation of the ditch and rampart north and east of the market town's parish church.²⁰ This timber structure corresponded to the one observed

¹⁸ NAGY 1990, 389–390; VASS 1993, 201.

¹⁹ MAGYAR 1981, 62; 1990, 108–109. Cf. GERELYES 1988, 278, Ill. 38 for a sunken house from the Ottoman period uncovered at Ozora.

²⁰ MAGYAR 1990, 102; 1994, 87, Ill. 12. Cf. also KOVÁCS – RÓZSÁS 1996, 168, 180, notes 37–38, for a detailed discussion of this palisade fortification.

at Török vár, with earth packed between the timbers. We could also observe the ditches running parallel to the rampart. They were 3–4 metres deep and had a V-shaped section.

A row of postholes, probably from a series of posts reinforcing the rampart, was observed in the fill of the ditches. The horizontal timbers between these posts ensured the solidity of the rampart. This fortification work can be dated to the fourteenth century and survived into the late seventeenth century. This dating is confirmed by the pottery finds from various periods.

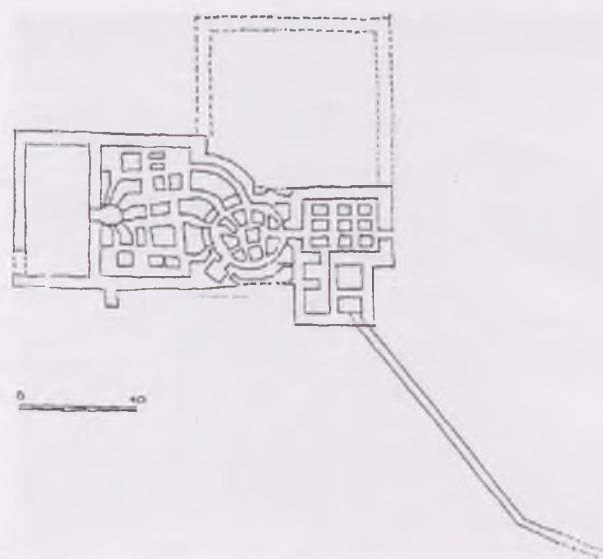
The Benedictine monastery in the middle of the Nárciszos (Basakert) castle was – along with its surrounding sacral area, including the cemetery – disturbed by the construction of a large Turkish bathhouse. The underground structures of the bathhouse were built over the cemetery (Ills. 2, 4 and 6).

This Turkish bathhouse (*hamam*), excavated during the 1988 campaign, was situated some 5–10 metres north of the Benedictine church. This bath at Babócsa is the westernmost *hamam* known to date. On the basis of the surviving foundation walls we were able to reconstruct the ground plan of the entire building.

Two construction periods could be distinguished. The rooms along the east–west axis of the building and the chambers along the axis of the wastewater pipe represent one building period, while, in brickwork of significantly poorer quality, a large room adjoining these to the south represents another – later – period.

When identifying the different rooms, we turned to Memi Paşa's bath in Pécs as the best analogous building.²¹ At Pécs, the rooms were arranged linearly from east to west, while at Babócsa it was from west to east, owing to the nature of the site.²² We identified a well near the northern wall of the bathhouse, and we found a wastewater pipe leading to the marshland of the River Rinya at the other end of the building. The entire hypocaust system could be recovered. Warm air flowed under the brick pillars supporting the floor and was then led out into the open through ducts built in the wall.

The rooms of the first building period of the Turkish bathhouse at Babócsa were the following: the *tepidarium* (*sogukluk*), in the west, followed by the room of the warm water bath (*caldarium*; *sıcaklık* or *harara*), which had a cupola. The furnace room and the water cistern adjoined the eastern wall of the former, while the easternmost room accommodated the heating chamber. The cistern was placed directly next to the well, ensuring that water could be led into the bathhouse very easily. From beneath, a furnace heated the water. The opening of this furnace and the radial floor-ducts could be clearly observed. No traces of an ash-pit were found



Ill. 4. Ground plan of the Turkish bathhouse

in front of the furnace. The lower floor level of the heating chamber could be identified on the basis of the furnace opening. The entrance to the heating chamber was uncovered in the northeast. We found no remains of possible steps, suggesting that the building followed the terrain. The size of the two service rooms was conspicuously large compared to the actual bath.

It is likely that the entrance hall (*camekan*) of the first construction period adjoined the central room of the bath (*tepidarium*) from the south. The second hall, constructed of bricks laid into clay, was added to the bathhouse at a later date. The size of this hall suggests that – in line with the general Turkish practice – it had a fountain in the centre and benches arranged along its walls.

Both construction periods of the Turkish bathhouse at Babócsa accord with the classical principles of Ottoman architecture. Particularly interesting is the glimpse into the life of a rather simple settlement that this bathhouse allows. The first building period of the bathhouse was most likely coeval with the wattle-and-daub houses built by the first Turkish settlers (Ills. 4 and 6).²³

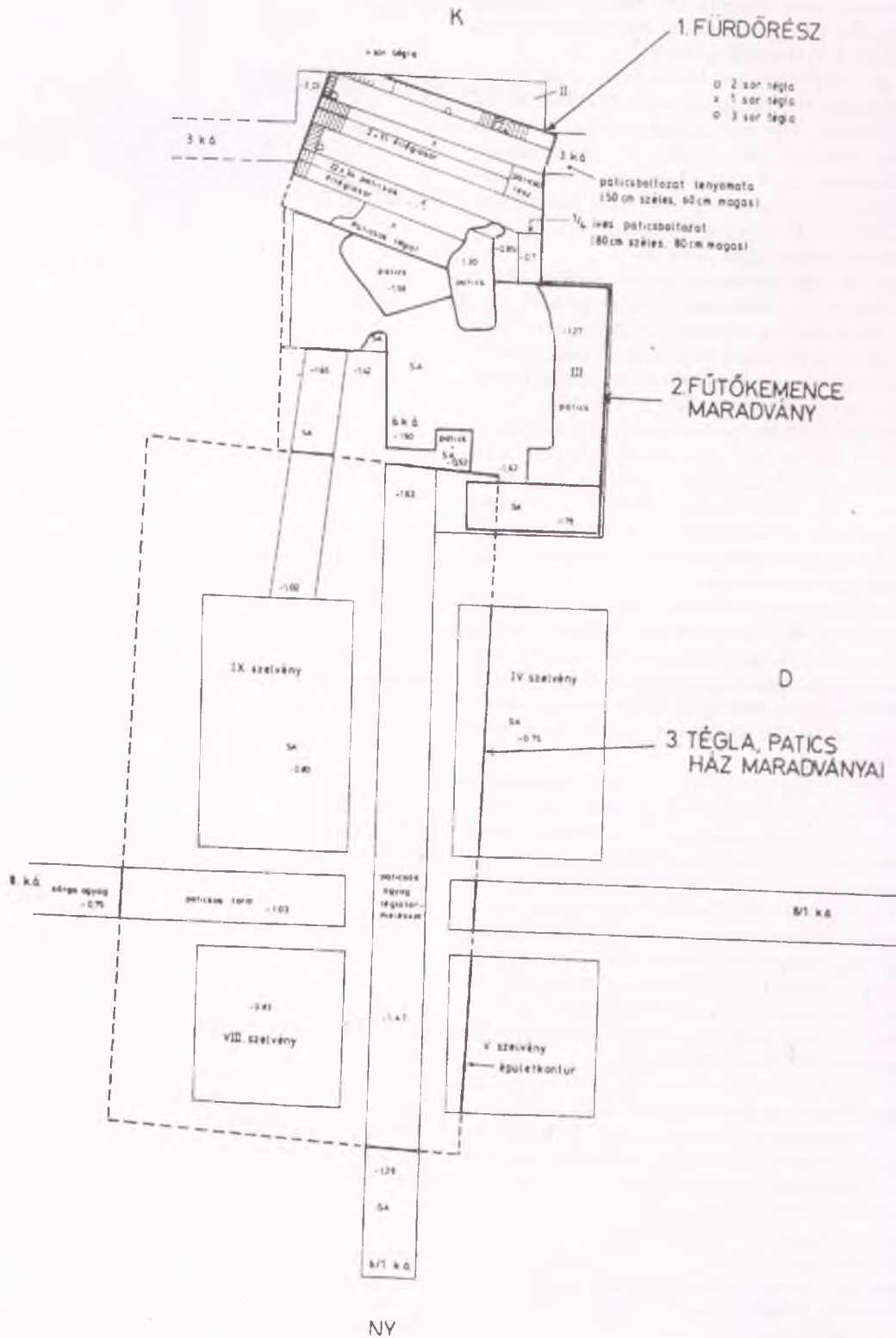
Another building, excavated in 1989, is also important in terms of the settlement's history.²⁴ Its foundations were discovered some two metres below the present surface. The building had a bath in the eastern part, while the residential rooms were in the western part. A wastewater system was uncovered under the bath, indicating floor heating from a sunken furnace. It would appear that there was no difference between the floor level of the bath and that of the residential wing, and the

²¹ GERÓ 1987a.

²² MAGYAR 1990, Pl. 23. 1–3, Pls 24–25 and 30.

²³ NAGY 1990, 386–389.

²⁴ NAGY 1990, 389–390; MAGYAR 1990, 128–138, Ill. 43.



III. 5. Excavation units of the Turkish *seray*. Key: FÜRDŐRÉSZ = part of the bathhouse, FÜTŐKEMENCE MARADVÁNY = part of the furnace, TÉGLA, PATICS HÁZ MARADVÁNYAI = remains of a brick and wattle-and-daub house



Ill. 6. Excavation of the Turkish bathhouse. 1. View from the northwest, with the burials of the former monastery; 2. View from the north, with the western part of the bathhouse

ground plan of the structure suggests that their flooring may have been identical. This building lay far away from the other constructions of the settlement, in the centre of the stronghold and enclosed within a wall.²⁵ Since the more lavish Ottoman buildings usually had a bath, this one can doubtless be regarded as the residence (*seray*) of the Turkish commander.²⁶

The investigations revealed that the earlier Hungarian Benedictine monastery and the market town perished sometime between 1566 and 1686 with only their ruins surviving. The Turkish bathhouse was built over the remains of the Benedictine monastery, disturbing the cemetery surrounding the latter. Ottoman-period refuse pits were found in the multi-partite residential area of the one-time manor house. A few medieval brick buildings must have remained in use during the Ottoman era, since near these, too, a larger number of storage and refuse pits came to light.²⁷ The smaller residential buildings of the Ottoman period, including the wattle-and-daub houses, lay scattered around the *hamam*, forming an arc. The *seray* of the Turkish commander in Nárciszos (Basakert) was an elegant walled complex; the bath and the walled garden (planted with daffodils) both served the commander's comfort.

Smaller buildings and storehouses were unearthed scattered over the entire area of the stronghold. Settlement traces of the Ottoman period were found on the area of the parish church, as well as in the cemetery. The finds include thousands of Turkish pottery sherds, stove tiles, bronze and iron artefacts, as well as animal bones (Ill. 7).²⁸

Summary

The investigations revealed that there were two fortifications at Babócsa on the left bank of the River Rinya in the Middle Ages: a small motte-type fortification built in the eleventh- to thirteenth centuries by the Tibold kinship group and the castle of the Marczali and Báthori families constructed in the fifteenth to sixteenth centuries and located near the Roman Catholic church in the centre of the present-day community. The early eleventh- to fourteenth-century manor house of the Tibold kinship group, the monastery with the cemetery, and the early medieval settlement lay on the right bank of the Rinya in the so-called Nárciszos area. This area was first fortified after the Mongol invasion, sometime in the early fourteenth century (Ills. 1 and 2).²⁹ These fortification works from different times

²⁵ Nowadays daffodils (called *nárcisz* in Hungarian) flower most profusely on the spot of the one-time *seray*; perhaps there is some truth in the old legend that daffodils were first planted in the garden of the *seray* and that the origins of the Babócsa daffodils indeed go back to the Ottoman period.

²⁶ NAGY 1990, 390.

²⁷ MAGYAR 1994, 79. Similar phenomena were observed in the town quarter fortified with a palisade at Segesd (MAGYAR 1988, 128–133), as well as in the palisades at Barcs and Ozora (KOVÁCS – RÓZSÁS 1996, 170, 178; GERELYES 1988, 280).

²⁸ MAGYAR 1990, 138–140, 171, Pl. 27, 174, Pl. 30. 4–5, 175–181.

²⁹ MAGYAR 1993, 222–223.



Ill. 7. 1. Ottoman-age stove-tile, decorated with a wavy line; 2. Cup-shaped stove-tile

were incorporated into a uniform fortification system, the Babócsa border fortress, after 1526, and they remained in use throughout the period of Ottoman sway in the region (1555–56; 1566–1686).

The investigations in the Nárciszos area revealed that the Gothic church of the medieval market town may have perished sometime around 1555–56.³⁰ It also became clear that the church in the southern part of the Nárciszos territory could no longer have been used by the Hungarian population after 1566, since the settlement remains of the Ottoman period – refuse pits and wattle-and-daub houses – overlay the burials of the cemetery.

The most impressive building from this period was a large Turkish bathhouse – with its brick walls, heating ducts, drainage pipes, and furnace – uncovered in the fortified centre. The remains of this bathhouse were uncovered above those of the Árpád-dynasty church, the Benedictine monastery of the Tibold kinship group and the neighbouring cemetery. It is therefore clear that the church and its cemetery fell into disuse immediately after the arrival of the Ottomans, and also that the Benedictine monks and the Hungarian inhabitants left the settlement. The Ottomans perhaps utilized the

monastery as an outbuilding for the bathhouse or as a storehouse until 1686, when Christians re-occupied the territory (Ills. 2, 4 and 6).

One major result of the excavation was that we found the walled residence, the *seray* of the Turkish commander that also incorporated a private bath (Ills. 2–5).

We found settlement remains from the Ottoman period north of the Turkish *hamam* (refuse pits and wattle-and-daub houses, together with a wide array of Ottoman-period finds, including stove-tiles, glazed pottery, and iron and bronze artefacts).³¹

Between 1566 and 1686, no Hungarians lived in the fortified settlements described above. The settlements and places of worship of the local Hungarian population moved a couple of kilometres away from the castle and the fortified places,³² in other words, away from the Turkish forces. Their settlements have been found in the western and northwest parts of today's village. Their cemeteries were unearthed in the Léránt-kert and the Bolhói út area in 1979–80.³³ Judging by the coin finds from the burials, these cemeteries remained in use until the Fifteen Years War (1593–1606).³⁴

³⁰ In 1532 the armies of Sultan Süleyman passed through Babócsa. The Ottomans occupied the town in 1555. The abbot of Babócsa is no longer mentioned as the landowner in documents dated after 1542, suggesting that the monastery was abandoned. Cf. JANKOVICH 1976, 5–6.

³¹ MAGYAR 1990, 140, Figs 17 and 44. Quoted by Gyöngyi Kovács in connection with the excavations at the Barcs palisade. Cf. KOVÁCS – RÓZSÁS 1996, 178, 181, note 47.

³² Cf. BALASSA 1994, 55, 68–69, 252, 259, for settlers from Babócsa who moved to Sárospatak in 1531.

³³ MAGYAR 1981, 60–62.

³⁴ The photographs were taken by Kálmán Magyar; the figures were drawn by Zsuzsanna M. Hrotkó and Gergely Nagy.

Turkish Palisades on the Tolna-county Stretch of the Buda-to-Eszék Road

For almost ten years, since 1975,¹ I have been engaged on an excavation of the Turkish fortification of Újpalánk ("New Palisade"), work that has meanwhile spread to a study of the other castles along the River Danube. These small palisade fortifications (in Turkish *palankas*), situated at an average distance of twenty kilometres from each other in a north-south direction roughly on the line of the old Roman limes, have hitherto been almost completely ignored by archaeologists. Of course, there is nothing particularly astonishing in this, as these palisades, which usually were hastily erected around a medieval stone building, did not play a significant role in the history of the Ottoman period. Indeed, on the basis of their size, the majority lacked even secondary importance.

However, these small earth-and-wood fortifications (*palankas*) were part of the border-fortress system, and although of lesser significance than larger castles or fortresses, still had some tasks of considerable importance for the Ottomans:

(a) First and foremost, by their mere presence they exercised a certain degree of control. They watched over longer or shorter sections of one of the main military, commercial and diplomatic routes of the occupied area, the Buda-to-Eszék (today: Osijek, Croatia) road. The roughly 80-kilometre stretch guarded by the *palankas* of Tolna County happened, in fact, to be one of the most dangerous sections on the road to Istanbul, because of its craggy defiles and marshy crossings. These encouraged raids by irregulars, and there were also attacks by Hungarian frontier troops penetrating the area.

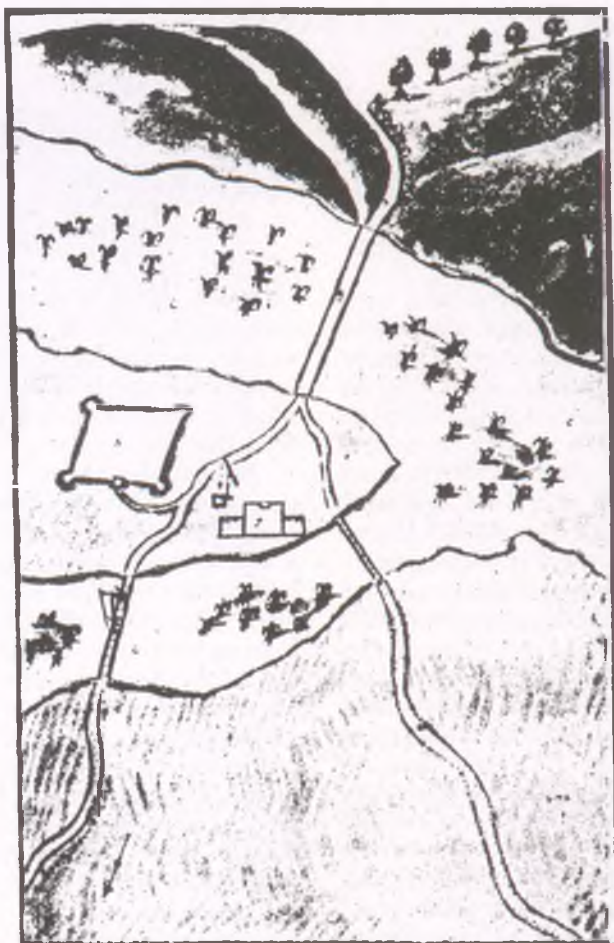
(b) Additionally, the question of security for the ferries and customs houses in the area, most of which was managed by the Treasury, was extremely important for the Ottomans, as it was for the bridge at Yeni Palanka and the ferries at Báta, Tolna, Dombor, Paks, and Földvár. It was through these points that much of the trade with the Great Hungarian Plain was conducted: westbound goods and commodities from that region, and merchandise making its way in the opposite direction. It is perhaps enough to mention the wine, which played an increasingly important role in exports, or livestock deliveries, which primarily impacted on the customs house at Földvár. The larger settlements near these crossings – such as Paks, Tolna and Földvár – were

often the sites of major fairs. Precisely because of its cattle trade, Földvár's St. Peter's Day fair attracted visitors from great distances, occasionally pulling crowds of as many as five to ten thousand. Although often an impossible task, the defence of these people fell to the *palankas*.

Finally, from the point of view of the archaeologist, the existence of these fortifications can be attributed particular significance, in that – notwithstanding a few brief raids and instances of pillage – they were held by the Ottomans throughout, from the time they were built right up to their destruction in 1686. During his retreat to Eszék in that year, the grand vizier used a rearguard of 2000 Tartar horsemen to burn each and every one of these structures to the ground. Consequently, these fortifications provide much better opportunities for the analysis of unearthed archaeological materials than do the major castles, which tended to change hands frequently, thus making precise and reliable separation of the object-finds a much more complicated, and occasionally impossible, task.

The rest of this article will deal solely with the Újpalánk fortification and the excavation findings there as an illustrative example. Built only four kilometers south of Szekszárd, the Újpalánk fortification was something of an exception in the series of Ottoman *palankas* along the former Royal Road. It had no medieval core, unlike the others (Bátaszék: ruins of a Cistercian and later Benedictine abbey, Tolna: a strongly built medieval church, Paks: a Franciscan church and monastery, Földvár: a sixteenth-century tower), and it boasts no history beyond the early eighteenth century. It was the last of the palisades listed above, built nearly half a century after the others, which also accounts for its name in Turkish (Yeni Palanka) and in Serbo-Croat (Nova Palank). Beginning in 1596, it guarded the wooden bridge across the River Sárvíz. This bridge was described by the traveller Evlia Çelebi in 1663 as a fine, strongly built, "twenty-arch" bridge. Again according to Evlia Çelebi, it was Mehmed III (1595–1603) who ordered the palisade's construction; more precisely, he had it built "when he went to war," that is, during the 1596 military campaign. Unlike the palisades at Tolna, Paks and Földvár, Yeni Palanka did not secure a Danube crossing-point. Instead, it guarded the Sárvíz customs bridge, where by that time there was an increasing traffic in the so-called "South Baranya" red wines produced on the hillsides around Szekszárd. As can be seen on Heinrich Ottendorff's 1663 sketch (Ill. 1), the area around

¹ This article is an unchanged reprint of a study published in 1985. Cf. GAÁL, 1985.



Ill. 1. Yeni Palanka. Ottendorff's drawing of the *palanka* in 1663

the customs bridge was a rather dangerous place for travellers, mainly merchants and traders, since the road through the swampy countryside was often impassable.

Considering that this *palanka* was burned down finally in 1686, the object-finds unearthed can be dated to an approximately ninety-year period, which in itself is significant. Also important for the archaeologist is the fact that the remains are located on open arable land rather than within an inhabited community, thus facilitating an excavation of the entire area of the fortification and a study of the structure of the palisade.

The rest of this article will attempt to outline the picture gained through the excavation in the fortification, and also to cast light on the lives of its soldiers, although space does not permit an evaluation of these findings or a comparison with data from various other sources:

(1) Occupying an area measuring 50 metres by 60 metres in all, this area was surrounded by a palisade wall ranging between 80 and 100 centimetres in width, made by tying or otherwise fastening posts 20–25 centimetres in diameter sunk at intervals of

40 centimetres from each other in two rows. The earth filling of the wall came from the moat, which was 4 metres wide and 2–2.5 metres deep. In places reinforced with lime, this earth was packed down.

The palisade wall was presumably burned down around the turn of the seventeenth century (at which time there was an increase in attacks on the *palankas* of Tolna by irregulars and frontier troops), and in its place a new palisade with three rows of posts was erected using the old moat and the wall remains.

On the north wall overlooking the Sárvíz a wooden gate was built with an inner width of 2.8 metres, and presumably with a wooden sentry-post above supported by two rows of four enormous oak posts each 40 centimetres in diameter. The excavation unearthed the large posts horizontally supporting the lowered gate, as well as the remains of the pointed stakes in the pitfall in front of the gate. It can easily be seen that this north wall, weakened as it was by the gate opening, was built (unlike the other walls) using three rows of posts.

(2) Built on a roughly rectangular area, the fortification of Újpalánk had four round bastions at its corners, like the majority of palisades. It can be



Ill. 2. Szekszárd-Újpalánk. The northwest bastion of the fortification

seen that for both the walls and the bastions that no careful measurements were taken, the line for the walls being drawn almost by eye. Of the four bastions no two are the same: some are rounder, others more angular. The bastion walls were made wider and stronger than the other walls, although the posts used were identical in thickness for both. The straight wall sections were joined to the bastion arcs by a complicated affixation system. In this the large – 30–35 centimetre – iron nails unearthed during the excavation may have played a role, but since the remains even of the bastions are of the parts that were below ground level, this system can only be guessed at on the basis of the wall trenches.

The large and deep postholes found inside the bastions indicate that roofing of some kind covered the bastions, although no remains were found of this.

One of the reasons for the stronger construction of the walls mentioned above may have been that cannon were placed there. This is supported by written descriptions and by the evidence of the finds. According to Evlia Çelebi there were a total of ten *şahi* cannon. The 1.5–2 kg cannonballs for these were found across the entire area of the fortification, and the remains of an exploded specimen were found at the northwest bastion (Ill. 2).

The castle's wells were unearthed not far from the bastions. In all there were two dug wells, but nothing remained of the superstructures. Based only on the well beside the inn depicted by Ottendorff and on the postholes beside the unearthed wells, we may postulate that they were levered draw-wells. Wall

erosion was clearly visible at varying heights due to the changing water level.

(3) Although a fair number of bricks and limestone fragments were unearthed from the waste fills, no remains of a building of more solid material were found. The reason for this may be that even if there were brick buildings inside the fortification, they were built without any particular foundations. As for the stone remains, it has been proven that the stones taken from the ruins of medieval buildings and from the remains of a nearby Roman villa were brought not for construction purposes, but so that lime could be extracted from them.

In the better-preserved northwest area of the castle, we found the remains of mud-and-daub and mud-and-reed buildings, some of them leaning against the inside of the palisade wall. However, most of the residential buildings unearthed were one-room sunken houses with pointed roofs and hearths outside. Around each house were several storage pits arranged in a semicircle; these were usually in chronological succession. I must admit that the relationship between the enormous deep pits and the insignificant little houses is still unclear, as are the uses of the pits themselves. In terms of shape, the pits were most commonly cylindrical or cup- or pear-shaped, but a grave-shaped pit was also found. (Only for the last mentioned do we know that it was used to store a mixture of wheat and millet. The type of food stored in the other pits is unknown.)

After the castle was burned down, the landscape was altered. These storage pits were used to bury

dead animals, and occasionally also human cadavers and large quantities of mixed debris. Thus it was that these storage pits, and of course the pits of the residential buildings, came to be the main sources for a very high number of object-finds in view of the fortification's size.

The remains of open-air fires were found in the area between the houses; they were often on the top of some half-buried pit. Low ovens with curving sides were made of split wood affixed to a nail-reinforced wooden frame, next to which the bricked fireplace for the "baking-lids" was also usually found. This form of baking, which came from the Balkan territories, was extremely popular at this fortification, presumably because of the Southern Slav origin of most of the 100-man garrison. A large number of fragments relating to this type of baking were unearthed.

Found around the open fires were lead sheeting, iron pincers, and fired clay or cast copper bullet-casting moulds, indicating that the soldiers made their own bullets for firearms. However, the eight slate-casting negatives found under the debris of a collapsed workshop are an indication that a metal-smith dwelt here. Also found were a sword, a piece from a wheel-lock pistol, stirrups, horseshoes, and a large quantity of nails, suggesting that the craftsman also performed other tasks relating to metal-work.

It is not possible at this time to give a presentation of the large number of weapons finds, animal bones, and varied seed finds. Likewise, only a brief mention will be made of the ceramic finds unearthed during the excavation, which included fragments of

Chinese and Persian porcelain cups, monochrome glazed footed dishes and cups, spouted jugs fired in a reducing atmosphere, and a large number of pipes of many varieties; such finds are common for most of the Turkish-inhabited fortifications. More interesting, although perhaps not as important, is the large number of hand-turned ceramics (shards from pots, lids and cups, as well as intact items), made of clay tempered with coarse gravel and stamped on the bottom, unearthed from the same layers as the more refined Turkish and Turkish-influenced ceramics mentioned above. A full classification of these will provide assistance in separating the medieval ceramic object-finds of earlier excavations from the ceramic objects that are very similar in many respects, but in fact date from the sixteenth and seventeenth centuries, and are of Balkan origin.

Further description of the object-finds is, I feel, unnecessary, and a detailed elaboration of the conclusions that can be drawn from the archaeological material on the life of the castle and its soldiers cannot be condensed into a single brief presentation. Nevertheless, I hope that this article has provided at least an outline of the structure and set-up of a tiny Turkish *palanka*, one that, precisely because of its smallness and simplicity, can serve as a model in the research of other palisades that are less accessible and often suited only to partial excavation. The need for this research is growing – and here I can cite my own experience in Tolna County –, as serious day-to-day damage is being caused daily by public utilities and other modern construction on these regrettably quite transitory historical objects.²

² Selection of the object-finds from Yeni Palanka cf. GAÁL. 1981; 1983, Ills. 1, 5, 10. 3, 11. 2–3, 16. 4, 18. 2, 19. 2–3; 1991, Ills. 2. 1, 7. 1, 3–4.

Remarks on Archaeological Investigations into Smaller Ottoman-era Palisades in Hungary

BAJCSAVÁR, A NEW STRONGHOLD IN ROYAL HUNGARY'S BORDER-DEFENCE SYSTEM

Since Attila Gaál's excavations at Újpalánk near Szekszárd,¹ considerable progress has been made in the archaeological researching of smaller Turkish palisades (*palankas*), even though in most cases this research has extended only to certain smaller details.

Very often even the location of these military constructions is unknown, and many have been successfully identified only in recent decades.² Following their decay or destruction, the sites they occupied were often built on, making archaeological excavation impossible, or possible only to a limited extent. Only on a few sites could trial or rescue excavations be conducted to corroborate the information contained in contemporary or eighteenth- or nineteenth-century descriptions, in surveys or maps, or in field surveys. On sites where the nucleus of the fortification was a medieval structure that was still standing or, at the very least, one whose foundation walls could be investigated, archaeologists and architects working in the field of monument protection understandably focused their research on the medieval building remains, often neglecting the Turkish settlements around them.³

Nevertheless, the corpus of finds has grown significantly. Many smaller sections of the surrounding wooden palisades and timber-post remains – as well as the remains of the inner buildings and various other structures – or sometimes just artefacts from the period have been uncovered.⁴ These finds offer an insight into the characteristic features of these

smaller palisades and the buildings inside them, and into the lives of their garrisons.

The remains suggest that the construction of these fortifications was not planned with any particular care,⁵ and they also indicate that medieval buildings were often converted in a haphazard manner.⁶ The sunken houses, wattle-and-daub structures, tiled stoves, open-air ovens, storage pits and refuse pits, as well as various artefacts of Balkan origin unearthed at these sites testify to the rather frugal life of the conquerors. They also indicate that the majority of the soldiers manning these fortifications – predominantly peasants from the Balkans – lived as they had done in their villages at home, even in cases where different arrangements would have been possible.⁷

Újpalánk was a small Turkish palisade built fully from scratch in 1596 near Szekszárd. It is the only Turkish palisade to have been investigated on its entire territory, thus its findings there continue to serve as a model.

The smaller palisades in the Hungarian royal chain of border fortresses have been archaeologically investigated to a lesser extent than those on the Ottoman side of the border.⁸ Recent excavations near Nagykanizsa have yielded basic information – partly at variance with that for Újpalánk – on palisade construction during the period.

The onetime fortification of Bajcsavár near Nagykanizsa (it is generally referred to as *Weitschawar* in the contemporary German-language sources; today

¹ GAÁL 1985.

² Cf. István Sugár's identification of the sites of various palisade forts, fortresses and castles in northeastern Hungary (SUGÁR 1985) and Gábor Hatházi's research into the Turkish palisades of Fejér County (cf. his study in the present volume).

³ For example, Dunaföldvár (KOZÁK 1970) and Bátaszék, excavated by Ilona Valter and Attila Gaál (*RégFüz* I. 48 [1997] 77–78; 49 [1997] 84). Cf. also Tamás Pusztai's study in this volume.

⁴ For example, Békés (GERELYES 1980); Törökszentmiklós (KOVÁCS 2001a); Barcs (KOVÁCS – RÓZSÁS 1996; 1998); Dunapentele, rescue excavation by Jolán B. Horváth (*RégFüz* I. 45 [1993] 8–9); Szarvas (for the palisade and the finds, cf. *MRT* 8, 397–406, site 8/25a-f; JANKOVICH 1983, 171).

⁵ GAÁL 1985, 187.

⁶ At Nádásd (today: Mecseknádásd) and Vál the Turks added walls and dug cellars when they converted the medieval churches into residential buildings or places of worship. For Mecseknádásd, excavated by Győző Gerő and Mária G. Sándor, see *RégFüz* I. 27 (1974) 97–98; 28 (1975) 126–127; 29 (1976) 81–82; 30 (1977) 61–62; 31 (1978) 111–112; 32

(1979) 123; 33 (1980) 108; 34 (1981) 106–107. For Vál, excavated by Gábor Hatházi, see HATHÁZI – KOVÁCS 1996, 51. At Bátaszék the sanctuary was converted into a mosque (also, a minaret was added to the southeastern corner of the sanctuary), while other parts of the church were – on the evidence of the fifteen layers of burnt traces of plastering and planking, as well as the remains of stoves and fireplaces – utilised as living quarters.

⁷ At Ózora, for example, the imposing medieval castle served as the officers' quarters and as storehouses, while the soldiers of the garrison lived around this major structure (GERELYES 1988, 278). The same held true for the other major fortresses, such as the one in Gyula (GERELYES 1996, 112) and, presumably, the one at Kanizsa as well, although the late medieval fortress there, if still standing at the time of the Ottoman conquest, was probably uninhabited by that time (VÁNDOR 1994, 368). The situation in Buda was much the same: the *paşa* of Buda did not reside in the medieval royal palace.

⁸ For the investigation of the smaller, occasionally medieval, castles in present-day Zala County, cf. VÁNDOR 1994, 340–346. For Zalavár, cf. RITÓOK 2001, 324.



Ill. 1. Bajcsa-Vár. The southwestern palisaded bastion. (Photograph: Gyöngyi Kovács)

the village is called Bajcsa) was fully excavated between 1995 and 2001, with the exception of the western bastion that had been completely destroyed by the twentieth century. Despite the fact that a number of smaller details could not be observed and that many issues remain controversial, the findings reveal the nature of the smaller purpose-built palisades built by the *Hofkriegsrat* in Vienna and the military council in Graz, and provide a wealth of detail not observed elsewhere in Hungary (or, for that matter, along the entire Croatian-Hungarian defence line against the Ottomans). The findings also facilitate comparisons with the Turkish castle at Újpalánk, even though these must take into account differences in function and size. While Újpalánk was a smaller outpost on the Danube bank (specifically to guard the Sárvíz toll-bridge near Szekszárd), Bajcsavár, although not particularly large, was a key fortification in the defence line for Southwest Transdanubia, or at least was originally built as such.

The main features and significance of the excavations at Bajcsa can be summed up as follows:⁹

(1) The castle, built from scratch in 1578 and paid for by the Estates of Styria, was intended to defend primarily the Mura region and Styria itself. It was evacuated in 1600, shortly before the Ottomans captured Kanizsa. Bajcsavár, then, stood for a very brief time, twenty-two or twenty-three years, and the

finds from the site can be dated to this short and precisely defined period.

(2) The fortification was very closely connected with Styria throughout, with the result that there is considerable archival material on its construction, buildings, garrison, and fittings in the archives at Graz and Vienna, meaning that the documentary evidence can be checked against the archaeological finds and observations.

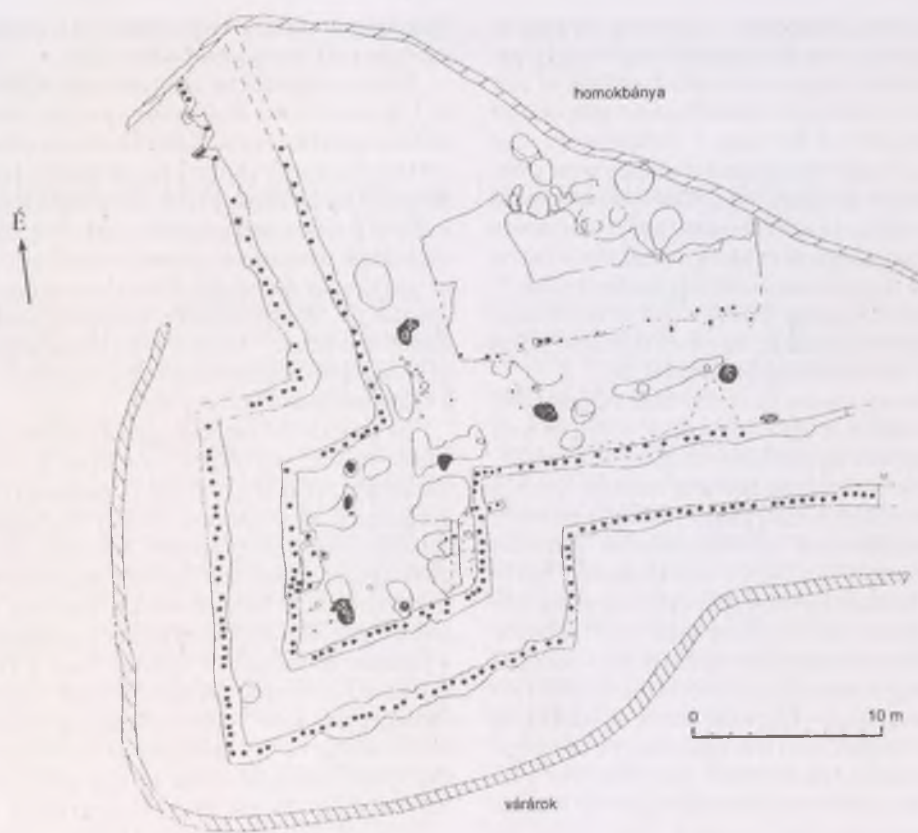
(3) Intended to be the main fortification in the defence line section running from Kanizsa to the River Mura – this section was known as the Captaincy of Bajcsavár (*Windische-Weitschawarische Grenze*) –, the stronghold received special supplies. The finds from this site include Croatian, Hungarian and Styrian artefacts, as well as products from elsewhere in Austria, from Germany and from Italy.¹⁰ This is explained not only by the castle's links with Styria, but also by Styria's links with the rest of the Habsburg Empire, as well as by the ethnic composition of the garrison.

(4) As opposed to the more archaic features of the smaller Turkish fortifications (I refer to elements known from Ottendorff's drawings,¹¹ but first and foremost to those revealed at Újpalánk), at Bajcsa we might assume a striving for better solutions, although the end result was far from perfect as the surviving remains indicate. Diverging from the usual rectangular ground plan and round bastions of the smaller

⁹ For investigations of Bajcsavár, cf. ROTH 1970; VÁNDOR 1994, 1997, 1998; VÁNDOR – KOVÁCS – PÁLFFY 1998/2000; KOVÁCS 2002.

¹⁰ For example, KOVÁCS, Gy. 2001b.

¹¹ HERMANN 1943.



Ill. 2. Bajcsa-Vár. The southwestern palisaded bastion. (Drawn by Zoltán Tóth and Zsolt Réti)
 KEY.: homokbánya = sand-workings; várások = moat



Ill. 3. Bajcsa-Vár. Brick buttress on the northern side. (Photograph: Ildikó Mazúr)

Turkish fortifications, Bajcsavár – covering an area of roughly one hectare – was pentagonal in ground plan and was provided at its corners with bastions of the Old Italian type. This kind of fortification was one of the most developed of the age.¹² Admittedly, the excavated palisade bastions indicate that they were only roughly the same size (Ills. 1–2). The palisade wall was four metres thick. It would seem that it was never finished; the archaeological evidence (and the written sources) indicate that it was constantly under repair.¹³ An outer brick buttress and defence works were built beyond the northern palisade, to offset the difficulties stemming from the loose sandy soil (Ill. 3).

No sunken houses were found at Bajcsa, just fully aboveground buildings with ascending walls, as well as cellars, pits and storage facilities dug into the earth. The buildings were erected around timber frames and had brick or daub walls. Larger buildings were roofed with clay tiles (the written sources mention shingle and thatch, too); they were repaired fairly often and were heated by tiled stoves; the frequently renewed clay floors were often laid over a brick substructure. Storehouses and workshops – sometimes simple structures and sometimes built with substantial foundations – likewise occur at Bajcsa, as they do at other castles, and the same is true of open-air ovens, the storage and refuse pits, and the pits dug for laying fire and for performing some works.

The larger cellars were lined with planks, while the storage pits were lined with clay.

Even a superficial comparison of the strongholds at Újpalánk and Bajcsavár reveals that despite the differences between them, both are characterised by certain features shared by all newly built palisaded forts of the period. These fortifications had defence walls of timber and packed earth, but they were often makeshift structures erected without careful planning or particular foresight. One document very tellingly speaks of “discretionary building work” from one day to the next.¹⁴ Most were characterised by a sense of incompleteness and non-permanence, as well as by a constant need for repair.

At Bajcsa the building we can reconstruct on the basis of the surviving remains is only partly in harmony with the artefacts uncovered there. The architectural evidence clearly indicates difficulties arising from the cramped interior space and from obvious crowdedness, as well as problems stemming from the sand hill on which the fort stood. At the same time, the artefacts reflect good supply, wealth, a certain measure of luxury, and a relatively high standard of living in this border castle. They also indicate ties with Western Europe that are doubtless attributable to the builders of the castle, as well as to the ethnic composition of the garrison (Germans, Styrians, Croatians, and Hungarians).

¹² DOMOKOS 2000, 15–29.

¹³ Cf. TAKÁTS 1915, for data on the repairs to the various palisades in Hungary.

¹⁴ VÁNDOR – KOVÁCS – PÁLFFY 1998/2000, Appendix No. 4.

New Findings in the Research of Turkish Palisades in Fejér County

For Jenő Fitz at 80

Almost five decades have passed since Jenő Fitz published his series of studies on the fortification system of Fejér County during the Ottoman era.¹ His work contains a wealth of archaeological and historical data that cannot be neglected by the researchers of this period. This volume, dedicated to various aspects of the period of Ottoman domination in Hungary, also offers a possibility for an assessment of the new advances made in this field of research during the past few decades. This study will survey and discuss the smaller palisades or castles (*palankas* and *parkans*) of minor military significance,² but will not include the centre of the *sancak*, Székesfehérvár, the second most important fortress after Buda. The same applies to Csókakő – controlling the road from Fehérvár to Győr –, the sole “rock fortress” of the county surviving from medieval times (thirteenth to fifteenth centuries); this stronghold cannot be included a survey of the Turkish palisades owing to its very nature. Jenő Fitz, too, discussed Csókakő as a separate unit in his study.³ Even a brief discussion of new historical works,⁴ the findings of the campaigns in 1960–62 and the new excavations conducted since 1997⁵ would in themselves exceed the scope of this study.

I discuss the castles in the same order as Jenő Fitz.⁶ It should here be noted that this consideration – and the choice of the castles to be discussed – is based on the administrative division of Fejér County and the area across which the archaeological activity of the Szent István Király Museum extends, rather than on the military and administrative units of the Ottoman period. The territory of present-day Fejér County was divided up between the *sancaks* of Buda,⁷ Fehérvár⁸ and Simontornya.⁹ Pentele, Adony, Ercsi, and Vál were part of the chain of small castles administered by the *sancak* of Buda; Szabadbattyán/Csákvár and Bogárd/Polgárdi belonged to the *sancak*

of Fehérvár and formed part of the outer defence system of Fehérvár (today: Székesfehérvár), while Hídvég was first part of the *sancak* of Koppány and, later, of Simontornya.¹⁰

The history of research on these castles will not cover all historical events. The prime consideration is to obtain an overview of the available evidence on the construction, the appearance (nature and condition) and the topographical identification of these structures, as well as on their destruction and reconstruction, on the basis of the written sources with the aim of collating this information with the data from the various contemporary depictions, maps and archaeological findings. Whenever possible, I have included the evidence of the payrolls. The strength of the garrisons and their composition (the numbers and proportion of élite regular troops, artillerymen and lower-ranking auxiliary troops) offer a wealth of additional information on the strategic importance and role of individual strongholds. However, as pointed out by Klára Hegyi, one important *caveat* in this respect must be borne in mind, namely that the strength of the garrisons – and this is especially true of those stationed in the smaller castles under discussion – cannot be precisely determined only from the payrolls owing to the different forms of remuneration (e.g. *timar* holders do not appear on these payrolls). The difference between the payrolls and the actual strength of a particular garrison can be illustrated by the fact that in the 1570s only about 60 per cent of the soldiers stationed in the garrisons were genuine salaried troops, the remaining 40 per cent were *timar*-holders.¹¹ Even so, these data are suitable for illustrating proportions and broad estimates. The composition of these garrisons¹² – especially the presence of *azabs* and *martoloses* (indicated by their respective branches of service and personal names) – is very important from an archae-

¹ FITZ 1956a; 1956b; 1956c; 1958.

² This paper was originally read at the 4th Meeting of the Castrum Bene Association (Székesfehérvár, 15–17 May 1998).

³ FITZ 1958.

⁴ ZÁBORSZKY 1981, 183–205; FARKAS 1989b, 45–49.

⁵ Excavations conducted by Jenő Fitz, Alán Kralovánszky and Gyula Rosner between 1960 and 1962, and by Gábor Hatházi, Mihály Kulcsár and Gyöngyi Kovács between 1997 and 2000. For an overview of the new results, cf. HATHÁZI 1999, 54–75; 2000, 5–15.

⁶ FITZ 1956b; 1958. One exception is Érd (the *palanka* of Hamzabég: FITZ 1956b, 10–11) that currently falls outside the activity area of the Fejér County museums.

⁷ KÁLDY-NAGY 1971; 1977; 1985.

⁸ MATUZ 1986; VASS 1989, 69–200.

⁹ DÁVID 1982.

¹⁰ The Turkish watchtower at Székesfehérvár-Öreghegy (tower of Kara Murteza Paşa, later St. Donát's Chapel) will not be discussed here, although it was part of the defence system of Székesfehérvár (SIKLÓSI 1991, 53–64). Although it has been suggested that the Árpáadian-age *rotunda* at Zámoly-Kerekszenttamás had perhaps functioned as a watchtower during the Ottoman period (MOLNÁR 1963–64, 234–237; 1972a, 40–41, 56, 87; TEREI 1998, 56), there is no historical or archaeological evidence to confirm this.

¹¹ HEGYI 1995, 85–94.

¹² HEGYI 1995, 83–85, 100–109.



Ill. 1. Ottendorff's drawing of the Pentele *palanka* (1663)

ological point of view since beside the finds from Turkish and local Hungarian culture, Southern Slav influences stand out with ever sharper contours in the assemblages brought to light during the excavation of these castles.¹³

Pentele

Important advances have been made in the research of this palisade near an important ferry and market place since Fitz published his study.¹⁴ The findings of the research conducted over the past decades¹⁵ are available in a summary by István Bóna.¹⁶ The appearance of the Dunapentele palisade

can be more or less precisely reconstructed from Heinrich Ottendorff's description and depiction (Ill. 1),¹⁷ as well as from Evlia Çelebi's notes¹⁸ that were, incidentally, recorded on the same day and can thus be compared with Ottendorff's. According to Evlia Çelebi, "this is a newly-built rectangular stronghold, with a stockade and a deep ditch lying on a high hill beside [...] the Danube. Its eastern half faces the Danube, while its western part [...] is a deep ditch. [...] The stronghold has some three hundred soldiers. The suburb, with its three hundred plank-roofed houses, one inn and twenty shops, was built earlier. [...] The town is newly built." Evlia makes special mention of the *cami* in the palisade that he considers to be the most beautiful of those in the castles along the Danube. Ottendorff's data more or less confirm this description, but also supplement it: his drawing shows the corner-bastions, the gatehouse and the tower of a *cami* in the rectangular, "wretched" stronghold, as well as its wattle fence and the sturdy timber fence enclosing the suburb.

The location of the palisade has also been confirmed archaeologically. It lay in the northern part of present-day Dunaújváros and is identical with the site of Rácdomb ("Serb Hill") in the old town (Ópenetele, Öreg Pentele) (Ill. 2).¹⁹ The hill has been inhabited more or less continuously since the Neolithic period and, as a site suited to the construction of a fortification, is probably identical with the site of the earthen hill-fort built by the Andornak kinship group in the twelfth to thirteenth centuries.²⁰ The 1951 excavations conducted by László Zolnay, Miklós Héjj and Imre Holl revealed that the Turkish palisade had been constructed over the remains of a medieval settlement.²¹ The investigation of this site was resumed by Jolán B. Horváth, who uncovered a number of refuse pits from the Ottoman age containing a wide variety of finds (seventeenth-century painted and green-glazed bowls, jugs, stove-tiles), as well as a section of the western ditch, described by Evlia Çelebi.²² Judit Tamási's investigation of the Serb church in 1991 also produced some important findings²³ since they made it clear that the building was a late Baroque structure and could not therefore be identified with the Árpáadian Age church of the Andornak kinship group. In other words, it could not be confirmed that the Turkish palisade had been built around a surviving medieval building. The findings also made the point that the church could not be identified with Evlia Çelebi's *cami*, or with the

¹³ The Ottoman-date Southern Slav ceramic sherds appear in a small quantity at Vál, to mention just one investigated fortification in Fejér County. HATHÁZI – KOVÁCS 1996, 34–49; 1997, 198–219.

¹⁴ FITZ 1956b, 3–5.

¹⁵ NAGY 1975, 43–51; JENEI 1975, 123–127.

¹⁶ BÓNA 1991, 11–25, 36–38, with extensive literature and a survey of the relevant sources; for the second, revised and enlarged edition, cf. BÓNA 1997, 14–29, 45–47; Tamás Keszi's

recent summary (in: ERDŐS – PONGRÁCZ 2000, 95–107) does not contain any additional information.

¹⁷ HERMANN 1943, 41–42.

¹⁸ KARÁCSON 1985, 241–242.

¹⁹ ERDŐS – PONGRÁCZ 2000, 192–193, with a map of Dunapentele around the turn of the twentieth century.

²⁰ BÓNA 1991, 5; 1997, 7; GYÖRFFY 1987, 45–47.

²¹ BÓNA 1954, 25, 27; 1991, Ill. 8.

²² BÓNA 1997, 22.

²³ *RégFüz* Ser. I. 45 (1993) 78.



Ill. 2. Map of Pentele (today: Dunaújváros) from the turn of the century, marking the Rácdomb ("Serb Hill"). (The assumed boundary of the *palanka* and the suburb are indicated by a dotted line; I. Serb church)

church spire on Ottendorff's drawing.²⁴ Bóna attempted to locate the individual quarters of the town – such as the Turkish-Serbian quarter with its lead-roofed caravanserai (Ottendorff's "c" point) known from other sources also (Vencel Vratislav's diplomatic mission) and the Christian quarter (Ottendorff's "d" point) – from Ottendorff's sketch and from the archaeological evidence from the Rácdomb site. The Turkish-Serbian suburb (present-day "Agragye") should most likely be sought in the region of *Fransepán utca* and *Pentelei Molnár János utca*, while the Christian quarter probably lay somewhere around *Táltos utca* and *Magyar utca*.²⁵

The date of the construction of the Pentele palisade is also unclear. Jenő Fitz has already noted that the payrolls from between 1540 and 1629, the *defters* from between 1546 and 1590, and the reports by

various envoys belie its existence.²⁶ In the absence of payrolls the seemingly exaggerated strength of three hundred soldiers garrisoned in the castle mentioned by Evlia Çelebi cannot be confirmed.²⁷ The first firm evidence for the existence of the castle (and an important piece of information for its architectural history) is Captain-General Ádám Baththyány's autumn 1661 campaign in the course of which the first palisade was torched; we also know that its rebuilding was far from complete in 1663.²⁸ In view of the seventeenth-century dating of the archaeological finds from the site, István Bóna put the construction of the first palisade to around 1635–37, and linked it to Hussain, *paşa* of Buda. He suggested that the reason for its construction was the relocation of the Adony *palanka* to a more northerly site, as a result of which a roughly 50-kilometre-long section of the Duna-

²⁴ As a result, the hypothesis contained in the first edition of Bóna's book (BÓNA 1991, 19) was omitted from the second edition (BÓNA 1997, 23). Even so, this issue is far from resolved, since the possible continuity of the church site remains undecided. J. Tamási emphasized that her research focused on the investigation of the facades and that no excavation had been conducted (that might have revealed partially demolished walls).

²⁵ BÓNA 1997, 23.

²⁶ FITZ 1956b, 3–4; BÓNA 1991, 36–38; 1997, 45–47.

²⁷ KARÁCSÓN 1985, 241–242.

²⁸ For the 1661 campaign that Evlia Çelebi had mistakenly ascribed to Zerlin-oglu (Miklós Zrínyi), cf. VÁRKONYI 1985, 1090; BÓNA 1991, 18; 1997, 22; for a similar note concerning Vál, cf. HATHÁZI – KOVÁCS 1996, 14.

földvár–Adony road remained undefended.²⁹ Viewed in this light, Evlia Çelebi's claim that the Pentele palisade had been constructed by János Szapolyai in 1529 and rebuilt by Sultan Süleyman after torching in 1541 during his march on Buda seems wholly unreal.³⁰ Martinus Zeiler's claim, published in Leipzig in 1664, that Pentele was built in the Italian style and occupied by Christian forces in 1598 seems equally unfounded.³¹

The date of the abandonment of the stronghold is similarly uncertain and can only be determined from indirect data: its defenders could evacuate and destroy it on 7–8 September 1686. According to a report by György Ottlyk, a 5000-strong reconnaissance force led by Károly Pálffy saw the castle standing in July; this was possible since the Turkish grand vizier retreated there from Buda only on 5–6 September. However, the troops led by Charles of Lorraine found a destroyed and deserted settlement when they arrived three days later. The palisade was not rebuilt and, in contrast to Ercsi and Adony, its location is not indicated on the encampment plans of the Christian forces that marched through the area several times between 1686 and 1687. The 1689 register compiled by István Daróczy, heir of the Paksy family who had been the original landowners, mentions that the Turkish garrison inhabiting the forty houses of the castle had fled, and that the Serb peasants from the suburb then moved there destroying all surviving remains of the military post.³²

Adony (Korkmaz/Cankurtaran)

The palisade (or palisades) in the Adony region – called in Turkish Korkmaz (“No Fear”) and Cankurtaran (“Redeemer of the Soul”) – is the most controversial link in the Turkish chain of fortifications in Fejér County, as regards both its history and its topography.

Let us again take Jenő Fitz's research as our starting point.³³ His study does not mention Korkmaz. Cankurtaran, mentioned by Evlia Çelebi³⁴ and documented securely by Katib Çelebi from 1593 on,

could only be identified with a palisade whose name has an uncertain reading that crops up in the payrolls from between 1568 and 1629.³⁵ Fitz believed that the location of the *parkan* was preserved in an engraving depicting the Battle of Adony in 1684 made by an unknown German engraver and bearing a German inscription (Ill. 3).³⁶ The eminence rising behind the castle on the Danube bank was identified with the loess hill of Szentmihály-puszta (site of a deserted village) lying south of Adony. Various names called Bolondvár and Szentmihály-hegy (“St. Michael's Hill”), this was first described by Flóris Römer; it is currently a protected archaeological site with a Bronze Age hill-fort.³⁷ There has been a suggestion, based on local tradition, that it can perhaps be identified with the Turkish castle.³⁸ The Bronze Age hill-fort of the Vátya culture³⁹ and the remains of a Roman watchtower⁴⁰ can be seen on the hill on the western side of the road.

Gyula Káldy-Nagy's publication of the tax *defters* brought important new results.⁴¹ István Bóna was the first to note that the palisades of Korkmaz and Cankurtaran were mentioned increasingly often in the tax-registers of the *sancak* of Buda from between 1546 and 1590 and that they could be located to the Adony region. He also noticed that they never occurred together, and that they did not appear to be synonymous with each other. (The Christian sources only mentioned Cankurtaran as the Turkish equivalent of Adony.) Bóna concluded that there was a chronological and topographical difference between the two palisades, with the early one at Szentmihály-puszta, built in the 1550s, being identical with Korkmaz, and the other one, designated as Cankurtaran from the Fifteen Years War (1593), being identical with the palisade lying some 5 kilometres to its north at the Adony ferry (Lórév).⁴²

Klára Hegyi has also discussed the historical aspect of this problem; she believed that this was one castle that had been given two Turkish names. She quoted the 1559 tax-register: the *timar defter* indicates the commander of Korkmaz as the landholder of Pentele, while the *tahrir defter* indicates the commander of Cankurtaran, suggesting that the two persons were

²⁹ BÓNA 1991, 18; 1997, 21. One important argument in his line of reasoning was an undated map of Buda region that can be assigned to the late sixteenth century on the basis of its stylistic traits (cf. FEKETE 1944, Pl. LIV. 1) showing the palisades at Ercsi, Adony/Cankurtaran and Dunaföldvár, but not the one at Pentele. In view of the fact that the existence of the Ercsi *palanka* cannot be documented before 1627, the map should be dated to around the 1630s, the years preceding the construction of the Pentele palisade.

³⁰ KARÁCSON 1985, 241–242.

³¹ GLÓSZ – ÉLESZTÓTS 1997, 240.

³² BÓNA 1991, 20–23; 1997, 24–29.

³³ FITZ 1956b, 5–9.

³⁴ KARÁCSON 1985, 242–245.

³⁵ VELICS – KAMMERER 1886–1890, II. 384, 693, 425, even though Korkmaz is also mentioned: 82.

³⁶ “Wahre Abbildung des tapferen Angriffs der Christl. Kays. Armata ... auf die türkische Armee ... den July Anno 1684. Cerch. Excud.” This engraving is currently housed in the Arts Collection of the Szent István Király Museum (SZIKM) of Székesfehérvár (Engravings Collection, inv. no. 80.61.1).

³⁷ SZIKM Archives, inv. no. 926, 2475/2; NOVÁKI 1952, 12; PETRES – FITZ 1956, 8.

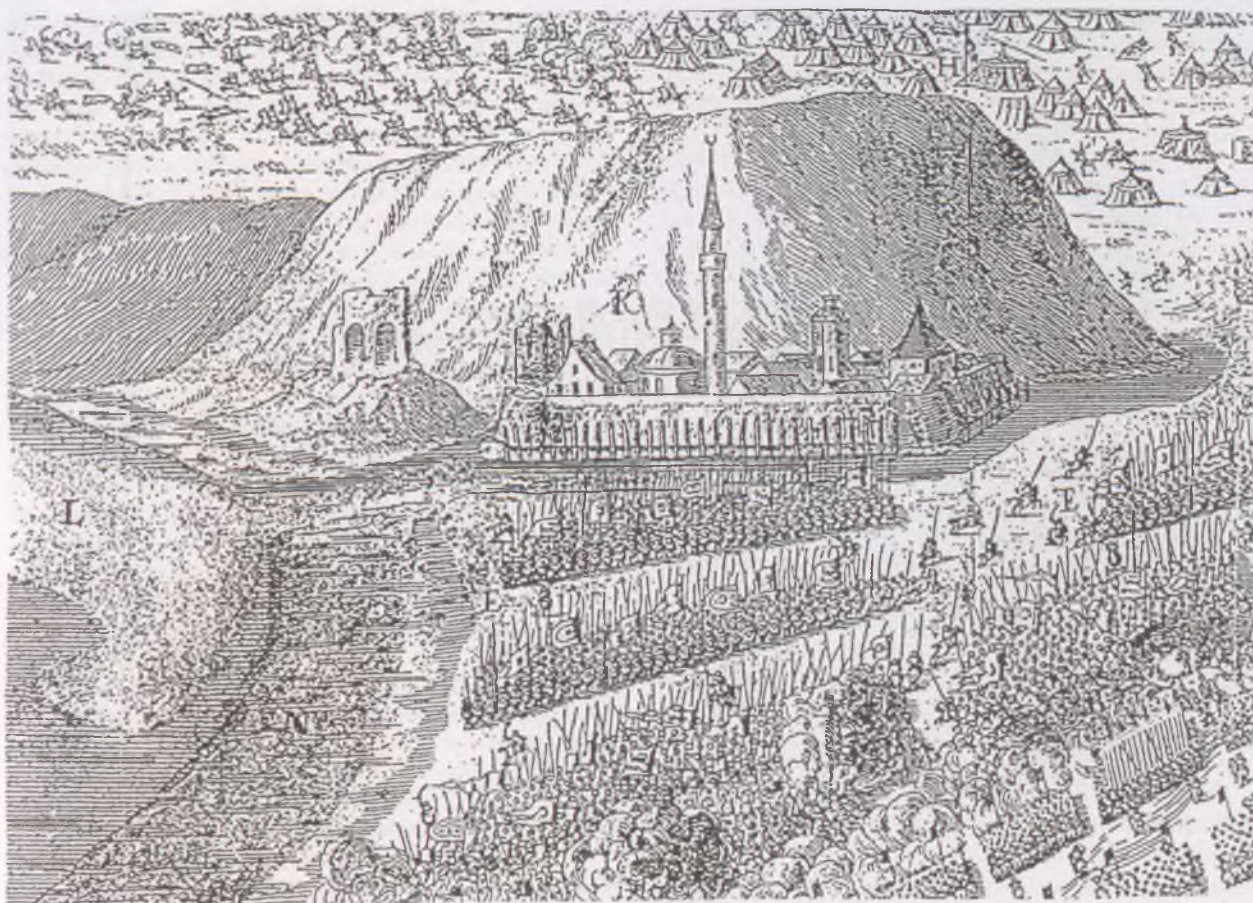
³⁸ GENTHON 1959, 10. Frigyes Pesthy also knew of this local tradition: PÁRNICZKY 1977, 170.

³⁹ Excavation reports by Györgyi Csukás, published in *RégFüz* Ser. I. 27 (1974) 3 and *Alba Regia* 14 (1975) 365.

⁴⁰ VISY 2000, 69–70, 99, Ill. 102, Map 19, VSA 2.

⁴¹ KÁLDY-NAGY 1971; 1977; 1985.

⁴² BÓNA 1991, 15–16, 36–38; 1997, 17–19, 45–47, with extensive literature and a survey of the relevant sources on Adony as well.



Ill. 3. Engraving by an unknown German master of the Battle of Adony in July 1684; with a detail of the palisade of Adony

one and the same. Accepting Jenő Fitz's view, she did not discuss the possible location of the castle.⁴³

Knowing the close relation between Korkmaz and Cankurtaran, we can now proceed to the history of the castle. Although the foundation date of 1529, recorded by both Evlia Çelebi and Ottendorff, is unacceptable (they both quote a tradition that Süleyman had fled here after the siege of Vienna),⁴⁴ it is almost certain that Adony was one of the earliest fortified settlements in the Ottoman-occupied territory of Hungary. Its construction was no doubt strongly motivated by the fact that Adony, lying on the Danube and along the road leading to Buda, was, by the fifteenth century, one of the major market towns and ferries of the county.⁴⁵ The palisade was certainly built by 1549 and was garrisoned by 108 soldiers, all of whom were cavalymen, with the exception of three artillerymen.⁴⁶ (This calls for a rejection of the early 1550s foundation date proposed

by István Bóna on the basis of a datum given by Hans Dernschwam: the Verancsics – Zay diplomatic mission of 1553.⁴⁷) Klára Hegyi has suggested that the castle was established by 1543 at the latest, in order to control the military road along the Danube leading to Buda, which was occupied in 1541.⁴⁸ The 1559 *defter* offers a few morsels of information on the garrison of the ensuing decade: the beneficiaries of the palisade include the *kethüda* and his deputy, the cavalry *aga* and the commander of one of the *serodas*, an *odabaşı* indicating an infantry janissary unit, as well as *topçıs*.⁴⁹ (As a matter of fact, a Hungarian renegade also served in the castle in 1557/58.⁵⁰) By 1569 the garrison had diminished to thirty-seven men, made up of cavalymen and janissaries according to a report written by Benedek Thúri.⁵¹ Mention must here be made of a piece of information from the 1568–69 payrolls (quoted by Jenő Fitz) according to which the garrison numbered 392 men: 64 *müstahfizes*, 199 *ulufeci suvarıs*,

⁴³ HEGYI 1995, 82, and notes 258–259.

⁴⁴ This date was also rejected by Jenő Fitz. Cf. FITZ 1956b, 6; HERMANN 1943, 41.

⁴⁵ CSÁNKI 1897, 307; KÁLLAY 1979, 43.

⁴⁶ VELICS – KAMMERER 1886–1890, II, 82.

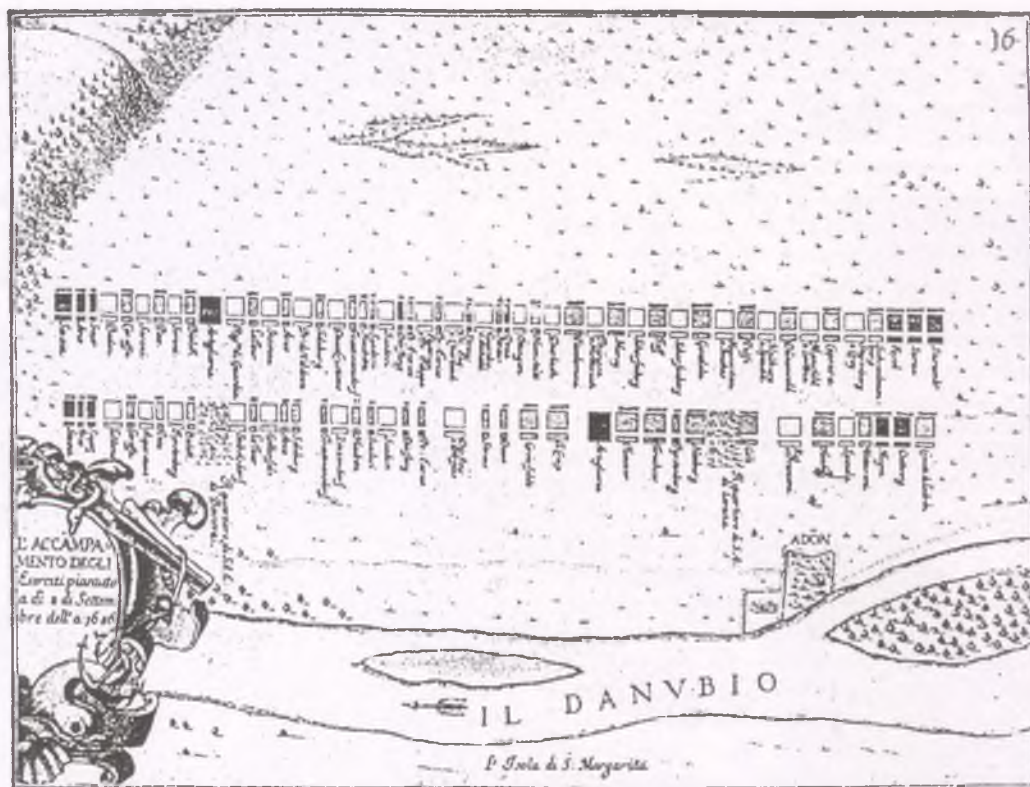
⁴⁷ BÓNA 1991, 15; 1997, 17.

⁴⁸ The section of the payroll proving this has unfortunately perished. Cf. HEGYI 1995, 87.

⁴⁹ KÁLDY-NAGY 1977, no. 28/50–51, no. 29/51, nos 34–35/52, no. 38/54, no. 73/64, no. 174/107; 1985, 60–64.

⁵⁰ HEGYI 1995, 109–110.

⁵¹ BÓNA 1991, 15; 1997, 17.



Ill. 4. Map supplement from Charles of Lorraine's campaign diary, showing the palisade of Adony (8 September 1686)

76 *azabs*, 32 *martoloses*, and 21 *topçıs*.⁵² It has since become clear that Çatfedai/Canfeda was not identical with Cankurtaran, but was a palisade near Jászberény built in 1568.⁵³ (The information on a 101-strong garrison in 1601 must be discounted for the same reason.⁵⁴) According to the payrolls, Adony had a rather small cavalry garrison until the late sixteenth century (38 men in 1573, 29 men in 1579 and 35 men in 1591), although these numbers only reflect one-half of the actual troops stationed there since, for example, we know from another source that an additional 39 foot-soldiers were stationed in Adony in 1580.⁵⁵

The Fifteen Years War brought a marked change. Adony came under Christian control twice, first during the campaigns in October 1601, leading to the liberation of Székesfehérvár, and again during the Danube raids led by Ferenc Nádasdy and György Thurzó in 1602.⁵⁶ According to Kâtib Çelebi the Turks returned immediately (in July 1602) and by 1604 "the *serdar* had the palisade of Cankurtaran, destroyed by an enemy attack, repaired and supplied with ample provisions."⁵⁷ Contemporary Christian

historians obviously described the same events in a different vein. Martinus Zeiler notes that the Christian army had occupied the Turkish palisade and food storehouse, and also that they only abandoned it a year later, in July 1603, after torching it "without any reason whatever".⁵⁸ This is also confirmed by other sources offering an explanation: Benedek Pogonyi/Pogrányi, serving as a hussar officer during the Nádasdy – Thurzó campaign, was appointed castellan of the Adony "*castellum*" in 1602/1603, but since he considered the stronghold to be weak, he evacuated it.⁵⁹ Géza Pálffy has found documents according to which, in May 1603, the *Hofkriegsrat* in Vienna ordered Von Althan, captain-general of Esztergom, to prepare a report on the back pay owed to the royal garrison at Adony and on the monthly salaries to be paid to them.⁶⁰ The 1604 rebuilding of the castle is also uncertain since the diplomatic mission led by Herberstein, travelling down the Danube in 1608/9, only saw deserted villages and ruins between Ráckeve and Dunaföldvár.⁶¹

The rebuilding of the castle can be dated to the early 1610s: in 1613 its Turkish garrison was again

⁵² FITZ 1956b, 8–9.

⁵³ HEGYI 1995, 83.

⁵⁴ FITZ 1956b, 8.

⁵⁵ The true strength of the garrison can probably be deduced from the total strength of the two military elements (the salaried troops and the *timar* holders). Cf. HEGYI 1995, 93–94.

⁵⁶ BÓNA 1997, 17–18.

⁵⁷ FITZ 1956b, 7.

⁵⁸ GLÓSZ – ÉLESZTŐS 1997, 209.

⁵⁹ H. TAKÁCS 1970, 166; KÁLLAY 1979, 43. Mátyás Bél also mentions this (PROKOPF 1977, 115).

⁶⁰ Österreichisches Staatsarchiv, Vienna, Kriegsarchiv, Protokolle des Wiener Hofkriegsrates, Reg. Bd. 209, fol. 140. I would here like to thank Géza Pálffy for drawing my attention to these documents.

⁶¹ BÓNA 1997, 19.

122 strong,⁶² and in 1628/29 the garrison numbered 117 men.⁶³ The marked increase in the size of the garrison can no doubt be explained by the lessons drawn from the Fifteen Years War and the growing importance of the military road leading to Buda. Another important event in the history of the palisade occurred during the 1661 autumn campaign led by Batthyány and Souches when the Christian forces again burnt the palisade.⁶⁴ Evlia Çelebi and Ottendorff – who visited the region in 1663 – both describe the rebuilt palisade. In his account, Evlia claims that the garrison was 500 strong (probably another of his exaggerations), and that it was commanded by the *bölük aga*.⁶⁵ The cavalry battle fought under the palisade in July 1684 – commemorated by a German engraving discussed above (Ill. 3) – was a foretaste of the liberation war two years later: during this attempt to liberate Buda, the troops led by Charles of Lorraine drove certain units of Mustafa Paşa's army back to Adony and Székesfehérvár after the Battle of Érd on 22 July. However, the castle itself was not besieged.⁶⁶

The circumstances and the date of the castle's capture by the Christians, and of its destruction, are more or less known. In July 1686, György Ottlyk noted that – similarly to Pentele – it was still under Ottoman control. Mátyás Baló, an envoy from Transylvania, recorded that on the second day of the occupation of Buda by Christians, Grand Vizier Süleyman almost rushed through Adony (3 September) and only stopped for a longer while at Pentele (5–6 September).⁶⁷ It was probably at this time that the defenders of Cankurtaran/Kormaz deserted the castle and joined the main army corps; this abandonment was so swift that they did not even have time to destroy it. Arriving on 8 September, the troops of Charles of Lorraine met no resistance (the Turks were somewhere near Szekszárd by this time, in the Sárvíz area) and they found the palisade in a fairly good condition. This is confirmed by a map supplement showing the route and the campsites of the army in the campaign diary of the commander-in-chief that also depicts the castle (Ill. 4).⁶⁸ According to the 1687 orders book of General Baron Hasslingen, the Adony castle was the base of oper-

ations during this campaign and had several regiments encamped around it (12–13 June).⁶⁹ The castle became the river base of the Christian forces in the next year: the Ottomans who had capitulated at Székesfehérvár were transported away on twenty ships and two barges.⁷⁰ Although on 20 December 1689 Count István Zichy ordered an inventory of Adony after it had been handed over by the military,⁷¹ this cannot be regarded as the date of the castle's final abandonment and its decline as a military post. A total of ninety *libertinus* Hungarian and Serbian peasant soldiers – enjoying privileges similar to those of the Haiduks – served in the castle; they can be regarded as the first inhabitants of the reviving settlement. The final destruction of the stronghold can be dated to around 1700, the time that marked the beginning of an exodus lasting until 1715. In the course of this the soldiers serving in the castle moved to the neighbouring villages, as well as to Buda, Fehérvár, Csesznek, and Hídvég.⁷²

It has been briefly mentioned above that two proposals have been made for the localisation of Cankurtaran/Korkmaz. According to Jenő Fitz, this palisade stood on the Danube bank at Szentmihálypuszta near Bolondvár, while Bóna distinguished two periods: the early fortification (Korkmaz) at Szentmihály and the late one (Cankurtaran) to its north – at the ferry (Lórév) – that was standing by 1593 at the latest. Although the joint occurrence of the two names in 1559 refutes the succession of the two names, the relocation of the palisade to another site is a possibility that must by all means be considered in the light of the written evidence.

Hans Dernschwam (1553) records that he first glimpsed “the stockade plastered with mortar [...] erected on a clay hill” and the village of Adony on arriving from Pentele, adding that after continuing his journey towards Ráckeve and Buda, he reached “a mile further [on] the Danube ferry to Ráckeve Island [...] where one alights at Lórév”.⁷³ Antonio Pigafetta (1568) found “the village of Adon and the Turks' castle [...] amidst hills after crossing a barely cultivated plain”.⁷⁴ Neither of them mentions that the stronghold lay directly on the Danube.

⁶² HEGYI 1995, 97.

⁶³ FITZ 1956b, 8. The problem of reading mentioned in the above (its possible confusion with the palisade of Canfeda near Jászberény) is certainly not the case concerning the 1628/29 data since Canfeda was burnt around 1621 and was not rebuilt later (HEGYI 1995, 83). This is also confirmed by the fact that the palisade is here listed among the fortifications of the Buda *sancak* as one lying between Ercsi and Földvár.

⁶⁴ GLÓSZ – ÉLESZTŐS 1997, 334; VÁRKONYI 1985, 1090.

⁶⁵ KARÁCSON 1985, 243–244. The exaggeration is similar to the one where he attributes the successful 1661 attack led by Batthyány and Souches to Zerlin-oglu (Miklós Zrínyi) and transforms the defeat of the 200 Turks defending the castle into the total annihilation of the Christian army 40,000 strong. Cf. VÁRKONYI 1985, 1090; BÓNA 1991, 18; 1997, 22; HATHÁZI – KOVÁCS 1996, 14.

⁶⁶ The Christian armies had been driven back to around Buda by September–October and they abandoned its siege by early November. Cf. MAROSI – NAGY 1985, 311–313; FITZ 1956b, 7; BÓNA 1991, 20; 1997, 24.

⁶⁷ BÓNA 1991, 20–21; 1997, 26–27.

⁶⁸ SZITA 1987, 15, 78, and map 16.

⁶⁹ SZITA 1987, 183.

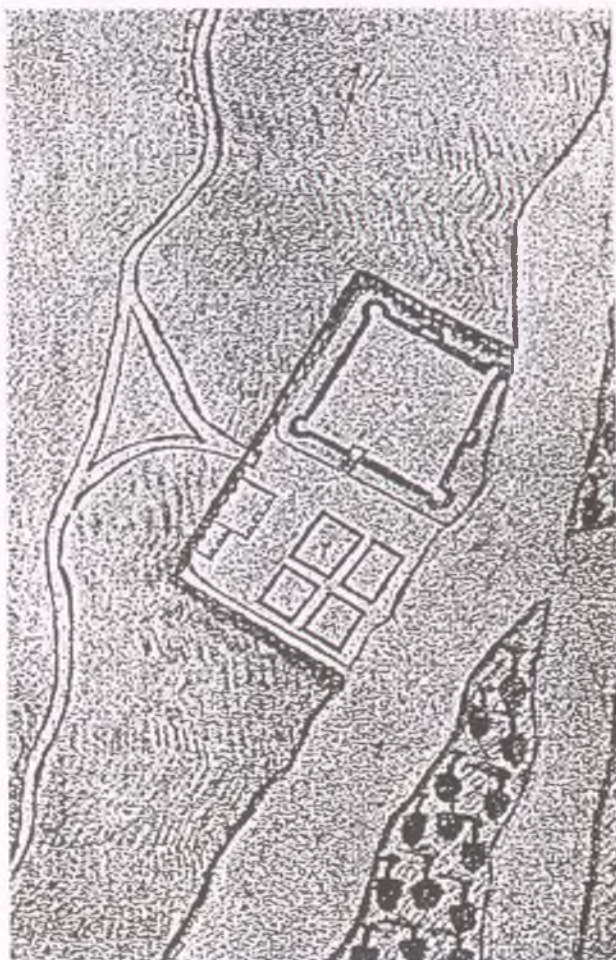
⁷⁰ BÓNA 1991, 21; 1997, 26, although other sources mention seventy ships. Cf. SZAKÁLY 1989, 17.

⁷¹ HENSZLMAN 1979, 7.

⁷² KÁLLAY 1979, 48–49; PÁRNICZKY 1977, 171, note 4.

⁷³ TARDY 1984, 496. The usefulness of this observation is slightly diminished by the fact that the Lórév crossing place is mixed up with the Ercsi ferry, where the ruins of the monastery are to be found. Cf. GYÖRFFY 1987, 360–361; CSÁNKI 1897, 326.

⁷⁴ BÓNA 1991, 15; 1997, 17.



Ill. 5. Ottendorff's drawing of the Adony *palanka*

The seventeenth-century sources offer an entirely different picture. Both Evlia Çelebi and Ottendorff agree that the topography differed considerably.⁷⁵ Their diaries and Ottendorff's drawing (Ill. 5) reveal that the palisade stood directly beside the Danube "on a wide plain", as Evlia Çelebi describes it. He weaves into his imaginative account of the castle's foundation the story of how Sultan Süleyman crossed over to Csepel (Kúvin) Island. Although Dernschwam characterised the castle as lying among the hills near Pentele, the seventeenth-century palisade lay further to the north, closer to Ercsi. Ottendorff designates it as being a four-hour journey from

Pentele and a three-hour one from Ercsi, while Evlia Çelebi claims the same distances to be four and three hours respectively. This seems to be confirmed by Zeiler, although his mileage data must be treated with caution. He mentions the Adony palisade twice: first in 1602/3, as a fortification lying four miles from Buda (Pogrányi's *castellum*), and secondly in 1661, at the time of the Batthyány campaign, by which time it only lay two miles from Buda.⁷⁶

The location of the palisade in the seventeenth century can be precisely determined from the sources for the 1686–87 war of liberation. The above-mentioned map supplement to Charles of Lorraine's campaign diary (Ill. 4) depicts the castle in exactly the same place as Ottendorff's drawing (Ill. 5): on the military road leading to Buda along the Danube. The palisade lay on the floodplain extending between Ercsi and the hills of Szentmihály-puszta – ringed by the hills of the Mezőföld loess plateau in the west – several kilometres away from any hill that could be identified with Dernschwam's or Pigafetta's description. According to General Hasslingen's orders book from 1687,⁷⁷ "the artillery troops marched ahead of the pack animals, on the road winding along the Danube. [...] The terrain between Ercsi and Adony is plain, traversed by a river where the islands end that the infantry was unable to ford, but had to take a detour towards the palisade to the right. [...] After Adony we again found marshland. [...] Not far from it a stream with a stone bridge runs into the Danube. [...] We also marched through a narrow gorge, in a valley ringed by high hills on both sides. [...] We marched through plainland to Pentele." The 1686 map showing the marching route of the army and the topography of the area in question both confirm that the gorge reached by the army halfway between Adony and Pentele is identical with the pass at Szentmihály-puszta. The modern road leading to Pécs leaves the Danube floodplain beginning at Ercsi at this very point. (A comparison with the course of the Roman *limes* road is most instructive, revealing the continuity of its use.⁷⁸) The identification of the islands mentioned by Hasslingen can also contribute to the localization of the palisade. These islands are indicated on both the 1688 map and Ottendorff's drawing (Ills 4–5). The more southerly island has disappeared by now, but the northern one is most probably identical with Nagysziget ("Big Island") at Adony, and the ferry (Lórév) to Csepel Island can be found at its southern tip.

⁷⁵ KARÁCSON 1985, 243–244; HERMANN 1943, 40–41.

⁷⁶ GLÓSZ – ÉLESZTIÓS 1997, 209, 334.

⁷⁷ SZITA 1987, 183–185.

⁷⁸ VISY 2000, map 19. In his description of Adony, Elek Fényes mentions various Roman ruins and also notes that "there was a road winding along the Danube that, although built 1800 years ago, was still intact in so many places that the county kept it." FÉNYES 1851, I. 11.

The currently available evidence from the written sources and the maps thus confirms István Bóna's hypothesis. Other important information can be gleaned from serfs' testimonies in the eighteenth century concerning the land holdings of Adony.⁷⁹ One recurring element in these statements is that "the people of Adony were not where they are now, their homes were further down". At this point the location of these homes takes us in two different directions. One is towards Szentmihály-puszta, or perhaps to Szőlőhegy, near Adony. "The settlement of Adony was not inhabited by the Turks where it now lies; the village lay towards Perkáta by the hill where the old vineyards are and was called a town." According to the other testimonies, "The settlement of Adony was not where it is now, but by the present Révjárás ("Ferry"), as can still be seen from the traces." The memory of the two palisades was thus preserved by the generation after the Turkish wars, creating an apparently contradictory situation. The construction of the early palisade in the Szentmihály area is in line with the administrative arrangements of the Ottoman period: Szentmihály, a flourishing village in the Middle Ages, was already deserted by the time the Turkish castle was built,⁸⁰ and had become part of Adony. The date of the relocation of the castle – a few years before 1593 – to the more northerly ferry point (Lórév) suggested by István Bóna should perhaps be rejected in favour of a date in the early 1610s, when it was decided that there was no sense in rebuilding the palisade, in ruins since its torching in 1603 at least until 1609, in its original location.

Evliya Çelebi and Ottendorff offer comparable descriptions of the appearance of the palisade in the seventeenth century.⁸¹ According to Evliya Çelebi, "it is a rectangular, strong castle enclosed within a strong stockade revetment wall. [...] Its ditch is deep, wide and very steep, [...] the cannon muzzles all face the ditch." Ottendorff notes that the ditch is a dry ditch, the fortification itself being similar to Ercsi, although slightly larger. Evliya Çelebi continues his description thus: "It has a barrier and a siege rampart of timbers along the ditch. [...] It has three gates, two facing east on the Danube bank. Above these gates, by the head of the drawbridges, there are tower defences." Ottendorff observes: "Both the stronghold and the inn in front of it (c), as well as the houses, are enclosed by high posts." His drawing (Ill. 5) only depicts one gate for the town and one for the castle. Evliya's description of the suburb basically corresponds to Ottendorff's: "There are altogether 150 modest houses, its streets too are narrow, with a cistern at the beginning of each street [...]; there is one inn along with twenty shops." In



Ill. 6. Ottendorff's drawing of the *palanka* at Érd (1663)

the light of other sources according to which the castle also functioned as a supply base, the claim that "it contains a military arsenal, storehouses and granaries" is wholly credible. The data contained in the 1613 payroll,⁸² asserting that the inhabitants of the castle also included three paid persons for a place of worship, make Evliya's claim that there was a *cami* wholly plausible. (He mentions vineyards and gardens, too.) Ottendorff makes special reference to the watermills on the Danube.

Another interesting piece of information is that according to Evliya "there is a ruined church by the corner of the palisade on the Danube bank that is filled with planks and other supplies [...] for the town". It would thus appear that the palisade was constructed around a medieval ruin. Two suggestions have been made for the identification of this ruin: the church of the medieval market town of Adony and the ruins of Pál Kinizsi's *castellum* mentioned in

⁷⁹ NAGY 1966, 173.

⁸⁰ Its abandonment was considered as early as 1457 and 1464 when it was sold as a part of Adony (KÁLLAY 1979, 42–43; CSÁNKI 1897, 349). The sixteenth-century Ottoman tax-registers describe it as an uninhabited area, its fields being

Adony ploughland that was sometimes also used by the inhabitants of Venyim (KÁLDY-NAGY 1977, no. 31/51, no. 41/56; 1985, 586).

⁸¹ KARÁCSÓN 1985, 243–244; HERMANN 1943, 40–41.

⁸² HEGYI 1995, 97.

a charter from 1490 (it seems likely that while on his way to Mohács, King Louis II stopped at this *castellum* on 31 July 1526, and issued a charter).⁸³

It is therefore worthwhile to take another look at the engraving depicting the Battle of Adony in 1684 (Ill. 3). Although the engraver had not personally witnessed the battle, he seems to have been well informed, since he depicted both the *cami* and the medieval ruins. At the same time, the mountain rising in the background is wholly implausible in view of the descriptions contained in other seventeenth-century sources, and it cannot be identical with hill at Szentmihály-puszta owing to the relocation of the palisade. György Terei has already voiced his doubts in this respect,⁸⁴ to which we may add that the moat fed by the Danube is also contradicted by Evlia Çelebi's and Ottendorff's accounts of a dry ditch. The contradiction between the rather precise depiction of the castle's core and the inaccuracy of the foreground (the water-filled moat) and the background (the mountain and unknown ruins) can perhaps be resolved or, at least, explained. We must again turn to Ottendorff, who also described and drew the palisade at Érd (Hamza Bey's *palanka*) (Ill. 6).⁸⁵ The core of the Érd palisade is irrelevant in terms of the engraving of Adony and the other seventeenth-century sources on Adony since there is no obvious link between them. What is important is the similarity between the foregrounds (the floodplain of the Danube used as a moat) and the backgrounds (a high mountain with the ruins of a stone building). It is instructive to compare Ottendorff's description of the palisade's environs with his own sketch (Ill. 6) and the Adony engraving (Ill. 3): "The village (b) lies east and south of the palisade and has scarcely been rebuilt. [...] The remains of an old church (c), destroyed many years ago, lie on a hill. A small marsh (e) extends from the Danube (d) that continues beyond the palisade." Speaking of Ercsi,⁸⁶ he also adds: "As soon as one leaves Hamzabég [i.e. Hamza Bey's *palanka*], one encounters a high mountain, but once the traveller crosses it, his journey continues through a flat, uninhabited, deserted land." It therefore seems likely that even if the German engraver did not personally visit the area, he had been rather accurately informed of the battle in July 1684 that raged between Érd and Adony. The

bits and pieces of information on the two locations became mixed up and appear together on a single engraving. The identification of the castle with Adony seems acceptable, while the foreground and the background definitely reflect the environs of the Érd castle.

The archaeological identification of the castle (castles) remains a task for future research. The field surveys conducted by Györgyi Csukás and György Terei did not confirm the presence of the early palisade and village at Szentmihály-puszta either on the hill or at its foot, on the Danube bank as shown on the 1684 engraving.⁸⁷ It has been suggested that the river had perhaps washed away the remains of the palisade, and it is therefore instructive to recall Dernschwam's (1553) and Pigafetta's (1568) descriptions. Both emphasise that the stronghold stood on a hill and neither mentions a location right next to the Danube. A few scattered archaeological and topographical data may be useful for future research. The fragments of Turkish tombstones reached the Szent István Király Museum from a farm called "Mária major", lying some 2 kilometres west of Szentmihály-puszta.⁸⁸ This loess bank is today called Sánccpuszta/Sánci-dűlő ("Rampart Farmstead"); the area itself was called Bolondvár in 1826.⁸⁹ The area is well known for its Bronze Age finds,⁹⁰ but the tombstone fragments indicate remains from the Ottoman period, suggesting that the "clay hill" on which the early palisade of Korkmaz/Cankurtaran was sited had perhaps been a prehistoric settlement site with a good strategic location. However, further field surveys are necessary to confirm this possibility.

The rescue excavation conducted by Jolán B. Horváth in 1978 offers another possibility. She found a hoard of 902 coins containing mostly coins of Ferdinand I (1526–1564), as well as Bavarian, Austrian and a variety of other Western coins on the eastern slope of Adony–Szőlőhegy. The coin types suggest that the hoard had been hidden in the late 1550s; it was recovered from under the floor of a decayed/burnt house.⁹¹ It is possible that this house belonged to a settlement that can be associated with the Turkish palisade, even though György Terei's field surveys did not confirm this.⁹² (It should here be noted that the Jankovich collection includes a sixteenth-century silver signet ring from Adony–Szőlők.⁹³)

⁸³ CSÁNKI 1897, 307; KÁLLAY 1979, 43; KOPPÁNY 1999, 110.

⁸⁴ TEREI 1998, 43–44.

⁸⁵ HERMANN 1943, 37–38.

⁸⁶ HERMANN 1943, 39.

⁸⁷ During her field survey in 1973, Györgyi Csukás attempted to identify the medieval settlement, but did not succeed in this (Report, SZKIM Archives, inv. no. 926). György Terei's repeated field surveys were similarly unsuccessful (TEREI 1998, 44), as were the surveys conducted by Mihály Kulcsár and the present author in September 2000.

⁸⁸ SZIKM Archives, inv. no. 31, 09.02.11, stone monuments: Stone Relics Collection, inv. nos 10597–10599, published in SzSz 1932, 34 and *FmN* 1925, 6 December.

⁸⁹ Lying 5 kilometres southwest of Adony, the area adjoins the southern end of Adony–Szőlőhegy, Rác-hegy and Szentmihály-puszta. SZIKM Archaeological Maps Collection, inv. no. 166 (Scale = 1:10,000, section L-34-26-D-c-2). Cf. NAGY 1972, 230; KÁLLAY 1979, 42.

⁹⁰ SzSz 1932, 4–6, 32.

⁹¹ Report by Jolán B. Horváth. SZIKM Archives, inv. no. 1337. Cf. also *Alba Regia* 18 (1980) 365; Gy. V. SZÉKELY, Éremleletek [Coin Finds]. *NK* 82–83 (1983–84) 119.

⁹² TEREI 1998, 44.

⁹³ NAGY 1985, Suppl. I. 142.

The exact location of the seventeenth-century palisade is equally uncertain. The single, albeit rather faint, archaeological lead is again a piece in the collection assembled by Miklós Jankovich, a nineteenth-century art collector. This is a sixteenth- to seventeenth-century ring found on the Danube bank at Adony.⁹⁴ The surveys conducted around the current ferry yielded no results.⁹⁵ In this case, the possibility that the periodic Danube floods did indeed wash away the palisade's remains cannot be rejected. We know, for example, that the 1810 flood washed away an area twelve yards wide and that a corner of the inn by the ferry also fell victim to the water. The construction of a dam was planned in order to prevent further flood damage.⁹⁶

Ercsi

The northernmost fortification on the Belgrade–Buda road discussed by Jenő Fitz was Ercsi, also on the Danube bank.⁹⁷ Evlia Çelebi's topos that the palisade was founded in connection with the 1529 siege of Vienna can be rejected in this case also.⁹⁸ On the basis of the first authentic mention known by him in the payroll from 1628/29,⁹⁹ Fitz suggested that this *palanka* had been founded at a late date, sometime after the Fifteen Years War. His suggestion is confirmed by a little-known source. In a report describing his diplomatic mission to Buda addressed to the Palatine Miklós Eszterházy and written in July 1627, Gáspár Tassi mentions that "the commander [...] went to the camp of the *paşa* of Bosnia ... but this is a lie, for he went not for this reason, but to build the palisade at Ercsi, four miles from Buda, which is now being plastered. [...] Ercsi is said to be an excellent place for ambushes in these times of war."¹⁰⁰ The *palanka* was thus constructed in 1627 in order to control a favourite ambushing site of the Christian troops.¹⁰¹ The hitherto-unprotected caravanse-rai and ferry, together with the village functioning as a regional centre and holding regular markets, no doubt proved an attractive target for Hungarians who ventured this far.¹⁰² The data on the population of the settlement are most instructive: the 23 (Hungarian) taxpaying households of 1581 had dwindled



Ill. 7. Ottendorff's drawing of the *palanka* at Ercsi (1663)

to two by the time the palisade was built. Following the palisade's construction, Serbs (140 households from Bosnia-Herzegovina) settled in the village.¹⁰³

The composition of the 87-strong garrison recorded in the payroll of 1628/29 indicates a strong Southern Slav element (*miistahfizes* and *ulufeci suvaris*, as well as *azabs*). In 1644 there were nine Serbs, from the village, serving as salaried troops in the castle.¹⁰⁴ As far as I know, there are no published data on the strength and composition of later garrisons in this

⁹⁴ NAGY 1985, Suppl. I. 142.

⁹⁵ Survey by Mihály Kulcsár and the present author in September 2000.

⁹⁶ KÁLLAY 1979, 46.

⁹⁷ FITZ 1956b, 9–10.

⁹⁸ KARÁCSON 1985, 246.

⁹⁹ VELICS – KAMMERER 1886–1890, II. 554.

¹⁰⁰ SALAMON 1867, 213.

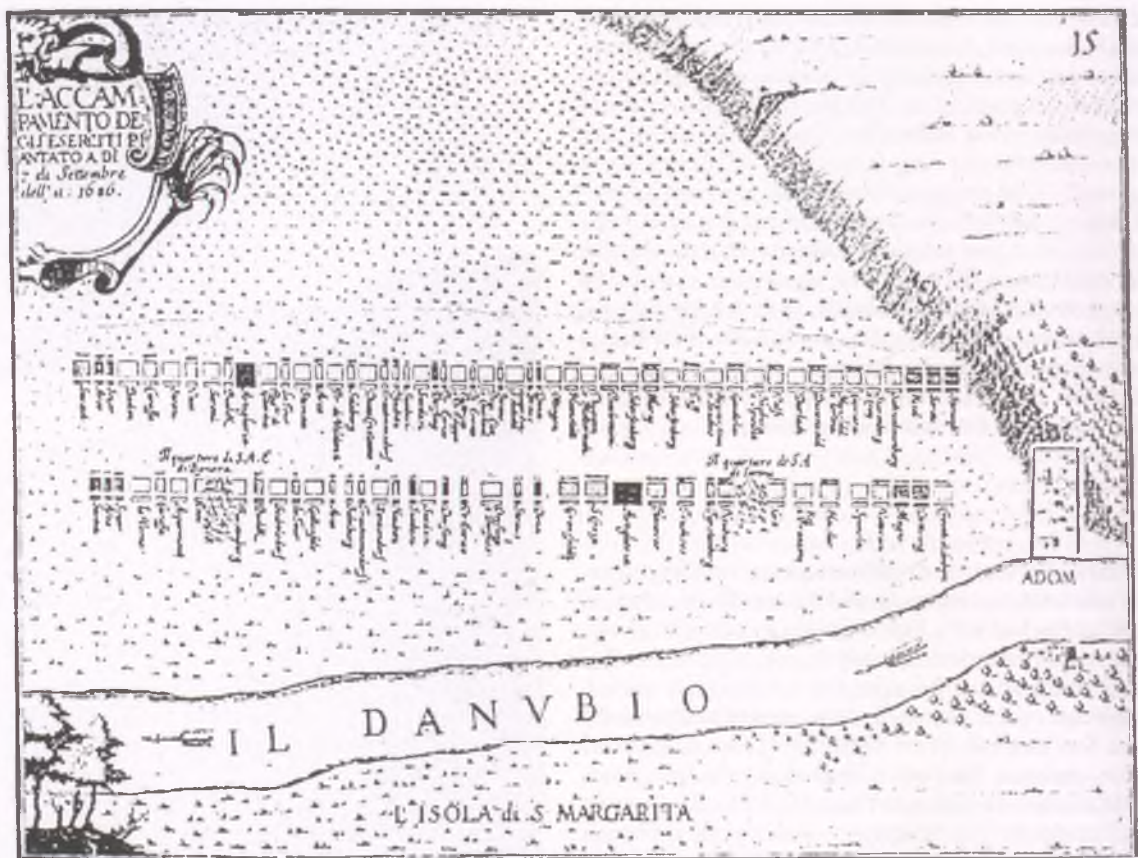
¹⁰¹ In the light of the above Gábor Farkas' data that the palisade had been built in 1545 is unacceptable (and cannot be confirmed) (FARKAS 1989c, 210). The sixteenth-century Turkish map depicting the Buda region (FEKETE 1944, Pl. LIV. 1) has already been mentioned above, in the section dealing with the construction date of Pentele; this map depicts the castles at Ercsi, Adony/Cankurtaran and Duna-földvár, but not Pentele. In view of the fact that the existence

of the Ercsi palisade cannot be documented earlier than 1627, the map should be dated to the 1630s, the period immediately preceding the construction of the Pentele palisade.

¹⁰² Dernschwam, who travelled through Ráckeve too, also mentions its ferry, in 1553, although to some extent he mixes it up with Lórév when speaking of the ruins of the Ercsi monastery (TARDY 1984, 496). The 1580–81 *defter* mentions Ercsi's revenues from markets (VELICS – KAMMERER 1886–1890, II. 551). Vencel Vratislav mentioned its tin-roofed caravanse-rai during his diplomatic mission of 1591 (SZAMOTA 1891, 201). KOPPÁNY 1999, 141, suggested the existence of a medieval *castellum* where King Louis II allegedly spent the night on his way to Mohács.

¹⁰³ HETÉNYI 1985, 74–75; JENEI 1976, 190–191.

¹⁰⁴ JENEI 1976, 193.



Ill. 8. Map supplement from Charles of Lorraine's campaign diary, showing the Ercsi palisade, mistakenly inscribed "Adony" (7 September 1686)

castle. Thus, the only comparative material is Evlia Çelebi's information that in 1663 the garrison was 200 strong, a number that seems slightly exaggerated in the light of the garrison's strength in 1628/29. It is interesting that the garrison also had *topçis* in 1628/29, although no mention is made of artillery in 1663.

The various documents relating to the palisade's construction (purchases of stakes and other timber), beginning with 1642,¹⁰⁵ mark an important period in the architectural history of the palisade. A Haiduk raid in 1644 was perhaps carried out with the intent of impeding this construction work. The Haiduks torched the village, drove away the cattle and took the villagers prisoner.¹⁰⁶ This raid appears to have been successful since construction work was begun anew in 1644 and was still under way the following year. The campaign led by Batthyány and Souches in 1661 again destroyed the castle and its suburb.¹⁰⁷ Evlia Çelebi and Ottendorff both mention the reconstruction work in 1663 in the wake of this raid.¹⁰⁸ According to Evlia, "the castle has fifty plank-

roofed houses, a military arsenal, granaries, a *Hünkar cami* and a gate facing east, a steep ditch on one side and a high hill beside the ditch. The enemy usually attacks the castle from here. [...] Its suburb lies in a hilly area and only its ditch has survived. It has a new inn and forty shops. Beyond the ditch of this destroyed town there are only gardens enclosed by fences." Ottendorff is more laconic, although his engraving offers a wealth of smaller details (Ill. 7): "The palisade (a) of Ercsi [...] lies on a plain near the Danube (b), although the stronghold itself is sited on a hill. It is a rather miserable affair [...] and has been completely rebuilt."

The date and the circumstances of the abandonment of Ercsi by the Ottomans are not wholly clear. István Bóna has suggested that its defenders surrendered it as early as June 1686.¹⁰⁹ It is a fact that around 17–18 June János Bottyán's hussars were already at Ercsi – by which time Buda was surrounded¹¹⁰ – and that Károly Pálffy's raiders also passed it three days later (György Ottlyk lists Ercsi among the

¹⁰⁵ FITZ 1956b, 9.

¹⁰⁶ JENEI 1976, 191.

¹⁰⁷ According to Zeiler, a certain General Götz (GLÓSZ – ÉLESZTŐS 1997, 333) also participated in the raid led by Batthyány and Souches (VÁRKONYI 1985, 1090; BÓNA 1991, 18;

1997, 22; HATHÁZI – KOVÁCS 1996, 14) that was again mistakenly attributed to Zerlin-oglu (Zrínyi) by Evlia Çelebi.

¹⁰⁸ KARÁCSON 1985, 246.

¹⁰⁹ BÓNA 1997, 26.

¹¹⁰ MAROSI – NAGY 1985, 315; HERMANN 1943, 39.

fortified Turkish settlements).¹¹¹ Still, it is unclear whether the Turkish garrison abandoned the settlement, or whether it merely withdrew into the stronghold, as at Pentele and Adony. Most probably, the Christian forces occupied Ercsi on 2–3 September (Buda surrendered on 2 September; the grand vizier retreated to Adony the next day and to Pentele on 5 September).¹¹² The surest date for the Christian occupation is 7 September, when Charles of Lorraine's troops camped beside the palisade. In contrast to the entry in the campaign diary, the camp map marks the fortification as Adony (Ill. 8).¹¹³ We know that the "real" Adony was reached only next day (Ill. 4). The surviving sources do not mention the condition in which the Turkish garrison left the palisade, although it seems likely that it was in an even less usable condition than Adony, and perhaps in ruins. In any case, the cessation of Ercsi's military role is reflected in the fact that its owners, the Szapáry family, immediately conducted a survey of what had survived (45 inhabited and 140 uninhabited houses),¹¹⁴ and a year later General Hasslingen made no mention of its being a fortified settlement.¹¹⁵

Unfortunately, no advances have been made in the archaeological investigation of the castle¹¹⁶ or its localization since the publication of Fitz's study, except for a suggestion by Tibor Koppány that the Turkish castle had perhaps been established on the site of a medieval *castellum*.¹¹⁷ What is clear from Evlia Çelebi's description and Ottendorff's engraving (Ill. 7) – and this is also confirmed by the 1686 map (Ill. 8) – is that the castle was sited by the southeast foot of the loess plateau on which the present-day settlement lies, somewhere along the edge of the Danube floodplain extending to Szentmihály-pusztá. The road system depicted on the 1686 map appears more or less to coincide with the line of the Roman *limes* road,¹¹⁸ and can thus perhaps offer a good starting point for later field surveys.

Vál

Since the history and the archaeological finds from the castle have been discussed in a recently published volume¹¹⁹ along with the new findings of the research conducted since the publication of Fitz's study,¹²⁰ only the most important elements and more recent findings shall be briefly discussed.



Ill. 9. The site of the castle at Vál (Szent István tér)

Aşık Mehmed (1594) described the stronghold controlling the Vál valley, a natural pass bordered by a dry loess bank that had once been covered by open woods, as the key to the road leading from Győr–Tata to Cankurtaran/Adony. Hamza Bey built the palisade of Vál in 1550. According to its first known payroll from 1552/53, the 50-strong garrison of the rather insignificant castle belonging to the *sancak* of Fehérvár was made up of mostly Southern Slav origin and a few cavalymen. It gained importance when Vál became a sultan's *hass* estate and rose to become one of the four major market towns of the *sancak* of Buda. The strength of the castle, now placed under the direct control of Buda, was also increased: according to the payrolls from between 1557 and 1569, the garrison was doubled to around 110 men, and beside élite troops (39–45 *müstahfizes* and 35–38 *ulufeci suvaris*), artillerymen (5 *topçıs*) were also stationed there. Besides the permanent Southern

¹¹¹ BÓNA 1997, 26–27.

¹¹² BÓNA 1997, 26.

¹¹³ SZITA 1987, 15, 78, and map section 15.

¹¹⁴ HETÉNYI 1985, 75.

¹¹⁵ SZITA 1987, 182–183.

¹¹⁶ The single, rather uncertain indication – in terms of both its date and its findspot – of the palisade is a find mentioned by Arnold Marosi: "a double-edged, straight sword with a hand-guard dredged up from the Danube" (perhaps dating to the Middle Ages or the sixteenth to seven-

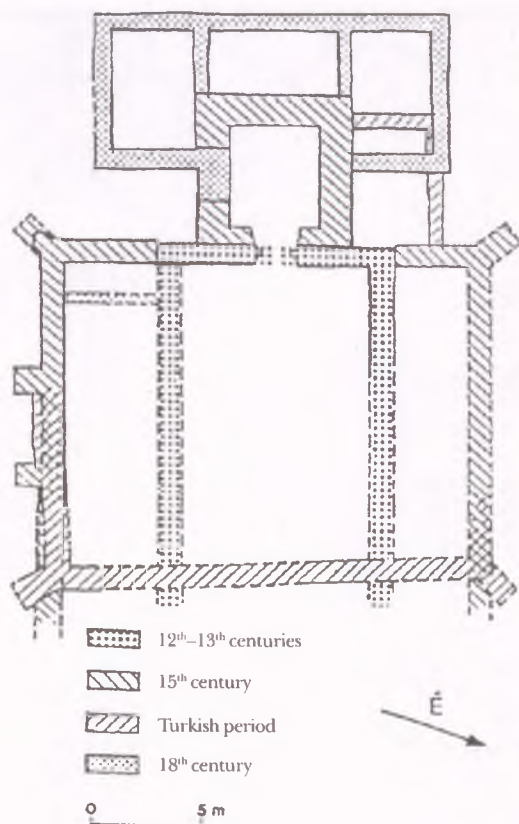
teenth centuries) in the possession of Dr. Iván Polgár, a local collector (SZIKM Archives, A. Marosi's papers, inv. no. 5144/88; cf. also SzSz 1931, 7–8).

¹¹⁷ KOPPÁNY 1999, 141.

¹¹⁸ VISY 2000, 66, Map 17, MAT 3, 10, 4a. Its continuous use is also indicated by its name, "Római országút" ("Roman road") – 1826. Cf. NAGY 1972, 250.

¹¹⁹ FITZ 1956b, 11–12.

¹²⁰ HATHÁZI – KOVÁCS 1996; 1997, 195–225.



Ill.10. Identification of the building periods according to excavations conducted around the medieval tower at Vál in 1973 and 1986

Slav soldiers (31 *azabs*) a renegade Hungarian also served in the castle.¹²¹ Klára Hegyi has noted that in contrast to the other second- and third-rate fortifications, the entire garrison of the Vál castle was paid from the state treasury, an arrangement that usually characterized only first-rate fortresses.¹²² It is uncertain whether the garrison was further strengthened by 1577, or whether the numbers for this year are simply exaggerations of the enemy forces. Be that as it may, a report to the *Hofkriegsrat* in Vienna notes that the garrison troops included 70 cavalrymen and 137 infantrymen. This may even have been necessary since the raids against Vál became almost daily affairs in the years between 1570 and 1590. In 1599, the Christian forces briefly occupied the castle and burnt it during one such raid.

A decline can be noted in the life of the market town and its *parkan*. It is rarely mentioned in contemporary sources and the payroll for 1628/29 lists only 77 men.¹²³ In the light of this, Zeiler's claim that when the castle was destroyed a second time (this was in 1661, during the Batthyány – Souches campaign) its 200-strong garrison (including the commander and three officers), 2 clergy, a tax collector, and 300 civilians perished within the palisade seems exaggerated.¹²⁴ Interestingly enough, Evlia Çelebi is more moderate in this case. A few years later, when he visited the rebuilt castle, he found a 150-strong garrison; he does not mention any prayer house that could be associated with clergy and he gives a figure of 300 for the total number of victims.¹²⁵

The abandonment of the castle cannot be dated precisely from the sources. The earliest possible date is June–July 1686 (during the raids by Pálffy and Caprara linked to the siege of Buda), although a date around June 1687 cannot be ruled out either (as part of the military operations under János Eszterházy and István Zichy around Fehérvár). The most likely date seems to be October 1687 and the most probable capitulation a peaceful one; Csókakő, Palota and Battyán/Csíkvar were also liberated at this time.¹²⁶

The outward appearance of the stronghold features only in Evlia Çelebi, from between 1664 and 1666:¹²⁷ “a palisade nesting in an inhospitable, bleak valley, with a high tower built of bricks. [...] It has no bazaar, or inns, or bathhouses. [...] Zerlin-oglu [Zrínyi] [...] burnt the high rectangular tower forming the central ‘fort’. [...] Ismail Paşa [...] rebuilt this palisade and made it stronger than ever before.”

As regards the location of the castle, both Jenő Fitz¹²⁸ and Alán Kralovánszky¹²⁹ suggested that it can be identified with the Gothic tower in the environs of Szent István tér¹³⁰ (Ill. 9).¹³¹ This identification has been confirmed by various ecclesiastical documents from the eighteenth and nineteenth centuries,¹³² and by a comparison of the findings of the 1973 excavation conducted by Györgyi Csukás¹³³ with the investigations in 1986. These findings can be briefly summarised as follows:¹³⁴

The castle was sited on the western slope of the Vál valley (the southwest quarter of the present-day settlement), on a plateau rising some 10–15 metres above the valley floor covered with marshland and criss-crossed by watercourses. The Ottomans built

¹²¹ HATHÁZI – KOVÁCS 1996, 11–18; for the Hungarian serving in the castle in 1557/58, cf. HEGYI 1995, 107–108.

¹²² HEGYI 1995, 94.

¹²³ HATHÁZI – KOVÁCS 1996, 11–18.

¹²⁴ GLÓSZ – ÉLESZTÓTS 1997, 333.

¹²⁵ KARÁCSON 1908, 211.

¹²⁶ HATHÁZI – KOVÁCS 1996, 14.

¹²⁷ KARÁCSON 1908, 211.

¹²⁸ FITZ 1956b, 11, after KÁROLY 1896–1904, Vol. V, 409.

¹²⁹ Templomsor utca, Plot No. 307 and its environs, report by Alán Kralovánszky for 1967: SZIKM Archives, inv. no. 769; cf. also *Műemlékvédelem* 1967, 253 and *Alba Regia* 10 (1969) 151–152.

¹³⁰ GERECSZE 1906, II. 308, 1156; GENTHON 1951, 207; 1959, 406–407, III. 398; MO. MŰEML. 1976, 291; 1990, I. 498 (cadastral no. 1976: 248, 1990: 144, serial no. 1615).

¹³¹ Survey by Endre Egyed.

¹³² HATHÁZI – KOVÁCS 1996, 14–18.

¹³³ For a brief description of Györgyi Csukás' excavations, cf. *RégFüz* Ser. I. 27 (1974) 105 and *Alba Regia* 14 (1975) 369–370.

¹³⁴ HATHÁZI – KOVÁCS 1996, 19–24.

their stronghold around the Gothic church of the settlement. This had originally been erected in the twelfth to thirteenth centuries and had been enlarged into a three-nave church with a high tower in the fifteenth century. They reinforced certain wall sections (the south wall), demolished the east end of the church (the chancel) and erected a new east wall, creating thereby a roughly trapezoidal barracks building fitted with three rooms. The new entrance in the southern facade indicates that the tower had functioned as a watchtower and a gatehouse. The annex built against the tower in the north can also be dated to the Ottoman period (Ill. 10).¹³⁵ The tower adjoining the barracks corresponds to Evlia Çelebi's description since it can be identified with the "high rectangular tower forming the central fort" (although he claims that the tower was built of bricks). Zeiler, too, mentions the tower, from which sixty soldiers jumped or else perished by fire. The excavations brought to light an abundance of Turkish finds, mainly from the seventeenth century: a lavish assemblage of Turkish copper vessels, various weapons (a sabre, a lance and a cannonball) and ceramic finds, among them a few vessels of Southern Slav origin.¹³⁶

The collation of the archaeological record with the written sources allows the reconstruction of the circumstances under which the Turkish palisade was abandoned, as well as of the continued settlement in the area. Following the departure of the Turks, the castle first passed into the possession of the Calvinist Church (1693–1714). The southern Gothic nave (the southern wing of the Turkish castle) was restored and used as a prayer house. The Catholics who arrived at a later date reclaimed the church by stressing their historical rights dating to before the Ottoman period and began their own reconstruction in the 1720s. However, this episode in the history of the church falls outside the scope of the present study.

The outer stockade, the rampart and ditch system of the Turkish castle could not be investigated and thus the size of the area occupied by the castle remains unknown. The changes in the terrain do not permit any reconstructions based on surface remains. Since the site of the Turkish castle was inherited and reclaimed by the Church on the grounds of legal continuity, the boundaries of the ecclesiastical estate – these have remained essentially unchanged since the early eighteenth century – offer some orientation in this respect. Beside various strategic considerations, the archaeological evidence put together by Árpád Dormuth in 1928/29¹³⁷ and by Alán Kralovánszky in 1967, along with various

stray finds,¹³⁸ indicates that the loess plateau (present-day Templomsor) rising to west of the tower was also part of the palisade. It would therefore seem that the extent of the palisade built around the medieval church was approximately 80–100 x 60–80 metres.¹³⁹ However, only future excavations can confirm this.

Szabadbattyán–Csíkvár (Kula Tower)

The period that has elapsed since the publication of Jenő Fitz's study¹⁴⁰ has brought important new findings in terms of the history, the archaeology and the architectural history of the castle, but has – at the same time – raised a number of new problems and unresolved issues. Let us take as our starting point Evlia Çelebi's description:¹⁴¹ "This was a large *palanka* in the old days. After Sultan Süleyman occupied it, he decided there was no need for it and destroyed it. It is now a small *palanka*, visible from Székesfehérvár [...], a small rectangular town with one gate at the entrance to the passage. It has one hundred plank-roofed houses, a *cami* and a granary, an arsenal, a tower for the military band, a draw-bridge over the ditch, and ten shops. This castle is Székesfehérvár's outer defence work against the enemy, and its soldiers fight the enemy thrice daily, there being no other route for crossing the River Sárvíz. The soldiers of the castle levy a tax on all who would cross the river. When the castle is besieged, soldiers from Székesfehérvár come to relieve it."

The renowned traveller shrewdly perceived an important problem: the medieval Hungarian antecedents of the palisade in the direct vicinity of Székesfehérvár (a mere 9 kilometres from the town) and its destruction. Viewed critically, his description relates genuine conditions. It is a historical fact that Süleyman I personally led the 1543 campaign against, and siege of, Fehérvár between 20 August and 4 September.¹⁴² The expression "*Batthyán per turcas destrada est*" in the *dicalis* register for that year reflects the local consequences of that campaign.¹⁴³ Evlia's "large *palanka*", suggesting a fortified manorial centre or residence, can also be studied. The medieval residence-like nature of the settlement is also reflected in the fact that the name of the landowning Kővágóörs family, which had owned the area since the late fourteenth century, changed to Batthyány.¹⁴⁴ The most conclusive evidence is provided by the surviving probate inventories from 1521–26.¹⁴⁵ In 1543, the Batthyány family had pikemen stationed in the manor house who, however, proved unable to defend the

¹³⁵ Survey by Endre Egyed.

¹³⁶ HATHÁZI – KOVÁCS 1996, 34–50; 1997, 195–225.

¹³⁷ DORMUTH 1936, 50–52.

¹³⁸ SZIKM Archives, inv. no. 769. Cf. also *Műemlékvédelem* 1967, 253 and *Alba Regia* 10 (1969) 151–152, and the finds collected by the present author in 1986.

¹³⁹ HATHÁZI – KOVÁCS 1996, 51–52.

¹⁴⁰ FITZ 1956b, 12–13.

¹⁴¹ KARÁCSON 1908, 38.

¹⁴² VASS 1989, 70.

¹⁴³ NAGY 1972, 294.

¹⁴⁴ CSÁNKI 1897, 318, 361–362.

¹⁴⁵ KUBINYI 1991, 26–28. Zeiler also mentions the Battyán in connection with the family's estates during the Ottoman period. Cf. GLÓSZ – ÉLESZTŐS 1997, 38.

ford over the Sárvíz.¹⁴⁶ The continuity between the residence and the later Turkish palisade is also confirmed by a letter written to Boldizsár Batthyány by Benedek Thúry, castellan of Palota, in 1567: "Our enemies are desirous of building the castle in Battyán, on Your Excellency's estate, and they have already dug the ditch [...], and the building of that castle – in which they will station infantry and cavalry – will be to the destruction of all Christendom."¹⁴⁷ György Terei's investigations have shown that the destruction of the Batthyány *castellum* cannot be attributed to Süleyman I: Ferenc Török de Enying burnt it in July 1556, after its occupation by the Turks. In a report addressed to Tamás Nádasdy,¹⁴⁸ he notes: "We set fire to Battyán and several neighbouring villages. We passed through the castle and brought away whatever we found there. We erected a pile of wood and reeds and set it on fire. I believe that even if its walls did not collapse, everything inside it was burnt."

In sum we may say that the Evlia Çelebi's "large *palanka*" can be identified with the fifteenth- to sixteenth-century *castellum* of the Batthyány family where a Turkish garrison was probably stationed by 1543, and that in 1556 Ferenc Török retook the castle from this Turkish garrison. The lack of early payrolls can perhaps be explained by the fact that Battyán was not an independent garrison and that its soldiers were selected from among the troops stationed at Fehérvár.¹⁴⁹ The *castellum* is marked as a strategic site in spite of its ruinous condition on a map drawn before June 1564 that was discovered by Géza Pálffy.¹⁵⁰ This would explain why the Ottomans began rebuilding it in 1567, and this is why Benedek Thúry argued in favour of a new assault on the castle. This assault was either never carried out or was unsuccessful since the palisade was rebuilt by 1568 and provided with a 109-strong garrison (*müstahfizes*, *ulufeci suvaris* and Southern Slav *martoloses*).¹⁵¹

In November 1601, after the siege of Székesfehérvár, the Ottoman troops in Battyán capitulated without resistance, the commander surrendering personally to Prince Mercoeur.¹⁵² The castle was occupied by Christian forces, as a result of which the legal continuity of the Batthyány *castellum* was ensured, according to Géza Pálffy's research work. In his report to the *Hofkriegsrat* in Vienna dated May 1602, Eggenberg, captain-general of Győr, reports

that in accordance with Archduke Matthias' decision, fifty hussars and fifty Haiduks should be stationed in the stronghold. He also notes that an additional fifty Haiduks were already living in the castle (as private troops of the landowner) under their own voivode, and that they did not accept orders from the captain-general of Győr, only from their own master.¹⁵³ In 1602, the castellan of the castle was István Török, who successfully repelled the first Ottoman attempt to recapture the castle. On 6 August, however, he abandoned the castle, after learning of the approach of a 300-strong unit of *sipahis*.¹⁵⁴

The returning Ottoman troops numbered 54 in 1608/9, 59 in 1628/29, 59 in 1629/30, and 58 in 1631/32. They were made up of *müstahfizes*, *ulufeci suvaris* and Southern Slav *martoloses*. Interestingly enough, *topçis* are not mentioned in the seventeenth-century lists,¹⁵⁵ even though this is at variance with the archaeological evidence, as will be shown below. A Hungarian renegade – János Mindszenti by name – also served in the castle, between 1675 and 1683.¹⁵⁶ Evlia Çelebi's observations concerning the daily skirmishes with the Christian raiding troops are accurate.¹⁵⁷ The Hungarian assault in October 1661 stands out among these clashes, since it led to the destruction and subsequent rebuilding of the palisade. According to Zeiler, the landowner, Ádám Batthyány, led this raid in person: the stronghold was torched and its garrison put to the sword.¹⁵⁸ The palisade was rebuilt and Evlia Çelebi's description records conditions at the time of his visit in 1664. Another important piece of information is that the Csíkvárdam was widened in the summer of 1683; the plan was that the Ottoman forces would march against Vienna by way of the crossing place protected by the palisade ("there being no other route for crossing the River Sárvíz").¹⁵⁹

An important point must be mentioned here, one also noted by Evlia Çelebi: "The soldiers of the castle levy a tax on all who would cross the river." The Ottoman tax-registers from 1558 and 1570 mention the toll to be paid for crossing the bridge at Battyán/Csíkvár.¹⁶⁰ Its antecedents can again be traced to Middle Ages. The charters and other legal documents of the Kővágóórs/Batthyány family from 1397, 1398, 1399, 1400, and 1401 all mention the bridge toll collected there.¹⁶¹ The bridge itself was built before

¹⁴⁶ FARKAS 1989a, 46, unfortunately without any indication of an archival reference number or other reference.

¹⁴⁷ JENEI 1972, 173.

¹⁴⁸ TEREI 1998, 35. Hungarian National Archives, Budapest, E. 185, Hungarian Treasury Archives, Hungarian Treasury Archives familiae Nádasdy, 15 July 1556, Pápa.

¹⁴⁹ VASS 1989, 80–81; the decrease in the strength of the Fehérvár garrison, documented from the 1570s, can in part also be attributed to the fact that the smaller castles in the area became independent units.

¹⁵⁰ Österreichisches Staatsarchiv, Vienna, Kriegsarchiv, Alte Feldakten, 1564/2/ ad 11 c.

¹⁵¹ VELICS – KAMMERER 1886–1890, II. 389.

¹⁵² FARKAS 1989a, 46; GLÓSZ – ÉLESZTŐS 1997, 196.

¹⁵³ Österreichisches Staatsarchiv, Vienna, Kriegsarchiv, Protokolle des Wiener Hofkriegsrates Exp. Bd. 208, Fol. 229–230.

¹⁵⁴ FARKAS 1989a, 46–47; GLÓSZ – ÉLESZTŐS 1997, 251.

¹⁵⁵ VELICS – KAMMERER 1886–1890, I. 400, 428, 448, 458.

¹⁵⁶ JENEI 1972, 223.

¹⁵⁷ FARKAS 1989a, 46–48.

¹⁵⁸ FARKAS 1989a, 47–48; GLÓSZ – ÉLESZTŐS 1997, 332.

¹⁵⁹ FARKAS 1989a, 48.

¹⁶⁰ VASS 1989, 85, 100.

¹⁶¹ ZsO I, 4807–8, 5260, 5627, 5971, II, 10, 952.

1279 by Péter, comes of the Bökénysomlyó kinship group, and his relatives near Battyán (to the detriment of the Fövény ferry of the Fehérvár chapter, even though – at least according to the repeated protests of the chapter – there had been no crossing at Battyán previously). Following agreement between the two parties, the bridge was partially demolished and could be used for pedestrian traffic only.¹⁶² It nevertheless became a busy tolling place well before 1379, and its continuous use can be traced through the Ottoman period until 1737 according to the documents amassed by the Council of the Governor-General.¹⁶³

In February 1686 Hungarian horsemen unexpectedly assaulted the palisade and, after allowing free passage for its defenders, burnt it. At the end of the same month the castellan of Veszprém promised Ádám Batthyány that he would prevent the Turks from rebuilding the palisade. In June his troops torched again the castle.¹⁶⁴ In October 1687, following makeshift repairs, the Turkish garrison surrendered the Csíkvár castle without a fight.¹⁶⁵

The palisade was not demolished after the liberation of Székesfehérvár (15 May 1688),¹⁶⁶ but retained its importance as late as the war of independence led by Ferenc Rákóczi II. In May 1704, serious clashes for control of it took place between General Heister and Colonel Ferenc Domokos; these ended in victory for the imperial forces. In mid-June, however, the insurrectionist *kuruc* troops led by Antal Eszterházy returned and camped for long months under the hastily repaired Csíkvár castle, directing the siege of Székesfehérvár from there. They withdrew only in the autumn, on strict orders from Károlyi. The siege was resumed in February 1706, first under Bottyán Vak and later under General István Szekeres; the units that had now occupied Csíkvár for three years again played an important role (the real centre of the *kuruc* troops was Pákozd by this time). Only with difficulty could Rabutin's troops fight their way through the crossing controlled by the Battyán castle, and even the general's aide-de-camp was killed. In early 1709, Ferenc Balogh, a *kuruc* general, fell while defending Battyán and its crossing; the castle changed hands several times and was eventually occupied by the

imperial forces. The military significance of the castle came to an end in the autumn of that year when – according to a report by Antal Eszterházy – the *kuruc* troops around Fehérvár were disbanded.¹⁶⁷

The fact that the tower – called “Kula” in Hungarian even today – forming the nucleus of the palisade on the eastern outskirts of Szabadbattyán is still standing (it now functions as an exhibition hall of Székesfehérvár's Szent István Király Museum) can be attributed to its continued use after the end of the Ottoman wars.¹⁶⁸

The building was used as a granary for some time after the crushing of the war of independence led by Rákóczi;¹⁶⁹ the first description reflecting conditions in the 1730s comes from Mátyás Bél, who recorded the military history of the Csíkvár tower, “a renowned stronghold during Turkish times”, noting that “hardly any trace of the one-time fortification remains since the small town or village is more densely populated than ever”.¹⁷⁰ The Palatine Joseph mentions the tower in his diary in an entry dated 26 November 1809, on the occasion of his visit to Sárvár.¹⁷¹ In the 1860s Frigyes Pesthy remarked of the tower: “An edifice of ancient and strong material, called Kula, stands on the western bank of the Malomcsatorna (Mill Canal), a small castle in olden times, as shown by its name, Kula, transmitted from bygone ages to the present.”¹⁷²

The tower was first registered as a protected monument in 1927.¹⁷³ In 1935, Arnold Marosi made a series of photographs of its facade;¹⁷⁴ this series remains an important piece of documentation to this very day since this is the last authentic document of the tower's condition since the eighteenth century. In 1945 the building was severely damaged by a bomb.¹⁷⁵ The first archaeological excavations, directed by Jenő Fitz, were carried out in 1955. The enclosure wall and a section of the ditch, both lying to the west of the tower, were investigated.¹⁷⁶ Some conservation work was also carried out in 1956.¹⁷⁷ Excavations on a larger scale were begun in 1967 under Alán Kralovánszky, as a preliminary step in the final conservation work.¹⁷⁸ The results of these investigations allow the reconstruction of the Ottoman-age (sixteenth- to seventeenth-century) castle.

¹⁶² GYÖRFFY, 1987, 349.

¹⁶³ FARKAS 1989a, 46.

¹⁶⁴ FARKAS 1989a, 48.

¹⁶⁵ SZAKÁLY 1989, 16; according to other sources, however, the Ottomans evacuated the castle – perhaps temporarily – as early as June 1686, and General Dünevald stationed some troops there. Cf. FARAGÓ – SZAKÁLY 1986, 28.

¹⁶⁶ SZAKÁLY 1989, 13.

¹⁶⁷ THALY 1880, 117; JENEI 1977a, 11–17; JENEI 1977b, 38.

¹⁶⁸ GENTHON 1951, 202; 1959, 334; GERŐ 1968, 303; MO. MŰEML. 1976, 289, cadastral no. 4024.

¹⁶⁹ GENTHON 1959, 334.

¹⁷⁰ PROKOPP 1977, 113.

¹⁷¹ FARKAS 1989a, 45–46.

¹⁷² PÁRNICZKY 1977, 276.

¹⁷³ Ottó Szőnyi (GENTHON 1959, 334).

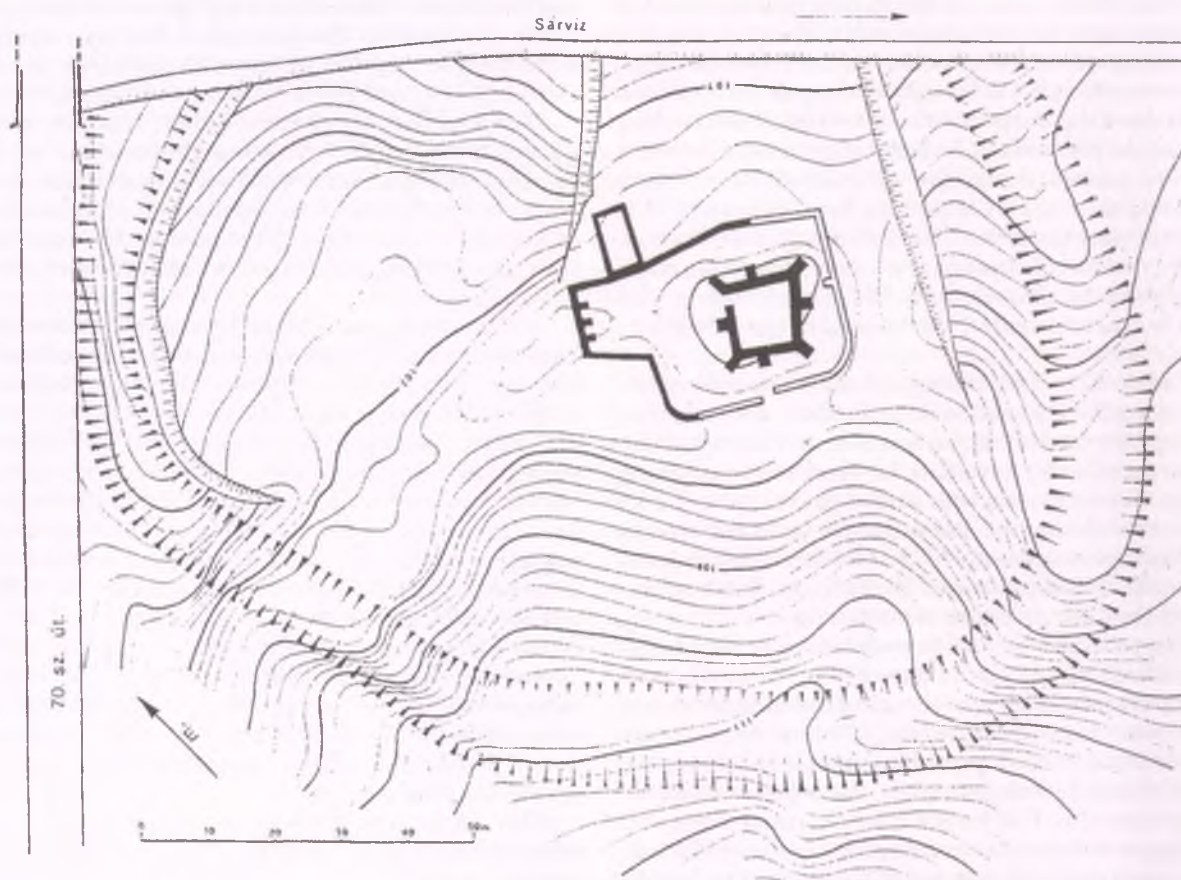
¹⁷⁴ SZIKM Archives, no. 1859, photograph no. 14/1935.

¹⁷⁵ FITZ 1956b, 12.

¹⁷⁶ Jenő Fitz's excavation report for 1955 (SZIKM Archives, 526, 5049/88, the finds were inventoried under SZIKM inv. no. 55.203.1). The same year a rich assemblage of fifteenth- to seventeenth-century finds (mostly stove-tiles and pottery) was donated to the museum from this site, followed in 1965 by other donations of Ottoman period and eighteenth-century stray finds, namely a clay pipe and a shoe plate (from László Ospán, SZIKM inv. no. 56.131.1–56.132.13 and from Károly Suharda, SZIKM inv. no. 65.41.1–2; cf. also *Alba Regia* 8–9 [1967–68] 181–182).

¹⁷⁷ László Gerő performed this conservation work. *Műemlékvédelem* 1958/1, 61–62; GENTHON 1959, 334.

¹⁷⁸ Alán Kralovánszky's excavation report for 1967 (SZIKM Archives, 837, 4334/87, 5050/88; cf. also *RégFüz* Ser. I. 21 (1968) 76; *Műemlékvédelem* 1967/4, 251; *Alba Regia* 10 (1969) 150, 152. The finds are still unpublished and, in part, uninventoried (SZIKM inv. no. 73.5.1–73.46.13).



Ill. 11. Ground plan of Szabadbattyán–Kula site (the surviving sections of the enclosure wall and the timber foundations are indicated using different colours). Survey and drawing by Endre Egyed

The topography of the castle is determined by a roughly east–west¹⁷⁹ double ridge, bordered by the Sárvíz (Malom-csatorna; “Mill Canal”) in the north and by Road 70 (which probably following the route of a Turkish road) in the west (Ill. 11).¹⁸⁰ A semicircular ditch fed by the Sárvíz flanked this ridge. Within this ditch, other ditches enclosed the two mounds of the ridge. The remains of a double row of posts – perhaps the pillars of a bridge or a log palisade – were identified between the inner ditches.

The western mound is currently built on and cannot be investigated. Still, it seems likely that it was an organic part of the stronghold (perhaps functioning as its outer ward). The three-storey tower (Kula Tower) with its irregular trapezoidal ground

plan and eight buttresses at its corners and middle points of its facades still stands on the eastern, man-made mound. Beside the traditional cannon loopholes, its distinctive features include narrow, stone-framed arrow loops for archers (Ill. 12).¹⁸¹ A similarly interesting feature is the guardroom – with loopholes in the eastern facade – that could be entered through a stone-framed arched door on the first storey. A similar stone-framed door can be noted on the western facade, suggesting an exterior wooden gallery or wooden stairway.¹⁸² The eighteenth-century rebuilding (rows of Baroque windows, beam-sockets and roof structure indicative of a new, four-storey interior division) did not affect these features.

¹⁷⁹ The basically northeast–southwest oriented system is here described in a somewhat simplified form, corresponding to the documentation prepared by Alán Kralovánszky.

¹⁸⁰ Survey by Endre Egyed.

¹⁸¹ György Székér's drawing, presented at the 3rd Meeting of the Castrum Bene Association (Sárospatak, 23–25 May 1997).

¹⁸² The remains of the crushed stone foundation for the walls lying at a distance of 2.5 metres from each other and oriented to correspond to the north–south axis of the

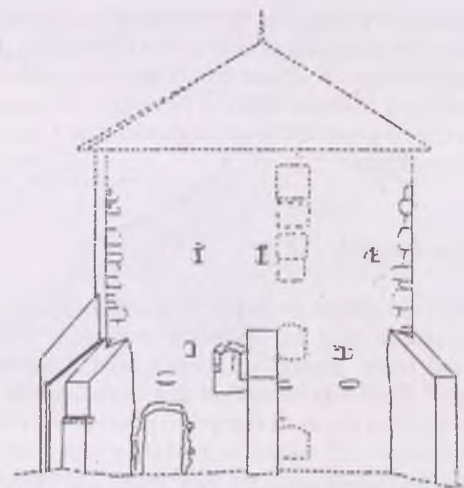
tower were also uncovered (enclosing a well in the geometric centre of the tower). These walls served as supports for the wooden structures of the upper storeys, as well as buttresses. The remains of a crushed stone circular foundation supporting a similar wooden structure for the upper storeys that was used in another architectural period were also uncovered; they were similarly oriented to correspond to the north–south axis of the tower, but lay at a distance of 3 metres from each other.

The wall enclosing the tower was not an earth-and-timber or a wattle stockade; a wall of stone built on a foundation of posts driven into the waterlogged subsoil enclosed an irregular oblong area that corresponded to the orientation of the ridge. Its entrance lay on the southern side and was created by shifting the plane of the enclosure wall inwards by the width of the wall. A bastion – gun emplacement of rectangular ground plan reinforced with internal buttresses stood in the northwest corner of the courtyard paved with crushed stone.¹⁸³ An oblong-shaped building adjoined this tower from the north. A rich assemblage of Turkish-period finds – footed bowls, pipes, stove-tiles, metal and glass wares, and weapons – were brought to light in the course of the excavations.

The reconstruction outlined above is valid for the seventeenth-century, Ottoman period of the castle. However, various details of the architectural periods defined by Alán Kralovánszky have been challenged in more recent years, especially concerning the history and construction of the Turkish castle. Since a detailed discussion of these points would exceed the scope of this study, I shall here mention them only briefly.

(1) The remains of an east–west oriented bipartite building came to light in the northern half of the tower during the investigation of its foundations. With the exception of its southern wall and the partitioning wall, its walls did not extend beyond the foundations of the tower and the archaeologist therefore believed that they had been demolished when the foundations for the tower were made. This feature was dated to the age of Árpád dynasty (twelfth to thirteenth centuries) on the basis of the finds from the rubble layer (slow-turned pottery tempered with pebbles and mica and decorated with bundles of straight and wavy lines). This dating corresponded to the then-known evidence and could also be associated with the crossing place mentioned in the abovementioned thirteenth-century source (guard-house/toll house). However, according to the latest research the finds in question can be associated with the Southern Slavs of the Ottoman period, with the result that the dating of the walls to the Árpáadian Age can no longer be accepted. Knowing the sixteenth-century tower at Dunaföldvár in Tolna County,¹⁸⁴ a two-roomed cellar contemporaneous with the Kula Tower or a T-shaped buttress – added later by way of reinforcement – seems more likely.

(2) According to Alán Kralovánszky, the tower with four corner buttresses was built sometime in the



Ill. 12. The western facade of the Kula Tower in Szababattyán

fourteenth to fifteenth centuries, with the facade pillars being added during the Ottoman period, at the same time as the outer defence works were constructed, with the result that it can be identified with the Batthyány *castellum*. The excavations yielded a rich medieval assemblage, predominantly made up of fifteenth- and early sixteenth-century finds (the latter included a complete set of iron tools from a cartwright's workshop). The fine tableware (white "Buda ware"), green-glazed stove-tiles with heraldic and tracery decoration, a Gothic chamfered copestone (door frame), and the fragment of a cornice with blind tracery that had been secondarily incorporated into the eastern facade pillar can definitely be associated with the Batthyány manor house pre-dating the Turkish castle.¹⁸⁵ The secondarily reused fragment and the copestone, however, can also challenge the identification of the fourteenth- to fifteenth-century manor house with the Kula Tower (since we could also assume that the fourteenth- to fifteenth-century building was demolished and its stones later reused in the construction of the tower.) László Gerő and, more recently, György Székér have suggested a dating to the late sixteenth century (late Batthyány or Turkish), a date that seems more acceptable in view of the comparable Hungarian towers of the Jagellonian period and of the Balkan Turkish parallels of the towers with horizontal loopholes.¹⁸⁶

These issues can only be resolved after detailed analysis of the archaeological finds and of the documentation.¹⁸⁷ The rejection of a fourteenth- to fif-

¹⁸³ The crushed stone surface of the inner courtyard survived in a few spots.

¹⁸⁴ Excavated by Éva M. Kozák. GERŐ 1975, 138, with additional literature.

¹⁸⁵ SZIKM 65.82.1; *Alba Regia* 10 (1969) 152; FITZ 1956b, 12.

¹⁸⁶ GERŐ 1968, 303; SZÉKÉR, GY., A sárospataki Vörös-torony előképei [The Models for the Vörös Tower at Sárospatak]. Paper read at the 3rd Meeting of the Castrum Bene Association, Sárospatak, 23–25 May 1997. During the on-site

survey, Győző Gerő and István Feld, too, assumed a construction date in the Ottoman era.

¹⁸⁷ István Feld, Gyöngyi Kovács and the present author will evaluate Alán Kralovánszky's documentation of the Kula Tower, along with the finds. The revision and re-identification of the finds according to excavation features, as well as their restoration and preparation for inventorying, has already been completed.

teenth-century date for the tower also causes difficulties in the association of the finds from this period with an architectural feature. This – hypothetical – architectural feature should perhaps be sought in the northern part of the stronghold that has not yet been investigated.

Bogárd or Polgárdi

Only one single mention is made of this stronghold, namely that in 1608/9 there were 44 *azabs* stationed here. Based on Velics and Kammerer's reading,¹⁸⁸ Jenő Fitz identified this castle with Bogárd, suggesting that it was designed to protect the crossing over the Sárvíz.¹⁸⁹ Since its garrison was controlled from Székesfehérvár and not from neighbouring Simontornya, Előd Vass has suggested that the reading should be the geographically more plausible Polgárdi.¹⁹⁰ This would also suggest that this palisade was designed to protect a by-road from Veszprém to Fehérvár that skirted the Sárrét from the south. The garrison and the branch of service, as well as the fact the castle is mentioned only once, indicate that it was an insignificant, temporary military post.

The archaeological record has little to add to this picture. The existence of a castle in the Sárbogárd area was not confirmed by the field surveys conducted by György Terei.¹⁹¹ Although the Polgárdi area was systematically surveyed as part of the medieval site survey of Fejér County, the results were similarly negative.¹⁹²

Hídvég

Our knowledge of the palisade at Hídvég has been greatly enriched since Jenő Fitz's study,¹⁹³ regarding not only the relevant written sources, but also the topographical data.

The existence of this castle is documented since 1570, when it had a garrison of 25 men (infantry and artillery).¹⁹⁴ It is also noteworthy that the Hungarian tithe-register for that year also mentions a "Turkish *castellum*", while the 1564 register, prepared a few years earlier, does not,¹⁹⁵ suggesting that the palisade had been built sometime between these two dates. The wood for the construction of the Kajár palisade was stored and transported there from Hídvég in 1577.¹⁹⁶

The castle came under Christian control in the following years, before its eventual recapture by Ali Bey of Koppány. Boldizsár Batthyány, Ferenc Nádasdy and Péter Huszár led the punitive counter-attack a year later. As a matter of fact, this campaign was directed not against Hídvég, but against Koppány. The fortress of Koppány fell and its wounded *bey* fell into the hands of the Hungarians. The sultan had the *bey* of Buda bowstrung for the defeat, but the Hungarians were court-martialled for their raid.¹⁹⁷ As part of the *sancak* of Koppány, Hídvég remained in Ottoman possession, as shown by a *ruzmançe* from 1586–88.¹⁹⁸ Zeiler's data indicate that the early 1590s brought a decisive change in the life of the stronghold: it was again briefly occupied by the Hungarians and then again recaptured by the Ottomans in 1593, when it burned down.¹⁹⁹ The rebuilt Turkish *parkan* was placed under the administration of the *sancak* of Simontornya. Klára Hegyi notes that in 1613 its garrison consisted primarily of Serbs.²⁰⁰ This harmonises neatly with the 1628/29 payroll that lists 26 *azabs* and 13 *ulufeci swaris*, with no mention of artillerymen.²⁰¹ The size and composition of the garrison indicates that the castle was similar to the one at Bogárd/Polgárdi, and that it was relatively insignificant. Its main function was to control the crossing over the River Sió, as well as collecting tolls.²⁰²

The subsequent existence of the palisade is indicated by a single piece of information, namely that a few officers leased a watermill on the Sió in 1648.²⁰³ There is no information on the fall or the surrender/abandonment of the castle that certainly occurred by 23 September 1686 at the latest, when the army corps under the command of Louis of Baden recaptured neighbouring Simontornya.²⁰⁴

Jenő Fitz did not undertake the topographical identification of the Hídvég palisade. György Terei was very cautious in suggesting that the castle probably lay somewhere on the territory of the present-day settlement.²⁰⁵ It would appear that one possible solution to the problem is to be sought in Zsófia Demeter's research on the land owned by the *libertinuses* in Hídvég in the eighteenth and nineteenth centuries.²⁰⁶ In 1688, Captain-General Ádám Batthyány granted *libertinus* privileges – a status similar to that enjoyed by the Haiduks – to eighteen soldiers from Hídvég to express his gratitude to them for freeing him from Ottoman captivity. They soon lived

¹⁸⁸ FITZ 1956b, 13.

¹⁸⁹ VELICS – KAMMERER 1886–1890, I. 401.

¹⁹⁰ VASS 1989, 82.

¹⁹¹ TEREI 1998, 49.

¹⁹² Kind oral communication by Gyula Siklós.

¹⁹³ FITZ 1956b, 13.

¹⁹⁴ DÁVID 1982, 85; VERESS 1996, 122.

¹⁹⁵ PÁKAY 1942, 163.

¹⁹⁶ FARKAS 1962, 8; VERESS 1996, 127.

¹⁹⁷ VÁRKONYI 1985, 612, 1669. Identified erroneously with Baranyahídvég, lying some 120 kilometres from Koppány along the River Drava (northwest of Pécs). In contrast, Szabadhídvég belonging to the Batthyány estates as a site of

a Turkish palisade (that was part of the *sancak* of Koppány) lies only 40 kilometres away.

¹⁹⁸ The beneficiaries of Acsa and Bogárd were the soldiers of the Hídvég palisade. VELICS – KAMMERER 1886–1890, I. 350; FITZ 1956b, 13; FARKAS 1962, 8–9.

¹⁹⁹ GLÓSZ – ÉLESZTŐS 1997, 225.

²⁰⁰ HEGYI 1995, 103.

²⁰¹ VELICS – KAMMERER 1886–1890, I. 429.

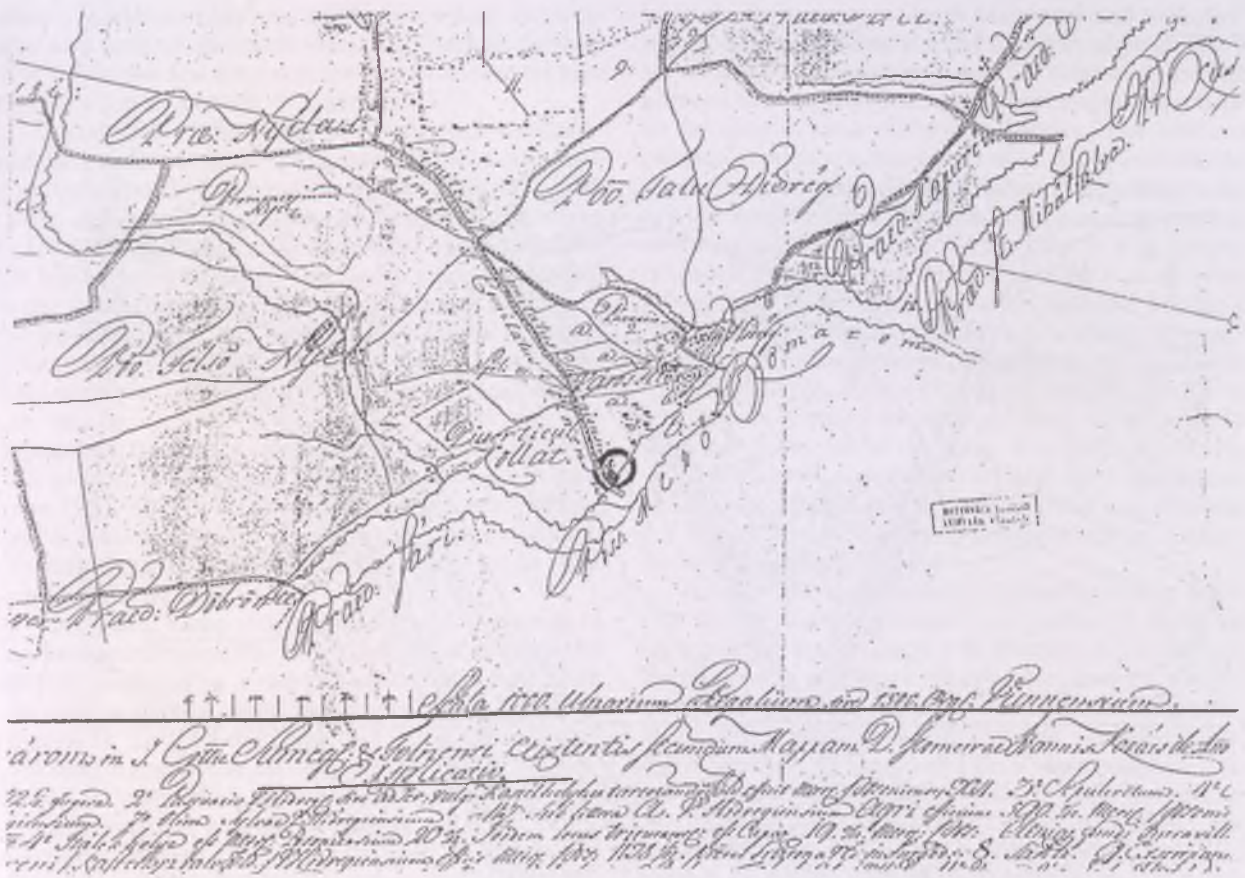
²⁰² FITZ 1956b, 13; FARKAS 1962, 7.

²⁰³ VERESS 1966, 155.

²⁰⁴ VÁRKONYI 1985, 1627, 1741.

²⁰⁵ FITZ 1956b, 13; TEREI 1998, 50.

²⁰⁶ DEMETER 1997, 45–52.



Ill. 13. Map of Városhídvég, showing the "Santz" area (1757)

under the authority of their own captain, and replenished their ranks with other soldiers from Adony, Veszprém and Ozora (their numbers had swelled to 70 by 1694).²⁰⁷ The Hídvég "castellum area" and its fields were designated as their settlement: the charters of privilege from 1713 and 1757 note that beside the fields of the *castellum*, the soldiers also received the "castle" itself.²⁰⁸ The obvious conclusion seems to be that the *castellum* and environs allotted to these soldiers can be identified with the Turkish palisade evacuated two years earlier and known as the "Turkish *castellum*" since 1570.

The boundary of the privileged area around the castle was encircled by a ditch as early as 1688 and

was subsequently called "Városhídvég" ("A bridge with a castle") in order to distinguish it from the other settlement areas of serf legal status (Kis- and Faluhídvég).²⁰⁹ This name appears on the manorial maps from the eighteenth and nineteenth centuries (Ill. 13);²¹⁰ the name changed gradually to the present-day Városhídvég form. The evidence from these sources indicates that the castle should be sought somewhere in the Városhídvég district of Szabadhídvég, on the western bank of the Sió. This is confirmed by a letter of complaint from 1649 written by the serfs of Hídvég mentioning that the estate was divided, as a local variant of the phenomenon of *condominium* that characterized Ottoman rule in Hungary. The estates of the Hun-

²⁰⁷ FARKAS 1962, 9–10; VÁRKONYI 1985, 1408; DEMETER 1997, 45–46.

²⁰⁸ Hungarian National Archives, Budapest, (OL) P. 1321, Sheaf 9 (1688), Inscriptio volume 1313 (1688–1724) 410–411; DEMETER 1997, 46.

²⁰⁹ FARKAS 1962, 17; DEMETER 1997, 46.

²¹⁰ I would here like to thank Zsófia Demeter for her generous help, for sharing with me her knowledge of these maps and her kind permission to publish them. Ill. 13: Map of Városhídvég from 1757 (Hungarian National Archives,

Budapest, (OL) P. 1321, Sheaf 23). Additional maps: "Map of the old and new bed of the Sió and the causeway between Mezőkomárom and Hídvég" (József Szeles' 1863 copy of the 1842 plan prepared by Pál Naszluhácz), Fejér County Archives, Székesfehérvár, (FML) BUI. 15. 1863; "Map of the *diverticulum* of Kollát" (1814), (Hungarian National Archives, Budapest, (OL) P. 1322, Sheaf 121; another map that is useful for the study of the Hídvég area is OL. S 20/34.



III. 14. Szabadhidvég-Pusztavár on a modern map

garian landowner lay east of the Sió, while the western area towards the castle was under Turkish control. The fields divided between the two landowners also included a pasture called "Város réte".²¹¹

Documents of the 1820–1862 litigation concerning the privileges of the Várashídvég *libertinuses* also contain valuable information on the location of the castle. A lawyer by the name of Kapotsffy mentions in 1824 that the area of the *castellum* "extended from the hill with the castle by the Kollát (named village) to the boundary marked by Szabadhegy [...] along the houses on the Sió bank to the place where the street reaches the Sió." Two years later a report by a land surveyor remarks that "the site of the *castellum* can still be seen."²¹² This compares well with the eighteenth- to nineteenth-century maps on which the "Váras- and Városhídvég" areas are indicated. A map from 1757 (Ill. 13) marks a rampart ("Santz") beside the "*diverticulum Kollát*", and the same area on a map showing the "*diverticulum* of Kollát" appears as "Vár domb" ("Castle Hill").

The Kollát rampart or hill fort is well known to archaeological research. Mór Wosinsky mentions the hill fort enclosed by a red burnt rampart and ditch at Korlátpuszta, situated on the boundary between Felsőnyék and Szabadhídvég.²¹³ The site, lying 1 kilometre east of the settlement (Ill. 14),²¹⁴ became known as Szabadhídvég–Pusztavár in the archaeological literature; it is an extensive, fortified Celtic settlement from the La Tène D period.²¹⁵ Later field surveys²¹⁶ emphasize the predominantly Celtic nature of the site, although mention is made of glazed pottery fragments dating to the post-medieval period (perhaps to the Ottoman period); this would suggest that in view of the documentary evidence the Turkish palisade could be localized to this area. It must nonetheless be emphasized that the size of the oval Celtic hill fort (approximately 350 metres by 200 metres) does not permit its direct identification with the insignificant Turkish stronghold. The Celtic hill fort simply indicated the most favourable strategic site and also offered a "natural" outer defence for the small Turkish fortification. However, it must be borne in mind that this possibility merely represents a possible starting point that can be confirmed or rejected only by archaeological excavations.

* * *

In sum, we may say that – with the exception of the Bogárd/Polgárdi castle – significant advances have

been made in terms of both historical and archaeological research since the publication of Jenő Fitz's studies. The discovery of new written sources has allowed the reconstruction of a more detailed picture in the case of each of these palisades. The archaeological results are also impressive: Battyán/Csíkvár has been almost completely excavated; remaining tasks are the systematic evaluation and re-interpretation of the available evidence. In the case of Vál, future research needs to concentrate on the area around the central buildings (the tower and the fortified church). The archaeological evidence allows the exact localisation of the Pentele palisade on the Rácdomb of Dunaújváros, although it is uncertain whether a larger area could be excavated owing to the densely built-up character of the area. The collation of the written sources, contemporary and later maps, and the archaeological record offers useful suggestions for future archaeological investigations at Adony, Ercsi and Hídvég.

We may also draw some general conclusions from our survey of these palisades or castles. In terms of their military and strategic role, Pentele, Adony (which also served as a military supply base) and Ercsi were designed to control specific sections of the Belgrade–Eszék–Buda road along the Danube. (In contrast to the other castles, Pentele and Ercsi were established in the seventeenth century, and were originally ambushing places much favoured by the Christian raiders.) Vál was in part founded as the frontier ward of Buda and in part to control the Vál valley that extended to the Buda road (i.e. to the Danube). Szababattyán/Csíkvár and Bogárd/Polgárdi were designed to control the Sárvíz and they also served as an outer line of defence for Székesfehérvár. Hídvég, which defended a crossing over the Sió, was also the ward of Koppány and, later, of Simontornya (and Ozora).

Beside their military role, the choice of location for these castles no doubt included economic and trade considerations, i.e. an intention to make them into smaller regional centres. Pentele was a major ferry and market place (with a caravanserai in the Ottoman times); also important were Adony (a major market town since the fifteenth century) and Ercsi (which had a caravanserai). Szababattyán and Hídvég functioned as toll places. Vál, a sultanic *hass* estate, was one of the four major grain-growing market towns in the *sancak* of Buda. This would also explain the relatively brief existence of the Bogárd/Polgárdi palisade suggested by its single mention in the sources: it had no additional functions.

²¹¹ DEMETER 1997, 45; JENEI 1972, 185.

²¹² DEMETER 1997, 46, 50.

²¹³ WOSINSKY 1896, I. 246–247.

²¹⁴ SZIKM Archaeological Map Archives, inv. no. 241 (Scale = 1:10,000, section 604–411).

²¹⁵ GENTHON 1951, 202; 1959, 334, described it as a prehistoric or Bronze Age hill fort; PETRES 1971, 130, defined the site as a Celtic (La Tène D) settlement. Cf. also *Alba Regia* 8–9 (1967–68) 181–182.

²¹⁶ Field surveys conducted by the present author and Mihály Kulcsár, as well as by Gyula Nováki and György Terei in 2000.

Another point that emerges clearly is that the Turkish engineers fully exploited local conditions by functionally modifying and rebuilding already existing buildings. At Pentele, the palisade was established on the site of an earlier Árpáadian Age and medieval settlement, possibly identical with the early castle of the Andornak kinship group, while the late palisade at Adony was built around a ruin (the church of the medieval settle-

ment or the Kinizsi *castellum*). The same can be assumed for Ercsi, although there is no clear indication of this in the sources. The tower and the castle at Vál were created from the rebuilding of the medieval church, while the core of the Turkish castle at Szabadbattyán/Csíkvár was the Batthyány *castellum* (or its site). At Híd-vég, the use of the Celtic hill fort and its ramparts can definitely be considered as a possibility.

Berkigát: an Unknown Turkish Palisade in Southern Transdanubia

The starting point for this study was a brief and – at least at first glance – rather unexciting Turkish document that I first encountered during my doctoral studies in Vienna in 1995. A more thorough study of this document and other related sources resulted in the “discovery” of a hitherto unknown Turkish palisade (*palanka*) in Transdanubia.

This study will cover three main subjects: the name and location of this stronghold, based on the Turkish document; the written evidence on its construction; and, finally, the circumstances of its destruction.

My investigation of the relevant documentary evidence revealed that this fortification came into the focus of diplomatic and military clashes between the Ottoman and the Habsburg empires, two rival powers of the day. The interest in this palisade cannot be explained by its strategic location, or by its strength or size. Even so, it became a touchstone of the peace treaty concluded in 1606 that was subsequently confirmed several times.

The relations between the two empires were upset in the middle of the 1650s when György Rákóczi II, prince of Transylvania, defied his suzerain, the Ottoman Empire, in order to pursue the political ambition of his father, namely acquisition of the Polish throne.¹ His ally, King Carl Gustav X of Sweden regarded, King John II Casimir of Poland as a dynastic rival, since the latter had demanded the Swedish throne for himself after the abdication of Christina, daughter of Gustavus Adolphus. The advance of Carl Gustav's troops was halted with help from Brandenburg. At this point, the prince of Transylvania joined the conflict on the Swedish side (1656–57). The situation was further complicated by the fact that Rákóczi, believing the Ottoman Empire to be weakened by internal conflicts, had neglected to ask the Sublime Porte's approval before launching his Polish campaign. He also failed to perceive that the appointment of Köprülü Mehmed as grand vizier in 1656 had stabilised the foreign and internal policy of the empire. When the Danes, too, joined the conflict against the Swedes, Carl Gustav retreated, abandoning Rákóczi in Poland

and thus forcing him to conclude a peace treaty (1657). Rákóczi's military action, however, had aroused the wrath of his Ottoman overlords. Another interesting aspect of the events is that while the war was raging in Poland, Habsburg troops led by Melchior von Hatzfeld and Raimondo Montecuccoli also intervened against the Swedes. When Rákóczi returned to Transylvania, his only hope against the Ottomans lay in the Holy Roman Empire and, in particular, in the Viennese court.² Köprülü Mehmed demanded Rákóczi's abdication and the election of another prince in his stead. The Transylvanian Estates refused to accede to this demand and this, in turn, brought repeated Ottoman attacks against Transylvania. A series of Hungarian campaigns was launched in Transdanubia to counter the renewed Ottoman military activity. A seemingly insignificant event, such as the construction or destruction of a small *palanka* in the border region, was viewed in an entirely different perspective if it had any bearing on the outbreak of general hostilities or the continuance of peaceful relations. The history of the Turkish palisade in question must be set against this political background.

We know that the civilian and military personnel were remunerated in one of two ways in the Ottoman Empire: they either received an *ex officio* estate (*timar*, *ziamet* or *hass*) or were paid a salary. The payment of these salaries was the greatest single burden on the sultan's treasury. The garrison troops serving in the Hungarian forts and fortresses represented a particularly heavy financial burden on the Ottoman state. The past few years have seen an upsurge of interest in the troops serving in the Turkish border fortresses of Hungary.³

We have a fairly good idea of how a salaried soldier serving in one of the Turkish border forts or fortresses of Hungary acquired a post that provided a secure living for him and his family. The Archives of the National Library in Vienna (Handschriftensammlung, Nationalbibliothek Wien) has a large collection of Ottoman documents. One of these is a rather brief one that can be found among thirteen Turkish letters on different themes from different periods (Appen-

¹ VÁRKONYI 1984, 12–13

² ZÖLLNER 1974, 248–252.

³ HEGYI 1995; RÖMER 1995; SCHWARZ 1997. Klára Hegyi's excellent book offers a detailed overview of the number, the ethnic composition and the various branches of service

of the Turkish soldiers serving in Hungary; Claudia Römer studied the process of how the mercenaries were appointed to the Turkish border fortresses of Hungary in the time of Murad III (1574–1595), while Klaus Schwartz's recently published thesis discusses a similar theme.

dix II).⁴ Similarly to its European counterparts, the Ottoman Chancellery used documents of different types when dealing with different issues.⁵ The document in question here was an *‘arz* (“petition”, “application”), the original meaning of the word being “submittal” or “presentation”, and it can be related to the ceremonial act in the Sultan’s *saray* when dignitaries sitting in the *divan* appeared personally before the sultan to make their reports. This ceremonial act was called *‘arza girmek* (“to participate in a sultanic audience”).⁶ Lajos Fekete thus considers this document type a variant of the report, although he fails to mention perhaps its most important usage, namely its role in appointments to salaried posts.⁷ A few years ago Claudia Römer published a number of documents showing that this document type was used extensively and that it was suitable not only for applying for various posts in the garrisons of fortresses and posts involving a regular salary, but also for petitioning for an *ex officio* estate.⁸

The above brief overview of the diplomatic events was necessary since the name of the palisade in question first appears in one such petition document. This document tells us that a new palisade was built at Berkigát in the *sancak* of Pécs, in the *vilayet* of Kanizsa, and that a certain Mehemmed with a daily salary of twenty *akçes* was appointed *aga* of the *azabs* there. After the *aga* died, he bequeathed his post to Şehbâz, his legitimate son. Ahmed, deputy of the *sancakbeyi* of Pécs wrote a petition requesting that Şehbâz receive his father’s post.

The document is not dated; this is not unusual in the case of the *‘arz*. Since this document made the rounds of the state bureaucracy, it contains a number of remarks that were jotted down on the document. These show that the request was eventually granted and that Şehbâz received his father’s post. The date when the document (*berât*) containing the final confirmation was drawn up – zil-qa‘de 8, 1066 (28 August 1656) – was also noted down on the original petition, offering an approximate date for the events in question.

According to the Turkish document, the stronghold had just been constructed when Mehemmed, *aga* of the *azabs* died. We may assume that quite a few months elapsed between the drafting of the petition and the final confirmation. Assuming that Mehemmed served in the new fortification for a brief time before his death, we may date the construction to the previous year (1655). As a matter of fact, the date of construction can be precisely determined from another document. In a letter dated 3 June 1655, László Pethő, captain of Kiskomárom and a *servitor* of Ádám Batthyány, mentions that, as far as he knew, the construction of the castle at Berki would be completed the same week that he wrote his letter. He also reported that its commander was called “Black Mehmet”, that the castle would be garrisoned by 70 infantrymen and 250 Serbs, and that the Turks had employed a thousand peasants for the construction work, recruited from the area between the rivers Kapos and Drava.⁹

The Vienna sources from this period also mention the construction of the castle. In early June 1655, the War Council of Inner Austria (*Innerösterreichisches Kriegsrat*) informed the Imperial War Council (*Hofkriegsrat*) in Vienna that the Turks had built a palisade at Berki;¹⁰ it based its communication on reports submitted by Philipp Graf von Mansfeld¹¹ and László Pethő. The War Council of Inner Austria and the Imperial War Council in Vienna both believed that it would be best not to provoke the Turks with a possible military intervention. They suggested that the newly constructed stronghold should not be destroyed, but that two counter-strongholds should be built, one at Szentmiklós (probably identical with Magyarszentmiklós in Zala County) and another at Hídvég (probably identical with Zalahídvég on the River Zala). The task of building these castles was entrusted to Count Ádám Batthyány.¹² Since these operations affected the peace treaty between the two empires, Simon Reninger, the envoy in Constantinople, was informed of the events.¹³

⁴ ÖNB Mxt. 670. fol.: 8 (FLÜGEL 1866, 304). This document was probably originally housed in the *defterdar* office in Buda. A great number of *defters* and other Turkish documents were captured after the liberation of Buda in 1686. Although the greater part of these Turkish documents perished, some officers in the Christian army, such as the Italian Marsigli, made efforts to preserve the written documents of the Ottoman occupation period.

⁵ FEKETE 1926, XVI–LXII.

⁶ SERTOĞLU 1986, 20.

⁷ FEKETE 1926, LIII–LIV.

⁸ RÖMER 1989, 28–80.

⁹ Hungarian National Archive (MOL), Family Archives (CsL) P1315, archive of the Prince Batthyány family. Batthyány I. Ádám, 1655: No. 725. László Pethő to Ádám Batthyány, 3 June 1655, Kiskomárom, abstract. Here I should like to thank Géza Pálffy for kindly providing me with a photocopy of this document.

¹⁰ I[inner] Ö[sterreichischer] Geheimbe vnd Kriegrath Manßfeldt vnd Ladisl: Petheo, wegen der Türkischen erpauung deß Castell Perky. June 1655 (in the first days of June, according to the entry). ÖStA KA HKR Prot. Exp. Bd. 311 (1655) fol.: 185r, Nr. 65.

¹¹ Philipp Graf von Mansfeld was castellan of Győr between 1643–57. PÁLFFY 1997b, 276–277.

¹² ÖStA KA HKR Prot. Reg. Nr. 312 (1655). fol.: 117r. Nr. 91. June 17, 1655. Imperatori die I: Ö: Rath Zuerindern, wegen des baues Bereky von denen Türckhen. Item St. Niklases vnd Hidweg Bau, dagegen v[on]. gr. Batthiani Zuerichten; ÖStA KA IOK Exp. (1652–1655) Nr. 66/2 fol.: 48r-v. June 13, 1655. Ihr Khayserliche Mayestät Erindern die I: Ö: Geheimben vnd hoffkriegß rätthen auf deroselben eingeraichten Berichten, Guettachten, die 2. Posten Sturlicz vnd Bereckhy betreffend, daß nemblichen selbe mit gewalt nit abgerissen, hingegen aber der Pasß St. Nicolaß wie auch Zu hidweg disseits gebauet vnd die Verrichtung dessen dem Canaisischen Gräniz Obristen Graff Adam Batthiani aufgetragen werden.

¹³ ÖStA KA HKR Prot. Exp. Nr. 312 (1655). fol.: 117v. Nr. 92. June 17, 1655. Reninger, communicatur wie die Türck-

On 23 June it was decided that Vienna would lodge an official complaint over the construction of the Berkigát castle, as well as over the construction of another castle at nearby Korotna, with both the Sublime Porte and the *beylerbeyi* of Buda. However, no military steps would be taken to resolve the issue, which was regarded a violation of the peace treaty.¹⁴ Although the details of the dispute between the two empires shall not be described here, suffice it to say that according to a remark in the *protocollums*, the issue of the palisade was still on the agenda of the Imperial War Council as late as the end of 1655.¹⁵ The Turks claimed that they had not built a new castle but had merely renovated an existing one.¹⁶ Although the final outcome was not influenced by this explanation, this reasoning was clearly more acceptable in terms of the Peace of Zsitvatorok (1606) and its repeated confirmations, since it did not involve the odium of violating the treaty. Incidentally, it seems that the construction of smaller strongholds on either side of the border encountered no particular opposition. The *protocollums* I have studied mention comparable incidents almost each and every year.¹⁷

The relevant documents offer no clues as to the location of the palisade in question. The prefix of Berkigát, "berki", suggests some sort of open woodland. I studied the toponyms of Zala, Tolna and So-

mogy counties and found fifty toponyms containing the prefix "berki" in Somogy County alone. Two localities near Pécs contain the element "berek": Dinnyeberki in Baranya County and Nagyberki in Somogy County.¹⁸ The report written from Edirne by the envoy Reninger and dated 14 March 1660 (Appendix I) offers a useful starting point in the quest for the castle's location. Commenting on the burning of the castle, he mentions that the palisade at Berkigát lay near Koppány, not far from Pécs, between the River Kapos and Lake Balaton.¹⁹ This description is far from accurate. I could not identify a single toponym among the settlements in the immediate vicinity of Koppány that could plausibly be linked to this castle.²⁰ As a matter of fact, Koppány was the seat of a *sancak* that had variously belonged to the Buda and the Kanizsa *vilayets* in the mid-seventeenth century. Nagyberki lies next to the Kapos; it is quite close to Pécs and is situated some twenty kilometres from Koppány.

I also examined the maps and the accompanying descriptions of the Kapos valley in the so-called *Josephinische Aufnahme*, the first military survey, prepared under Emperor Joseph II, but I found no reference to possible Turkish fortifications in the environs of Nagyberki (called Berki at the time).²¹ The lack of any references of this kind, however, does

hen mit Verlust vnder Leuenz abgetriben, vnd sie aber mahllen einen bau an deß Castel Berky angestellt.; fol.: 120v. Nr. 22. Imperatori, die I: Ö: Ráth auf dem anwösendhen hofkriegs Rath Zuverbescheiden, wie es mit den bau deß Schloß Corutna oder Bereky auf der Türchk Seüthen, dieser seiten aber den Pass Nikola vnd Hitwegen Zuhalten, aber an der Porten oder Vesir Zu Ofen Zuanten. June 23, 1655.

¹⁴ ÖStA KA HKR Prot. Reg. Nr. 312 (1655). fol.: 120v. Nr. 22. 1655.

¹⁵ ÖStA KA IÖK. Exp. Nr. 66/2 (1652–1655) fol.: 83r. December 1, 1655. Ihr Khayserliche Mayestát Erindern die Stöllen gnädigst, wie daß sie von dero Zu Constantinopel anwesenden Residenten gehorsamist wehren Berichtet werden, daz sie die Porten einen neuen Bassa nacher Canisa Verordnet, welcher ein Vnruchiger Tyrannischer Mensch sein solle, dahero auf Ihme ein Wachtsames aug Zu haben sey, Item Berichtet er auch wegen des erhöhten Castels Berechi.

¹⁶ ÖStA KA HKR Prot. Reg. Nr. 312 (1655). fol.: 308v. Nr. 37. Mansfeldt, Zuberichten, ob daß von diesen Türckhen erbaute Castels Pereki eine alte Türckhsche Palanka gewäsen...

¹⁷ Beside the construction of the palisades at Korutna, Berkigát and Pinchely by the Turks, and the palisades at Szentmiklós and Hídvég by the Hungarians, the *protocollums* I have studied provide evidence for the building of palisades at the following locations between 1655 and 1660. It seems likely that some of the documents refer to one and the same stronghold. – (1) Turkish building activity at unnamed locations: ÖStA KA HKR Prot. Exp. 1656. cum Indice. 313. fol.: 235v. Nr. 117. auß Raab von 17. Aprilis, 1656. überschikht deß Obrist Wachmeister Kemptners relation über seine Verrichtung bey dem Vesir Zu Ofen, wegen deß Bischoff Zu Wesprin geclagte entführung über Personen auß Zu enyen dörrfern am Plattensee, vndt der Türkhen

Vorhabende erpauung eines neuen Castels.; fol.: 243v. Nr. 164. "Schlist bey waß der Hauptman Zu Tyhan Matthias Karazitsch von der Türckhen vorhabens erpauung eines Castels 2. Meil von Tyhan bericht." April 1656; fol.: 291. "Succurierung dem Manßfeldt, fahls die Türkhen ein neues Castel bawen wolten." May; – (2) ÖStA KA HKR Prot. Reg. 1656. Nr. 314. fol.: 167v. Nr. 54. "Mansfeldt Andtworth auf seines von 3. dieses wegen der türckhen insolenzien von Weißenburg vnnd erbauung eines neuen Castels Farakas Kelis genannnd, solches alles bey dem Vesir Zu Ofen, in falls noch nit beschechen Zu andten, vnnd den baw auf alle weis Zuerhindern." April 8; 22. fol.: 186r. Nr. 154. "Mansfeldt Antworth auf seines von 17 dieses ... 4. Verheitung bey dem Thürckhen des Neuen Verlauttenden Castels baw." April; fol.: 373. Nr. 145. "Reninger Andtworth auf seines von 21. vnd 31. July wegen der Zu Wesprin vnd Neupauenden Palanka vnd waß der Groß Vezir deß auß geblinderten Laufleuth halben andet," September 23.; ÖStA KA HRK Exp. 1660. Nr. 321. fol.: 391r-v, Nr. 85. Battiani klagen wider den Ober Hauptman Zu Klein Comern Ladislaum Petheö daß derselbe ainen Mayrhoff sambt einer Scheürn an die Vestung bawen laßßen.; ÖStA KA HKR Prot. Reg. Nr. 322. 1660. fol.: 74r. Nr. 3. May 2, 1660. Wegen *restauration Seruas* [Szarvas] vnd der Türkischen Kriegsapparaten Andwort auf des Homonay schreiben wegen des bemelten Castels *Servas, excursion per confiniarios Canisenses, et exustio Berki*.

¹⁸ Kiss 1980, 180 and 441; PAPP – VÉGH 1974.

¹⁹ ÖStA HHStA Türkei I (Turcica) Karton 132. Konv. I (January–June 1660) fol.: 19a.–21.

²⁰ BIRKEN 1976, 29, 32; FEKETE 1932, map; PITCHER 1999, map 29. Koppány is here depicted as belonging to Kanizsa, while Pécs is shown as belonging to Buda, which could hardly have been the case in 1656, especially not in the light of the Turkish document discussed here.

²¹ Original – Aufnahme, Collo: IX, Sectio 26.

not exclude the possibility of the brief existence of a Turkish fortification in the mid-seventeenth century. Suffice it here to quote Pinchehely, a castle the Turks intended to renovate in 1660.²² The maps and accompanying descriptions of the *Josephinische Aufnahme* make no mention of this abandoned Turkish palisade. By contrast, a castle that had formerly functioned as a Turkish stronghold at Tamási in Tolna County is mentioned.²³ An overview of the relevant geographic descriptions of the area revealed that an ancient road called "Sapkatöltés" ("Cap Embankment") by the local people runs through the outskirts of Nagyberki; according to local tradition the Tartars had carried the earth in their caps when building the roughly 120-metre-long structure that spans a deep valley. Dezső Csánki has noted that more probably the Turks built this road.²⁴

The text of the first military survey of Hungary, the *Josephinische Aufnahme*, records that Nagyberki – an important crossing place in the marshy Kapos valley – did indeed call for some kind of fortification. At the time of the survey a massive manor house stood in Berki (Nagyberki). The mill-brook created a marshland that could only be crossed at the bridges designated.²⁵

It is my belief that the Turks built the palisade to protect this crossing place. Together with the archaeologist István Torma, I reviewed the archaeological finds from the area, but there was nothing to suggest that the palisade had ever been sought systematically or that it had been found accidentally. I visited the area while writing this study and asked the local people whether they knew anything about a local tradition concerning the Turks. This is how I met József Pallósi, a 76-year-old agricultural engineer²⁶ who had a lively interest in history of his community. Although he was unable to confirm that Berkigát could be located in Nagyberki, I learnt from him that the population had changed completely and that the settlement is now inhabited by magyarised Swabians who probably know little, or nothing, of the settlement's past.

Finally, let us say a few words about the destruction of the castle. The available evidence suggests that

the palisade was destroyed sometime in February 1660, since Kristóf Batthyány's report, dated 5 March, mentions that Hungarian soldiers had captured, demolished and burnt the Turks' *palanka* at Berki that had been built in defiance of the peace treaty and in which the Turks had behaved tyrannically against the Christians.²⁷ That the destruction of Berkigát was indeed newsworthy is also shown by the fact that the Venetian envoy in Vienna mentioned this event immediately, in a report dated 6 March. According to this report, the Batthyány counts conducted a daring raid into Turkish territory, in the course of which they blew up a Turkish palisade and took five hundred prisoners.²⁸ Even if the number of Turkish prisoners seems a trifle high, we should bear in mind László Pethő's abovementioned letter according to which the garrison at Berki was 320 strong. Taken together with the later diplomatic conflicts, this would suggest that the castle was far from insignificant.

Kristóf Batthyány was acutely aware that he would have to find some plausible excuse for the behaviour of his men, either by claiming that the palisade had been built in violation of the peace treaty or by alleging that the horrendous crimes had been committed against the Christians. In 1660 relations between the two empires became extremely strained. In late February and early March Luis Gonzaga, captain-general of Győr, repeatedly presented the Turkish standpoint at the Imperial War Council in Vienna. According to reports by his chargé d'affaires, Berkigát's destruction was the work of Kristóf Batthyány's men, who – allegedly – had been led by László Pethő, captain of Kiskomárom.²⁹ The *protocollum* reveals that the affair had been handled not by Seydi Ahmed, *paşa* of Buda, but by his deputy, the *kaymakam*. (The *beylerbeyi* of Buda was at the time in Edirne, where he received the post of *serdar* of the Transylvanian campaign against György Rákóczi II.)³⁰ Although the Turkish troops in Buda were preparing for the campaign against Transylvania, a number of diplomatic moves were made because of Berkigát. Knowing the news from Buda, Luis Gonzaga advised

²² ÖStA KA HRK Exp. 1660. Nr. 321. fol.: 340r-v. Geheimbe vndt deputierte Rath zur Wien vom 13. Septembris 1660. ...der Türkhen reparierung beider Castell Berki vnd Penzehell.

²³ Original – Aufnahme, Collo: XI, Sectio 27.

²⁴ CSÁNKI 1914, 117. Nagyberki: the settlement appears as Berki in the 1673/74 Turkish register that records three tax-paying households here. Although the remains of a fort are also known in this area, István Torma of the Archaeological Institute in Budapest has kindly informed me that this is a prehistoric site.

²⁵ DOBAI 1983, 156. Although some sort of reference to the Turks appears in almost all geographical names of the settlements in the area, the following piece of information is most certainly interesting: "Local tradition considers the medieval ruin in the corner of plot 1333/3 to be the remains of a Turkish mosque. Sági's 1952 report, Hungarian National Museum, inv. no. A. 81. Sz. I., quoted in *RégFüz* Ser. II (13) 102.

²⁶ Szalacska-hegy (Szalacska Hill) lies south of the settlement. According to local tradition, a castle stood on the hilltop and it took King Stephen the Saint seven years to capture it. József Pallósi wrote a poem, "The Castle of Szalacska", to commemorate this siege.

²⁷ ÖStA KA HRK Prot. Exp. Nr. 321. (1660). fol.: 105r. Nr. 68. Batthiani Vom 5. Martj 1660, bericht, daß die Granitzer daz wider den friden Von denen Türkhen erbaute Granitz hauß Perki, in welchen sie mit denen Christen sehr Tyrannisch Vmbgangen, erobert, demolirt, vnd Verbrent.

²⁸ PRIBRAM 1901, 389. Here I should like to István Fazekas for drawing my attention to this source.

²⁹ ÖStA KA HRK Prot. Exp. Nr. 321. (1660). fol.: 105v. Nr. 70. Luis Gonzaga vom 18: vnd 22. februaris: 3. vnd 10. Martii auisiert, waß ihme der Zemper auß Ofen von dem Turckhischen statu aldorten berichtet ... daß Batthiani Granitzer hetten sich daß Türckhischen Granitzhauß Perki bemächtiget, diese Parthey habe der Ladislaus Petheö gefüchret.

³⁰ GOR, VI. Pest, 1830, 69.

the Imperial War Council to punish Kristóf Batthyány in order to maintain the peace.³¹ As a matter of fact, the Ottomans had been misinformed about the man who had actually led the raid against Berkigát. It was not the captain of Kiskomárom, but János Ákosházy Sárkány, captain-general of Érszeg and also deputy commander of the border region in the Kanizsa area, who actually led the raid. The Imperial War Council punished both Batthyány and Sárkány, although the degree of this punishment remains unknown.³² Sárkány's letter of apology was filed on 8 May in Vienna. The written reprimand was deemed an important part of the diplomatic negotiations with the Ottoman Empire. Copies of this official reprimand were presented to the Buda *kaymakam* because it was believed that the punishment of the Hungarian notables would make a suitable impression on him, as well as on the Turkish dignitaries in Istanbul.³³ The captain-general of Győr presented the *kaymakam*'s letter dealing with the destruction of Berkigát, appending the protest lodged by Köprülü Mehmed, the grand vizier. Gonzaga also sent a list of the Turkish captives.³⁴

While the military preparations for the campaign against Transylvania were continuing in Istanbul, the destruction of Berkigát added more fuel to the flames. The Habsburgs desperately wanted to maintain peace and they instructed their envoy, Simon Reninger, to this effect. (This was when he was informed of the raid against Berki, as well as of the construction of the counter-forts at Szentmiklós and Hídvég.³⁵) On 14 March, Simon Reninger reported that the *paşa* of Kanizsa had complained about the burning of Berkigát. The Ottomans claimed that Zrínyi, the Batthyány counts, Ferenc Nádasdy, and Luis Gonzaga, the captain-general of Győr, had performed this military operation with fifteen thousand men and a

few cannon. The experienced envoy to the Sublime Porte also noted that the Vienna court should not react in haste, since it could turn out that the whole affair was over-stated. ("Ich sey aber der mainung man solle besser nachricht einzeihen, vnd denen Gräniz relationen, welche gemainiglich passioniert oder falsch Zu sein geflegten, nit geschwindt glauben beymessen, die Gränizer geflegten Zum öfftere auß einem finger ein hand Zumachen."³⁶) He was certainly correct in noting that the *paşa* of Kanizsa had exaggerated the number of the Hungarian troops who had destroyed the palisade.

The documentary evidence shows that the Viennese court did everything in its power – stooping even to self-abasement – to preserve the goodwill of the Turkish dignitaries. In late April the Imperial War Council asked Reninger to provide information as to whether the Ottoman military preparations were aimed against Rákóczi in Transylvania, against Dalmatia, or against Batthyány for the destruction of Berkigát. The envoy was instructed to do everything in his power to maintain the peace and to emphasize repeatedly that Kristóf Batthyány had been called to account for his actions. The Imperial War Council also let it be known that it would agree to the rebuilding of Berkigát, as well as nearby Pincehely, if the Turks so wished. Instructions to this effect were sent to the Hungarian dignitaries and notables right the way up to September.³⁷

The sources do not mention whether the small stronghold beside the Kapos was ever rebuilt. Still, this issue cropped up repeatedly in the various reports from 1660, a remarkable fact knowing that the same year saw the campaign against Transylvania, the death of György Rákóczi and the fall of Nagyvárad. It would appear that even in 1661 Berkigát had not been rebuilt. Miklós Zrínyi's famous letter

³¹ ÖStA KA HKR Prot. Exp. Nr. 321. (1660). fol.: 165r. Nr. 136. Luis Gonzaga vom 1. April 1660. ... dem Batthianj wehre ein reprimentum Zugeben.

³² ÖStA HKR Prot. Reg. Nr. 322. 1660. fol.: 51v. Nr. 68. March 30. Verweiß wegen des auf Perki von sein vnd[er]-halbe[nden] Gränizen getanen staifs. (sent to Batthian.) April 12, 1660; fol.: 54v. Nr. 19. 1660. Aprilis 12. Verweiß wegen des Castels Perki so durch die Gränizer des Grafen Batthiani ruiniert vnd abgebrendt worden. Addressed to Sarkani Vice Generali Confinior Canisa oppositorum. 12 April 1660; fol.: 62v. Nr. 66. 1660. Aprilis 26. Antwort auf seines von 7. April auf des Caimecam Zu Ofen an Ihme abgelaßenen schreiben wegen des Castelo Perky, solle waß vorher in dieser materia geschriben worden, einschikhen, mit beischluß des Batthiani verantwortung. Addressed to Don Luis Gonzaga, 26 April 1660; fol.: 79, Nr. 28. Wegen bestraffung der Rädelsführer bei neulicher excursion deß Schloßes Perki. 8 May 1660.

³³ ÖStA HRK Protocoll Reg. Exp. 1660. Nr. 321. fol.: 197v. Nr. 92. Sarkani von 8. May 1660. Entschuldigung wegen der strauf auf Perkj (The name Sarkani is jotted down in the margin, pointing towards Perkj, as a demonstrative particle. But this only makes sense if we assume that Sarkani was also responsible for burning the palisade.) He was deputy captain-general of the border area opposite Kanizsa 1656–1671, and captain-general of Érszeg 1656–1660. Cf. PÁLFFY 1997b, 257–288.

³⁴ ÖStA HKR Prot. Exp. 1660. fol.: 229v. Nr. 30. Obrister Zu Luis Gonzaga vom 13: vnd 28. Maii antwortt, Waß Er dem

Caimecam Zu Ofen wegen Perki geschrieben, vnd waß es mit des Vesirs eingeschickhten Clagen für beschaffenheit habe. Item die lista der gefangenen Türcken, vnd vnter seiner anuertrautn Gränitzen befindlichen herrn Diener.

³⁵ ÖStA HKR. Prot. Reg. Nr. 322. 1660 fol.: 47r-v. Nr. 49. March 17, 1660. Recepisse vom 21. Xbris (Decembris) vnd 16. Januarii wegen der Türckhen Krüegs außrüstung neben andeutung daz man disseits dem frieden begehre Zu *conseruieren*, vnd den Rakozii nit Zuassistiern: dan auch wegen seiner raiß mit dem GroßVesir, hinderlassung einer ander Persohn bey dem Sultan anstatt seiner, straf auf Perckhi, erbaug Miklos, vnd hidweg gegen Perki, der Türckhen *exorbitanzen* in erpressung schweres Tributs.

³⁶ Turcica Karton 132. Konv. 1. (January–June, 1660) fol.: 19a.-21. Reniger's report from Edirne, 14 March 1660. der Bassa von Canisa hat alhero bericht, daß der Graf von Zerín, Batthyan, Nadasdy vnd der Obrister von Raab mit 15.000 Mann, vnd mit etlich stüekch ... This important document is included as an appendix to this study.

³⁷ ÖStA HKR Prot. Reg. Nr. 322. 1660 fol.: 53r. Nr. 9. April 1660. Mit Überschikung der acten in Anno 1655 wegen erbauten Castels Berky in den Situatorokischen frieden nach Zu schlagen vnd mit guettachten Zu berichten. The addressees and the reference word of the issue can be read beside the entry: Pucher, Schwarzenhorn, Berky; fol.: 182v. Nr. 69. 29 September 1660. Wider den aufgerichteten frieden mit den Türckhen in guethem Verstandnus nihts neues Zu lassen noch die 2. Orten Binzelhel vnd Berki wider aufbauen Zulassen. Addressee: Batthiani, Zrin; fol.: 183r.

to the Imperial War Council in Vienna explaining the reason for rebuilding Új-Zrinyivár also mentions Berkigát. He notes: "The Turks have no right to complain. How can they object to our doing something that they themselves do? They have already erected at least three or four new fortifications and they are now planning the rebuilding of Beligát [Berkigát] burnt by the Hungarians last year."³⁸ The events also took their toll on the settlement, since the 1673/74 *defter* mentions only three tax-paying households.³⁹

The starting point for this study was a Turkish document recording that Sehbaz, son of Mehemmed, *aga* of the *azabs* of Berkigát, was officially appointed to his father's post in 1656. I wondered whether I could find out something about the subsequent fate of this Turkish officer. Was he among the defenders of the castle at the time of the attack, and if so, did he survive the raid or did he join his father in the Paradise of his belief? For over a century the Batthyány family kept a register of the captives living on

its Transdanubian estates.⁴⁰ The last date on the carefully ordered documents is 1659; the documents for the year 1660 either perished or were never drawn up. We therefore know nothing about the fate of this Turkish soldier, even though an episode in his life offered an all too brief insight into the history of a hitherto-unknown Turkish castle.

LIST OF ABBREVIATIONS:

BOA MD. Başbakanlık Osmanlı Arşivi, Mühimme defteri
MOL, CsL P1315. Hungarian National Archives, Family Archives
Original – Aufnahme. Original – Aufnahme von Ungarn.
Colló: IX Sectio 26. Map Collection, Department of Geography, University of Szeged
ÖNB Mxt. 670. Österreichische Nationalbibliothek (Handschriftensammlung)
ÖStA KA HKR Prot. Exp. Österreichisches Staatarchiv, Kriegsarchiv, Protokolle des Wiener Hofkriegsrates, Expedit
ÖStA KA HKR Prot. Reg. Österreichisches Staatarchiv, Kriegsarchiv, Protokolle des Wiener Hofkriegsrates, Expedit
ÖStA KA IÖK Exp. Österreichisches Staatarchiv, Kriegsarchiv
Innerösterreichischer Kriegsrat, Expedit
Turcica - ÖStA HHSStA Türkei I (Turcica)

Appendix I

Simon Reninger's report from Edirne (14 March 1660)

ÖStA HHSStA Türkei I. (Turcica) 132. 1660. Konv. I. (January–July) fol.: 19a.–21.
Expedit den 26. April 1660.

Reniger auß Adrianopl von 14. Marty 1660. wegen abgebranter Palancka Perkigat genant, ...

Allergnedigister Kayser vnd Herr etc. der Bassa von Canisa hat alhero bericht, daß der Graf von Zerín, Batthyan, Nadasdi vnd der Obriste von Raab mit 15.000 Mann, vnd mit etlich stückh vnweit von fünff Kirchen bey Kopan Zwischen Zwayen Wassern, Kopus und Balatin ein gewisser Palankha /Perkigat genant/ abgebrandt, Viech vnd Leüth weckhgeführt,

die Türckhen hetten Zwar anfangs vor die Palankha hinauß gebezt, weilen der feind aber in solcher anzahl vnd zu starckh gewest; alß hetten Sie nichts richten Können, sondern mit verlust 50. Mann sich wiederumb retiriren müessen, Es sey eine Alte Palanka vnd noch vor etlichen Jahren von einem Bassa Zu Canisa (Mustafa genand) repariert worden, man müesse Sie nothwendig widerumb aufbauen, vnd weilen der feind selbiger gegend sich starckh versamblet, Alß solle Mann die Völckher welche nach Sübenbürgen wider den Rakozzi destiniert, vilmehr diß orths gebrauchen, der Groß Vesier hat gleich erlaubt das mann die Palanka

Nr. 72. 29 September 1660. geheimen vnd Deputierten Rät. ... werden beantwortet auf ihre Von 18. vnd 20 Sept: die Verlautende zuenembung der Türchen gefahr vnd darüber gemachten Versorglichen anstanten betreffend; ...wegen der Türchen Verlauf /ter den erbauung Pinzehel, vnd Perzin (probably a misspelt form of Perki; fol.: 249r. Nr. 23. 13 September 1660. Wegen Übergaab Waradein *inhibernung* der *Executionen* wider die Türkhen, *Reparierung* der zwey Castell Berki, vnd Pinsehell, *succurierung* der Vestung Raab Vnd fortification gelter. The addressees and the reference word for the matter can be read beside the entry: Imperatori, Wardein Übergaab; Berki, Pinszehel Castellen; fol.: 249r. Nr. 24. u. akkor mint fent: Antwort auf seine Von 9: Anno 7ber: wegen der Excursionen deß Vazierenden gesindels, *reparierung* Berki und Pinze-

hel, wie auch der *fortification* gelder. Addressed to Obr. zu Raab; fol.: 249.r-v. Nr. 25. Wegen *Inhibernung* der *Executionen* wider die Türkhen, vnd *reparierung* der Caßtel Berki vnd Pinzehell. The addressee and the reference word for the matter can be read beside the entry: Batthianj, reparatur.

³⁸ PERJÉS 1976, 347–348. The original is housed in Library of the Eötvös Loránd University in Budapest, HEVENESSY Collection, Tom. LXIX fol. 248–249 (no. 247). It was published by KANYARÓ 1888, 605. Here I should like to thank Gábor Hausner for calling my attention to this document.

³⁹ CSÁNKI 1914, 117.

⁴⁰ VARGA J. 1991, 121–133.

widerumb aufbawen soll, mir aber durch den Panaioti ermeltes Bassa von /19.v./ Canisa brief geschickht, vnd ableßen lassen, mit vermelten, Er sehe woll das Mann ein größers feuer anzusteckhen entsinnet, dann Komme Kein schreiben von Gränizen wo nit wider bedeüte herrn Grafen Clagen vnd grauamina beygeschlossen, wann man Sie ie nit bedingen vnd ie Zaumb halten Käme, so solle Mann Sie Turchen mit ihnen handeln lassen, die Sach sey von übler consequenz, vnd ein gefährliches wesen, ich soll alß bald ein aignen menschen agfertigen, Eür Kayh: Matth. von ein, vnd ändern allervnterthenigist parte geben, damit ein grössers Übel bey Zeiten verhüettet werde,

Ich hab durch Panioti widerumb andwortten lassen, daß der Currier vnd die expedition gleich fertig sein werde, Ich sey aber der mainung man solle besser nachricht einzeihen, vnd denen Gräniz relationen, welche gemainiglich passioniert oder falsch Zu sein geflegen, nit geschwindt glauben beymessen, die Gränizer geflegten Zum öfftere auß einem finger ein hand Zumachen, vnd mit ihren Clagen daß ienig Zuuerdenkhen, was Sie verbrechen, wehr weiß ob Sie nit etwo /20.r./ Vrsach geben, oder ob ermelte Palanka nit etwo wider die friedens Capitulation gebawet worden, ohne Vrsach wurde gewiß Kein solche hostilitet verübt werden. ...

Appendix II

Petition of the *kaymakam* of Pécs on behalf of Şehbâz

بروز بیاریک

ویرگانه حاکم مدار و بیاریک که در حوزة اقتدار برتر از بعضی بن محمد زور، قند و لایم
 بکوی شیخ محمد و آغا بنا اولی که بی خط بلنق سنه یوچ بکوی رقی لیا عزیزه
 آغا رفیع محمد فوت اولی آغا نقی صبیح صلیب ادعای لطفه شرحه و توضیح اولی
 هندو برتر از آغای نقی و کورین شهباز قولندیم و ازین آغای که برتر از
 صدق قندین بودیم و کما بعضی اولندیم بانه فناه و در کماله
 قانع
 کور
 خلا

۱۰۶۶
 ۱۰۶۷
 ۱۰۶۸
 ۱۰۶۹
 ۱۰۷۰
 ۱۰۷۱
 ۱۰۷۲
 ۱۰۷۳
 ۱۰۷۴
 ۱۰۷۵
 ۱۰۷۶
 ۱۰۷۷
 ۱۰۷۸
 ۱۰۷۹
 ۱۰۸۰

Inv. no.: ÖNB. Mxt. 670.8; Flügel II. 304.
The document is undated, but a date was jotted down next to the first line (*der kenār*): *fī zilqa'de sene-i 1066*, i.e. 8 August 1656.

Size: 29.6 x 19.5 cm.

Seal: An oval seal in the lower right corner on the reverse; from its legend only the name *Ahmed* is legible.

Hüve

1. *Dergāh-i felek-medār ve bargāh-i gerdūn-iqtidār turābına 'arz-i bende-i bī-miqdār budur ki Qanīza vilāyetine tābī'*
2. *Peçūy sanğağında müğdedden binā olunan Bırqı Ğāt palanqasında yevmī yigirmi aqçe ile 'azeblere*
3. *ağa olan Mehemmed fevt olub ağalığı şahīh şulbī oğlu olan Şehbāza tevğih olunub*
4. *henüz berāt etmedi ağalığı mezkūr (!) Şehbāz qullanna ferāğāt etmegin berāt-i şerīf*
5. *şadaqa u 'ināyet buyurılmaq riğāstıyle 'arz olundu bāqī fermān der- i 'adlındür bende Ahmed qāimmaqām-i Peçūy hālā*

Remark above the text: *berāt yazıla*

Remark beside the first line: *yazılmışdur fi 8 zā (zī l-qa'de) sene-i 1066*

Remark beside the second line: *maħalle bu qadar qayd olmamışdur(?)*

Remark in upper left corner on the reverse: *maħalle bu qadar qayd olmamışdur(?)*

Remark under the seal in the lower right corner: *görüldi m[evcüd]⁴¹*

“Request of the insignificant servant to the dust of the throne in the axis of the sky and the court resembling the power of fate: Mehemmed, *aga* of the *azabs* with a daily salary of twenty akçe in the newly-built *palanka* of Berkigāt in the Pécs *sancak* of the Kanizsa *vilayet* has died. The post of *aga* has passed to Şehbāz, his lawful son, who has not yet received the letter of confirmation (*berāt*). Since the named *aga*'s post was conferred on your servant Şehbāz, [the issue was] submitted, requesting a favourable and gracious action regarding the noble letter of confirmation (*berāt-i şerīf*). The order is that of the court of justice.

[signature] The current *kaymakam* of Pécs, servant *Ahmed*

Remark above the text: The document of confirmation (*berāt*) should be drawn up.

Remark beside the first line: Drawn up on *zī l-qa'de 8* (28 August 1656).

Remark beside the second line: Not registered in its place to date.⁴²

Remark in the upper left corner on the reverse: Not registered in its place to date.

Remark in the lower right corner on the reverse: I have seen it, it is present.

⁴¹ The usual meaning of the word abbreviated by the letter *mīm* is “present” and in the *defters* it is usually used to indicate that someone is in his place. Cf. FEKETE 1955, 47, 97.

⁴² These notes would have been inscribed when the content of Şehbāz's first petition was not found in the registration *defter*. Had it been found, then *qayd süd* (“Has been entered”) would have been written. Cf. İNALCIK 1980, 5; RÖMER 1995, 66.

A Turkish Guard Station on the Lands of Drávatamási

When archaeological research was conducted on the Turkish palisade (*palanka*) in Barcs (Somogy County) between 1989 and 1994, attention was also given to other minor military sites in the area. These sites are rarely even mentioned in the written sources or published material.

During the Ottoman era there was a line of castles, palisades and guard stations along the River Drava, one of which was the palisade at Barcs. It was built in 1567 by the *bey* of Szigetvár immediately next to the Drava, its importance deriving primarily from the port there as the centre for a smaller Ottoman river flotilla.¹ In the proximity of Barcs, fortifications were located upriver at Babócsa, Vízvár, Bélavár, and Berzence, and downriver at Drávaszentmárton and Sellye. Also part of this chain, although somewhat farther from the Drava, was the palisade at Görösgal, lying approximately twenty kilometres northeast of Barcs in the direction of Szigetvár. The fate of these depended essentially on the control of two or three larger castles, in which regard Babócsa, Berzence, and above all Szigetvár were the most important.

Near these larger, more important fortifications were a number of smaller castles, outposts, guard stations and guard towers whose military value was rather minor at times since only small numbers of soldiers were stationed in them. The importance of these sites lay mainly in signalling, and in gathering and forwarding intelligence.² This paper offers an overview of the palpable traces of presumed sixteenth- to seventeenth-century guard stations in the area of Barcs, with particular regard to the guard station and bridgehead at Drávatamási.

The village of Drávatamási is located in southern Somogy County some 13 kilometres southeast of Barcs. Two kilometres east of the settlement is located a Calvinist cemetery, on the lands of Drávagárdony (to which the cemetery belongs administratively). Situated there is a 2-metre-high man-made mound that resembles a truncated pyramid in form. Its top

measures 25 metres by 25 metres. A ditch encircles the mound (Ill. 1). Traces of this ditch can be made out only on the western side; it is approximately 3 metres wide and 0.5 metres deep in its current condition. Modern burials have also been found on the mound, but no archaeological finds have been detected in the filling of the grave-pits.³ The mound is situated on what once was the north bank of the River Drava (Ill. 2). A field survey was conducted in the area in 1990: a thirteenth- to sixteenth-century settlement with Celtic-Roman antecedents was identified west of the mound, while a thirteenth- to fourteenth-century village overlying a Bronze Age site was discovered to the east.⁴ The local people call the mound Törökdomb ("Turkish Hill"), and according to local tradition it was one of the guard stations between Pécs and Verőce.⁵

Eight hundred metres to the northeast is another location with an interesting and "revealing" name: the wet marshy depression of "Kasté", from the Hungarian *kastély*, meaning castle (Ill. 2). Local tradition has it that a landed aristocrat built a castle on piles there during the Ottoman era. It is perhaps not by chance that the two toponyms are similar in meaning and in local folk interpretation.⁶ In 1998 I discovered an interesting passage in a work by Gergely Pethő de Gerse (c. 1570–1629) entitled *Rövid magyar kronika* [A Brief Chronicle of Hungary] that sheds light on the possible function of the Drávatamási artificial mound, on the background of the geographical names and on the history of the region in general.

In his introduction to the events of 1603, Pethő mentions that "Sigmond Tratmanstorfer, General of Slovakia,⁷ and Miklós Zrínyi the Younger took the two castles at Tamási, which had been built by the Turks on the banks of the Drava at either end of the bridge, burning both, along with the bridge, and slaying the Turks in them, on the twelfth day of October".⁸

According to this description, there was a bridge over the Drava at Tamási, which is now called Drávatamási.⁹ A Turkish "castle" protected each of the

¹ For the 1989–1994 research on the Turkish palisade castle at Barcs, cf. KOVÁCS – RÓZSÁS 1996; 1998.

² TAKÁTS 1915, 66–71; for a more detailed discussion, with regard to Vas County, cf. IVISICS 1993, 289–310.

³ Described by MAGYAR 1990, 104, but with inaccurate measurements. The archaeologist György Terei made a new geographical survey of the site, and I should like to thank him here for his work and help. Thanks are also due to István Torma and Géza Pálffy for their help and comments, and to Gyöngyi Kovács for her overall assistance and support.

⁴ Barcs, Drava Museum, Archives, inv. nos. 679–90; 1156–2000.

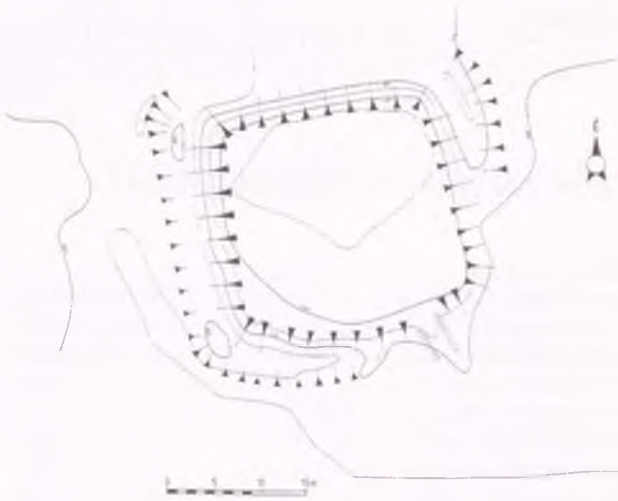
⁵ PESTY 1864; CSÁNKI 1914, 58.

⁶ PAPP – VÉGH 1974, 819–820.

⁷ This was Sigmund Friedrich Graf von Trauttmansdorf, captain-general of Slavonia (1603–1630)

⁸ PETHŐ 1753/1993, 155.

⁹ FÉNYES 1851, II. 173.



Ill. 1. Drávagárdony. Contour map of Törökdomb. (Survey and drawing by György Terei, 2000)

two ends. Pethő writes of two “castles”, the assumed site of one of which we know, its memory perhaps being preserved in the place-name Kasté. The fortification on the other bank of the Drava was probably destroyed during the regulation of the river in the late eighteenth and early nineteenth centuries. Between Barcs and Eszék (today: Osijek, Croatia) a number of bends were cut out, as a result of which the riverbed is now to be found approximately one kilometre south of its earlier location.¹⁰

Except for this passage in Pethő’s chronicle, no other mention of the bridge has been discovered. Still, the value and reliability of the quoted passage are enhanced by the fact that the author of the chronicle was familiar both with the area of Tamási and with the history of the River Drava in the sixteenth and seventeenth centuries. From January 1599 until September 1600 Pethő was captain-general of Babócsa, the nearest royal border fortress, until he surrendered to Grand Vizier Ibrahim, who was marching against Kanizsa, on 4 September 1600. Moreover, at the time the bridge was burnt (12 October 1603), Pethő was serving in Transdanubia under Ferenc Nádasdy, one of the best-known warlords of the region.¹¹

The Ottoman armies marching against Hungary during the sixteenth and seventeenth centuries traditionally crossed the Drava at the Eszék–Dárda Bridge. Undoubtedly, smaller forces and raiding parties may also have crossed at fords and impromptu

bridges, but the utility of these depended greatly on the height of the river.

An examination of the numerous surviving drawings, descriptions and military engineering surveys of the bridge at Eszék shows that the nearly three-kilometre-long bridge was constructed extremely well, optimally exploiting the geographic conditions. The bridge structure rested on posts over the marshy floodplains, and on boats (pontoons) over the two branches of the Drava.¹² The bridge was described in the same way by a number of travellers, including Evliya Çelebi, Edward Brown and Heinrich Ottendorff. In his description of Buda, Evliya noted that the bridge over the Danube, too, rested on boats, which he referred to as “air-bag boats” and “drum boats”.¹³

The bridge of Drávatamási was presumably similar in construction. The solution employed in the construction of the Eszék Bridge seems straightforward enough. A glance at the contour map of the region (Ill. 2) shows that the former bed of the river narrowed considerably at this location. According to the map – on a scale of 1:10,000 –, there were numerous islands and sandbanks in this section of the river. The formation and destruction of these has been a continuing phenomenon over the centuries. They may have been used as natural pillars during construction.

The use of a pontoon structure is also supported by archaeological evidence, although the remains found along the section of the Drava investigated thus far are not entirely clear. The remains of several “tub boats” carved from tree-trunks were found partly buried in the riverbank at Drávatamási in 1992 at a time when the river was low.¹⁴ A remarkable find was discovered in the muddy fill in one of the boats: a sixteenth- to seventeenth-century Turkish pewtered copper vessel with a spout (Ill. 3).¹⁵

As it happens, a number of other relatively intact “tub boats” have been unearthed in the Barcs area (although their exact dates remain unknown). One 11.35-metre-long example was unearthed in 1972 and is currently on display in Barcs.¹⁶ Another 10–11-metre-long specimen was recently found where the Rinya brook flows into the Drava at Barcs–Kömlőd. It was probably pulled out of the riverbank by the current.¹⁷

“Boats” carved from single tree-trunks may have been multifunctional, based on ethnographic analogies. They may have been used to support landing

¹⁰ The archives of the Széchenyi family preserve a number of maps relating to this: cf., e.g., Hungarian National Archive, P 623; Széchenyi family archive, IV, plans by court engineer Hofstaedter to cut through a bend in the River Drava on the edge of the Csokonya estate, from 1799.

¹¹ PÁLFFY 1997a, 200–201, 212.

¹² GAČINA – IVANKOVIĆ 1996, 8–44.

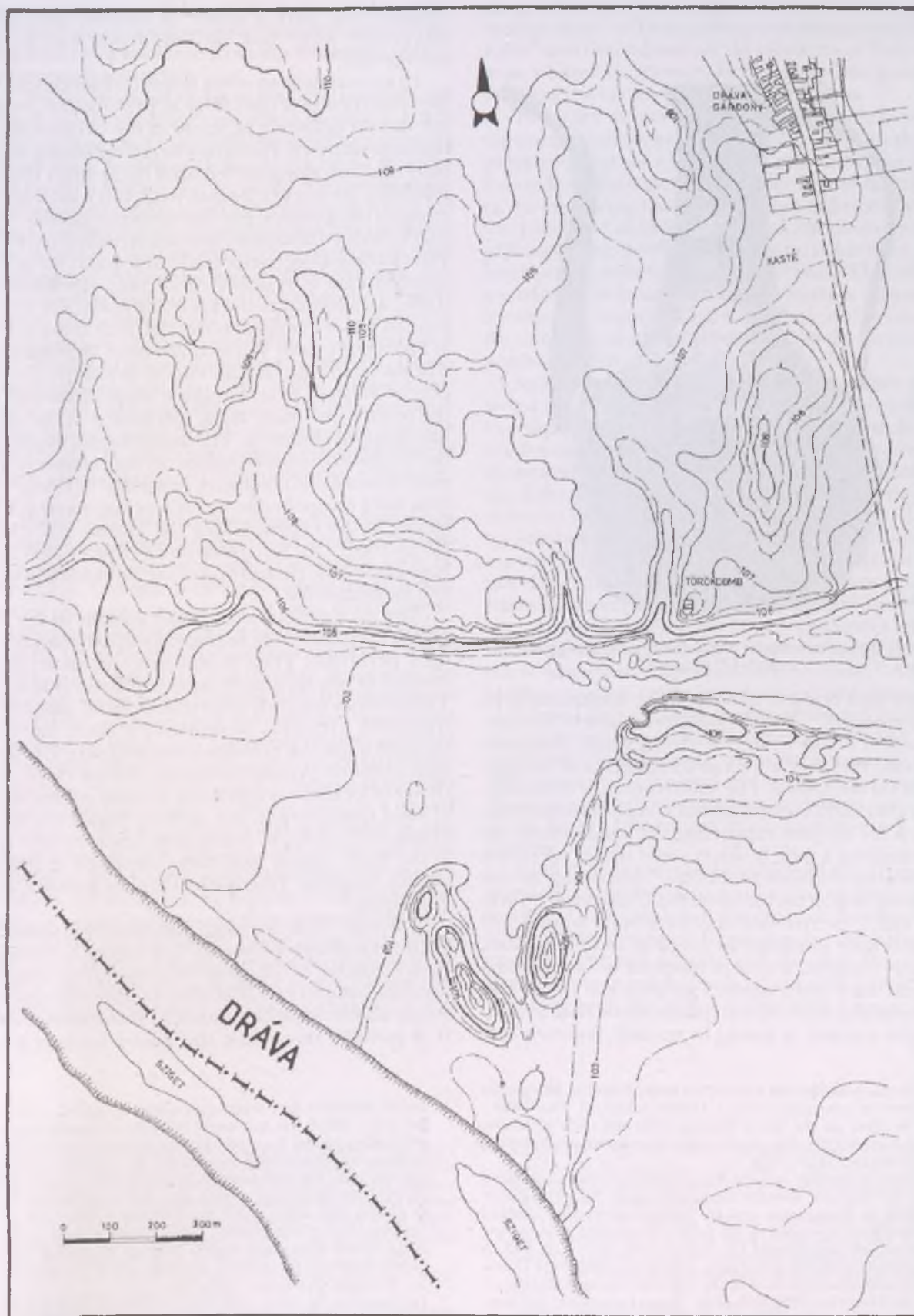
¹³ KARÁCSON 1985, 292.

¹⁴ Barcs, Drava Museum, Archives, inv. no. 878–92, and photograph archives, inv. no. 2698–2701.

¹⁵ Barcs, Drava Museum, Archaeological Collection, inv. no. 99.8.10.

¹⁶ Kept in unworthy conditions and now falling apart. It is described as a fishing boat in MAGYAR 1973. The bottom of “tub boats” used for fishing is almost always flat, or with very slightly curved, while for “boats” used for mills the natural curvature of the tree-trunk was usually preserved (ERIĆ 1993–1994).

¹⁷ Barcs, Drava Museum, Archives, inv. no. 1155–2000.



Ill. 2. Drávagárdony. Törökdomb and its environs. (Drawing by György Terei, 2000)



Ill. 3. Turkish copper vessel found at Drávatamási, 16th–17th century

stages and bridges, as well as the substructures of floating-mills.¹⁸ If such floats were used in the construction of the bridge at Drávatamási, it is quite possible that they were also components of floating-mills on the Drava. The substructure of a floating-mill generally consisted of four trunks, plus one large trunk for the part supporting the paddlewheel. By dismantling a mill, builders could obtain up to five extremely durable pontoons.¹⁹ According to the contour map, at the bottom of the Törökdomb ("Turkish Hill") the riverbed may have been around 100 metres wide; given that the length of an average beam was 4–5 metres, a total of nineteen to twenty boats would have been needed to span the river. The dismantling of four floating-mills would have provided this number. It should be stressed, however, that

floating-mills were a source of income; thus they obviously were not pulled down except in emergencies.²⁰

In an examination of the historical background to the construction of the bridge at Drávatamási, mention should definitely be made of the circumstances that necessitated it. Historians have long known that a busy road ran along the left bank of the River Drava, following the line of a Roman road; this road was still in use in the medieval and late medieval periods. The Eszék–Siklós–Babócsa section was actually part of the Pécs–Radkersburg transit road (cattle road), for which detailed data is available concerning the livestock traffic. In addition to the bridge at Eszék, the Drava boasted smaller bridges and ferries, such as the ferries at Szentgyörgy and Valpó southeast of Drávatamási. The mid-sixteenth century was the heyday for the export of livestock from Hungary, while by the end of the century the trade along this section of the river had dropped off sharply. The reason for this was partly the Ottoman conquest, and partly the collapse of the road network and commerce generally.²¹ These problems were compounded by various major and minor battles in the region during the Fifteen Years War (1593–1606). One such battle on 12 October 1603 may have caused the destruction of the short-lived bridge and its abutments.

The sites definable as guard stations in the region are situated in the swampy floodplains and along their perimeter. Their foundation was an artificial mound or appropriately modified natural hillock. The artificial mounds were usually in the shape of a truncated pyramid; occasionally a ditch was dug through a natural geological outcropping to isolate such a mound. A common feature for both is careful choice of location, as well as the fact that neither signs of solid construction, nor surface finds have been discovered on them. Artificial mounds of this type in the Barcs region have been identified at Dráva-szentes, Komlósd, Péterhida, Háromfa, Babócsa, and Kálmánca.²²

There are no archaeological sites on these mounds, but there is always one nearby. The surface finds range from Neolithic to fifteenth- to seventeenth-century material, but with very little from the sixteenth century and an almost negligible amount from the seventeenth. It is possible that when the guard stations were

¹⁸ For the possible function of 'tub boats' found in Hungarian rivers in connection with a Tiszabecs find, cf. PÁLL 1993.

¹⁹ For more on the Drava floating-mills and their structure, cf. KOVÁCS 1989. Also cited on several occasions in a historical survey by TAKÁTS 1915.

²⁰ Drava watermills and the dues payable on them are found in the sixteenth-century documents of the Szigetvár estate. Mills in Hungarian and in Turkish ownership yielded significant revenues, or the millers themselves paid to have them left unharmed. Cf. TIMÁR 1989, 227–229, 243. A pontoon bridge over the Sava, similar in width to the Drava, was constructed in 1521 in the following manner (BLAZOVICH – SZ. GALÁNTAI 1994, 308–309): "Boats [pontoons] that were brought by the authorities in large numbers from nearby areas, and those which were made for use in the village, were, having been tied together, placed lengthways at dis-

tances of twelve feet from each other across the width of the river, which was not more than three hundred paces, and beams passed from one boat to another were fastened to them with inch-thick iron nails." It is worth mentioning that until the mid-nineteenth century the "boats" were carved from single tree-trunks since the use of barges built of planks and ribbing did not become widespread until the latter half of the century. Thus, in the passage quoted, boats carved from single trunks held up the bridge. Evliya Çelebi witnessed the making of a large "boat" of this sort in the Muraköz (KARÁCSON 1985, 67).

²¹ For more on the cattle road and its traffic cf. SZAKÁLY 1973.

²² For more on the man-made or man-modified hills in the Barcs–Babócsa region, including geological surveys, cf. MAGYAR 1990, 50–55, 102–105.

created, use was occasionally made of the small fortifications in nearby medieval settlements. There is considerable evidence from the sixteenth century regarding this practice.²³

The late medieval and post-medieval outposts and guard towers no doubt controlled the major roads and junctions, and especially the important crossing points along the River Drava. It can be no accident that the First Military Survey (1782–85) mentions the crossing points at Komlósd and Péterhida, which led over swampland in the immediate proximity of Barcs. The Péterhida point is even marked on the map, with the diamond sign marking smaller fortifications, and there are even indications of buildings and possibly mills.²⁴ This solution, which used a brook swollen by a mill dam as a natural line of defence, was employed in a number of places during the sixteenth century. Contemporary sources refer to the strategic importance of mills and mill dams on numerous occasions, since in some places crossings were possible only there. The placement of sentry stations at these points often guaranteed control over an entire region.²⁵

There are few surviving contemporary documents or descriptions concerning these small buildings; their lives and outward appearances can only be guessed at. Even maps rarely designate them clearly, but for the area examined here some data is, fortunately, available. On his map of Hungary published in 1579, Johannes Sambucus (János Zsámboky, 1531–1584), court historian and private doctor to the emperor, marks a small tower with the inscription “Peterhida” at the edge of the extensive marshland surrounding Babócsa. This tower certainly does not refer to the village itself, since even much larger and more important villages are not shown. It appears indisputable that what is shown here is a guard station and crossing point belonging to Babócsa, one whose site which can very probably be identified as Péterhida. In the centre of a clearing, 500 metres south of the road linking Komlósd and Péterhida, there is a small hill known by the name of Gorica or Góricdomb (“Góric Hill”) rising quite high above the relatively flat ground. Ground formations show that at one time a large body of flowing water surrounded it. According to local tradition “it was

occupied by the Turks in the 1500s and Turkish paša resided there”.²⁶ This may be a case similar to that of Kasté and Törökdomb on the outskirts of Drávata-mási, where local memory has preserved the possible origin of the name over many generations.

There are numerous engravings – made to commemorate military events more often than for documentary purposes – that depict guard stations and towers from the time of the border-region skirmishes. An engraving showing the siege of Szigetvár – it was published in 1566 by Matthias Zündt (or Zyndt) of Nuremberg (1508–1572) – has no fewer than five small towers with the inscription “Wach Thurn” on the edge of the swamp around the fortress. Although the drawing is undoubtedly schematic and fictitious, the existence of guard towers around the fortress is unquestionable.

An entire network of smaller guard stations protected the larger fortresses. For example, according to a report by Archduke Ernest, in 1574, so many smaller castles and surveillance structures protected the nearby fortress of Kanizsa that more than half of the Kanizsa garrison soldiers were constantly stationed in them.²⁷

Somewhat farther away, but in an area influencing the fate of the region, the defensive network of the Muraköz district also included a series of guard stations and outposts. Outposts along the River Mura are mentioned many times in György Zrínyi's letters in the late sixteenth century, while a report from the late seventeenth century lists them by name.²⁸ A map by Montecuccoli made in connection with the siege of Zrínyi-Újvár in 1664 designates guard stations assisting communications between Légrád and Zrínyi-Újvár.²⁹ Evliya Çelebi, who visited this region in 1660, notes that at the border of Miklós Zrínyi's estates “there are surveillance or communications towers in a row on the hills, a gunshot's distance from one another”.³⁰

Géza Pálffy has recently published an extremely interesting map that is a copy of a Turkish map made in 1580. On it are shown the chain of fortifications in the Kanizsa region.³¹ Depicting also the forts and castles of Somogy County and the ones along the Drava, the map marks fortifications with a circle (Ill. 4). Along with the larger circles with a name that

²³ Medieval fortifications, too, along the Kanizsa brook were converted into sentinel posts (PÁLFFY 2000a, 26–27). The First Military Survey mentions, for example, that at Bézsény “There is still a rampart with a double moat, which can be easily converted for defence purposes” (DOBAI 1983, 123).

²⁴ Copies of the First Military Survey can be found in the Military Maps Archive, Collo: VII. Sectio. 27 (1784).

²⁵ Examples of guard stations and crossings converted from mills are mentioned by PÁLFFY 1999, 171, 195.

²⁶ In this instance the surviving place-name may preserve the memory of a guard station located here (PAPP – VÉGH 1974, 798).

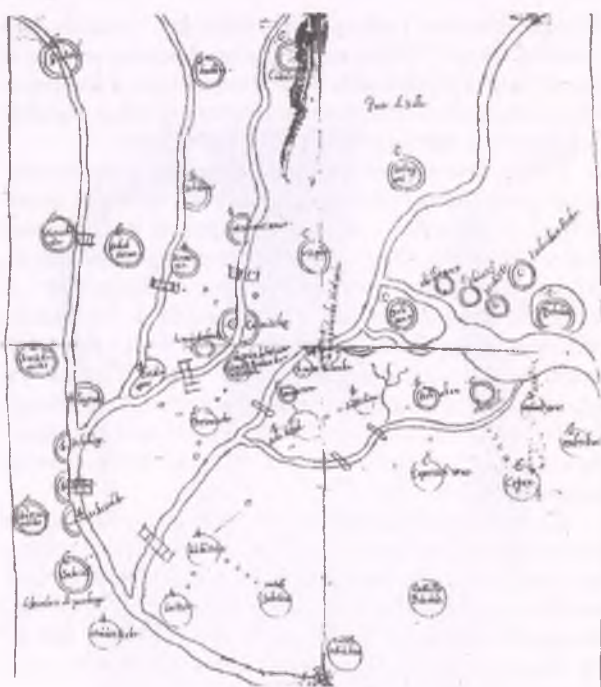
²⁷ TAKÁTS 1915, 68; The smaller outposts played an important role in the decade after 1577, also in the defence system built up in the marshy valley of the Kanizsa brook (KELENIK 1995; PÁLFFY 2000a, 20–28).

²⁸ TAKÁTS 1915, 69; György Zrínyi's 1582 sketch map of the guard stations on the right bank of the Mura and Italian military engineer Giovanni Giuseppe Spalla's 1670 military map of the Muraköz are presented in PÁLFFY 2000a, Appendices IV–V.

²⁹ Military Maps Archives. H. III. c.34.

³⁰ KARÁCSON 1985, 67.

³¹ PÁLFFY 2000a, 46–49; Appendix III.



Ill. 4. Map manuscript from 1580 (after PÁLFFY 2000a)

mark forts and castles, there are smaller unnamed circles that may designate guard stations. In the immediate vicinity of Barcs there are signal lines in two directions. One lies between Barcs and Babócsa, where the map shows two guard stations along a fifteen-kilometre section, at approximately equal distances from each other. This corresponds to the Barcs–Kömlőd–Péterhida–Babócsa line. Sites at Kömlőd and Péterhida can also be regarded as near certainties. Péterhida has already been discussed, while at Kömlőd local tradition speaks of a “castle” that once stood on Báthory-domb (“Báthory Hill”).³²

Presumably the artificial mound at Barcs–Dráva-szentes also fits into the same network.³³ This is apparently confirmed by the military survey mentioned earlier, where the map again marks smaller castles and other fortification works with a diamond sign, and also has markings for buildings and, possibly, mills. The second line stretches from Babócsa to Szigetvár and has four sentry points. This line we have not yet examined. Nevertheless, at Kálmánca, the most important point in the section, geographical names (Várhegy [“Castle Hill”], Látó-domb [“Lookout Hill”]) and a castle site similar in shape to those mentioned above preserve the memory of the line.³⁴

Since these areas changed hands repeatedly, the guard stations probably stood for short periods only. Their predominantly wooden structures perished by fire, while their ditches have disappeared owing to land cultivation and their foundation walls as a result of scavenging for construction materials. The Drávatamási guard station – which very probably was also a bridgehead – fortuitously embodies the characteristic features of these structures, while its modern use as a cemetery prevented its final destruction. The remains of the fortification show that further investigation of the historical sources and a more thorough knowledge of the region, geographical names and local traditions may shed light on many military sites constituting important parts of the fortification network in the Ottoman era but hitherto attracting little archaeological attention. Since the Drava marks a section of Hungary’s border, there have been few opportunities thus far to research guard stations on or near the old riverbank. The hills have been spared major earthmoving projects and have therefore survived; the chances for profitable future exploration there are better than in the interior parts of the country.

³² Mentioned in CSÁNKI 1914, 98; geological survey and description in MAGYAR 1990, 51, 103.

³³ This mound has hitherto escaped the attention of researchers. According to local tradition it was a “guard tower” (RÓZSÁS 1987, 32).

³⁴ PAPP – VÉGH 1974, 788; survey in MAGYAR 1990, 55.

Andrásvár: a Guard-Tower in Royal Hungary's Border-defence System

Between 9 September and 4 October 1996, a trial excavation was conducted at the Gyórszentiván–Andrásvár site.¹ The excavation was financed by the Hungarian National Museum, and in the absence of additional funds was restricted to cutting through the inner rampart and conducting a limited investigation of the area inside it.

The Andrásvár site lies about 5 kilometres east of Győr, approximately 900 metres west of Gyórszentiván's westernmost houses, north of the Győr–Budapest railway line and the Győr–Gyórszentiván paved road, and south of the military area located near the Gyórszentiván settlement. In 1996 the local cooperative farm cultivated the field in which the site is located. The one-time floodplain area is segmented by sand dunes from two to three metres in height and more or less parallel to the Moson–Danube waterway. The site is located at the western end of one of these dunes, on what is by no means its highest point, which occurs approximately 200 metres east of Andrásvár.

Because of the steep ramparts, the area of Andrásvár is not farmed, and this is why the site is recognisable from afar. The ramparts, which still had sparse forest cover at the time of Gyula Nováki's 1952 land survey,² are overgrown with untended acacia underbrush. The surface features indicate a concentric double rampart. The outer rampart is more or less circular, with an outer diameter of roughly 100 metres and a height of nearly 4 metres in some spots. To the east the rampart ascends no more than around 2 metres above the level of the ground outside, owing to the line of the rise. Behind the rampart is a ditch – the bottom of which is higher by a metre than the ground level outside – followed by a second rampart some 2 metres high. This rampart is more or less rectangular, with sides approximately 25 metres in length. The corners of the inner rampart extend outward, so that the site plan of the inner structure resembles a square with sides made concave (Ill. 1).

During the excavation a large section of the southern side of the inner rampart was cut through by means of a trench. It became clear that the construc-

tion of the rampart was begun on two layers of bedding mortar without disturbance to the humus layer. A mortar layer was found only under the middle part of the rampart, and – owing to the lack of time – we were unable to clarify whether this mortar layer continued as far as the site of the one-time tower.

Above the mortar layers, wooden beams were laid horizontally on top of each other: beams three to four deep could be observed in some places. Since the wood had completely rotted away by this time and since the one-time structure was indicated only by the discoloration, it was impossible to establish unequivocally whether the wood had been squared or whether unprocessed tree trunks had been piled on top of each other. The southern part of the western wall of the trench revealed that the uppermost piece of timber was split and splayed at one end, suggesting that no particular care was taken in the selection and placement of the wood.³ The fact that the rotten wood layer was found over the entire width of the trench through the rampart would indicate that the beams (or tree trunks) had been set closely together.

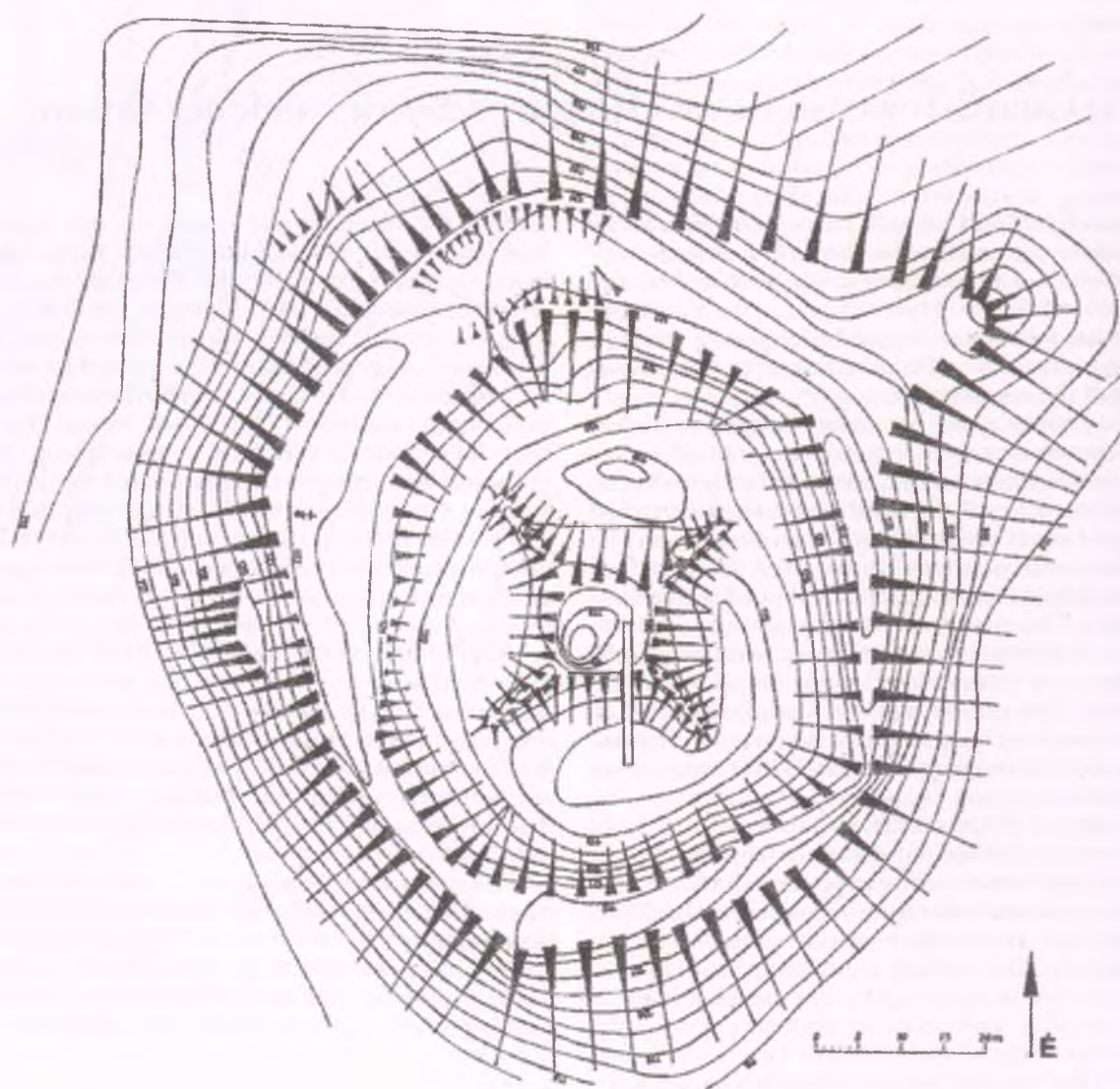
The lower wooden structure of the rampart was covered with layers of packed earth. Since in some places many of the layers running in non-horizontal directions could be traced quite clearly, it seems unlikely that the top part of the rampart was also made of wood. Earth from different places was used to build it up, as shown by the alternating sand and humus layers. It is possible that the earth from a ditch surrounding the fort was used in the construction of the rampart. Fragments of thin-walled, glazed pots with handles were recovered from these layers, and although a more precise dating is not possible, these are unlikely to date from before the mid-sixteenth century.

North of the current highest point of the rampart and in the direction of the central depression, we found – some 1.2 to 1.4 metres south of the clearly separable vertical layers visible on the sides of the trench – a ditch filled with rubble. This trench varied in width from 0.8 to 1.0 metres and the rubble was, in all likelihood, the remains of the removed

¹ This brief report is not intended to substitute for a more comprehensive treatment of the site. A presentation on Andrásvár was given at Székesfehérvár on 16 May 1998, at the Fourth Meeting of the *Castrum Bene* Society. A portion of that paper has been published in the first issue of the *Castrum Bene Hírlevél*.

² Xantus János Museum, Győr, Archaeological Archives 114. Gy II.

³ The trench cutting through the rampart was only 1 metre wide. It was therefore impossible to determine whether the timbers had been used to make encasements similar to those in fortifications during the time of Árpád dynasty.



Ill. 1. Győrszentiván–Andrásvár. Contour map of the site. (Survey by György Terei, 1996)

foundation of a wall on top of the rampart. The width of this wall suggests it may have been of symbolic value only, although it may have protected soldiers on guard there from gunfire.

Post-medieval pottery finds were recovered from the fill of the rampart; in the absence of pottery types clearly datable to the seventeenth century, these can be dated to the later sixteenth century. The finds also included an intact brick, bearing the imprint of a so-called “buckle” stamp used in the early construction work on the castle of Győr.⁴ The sturdy building material for the fort came – as one would expect – from the brickworks of Győr castle. This brick appears to support the assumption that Andrásvár was constructed in the second half of the sixteenth century.

The central section of the site was investigated by lengthening the trial trench cutting through the rampart. The earth fill of the rampart and the rubble fill of the central section of the fortification could be clearly distinguished in the sides of the trench. The rubble fill occupied the place of a cellar whose walls had been removed; the brick fragments found in the rubble indicate that the cellar, as well as the building above it, had been constructed of bricks. The cellar was dug barely a few centimetres into the sandy subsoil, but was still probably around four metres deep because of the rampart rising next to it. The line of only one wall of this cellar could be made out. Since this wall was straight, and matches the

⁴ LÓVEI 1991, 17.

only surviving – highly schematic – drawing (Ill. 2), the central tower was probably square in ground plan. The length of its sides can be estimated at approximately ten metres. The fill of the cellar yielded seventeenth-century pottery (including tin-glazed *Haban* fragments), square bowl-shaped stove-tiles, a few metal objects, and fragments of stamped bricks dating from between 1603 and 1630. On the basis of the latest (marbled-glaze) sherds, the destruction of the tower and the fill of the cellar can be dated to around the turn of the eighteenth century. According to a 1695 hand-drawn map preserved in the Győr archives,⁵ Andrásvár's tower was still standing at that time.

The first building period at Andrásvár can be dated to the last years of the construction of the crucially important Győr castle. This is indicated not only by the (re-used) stamped bricks unearthed at the site, but also by military logic: no efforts would have been devoted to the construction of surveillance outposts around the castle until the main stronghold, the castle itself, had been completed. The name of Andrásvár probably comes from Andreas Teuffel, the commanding officer in the years following the construction of Győr castle.⁶ It was customary in this period to name military installations after the officer in charge at the time they were made. Although it was more common for the surname to be thus preserved, use of the Christian name was not unprecedented (cf. the Gergely Bastion in Eger). Andreas Teuffel held the office of captain-general of Győr between 1575 and 1577 and between 1577 and 1588,⁷ thus the construction of the initial form of the outpost can be dated to this period.

The evidence of the stamped bricks dating from between 1603 and 1630 indicates that Andrásvár underwent significant renovation in the early seventeenth century. This archaeological observation harmonises well with the historical record. The Otto-



Ill. 2. The tower of Andrásvár on a hand-drawn map from 1695

man siege and occupation of Győr in 1594 must have had an impact on Andrásvár as well. None of the finds unearthed to date confirms that Ottoman troops took over Andrásvár during the four years of Ottoman rule at Győr. This may be attributable to the rather limited area investigated, although the building work carried out in the first third of the seventeenth century would suggest that Andrásvár, too, needed reconstruction after the period of Ottoman rule in Győr.⁸

A final evaluation of the Győrszentiván–Andrásvár site can only be presented after the restoration of the finds and a thorough examination of the written sources relating to the site.⁹

⁵ Published in the appendix to the publication *Városi Levéltári Füzetek* 2 (1999), brought out by the Győr City Archives.

⁶ This suggestion was first made at the Székesfehérvár conference; it was accepted by Géza Pálffy, a leading expert on the period in general and on the history of Győr in particular (cf. PÁLFFY 1999, 170).

⁷ PÁLFFY 1999, 233–235.

⁸ A large volume of data on the construction in the fortress exists for the years 1613–14 (GECSENYI 1990, Nos. 933, 935, 987, 992). In it trees, stakes and wattle are mentioned as building material.

⁹ The sixteenth-century data on this fortification was collected by PÁLFFY 1999, 169–172.

Characteristics of Turkish and Hungarian *Palanka*-protected Settlements along the River Danube

All Ottoman military posts were planned with a view to geographical environment and transportation routes. Highways facilitated effective communications, while fortifications along these routes took care of the security necessary for commerce. The main commercial routes – e.g., the *Via Militaria* that connected Constantinople with Belgrade and the *Via Egnatia* that extended through Macedonia towards the shores of Adriatic (both roads dated from Roman times) – were used for military purposes also. The busiest trade routes during the Late Middle Ages were those between Northern Italy and Flanders, and along them traders found opportunities not only to sell and purchase goods, but also to broaden their contacts and to take part in periodical fairs. A similar state of affairs pertained on the territory of the Selcuk Empire, where caravanserais facilitated the journeys made by traders.

The antecedents of the road network of Anatolia went back to Persian and Roman times. In Antiquity the roads built by the Romans were protected by fortifications, so-called *castra*. With regard to the *limes* – a centralised system –, we may speak of an effective combination of roads and minor fortifications.¹ In early Byzantine times the Roman network of roads was still in use and functioned on the basis of similar principles, although the military reforms of the eighth to ninth centuries weakened the influence of the central government.² The Selcuks renewed the system that they had inherited. Roadside caravanserais followed the *ribat* Islamic architectural form. The origins of this lay in the living quarters of the so-called Futuwwa Brotherhood, whose members dwelt in enclosed rectangular spaces. The Ottomans perfected this so-called *menzil* system (*menzil* = military station), within the framework of which small roadside settlements promoted safe and well organized travel, as well as trade. These villages enjoyed exemption from taxation in exchange for providing the army with foodstuffs, animals and other necessary supplies.³

Many settlements in the Balkans sensed the need to promote the effective transportation of goods, thereby creating possibilities for the development of local markets and periodical agricultural fairs. On

this basis of this it is understandable that the central leadership saw that the way to guarantee commercial development almost everywhere in the Balkan and East European territories of the Ottoman Empire was to provide three things: highways, protected settlements and zones for commerce. The highways facilitated transportation for the army and for traders, while small settlements protected by military stations afforded safe havens for the exchange of goods.⁴

There were a number of trade routes linking Central Hungary and the Balkans. One of the most frequently used was the Danube waterway, since Danube linked Buda and Belgrade. Small fortifications known as *palankas* (strongholds surrounded by a palisade wall) ensured the safety of the waterway. Near these small fortifications there were trading villages. In order to obtain a better grasp of what *palanka*-protected settlements along the Danube were like, we must first take a look at the Turkish town in the sixteenth and seventeenth centuries.

Structurally, the Turkish town was determined by the bringing together of various neighbouring quarters. The inherited structure ensured wholeness and stood for continuity. High on a hilltop, the citadel, which usually dated back to Roman or Byzantine times, represented – in accordance with the medieval custom – the chief means of defending the town: its purpose was to protect against external attack and to crush any internal uprising. The citadel housed the *paşa*'s palace and a small garrison, and also served as the place where the inhabitants' more important valuables were kept. Since the Anatolian town, built at the foot of a hill, was rarely if ever surrounded by a wall, the citadel played the leading role in that town's defence.⁵

Another component part of the settlement was the *mahalle*, the quarter containing the religious centre. The "pious foundation" (*waqf*) – more precisely the foundation's creator – arranged for the construction of the *cami*, the *medrese*, the elementary school, the public baths, and the drinking fountain. These together comprised the infrastructure for the social life of the Muslim community. In the Balkans and Eastern Europe Christian settlements could be form-

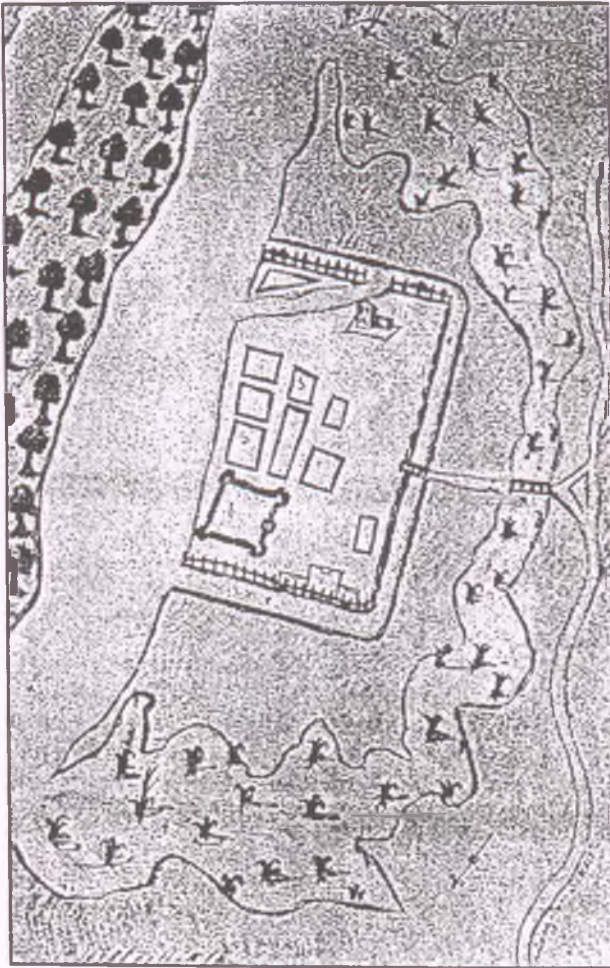
¹ For the Roman *limes* in Pannonia, cf. SOPRONI 1978; VISY 1988.

² RAMSAY 1906, 291.

³ JIREČEK 1877; ZIROJEVIĆ 1987, 81–106; HEGYI – ZIMÁNYI 1988, 134–135.

⁴ FERETE 1976, 49. Here I would like to thank Ibolya Gereles for kindly making this book available to me.

⁵ The extent to which the architecture of Antiquity and Byzantium influenced Ottoman urban development is subject to debate. Cf. CERASI 1999, 26–30.



Ill. 1. The *palanka* at Mohács on Ottendorff's drawing. 1665

ed within the frameworks prescribed by Muslim law. Muslims, Christians (Greeks, Armenians and Latins) and the Jews enjoyed the right to establish a town-quarter. The settlement's commercial life was carried on in the buildings of the bazaar, the market (*çarşı*) and the caravanserai (*han*) that together formed the hub of the town's economic life.

In Anatolia and in the Balkans towns exhibited an amorphous character for the most part. When fashioning their towns, the Ottomans utilised town-quarters from earlier times. At the same time they also erected new buildings, transforming the environment in such a way that it now reflected the Ottoman administrative system. Generally speaking, the Selcuk settlement, the forerunner of the Ottoman-Turkish town, lacked an axis, and even an exact geometrical and readily comprehensible spatial ar-

range.⁶ The Ottoman townscape did not resemble the early modern European one. In Italy, for example, medieval town-walls were reduced in size and new bastions were built; thinkers developed the idea of "La città ideale", on the basis of which new settlements were planned on a polygonal pattern. On the territory of the Ottoman Empire, town planning in line with modern ideas was virtually unknown; one of the rare examples of a modern kind of town in the Ottoman Empire was Muşkara built between 1718 and 1730 and later called Nev-sehir ("New City").⁷ It was during the Middle Ages that the idea of a "new town" first emerged in Europe; dissertations written at the time of the Renaissance developed the concept further. Fortification architecture for the ideal town was extended by means of geometrical and radial configuration, by the building of bastions on a triangular ground plan and by the digging of water-filled ditches.⁸ The question of whether a Filaretan type of geometrical planning was out of place in the Ottoman town must be discussed elsewhere. It is a fact, though, that radial-type planning appeared in fifteenth-century Ottoman fortification architecture. Examples are Yedikule in Istanbul and Kilid-ül-Bahir in Çanakkale.⁹

In Europe the need to plan towns affording greater protection increased, and because of this geometrical- and radial-type planning could spread widely, along with the idea of combining such planning with new defence technologies. This was understandable considering the wars at around this time between the Italian city-states, and between Catholics and Protestants. For the city-dweller the building of a wall affording sure protection was important. In the Ottoman Empire, which was under central direction, this issue did not emerge and could not have emerged: there was no burning necessity to build walls; they were important only in the cities along the borders.¹⁰ As in the case of the Pax Romana, peace was maintained by the central bureaucracy and by the army. At the same time, the needs of the army required that military stations be established in the Ottoman Empire for the defence of its territory. The line of fortifications built by the Ottomans along the Danube shows striking similarities to that of the Roman *limes*.¹¹

When the Ottomans occupied Hungary they found medieval towns, such as Esztergom and Székesfehérvár, whose histories went back to the time of King Stephen I (1000–1038). In the thirteenth and fourteenth centuries, through the granting of privileges, certain towns became pre-eminent. It was the market towns – also protected by the king – that

⁶ TURAN 1965; cited by KURAN 1980, 82.

⁷ GOODWIN 1971, 452.

⁸ DE LA CROIX 1972; HALE 1965, 466–494.

⁹ ÖZGÜVEN 1997, 170–173.

¹⁰ The Ottoman fortress of Elbasan (Ilbasan) in the Albanian territories is an excellent example of how much the importance of town-protection structures could change over time. Elbasan was first rebuilt (or possibly built) in 1466. At that

time the settlement lay on the borders of the empire and afforded refuge for marauding, plundering troops. Later, as a result of the extension of the empire in the sixteenth century, the town found itself in the interior (*iç il*) of the country. It thus lost its importance and the garrison left. (NEŞRİ 1957, 777; EVLIYA 1988, 447).

¹¹ Many Hungarian towns have Roman antecedents (GEREVICH 1990, 120).

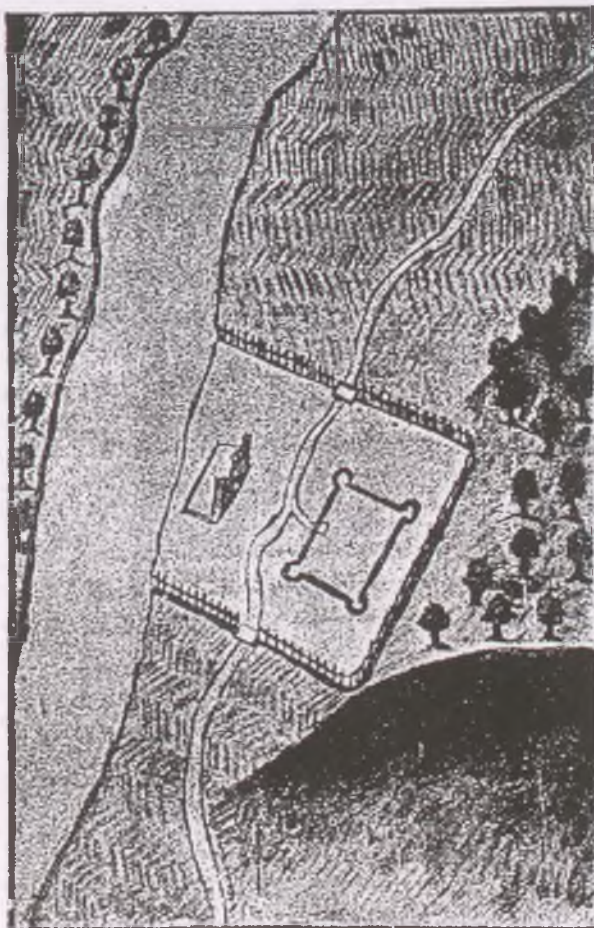
developed the most rapidly, proving that commerce played an important role in the different regions around this time. From the fifteenth century onwards, the village, too, changed. The buildings of settlements were now grouped along a main axis, with a market square and church at the middle point. A good example of this kind of development was Szeged, which consisted of a single, mile-long street. The same phenomenon is observable in settlements in some German-speaking regions, in – among others – late medieval Saxon settlements.¹²

Existing towns and routes helped the Ottomans to develop an effective transportation and communications system, on the basis of their earlier experiences in Anatolia and the Balkans. In co-operation with the military, the state bureaucracy developed minor settlements into important towns.

Many contemporary historians debate the issue of village and town development in Hungary. Konrad Schünemann, for example, suggests in a study that many medieval settlements were developed into towns by the Ottoman conquest, owing to the large-scale influx of Balkan elements that necessitated the creation of settlements with town-like characteristics.¹³ Lajos Fekete stresses the separateness of town-quarters inhabited by communities of differing religions, emphasising that unlike contemporary European examples, the Ottoman town was by no means a unity.¹⁴

As in the Balkans and the Anatolian territories, the Ottoman-Turkish town in Hungary consisted of three parts: the old castle (as the inner fortress), the *varoş*, (meaning a civilian settlement outside the fortress) and the outer town, in other words the suburb. These three levels together represented the typical Ottoman town.

The castle – whose history in most cases stretched back to the Early or Late Middle Ages – was usually sited on the top of a high hill that possessed water resources. It was generally used by the Ottoman public administration for military purposes. The cathedral, or the largest church, was converted into a *cami*. Supplies most necessary for military operations – munitions, food and other supplies – were stored in the castle, as were valuable goods, important documents and gold and silver ingots. Evliya Çelebi records that in some cases a church crypt proved ideal for the storage of grain, after the tombs had been removed to a cemetery in the outer town.¹⁵ The *kapukulu* and *yeniçeri* barracks were in the castle (fortress), as was the residence of the *dizdar*, the castle's commander. The castle had semi-circular bastions, and some walls were renewed. Some medieval towers were converted into prisons.



III. 2. 'The *palanka* at Szekszárd on Ottendorff's drawing, 1665

The second level of such a settlement was the *varoş*. This was a term borrowed from the Hungarian; in today's Turkish it means "suburb". In Evliya's terminology it indicates the civilian settlement whose residents were not regular soldiers.¹⁶ The *varoş* encircled the castle and, as in the case of Ottoman cities, typically consisted of different quarters. Generally speaking, the founding *paşa* initiated the construction of a religious complex as the first step in the establishment of a traditional Ottoman quarter. In the middle of the complex was a *cami* that bore his name. Subsequent heads of the *varoş* erected *waqf* buildings, which included an elementary school, *medrese*, communal kitchens (*imarets*), and a communal fountain. In the case of Érsekújvár inhabitants were resettled there from other Ottoman settlements as prospective soldiers of a future army.¹⁷ In time of war *varoş* inhabitants were called up, while in time of

¹² KOCH 1994, 395.

¹³ SCHÜNEMANN n.d., 20–21.

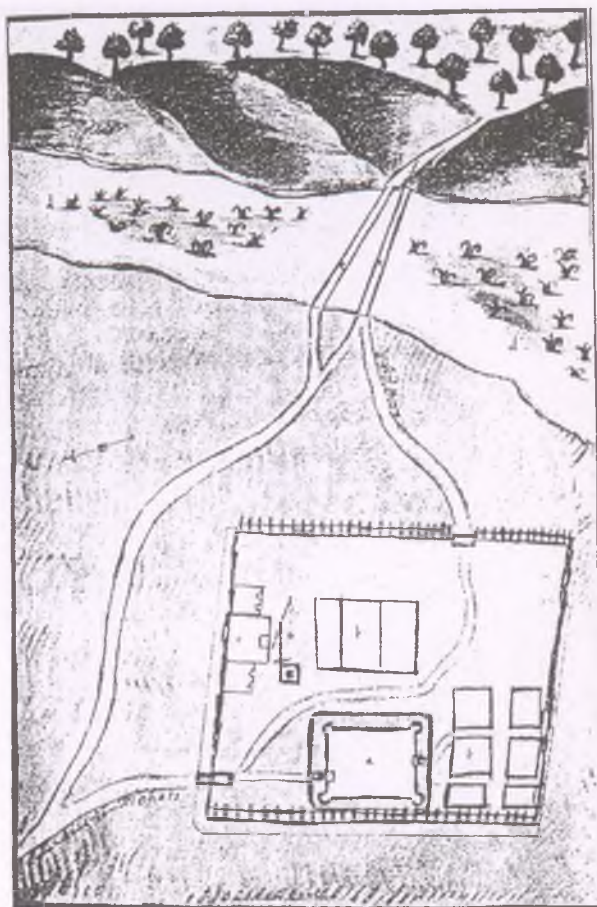
¹⁴ FEKETE 1976, 26.

¹⁵ Evliya Çelebi mentions that the crypt of St. Peter's Church in Pécs was turned into a grain store, and that foodstuffs

set aside for official purposes were kept there. (EVLIYA 1984–85, 530).

¹⁶ FEKETE 1976, 13–22.

¹⁷ EVLIYA 1984–85, 649; ŞİMŞİRLİĞİL 1998, 325–352.



Ill. 3. The *palanka* at Baranyavár on Ottendorff's drawing. 1665

peace they engaged in agricultural or commercial activity. In the *varoş* a key need was the creation of a *mahalle*; furthermore a drainage system was necessary for the public baths and the fountain, which were located near the school and the *medrese*.

In almost every *varoş* a market place was established. This was sometimes small and sometimes large. It might consist of many rows of shops or else might be just a simple, empty square. Merchants would spend a couple of nights in a caravanserai (*han*) in order to discharge business at the local market. Dervish cloisters (*tekkes*) appeared in the *varoş*, as did tombs of holy persons.

Generally speaking, a palisade surrounded a *varoş*.

Some *varoşes* were in the fortunate position of being able, as of right, to hold periodical fairs. These brought about economic growth. The *varoş* of Eszék was among them; its fairs were safeguarded by the *paşa*.

In the outer town – in other words the suburb inhabited by the Christian community – there were

Serb, Hungarian and other Christian nationality groups.¹⁸ The churches belonging to the various denominations formed the hubs of these communities. Churches formed part of the sultan's so-called *has* lands. The carrying out of repair work required special permission, for which the Ottoman authorities had to be approached. A repaired part could under no circumstances exceed its original size.

The *palanka*, which was a characteristic element of Ottoman architecture, generally encompassed a small area, one where military stores were kept and where soldiers were quartered, as in medieval castles. Drawings made in the sixteenth and seventeenth centuries afford much interesting information with regard to these. The renowned Italian military adviser Count Luigi Fernando Marsigli published a general plan for a *palanka* on Plate XXXVII in his book *Stato Militare dell' Imperio Ottomano*.¹⁹

Palankas mostly exhibited the characteristics of fifteenth-century Ottoman-Turkish fortifications.²⁰ Bastions at the corners reinforced walls at right angles to each other; the walls consisted of upright posts (generally of oak) next to one another and covered with mud and mortar. The building of a *palanka* was quick and easy. Generally speaking, a bridge and a guard-tower protected the entrance. The *palanka* played a role similar to that of the citadel in classic Ottoman towns. Arms and other necessary stores were kept in it should the garrison need to fight. Inside, small buildings, made from wooden beams and clay bricks, provided quarters for the troops. Soldiers retreating from the enemy found refuge within its walls.

The civilian settlements around *palankas* reflect another form of Ottoman-Turkish life in Hungary. These settlements, inhabited by people of differing nationality, gave a substantial boost to trade along the River Danube.

Relying on two main sources, I shall attempt to describe the characteristics in the seventeenth century of the settlements lying between Buda and Eszék. The first source is a travelogue by Evliya Çelebi, who visited this area between 1661 and 1664,²¹ while the second is an album by Heinrich Ottendorff, who travelled along the banks of the Danube on the road to Istanbul in 1665, in the company of Baron Johann von Goes. Ottendorff collected Von Goes's notes and observations into a volume, dedicating the album – *Der Weg von Ofen auf Griechisch Weissenburg* – to Montecuccoli. The manuscript includes coloured illustrations of *palankas*, the fortifications with the neighbouring civilian settlements, and characteristics of the countryside roundabout. Ottendorff was an observant man, possibly a spy. Even so, he collect-

¹⁸ FEKETE 1976, 20–21.

¹⁹ MARSIGLI 1732/1971. Thanks to Marsigli's studies we have appropriate information on the history of the Danube before the nineteenth century. In the seventeenth century, the river was highly dangerous for peaceable travellers along its Buda–Belgrade section. The bends, whirlpools and large

rocks put merchant ships at the mercy of pirates. Even ships of the *sancakbeyis* were not safe. After the capture of Kanizsa, the abovementioned section of the river grew in importance.

²⁰ ÖZGÜVEN 1999, at the press.

²¹ EVLIYA 1984–85; KARÁCSON 1908; 1985.

ed not just military data, but also information of a social and economic nature.²²

Everywhere within the Ottoman Empire settlements near *palankas* exhibited similar characteristics, with the difference that the older parts preserved their pre-Ottoman – medieval or early modern – features as well. Although commercial activity took place on the roads along the Danube, the medieval towns were situated not by the riverbank, but often on the tops of hills. Village inhabitants utilised materials from ruinous buildings in the neighbourhood, too. In contrast to medieval examples, settlements in the Turkish time were often established on flat territory, frequently on a bend in a river; in this way easily defensible enclaves were created. Albeit in smaller numbers than in the larger towns, within the *palanka*-protected settlements, too, there were units discernible as *varoşes* and suburbs.

The Ottomans attached very great importance to developed commercial activity along the line of the Danube. This is shown by the caravanserais (*hans*) established in almost every *palanka*-protected settlement. In his description, Ottendorff does not give the ground plan of the *han*, although he does supply its basic form. The brick base was divided into three parts, with the two smaller parts flanking the larger one. If this representation by Ottendorff is not merely of one particular example, then it suggests that *hans* in every settlement were built on this pattern. Moreover, the *hans* were sited in such a way that they might be connected to the *palanka* itself, thus affording security to merchants and their goods. The schematic *han* ground plans depicted by Ottendorff do not reflect the characteristics of the *hans* of classical Ottoman architecture that were present in virtually every larger town. The most characteristic part of the classical *han* was the inner courtyard, in the middle of which was a *sebil* (fountain) or a small *mescid* (mosque). Rows of cubicles around the sides of the inner court opened onto an arcade on the lower and upper level alike. The small cubicles on an Ottendorff drawing perhaps indicate shops placed next to one another. Using the same manner of depiction, in his drawing presenting Temesvár he places the line of shops in a row forming a corner of the building. At the same time the market place occupied a large part of the neighbouring area; a market place was to be found in every settlement. To a market place may have been linked a fountain, spring, water-tank, or baths (*hamam*). The scene of trade could have been an empty street even, where traders sold their wares in the absence of any kind of permanent building or buildings. In the smaller towns, Evliya Çelebi frequently observed this type of solution.



III. 4. Waterways between Esztergom and Belgrade in the 16th–17th centuries

In what follows, we shall describe the civilian settlements as observed by Evliya and Ottendorff during the third quarter of the seventeenth century.²³

The first stop on the journey from Ofen (Buda) to Griechisch Weissenburg (Eszék) was the settlement of Hamza Bey (today: Erd). It was protected by a *palanka* which was rectangular in ground plan, and in the settlement there were three separate *mahalles*; the main street was at the same time the Danube embankment. A ruinous building shown nearby in Ottendorff's drawing proves that in 1662 General Souches had burnt the settlement. The next stop was Ersci, which had only a small *palanka*, while Cankurtaran (today: Adony) was depicted as a large Christian settlement protected by a palisade. There was a caravanserai next to this. Pentili (Dunapentele) had been established at the foot of a hill, where the medieval fortification contained a congested *mahalle* for the Muslim inhabitants. The old church had been

²² Heinrich Ottendorff: *Der Weg von Ofen auf Griechisch-Weissenburg*. Wien 1665. (Österreichische Nationalbibliothek, Wien. MS Cod. 8481). See also HERMANN 1943.

²³ The topographical identification of the *palankas* along this section of the military road along the Danube has been performed by Gábor Hatházi, who has analysed all the available sources. (Cf. Gábor Hatházi's study in this volume).

converted into a mosque, and according to Evliya had been set to rights sometime after 1662. However, in the Christian settlement, also at the foot of the hill, a caravanserai surrounded by a large market place had been built, which indicates that the settlement was a centre for commerce. Although Ottendorff did not identify Pentili's inhabitants, Evliya noted that they were mainly Turks, Gypsies, and Serbs and other Christians. A palisade wall protected the market place and the village; a ruinous building was to be seen in the vicinity.

Ottendorff mentions Paks as a settlement lying on the banks of the river River Altun-oluk, where a *han*, a market place and a garden were to be found. The town was supplied with two palisade walls, which served to protect it against possible attack from the neighbouring valley. The next stop was Tolna, which possessed a suitably built market place and a *han*. When we think of the viticulture traditions of the region, it is easy to perceive Tolna's leading role in the economic life of the area.²⁴ The settlement of Óvár (today: Palankapuszta) served exclusively military purposes, although here, too, there was a small *han*, which was protected by two bridges. The next place (a garrison town) was Szekszárd, which was sited on a hill. Although Evliya described it as a developed settlement with a *han*, a *haman*, four *camis*, and a market place, Ottendorff, arriving a few years after Evliya's visit, found only a burnt-out *han* and a town in ruins.²⁵

Bátaszék and Dunaszekcső were typical examples of Ottoman-age settlements along the Danube, and Mohács and Baranyavár displayed similar characteristics: each had a *palanka* serving military purposes, a *han* and a market place. Below Veresmart (?) the Danube and the River Drava met. The town of Eszék, located at that point, played an important role in the life of the region.

We may assert by way of summary that the Ottoman-Turkish settlements along the Danube had largely similar characteristics. In the majority, a caravanserai (*han*), a market place and a palisade wall were to be found. Although some settlements had historical antecedents going back some time, it can be seen that Ottoman-Turkish government policy in the seventeenth century placed serious emphasis on increasing the commercial importance of the Danube waterway.

The policy of creating a standard type of settlement was not far removed from the Ottoman ideas concerning town construction, since many characteristic circumstances – e.g., limits on building ma-

terials (wooden beams, stone and mortar), remuneration centrally determinable in advance, and possible renovation and other expenses that might occur – made it necessary.²⁶ The sizes and shapes of future military and civilian buildings were determined ahead of time by a corps of architects answerable directly to the sovereign. Many *camis* in the provinces largely followed a single design made by the Turkish architect Sinan. The application of standards was determined by the role played in the region by the given provincial settlement and by local availability of basic materials. Godfrey Goodwin has asserted that this procedure made settlements in the Ottoman Empire uniform or similar, regardless of differences in geography.²⁷

Although many relevant historical examples can be mentioned in connection with the centrally standardised construction idea – it is enough to think only of the structure of industrial towns in the nineteenth century –, its true antecedents go back to the time of the Roman Empire. The Roman *castra*, which served to accommodate mainly regular soldiers, had a similarly rectangular ground plan, and within its walls could be found buildings satisfying basic urban needs, in the framework of a simple network of streets. The basic parallel between the Roman *castra* and the palisaded settlement based on the Ottoman-Turkish concept was central planning and standardisation; the traveller would meet with identically built structures throughout the empire. In the *palankas*, in a framework of strict discipline – which could only have been achievable in such a special environment remote from civilian life – military elites developed that were in line with the empire's interests.

Inside the *palankas* were stationed military elites who despite the circumstances proudly fought for the extension of the empire's borders in order to demonstrate the sultan's power. In this way the Ottoman Empire was able to cover so enormous an area: from Baghdad to Banjaluka, and from the Caspian Sea to the Arabian Peninsula. *Varoşes* and suburbs – where the civilian population lived – mirrored regional cultures. These civilian populations were, in the settlements along the Danube, mostly of Balkan descent, but were almost certainly East European. The military elites there lived exactly the same life as that lived by those in similar positions elsewhere in the empire. This was the way of life that the empire required of them. The civilian inhabitants changed their customs and lifestyles to some degree, but maintained their local and national traditions.

²⁴ EVLIYA 1984–85, 536.

²⁵ EVLIYA 1984–85, 536–537.

²⁶ BARKAN 1955–56; REFIK 1931; NECİPOĞLU-KAFADAR 1986, 224–243.

²⁷ GOODWIN 1971, 450.

Pest during the Ottoman Era

During the Ottoman period Pest occupied what is now District 5 of the Hungarian capital. This area, the so-called Inner City, is delineated by Várház körút, Múzeum körút, Károly körút, and Deák Ferenc utca (Ill. 1). The settlements around the Pest ferry – Pest, Szentersébetfalva (later called Szentfalva) and Újbécs – date back to the period of the Hungarian Conquest (ninth–tenth centuries), but by the turn of the thirteenth century Pest had eclipsed the other embryonic towns. The development of the settlement was continuous and by the mid-thirteenth century it had become one of the major Hungarian towns. At the time of the Tartar invasion in 1241, the main square of the town (present-day Március 15. tér), with its Parish Church of the Blessed Virgin on its northern side, had already been completed. The large, towered building of the Town Hall stood on the southern side of the square, while around the square itself were stone houses belonging to wealthy burghers. The street network had also evolved: the boundary of the town was marked by today's Régi-posta utca, Szervita tér, Városház utca, Ferenciek tere (the eastern side of the Franciscan monastery), Reáltanoda utca, Cukor utca, and Nyáry Pál utca, and the first town wall was built along this line. The royal court, surrounded by the houses of Bécs and Újbécs, probably adjoined the town from the north. A Dominican cloister was built in the open area lying southeast of the town wall; Szentersébetfalva, a settlement that had developed into a flourishing market town by the close of the Middle Ages, lay south of Pest. The dynamic growth of the settlements on the Pest side of the River Danube came to an abrupt halt in the mid-thirteenth century. Sometime around 1246 King Béla IV (1235–1270) founded a new town on Castle Hill, on the Buda side of the waterway, after receiving news of a new Tartar attack against Hungary. The burghers of both Óbuda and Pest moved into this new town. Although Pest now lost its independence and became a suburb of Buda, it nonetheless continued to flourish, becoming a wealthy merchant town by the fifteenth century. In the second half of the fifteenth century the town seceded from Buda and regained its independence, becoming a free royal town by the early sixteenth century.¹

In the meantime, several successive waves of extensive construction work took place on the Pest side.

The last major medieval construction work occurred during the second half of the fifteenth century, under King Matthias (1458–1490): the burghers of Pest, Szentfalva and Újbécs came to agreement and created a uniform town planning design, to use a modern expression. Archaeological investigations have shown that the actual construction work was also based on uniform plans. Construction work was preceded by large-scale demolitions throughout the town. Pest's thirteenth-century town wall was dismantled, as was Pest Castle whose construction had been abandoned in the early fifteenth century; the houses of Újbécs and Szentfalva in the way of the new town wall were also demolished. The tanneries on the southern outskirts of Pest were closed down and the workshops were relocated to beyond the new town wall, to present-day Fővám tér, where they remained active until the mid-eighteenth century. The new town wall – it was 2.2 km long and ran parallel to the thirteenth-century one – had been completed by the end of the fifteenth century. The crenellated wall – 1.8 metres wide and 10 metres high – was built on foundations roughly 2.2 metres wide and 1.6 metres deep. Loop-holed quadrangular gate towers with semicircular bastions between them were built on the roads leading out of the town at the northern and southern end of present-day Váci utca, the eastern end of Kossuth Lajos utca (Astoria pedestrian underpass) and the southeast end of Kecskeméti utca (Kálvin tér pedestrian underpass). A wall of stone, against which houses had been built, probably also ran along the Danube. Contemporary engravings show that the wall between the two northern round bastions was still standing in the late seventeenth century. The ground-plot division that has survived to this very day was created on the territory enclosed by the walls, together with a network of straight streets leading to the gates.²

The town was enriched with several magnificent art works as part of this large-scale construction work. The most important artistic creation of this flourishing early sixteenth-century urban life was the Renaissance high altar of the Church of St. Mary (today the Church of the Inner City), to which the burghers of Pest also contributed. Although only fragments of this Renaissance altar have been preserved, the two *pastoforiums* – one of which was

¹ GYÖRFFY 1973, 217–349; KUBINYI 1973, 7–240.

² IRÁSNÉ MELIS 1994, 88–107.



Ill. 1. Archaeological sites in the inner city of Pest, 16th–17th centuries

founded by András Nagyrévi, parish priest of Pest from 1500 until 1506, and the other by the burghers of Pest in 1507 – have survived.³

Shortly afterwards a tragic event disrupted the life of Pest: the Ottoman army, arriving from Mohács in the autumn of 1526, ransacked and burnt the town. The 160-year-long slow decay of the town began after this event. According to the historical sources, the town slowly recovered after 1526, but only one major building project – the reconstruction of the town wall – was completed before the Ottomans again occupied the town in 1541. This construction work was stipulated by the Treaty of Várad (1538), in which King John Szapolyai and Ferdinand I agreed to join forces in the defence against the Ottomans.⁴

Scholars studying the history of Pest have often discussed the round bastions of the town wall and many have dated the construction of these to the Ottoman period.⁵ Only one has been investigated archaeologically, albeit partially. This was the round bastion by the former town gate on the road out to Hatvan dismantled when the Astoria pedestrian underpass was built. The layer sequence and the vari-

ous onetime habitation levels along the outer side of the round bastion were recorded during this rescue excavation. The same were observed at the town gate on the road out to Vác and on the outer side of the gate, fortified with a round bastion or barbican, on the road out to Kecskemé. A distinctive thick fill containing exclusively sixteenth-century Hungarian finds – such as household vessels, bowl-shaped stove tiles and fragments of various iron implements – that had been used to raise the level at that time was noted beside each town gate.⁶ The lower part of the wall was reinforced with ramparts in several places; it was then that the medieval smithy by the outer side of the town wall along what is today Károly körút was buried. The archaeological sections reveal that the fill of the smithy covered the earlier pebbly level running along the town wall. The moat encircling the town wall was probably also repaired at this time, although the exact location of this moat remains unknown.

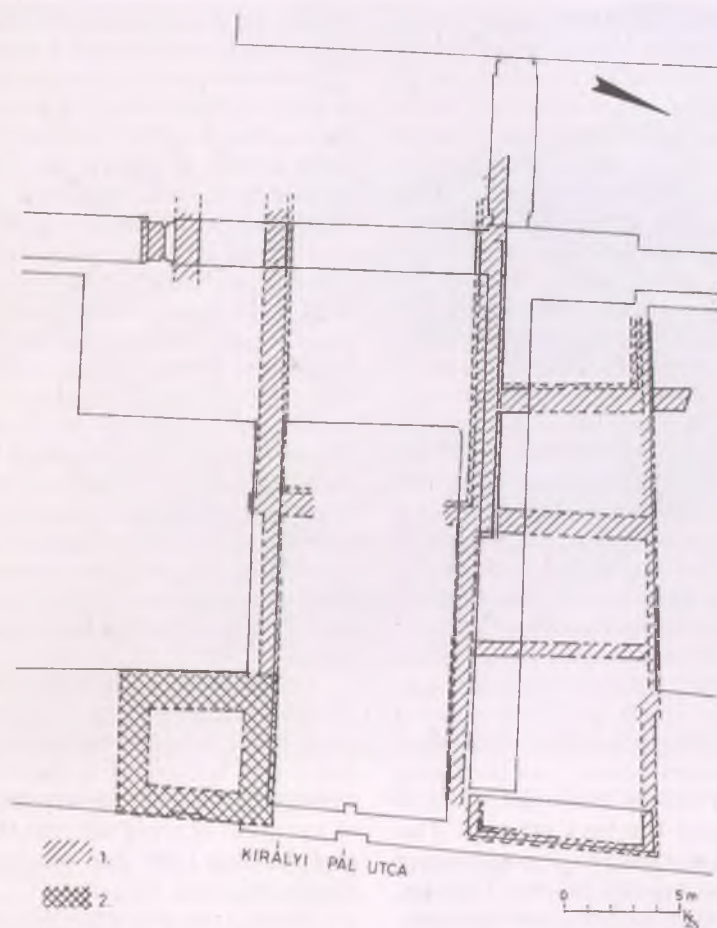
The Ottomans reaped the fruits of the military construction work when in 1542 combined German and Hungarian armies attempted to recapture Buda,

³ TÖRÖK – OSGYÁNI 1981, 95–113.

⁴ KUBINYI 1973, 201–203.

⁵ CSORBA 1976, 357–358.

⁶ TÓTH 1966, 20–22; IRÁSNÉ MELIS 1987–88, 213–215.



Ill. 2. Foundations of the minaret beside the medieval parish church of Szentfalva. Szerb utca 21–23, District 5, Budapest. 15th–16th centuries. Archaeological research performed in 1981. Key: 1. Middle Ages, 2. Ottoman period

which by then was in Turkish hands. First they laid siege to Pest, encircling the town and beginning its bombardment from the north. Although the Ottomans sallied forth, they were unable to beat off the attack. The German and Hungarian troops then continued their bombardment of the town, “firing 3600 cannonballs against Pest on a single day”. Having destroying a section of the wall roughly 80 metres long, they now launched a massive attack. The Ottomans resisted and repelled this attack, and the German-Hungarian army pulled back from Buda on October 8.⁷

Traces of this siege could be observed in various places. These included the section at Károly körút 28–30 and the section – 140 metres long – of the town wall excavated in the northern court of the Budapest City Hall. The foundations were also damaged in some places. The projecting walls indicating the medieval habitation level were not rebuilt when the damaged sections were repaired and the same crushed stone that was used to repair the walls was

also used to repair the foundations; the plane of the repaired wall was flush with the medieval ashlar facing. Two sixteenth-century descriptions of the Ottoman-occupied town both emphasize the sturdiness of the town wall. Making a tour of the town wall within an hour, Salamon Schweiger noted that the walls were strong and sturdy, and of a better quality than the walls of Buda, Esztergom and Belgrade, whose fortifications had been severely damaged. According to Reinhold Lubenau, a member of the imperial mission to Pest in 1587, the town of Pest was “protected by a solid a wall ornamented with polygonal and round bastions”.⁸

A thick brown sandy fill 40–60 centimetres thick used during the repair operations on the inner side of the wall raised the contemporary level. This layer covered the remains of the burnt houses of the street running parallel to the town wall. These houses had burnt down in 1526 and it seems likely that their remains were no longer visible by the time of the 1542 siege. The earth layer covering these houses

⁷ FEKETE – NAGY 1973, 337–343.

⁸ For Schweiger’s travelogue cf. NÉMETHY 1890, 134–135; for Lubenau’s report cf. HARASZTI – PETŐ 1963, 90.

yielded finds from the earlier sixteenth century, while the post-1542 fill consisted of brown sandy earth. The area was not built over until the close of the seventeenth century. The reconstruction work launched after 1542 also involved the renovation of the medieval road running some 38 metres from the town wall. The foundations of the uppermost level (level 5) yielded both Turkish and Hungarian finds, suggesting that the construction of the road can be dated to the second half of the sixteenth century. This level, and the possible later repairs to it, could not, however, be readily distinguished from the rubble layer – 50–80 centimetre thick – of the large-scale demolitions following the 1686 liberation of the town.

On the southern side of the road, the medieval stone houses that had burned down in 1526 or had been damaged during the 1542 siege were rebuilt; three of them survived in slightly modified form until the 1740s.⁹ These houses were built from a variety of materials: the three rooms facing the street were constructed of stone, while the other rooms were built on a timber frame with wattle and daub or else were made from *terre pisé*. The three houses can be assigned to the so-called “Álföld type”. Their longitudinal axis ran perpendicular to the street and their various rooms were aligned one behind another. The largest room of these three-roomed houses was the living room facing the street; it usually had a tiled stove of bowl-shaped tiles in one of the back corners. The middle room functioned as a kitchen, incorporating the oven needed for cooking and baking. This was followed by a pantry or, more rarely, by another room. The pens, coops and other outbuildings usually had a timber framework with wattle-and-daub or else had *terre pisé* walls. The three-part main building was usually between 4.3–5 metres wide and 16–18 metres long. Judging from the width of the walls, it is possible that there were additional rooms in the high saddle roof. A more carefully built house stood at the western end of the excavated street section. Although the house itself was destroyed, its large 2 metres by 2 metres cellar built from ashlar survived. Its fill, dating from the late seventeenth century, contained fourteenth- to fifteenth-century Gothic stone carvings, as well as seventeenth-century weapons.¹⁰

Early sixteenth-century houses, similar to the ones uncovered on Károly körút, also survived in the opposite corner of Pest, on the plots at Molnár utca 36 and 40. Sections of stone-built rooms, facing the street, were uncovered during the excavations. The plot between these two houses was originally empty, but a single-storey brick house had stood there sometime in the 1550s, as shown by a 1552 coin of

Ferdinand I that was found in the mortar. The rubble from this house yielded a number of green-glazed Turkish stove-tile fragments, as well as the remains of several foundations for stoves. The house stood at the northern end of the plot, which was 10 metres wide, and its northern wall also marked the plot’s boundary in that direction. The outbuilding that adjoined the northern wall of the house at Molnár utca 40 was erected on the southern part of the plot. The 2.2 metres by 1.8 metres large pen was probably used for keeping small animals, such as sheep or goats. Employment of this building as a pen was later discontinued; a stone stove was built inside it and also a larder that could be locked. The use of this building over a longer period of time was indicated by the household refuse and by a Turkish harness stud that was recovered from the fill 30 centimetres thick that accumulated during its reconstruction in the sixteenth century. Various iron implements – such as nails, knives and sheet metal – were placed under the stove to ensure a higher temperature and better heat retention. The finds also included an iron spur.¹¹

The early sixteenth-century house at Molnár utca 36 fell into disrepair as a result of the military events from 1526 and 1542 inclusive, since this part of the town was subjected to heavy artillery fire. The strength of the explosions is indicated by a fragment of a cannon bearing the coat of arms of Ferdinand I and the date 1527 that was found on the corner of Pintér utca and Váci utca.¹²

Almost concurrently with their occupation of Pest in the autumn of 1541, the Ottomans began to adapt ecclesiastic, military and administrative buildings that were suited to their needs. They chose buildings that had originally served similar functions, e.g., they immediately transformed the medieval churches into *camis* (Ill. 3). They destroyed the furniture and fittings, caused serious damage to the walls, removed the statues, and scraped away the frescoes. This led to the final destruction of the medieval remains, since when the imperial armies stormed and burnt Pest in 1604 and again in 1684, they knew nothing of these medieval churches.

Only the sanctuary of the Church of St. Mary (Március 15 tér) survived after 1686. The *mihrab* visible today in the south wall was uncovered during investigations in the 1930s (it had concealed reconstruction work in the eighteenth century). Also uncovered were the recessed medieval seats – decorated with frescoes – that had been walled up by the Ottomans.¹³ One of the *camis* that can be seen on seventeenth-century townscapes was the transformed

⁹ Excavation conducted by the present author. The finds are unpublished.

¹⁰ The archaeological finds brought to light during the 1996–97 excavation on Károly körút have not yet undergone conservation.

¹¹ IRÁS-NÉ MELIS 1996, 231–232.

¹² KUBINYI 1973, 202, Ill. 39.

¹³ LUX 1933, 1–33. For the *mihrab* following its discovery, cf. FEKETE 1944, 329–330, Pl. C. For the southern wall of the sanctuary and the *mihrab* after restoration, cf. GERÓ 1956, 23.



Ill. 3. The siege of Buda, 1686. Engraving after a drawing by L. N. Hallart. Detail representing Pest

parish church of Szentfalva. The foundation walls of the rectangular minaret next to the medieval sanctuary were uncovered on the plot at Szerb utca 21–23. Pest's Poor Clares convent was built on the site in the eighteenth century and the remains of the minaret served as the base of the tower standing between the eighteenth-century church and the convent (Ill. 2).¹⁴ Of the *camis* featuring on the engravings, the one created from Church of the Franciscans can be identified, while an eighteenth-century plan shows the location of the Great Mosque (the *Büyük Cami*) half way along the *Városház utca* wing of the Invalidus building that later became the City Hall of Budapest. It would appear that this was built in its entirety by the Ottomans, since an east-oriented buttressed wall with medieval burials along its northern side – the presumed remains of the medieval Church of St. Nicholas – have been found further on, in front of the *Bárczy István utca* facade of the Invalidus building (the present City Hall). According to eighteenth-century data, the Turkish *cami* was converted into the Church of the Servites, which collapsed of its own accord while the Invalidus building was being constructed.¹⁵ According to the

historical data, the Christians, too, had a church during the Ottoman period. Although Pest's Parish Church of the Blessed Virgin is believed to have remained a Christian church for a fairly long period of time, it is invariably depicted as a *cami* in seventeenth-century engravings.

The Turkish dervishes of Pest had two *tekkes*: one, situated somewhere inside the town, is mentioned in 1664, while the other, the *Yalı Tekkesi*, stood somewhere on the Danube embankment. The location of the Turkish schools and bathhouses remains unknown.¹⁶ Seventeenth-century townscapes show the Turkish cemeteries (Ill. 3). The cemeteries, which were extensive, lay outside the town wall, near the gates. A Turkish gravestone was found among the graves in the *Kálvin tér* cemetery near the *Kecskeméti kapu* (Kecskemét Gate), and Turkish graves were also uncovered by the *Hatvani kapu* (Hatvan Gate) at the beginning of *Rákóczi út*, as well as north of the *Váci kapu* (Vác Gate) and on *József nádor tér*.¹⁷

The foundations of a large building from Ottoman times were found under the road at the corner of *Károlyi utca* and *Curia utca*. The food depot of the Bavarian troops stood on this spot in 1686–87

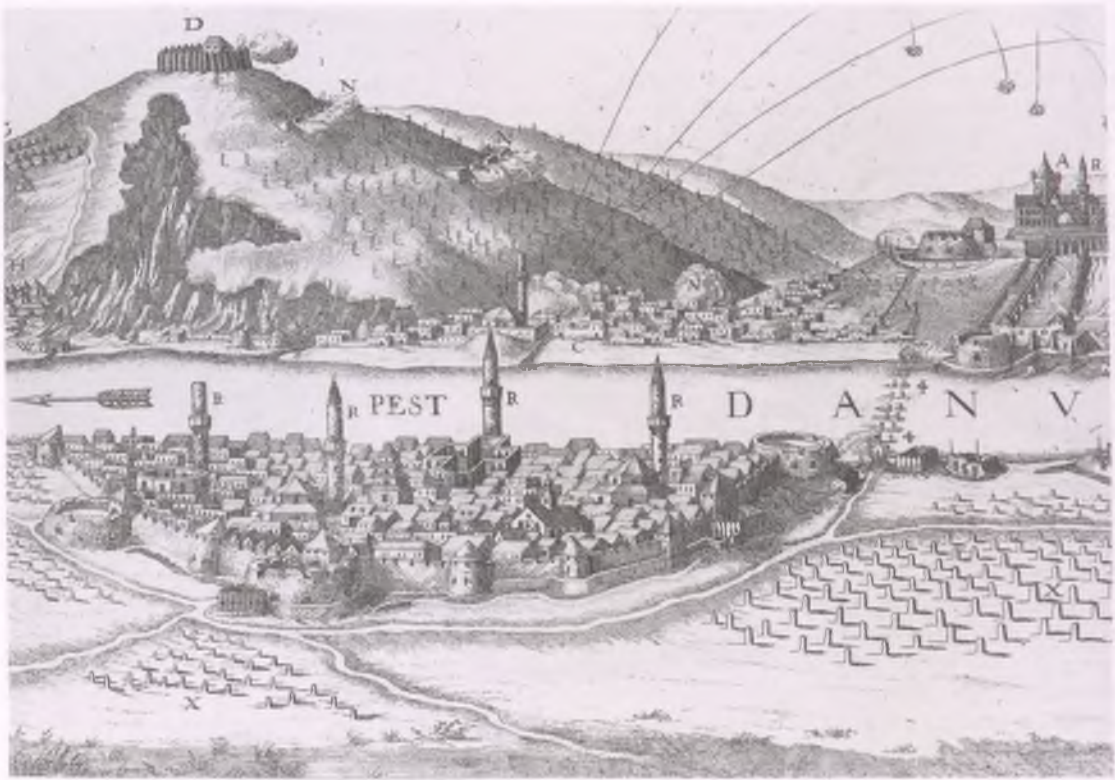
¹⁴ IRÁSNÉ MELIS 1984, 64–65, 70. The archaeological investigations were resumed while this publication was at the press and it became clear that the foundation walls of the tower next to the church's sanctuary served as the foundation walls for the minaret.

¹⁵ For a section of the medieval cemetery, cf. IRÁSNÉ MELIS 1976, 321, Ill. 85. A depiction of the Great Mosque (*Büyük*

Cami) has survived on an engraving from 1721. This was based on a drawing by Fisher von Erlach. Cf. FEKETE – NAGY 1973, 359–360; RÓMER 1873, 179–183.

¹⁶ FEKETE – NAGY 1973, 359–360; GERŐ 1980, 82–122.

¹⁷ Rescue excavation conducted by Győző Gerő and the present author.



Ill. 4. The siege of Buda with the view of Pest, 1684. Mixed technique. Graphic work after a drawing by L. N. Hallart

and it likely that the building was a military storehouse during the Ottoman period also. In the medieval era it may have been the house of the Franciscan *beginas*.¹⁸

The archaeological record and the historical sources show that the overall topography of the town remained unchanged after 1541 and that the medieval names, too, persisted. In the 1547 tax registers the various neighbourhoods, or *mahalles*, are listed using Hungarian street-names: the town consisted of the Búza piac, Bécsi utca, Szent Péter utca, Hatvani utca, Zsidó utca, Ceglédi utca, Szent Miklós utca, Circulus utca, Nagy utca, and Szél utca *mahalles*. Some of the streets and squares were renamed in later decades, and even today we do not know where the Jász *mahalle* and the quarters with Turkish names – such as the Ulama Paşa, the Defterdar and Gazanfer Aga *mahalles* – actually were.¹⁹ The sixteenth-century descriptions of the town are rather contradictory on these points. The visitor gazing across from Buda or sailing down the Danube would hardly have noticed the neglected, muddy streets and the makeshift houses between the minarets and cupolas that rose above the town. Stephan Gerlach's scathing opinion, published in 1573, may have come near to the truth:

"After lunch we crossed the pontoon-bridge, which is 700 paces long, over the Danube to Pest and saw that it had once been an important trading town. In it there are numerous dark and not particularly cheerful shops. Although the pretty stone buildings from earlier times used to have emblems and latticed windows, the Ottomans have daubed them with clay and there are now no embellishments to look at. The two Turkish churches resemble each other with their pretty porches. In each case the vestibule of the prayer hall is covered with carpets on three sides, as is the inner hall, and the eastern wall in the church of the *paşa* is likewise draped with fine carpets. These mosques are round and slighted pointed on top; inside hang various smaller and larger lamps made from iron wire. A slender white tower with a small walkway on top rises on the western and eastern side of each of these mosques. [...] On 20 June the gentlemen set out for Pest by boat and there they saw a lavishly ornamented bath made of red marble; this could be heated, and there was warm water flowing from the wall."²⁰

Life in Pest, one of the Ottoman Empire's most distant garrison towns, was fairly peaceful until the end of the sixteenth century. In 1598 another army

¹⁸ In 1541–42, the Franciscan friars operated in the *beginas* house, but they soon fled the town. During the Ottoman era the Christian population of Pest were mostly Lutherans; we know the names of several of the pastors. Cf.

FEKETE – NAGY 1973, 360, 412; For the building's remains cf. IRÁS-NÉ MELIS 1976, 319, 336, Ill. 83.

¹⁹ FEKETE – NAGY 1973, 359.

²⁰ SZALAY 1861, 218–219.



Ill. 5. The positions of the posts of the outer gun platform on the outer side of the town wall. Károly körút 28–30, District 5, Budapest. 17th century. Archaeological research performed in 1997. Trench VI

of liberation – led by Archduke Matthias – arrived beneath the walls of Buda. The army made no attempt to besiege Pest and later withdrew owing to bad weather. In 1602 the military leadership in Vienna again planned the recapture of Buda. The commander in charge of this campaign was General Hermann Christopher Ruswurm, who managed to capture Pest. The Turks put up a determined defence. Following a battle fought from street to street, the last few hundred Ottoman soldiers barricaded themselves in one of the large bastions by the Danube, but they eventually surrendered and were allowed to withdraw to the Buda side. The imperial troops captured valuable war booty, including one thousand horses captured from the Ottoman army. Although Pest remained under imperial occupation during the winter of 1602–3, the town suffered frequent attacks. The most serious of these came from Buda, since Lala Mehmed fired on the town from Castle Hill. Later engravings of the town show the damage suffered by the riverside area of the town and on some of them damaged mosques can also be seen (Ills. 3–4). Military operations continued in 1603 and in late September imperial troops again appeared under the walls of Buda. They threw a bridge over the Danube, occu-

pied Csepel Island, but since they were unprepared for winter, they withdrew once more. Partly as a result of István Bocskai's campaign, in September 1604 the *Hofkriegsrat* in Vienna ordered Captain Jägenritter Wolff to destroy the fortifications of Pest, to evacuate the town and to burn it. Pest was left in ruins. However, the military events of the early seventeenth century were still not over. The armies led by István Bocskai reached Pest and pitched camp at Rákosmező. The Turks organized a series of ceremonies and Lala Mehmed, who had ordered the bombardment of Pest, handed over to Bocskai the crown sent by Sultan Ahmed I. After this, negotiations began. The adversaries – Turks, Germans and Hungarians – were all wearied by war. In the Treaty of Zsitvatorok (1606) they compromised with each other and agreed that Buda should remain in Turkish hands.²¹

During the campaigns launched to recapture Buda it became abundantly clear that as a result of advances in artillery and military technology generally that the military value of Pest had diminished. Buda could not be captured or even besieged from the Pest side, and the medieval town walls no longer offered adequate protection for the town itself. Ravaged and destroyed, the town offered a pitiful spectacle to visitors. After his János Bocatius, mayor of Kassa, was bitter at what he saw during his visit in 1605: "O poor Pest, which should rather be called Pestilence! There is not a single house left intact, all

²¹ FEKETE – NAGY 1973, 337–343.

have been knocked down, and the few inhabitants ruff-raff, the lowest of the low."²²

After 1606 the Turks returned. Pest remained a garrison town for Buda that protected Castle Hill from the Great Hungarian Plain. The garrison soldiers and the civilian population were probably newly arrived among the ruins and devoted major attention only to rebuilding the military installations. Archaeological investigations reveal that civilian architecture all but disappeared in the seventeenth century, and that the humble huts were improvised from the ruins. This is clear from the remains that have been unearthed in Molnár utca. A low, single storey house with narrow walls of crushed stone was built over the remains of an earlier house at Molnár utca 36, and a massive round stone stove, probably used for industrial purposes, was installed in the room facing the street. The foundation for the seventeenth-century stove contained green-glazed Turkish stove tiles, footed bowls and other household ceramics fragments. The manner of building was different on the neighbouring plot, at No. 38. The sixteenth-century brick house had been completely destroyed and a sunken stone oven was built in the centre of the room that had faced the street (this stove was more carefully constructed than the hut beside it. The seventeenth-century house with *terre pisé* walls was built over the earlier outbuilding and stove, and it adjoined the surviving wall of the medieval house on the neighbouring plot at No. 40.²³ On the evidence of the excavations, the stone houses on Károly körút were still standing in the seventeenth century. The medieval manner of utilising the plot remained unchanged, as did the medieval ground plans, although we know nothing of the structures above ground level since in 1684 the houses were damaged to such an extent that only the foundations were used in the rebuilding work performed at the end of the seventeenth century. The area around the stone houses was to all intents and purposes not built on in the seventeenth century. It was covered with rubbish heaps containing mostly animal bones; the inhabitants did not even bother to dig refuse pits. Only the remains of one seventeenth-century *terre pisé* house have survived in amongst the modern buildings. It was open on the eastern side; the remains of the southern wall could be seen along its entire length, as well as sections of its western wall. A flat fireplace was found in the southwest corner that was probably used for metal smelting and blacksmithing. A large pit (with a diameter of 3.7–4 metres and a depth of 1.7 metres) found nearby can proba-

bly be associated with the workshop. This storage pit was dug into the sandy subsoil and its floor was lined with planks. This plank flooring collapsed in the centre of the pit and eventually decayed; the floor was then covered with earth and a new floor of planks put down. A total of four plank floors were uncovered; the two lowermost ones sloped slightly towards the middle of the pit, while the two upper ones were almost horizontal. The planks were strongly decayed. The layers of earth contained a few Turkish pottery fragments. The remains of the pit and the fireplace were covered by the fill layers of the 1686 levelling, suggesting that the two features can be dated to the period after the 1604 destruction.²⁴

On a few seventeenth-century engravings as well as the ruinous *samis* the ruinous neighbourhoods can also be seen. The northern neighbourhood along the Danube, a part near to Buda, was likewise in ruins owing to the bombardment from Buda between 1602 and 1604, and since a similar attack against the town could be expected at any time, the area remained neglected.²⁵ Archaeological excavations have confirmed that the Church of St. Mary – the present-day Parish Church of the Inner City – was flanked on all sides by ruins. Not a single wall section that could have been used in the seventeenth century could be identified on Március 15 tér. Owing to the extent of the destruction, not even the medieval buildings on the northern side of this church could be reconstructed since only large refuse pits filled with rubble lay under the late seventeenth-century fill from the later levelling. Various finds from the eleventh–seventeenth centuries were made in the seventeenth- and eighteenth-century layers between the remains of the medieval walls. Only one undisturbed pit from the sixteenth century was uncovered; this had probably contained a potter's stock of vessels. One half of the pit yielded various green- and polychrome-glazed footed bowls; in the other half were Hungarian white pots, jugs and ewers with glazed interiors laid carefully one inside another. The upper part of the pit had been destroyed.²⁶

After the Treaty of Zsitvatorok in 1606 the town wall protecting the military garrison could not be left in a ruinous state. During the reconstruction work a number of external gun emplacements, as well as ditches inside and outside the town wall, were created in the northeast, the direction from where a liberating army could be expected. This construction work was finished by the 1660s. In his work describing his travels in Hungary between 1660 and 1664, Evlia Çelebi gave a highly enthusiastic account of Pest's

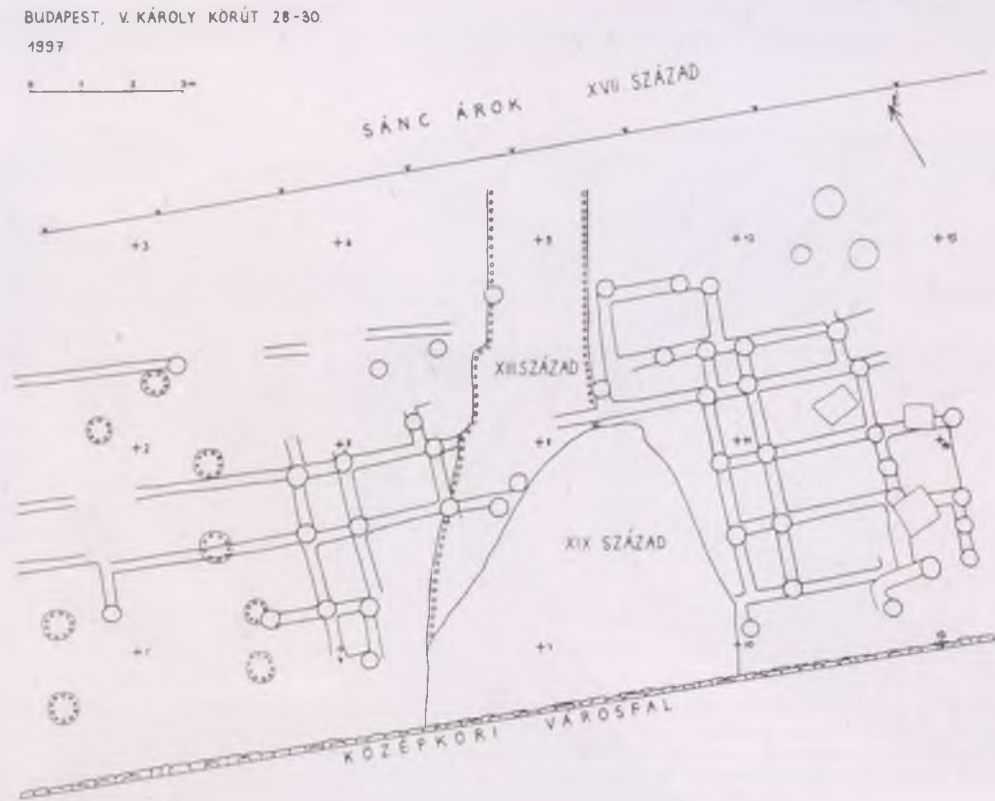
²² SINKOVICS 1968, 336.

²³ For the townscape and secular architecture during the Ottoman period, cf. GERŐ 1980, 35–37. For the houses of Pest cf. IRÁSNÉ MELIS 1996, 232–235. The cadastral survey of Pest from 1688, after the end of the Ottoman rule, records a few house remains of wood and daub as being Turkish houses. Excavations have revealed that these were of the most humble type during Ottoman times also. Cf. NAGY 1961, Map.

²⁴ Excavation conducted by the present author. The finds are unpublished.

²⁵ Detail of N. M. de la Vigne's engraving depicting the ground plan of Buda and various views of the town. Cf. RÓZSA 1963, cat. no. 21, 88–89, 195–196, Pl. XXXIV and Pl. LXIII.

²⁶ IRÁSNÉ MELIS 1976, 317–318.



Ill. 6. Wooden structure of the outer gun platform. Ground plan. Károly körút 28–30, District 5, Budapest. 17th century. Archaeological research performed in 1997. Trench V. (Key: SÁNC ÁROK = ditch; KÖZÉPKORI VÁROSFAL = medieval town wall)

one important structure, namely its town wall. He noted that the town was protected by a stone-built wall on the landward side and by a simple palisade on its Danube side. A wide but insignificant ditch and rampart lay outside this wall, and earlier on the ditch had been fed from the Danube. He saw twelve round towers on the walls. Five of these were round *iskederi* bastions; the other towers were spaced out between the gates. Each tower was equipped with five to six cannon. The towers were roofed with cupolas of planks; the towers were fifty paces apart and the loopholes for the guns two paces apart.²⁷ Two Western travellers also visited Buda at roughly the same time as Evlia Çelebi. Arriving in 1663, Heinrich Ottendorff described Pest as a town “fortified with a bad wall in some places strengthened with towers and semicircular bastions.” Edward Brown thought very differently when in 1669–70 he looked down at Pest from Buda, delighting in the view of the rectangular town with its slender minarets and impressive walls lying on the plain.²⁸ The defence works protecting the northeast section of the town wall are not mentioned in either description,

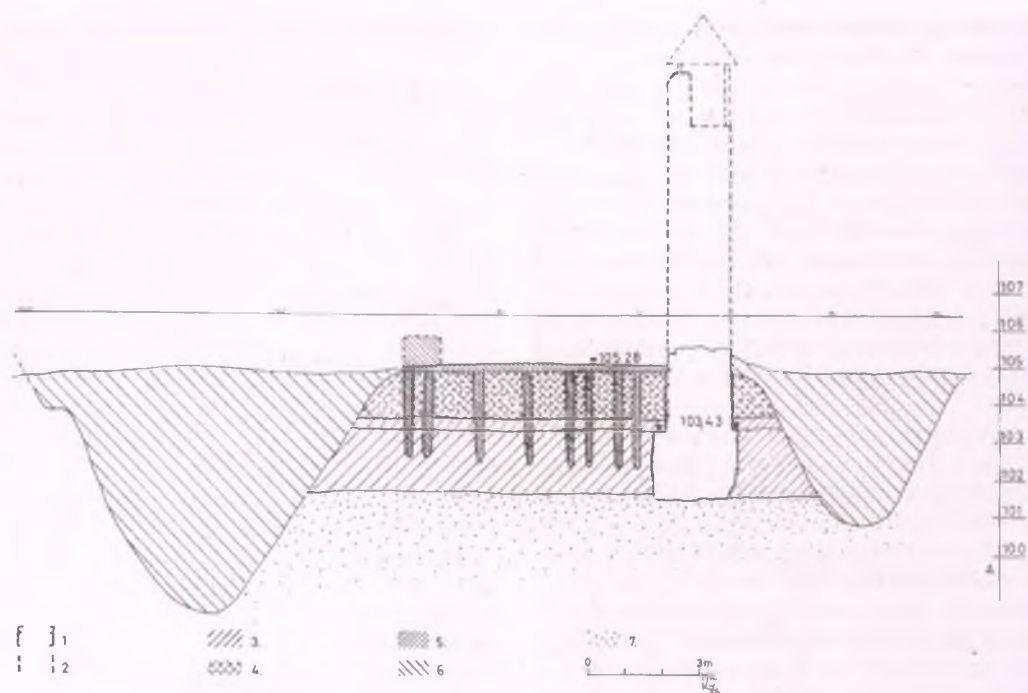
suggesting that they were constructed later, after 1670. For its part, the archaeological record only permits the assertion that the defence works shown on engravings depicting the 1684 siege were constructed between 1606 and 1684.²⁹

Sections of the defence works depicted on the siege pictures from the period 1684 to 1686 siege were identified on both sides of the Károly körút town wall section during excavations in 1996–97. The excavated remains accord with Hallart’s engraving, depicting Pest as seen from the east, down to the smallest detail (Ill. 4). The engraving, which can be regarded as accurate, shows a high, plank-built gun platform resembling a round bastion; this had an entrance on its western side and it stood in front of the Váci kapu. It was here that the outer gun platform built for the town wall began, linked to the western side of the rectangular tower at Deák tér. The defence works continued from the opposite side of that tower, skirting round the semicircular tower that stood on the boundary of plots at Károly körút 28–30 (this tower was completely demolished in the early twentieth century) and continuing towards the

²⁷ KARÁCSON 1904, 258.

²⁸ For Heinrich Ottendorff’s description of Pest, cf. HERMANN 1943, 35–37; for Brown’s description cf. HARASZTI – PETŐ 1963, 142.

²⁹ A Ground Plan of the Siege of Buda: engraving after a drawing by L. N. Hallart. Cf. RÓZSA 1963, cat. no. 99, 218–22, Pl. LII; View of the siege of Buda, 1686: engraving. Cf. RÓZSA 1963, cat. no. 105, 246–248, Pl. LV.



Ill. 7. Section of the town wall, the outer gun platform and the ditch. Károly körút 28–30, District 5, Budapest. 17th century. Archaeological research performed in 1996–1997. Key: 1. Remains of the town wall at the time of the excavation; 2. Cross-section of the reconstructed town wall; 3. Medieval layers, 12th–16th centuries; 4. Grey clay layer, 17th century; 5. Unearthed and reconstructed loopholes of the gun platform, 17th century; 6. Cross-section of the ditch on either side of the town wall, 17th century; 7. Undisturbed sandy soil.

northern wall of the next semicircular tower. Running in front of the gun platform was a wide ditch and rampart extending from the Váci kapu to the round bastion of the Hatvani kapu. A gun platform protected by a palisade defended the gate of this bastion. The ditch and rampart continued right next to the wall, extending to the round bastion of the Kecskeméti kapu. The engraving shows that in front of the gun platform the earth from the ditch had been piled onto the outer side of the wide ditch. The excavations at Károly körút uncovered a section of the seventeenth-century defence works 80 metres long between the rectangular tower at Deák tér and the semicircular tower next in line from it.

On the outer side of the town wall, the gun emplacements and the ditch and rampart in front of them extended along a strip of land 17 metres wide. The gun platform was constructed from timber posts with a diameter of 30 centimetres and from planks 10–12 centimetres wide; the grid-like structure was 7–7.5 metres wide and the gridwork was filled with grey clay (Ills. 5–6). A total of approximately 2000–3000 cubic metres of premium quality wood were needed for the more than 400 metres of construction work, which also required 3000–4000 cubic metres of grey clay. The archaeological record suggests that the valuable wooden material used for the construction of the gun platform was removed in conditions of peace, before the imperial troops recaptured Pest in 1684. This may be the reason why no traces of burning could be noted either in or on

the grey clay, even though we know that the imperial troops destroyed and burnt Pest in the fall of 1684. The greyish clay layer had practically turned into cement and near the town wall its thickness exceeded 1 metre. Holes for the posts and remains of the planks were found in the medieval layers underlying the grey clay layer; they cut through the sixteenth-century fill, the fifteenth–sixteenth-century pebbly surface and the settlement levels of the periods preceding the construction of the town wall. The positions of the posts outlined the original grid-like structure. The first row was positioned some 60–70 centimetres from the town wall and the grids were 70, 30, 70, 30, 100, 120, 80, and 30 centimetres wide respectively. The outer edge of the gun platform could not be precisely observed since it merged into the inner edge of the ditch and rampart. It seems likely that the outer wall of the outermost, 30-centimetre-wide, gridwork consisted of the palisade that can be made out on the engravings from 1684 to 1686. The height of the gun platform remains unknown. The distance between the top of the layer of grey clay next to the town wall and the base of the holes for the posts was 270 centimetres, suggesting that the timber posts had been at least 3 metres long.

The outer ditch and rampart were 8–8.5 wide and 6 metres deep on the level of the fill. It proved impossible to cut through the ditch and rampart with a trial trench since a public utility pipe had been laid in the fill of the ditch (Ill. 7). Owing to the modern intrusions, the outer side of the ditch and



Ill. 8. The siege of Buda. Engraving by M. Wening after a drawing by L. N. Hallart

rampart could only be cut through in one spot to gain a section; we found the same medieval layers that we noted under the gun platform. The walls of the ditch, especially on the inner side, cut through the earlier layers, and the levels of the post-1686 fill, too, formed a straight line, suggesting that the wall of the ditch had been dug very carefully. The ditch wall had probably been reinforced with a wooden structure since the sandy soil underlying the roughly 2-metre-thick layer dating from the eleventh to the seventeenth-century was extremely loose. It is known that neither moat, nor dry ditch was dug near the town wall in the Middle Ages. The seventeenth-century ditch and rampart had no medieval precursor.

Archaeological excavations at the Hatvani kapu and the Kecskeméti kapu have confirmed the authenticity of Hallart's 1684 engraving (Ill. 4). On the

engraving the ditch and rampart end at the juncture of the Hatvani kapu and the town wall. The 1963 excavations conducted on the eastern side of the Hatvani kapu round bastion revealed a series of layers, with the lower levels yielding thirteenth-century finds and the upper ones sixteenth-century artefacts. No traces of a ditch comparable to the one uncovered on Károly körút, or a smaller ditch, were found during the investigations conducted in the 1970s at the Kecskeméti kapu and its round bastion. A sediment layer of levels each of them 1 centimetre thick was noted north of the gate tower. These layers, however, stemmed from the drying of rainwater.³⁰

On the inner side, too, of the town wall along Károly körút a ditch has come to light. The ditch, 6 metres wide and 4 metres deep, ran parallel to the wall along the 140-metre-section of the wall that was excavated. We know that at the time of the 1542 siege

³⁰ The Siege of Buda from the East, 1684: engraving by M. Wening after a drawing by L. N. Hallart. Cf. RÓZSA 1963, cat. no. 77, 178–179, Pl. XXX; The Siege of Buda from the

South, 1685: engraving by M. Wening after a drawing by L. N. Hallart. Cf. RÓZSA 1963, cat. no. 118, 264–265, Pl. XXXI.

the determined Turkish defenders dug ditches and raised ramparts on the inner side of the town wall. No traces of these have yet come to light. Neither have any traces of the northern interior wall and ditch depicted on engravings of the 1686 siege, even though these engravings clearly show that they ran from the smaller southern round bastion on the Danube through the northwest corner of the town to the town wall section between the Váci kapu and the outer tower at Deák tér (Ill. 3). The bird's-eye view of Pest in Hallart's engraving shows an inner ditch starting at the juncture of these two walls. The ditch indicated by hatching can be traced to the tower at Deák tér, disappearing up to Királyi Pál utca, and reappearing again between the houses to the Danube shore. The traces of the inner ditch were also identified on the plots at Magyar utca 48–50. The inner edge of the ditch could be identified after the clearing away of the modern cellar walls: it ran some 5.6 metres from the town wall and the wall of the ditch sloped gradually towards the town wall. The side of the ditch nearer to the town wall was destroyed when a double cellar was built beside the town wall.³¹ The excavated sections of the ditch suggest that this inner ditch ran along the entire length of the town wall between the gates and the outer bastions. Only the section running along Károly körút could be investigated along its entire width. The bank of the ditch lay at the same level as the top of the grey clay layer on the outer side of the town wall, and the steep walls of the ditch cut through the medieval levels. The steeper side of the ditch lay some 2–2.5 metres from the town wall, and the town wall did not collapse into the ditch, because the ditch walls were reinforced. After 1686

the ditch was filled up with the earth from the piles beside it. Thus, the finds from this fill ranged from twelfth- to seventeenth-century finds, and also included architectural rubble from the same period (Ill. 7).

In the early 1680s the European countries saw that the time had arrived to launch a new war against the believed the time had come to launch a new war against the Turks. On 5 March 1684 an anti-Turkish alliance, the Holy League, was formed. A few months later an army of liberation arrived beneath the walls of Buda. On 30 June 1684, the Turks evacuated and burnt Pest, after which the imperial troops led by Charles of Lorraine marched into the ruinous town. They began bombarding Buda from the Pest shore, but soon realized that Pest lacked significant strategic value, and that the retention of the town in the face of the Ottoman guns of Buda would mean heavy losses. In order to avoid further losses, the *Hofkriegsrat* in Vienna ordered the evacuation of the town. The few surviving buildings were destroyed and the ruins were set on fire. In this way the second largest medieval town of Hungary was finally obliterated. Following an unsuccessful siege of Buda, the imperial army retreated in the autumn of 1684 and Pest was re-occupied by the Ottomans. In May 1686, combined European armies of liberation set out from their camp at Párkány (today: Šturovo, Slovakia) and arrived under Buda on 16–17 June. Elector Maximilian Emanuel of Bavaria occupied Pest within a few hours on 17 June; four days later, on 21 June, his troops crossed the Danube and fought a valiant battle lasting seventy-five days that ended in the recapture of Buda.³²

³¹ IRÁSNÉ MELIS 1976, 325.

³² KÁROLYI – WELLMAN 1936, 208–209, 248. The drawings in the present study were made by Zsuzsanna Kuczogi and by the author; the photographs were taken by Margit Bakos and Bence Tihanyi.

Ottoman Architecture in the Town of Gyula

The fortress of Gyula fell to the Ottomans on 2 September 1566. As is well known, a few days later, on the 8th, Szigetvár, too, was captured. In this way the position of the Ottoman armies in Hungary was strengthened for a long period.

Ottoman taxation of the villages of Békés County had, however, begun years earlier, after the fall of Temesvár in 1552 and the subsequent establishment of the *vilayet* of Temesvár. The *sancak* of Arad, created after the Ottoman military expeditions of 1552, consisted of three *nahiyes* (Arad, Békés and Zaránd), according to the tax-register (*sancakdefter*) of 1557–1558. After the capture of Gyula, a new apportioning was implemented. According to this, the *nahiyes* of Gyula, Arad, Békés, Zaránd, and Bihar belonged to the *sancak* of Gyula.¹

As everywhere in the Ottoman Empire, Gyula, the seat of the newly established *sancak*, was transformed into a settlement more suited to the conquerors' way of life. The town of Gyula belonged to the group of settlements in which not only the fortress, but also the outer areas served to accommodate soldiers. In such settlements – and therefore in Gyula, too – officials and a Muslim civilian population large or small moved into the conquered town in the soldiers' wake. This Turkish and Serb population gradually transformed the appearance of the medieval Hungarian town.

Researching the history of Gyula, we are in a fortunate position: there is a wealth of information concerning the inhabitants, the houses, the streets, and the topography of the town during the Middle Ages. Working from a variety of sources at the end of the nineteenth century, János Karácsonyi endeavoured to reconstruct the topography of Gyula in the sixteenth century;² and in his monograph of 1938 Ferenc Scherer attempted to do the same.³ Based on these sources we know the names of fifteen streets and approximately

where and in which town quarter they were situated.⁴ An additional help is Matthias Zündt's engraving of 1566 that depicts the siege of Gyula (Ill. 1),⁵ although of course this shows the town as it was before the Ottoman occupation. Of the street-names appearing in the sixteenth-century sources, six are mentioned in the tax-register for the *sancak* of Gyula drawn up in 1567. According to this, Ottoman residents lived in the Nagy utca, Malomszeg utca and Sánta utca *mahalles*, as well as in the fortress, while the Hungarians who returned after the siege occupied the Barát utca, Halász utca and Új utca *mahalles*.⁶ This would suggest that some parts of the town remained relatively intact after the military operations, and also that some of the houses were habitable. In the era of the Ottoman conquest Gyula underwent a gradual change. The *sancak* register of 1579 indicates the presence of two *camis* and three *mescids* in the town. The Ottoman inhabitants of the town were not registered according to the street in which they lived, but according to the *mahalle* (town quarter). The Hungarians still lived in the Új utca, Barát utca and Halász utca *mahalles*.⁷

Before its capture by the Ottomans in 1566, Gyula had six Christian churches and chapels. In all likelihood the *camis* and *mescids* mentioned in the tax-register for the *sancak* were medieval buildings reconstructed in line with their new purposes. We can rule out the possibility that the chapel in the castle-building (the medieval core of the inner fortress), the Franciscan church and the Chapel of St. Maurice were transformed into mosques.⁸ If we accept the assumption that the Franciscan church was built in what was originally a village called Krakó, that its cloister faced Barát utca, and that Barát utca and Szt. Móric utca ("St. Maurice Street") were adjacent to one another,⁹ then we can conclude that no Ottoman mosque stood in this area because its inhabitants at this time were Hungarians.

¹ KÁLDY-NAGY 1982, 10.

² KARÁCSONYI 1896, I. 162–164, II. 144–145.

³ SCHERER 1938, 84–90.

⁴ SCHERER 1938, 90; VERESS 1938, 91–93, 218–224.

⁵ Hungarian National Museum, Historical Gallery. Inv. no. T. 352; the most recent overview of medieval Gyula was made by József Dusnoki. Basing his work on the known street-names and Zündt's engraving, he tried to reconstruct the old town plan. Cf. BLAZOVICH 2000, 26–29. As regards Zündt's engraving, it is unclear whether the artist made use of sketches drawn by spies who were on the spot, as is evident in the case of his work concerning Szigetvár. Cf. ROGERS – WARD 1988. The drawing includes several details

which imply that the work was based on personal observations, such as the mills by the River Körös, the moat dividing the inner and the outer fortress, the gun emplacement in the outer fortress, etc. However, the portrayal of the castle-building, a work of fantasy, should be treated with caution.

⁶ KÁLDY-NAGY 1982, 41–47.

⁷ KÁLDY-NAGY 1982, 47–54. The third *cami* was in the fortress. More will be said about this later.

⁸ There were no indications during the excavation of the castle-building that the chapel had been transformed into a *cami*. Cf. PARÁDI 1966, 13–14.

⁹ SCHERER 1938, 50, 87.



III. 1. The siege of Gyula in 1566. Engraving by Matthias Zündt

In the light of the research over the last few years, it is doubtful whether the parish church in Gyula was altered and that this medieval building became the holy *cami* of Ali Bey mentioned in the 1579 tax-register.¹⁰ According to Dénes Jankovich-Bésán, a medieval structure excavated in an area much further from the fortress and today's town centre, namely in the so-called Törökzug district to the east, could be the former parish church.¹¹ The engraving by Matthias Zündt corroborates this theory. If this is so, it is impossible that this assumed medieval parish church was transformed into a mosque, since it, too, was located in a district inhabited by Hungarians. This means that the Chapel of St. Aloysius, and the building of the hospital next to it were utilised by the incoming Turks, namely by Pirsiz Ali, the *sancakbeyi* of Gyula. Contradicting this, however, is some data from 1518, according to which Mátyás, the parish priest of Gyula, pledged that before leaving the parish, he would repair the mill, bathhouse and school that belonged to it.¹² The location of the medieval bathhouse, the later Turkish bathhouse, is known; the building – or more precisely its foundations – still exist today, not in the Törökzug district,

but beside the parish church, still standing, that was built by Ferenc Harruckern. On the spot of this last-mentioned church an Ottoman mosque stood at the time of the town's recapture.¹³ In the light of the above, only this much can be said with certainty, that on the basis of Zündt's engraving the Chapel of St. Aloysius, which can be assigned to the vicinity of the fortress, and the Chapel of St. Nicholas, which has not yet been identified, were transformed into mosques after 1567.

The still unresolved contradiction described above also demonstrates the difficulties of reconstructing the state of affairs in Gyula during the sixteenth century. At the turn of the seventeenth century the town was destroyed twice, in 1600 and again in 1604.¹⁴ This explains why Evlia Çelebi, who visited the settlement in 1664, found only two *camis*, one in the town, the other in the fortress.¹⁵ He called the *cami* in the town the "Ali Bey Cami", adding that its founder, Ali Bey, was buried next to it. The reference is probably to Pirsiz Ali, who held the office of *sancakbeyi* of Gyula several times until his death in 1584.¹⁶ The mosque lived to see the recapture of the town at the end of the seventeenth century. In his

¹⁰ The present author took this view even before the recent research. GERELYES 1996, 104.

¹¹ JANKOVICH 1982, 415–426.

¹² SCHERER 1938, 98, 236.

¹³ Erkel Ferenc tér 3. Today the building is a school.

¹⁴ SCHERER 1938, 273.

¹⁵ KARÁCSON 1908, 229.

¹⁶ Pirsiz Ali was the *sancakbeyi* of Gyula in 1568, and it is therefore clear that the holy *cami* of Ali Bey mentioned in the register of 1579 was founded by him. Cf. DÁVID 1994, 127.



Ill. 2. Survey of the fortress and town of Gyula by Leopold Franz Rosenfeld, 1722

report written to the *Hofkriegsrat* in Vienna in 1695, Colonel Fülöp Jakab Porthen mentions two comparatively intact mosques and an “old bathhouse” in a town otherwise completely gutted by fire.¹⁷ The new Catholic church, built from the stones of the former mosque, can be clearly seen on a drawing made in 1722 by Leopold Franz Rosenfeld, a military engineer; by its northwest corner the minaret is still standing (Ills. 2–3).¹⁸ The last mentioned was finally demolished in 1744, during the construction of today’s Roman Catholic parish church, which was built by Ferenc Harruckern. Evlia Çelebi was surely right concerning the mausoleum (*türbe*) of Ali Bey. On the abovementioned map by Rosenfeld, very close to parish church, a single-domed small building is shown. He called this small building a “Chapel of the Deceased” in his explanatory notes. The mau-

soleum was demolished along with the minaret of the mosque in 1744.¹⁹ A little way from the *türbe* and the altered mosque a bathhouse covered with four domes can be seen on Rosenfeld’s map. This bathhouse, built during the medieval period, was substantially refashioned and enlarged during Ottoman times; a relatively late source – dating from 1733 – mentions this reconstruction. According to this authority, the stones needed for the construction work were acquired from churches demolished in the surrounding villages.²⁰ In 1715, the Calvinists were given the building as a church, in the absence of any other usable edifice. In 1784, the building was part church and part school.²¹ A limited uncovering of the building’s foundations took place in the early nineteenth century, and archaeological research of the last few years has proved that the heating system

¹⁷ VERESS 1938, 454.

¹⁸ Hungarian National Archives, Károlyi archives. Maps: 59.

¹⁹ MOGYORÓSSY 1858, 41; KARÁCSONYI 1896, II. 158.

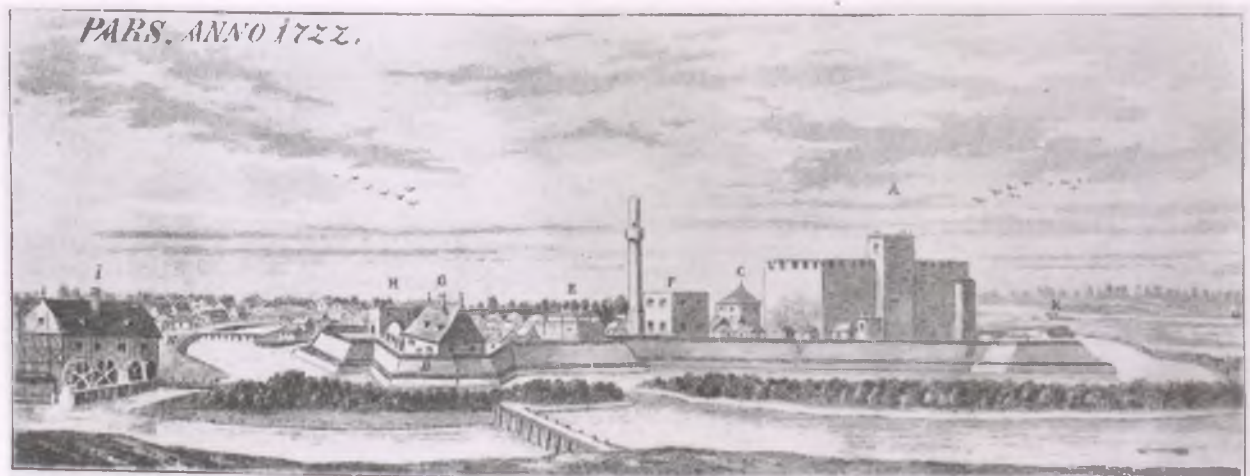
²⁰ HAAN 1870, 280–281: “The village of Nagydécs. Ecclesia haec per turcam fuit ruinata et materialia eiusdem Gyula

et ad Szarvas pro aedificatione balnearum fuerant deportata.”

²¹ PETIK 1784/1961, 17.



Ill. 3. Drawing of the town of Gyula by Leopold Franz Rosenfeld, 1722. N: The newly built Roman Catholic church, with the minaret at one of its corners; O: The mausoleum of Ali Bey; P: Turkish bathhouse



Ill. 4. Drawing of the fortress of Gyula by Leopold Franz Rosenfeld, 1722. A: The castle-building; F: Süleyman *cami*; G: Palace; H: Gateway structure

was of the hypocaust type; consequently the facility can be assigned to the steam-baths (*hamam*) category.²² Accepting that the building belonged to the *cami* of Ali Bey and not to the *cami* of Ishak Bey – this, too, was mentioned in the 1579 tax-register – would mean that Ali Bey created a traditional Ottoman building-complex (including a mosque, mausoleum and bathhouse), a so-called *külliye* (educational and charitable dependency of a *cami*), in this far-flung outpost of the empire.²³

The next building that should be mentioned when speaking of Ottoman architecture in Gyula is the *cami* on the area of the outer fortress. The 1579 register describes the *cami* as the “holy *cami* of the sultan’s *hâs*”.²⁴ This area was not affected by the destruction of the early 1600s. Evlia Çelebi saw the mosque and remarked that the “*cami* of Sultan Süleyman and that of Ali Bey are roofed in lead and are pleasing.”²⁵ Because the *cami* of Ali Bey was identified with the help of the mausoleum standing next to it, the mosque

in the outer fortress must have been the one named after Sultan Süleyman. According to the survey drawn up in 1722, there was a building in the outer fortress with one minaret (Ill. 4). On the depiction, the entrance of the building faces northwest; beside it, towards the west, stands the minaret, which is hexagonal in ground plan with a cylindrical body. The southeast–northwest orientation of the building corresponds to the orientation of other Ottoman *camis* in Hungary, which was always determined by the direction of Mecca. However, the *cami* does not exhibit the features characteristic of Ottoman architecture. Its roof is flat, there is no dome or cupola, and its windows are not arched. According to the drawings prepared in the middle of the eighteenth century, the building, which remained in use, underwent no significant change except for the addition of a gabled roof (Ill. 5). Antal Hübner, chaplain at the court of Ferenc Harruckern between 1743 and 1758, alludes in his diary the “slim minaret from the Ottoman

²² MOGYORÓSSY 1858, 153; GERÓ 1980, 110–111.

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²⁴ KÁLDY-NAGY 1982, 47.

²⁵ KARÁCSON 1908, 229.



Ill. 5. View of the castle-building, the Ottoman *cami*, the Harruckern palace and the gate-tower, 1745

period” still standing in the courtyard of the palace.²⁶ In 1784, Ambrus Petik, after describing the Harruckern palace in the outer fortress area, mentions the Turkish mosque in his list of the town’s sights: “In the middle of the outer fortress are the quarters of the steward of His Lordship’s estates [= the former Turkish mosque]. To this building the minaret, destroyed in 1754, was joined.”²⁷ A stretch of the *cami*’s foundations was accidentally found in 1958. Based on the excavations carried out between 1984 and 1987, the exact location of the building, as well as its ground plan, could be determined. Oriented southeast–northwest, it was 21.5 metres long and 12.5 metres wide. The great demand for building materials during the reconstruction of the town explains why the walls – and in several areas even the foundations – of the *cami* were demolished. However, it could still be seen that the building had been erected on a foundation of stone and a multi-layer timber structure. The scanty remains of the walls and the great amount of brick debris indicate that the upper sections of the building were constructed of brick.²⁸

It is difficult to reconstruct the state in which the Ottomans found Gyula fortress and its defence works. Excavations, investigations of the walls and the comparison of late seventeenth-century surveys with the 1562 sketch drawn by the military engineer Paolo Mirandola (Ill. 6) all indicate that the Ottomans did not alter it significantly during the 130 years they occupied it. The repairs mentioned in a number of written sources (in 1571, 1584, 1630, and in 1687)²⁹ probably only meant maintenance of the walls. Stor-

age was the main function of the castle-building throughout the occupation period. None of the known sources mentions major damage to the castle-building during the siege of 1566. The exact date of the major destruction of the northeast and northwest parts is unknown; according to Nándor Parádi, leader of the excavations between 1956 and 1961, the damage occurred sometime during the Ottoman era. According to the 1579 register, a larger part of the garrison, 54 families, lived in the environs of the *cami* in the outer fortress.³⁰ There are no data on where the 700-strong Ottoman garrison mentioned at the end of the sixteenth century was accommodated; it seems probable that most of these soldiers were likewise quartered in the outer fortress. Evlia Çelebi mentioned that in 1664 “only the commander *aga* lived in the castle-building, where the granary and the military storehouses were located”.³¹ According to the 1695 official report by Colonel Fülöp Jakab Porthen, the castle-building seems to have been scarcely used at this time; its gate was fully blocked up and two small houses stood very near the entrance.³²

The other question is whether the Ottomans performed any larger-scale reconstruction of the palisade system or of the earthen bastions. Comparing the surveys drawn up in the late seventeenth and early eighteenth century with Mirandola’s plan from 1562, it seems that the enlargement of the palisade fortification was carried out on the basis of the Italian’s plans, meaning that these operations were ordered by the fortress commander, László Kerecsényi, and executed between 1560 and 1566. Accord-

²⁶ HAAN 1874–75, 16.

²⁷ PETIK 1784/1961, 18.

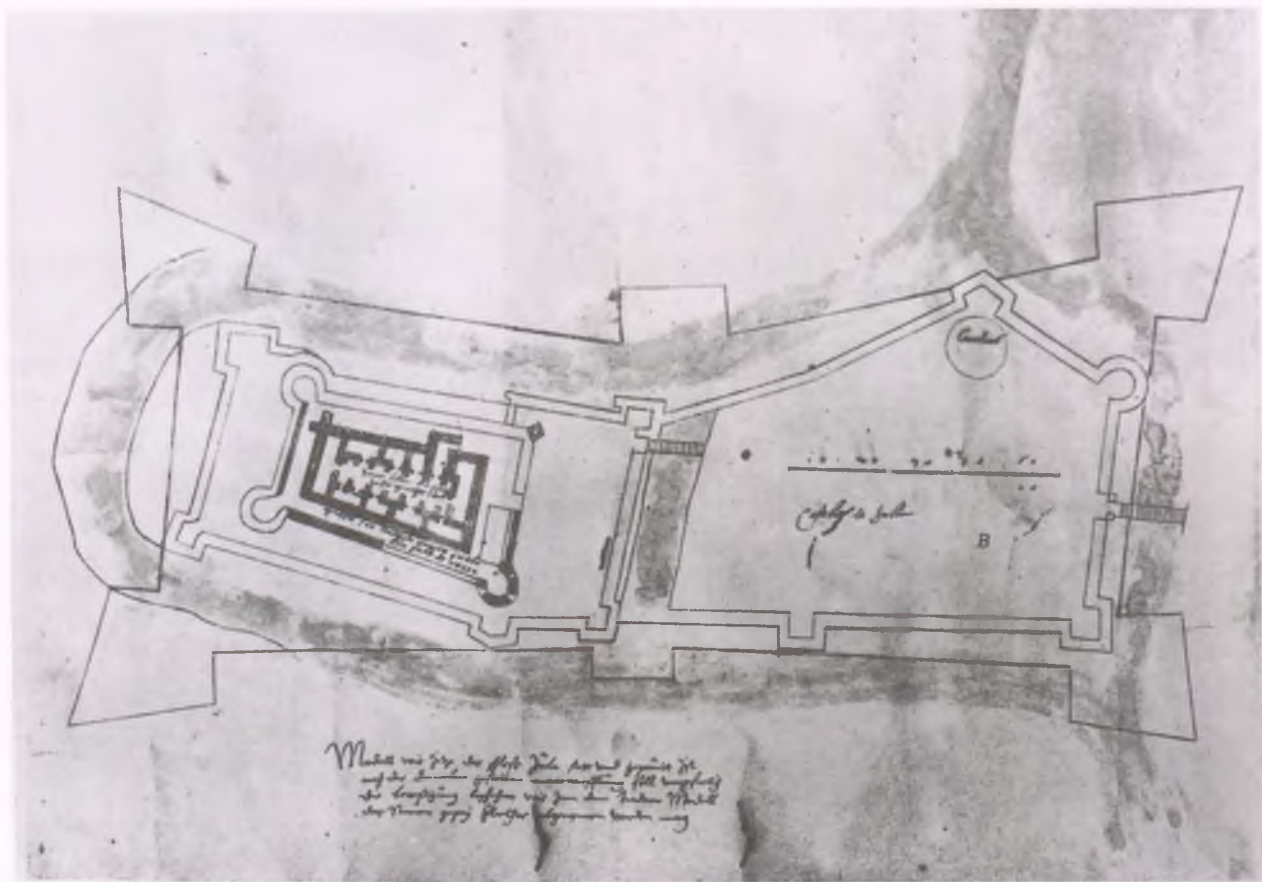
²⁸ GERELYES 1996, 106–111.

²⁹ FODOR 1979, 377; 1985, 170; HAAN 1870, 183, 248.

³⁰ PARÁDI 1966, 23; KÁLDY-NAGY 1982, 47–48.

³¹ KARÁCSON 1908, 227.

³² VERESS 1938, 454.



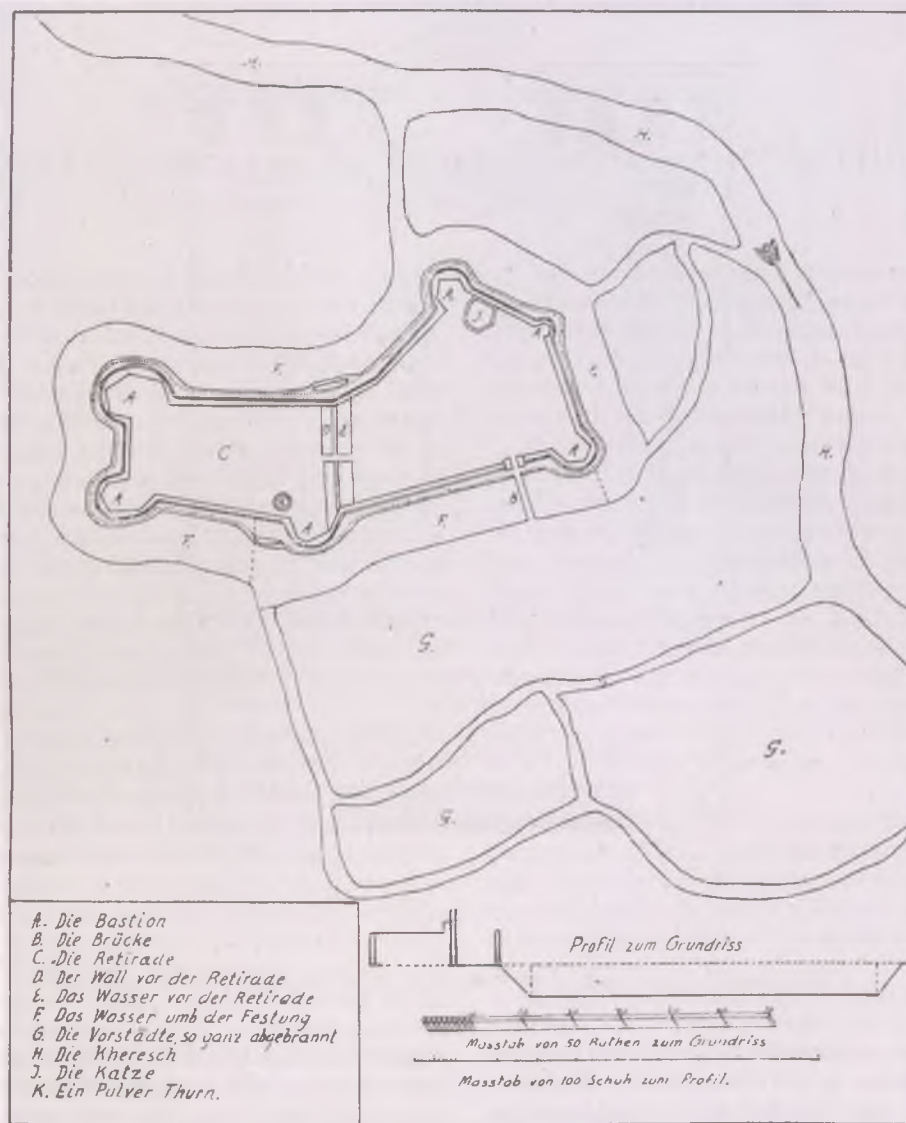
Ill. 6. Ground plan of the fortress of Gyula by Paolo Mirandola, 1562

ing to Paolo Mirandola's survey and his plan for the enlargement of the outer fortress, the outer defences had nine bastions in 1562. At the time of Mirandola's visit the entrance of the outer fortress faced southwest, and, on a plan drawn in thin lines, Mirandola, signalled his approval of this. In the following four years – up to the 1566 siege – Kerecsényi strengthened the outer fortress on the basis of Mirandola's plans. Neither the written, nor the archaeological sources tell whether it was he, Kerecsényi, who moved the outer fortress's entrance to the northwest side. Moreover, according to the report of the royal commissioners who visited the site in 1564, Kerecsényi had not yet finished strengthening the outer fortress. In 1565, work on the fortress's fortifications stopped; there was no master-builder present and László Kerecsényi was himself absent for a period of months. On Zündt's engraving the entrance of the outer fortress was on the southwest side. The survey by Fülöp Jakab Porthen (Ill. 7), and another by Lampert Lambion, a military engineer with the imperial forces, placed the entrance of the outer fortress – and the gate-tower – on the northwest side, where they can be seen today.

The gate-tower was certainly standing by 1664. Evlia Çelebi's slightly rambling account makes reference to it: "The second suburb surrounds the former one [i.e. the inner fortress]. Its sturdy palisade has a

length of forty paces. The striking of the tower clock above its gate can be heard for an appreciable distance. The tower is a brick edifice and has a gateway with brick vaulting and an iron gate that looks north. Above the gate leading to the large suburb outside is a brick-vaulted *semender* tower, the fire-spewing cannon of which stick out just like the bristles on a badger. In front of the gate, above the River Körös, is a wooden bridge 100 paces long that leads to the abovementioned large suburb."³⁵ Comparing the sources from before and after the Ottoman era, we may conclude that it was during the Ottoman period that the entrance of the outer fortress was relocated from the southwest to the northwest, and that it was at this time that the present gateway was made. According to the archaeological investigations and exploration of the walls carried out in 2000, the rampart of the outer fortress included a demonstrably single-level, stone-built gateway rectangular in ground plan and with arches and vaulting executed in characteristic brick. On the inner sides of its north and south walls ogee-arched sediles were fashioned. To the north wall of the tower was attached a stone building put up at the same time. The ground floor of the tower was connected to this building by a

³⁵ KARÁCSON 1908, 228.



Ill. 7. Survey by Fülöp Jakab Porthen, 1695

passageway. A multi-level Baroque tower was built on top of a section of this gateway between 1722 and 1745 (Ill. 8).³⁴

The archaeological investigations confirmed the assumption that the palisade of the outer fortress was kept in continuous good repair and renovated repeatedly during the period of Ottoman rule. This was especially true for the southern part of the outer fortress, whose palisade was completely burnt down in the siege of 1566.³⁵ Colonel Fülöp Jakab Porthen's report, prepared shortly after the recapture of Gyula in 1695, mentions the continual renovations. Writing of the palisade, he notes that "it is thick, although not consistently so, built using two rows tall oak posts everywhere joined together by sturdy

traverse bracing and filled with earth to a thickness of seven paces in some parts, eight places in others".³⁶ The abovementioned repairs to the castle-building surely also included renovation of the palisade.

Summary

The town of Gyula, captured by the Ottomans in 1566, underwent significant changes in the twelve years up to 1579. The Ottoman newcomers lived near the fortress, in the former Zaránd County quarter. A new *cami* was built in the outer fortress, and this can be identified as the Süleyman the Magnificent Cami.

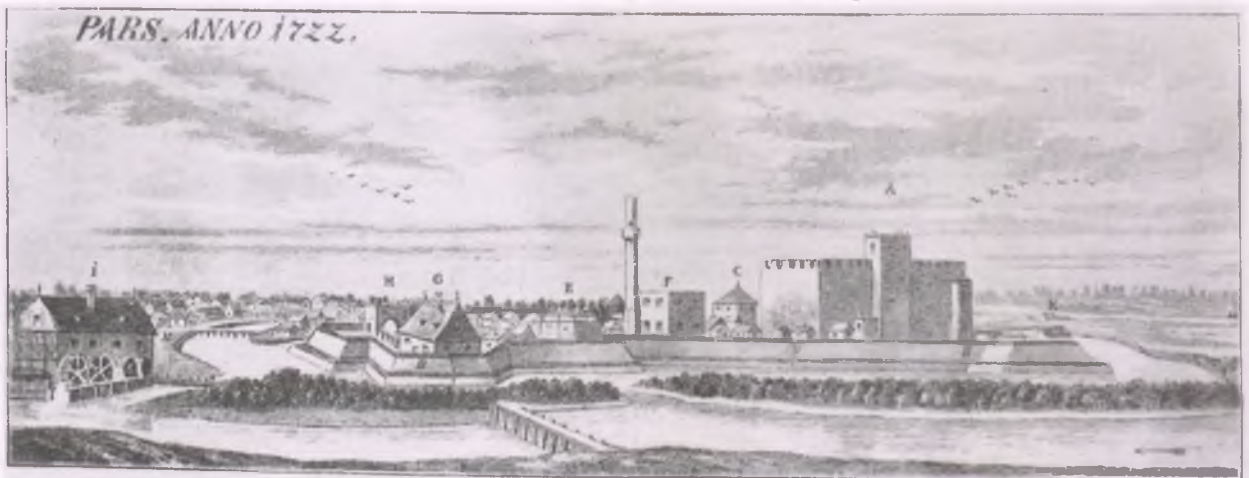
³⁴ Feld, I. and Gerelyes, I., Archaeological research of the fortress of Gyula, 2000. Documentation of the excavation.

³⁵ GERELYES 1996, 117-120.

³⁶ SCHERER 1938, 258.



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It is difficult to reconstruct the state in which the Ottomans found Gyula fortress and its defence works. Excavations, investigations of the walls and the comparison of late seventeenth-century surveys with the 1562 sketch drawn by the military engineer Paolo Mirandola (Ill. 6) all indicate that the Ottomans did not alter it significantly during the 130 years they occupied it. The repairs mentioned in a number of written sources (in 1571, 1584, 1630, and in 1687)²⁹ probably only meant maintenance of the walls. Stor-

age was the main function of the castle-building throughout the occupation period. None of the known sources mentions major damage to the castle-building during the siege of 1566. The exact date of the major destruction of the northeast and northwest parts is unknown; according to Nándor Parádi, leader of the excavations between 1956 and 1961, the damage occurred sometime during the Ottoman era. According to the 1579 register, a larger part of the garrison, 54 families, lived in the environs of the *cami* in the outer fortress.³⁰ There are no data on where the 700-strong Ottoman garrison mentioned at the end of the sixteenth century was accommodated; it seems probable that most of these soldiers were likewise quartered in the outer fortress. Evlia Çelebi mentioned that in 1664 “only the commander *aga* lived in the castle-building, where the granary and the military storehouses were located”.³¹ According to the 1695 official report by Colonel Fülöp Jakab Porthen, the castle-building seems to have been scarcely used at this time; its gate was fully blocked up and two small houses stood very near the entrance.³²

The other question is whether the Ottomans performed any larger-scale reconstruction of the palisade system or of the earthen bastions. Comparing the surveys drawn up in the late seventeenth and early eighteenth century with Mirandola’s plan from 1562, it seems that the enlargement of the palisade fortification was carried out on the basis of the Italian’s plans, meaning that these operations were ordered by the fortress commander, László Kerecsényi, and executed between 1560 and 1566. Accord-

²⁶ HAAN 1874–75, 16.

²⁷ PETIK 1784/1961, 18.

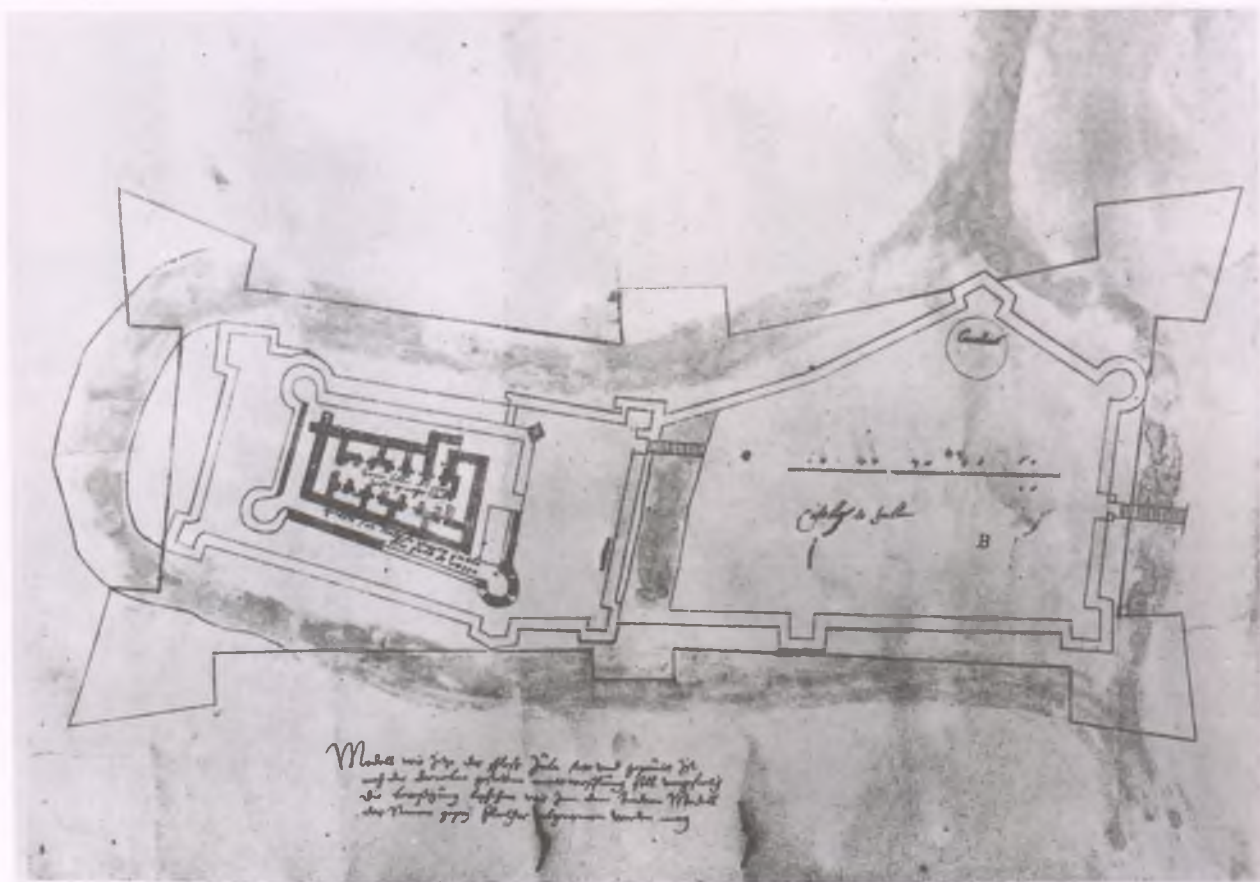
²⁸ GERELYES 1996, 106–111.

²⁹ FODOR 1979, 377; 1985, 170; HAAN 1870, 183, 248.

³⁰ PARÁDI 1966, 23; KÁLDY-NAGY 1982, 47–48.

³¹ KARÁCSON 1908, 227.

³² VERESS 1938, 454.



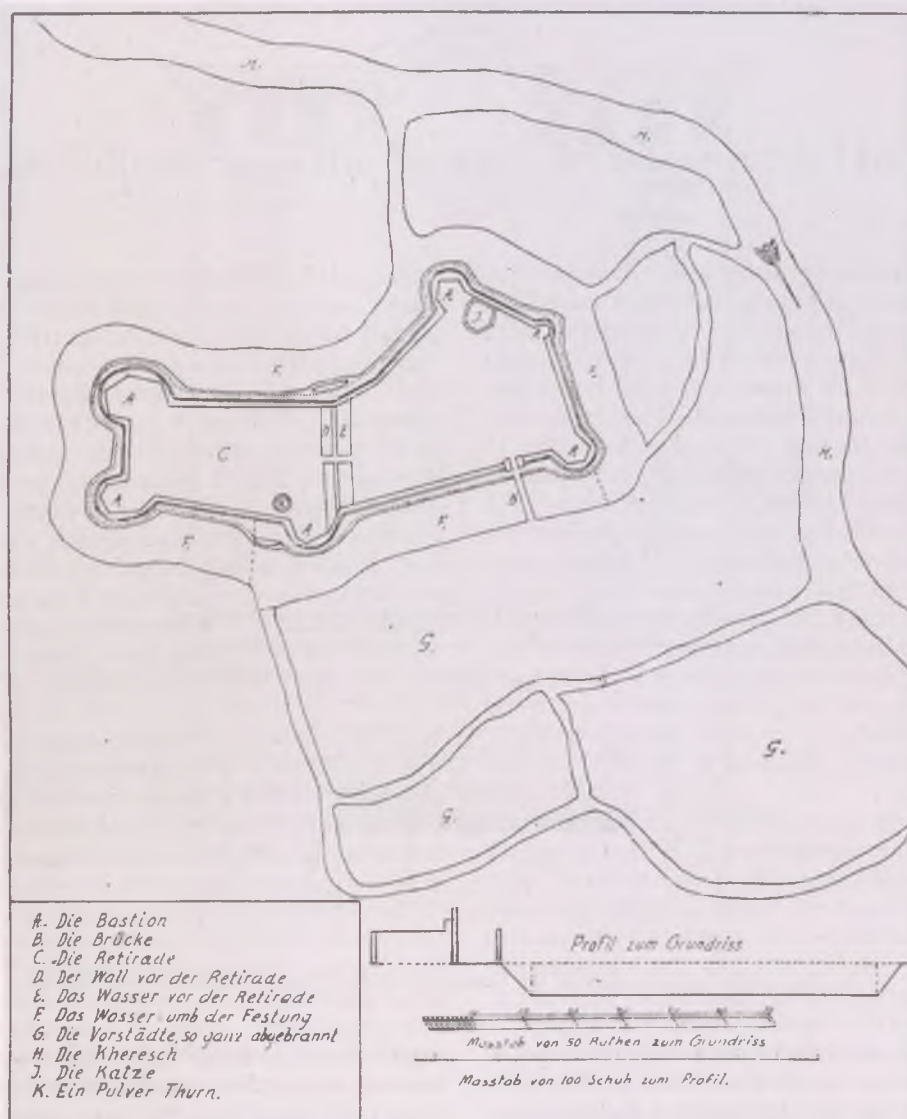
Ill. 6. Ground plan of the fortress of Gyula by Paolo Mirandola, 1562

ing to Paolo Mirandola's survey and his plan for the enlargement of the outer fortress, the outer defences had nine bastions in 1562. At the time of Mirandola's visit the entrance of the outer fortress faced southwest, and, on a plan drawn in thin lines, Mirandola, signalled his approval of this. In the following four years – up to the 1566 siege – Kerecsényi strengthened the outer fortress on the basis of Mirandola's plans. Neither the written, nor the archaeological sources tell whether it was he, Kerecsényi, who moved the outer fortress's entrance to the northwest side. Moreover, according to the report of the royal commissioners who visited the site in 1564, Kerecsényi had not yet finished strengthening the outer fortress. In 1565, work on the fortress's fortifications stopped; there was no master-builder present and László Kerecsényi was himself absent for a period of months. On Zündt's engraving the entrance of the outer fortress was on the southwest side. The survey by Fülöp Jakab Porthen (Ill. 7), and another by Lampert Lambion, a military engineer with the imperial forces, placed the entrance of the outer fortress – and the gate-tower – on the northwest side, where they can be seen today.

The gate-tower was certainly standing by 1664. Evlia Çelebi's slightly rambling account makes reference to it: "The second suburb surrounds the former one [i.e. the inner fortress]. Its sturdy palisade has a

length of forty paces. The striking of the tower clock above its gate can be heard for an appreciable distance. The tower is a brick edifice and has a gateway with brick vaulting and an iron gate that looks north. Above the gate leading to the large suburb outside is a brick-vaulted *semender* tower, the fire-spewing cannon of which stick out just like the bristles on a badger. In front of the gate, above the River Körös, is a wooden bridge 100 paces long that leads to the abovementioned large suburb."³³ Comparing the sources from before and after the Ottoman era, we may conclude that it was during the Ottoman period that the entrance of the outer fortress was relocated from the southwest to the northwest, and that it was at this time that the present gateway was made. According to the archaeological investigations and exploration of the walls carried out in 2000, the rampart of the outer fortress included a demonstrably single-level, stone-built gateway rectangular in ground plan and with arches and vaulting executed in characteristic brick. On the inner sides of its north and south walls ogee-arched sediles were fashioned. To the north wall of the tower was attached a stone building put up at the same time. The ground floor of the tower was connected to this building by a

³³ KARÁCSON 1908, 228.



Ill. 7. Survey by Fülöp Jakab Porthen, 1695

passageway. A multi-level Baroque tower was built on top of a section of this gateway between 1722 and 1745 (Ill. 8).³⁴

The archaeological investigations confirmed the assumption that the palisade of the outer fortress was kept in continuous good repair and renovated repeatedly during the period of Ottoman rule. This was especially true for the southern part of the outer fortress, whose palisade was completely burnt down in the siege of 1566.³⁵ Colonel Fülöp Jakab Porthen's report, prepared shortly after the recapture of Gyula in 1695, mentions the continual renovations. Writing of the palisade, he notes that "it is thick, although not consistently so, built using two rows tall oak posts everywhere joined together by sturdy

traverse bracing and filled with earth to a thickness of seven paces in some parts, eight places in others".³⁶ The abovementioned repairs to the castle-building surely also included renovation of the palisade.

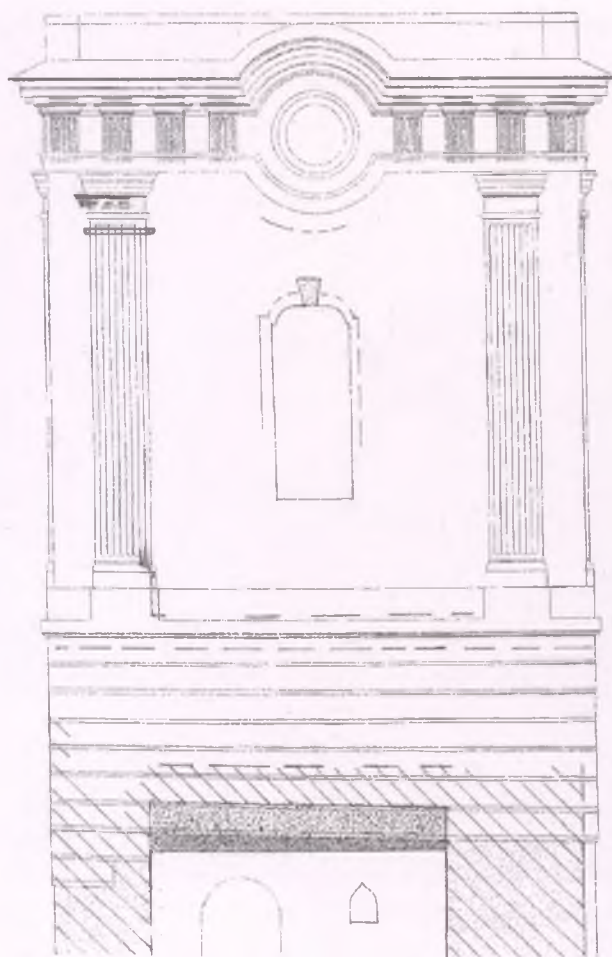
Summary

The town of Gyula, captured by the Ottomans in 1566, underwent significant changes in the twelve years up to 1579. The Ottoman newcomers lived near the fortress, in the former Zaránd County quarter. A new *cami* was built in the outer fortress, and this can be identified as the Süleyman the Magnificent Cami.

³⁴ Feld, I. and Gerelyes, I., Archaeological research of the fortress of Gyula, 2000. Documentation of the excavation.

³⁵ GERELYES 1996, 117–120.

³⁶ SCHERER 1938, 258.



Ill. 8. The northern, outer face of the Gyula gate-tower. (Survey by István Feld, 2000)

An additional two *camis* and three *mescids* were created through alterations to the Chapel of St. Nicholas, the Chapel of St. Aloysius, the hospital, and two other medieval buildings in the town. The Turkish bathhouse also had medieval antecedents. In the early years of the Ottoman occupation the Hungarians lived separately from the Ottomans in the former Békés County quarter. Not only the historical, but also the archaeological sources imply that these were decades of regression. As regards conditions later on, in the mid-seventeenth century, we may accept Evlia Çelebi's description, which more or less corresponds to what the imperial forces saw. According to Evlia Çelebi, there were only two mosques, one in the fortress and the other in the town. The bathhouse and the

mausoleum (*türbe*) of Pirsiz Ali, the *sancakbeyi* and the creator of this complex of buildings, stood almost fully intact near the town mosque. The castle building itself was hardly used. Excavations around it suggest that the brick wall and the palisade, previously surrounding the castle-building, no longer seemed important and no longer existed in the second half of the seventeenth century. Refuse pits and open-air hearths were found in the spots examined. However, the palisade forming the fortress's outermost fortification system was continually maintained and repaired. In the late seventeenth century no Hungarians dwelt in Gyula, but there were significant numbers of Serbs. In 1695, the population of the recaptured settlement consisted exclusively of them.

Balkan Influences in the Mosque Architecture of Hungary

Following the occupation of Buda in 1541, a significant portion of historical Hungary came under Ottoman rule.¹ In this way a fundamental change took place in Hungary's links with the Balkan provinces of the Ottoman Empire. Soldiers and their families arrived in Hungary from the Balkan areas, along with members of the civilian population. In the new historical situation the Balkan provinces of the Ottoman Empire, especially Bosnia and Herzegovina, played a mediating role. The reason for the increasingly strong contacts with the Balkans was not just the mutual border; a complex interplay of numerous factors exercised a significant Balkan influence over nearly every area of life, architecture included, in the Ottoman-inhabited regions of the conquered area.

From the very beginning of the conquest of Hungary, an extremely important role was played by the *sancakbeyis* of the aforementioned Balkan provinces, many of whom participated personally in the battles. They and their relatives became highly placed military and civilian leaders in the newly formed *vilayet* of Buda. Later, the high-ranking officials and soldiers continued to be made up of people from this region, and extensive family and official connections allowed them to hold on to these positions to the end of the Ottoman period. In this respect we should mention the members of the Sokollu, Yahya and Malkoçoğlu families, whose authority was felt beyond the borders of Hungary.

With regard to Ottoman architectural remains in Hungary, two basic factors should not be overlooked. The first is that Ottoman buildings were constructed only in areas inhabited exclusively by Muslims; the second is that the number of monuments still standing today is substantially smaller than the number of structures known from written sources and authentic contemporary drawings.

Some of the Ottoman mosques built in the Hungarian territory were originally Christian churches. The majority of these buildings preserved their former – mostly Gothic – ground plans. During some conversions modifications to the ground plan were executed, of which two basic types can be distinguished. In one characteristic form of modification the apse of the church was taken down and the nave was walled across in its place, thereby creating a

rectangular ground plan. Examples of this type of modification are the Paşa or Seray Cami – converted from the medieval Franciscan church – in the Buda Castle District, and the so-called Orta Cami – converted from the former St. George's Church – likewise in the Buda Castle District.

In the second type, the apse was left and a vestibule was added to expand the church. An example of this kind of alteration is the Memi Paşa Cami in Pécs, or the Sultan Süleyman Cami in the Buda Castle District converted in 1541 from the medieval Church of the Virgin Mary into a mosque, and the Fethiye Cami or Clock Mosque (also in the Buda Castle District) converted in 1596 from the Gothic Church of Mary Magdalene. For mosques converted from churches, the original tower served as the minaret, but there were also cases in which an "Ottoman-style" minaret was built beside a medieval, formerly Christian, church.

With regard to Balkan connections, the originally Ottoman buildings were substantially more important. In this respect, references are to be found in the descriptions by Evlia Çelebi and in other sources, and many examples can be seen on city maps and townscapes from the seventeenth and eighteenth centuries. These last mentioned provide considerable supplementary information concerning the small number of existing physical monuments.

Ottoman mosques in Hungary followed two types of ground plan. The first, the most common in the Balkans and in occupied Hungary, was a mosque with a square ground plan, three arched segments, an open vestibule, a cupola, and a minaret. The frequency of these is indicated by the existing remains as well as by seventeenth-century surveys drawn up by military engineers. A large number of Balkan parallels of this ground-plan arrangement are to be found, so much so that it may be considered the truly typical one, and even with regard to size there are very few differences. However, beyond the uniformity of the ground plans, the artistic details and architectural elements of the mosques built in Hungary provide a much more important indication of the Balkan connection. Naturally, apart from the similarity of the forms, the question of the person commissioning the given buildings also arises. From the standpoint of analysis of detail-forms, the primary objects of examination are the mosques still standing, or their remains. The best opportunity here is provided by the Yakovalı Hasan Paşa Cami in Pécs (shown on p. 2 of the present volume), the most intact form remaining in Hungary. Built in the second half

¹ Originally this paper was given as a lecture at ICTA XI, held in Utrecht in 1999.



Ill. 1. Gazi Kasim Paşa Cami, Pécs (1543–1564)

of the sixteenth century, this small *cami* is the most ornate of any in the country. A multiply contoured stone frame borders the entrance, a portal projecting from the plane of the facade. Above the entrance there is a triangular-shaped field framed by two rows of stalactite decoration. On the lower part of this triangular field is a rectangular niche. Similar entrance arrangements can be found at the Şişman İbrahim Cami in Počitelj and at the Balagusa and Lala Mustafa Camis in Livno. In its proportions the minaret of the Yakovalı Hasan Paşa Cami is closest to that of the Şişman İbrahim Cami. The floral ornamentation decorating the walls is a modest variation on the ornamentation of Ottoman wall-tiles, which are unknown on architectural relics of the period of Ottoman occupation in Hungary.

The other type is a rectangular mosque covered by a gabled roof, with an open vestibule and a minaret. Regrettably, only two buildings representing this type are still standing today. One is the Sultan Süleyman Cami in the fortress at Szigetvár, and the other is the Öziçeli Hacı İbrahim Cami in the Vízi-város (Water Town) district of Esztergom. This ground plan can be also observed at Gyula's Süleyman Cami, the remains have been excavated. Parallels to this latter type of ground plan occur in the Balkan provinces. Similar ground plans are to be observed at the Hünkâr Cami and the Careva Cami in Foča, as well as at the Islam Aga Adrević Cami in Niš built in

the early eighteenth century. The best example of this type is the Sultan Süleyman Cami in Szigetvár (Ill. 2), commissioned by Sokollu Mustafa between 1566 and 1578. An L-shaped vestibule, originally with arcades, is attached to the mosque. The *mihrab* niche was on the enclosed southeast side. A parallel with its vestibule can be found in the Edem Bey Cami built in Tirana in the early eighteenth century.

In both types of ground plan it is possible to observe an extremely large number of details that were very common in the Ottoman architecture of the Balkans.

The distribution of windows at the Malkoç Bey Cami in Siklós can be considered a parallel to the distribution at the Karagöz Cami in Mostar, the Şişman İbrahim Cami in Počitelj, and the Alaca Cami in Foča. Its minaret is pentagonal in design, as is that of the Ali Paşa Cami in Sarajevo. Both the minaret and the wings are accessible from a stairway built into the wall and opening out of a window recess. At the Ferhad Paşa Cami in Banja Luka, two spiral stairways formed in the main wall lead to the wing, as in the case of the Fatih Cami in Pristina. The closest to the mosque in Siklós, however, is the Banjabashi Cami in Sofia, where the entry likewise opens from a window recess and connects to the wing.

The windows of most mosques feature the ogee or high arch generally employed in Ottoman architecture. The exception is the Sultan Süleyman Cami



III. 2. Sultan Süleyman Cami, Szigetvár (1566–1578)

in Szigetvár, where in addition to the ogee-arch windows the raindrop-shaped window in a recessed field also appears. The same window form and placement can also be found at the Ahmet Bey Cami in Küstendil. During our research it was discovered that the only exception is constituted by the windows of the Ferhad Paşa Cami in Pécs, which are topped by semicircular arches as at the Ferhad Paşa Cami in Banja Luka.

In the Sultan Süleyman and Ali Paşa Camis in Szigetvár, as well as the Malkoç Bey Cami in Siklós, wall niches were found during the investigation of the walls. The wall niches of the Szigetvár mosques are straight, while those in Siklós are enclosed with peaked or ogee arches. Parallels to the wall niches of the Szigetvár mosques are found in the Karagöz Bey and Koški Mehmed Camis in Mostar.

The *mihirabs* in Hungary, with two exceptions, were built of brick, with varying stalactite arch enclosures. The partially chipped remains of these were recovered during the research work, and of them only two could be reconstructed. The *mihirabs* for the Gazi Kasim Paşa Cami in Pécs and Toygun Paşa Cami in Buda were carved from stone. Elements of the stalactite arches of the latter are similar to the *mihirab* of the Alaca Cami in Foča.

Unfortunately, all of the vestibules of our mosques have perished, with only details or fragments remaining. The material in Hungary contains both types of column used to support the arches of the vestibule. The stalactite capital was used in the Gazi Kasim Paşa Cami in Pécs. A parallel can be found in the vestibule of the Koški Mehmed Paşa Cami in Mostar. The vestibule of the Ferhad Paşa Cami, also in Pécs, features the so-called

baklavali type of capital, found in numerous variations in the Balkans and in Turkey.

This study has attempted to present the most characteristic details illustrating the closeness of the connection between *cami* architecture on the territory of Hungary and Ottoman mosque architecture in Bosnia–Herzegovina. However, these parallels in structure and form raise further issues. For example, it can be proved that many mosques in Hungary and Bosnia–Herzegovina were founded or built by the same person. Sokollu Ferhad Paşa had foundations in both Pécs and Banja Luka. The builder of the Alaca Cami in Foča, Hasan Paşa, was *defterdar* of Buda. The Div Süleyman Cami – also in Foča – was founded by Süleyman, a former *paşa* of Buda. Hadim Ali, a former *paşa* of Buda, founded the Ali Paşa Cami in Sarajevo, and Hacı Mehmed, another former *paşa* of Buda, founded the Karagöz Bey Cami in Mostar. Sokollu Mustafa, yet another *paşa* of Buda, founded a number of buildings in Buda and Hungary, and is also known to have founded a complex of buildings in Rudo, Bosnia. Kasim Paşa – successively *sancakbeyi* of Eszék, Mohács and Pécs and more than once *paşa* of Buda and Temesvár – founded Hungary's largest surviving mosque, the Gazi Kasim Paşa Cami in Pécs (Ill. 1) and also had a mosque built in Eszék. As can be seen from these few examples, close family and official ties linked Hungary and Bosnia–Herzegovina throughout the period of the Ottoman occupation. This fact played a defining role not only in mosque architecture, but also in Ottoman architecture in general in Hungary, which should be seen as an extension of Balkan Ottoman architecture, albeit with its own unique characteristics.²

² For further reading: GERŐ 1980; According to the people of Balkan origin in Hungary: HEGYI 1998. See also the study of Klára Hegyi in this volume. Written sources: KARÁCSON 1904; 1908; 1985; VELICS – KAMMERER 1886–1890; VERESS 1906; Regarding Kasim Paşa Cami and Yakovalı Hasan Cami at Pécs cf. GOSZTONYI w.d.; GERŐ 1960a; 1976; Sultan Süleyman Cami in Szigetvár cf. GERŐ 1966; Öziçeli Hacı

Ibrahim Cami at Esztergom cf. GERŐ 1965; Malkoç Bey Cami in Siklós cf. GERŐ 1983; Süleyman Cami in Gyula cf. GERELYES 1996, 102–111; for analogies in the Balkans cf. BEJTIĆ 1952–53; AYVERDI 1981, II/3.

* The research was supported by the National Research Fund ('OTKA').

An Ottoman Mosque at Borosjenő

This article will present a lesser-known Ottoman monument, the mosque at Borosjenő.

Along with the rest of Arad County, Borosjenő (today: Ineu, Romania) came under Ottoman rule in the middle of the sixteenth century.¹ There is no information on Ottoman mosques in Borosjenő from the middle to the end of that century; however, given the analogues, it may be assumed that mosques existed from the beginning of the Ottoman occupation. The first reliable data is from around 1595, when György Borbély drove the Turks out of Jenő and reoccupied the castle. At that time four mosques were allegedly in existence.² These, however, must have been highly insignificant buildings, since as they have vanished practically without trace. Their improvised nature is confirmed by a letter, dated 24 January 1647, from Prince György Rákóczi I of Transylvania to István Szalánczy, his ambassador to the Porte, in the matter

of complaints by the Turks of Jenő: "Since Your Excellency has been in Jenő many times, had you remembered you could easily have answered with regard to the mosque, namely that to this day we have not seen such a thing, nor heard of there being a mosque made of stone, [...] although there was a small look-out space at the foot of one of the bastions; whether it was of rotten wood or shingles we do not know."³

This proves that the mosque discussed below was built after the siege of 1658, when the Ottomans reoccupied the town (Ill. 1). There is documentary evidence that after taking the castle of Borosjenő, Ali Paşa began construction work in 1659, launching renovation of the castle walls and other fortification work;⁴ the mosque may have been built at this time. Evlia Çelebi mentions several *camis* and *mescids* in his account.⁵ The building in question stood on the



Ill. 1. Borosjenő mosque with the minaret

¹ July, 1566. FÁBIÁN 1835, 81; For the history of the *Vilayet* of Temesvár (Timișoara) cf. FODOR 1996a; 1996b; DÁVID 1999, 113–128; and Ferenc Csörtán's study in the present volume.

² FÁBIÁN 1835, 82; MÁRKI 1895, 243.

³ BEKE – BARABÁS 1888, 819–820.

⁴ MÁRKI 1895, 114. "Aradul permanenta in istoria patriei". Arad 1978, 151.

⁵ KARÁCSON 1985, 45–46. It is not known what type of mosque the building in question actually was.

southwest side of the castle. It had a rectangular ground plan, and two wooden columns supported its simple wood ceiling. Next to the building stood a seventeen-meter-high minaret erected from carved stones. Two of these stones are still preserved in Arad Museum.⁶

After the imperial general Siegbert Heister retook Borosjenő from the Ottomans in 1686, the condition of the mosque deteriorated significantly. From 1702 until completion of a new church for Catholics in 1858, the building functioned as a place of Christian worship. During this period minor repairs were performed; e.g., there is data indicating that the wooden columns supporting the ceiling were replaced with stone ones in 1850. While the mosque was being used as a Christian church, the condition of the minaret continued to decline. In 1779 the natural scientist Grassinger was no longer able to go up the "Turkish tower" because of the "innumerable



Ill. 2. Candlesticks from the mosque



Ill. 3. László Diószeghy's watercolour of the mosque

bats" inhabiting it.⁷ At the end of the nineteenth century the minaret was converted into a chimney for a vinegar factory. A picture published in the 12 July 1931 issue of the periodical *Vasárnap* shows the rather ruinous condition of the building in the early twentieth century. It was still standing, but its roof had fallen in; and the roof of the minaret was completely missing. The tower was torn down in 1947 and the building itself in 1954.

A few objects, ceramic vessels and stove tiles from the demolished building have passed into the possession of Arad Museum. Of especially great value are the two candlesticks that became part of the collection following nationalisation (Ill. 2).

The last picture (Ill. 3) attempts to evoke the one-time atmosphere of Borosjenő. This is a watercolor by the painter László Diószeghy. Diószeghy played an important role in the artistic history of Arad. The Borosjenő-born painter strove to record the more valuable castles, parks and memorials of the Arad region. His surviving paintings are a rich source of documentary material for researchers of local history.

⁶ Arad Museum of History, Medieval Section. M. F. 605; M. F. 1766.

⁷ FÁBIÁN 1835, 84; MÁRKI 1895, 244.

Ottoman Architecture in the *Vilayet* of Temesvár

The *vilayet* of Temesvár was created after the Ottoman forces, beginning in 1551, systematically occupied the fortresses of the Kingdom of Hungary in the so-called Tiszántúl (the region directly east of the River Tisza). This process actually began with the conquest of Orsova in 1520; the first major event was the capturing of Becse and Becskerek in 1551 and the creation of a *sancak* with Becse as its capital. The fortresses at Temesvár and Lippa were occupied the next year and Temesvár became the seat of the new *vilayet*. The *vilayet* expanded northwards: Arad came under Ottoman rule in 1551 and yet another *sancak* was created. Gyula, Világos and Jenő were taken in 1566.

In 1551 Süleyman I (1520–1566) handed over the fortresses of Lugos and Karánsebes, as well as the Upper Temes region that formed the hinterland of these fortresses, to the voivode of Transylvania. This area was only incorporated into the *vilayet* of Temesvár in 1660 and it remained part of this administrative unit until 1717, the year marking the end of Ottoman rule in the area.

The last decades of the seventeenth century saw a major change in the balance of power, resulting in the eventual withdrawal of Ottoman troops from the territory of the Kingdom of Hungary. The Treaty of Karlowitz, signed in 1699, stipulated that Ottoman administration be restricted to the territory between the Danube, Tisza and Maros rivers and the western spur of the Transylvanian Alps. A chain of Serbian settlements for the defence of the border was created by the Habsburgs along the lower reaches of the Danube and the Tisza, as well as on the right side of the Lower Maros. The Treaty of Karlowitz also stipulated that the Ottomans would have to demolish the fortresses in the northern frontier area of the *vilayet* (Lippa, Fenlak, Csanád, Besenyő, etc.)

The *vilayet* of Temesvár was finally abolished by the Treaty of Passarowitz (1718), although the greater part of its territory had been occupied as early as 1716–17 by the troops of Eugene of Savoy.¹

Even so, the Ottoman presence in the Temesköz region did not yet come to a final end: the Sublime Porte recovered its strength, even if only temporarily, and the Belgrade Treaty of 1736 stipulated that the Habsburgs should retreat from the territories

conquered and annexed in 1717 (Northern Serbia and Oltenia). The fortress of Orsova was ceded to the Ottomans, together with the fortress of Ada-Kale; a canal running parallel to the River Cserna was constructed to mark the new Ottoman–Austrian border.

The Muslim population of the *vilayet* of Temesvár lived exclusively in fortified settlements or in settlements that were protected by a fortress. The distinctive creations of Ottoman architecture – *camis*, *mescids*, schools, bathhouses, palaces, kiosks, shops, covered markets, inns, *türbes* and other sepulchral buildings, fountains and bridges –, as well as the techniques and ornamental motifs of Ottoman architecture, can be documented almost only in these settlements. In the Balkans and in Central Europe, thus in the *vilayet* of Temesvár also, local administrative centres were usually established in pre-existing fortresses. The conquerors only built new fortifications in a few settlements; these were usually strongholds with palisade walls and earthworks, and they frequently utilised earlier buildings. The conversion of one or more Christian churches into places of Muslim worship in the conquered settlements was also a general practice. The foundation date of these religious institutions was recorded in a calligraphic relief inscription, as was the date of building and renovation.

The Ottoman towns of Southeast Europe usually had a fortress or a castle with an inner part – called an “inner castle” – and a town (*varoş*) made up of several quarters outside the fortress. At Temesvár and Várad, for example, the *varoş* was also enclosed by a palisade. Some town quarters lay outside the palisade. The different ethnic and religious groups usually had their own quarters, as did craftsmen plying the same trade.

In Ottoman society, it was rulers and high-ranking officials who usually had communal buildings constructed, establishing pious foundations for their upkeep. Modelled on similar buildings in the major centres of the Ottoman Empire, the form, the structure and the ornamentation of these buildings showed a remarking uniformity. The architects usually came from the major centres of the Ottoman Empire,² explaining why practically nothing was adopted from

¹ For the history of the *vilayet* of Temesvár cf. KÁLDY-NAGY 1982; ENGEL 1996; FODOR 1996a, 195–208; DÁVID 1999, 113–128.

² Cf., for example, the literary description of the construction of the bridge at Visegrad in Bosnia (Ivo Andrić, *The Bridge on the Drina*), and the Süleymaniye in Damascus whose magnificence is on a par with the one in Istanbul.

the pre-Ottoman architectural tradition; even so, certain regional differences can be demonstrated during different periods.

The gazetteer below attempts to list – primarily on the basis of Evlia Çelebi's descriptions, but using other documentary evidence as well – all the Ottoman buildings in the settlements of the one-time *vilayet* of Temesvár. This gazetteer will no doubt be modified with the discovery of new documents and future archaeological investigations. Most of the buildings listed here were destroyed and in most cases even their one-time location remains unknown.

The gazetteer clearly shows that the fortresses and towns of the *vilayet* of Temesvár had a rich and, in many cases, attractive Ottoman architecture. We may assume some resemblance with the buildings of contemporary Bosnia, since many *beylerbeyis* and other high-ranking officials came from that region and, also, since the military and civilian population, too, had a Balkan, southern Slav background. The reason that these Muslim buildings perished can be summed up as follows:

(1) Ottoman rule usually ended after long and fierce sieges in the course of which most, if not all, of these buildings were destroyed.

(2) After the Muslim population's departure, the buildings were no longer used.

(3) The Habsburg administration launched an ambitious modernising programme of economic, cultural and technological development that built on the remaining Christian (and Jewish) population, as well as on new settlers from the neighbouring Balkan territories, Western Europe and existing provinces of the Habsburg Empire. Viewed from this perspective, the surviving Ottoman buildings did not meet the new practical and cultural (aesthetic) requirements.

Gazetteer³

ADA-KALE (Romania)

An island in the Danube, some 4 km southeast of Orsova, that perished when the Yugoslavian–Romanian dam and hydroelectric plant was built in the 1960s. It had an exclusively Turkish and Muslim population during the Ottoman period. The Ottomans occupied the insignificant island in 1520. Between 1718 and 1738, the Austrians built a fortress here; according to the terms of the Treaty of

Belgrade, the fortress came under Ottoman control.⁴ A Turkish garrison was stationed here and the Franciscan chapel was transformed into a *cami*. In 1878, the Turkish garrison abandoned the fortress and in 1885 the island came under Austro-Hungarian control.

ALSÓLUPKÓ (today: Liubcova, Romania)

A small palisade in the *sancak* of Moldava that, according to Evlia Çelebi, was built under Ottoman rule. The fortress, ringed by a double ditch, only accommodated five houses. The shingle roofed *cami* and *minaret* lay beyond the gate. One hundred Muslim and one hundred Christian families lived in the *varos*.⁵

ARAD (today: Arad, Romania)

The palisade was built in 1551 around a church. The stronghold had an oblong ground plan and was provided with a bastion on each corner. A small bailey stood inside it with a small kiosk. In 1658 Köprülü Mehmed built “a *cami*, a large *han*, a *mekteb*, a *tekke* and an *imaret* [...] there is a small bathhouse and a rather large, but narrow market.”⁶

BECSE. See Törökbecse.

BECSKEREK. See Nagybecskerek.

BÉKÉS (today: Békés, Hungary)

The Ottomans probably occupied the town in 1566, after the fall of Gyula. The palisade, located in the area called Kastélyzug today, was constructed in 1584 on the spot of the Maróthy family's manor house.⁷ A total of 238 soldiers garrisoned the stronghold in 1590–91, and the sources also mention a certain Hürrem who “served in the *cami*”.⁸

BESENYŐ. See Óbesenyő.

BOKSABÁNYA (today: Bocşa, Romania)

The medieval fortress stood on a hill on the right bank of the River Berzava. A hillfort whose ramparts were reinforced with wood was built on the left bank of the river in 1552. The fortress was oblong in ground plan and had a lozenge-shaped tower in each corner.⁹ In 1590–91, a garrison of 63 Ottoman mercenaries served here, while in 1664 the garrison was made up of cavalrymen, infantrymen and *azabs*.¹⁰

BOROSJENŐ (today: Ineu, Romania)

A major market town, lying in medieval Zaránd County. The Ottomans occupied the town in 1566 and it became the seat of the *sancak* of Jenő–Pankota in the *vilayet* of Temesvár until 1595. From 1660 the town functioned as the seat of the *vilayet*: at first, until 1684, the *beylerbeyi* divided his time between Borosjenő and Temesvár, remaining here from then on

³ The buildings are listed according to settlements. However, we have omitted settlements of which it is known merely that a Turkish garrison was stationed there, i.e. those for which archaeological or written evidence for any building from the Ottoman period is lacking. A number of bridges were built on the territory of the one-time *vilayet* of Temesvár; some of these can probably be associated with the Ottomans.

⁴ HEITEL 1974–1975, 193–208.

⁵ EVLIA 1976, 692–693.

⁶ EVLIA 1976, 504.

⁷ MÁRKI 1895, 13; BANNER 1970, for the historical sources, and GERELYES 1980, for the archaeological investigations in the area.

⁸ VELICS – KAMMERER 1886–1890, I. 375.

⁹ Cf. SEBESTYÉN 1984, 46, for Marsigli's survey from 1697.

¹⁰ VELICS – KAMMERER 1886–1890, I. 375; FERETE 1928–29, 7 (1929), 85.

until 1693, when the town was captured by the Austrians. Jenő had a substantial garrison during Ottoman rule.

The settlement was made up of a fortress (*kale*) originally built in the Middle Ages, a palisade and a town (*varoş*) protected by a moat fed by the River Körös. The Ottomans did not engineer significant changes to the medieval fortress. One of bastions accommodated a wooden *mescid*.

In 1595, the year the Transylvanians re-occupied it, four *mescids* stood in the town; these were destroyed during the siege. A few years after the 1658 re-occupation of the town by the Ottomans, Evlia Çelebi visited Borosjenő: "Standing on the banks of the River Körös, the fortress is rectangular in ground plan and has small stone bastions. [...] The gate is on its southern side, the key is held by the *ağa* of the janissaries who lives in the fortress. Inside, near the gate, stands the *cami* of Sultan Mehmed, beside it is a clocktower constructed of wooden planks, and a mill driven by horses. The new fort [i.e. the castle renovated by the Transylvanians] that contains nothing but the janissaries' rooms lies within the fortress."

Lying on both sides of the Körös, the *varoş* was protected by a palisade, eight strong bastions and three wooden gates (the Temesvár, Gyula and Várad gates). "The solid and most graceful tile-roofed *cami* with a stone minaret of Köprülü Mehmed Paşa stands in this town; it is visited by many for praying." Haseki Osman Ağa's tiled-roofed *cami* stood in the middle of the *varos*, its minaret built of wooden planks. A building inscription dated 1073 (1662–1663) was set above its entrance.

The *cami* of Sofu Kenan Paşa was also roofed with tiles, and had a minaret of wooden planks. Not far away, near the bridge, stood the *cami* of Köprülüzade Fazil Ahmed Paşa. The town also had several other *mescids*.¹¹

The town boasted over eight hundred houses; "the *pasa's seray*, with a portico and a bathhouse, was located near the Gyula Gate. [...] So far the town has only had a single bathhouse." The town also held an inn built by Köprülüzade Ahmed and about two hundred shops.

One of the *camis*, possibly the one built by Köprülüzade Fazil Ahmed Paşa, survived into later centuries and was only destroyed after the Second World War.¹²

A nineteenth-century historian mentions that the Turks delighted in the mineral springs abounding in this area and built bathhouses, public fountains and pools.¹³

CSANÁD (today: Cenad, Romania)

Occupied by the Ottomans in 1551, the town became one of the important military, economic and cultural centres of the *vilayet* of Temesvár. The large rectangular fortress with corner-bastions, the town walls and the moat were originally built in the Middle Ages. There were four *camis* inside the fortress, each with a minaret transformed from a belfry. One of these, the Hünkâr *cami*, stood in the inner fort, together with the houses of the military leaders. A rather popular *mescid* and the court of the Prophet's *shariat* could be found outside the fortress. The *varoş* was protected by an earthen rampart and palisade. It had "185 spacious houses, the most beautiful among them being the *beyzade's* residence, beside which lay the ruins of a monastery. The extensive suburb had a total of twelve *mihirabs*, the largest of which was the *cami* of Hacı Osman Ağa."

The *cami* of Gazi Küçük Bali Bey, conqueror of the town, stands in front of the gate of the middle fort. His tomb lies under one of the cupolas. The *seray* of the Csanád *bey* is located beside this *cami*.

"The town has three *medreses*, three *tekkes*, four *mektebs* and about three hundred shops. Although there is no [covered] bazaar, it does have a small bathhouse and three inns."¹⁴

The fortress was demolished in 1701, under the supervision of Austrian officers. The medieval buildings were also destroyed at this time. The 1717 imperial survey lists forty houses in all.¹⁵

DENTA (today: Denta, Romania)

A palisade in the Csákova *nahiye* of the Temesvár *sancak*. In the seventeenth century it was described as a "quadrangular stronghold of wattle, with a *dizdar* and fifty *nefers*, a gunpowder magazine, a *cami*, an inn and a few *dükhâns* [shops]."¹⁶

ERDŐHEGY (today: Pădureni, now part of the town of Köröskisjenő/Chişinău-Criş, Romania)

A palisade built in 1571–72;¹⁷ in the late sixteenth century it had a garrison of 260 soldiers that was later increased to 270. They included "Mühieddin, the *imam* and *hatib* of the garrison's *cami*, as well as the *müezzins* Ibrahim and Murteza",¹⁸ suggesting that the stronghold had at least one, but possibly two religious buildings.

FACSÁD (today: Făget, Romania)

Palisade and *nahiye* seat in the *sancak* of Temesvár that was under Ottoman control from 1551 to 1594 and from 1616 to 1717; its garrison was usually over 300 strong.¹⁹ According to Evlia Çelebi, "the quadrangular, attractive and sturdy castle [...] is roofed with shingle. It has no market or bazaar." Between 1700 and 1706 it was a *menzil*.²⁰

¹¹ EVLIA 1976, 512–515.

¹² OPRIS 1988, 41, 131, 241; SORBÁN 1934, 30–36; cf. also G. Lanevski's study in the present volume.

¹³ MILETZ 1876a, 176.

¹⁴ EVLIA 1976, 647–648.

¹⁵ BOROVSKY 1897, 88.

¹⁶ EVLIA 1976, 491.

¹⁷ MÁRKI 1895, 5, 161.

¹⁸ MÁRKI 1895, 243; VELICS – KAMMERER 1886–1890, I. 377.

¹⁹ MÁRKI 1895, 18, 20.

²⁰ EVLIA 1976, 503; SEBESTYÉN 1984, 46–49; for the garrison, cf. VELICS – KAMMERER 1886–1890, I. 375. I would here like to thank Klára Hegyi for sharing with me her knowledge on this town.

FENLAK (today: Felnac, Romania)

In the early sixteenth century Fellak, a market town, was the seat of the Jaksics family who built a castle here. It burnt down in 1551 during the siege; the Turks rebuilt it the following year. Between 1552 and 1595 and from 1598 to 1695 the fortress was described as a *kale*, i.e. a stone castle. The town functioned as the seat of a *nahiye* in the *sancak* of Temesvár. The small fortress (with a circumference of 400 paces) had a "small *cami* from the time of Süleyman, five houses and five large cannon."²¹ There was a small kiosk in front of the gate.

GYULA (today: Gyula, Hungary)

The town and its medieval castle came under Ottoman occupation in 1566, during Süleyman's last campaign. The town functioned as a *sancak* seat. The population became predominantly Muslim within a few decades after the Ottoman occupation; it was the only town in the *sancak* that had a sizeable Muslim civilian population.

According to the 1579 tax *defter*, the town had the following *mahalles*: quarter of the sacred *cami* of Ishak Bey, quarter of the sacred *cami* of Ali Bey (with the *türbe* of the *cami*'s founder), quarter of the *mescid* of Mehmed Aga, quarter of the *mescid* of Ilias Kethüda, and quarter of the *mescid* of Kurd Bey. The outer fort held the sacred *cami* of the sultan: this can perhaps be identified with the Sultan Süleyman Cami quarter. An additional three *mahalles* were populated by Hungarians, a fourth by seven Serbian *martoloses* and their families.²² The town also had three *medreses* and, according to Evlia Çelebi, eleven bathhouses.²³

HARAM (today: Banatska Palanka, Yugoslavia)

The settlement was the seat of one-time Krassó County, its medieval fortress stood on the left bank of the Danube.

A palisade was constructed here during the Ottoman period. According to Evlia Çelebi, the stronghold held a *cami* and fifty shingle-roofed houses, only the *paşa's seray* was roofed with tiles. The *varoş* had four *mahalles*: two of these were inhabited by Muslims, the other two by Christians. There were three *camis* and one bathhouse; the two main streets were covered with wooden planks. The wealthier inhabitants had bathhouses in their houses.²⁴

JENŐ. See Borosjenő.

KARÁNSEBES (today: Caransebeş, Romania)

Until 1658 the town was the seat of the Lugos and Karánsebes *banate* of Transylvania; under Ottoman rule it functioned as a *sancak* seat. The pentago-

nal fortress with corner-bastions was in part built during the Middle Ages, and in part in the sixteenth century. It held three hundred houses.²⁵ The Ottomans did not rebuild the fortress. There was a smaller fort within the fortress that functioned as the commander's residence. In 1700 the garrison was made up of fifty mercenaries. The stronghold was demolished in 1701, as stipulated in the Treaty of Karlowitz.

The *cami* of Defterdar Ibrahim Paşa, "a low *cami* roofed with tiles and a high minaret", was built in 1658. The suburb had a bazaar and a charming market."

LIPPA (today: Lipova, Romania)

Conquered by the Ottomans in 1551, the fortress always had a sizeable garrison. Lippa had an elaborate defence system: the town was ringed by a moat and palisade, and there were three strongholds on the left bank of the River Maros (fortresses of Lippa, Orta-Kale and Narin-Kale) and one on the right bank (Radna).²⁶

The fortress of Lippa was rectangular in ground plan and had four corner-bastions; its circumference was ten thousand paces and it had five gates: the Bridge Gate (or Radna Gate), the Azab Gate, the Water Gate, the Temesvár Gate and the Battal ("empty", "unused") Gate. The Martolos Gate and the Barrier Gate were part of the palisade protecting the neighbouring outer *mahalles*.

The fortress had five *camis* and a *mescid*. Of these, the following are known by name: the Büyük Cami was built in 1552, it had a cupola with leaden roofing, suggesting that it had originally been a Christian church; the Temesvár Cami stood beside the Temesvár Gate (Evlia Çelebi recorded its building inscription, although he miswrote the date); Alay Bey's *cami* stood beside the Battal Gate; while the Hacı Mescid lay in the German quarter. One of these was probably identical with the "*templum turcicum mechiet vulgo nuncupatum*" on "the corner of Híd utca and Ábrahám Diák utca" that already existed in the "first Ottoman period" of Lippa. In 1615 the abandoned building was "tidied up" by a certain "Çelebi Tatar", who had been permitted to visit the town, and from 1616 it again served a building for Muslim worshippers.²⁷

Evlia Çelebi also describes seven *mektebs* and a *medrese*. Before 1688, there was also a *karavanseray* beside the River Maros: its ground floor was of stone, the upper storey was built from wood.²⁸

The Orta-Kale ("Middle Fort") stood beside the fortress of Lippa; constructed of wood and earth, it

²¹ EVLIA 1976, 503–504.

²² KÁLDY-NAGY 1982, 47–54.

²³ For the excavation of the Gyula fortress, cf. PARÁDI 1966, 135–165; FELD 2000, 257–280; for the Turkish bathhouses, cf. GERÓ 1980, 77; for the identification of the Ottoman-period buildings and the excavation of the Süleyman Cami, cf. GERELYES 1996 and her study in this volume.

²⁴ EVLIA 1962.

²⁵ EVLIA 1976, 534–535; SEBESTYÉN 1984, 41–43.

²⁶ MÁRKI 1895; EVLIA 1976, 505–509; OSMAN AÇA, 69.

²⁷ MÁRKI 1895, 243.

²⁸ OSMAN AÇA, 70.

was ringed by a moat. It had a pentagonal ground plan and was fortified with five strong bastions, each equipped with three *balimez* cannon. The fort had one gate with a drawbridge and it contained 150 houses for the soldiers. A military band played music each evening in one of its corners.

The Narin-Kale ("Slender Fort") was built of stone; it had two towers and was encircled by a moat. It had a single gate with a drawbridge, and the gatehouse also held the prison. The *dizdar*, the *imam* and the *müezzins* all lived in this fort, which also incorporated the treasury and the gunpowder magazine.

There were three *tekkes* outside the fort: the best known of these was Yagmur Baba's *tekke* with the holy *türbe* in its courtyard. Another popular local saint was Sheik Mehmed Effendi Hindi, a renowned *sipahi* and charismatic *sufi* from Agra, whose tomb was visited by pilgrims from as far away as India. Other sacred places of pilgrimage included the tomb of Ulema Paşa, the former *beylerbeyi* of Buda who had occupied Lippa, and the Cemetery of the Thousand and One Martyrs.²⁹

In accordance with the stipulations of the Treaty of Karlowitz, the Austrian imperial army demolished the fortifications of Lippa in 1702, although a small garrison was stationed here until 1717.

Local tradition considers that the "bazaar", a high tent-roofed building covered with tiles and incorporating a row of shops each provided with a cellar, and another building, known as the "the pasha's residence", originate from the Ottoman period.

MAJDÁN (today: Banatsko Aranđelovo, Yugoslavia)

It is a settlement in former Torontál County, near the medieval monastery of Oroszlámos. It was given its present-day name during Ottoman rule (*meydan* = market). Turkish tombs, found by the ruins, are mentioned in 1877.³⁰

MENYHÁZA (today: Moneasa, Romania)

Its mineral springs are mentioned in a document from 1597: "The Turks built bathhouses at Pankota and Menyháza."³¹

NAGYBECSKEREK (today: Zrenjanin, Yugoslavia)

An important medieval fortress and market town that functioned as a *sancak* seat in 1551 and as a *nahiye* seat in the *sancak* of Csanád from 1552. It had a permanent garrison and a sizeable Muslim civilian population.³² A document from 1573 mentions "a mill, an elegant bathhouse and twenty-two shops".³³ A century later Evlia Çelebi notes that "in the time of the infidels it was a small palisade, but complying

with the command of the imperial *fermân*, Koca Sokullu Tavil Mehmed Paşa enlarged it and turned it into a prospering town. [...] In this town, all the public buildings, the inns, the bathhouses, the hostels, the *medreses*, the *tekkes*, the schools and the *camis*, the market and the bazaar were all built by Sokollu Mehmed Paşa, who built all these buildings from bricks."³⁴ The *vakifname*, the foundation deed of Sokollu Mehmed's *vakifs*, lists the following buildings in Beçskerek: a *cami*, a *muallimhane*, a *medrese*, an *imaret* and a bathhouse.³⁵

ÓBESENYÓ (today: Dudeşti Vechi, Romania)

A palisade in the *sancak* of Csanád. In 1660 it was "a small palisade, quadrangular in ground plan, on the shores of a muddy lake on the floodplain of the River Maros. It has a *dizdar* and eighty soldiers. The *naib*, deputy of the *kadi* of Csanád, has his seat here. The town holds a *cami*, a transformed Christian church, two *mescids*, a *medrese*, a *tekke*, two *mektebs*, a small bathhouse, eight shops and three inns, two of which are roofed with shingle."³⁶ In 1738, when the Austrian administration settled Catholic Bulgarians in the town, there was still a "Turkish watch-tower", i.e. a minaret built of brick.³⁷

ÓMOLDOVA (today: Moldova Veche, Romania)

A palisade that functioned as a *sancak* seat from 1554. In 1566 the town had an active mint in which *akçe* and gold coins were struck. It had a permanent Turkish garrison.³⁸

ORSOVA (today: Orşova, Romania)

The town lies on the left bank of the Danube, in the one-time Krassó-Szörény County. The Ottomans captured the medieval castle in 1522. The fortress was repaired in 1526 and garrisoned. In 1551 it was incorporated into the *vilayet* of Temesvár and its commander bore the title of *sancakbeyi*. A few years later it became part of the *sancak* of Moldava. The castle was altered and enlarged into a palisade.

"A rectangular earthen fort, with a circumference of eight hundred paces, provided with two gates. The *bey's* residence in the fort outshines all the other houses. The wall facing the Danube has countless kiosks. There are fifty shingle-roofed houses in the fortress. A small attractive *cami* facing the Danube stands opposite the larger gate leading to the town. The inner fort is a small rectangular stone edifice from the time of the infidels. Only the *dizdar*, the *imam*, the *muezzin*, and the *mehterbaşı* live here. Above its gate, beside the prison, stands a wooden clock tower. The *varoş* [town] itself lies on the plain beside the fortress." Around 1600 it had "some three

²⁹ AYVERDI 1977, 54.

³⁰ MILETZ 1876b, 4-5.

³¹ MÁRKI 1895, 248, 259.

³² KÁLDY-NAGY 1982, 14.

³³ Sokollu Mehmed Pasa's *vakifname*. Temesvár Archives, document no. 118, 103.

³⁴ EVLIA 1976, 649-650.

³⁵ CEZAR 1983, 274.

³⁶ EVLIA 1976, 648.

³⁷ MILETZ 1876b, 128.

³⁸ For the mint, cf. NICOLAE 1994, 66; for the garrison, cf. FODOR 1996b, 44.

hundred houses, both single and two storeyed, some built of stone, some of wood, all roofed with shingle. There is a *cami*, a *mescid*, a *medrese*, a *mekteb*, and ten shops. A bathhouse and an inn stand beside the moat. The Greeks [i.e. the Orthodox] have their own church."³⁹

Austrian troops occupied the town in 1717. The old fortress was demolished and a Vauban-type fortification was built in its stead. A fort was also constructed on an island lying a few kilometres away (see Ada-Kale), and on the mountain rising on the opposite bank of the river ("St. Elizabeth's Fort"). In 1736 hostilities broke out between the Ottoman and Habsburg empires; the Treaty of Belgrade, signed in 1739, stipulated that Serbia and Oltenia (the territory of Wallachia that lay west of the River Olt) be placed under Ottoman control. The border between the Habsburg and the Ottoman empires was drawn along the River Cserna, and in order to ensure that the fortress of Orsova would lie on Ottoman territory, under the direction of Mustafa Reis Efendi and two French military engineers the sapper corps of the Ottoman army, aided by 15,000 Wallachians, Moldavians and Bulgarians, dug a canal 1.5 metres wide and approximately 22 kilometres long that was fed by the River Cserna. This canal marked the border between the two empires until 1790. The canal ran some 1–3 kilometres west of the river, beginning from the confluence of the Cserna and Belareka.⁴⁰ On Lipszky's map it is marked as "Türkischer Aqueduct".⁴¹ Remains of this canal survive in Toplec (Topleț, Csernahévíz).

The fortress was eventually demolished and the office buildings of the Danube Steamship Company were erected in its place after 1829.

OTTLAKA (today: Grăniceri, Romania)

The remains of a Turkish bathhouse are mentioned in an area called Zsellérföldek on the territory of the Záránd *nahiye* of the one-time *sancak* of Gyula.⁴²

PANCSÓVA (today: Pančevo, now one of the outer districts of Belgrade, Yugoslavia)

A palisade that functioned as a *nahiye* and *kaza* seat in the *sancak* of Temesvár.

The small quadrangular stronghold constructed from wood and earth accommodated the residence of the *dizdar* and fifty *nefers*, a gunpowder-magazine, a *cami*, an inn, and a small bazaar; most buildings were roofed with reed.

In the summer of 1660 when the Ottoman army marched against Várad, a strong pontoon bridge of seventy-seven boats called *tombazes* was constructed between Hisarcik on the right bank of the River

Danube and "Eski Palanka on the territory of Temesvár".⁴³

PANKOTA (today: Pâncota, Romania)

This was a major medieval market town whose one-time Benedictine monastery was transformed into a fortress in the late fifteenth century or early sixteenth century. The Ottomans fortified it in 1558.⁴⁴ Between 1565 and 1595 the town was a *sancak* seat. In the period between 1595 and 1608 the town changed hands several times and it was eventually evacuated in 1618, after which it fell into decay.

The Ottomans cherished Pankota for its thermal springs that flowed on the northwest slope of Kopasz-hegy ("Kopasz Hill"). A stone fountain believed to be Turkish work can still be seen on the hill.⁴⁵

RADNA (today: Radna, now part of Lipova, Romania)

The small stronghold built by Ulema Paşa sometime after 1551, following the occupation of Lippa, had fallen into a state of disrepair by the mid-seventeenth century.⁴⁶ The fortification was garrisoned by Christian *martoloses*.

SOLYMOS (today: Șoimoș, Romania)

A medieval stone castle perched on top of a rocky mountain on the right bank of the River Maros near Radna in the *sancak* of Lippa. (Ill. 1.) Between 1552 and 1595 and from 1614 to 1688 it was garrisoned by Ottoman troops. Around 1560 forty-three *timar*-holding soldiers were stationed here. Around 1660 "it had a *dizdar*, soldiers, cannon and a magazine. It has a single gate, facing west; a rampart encircles the fort, which accommodates thirty houses. The fort also has a small *cami* named after Süleyman Khan that can hold no more than ten at a time."⁴⁷

SZARVAS (today: Szarvas, Hungary)

A palisade in the *sancak* of Gyula built in 1584. In 1590–91 its garrison was 195 men strong.⁴⁸ (Ill. 2).

TEMESVÁR (today: Timișoara, Romania)

A medieval town and castle on the elevations rising above the floodplain of the rivers Béga and Temes. A rather ambitious rebuilding project, under the direction of Castaldo, was completed before the 1551–52 siege. The town was occupied in 1551 by the troops of Sokollu Mehmed, in 1552 by the soldiers of Ahmed Paşa. During Ottoman rule the town had a permanent Turkish garrison, the most important one in the entire *vilayet*.

Conditions in the Ottoman period can be reconstructed from Evlia Çelebi's *Seyahatname*;⁴⁹ the travelogue written by Heinrich Ottendorff, an Austrian diplomat who spent several months here in 1667;⁵⁰

³⁹ EVLIA 1976, 694–695.

⁴⁰ GROZA 1997; JUAN-PETROI 1998, 2.

⁴¹ HERNER 1987, Lipszky folder 1806/1987, section 40.

⁴² SOMOGYI 1913, 203.

⁴³ EVLIA 1976, 491, 490.

⁴⁴ MÁRKI 1885, 200–201.

⁴⁵ MÁRKI 1895, 248, 259; SOMOGYI 1913, 206.

⁴⁶ EVLIA 1976, 509.

⁴⁷ MÁRKI 1895, 20, 155; EVLIA 1976, 511.

⁴⁸ VELICS – KAMMERER 1886–1890, I. 381.

⁴⁹ EVLIA 1976.

⁵⁰ HERMANN 1943.



Ill. 1. View of Solymos castle, 1816. Aquarelle. National Széchényi Library, Budapest

the sketches drawn by an architect known as “Radonia Meymar” around 1700;⁵¹ and maps prepared by Captain Perrette in 1716, following the arrival of the imperial troops.⁵²

During the Ottoman period Temesvár was made up of the following four parts:⁵³

(1) The “Castle”, i.e. the medieval stone fortress. It had four cylindrical corner-bastions and a prism-shaped gatehouse. A palisade with cylindrical brick towers at its corners and a gatehouse resembling the citadel’s own encircled it.

(2) The “Fortress” was originally the town quarter enclosed by the palisade lying beside the castle; in the Middle Ages it had several monasteries and churches. During the Ottoman period this town quarter was the *varos* and was dominated by Muslims, although there was also a “Latin *mahalle*”. The Fortress accommodated the most important religious and commercial institutions and their buildings. The palisade was constructed of strong timbers and earth, with several bastions and gates; these were the following: the New Gate (or Belgrade Gate), a small-

er gate that led to the Small Palisade, Bastion of the Inner Fortress, Gate of the Bloody Bastion, Gate of the Janissaries, Rooster Gate with a weathervane and clock tower (with a kiosk above the tower), Bastion of the Sipahis, Bastion of the Arsenal, Gate of the Azabs, Bastion of the Water Gate, and Water Gate (called Lugos Gate after 1658). The Fortress had four separate town quarters.

(3) The suburbs bordered onto the above two parts. Most important among them were the Great Palisade and the Small Palisade; both were fortified with ramparts and wooden walls and were divided into a total of ten *mahalles*.⁵⁴ The Small Palisade lay beside the Castle and was ringed by a moat. The Hünkâr Cami, as well as another *cami*, lay in this area. The Great Palisade was the extensive northwest–northern–northeast suburb that held a larger population than all other parts of the town put together. Its eastern end was called Sziget (“Island”). The Great Palisade had three *camis*, one of which was the “attractive new Seid Ahmed Cami beside the Rooster Gate and the rampart”.⁵⁵ The church of the Franciscan friars and

⁵¹ OPRIS 1987, 19.

⁵² OPRIS 1987, 22–23.

⁵³ PREYER 1995, 182.

⁵⁴ Ottendorff calls the Great Palisade Sziget (“Island”) and the Small Palisade Ratzenstadt (“Serbian Quarter”).

⁵⁵ HERMANN 1943, 73.



III. 2. Stockade of Szarvas. Unknown master. Engraving from the late 16th century

the Orthodox church lay in the Sziget area. There was an inn near the Gate of the Azabs.⁵⁶ A total of two thousand houses burned down here during the siege of 1716.⁵⁷

(4) The Gunpowder Mill (*Baruthane*) was located on another fortified island east of the fortress, near the Water Gate and the Serbian church. These areas were surrounded by other sparsely built-up quarters with gardens and summer residences; most of these were completely destroyed during the sieges. One of these was "the *paşa's* summer residence", whose ruins can still be seen today, near the north-east exit from Temesvár; "a few dervishes lived beyond the town quarters along the edge of the town, at the distance of a cannon shot, near the tomb of one of their saints."⁵⁸

The following Islamic public buildings are mentioned in the written sources:

– *Camis, mescids*. According to Ottendorff, "Temesvár has eight large *mescids*, each with a high tower, built of brick in the customary manner and roofed with lead. There are two in the Town, to the right and left of the bazaar, one on the Island, and another

five in the outer town quarters. These are the following: the Kadıncı Mescid (on a market, near the inn), the Klca Mescid (near the Belgrade road), the Hünkâr Mescid (this side of the bazaar), the Cemceme Mescid (on the other side of the bazaar, near the Castle) and the Seid Ahmed Mescid (in the suburb, near the Rooster Gate), with the tomb of the founder, who was strangled in the courtyard on the orders of the sultan."

Evliya Çelebi mentions ten *mescids*: beside the Seid Ahmed Paşa Cami, he also describes the Silahtar Mescid (on the Island), the Aişe-Kadın Mescid and the Muradiye at the end of the *mahalle*. He also describes three simple, small wooden *mescids* with low wooden minarets: one by the Gate of the Azabs; one on the bank of the River Temes, beside the Serbian church; and a third at the end of the Island.⁵⁹ The citadel had four *camis*; three of these are mentioned by name: the Süleyman Kan Cami, the Cemceme Cami and the Şiket (?) Cami.

Another good source for the *camis* and *mescids* is the documentation of the sultan's chancellery. These documents mention the First Cami and its staff of

⁵⁶ OPRIS 1987, 19; on "Radonia Meymar's" map.

⁵⁷ PREYER 1995, 191.

⁵⁸ HERMANN 1943, 77.

⁵⁹ EVLIA 1976, 499.

thirteen, Tesvic Paşa's *cami* (its *imam* also served in the First Cami), the *cami* lying in the "inner *hass*" (with a staff of twelve in 1625), the *mescid* in the "Segesd *mahalle*" (with a staff of six), the *cami* in the "Hizr Ağa *mahalle*" (with a staff of eleven), and the *mescid* in the "Mahmud Kehaya *mahalle*" (with a staff of six). In 1625 a certain "Ahmed *kalfa*, *imam* of the Kasim's *cami*", was on the Treasury's payroll.⁶⁰ The description of the 1716 siege mentions a *mescid* "beyond the Great Palisade, between the Forforos and Mortoros Gates".⁶¹ The following piece of information probably refers to yet another *mescid*: Kudret Halil, artillery commander of the Fortress, had the Memi Ağa *Mescid* repaired and requested that it be transformed into a *cami*, in compliance with the wishes of the population of that town quarter. The sultan granted the request and his approval was communicated to the *kadi* of Temesvár in December 1663.⁶²

It is rather difficult to identify and locate the many *camis* and *mescids* mentioned in the sources, partly because some of them were identical with each other in spite of the different names preserved in the descriptions, and partly because the Austrian authorities initiated such large-scale and radical rebuilding activity that it is no longer possible to locate them.

– *Tekkes*. Evlia Çelebi mentions four *tekkes* in the Fortress. A fifth *tekke*, renowned for its excellent drinking water, was the dervishes' hostel beyond the town.

– Cemeteries, *türbes*. Evlia Çelebi mentions the Büyük Şehidlik and Şeyk Karabaş cemeteries,⁶³ while another source mentions Baba Hüseyin's *türbe*.⁶⁴

– Commercial buildings. Temesvár did not have a *bedesten* (a covered market-place that could be locked up for the night); it had a "covered side-street in the centre of the town" (a bazaar or *çarşı*) with many shops.

– Bathhouses. Evlia Çelebi mentions "four pleasant bathhouses, of which the one beside the Water Gate and the other beside the Gate of the Riverbank were within the walls". One of these was perhaps Sultan Ibrahim's bathhouse, whose fragmentary inscription, dated 1053 (1643), was incorporated into the "German town hall".⁶⁵

– Inns. Evlia mentions three inns in the Fortress; Ottendorff also mentions one in the Great Palisade, "at the end of a covered street leading to the Rooster Gate, built of stone, with a courtyard and numerous stalls. It has many rooms, one above the other."⁶⁶

– There were a few coffee houses in the Fortress, as well as granaries.⁶⁷

– *Medreses*. There is no direct evidence for *medreses*; however, the 1624 payroll of public officials mentions two teachers, one receiving a daily salary of twenty *akçe* and the other a salary of thirty *akçe*, suggesting a *tecirid* and a *miiftah medrese*.⁶⁸

– Residential buildings. Since stone was scarce, houses were built of wood and earth and roofed with shingle. Only the chimneys of a few houses were built of stone or brick.

– Streets. Most streets were covered with timber and planks, both in the Fortress and in the two Palisades, since the soil was often waterlogged.

TÓTVÁRAD (today: Vărădia de Mureş, Romania)

A medieval market town with a fortress. During the Ottoman period (1551–1595 and 1614–1693) it was a palisade with a permanent garrison. Around 1660 it was described as "a strong palisade, longish, rather than square-like in ground plan, on a high hill on the bank of the River Maros. It has a hundred and fifty houses, a *dizdar* and seventy *nefers*. A stone tower rises in its centre. The *dizdar* lives in this tower; the ammunition store is also there [...] it has no bazaar."⁶⁹

TÖRÖKBECSE (today: Novi Bečej, Yugoslavia)

Town in the one-time Torontál County. Sokullu Mehmed occupied the town in 1551. It became a fortress of the *sancak* of Csanád with a permanent garrison and a sizeable Muslim civilian population.⁷⁰

The fortress was rectangular in ground plan and ringed by a moat; one of its gates faced the harbour, the other the town. The harbour had an inn and fifty storehouses. "There is a flourishing *cami*, transformed from a church, a *medrese*, three schools, a *tekke*, a bathhouse, forty shops and one hundred low houses, roofed with tiles or reed."⁷¹

ÚJARAD (today: Aradul Nou, Romania)

A small settlement by the left bridgehead of the bridge over the River Maros, near Arad. The building of a *cami*, a school, an inn and shops in 1658 was enabled by a foundation made by Köprülü Mehmed.⁷²

VERSEK (today: Vršac, Yugoslavia)

A permanent garrison was stationed here from 1552. In the seventeenth century it was "a small town with about three hundred houses, all of them single or two storeyed, roofed with shingle." The fortress was uninhabited, "with a *cami* covered with shingle, a minaret of planks, and a few houses." The town had "three *camis*, a *medrese*, a *tekke*, two *mektebs*, a bathhouse and two inns."

⁶⁰ VELICS – KAMMERER 1886–1890, I. 414–420.

⁶¹ GRISLINI 1984, 114.

⁶² FEKETE 1928–29, document no. 130.

⁶³ EVLIA 1976, 500.

⁶⁴ AYVERDI 1977, 61.

⁶⁵ AYVERDI 1977, 61.

⁶⁶ HERMANN 1943, 74.

⁶⁷ EVLIA 1976, 499.

⁶⁸ ÁGOSTON 1987, 53.

⁶⁹ MÁRKI 1895, 17, 19; EVLIA 1976, 509.

⁷⁰ KÁLDY-NAGY 1982, 14.

⁷¹ EVLIA 1976, 649.

⁷² EVLIA 1976, 504.

VILÁGOS (today: Şiria, Romania)

There were two strongholds on the territory of the present-day settlement during the Ottoman period: the fortress of Világos and the palisade in the one-time market town of Siri, lying by the foot of the hill. Between 1566 and 1595 and from 1616 to 1693 it was part of the *vilayet* of Temesvár. During this period it had a permanent garrison. In 1660 "there was a permanent fortress of stone, erected on a gleaming red rock. It is small, as a falcon's nest. [...] There are sixty houses in the fortress, a *cami*, and a granary. ... The place of pilgrimage of the martyrs is in front of the fortress's gate."⁷³

ZSIDÓVÁR (today: Jidioara, Romania)

The ruins of a medieval fortress lie on a high hill; the palisade was built at the foot of this hill. "It was occupied by Köprülü Mehmed Paşa in 1658. A quadrangular wooden palisade. Since it is newly constructed, it has no public buildings."⁷⁴

Apocryphal relics of the Ottoman occupation

One interesting phenomenon is that the population of the Ottoman-occupied region usually associated every unknown building or ruin with the "Turks" after the end of the Ottoman rule. This was not simply local folklore, since the Turks had in fact utilised many medieval buildings. The examples listed below, taken from the territory of present-day Arad and Temes counties, illustrate this phenomenon, as there is no evidence for a direct link between the Ottomans and these buildings or settlements.

ÁGYA (today: Adea, Romania)

A barely visible ruin can be seen near the settlement. "It was perhaps a monastery or *mescid*".⁷⁵

ALSÓSZAKÁCS (today: Secaş, Romania)

"[In 1786] the village already had a church that operated in a now abandoned Turkish temple outside the village."⁷⁶

CSERMO (today: Cermei, Romania)

The ruins of an old bridge on the outskirts of the village are believed to date from the Ottoman period.

MAKRA (today: Mocrea, Romania)

A fountain called "Turkish Fountain".

MÁSLAK (today: Maşloc, Romania)

"Turkish ramparts" (a medieval earthwork) 300 metres south of the village; "Turkish well" (from the Ottoman period) on the outskirts of the village.

NAGYHALMÁGY (today: Hălmagiu, Romania)

A small ruin [...] believed to be the remnant of a Turkish *mescid* from the sixteenth- to seventeenth-century Ottoman period.

NAGYLAK (today: Nădlac, Romania)

There is a local tradition concerning a "*mescid* and Turkish castle" above the floodplain of the River Maros, opposite the plot of Március 6 utca 14.⁷⁷

PÉCSKA (today: Pecica, Romania)

At Pécska there are the remains of an old church and *mescid*;⁷⁸ there are also "the ruins of a *mescid*" between Pécska and Szemlak.⁷⁹

SZÉPFALU (today: Frumuşeni [Schöndorf], Romania)

The memory of bygone times is preserved by an enormous "Turkish well" on the outskirts of the settlement. (The ruins are in fact the remains of the medieval Sződ fortress.)

TEMESILLÉSD (today: Alioş, part of Máslak/Maşloc, Romania)

A "Turkish castle" 1 kilometre south of the village.

TEMESJENŐ (today: Ianova, part of Temesremete/Remetea Mare, Romania)

A "Turkish castle" 2 kilometres south of the village (the ruins of a medieval fortress).

TEMESVAR (today: Timișoara, Romania)

The "Turkish house" at Str. Păltiniş Nr. 2, one of the oldest buildings of this town, was probably the summer residence of Diesstl, the foreman who directed the construction of the Roman Catholic cathedral in the first half of the eighteenth century.⁸⁰

ÚJSZENTANNA (today: Sântana, Romania)

A 1.5-metre-high stone column, believed to date from the Ottoman period, stands in an area called Nyék on the outskirts of the village.⁸¹

ZSEBEL (today: Jebel, Romania)

According to one explanation this toponym can be derived from the Turkish word *cebelü* ("armoured knight"). As a matter of fact, the medieval name of the settlement was Széphely, while the name "Siphil" appears in the *defters*. There is a local tradition concerning a small Turkish garrison stationed here.

⁷³ VELICS – KAMMERER 1886–1890, I. 381; EVLIA 1976, 511–512.

⁷⁴ EVLIA 1976, 534.

⁷⁵ SOMOGYI 1913, 108.

⁷⁶ MÁRKI 1895, 751.

⁷⁷ Kind oral communication by Pavel Hlohoska, a local inhabitant.

⁷⁸ MILETZ 1876a, 171.

⁷⁹ HUNFALVY 1856–1864, II. 302.

⁸⁰ OPRIŞAN 1991, 20–29; AYVERDI 1977, 61, III. 94; MILETZ 1876b, 130.

⁸¹ SOMOGYI 1913, 202.

Settlement Reconstruction Based on Written Sources

In his paper for this conference, Géza Dávid broached the issue of the collation of the archaeological evidence with the information contained in the written sources, primarily Ottoman tax registers (*defters*), and also that of the immensely arduous task of the archaeological observation of settlement patterns and settlement structure.

The present paper will attempt to demonstrate whether it is possible to draw conclusions relating to settlement type from an examination of the names listed in the *defters*, and if so, how. The essay will examine two basic issues:

(1) Ethnographical and settlement history problems of agglomerate (i.e. unregulated, without any system of linear streets) settlements with unattached farmyards, and

(2) Possible models for the examination of *defter* records, based on case studies.

Ethnographic and settlement history problems of agglomerate settlements with unattached farmyards

The spate of articles on ethnographic settlement history published in the 1990s usually reached the conclusion that the spatial separation and distribution of residential and economic functions within settlements is an "elementary idea".¹ Human communities used this practical model in a variety of geographic environments, at different times in history under varying economic and social circumstances.

István Györffy was the first to analyse this phenomenon in Hungary when in the 1920s he described the spatial organization of Hajdúböszörmény and Hajdúszoboszló,² and, a few years later, that of Mezőkövesd.³ In the 1930s he noted that settlements divided into residential units and spatially separate zones where stock was kept represented a settlement layout whose origins could perhaps be traced to Asiatic nomads.⁴ In Hungary, settlements with two internal areas (one residential, the other for stock-keeping purposes), especially common in the Great Hungarian Plain, can be regarded as the successors

of nomadic winter quarters. He also noted that this phenomenon was uniquely Hungarian.⁵

Györffy's ideas on the nomadic origins of this settlement form – and also his interpretation of it as a uniquely Hungarian phenomenon – were later challenged. Other scholars quoted various new findings, as well as theoretical considerations. The agricultural historian István Szabó noted that there was no evidence whatever for the existence of settlements with "yards for stock" in the Middle Ages.⁶ Basing his studies in part on Szabó's findings and in part on his own research, Ferenc Maksay reached the same conclusion, although he did point out a few possible exceptions.⁷ Szabó and Maksay believed that the linear-street (i.e. non-scattered) village layout was the dominant type in medieval Hungary.

Ethnographers have sought to demonstrate the earliest possible examples of settlements with two internal areas,⁸ as well as to find new instances of eighteenth and nineteenth-century occurrences and to describe special variants.⁹

The settlements with the separate yards described by Györffy were agglomerate settlements. Historians therefore searched for agglomeration, evidence of which was relatively easy to find. Agglomeration was seen as a touchstone of such yards, as well as a precondition for them to some extent. Village plans reconstructed from documentary sources were compared with military maps from the late eighteenth century. The conclusions quoted above were based on these comparisons.

In her study on the sixteenth-century agricultural production of the serf villages in the Hegyalja and Bodroglököz regions, Éva Veress used a variety of documents in addition to narrative/descriptive resources in the examination of village layouts. She compared *urbaria* (feudal tenant contracts) and other sources, primarily grain tithe records, from roughly the same period. She was thus able to determine the structure of the settlement in question, as well as whether the settlement was of the linear-street type or agglomerated.¹⁰

¹ BARTH 1996, 59.

² GYÖRFFY 1926a; 1926b.

³ GYÖRFFY 1942, 250.

⁴ GYÖRFFY 1943, 51.

⁵ GYÖRFFY 1943, 82.

⁶ SZABÓ 1969, 153.

⁷ MAKSAY 1971, 95–96.

⁸ KOCSIS 1974, 61–64.

⁹ HOFER 1960.

¹⁰ VERESS 1966.



Ill. 1. Map of Szentkirály, based on the 1559 and 1562 tax register

Possible models for the examination of defter records, based on case studies

The *urbaria* and the tithe records are known to contain information on the financial standing of the persons and households listed in them, thereby making it easier for researchers to identify persons in various sources. But what is a researcher of the sixteenth and seventeenth centuries to do if the village in question lies in the area conquered by the Ottomans? Few, if any, *urbaria* or tithe records have survived, and the names in them can be matched only to a very limited degree. However, the Ottoman *defters* are available. These make virtually no reference to the financial standing of the persons registered, and it is therefore almost impossible to distinguish between two persons bearing the same name.

The question is whether it is possible to reconstruct the settlement type – be it a linear-street or an agglomerate type – merely from the sequence in which names appear in various Ottoman documents made at roughly the same time.

To answer this question, one must first examine the source-value of the documents, not in the sense of the accuracy with which the population segment was recorded nor in terms of the motifs for the lists, but rather in the sense of the circumstances under which the documents were drawn up: whether the sequence in which the names (persons) are listed possibly reflects the actual order of the homes.

According to a sultan's decree cited by Gyula Káldy-Nagy, the land-owning *spahi* was to take all his subjects to the *emin*, the official whose duties included the compilation of the lists, when the tax registers were to be drawn up.¹¹ If this was not the first such register, the *emin* read out the previous list of names, recorded the changes and noted the newcomers at the end, after which a fair copy of the document was

made. This would imply that the land-owning *spahi* ordered the Hungarian peasants to assemble at the church, where the *emin* asked each of them his name and so on. The list of names thus obtained in this way would be completely random and unsuitable for the drawing of any conclusions. (Such an approach is not confirmed by our study described below, whose diagrams reveal some regularity.) Common sense, too, is at variance with this method of register compilation, since it would have taken no account of those trying to evade registration. In other words, it would have given ample scope for hiding up, which would have been very important for all the inhabitants since the fewer the persons registered, the smaller the amount of tax the settlement would have to pay. Twentieth-century logic aside, scholarly observations may also be cited.

In his study on the *sancak* of Simontornya, Géza Dávid noted that "the Turkish compiler followed a certain order in recording those on a landed property, albeit a different order from the one used in Hungarian surveys."¹² Registration, then, may have been done by means of on-site visits after all, with the villagers in all likelihood waiting in front of their houses for the Turkish official accompanied by the village magistrate. This is in itself sufficient to suggest that the sequence of names in a register was very likely to correspond to the order of adjacency, meaning that a map of the settlement can be reconstructed on the basis of it.

In order to make a reconstruction:

(1) Persons appearing in two records need to be found;

(2) The names need to be replaced by serial numbers; then

(3) The serial numbers for identical persons in documents made at two different times need to be mapped in a rectangular system of co-ordinates. One serial number is positioned along the Y axis and the other along the X axis. The given points mark the locations of the onetime houses relative to each other, although the map derived in this manner is divorced from the actual site. (See the lists of names for the village of Szentkirály and the map – Ill. 1 – drawn from the sequence of the heads of households identified in the lists.¹³)

The scope of this paper does not allow us to demonstrate that if the houses were arranged next to each other at the time in question – in other words, that if the registration followed a logical order regardless of where it started and regardless of the system followed – then the points occurring in the system of co-ordinates would reflect this. A practical demonstration of this is afforded by the case of Úri, a village in Pest County. The houses of the village were aligned in two rows in the narrow valley of the Úri brook, as can be seen on a map from the late

¹¹ KÁLDY-NAGY 1970b, 19–20, 22.

¹² DÁVID 1982, 39.

¹³ The lists are published in KÁLDY-NAGY 1971, 343; 1977, 184.

1559		1559	1559	1562	1562	1562	1562	1562
1	Gábor, priest					x	1	János, Lőrinc Ihász 1
2	Imre, Bálint, Boldizsár Sánta	x	1	1	9	x	2	Miklós Fodor 2
3	Filip, Balázs Korcsa	x	2	2	4	x	3	Lőrinc, István Kun 3
4	Ferenc, Sebestyén Kis	x	3	3	6			Lukács Móna 4
5	Péter, Gergely Kis	x	4	4	5	x	4	Filip, Balázs Korcsa 5
6	Péter Mihály, Gergely's son-in-law	x	5	5	7			Jakab, András Beteg 6
7	Dénes Nagyházú					x	5	Petőr, Gergely Kis 7
8	Ambrus, Benedek Komor	x	6	6	10	x	6	Ferenc, Sebestyén Kis 8
9	Mihály, György Fekete	x	7	7	11	x	7	Petőr, Benedek Mihál 9
10	Máté Fekete	x	8	8	12			Gergely Nagy 10
11	Gergely, Borbás, Petri Kun	x	9	9	14			Gergely, Balázs Nagy 11
12	János Sándor					x	8	Imre, Dénös Nagy 12
13	Dimitri, Istv., Bálint, Istv. Beteg	x	10	10	16	x	9	Imre, Boldizsár Sánta 13
14	András, Mihály Harangozó	x	11	11	17	x	10	Ambrus, György Komor 14
15	Pál, Mihály Beteg	x	12	12	18	x	11	Mihály Fekető 15
16	Ferenc, Péter Beteg	x	13	13	19			Pál Csordás 16
17	Fodor Miklós	x	14	14	2	x	12	Máté Fekető 17
18	Pál Nagy					x	13	Mihály Kara 18
19	Albert Kun	x	15	15	23			György Fekető 19
20	Gellért, Dimitri Beteg	x	16	16	20	x	14	Borbás, Petőr, András Kun 20
21	Balázs Somogyi							Ambrus Erdőbíró 21
22	Imre, János Diák	x	17	17	22			Tamás Kis 22
23	János, János Ihász	x	18	18	1	x	15	Gergely, Antal Kara 23
24	Lőrinc, György Kun	x	19	19	3			János Szabó 24
25	Lukács Halkó	x	20	20	24	x	16	Demeter, Pál, Gergely Beteg 25
26	Ferenc Molnár	x	21	21	25			Pál, Gilerd Virágos 26
27	Imre Nagy	x	22	22	8	x	17	András, Mihály Harangozó 27
28	István, János Marton	x	23	23	21	x	18	Pál, András, Mihály Beteg 28
29	István Hartyán	x	24	24	26			Sánta Lukács, Lukács 29
30	János Tót							Petőr, Imre Varga 30
31	János Faragó							János Nyíl 31
32	Gergely Kara	x	25	25	15			Bertalan Szabó 32
33	Mihály Kara	x	26	26	13			Mihály, Mihály Tokozó 33
								Ambrus Móna 34
								Vince Kis 35
								Ferenc Baranya 36
								Petőr Áktó Móna 37
				19		x		Ferenc, Ambrus, Petőr Beteg 38
				20		x		Gilerd, Demetör, János Beteg 39
				21		x		István, János Marton 40
								Gergely Faragó 41
								Demeter, György Dézsa 42
								Gergely Szitás 43
				22		x		János Diák 44
				23		x		Albert Kun 45
				24		x		Palkó Lukács 46
				25		x		Ferenc Móna 47
				26		x		István Hartyán 48
								Bálint Sánta 49

eighteenth century (Ill. 2). Next to this is a schematic village map based on the sequence in which the heads of households are recorded in the *dicalis* registers from 1695 and 1697 (see Ill. 3). Although the two tax registers list the farmers inhabiting the village in differing orders, the sequence determined by rationality will trace out a village map corresponding to the reality: two rows of houses. A comparison with



Ill. 2. Map of Űri, based on the First Military Survey

the sequence in the sixteenth-century Ottoman tax records also results in a map of a street consisting of a few houses.

If the houses of the settlement were positioned without fences in an unregulated clump, this would have meant that their spatial arrangement afforded no obvious natural starting point for the compiler of the register. Thus the sequence of the heads of households listed in the document would be random. In the co-ordinate system this would be observable as an irregular distribution of the points. According to investigations already completed, in the case of connected groups of houses in major towns – Jászberény and Kecskemét – the points manifest themselves as irregular clusters (the relevant diagrams cannot be shown here on account of their extent).

The abstracted village map drawn up through the comparison of the lists of names mentioned above was compared with an actual map from approximately one century later. In what follows, we shall continue to investigate and prove the usefulness of the method by comparing its results with the archaeological record.

An increasing number of Ottoman tax documents have been made available for historical research during recent decades. In regard to surviving and partially or fully published lists of names, the onetime

sancak of Buda occupies a pre-eminent place. In the *nahiye* of Kecskemét, located in its central part between the Danube and the Tisza rivers, lists were made of the inhabitants of the village of Szentkirály.¹⁴ The village fell into ruin during the Ottoman occupation. Archaeologists have, however, located the onetime village, and have also excavated many of its houses.¹⁵ As a result of the decay of the village, its sixteenth-century ground plan has survived, and so have lists of names in the tax registers from the same



Ill. 3. Map of Űri, based on the sequence of the heads of households in the 1695 and 1697 *dicalis* registers

time. As the first step of the investigation, the heads of households in the lists were given a serial number and the two lists were compared, seeking out the heads of households listed on both occasions. As can be seen from the table, the sequence of the names differs in the two documents, meaning that the 1562 document was not simply a copy of the earlier one. Heads of households found on both lists were given a second serial number, which marked their location in the rectangular co-ordinate system and by implication the position of their house in relation to the others. (Imre Sánta was listed second in 1559, but thirteenth in 1562. However, he was assigned the serial numbers 1 and 9, because Father Gábor does not appear in the 1562 document. Lukács Móna, Jakab Beteg and the two Gergely Nagys are similarly absent from the 1559 list.)

From the points of the co-ordinate system derived from the lists of names, a map of the village was drawn, in which the houses were arranged regularly, next to each other in rows (Ill. 1). This corresponds to archaeological field observations, according to which "the late medieval village of Szentkirály was established on a sand mound stretching in a northwest – southwest direction. ... On the hill the ruins of the houses are to be found in two rows, at intervals averaging 50 to 70 meters."¹⁶

¹⁴ KÁLDY-NAGY 1971, 343; 1977, 184.

¹⁵ PÁLÓCZI HORVÁTH 1986b.

¹⁶ PÁLÓCZI HORVÁTH 1986b, 225.

The Survival of Szentkirály in the Ottoman Era

The life of the medieval Hungarian village system was accompanied throughout by the phenomenon of desertion, but between 1526 and 1699 there was, in the areas subject to Turkish occupation and clashes between contending armies, a much greater destruction of communities than previously. This was not simply the wiping out of countless villages in the central and southern regions of the country, but rather the disintegration of the entire medieval village system. The greatest blow to the late medieval network of communities was the Fifteen Years War (1593–1606), particularly at the hands of the Tartars stationed in Hungary between 1594 and 1599 as allies of the Ottomans. Researchers of the medieval villages on the Great Hungarian Plain generally consider this period to be one of the major periods of settlement destruction. Kálmán Szabó, director of the excavations on the sites of destroyed medieval villages around Kecskemét in the 1920s and 1930s, noted: "Most of the destruction took place during the first half of the Ottoman occupation, during the long war between 1591 and 1606. [...] I excavated villages that, without exception, had been destroyed in the first half of the Ottoman occupation and not resettled." Szabó quotes a report by János Hartyáni, deputy lord-lieutenant for the county of Pest and Solt, who in 1596 was unable to collect the poll tax since, except for the Three Cities, "the entire county of Pest is a wasteland".¹

There is no reason to doubt the veracity of Hartyáni's statement. However, in order to gain a more exact picture of village life during the Ottoman period, we must also examine whether destruction meant the complete depopulation of the villages in question, whether the majority of the inhabitants were killed or whether they simply abandoned the village and moved to a safer location, and whether the composition of the population changed when a return took place.²

The archaeological evidence can contribute much to the study of these issues. It can help to determine the date, the manner and even the extent of destruction, as well as the question of which villages survived, even in cases where there are no written sources to go by. One goal of settlement history research is to investigate the degree to which popu-

lation or settlement continuity can be determined in Ottoman-occupied areas.

I addressed these questions during my combined settlement history research in the Nagy-kunság region, where I surveyed and investigated archaeological sites in the environs of three towns: Kisújszállás, Túrkeve and Karcag.³ In many cases it was possible to identify the settlements and other locations mentioned in the tax registers; this work was greatly aided by the excellent topographical research in the Nagy-kunság area performed by Lajos Gyórfy and Gábor Ágoston, who were familiar with the archaeological data also.⁴ The size and the existence of the medieval and post-medieval settlements were determined by archaeological methods; a reconstruction of the changes in the settlement network from the tenth to the eighteenth centuries was also prepared. In this paper I shall present some additional findings from the Nagy-kunság research project. Some of these have already been discussed, at the "Jász-kunság Research 2000" conference held in Kiskunfélegyháza.⁵

In the sixteenth and seventeenth centuries an extensive disappearance of villages can be observed in the Nagy-kunság region. Up to 1592 the destructions tended to be temporary, whereas between 1593 and 1606 an almost total annihilation of existing settlements can be noted. After 1618, however, the region was repopulated. In contrast to the 36 villages at the beginning of the Ottoman occupation, there were only 22 inhabited villages in the Nagy-kunság region by the mid-seventeenth century, representing 42 per cent of the number of late medieval settlements. Only 7 villages still existed by 1669 (14 per cent of the pre-1526 figure). According to the so-called Pentz Survey made in 1699, there was only one inhabited settlement, Karcagújszállás (inhabited by 78 families), in the entire Nagy-kunság, although it should be noted that Kunmadaras now began to be repopulated by refugees from the destroyed settlement of Kolbászszállás.⁶ Finally, in the early eighteenth century 6 villages in the Nagy-kunság were repopulated; this figure represented 12.5 per cent of the total number of late medieval settlements. It is thus possible to trace a process of settlement concentration, with abandoned villages merging into surviving ones. Despite repeated destructions, the complete transformation of the set-

¹ SZABÓ 1938, 79, 127.

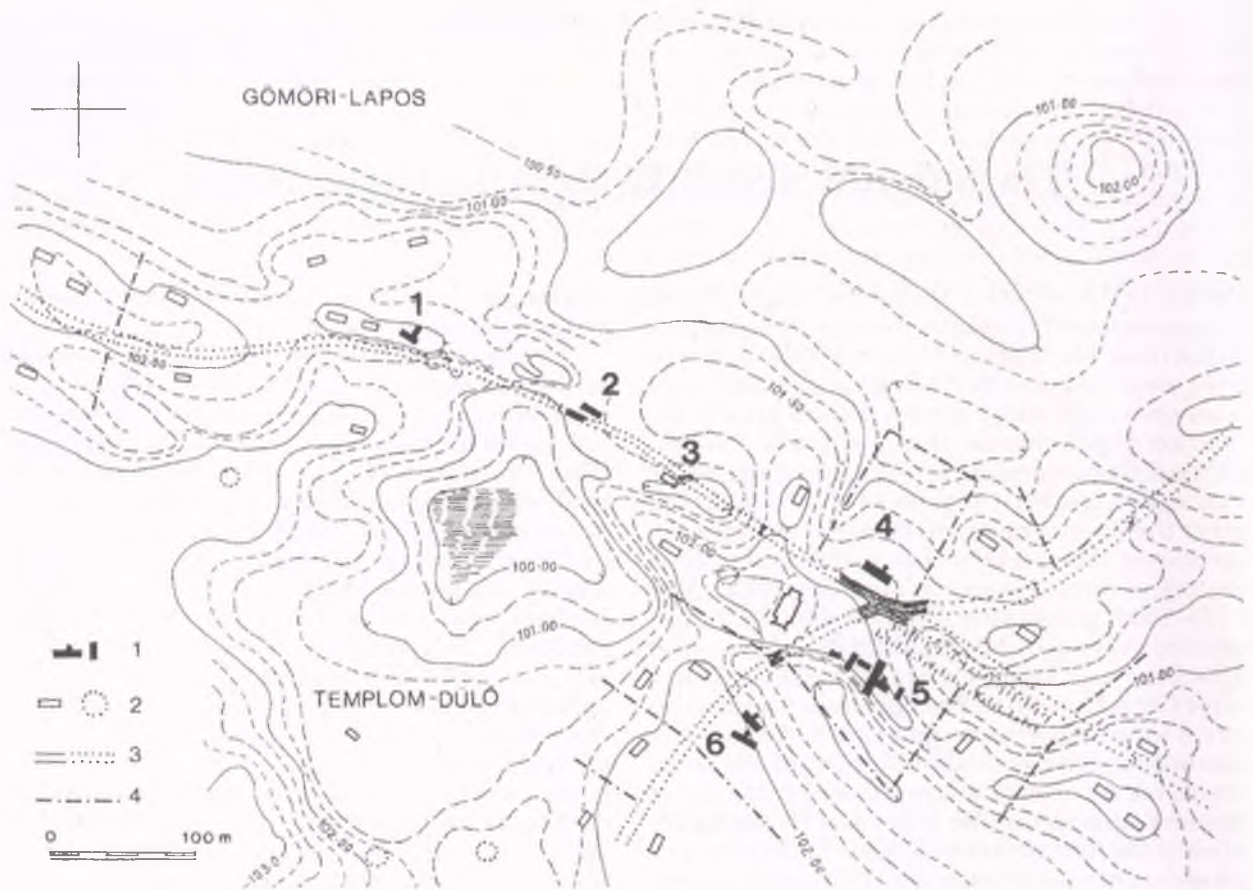
² Cf. DÁVID 1997, 161–162, for the dangers in overestimating the effects of depopulation.

³ PÁLÓCZI HORVÁTH 1986a; 1987; 1992a; 1993.

⁴ GYÓRFFY 1956; ÁGOSTON 1988–89, 1.

⁵ Title of the address: "Pusztásodás a kunságban" [Abandoned Villages in the Kunság Region]. MS, currently at the press.

⁶ KISS 1979, 19–29, 212–217, Pls. 1–4.



Ill. 1. Layout of the medieval village of Szentkirály, with reconstructed plot boundaries (15th-16th centuries)

tlement network and the non-survival of medieval villages in this region, the archaeological record and urban history data suggest that some kind of continuity can still be posited for the Nagykunság towns that were repopulated in the eighteenth century. In this sense we should speak not of total destruction, but rather of an extremely high settlement concentration.

The medieval village system withered away under similar circumstances in the territory between the Danube and Tisza rivers during the sixteenth and seventeenth centuries. Kálmán Szabó and László Papp excavated some thirty destroyed medieval settlements in this region during the 1920s and 1930s; unfortunately, most of the documentation and finds were destroyed during the Second World War. Although they also investigated the Szentkirály-pusztá area near Kecskemét, they did not survey the late medieval village and its church, hence our choice of this site for excavation. Between 1969 and 1990 we

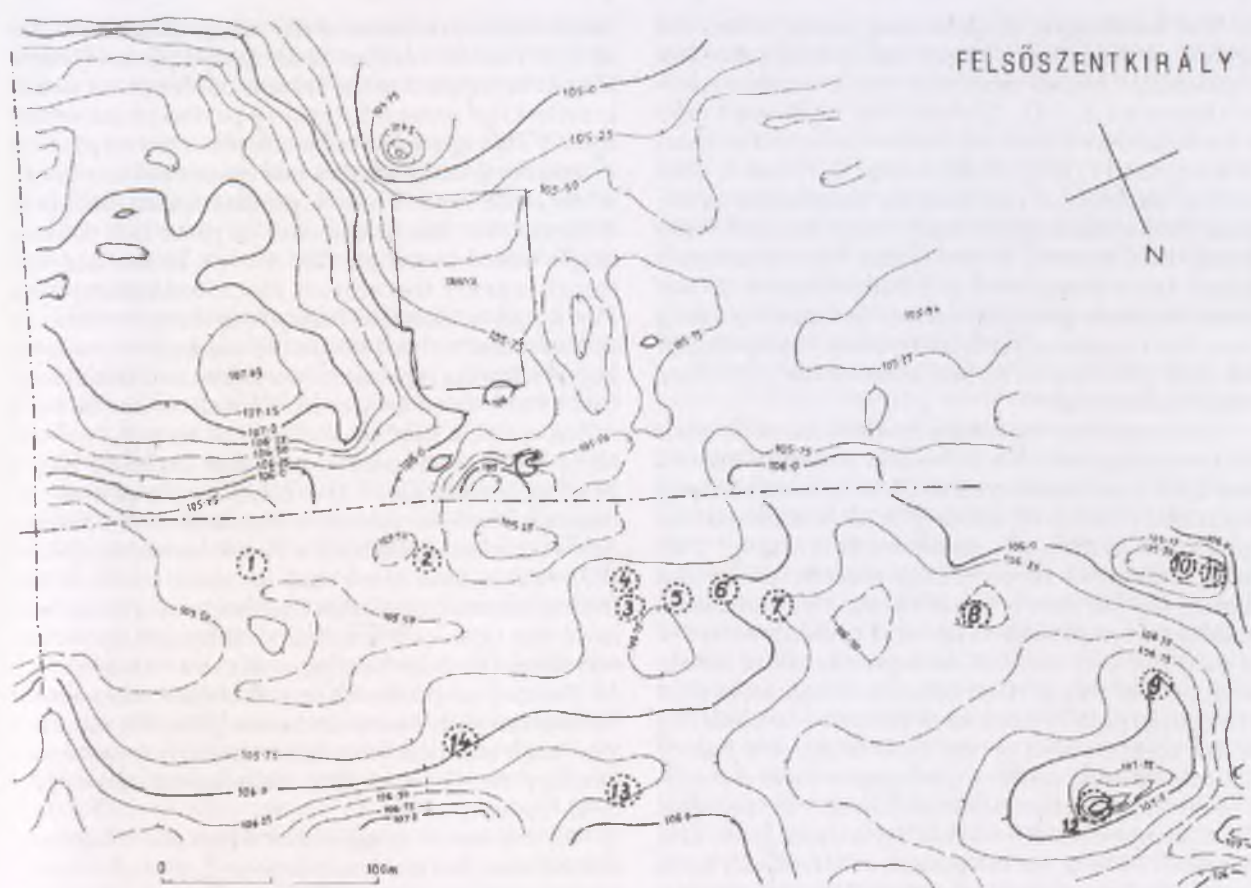
uncovered twenty residential and forty other buildings, together with approximately 300 other features.

In the fourteenth and fifteenth centuries a noble Cuman family held Szentkirály and the neighbouring settlement of Barabásszállás; these had been bestowed on it by King Louis the Great.⁷ After 1541 the owners probably fled to Royal Hungary. The estate subsequently passed to a wealthy merchant family from Kecskemét. Turkish officials assigned Szentkirály and Barabásszállás – the latter was already abandoned when the Turks made their survey – to the *nahiye* of Kecskemét in the *sancak* of Buda. Turkish tax records from 1546, 1559, 1562, 1580, and 1590 list Szentkirály as an inhabited village, with a population that was twice the average of the numbers calculated by Gyula Káldy-Nagy for seventeen villages of the Upper Kiskunság region.⁸ Between 1594 and 1599 the Tartar army stationed in the country depopulated the entire region between the Danube and the Tisza, including Szentkirály. Although Szentkirály was still registered

⁷ GYÁRFÁS 1870–1885, III. 489–492, 706–707; PÁLÓCZI HORVÁTH 1986b, 221–223.

⁸ KÁLDY-NAGY 1985, 570–571. The comparison was based on the population of the following villages: Adacs, Baracsa, Bene, Beszter, Jakabszállás, Jenő, Kara, Kerekegyház, Ko-

csi, Lajos, Mizse, Orgován, Palka, Peszér, Szabadszállás, Szentlőrinc, Szentmiklós, and Törtel. In the period between 1546 and 1590 only Törtel was a similarly populous village.



Ill. 2. Survey of the 17th-century village of Felsőszentkirály, with postulated house-sites

as an inhabited village in the seventeenth century, the Turks were barely able to collect taxes from its few houses in 1628 and 1634.⁹ In the course of the seventeenth century the inhabitants of Szentkirály moved to Kecskemét in a number of waves; the village was finally abandoned in 1692. In 1701 the townspeople of Kecskemét made an inspection in Szentkirály, which they leased from the palatine.¹⁰ This marked the beginning of farmsteads on Szentkirály-pusztá.

The documentary evidence thus indicates that Szentkirály was inhabited, albeit with minor interruptions, during the Ottoman period, although the population declined significantly in the seventeenth century. The archaeological record, however, indicates otherwise, shedding new light on the life of the village during the Ottoman period.

Periods of destruction in the life of the settlement

Based on surface finds in the areas looked at during the excavation, the abandonment of the settlement

can be dated to the close of the sixteenth century; this corresponds to the desertion mentioned in the historical records, and also fits the general pattern for the region between the Danube and Tisza rivers. The dating of the buildings confirms this destruction time. The overall picture is, however, much more differentiated.

In each of the investigated areas, houses built in the first half of the fifteenth century were the earliest structures, although in many cases the remains of houses built using posts indicate that the village was originally established around the turn of the fifteenth century. The surviving fifteenth-century houses had externally-fed tiled stoves and projecting kitchen ovens; most houses also had a loft. These buildings had been constructed carefully and all of them burned down during the first half of the sixteenth century (Houses I, 4/a, 7 and 25).¹¹ This destruction can most likely be linked to the 1526 military campaign led by Sultan Süleyman who marched through the region between and Danube the Tisza after burning Pest.¹²

⁹ VELICS – KAMMERER 1886–1890, II. 710, 720.

¹⁰ BALANYI 1964–1965, 43; PÁLÓCZI HORVÁTH 1986b, 223.

¹¹ PÁLÓCZI HORVÁTH 1989; 1996, 13–17, 47; 2000, 135–142.

¹² VÁRKONYI 1985, I, 149–155.

The buildings of the following period reflect the revival of the village: larger, but considerably less sophisticated houses equipped with stoves were erected (Houses 4, 6, 7/II, 22/a and 29).¹³ Although only a few coins were found, the date is confirmed by coins of Ferdinand I (1526–1564) found in House 4. This period comes to an end with the destruction at the close of the sixteenth century. However, not every house had burned down: some had apparently simply been abandoned and had collapsed. It was noted that some plots were indeed deserted for a long time: the remains of birds and rodents had polluted the wells (Pit 94, a well), and some of the plots were never reoccupied.

Two neighbouring houses from the later sixteenth century equipped with stoves and ovens (houses 22 and 29/a) were uncovered in the area most recently excavated (Trench 6); another house was erected on their ruins in the early seventeenth century.¹⁴ The floor remains of House 22 lay directly under the topsoil, but the floor levels of House 29/a and a later building were ploughed up, and nothing survived of their ovens or stoves. Consequently, there is little evidence for this period; only the Ottoman-period Hungarian pottery from some pits can be considered in this respect. This period ends in the first half of the seventeenth century, perhaps in its first third. The area around the medieval church – the present-day Calvinist church – was not reoccupied later. The question of where the inhabitants of Szentkirály lived during the seventeenth century will be addressed in the next section.

The issue of houses and households

Based on the surface finds, the location of about twenty-eight to thirty houses could be identified at the destroyed medieval village of Szentkirály, meaning that roughly the same number of plots could be expected. (After the consolidation of the plot system, houses were always built on the same part of the plot and thus the number of archaeologically observable house locations will approximately match the number of plots.) Topographically, the locations of individual houses were treated as separate excavation sites. The excavation yielded information on the positioning of the houses on six medieval plots, as well as on the make-up of the plots. On three plots the parts that had been built on were partially or wholly excavated (Ill. 1).¹⁵

The number of archaeologically identifiable house plots (28–30) differs significantly from the number of families recorded in the written sources: the sixteenth-century Turkish tax records list twice as

many families (houses) in the village (52 in 1562, 66 in 1590) as the number of identified plots. (Here it should be noted that the surface observations usually reflect the sixteenth-century period of the settlement.) This apparent contradiction can be resolved by assuming that each plot had more than one house at the same time. There is no direct archaeological evidence for this in the case of plots 1–3. Only a single house stood on Plot 4 even in the late sixteenth century. By contrast, Plot 5, located opposite Plot 4, had two houses (7 and 10) in the early fifteenth century, and a third house (5) was built some time later. Following repeated renovations and rebuilding, there were three houses (6, 12 and 16) beside each other on this plot in the late sixteenth century, although in each period only one building had a heating installation.¹⁶ Five building periods can be distinguished on this plot. Similarly, five building periods can be identified for Plot 6, on which a house (25) with a tiled stove and an oven stood in the fifteenth century; no other building was erected here until the close of the century, although the house was rebuilt and the heating system was modernized. In the mid- and later sixteenth century there were two houses with a stove and oven (22/a, 29) standing near each other on this plot; in the early seventeenth century two houses (22, 29/a) stood there (Ills. 3–4).¹⁷

All this would suggest that when the village was settled and the plots apportioned, a single family occupied a plot, although a second, unheated, two-room building was occasionally erected if two or more generations lived together. Later, as the population grew, there were plots with one, two or three houses, according to the changing family structure. Thus by the mid-sixteenth century the houses-to-plots ratio may have been around 2:1 in Szentkirály.¹⁸ Since the debris of buildings built directly next to or on top of each other cannot be distinguished on the surface, it could not be determined whether the ploughed-up house remains represent one or more buildings. A full excavation, however, uncovered each and every house recorded by the Turkish officials.

Peasant culture and farming in the first half of the Ottoman period

After the destruction of the fifteenth-century houses, in the period between 1526 and 1594/99 the late medieval village lived on, its culture being an organic continuation of late medieval village culture. A certain extent of impoverishment or simplification can be noted in the houses, indicated, for example, by the disappearance of tiled stoves that were also

¹³ PÁLÓCZI HORVÁTH 1992b; 2000, 126–128, 133–134.

¹⁴ PÁLÓCZI HORVÁTH 1992b, 57; 2000, 128, 133.

¹⁵ PÁLÓCZI HORVÁTH 2000, 126–127.

¹⁶ PÁLÓCZI HORVÁTH 1986a, 225; 1992b, 51; 2000, 126–128.

¹⁷ PÁLÓCZI HORVÁTH 1992b, 53–57; 2000, 127, 133–134.

¹⁸ PÁLÓCZI HORVÁTH 2000, 128.

important products of local craftsmen. The stoves from this period were constructed with simple cup- or bowl-shaped tiles instead of the ornate Late Gothic ones.

The pottery finds recovered from the houses likewise reflect an organic continuity with late medieval Hungarian pottery. Since the pottery finds, numbering many tens of thousands, are currently being evaluated, detailed description of them will not be attempted here.

The archaeological evidence for agriculture harmonises neatly with the information contained in the tax records. According to Gyula Káldy-Nagy, the low production level of 1546 had risen significantly by 1562, with crop production roughly doubling, the stock of sheep tripling, and the stock of pigs increasing tenfold.¹⁹ It is my belief that agriculture had recovered by this time and had attained the pre-1526 peacetime level. On the other hand, by 1590 a slight decline can be noted. An increase in the population, too, can be demonstrated for the period stretching from the 1560s to 1590.

Compared to other settlements in the area, the village's grain production was quite significant. In 1562 the wheat tithe and mixed grain tithe totalled 550 *kiles*, indicating that Szentkirály produced an estimated 76.95 metric tons of wheat and 55–60 metric tons of other grains. The average grain production for one family was 108 *kiles*, or approximately 2.6 metric tons.²⁰ Calculations were also made for the size of the area needed to produce this quantity of crops. Based on generally accepted regional estimates in European agricultural history, a 450 per cent yield and 3.5 to 4 quintals per hectare would qualify as an acceptable average.²¹ Accordingly, the total grain production for Szentkirály in 1562 can be estimated at 131.95 to 136.95 metric tons, with a mean of 135 metric tons, or 1350 quintals. To produce this, 337.5–385.7 hectares of arable land would have been necessary, with a mean of 362 hectares. The average field size per family comes to 6.8 hectares. (If the average production per hectare in Szentkirály was lower, the size of the cultivated area would obviously have been larger: for example, as much as 470.6 hectares in the event of a 30 per cent downward adjustment.) This cultivated area comes to about 3.5–4.6 per cent of the village's total lands. Consequently, the inhabitants of Szentkirály had fairly large pasturelands at their disposal; there is also cartographic, geological and archaeobotanical evidence for an oak forest where pigs could graze on acorns. Some elements of the lands in the sixteenth

to seventeenth centuries can be discerned from the maps prepared at the time of the First Military Survey, and we believe that we have found the arable land, which was all in one block.²²

Since the Turks also collected taxes on mills, we know that in 1580 and 1590 there were four so-called "half-year" mills in Szentkirály.²³ These mills were most likely powered by animals. A large millstone that may have belonged to one of these mills was found during the excavations.²⁴ Quern-stones were found in almost every house, suggesting that each household was equipped with a hand mill.

Ferenc Gyulai and Andrea Torma identified the nearly 20,000 crop- and other seeds brought to light during the excavations. Most were recovered from a sixteenth-century well. Over 160 plant species could be identified.²⁵ The ecological grouping of the plant species allowed the reconstruction of the habitats in the village's surroundings, the vegetation of the period and the plants cultivated. The major grain types were all represented in the archaeobotanical sample: wheat, rye, barley, and millet. The furrow weeds of the spring and autumn crops were also identified. Lentil, pea, watermelon, honeydew melon, flax and hemp were grown in the gardens near the houses. The sixteenth-century Turkish tax records also list wheat, rye, barley, flax, flaxseed, hemp, lentils, and beans.²⁶ The species identified indicate a high level of grape and fruit production: apricots, peaches, cherries, sour cherries, plums, bullaces, walnuts, and wine grapes. Some of the identified weed species are known to thrive in gardens and fertilised areas. The presence of forest fruits – hazelnuts, wild strawberries, blueberries, wild apples, and acorns – indicates that these were gathered as dietary supplements. Many archaeobotanical finds represent wild plants and herbs used in the households.²⁷

Szentkirály's survival in the seventeenth century

In the 1980s the remains of a destroyed village was discovered at Felsőszentkirály, lying some 5.5 kilometres northwest of Szentkirály, by the road leading away from it. The settlement covered an area approximately 450 metres by 100 metres. The house remains could be easily identified, and a total of fourteen houses were marked on the site plan (Ill. 2). The houses were aligned in two rows. The surface finds consisted of seventeenth-century pottery, kitchen refuse, animal bones, and iron slag in some houses. An excavation was not possible; we could only open

¹⁹ KÁLDY-NAGY 1985, 570–571.

²⁰ KÁLDY-NAGY 1985, 9, 571; PÁLÓCZI HORVÁTH 1996, 20.

²¹ BRAUDEL 1985, 118–122.

²² Our investigations concerning grain production and the location of the cultivated land were presented in our paper "A késő középkori Szentkirály gazdálkodása" [Farming in Late Medieval Szentkirály] read at the conference entitled

"Farming on the Great Hungarian Plain" organized by the János Arany Museum at Nagykőrös in 2000.

²³ KÁLDY-NAGY 1985, 571.

²⁴ PÁLÓCZI HORVÁTH 1996, 20, 48 (cat. no. 15); BALÁZS 1995.

²⁵ TORMA 1996.

²⁶ KÁLDY-NAGY 1971, 343–344; 1985, 571.

²⁷ TORMA 1996, 40–41, 62–66.



Ill. 3. Excavation of House 22 destroyed in the early 17th century

a trial trench in the loose sandy soil. We uncovered a *terre pisé* clay wall; this construction method differs from the one used for the fifteenth- to sixteenth-century houses at Szentkirály.²⁸

The boundaries of the present-day village of Szentkirály correspond to the ones described in the 1354 charter. The excavation site (Szentkirály, Site 6) lies within these boundaries, meaning that it was part of the medieval estate of Szentkirály. The “doubling” of

settlements was a frequent phenomenon in the medieval period, and the name of a part of the lands – Felsőszentkirály (“Upper Szentkirály”) – attests to a naming of this type. However, in view of the fact that this settlement postdates late medieval Szentkirály, it is our belief that we have found the village where the inhabitants of Szentkirály lived from the 1630s until the final abandonment of the village and its lands.

This seventeenth-century archaeological site also provides an explanation for a rather unusual phenomenon. During the excavation of the cemetery around the church of Szentkirály, a number of modern graves were also uncovered: it would appear that the community using the cemetery continued to bury its dead here even as late as the eighteenth century. (The grave goods from some burials included relics of popular religiosity, such as rosaries and crucifixes.²⁹) The families that moved to Felsőszentkirály apparently continued to use Szentkirály church and its cemetery in the seventeenth century, while the burials from the eighteenth century can most likely be linked to the descendants of Szentkirály inhabitants who moved to farmsteads.

I believe that some important conclusions can be drawn from the investigations in the Nagykunság region and at Szentkirály. Destruction and survival are not mutually exclusive elements in the life of settlements during the Ottoman period. The population of this period was forced into a high degree of mobility, and at times disappears from before our eyes, much in the same way as it tried to disappear from before the eyes of the tax collectors and the Tartars. Some of its sand-covered tracks have now been found at Szentkirály. The seventeenth-century village of Szentkirály needs to be investigated further; it may provide an answer to various questions, such as the development of Hungarian folk architecture and folk culture during this little-known period, as well as the extent to which the industry and commerce of the conquering Ottomans affected the life of the peasantry on the Great Hungarian Plain.

This study was sponsored by the National Research Fund (projects T 006766 and T 025554).

²⁸ PÁLÓCZI HORVÁTH 1996, 24. The identification and survey of this site was part of a systematic investigation of the area around the Calvinist church. The geodesic survey was

performed with generous financial support from the Museum of Kecskemét.

²⁹ PÁLÓCZI HORVÁTH 1996, 23–24.

Data on the Settlement History of Ete, Medieval Market Town

Location

Medieval Ete lies in the Sárköz region of Tolna County, some 10 km south of Szekszárd and 3 km west of Decs (Ill. 1). Its geographical location is extremely favourable: the settlement is sited on the highest hill of the region, near the hills rising along the western edge of the Sárköz region that extends to the Sárvíz waterway. This location offered the best crossing place over the Sárvíz, in a place that could be easily approached not only from within the Sárköz area, but also from the road running along the foot of the hills. It was thanks to this that Ete grew into one of the largest and most important market towns of the Sárköz region.

In spring the longish northeast–southwest oriented hill is still surrounded by water on three sides. Aerial photographs have shown that originally a waterlogged area protected it to the west and southwest (Ill. 2). The settlement extended over an area 700 metres by 300 metres. The southwest end was the lowest; it rose gradually towards the northeast. Height above the floodplain is approximately 2 metres at the western end and 5–6 metres at the eastern end. The hill is 97 metres above sea level.

The northern, larger, part of the one-time market town was pasture up until 1962, while the smaller, southern part has been used as arable land since the 1860s.¹

The eastern and southern edges of the slightly convex hill with gently sloping sides were originally steep banks that have now been washed away. The older inhabitants of Decs still remember these and the hill is shown thus on the 1:25,000 scale maps published in 1950 and 1953,² as well as on the 1:10,000 scale map issued in 1970. The vertical banks 3–4 metres high were levelled in 1962 when the pasture, several centuries old, was ploughed up: the remains of the medieval houses and the steep bank was levelled with bulldozers in order to transform the area into arable land. Cultivators processed the entire area of the hill: tines spaced at 80 centimetres from each other cut through the soil to a depth of 80–90 centimetres.³

The site is traversed by the Decs–Szőlőhegy út. The fields lying north of this road – including the

greater part of Ete – used to belong to the Decs Co-operative Farm, while the fields to the south used to belong to the Sárköz State Farm. As a result of privatisation, the fields once owned by the co-operative now belong to three individuals.

Historical data

The documentary evidence on the history of the market town was collected and published by József Holub;⁴ the following brief survey is based essentially on his work.

The first known data regarding ownership of the settlement comes from 1398, when, together with Decs, the settlement was in the possession of the Chapter of Vác. The church, dedicated to the Holy Spirit, is first mentioned in a papal tithe register.⁵

The fact that the settlement appears in charters and other documents only at a relatively late date does not mean that the settlement was established in the fourteenth century: the archaeological record shows unequivocally that Ete was already in existence in the tenth to eleventh century, during the early period of the Árpád dynasty. Its heyday can be dated to the fifteenth to the sixteenth century, when it was the sole town in the Sárköz region with the right to hold markets. Its weekly market is mentioned in a document from 1565. The Ete market was held on Sundays.⁶ According to a document from 1535, Ete was a town.⁷

Although the Sárköz area came under Ottoman sway in 1543, the majority of the villages in the region paid taxes to, and worked for, the castle at Szigetvár until the fall of Szigetvár in 1566. After 1566 only the Ottomans were masters in the region. Ete did not decline during the first half of the Ottoman period: according to Ottoman tax registers, the town had 155 houses in 1557 and 192 in 1572. The town's population can thus be estimated at 800–1000 inhabitants.

The town probably perished between 1620 and 1627, since we know that it still in existence in 1619 when Báta Abbey ordered the people of Ete to pay their debts to it as their landowner. In 1627, however, a document from the abbey notes that "Ete was a

¹ GAÁL – KÓHEGYI 1971–1972, 311.

² Museum and Institute of Military History, Budapest. Collection of Military Maps B XVa. 40 and B XVa. 49a.

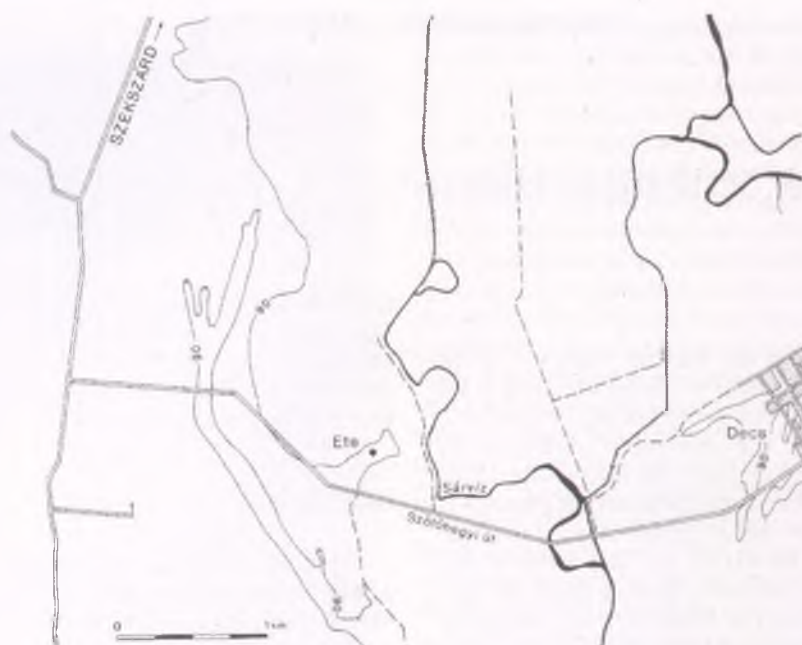
³ During the excavations we also observed the traces left by these machines.

⁴ HOLUB 1958, 1–19.

⁵ MON. VAT. I. 1. 287, 311; HOLUB 1958, 3.

⁶ SZAKÁLY 1969, 40.

⁷ HOLUB 1958, 5; Pozsonyi kápt. lev. Archives of the Chapter of Pozsony, Capsa 63, fasc. 3, no. 2.



Ill. 1. Decs–Ete. Map of the site. (Drawn by Sándor Ósi)

goodly town, now its people live in Decző [i.e., Decs].⁸

The research: a survey

According to Frigyes Pesthy's gazetteer of toponyms, "Ete is part pasture, part arable land. Destroyed by the Tartars, it was an extensive urban settlement with the ruins of a castle; the origins of its name are unknown."⁹ Local tradition calls the area Eteváros [Ete Town], Ete vára [Ete's Castle], Városhel [Town Place], and Ete domb [Ete Hill].¹⁰

The first to survey the area was Flóris Rómer, who described only the castle, making no mention of the remains of the town.

József Csalogovits excavated certain parts of the settlement in 1933 and 1935. According to his brief excavation reports,¹¹ he uncovered several houses, a section of the church, a few burials and two pottery kilns. Unfortunately, his excavation records perished at the close of the Second World War,¹² and the exact

locations of the settlement features unearthed by him are now unknown.¹³

Lajos Márton visited the excavations and suggested that the site be photographed from the air. Unfortunately, no aerial photographs were made at the time. In his report Lajos Márton mentions that house remains and one of the streets could be clearly made out: "one street of the former settlement is clearly visible, as are the one-time houses, marked by a series of pits on either side of the road".¹⁴

In November 1963, Gyula Mészáros conducted a field survey on the territory of Ete. He noted that the pasture had been ploughed up the previous year and that thin patches could be seen in the winter wheat that he interpreted as house remains from the brick and daub fragments on their surface. He collected vessel fragments from the fourteenth to the sixteenth centuries, a cup-shaped stove tile and flat stove tiles, loom weights, a whetstone, and a coin (a Ferdinand I denarius issued in 1554).¹⁵ He conducted another survey in 1966 in the area formerly used as pasture that had been turned into arable land in

⁸ HOLUB 1958, 12: "Anni 1627. die 29. decembris. Concerning the place and condition of the possessions, towns, villages of the Bába abbot, in the words of my bailiff János Décsi" (Archives of the Chapter of Pozsony, Capsa 63, fasc. 1. 3, no. 6).

⁹ GAÁL – KÓHEGYI 1971–1972, 311.

¹⁰ TOLNA MEGYE FÖLDRAJZI NEVEI 1981, 483.

¹¹ CSALOGOVITS 1935, 1–10; 1937, 321–332.

¹² Letter from Zsolt Csalog to the authors, dated 10 April 1997.

¹³ The approximate location of the excavation is described by Gyula Mészáros: "In the 1930s József Csalogovits conduct-

ed an excavation on the eastern end of the hill and on the arable land." Wosinsky Mór Museum, Szekszárd, Archives, 203–75. Csalog's publications reveal only that he investigated both the pasture and the arable area. He did not mark where he had opened his trenches. He mentions two owners in the case of the arable land, Pál Pörnyi and Sándor Cseh, on the basis of whom we could identify the area in question from old maps and land registers. These two plots lay on the southwest edge of the site.

¹⁴ Report by Lajos Márton from 1933 to Oszkár Széward, deputy lord-lieutenant for Tolna. HNM Archives, 43.E.I.

¹⁵ Wosinsky Mór Museum (Szekszárd) Archives, 203–75.



Ill. 2. Decs–Ete. Aerial photograph of the site taken on 28 February 2000. (Taken by Zsuzsa Miklós)

1962. During this second survey he collected medieval and post-medieval fishing implements, crockery and cutlery fragments, and ornate metal book corner-guards. In 1966 he found 922 late medieval *denars*, all of them stray surface finds.¹⁶

In 1967, the same Gyula Mészáros conducted a small excavation at the highest point of the site in order to clarify the eastern boundary of the settlement. He found house and oven remains from the period of the Árpád dynasty (eleventh–thirteenth centuries) and from the Late Middle Ages, and he also identified the earliest phase of the settlement, noting that the medieval village overlay a stratified Bronze Age settlement. He also found a hoard of 5000 Ferdinand I coins placed in a vessel concealed in waterlogged arable land at the bottom of the hill, silver jewellery and a Turkish gold coin.¹⁷ Nándor Parádi later published this collection of finds.¹⁸

In 1986 Attila Gaál and Géza Szabó visited the site and conducted a small rescue excavation when the concrete road (Szőlőhegyi út) was built. They uncovered two small sections of the wall encircling the medieval church and two burials that contained no grave goods.¹⁹

Zsuzsa Miklós has surveyed the area on a number of occasions since 1992. Although she did not find any patches indicating houses, she did observe daub fragments and ploughed-up fireplaces. In 1995 she identified the church from brick and stone fragments, and also human bones that lay on a small hill rising above its surroundings (Miklós 1992, 1995).

The authors of the present study have been jointly researching the market town since 1996.²⁰

Aerial photographs

According to our present knowledge, the first aerial photographs of the area were made in the early 1950s for cartographic purposes.²¹ Since the greater part of the site was being used as pasture at that time, such photographs could have provided a wealth of information on the history of the settlement. However, since they were taken at an altitude of 3000–4000 metres, and since the original negatives have been lost, these photographs are of little help: the prints are unsuitable for preparing enlargements on a scale that can be used for assessing the site. This is all the

¹⁶ HNM Archives, I. 25/1967.

¹⁷ *RégFüz* Ser. I. 21 (1968) 57.

¹⁸ PARÁDI 1970, 223–235.

¹⁹ *RégFüz* Ser. I. 40 (1987) 93.

²⁰ Our research was funded by the National Research Fund (OTKA grant T 025385), the National Cultural Programme,

the Ministry for National Cultural Heritage, the Tolna County Assembly and the Wosinsky Mór County Museum. Museum and Institute of Military History, Budapest. Collection of Military Maps. The most useful photographs were the ones taken in 1950 (inv. nos 47597–47598) and 1953 (inv. nos 47604, 47605, 47607, 47608).

more regrettable since this pasture part of the settlement was turned into arable land in 1962 with the house remains being levelled in order to facilitate ploughing.²² Later aerial photographs recorded this new state of affairs.

The type of crop planted influences the usefulness of aerial photographs. Since the owners of individual fields often plant different crops in their fields, the visibility of features can vary from field to field. By contrast, the fields south of the road have been cultivated since the 1860s, with the result that archaeological features cannot be identified either from the air or from systematic field surveys, since ploughing has destroyed them.

Zsuzsa Miklós has been conducting aerial reconnaissance and taking aerial photographs since 1991, in connection with research into the castles of Tolna County. In 1992 she noted that the settlement structure of Ete was clearly discernible at an altitude of at least 400 metres from the ground. Since then she has regularly made photographs and videotapes of the site.²³ She has recorded the features from oblique and almost vertical angles in different seasons and degrees of visibility from altitudes of between 500 and 1100 metres. So far she has mostly taken photographs of the land after ploughing, as well as during the various stages of the development of the maize crop, and she has also attempted to collect together all the aerial photographs made of the area at different times.

We utilised these aerial photographs to determine locations for the trial trenches when we resumed investigation of the site in 1996. We planned beforehand which archaeological features to investigate. In 1997, Endre Egyed, a colleague of the Archaeological Institute of the Hungarian Academy of Sciences in Budapest, prepared a detailed geodesic survey of the site. We projected the "patches" visible on the aerial photographs onto this map (Ill. 3). In 1999, we placed a number of markers on the site that could be seen from the air, and in December 1999 and spring 2000, Zsuzsa Miklós took a series of photographs on which these markers could be identified. The points with known co-ordinates were useful for determining the exact location of individual features. The evaluation of these aerial photographs is still under way.

The aerial photographs reveal the entire structure of this medieval market town (Ill. 2). The main street, oriented northeast to southwest, rises gradually towards the northeast and runs along the ridge of the hill; it appears as a roughly 10-metre-wide dark

strip. This slightly curving strip branches off at the eastern end of the hill and forms a loop, perhaps indicating the widening of the street to make a square. The length of the main street up to the loop is 360–400 metres and the length of the loop 90 metres; its greatest width is approximately 70 metres.

Originally, three side streets ran into the main street on the southern side. The length of these streets, which were perpendicular to the main street, varied: they extended to the southern edge of the hill. The eastern side street was the shortest – approximately 50–60 metres long – and, from the viewpoint of perceptibility, in the best condition: here on some photographs patches indicating two houses on either side of the street can be seen. Running parallel to it some 70 metres to the west is a 50-metre-wide and 270-metre-long light strip, indicating the next side street, which extends to the southern side of Szőlőhegyi út. It can be followed to the edge of the hill, to what was once a backwater of the river. The house patches are very indistinct: vague, rectangular patches can be made out on some photographs, but their exact dimensions cannot be determined. The third side street can be seen only on a few photographs (e. g. on the one made on 19 April 1996). This street is narrower than the previous two; the strip, 20–25 metres wide and roughly 270 metres long, runs from the western end of the main street to the edge of the floodplain.

On the main street the northern row of houses is slightly shorter than the southern one, the reason being that part of the northern side of the hill was waterlogged.

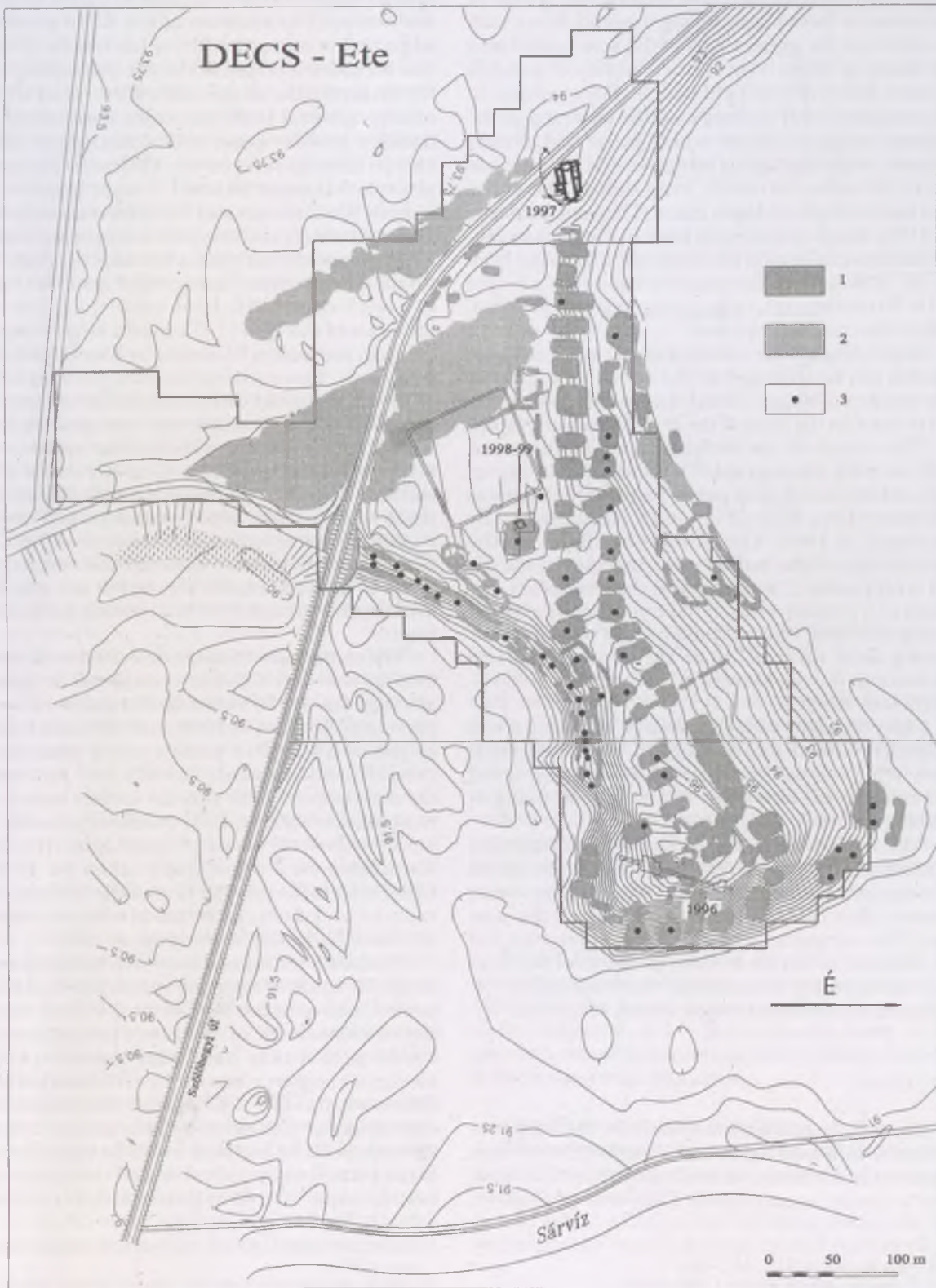
The remains of one-time houses show up as light, yellow coloured patches after ploughing. Their length varies between 10 and 30 metres; their width is usually 10, 15 or 28 metres. Most are perpendicular to the main street.

The dark bands on a photograph taken by Hungary's Research Institute for Hydrography on 29 March 1985 probably indicate the plot boundaries. This photographic evidence suggests that plot widths ranged from 25 to 30 metres, while their lengths varied according to the terrain: they extended down to the bottom of the hill south of the main street or to the marshy area north of it.

Patches indicative of houses and streets could best be observed against maize that was just sprouting. They could also be made out against maize that had reached a height of 20–30 centimetres. In the period before ripening, certain species of maize even indicated the

²² Gyula Mészáros drew attention to the ploughing up in November, 1963, and he also noted that the house remains were indicated by patches. Wosinsky Mór Museum (Szekszárd), Archives, 203–75. The local people, too, called our notice to the fact that the soil had been levelled with bulldozers in order to prepare the land for arable use.

²³ The aerial photographs taken by Zsuzsa Miklós are housed in the Archives of the Archaeological Institute of the Hungarian Academy of Sciences and in the Wosinsky Mór County Museum, Szekszárd. A detailed description of the findings of these regular aerial reconnaissance flights can be found in her study written for the volume in honour of Prof. András Kubinyi, currently at the press.



III. 3. Decs-Ete. Contour map incorporating the patches from the aerial photographs. (Drawn by Endre Egyed.)
 Key: (1) Patches of houses; (2) Patches of streets; (3) Patches of houses observed at the time the map was made

sites of the one-time houses, since the plants were shorter and sparser, and also because the colour of the maize in these places was a rusty red. Since with privatisation the greater part of the area passed into the hands of three owners, the visibility of possible features differed from field to field. For example, in the autumn of 1997 nothing could be observed on the western section of the site where maize had already ripened, while the various features could still be made out in the other two fields, even though the entire area had been planted with maize. The same held true for 1998. Based on our experience in Ete, archaeological features can be most profitably photographed from the air in May, when the maize had grown to a height of 10–30 centimetres, or in mid- and late September, before the crop had ripened.

Depending on the circumstances, more or fewer patches can be observed on the aerial photographs. The number of houses varies between twenty-nine and thirty-nine on the basis of the available photographs.

The church of the settlement can be made out only on a few photographs: it appears as an vague, light-coloured patch. Its exact location was determined by a field survey and it was subsequently excavated in 1997. The Gothic church lay on the western edge of the market town, in a spot where the hill is only some 2 metres above the floodplain. No traces of a possible church have yet been identified on top of the hill, where the main street widens, either during field surveys, or in the course of probe excavations (Gyula Mészáros 1967; Zsuzsa Miklós – Márta Vizi 1996).

Unfortunately, with the passage of time the site has suffered noticeable destruction, and patches that a few years ago could still be seen clearly on aerial photographs are now more and more faint owing to the effects of deep ploughing.

With regard to the abovementioned damage, the number of objects currently visible on the aerial photographs is smaller, and the lengths of the streets shorter, than before the ploughing up of the pasture. This is especially true of the southeast part of the settlement. In this section the waters of the Bába may have eroded their banks, resulting in the collapse of a several-meter-wide section of the hill.

Ete's Castle

The building called Ete's Castle by the local people lay in the western part of the market town. Flóris Rómer was the first to document this fortification: "Ete's Castle, named after Edü, was probably a

Roman rampart. It is situated opposite the Kerekdomb ["Round Hill"], on which a gold hoard was discovered. The rampart of Ete is not particularly large and is covered with weeds inside."²⁴ Rómer also included a sketch of the site. According to this, the ground plan of the castle formed an irregular oblong ground with two sides measuring 40 by fathoms and the other two measuring 44 fathoms and 46 fathoms respectively. (These measurements, given in Viennese fathoms,²⁵ correspond to 75.84 metres, 83.42 metres and 87.21 metres respectively). This was surely the rampart concerning which József Csalogovits informed István Paulovics. It was on the pasture that Csalogovits found the remains of a brick church. He later wrote the following: "A little east of this spot [...] I found a large rectangular rampart measuring 85 metres by 85 metres encircled by a ditch. This earthen rampart is no higher than 75 centimetres; the ditch is about half a metre deep. The sides of the rectangle run east–west and north–south. Very few pottery sherds that could be dated are to be found on the surface: the thirty pieces I collected came to light from a molehill, but most of them were so small as to be unhelpful. They could be Roman on the basis of their material."²⁶ Although Csalogovits planned to excavate the site, in the absence of written records we cannot say whether he actually did so, and if he did investigate it, what he found.

The rectangular rampart described by Rómer and Csalogovits – Ete's Castle – could still be identified as a large feature 79 metres by 83 metres on the aerial photographs taken in 1950 and 1953; since the area in question was still a pasture at the time, even the rampart could be made out (Ill. 3).²⁷ As a result of the destruction of the site, no surface traces of this rampart now survive, and remains of can only rarely be identified on aerial photographs. It was first identifiable on a photograph taken on 25 March 1999, on which only the line of the former double rampart and ditch can be made out, since the rampart itself had completely disappeared.

On the testimony of the aerial photographs, Ete's Castle lay south of the main street, between two side streets. This area has not been excavated; hence we have no knowledge of the castle's structure or of any buildings that may have been inside it. A similar medieval rampart is known from the market town of Dalmand, also in Tolna County. Although here too cultivation has also destroyed any surface remains of this rampart, its location could be identified from aerial photographs that revealed the presence of a double ditch.²⁸ In 1998 Zsuzsa Miklós cut through

²⁴ RÓMER Registers XIX, 157–158.

²⁵ 1 Viennese fathom equals 1.896 metres.

²⁶ Letter from József Csalogovits to István Paulovics, dated 29 March 1933. HNM Archives, Paulovics papers. Here we would like to thank Mihály Kószegi, who kindly called our attention to this document.

²⁷ Museum and Institute of Military History, Budapest. Collection of Military Maps, 1950: L-34-62-A-b. 30/149, inv.

no. 47588; 1953: 140/4, 5. inv. no. 47604–605, 151/34, inv. no. 47609.

²⁸ Aerial photographs taken by Zsuzsa Miklós; the negatives are housed in the Archives of the Archaeological Institute of the Hungarian Academy of Sciences. 1993: inv. no. 163.712–714; 1997: inv. no. 175.477–480; 1998: inv. no. 178.039–040, 178.252–254, 179.144–146, 180.457–464; 1999: inv. no. 182.501–505, 182.756, 185.002–003; 2000: inv. no. 186.213.

the southern section of these Dalmand ditches. The current width of the inner ditch was 8.3 metres and the current width of the outer one 6 metres; their depth was 3 metres from the present surface. The pottery finds from the inner ditch date this feature to between the thirteenth and the sixteenth centuries.²⁹ Both ramparts and ditches lay on the territory of the market town and their structures – at least on the evidence of the aerial photographs – were more or less identical. Their function remains unknown. It is possible that they can be identified as the ditching surrounding buildings featuring in medieval documents under the name *curia*. Clarification of this issue will require further investigations.

Current research

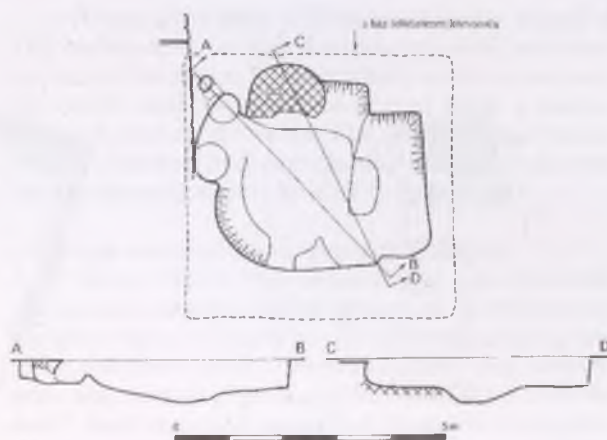
In contrast to other market towns that were destroyed during the Ottoman period, medieval Ete has one indisputable advantage: it was not resettled and thus its investigation is not impeded by later buildings and other structures. The entire area is easily surveyed and, in view of its utilisation as arable land, offers excellent opportunities for aerial photography. At the same time, cultivation is rapidly destroying the entire site, and this is one of the reasons why it should be investigated as comprehensively as possible.

Since the entire area of the market town is rather extensive, its complete excavation would have been impossible within a reasonable period of time. We therefore adopted an excavation strategy that would yield the most information with the help of surface investigation and aerial photography. In 1997 Endre Egyed prepared a highly detailed geodesic survey of the area (Ill. 3). In 1997 we began an intensive surface survey of the site that continued until August 2000. We surveyed a total of 416 quadrants, each measuring 20 metres by 20 metres. The evaluation of this survey is still in progress.

Our excavation of the site began in 1996. In that year we investigated an area of 330 square metres near the highest point of the settlement's eastern part. We uncovered four residential houses, three baking ovens, several fireplaces, a ditch, outhouses, a variety of refuse pits, and the remains of a tiled stove from one of the houses.³⁰

From October to November 1997 we excavated the 29-metre-long Gothic church whose chancel ended in three sides of an octagon and which had a side-chapel on each of its northern and southern sides.³¹

In 1998–99 we uncovered the remains of a potter's hut: the fill of the sunken, timber-framed building, measuring 4.5 metres by 4.1 metres, yielded a



Ill. 4. Decs-Ete. House 5. Reconstruction: Márta Vizi. (Drawn by Sándor Ósi)

rich assemblage of sherds and stove-tile fragments from the late fifteenth and sixteenth centuries. In the uppermost level of the fill we found some eighty to ninety intact and broken sixteenth-century jugs, neatly arranged into rows of three. During the excavation of the area around this structure, which presumably served as a pottery storehouse, we happened upon other buildings and parts of buildings.³²

In the following section we shall describe the buildings uncovered during the excavations since 1933. A total of fifteen houses have been investigated so far; houses 5 and 6 date from the tenth to the eleventh centuries, the rest all date from the fifteenth to the seventeenth centuries.

Single-roomed sunken buildings

The two earliest houses (houses 5 and 6) date from the tenth to the eleventh centuries and their remains were found inside the church.

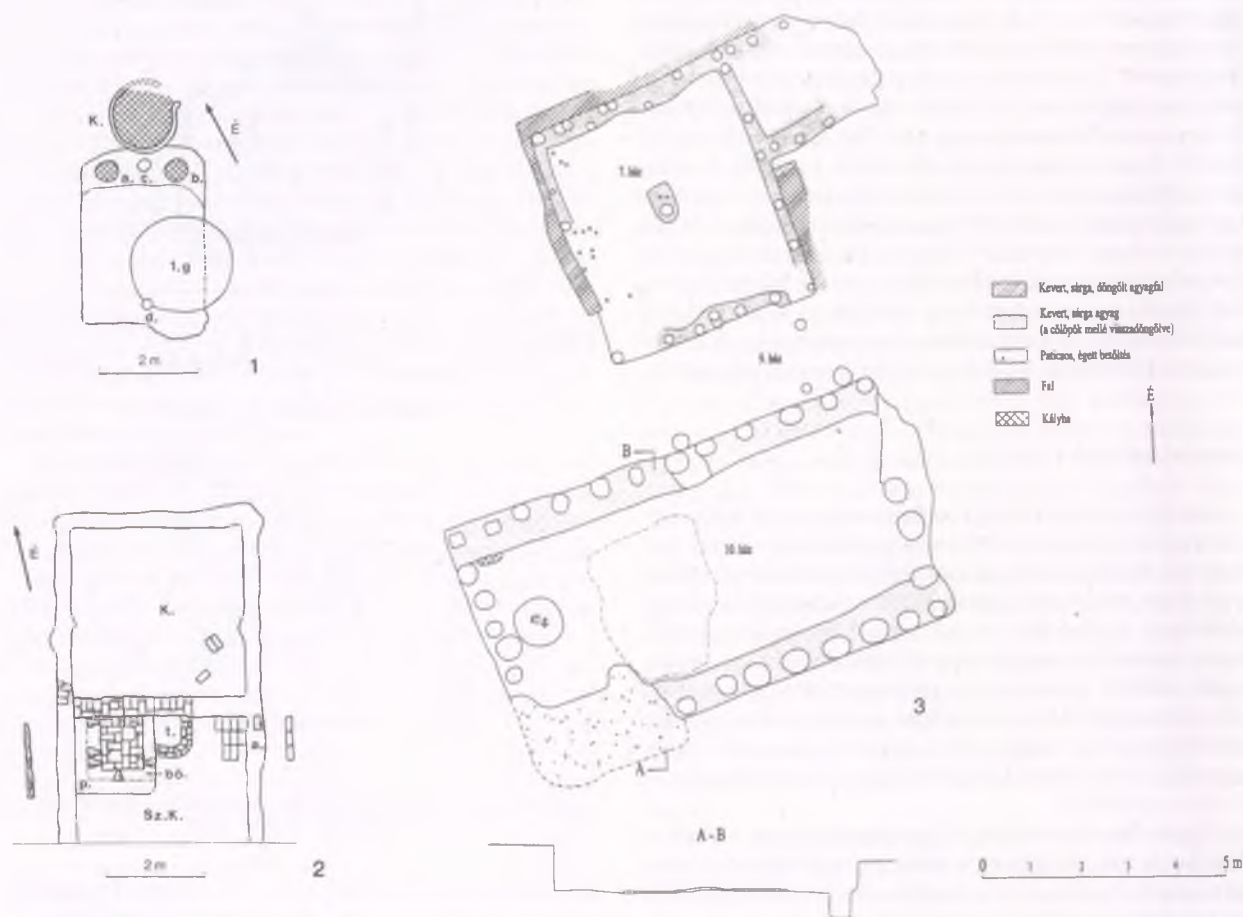
– House 5 (1997). This building measured 3.8 metres (north–south); its western end remained un-

²⁹ HNM Archives, inv. no. XXXVI. 251/1999.

³⁰ HNM Archives, inv. no. XIV. 160/1997. 1–2.

³¹ HNM Archives, inv. no. XXV–XXVI. 128/1998. See also MIKLÓS – VIZI 1999.

³² HNM Archives, inv. no. XXXV. 240/1999 and XX. 182/2000.



Ill. 5. Decs-Ete. (1) House 1935/1. a–b: fireplace, c–d: postholes, g: pit, K: oven; (2) House 1935/4. (Sz.K.: kitchen-cum-room, K: pantry, a: door, t: open fireplace, p: bench; bô: tiled stove with cup-shaped tiles; (3) Houses 7 and 10 (1998–1999). Sketches 1–2 were made on the basis of CSALOGOVITS 1937. (All three sketches by Sándor Ósi)

excavated, while its southern side was 2.5 metres long. We found a heavily damaged oven (diameter 1.4 metres) in its eastern half. A small bench was found at the northern edge: its uneven base was dug into the yellow subsoil. We did not find a floor level. It is possible that the western half of the house had been disturbed and had perhaps been used as a source of clay before its final destruction (Ill. 4).³³ A pot could be partially assembled from the sherds worked into the baking surface of the oven. This pot dates the house to the tenth to the eleventh centuries.

– House 6 (1997). Lying south of house 5, this building was found beneath the graves along the northern side of the southern wall of the church's nave, also extended under this wall. Its north–south length was 3.2 metres. An oval oven 160 centimetres wide whose baking surface had been twice renewed lay in the eastern part of the house. The finds date the building to the tenth to the eleventh centuries.³⁴

– House 1935/1.³⁵ This building measured 3.5 metres by 2.5 metres, and it had two fireplaces. Its depth was 90 centimetres. The building had Y-shaped timber uprights (Ill. 5. 1).³⁶

– House 1935/3. This building measured 3.5 metres by approximately 3 metres; it had a depth of 90 centimetres. We found no traces of a hearth or oven and it is therefore not certain that it was a residential building at all. On the basis of the post-holes Csalogovits suggests that it was a building with wattle-and-daub walls.³⁷

Late medieval buildings

– House 1 (1996). The width of the surviving section was 5 metres. Its oven extended some 45 centimetres from the western wall. The beaten-earth floor was found at a depth of 62 centimetres from the present surface. The house had upright walls. The finds date it to the fifteenth century.

³³ For a detailed description, cf. MIKLÓS – VIZI 1999, 226.

³⁴ For a detailed description, cf. MIKLÓS – VIZI 1999, 226–227.

³⁵ The houses uncovered by József Csalogovits were numbered after the event; the numbering of the various fea-

tures uncovered since 1996, when the investigation was resumed, carried on from Csalogovits's.

³⁶ CSALOGOVITS 1937, 322–323.

³⁷ CSALOGOVITS 1937, 329.

– House 3 (1996). The width of the surviving part measured 4.3 metres. Its beaten-earth floor was found at a depth of 70 centimetres. The sherds and a tile fragment date the house to the fifteenth to the sixteenth centuries.

– House 7 (1998). This was the storeroom of the pottery workshop. It measured 4.5 metres by 4.1 metres, and lay at a depth of 50 centimetres from the medieval surface. The house was timber framed; the upright timbers were set into a bedding trench 20 to 25 centimetres wide. The posts had a diameter of 20 centimetres and were spaced 80 to 120 centimetres from each other. The two double postholes observed on the northern side are perhaps an indication of replacement. The diameter of the timber post that had been set into the posthole in the centre of the house was 25 centimetres. The house had a beaten-earth floor. No traces of a fireplace or hearth were found inside the house.

The 170-centimetre-wide entrance to the house lay in its northeast corner and was similarly timber framed. These posts probably supported some sort of roofing that protected the entrance. It is also possible that the posts supported only the inner lining of the house and had no other function, since a strip of mixed clay 40–60 centimetres wide was noted beyond the posts, perhaps the remains of a *terre pisé* wall (Ill. 5. 3).

A rich assemblage of ceramics – jugs, posts, pans, lids, and stove tiles – was recovered from the fill. These finds date the house to the late fifteenth to the sixteenth centuries. A more precise dating will be possible only after the restoration of these finds.

– House 10 (1998–1999). The house was north-east–southwest oriented and measured 9.5 metres by 5.2 metres, with a depth of 90 centimetres from the medieval surface level. The house was timber framed: the upright timbers were set in a bedding trench 60–100 centimetres wide. Most of the postholes were round or oval; two large rectangular postholes were uncovered in the western corner of the house. No remains of a partition wall could be observed. The debris of a stove was uncovered in the western corner; it consisted of cup-shaped stove tiles, with a few yellow and green glazed tile fragments. The destruction level also yielded two Ferdinand I *denars* from 1543. These finds date the house to the sixteenth century (Ill. 5. 3; Ill. 7).

– House 9 (1999). A small section – 2 metres by 4 metres – of the floor level was found between houses 7 and 10. House 7 was dug into it in the north and house 10 in the south (Ill. 5. 3). Its floor level lay some 44 centimetres higher than the upper floor level of house 10. Since very little remained of it, neither its ground plan, nor its wall structure could be reconstructed. The finds date it to the fifteenth century.

– House 11 (1999). This house lay at a depth of 105 centimetres. A dark discoloured path indicated its former presence. Since it could not be excavated, we could only assume that it had been a single-roomed, sunken structure. The surviving part measured 1.5 metres by 2 metres, and had a fireplace in the northwest corner. Its date is unknown.

Single-roomed above-ground buildings

– House 1935/4. The archaeologist uncovered the remains of a *terre pisé* wall at a depth of 40 centimetres together with a 1.1 metre by 1.8 metre bench alongside it; on this there were a few cup shaped and pointed stove tiles. A coin of Ferdinand I from 1552 lay near the wall.³⁸ Since the exact position of this coin is unknown, it has no dating value. The stove tiles date the building to the late fifteenth to the early sixteenth centuries.

– House 2 (1996). This house could be excavated only partially. One side was 6.4 metres long; the length of the surviving section of its other side was 4 metres. It lay some 28–36 centimetres below the present surface. The house was timber framed; the posts were set into a bedding trench 25 centimetres wide. The building had a concave floor, but no traces of any floor plastering could be observed. The debris of burnt daub fragments yielded sherds and two Ferdinand I *denars*.

– House 4 (1996). This house had been provided with a cellar. Only a small section of the ground level floor survived. The cellar measured 3.8 metres by 3.6 metres. The walls of the room cut into the subsoil were vertical and there were no remains of either lining or posts. The ground-level room probably had *terre pisé* walls, as indicated by the yellow clay strips found during its excavation. However, neither their thickness, nor their structure could be determined owing to the extent of its destruction. The red bowl-, cup- and onion-shaped stove-tiles probably belonged to a tiled stove inside this house. The house can be dated to the late fifteenth to the early sixteenth centuries.

Two-roomed above-ground buildings

– Only one such building was found at Ete, during József Csalogovits's 1935 excavation (house 1935/2). The bedding trench of the house was uncovered at a depth of 45 centimetres; it was filled with yellow clay. The walls of the house were built of bricks. The floor was beaten-earth and could be clearly distinguished from the surrounding area. The remains of a tiled stove were found beside the partition wall in the main room of the building. The finds and the observations made during its uncovering suggested that the house had burned down during the final destruction of Ete (Ill. 5. 2).³⁹

– House 8 (1998–99) was probably also a two-roomed structure. Since, however, it lay very near to

³⁸ CSALOGOVITS 1937, 329.

³⁹ CSALOGOVITS 1937, 326–328.

the present surface, it was damaged to such an extent that its ground plan and structure could not be recreated. It could be dated to the sixteenth century.

According to the documentary evidence, Ete was destroyed sometime in the early seventeenth century and was never rebuilt. The area it occupied (the area of the one-time houses) was for centuries used as a pasture by the inhabitants of neighbouring settlement of Decs. As a result, the house remains survived until 1962–63, when the area was turned into arable land. As a result of mechanised levelling, the topmost, early seventeenth-century, layer was almost completely destroyed. It is therefore most unlikely that any settlement features from the time of the final destruction of the settlement will ever be found. Most of the finds and features uncovered can be dated to the fifteenth and the sixteenth centuries.

The number of patches indicating the location of the one-time houses varies between 29 and 39 on the aerial photos, depending on conditions. By contrast, the 1557 tax survey records a total of 155 houses, while the 1572 survey mentions 192 houses. The reasons for this discrepancy are manifold.

The earth-levelling operations of the 1960s may have destroyed many houses.

Natural destruction must also be taken into consideration: in the centuries since the Ottoman tax survey, the River Bába washed away a several-meter-wide section of the hill first and foremost in the eastern and southern parts of the settlement. The result was that many houses and other settlement features disappeared without trace.

The aerial photographs show only some of the one-time houses; as a matter of fact, the streets, appearing as light coloured strips, probably conceal a number of houses. Since some of the patches on the aerial photos are rather large – measuring 10 metres, 15 metres and 28 metres by 10–30 metres –, they are sure to contain several houses each. That this is so has been indicated by the investigations conducted since 1996: a total of nine separate houses have been uncovered so far in a patch 28 metres by 30 metres.

Nor do we know precisely the criteria according to which the Turkish lists were compiled.

Further investigations will be needed if we are to get a better understanding of the history of the Ete settlement: assessment of the findings of the intensive surveys, additional aerial photographs, and the full excavation and assessment of as many as possible of the patches shown on the aerial photographs.

* * *

The excavations at Ete have yielded an enormous amount of material. Most of these finds are being evaluated unit by unit.⁴⁰ Of the very various finds (ceramics, metal and glass), here we shall call attention to one particularly attractive category: stove tiles.

József Csalogovits, too, uncovered pottery kilns containing numerous ceramic finds during his 1933 excavation.⁴¹ He also found the moulds for, as well as finished specimens of, stove tiles ornamented in the Renaissance style. Comparable stove tile fragments were collected during the excavations and field surveys conducted in the 1960s. We found several negative and positive stove tile fragments during our own surveys.⁴² A detailed description and discussion of these fragments will be published in a separate study.

The majority of the stove tiles we found can be assigned to the so-called “stud-patterned” (*Beschlagmuster*) type, some examples of which have already been published by Csalogovits.⁴³ These stud-patterned tiles are a subgroup of the so-called “wallpaper”-patterned (*Tapetenmuster*) tiles category, a type that according to Rosemarie Franz appeared after 1500.⁴⁴ These tiles bear patterns taken from Italian leather and textile wall coverings, presumably because the stove tiles should harmonise with the other decorative motifs of house interiors. Individual motifs or patterns were often created from sets of individual tiles.

The stove-tile moulds found in Salzburg’s Steingasse may indicate that very many tiled stoves were made using moulds that had been manufactured in Salzburg. Itinerant journeyman potters used these moulds throughout Southern Germany, Switzerland and Austria, all the way to the southern part of Styria. The finds from Salzburg include a number of moulds for stove tiles with “wallpaper”-pattern.⁴⁵ Their ground was often stippled (a procedure producing tiny raised points on the positive tile.) Many stoves constructed from tiles with wallpaper-pattern have survived, but here we shall mention only mount-patterned stoves. With regard to the shape of stoves, however, the former group has been surveyed. In Graz there is a 2.55-metre-high stove made from green-glazed tiles with wallpaper-pattern; this comes from Steinach–Irdning and can be dated to around 1550.⁴⁶ Another tiled stove that may be mentioned here is a multicoloured example from the castle of Hollenegg in Styria. This can be dated to the second half of the sixteenth century.⁴⁷ A third stove in this group is from Salzburg; it, too,

⁴⁰ When evaluating the finds, we separated the “old” material from excavations and surveys conducted before 1996 from the assemblages recovered after 1996. The evaluation of the “old” material was made possible by a grant from the Ministry of National Cultural Heritage. Cf. MIKLÓS – VIZI 1999, 207–269 for an overview of the investigations conducted since 1996, and VIZI 2000 for a description and discussion of graphitic wares.

⁴¹ CSALOGOVITS 1937, 330–332.

⁴² Apart from the tile types discussed in this study, other types have also been found at Ete. These are the following:

(a) Fragment of a knight in armour, Holl’s Type 4 (HOLL 1958, 245); (b) A similar fragment from the 1996 excavation; (c) Fragment of a tile bearing the figure of a knight from the 1996 excavation, Holl’s Type 1 (HOLL 1958, 252, and 254, Fig. 74); etc. A rich assemblage of bowl- and cup-shaped stove tiles was also found.

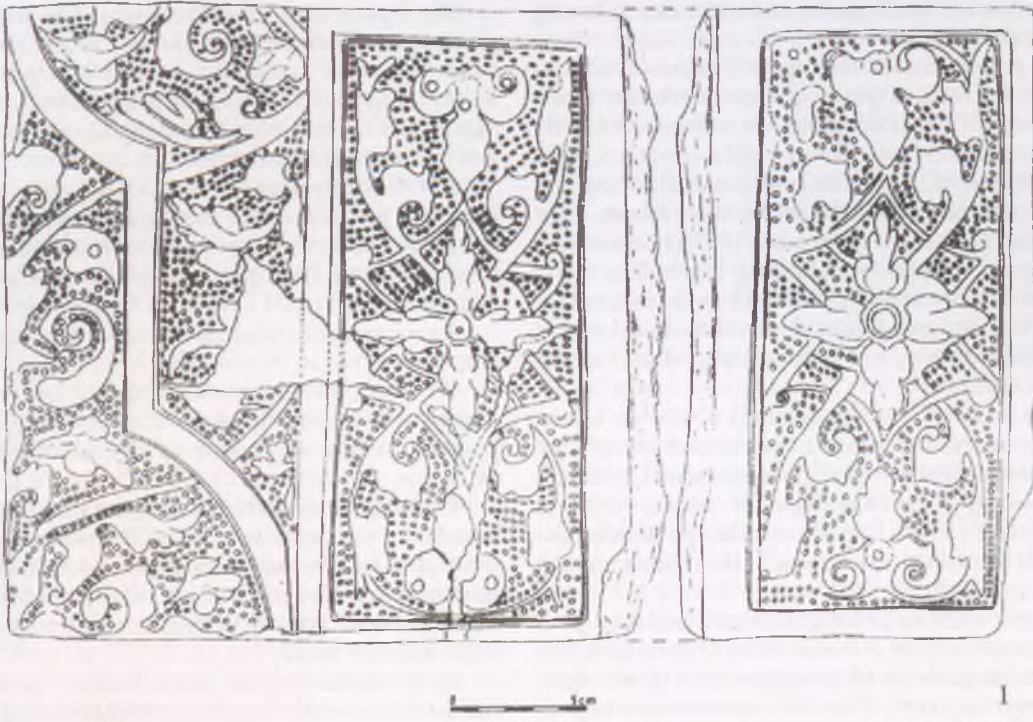
⁴³ CSALOGOVITS 1937, 330–332.

⁴⁴ FRANZ 1981, 99–100, 176–182.

⁴⁵ Cf. FRANZ 1981, Fig. 633, for stud-patterned tiles.

⁴⁶ FRANZ 1981, 182, Fig. 294.

⁴⁷ FRANZ 1981, 218, Fig. 631.



Ill. 6. Decs-Ete. Stove-tile negatives. (Drawn by László Gere)

is multicoloured and can be dated to the late sixteenth century.⁴⁸

In the collections at Budapest's Museum of Applied Arts there is a green-glazed stove tile from Switzerland.⁴⁹ The rectangular tile is decorated with a rich foliate pattern set within a ribbon border. The central pattern of this tile is made up of a stamped pattern within a circle formed by the ribbon. The tile measures 18 centimetres by 17.5 centimetres. According to Cserey, comparable stove tiles were manufactured not only in Winterthur, but also elsewhere in Switzerland. This tile was first dated to the late fifteenth century, but subsequently dated to the sixteenth century.⁵⁰

On the basis of finds published in the archaeological literature, most mount-patterned stove tiles and fragments of their moulds were found at Decs-Ete. Following József Csalogovits' study, Nándor Parádi examined the Ete tile moulds in his discussion of late medieval stove tiles.⁵¹ He distinguished four main types:⁵²

(1) Those with an oblong, concave mould and a pattern not set within a frame. The known positive tiles cast from such moulds suggest that there were at least two types.⁵³ The tile inventoried as no. 58.163.1 was probably made using a mould that has survived. According to the presently known corpus of finds, the following tile types can be assigned to this group: grey unglazed tiles; red unglazed tiles; red tiles with a graphitic coating; and polychrome-glazed tiles made from light red clay with a yellowish-white surface. The base is an opaque light yellow glaze, lighter than the background owing to the slightly raised central foliate motif. The ribbon is brown glazed, and the leaves are either brown or green glazed.

(2) Those that are rectangular, with a flat surface and a pattern not set within a frame. The 1998 excavation yielded a mould that can be assigned to this category (Ill. 6. 2).⁵⁴ Fragments of tiles made using this type of mould came to light during Csalogovits's excavations. Some unglazed tiles of a red material are also known.

(3) Those that are quadrangular, with a level surface divided into two fields. These fields are a foliate pattern around a central leaf pattern in a framed field on the right side, and a pattern resembling that on the tiles in Group 2 on the left side, but not set within a frame.

(4) A quadrangular mould bearing a pattern identical to that on the tiles in Group 3, and a half-sized mould for a corner tile with an identical pattern to that on the right side of the tiles in Group 3 (Ill. 6. 1).

A new type of mould was found during the 1999 excavation:

(5) Those that are half sized and bear a pattern identical to right side of the tiles in Group 3 (cf. the pattern on the right side of the tile shown in Ill. 6. 1).⁵⁵

Parádi also offered a reconstruction of a tiled stove based on these moulds:⁵⁶ "The tiles indicate that lower part of the stove was rectangular, while the upper part may have been circular on the evidence of the oblong convex tiles."⁵⁷ A drawing of a reconstructed stove was not made.⁵⁸

In the following we shall review the finds that can be assigned to the category of mount-patterned tiles;

Kőszeg. A corner fragment of a mount-patterned tile was recovered from layer 1/a of the northeast court.⁵⁹ Imre Holl has kindly informed us that this fragment came from a grey unglazed tile.⁶⁰ He dated this find to the sixteenth century on the basis of the layers. The decoration of this tile resembles the pattern on a tile from Salzburg,⁶¹ although minor differences between the two are apparent: on the Kőszeg fragment the leaves of the foliate pattern in the centre are more slender and have veins. In the lower left corner the bouquet of leaves is held to the ribbon by a clip, although there are fewer leaves and the lower leaf is slightly more blurred than on the Salzburg tile.

Eger. A green-glazed mount-patterned stove tile was found in a refuse pit from the Ottoman period that was uncovered during the 1986 rescue excavation in the

⁴⁸ FRANZ 1981, 218, Fig. 636.

⁴⁹ CSEREY 1968, 60–61, Fig. 1, inv. no. 15.728.

⁵⁰ CSEREY 1983, 87, Fig. 21.

⁵¹ PARÁDI 1957, 182–183, Pl. XXXI. 1.a (inv. no. M. 3.936.40), Pl. XXXI. 2 (inv. no. 58.163.9), Pl. XXXI. 3 (inv. no. 58.163.26), Pl. XXXI. 4 (inv. no. 58.163.21), Pl. XXXI. 5 (inv. no. 58.163.1.), Pl. XXXI. 6 (inv. no. 58.163.8).

⁵² When describing the tiles (both negatives and positives), we always positioned the ribbon/relief motif – which consists of two concave parallel ribbons joined at one end and each splitting into two parallel ribbons at the other end, and of another two diverging arches connecting with the ends of these – in such a way that the two joining ribbon sections reaching the middle of one of the tile's edges are at the top and the two diverging arches extend into the tile's two bottom corners.

⁵³ For these tiles see Wosinsky Mór Museum (Szekszárd), inv. nos 58.163.1. and 58.163.8.

⁵⁴ A number of fragments that could be assembled to form the negative were found around House 7. Reg. no. 248.

⁵⁵ Found in Pit 46 (1999 excavation). Reg. no. 404.

⁵⁶ PARÁDI 1957, 182 and note 14.

⁵⁷ PARÁDI 1957, 182 and note 14.

⁵⁸ Ledge-tiles also occur among the old finds from Ete. Parádi did not publish these since their negatives were not known. However, these ledge-tiles also had to be used in the reconstruction. The more recent excavations at Ete brought to light fragments of ledge-tiles, too, as well as their negatives.

⁵⁹ HOLL 1992, 126, Fig. 65. 8.

⁶⁰ We would like to thank Imre Holl for this assistance.

⁶¹ FRANZ 1981, Fig. 633.

court.⁶² The tile measures 20.2 centimetres by 20.2 centimetres; its thickness is 4.6 centimetres.

Kassa (today: Košice, Slovakia). The remains of a potter's workshop were uncovered during an excavation conducted at Kassa's city prison.⁶³ The products of this workshop also included mount-patterned tiles. Floral motifs also appear between the schematic motifs set between the ribbons. Placing the tiles side to side revealed that sets of these tiles produced an overall pattern. The green-glazed tiles from Kassa can be assigned to Group 2. Their dimensions are unknown.

Füzér. An unglazed light mount-patterned tile was found during the excavations conducted in Füzér castle.⁶⁴ This tile can be assigned to Group 2: it is decorated with a foliate pattern in the centre, framed by ribbons, with a zigzag pattern running along its edges. This would suggest that neither the potter who had produced the tile, nor presumably his customer was aware that originally a number of tiles had to be fitted together in order to create a motif. According to the published illustration, the stippled background characterizing the tiles from Ete is also missing. The tile measures 19.8 centimetres by 19 centimetres; its thickness is 8 centimetres. The tile has been dated to the early seventeenth century.

Anna Gyuricza has assembled the corpus of Renaissance stove tiles from northeast Hungary:

Füzér. One-half of an unglazed quadrangular tile with a width of 19 centimetres. It is framed with a zigzag pattern. It can be dated to the first third of the seventeenth century.⁶⁵

Pácin. (a) Strongly fragmented, probably quadrangular brown glazed tile from the mid-seventeenth century;⁶⁶ (b) tin-glazed quadrangular tile, with green, yellow, and white colouring, measuring 17 centimetres by 17 centimetres. A variant is coated with two different green glazes. Seventeenth century.⁶⁷

Kéked. (a) Strongly fragmented unglazed quadrangular tile with engobe, from the seventeenth century;⁶⁸ (b) fragments of a green-glazed stove tile with engobe under the glaze; these last can probably be assigned to the category of mount-patterned tiles.⁶⁹

Szerencs. Slightly oblong yellowish-brown glazed tile, measuring 19 centimetres by 20.8 centimetres, from the mid-seventeenth century.⁷⁰

Sárospatak. (a) Quadrangular and half-sized tin-glazed tiles with white, yellow and green colouring on a dark blue base, that formed a corner. The dimensions are 24 centimetres by 18 centimetres. Dated to the early seventeenth century;⁷¹ (b) green-glazed stove tile, measuring 19.2 centimetres by 19.3 centimetres, from the seventeenth century;⁷² (c) un-

glazed corner tile, measuring 19.4 centimetres by 19.2 centimetres, from the seventeenth century.⁷³

Fülek. According to János Kalmár the tile from this site is identical to the green-glazed tiles from the city prison – the so-called Miklós Prison – in Kassa.⁷⁴

On the basis of the date above, it is at Ete that the most mount-patterned tiles – and the most moulds for them – have come to light. It would appear that other variants of tiles with a wallpaper-pattern were not used at Ete. The tile types described above and the mount-patterned tile stoves from Western Europe permit the reconstruction of the stoves used at Ete. These stoves probably had a block-shaped lower part and a cylindrical upper part. Judging from the corner tile mould and the moulds in groups 3 and 5, it is highly likely that the stove was positioned in a corner, with two sides set against the wall. The half-size tiles bear a self-contained motif in addition to a part belonging to the main motif, in order to enhance the attractiveness of the stove. These probably formed a border pattern on the sides set against the wall and at the corners of the stove. Since two rows of the Ete tiles would only have been sufficient for a very low stove body, the lower part must have had at least four rows of tiles. The lower part thus stood roughly 80 centimetres high (not counting a possible base, a possible lower frieze and the tiles of the middle ledge that were part of the lower part).

The convex tiles suggest that the upper part was cylindrical; three rows of tiles would have been needed to complete the pattern and hence the height of this part would have been 70.5 centimetres.

The lower part of the green-glazed stove from Steinach-Irdning has two rows of tiles apart from the lower frieze; the fitting together of the two rows resulted in a medallion-like motif.⁷⁵ Here four tiles give a complete motif. The upper part of the stove is cylindrical and has two rows of tiles. The overall height of the stove was 255 centimetres according to the author, although the publication does not specify the dimensions of individual tiles. The published photographs suggest that unlike at Ete there were no corner tiles, nor any border tiles. Franz dates the stove to around 1550.

The tiled stove from Hollenegg is polychrome glazed,⁷⁶ although the published illustration suggests that the relief pattern and the foliate motifs were set against a dark background. The block-shaped lower part of the stove has four rows of tiles (similarly to the one reconstructed for Ete) and, as far as can be made out from the photographs, has no corner tiles or half-size tiles. The block-shaped upper part has

⁶² KOZÁK 1989–1990, 358–359, Fig. 32.a.

⁶³ MIHALIK 1942, 13, Pl. 35.

⁶⁴ SIMON 2000, 91–92, Fig. 36. 4.

⁶⁵ GYURICZA 1992, 52, 102, no. 81; FELD 1996, 10, 66, cat. no. 125.

⁶⁶ GYURICZA 1992, 58, 114, no. 148.

⁶⁷ GYURICZA 1992, 63, 126, no. 191.

⁶⁸ GYURICZA 1992, 65, 129, no. 208.

⁶⁹ GYURICZA 1992, 66, 132, nos 223–224.

⁷⁰ Inv. no. P III. 86.106.1; GYURICZA 1992, 70, no. 258; FELD 1996, 10, 66, cat. no. 127, Fig. 20.

⁷¹ GYURICZA 1992, 73, 147, nos 282–283; FELD 1996, 66, cat. no. 123.

⁷² FELD 1996, 10, 66, cat. no. 124.

⁷³ FELD 1996, 10, 66, cat. no. 126.

⁷⁴ KALMÁR 1959, 28, Pl. L.

⁷⁵ FRANZ 1981, Fig. 294.

⁷⁶ FRANZ 1981, Fig. 631.

five rows of tiles. Its dimensions are unknown. The stove is dated to the late sixteenth century.

The reconstructed “stove wall” from Salzburg, currently housed in Vienna, is also very instructive. The body is made up of three rows of polychrome tiles, with half-sized tiles along the edges. These resemble the tiles from Ete, even though the last mentioned do not form a complete pattern (although it could be that the paucity of the surviving tiles is responsible for this). The reconstruction is nonetheless important owing to the border elements. Here, too the tiles have a dark ground, while the relief pattern and leaves are light in colour. Franz dates the “stove wall” to the late sixteenth century.

In the examples given the tiles are, of course, shown mounted. There provide one reason why we have reconstructed the tiled stove from Ete in the way we have. Another, and perhaps more important, reason was the impression gained from determining the function of individual tiles. The mould for a corner-tile clearly showed that on the corners the infinite pattern did not just continue, but ended in the half-element tiles. The fact that the stove was fitted to the wall was suggested by the half-sized quadrangular tiles and by one of the moulds for half-sized tiles with a self-contained pattern.

It is impossible to compare the dimensions of these tiled stoves since the publications from which the above parallels have been quoted often neglected to give dimensions.

We have already described the tile types found at Ete. We may assume that stoves of unglazed red tiles, as well as stoves of red tiles with a graphitic surface, were also used at Ete. Unglazed grey tiles fired in a reducing atmosphere were, along with polychrome tiles, no doubt used for some stoves. The dates and cost of these stoves probably differed; stoves with graphitic and polychrome tiles were probably more expensive.

The date of these stoves is an important issue. The abovementioned stoves from regions to the west of

Hungary date to the mid- or late sixteenth century. The documentary evidence quoted earlier indicates that during the first half of the Ottoman period Ete retained its earlier importance. We also know that the town was finally destroyed sometime between 1620 and 1627, meaning that the tiles could have been made no later than the first third of the seventeenth century. In other words, these artefacts reached the market town between the mid-sixteenth and the early seventeenth centuries. The tile negatives (more precisely, the blocks for producing the negatives) were on the one hand probably diffused by itinerant craftsmen as in the case of the Salzburg workshop, and on the other arrived as imports along the known trade routes. One important starting point for future studies is the observation that motifs and patterns popular in Austria and the southern German territories soon appeared in Ete, which lay in the Ottoman ruled part of Hungary. The Hungarian parallels indicate that the same motifs also appeared in northeast Hungary in the early seventeenth century, even if the quality of the products there was slightly inferior. In view of the above, the mount-patterned stove tiles from Ete appear to have been popular in the last third of the sixteenth century, while, at the same time, stoves with graphitic and polychrome tiles were also in use. House 10, excavated in 1998–99, had a stove of polychrome and cup-shaped tiles. The tiles were apparently collected intact and taken away after the destruction of the house, since very few fragments remained in the debris. The house dates to the sixteenth century; two Ferdinand I *denars* minted in 1543 were recovered from the debris layer.

The further study of tile types and the detailed analysis of currently known tiles will no doubt contribute to a better knowledge of the beginnings of stove manufacturing, as well as of the types that were popular in a given period. Similar studies in more distant areas will also shed light on the distribution of different tile types and, perhaps, on the role of the Ete workshop.

The Sixteenth- to Seventeenth-century Cemetery at Dombóvár–Békató

During the rescue excavation conducted between mid-August and October 1975, 251 graves of a cemetery lying on the territory of a planned fishpond were uncovered; in summer 1977 the western end of the cemetery was identified and an additional nine graves were revealed. The number of burials was probably higher since some 60–70 burials were destroyed during the earth moving operations preceding the excavation.¹

Location of the cemetery

The dirt track (today concrete road) traversing the Kapos Valley in an east–west direction between Újdombóvár, the eastern town quarter of Dombóvár, and Mágocs (the latter lying in Baranya County) is the shortest route between the two settlements. The Méhész-árok (Méhész Ditch), at the bottom of Mágócsi-hegy (Mágócsi Hill), marks the county boundary; its water feeds a network of fishponds in the valley.

The cemetery came to light during the construction of a fishpond, on the western bank of the Méhész-árok, in the eastern part of an area known variously as Békató, Békás-tó and Békató-puszt (Ill. 1). The Méhész-árok is a survival of the one-time River Kapos and its course is more or less identical with the old riverbed. The “Apiaria” depicted on Schneemann’s 1818 map (Ill. 2) explains the origins of the modern name. The ruins of a water mill are indicated on a sketch from 1734, on the spot where the maps depict a bridge over the Kapos (Ill. 3). A comparison of the modern terrain with the conditions depicted on these older maps suggests that the cemetery could be located between the apiary and the water mill on this old map, a plausible location since the cemetery lies some 350 metres from a village marked as *Locus Pagi Békató* on these maps.

The burials

a) Orientation

All 260 burials in the excavated part of the cemetery were west–east oriented. Although smaller divergences could be noted, there was no regularity in them.

b) Grave pits

The most common variants of the grave pits known from the ethnographic material could be observed among the grave pits.² Their evaluation was difficult since the upper earth layer was heavily disturbed and the walls of many grave pits had been destroyed; sometimes little more survived than a discoloured patch indicating the grave floor. In 138 cases it was impossible to determine the type of the grave pit.

(1) Burials in pits with vertical or oblique walls can be regarded as simple grave pits. Fifteen grave pits had vertical walls, while thirteen pits had oblique walls. The floor of these grave pits was usually even.

(2) A total of thirteen burials with a niche in the grave wall were uncovered. One difference compared to the most common type of grave pits with niches is that these graves only contained a single burial and that the skeleton did not lie in the main part of the grave pit. There was therefore no need to cut the niche into the side of the grave pit above the grave floor; the niche was dug out obliquely and its bottom lay deeper than the floor of the main grave pit. Interestingly enough, nine of these graves contained child burials.

(3) A total of seventy-nine grave pits with ledges were excavated, although it seems likely that there had originally been considerably more burials of this type. We may therefore conclude that this grave pit type was the one most commonly used in this cemetery.

c) Deposition of the deceased

The deceased were usually laid to rest on their back in an extended position. Only in six cases were the deceased deposited with legs bent at the knees. In two cases, both female burials, the deceased had been turned onto their right side.

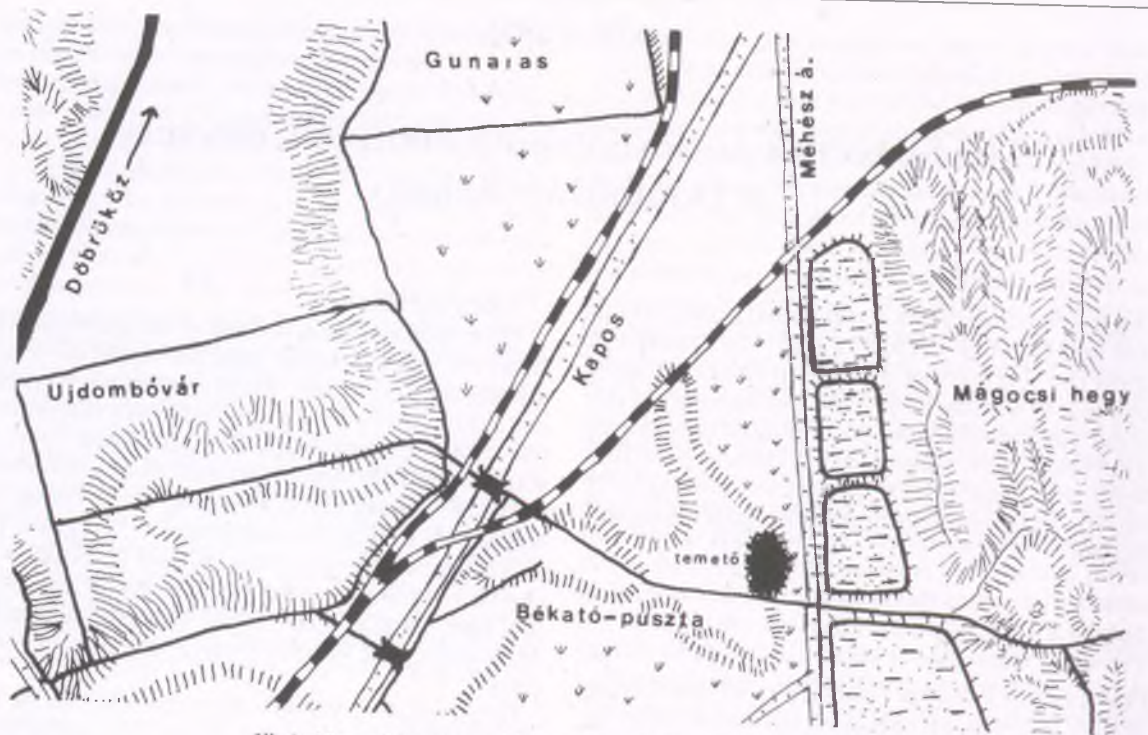
The deceased buried in graves with niches were usually laid to rest in an extended position, with the arms set closely beside the body; the body itself was squeezed into the niche. Some of the deceased laid to rest in grave pits with a ledge were similarly squeezed into the lower part of the grave.

Multiple burials were observed in four graves. Graves 73–74 contained the burials of an adult male

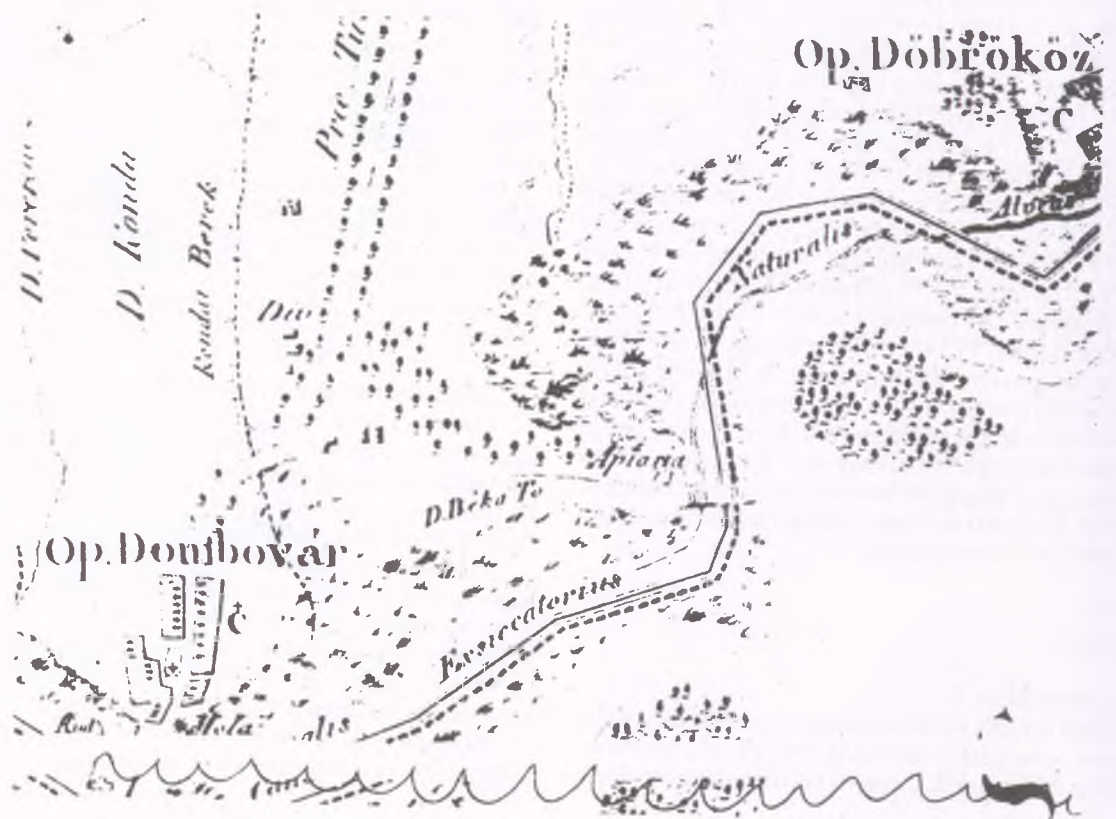
¹ This paper is based on an earlier study of the author (GAÁL 1979–80). The anthropologic material was analysed by

Kinga Éry, the laboratory analyses were carried out by Imre Lengyel (ÉRY 1979–80, 225–298).

² BALASSA – ORTUTAY 1979, 601–602.



III. 1. Map of the site and its environs. Key: TEMETŐ=cemetery



III. 2. Békató and its environs on Schnemann's map from 1818



Ill. 3. Sketch of Tüske-pusztá and Békátó-pusztá from 1734

and two young girls. The man and the 2–3-year-old child in his left arm had both been cut down by a sabre. Graves 187–188 contained the burial of a 44–53-year-old man and a 48–54-year-old woman respectively (Ill. 4). The skeleton of a newborn infant was found in two adults' graves: a newborn baby between the legs of a 20–24-year-old female in Grave 116, and the long bones of a newborn infant above the left shoulder of the 41–45-year-old man buried in Grave 122 (Ill. 5).

Not one single nail, clamp or mount indicating the use of coffins was unearthed, although wood remains were observed in several graves. Beside the wood remains that could be easily recognized by their colour and fibre content, the white residue forming a frame a few centimetres wide above the skeletons and the 2–3-cm-wide white residue layer extending from one side of the pit to the other can also be regarded as the remains of wood. Wood remains were observed in nineteen burials; these can be divided into three main groups and, in the absence of coffins, their function was to protect the deceased from being soiled by earth. The groups are as follows:

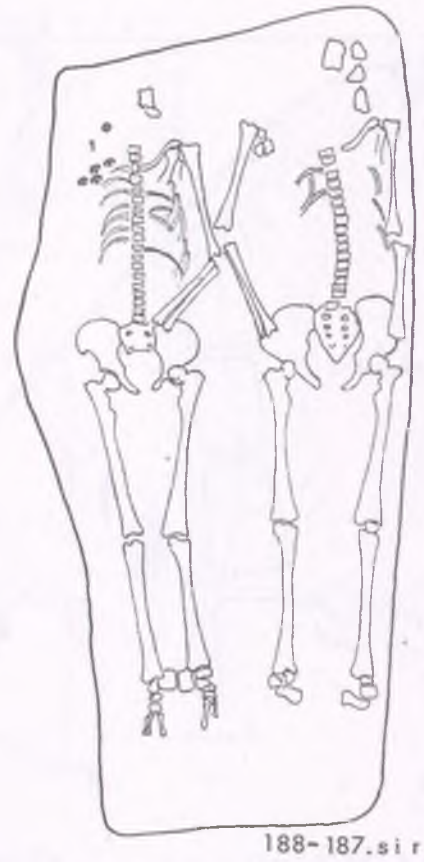
(1) One or more planks laid over the entire body or only covering some parts of the body, most often the head and shoulders;

(2) A rectangular wooden frame that lay slightly higher than the deceased, its function perhaps being to prevent the collapse of the grave's walls; and

(3) A narrow plank or branch set in the centre of the grave along its longitudinal axis.

The nineteen graves in which wood remains were observed lay scattered over the area of the cemetery and no consistency could be observed as regards either the gender of the deceased or the internal chronology of the burial ground. They included burials with many costume accessories and ornaments, as well as burials without any grave goods.

In four cases we noted that the deceased had originally been wrapped in a shroud. It seems likely that this custom was practised more extensively, even though the textiles used for this purpose had in most cases vanished without a trace. Remains of the shroud could be observed only in the four cases in which the deceased had been wrapped in, or covered with, a shroud woven from bulrushes or reed.



Ill. 4. Multiple burials (graves 187–188 and graves 73–74)

d) Position of the lower arms

The position of the lower arms could not be observed precisely since one or both lower arms were missing from many burials owing to modern intrusions. Even so, we could observe a great variety

³ The number of interments with joined hands, a typically Christian burial custom, was conspicuously low.

in the positioning of the arms. In cases when both arms lay extended beside the body, the hand was often placed on the thigh.³

e) Grave goods

The grave goods (Ill. 6) can be divided into three main groups:

(1) Clothing accessories and jewellery. These include bronze and iron clasps; plain and beaded bronze pins; buttons, with attached loops, made from tin, bronze, bone and glass; glass beads; small interlocking rings of bronze and iron; cowry shells; forehead and head ornaments; open, closed and twisted rings of bronze and iron; a felt cap; a triangular openwork pendant of tin; a shoe heel plate of iron; and coins used as jewellery.

(2) Tools and implements. These include knives, iron strike-a-lights, flints and a flat-headed bronze needle used for cosmetic purposes.

(3) Ritual grave goods. These include coins, pieces of iron and a lead disc.

No cemetery that can be compared to the Dombóvár-Békató cemetery has so far been uncovered in Hungary.⁴ There are two sites whose assemblages offer good parallels to the finds uncovered at Dombóvár. Both lie in Serbia, in the Zombor area; one was excavated at Zombor-Bácsmonostorszeg, the other at Zombor-Repülőtér (Airfield).⁵ Only some finds – such as the cowry shells and the coloured glass beads – from the church cemetery at Bácsmonostorszeg are similar to the grave goods from the Dombóvár burial ground. The proportion of finds that do not occur either at Dombóvár or among the finds from Zombor-Repülőtér, even though the finds from the latter site have more in common with the Dombóvár finds, is more or less similar. Unfortunately, no descriptions of individual burials are available and thus only the descriptions on the reference cards in the museum archives could be used. The same holds true for the still-unpublished finds from the Zombor-Repülőtér site. The very precise description of the finds on the reference cards was of great help in comparing the find assemblages from these burial grounds.

The hook-and-eyes are common types, recovered from many medieval and late medieval cemeteries. They are thus unsuitable for a finer dating. Specimens made of bronze and iron were excavated from the Dombóvár burials; they usually occurred in pairs, even though sometimes only one came to light. Examining their distribution according to the gender of the deceased, we established that nine were found in female burials, one was in a male burial and one in the burial of a young boy. They usually lay near the chin and the collarbones, or beside the lower arms, in the region of the waist, suggesting that they

were female clothing accessories, most likely used for fastening blouse necks and skirts or bloomer-like trousers.

Comparable clasps occur in roughly the same proportion as at Dombóvár in the material from Zombor-Repülőtér, while they are virtually absent from Bácsmonostorszeg, the single exception being a variant with an ornamented bronze plate used for fastening upper garments.

The 5–8-centimetre-long pins of bronze and iron are at least as characteristic of the period as the hook-and-eye clasps. Plain and bead ornamented variants were both recovered, although it would appear that there was no difference in their use. Pins came to light in twenty-three graves: one was a male burial, four were observed in the burials of 12–14- and 15–16-year-old boys, containing a single pin each, usually on the forehead, or on top of or beside the skull. The rest were placed in female and young girls' burials. Five of these seventeen burials contained one pin lying beside the skull. Plain and beaded pins lying around the skull radially or at random were only excavated in adult women's burials. Their position suggests that they were either hairpins or ornamental pins stuck into some sort of scarf or a similar head covering. Their number varied from grave to grave, and they could equally well reflect differences in wealth. Pins ornamented with blue, green, white and striped glass that lay in a position indicating some sort of head ornament were usually found in graves that contained the burial of older women from wealthier families.

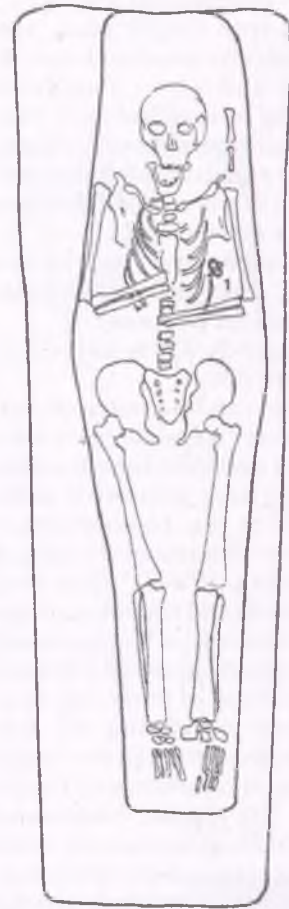
Bead-ornamented pins were not mentioned in the Zombor cemeteries; only plain pins and specimens decorated with bronze globules and semi-globules were recovered from these burials.

The most distinctive grave goods were the head ornaments and frontlets, whose remains were brought to light from six burials. While searching for possible analogies it became clear that these finds never occur in cemeteries used by Hungarians. The most striking element of these ornaments were cowry shells, usually strung onto bead necklaces; these shells most often occur in Scythian burials on the territory of Hungary and, later, in cemeteries from the era of the Árpád kings. József Korek has convincingly shown that these shells again became fashionable ornaments in the sixteenth century, especially in the southern regions of the Carpathian Basin.

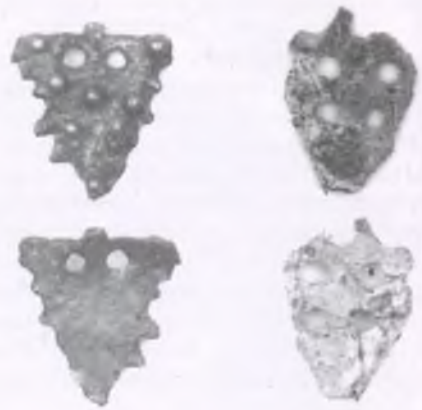
⁴ A number of comparable cemeteries have since been excavated. Cf. the studies by Sarolta Lázár and Erika Wicker in this volume.

⁵ The Zombor-Bácsmonostorszeg cemetery was excavated by Kálmán Gubitza. The finds are currently housed in the Zombor museum (inv. nos 2446–2458), while the reference cards and the photographs are to be found in the Archaeological Archives of the Hungarian National Museum under the same numbers. The 145 burials of the Zombor-Repülőtér (Airfield) cemetery (sometimes referred to as Zombor-Bükkszállás or Zombor-Bukovác) were excavated by József Korek and the staff of Archaeological

Institute of the University of Szeged in 1943. These burials represent about one-half of the original burials. The finds are housed in the Zombor museum, the reference cards can be found in the Archives (nos. 4321–4406). The finds on reference cards nos. 4407–4417 came from the same cemetery; they were presented to the museum by Gábor Csallány. The anthropological material from the Zombor-Repülőtér cemetery was analysed by László Bartucz (BARTUCZ 1960, 23–48), who quoted the description of the finds from Korek's unpublished manuscript. The descriptions in this study are in part based on Bartucz's study and in part on Korek's kind personal communication.



122.sir



Ill. 5. Infant burials from graves 116 and 122. Pewter pendants

Several head ornaments decorated with cowry shells were found in the Zombor–Repülőtér and Bácsmonostorszeg cemeteries. Unfortunately, there are no exact descriptions of these finds. According to the files the most characteristic head ornament in the Zombor–Repülőtér burials was a narrow ribbon around which metal wire strands were twisted, deco-

rated with three rows of cowry shells. Often as many as twenty to thirty shells were mentioned in a burial. In the case of the Bácsmonostorszeg cemetery, only the photographs of the finds offer a starting point. The high number of glass beads and cowry shells suggest that these were probably parts of head ornaments, although the available descriptions are often

contradictory. Eleven Nuremberg tokens were also brought to light in this cemetery; the small perforation near the edge – clearly visible on the photographs – leaves no doubt that, similarly to the ones from Dombóvár, these were also part of a head ornament.⁶ József Korek dated their manufacture to the fifteenth to sixteenth century and their use to the seventeenth century, on the basis of two Italian ecclesiastical coins in the Bácsmonostorszeg finds.⁷ On the basis of the analogies with the hair ornaments, the pendants and the cowry shells, he identified the population buried in the two Zombor cemeteries with a group of Slavic – possibly Serb – immigrants who had arrived during Ottoman rule.⁸

The search for finds comparable to the head ornaments and for ethnographic parallels to the burial customs observed at Dombóvár-Békató eventually led to the Southern Slavs of Baranya County. Many new advances have been made in the researching of this ethnic group. Numerous similarities can be noted among the documented burial customs of the Bosnians and Šokacs of Baranya, even though the 300–350 years separating the archaeological finds and the costume and customs of the contemporary population do introduce an element of uncertainty.⁹ Most important among these similarities are the ethnographic parallels to the custom of interring the deceased with a head ornament: among the Bosnians and Šokacs of Baranya it is customary to “lavishly ornament the heads of infants, girls, boys and newly-wed girls if they die. The mothers’ head ornaments are set on the children’s’ heads if they should die.”¹⁰ This would explain the presence of head ornaments in boys’ graves, and also why valuable head ornaments were found in infant burials.

An examination of the features that differ from the available ethnographic material from Hungary reveals the conspicuous lack of cowry shells. At the same time, the spherical head ornaments, known from the Bosnian and Šokac ethnographic material, are absent in the Dombóvár cemetery. Their contemporary variant, headpins decorated with bronze spheres and semi-spheres, were observed at the Zombor cemeteries, whereas at Dombóvár bead-ornamented bronze pins were found.

Summing up, we may conclude that the head ornaments recovered from female and child burials can essentially be divided into two categories: narrow frontlets and a wider, bead ornamented frontlet

that occasionally also included a string of shells. The archaeological and ethnographic evidence suggests that the origins of this ornament and the custom of depositing it into the grave can be sought among the Southern Slavs. At the same time, the differences between the archaeological evidence indicating a Serb ethnic background and the ethnographic data pointing towards a Bosnian and Šokac background counsel caution regarding ethnic identification.

The most common clothing accessories were metal, glass and bone buttons that probably also functioned as costume ornaments. About two-thirds of these buttons were recovered from female burials, suggesting that they ornamented women’s’ upper garments.¹¹ Most numerous were buttons made from pewter. Tiny glass beads, resembling the beads of the head ornaments, were placed inside these damaged or worn buttons. The often flawed, rough execution of these buttons suggests that the majority was home-made. Glass buttons came in two varieties: mauve or dark coloured segmented buttons and plain black buttons. Only one single bone button was unearthed.

A total of four rings came to light in three burials. One iron ring in a male burial was placed on the right hand of the deceased. An 8–9-year-old boy had a similar iron ring; the size of the ring suggested that it had been made for an adult and it would therefore seem that the ring had been thrown into the grave at the time of the burial. A plain bronze ring was put in the pouch suspended from the belt in another boy’s grave. The most ornate ring was recovered from a female burial; its position near the left temple suggests that it, too, had been cast into the grave at the time of the burial.

It would seem that the openwork pewter pendants were only observed in their original position by the temple in a single female grave. They were probably braided into the hair or fastened onto a headdress. Such pendants were given to two boys as well by their adult relatives. One of the boys had worn the pendant around his neck, while the other pendant was apparently thrown into the grave at the time of the burial. No comparable objects are known in the other cemeteries quoted above. Some similarity can be observed between the trapezoidal embossed pendants of sheet bronze found in two burials at Bácsmonostorszeg and the neck ornament of sheet bronze cut into a triangular and trapezoidal shape associated with one of these pendants.

⁶ The legend of the token from Dombóvár-Békató reads as follows. Obverse: *MACHT REICH GOT.E.SEGEN*. Reverse: *WOLF...A.ER NÜRNBERG RECH*. The legend of the Bácsmonostor token according to the reference card is as follows. Obverse: *GOTT ERGEBEN SOL...* Reverse: *GOTTES REICH BLEIBE EWIG*.

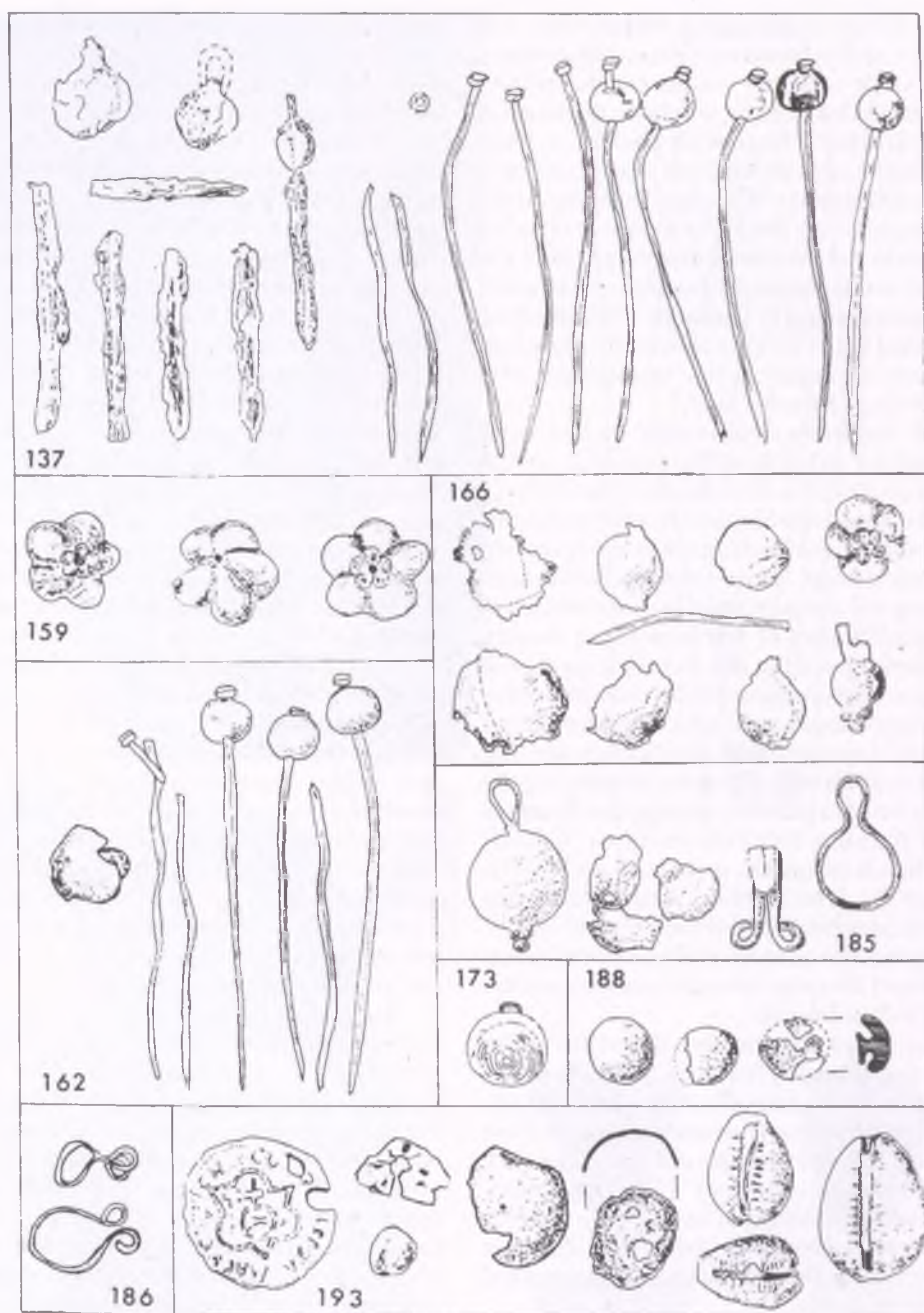
⁷ The Numismatic Collection of the Hungarian National Museum has a total of ten Nuremberg tokens. The designs are either identical or similar to the one on the Dombóvár specimen and have no date, with the exception of a single token that bears the date 1559 (or perhaps 1539).

⁸ BARTUCZ 1960, 27–28.

⁹ SAROSÁ CZ 1968, 152–168.

¹⁰ György Sarosá cz’s letter to the author (26 February 1979).

¹¹ The rare occurrence of buttons in male burials is perhaps explained by the fact that, for example, men over 40 were dressed in a shirt and trousers in the Croat villages. In the Šokac villages white stockings were put on the feet and a hat was laid on the chest in addition. Teenage girls and boys were dressed as bride and groom, while women over 40 were dressed in black ceremonial wear. Cf. SAROSÁ CZ 1968, I. 154, II. 288.



III. 6. Grave goods from the burials

The decayed remain of a felt cap were identified in the grave of a 51–57-year-old male.¹² Heel plates for leather shoes were unearthed in three graves; two were female burials, the third was a male burial.

A perforated coin used as an ornament was recovered from one burial; a very worn Turkish *akçe* lay beside the neck of a 2–3-year-old infant boy.

The number of tools and implements in the burials is very low: two knives, a strike-a-light, three flint stones and a flat-headed bronze needle. A B-shaped strike-a-light, two flints, a round bronze plaque, small fragments of sheet bronze and an open ring, originally kept in a pouch, lay by the right elbow of an 8–9-year-old boy.

Interpretation of some of the pieces of iron from the burials is difficult since there is no indication of their original function. Iron finds of this type were found in one adult and two child burials. These iron

¹² For the archaeological occurrences of caps, cf. GAÁL 1977–78, 109–131.

scraps were probably deposited in the burials intentionally and they probably had some apotropaic function.¹³

Beside the coin mentioned above, four other burials yielded coins: a contemporary bronze counterfeit of an Emperor Rudolph *weisspfennig*, a broken Turkish silver *akçe*, a small bronze coin of Const. Gallus, and another Roman bronze coin.

The presence of these coins indicates that the custom of placing an obulus in the grave was still practised in the sixteenth to seventeenth centuries. The dating value of these coins is also important. The *weisspfennig* was minted sometime between 1576 and 1612 and, taken together with the Turkish *akçe* coins and the Nuremberg token, dates the Dombóvár-Békátó cemetery to the second half of the sixteenth century or later.

History of the settlement

The settlement of Békátó came under Ottoman authority at the time that nearby Dombó fortress was occupied. Although the exact date of this occupation has not been established, we know that by 1552 the fortress had a sizeable Turkish garrison.¹⁴ The name of Békátó first appears in a Turkish document in the year 1581.¹⁵ A survey of the villages belonging to the *iflak* organization in the *sancak* of Koppány was prepared by Omar Çelebi, who noted that "a goodly number of *iflaks* were registered during the survey of the *sancak* of Koppány who had settled in various villages; they live in prosperity and cultivate their fields."¹⁶ There were a total of 503 taxpayers in the 82 *iflak* villages; the following sections are relevant to the history of the Dombóvár region:

(1) "Village of Kis Atala, belonging to Dombó: Radoslav Vukovin, Milaj Radkovin, Vuča Radibivin, Rača Andrejas, Tomin Raduja, Ivan Raič, Miloslav Marko, Radić Dobrodolin, Romin Braka, Vuča Draguja, 6 *hanes*";

(2) "Bikatól [Békátó], *kenez* Vasin Viče, Vuk Draguja, Raduja Radoslav, Gelsura Barbul, Vukdirag Radovan, Pavko Vuk, Jovan Radić, Vuk Radiboj, Dras Sima, Radovan Viten, Vukdirag Radoslav, 10 *hanes*".

In his study on the 1556 Turkish tax survey of the *sancak* of Koppány, Előd Vass noted that the *iflaks* – who can probably be regarded as Vlachs – should not be identified with the *martoloses* who served in the neighbouring fortresses of the *sancak*. Originally herders, the *iflaks* had no doubt arrived in various Ottoman-ruled areas of Hungary together with Serbs and Bosnians who had converted to Islam. Once in

Hungary, they, too, rendered various military services in exchange for which they were allowed to settle in villages; in the neighbourhood of the Koppány and Dombó fortresses in the *sancak* of Koppány.¹⁷ It seems likely that they usually occupied deserted villages and thus avoided taxation for a few years. Soon, however, the newcomers had to deal with the problem of taxation by the Hungarian landowners who kept an eye on developments in the Ottoman-occupied territories and who insisted on receiving the taxes due to them no matter what the circumstances. Irrespective of whether they were genuine Serbian settlers or *iflaks* (variously called Vlachs and Thracians), the newcomers were obviously reluctant to pay any taxes to Christians and this stubborn resistance no doubt often led to bloody clashes. Istvánffy mentions that in the winter of 1586–87 a decision was taken to exterminate the Thracian population living in the area between Lake Balaton and Kaposvár.¹⁸

It is uncertain to what extent the punitive raids conducted over the entire area of the *sancak* affected the Békátó community. What is clear is that the gradual deterioration of the life expectancy of the population, and the decreasing incidence of men demonstrated by Kinga Éry, can obviously be attributed not only to the unhealthy living conditions, but also to various military events, including the frequent raids against the *iflak* villages.¹⁹ Éry demonstrated the drastic decrease in life expectancy after the beginning of the cemetery's third period, dated to between 1576 and 1612. This decrease can no doubt also be associated with the outbreak and battles of the Fifteen Years War (1593–1606).

Imre Lengyel determined that the cemetery had been used for some 120–150 years. Both the archaeological and the anthropological evidence indicate that the settlers had not mixed with the local Hungarian population. These time brackets coincide with the *iflak* presence in this area. The settlement was abandoned at the time of the war of liberation against the Ottomans, sometime in October 1686. In a survey prepared six years after the expulsion of the Ottomans for the Palatine Pál Esterházy, landowner of this territory, Békátó is mentioned among the deserted settlements.²⁰

Summary

The 260 graves uncovered near present-day Békátó-puszta were part of a cemetery used by the *iflak*, i.e. Vlach, population that had settled north of the

¹³ A sickle with an apotropaic function was found in one of the fourteenth- to fifteenth-century graves of the cemetery near Kaposszentjakab Abbey. This find indicates that more attention should be paid to metal artefacts seemingly placed into the grave at random. Cf. BARDOSI 1971, 87–95.

¹⁴ VASS 1972, 57–73.; VELICS – KAMMERER 1886–1890, I. 86.

¹⁵ Since the village is not mentioned in the registers in the period between the creation of the *sancak* of Koppány (1555)

and 1581, it is quite possible that it was an uninhabited, deserted settlement.

¹⁶ VELICS – KAMMERER 1886–1890, I. 331–332.

¹⁷ VASS 1972, 59; Cf. the study by Klára Hegyi in this volume.

¹⁸ VELICS – KAMMERER 1886–1890, I. 331.

¹⁹ ÉRY 1979–80.

²⁰ Hungarian National Archive EL. Rep. 35, Fasc. M. No 2/5.

River Kapos in the sixteenth to seventeenth century. The exact site of the settlement itself remains unknown; its presumed location can be identified on the basis of an early seventeenth-century sketch of the area. It is therefore uncertain whether it can be identified with an earlier village that was founded by the Bodó de György family in the fifteenth century.

Be that as it may, a new cemetery was opened that was separate from the burial ground of the earlier Hungarian settlement. No remains of a stone or wooden church were observed in the investigated area, although any traces of a possible church may have been obliterated by the large-scale destruction of the area. On the other hand, the absence of a church seems logical in view of the fact that not one single artefact recovered from the burials indicates that this community had been Christian. The special treatment of this population, as reflected in the tax-registers, as well as the fact that the mass conversion of the Bosnians to Islam at roughly the same time as the arrival of this population, seems to

confirm the assumption that the seventeenth-century inhabitants of Békató were not Christians.

An examination of the grave goods revealed that parallels can be drawn between the Békató cemetery and the two cemeteries uncovered at Zombor–Repülőtér and Zombor–Bácsmonostorszeg; in addition, several similarities can be observed regarding the funerary practices of the Southern Slavs – Bosnians and Šokacs – living in Baranya County. The similarities, as well as the differences, appear to support the earlier suggestion that the *iflaks*, or Vlachs, cannot be identified with the Southern Slav newcomers – Bosnians, Serbs and Croat – mentioned in several sources. From her analysis of the anthropological material and her comparison of it with contemporary Balkanic samples, Kinga Éry concluded that the homeland of the Vlach community of Dombóvár–Békató lay somewhere in the Montenegro region, or perhaps in the neighbouring Greek or Albanian mountain region.

An Ottoman-age Cemetery at Esztergom–Szentkirály

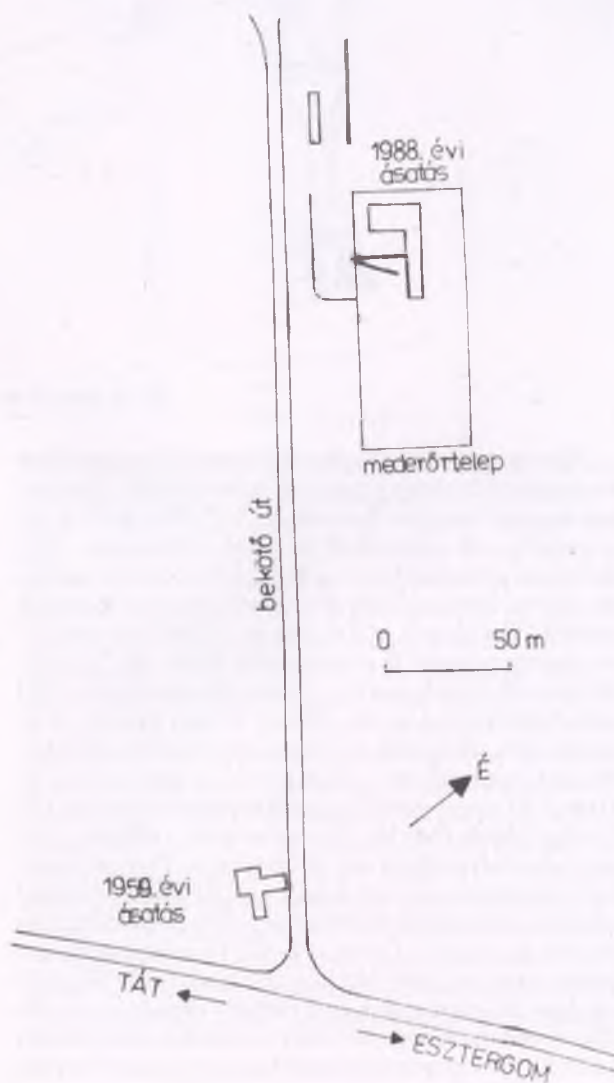
In 1988, a section of an Ottoman-age cemetery was excavated as part of the preliminary archaeological investigations preceding work on the Bős–Nagymaros dam project. The excavation was conducted under the direction of the present author and Piroska Biczó.¹

A dyke-keeper's house with various outbuildings was planned for the area on the Esztergom side of the approach road leading from the Esztergom–Tát highway to the one-time coal loading facility on the Danube embankment. Two narrow and thirteen wider trenches were opened on this area, while the territory of the canal planned next to the dyke-keeper's house was investigated with a narrow trench and four wider trenches. No burials were found in the latter area.

Our site lay at the southwest end of Abony (later known as Szentkirály), a settlement from the time of the Árpád kings. Hearths and pits of this village, as well as sections of a ditch, fell within the area investigated. These objects were disturbed by the burials of the Ottoman-period cemetery; a total of thirty-nine burials were uncovered. An additional five graves came to light when a ditch for cables was dug parallel to the approach road.

Burials from this cemetery had already been found on the other side of the approach road in 1959, when Alajos Bálint uncovered a total of twenty-one burials along with various settlement features of Árpáadian-age Szentkirály as part of the archaeological research preceding an earlier phase of the dam project. Most of these adult burials were disturbed and in some cases coffin remains could also be seen. One burial contained coffin nails in their original position beside the head and the feet, allowing the reconstruction of the form of the coffin, whose side and bottom planks had also survived. The hinges of the coffin mountings were unearthed in another burial. Most of the deceased had been laid to rest on their backs, although in one case the deceased had been laid on his side. The arms were usually folded, although depositions with elbows drawn apart and arms folded to the shoulder were also uncovered; in some cases the legs were moved to one side or drawn up at the knees. Bronze and iron dress hooks and eyes, an

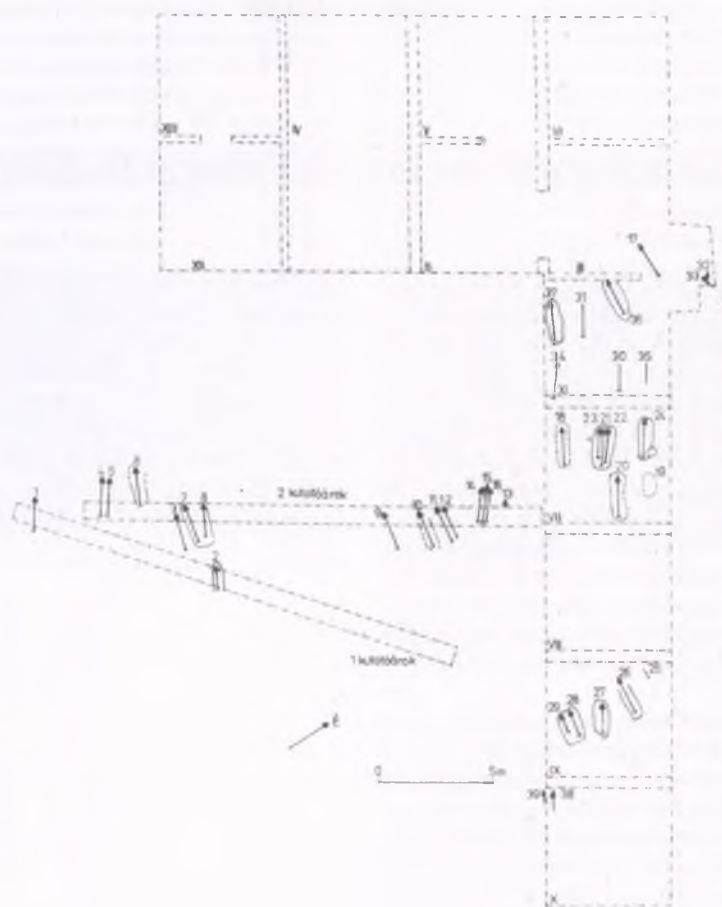
iron buckle, and a bronze tube were recovered from probably female burials, while buttons made from metal strands and a conical fluted button belonged to accessories of a male costume. Two burials yielded musket balls. Other grave goods, including a broken bronze earring, two silver coins – one of which had perhaps been struck in 1538 – an iron knife with a bone hilt, bronze beads, a small iron ring, and a lead button have since been lost (Ill. 1).²



Ill. 1. Site of 1959 and 1988 excavation campaigns. (Key: BEKÖTŐ ÚT = approach road; 1959. ÉVI ÁSATÁS = 1959 excavation; 1988. ÉVI ÁSATÁS = 1988 excavation; MEDERŐRTELEP = coal loading facility)

¹ Here I would like to thank Piroska Biczó for her kind permission to publish the finds.

² Alajos Bálint: "Esztergom–Szentkirály". Documentation of the excavation, 08. 24–09. 18, 1959. Archives of the Hungarian National Museum, inv. no. A-25/1959. Published in *MRT* 5, 183, site 8/20. The finds of the site Szentkirály I are housed in the Archaeological Collection of the Balassa Bálint Museum of Esztergom, inv. nos 74.106.1–115.5.



Ill. 2. Plan of the 1988 excavation

We excavated twenty-five undisturbed graves in the investigated cemetery part: twenty-one male, thirteen female and five child burials (Ill. 2).³ One part of the cemetery was disturbed by vine cultivation. The skeletons remained in a good state of preservation, the graves, forming loose rows, were dug into the sandy subsoil. The depth of the graves varied between 32 centimetres and 76 centimetres from the present surface. The dark patch outlining the grave pit could only be observed in the case of fifteen burials. The graves were northwest–southeast or west–east oriented. We did not find any coffin pieces in the burials; in Trench VI some wood fragments remained among the human bones that lay in a secondary position, and seven burials yielded one or two nails. The deceased were laid to rest on their backs, usually in an extended position, and sometimes there were two or three burials in one grave pit. Grave 14–15–16 contained one female and two male burials: the male body lying on top had its arms apart and slightly drawn up at the elbows as if to protect the other two bodies underneath it (Ill. 3). Two graves contained superimposed burials

without any grave goods, while in eight burials some sort of pillow had originally been placed under the head of the deceased. The arms were usually folded across the chest, the belly or the waist; in one case they lay extended along the body and in other case were drawn up under the chin. In some burials one or both two arms were bent towards the shoulders. The legs were usually extended and parallel to each other, although in a few cases they were slightly drawn apart or laid to one side with the knees drawn up. One male skeleton was lying with the knees slightly drawn up, while in two graves the legs were crossed over each other (Ill. 4).

The overwhelming majority of the grave goods were dress accessories. The narrow trousers worn by men were fastened with hooks and eyes on the inner sides of the legs.⁴ A pair of iron hooks and eyes (Ill. 5. 1) was observed beside the inner side of the left thighbone near the knee in Grave 21. The *dolman*, the overgarment worn over the linen shirt, was fastened with a row of buttons.⁵ Seven flattened spherical buttons of white glass paste were unearthed in Grave 10 among

³ The anthropological analysis of the skeletons was carried out by Nándor Tanczos. Cf. TANCZOS 1993.

⁴ RADVÁNSZKY 1895/1986, 55.

⁵ EMBER 1966–67, 205.



Ill. 3. Graves 14, 15 and 16



Ill. 4. Grave 37

the ribs and beside the left side of the pelvis (Ill. 5. 2). Two smaller bronze buttons lay beside the right arm bones and the ribs (Ill. 5. 3), together with a carved bone button on the right collarbone. The bone button has a rounded lower and a pentagonal upper part held together with a bronze loop (Ill. 5. 4). A fluted variant of the spherical bead made from white glass paste was recovered from Grave 14, beside the right elbow (Ill. 5. 5). The *dolman* of the male buried in Grave 31 had three slightly flattened iron-looped black buttons of glass paste sewn onto it. The buttons lay in the region of the right shoulder blade and under the right arm bone (Ill. 5. 6). Lead buttons were recovered from two burials. Grave 4 contained a flattened semi-spherical metal button and a conical fluted metal button spread among the right ribs (Ill. 5. 7–8). In Grave 18 ten slightly fluted semi-spherical lead buttons were lying in an arc from the cervical vertebrae to the right collarbone and back to the vertebrae. Two buttons were observed to the left of the spine, parallel to the vertebrae; three buttons were fragmentary (Ill. 5. 9). The sleeves of the *dolman* were slit and fastened with small buttons or hooks and eyes, as in the case of the so-called pipe-sleeved *dolmans* popular in the first half of the eighteenth century.⁶ The young man buried in Grave 21 probably wore a similar *dolman*, judging from

the hook parts of bronze hooks and eyes found beside the right radius. The deceased laid to rest in Grave 4 wore a silver ring on the right middle finger. The man buried in Grave 9 held a rosary in his hand, as shown by the twenty-seven bone beads between the left ribs and the left lower arm-bones (Ill. 5. 10). The small tubes bent from sheet metal probably served as stiffeners for cloth belts (Ill. 5. 11). The fragments of a Gothic buckle were recovered from among the bones in Grave 35 (Ill. 5. 12). The bronze and iron hooks and eyes from the female burials fastened the bodice sewn onto the skirt. The bodice of the woman buried in Grave 34 (Ill. 6) was fastened in front with several hooks and eyes (Ill. 7. 1). It probably had an open, so-called Hungarian shoulder.⁷ Nine silver coins had been placed in her purse or bag, suspended from her waist by an iron strap (Ill. 7. 2): a worn silver *denarius* of Ferdinand I (1526–1564), struck between 1527–1559(?),⁸ two silver *denariuses* of Maximilian (1564–1576) from the 1570s,⁹ and silver *denariuses* of Rudolf

⁶ KOLBA – LÁSZLÓ – VADÁSZI 1986, 316; EMBER 1966–67, 215.

⁷ RADVÁNSZKY 1895/1986, 79–80; KOLBA – LÁSZLÓ – VADÁSZI 1986, 317.

⁸ UNGER 1960, 744–747.

⁹ UNGER 1960, 767 K–B. 157?.



Ill. 5. Male costume accessories. 1. Iron hook and eye (Grave 21); 2. White glass-paste bead (Grave 10); 3. Bronze button (Grave 10); 4. Ornate bone button (Grave 10); white segmented glass button (Grave 14); 5. Black glass-paste bead (Grave 31); 7–8. Lead buttons (Grave 4); 9. Lead button (Grave 18); 10. Rosary (Grave 9); 11. Belt stiffeners (Grave 27); 12. Iron buckle (Grave 35)

(1576–1608) from 1578,¹⁰ 1579,¹¹ 1589¹² and three from 1592¹³ (Ill. 8. 1–6). The woman buried in Grave 27 worn a simple silver ring on her left ring finger and her hair was held in place with a bone comb whose fragments were found under the dorsal vertebrae (Ill. 7. 3).

Who were the people buried at Esztergom–Szentkirály? This question cannot be easily answered. Szentkirály had become deserted by 1543 because of the Ottoman campaigns.¹⁴ The Turkish tax-register for 1564 describes it as a destroyed settlement, the one for the year 1570 as an uninhabited settlement.¹⁵ Szentkirály, lying south and southwest of “Serb Town”, the one-time “Royal Town”, of Esztergom, was on the route taken by the Christian armies in 1594–95 and

was at the same time a place of encampment, strengthened by ramparts, for them, as well as an operational base.¹⁶ The above historical information shows that the dating value of the sixteenth-century coins recovered from Grave 34 must be treated with caution, the more so since in his analysis of the graves containing sixteenth-century coins in the Győr–Gábonavásártér cemetery – whose finds offer the best analogies to the finds from the Szentkirály burial ground – Sándor Mithay noted that it was the custom of the Serbs of Hungary to deposit a few coins in the graves of the deceased to ensure their prosperity in the afterlife.¹⁷ Although this in itself does not allow the conclusion that the people buried at Szentkirály were Serbs, we must consider the possibility that the

¹⁰ UNGER 1960, 810 K–B.

¹¹ UNGER 1960, 810 K–.

¹² UNGER 1960, 811 K–B.

¹³ UNGER 1960, 811 K–B.

¹⁴ VILLÁNYI 1892, 26–27, quoted in *MRT* 5, 183–184, note 42.

¹⁵ VILLÁNYI 1892, 26–27; FEKETE 1943, 74; both quoted in *MRT* 5, 183–184, note 42.

¹⁶ Cf. the engravings made by Cogorano and Custos: LEPOLD 1944, 172 and 16, quoted in *MRT* 5, 184, note 44.

¹⁷ MITHAY 1985, 194.



Ill. 6. Grave 34



Ill. 7. Female costume accessories. 1. Bronze hook and eye (Grave 34); 2. Iron strap (Grave 34); 3. Bone comb (Grave 27)



Ill. 8. 1-6. Coins from Grave 34

people settled in Esztergom, or the inhabitants of neighbouring villages who had been resettled in this area could have buried their dead here only between 1595 and 1605 when Esztergom was, temporarily, under Christian control.

There is evidence for migrations and the settlement of smaller groups from the very beginning of this ten-year period: we know that Miklós Pálffy organised the resettlement of the inhabitants of Pócsmegyer to Esztergom and, also, that he invited Serbs to settle there. Esztergom continued to flourish and hold markets in spite of, and amidst, the constant Turkish raids and

Hungarian counter-raids.¹⁸ Besides booty, the Hungarian soldiers sometimes also brought people back with them, as in 1596, when they arrived with 750 persons from Budakeszi and Budaörs.¹⁹ The multiple burials uncovered in the Esztergom–Szentkirály cemetery suggest a population afflicted by epidemics and various other illnesses. The anthropological analysis of the skeletal remains, too, indicates a population of individuals closely related to each other living under unfavourable circumstances.²⁰ Additional work in the cemetery can no doubt modify this picture and enrich it with further details.

NÁNDOR TÁNCZOS: "Anthropological Investigations
into the Sixteenth- to Seventeenth-century Population of Esztergom–Rozmár"
Extract

An examination of forty-two skeletons from a population of unknown size uncovered at the burial ground of Esztergom–Rozmár site can be summed up as follows.

From the demographic point of view, the sample featured no baby, only a few small children, an unusually high proportion of adolescents and adults, and no elderly people. The ratio of men to women was 21:15.

From the metrical and morphological standpoint there was no noticeable difference between the men and the women. Generally speaking, tall stature and short heads (hyperbrachykrania) characterised the sample. According to the measurements, the Rozmár sample is without parallel in the material known so far, namely the skulls are wider, and the faces shorter and higher, than those in samples examined hitherto.

Among the numerous abnormalities resulting from disease or injury (e.g. broken bones, marks

caused by sabre cuts), there were those affecting joints, those caused by inflammation (osteoporosis, osteoarthritis, etc.), those stemming from disorders of the circulatory system, those caused by unidentified disorders (e.g. premature ossification of the joins on the skull), bony growths (exostosis), damage to the teeth, dental caries, and abnormalities of the teeth and the spinal column. Especially worthy of attention was the ossification disorder observed on a number of individuals, as well as the many different varieties of dentition. All this, plus the mortality indicators that were the same for both sexes, as well as the metrical and morphological characteristics similar for men and women, permits the conclusion that there was a close genetic connection between the members of the population living in the sixteenth to seventeenth century and buried in the lands of Esztergom–Rozmár. Their early deaths may have been connected in part with unfavourable living conditions in war-torn decades.

¹⁸ CSORBA 1978, 161.

¹⁹ NÉMETHY 1900b, 121.

²⁰ TÁNCZOS 1993, 171.

A Serb Cemetery from the Ottoman Era in Hungary

In the spring of 1993 a sand quarry was opened 3.5 to 4 kilometres southwest of Bácsalmás, in an area known as Óalmás, on the hill at the crossing-point of the Bácsalmás–Bácsbokod road and the Kígyós brook.¹ When human skeletons were unearthed during the work, two researchers in local history, Zoltán Horváth and Mihály Sövény, notified the Thorma János Museum at Kiskunhalas.

Several skulls and skeletons were found in the area of the quarry near the relatively high hilltop during the survey of the site and a number of skeletons lay scattered on the surface on the hilltop itself. Although the few pottery sherds also suggested the presence of a Sarmatian settlement, no finds indicating the age of the cemetery were found.²

Since the continuation of sand quarrying would have destroyed the site, a rescue excavation was conducted. A total of 91 graves were unearthed over an area 800 square metres in extent during the 19 days of the excavation.³ Two graves did not contain a skeleton, the reason being that these graves were quite shallow, their floors barely sunk into the yellow soil; the bones had probably been ploughed up during agricultural activity. A later burial had disturbed an earlier one; another burial contained two adult skeletons. Thus, the number of skeletons unearthed was also 91.

One-third of the graves were child burials. Based on the grave goods deposited in the adult graves, thirteen were female burials, only one was a male burial; the sex of 46 adult skeletons could not be determined from the grave goods.⁴

The first day of the excavation yielded a find at the edge of the quarry that helped determine the age of the site. A hairpin embellished with a hollow bead from Grave 1 and the position of arm-bones in the graves confirmed our assumption that the burial ground on Óalmás hill was the cemetery of sixteenth- to seventeenth-century people of Balkan origin.

Sand quarrying was continued at the site in 1994 and thus the rescue excavation was also continued. Since the archaeologists employed at the Museum of Bács-Kiskun County were all working on the excavations along the future M5 motorway, whose construction was begun in 1994, Zoltán Polgár of the Damjanich János Museum in Szolnok undertook the direction of the Bácsalmás excavation. The area investigated by him in 1995–96, in which an additional 75 graves were uncovered,⁵ is beyond the scope of this study; only a description of the finds from the 1993 campaign will be presented here.⁶

The graves

Most of the graves in the excavated area were arranged into regular rows and lay some 1–1.5 metres from each other. There was no separate area for the children's graves within the cemetery or, to be more precise, at least not during one phase of the cemetery's use; the child graves lay near a presumably related adult's grave. Only two superimposed burials were uncovered: both lay at the end of a grave row, where the graves were spaced less regularly.

The size of the grave usually matched the size of the person buried; the adult graves were more or less the same size and they were usually northwest-southeast oriented.⁷ Deviations from this general orientation were restricted to the difference between the orientation of the grave pit and the grave mound since at the time of the burial the orientation of the grave mound did not always correspond to that of the grave pit, and the orientation of the next grave was usually based on the grave mound of the previous burial. This fact should be taken into consideration when dealing with any cemetery of this period.

¹ The site was designated as Bácsalmás–Homokbánya (Sand Quarry) in the excavation diary and other documentation, as well as in the anthropological studies. The historical record, however, justifies the name Bácsalmás–Óalmás, and we shall therefore use this name.

² I would here like to thank Mrs. Ambrus Huszár (Kiskunhalas, Thorma János Museum) for her assistance in the preliminary field surveys.

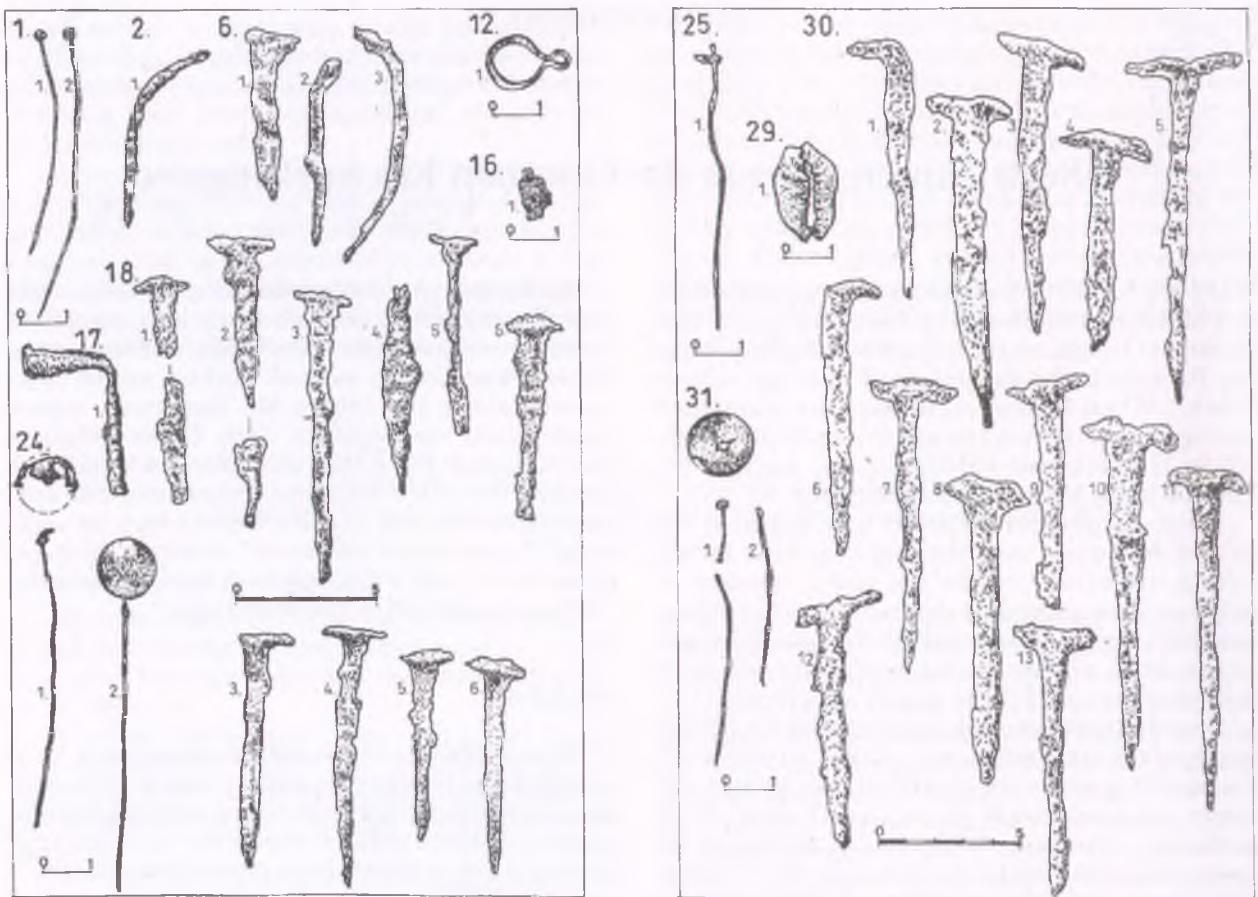
³ The participants of the excavation included archaeology student Rozália Kustár, excavation technician Ambrus Huszár and secondary-school student László Sultis, all of whom I should like to thank for their invaluable help.

⁴ The 15 anthropological studies published after 1994 were largely the work of György Pálfi and Antónia Marcsik.

⁵ For the first brief report on the cemetery, cf. WICKER 1999. The evaluation of the entire cemetery area investigated to date is planned in the near future. Some ditches and pits suggesting a Sarmatian settlement were found in 1993 and in 1995–96.

⁶ After the campaign of 2001 the number of the graves rose to approximately 310.

⁷ This is the main orientation of the graves in similar cemeteries in Hungary and in Serbia as well.



Ill. 1. Finds from the cemetery of Bácsalmás (Drawings by Marianna Jancsó)

The coffins

The wood of the coffins survived in an extremely good state of preservation in about one-half of the graves. Although the exact shape of the coffins cannot be reconstructed, it is clear that they were fitted or nailed together from approximately 10-centimetre-wide planks. Most coffins were made from oak (*Quercus robur*), a species that in the sixteenth- to seventeenth century thrived on floodplains such as the one by the Kígyós brook (a group of these oak trees survives on Kossuth tér in Bácsalmás).⁸ The choice of oak for the coffins was no doubt influenced by the Serbs' traditional respect for oak.⁹ Coffin nails were rarely used; nails were found in only 15 graves, including five where wood remains could not be observed. The number of nails varied, usually ranging from four to nine, but in two graves the planks of the coffins were held together by 12 long nails with flat heads. About one-third of graves with nailed coffins did not contain other finds.

⁸ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 53.

⁹ KULIŠIĆ 1981, 115.

¹⁰ Considering that the kerchiefs or headdress held in place by these pins cannot be reconstructed, we shall use the term "hairpin" here. Similar pins of Balkan origin have also been called "hairbun-pins" (GERELYES 1994).

The finds (Ill. 1)

Among the few grave goods, the hairpins¹⁰ were especially valuable for determining the date of the cemetery and the ethnicity of the deceased. The pins were usually made from bronze, although a few silver pins were also found. Two variants can be distinguished: one is decorated with a large hollow bead fitted together from two halves, the other with a small solid bead. Eight graves yielded a pair of pins; two contained one pin each. Several graves only contained tiny bronze scraps beside the skull. These pins were part of women's costume.¹¹ The pins with small beads were originally fitted with a pearl or an ornament made from some other material that had perished.¹²

The women did not wear other jewellery beside the hairpins. Rings – or discoloration indicating their former presence – were observed in two graves. The green discoloration noted on an adult skull was all

¹¹ Kerchiefs were generally worn among the Serbs of Bácska: "Girls wear their hair combed straight and tied in buns; young married women appear in gold lace kerchiefs on Sundays and holidays, and on weekdays they make do with a black silk kerchief." FRANKL 1896, 284.

¹² A hairpin ornamented with a blue bead was found in Grave 60; a similar bead-decorated pin is also known from the Katymár cemetery.

that remained of a small bronze mount adorning a kerchief or cap or, perhaps, a headdress ornament.

Metal spangles adorned on the clothes of both men and women. Fourteen graves contained such ornaments. Most were made from bronze, although a few silver ones were also found. In some cases both bronze and silver spangles adorned the clothes. Bronze clasps¹³ resembling the modern Parisian clasps were not too common: they were found in two graves.

Scraps from various iron objects were recovered from nine graves. Cowry shells, quite frequent grave goods in similar contemporary cemeteries,¹⁴ were found in a single child burial.

A coin was found in one grave. A silver coin (a Ferdinand II farthing¹⁵) minted in 1631 was perhaps intentionally left in the upper pocket of a coat; this coin plays an important role in reconstructing the history of the cemetery and the community.

Burial features: the arm positions (Ill. 2)

The unusual positioning of the arm-bones was noted after the excavation of the very first burial. The lower arm-bones were not in the customary position, lying parallel to the spine along the sides of the body, but were crossed at the pelvis. During the excavation of the cemetery both similar and differing arms positions were observed; seven main groups could be distinguished, as follows:

(1) Arm- or hand-bones crossed near the waist (15 graves);

(2) One set of arm-bones parallel to the body, the hand-bones of the other resting on the pelvis (3 graves);

(3) One set of arm-bones parallel to the body, the other broken at the elbow, with the lower arm-bone in a horizontal position (5 graves);

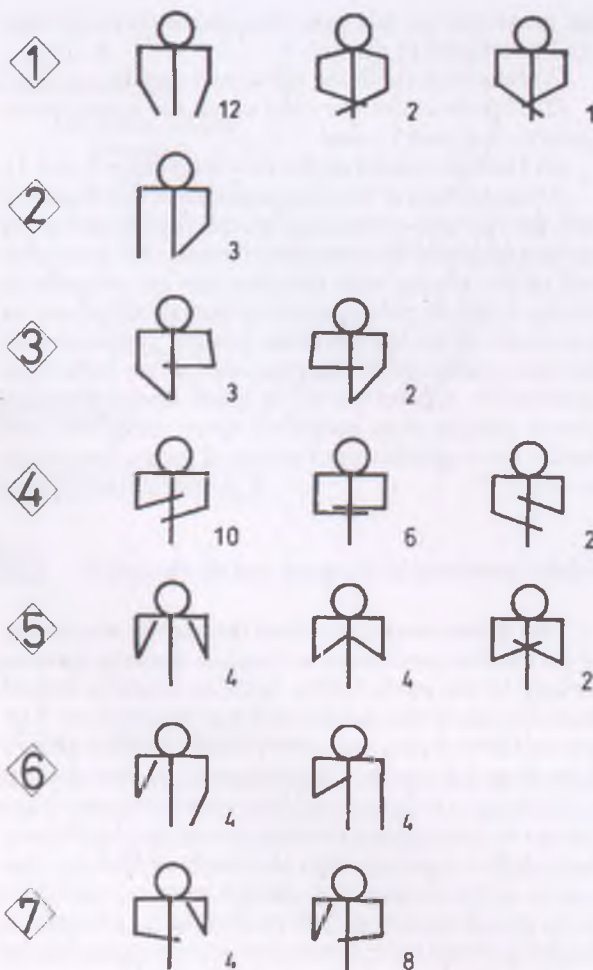
(4) Arm-bones broken at the elbow, lower arm-bones parallel, crossed at the pelvis, or one hand laid on the opposite shoulder, the other on the opposite pelvic bone (18 graves);

(5) Arm-bones broken at the elbow, both hands laid on the opposite shoulder (10 graves);

(6) One set of arm-bones parallel to the body, the other broken at the elbow and pointing toward the neck (5 graves); and

(7) Arm-bones broken at the elbow, one set crossed at the pelvis and the other pointing toward the shoulder (12 graves).

It is no accident that in the above list we have consistently used the word "bones", emphasising that we observed the position of the bones. However, the



Ill. 2. Positions of the arm-bones

positions of the arm-bones do not necessarily correspond to the original positioning of the arms. The difference between the original and the "excavated" positions can be attributed to the carrying of the coffin and its descent into the grave.¹⁶ It was customary among the Southern Slavs to carry the deceased to the cemetery in an open coffin. The Serbs taking refuge in Hungary also practised this custom and we know that an uprising almost broke out in Újvidék (today: Novi Sad, Serbia) in 1777 when the authorities attempted to forbid this custom.¹⁷ Open-coffin funerals also meant that the arms could be put back into their original position if they had become dislodged from this position while being carried to the church. The coffins were obviously closed before being lowered into the grave.

The arms could also be dislodged from their original position while the coffin was lowered into

¹³ Since these artefacts – generally termed "clothes clasps" in the archaeological literature – match modern Parisian clasps in shape and size, the term Parisian clasps will be used here, even if the literature cited uses a different term.

¹⁴ GAÁL 1979–80, KOREK 1989–90.

¹⁵ I would here like to thank György V. Székely for the identification of the coin.

¹⁶ The coffin was often jostled at these times, this being the reason that the arms were sometimes dislodged from their original positions.

¹⁷ MARGALITS 1918, 448, 741–742.

the grave pit; in this case, the above seven groups can be reduced to three:

- (1) Hands at the waist (groups 1 and 2);
- (2) Hands under the chin or on the upper body (groups 5, 6 and 7); and
- (3) Hands crossed at the pelvis (groups 3 and 4).

A comparison of the arm positions of the deceased with the hairpin-containing burials representing the earliest phase of the cemetery reveals that over one-half of the graves with hairpins can be assigned to Group 3, while the remaining burials fall more or less evenly within the two other groups. Consequently, the arm positions can be regarded as an indication of ethnicity. A brief survey of other burial grounds where similar arm positions were observed and similar grave goods were recovered seems very much in order.¹⁸

Similar cemeteries in Hungary and the Voivodina

Five graves were unearthed during the excavation of the Pauline monastery at Zombor–Bodrog-monostorszeg in the early 1900s; Kálmán Gubitza linked these burials to the medieval Šokac population. The graves yielded pins and cowry shells, comparable to those from Bácsalmás. Unfortunately, no descriptions or drawings of the graves have survived, and thus there is no information on the arm and hand positions. According to Gubitza, after the Battle of Mohács “the homes of the fleeing population were occupied by Slavic peoples pouring in from Bosnia. [...] However, the Šokacs who settled here had little respect for the past, [...] they even pillaged the Pauline monastery for stones to use for their own buildings. This reckless destruction did not cease even after they moved to their current homes from their first settlement.”¹⁹ It would seem that Gubitza associated the five late medieval graves with the Šokacs simply on the basis that the people living in that region at the turn of the twentieth century were Šokac in origin. Still, Gubitza is to be credited with identifying the Slavic origin of grave goods such as the bronze pins and the cowry shells.

A total of 145 graves were unearthed at Zombor–Bükszállás in 1943 under the direction of the Anthropology Institute of Szeged University. József Korek evaluated these finds. He dated the cemetery to the seventeenth century on the basis of the grave goods from the burials. These included metal buttons, bronze clasps, strings of beads, pins, cowry shells, and a 1637 denarius of Ferdinand II (about one-third of the graves contained grave goods). The finds have much in common with the finds from Bácsalmás, but nothing is known about the arm and hand

positions. Although Korek notes that “the dead were buried in the Christian manner, lying on their back with the arms crossed on the chest or extended”, in the absence of descriptions and drawings of the graves, there is no additional data on the arm positions of the deceased. Korek considers the population interred in the graves to be a Southern Slavic group arriving at the same time as the “mass settlement of Serbs”, although he was uncertain as regards the exact determination of the ethnic group. According to his 1944 analysis, “the assemblage differs from Hungarian finds dating to the same period, and can be considered Slavic or Bunjevac”.²⁰ A later comment, added before the publication of the manuscript, contradicts his original views: “In my opinion, my standpoint as set down in 1944 is still valid and I consider the Bükszállás population to be Šokac.”²¹

Attila Gaál investigated the sixteenth- to seventeenth-century cemetery at Dombóvár–Békató site in 1975 and 1977. Although the finds from the 260 graves of the cemetery outnumber by far the ones from Bácsalmás, the two assemblages have much in common. The finds from the Dombóvár cemetery also include bead-decorated pins, Parisian clasps, cowry shells, and metal buttons, and there is also a resemblance in the arms positions of the deceased. Interestingly enough, no coffin nails were found, despite the wood remains observed in the Dombóvár burials. Coins were found in several graves of the cemetery: these included two Roman bronze coins, a contemporary counterfeit of an Emperor Rudolph *weisspfennig* minted around 1590 and one-half of a Turkish *akçe*.²² From his analysis of the archaeological and the historical record, Gaál concluded that the deceased in the Dombóvár–Békató cemetery were Vlachs (Iflaks).

Kinga Éry, who conducted the physical anthropological analysis of the skeletal remains, came to a different conclusion: “The Vlach and Karakačan groups currently living in the Balkans have longer and narrower skulls and a stockier build, for which reason they cannot be associated with the Iflaks of Dombóvár–Békató. However, the characteristic Dinaroid features of Dombóvár–Békató population can be found in a rather well circumscribable area: the mountains of Northwest Greece, Albania and Montenegro in the centre of the Balkan Peninsula. The homeland of this population probably lay somewhere in this region.” Éry also notes that this Balkan group did not intermarry with the local population after arriving in its new home and that “their uniform appearance and the high number of disorders was no doubt a consequence of isolation and inbreeding.”²³

¹⁸ SZABÓ 1983 considers these characteristic hands positions to be distinctive marks of Eastern Christianity; this is also supported by the observations made in the Bácsalmás cemetery.

¹⁹ GUBITZA 1902, 3–4.

²⁰ KOREK 1989–90, 197.

²¹ KOREK 1989–90, 198.

²² GAÁL, 1979–1980, 175.

²³ ÉRY 1979–1980, 247–248.



Ill. 3. Serb cemeteries in the southern part of Bács-Kiskun County

Some 370 graves were unearthed at Győr–Gabonavásártér in 1949 and 1950.²⁴ A comparison of the grave goods from this sixteenth- to seventeenth-century cemetery with those from Bácsalmás shows little affinity between the two, except for Parisian clasps and coffin nails, artefact types that are hardly indicative of ethnicity. Some similarities can be noted in the arms position of the deceased. Although it is noted that the ethnicity or the possible Slavic origin of the deceased in the Győr cemetery cannot be verified by the anthropological analysis of the skeletal remains, the historical record indicates that the deceased were probably Serbs. According to two sources, the armies led by Pálffy and Schwarzenberg, marching to relieve the fortress of Győr, encamped by the so-called “Serb Cemetery”, located in the area of present-day Gabonavásártér (“Corn Market”), where a wooden cross with a Cyrillic inscription still stood in 1913. It is also known that in 1529 the fortress of Győr was taken over by Pál Bakics’s hussars, the overwhelming majority of whom were Southern Slavs who, together with their priest, settled in Győr from the south. The graves unearthed at Gabonavásártér were thus associated with Serb soldiers and their families.²⁵

A total of 60 graves were unearthed at Esztergom–Szentkirály by Alajos Bálint in 1959 and Sarolta Lázár and Piroska Biczó in 1988. Similarly to the Győr cemetery, the finds consisted mainly of Parisian clasps,

metal buttons and coffin nails. In addition to the few grave goods, the arm positions of the deceased buried in the Esztergom cemetery resembled those of the deceased in the Bácsalmás and the other cemeteries listed here. Anthropological examination of the skeletal remains showed that “the individuals were closely related to each other and were living under extremely adverse conditions”.²⁶ Knowing that the one-time village of Szentkirály lay near a settlement called Rácváros (“Serb Town”) and that the historical record mentions Miklós Pálffy’s permitting Serbs to settle in Esztergom, it seems likely that the cemetery was used by a Serb community.

Two other cemeteries in the southern part of Bács-Kiskun County lying less than 15 kilometres southwest and northeast of the Bácsalmás cemetery must also be mentioned (Ill. 3).

The excavations at the Katymár–Téglagyár (“Brick Works”) site were conducted by Elemér Zalotay and György Szabó in 1952,²⁷ by József Komáromy and György Szabó in 1953²⁸ and again by Elemér Zalotay in 1955.²⁹ Mihály Kőhegyi mentioned that 17 graves had been destroyed during clay extraction in 1958; an additional 11 graves were unearthed in 1960.³⁰ Zalotay, Szabó and Komáromy dated this burial ground to the twelfth to fifteenth century, while Kőhegyi believed it to be a medieval Hungarian cemetery. The date of the Katymár–Téglagyár site can hardly be determined without a detailed analysis of the finds,

²⁴ MITHAY 1985.

²⁵ MITHAY 1985, 196–197.

²⁶ LÁZÁR 1999, 317.

²⁷ ZALOTAY – SZABÓ 1954.

²⁸ Komáromy, J. – Szabó, Gy., Katymár–Téglagyár (1953). *ArchÉrt* 82 (1955) 89.

²⁹ Zalotay, E., Katymár–Téglagyár (1955). *ArchÉrt* 84 (1957) 87.

³⁰ Kőhegyi, M., Katymár–Téglagyár (1959). *RégFüz* Ser I. 11 (1959) 74; Katymár–Téglagyár (1960). *RégFüz* Ser I. 14 (1961) 45.

although the grave goods indicate that a part of the cemetery can definitely be linked to a sixteenth- to seventeenth-century Southern Slav population. The finds include bead-decorated hairpins similar to the ones that came to light in relatively large numbers at the Bácsalmás site.³¹

A similarity in the burial rites links the cemetery at Mélykút–Kilátó (“Lookout Tower”) to the ones mentioned above. Although earthworks had disturbed the overwhelming majority of the 20 graves, the arm positions of the deceased in the undisturbed graves were identical to those in the Bácsalmás burials. Since only a single metal button was unearthed at Mélykút,³² the grave goods cannot be really compared. Mélykút is reported as a Serb settlement in a 1572 document,³³ and its inhabitants defined themselves as Serbs in 1598, similarly to the inhabitants of the villages of Katymár and Bácsalmás–Óalmás.³⁴

The ethnicity of the Óalmás cemetery

The above survey shows that at present eight cemeteries are known from Hungary and the Voivodina region of Serbia where the date of the cemetery, the burial rite and, in some cases, the grave goods suggest the same ethnic group or closely related groups. It is our conviction that this number will increase following an examination of the still-unpublished late medieval archaeological assemblages in various museums;³⁵ future research should also include settlements and areas whose name begins with *Rác*, the old Hungarian word for “Serb”.³⁶

There is no general consensus on the ethnicity of these sixteenth- to seventeenth-century cemeteries. Gubitza considered the Zombor–Bodrog-monostorszeg site to have been used by the Šokacs, while Korek believed that the Zombor–Bükkszállás burial ground had been used by the Bunjevacs, a view that he later modified, claiming that the users had been Šokacs. Gaál believed that the Dombóvár cemetery had been used by Vlachs, while the users of the burials grounds at Győr and Esztergom were, albeit with some uncer-

tainty, identified as Serbs, based on the word *Rác* in the name of the cemetery and the settlement.

The Serb and Southern Romanian parallels and historical data outlined in the following sections suggest that the Bácsalmás cemetery – and especially the earliest burials – can be linked to a Serbian Orthodox group which moved to this area in the latter third of the sixteenth century.³⁷ Before surveying the relevant historical data, let us see whether there are comparable burial sites in Serbia.³⁸

Analogies from the Balkans

Although similar cemeteries are known from Southern Romania,³⁹ the largest number of comparable burial grounds has been reported from Serbia, especially north of the Niš–Leskovac line.⁴⁰ One good example is the fifteenth- to eighteenth-century cemetery of Drmno on the Lower Danube, below Belgrade.⁴¹ Earlier, eleventh- to fourteenth-century, cemeteries were excavated at Trnjanen near Požarevac⁴² and at Ratina near Kraljevo; the grave goods compare well with the finds from Bácsalmás and the hand positions of the deceased were fully identical.⁴³

The hairpins of the Bácsalmás cemetery also point toward Serbia since their more ornate variants are known from sixteenth- to seventeenth-century Balkan hoards and hoards of Balkan origin. These include the bead-decorated filigreed pins from Ritopek and Dubovac in Serbia, as well as simpler variants from Battonya and an unprovenanced specimen in the Hungarian National Museum. These bead-decorated pins are usually described as parts of lavishly decorated silver head-ornaments. The pair of pins from the Peć find and the “breast pins” from Tomaševac, as well as analogies to the latter in the Hungarian National Museum from an unknown site, could equally well be described as hairpins.⁴⁴ As a matter of fact, the earrings from these finds resemble the filigreed earrings with lozenge-shaped pendants recovered from one of the burials in the Katymár cemetery. These Serb analogies to certain elements

³¹ The finds of the Katymár cemetery were recently published in WICKER – KÓHEGYI 2002.

³² Wicker, E., Mélykút–Kilátó (1990). Documentation of the excavation can be found in the archives of the Katona József Museum (Kecskemét). MS., inv. no. 98.860.

³³ SAROSÁCS 1973, 378.

³⁴ SAROSÁCS 1973, 379–380; HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 44.

³⁵ József Korek mentions finds similar to those at Bükkszállás from Szegvár and Mindszent; these are currently housed at the Szentes museum. Cf. KOREK 1989–90, 184.

³⁶ At Rösztke, for example, “Serb frontier soldiers [...] settled after the defeat of the Turks [...] building their houses in a row along the road [...] mentioned by a number of written sources; but even without these their former presence is indicated by the old abandoned Serb cemetery”. Cf. TÖMÖRKÉNY 1963, 311. At Rösztke “the remains of the Serb

cemetery beside the road to Szabadka were still remembered by many in the recent past”. Cf. JUHÁSZ 1996, 169.

³⁷ For the Serbs and Vlachs/Iflaks cf. PÁLFFY 2000b, 177; ÁGOSTON – OBORNI 2000, 179–181.

³⁸ Since the Serbian material is not at our disposal, we shall only briefly refer to the relevant publications.

³⁹ CANTAGUZINO 1979.

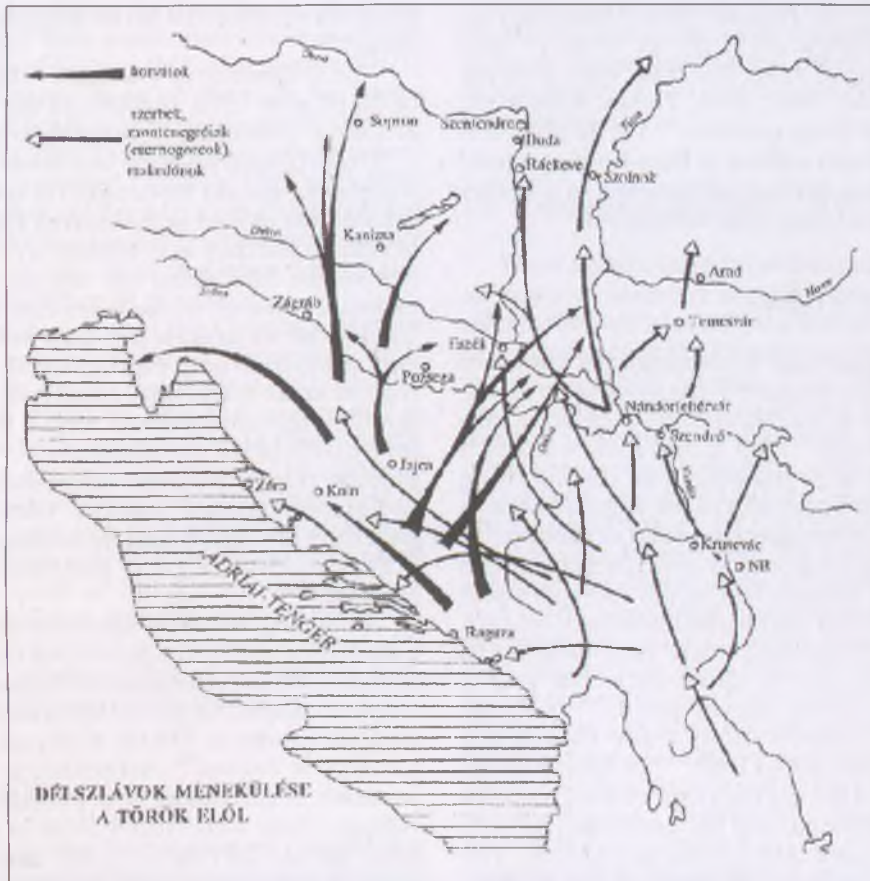
⁴⁰ Verbal information from Mirjana Tomić. She also noted that the evaluation of similar cemeteries in Serbia is in progress.

⁴¹ TOMIĆ – ŠPAŠIĆ 1998.

⁴² MARJANOVIĆ – VUJOVIĆ 1980–81.

⁴³ LJAMIĆ – VALOVIĆ 1988.

⁴⁴ GERELYES 1994, 41–48. As regards the Tomaševac breast-pins, Gerelyes suggested that these could have been stuck into the kerchiefs covering the head.



Ill. 4. The migration of Serbs (after SZAKÁLY 1992)

of the burial rite and the hairpins offer additional proof that the Bácsalmás population was made up of Orthodox Serb immigrants from the Balkan Peninsula.

Serb settlements in medieval Hungary (Ill. 4)

In the absence of reliable historical data we can at most only assume that Serb groups had settled in Hungary as early as the age of the Árpád kings. The historical record is more eloquent as regards the large-scale migrations accompanying the expansion of the Ottoman Empire.⁴⁵

The first major Serb settlement in Hungary followed the Battle of Nicopolis in 1396. This wave included members of the Serbian royal family, as well as their relatives, soldiers and serfs. After the fall of Serbia, many tens of thousands of Serbs, including landowners led by George Branković, received permission to settle in the southern regions. In 1437 there were so many Orthodox Serbs and heretic Bosnians in Szerém, Bodrog and Bács counties that Pope Innocent IV seriously considered sending

inquisitors to Hungary. This was prevented since the Serbs, occupying mostly the sparsely inhabited southern regions, were needed to protect the borders.

Serbs continued to settle in Hungary throughout the fifteenth century. In 1428, following the fall of Niš, Kruševac and Golubac, a new wave of immigrants came to Hungary in the face of the Ottoman advance and settled on Csepel Island and at Szentendre. The influx of Serbs continued in the ensuing decades. In 1465 several thousand families were given refuge in Szerém, Bácska and Csongrád counties. Their settlement was assisted by a 1481 decree of the Hungarian Diet, which exempted the Orthodox Serbs from paying the ecclesiastical tithe.

During the Ottoman period the Turks maintained a policy of settling destroyed or deserted villages with soldiers and peasants. The Turkish garrison at Baja near Bácsalmás included Serbs as early as 1542; their number was 38 in 1557 and 52 in 1559.

The last major Serb immigration occurred in the period 1687–1690, when approximately forty thousand families from Old Serbia and Metohije moved to Hungary under the leadership of Arsenius Černojevič, patriarch of Ipek (Peć). Some estimates put the number of these immigrants at 200,000, others at 500,000. Serbian troops entered Hungary at Bácska (Bačka) and Eszék (Osijek), advancing

⁴⁵ This brief historical summary is based on SAROSÁCSZ 1973.

along both sides of the Danube toward Buda and the eastern and western areas of the country, and eventually settling in Arad, Baranya, Bács-Bodrog, Csanád, Csongrád, Fejér, Győr, Heves, Komárom, Pest, Szerém and Tolna counties.⁴⁶ We do not know whether the Serbians settling in Bács-Bodrog moved to already existing Serbian settlements or whether they founded new villages for themselves.

The Serb settlement of Óalmás

Several Árpáadian-age settlements are known to have existed on the outskirts of the present-day Bácsalmás.⁴⁷ Describing his 1964 rescue excavation, Mihály Kóhegyi noted: "The foundation walls of a medieval church were uncovered on the hill rising by the edge of the floodplain of the Kígyós brook. A total of 49 graves were unearthed east of the apse. In spite of the few grave goods, it could be determined that the earliest burials date to the early eleventh century and the latest ones to the fourteenth century. [...] Traces of the former settlement were found north and south of the church, along some 200 to 300 meters, parallel to the Kígyós brook."⁴⁸ Kóhegyi supplements his observations made during the excavation in a letter dated 1989: "The finds indicate that burials began during the reign of King Stephen the Saint and continued until the fourteenth century, perhaps until as late as the Ottoman period. The settlement lay on the east bank of the Kígyós, extending along some 800 meters."⁴⁹

In the absence of relevant data, we can only assume that this Árpáadian-age settlement, lying close to the later Óalmás cemetery, can perhaps be identified with the village of Almás, first mentioned in 1543. According to an archiepiscopal tax register, in that year the village was obliged to pay a tithe of 18 forints and a pair of boots.⁵⁰ It seems likely that the remnants of the medieval Hungarian village community of Óalmás lived there at the time since it is highly improbable that the Orthodox Serbs would have paid taxes to a Roman Catholic archbishop.

During the Ottoman era the village of Almás was part of the Baja *nahiye* in the *sancağ* of Szeged; the name of the village appears in the Turkish tax records from 1553 and later years.⁵¹ The question is whether this village should be identified with the one inhabited by a Hungarian community or with Óalmás, which by this time was settled by Serbs. The first option seems more probable since a 1572 archiepiscopal tithe record lists Kelebia, Tompa, Ludas, Borsod, Mélykút and Ivánka-pusztas as set-

tlements inhabited by Serbs, while Almás is not mentioned.⁵²

The settlement of Óalmás by the Serbs can thus be dated after 1572. In 1580–82 the village consisted of a mere 25 houses, only rising to 35 in 1591–92.⁵³

Unfortunately, we do not know where the Serb settlement should be sought. It is possible that its inhabitants moved to the nearby Hungarian village of Almás, but they may equally well have settled on one of the hills along the Kígyós brook near the Óalmás cemetery. In the latter case it is possible that "they lived in sunken pits and hollows, a practice they adhered to until the organization of the frontier regions in the early eighteenth century, at which time the *Hofkriegsrat* in Vienna forced them, albeit with severe difficulties, to build houses".⁵⁴ It was believed that the reason for their "extremely primitive and rudimentary homes" was that "they would be able to pack their belongings and move elsewhere at any time if they so desired or if their superiors so commanded".⁵⁵

According to earlier historical research, this may have happened in the case of the Óalmás Serbs too, since in 1598 the inhabitants of Halimas, among those of other villages, signed an agreement in which they pledged loyalty to Miklós Pálffy and moved to the Esztergom region.⁵⁶ According to another interpretation, Serbs coming from Halimas and these other villages (there were nearly forty in all) but living in other parts of the country at the time their respective agreement was signed would pay tax if they returned to their original villages.⁵⁷ The settlements mentioned in the documents were concentrated in the southern part of the Zombor–Szabadka–Baja–Halas rectangle. Among the signatories to the agreements were inhabitants of Katymár and Mélykút also – the latter was mentioned as a Serb village as early as 1572 –, where we likewise know of sixteenth- to seventeenth-century cemeteries that can be linked to Serbs.

The second interpretation of the two Pálffy agreements from 1598 may be vindicated by the fact that the use of the cemetery at Óalmás was continuous over the following decades also. This is demonstrated by the 1631 coin mentioned earlier, as well as by the sequence of the burials. The coin finds again confirm that the Óalmás community was Serb in origin since it was customary among the Serbs in Hungary to "place a few coins in the pockets of the deceased, so that they might pay for their plot in the cemetery, originally perhaps so that they might buy eternal happiness. Mourners would also each toss a coin into the grave for the same reason."⁵⁸

⁴⁶ SAROSÁ CZ 1973, 381–382.

⁴⁷ HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 26–27.

⁴⁸ Kóhegyi, M., Bácsalmás–Óalmás (1964). *ArchÉrt* 91(1965) 62.

⁴⁹ HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 27.

⁵⁰ HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 43.

⁵¹ HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 43.

⁵² SAROSÁ CZ 1973, 378.

⁵³ KÓHEGYI 1972, 35; HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 43.

⁵⁴ IVÁNYI – DUDÁS 1896, 268.

⁵⁵ IVÁNYI – DUDÁS 1896, 268.

⁵⁶ SAROSÁ CZ 1973, 379–380; HORVÁTH – SÖVÉNY – SZÉNÁ SINÉ 1999, 44.

⁵⁷ SZAKÁLY 1981, 147–148.

⁵⁸ KAUSCH 1904, 3.

Coins were also found in the other cemeteries mentioned above.⁵⁹ Four coins minted between 1527 and 1574 were found in a male burial (Grave 304/1) in the Győr cemetery: "lying on the right hip bone, they had in all likelihood been placed in the deceased's pocket."⁶⁰ Grave 34 of the Esztergom cemetery yielded nine coins minted between 1527 and 1592 that may originally have been in a pouch hung from the waist.⁶¹ A 1637 Ferdinand II silver denarius lay on the left side of the skull in Grave 144 of the Zombor–Bükkszállás burial ground.⁶²

What is clear, then, is that the Óalmás cemetery remained in continuous use in the seventeenth century. Not only the archaeological, but also the historical record confirms this: the community is mentioned on a number of occasions in Church tithe lists from the late seventeenth century. The village of Hajmás paid the archbishop of Kalocsa a tithe of 10 forints in 1650, and one of 3 forints in 1678 and 1679. By 1686 Hagymás had become a very small village, with a total of twenty households. Its population decreased steadily and in the 1699 registration it appears as an uninhabited settlement.⁶³ In 1703 Almás is mentioned as a deserted area belonging to the Hungarian Treasury.⁶⁴

The name of the village

With regard to the forerunner of present-day Bácsalmás, the settlement was called Almás in the 1543 record mentioned above. At this time a Catholic Hungarian population lived in the village. The same name appears in the 1553 tax records. The Serbs moving in during the late sixteenth century did not translate the name of the village into their own tongue ("Almás" means "Place of Apples"), but simply altered the pronunciation. By 1598 Almás had become Halimas.

In documents from 1678–1679 from the archdiocese of Kalocsa the village features under the name of Hajmás, which was easier to pronounce in Hungarian. The fact that in 1686 the village was called Hagymás might indicate that the name Almás was no longer recognizable in the Slav-sounding Hajmás, a word that had no meaning in Hungarian, unlike the similar sounding Hagymás ("Place of Onions"). It also means that there may have been a Hungarian-speaking population at this time. But the replacement of the soft "j" with the hard "gy" may also refer to the arrival of new settlers of Serb descent in Óalmás. Between 1553 and 1686, then, the name changed from a Hungarian one to a Serb one and then back to a Hungarian one again.

There is no data as to how the village name again became Almás in the early eighteenth century. In order to distinguish it from other settlements with similar names, it was later named Bács Almás, and in 1898 Bácsalmás.

The resettlement of the village: 1719

There is only scattered and unreliable information on how the deserted area of Almás became repopulated, the only source being a *protocollum* preserved in the archives of the Franciscan Order at Szabadka (today: Šabotica, Serbia): "The village of Ó-Almás [sic] became depopulated during the turmoil of the Rákóczi uprising: its inhabitants sought refuge in more protected locations, and in 1703 it was registered as deserted area belonging to the Hungarian Treasury. In 1711 it was resettled and its inhabitants returned. In 1714 it was again listed as a village in the district of Baja. It had a village mayor and seven taxpaying husbandmen. But peaceful development could not begin because in 1716 this area became a thoroughfare for wars: royal armies set out against the Turk to recapture the Bánát. The progress of the wars was accompanied by immeasurable vexations. Homes were abandoned and safe places of refuge were sought. Together with those of Jánoshalom and Katymár, the inhabitants [of Ó-Almás] withdrew to Szabadka. They could not have been many, since the inhabitants of the three communities dwelt in twenty pitiful hovels. The wars came to an end in 1718, but the refugees from Almás did not return to their old home of Ó-Almás. Instead, they chose a new home for themselves: they founded present-day Almás, as related in the Franciscan annals quoted earlier. The same is reported in a document from 1728 preserved in the community's archives, according to which the Almás inhabitants began to melt away in 1716, and finally abandoned Almás, in other words Ó-Almás, in 1719. Collating all this, we can see that the year of the establishment of today's Bács Almás was 1719."⁶⁵

Serbs or Bunjevacs?

There is no clear-cut answer to the questions of who the inhabitants of Hagymás were at the close of the seventeenth century, who moved there in the next century and who founded the new settlement of Bácsalmás. As mentioned above, this much is certain: use of the Óalmás cemetery, of which the Serb newcomers availed themselves in the last third of the sixteenth

⁵⁹ The 40 silver coins found in a vessel at Zombor–Bodrogmonostorszeg and dating from after the Battle of Mohács probably did not belong to the cemetery. GUBITZA 1902, 6–7.

⁶⁰ MITHAY 1985, 193.

⁶¹ LÁZÁR 1999, 313–314, 316.

⁶² KOREK 1989–90, 189.

⁶³ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 43–45.

⁶⁴ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 40, 54.

⁶⁵ *Protocollum Religiosae Domus Szabadkiensis*, 48. In: UDVARDI n.d., 9–10.

century, continued throughout the seventeenth century and even beyond. However, the written sources do not mention new Serb, Hungarian or possibly Bosnian arrivals.

Whatever language or languages the inhabitants of Óalmás spoke, at least some of them were most certainly Catholics, since we know their history in the early eighteenth century from the reports of the Franciscans in Szabadka. At the same time, a 1720 register mentions the names Rudiković, Piuković, Bošnjak, Šišković and Nimčev, surnames that can all be found in the community today.⁶⁶ On the basis of all this, we cannot rule out the possibility that a part of Almás's population in the eighteenth century was Bunjevac in origin.

We may assume that, concurrently with the Serb migration to Hungary, there was also a continuous influx of Bunjevacs, "whom the perils of war, centuries of Turkish oppression and the famine in Bosnia in 1686, as well as the subsequent outbreak of plague there, obliged to seek new places of sanctuary. [...] Most of them settled alongside the Serbs and Roman Catholic Bosnians who had arrived with the Turks. Their leaders were Franciscan friars."⁶⁷

We know that Roman Catholic Bunjevacs also lived in northwest Bácska County, around Baja, in the early 1630s. At that time there were 400 villages in Bácska and Bodrog counties, 30 of which were inhabited by Bunjevacs and Šokacs; in the rest lived Serbs.⁶⁸

Considering that it was the Franciscans of Szabadka who tell of Almás's population in the early eighteenth century, it seems logical to assume that the surnames listed above were those of Bunjevac inhabitants. However, the picture is not so straightforward as this, in the light of later information.

In 1715, there were eight families in the old village of Óalmás, while in 1720 there were only six in "new" Almás, founded in 1719.⁶⁹ Data on the number of inhabitants and their distribution by language⁷⁰ reveals that there were 40 villagers in 1720, and 632 by 1767. In the 1770s, Hungarian and Slovak families settled there from Northern Hungary. At this time the village had over 1000 inhabitants. With the settling of Germans in 1786, this number quickly reached almost three times this figure.

Data on the languages spoken by the inhabitants of Almás is available from 1880. Over one-half of the population spoke German, less than a quarter

Hungarian and a slightly smaller proportion Serb. There were no Croat speakers. By the turn of the twentieth century the number of Serb speakers was falling, while the number whose mother tongue was Croat was gradually increasing.

If we look at the breakdown according to religious denomination, the data are even more absorbing. In 1783 almost everyone was Roman Catholic, with the proportion of those declaring themselves to be Greek Orthodox standing at scarcely 1.7 per cent, a figure that fell continuously in the years that followed. In 1880, when almost one-fifth of the inhabitants still spoke Serb, there were just two persons who practised the Greek Orthodox faith.⁷¹ It is difficult to escape the conclusion that the Greek Orthodox descendants of the earlier Serb population gradually relinquished – through marriage also – their faith and converted to Roman Catholicism. In the view of the present author, this is corroborated by the continuous use of the Óalmás cemetery. Certain burial customs, however, were able to live on for a while.⁷²

The internal chronology of the Óalmás cemetery: grave groups and grave rows (Ill. 5)

When plotted on a map, certain features of the Bácsalmás–Óalmás cemetery (coffins with or without nails, the occurrence or absence of hairpins, buttons and other finds, the absence of grave goods, etc.) show no regularity at all. What is striking, however, is that three groups can be distinguished among the graves of the investigated area:

(1) Centre of the excavated area: regular grave rows, identical orientation of the graves, graves spaced at equal distances from one another;

(2) Northwest section of the excavated area: irregular rows, varying distances between graves, orientations diverging slightly from one another, some superimposed burials; and

(3) Southern section of the excavated area: graves spaced closely and regularly; orientation of the graves that it is identical within the group, but diverging slightly from the burials in the first two groups.

Precise interpretation of the three groups is difficult at present. They do not represent a chronological sequence, or, if they do, only a partial one, since hairpins, characteristic of the earliest burials, occur in all three groups. The same is true for the other grave goods and for the use of coffins.

⁶⁶ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 54.

⁶⁷ SAROSÁ CZ 1973, 382.

⁶⁸ SAROSÁ CZ 1973, 380.

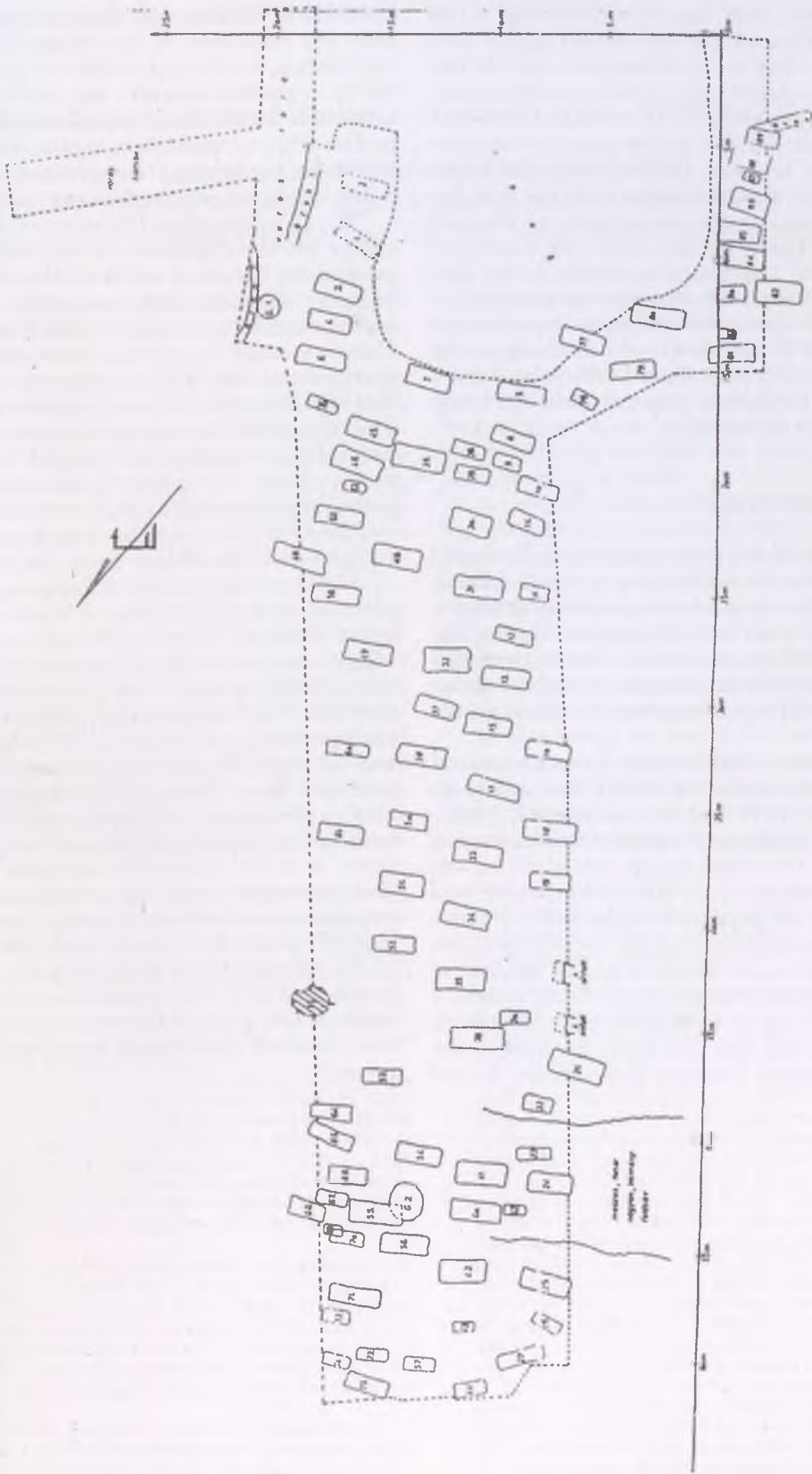
⁶⁹ KÓHEGYI 1972, 41.

⁷⁰ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 245.

⁷¹ HORVÁTH – SÖVÉNY – SZÉNÁSNÉ 1999, 250.

⁷² KAUSCH 1904, 2–3. "Before the coffin is lowered into the grave, a little wine is poured into it. [...] There might be a superstition linked to the ecclesiastical ritual during which the priest anoints the deceased with wine. This is borne out by the following case that I witnessed myself: A Gypsy

child who had been baptised a Roman Catholic was buried by the Catholic priest. The father, who was Greek Orthodox, brought the open coffin out from his tent for the priest to sprinkle it with wine. Since the priest declined to do this, he took the wine to the cemetery himself. Once there he opened the coffin, imploring the priest to sanctify the deceased with wine. When both the cantor and the mourners bade him desist, he was taken aback, his face expressing horror and desperation. He hesitated for a while, then stepped into the grave, opened the coffin, and poured in the wine himself."



Ill. 5. Map of the Bácsalmás-Óalmás cemetery. The area excavated in 1993

The cemetery, then, has an ordered and a less ordered part. The ordered part would suggest that the graves were dug in chronological order. In the case of the less ordered part, we must conclude that, possibly, graves are grouped according to family, or – and this is more likely – that the graves at variance with the “order” are later. Unfortunately, the establishment of a precise chronology is for the time being not possible, partly on account of the soil conditions and partly on account of the scarcity of the grave goods. This much is certain: in the first third of the seventeenth century the cemetery – already or still – consisted of regular rows, since it was that that we found the grave containing a coin struck in 1631. Analysis of the 1995–96 and 2001 excavations of the Óalmás cemetery would certainly yield answers on this issue.

Dating the Óalmás cemetery

On the basis of the grave goods and the burial customs observed, we can be sure that it was burials of a sixteenth- to seventeenth-century Greek Orthodox Serb population that were discovered during the excavation of 1993. However, the cemetery extended in every direction beyond the excavated area, implying that there may be several hundred additional graves under the hill.

We know from a 1738 record of an ecclesiastical visit that, to begin with, the village founded in its present place in 1719 had two cemeteries. A later source relates: “One is quite a small cemetery around a little church; the other, larger, one is out on the lands of the village. [...] When the parish was established and the population began really to grow, the cemetery around the church was not used, but instead the one out on the lands. [...] At the time of the 1767 ecclesiastical visit this more distant cemetery was still in use; it was three-quarters of an hour from the village and was also old, from the time of the Turkish withdrawal. I believe this may be the old

cemetery of Óalmás, one that continued to be used after the relocation of the village. In 1767, when Archbishop Batthyányi conducted a canonical visit, the more distant cemetery was still in use. Precisely because of the distance it was extremely neglected. It had no fence or wall, this being the reason that cattle wandered in to graze. The herdsmen, when making a fire, would even burn the old crosses.”⁷³

The abovementioned cemetery in the lands of the village lies three-quarters of an hour by foot from present-day Bácsalmás and is the Óalmás cemetery the recovery of whose finds was begun in 1993. This ecclesiastical data, too, supports the idea that use of the Óalmás cemetery – it began in the final third of the sixteenth century – was continuously in the centuries that followed, after 1767 also, even though it was at this time that a new cemetery was designated in the eastern part of the new settlement in place of the full cemetery by the church. According to parish records, the last grave dug in the old Óalmás cemetery on the hilltop was that of an 11-year-old boy buried on 8 March 1790. He is recorded as the son of one Gáspár Nákity.

The Slavic surname of the last person buried there and the fact that the village population, by now almost completely Catholic, simultaneously used the village cemetery as well as the more distant, originally Serb, Óalmás cemetery inevitably raises the question of whether the continuous use of the Óalmás cemetery can in some way be linked to an “origins tradition”, and whether the persons buried there were all Southern Slavs. The use of the expression “Southern Slav” is intentional, referring to the descendants of both Greek Orthodox Serbs and Catholic Southern Slavs. If at the end of the eighteenth century the Óalmás cemetery had been used only by the Orthodox population, by that time just a few persons, then the Roman Catholic documents would hardly contain so much information on the continuous use of the old cemetery. The last-mentioned issue can probably be resolved by a study of the parish records for burials; this, however, falls beyond the scope of the present paper.⁷⁴

⁷³ UDVARDY n.d., 72.

⁷⁴ The excavation of the Bácsalmás cemetery continued in 2002 as well. Analysis of the total 420 graves unearthed and the historical sources recently discovered may modify the findings of this paper.

Spinal Diseases and Tuberculosis in the Ottoman Period

MAJOR PALAEOPATHOLOGICAL FEATURES OF THE BÁCSALMÁS–ÓALMÁS (BÁCSALMÁS–HOMOKBÁNYA) SIXTEENTH- TO SEVENTEENTH-CENTURY ANTHROPOLOGICAL SERIES

At first glance it might seem that the anthropological series from the Bácsalmás–Óalmás (Bácsalmás–Homokbánya¹) cemetery is not one of the more significant items in the collection of the Anthropology Department of Szeged University. In terms of its size and the period it dates to, it is indeed unremarkable: the Szeged collection, containing over 20,000 skeletons in all, includes many series that are larger than Bácsalmás–Óalmás assemblage with its 166 skeletons;² some, in fact, contain finds from over a thousand graves. Moreover, many anthropologists prefer to study material from older cemeteries (e.g. Bronze Age, Avar period or the Hungarian Conquest period). Nevertheless, the Bácsalmás series may be deemed one of the most valuable assemblages in the Szeged anthropological collection. The great majority of the skeletons are extremely well preserved (many are to all intents and purposes on a par with anatomical collections), and there are fewer missing bones than usual. These facts indicate the favourable soil conditions of the cemetery and the thoroughness and care character-

istic of the excavation, thanks to which an extremely informative set of finds was unearthed for the anthropologist.³ Also fortunate is the fact that the material is from a cemetery used for a relatively brief period,⁴ and even though it does not represent a "population" in the biological sense, it is still much closer to being one than are most other medieval anthropological series.

A complete anthropological analysis of the series has not yet been performed, while a complete classification and comparison of the material with that of similar Ottoman-period cemeteries may be expected in the near future.⁵ However, there is no reason to conceal the findings obtained by palaeopathological studies thus far. Indeed, many have already been presented at international forums and have appeared in a number of international publications.⁶

In this article we would like to summarise, with no pretence of completeness, our most important findings from the palaeopathological examinations of the Bácsalmás series with regard to spinal diseases, tuberculosis and palaeopathological methods.

¹ In her study written for this volume, Erika Wicker notes: "The site was designated as Bácsalmás–Homokbánya (Sand Quarry) in the excavation diary and other documentation, as well as in the anthropological studies. The historical record, however, justifies the name Bácsalmás–Óalmás, and we shall therefore use this name." Although earlier anthropological and palaeopathological studies consistently use the "Homokbánya" designation, this report prefers the designation Bácsalmás–Óalmás.

² The skeletons preserved in the collection of the Anthropology Department of Szeged University from the Bácsalmás–Óalmás site currently number 166, including the skeletons unearthed by Erika Wicker in 1993 and those uncovered by Zoltán Polgár and László Pintér in 1994 (WICKER 1999, 25), from a total of 173 graves. Several palaeopathological studies on the entire series have already given 173 as the basic number of graves: SZÉPLAKI 1998; PÁLFI – MARCSIK 1999.

³ On behalf of our physical anthropologist and palaeopathologist colleagues we would like to thank archaeologists Erika Wicker, Zoltán Polgár and László Pintér, who conducted the excavation, and all the participants in the excavation, for their comprehensive recovery of the site, making it possible for a thorough examination of the finds to be performed and for the highly valuable finds to be preserved for posterity.

⁴ WICKER 1999; and see also her study in this volume.

⁵ Based on the kind oral communication of associate professor and department head Antónia Marcsik.

⁶ The number of articles and studies on the Bácsalmás anthropological series is large. Seven deal exclusively with the Bácsalmás series or cases originating from it: HORVÁTH – MOLNÁR – KOVÁCS – WICKER – BÉRATO – PÁLFI 1994; MOLNÁR – PÁLFI 1994; GYURKÓ 1995; PÁLFI – MOLNÁR – BÉRATO –

WICKER – DUTOUR 1996; PÁLFI – MOLNÁR – BÉRATO – DUTOUR 1997; SZÉPLAKI 1998; ARDAGNA 1999a. Another six used the Bácsalmás findings in a comparative analysis with other series: MACZEL – MARCSIK – DUTOUR – PÁLFI 1998; MOLNÁR – MARCSIK – DUTOUR – BÉRATO – PÁLFI 1998; PÁLFI 1998; ARDAGNA 1999b; HAAS – ZINK – MOLNÁR – MARCSIK – DUTOUR – NERLICH – PÁLFI 1999; MARCSIK – PÁLFI 1999; PÁLFI – MARCSIK 1999; HAAS – ZINK – MOLNÁR – SZEIMES – REISCHL – MARCSIK – ARDAGNA – DUTOUR – PÁLFI – NERLICH 2000. The material also has been and still is a subject or partial subject for dissertations under the leadership of Antónia Marcsik and György Pálfi. French and German experts have also participated in the study and evaluation of the palaeopathological finds: from France anthropology professor Olivier Dutour, archaeologist and rheumatologist Jacques Bérato, and Yann Ardagna (co-author of this article), while for the Germans mention must certainly be made of pathology professor Andreas G. Nerlich, anthropologist Albert Zink and biologist Christian J. Haas, the team that performed the molecular biological analyses on the TB cases. We would like to thank the former head and the current head of the Anthropology Department of Szeged University, Associate Professor Gyula Farkas and Associate Professor Antónia Marcsik respectively, for the opportunity to study the material of the finds; we also express our gratitude to Marseilles professor of anthropology Olivier Dutour for his participation in several stages of the palaeopathological research. We would especially like to thank the late József Kovács, X-ray physician; postdoctoral student Erika Molnár; senior lecturer Zsuzsanna Just; PhD student Márta Maczel; former PhD student Gabriella Horváth; former undergraduate students Ágnes Gyurkó and Laura Széplaki; and undergraduate students Éva Kemény, Éva Molnár and Katalin Nagy for their assistance.

Introduction: a few words on palaeopathology

Palaeopathology, a science going back nearly a century, is the study of disease-caused alterations in human and animal remains, predominantly skeletal remains, using the methods of historical anthropology and actual medical diagnostics. Human palaeopathology can be considered a special interdisciplinary branch of human osteology, the material for which is primarily the human skeletal remains unearthed at archaeological excavations. Owing to the nature of the material studied, the findings concentrate primarily on the diseases of the bones and joints: research extends to the past occurrence of diseases including traumatic deformations, tumours, and specific infectious diseases (such as tuberculosis and treponematosi), as well as to numerous other diseases involving anatomical deformation. Recent literature has used the expression "palaeorheumatology", designating palaeopathological research into diseases of rheumatic origin. "Palaeoradiology" deals with the radiological study of ancient remains, while the field defined as "palaeomicrobiology" uses molecular biological methods to identify human pathogens from human remains. "Palaeoepidemiology" might be best translated as the history of the spread of diseases, relying on palaeopathological data to research epidemiological relationships of diseases.⁷

Spinal diseases in the sixteenth- to seventeenth-century population of Bácsalmás–Óalmás

As a result of its extremely well preserved condition, the Bácsalmás anthropological material is outstandingly suited to palaeopathological study. Research conducted by the Anthropology Department of Szeged University has revealed an extremely wide range of pathological deformations (dental diseases, development disorders, traumas, traces of infections, and other bone and joint deformations). The scope of this article does not permit a comprehensive summary of the findings, only references to the most important work and a note that the evaluation of the material is still in progress.⁸

With regard to the findings in the area of palaeorheumatology we have focused primarily on the spinal diseases observable in the series. In juvenile skeletons no pathological spinal deformations were

observed. One of the major reasons for this is the generally low level of observability⁹ (owing to joint surface loss from the lack of ossification of the epiphyses or the fragility of the skeletons) of spinal and other articular elements (and of the spine and joint diseases occurring as early as childhood) in child skeletons.

For the above reasons the examination of spinal diseases considered the juvenile (*Juvenis*) and adult (*Adultus*, *Maturus*, *Senium*) skeletons. For the total of 166 skeletons from the Bácsalmás–Óalmás anthropological material, the examination extended to 107 skeletons or spinal remains altogether (Table 1).

Age	Female	Male	Sex unknown	Total
<i>Juvenis</i>	5	10	6	21
<i>Juvenis-Adultus</i>	1	1	2	4
<i>Adultus</i>	11	9	1	21
<i>Maturus</i>	14	23	–	37
<i>Senium</i>	7	17	–	24
Total	38	60	9	107

Table 1. Distribution by age and sex of the skeletons examined for spinal diseases in the Bácsalmás–Óalmás anthropological series (the study does not include the 59 children's skeletons [*Infans I, II*] from the material)

As noted earlier, the set is remarkably well preserved, over 70 per cent of the spinal remains being in a particularly good state of preservation. This often facilitated identification of pathological processes that were milder in severity or in their early stages.

Exploiting the state of preservation of the series, one goal in our study was the introduction of a new system of entering and evaluating data, on the basis of which the Bácsalmás sample could serve as a reference point for later comparative palaeoepidemiological studies. This is warranted by the fact that earlier palaeopathological studies – our own works included – ignored the state of preservation of the bones, including consideration of the observability of specific regions for the disease in question in the comparison of frequencies of diseases.

The prevalence (P) of diseases (or pathological changes) in a series is obtained simply by dividing the number of observed cases (n) by the total number of individuals in the sample (N):¹⁰

⁷ ORTNER – PUTSCHAR 1985; ROGERS – WALDRON 1995; PANUEL – DUTOUR – PÁLFI 1998; SPIGELMAN – LEMMA 1993; DRANCOURT – ABOUDHARAM – SIGNOLI – DUTOUR – RAOULT 1998; DUTOUR – SIGNOLI – PÁLFI 1998.

⁸ HORVÁTH – MOLNÁR – KOVÁCS – WICKER – BÉRATO – PÁLFI 1994; MOLNÁR – PÁLFI 1994; GYURKÓ 1995; SZÉPLAKI 1998.

⁹ Before collecting the data it is necessary to define the concept of "observability" with regard to the given deformation(s), in order to facilitate quantitative palaeopathological analysis. This category was introduced and defined (ARDAGNA 1999a and 1999b) by further developing the theoretical methods of WALDRON 1994 and 1999. In any event the definition of observability depends on the type of disease to be examined (e.g. the determination of observability for

a degenerative articular disease requires the presence of elements different from those needed for an examination of traumatic deformations of the limb bones or of the frequency of periostitis, etc.). By our definition "Observability is the name for an anatomical unit whose information content (degree of preservation) makes it possible to identify the pathological condition in question." In some cases skeletal remains with a degree of preservation of 30–40 per cent may be sufficiently informative for a given disease, while in other cases a bone of 95 per cent preservation may be classified as "not observable" for a given question if the critical section happens to be missing.

¹⁰ WALDRON 1994.

$$P = n/N$$

where P is an uncorrected value that does not reflect reality unless the observability value of the material is 100 per cent (which, of course, is an unrealistic assumption even for the Bácsalmás series).

A substantially more accurate value (and usable also in series of varying states of preservation) is the "corrected prevalence" (P_c), which in the example of the Bácsalmás series was worked out by us, by developing Waldron's idea:¹¹

$$P_c = n/N \times N_t/N_o$$

where the previously "uncorrected" prevalence is adjusted by multiplying it by a factor reflecting the ratio of the theoretical number of predilection sites (N_t) to the observable predilection sites (N_o). (For 100 per cent preserved material the correction factor will be 1.00. Obviously, the correction value will vary in inverse proportion to the deterioration of the preservation of the material or of "observability".) The application of the method will be presented later in an example of a disease of inflammatory origin.

In the quantitative evaluation of spinal diseases, detailed data entry forms were employed that aided in the registration of "observable predilection sites" assignable both to articular and to bone lesions.¹² In the differential diagnostics of given diseases and in the determination of predilection sites (the regions of the skeletal system which a given disease exclusively or most frequently attacks) the relevant medical and palaeopathological literature was relied on in all cases.¹³

In the 107 spinal remains studied from the Bácsalmás series, the observed changes could be classified into five different etiological categories (rheumatic inflammations, and metabolic, degenerative, traumatic and infectious spinal diseases). Of these, detailed presentation will be made of two cases of rheumatic disease that are of greater significance with regard to the history of science.

Two cases of ankylosing spondylitis (AS¹⁴) were discovered in the first phase of study of the series, on the 83 skeletons unearthed from 91 graves in 1993.¹⁵ At that time pathological deformations were observed on two skeletons from graves 80A and 90. Ill. 1 shows the ankylosis of the lower spinal remains of the elderly



Ill. 1. Fused lower spine resulting from ankylosing spondylitis (Bácsalmás-Óalmás, Grave 90)

male from Grave 90. This is remarkably similar to the deformation observable on the lower spine from Grave 80A, likewise an elderly male.¹⁶ Ill. 2 gives one example of the (bilateral) sacroileitis (articular inflammation of the hip and pelvic bones) appearing in both finds, presenting the inflammatory symptoms of sacroileitis in Find 80A. Consideration of these symptoms, other peripheral changes and the results of radiological examinations led, after consultation with radiologists and rheumatologists, to the determination of ankylosing spondylitis. It was extremely surprising that

¹¹ WALDRON 1999.

¹² The use of palaeopathological data entry forms for registration of the condition of the spine and other parts of the skeletal system worked out by György Pálfi in 1999 is currently at the experimental stage in dissertations and doctoral and postdoctoral research at the Anthropology Department of Szeged University and at the Anthropological Collection of the Museum of Natural Science.

¹³ RESNICK - NIWAYAMA 1988; ORTNER - PUTSCHAR 1985.

¹⁴ Ankylosing spondylitis (AS) is an inflammatory disease of uncertain etiology, involving chronic sacroileitis and peripheral and spinal symptoms, and indicating family

accumulation. In its advanced form the vertebrae may fuse through the vertical syndesmophytes, and may exhibit the easily identifiable "bamboo-spine" pathological form. RESNICK - NIWAYAMA 1988; GRAN - HUSBY 1993.

¹⁵ HORVÁTH - MOLNÁR - KOVÁCS - WICKER - BÉRATO - PÁLFI 1994.

¹⁶ Other articles have analysed the morphological similarity and very likely etiological kinship of the two cases: HORVÁTH - MOLNÁR - KOVÁCS - WICKER - BÉRATO - PÁLFI 1994; PÁLFI - MOLNÁR - BÉRATO - WICKER - DUTOUR 1996; PÁLFI - MOLNÁR - BÉRATO - DUTOUR 1996; PÁLFI 1996.



Ill. 2. Traces of sacroileitis in ankylosing spondylitis (Bácsalmás–Óalmás, Grave 80A)

an apathological condition that is rare in osteoarchaeological series should occur twice. The genetic background and family accumulation¹⁷ of a propensity for the disease may suggest the possibility of a greater than average degree of endogamy in the series,¹⁸ but, inasmuch as the two graves lay beside each other, a direct family relationship is also possible.

A precise determination of the prevalence of the disease can be determined using the formula given above. As no further cases occurred in the rest of the series, the number of cases (n) is 2, while the total sample (N) is 107. Determination and entry of the predilection sites is more complicated than usual, since the entire spine (24 vertebrae + sacrum = 25 "vertebrae") can be affected, and the literature considers the susceptibility of the bilateral sacroiliac articulation to be a criterion of equal value. The "value" of the observability of the 25 "vertebrae" ("v") is identical to the observability of the 2 sacroiliac ("SI") articulations, thus the formula for the corrected frequency of AS in the anthropological bone samples is the following:

$$Pc_{AS} = n/N \times (Nt_v + 12.5 \times Nt_{SI}) / (No_v + 12.5 \times No_{SI})$$

In this case:

n (number of cases) = 2; N (total sample) = 107;

Nt_v (theoretical number of vertebrae) = 107×25
= 2675;

Nt_{SI} (theoretical number of SI articulations) = 107×2
= 214;

No_v (number of observable vertebrae) = 2048;

No_{SI} (number of observable SI articulations) = 207

Consequently the corrected prevalence for ankylosing spondylitis in the anthropological material of Bácsalmás–Óalmás is:

$$Pc_{AS} = 1.95\%$$

To give a brief presentation of the other spinal disease groups listed earlier, of the deformations metabolic in origin, indications of DISH (diffuse idiopathic skeletal hyperostosis) were observed in 7 cases ($Pc = 9.5$ per cent). Ill. 3 indicates the characteristic morphological picture for advanced DISH on the spinal remains of the elderly male from Grave 173, where the calcification of the anterolateral ligaments on the vertebrae leads to fused ossification of the vertebrae. This relatively tolerable deformation is metabolism-related, a disease usually connected to obesity, diabetes or other metabolic disorders, with its frequency greatest in older males. As with the population living today, in the Bácsalmás series degenerative deformations of the spine (interapophyseal joint arthrosis, traces of degeneration of the intervertebral disks) represent the most common spinal diseases. Traces of degenerative spine processes were observed in 47 spines out of 107, with significant accumulation in old age. Vertebral changes of traumatic origin appeared in the form of spondylolysis, vertebral arch ruptures in the lower spine. Usually occurring as a result of a micro or macro-traumatic effect, spondylolysis was observed in 11 cases in the Bácsalmás material. Given this relatively high frequency of 11.4 per cent, one might assume an inheritance of the propensity in addition to mechanical stress.

¹⁷ GRAN – HUSBY 1993.

¹⁸ Examination of inherited variations observable on the cemetery's material is currently in progress, but the preliminary data here again suggest a high degree of endogamy.

Of the specific infectious diseases, tuberculosis traces were diagnosed in the series examined. The observed frequency of the disease and its form of appearance were both highly significant, and deserve a separate short section of their own.

Prevalence and forms of appearance of tuberculosis

Signs of chronic infections of bones and joints were detected in the very first examinations of the Bácsalmás–Óalmás anthropological material. Our first publication on this subject¹⁹ described three cases where the term tuberculosis (TB) was used only tentatively, as the deformations observed were somewhat unusual in comparison to case descriptions appearing earlier in the Hungarian palaeopathological literature. The remains of the individual from Grave 39 showed extensive multifocal vertebral destruction over a large part of the spine; this is reflected clearly in the bone destruction observable on the sacrum (Ill. 4). Diverging even further from the classically known TB alterations of the vertebrae and major joints are the three fused ribs of the male skeleton from Grave 85 (Ill. 5). The hypothesis of a development disorder was rejected due to the minor surface traces of new bone formation and the presence of two calcified pleura fragments, and it was considered probable that the two phenomena were related. The third “suspicious” find was the skeleton from Grave 61, the vertebrae of which showed signs of mild multifocal inflammation; indications of periostitis and osteolysis were observed on the visceral surface of nine ribs on the right (Ill. 6). An interesting and important circumstance is the fact that the only similar previous report in Hungary was Éry's 1982 article on anthropological finds from a similar era and similar ethnic environment.²⁰ Our suspicions were later confirmed in all three cases. At roughly the same time as our 1994 study, Roberts and his colleagues published their highly important article on the correlation between rib deformations of this sort and pulmonary tuberculosis.²¹

The real breakthrough, however, came from advances in palaeomicrobiology that in 1999 made it possible to reveal the first positive results (Grave 85) on tuberculosis bacteria infections in the Bácsalmás finds.²² The anthropological series was re-examined following its expansion, and this, along with palaeopathological identification of the early stages of vertebral TB,²³ played a role in the mention of as many as nine possible cases of TB in our 1999 study²⁴ with regard to the entire Bácsalmás series. Eight of



Ill. 3. DISH: vertebral fusion with calcification of the ligaments (Bácsalmás–Óalmás, Grave 173)

these cases were subjected to palaeomicrobiological analysis at the Pathological Institute in Munich in the autumn of 1999, where in five cases the specific DNA fragments of tuberculosis bacteria were both amplified and sequenced.²⁵ In addition to the previously mentioned pulmonary and pleural tuberculosis on Grave 85, the multifocal destructive vertebral inflammation on Grave 39 yielded a clearly positive result, and the molecular biological diagnosis was similarly certain in three further cases of early-stage vertebral inflammation (graves 48, 53 and 118). Significant in the history of science is the fact that the Bácsalmás–Óalmás series produced the world's first molecular biological confirmation of early-stage TB vertebral changes (Ill. 7). Given the thorough re-examination of the spinal remains of the Bácsalmás set of anthropological finds and the new morphological criteria, it is likely that varying stages of

¹⁹ MOLNÁR – PÁLFI 1994.

²⁰ ÉRY 1979–80.

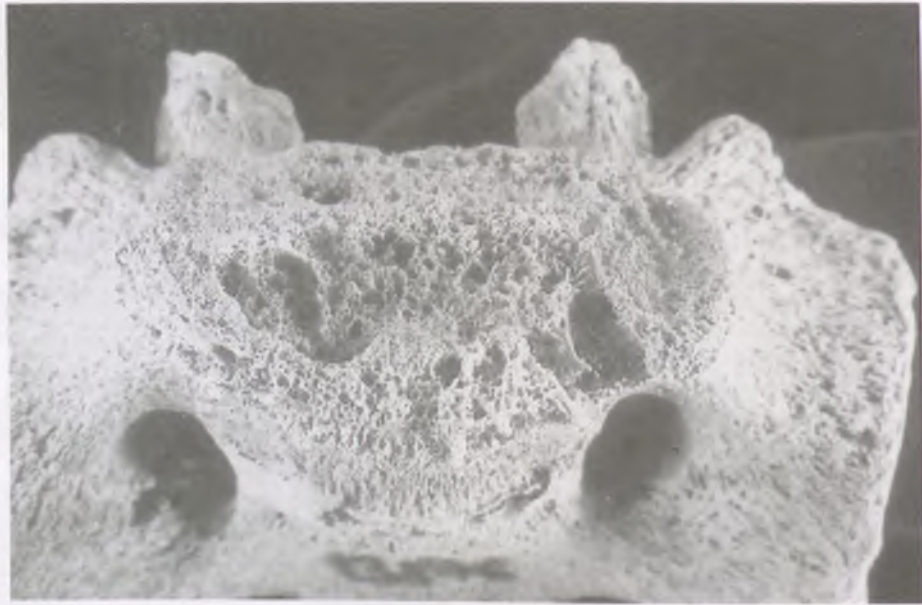
²¹ ROBERTS – LUCY – MANCHESTER 1994.

²² HAAS – ZINK – MOLNÁR – MARCSIK – DUTOUR – NERLICH – PÁLFI 1999.

²³ BAKER 1999.

²⁴ PÁLFI – MARCSIK 1999.

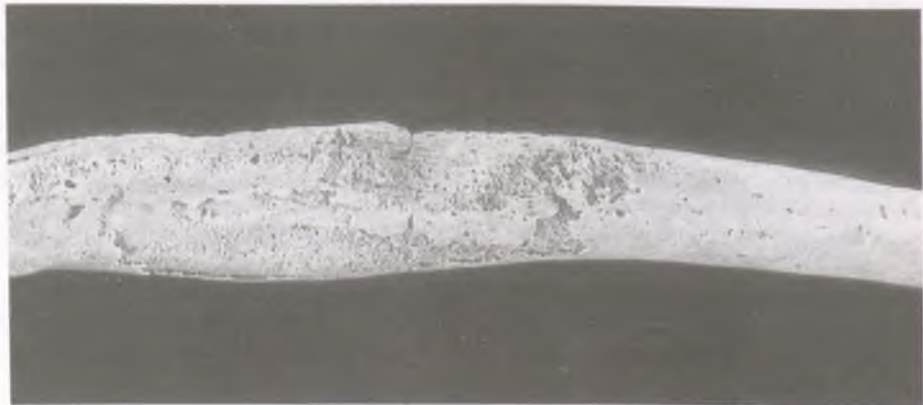
²⁵ HAAS – ZINK – MOLNÁR – SZIEMES – REISCHL – MARCSIK – ARDAGNA – DUTOUR – PÁLFI – NERLICH 2000.



III. 4. Traces of lumbo-sacral tuberculosis on the sacrum (Bácsalmás-Óalmás, Grave 39)



III. 5. Rib fusion as a complication from chronic pulmonary/pleural TB (Bácsalmás-Óalmás, Grave 85)



III. 6. Periostitis on the inner surface of the rib resulting from pulmonary/pleural TB (Bácsalmás-Óalmás, Grave 61)

vertebral TB will occur in 15 individuals, representing a corrected frequency of 15.5% with regard to the spines of the given 107 juvenile and adult individuals.²⁶ The rate of occurrence of tuberculosis is further increased by four cases in which bone deformations were not connected to spinal symptoms (Grave 132: probable wrist-joint TB involving fused ossification; Grave 85: rib fusion and pleura calcification confirmed by DNA examination and described above; graves 32 and 83: diffuse periostitis probably indicating TB).

Conclusions

The Bácsalmás-Óalmás anthropological series abounds in signs of a variety of chronic pathological changes, among which a large number of symptoms of degenerative spinal deformations were noted in our examinations. An earlier study reports significant numeric ratios in the dental pathologies.²⁷ These phenomena may be related to the fact that the sample has a large number of skeletons of older individuals, suggesting that the conditions for long life were present in the population. Unfortunately, however, this fell only to those who survived the wars, epidemics and all the other severe health problems of the era, including the "white plague", tuberculosis.

To summarise the most important elements of this study briefly, the following statements can be made:

(1) Owing to the favourable geographical features of the excavation site and the careful recovery of the finds, the sixteenth- to seventeenth-century Serbian cemetery of Bácsalmás-Óalmás provides an extremely valuable set of anthropological finds. At present the results of palaeopathological analysis have yielded considerable information on this population from the late sixteenth and early seventeenth century; however, both archaeological and historical data, as well as palaeopathological findings, make the effects of high endogamy likely, for which reason there is considerable promise of important findings in the anthropological classification currently in progress, and in comparative analysis with other series of similar historical periods and ethnicities. The good state of preservation of the finds facilitated the experimental introduction of new types of palaeopathological methods, such that in the future the Bácsalmás sample may serve as a reference collection in comparative palaeopathological analyses.

(2) During our palaeopathological/palaeorheumatological examinations particular attention was paid to the spinal deformations observable in the series. Consistent with the presence of older generations, the high rate of degenerative vertebral deformations and the prevalence of diffuse idiopathic skeletal hyperostosis are extremely significant, as is the presence of two cases of ankylosing spondylitis and



Ill. 7. Early-stage vertebral TB: surface irregularities and hypervascularization (Bácsalmás-Óalmás, Grave 53)

the presumed family relationship of the sufferers. The corrected prevalence of AS of around 2 per cent is at least one order of magnitude greater than would be expected in a random population.²⁸ While kinship of the two individuals cannot be proven beyond all doubt – perhaps a genetic examination would give added accuracy – this is currently the first case where the question arises at all in the palaeopathological literature with regard to seronegative spondylarthritis.

(3) The most significant palaeopathological data in the series is the high prevalence of tuberculosis. At present 19 probable occurrences of bone and joint tuberculosis – described in the previous section – are recorded among the 107 juvenile and adult skeletal remains in question. More than half of the cases can be considered "highly probable", partly on the basis of the confirmed *Mycobacterium* sequences, and partly on account of the unambiguous morphological picture. It is worth noting that nearly three-quarters of the alterations were observed in skeletons from the juvenile age group, indicating a level of

²⁶ ARDAGNA, at the press.

²⁷ GYURKÓ 1995.

²⁸ GRAN – HUSBY 1993.

infection above 50 per cent in this age group.²⁹ (Despite our earlier negative findings, a re-examination of the infant skeletons may be justified.) It should also be mentioned that no case of advanced, “classic”, chronic bone and joint tuberculosis occurred in the Bácsalmás tubercular finds presented. This may suggest heightened aggressiveness or virulence on the part of the disease (or weak resistance capacity on the part of the population). The high number of disease victims may be related to the location of the community or to the public health conditions of the

era. As for the question whether the Bácsalmás sample is a single “endemic lump”, or perhaps a much more generalized phenomenon, the answer can only come from a wide-ranging series of thorough examinations. What is clear from this one sample, however, is that the prevalence of tuberculosis is not simply a product of the nineteenth and twentieth centuries in Hungary, as is indicated not only by the Serb population of the Bácsalmás–Óalmás cemetery, but also by the mummies of inhabitants of Vác who lived nearly a hundred years afterwards.³⁰

²⁹ In medieval finds from France (La Celle, Var) we have shown similarly high prevalences of tuberculosis, but here the disease chose its victims mainly from the children's age group, particularly from the age group of 0–1 year, ARDAGNA – AYCARD – BÉRATO – LEGUILLOUX – MACZEL – PÁLFI 1999.

³⁰ PAP – JÓZSA – REPA – BAJZIK – LAKHANI – DONOGHUE – SPIGELMAN 1999.

Some Possible Directions for Research into Ottoman-era Archaeological Finds in Hungary

In the past decades – following the Western European trends – in Hungary, too, there has been a growing interest in the archaeology of the post-medieval period, especially in the sixteenth to seventeenth centuries, a period defined by the Ottoman occupation. It is a welcome change that while even fifteen years ago the archaeology of the Ottoman period was rarely chosen as the subject of a university or doctoral dissertation in Hungary, there is now a wealth of studies on the archaeological assemblages from the excavation of sixteenth- to seventeenth-century sites. The wide choice of themes discussed at this conference also indicates that research in this field has opened up new horizons and, also, that besides the study of Ottoman Turkish artefacts, research into the heritage of the local population at that time has not been neglected either. It must also be noted that although the ending of Ottoman rule in the late seventeenth century closed this period in Hungary from the historical point of view, there is very often no break in the archaeological record – especially with regard to local material –, and in this sense continuity can be noted between the seventeenth and eighteenth centuries.

The past decades have brought a genuine breakthrough in the archaeology of the Ottoman occupation era. Even though our knowledge has grown spectacularly, scholars dealing with this period still have to face a number of difficulties. In the following I shall outline a few of the problems (some have been addressed already) whose more detailed study remains a task for future research.

Dating

One important consideration in the dating of Turkish assemblages that can be definitely associated with the conquerors is the duration of the Ottoman occupation of a fort or settlement, and its possible torching and rebuilding. Although the broad time-brackets, i.e. the date of capture by the Ottomans and the date of re-capture by Christian forces, are obviously very important, they often represent a very broad, sometimes a century-long, period of time. For example, the Turkish finds from the Eger and Kani-za fortresses are datable to between 1596 and 1687

and 1600 and 1690 respectively.¹ The objects from the small Turkish castle (*palanka*) at Újpalánk near Szekszárd can be assigned to the period of its existence, i.e. to between 1596 and 1686.² However, in order to refine the internal chronology of the rather uniform Turkish artefacts, it is necessary to define shorter periods associable with archaeological features that can be securely linked to specific events and adequately documented. Without the years and the exact archaeological context, average Turkish artefacts – such as glazed footed bowls (Ill. 1. 1–3) and copper vessels – cannot be dated more precisely to within a shorter span of time.

The find circumstances and the find context need to be repeatedly emphasized since sometimes even the dates of an Ottoman period just a few years long are insufficient for a precise dating, as shown, for example, by the copper vessels known from Ajnácskő (today: Hajnáčka, Slovakia) (Ill. 2). Magda Bárány-Oberschall dated this assemblage to between 1645 and 1649, when the Turks occupied the fortress for the second time.³ Géza Fehér later suggested that the assemblage, consisting of a pan, two copper cauldrons and four bowls with pedestals, could be equally well assigned to the mid-sixteenth century, to the time of the first Turkish occupation of the fortress (1546–1593).⁴ In other words, even the relatively brief spans of Ottoman presence in the fortress were of little help in dating this group.

As a counter-example we may quote the copper vessels from Vál, found in the 1980s,⁵ whose date of manufacture and use could be assigned to a specific period within the 143-year-long Ottoman occupation of this castle on the basis of their find context. The assemblage – containing a cauldron, a baking pan, a platter, a ewer, a drinking cup, and three bowls with pedestals, as well various vessel fragments – was recovered from a pit that could be dated to the period between the rebuilding activity begun in 1693–94 after the destruction of the castle (1686–87) and the large-scale ecclesiastical constructions launched in 1721–22. The vessels can thus be dated to the later seventeenth century, to its last third.

The use of Turkish and Balkan copper wares continued to some extent even after the end of Ottoman rule. Countless copper vessels from the Balkans reached Hungary by means of trade during

¹ MO. TÖRT. KRÓN. II. 1982, 417, 422, 511, 514.

² GAÁL 1985, 186.

³ BÁRÁNYNÉ OBERSCHALL 1944, 359.

⁴ FEHÉR 1962, 154, 164, Pl. XXII. 4, 7, 9–11, Pl. XXV. 1.

⁵ HATHÁZI – KOVÁCS 1997, 198–209, Ills 4–8.



Ill. 1. Glazed Turkish pottery from the fortress at Szolnok, 16th-17th centuries. (Photograph by Károly Kozma)



Ill. 2. Pieces of a copper vessel assemblage from Ajnácskő, 16th–17th centuries. (Photograph by Bence Képešy)

the eighteenth century,⁶ and these often resemble, down to the tiniest detail, the late seventeenth century ones found in Hungary. The identification of copper wares from the eighteenth century or later from among them lacking a secure archaeological context is one of the tasks of future research.

A number of other examples could also be quoted here, since in some cases finds from various archaeological layers and features from older and more recent excavations could indeed be dated to a narrow span of time.⁷ My purpose was to point out the difficulties in the internal periodisation of the “everyday” objects of the Ottoman conquest period, and to emphasize the need for the precise documentation of their archaeological contexts.

Historical events play an important role in the study of the internal chronology of local Hungarian artefacts also. The best starting point in this respect is an examination of the stages of the Ottoman expansion into Hungary, since the occupation of a major fort or fortress often meant the cessation or, conversely, the renewed flourishing of a settlement or a workshop.

Let us take as an example the Kanizsa fortress and its broader vicinity. Following the Ottoman capture of Szigetvár (1566) and, later, the fall to the Turks of Kanizsa itself (1600), the stock of settlements

supplying Kanizsa with various wares decreased in number and, at the same time, changed with regard to composition. After 1566 the importance of the villages north of Kanizsa and in the town's hinterland increased, while the areas east of the fortress lost their former importance.⁸ The situation changed again after Ottoman troops installed themselves at Kanizsa. The years 1566 and 1600 can thus be regarded as a kind of watershed in the life of southwest Transdanubian villages and their workshops, and they also affected the material culture of given sites.

These changes can be more easily traced through the finds from excavations conducted on sites that had a short lifespan. The comparison of their assemblages can contribute to the determination of the lifespan of a workshop, as well as its location and the distribution area of its products, facilitating the creation of a chronological sequence for different artefact types and their typological, as well as regional, variants.

One short-lived castle in the Kanizsa region was Botszentgyörgy, in existence between 1481 and 1577 (Ill. 3).⁹ The objects discovered there can be dated to the late fifteenth century and early sixteenth century, although they are more representative of the latter. The excavation (1995–2001) of Bajcsa palisade castle¹⁰ near Kanizsa (the castle's construction was

⁶ GERELYES 1997, 2.

⁷ To quote an example from my own excavations, by carefully observing the late sixteenth-century debris layer representing the destruction of the castle and its separation from the layers of the subsequent levelling of the Turkish palisade at Barcs, I was able to subdivide the almost 100-year-long period between the construction and the destruction of the stronghold (1568–1664) into sub-periods of a few decades each (cf. KOVÁCS – RÓZSÁS 1996; KOVÁCS 1998). Their correct dating was confirmed by the internal stratigraphy of Barcs castle, as well by the wider interrelations of the region. At Barcs, for example, the layer dated

to the last third or close of the sixteenth century yielded pottery wares and knives identical with or similar to the objects from Bajcsa castle, while the best parallels with the finds from the debris layer dated to the 1660s and from the fill of the moat came from the seventeenth-century artefacts at Kanizsa fortress and from among the late material at more distant Transdanubian sites.

⁸ MÉRI 1988, 15; VÁNDOR 1994, 289, Map 7.

⁹ VÁNDOR 1995.

¹⁰ VÁNDOR 1994, 319–322, 345; 1997; 1998; VÁNDOR – KOVÁCS – PÁLFFY 1998/2000; KOVÁCS 2002.



Ill. 3. The fortress of Kanizsa in southwest Transdanubia, late 16th century. (Drawn by Sándor Ósi)

funded by the Styrian Estates) yielded a rich corpus of artefacts from the period between 1578 and 1600. These abovementioned sites serve excellent comparative material for the fifteenth- to seventeenth-century finds of István Méri's excavations in the Kanizsa fortress,¹¹ as well as of later rescue excavations. In other words, the results of more recent excavations offer new perspectives for the study not only of the Kanizsa material, but of the period as a whole.

On the basis of the Bajcsa excavations it is now possible to identify the late sixteenth-century artefacts in the Kanizsa assemblages.¹² It is also clear that the two strongholds – Kanizsa and Bajcsavár – were in part supplied by the same workshops during these decades; at the same time, the evaluated ceramic finds also indicate that the late medieval fortified manor house forming the core of the fortress at Kanizsa was no longer an aristocratic residence, but a provisions storehouse. We also noted that the ceramic sherds from the Turkish suburb (Turkish: *Topraklık*) established there in the seventeenth century included rather few examples characteristic of those in the Bajcsa assemblages. It would appear that those workshops that supplied Kanizsa and Bajcsa at the close of the sixteenth century were no longer active in the seventeenth century, or at least that their output had declined. The examination of the written sources is also important, since the lack of the products of certain workshops at seventeenth-century Kanizsa cannot be attributed to the Ottoman conquest alone.

Kanizsa was quoted as an example to illustrate one possible direction for future research, namely the determination of the regional workshops of the Ottoman conquest era, as well as the creation of an internal chronology for the local, Hungarian wares of this period not only in southwest Transdanubia, but also in other areas of Hungary.

Regional variations in the material unearthed

To focus on pottery production, according to our present knowledge no regional variations can be distinguished in glazed Turkish wares in Hungary. By contrast, several regional variants can be noted in the spread of slow-turned pottery wares. Appearing together with the glazed Turkish wares in the sixteenth- to seventeenth centuries, this pottery is, on the basis of its archaeological and ethnographic analogies, defined as the heritage of various Balkan population groups arriving with the Turks from the Balkans. It generally appears in the Turkish castles and forts of southern Transdanubia, mostly in the smaller ones, although in varying proportions.¹³

Klára Hegyi has demonstrated that the Turkish castles, forts and fortresses of the occupied territories were, irrespective of their geographic location, garrisoned with Balkan soldiers, mostly from Bosnia-Herzegovina.¹⁴ In her view the distinctive distribution of these slow-turned pots and jugs can be explained by the immigration of a Balkan popula-

¹¹ MÉRI 1988.

¹² KOVÁCS, Kanizsa.

¹³ GERÓ 1978, 351–352; GAÁL 1985, 189; GERELYES 1988, 280; KOVÁCS 1998, 156–162.

¹⁴ HEGYI 1998, 243. Cf. also her study in this volume.



Ill. 4. So-called Bosnian jug from the fortress at Kanizsa, 17th century. (Photograph by Tibor Kádas)

tion of rural origins and its settlement around the forts and in the deserted villages of southern Transdanubia for the most part, where it performed military service.

However, another possibility must also be considered, one that may have influenced the distribution of this slow-turned pottery during the Ottoman period. Although slow-turned pottery can be regarded as rather archaic in Hungary after the fifteenth century, certain types were still manufactured by Hungarian potters in southern Transdanubia during the late medieval period,¹⁵ as shown by vessels found in fifteenth- to sixteenth-century contexts.¹⁶ The slow-turned wares of the Ottoman era – also identified at Bajcsa – that can be associated with Hungarian potters, or perhaps with Croatian ones in Slavonia or southern Transdanubia, indicate that local potters still used the slow wheel during this period. The future research should definitely pay greater attention to this circum-

stance, i.e. the nature and composition of the assemblages recovered from the Turkish forts was determined not only by the garrison troops and the other inhabitants of a given stronghold, but also by the surrounding local villages and their craftsmen that supplied these strongholds.

The so-called Bosnian jugs (Ill. 4) represent a less familiar type among the slow-turned pottery wares of the Ottoman period. These thick-walled coarse vessels were usually tempered with small pebbles. Most were ornamented with rouletted patterns arranged into strips. This pottery was found primarily in southern Transdanubia, e.g. at Pécs,¹⁷ Berzence, Babócsa,¹⁸ Törökkoppány,¹⁹ Barcs,²⁰ and Kanizsa.²¹ With regard to the last-mentioned site, characteristically enough this ware was recovered almost exclusively from the *Topraklık* quarter (Turkish suburb) of the fortress. In view of the analogies from Bosnia-Herzegovina quoted by Géza Fehér,²² this vessel type can be linked to the Bosnian population of the Turkish town, whose presence at Kanizsa was also noted by Evlia Çelebi.²³

When we look at Hungarian pottery finds from the Ottoman era, the differences between artefacts from sites several hundred kilometres from each other are fully obvious, without the need for a more probing comparative examination. Besides documentation of local pottery types and ornamentation and more detailed studies of these,²⁴ tasks outstanding are the clarification of regional differences and analysis of possible connections with folk pottery.

Distinctive Gömör pottery items have been reported from a given territory – the northern and north-east area – of the Ottoman-ruled zone; the written sources, such as an account-book for 1661 from Nagykörös,²⁵ mention that these were traded goods: “We purchased pots, clay and wooden bowls, old cooking pots, and a small wooden bucket from the Rimaszombat merchants.” – “We bought bowls and jugs from the Rimaszombat merchants.” – “We also bought pots, a shovel and a pail from Márton Sós of Rimaszombat.” The appearance of these artefacts over a larger territory indicates that the distinctive Gömör wares – thin-walled pottery decorated with red and reddish-brown painted patterns on a white ground²⁶ – were popular both in the Ottoman-ruled territories and in Royal Hungary. The growing corpus of archaeological finds offers the possibility of mapping

¹⁵ HOLL 1956, 190–191.

¹⁶ KOVALOVSKZI 1969, 246–247, from Csepely. Comparable slow-turned pottery from this period has also been reported from Nagykanizsa-Vár, Nagykanizsa-Bajcsa-vár, Ocsény and Decs-Ete. Here I would like to thank Zsuzsa Miklós and Márta Vizi for their kind permission to study the still unpublished finds from their excavations at the last two sites.

¹⁷ PARÁDI 1958, 132, Pl. LXII. 18; FEHÉR 1959, 126–127, Pl. II. 4–7, Pl. VI. 2–3, Pl. IX. 10–13.

¹⁸ Author's observation.

¹⁹ KOVÁCS 1990–91, Pl. IX. 3, Pl. X. 3–5.

²⁰ Surface sherds collected by Márton Rózsás at Pusztabarcs. Cf. also KOVÁCS 1998, note 7, Ill. 17. 4–8.

²¹ KOVÁCS, Kanizsa, Pl. 8.

²² FEHÉR 1959, 126–127.

²³ KARÁCSON 1985, 570.

²⁴ Certain differences in form and ornamentation can be noted, e.g. in the case of the so-called black jugs: in Transdanubia they are ornamented rather with indented and incised patterns, while on the Great Hungarian Plain indented patterns are more common. In the case of polychrome-glazed ornamental plates, Transdanubian wares are usually ornamented with geometric motifs on a dark brown ground, while comparable plates from the Great Hungarian Plain usually have red, reddish-brown or green floral and animal patterns outlined with dark lines on a white or light ground.

²⁵ KRESZ 1960, 308.

²⁶ E.g. from Törökszentmiklós: KOVÁCS, Gy. 2001a, Pl. 12. 1–6.



Ill. 5. Sherds of Iznik faience wares from the fortress at Szolnok, 16th–17th centuries. (Photograph by Károly Kozma)

the distribution of Gömör wares more precisely and, also, of determining the survival into the eighteenth century of different workshops and their products.

Import wares in the Ottoman-ruled territories

As regards the import wares of the Ottoman period in Hungary, there is a wealth of historical studies on trade during this period. Many papers have been devoted to trade relations between the occupied territory and the Balkans and Anatolia, Transylvania, and Royal Hungary, as well as Austria, Germany and Italy.²⁷ According to the thirtieth tith and toll registers, a wide range of goods was brought from faraway regions to the central, Ottoman-dominated

regions of Hungary. It remains a task for archaeological research to document how this was reflected in the material culture of everyday life and how it is manifest in the forts and their broader environment, as well as in villages and towns. Little has been done in this respect as regards the assemblages from the Ottoman-era sites investigated.

Let us take as an example Iznik faience and Chinese porcelain wares (Ills 5–6), although these cannot be regarded as genuine import items since they are an organic part of the Turkish material. Appearing in Hungary at a rather early date, these fine wares were no doubt gifts or luxury items, whose more widespread use can be documented only in later periods.²⁸ The finds recovered from excavations²⁹ have not been systematically collected nor extensively investigated yet.

²⁷ GECSÉNYI 1981; 1993; 1995; 1998, with additional literature.

²⁸ For Iznik pottery, cf. ASLANAPA 1965; ASLANAPA – YETKIN – ALTUN 1989; ATASOY – RABY 1994; for Chinese porcelain cf. LUNSINGH SCHEULEER 1974.

²⁹ Buda: GYÜRKY 1974, 417–422, Taf. XLIX–LII; GERÓ 1978, 347–350; Szolnok: KOVÁCS 1984a, 44–54, Pls 28–32; Eger: FODOR – KOZÁR 1970–71, 149, Ills 13–16; Ozora: FELD – GERELYES 1985, 174, Ill. 10; Székesfehérvár: SIKLÓSI 1982, 3, 81.200; Kanizsa: MÉRI 1988, Pl. XXII. 2 and KOVÁCS, Kanizsa, Ill. 9. 1–4, etc.



Ill. 6. Sherds of Chinese porcelain wares from the fortress at Szolnok, 16th–17th centuries. (Photograph by Károly Kozma)

Even less is known about the possible distribution of the various products of Western European workshops in Hungary, and especially their occurrence in the Ottoman-occupied territories. The written sources mention that scythes, knives, various metal tools and implements, lengths of wire, nails and a wide variety of other goods arrived by the tens of thousands from Styria, where there was a flourishing iron industry in the sixteenth century.³⁰ A wide range of other objects no doubt also arrived, in lesser bulk maybe, that were perhaps gifts or simply articles for personal use.³¹ Even though it would be rather difficult to demonstrate that some or many of the rusty nails recovered during an excavation were Styrian products, it might be possible to distinguish – among the restored knives – between Steyr, Nuremberg and other Austrian or German products. Suffice it here to mention Imre Holl's studies examining fifteenth- to sixteenth-century knives that achieved significant results in this field.³² Western pewter vessels also are shown among finds in the Ottoman-ruled territories. A small pewter plate from Szolnok (Ill. 7),³³ made probably in a German, perhaps Nuremberg, workshop, indicates that Western Euro-

pean products appeared not only in towns of Royal Hungary, but also in Turkish-dominated areas.³⁴ Finally, it should also be emphasized that not all the colour-glazed pottery sherds from excavations of Ottoman-era sites date back to the eighteenth to twentieth centuries. They may well include sixteenth- to seventeenth-century Western European pieces, although the telling apart of the latter is a rather difficult task, since a definite tendency towards uniformity can be noted in the pottery culture of the period.³⁵

One of the sites that yielded large numbers of Italian, Styrian, Austrian, and German products is the abovementioned Bajcsa castle near Nagykanizsa. Although the presence of these products at Bajcsa³⁶ can no doubt be associated with the fact that Styria contributed greatly to the maintenance of this fortification and thus they cannot be regarded as trade items in the genuine sense of the term, they nonetheless serve as excellent comparative material for contemporaneous artefacts, primarily from southwest Transdanubia, since they represent rare European types from the late sixteenth century (Ill. 8).

³⁰ FEKETE – KÁLDY-NAGY 1962, *passim*; ZIMÁNYI 1976, 150, 154–155; GECSÉNYI 1993; HOLL 1994–95, 171.

³¹ Cf. GECSÉNYI 1995, 779.

³² HOLL – PARÁDI 1982, 68–78; HOLL 1994–95.

³³ KOVÁCS 1984b, Ill. 7. 3. This plate was originally mistakenly defined as a Turkish product. It does not have any precise analogies, and thus its date and probable place of origin have been determined on stylistic grounds. I would here like to thank Imre Holl for his generous help with this. Cf.

also MORY 1961, Abb. 67–68; BERTRAM – ZIMMERMAN 1967, Abb. 50, 71, 104; REINHECKEL 1971, Abb. 4; HAEDEKE 1973, Abb. 11, 175–176, 268, 425, etc.

³⁴ Cf., for example, the ornate Steyr knife among the finds from the Turkish castle at Barcs: KOVÁCS – RÓZSÁS 1996, Ill. 17. 6.

³⁵ Cf. STEPHAN 1987.

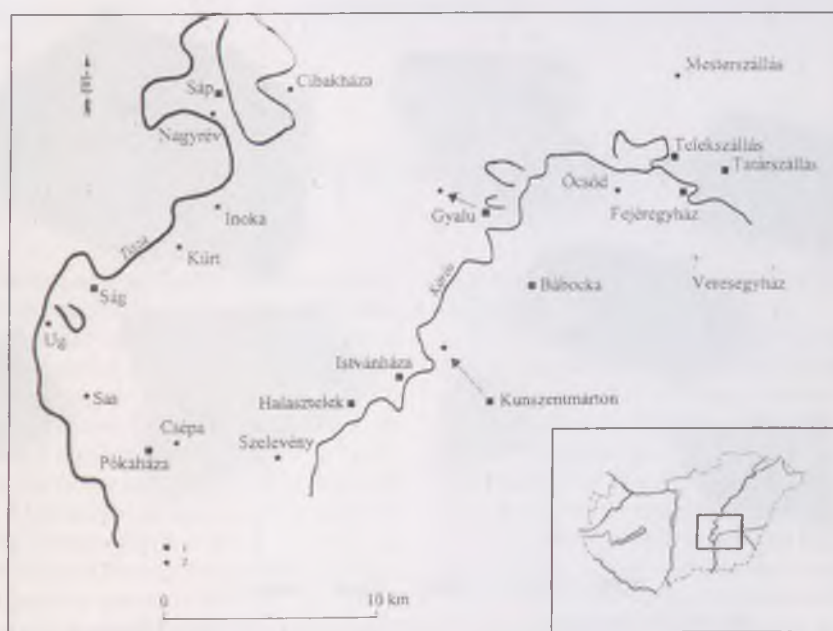
³⁶ KOVÁCS, Gy. 2001b, Pls 12–15; KOVÁCS 2002; KOVÁCS – VÁNDOR, under publication



Ill. 7. A small pewter plate from the fortress at Szolnok probably made in Germany, 17th century. (Photograph by Károly Kozma)



Ill. 8. Sherds of Western European ceramics from the excavation of Bajcsa, 1578–1600. (Photograph by Tibor Kádas)



Ill. 9. Villages of the Tiszazug in the 16th–17th centuries. (Drawn by Rita Magony and Sándor Ósi)
 Key: 1. Villages deserted during the era of Ottoman Conquest
 2. Settlements surviving up to-day

The role of topographical studies

Finally I would like to mention an aspect of Ottoman-period archaeology less often studied, namely archaeological topography, based on the findings of field surveys conducted in the Tiszazug region, in the heartland of the one-time Ottoman-dominated territory.³⁷ According to the historical sources, a number of villages were abandoned and deserted during the era of Ottoman sway in the Tiszazug (Fejéregyháza after 1580, Veresegyház and Bábócka in 1596, Sáp in the early seventeenth century, and Istvánháza and Ság at the close of the seventeenth century). There is evidence that some settlements were abandoned several times: the inhabitants fled a village to which they later returned. Very few villages survived the Ottoman occupation without a longer period of abandonment (e.g. Kürt and Nagyrév) (Ill. 9).³⁸ As regards the occurrence of the sixteenth- to seventeenth-century finds in the region, we could conclude the following:

(1) Sixteenth-seventeenth-century finds (ceramic sherds) occur in villages that were either abandoned during Ottoman rule or, conversely, survived it. The composition of these assemblages permits various conclusions. Glazed Turkish pottery was rarely recovered during these field surveys, suggesting that genuine Turkish articles, or at least pottery, did not reach the remote villages of the Tiszazug, lying far from the Ottoman forts, and that Turks did not settle in this region. The objects generally include local pottery wares; the assembled fragments allow the reconstruction of pottery wares characteristic of the region.³⁹ The fact that import wares from distant parts are entirely lacking from Ottoman-era material in the Tiszazug is a reflection on the nature of the trade relations of these villages during this period.⁴⁰

(2) Sixteenth-century finds were found on the sites of villages that had been destroyed by the close of the sixteenth century (such as Bábócka, Fejéregyháza, etc.), mostly in association with earlier wares, but not later ones. Obviously, seventeenth-century pottery was

³⁷ The joint surveys by the Archaeological Institute of the Hungarian Academy of Sciences and Damjanich Museum of Szolnok, as a part of the project "The Archaeological Topography of Hungary", were conducted in Szolnok County between 1977 and 1991 by Róbert Kertész, Pál Raczky, Csilla Siklódi, Judit Tárnoki, Marietta Csányi, Béla Kriveczky, János Cseh, József Laszlovszky, and Gyöngyi Kovács.

³⁸ For the history of these villages, cf. the relevant sections of ADATOK I–II (SOÓS – SZABÓ – SZABÓ I/121–122; BOTKA I/137–138; HAVASSY I/519–520; BOTKA – SZABÓ I/567–569; SZABÓ –

SZABÓ I/599–600; SOÓS – SZABÓ II/59–61; SZABÓ II/ 81–83; BOTKA – SOÓS – SZABÓ II/211–214; BOTKA – SZABÓ II/449–451; T. BEREZKY – SOÓS – URBÁN II/485–487; T. BEREZKY – SOÓS – URBÁN II/579–580; T. BEREZKY – SOÓS – URBÁN II/ 671–672).

³⁹ On the basis of field material collected at Törökszentmiklós, the villages of the Tiszazug and even the Arad area, ceramics partly of the same kind appeared in the late fifteenth century to the first half of the sixteenth century.

⁴⁰ The few rim fragments from Viennese vessels predate the Ottoman era.



Ill. 10. Post-medieval pottery from the territory of Csépa village.
(Photograph by Tibor Kádas)

recovered from the sites of villages that had been inhabited or abandoned during the seventeenth century; at the same time, the problems arising from the uncertain internal chronology of seventeenth- to eighteenth-century pottery must at all events be borne in mind with regard these finds. Since the pottery of these two centuries (glazed pot fragments, jug fragments fired in a reducing atmosphere and the occasional pipe) can only be distinguished with difficulty, especially in the case of fragments, these sherds assigned to the seventeenth century can equally well date to the eighteenth century (Ill. 10). This is often a problem in the case of material collected from the territories of villages with a continuous existence, since these objects can just as well be associated with the late Ottoman period (seventeenth century) as with the post-occupation period (eighteenth century).

(3) The pottery fragments found in the vicinity of modern farmsteads can be dated within still wider time-brackets. They are obviously late pieces as far as the age of the farmsteads is concerned, but it must be borne in mind that if the nature of the sites were not known, these worn sherds could be regarded as seventeenth-century ones. The pottery remains recovered from areas under vine cultivation can in most cases be associated with the viticulture of the post-occupation period. Still, there is written evidence that vine cultivation was practised in the era of

Ottoman occupation in the region – e.g. at Tiszakürt and Tiszasas⁴¹ –, and some of these sherds could therefore include specimens from the Ottoman age.

(4) Artefacts that can be tentatively assigned to the sixteenth to seventeenth century have also been found in other areas (even when they have only been handfuls of sherds). These are indistinct pieces for the most part whose their dating is uncertain, but they could nevertheless be useful in identifying places of refuge of the type described by Róbert Müller in his topographical survey of the Fonyód district.⁴² Müller found small settlements that could, on the basis of their finds, be unequivocally dated to the sixteenth to seventeenth centuries; these sites lay far from roads and were at the time been surrounded by marshland, water or woods; in other words they could be regarded as places of refuge. Similar sites no doubt also existed in the Tiszazug, despite the fact that the population of a village usually fled to the neighbouring village or villages in times of danger. However, further investigations are needed to interpret sites yielding only a few fragments of uncertain date as such places of refuge. Despite the fact that in the Tiszazug the findings are for the moment questionable, the identification of the archaeological remains of temporary settlements from the period of Ottoman occupation mentioned in the written sources is definitely worth the research effort.⁴³

⁴¹ ADATOK (T. BERECZKY – SOÓS – URBÁN II/492–493; II/580).

⁴² MÜLLER 1970.

⁴³ The evaluation of the sixteenth- to seventeenth-century glass finds in Hungary will be the task of future research. Cf. HOLL 1971; GYÖRKY 1986; 1991; MESTER 1997, with additional literature.

X-ray Emission Analysis of Turkish Copper Vessels

Over 300 composition analyses were conducted on various artefacts from approximately 200 different collections between 1995 and 1999, as part of a research project supported by National Research Fund (OTKA).¹ The purpose of these analyses was partly data collection, and partly an attempt to determine by statistical methods whether any groups can be distinguished among the copper and bronze artefacts from the Ottoman period on the basis of their trace element composition. Other objectives were to establish whether these possible differences are useful in determining workshops and Turkish, Balkan and Hungarian products; and, also, whether materials of the same or varying composition were used in the manufacture of a given artefact.

The analyses were performed using the NZ-450 X-ray emission spectroscope of the Directorate of Somogy County Museums in Kaposvár. The J-125 isotope was used for induction and the induced X-ray emission was detected by a Si/Li detector. This non-destructive method is employed routinely in the examination of archaeological objects.²

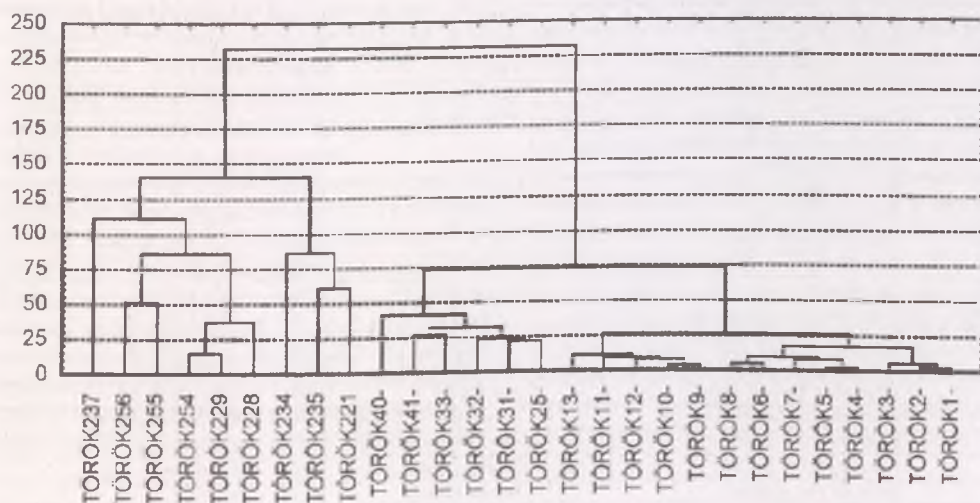
Although the full evaluation of the analytical results is not complete yet, a brief report on the findings for three assemblages, containing mainly vessels, will be presented here. Considering the relatively small size of the sample, this data should

be seen as additional information for the classification of these finds.

A comparison was made of the trace element composition of finds from the Ottoman-period palisade at Vál,³ finds from Buda Castle,⁴ and finds from Ajnácskő (today: Hajnáčka, Slovakia) that are now kept in the Hungarian National Museum.⁵ Although, obviously, the results of the twenty-eight analyses conducted on seventeen objects (Tables 1–2) are not valid for all the artefacts on which these analyses were performed, some conclusions may nonetheless be drawn from the statistical analysis (Ill. 1).

The analysis of the different parts of individual vessels reveals that the components were made from similar, but not necessarily identical material, a finding indicated also by a preliminary examination of the vessels from Vál.⁶ Looking at the artefacts from the three sites, a closer connection can be noted between the finds from Ajnácskő and those from Vál, while the artefacts from Buda form a separate group. The Buda finds are slightly more heterogeneous in themselves.

Another interesting finding is that vessels identical in function (such as kettles and cauldrons) were more similar to each other even in their material than they were to other objects. (Of course, this finding may change when the full analysis of all the finds is completed.)



Ill. 1. Dendrogram of Ottoman-period bronze objects from Vál, Buda Castle and Ajnácskő. Complete Linkage. Euclidean distances.

¹ Project no. T 018060.

² KÖLTŐ 1982; 1998.

³ HATHÁZI – KOVÁCS 1996, 34–40; 1997, 198–209.

⁴ Cf. Zoltán Bencze's study in the present volume, Ills. 5–8.

⁵ FEHÉR 1962, 154, 164, Pl. XXII. 4, 7, 9–11, Pl. XXV. 1; See also Gyöngyi Kovács's study in the present volume, Ill. 1.

⁶ KÖLTŐ 1996; 1997.

Table 1. Trace element composition of Ottoman-period bronze objects from Vál, Buda Castle and Ajnácskő.

Sample/element (%)	Fe	Ni	Cu	Zn	As	Ag	Sn	Sb	Pb	Bi
török 1	0.00	0.14	90.45	0.0	0.16	0.1	3.97	4.92	0.21	0.05
török 2	0.11	0.25	92.45	0.0	0.24	0.07	4.95	1.65	0.22	0.07
török 3	0.02	0.23	95.89	0.0	0.1	0.06	1.95	1.45	0.2	0.09
török 4	0.00	0.18	95.79	0.0	0.05	0.1	1.59	1.86	0.95	0.08
török 5	0.00	0.16	90.1	0.0	0.11	0.1	7.49	1.42	0.57	0.00
török 6	0.05	0.01	94.44	0.0	0.25	0.07	1.75	2.85	0.57	0.00
török 7	0.00	0.15	97.14	0.0	0.00	0.02	1.12	1.45	0.07	0.06
török 8	0.00	0.00	96.03	0.0	0.00	0.02	1.54	1.94	0.43	0.05
török 9	0.00	0.00	96.15	0.0	0.02	0.02	1.51	2.03	0.21	0.06
török 10	0.00	0.27	96.03	0.0	0.12	0.17	1.37	1.69	0.25	0.1
török 11	0.01	0.17	93.62	0.0	0.19	0.09	2.9	2.88	0.13	0.00
török 12	0.00	0.25	95.55	0.0	0.35	0.14	1.68	1.69	0.34	0.00
török 13	0.24	0.00	93.45	0.0	0.00	0.03	4.7	1.39	0.18	0.02
török 25	0.13	0.17	93.76	0.1	0.08	0.1	2.68	2.55	0.39	0.13
török 31	0.00	0.09	93.38	0.26	0.15	0.36	3.78	1.49	0.34	0.16
török 32	0.00	0.18	95.59	0.0	0.00	0.01	1.24	2.05	0.8	0.05
török 33	0.05	0.09	89.99	0.07	0.03	0.07	7.52	1.72	1.46	0.00
török 40	0.00	0.19	95.48	0.0	0.07	0.05	1.83	2.03	0.34	0.3
török 41	0.05	0.19	94.13	0.0	0.04	0.05	3.41	1.88	0.17	0.09
török 221	0.00	0.17	95.33	0.0	0.41	0.38	1.03	2.35	0.29	0.06
török 228	0.00	0.06	93.91	0.0	0.17	0.14	1.17	4.18	0.25	0.11
török 229	0.00	0.22	94.05	0.0	0.14	0.13	1.07	3.99	0.29	0.1
török 234	0.18	0.00	94.14	0.0	0.25	0.03	1.83	3.22	0.3	0.03
török 235	0.00	0.13	95.57	0.0	0.73	0.09	0.94	2.3	0.23	0.02
török 237	0.00	0.1	95.02	0.0	0.64	0.11	1.67	2.21	0.24	0.00
török 254	0.00	0.01	90.04	0.0	0.23	0.12	2.92	6.23	0.42	0.02
török 255	0.00	0.00	89.94	0.0	0.32	0.12	1.57	7.54	0.3	0.22
török 256	0.03	0.00	88.16	0.0	0.03	0.08	3.36	7.71	0.64	0.00

Table 2. Key to signs (SZIKM = Szent István Király Museum; HNM = Hungarian National Museum; BHM = Budapest History Museum)

Sample code	Artefact	Site	Inv. no.	Remarks
török1	Pierced fragment	Vál	SZIKM - 88.1.10	Burnt
török2	Inner side of a plate	Vál	SZIKM - 88.1.10.	Pewtered
török3	Outer side of a footed bowl	Vál	SZIKM - 88.1.1.	
török4	Handle of an <i>ibrik</i>	Vál	SZIKM - 88.1.2.	
török5	Spout of the <i>ibrik</i>	Vál	SZIKM - 88.1.2.	
török6	Small chain of the <i>ibrik</i>	Vál	SZIKM - 88.1.2.	
török7	Handle of a cauldron	Vál	SZIKM - 88.1.4.	
török8	Piece of the cauldron	Vál	SZIKM - 88.1.4.	
török9	Other side of the piece of the cauldron	Vál	SZIKM - 88.1.4.	
török10	Side of the cauldron	Vál	SZIKM - 88.1.4.	
török11	Bottom of a <i>lepsi</i>	Vál	SZIKM - 88.1.8.	
török12	Ornamented tray	Vál	SZIKM - 88.1.7. (F/2)	
török13	Bottom of a goblet	Vál	SZIKM - 88.1.3.	
török25	Cauldron	Ajnácskő	HNM - 125/1890.5.	
török31	Bottom of a cauldron	Ajnácskő	HNM - 125/1890.7.	
török32	Bottom of a cauldron	Ajnácskő	HNM - 125/1890.6.	
török33	Rim of the cauldron	Ajnácskő	HNM - 125/1890.6.	
török40	Rim of a footed bowl	Ajnácskő	HNM - 125/1890.3.	
török41	Foot of the bowl	Ajnácskő	HNM - 125/1890.3.	
török221	Bottom of a kettle	Buda Castle	BHM - 97.99.4.	
török228	Bottom of a goblet	Buda Castle	BHM - 97.99.7.	
török229	Side of the goblet	Buda Castle	BHM - 97.99.7.	
török234	Bottom of a cup	Buda Castle	BHM - 97.102.1.	
török235	Side of a cauldron	Buda Castle	BHM - 97.99.6.	
török237	Bottom of a small bowl	Buda Castle	BHM - 97.99.9.	
török254	Body of an <i>ibrik</i>	Buda Castle	BHM - 97.99.2.	
török255	Handle of the <i>ibrik</i>	Buda Castle	BHM - 97.99.2.	
török256	Spout of the <i>ibrik</i>	Buda Castle	BHM - 97.99.2.	

Coppersmith's Work in the Balkan Countries

Owing to its central geographical position on the Balkan Peninsula, Macedonia has always been an area of interest. The culture of the Ottoman Turks is one of the many cultures and civilizations that have left their mark on the life of the peoples inhabiting this region.

The Ottoman Turks ruled the territory of Macedonia from the late fourteenth century until the beginning of the twentieth century, until 1912. Their presence there was considerable, primarily among the inhabitants of the towns. After the initial conquests that lasted for a century, Macedonia became the strategic border region from which all the other Balkan and European conquests were launched.¹ This was especially true after the capture of Skopje in 1392. This settlement became a significant military centre in Rumelia, and later on an economic and cultural one as well.²

The imposition of the social, economic and cultural structures of the Ottoman Turks onto the newly conquered and populated regions was relatively rapid on account of the strong medieval system already in existence there.³ Ready to accept from this established system anything that seemed practical and useful, the Ottomans themselves contributed much to social, economic and cultural life.⁴ This was the case with crafts also. The important position occupied by crafts in the economy of the Ottoman Empire was soon apparent in the towns of Rumelia also. The existing crafts were already in a developed and advanced condition, and many new crafts were introduced. In the beginning, most crafts supported military needs, but soon there were also those that manufactured products for civilian use.⁵

One good example was the development of metalwork. In the Middle Ages metalworkers were usually lumped together under the name of goldsmiths. The goldsmiths were well organized and held a respected position within the state. In medieval times, their status was defined and regulated by the renowned Dusan's Law Book, dating from 1349.⁶ After the Ottoman conquest, the goldsmiths were divided into various metalworking crafts. Some of these (gunsmiths, cutlers, blacksmiths, minters, and bell-casters) pro-

duced artefacts for the state and the military, while others (silversmiths, tinsmiths and coppersmiths) catered to the needs of the common folk.⁷

In addition to their usefulness, the objects produced by the abovementioned crafts also had artistic value, appropriate to the time and place of production. Such a melding of utility and artistic elements can also be seen in the works produced by coppersmiths.

In the Ottoman period copper artefacts, textiles and artefacts made from wood were characteristic elements of town households.⁸ From their first appearance onwards, copper artefacts underwent continuous modification, as a result of historical, economic, social, and cultural circumstances. As part of the interior furnishings of a house, copper artefacts followed the development characteristic of households in the region. In other words, they mirrored the evolution of households in the towns of Rumelia from the fifteenth to the eighteenth centuries, and from the mid-eighteenth century to the first decade of the twentieth century.⁹

The period from the late seventeenth century to the early nineteenth century witnessed the construction of finer buildings in Rumelia, and the furnishing of interiors with artefacts on a high aesthetic level. At the same time it saw the production of copper artefacts to higher artistic standards.

The pressure of rapid changes in social, political and economic life coupled with the growing influence of Western Europe caused the Ottoman Empire to weaken in the second half of the nineteenth century and in the early part of the twentieth. It became clear that it was incapable of adapting to the new circumstances. This contributed to the contraction of the empire's borders, as a result of which its European territories were reduced to the middle part of the Balkans, with Macedonia at the centre.¹⁰ This process led to changes in ethnic and social structure, as well as to the rapid growth of the Slavic elements in the towns. All this had an effect on material culture, including the handicrafts.¹¹ Up until the first decade of the twentieth-century coppersmith's art retained its importance in Macedonia.

¹ HAMMER 1979, 62–69.

² KUMBARADZI 1998.

³ STOJANOVSKI 1960, 314–316; 1981.

⁴ TALBOT-RICE 1968; TIHIĆ 1979, 313.

⁵ KREŠEVIJAKOVIĆ 1935, 55–178; ŠOPOVA 1955.

⁶ JIRIČEK 1922, I, 40–48.

⁷ RADOJKOVIĆ 1966, 154; ČOROVIĆ-LJUBINKOVIĆ 1977, 71; PETROVIĆ 1964, 117–120; 1977, 123.

⁸ HAN 1969; NAZIM 1996.

⁹ SVETIEVA 1992.

¹⁰ ITZKOWITZ 1979, 285; VINAVER 1960.

¹¹ PANOVA – PALIKRUSHEVA – APOSTOLSKI 1996, 20–25.

The first evidence of coppersmith's art in the Balkan countries can be traced to fifteenth-century Skopje. This means that the town was not only a military and political centre, but also an economic and commercial one, where coppersmith's art – one of the staple crafts – occupied an acknowledged position. It may seem a little forced, but nevertheless we assume a connection between the fact that coppersmiths were first registered in the Balkan countries in Skopje in 1454 and that today the Museum of Macedonia (Muzej na Makedonija) has a very rich collection of copper artefacts.¹² This craft looks back on 550 years of tradition in the city, and therefore it is no coincidence that the Museum can claim the richest collection of copper artefacts in the Balkans. That this claim is warranted has been confirmed by my travels, during the course of which I have surveyed the Macedonian centres along with collections, storerooms and exhibitions in the Balkan countries more generally.¹³ Turkish scholars have a high regard for these surviving examples of the coppersmith's art, and have assigned to them the epithet "Bosnian work".¹⁴ The collection of metal household items at the Museum of Macedonia's Department of Ethnology consists of more than one thousand copper vessels and objects.

The objects can be classified according to function, and within this function according to shape and decoration. On the basis of their shape – which, naturally, stemmed from their intended use – vessels can be classified as flat, shallow, moderately deep, and deep. On the basis of their decoration they can be classified as embellished over the entire surface, partially embellished or embellished with an inscription only. With regard to their function, four main groups can be established:

- (1) Household artefacts,
- (2) Artefacts serving personal hygiene,
- (3) Artefacts for sacral use,
- (4) Artefacts used in trade and handicrafts.

Household artefacts may be divided into four subgroups: cooking (kitchen) vessels; dinnerware (tableware); vessels for liquids; and vessels for heating, lighting and decoration.

Cooking vessels differed with regard to size and shape; their surfaces were decorated a little or not at all. The following artefacts may be assigned to this category: *tenceres* (saucepans), *kotles* (small kettles), *araniyas* (large kettles with handles), *grnes* (pots), *ta-vas* (frying pans), *tepsiyas* (small trays), *saans* (large dishes with lid), *tsedalkas* (strainers), and *maslarches* (oil containers).

Many forms of tableware are known: *siniyas* (round metal trays), *saans* (large footed platters), *tablas* (circular or oval trays), *kases* (cups or bowls), *sefer tases* (travelling tableware with a number of metal dinner-plates fastened together), sugar and coffee containers, boxes for the transportation of food, and ladles.

Vessels for liquids containers differ significantly from the other vessels with regard to shape. In this group of vessels the following may be included: *gums* (long-handled vessels for water), *ibriks* (narrow-necked vessels with a spout), *gezves* (coffee cups), *zarfs* (cup holders), *kartas* (wine flasks), and *kazans* (cauldrons).

The household items category includes artefacts used for heating, such as *mangals* (braziers); artefacts used for lighting, such as *shandans* (chandeliers) and *feners* (lanterns); and decorative objects, such as vases, ashtrays and various containers.

Some of the containers that were mainly used for personal hygiene purposes are *kazans* (cauldrons for heating water), *amam tases* (cups used by visitors to Turkish baths for pouring water on themselves), *legens* (basins), and soapboxes.

The artefacts for sacral use were used in churches, mosques and private homes alike. This group includes *kandilos* (coil lamps), *krshatniks* (fonts), *kadel-nica-buhurdars* (censers), *svekniks* (chandeliers), *saan-diskuses* (large round trays), *naformicas* (wafer boxes), and *putirs* (chalices), as well as smaller cups.

The fourth group consists of toolboxes, pots, trays, and stills.

The age of copper vessels can be determined from the technique employed, the decoration and the shape. Very seldom do we find a year referring to the time of production. More rarely the degree of wear can influence the establishment of a date for an artefact.¹⁵

Most of the artefacts in the Museum of Macedonia's collection can be dated to a period extending from the mid-seventeenth century to the mid-twentieth century. Most are products from centres for copper work in Macedonia (Skopje, Prilep, Stip, Kruševo, Strumica and Ohrid); a lesser number come from other centres (Bosnia, Turkey or states in the Middle East).

For a long time the possession of copper artefacts served prestige purposes, as well as functional and decorative ones. They were also a way of expressing wealth.

We have many documents from the Ottoman period in Macedonia in which copper vessels are mentioned. The present author has found thirteen such documents: two *vakifnames* (deeds of pious

¹² KARAMEHMEDOVIĆ 1980, 67.

¹³ Featuring in this survey were the ethnographical museums in Ankara, Konya and Izmir; the Topkapi Saray Museum and the Museum of Turkish and Islamic Art in Istanbul; the collection of the private Sadberg Museum Sadberg in Turkey; the Ethnographical and Applied Arts Museum

in Belgrade; and the National Museum in Sofia. HASAN-EPENDIĆ 1978–79, 401; KARAMEHMEDOVIĆ 1980, 201, 311; PRIMOVSKI 1955, 139; PETEVA 1939, 139–181; BELLİ-KAYAĞLU 1993, 91, 136, 192.

¹⁴ KONESKA 1991, 325.

¹⁵ KONESKA 2000.



Ill. 1. Ornamented tray (*sini*) from Bitola (after KONESKA 2000)

foundations established by Turkish dignitaries) from 1570 and eleven *sicils* (judicial records) from the periods 1607 to 1642 and 1800 to 1839. These documents suggest that copper artefacts and *kilims* were the only movable household items that were listed in the probate inventories. These documents indicate – in addition to the names of the owners – the variety, types, value, and number of these artefacts. They also attest to their use for religious and secular purposes alike.¹⁶ It is important to note that the social estimation of copper artefacts was the same as that accorded to the other valuable artefacts indicated in the probate inventories. The documents available do not allow us to follow the development of copper artefacts from earliest times: they show merely that during the period from the seventeenth century to the nineteenth century the number of copper artefacts in households gradually increased. There were changes in usage, with many types of vessel featuring in different roles. With regard to their value, however, no significant changes can be detected.

In the seventeenth century copper vessels were used primarily in the households of aristocratic Muslim families. Only in the nineteenth century do they begin to appear in the ownership of wealthier Christian families.¹⁷

In Macedonia in the period from the seventeenth to the nineteenth centuries the ethnicity of copper-smiths exerted an influence on – among other things

– the embellishment featured on copper vessels. Changes in the decoration on *sinis* (circular trays) enable us to tell where and when artefacts were made.¹⁸

In the Balkans, in Bosnia, in Bulgaria and in Turkey a specific Macedonian embellishment appeared on copper artefacts in the late eighteenth and early nineteenth centuries. This embellishment, which we call “Macedonian”, consisted of floral ornamentation geometrically arranged in circles style decoration is rich in floral motifs arranged into circles and has a reduced composition with changed ornaments in regard to the one previously determined. The composition was dominated by a central motif encompassed by concentric bands. Certain elements of the central motif were repeated in the outermost band. This mode of decoration is similar to the ornamentation found on jewellery,¹⁹ and on woodcarvings,²⁰ made in the region at this time.

The appearance of this local decoration on copper artefacts coincides with the emergence of groups in the Christian population that were more highly placed in the social order. Undoubtedly, it was for these Christian groups that *sinis* of this type were made. The Museum collection’s oldest *sini* ornamented in this style originates from Prilep. On it the year 1799 and two names can be read. One name – Natza – refers to the owner and the other – Petar – to the craftsman who made the artefact. Both names are Christian Orthodox names.

¹⁷ KONESKA 1999.

¹⁸ KONESKA 1997a, 266–272; 1997b, 113–126.

¹⁹ GUŠIĆ 1955, 176–178.

²⁰ SVETIEVA 1992, 52; HAN 1956–57, 115–135.

¹⁶ TURSKI 1963, 102; 1969, 123–124; 1972, 43–44; 1995, 55, 123; 1951, 94–98; 1959, 17; 1955, 87; 1957, 9, 37, 76, 90.

An Ottoman-era Cellar from the Foreground of Buda's Royal Palace

In the autumn of 1999 the remains of a cellar dated to the Ottoman period were unearthed during an excavation at Lovarda köz, in the northwest foreground of the Royal Palace of Buda¹ (Ill. 1). This cellar had probably been destroyed during one of the sieges for the recapture of Buda (1684 or 1686). Its fill yielded medieval and sixteenth to seventeenth-century pottery, as well as animal bones.

The excavation

During the clearing of Trench 99/1, opened in front of the northern facade of the Royal Stables, we observed the following layer sequence: a hard-packed, grainy, upper layer containing charcoal and pottery from the Middle Ages and the Ottoman period, a thin layer with stone dust yielding few finds, and a pit with a brown organic fill. In addition to a high number of animal bones, a significant amount of pottery was unearthed, predominantly fragments of glazed pots, mugs, storage vessels, bowls, and plates from the sixteenth to seventeenth centuries, but also various medieval pottery sherds and fragments of different types of stove-tile, as well as metal and glass objects, along with faïences from Anatolia.

The excavation of the pit revealed that this was not a simple refuse pit, since the mixed stone debris of a cellar was uncovered under the organic brown layer. This fill could be dated by the predominantly Ottoman-period pottery. The sunken western wall of the cellar was unearthed when the eastern part of the trench was cleared down to the rock; after enlarging the trench, the remains of the northern wall were also identified (this wall, too, contained no mortar) together with three postholes cut into the rock to the east. The southern section was destroyed during the construction of the Royal Stables and it is therefore unclear whether the cellar had a southern wall or whether it had been cut into the rock on this side; a part of the structure roughly 3 metres by 4 metres large was unearthed (Ill. 2).

A few steps led into the cellar on the western side of the northern wall, between an upright wall on the west and a posthole to the east; the fill of the en-

trance yielded a mixed pottery assemblage, similar to the one from the fill of the cellar.

West of the cellar, above a thin humus layer covering the rock, a uniform brown fill of brick and other debris was found; the nature of the finds from this fill more or less corresponded to the assemblage recovered from the fill of the building and in a few cases fragments of the same vessel could be identified among the finds from inside and outside the building.

Four chronological phases could be distinguished on the basis of the layers sequence in the fill of the cellar. A layer containing refuse and the stones of the collapsed wall covered the rock that had probably served as the floor. The reason for the west-to-east sloping of the rubble was discovered when the trench was enlarged: the western wall of the cellar had collapsed first and the western section of the northern wall was also heavily damaged, while the northeast section had remained fairly undamaged. The fill of organic material and faeces was apparently dumped into the pit from the west; it seems that the material was probably rather soft since its uppermost part was almost horizontal and it apparently oozed in among the stones in the loose cellar debris, right up to the rock that formed the cellar wall in the east. Later, the area west of the building was filled up to the surviving part of the western wall and the entire area was levelled using hard-packed earth mixed with charcoal.

The finds

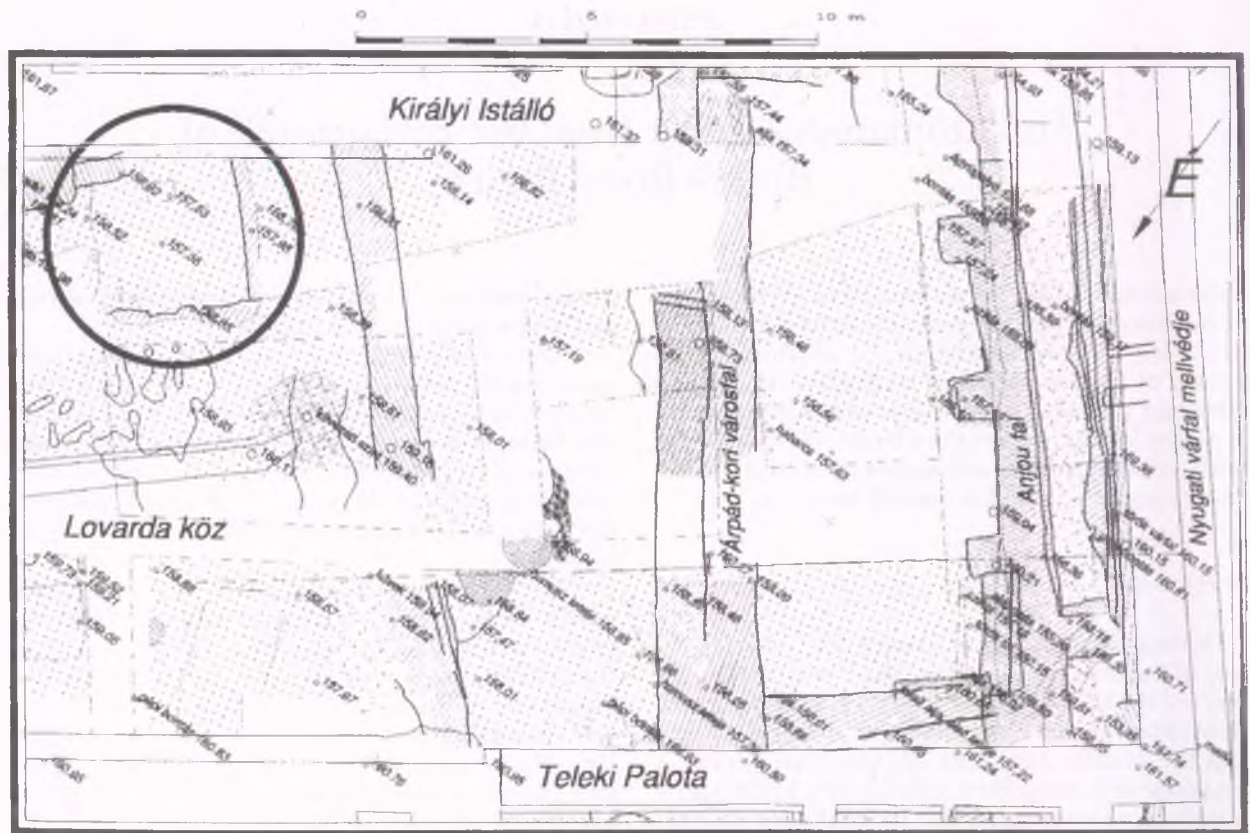
The description of the finds will be restricted to the pottery; the glass, metal and bone finds will only be mentioned in brief. The ceramic assemblage from the cellar is varied both as regards pottery types and its period of manufacture. Very few intact vessels were found and even fewer could be assembled from their fragments. Interrelation between the finds from different layers could be demonstrated primarily in the case of the ornamental pottery.

Household pottery

Household pottery was made up of pots, cups, liquid containers (jugs and ewers), bowls, plates and other kitchen vessels.

The four major fill units of the cellar and its immediate surroundings, as well as the four layers of the cellar entrance, showed the same picture: a highly mixed assemblage, spanning a long period of time.

¹ The excavation was directed by Károly Magyar, whom I would here like to thank for allowing the publication of the finds. I would also like to thank Eszter Kovács for her help in dating the Ottoman period ceramics, Margit Bakos for preparing the photographs and Zsolt Viemann for the site plan.



Ill. 1. The ground plan of the excavation. Key: KIRÁLYI ISTÁLLÓ=Royal Stables

The assemblage did not contain the pottery of a single household, but the finds from a large-scale levelling operation, in the course of which the remains of a house destroyed during one of the sieges (1684 or 1686) were levelled and filled up to a certain height (as indicated also by a cannonball and a few shell fragments found in secondary positions in the fill).

A small, but nonetheless significant portion of the finds is made up of medieval pottery fragments: all the major pottery types characteristic of Buda Castle in the thirteenth to fifteenth centuries are represented in the assemblage. Most of the sherds came from pots, cups and storage jars fired to a white colour, although sherds with a yellow, pink and red fabric also occurred, together with Austrian pottery wares. Two small sherds from a plate covered with a light greenish-yellowish glaze represented ornamental pottery.

The greatest part of the ceramics material of Ottoman period-date consists of Hungarian wares (Ill. 5); the only Turkish products were a few footed bowls, the fragments of a glazed lid, and baking trays.

The assemblage from the Turkish era spans a rather long period of time; the various pots and cups from this period make up the greater part of the finds. One distinctive group comprises a wide variety of late sixteenth- and early seventeenth-century cooking pots with segmented rims and interior glazing, their bodies being widest in the upper third.² The rims are occasionally scalloped or decorated with grooving.

Fragments of pots with globular bodies and out-turned rims with interior glazing dated to the seventeenth century occur in large numbers.³ The latest pieces are the pottery fragments dating to the close of the seventeenth century: squat pots with one or two strap handles and interior glazing, either plain or decorated with ribbing.⁴

Slow-turned, so-called "Bosnian" wares are entirely lacking.

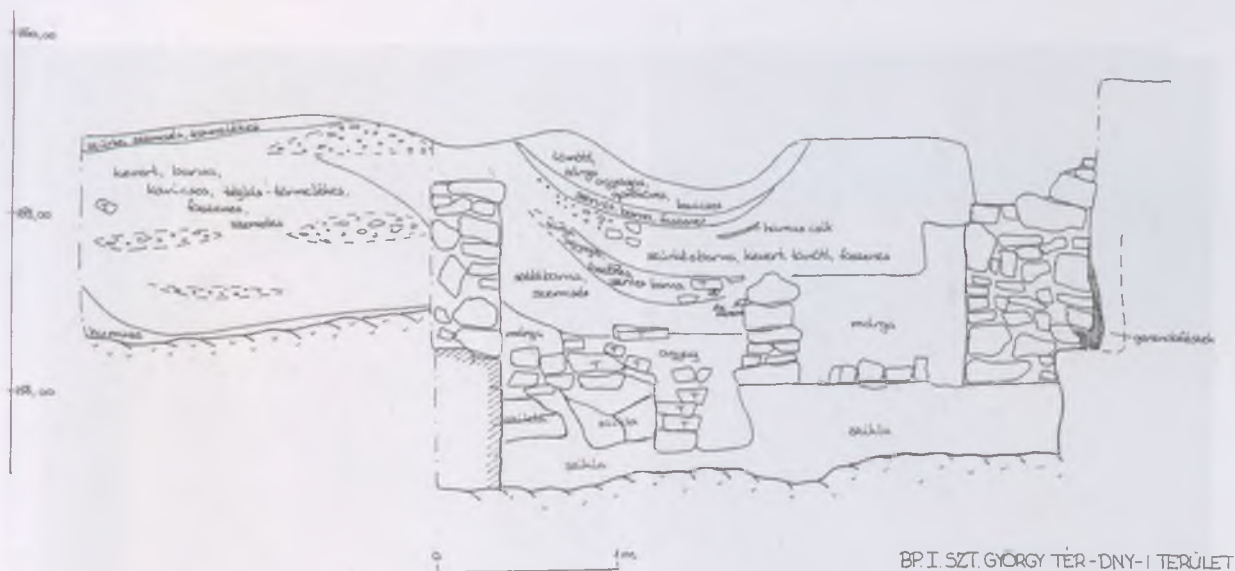
Plates and bowls come in a variety of shapes. Most common is the footed bowl with globular body and straight or slightly out-turned rim⁵ fired to a red colour or, more rarely, a whitish colour. Another frequent form is a lower bowl with strongly out-

² LÁZÁR 1986, 38–39, Ill. 1. 4–7, Ill. 2. 1, Ill. 3. 1–3; GERELYES – FELD 1986, 169, Ill. 5. 6.

³ GERELYES – FELD 1986, 169, Ill. 4. 7; unpublished material and kind oral communication from Eszter Kovács.

⁴ LÁZÁR 1986, 42–43, Ill. 9. 3–4, Ill. 10. 2–3; HATHÁZI – KOVÁCS 1997, 214, Ill. 10. 2, 5, Ill. 13. 3, 6. Unpublished material and kind oral communication from Eszter Kovács.

⁵ KOVÁCS 1984a, Pl. 11. 6, 10, 17.



Ill. 2. The northern wall of the cellar

turned⁶ or raised rim,⁷ occasionally decorated with grooving.⁸ The foot is low and slightly arched. Ornamentation is varied. Sgraffito decoration appears on two fragments: the vegetal pattern, incised leaf motifs, is on a light green base, with dark green and brown contours around the leaves. More frequent are variants decorated with light and dark green, or brownish-yellowish bands and spots in drip glazing,⁹ although monochrome glazing in green or, occasionally yellow in the interior of the vessel and, rarely, on the exterior is the most common.

Besides footed bowls, vessels with slightly in-turned swollen rims decorated with monochrome glazing or painted bands (in one case with concentric circles in black and white), characteristic of the turn of the eighteenth century,¹⁰ also occur.

Glazed or black spouted jugs are entirely lacking; the single liquid container was a slightly funnel-necked jug with two strap handles with a glazed interior and glazing on the upper part of the exterior. It was found in the middle posthole on the eastern side of the cellar.¹¹

There were few lid fragments among the finds; most were fired to a grey colour, except for a light yellow fragment with green glaze on its exterior.

The finds did not include baking lids; however, several coarse rim fragments of chaff-tempered clay were found, together with two bowl fragments made from fine clay; one of these had a hole approximately one centimetre in diameter in the centre of its base.

Most of the stove-tiles were of the bowl-shaped type, showing a great variety in size, wall thickness and profile. Cup-shaped stove-tiles in various sizes were also found: some were green or, more rarely, yellow glazed.

Only one single pipe was found; it is almost intact, grey in colour and with a ribbed decoration.

Anatolian faïences

In contrast to the almost complete absence of medieval ornamental pottery, a high number of Oriental import wares, including Iznik faïence and Chinese porcelain, were found. Similarly to the Hungarian pottery, these import ceramics show a wide variety and span a longer period of time. The rapid, uniform infilling of the cellar is observable here: fragments of the same vessel often came to light from two or even three different layers.

The earliest faïence fragments can be assigned to the Damascus style of the Iznik pottery workshop. The best parallels to the rose motifs and the use of manganese, green and blue colour occur on dishes and pitchers dated around 1545–1550.¹²

The wares from the later sixteenth century show an extremely varied repertoire of forms and patterns.

The fragment of a bowl decorated with flowers and pointed green leaves on a blue ground can be dated to around 1560, its best analogy being a plate in the collection of the Metropolitan Museum of Art in New York.¹³

⁶ Kovács 1984a, Pl. 11. 11, 14.

⁷ Kovács 1984a, Pl. 11. 2.

⁸ Kovács 1984a, Pl. 11. 11, 15.

⁹ Kovács 1984a, 33, Pl. 14. 3, Pl. 15. 1–4.

¹⁰ MÉSZÁROS 1968, Ill. 15; Kovács 1984a, 33, Pl. 33; HATHÁZI – Kovács 1997, 210, Ill. 13. 4.

¹¹ LÁZÁR 1986, 44, Ill. 12. 1; GERELYES 1991, Pl. 10; HATHÁZI – Kovács 1997, 210, Ill. 9. 3, Ill. 12. 3.

¹² ATASOY – RABY 1994, cat. no. 350.

¹³ ATASOY – RABY 1994, cat. no. 672.



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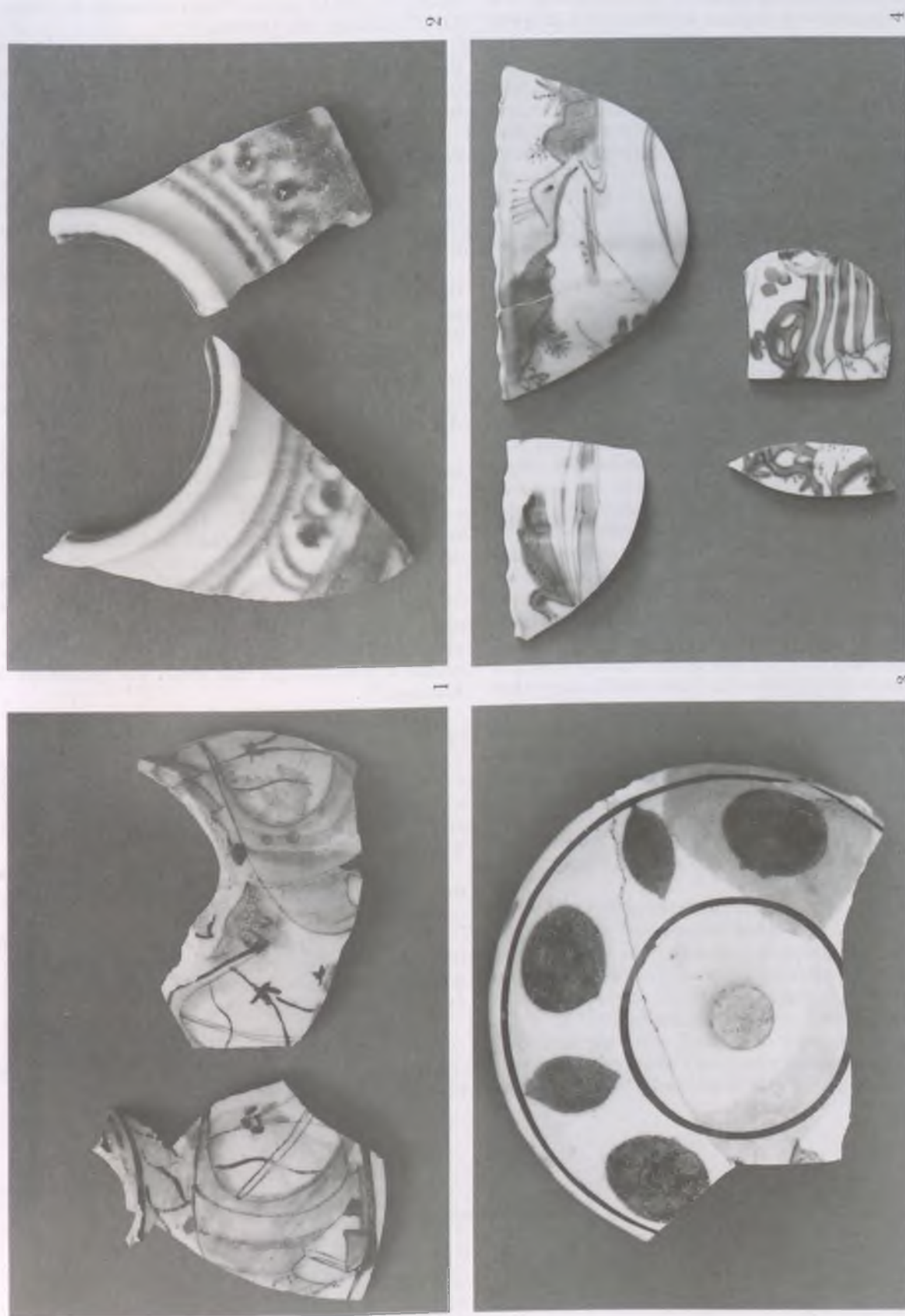


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III. 3. 1. Fragments of an Iznik tankard (1565-75); 2. Fragments of an Iznik jug and a dish (1574-75); 3. Fragments of an Iznik tankard (1575); 4. Fragment of an Iznik dish (1575)



III. 4. 1. Fragments of an Lznik jug (1625-1650); 2. Fragments of an inkwell (17th century); 3. Fragments of a lid (17th century); 4. Fragments of Chinese porcelain cups (17th century)

The most pleasing faience in the assemblage is a mug fragment with angular handles and a straight rim, decorated with red meanders in relief and green lines on a yellow base, and with large flowers and serrated leaves on a blue ground (Ill. 3. 1). The closest analogy to this piece is a small one-handed pitcher from the British Museum, dated to between 1565 and 1575: the rim pattern and floral decoration is identical, the only difference being in colouring.¹⁴ Another matching piece is a pitcher in the Musée de la Renaissance in Écouen, from the same period.¹⁵ Certain elements of the overall pattern also occur separately: the meander pattern occurs on a cup dated to 1590,¹⁶ while the serrated leaves feature on two cups dated to 1585 (these, too, are in the British Museum,¹⁷ as well as on two small pitchers in the Lisbon Museum.¹⁸

An almost intact small pitcher is decorated with blue, white and dark brown tendril and leaf motifs on a pink ground. The best parallel to this piece was recovered during the excavation of the Royal Stables, approximately 15–20 metres west of the cellar, between the collapsed town wall from the Angevin (Anjou) period and the western wall of the castle, from a fill dated by finds to the Turkish time (Ill. 3. 2). The pattern and colour of the bowl fragment found here compares well with that of the pitcher, the only difference being that the pitcher has a white glazed interior, while the bowl's interior is pink glazed, similarly to its exterior. A jug with a similar pattern is known from the collection of the Victoria & Albert Museum in London and the same motifs adorn one of the censers in the Museum of Naples; both can be dated around 1575. The most securely dated parallel is a water bottle made in 1574–75 from the mosque of Sultan Selim II in Edirne.¹⁹ Similar motifs ornament a cup dated 1575 in the Capodimonte Museum.²⁰ A plate with similar colours, but different patterns was brought to light from Pit 15/1 during the excavation of the former Armed Forces High Command building.²¹

The fragments of a white cup decorated with vivid red carnations, pointed leaves and small green tendrils (Ill. 3. 3) can be assigned to the Rhodes style; its parallels, a plate with a similar pattern in an Oxford museum²² and a water bottle in the Victoria & Albert Museum,²³ are dated to around 1575.

A plate fragment decorated with long-stemmed flowers and pointed leaves on a white ground (Ill. 3. 4) can similarly be dated around 1575; its closest

analogies can be quoted from museums in Frankfurt,²⁴ London and Oxford.²⁵

A rim fragment decorated with three-petalled flowers and turquoise fish-scale motifs can likewise be dated around 1575 on the basis of its parallels on bottles, cups and plates.

The fragments of a faience pitcher whose pattern cannot be reconstructed from its fragments also dates to this period; a comparable pattern of wavy lines can be seen on a pitcher in the Victoria & Albert Museum²⁶ and on a censer with a ship depiction in the Naples Museum.²⁷

The best parallels to the alternating blue and red flowers with rounded petals on a pitcher fragment are found on plates and dishes dated to around 1575–85.

The latest fragments come from a pitcher decorated with a ship (Ill. 4. 1). Occurring also on plates in various English collections, this fragment can be dated to between 1625 and 1650.

Some of the faience fragments are rather difficult to date: the turquoise and dark blue base fragment of a pitcher, the rim fragment of an inkwell decorated with blue tendrils (Ill. 4. 2), the rim and side fragments of a small pitcher, and a lid fragment decorated with green circles and leaves (Ill. 4. 3).

The meander decoration and wavy line pattern on the rim fragment of a cup can probably be assigned to the Iznik types dated to between 1580 and 1585, although the use of green and yellow colours also makes it possible that this vessel was produced in Kütahya.²⁸

Besides faience vessels, fragments of Chinese porcelain cups and bowls were also found.

Most attractive among these are the fragments of a fine, thin-walled cup with wavy rim, decorated with a waterfowl (duck?) and water plants on its exterior and a pattern of interlinked ovals in its interior (Ill. 4. 4, top).

Another similarly fine cup has deer figures on the exterior and five-petalled flowers with tiny leaves on the interior (Ill. 4. 4, bottom).

The fragments of a third cup are decorated with impressed interlinked arc motifs resembling fish-scales combined with arc motifs in blue, both on the exterior and interior.

Besides carefully made thin-walled fragments, coarser bowl fragments decorated with a simple tendril pattern in blue, with leaf motifs, and with bird-head and wing motifs were also found.

¹⁴ ATASOY – RABY 1994, cat. no. 726.

¹⁵ ATASOY – RABY 1994, cat. no. 727.

¹⁶ ATASOY – RABY 1994, cat. no. 625.

¹⁷ ATASOY – RABY 1994, cat. nos 621, 622.

¹⁸ ATASOY – RABY 1994, cat. nos 595–596.

¹⁹ ATASOY – RABY 1994, cat. no. 450.

²⁰ ATASOY – RABY 1994, cat. no. 626.

²¹ Here I should like to thank Zoltán Bencze and Edit Mester, leaders of the excavation, for their kind permission to quote this find.

²² ATASOY – RABY 1994, cat. no. 704.

²³ ATASOY – RABY 1994, cat. no. 703.

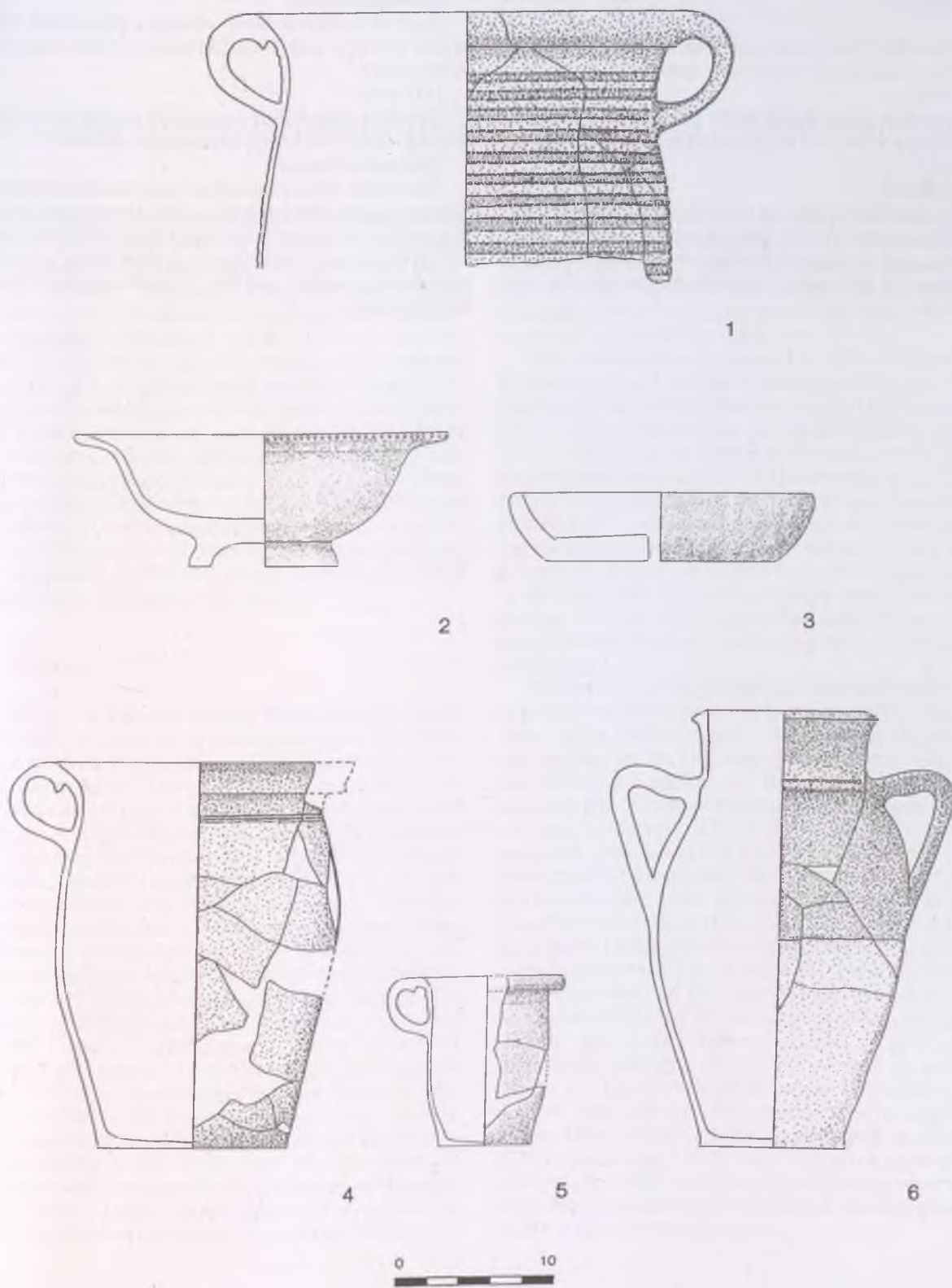
²⁴ ATASOY – RABY 1994, cat. no. 723.

²⁵ ATASOY – RABY 1994, cat. no. 704.

²⁶ ATASOY – RABY 1994, cat. no. 703.

²⁷ ATASOY – RABY 1994, cat. no. 690.

²⁸ LANE 1957, 65.



Ill. 5. Household pottery from the cellar

Other finds

The other finds have not been evaluated yet and shall be mentioned only briefly here.

(1) Glass

Very few glass finds were recovered from the cellar; most were very fragmented and have no dating value.

(2) Metal

In addition to various iron objects – a sword hilt, an almost intact sabre and an unidentifiable fragment –, an S-shaped bronze mount, a ring, an ornamental pin, and a candlestick were also unearthed.

(3) Bone objects

Half of a carved bone chequer decorated with circles of dots, and a leatherworker's awl make up these pieces.

(4) Coins

The fill yielded four extremely poorly preserved bronze coins; their legends are unreadable.

(5) Animal bones

The cellar fill contained an impressive amount of animal bones. Although the animal bone sample has not yet been analysed, it is clear that it is dominated by cattle bones, and also includes those of small ruminants, poultry and fish. In addition, there are a few pig bones.

A Turkish House and Stoves from the Water-Town (Víziváros) in Buda

Archaeological excavations were conducted on the plot at Gyorskocsi utca 26 before the planned enlargement of the Hungarian Foreign Ministry building in 1991–92.¹ This area, lying right next to the parish church of the medieval Szentpétermártir quarter, promised interesting results and this expectation was fully met by the excavations: we uncovered the cellar of a medieval house and the remains of a residential building dated to the Ottoman period that had been erected over an earlier one. The layer sequence of the burnt debris marking the destruction level was preserved inside the Turkish building. The rubble contained the remains of two collapsed tiled stoves, as well as many other pieces of the original fittings. This article will describe the excavations and the remains of the Turkish house, as well as the tiled stoves found during the excavations.

The excavation

The plot at Gyorskocsi utca 26 was already empty by the time the excavation was begun; the single storey house from the early nineteenth century had already been demolished. The present-day form and size of the plot can be traced to the post-medieval period since the first map showing the detailed plot divisions and building lines prepared in 1745–50 by Johann Matthey, a military engineer, reveals that at the time the area of the present-day plot was divided between two neighbouring plots.² The plan indicates a stone building in the southern part of the southern plot. This mid-eighteenth-century state of affairs, however, was also the result of a post-medieval change: the first survey of the houses in the Water-Town prepared in 1696 – the so-called *Zaiger* – shows an entirely different plot shape.³ In the *Zaiger* the plot marked as no. 253 was considerably shorter than the modern one, but wider towards the north and thus almost quadrangular. The single constant element in the changing form of the plot was its southern boundary that has apparently remained unchanged since 1696. A rather dilapidated wall stood on the plot at the time of the survey. As a matter of fact, the

entire area was – with the exception of a few plots along present-day Csalogány utca – in the ownership of a single person. It is therefore understandable that the new boundaries did not conform to those of the Ottoman period or to the preceding medieval plot structure when this property was divided.

The excavations conducted in 1991–92 revealed the medieval and Ottoman-period plot structure and buildings that differed from the post-1686 situation (Ill. 1). The remains of a medieval building with a cellar, rebuilt in the Ottoman period, were uncovered under the courtyard of the modern plot. Compared to the earlier one, the plot division was visibly shifted in the post-medieval period and this is why the remains of the medieval and Ottoman period were preserved. A modern cellar lies in the southern part of the plot and all earlier remains were destroyed during its construction; various modern intrusions also destroyed earlier structures in the northern part of the plot.⁴

The excavated building had two main parts: the rear part was built at an earlier date, in the Middle Ages, while the front part, extending to the street, was erected in the Ottoman period. Three sides of the medieval building, i.e. the cellar, could be uncovered; the fourth (southern) side the modern cellar had destroyed. The walls of the rectangular structure, which was 8.5 x 6 metres, had been built from crushed limestone. We did not find any traces of a floor in spite of the fact that the walls were higher than the foundations that could be observed on the outer side. In the absence of any traces of vaulting it seems quite certain that it originally had a flat ceiling. Its entrance lay on the eastern side. We found the stone threshold (102.02 metres above sea level, hereinafter: asl) in its original position, as well as an unshaped stone that was rather worn in its middle (Ill. 2. 2). The threshold lay some 60 centimetres deeper than the exterior medieval level and the original level of the cellar lay deeper still, at a depth of 80 centimetres (101.20 asl). A flight of stone steps led into the cellar, but the original configuration of these steps had perished as a result of the enlargement made in the Ottoman period.

¹ VÉGH 1998, 329–330. The excavations were conducted together with Katalin H. Kérdő of the Budapest History Museum's Aquincum Museum. We prepared the excavation documentation together.

² Map prepared by the military engineer Johann Matthey, 1745–50 (Wien Kriegsarchiv G.1.h.67).

³ NAGY 1964, 181–244. “N^o 253. Ein Haus in der Schantzgassen hat im gesicht 12 kl. 5 sch., und im Ruckhen 12 kl. 3 sch., an der rechten seyten ist 15 kl. 3 sch., und an der linckhen 14 kl. Lang, hat etwas wenig von alten schlechten gemeür ist zu einem Mayrhof eingefast.”

⁴ Cf. Márta Wellisch's excavation report in the Archives of the Budapest History Museum.

The construction date of the cellar could be determined from the levels noted on the northern side of the building (Ill. 2. 3). We uncovered sections of the lowermost levels of the stone paving of the courtyard that were cut through by several pits; these levels had been completely destroyed by modern intrusions in the area north of the cellar. A Viennese pfennig issued by Ottokar II, king of Bohemia (1253–1278), was found in the upper part of the paving made from flat stones, while the underlying 10–20-centimetre-thick layer yielded thirteenth and fourteenth-century pottery sherds. This fill covered the pebbly level that could be associated with the foundation of the house that dated the construction of the cellar; it overlay a humus fill covering Roman remains (103.30–40 asl).⁵ The earliest medieval level could be dated to the later thirteenth century on the testimony of the pottery finds; a denarius of King Béla IV (1235–1270) was also recovered from this level. A few baking ovens and fireplaces in the rear part of the plot could also be associated with this level.

The medieval cellar lay perpendicular to the street, probably in the southern part of the plot; this was indicated by the refuse pits uncovered on the northern side that cut through the stone paving and, also, by the fact that the cellar dated to the Ottoman period also faced this direction. It would appear that the cellar was not an independent structure, but that other buildings had adjoined it that extended to the street. These structures, perhaps built of wood, were later completely destroyed when the cellar was enlarged in the Ottoman period.⁶ The cellar and the stone building above it probably constituted some kind of storehouse.⁷

The building was rebuilt in the Ottoman period (Ill. 2. 1). The floor of the medieval cellar was raised by some 60 cm in the early Ottoman period. This fill was dated by a denarius minted in 1535 that can be regarded as a *terminus post quem* date. Charcoal, ash and other burnt debris lay on top of the raised yellow clay level (101.60–80 asl), indicating that the building had burnt down. Unfortunately, the finds were of no help in determining the exact date of the destruction. The new cellar was probably constructed after this destruction. The door of the earlier cellar was walled up and the cellar itself was infilled. Construction debris and the carcass of a horse were thrown into the fill during the termination of the cellar's existence. Ceramics from the Ottoman period (household pottery and stove-tiles) were mixed

with earlier medieval and Roman pottery, indicating that earth dug out from a nearby location was used for the infilling. This also explains the presence of finds from earlier periods.⁸

The cellar of the Ottoman period was oblong in ground plan, measuring 11.5 m by 6.5 m, its walls were of mixed crushed stone, primarily marl; the wall of the earlier medieval cellar was used as its western wall. Its entrance lay in the north with the hatch built against the wall of the house. The walls of the hatch overlay a Turkish refuse pit, proving that it had been built in the Ottoman period. Large stones brought here from the nearby Roman ruins were set on the floor in the centre of the cellar for the wooden pillars supporting the ceiling (Ill. 3).

The outer-levels associable with the buildings probably lay quite close to the modern surface, explaining why they were destroyed. However, the date of the building's destruction and its subsequent fate could be determined from infill layers of the cellar (Ill. 2. 1). In some spots the walls of the new cellar lay some 50 cm under the present surface (103.95 asl), while in others they lay 2 m deep owing to later intrusions that destroyed them. The cellar was finally infilled at the turn of the nineteenth century with a fill of stones and earth that also contained numerous post-medieval vessels (including intact ones). The date of this fill is indicated by a 1 kreuzer coin minted in 1800. The thickness of the fill varied between 50 cm and 1.5 m; it overlay alternating levels of refuse, charcoal and rubble, down to the lowermost level of beaten earth that was paved with bricks in some spots. This level was found 1.5 m below the present surface (103.00 asl). These layers apparently accumulated during the eighteenth century, no doubt after the cellar had been out of use. The stamped earth level overlay the destruction levels of the cellar that also covered the walled-up entrance to the medieval cellar. The topmost level of debris mixed with charcoal was 30–70 cm thick and it also contained construction debris along the cellar's walls. The fill yielded predominantly finds from the Ottoman period and a cannonball. A destruction level of burnt daub, charcoal and ash lay under this, while the lowermost level on the cellar floor consisted of charcoal and charred timbers. The thickness of the red burnt level varied between 20 and 80 cm and it contained not only the remains of the burnt building, but also various fittings that had more or less survived the conflagration, such as the remains of two tiled stoves that had fallen into the cellar from the ground storey

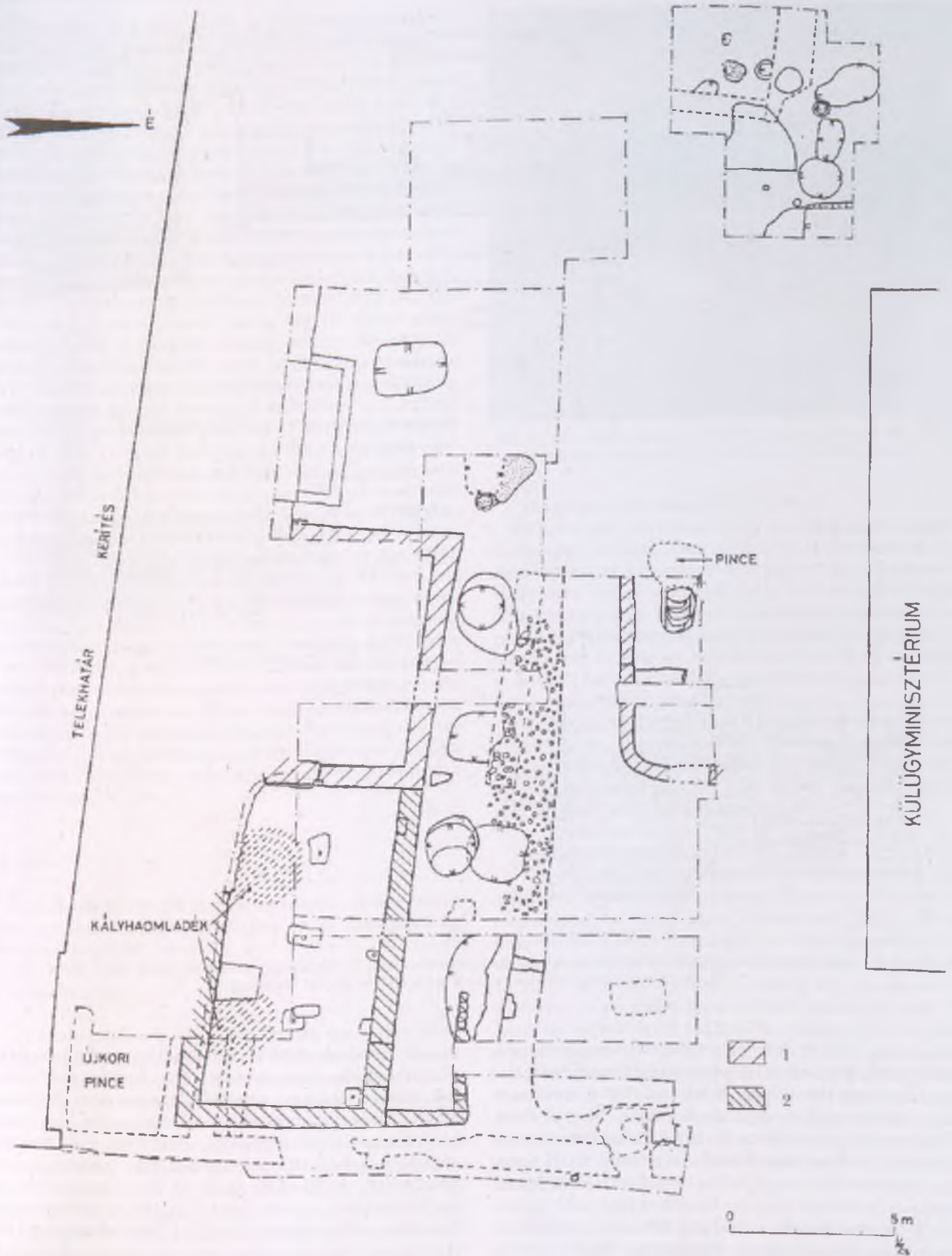
⁵ Interestingly enough, the uppermost Roman *terrazzo* layer was only some 13 cm below the thirteenth-century pebbly layer. It is therefore highly probable that the Roman ruins were visible in some spots during the thirteenth century.

⁶ A rich pottery assemblage was recovered from two storage pits in the rear part of the plot, as well as from a "small cellar" dug into the soil. This latter feature lay inside a smaller stone building; earthen steps led into a small pit that had perhaps been used for cooling. The three pits

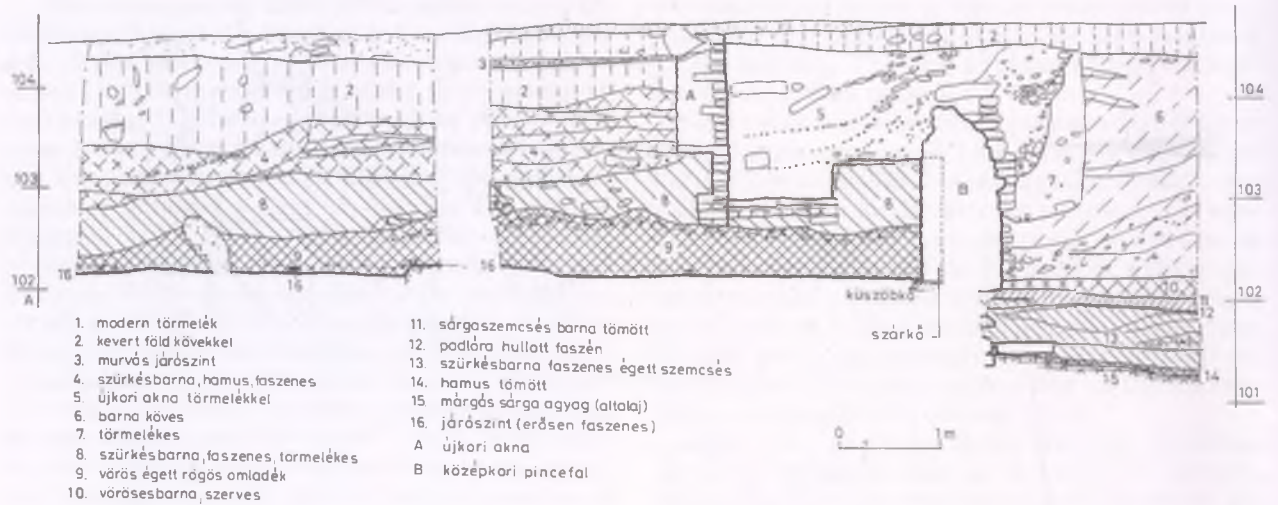
could be dated on the basis of coins minted under Sigismund (1387–1437). The finds from these pits shall not be discussed here.

⁷ Similar buildings have been uncovered by Katalin H. Gyürky at Fő utca 16 in Buda (GYÜRKY 1987–88, 62–80) and at Vác by Zsuzsa Miklós (MRT 9, 432–438; MIKLÓS 1986, 237–254; 1991, 7–108; 1996).

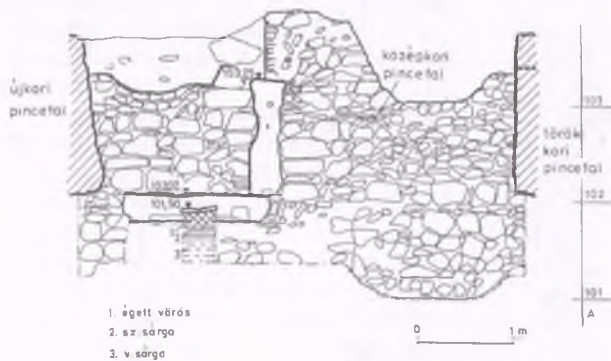
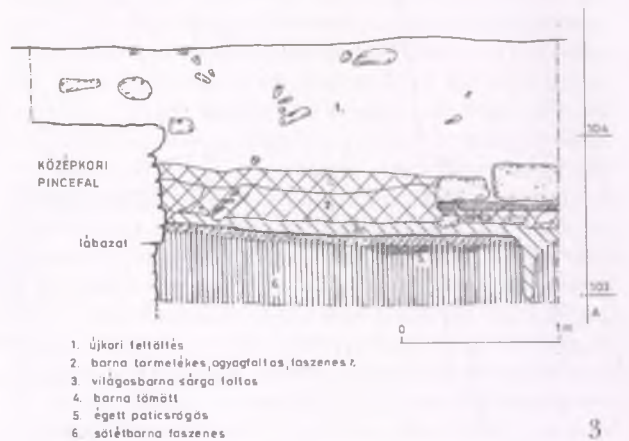
⁸ Noteworthy among these finds is the fragment of a medieval silver-gilt object, probably of ecclesiastic function.



Ill. 1. Budapest II, Gyorskocsi utca 26. Excavation plan (1: Middle Ages, 2: Ottoman period). (Drawn by Zsuzsanna Kuczogi).
 (Key: KÜLÜGYMINISZTERIUM = Hungarian Ministry of Foreign Affairs; PINCE = cellar; KÁLYHAOMLADÉK = stove fragments)



1



Ill. 2. 1. East-west section of the medieval and Ottoman-period cellar; 2. Walled-up medieval door, from the east; 3. Section of the levels associated with the medieval building

of the house. Their debris formed two smaller heaps by the southern wall. The plastering fragments, the stove-tiles and the adobe bricks of the stove foundation lay mixed up with each other. The pottery finds from this destruction level included brown pots thrown on a slow wheel and decorated with wavy lines, a reddish-brown globular vessel with a rouletted pattern on its shoulder, two-handled jugs with green glazing on the inside, a baking lid, and a strainer (Ill. 4. 1–2). Beside these “Southern Slav” vessels, genuine Turkish wares were also found (Ill. 4. 3). Contemporary Hungarian wares are conspicuously few, comprising the fragments of so-called canvas

vessel, bowl-shaped red stove-tiles and a small blue glazed lid decorated with white bands. Aside from household pottery, several Chinese porcelain cups were also recovered: three of these could be assembled from their fragments. Two were covered with celadon glaze and bore a landscape painting on the inside (Ill. 4. 4). The date of the destruction was indicated by a coin find: on the testimony of a denarius of Leopold I (1657–1705) minted in 1676, the house had probably been destroyed during the 1684 or 1686 siege.

The cellar is a rare piece of residential architecture from the Ottoman period in Buda since it represents an original edifice erected over a demolished medieval building. Three upright timbers supported the longitudinal ceiling joist that held the ceiling. The burnt layer allows the reconstruction of the aboveground part of the house. The finds recovered from the burnt debris suggest that the walls of the house above the cellar had been constructed from wood daubed with clay; the house was roofed with shingle, reed or thatch. The remains of the two stoves indicate that the house had had at least two separately heated rooms. The position of the stove remains also allows a few other conclusions. Stoves were usually positioned in the corner in order to allow their stoking from a neighbouring room. Since it is unlikely that these stoves were stoked from outside the house, we may assume that there were partitioning walls between the two stoves, i.e. that there was a third room in the middle of the house. The ground storey level of the Turkish house was thus probably tripartite, with the middle room functioning as a kitchen (judging from the known analogies). The household pottery found in the layers no doubt came from this kitchen. The two heated rooms flanked the kitchen.

The nature of the pottery and the stoves also allow some interesting conclusions. Both reveal Southern Slav, Balkan features. This is hardly surprising since we know that there was a rather high proportion of Southern Slavs, especially Croats, Bosnians and Serbs, in seventeenth-century Buda.⁹ A sizeable Christian Serbian population remained in the Water-Town, even after the re-occupation of the town, as shown by the construction of a monastery by the Franciscan order of Bosnia.¹⁰ The building and the finds can thus be associated with this seventeenth-century Southern Slav population.

The finds

The finds from the debris of the two stoves were more or less identical and they shall therefore be discussed together here.

1. Stove-tiles

The two stoves that had fallen into the cellar were, for the most part, made up of wide rimmed wheel-turned conical stove-tiles with glazed interiors. These stove-tiles came in a wide variety of shapes and sizes and were either green or yellow glazed. In the following we shall offer an overview of the different tiles according to shape and size; this should not be regarded as an exact typology since these groups only cover the most characteristic types and since the variants and transitional forms cannot be really well categorised.



Ill. 3. The cellar from the Ottoman period with the debris of one stove and the walled-up medieval door

Deep conical tiles (Ill. 5. 1–2)

There are very few deep specimens among the stove-tiles (a total of seven items). They have a small diameter and a distinctive cup-like cavity with a thin rim; they are decorated with 3–4 wheel-moulded concentric rings. The narrowing outer surface has a protuberant wheel-moulded ring in the interior that was rarely visible or was at most marked by a light groove. The edge and the interior are covered with a light or medium green glaze.

The outer diameter of these tiles varies between 14–14.5 cm, their inner diameter between 9.2–9.7 cm, the height of the smaller pieces is 9.2 cm, that of the higher ones is 11.5 cm. Three pieces could be assembled from their fragments.

Smaller stove-tiles (Ill. 5. 3–4)

The find assemblage was dominated by wide-rimmed, less deep specimens. These can be grouped according to their size. There are relatively few smaller tiles with a straight or slightly collared rim decorated with a wheel-moulded ring. Their interior flares slightly without a rim or edges, while their exterior is profiled by a wheel-moulded ring. The interior is covered with yellowish-green or yellow pitted glaze.

The outer diameter of these stove-tiles ranged between 13.8 and 14.8 cm, their inner diameter between 8.1 and 9.6 cm. The height of the smaller specimens was 5.8 cm, that of the higher ones 6–6.5 cm. Four pieces could be assembled from their fragments.

Medium-sized tiles with a deeper cavity (Ill. 5. 5)

The finds were dominated by medium-sized stove-

⁹ FERETE – NAGY 1986, 61–62.

¹⁰ NAGY 1964, 181–244.



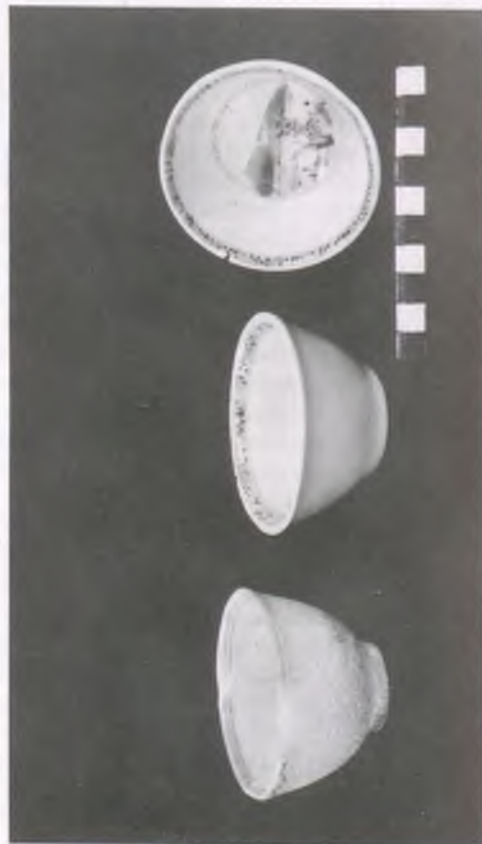
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III. 4. 1. Southern Slav pottery; 2. Two-handled storage jars with glazed interior; 3. Glazed pot and footed bowl; 4. Porcelain cups

tiles. Several sub-groups could be distinguished among them. These tiles have an approximately 3-centimetre-wide collar-like rim behind which only the glazed rounded cavity can be seen. We set up the following sub-groups on the basis of the shape and depth of the cavity.

Some of these tiles have a deeper cavity, although this depth is not as pronounced in the case of deep tiles with a narrow rim. The tiles in this group are usually green glazed.

The outer diameter of the rim varies between 16 and 16.5 cm, the inner diameter is 9.6 cm or 10 cm, and the depth ranges from 7.5 to 8 cm. This group includes a high number of fragments.

Medium-sized tiles with a shallow cavity (Ill. 5. 6)

Very few tiles could be assigned to this group. These tiles are characterised by a wide rim and a shallow cavity. The roundish interior is green or yellow glazed, without a carination or other break.

The outer diameter of the rim is usually 16.5 cm, and the inner diameter ranges between 9.4 and 9.6 cm. Their depth varies between 6 and 6.3 cm. Two to three pieces could be assembled from their fragments.

Medium-sized tiles with medium deep cavity (Ill. 6. 1–2)

This group comprises the tiles with a medium deep cavity. Their interior is green or yellow glazed, and has a carination or a groove.

The outer diameter of the rim varies between 16.2 and 16.7 cm, the inner diameter is between 10.3 and 11.5 cm. Their depth ranges between 7 and 7.5 cm.

Larger stove-tiles (Ill. 6. 3–4)

The larger stove-tiles have a 3.5–3.7-cm-wide rim with five wheel-moulded concentric rings. The tiles have a medium deep, narrowing cavity and their base diameter roughly corresponds to the base diameter of the smaller pieces. Their interior is usually carinated, the carination line is flanked by a light groove. They are covered with a medium green or yellowish-green glaze. Some pieces have a pitted mauve glaze in their interior that was probably due to a secondary firing.

The outer diameter of the rim ranges between 19.5 and 20 cm, and the inner diameter between 12.1 and 12.5 cm. Their depth is 7.5–8.5 cm.

Footed bowls (Ill. 6. 5)

These household vessels are discussed here because some were demonstrably used as tiles.¹¹ The semi-spherical bowls with out-turned rim and a low

pedestal have a glazed interior that, similarly to the stove-tiles, is yellowish-green, light green or medium green.

The rim diameter varied between 14 and 15.5 cm, the base diameter between 6.3 and 6.6 cm, and the height between 6 and 7 cm. Three of the roughly twelve pieces were assembled from their fragments.

Renaissance tiles (Ill. 7–8.)

The stove-tiles also included two green glazed late Renaissance stove-tiles. One piece is a moulded cornice decorated with a row of acanthus leaves and an angel's head set among twirling tendrils, the other is a corner tile from a set that originally had a repeating design. Comparable tiles are known from northeast Hungary, although similar pieces have also been reported from Transylvania, where the *Habans* introduced them.¹² Their analogies are known from Central Europe.¹³ The traces of plastering on these tiles indicate that they were built into the stove wall in such a way as to be practically invisible.

The length of the cornice is 22 cm, its width is 15 cm and its depth 6.5 cm. The restored corner tile is 19 cm wide, 19.5 cm high and 10.7 cm deep. The tile was already broken when it was built into the Turkish stove; the greater part of its larger side was missing.

2. Clay fragments

The greater part of the debris from the tiled stoves comprised the fragments of the clay wall between individual tiles. The well-preserved clay was slightly burnt when the house perished.¹⁴ Most of these fragments bear the imprints of the stove-tiles and of the bricks, twigs, etc. that were used in the construction of the stove itself. They thus contribute important information on the original appearance of these stoves and, also, on their construction technique. Their surfaces were carefully smoothed; their colour was yellowish and brownish. These several hundred fragments were carefully examined; they are here grouped according to their position in the stoves. Since the fragments from the two stoves are more or less identical, they shall be discussed together.

Fragments from the upright stove wall (Ill. 9. 4)

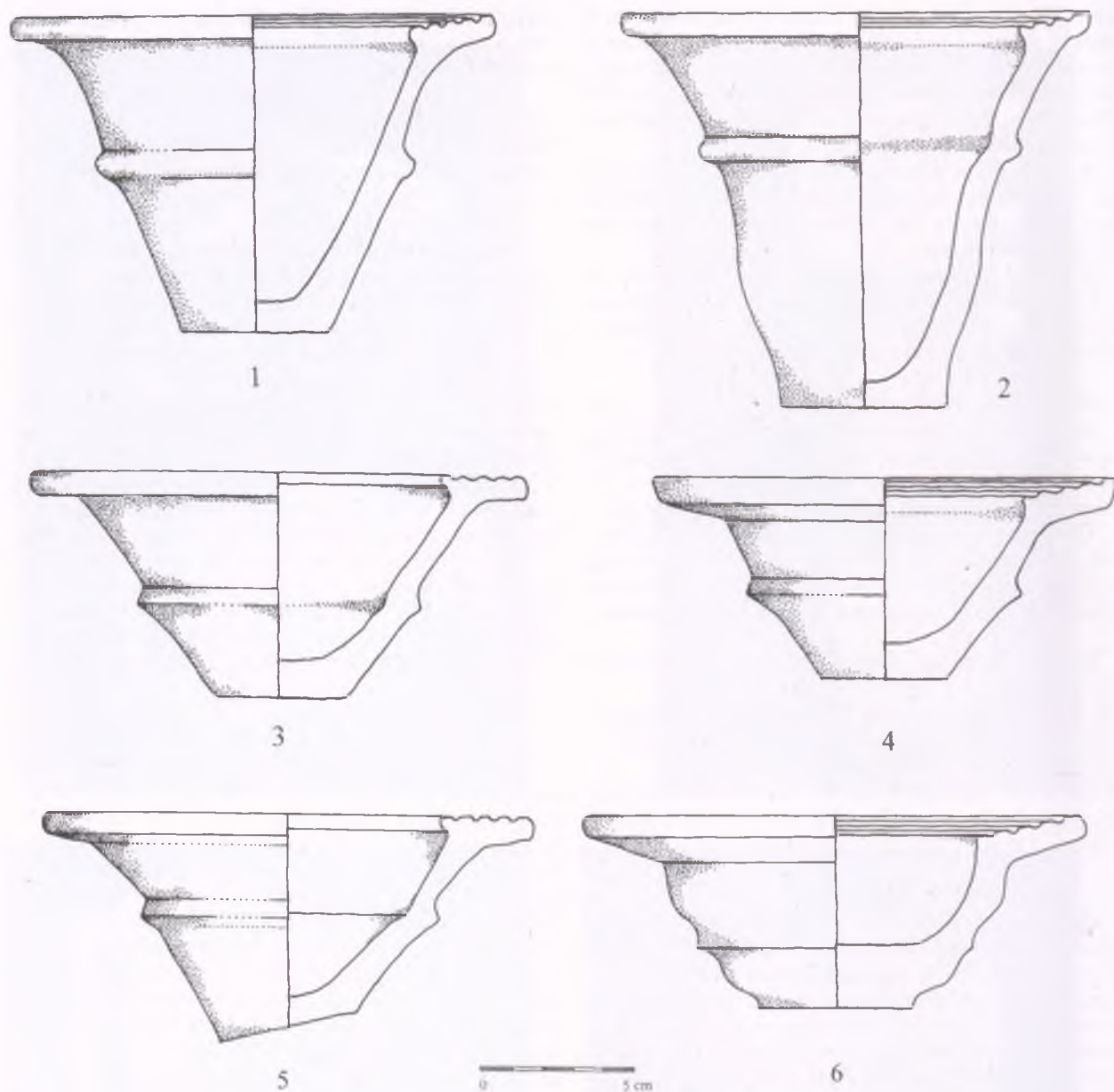
Fragments from the straight, even wall can be recognized at first sight. The larger pieces preserved the imprints of 3–4 tiles, revealing their distance from each other and, also, the system according to which the tiles were incorporated into the stove wall. It would appear that the tiles formed a network pattern with smaller spaces between them. The thickness of the stove

¹¹ Several clay fragments bore the imprint of the rims of footed bowls. The profile of these footed bowls cannot be mistaken for conical stove-tiles.

¹² GYURICZA 1992, 126, Ill. 191. and 147, Ills. 282–283; Kós 1989, 311/a.

¹³ CSEREY 1968, 61, Ill. 1; FRANZ 1981, Ill. 633.

¹⁴ The clay fragments were conserved in a solution of Plextol.



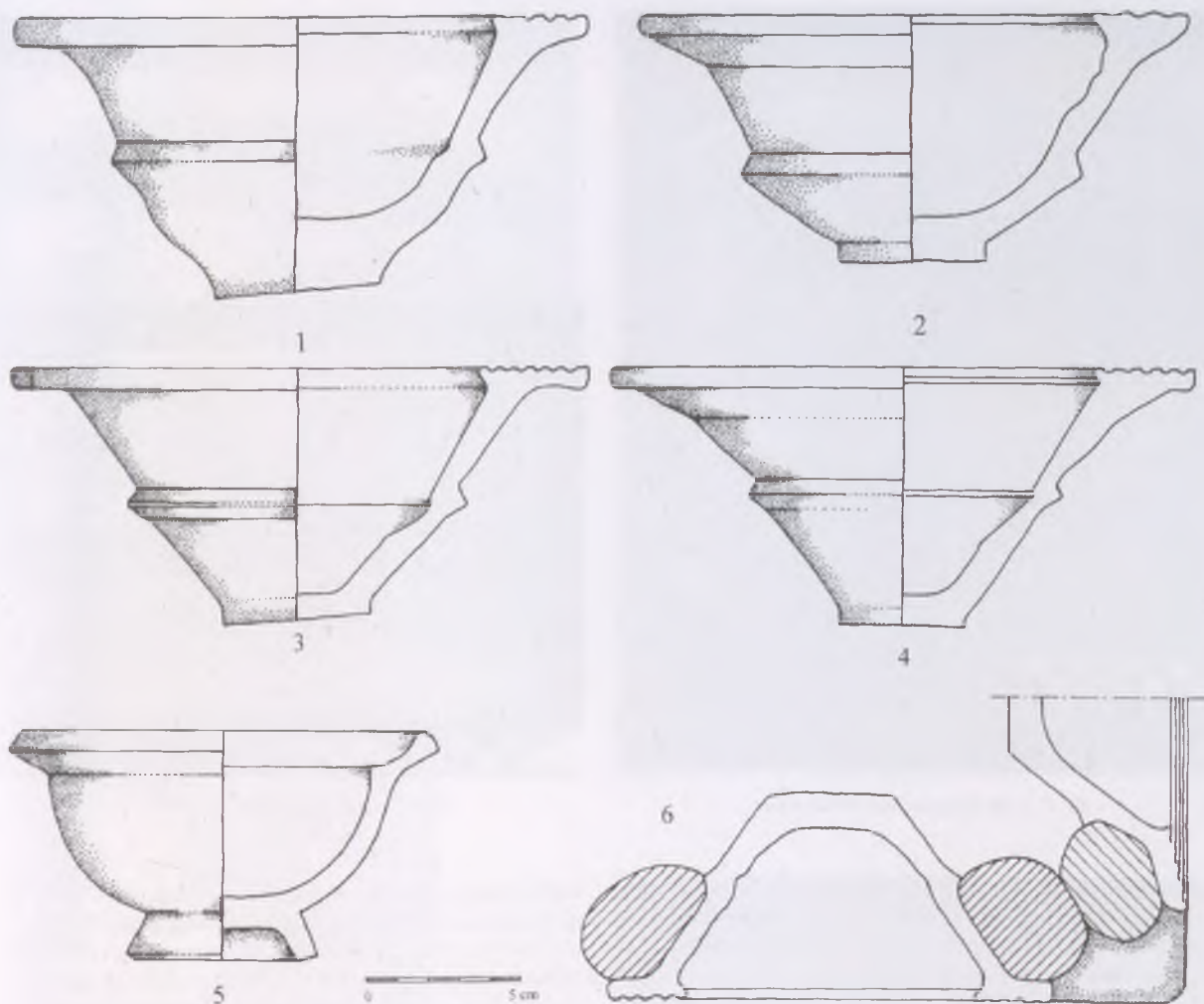
Ill. 5. 1–2. Deep stove-tiles; 3–4. Small stove-tiles; 5. Medium-size stove-tile with deep cavity; 6. Medium-size stove-tile with shallow cavity

wall was 4–4.5 cm. The tiles were set 1 to 4.1 cm from each other, the great majority 1.5 to 2.2 cm. The stove-tiles assembled from their fragments could be fitted into their imprints and it thus became clear that the larger pieces (with a diameter of 18.5–19 cm) were set into the upright wall, although the occasional medium-sized piece (with a diameter of 16.5 cm) was also used. Nineteen larger and 23 smaller fragments definitely came from the upright wall.

Fragments from the vertical edge (Ill. 11)

Five well-definable fragments of the vertical edge of the stoves have survived. They were right-angled

with rounded corners into which tiles were fitted on both sides. The tiles were set 1.5–2 cm from the edge (the smallest distance being 1.4 cm, the largest 4.3 cm). The tiles could be set close to the edge since their rim was fairly wide and since they were not contiguous owing to their narrowing rear part (Ill. 6. 6). Two pieces stand out from among these edge fragments. On one the two lateral sides are topped by a third side perpendicular to the lateral ones, indicating that this fragment came from one of the stove's corners. The other fragment came from the section that adjoined the floor or the base. The sides of this fragments curve outward and the base shows



Ill. 6. 1-2. Medium-size tiles with deep cavity; 3-4. Large tiles; 5. Footed bowl; 6. Horizontal section of the stove corner

that it had broken off a more-or-less even surface. The tiles that could be fitted into the tile imprints were larger ones.

Fragments from the horizontal edge (stove shoulder) (Ill. 9. 1)

Ten fragments of the horizontal edge could be definitely identified. They are only slightly rounded. The vertical sides bear tile imprints, while the horizontal sides do not. On two fragments imprints of the upper part of the stove have been preserved. The tiles were set 4-5 cm from the edge (the smallest distance was 4 cm, the greatest 6.7 cm). The tiles that could be fitted into the tile imprints were usually larger pieces; the diameter of one tile was 16.5 cm that of another was 14 cm. The imprint of a broken-off vertical edge was visible on a smaller fragment bearing the imprint of the stove's upper part. The lower arc of this imprint was some 3 cm away from the edge with which it was parallel. Traces of smoothing also corroborated our observation. The larger

shoulder fragment was 24 cm long; its vertical plane survived to a depth of 8 cm, its horizontal one to 13.5 cm. The latter bore the imprint of a polygonal structure whose vertical walls were preserved to a height of 1-1.3 cm. Two sides of the polygon adjoined each other at an obtuse angle and they did not run parallel to the edge of the stove (Ill. 12. 2). The thickness of the stove could be made out on the lower part of this fragment: it was 5.5 cm, thickening to 8 cm in some spots. This thickening was necessary owing to the polygonal upper part set on top of the stove's lower part; the weight of the upper part was borne by clay coils set on the lower part. These clay coils slanted inwards and formed the shoulder of the stove.

Fragments of the stove wall adjoining the room wall (Ill. 9. 2)

These fragments revealed that the lower, angular part of the stoves was built against the wall of the room. The stove wall adjoined the room wall verti-



Ill. 7. Late Renaissance corner tile



Ill. 8. Late Renaissance cornice tile

cally; the 4.5 cm thickness of the stove was increased to 10 cm. Six fragments of this vertical edge could be identified, and the imprints on these fragments indicated that the stove-tiles were set at distances of 5 cm, 7 cm and 8 cm from the wall. These fragments were carefully smoothed on their exterior, while their interior side was rather rough. We also observed brick fragments suggesting that a part of the wall behind the stove had been built of bricks.

Fragments of the polygonal stove part (Ill. 9. 5)

The description of the stove shoulder already revealed that the upper part of the stove was polygonal. Seventeen fragments from the edge of the polygonal prismatic part also confirm this. The obverse of these fragments is bordered by two oblique planes and, at their meeting-point, by the edge. The smaller fragments bear the imprints of 2–3 tiles, the larger ones of 4 neighbouring tiles. These tiles were set either above each other or on the neighbouring sides of the polygonal prism (Ill. 12. 1). The fragments also reveal that the tiles were arranged into a vertical row on each side. The tiles were set 0.7–1.2 cm from each other, although on one fragment this distance was as much as 4 cm. The tiles were placed 1.2–2.5 cm from the edges of the prism and thus the distance between tiles ranged between 2.8–3 cm, the greatest distance between two tiles being 4.5 cm measured as a straight line, meaning that the tiles lay 3 and 2.1 cm from the edge. The diameter of the tiles that fitted into the imprints ranged between 14.5 and 17 cm,

indicating a predominance of medium-sized tiles, although the imprints also included some larger tiles (18.5–19 cm). Three edge fragments must be mentioned separately: one of the smaller fragments is topped by a perpendicular plastered surface, indicating that it was the upper corner of the polygonal prism. The other two fragments broke off from a horizontal surface that can probably be identified with the shoulder of the stove. The fragments indicate that the first tiles were set 2.5 and 6 cm above the shoulder.

In order to determine the polygon we had to define the size of the obtuse angle enclosed by the sides of the fragments. Eight fragments proved suitable for these measurements. The largest angle (146°) was closer to the parameters of a decagon, while the smallest (124°) was closer to a heptagon; however, most measurements (128–138°) were closer to the parameters of an octagon (135°) suggesting that the upper part of the stove was a slightly irregular octagon.

Fragments of the shoulder above the upper part (Ill. 12. 3)

A fragment topped by a horizontal part has already been mentioned among the finds representing the edges of the polygonal prism. As a matter of fact, this was part of the upper shoulder on the stove's upper part. A larger fragment provided more information on this part. A 19-centimetre-long clay fragment came from the upper part of the prism and



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Ill. 9. 1. Fragments of a horizontal edge (shoulder); 2. Fragments of the stove wall adjoining the room wall; 3. Cylindrical lengths of clay coiled around the tiles; 4. Fragments of the stove wall with even surface; 5. Fragment of an octagonal block

bears the imprint of a tile on its front. This reveals that 2.5 cm above the uppermost tile there was a horizontal surface behind which there began a round dome. The arc of the circle revealed that the diameter of this dome could not have been more than 50 cm. This fragment also showed that the wall of the prism was narrowed and built into a circular one with clay coils.

Fragments of the dome (Ill. 10)

Some 12–13 fragments of the domes topping the stoves could be identified. These were arched fragments with rough plastering on their exterior that were built up from coiled cylindrical lengths of clay.

Fragments of the cylindrical lengths of clay coiled around the tiles (Ill. 9. 3)

About 61 fragments of the lengths of clay surrounding the tiles have survived. These were 5–5.5 cm thick and were slightly flattened in cross-section. The tiles were wrapped round with these cylindrical lengths of clay when set into the wall of the stove. When the stoves perished, these lengths broke off from the tiles and became part of the debris.

Fragments of cylindrical lengths of clay

Some of the straight and slightly curved lengths came from the wall of the stove. Their thickness was

the same as that of the above fragments. We identified 25–26 of these fragments.

Burnt daub fragments

Fragments of daub that bore the imprints of twigs and 4-centimetre-thick stakes were also recovered. On one fragment these imprints were at right angles to each other.

Air-dried brick fragments

Fragments of air-dried bricks made of clay tempered with gravel and chaff were also unearthed in the debris of the stoves. They originally could have been used in the base of the stoves or in the wall around the stoves.

Brick fragments

The fragments of eight flat bricks were also recovered; these had probably been part of the wall behind the stoves.

Plaster fragments

The various plaster fragments may have been part of the stoves, but may equally well have been part of the wall behind the stoves.

Reconstruction of the stoves

The high number of tile and clay fragments allows the reconstruction of these stoves. The examination of the clay fragments revealed that these stoves had a rectangular lower part and an octagonal upper part that was topped by a small dome. Although the position of the tiles relative to each other and the distinctive parts of the stoves can be fairly accurately reconstructed, the exact dimensions of the stoves remain unknown. The reason for this is that the stoves standing on the wooden floor fell into the cellar and



Ill. 10. Fragments of the dome



Ill. 11. Fragments of a vertical edge

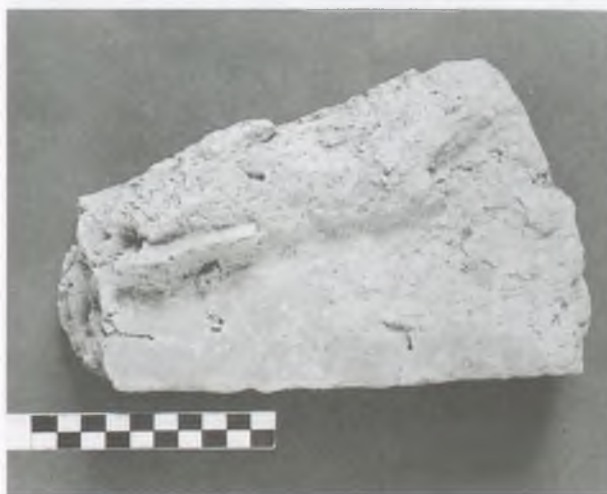
thus nothing remained of their base. What we do know is that the rectangular lower part adjoined the wall in a U-shape, implying that they were stoked from another room, which, in turn, indicated that the lower part had three sides and two corner edges. We also know that the upper part had one row of tiles in each panel and this allows the construction of the octagon. One of the shoulder fragments from this octagonal upper part indicated that the lower part was some 3–5 cm larger. The fragments suggested that one side of the octagon was approximately 21 cm; in this case the sides were 52 cm from each other. Adding 5–5 cm to each side gives 62 cm, corresponding to the lower part three stove-tiles wide. A roughly 40 cm dome can be constructed on top of this stove and this also corresponds to our examination of the fragments. As an accuracy check, if the width of the sides is increased or decreased by a single tile, the other dimensions cannot be adjusted in a manner corresponding to the dimensions indicated by the surviving fragments or to the reconstruction. As regards the ground plan, here it must be noted that the depth of the stove was larger than its width by some centimetres (almost 70 cm) since the first tiles were 5–8 cm from the wall. The larger shoulder fragments also allow a reconstruction in which the edges of the polygonal upper part of one stove were not parallel to the lower edges. This divergence, however, is not sufficient to warrant regarding the two stoves as significantly different from one another.

Although the dimensions of the ground plans of the stoves could be calculated with a fair degree of accuracy, ethnographic analogies and the proportions of the reconstructed parts served as the starting point for determining their probable heights. The lower and upper parts of the stoves were approximately the same height. Assuming four rows of tiles for both parts gives a 205-centimetre-high stove, including the dome. A similar twentieth-century Serbian stove was 210 cm high.¹⁵ The possibility of a base must also be mentioned in a discussion of the probable height. The ethnographic analogies indicate that each Balkan stove had a low, slightly protruding base. A stove from the later seventeenth century uncovered in Belgrade also had a slightly protruding base of adobe.¹⁶ The tiled stoves of the Turkish castle at Barcs, dated to the earlier seventeenth century, also had a base of bricks.¹⁷ We prepared a reconstruction of the stove with and without a base, based on the above analogies and the brick and adobe fragments (Ills 14–15). The numerous surviving stove fragments and tiles allowed the assembling of one side to support the accuracy of the interpretation and the reconstruction (Ill. 13).

Beside the form and dimensions, we also have to discuss the appearance of these stoves. The archaeological evidence suggests that their exterior was dom-



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Ill. 12. 1. Detail from the upper part of the stove; 2. Top-view of the stove shoulder; 3. Top-view of the upper shoulder with the arch of the dome

¹⁵ KOJIĆ 1949, 158.

¹⁶ MARJANOVIĆ – VUJOVIĆ 1973, T. VIII.

¹⁷ KOVÁCS – RÓZSÁS 1996, 168, Ill. 7; 1998, 93, Ill. 5 and 96, Ill. 8.



Ill. 13. Reconstruction using the tiles and the cylindrical lengths of clay

inated by yellowish and brownish plastering, thus the yellow and green glazed tiles, set alternately into the walls, gave a characteristic appearance to the stoves. No matter how surprising this may sound, the wide collar-like rim of these tiles was not visible, since the rims were completely plastered over. Although traces of secondary plastering cannot be made out on the clay fragments, we cannot exclude the possibility that the rims of the tiles were still visible for some time after the stove had been built and that they were covered with a clayey wash only later. This possibility is contradicted by the fact that the footed bowls built into the stove differed markedly from the tiles owing to their narrow rim. Neither the plastering of the stoves, nor the positioning of the tiles indicated a particular concern with precision. The

tiles were sometimes closely set, sometimes not, and the plastering, too, showed irregularities.

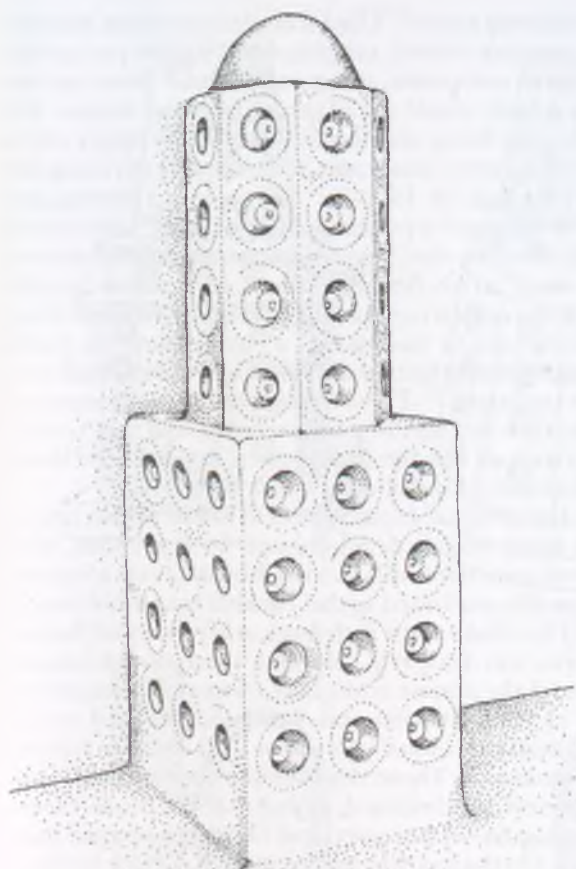
The reconstruction also involves the comparison of the number of estimated tiles and the number of tiles actually found. This is all the more necessary in a case where we are dealing with the complete remains of stoves. The two reconstructed stoves have 68 tiles each, giving a total of 136 tiles. A total of 49 conical tiles, 2 flat tiles and 3 footed bowls were assembled from their fragments, to which we have to add the number of tiles estimated from their fragments – some 69–73 – and 9 footed bowls, giving a total of some 132–136, that corresponds well with the number of tiles in the reconstruction.

Construction techniques

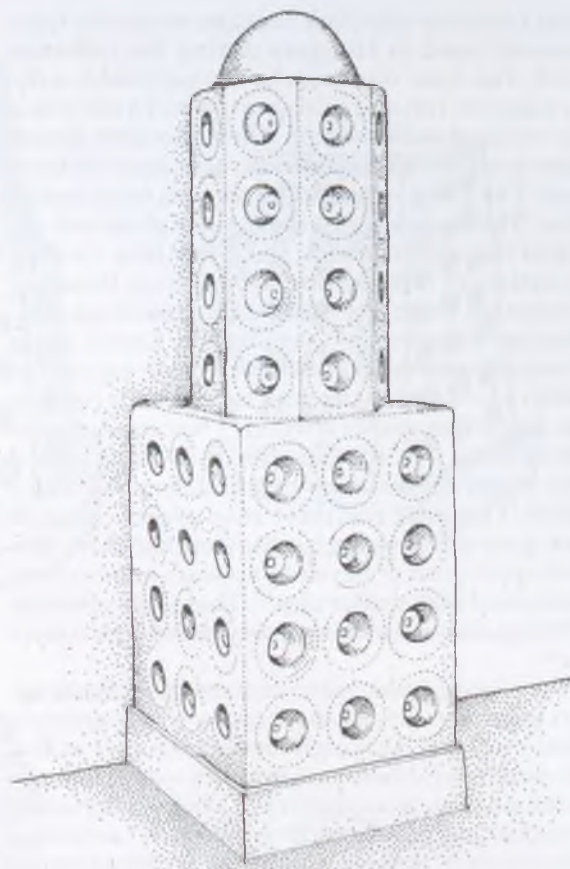
The high number of finds allows certain conclusions concerning the manufacturing technique of the stove-tiles and the construction of the stoves. The tiles were made from relatively good-quality clay fired to a yellow colour. The apparently simple cup-shaped tiles were the work of practised hands. Although rather simple at first sight, the carinated form and the out-turned rim suggest that these were not the most easily manufactured ceramic wares. Although the carination and the cavity of these tiles were made similarly, little attention was paid to size, explaining the rather wide range of dimensions, although it is also possible that the tiles were acquired separately, which would explain the differences in the colour of the tiles. It is also unclear why the tiles were cut obliquely from the wheel. The quality of the glazing also varies from tile to tile: the brownish and mauve blistered glaze can be attributed to secondary firing when the house burnt down. The differences in colour and the thin dull glazes reflect the difficulties of manufacturing and firing.

The clay fragments offered a wealth of new information on the construction technique of the one-time stoves. Such a variety in the use of cylindrical lengths of clay was hitherto unknown.¹⁸ A 5-centimetre-thick length was wound around the collar of each tile. The ends were pressed firmly behind the rim. The lengths lay between the rim and the wheel-moulded ring in the middle of the tile and prevented slipping. Only after the length of clay had been applied was the tile set into the wall of the stove. The tiles set beside and above each other were held in place with these lengths, leaving a space of 1.5–2.5 cm between the tiles (Ill. 6. 6). The space between the tiles was plastered with clay mixed with chaff. Although the rear part of the tiles thus projected from the roughly 5-centimetre-thick wall of the stoves, they were

¹⁸ Cylindrical lengths of clay are known to have been used in the construction of simple domed ovens, but their use in stoves was not known. Cf. SÁBJÁN 1988, 51–54.



Ill. 14. Reconstructed stove without base



Ill. 15. Reconstructed stove with base

subsequently plastered since their bases were not sooty. The insides of the stoves were rather coarse, but the exteriors were carefully smoothed. It would appear that the stoves had been plastered with a thin layer of clay right just after they had been completed; this plastering filled the spaces between the tiles and their rims were set into this plaster. The corners and the shoulders gained their final form with this plaster. The middle and upper shoulders, as well as the dome of the stove, were made using these lengths of clay. This was necessary because the upper part set on the lower part was smaller and the lower part had to be narrowed in order to prevent the upper part falling into it. The lengths pressed against each other were used to narrow and round off the corners. This narrowing was begun under the shoulders.

It has already been noted that these stoves were stoked from another room. Stoves of this type have a U-shaped lower part, meaning that there is no struc-

ture by the wall that would support the rear side of the upper part. We believe that the daub fragments come from some sort of structure that was designed to solve this problem. The imprints of the stakes at right angles to each other also suggest some sort of wattling, a practice known from contemporary stove making.¹⁹

Analogies of the stoves

Cup-shaped stove-tiles are common finds from sites of the Ottoman period. They have been primarily recovered from forts and towns, where the Turks settled on a permanent basis; by contrast, stove-tiles of this type are rarely found in villages.²⁰ Their sixteenth- to seventeenth-century distribution in Hungary can be associated with the appearance of a Balkan population in the country.²¹ The archaeo-

¹⁹ MIKLÓS – SABJÁN 1992, 128.

²⁰ Cf., for example, FEHÉR 1959, 131–132, Pl. XXXVI; MÉRI 1988, 107, Pl. XXIII; GERELYES 1991, 31, 32, 33, 34, 38, 40, 47, 69, Ill. 14.; MAGYAR 1994, 87; HATHÁZI – KOVÁCS 1996,

48–49, Ill. 27; TETTAMANTI 1994, 110, 158, Pl. 25; KOVÁCS 1998, 174, Ill. 16; KOZÁK 1970, 204–205.

²¹ HATHÁZI – KOVÁCS 1996, 49; RÁCZ 1995, 79–82; HEGYI 1995, 197.

logical record reveals that concave stove-tiles were commonly used in Hungary during the Ottoman period. Two basic types can be distinguished: a tile with a narrow rim and a deep cavity and a tile with a wider rim and shallow cavity. These tiles were glazed in their interior; no unglazed variants have yet been found. The glaze was usually green or, more rarely, yellow. The finds suggest that yellow glaze was applied to the wide rimmed, shallower tiles. Convex tiles occur very rarely in assemblages from Hungary.

Although there is a wealth of archaeological information on stove-tiles, very little is known about the actual stoves they decorated. A stove uncovered in Belgrade, dated to the later seventeenth century, is the single contemporary find.²² A collapsed stove – whose lower part survived relatively intact – stood in the house or workshop that had been destroyed in 1688. This stove had three rows of three concave green-glazed tiles on each side. The probably cylindrical upper part of the stove appears to have been ornamented with similar tiles.²³ These tiles resemble the Hungarian ones, although they also include convex tiles.²⁴

The ethnographic material from the Balkans appears to be more promising than the scanty archaeological evidence. Although tiled stoves were at first only used by wealthier persons, they were gradually also adopted by the peasantry.²⁵ Their construction technique and appearance owed much to those of their sixteenth- to seventeenth-century forerunners. In certain regions of Serbia, tiled stoves were very popular; many houses in Osat were heated with stoves that had a rectangular lower part and a polygonal block-like upper part.²⁶ Convex tiles were set into the 5-centimetre-thick walls of these stoves. The stoves standing in the rooms were stoked from the kitchen stove and their smoke was led into the chimney above the kitchen stove through a smoke conduit (Ill. 16. 4). These stoves measured 70 cm by 72 cm. Four vertical rows of five tiles each were set into the lower rectangular part. The stove had a slightly protuberant two-step base without any tiles. The upper part was an almost cylindrical dodecagon, its diameter was 55 cm and each side had a row of four tiles. A dome decorated with close-set tiles topped the upper part. The stove had an angular shoulder and a cornice.²⁷

Slender stoves set with tiles were an indispensable part of Bosnian houses. In winter the Muslim family heated the ground-storey rooms with these stoves.²⁸ The stove was set against the wall and was stoked from

the kitchen stove.²⁹ The form of these stoves showed an amazing variety, ranging from simple pyramidal forms to composite, polygonal forms.³⁰ Some stoves had a body made up of three different shapes, the lower two being angular blocks and the upper one a polygon, but in some cases all three parts were angular or polygonal (Ill. 16. 1–3).³¹ Stoves with a rectangular lower part and a pyramidal upper part,³² decorated with concave tiles,³³ were also popular. The interior of more lavish Bosnian rooms featured a lavishly carved wooden cupboard reaching up to the ceiling. The *banjica* or *hamamdžik*, a small space for ritual washing that adjoined the stove, was usually built into this cupboard.³⁴ These stoves were usually squatter than their freestanding counterparts and they usually had walls set with tiles beside them. Bosnian tiled stoves were rarely domed; most had a flat top.

The presence of tiled stoves in Montenegrin homes is a more recent development. In the 1830s, tiled stoves were used only in town homes; their adoption is usually attributed to the Turkish estate-holders.³⁵

The other main distribution territory of Balkan stoves was Bulgaria. Slender tiled stoves usually graced the rooms and guest-rooms of monasteries (as at Rila, Arbanis and Etropole), as well as the residential rooms of castles and manor houses (Samokov).³⁶ These stoves had a rectangular lower part and a cylindrical, polygonal or, more rarely, rectangular upper part, and tiles were set into their sides. On the top they had an arched cornice or frieze and a dome (Ill. 17. 1–6). These stoves were the work of Bulgarian or Cincar craftsmen.³⁷ Their products also served as models for folk architecture. These stoves became popular during the eighteenth century, although their widespread use dates only from the nineteenth century.³⁸ This coincides with the construction of a second, more spacious room that was heated with a stove of this type. In the southern part of the country, these stoves adjoined the outer wall, while in the Danube plain and in the Balkan Mountains they were built against the partitioning walls. Both types were stoked from another room. A variant without tiles was also used in Bulgaria. Plastered stoves were more common in the northern areas, although they also appear in the Balkan Mountains and in the Northern Mountain Range (Ill. 18. 1–5).³⁹

Scholars often emphasise the mediating role of the Turks in the spread of Balkan stoves, even though tiled stoves were not used in Turkey. In winter, rooms

²² MARJANOVIĆ – VUJOVIĆ 1973, 201–228.

²³ MARJANOVIĆ – VUJOVIĆ 1973, 203, Ill. 3.

²⁴ MARJANOVIĆ – VUJOVIĆ 1973, 215, Ill. 23.

²⁵ BÁTKY 1929, 50.

²⁶ KOJIĆ 1949, 143.

²⁷ KOJIĆ 1949, 158.

²⁸ OMM 1901, 330.

²⁹ MERINGER 1900, 249, 258–259.

³⁰ MERINGER 1900, 259, Ills 30–32; also quoted by FRANZ 1981, 20, Ill. 7.

³¹ MERINGER 1900, 259, Ills 30–31; OMM 1901, 335; SCHUBERT 1989, 52, Ill. 14.

³² MURKO 1905, 318.

³³ MERINGER 1900, 258; MURKO 1905, 320.

³⁴ OMM 1901, 331; SCHUBERT 1989, 52, Ill. 14.

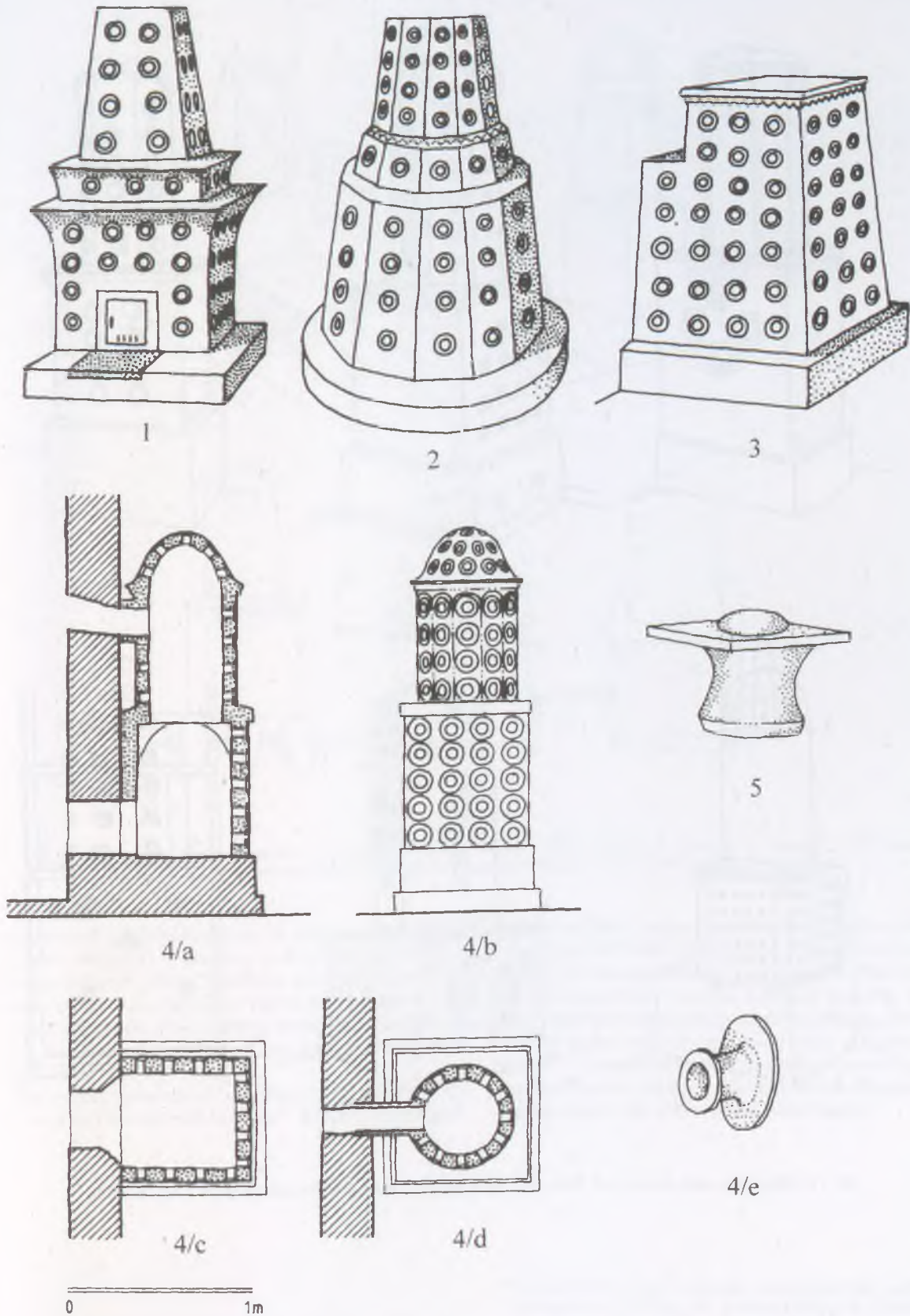
³⁵ HABERLANDT 1917, 25.

³⁶ BAKARDJIEFF 1956, 54–61; FEHÉR 1959, 131, Ill. 10; SZILÁDY 1931, 230, 334; KOZUCHAROV 1967, 57, Ill. 33.

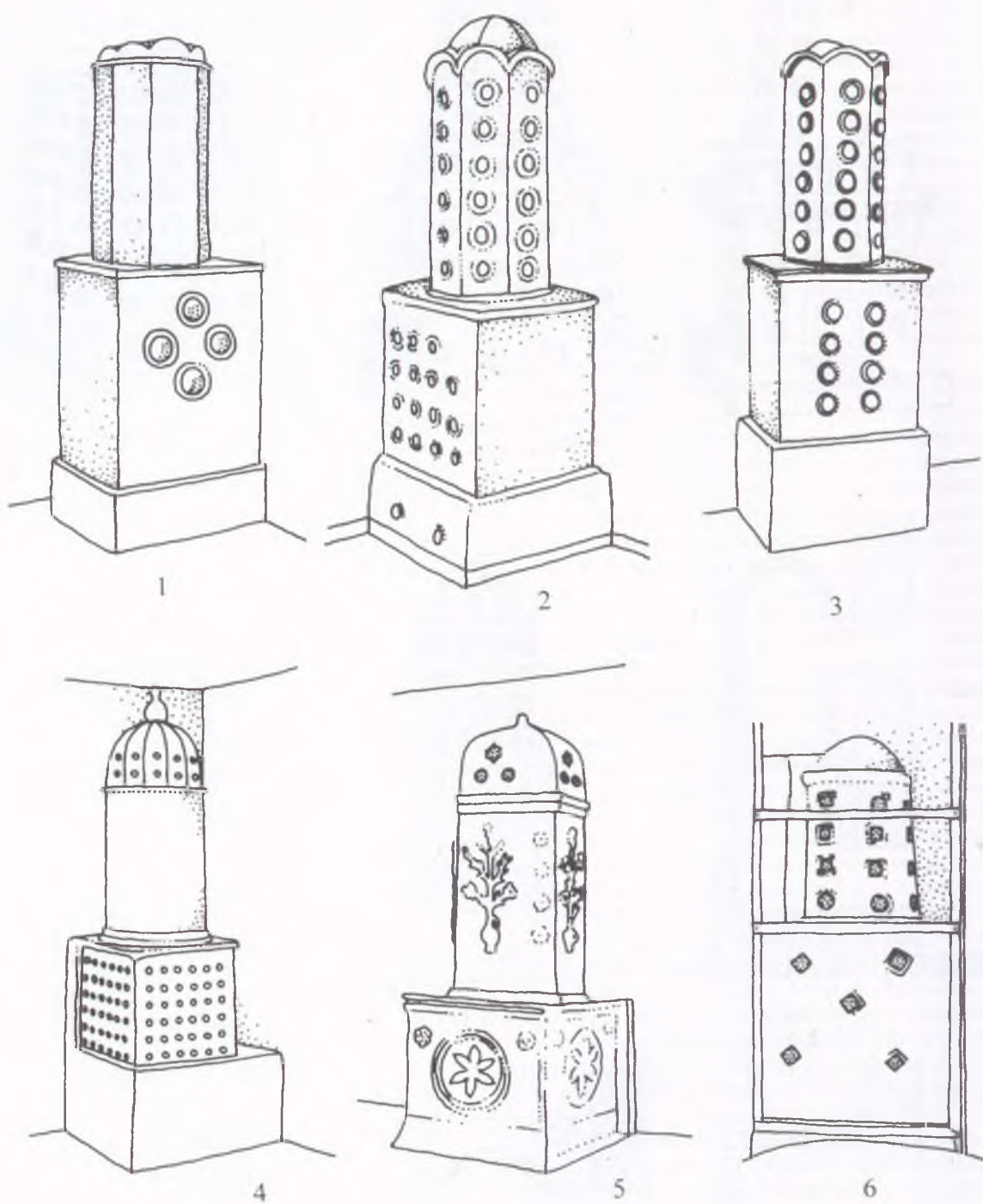
³⁷ SZILÁDY 1931, 230.

³⁸ GEORGIEVA – NIKOLOV – DIMITROVA 1987, 206.

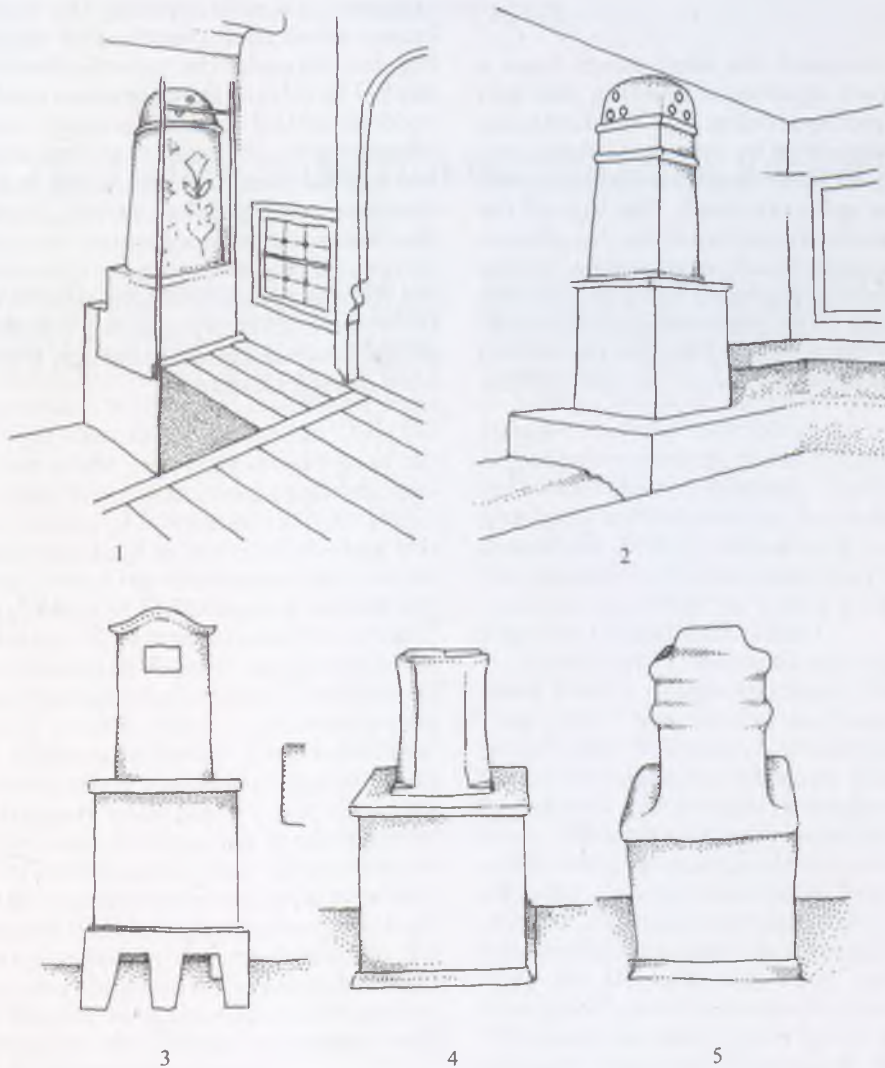
³⁹ GEORGIEVA – NIKOLOV – DIMITROVA 1987, 206–211.



Ill. 16. 1-3. Bosnian stoves from Travnik, Jajce and Dolnja Tuzla (after MERINGER 1900, 259, 30-32); 4. a. Section of a Serbian stove from Osat, b. View, c-d. Ground plans, e. Tile (after KOJIĆ 1949, 158); 5. Balkan convex stove-tile



Ill. 17. Bulgarian tiled stoves. 1–3. Rila; 4–5. Arbanis; 6. Etropole (after BAKARDJIEFF 1956, 54–60)



Ill. 18. Bulgarian plastered stoves. 1. Arbanis (after KOŽUCHAROV 1967, 57, 33); 2. Arbanis; 3. Boženci; 4. Krivnja; 5. Senovo (after GEORGIEVA-NIKOLOV-DIMITROVA 1987, 209-211)

were heated by fireplaces set in walls (*ocak*), or by braziers (*mangal*).⁴⁰ Stoves (*soba*) became more widespread only in the Tanzimat period (mid-nineteenth century) as a result of Western European and Russian influence. The heating installations appearing at this time also included cast iron, faience and brick stoves.⁴¹

Aside from residential buildings, tiled stoves were also used in Turkish bathhouses.⁴² Evlia Çelebi men-

tions that there were three Turkish baths without a cupola in the Gábor Bán inn at Kassa: "four crystal-topped stoves stood in the four corners of the bath".⁴³ He also recorded that the town of Ruda in Bosnia held "four hundred pretty stone buildings, all roofed with shingle and all equipped with a bath with a stove".⁴⁴ It is possible that these houses with a stove and bath were similar to the twentieth-century Bosnian houses with their small ritual baths.

⁴⁰ GOODWIN 1971, 429-453; SEZGIN n.d., 37-44.

⁴¹ *Büyük Lugat ve Ansiklopedi*, Meydan - Larousse, vol. 11, 421, s.v., *soba*; SCHUBERT 1989, 50.

⁴² I would here like to thank Győző Gerő for calling my attention to this fact. Cf. KREŠEVLJAKOVIĆ, H., *Banje Bosni i Hercegovini (1462-1916)*. Sarajevo 1952.

⁴³ KARÁCSON 1985, 128.

⁴⁴ KARÁCSON 1985, 454-455.

Summary

This study presented the tiled stoves from a seventeenth-century residential building that had been built over a medieval cellar. The building had a wooden ceiling supported by upright timbers and, in part, wooden walls. It had three rooms (two residential rooms and a kitchen). The tiles of the stoves, as well as many fragments of the clay plastering, survived. The analysis and interpretation of these tiles and the plastering fragments made possible the reconstruction of the form, appearance and construction technique of these stoves. The last mentioned provided new information, since in spite of the

existence of similar stoves in the Balkans, little was known about their construction technique, including, for example, the use of cylindrical lengths of clay.⁴⁵ The form of these tile stoves could be accurately reconstructed and it became clear from the ethnographic analogies that even though this form was not the dominant one, it was nonetheless fairly common among Balkan stoves. This is not to imply that these stoves represented the single variant of stoves in Hungary during the Ottoman period, since the ethnographical analogies cited here indicate that there were other types with a different form and a different ornamentation that may well have also been used during this era.

⁴⁵ Bulgarian plastered ovens were sometimes constructed over a framework of wattling. Cf. GEORGIEVA – NIKOLOV – DIMITROVA 1987, 209.

The Pottery of the Turkish Palisade at Báticasék

This paper presents the pottery finds from the Turkish palisade at Báticasék. Báticasék lies in Tolna County, on the right bank of the Danube, along the medieval Danube military road. Between 1994 and 2000 Ilona Valter and Attila Gaál investigated the remains of the Cistercian abbey at Cikádor.¹ The Ottomans made use of the one-time buildings of the former abbey when they constructed a palisade (*palanka*) during the reign of Süleyman I (1520–1566). This stronghold remained in use until the late seventeenth century when the Ottomans were driven out of Hungary. Finds of the Ottoman period also came to light during the investigation of the abbey.²

The pottery that can be dated to the period of the Ottoman occupation was predominantly made up of wares turned on a slow wheel, a manufacturing technique that differs significantly from both Hungarian and Turkish pottery manufacturing traditions. In medieval Hungary such pottery was used primarily during the tenth- to thirteenth-century period (the age of the Árpád dynasty). Its re-appearance in the sixteenth to seventeenth centuries can be associated with a well circumscribable region, namely the forts and settlements peopled by the conquerors in the Ottoman-ruled areas of southern Transdanubia. Most scholars tend to link the re-appearance of this pottery to the Balkan soldiers who settled in Hungary with the expansion of the Ottoman Empire.³

The excavations at Báticasék revealed that the levels from the Ottoman period often accumulated to as much as 1.5 metres. This sequence offered a unique possibility for determining the changes in the artefactual material between the mid-sixteenth century and the late seventeenth century. The changes in the find material would, hopefully, offer some clues as to the ethnic composition of the garrison stationed in the Báticasék palisade, as well as to the interrelations between the fortification and its broader environment.

The fortification of the Hungarian section of the Danube military road by the Ottomans became neces-

sary after the occupation of Buda in 1541, in part to ensure the defence of that fortress and in part because Hungarian raids against the Turks became increasingly frequent after 1541. The Turks were practically forced to build a chain of palisades (*palankas*) along the Danube for the protection of the military road.⁴ We do not know when the Turks fortified the buildings of the former abbey at Báticasék. The first known payroll listing the soldiers serving in the Báticasék garrison dates from 1552/53, the last such record from 1631.⁵ The palisade was visited and described by Athanasio Georgiceo in 1626,⁶ as well as by Evlia Çelebi⁷ and Heinrich Ottendorff in 1663.⁸

Evlia Çelebi's description reveals that the Ottomans built a double stockade; the church in the "inner fort" was transformed into a *cami* that was named after Süleyman I, the sultan reigning at the time of the capture of Báticasék. Evlia was enchanted by Báticasék and strongly recommended a visit to the town. He mentions eighty soldiers' houses. He describes the gatehouse above the moat by the southern entrance – a structure known from the description of other contemporary palisades – and the massive brick building on the western side. The moat encircling the stockade was deep and wide, and the stronghold could be entered across a drawbridge.⁹ The castle was also visited by the Austrian military engineer Heinrich Ottendorff the same year, at roughly the same time as Evlia's visit, although the Austrian was probably not allowed to enter the castle. In his description, Ottendorff notes that "the castle is almost wholly encircled by a stone wall with semi-circular and rectangular towers, semi-ramparts and a dry moat, with a fence of wattling daubed with clay." He describes the interior of the stronghold as being of extremely wretched and narrow construction, with collapsed, ruinous walls and stone heaps that survived from churches and other buildings.¹⁰

Very little is known about the fate of the palisade after 1663. It seems likely that Egedy Hermann's

¹ VALTER 1996; 1998.

² I would here like to thank the excavators of the Báticasék site for kindly offering me the opportunity to publish the Turkish-period pottery finds.

³ GERÓ 1978; 1985; GERELYES – FELD 1986; KOVÁCS 1998.

⁴ SZAKÁLY 1969, 24.

⁵ VELICS – KAMMERER 1886–1890, I. 81, 481.

⁶ TÓTH 1998, 853.

⁷ KARÁCSON 1985, 237.

⁸ HERMANN 1943, 112.

⁹ KARÁCSON 1985, 237. In his description Evlia assumes that the abbey had been fortified before the Ottoman conquest and he attributes the construction of the palisade to King Ferdinand.

¹⁰ HERMANN 1943, 112.

remark that “very little of the former village survived: five houses and a part of the abbey’s church that had been transformed into the Turkish commander’s residence.”¹¹ The *palanka* was finally destroyed by the Tartar rearguard of the Ottoman army that in September 1686 withdrew from Hungary after the recapture of Buda.¹² The medieval church had by this time fallen into ruin. The walls of the sanctuary were still standing in 1711, since masses were celebrated there temporarily. In 1718 the church was vaulted, and in 1741 a new nave was completed.¹³ These constructions sealed the Turkish levels.

Origins of the garrison stationed in Báticasék

The composition of the garrison stationed in the castle of Báticasék can be reconstructed from the Turkish payrolls and *timar defters* until the 1630s, from the 1663 descriptions (already quoted above) and from various Hungarian documents.

Antal Velics¹⁴ and Klára Hegyi¹⁵ have translated the relevant Ottoman documents into Hungarian. The Turkish documents from between 1553 and 1631 indicate that the garrison at Báticasék was predominantly recruited from Balkan population groups: in 1553 at least 72 per cent, and in 1558 at least 56 per cent, were from the Balkans, while in 1613 some 80 per cent of the *azab* serving in the garrison were Southern Slav Christians. Catholic Serbs probably formed the backbone of the garrison troops, and Bosnians were also represented among the soldiers, at least in the initial period. According to the payrolls, the soldiers of the garrison came from Bosnia, the borderland between Bosnia and Serbia, and the area between the Drava and Sava rivers. At the same time, the garrison troops arrived from different areas within these larger regions.¹⁶ Historical research has shown that in the seventeenth century the Ottoman Imperial Council withdrew the Southern Slavs from the major Turkish fortresses, and thus the proportion of the Serbs decreased in these garrisons. At the same time, the Southern Slavic Christian element retained its importance in the Danube garrisons, most likely owing to the ferrying service it performed.¹⁷ This

continuous Southern Slav presence was also valid for Báticasék; at the same time, the fact that there were significant shifts in the ratios of the different branches of service in the garrison must be taken into consideration when analysing the archaeological material.

Although the non-Turkish documents contain considerably less information on the composition of the Báticasék garrison, they do offer other valuable data. In 1663 Heinrich Ottendorff notes that the inhabitants of the garrison were Turks, with the exception of a Catholic from Körös. He also mentions a few peasant houses belonging to Serbs and Gypsies outside the palisade.¹⁸ The ethnic background of the soldiers serving in the garrison before 1686 is revealed by a document dated 20 November 1696,¹⁹ describing the estates of Jakab Jány, bishop of Pécs, who was the landowner of Báticasék in the late seventeenth century. The names of the inhabitants of Báticasék were the following: Ilia, Radoika, Petko, Ratko, Tadić, Ran, Ignatia, Radivoj, Stanko, Radan, Subota, Ivan and Andria Bosnak, and the document in question also notes that they are “Catholic Serbs, without any privileges, who all lived here under the *aga* Uzian,²⁰ and served as Haiducks, and as guards did not pay [tax to] the Turks either. They also served Bishop Jány as foot-soldiers.”²¹ This would suggest that the Serbian soldiers who lived at Báticasék and served their new landowner after the withdrawal of the Ottoman army had already lived there before 1686, but had served the Turks.

The population in the vicinity of the palisade

The Battle of Mohács in 1526 and the progress of the Ottoman army across the country did not result in the immediate abandonment and depopulation of the settlements in the Báticasék area.²² On the testimony of the Turkish surveys from the 1570s, the Hungarian population of the Danube settlements had not abandoned their homes, even if they had temporarily sought refuge elsewhere in times of war. This situation only changed at the turn of the seventeenth century, during the Fifteen Years War.²³ The settlements in the immediate vicinity of Báticasék,

¹¹ HERMANN 1929, 10. Unfortunately, the document quoted by Hermann – Hungarian National Archive U. et C., fasc. 54, n. 27 – can no longer be found.

¹² SZITA 1987, 16.

¹³ HERMANN 1929, 18–19.

¹⁴ VELICS – KAMMERER 1886–1890, I–II.

¹⁵ I would here like to thank Klára Hegyi for kindly allowing me to read her manuscript that also contains the findings of her analyses of the Báticasék payrolls and *timar defters*.

¹⁶ The association of the archaeological finds with smaller areas within these larger regions is not possible since the garrison changed rather often and changes were also frequent within individual branches of service.

¹⁷ HEGYI 1995, 103. For the role of the Southern Slavs, cf. also FEKETE 1944, 129.

¹⁸ HERMANN 1943, 112.

¹⁹ Archive of Tolna County, Kammerer papers, various documents (U. et C. 61.46).

²⁰ Called Uzun in another document. Cf. Archive of Tolna County, Kammerer papers, various documents: “The Turkish garrison of Báticasék around 1680”.

²¹ This document also notes that there is a lovely church at Báticasék with carefully built walls, but without roofing.

²² SZAKÁLY 1969, 16.

²³ KÁLDY-NAGY 1959.

including major market towns such as Ete and Báta, as well as smaller villages, had a predominantly Hungarian population in the sixteenth century.²⁴ The Serbs were not the dominant ethnic element; the names in the Turkish registers from the later sixteenth century clearly indicate that the population was essentially Hungarian.²⁵

From the early seventeenth century on, Serbs appear with increasing frequency in the villages in the Báticasék area.²⁶ Southern Slavs had no doubt replaced a part of the population in Tolna County by the close of the seventeenth century.²⁷

The Hungarian population of the Báticasék area had probably decreased after the Fifteen Years War. In 1669, the inhabitants of Báta, Decs and Nyék told the abbot of Báta that "Serb mercenaries" had settled Báticasék.²⁸ This fits in neatly with Ottendorff's description of "a few Serb houses" beside the Báticasék castle, as well as with the remark concerning the Serb soldiers serving Uzun Ağa.

Following the re-conquest of Báticasék, Jakab Jány, the landowner of Báticasék, attempted to repopulate the settlement with Slav settlers. Most of the new arrivals were Greek Catholics, although their ranks also included a few Roman Catholics (*Buniváci*). The county survey from 1715 does not list any Germans, who first settled in Báticasék around 1718.²⁹

Although Southern Slav groups maintained a continuous presence in the castle of Báticasék in the sixteenth century, they did not do so in the settlement itself, nor in the neighbouring villages and settlements. As a matter of fact, Báticasék was an important settlement with a sizeable Hungarian population in the sixteenth century. The Southern Slav population that can be associated with Báticasék was – if it existed at all – insignificant and concentrated around the palisade, suggesting that the soldiers of the garrison were not recruited from this population. This situation only changed in the mid-seventeenth century, although a Hungarian element remained in the Báticasék area even during this time. Since the historical sources reveal much less about the seventeenth century as compared to the sixteenth century as regards both the palisade and its vicinity, only analysis of the archaeological material can shed light on whether the changes in the archaeological finds can be associated with possible ethnic changes.

The pottery finds from the palisade

A total of 8700 ceramic artefacts were recovered from the excavated territory of the Báticasék castle between 1994 and 2000. Most of these are sherds. The ceramic finds were divided into eleven categories

on the basis of their typological traits. The proportion of individual groups within the ceramic assemblage is as follows.

1. Pottery turned on a slow wheel (slow-turned pottery)	36 per cent
2. Pottery fired in a reducing atmosphere	25 per cent
3. Stove tiles	20 per cent
4. Unglazed red and brown jugs	6 per cent
5. Unglazed and glazed Hungarian pots	5 per cent
6. Glazed Turkish pottery (excepting <i>sgraffito</i> ornamented bowls)	3 per cent
7. <i>Sgraffito</i> ornamented bowls	< 1 per cent
8. Glazed and floral ornamented bowls	< 1 per cent
9. Austrian graphitic ware	< 1 per cent
10. Painted wares from the Great Hungarian Plain	< 1 per cent
11. Pipes	< 1 per cent

I. Slow-turned pottery (Ills 1–2)

Most of the pottery from the palisade was turned on a slow wheel. The overwhelming majority of the vessels in this category were squat pots with out-turned rims (Ill. 1). Tempered with sand, these vessels were ornamented with one or more incised wavy lines, spirals, or with rouletted or impressed ornamentation. Incised herringbone patterns (Ill. 2. 6) are rare. Larger storage jars sometimes had an appliqué rib with impressed fingerprints (Ill. 2. 2). Vessel bases were rarely stamped. Cross-shaped stamps could be noted only on a few lids.

Fragments from slow-turned jugs were also found (Ill. 2. 5). Their best analogies are known from southern Transdanubia, namely from Pécs and Nagykanizsa.³⁰

There are few published contemporary assemblages with which the Ottoman-date slow-turned pottery from Báticasék can be compared. Such pottery wares of the Ottoman period have been recovered from various sites in southern Transdanubia, such as Babócsa, Barcs, Márévár, Mecseknádasd, Nagykanizsa, Ozora, Pécs, Segesd, Szekszárd–Újpalánk, Törökkoppány, and Vál.³¹ Although these wares were distributed predominantly in southern Transdanubia, a few comparable finds have also been reported from Buda³² and from the Szolnok fortress.³³

²⁷ MÉSZÁROS 1968, 20.

²⁸ HERMANN 1929, 11.

²⁹ HERMANN 1929, 13–14.

³⁰ FEHÉR 1959, 126–127, Pl. XXVIII. 4–7, Pl. XXXII. 2–3, Pl. XXXV. 10–13; PARÁDI 1958, 132, Pl. LXII. 18.

³¹ For Babócsa: MAGYAR 1990, 139, Pls 28–29; for Barcs: KOVÁCS 1998, 156–162, Ills 2–6; for Márévár, Mecseknádasd: GERŐ 1978, 351–352, Abb. 13; 1985, 197–200, Abb. 4; for Nagykanizsa: PARÁDI 1959, 132; for Ozora: GERELYES – FELD 1986, 165–168; for Pécs: FEHÉR 1959, 126–127; PARÁDI 1958, 132, Pl. LXII. 18; for Segesd: MAGYAR 1988, 147, Ill. 11. 4–6, Ill. 12. 1, Ill. 16. 1, 3–4; for Szekszárd–Újpalánk: GAÁL 1985, 189; for Törökkoppány: KOVÁCS 1990–91, 172, Pl. IX. 1–10, Pl. X. 1–5; for Vál: HATHÁZI – KOVÁCS 1996, 41–42, Ill. 35. 5, Ill. 27. 1.

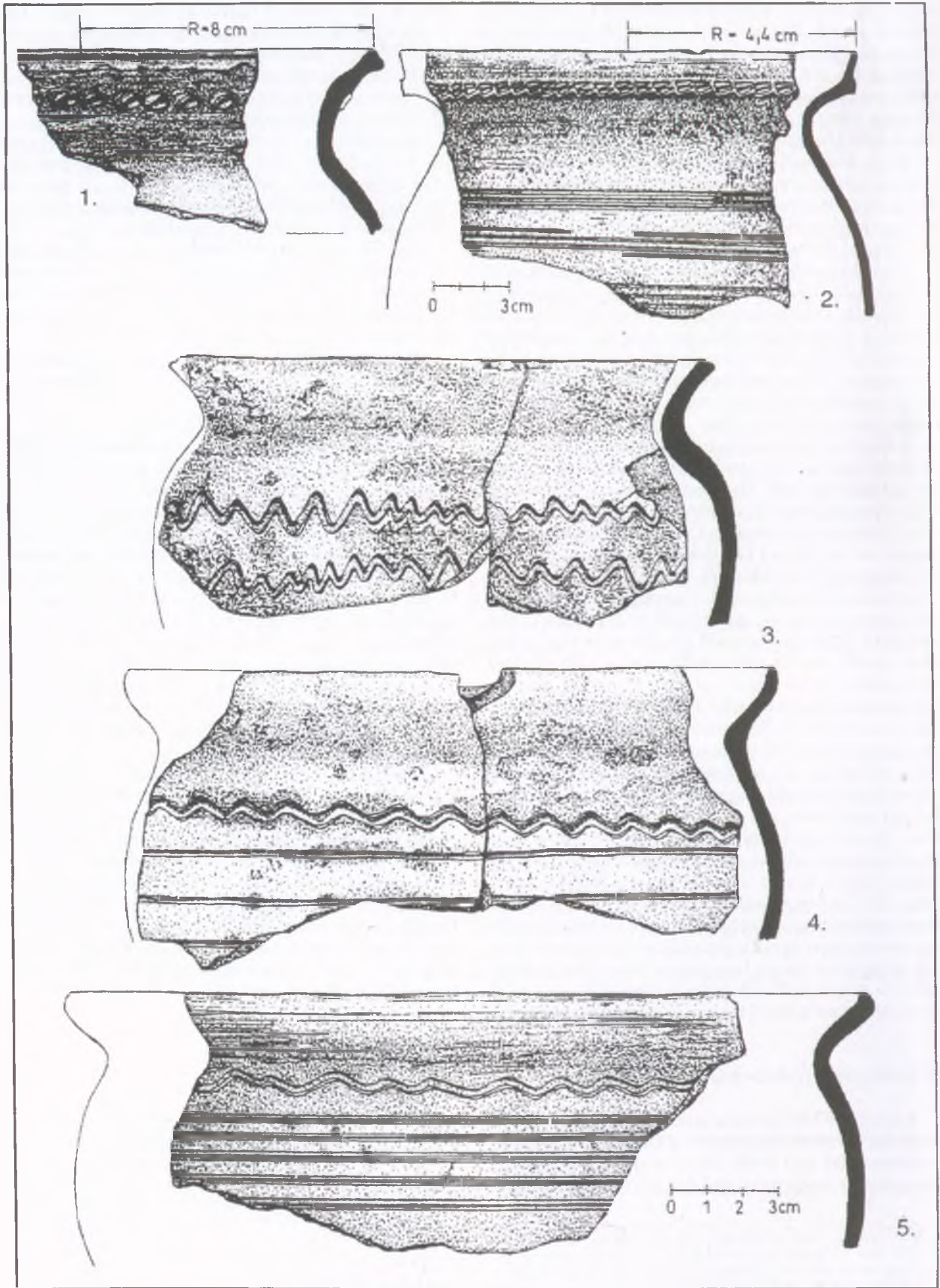
³² GERELYES 1991, 35, Ill. 11. 9.

³³ KOVÁCS 1984a, 13, Ill. 21. 2.

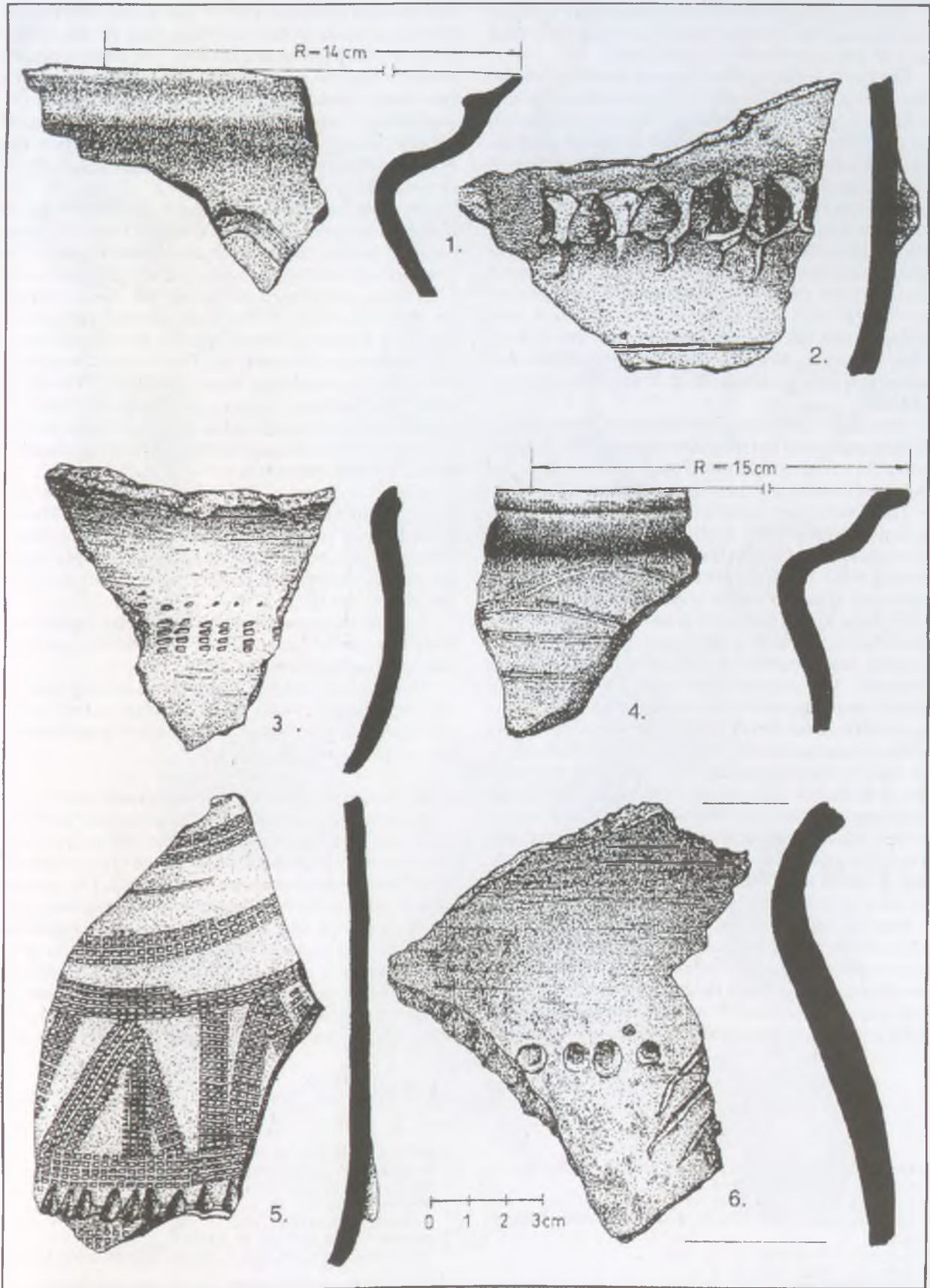
²⁴ Báta: 600 in 1545, 1100 in 1557 and 1571; Ete: 1200 in 1557 and 1571 (Cf. SZAKÁLY 1969, 28); for the population of the neighbouring villages (Ócsény, Decs), cf. VELICS – KAMMERER 1886–1890, I, 238–250.

²⁵ VELICS – KAMMERER 1886–1890, I, 46.

²⁶ SÜMEGI 1993, 116; SZAKÁLY 1981, 181, note 15.



Ill. 1. Slow-turned pottery from the Báticasék palisade



III. 2. Slow-turned pottery from the Báticaszék palisade

The assemblages from Barcs, Ozora and Vál offer a good basis for comparison; from the other sites quoted only a few finds are published.

The best parallels to the Báticasék finds are known from Ozora. The distinctive ornamental motifs and patterns – such as rouletting,³⁴ spiral patterns on the vessel body,³⁵ a combination of spirals and incised wavy lines,³⁶ and appliqué ribs with impressed fingerprints on larger storage jars³⁷ – reflect the links between the two assemblages. At the same time, the pots with scalloped rims,³⁸ handled pots and pots with a stamped base known from Ozora do not occur among the Báticasék finds. The rim forms of the vessels from Báticasék show a greater variety than at Ozora: e.g. vessels with a strongly out-turned neck and scalloped rim (Ill. 2. 4) or straight rims are lacking at the latter site. Vessels with a gently profiled out-turned rim with grooving (Ill. 2. 1) are also unknown at Ozora.

One slow-turned pot from Báticasék is ornamented with an incised herringbone pattern (Ill. 2. 6). At Ozora this ornamental motif appears on a grey jug fragment fired in a reducing atmosphere.³⁹

The slow-turned pottery from Barcs also has much in common with such finds at Báticasék. Although the ornamental motifs on the slow-turned vessels from the two sites – incised wavy lines, incised spirals and impressed triangle motifs – are more or less identical,⁴⁰ these motifs are rarely combined on the vessels from Barcs,⁴¹ while at Báticasék the tendency to combine these motifs on the same vessel is more common. The assemblage from Barcs does not include gently profiled out-turned rims with grooving, and thus the Barcs vessels give the impression of being coarser wares. Vessels with a stamped base are entirely lacking at Barcs,⁴² and they are fairly rare at Báticasék. The most conspicuous difference in the assemblages from the two sites can be noted in the lids: lids ornamented on the inner side and with strongly grooved handles⁴³ are absent at Báticasék, while lids with stamped handles, common at Báticasék, are missing at Barcs.

Slow-turned pottery in the Balkans usually comes from contexts that are pre-sixteenth century. Contemporary assemblages include a late seventeenth-century assemblage from Belgrade found in the Donji Grad quarter, recovered from a two-roomed building with a stone foundation and a wooden superstructure

that burned down in 1686.⁴⁴ The household implements survived in the building. One of the rooms probably functioned as a kitchen. The finds included wares turned on a slow wheel and those turned on a fast wheel. Beside pots turned on a slow wheel, the assemblage also included footed bowls and glazed vessels turned on a fast wheel, indicating that the household pottery was not made up exclusively of slow-turned pots.⁴⁵

Slow-turned pottery dating to the fourteenth to fifteenth centuries has been published from Belgrade, Szendrő (today: Smederevo, Serbia) and Stalač. The Szendrő assemblage includes storage jars decorated with finger-impressed ribs from the earlier part of the fifteenth century⁴⁶ that compare well with similar jars from Báticasék. Ibolya Gerelyes has already noted the similarities between the finds from Ozora and the earlier assemblage from Szendrő.⁴⁷ The finds from the Serbian section of the Lower Danube include squat pots with out-turned rims ornamented with impressed dots and oblique hatching, dated to the early fifteenth century.⁴⁸

Pots thrown on a slow wheel ornamented with incised and impressed decoration are also known from Bosnia, from fourteenth- to fifteenth-century contexts. The ornamental motifs on these vessels also include the impressed pattern under the rim of the pot shown on Ill. 1. 2.⁴⁹

Late analogies with the slow-turned wares from Báticasék can be quoted from the Serbian and Bosnian ethnographic material.⁵⁰

Hand-made baking platters and baking lids can also be linked to this Balkan group. Only a few specimens of this Balkan pottery were found during the excavation of the palisade.⁵¹

2. Pottery fired in a reducing atmosphere

Rich and varied assemblages of pottery fired in a reducing atmosphere that date to the sixteenth to seventeenth centuries are known from Hungarian and from Turkish find-contexts in Hungary. The greater part of such pottery from Báticasék comprises jugs, decorated with smoothed-in wavy lines, rouletted patterns and combed garland patterns. The proportion of grey jugs fired in a reducing atmosphere in Turkish assemblages varies from site to site. In southern Transdanubia, e.g. at Pécs and Ozora, this ware occurs in large amounts, while only a few

³⁴ GERELYES – FELD 1986, Ill. 4. 6, Ill. 5. 4, Ill. 10. 1.

³⁵ GERELYES – FELD 1986, Ill. 4. 8.

³⁶ GERELYES – FELD 1986, Ill. 4. 9.

³⁷ FELD – GERELYES 1985, 173, Ill. 9; GERELYES – FELD 1986, Ill. 4. 9.

³⁸ GERELYES – FELD 1986, Ill. 10. 1–2.

³⁹ GERELYES – FELD 1986, Ill. 6. 4.

⁴⁰ KOVÁCS 1998, Ill. 6.

⁴¹ KOVÁCS 1998, 162.

⁴² KOVÁCS 1998, 162.

⁴³ KOVÁCS 1998, 165, Ill. 9.

⁴⁴ MARJANOVIĆ-VUJOVIĆ 1973.

⁴⁵ MARJANOVIĆ-VUJOVIĆ 1973, 228.

⁴⁶ POPOVIĆ 1978, 107, Ill. 3.

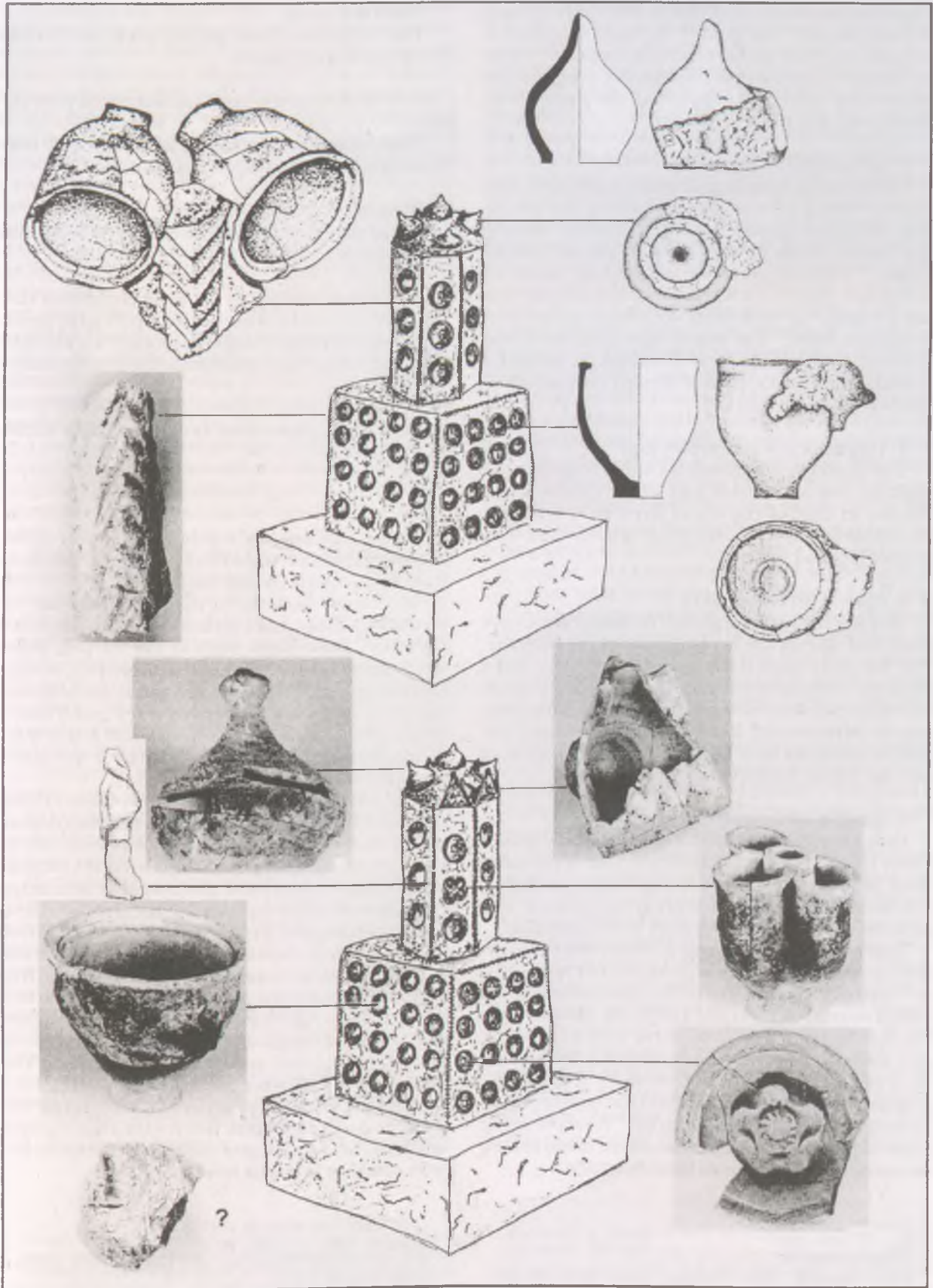
⁴⁷ GERELYES – FELD 1986, 165.

⁴⁸ JANKOVIĆ 1974, 117, Ill. 8a. 11–16.

⁴⁹ BOJANOVSKI 1978, 79, Abb. 1–15, 86, Abb. 14. lower left, no. 3.

⁵⁰ TOMIĆ 1983, Ills 84–140; POPOVIĆ 1956–1957 (1957), 21, Ill. 2. a 1, Pls IV–V.

⁵¹ POPOVIĆ 1956–1957 (1956), 115; TOMIĆ 1970.



Ill. 3. Stove-tiles from the Báticaszék palisade and possible reconstructions of tiled stoves

fragments are known from sites in other regions, such as Szolnok and Visegrád.⁵² At Eger, this ware is insignificant compared to other contemporary Turkish wares.⁵³ It has been shown that the frequency of this pottery ware can be linked to the presence or absence of certain ethnic groups.⁵⁴

3. Stove-tiles (Ill. 3)

The Báticasék assemblage contains many stove-tiles, many of which were recovered from *in situ* stoves. Cup- and plate-shaped, as well as bipartite tiles are also known from other Ottoman-period assemblages.⁵⁵ Certain types were definitely made by Hungarian potters in a workshop at Ete, a settlement near Báticasék,⁵⁶ or came from workshops on the Great Hungarian Plain.⁵⁷ The assemblages from Barcs and Márévár, both small Turkish castles in southern Transdanubia, included slow-turned variants of the stove-tiles from Báticasék.⁵⁸

4. Unglazed red and brown jugs

The finds from Báticasék included fragments of unglazed red and brown jugs whose quality is not inferior to that of the wares fired in a reducing atmosphere. They are also often ornamented with combed garland patterns.

5. Glazed Turkish pottery

Very few fragments of glazed Turkish pottery were recovered during the investigation of the palisade. The few finds came from footed bowls, jugs and a few large two-handled storage jars. Most of the bowls were drip glazed or monochrome glazed. Only a few *sgraffito* ornamented footed bowls that have good Balkan analogies have been found. The number of spouted jugs is similarly low.

6. *Sgraffito* ornamented bowls

Only a few fragments of this ware have been found. These fragments are ornamented with a palmette motif of incised wavy and straight lines, as well as interlocking arcs on a yellowish-green ground. The palmettes are outlined with dark green painting.

Sgraffito ornamented footed bowls were most certainly in use by the later sixteenth century in Hungary.⁵⁹ Based on her analysis of the closed assemblages from Visegrád–Alsóvár site and Buda, Ibolya Gereelyes concluded that *sgraffito* wares were used in the early seventeenth century at these sites.⁶⁰ Most scholars tend to emphasize the close links between the *sgraffito* wares from Hungary and the *sgraffito* ornamented pottery found in Belgrade. Parallels to the palmette motif from Báticasék can also be noted among the sixteenth-century finds from Belgrade.⁶¹

7. Glazed bowls

The fragments from glazed bowls are without exception unique pieces.

8. Wheel-turned glazed and unglazed pots and jugs

These wares are paralleled by the ceramic finds from Hungarian settlements of the time.

9. Austrian graphitic wares

These wares are probably from the period before the Ottoman conquest.

10. Painted wares from the Great Hungarian Plain

The red-painted wheel-turned pots were probably manufactured in Hungarian pottery workshops.⁶² Only a few fragments were unearthed at Báticasék.

11. Pipes

Only a few pipes were brought to light during the excavations.

The ceramic material is dominated by slow-turned pottery and vessels fired in a reducing atmosphere. Many stove-tiles were also found.

The other elements in the assemblage are the pottery types that make up less than 1–10 per cent of the finds. These finds, such as the Turkish glazed wares, make up the “Turkish” nature of the ceramic assemblage from Báticasék castle, and at the same time, they only add a few interesting hues to the overall nature of the finds. The proportion of wares made by Hungarian potters exceeds that of the glazed Turkish wares.

The 1686 destruction level can be clearly distinguished in the often 1.5-metre-thick stratified deposits of the Turkish stronghold that was built on the territory of the abbey. Although several Ottoman-period planked surfaces underlie this destruction level, these planked surfaces and the associated levels could not always be precisely dated. The finds from the various levels excavated in the three small trenches indicate that slow-turned pottery can be traced from the earliest level to the destruction level. Beside slow-turned wares, grey pottery fired in a reducing atmosphere, Hungarian wares (glazed Hungarian pots, unglazed red and brown vessels), and cup-shaped stove tiles were used throughout the life of the palisade. The few pipes were all recovered from the late occupation levels. Bowls with a floral pattern were only found on top of the 1686 destruction level or in pits dug into that level.

⁵² GERELYES 1991, 29.

⁵³ PUSZTAI 1999, 478.

⁵⁴ GERELYES 1991, 29.

⁵⁵ FELD – GERELYES – GERE – GYÜRKI – TAMÁSI 1989, 196–197.

⁵⁶ CSALOGOVITS 1937, Ill. 14. 1–2, 4–8.

⁵⁷ SZABÓ 1938.

⁵⁸ GERÓ 1978, Abb. 14; KOVÁCS – RÓZSÁS 1996, 175, 178, Ill. 15. 3. 2.

⁵⁹ GERÓ 1978, 350; SOPRONI 1981, 53.

⁶⁰ GERELYES 1986, 81; 1991, 39, 45.

⁶¹ BIRTAŠEVIĆ 1970, 76, cat. no. 130, Ill. 63; BIKIĆ – IVANIŠEVIĆ 1996, 269, Ill. 13.

⁶² For a discussion of these wares and their analogies, cf. HORVÁTH – SIMON 1996, 441, Ill. 53. 10, Ill. 54. 1, Ill. 65. 1, Ill. 72. 19; GERELYES 1980, 110, Ill. 8. 6, Ill. 9. 2, 4–5; 1996, 121.

Analysis of the composition of the finds and the collation of the archaeological with the documentary evidence revealed that there were no changes in the ethnic composition of the garrison that would perhaps also be reflected in the finds. The slow-turned pottery, dominating all levels, was probably made and used by the Balkan – the Bosnian and Serb – soldiers mentioned in the historical sources. The cup-shaped stove-tiles, present from the earliest layer to the destruction level, suggest that the stoves used in the castle were made following the same tradition; in view of the Hungarian analogies of these stove-tiles and the finds from a potter's kiln in nearby Ete, the stoves of the castle were probably made by Hungarian craftsmen. The continuous presence of glazed and unglazed Hungarian pottery wares indicates that despite the ethnic changes in the vicinity of the palisade (i.e. the increasing arrival and settlement of Southern Slavs), there remained a sizeable Hungarian population.

A comparison between the composition of the Turkish finds from BÁTASZÉK and other assemblages from the Turkish palisades of southern Transdanubia reveals a number of similarities, as well as differences.

While at BÁTASZÉK the Balkan soldiers of the garrison most certainly used stoves made by Hungarian craftsmen active in neighbouring settlements, at Barcs and MÁRÉVÁR they used poor slow-turned imitations of the stove-tiles made using their own pottery technique. The differences between the stoves of these Turkish castles can perhaps be explained by the ethnic differences in the broader environment of the castles: Balkan population groups, bringing with them their own pottery-making traditions, could have been settled in greater numbers in the Barcs and MÁRÉVÁR area, lying south of BÁTASZÉK.

A comparison of the BÁTASZÉK assemblage with the ceramic finds from the Turkish palisade at Barcs is also very instructive.⁶³

On the basis of the counting by the present author, the approximate composition of the Barcs assemblage according to wares was as follows (in percentages of the total):⁶⁴

Slow-turned pottery	45 per cent
Slow-turned stove tiles	35 per cent
Glazed Turkish pottery (excluding <i>sgraffito</i> ornamented bowls)	6 per cent
Hand-made baking lids	4 per cent
Pottery fired in a reducing atmosphere	3 per cent
Glazed and unglazed Hungarian pottery	3 per cent
Pipes, <i>sgraffito</i> ornamented bowls and other finds	1 per cent

Comparison of the slow-turned pottery from the two sites shows that this pottery type dominates both assemblages. At the same time, vessels fired in a reducing atmosphere were at least as important at BÁTASZÉK, while at Barcs the presence of this type is insignificant. This would suggest that the population who used slow-turned pottery did not bring with it from the Balkans the tradition of using vessels fired in a reducing atmosphere. Depending on the area in which this Balkan population settled, these vessels were present in differing proportions among commonly used household vessels. At Barcs for instance, this pottery was apparently produced in smaller volume in the vicinity of the castle, while at BÁTASZÉK pottery fired in a reducing atmosphere was quite common in the environs of the palisade. The presence or absence in Ottoman-period settlements of pottery fired in a reducing atmosphere can also, it seems, be explained by differences in the regions supplying these settlements with various wares. Since the assemblage from BÁTASZÉK was predominantly made up of vessel fragments, it was practically impossible to distinguish between the various types fired in a reducing atmosphere. Only this much can be said with certainty: some fragments came from vessels that resemble types in which coin hoards were hidden in the face of the Ottoman advance,⁶⁵ as well as from types that were found in a potter's kiln at Ete.⁶⁶ This would also suggest that pottery fired in a reducing atmosphere was produced in greater volume in the environs of BÁTASZÉK during the sixteenth to seventeenth centuries, although this does not necessarily imply that the potters were Turks or Southern Slavs.

At Barcs Turkish glazed pottery occurs in roughly the same proportion as Hungarian glazed pottery at BÁTASZÉK. This again allows certain conclusions as to the ethnic background of the population living in the environment of the two castles.

Comparison of the tiled stoves again reflects the differences in the broader environment of the two castles. The glazed and unglazed pottery from Barcs that can be linked to Hungarian potters represents an insignificant amount, its proportion being smaller than that of the Turkish glazed pottery. At both sites, pipes were found in late contexts, indicating that in these settlements the practice of pipe smoking appeared well after the introduction of this custom to Hungary. The evaluation of find types represented by less than 1 per cent of the finds calls for caution. At both sites, *sgraffito* vessels appear to have been luxury or prestige items rather than indicators of an ethnic background; however, this con-

⁶³ KOVÁCS 1998.

⁶⁴ Based on KOVÁCS 1998. Kovács offers a detailed data of different pottery types. Since the pottery finds from BÁTASZÉK were for the greater part fragments, while the many of the vessels from Barcs have already been assembled from their fragments and restored, I had to "break up" the

restored or intact vessels by multiplying them by 10; obviously, this does not reflect the original composition of the Barcs assemblage, but only thus could the finds from the two sites be compared.

⁶⁵ SAROSÁCS 1972, 82.

⁶⁶ CSALOGOVITS 1937, 331, Ill. 14, upper line no. 2.

clusion is only valid for these two sites only, since other factors must also be taken into account in the case of assemblages with a higher proportion of *sgraffito* ornamented wares from other Ottoman-period sites. At present, there is no plausible explanation for the low number of baking lids at Báticaszék.

A comparison with assemblages from other sites is even more difficult. At Ozora the ceramic finds reflect the continuous presence of slow-turned pottery. The stove-tiles from Ozora suggest that the castle's broader environment had a sizeable Hungarian population, as in the case of Báticaszék. The percentage of glazed pottery is more or less similar at both sites. At the same time, a higher number of vessels ornamented with *sgraffito* occurred at Ozora.

Despite the relative scantiness of the evidence, it is clear that the pottery wares produced in the broader environment determined in part the dominant types in the ceramic assemblages from these castles. In other words, the garrisons tended to use local pottery wares in addition to their own slow-turned vessels. In southern Transdanubia, the presence of both a local Hungarian population and the newly arrived Balkan groups resulted in the parallel existence of different material cultures in a smaller area. The patchwork of active pottery workshops also calls for an important caveat: we must proceed extremely carefully in making generalisations on the basis of conclusions drawn from the evaluation of individual find assemblages. The settlements around the palisades offer very instructive examples for local variations.

Even though the broader regions supplying the soldiers serving in the garrisons of the *vilayet* of Buda can be determined from the known payrolls, the exact place of origin of the soldiers in the Báticaszék palisade cannot be identified precisely. The continuous and dominant presence of slow-turned pottery indirectly indicates that in the sixteenth to seventeenth centuries in the main Balkan territories from which these soldiers came (Bosnia, the Bosnian–Serbian border-

land and the region between the Drava and the Sava rivers) the tradition of this pottery was considerably stronger than can be assumed from the currently known fifteenth-century finds from these regions. This is the sole plausible explanation for the uninterrupted presence of this ware despite the changes in the garrison's branches of service and the continuous change of the soldiers as reflected in the payrolls. Even so, one cannot summarily state that this pottery type was distributed throughout the Balkans in the Middle Ages since the presence of slow-turned pottery is not characteristic of all fortresses and castles in Hungary with a Turkish/Balkan garrison.⁶⁷

From her analysis of the payrolls of the *vilayet* of Buda, Klára Hegyi determined the places of origin of the Turkish soldiers serving in the garrisons.⁶⁸ A glance at her map reveals that most soldiers joined the Ottoman army, which offered them a better livelihood, from an area coinciding with the post-medieval core distribution of slow-turned pottery in the Balkans. According to Tomić, the production of slow-turned pottery in these regions can be explained by the scarcity of natural resources and possible sources of livelihood, namely that arable land in the environment of the – principally – mountain villages was limited and that pottery production was practised as a supplementary activity.⁶⁹ Similar phenomena can also be quoted from elsewhere.⁷⁰ Although the proportion of slow-turned pottery within the household wares excavated in the abovementioned Belgrade house is unknown, it is nonetheless clear that this assemblage included a relatively large amount of glazed tableware. By contrast, the finds from Báticaszék would suggest that the soldiers of the garrisons did not use other tableware in great quantity.⁷¹ It was soldiers from rural backgrounds who used the pottery at Báticaszék, soldiers who had not only used this slow-turned pottery extensively in their own households, but who had also manufactured these wares.

⁶⁷ The ceramic finds from Visegrád reflect the many different pottery wares that can be associated with Balkanic groups. Cf. GERELYES 1987.

⁶⁸ HEGYI 1998.

⁶⁹ TOMIĆ 1983, 72.

⁷⁰ DANKÓ 1967, 123–133.

⁷¹ Cf. also Attila Gaál's paper on the pottery from Szekszárd–Újpalánk, read at the conference held in the Hungarian

National Museum in spring, 2000. He noted that the slow-turned pottery from the palisade castle of Újpalánk includes various types, belying the suggestion that these vessels were used for serving and consuming specific dishes. The slow-turned stove tiles from a number of palisade castles also reflect the pottery manufacturing traditions of a probably rural population.

Finjans, Pipes, Grey Jugs

"TURKISH" OBJECTS IN THE HUNGARIAN FORTRESSES OF BORSOD COUNTY

The organising of this conference indicates that the past few years have seen many efforts to gain a better understanding of the archaeology of the post-medieval period. One interesting aspect of this period is the interaction between various cultures – German, Italian, Hungarian, Southern Slav, and Turkish – that existed side by side in Hungary. Archaeology can contribute to this fascinating issue through the analysis of the architectural and artefactual remains from the period. As one of the artefact types most commonly recovered from excavations, pottery is especially suited to archaeological analysis. Although several studies on the pottery of this period have already been published,¹ it must be borne in mind that the bulk of this pottery corpus comes from the forts, castles and towns occupied by the Ottoman forces. Finds from villages lying in Ottoman-ruled territory have also been published.² The reports on these finds indicate that pottery from the sites under Turkish sway includes types that seldom occur in the neighbouring villages, while, at the same time, the pottery types known from the villages are present in the ceramic material of the Turkish palisade forts, fortresses and towns. The Ottoman army captured and occupied the majority of the border fortresses on the territory of present-day Hungary and thus the pottery from these sites can be linked to Hungarian (and German) or Turkish (and Southern Slav) troops only after minutely detailed analysis. Only a small number of these border fortresses remained continuously under the control of the Kingdom of Hungary, and from these fortresses the pottery finds can be unequivocally associated with the German and Hungarian garrisons stationed there. In the following I shall discuss the ceramics from two such fortresses, Ónod and Szendrő (both located in the one-time Borsod County), for which a "Turkish" origin can be assumed.³

Finjans

In the abovementioned two Hungarian border fortresses, the first group of objects that can be associated with the Turks are the wares arriving

through long-distance trade whose routes led through the Ottoman Empire.

The sole undoubtedly Oriental vessel to reach these two border fortresses through Turkish mediation is the footed cup without handles (the finjan), even though this vessel is not of Turkish origin. A single fragment of one such Chinese porcelain vessel was recovered from a pit filled with household refuse in the eastern court of the Szendrő fortress. This small rim fragment is reddish-brown glazed on the outside and has a blue line running under the rim in its interior (Ill. 1. 1). Coloured glazes appear on the porcelains of the Ming period,⁴ and we know that a monochrome glazing on the outer side of vessels became very popular from the close of the seventeenth century.⁵ Since the fill of the pit can be dated to the late seventeenth century or to the abandonment of the fortress (1707) at the latest,⁶ it seems likely that the cup was manufactured under Qanxi (1662–1722), the first Ching emperor. The rebellions that broke out in the last years of the Ming dynasty caused disruptions in porcelain manufacture and trade from 1659; Qanxi restored the porcelain workshops in 1683, after he had successfully quelled the rebellions marking the first years of his rule,⁷ and thus the cup can be dated to between 1683 and 1707.

A finjan covered with transparent glaze ornamented with blue floral motifs on a white base in its interior was also found at Szendrő. The exterior was painted reddish-brown under the glaze. The base bears a blue painted mark resembling a Chinese character (Ill. 1. 2). Persia had a flourishing ceramics industry under the Savafids that was also renowned for – amongst other things – its imitation blue-on-white Chinese porcelain.⁸ The cup was most probably made in one of these Persian faience workshops. The lighter filling colour overflows the contour drawn in a darker blue. The imitation character is not an earlier "tassel" mark,⁹ but a simpler sign that recalls

¹ Cf. GARÁDY 1944; FEHÉR 1959; KOVÁCS 1984a; 1990–91; GERELYES 1990; 1991.

² Cf. SZABÓ 1938; MÉRI 1954; BENKÓ 1980; HORVÁTH – SIMON 1996.

³ This study has been made with support from the National Research Foundation (OTKA). Index no.: T029319.

⁴ COX 1959, 447.

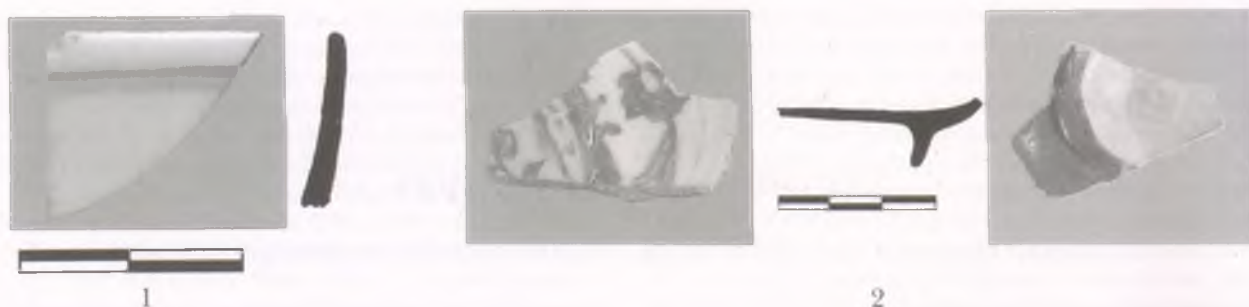
⁵ LANE 1957, 96.

⁶ Szendrő–Felsővár, Square 18, pit under Feature 4 (28 July 2000). The other finds from the pit included a few *Haban* fragments, a bowl decorated with a bird figure and a stove-tile with a so-called "heart pattern" that can be assigned to the later seventeenth century.

⁷ COX 1959, 533; LANE 1957, 90–91.

⁸ LANE 1957, 91–92.

⁹ LANE 1957, 115–116, 26, 29–32.



Ill. 1. 1. Rim fragment of a Chinese porcelain cup from Szendrő; 2. Base fragment of a Persian faience cup from Szendrő

eighteenth-century style,¹⁰ although it is not identical with the latter. The schematised painting, the form of the pseudo-character and the brown painting on the exterior suggest that this cup can be defined as a late specimen of Kirman ware. The decline of Persian faience can be dated to the eighteenth century,¹¹ but since the Szendrő fortress was destroyed in 1707, the finjan must be dated to before that year. The dating of this finjan fragment is confirmed by the fact that its find context and the associated finds came to light from a pit whose fill can be dated to the turn of the eighteenth century.¹²

The rarity of these cups and their late date indicate that porcelain and faience finjans only began to be used as rare utility objects by the officers serving in the border fortresses at the close of the Ottoman period. It seems likely that the appearance of this vessel type can be associated with the spread of coffee drinking. Since it was the Turks who introduced this custom into Hungary, it seems an obvious conclusion that the cups, too, reached the Hungarian border fortresses through Turkish mediation. No finjan fragments were found at Ónod, despite the fact that a larger area was investigated than at Szendrő. The reason for this may lie in the fact that the Ónod fortress was destroyed at an earlier date (1688), or in the difference in importance between these two fortresses, since importance no doubt influenced the prestige items owned by the officers serving there.

Pipes

The second group includes artefacts that are of Turkish origin. The only demonstrably Turkish artefacts in the assemblages are the clay pipes that

had originally been provided with wooden stems. The finds from Ónod include a pipe with a mark written in Arabic letters¹³ and a pipe whose careful manufacture and lavish stamped ornamentation suggest Turkish workmanship (Ills 2. 1–2).¹⁴ Not one single pipe that can be unequivocally considered Turkish has yet been identified in the assemblage from Szendrő. Lead-glazed pipes occur frequently among the mid- and late seventeenth-century finds from Ónod and Szendrő (Ills 2. 3–4). Some of these pipes – especially the varieties whose bowls are segmented or decorated with fluting – have their best analogies among the Turkish finds from Eger and Pécs.¹⁵ It is still unclear whether these pipes reached the border fortresses in Borsod County from workshops in the Ottoman-ruled areas or whether pipe-makers simply adopted these pipe forms from the Turks.

Although there are some pieces among the glazed clay pipes whose form and ornamentation still preserve vestiges of their Turkish origin, these were most likely manufactured outside the territory of the Ottoman Empire. The finds from Ónod¹⁶ and Szendrő¹⁷ include a pipe with a glazed bowl decorated with rosettes on each side, and a neck decorated with horizontal fluting (Ills 2. 5–6). This ornamentation is frequent on pipes recovered from Turkish sites such as Eger and Buda,¹⁸ suggesting a Turkish origin. The form of the Ónod pipe differs from that of the Turkish ones: its bowl recalls the form of the Western pipes with a clay stem. Its ornamentation consists of rosettes and small leaves, the latter being a motif that does not occur on Turkish pieces. Compared to the pipes from Eger, the Szendrő specimen is rather coarse, with the petals of the rosette deformed into tiny knobs. It seems likely that these two

¹⁰ LANE 1957, 116, 37–42.

¹¹ LANE 1957, 96.

¹² Szendrő-Felsővár, Square 7, Feature 4 (28 June 1999). This pit can be associated with the row of wooden houses constructed in the 1650s that survived until the destruction of the fortress; its fill yielded stove-tiles that can be assigned to the latest period of the fortress.

¹³ TOMKA 2000, 123 (5b/4).

¹⁴ Miskolc, Hermann Otto Museum (HOM) inv. no. 92.1.2271. A larger number of Turkish clay pipes were found at Nagyvárad,

all from the period before 1660. Cf. EMÓDI 1998, 31, 73, and Ill. 38.

¹⁵ KOVÁCS 1963, 243, Pl. I. 11; KOZÁK 1967, 105, Ill. 26; FEHÉR 1959, 120, Pl. XII. 19 and 121, Pl. XII. 224.

¹⁶ TOMKA 2000, 123 (5b/3).

¹⁷ Szendrő-Felsővár, Square 16, cleaning of the western section, from the pebbly layer (12 July 2000).

¹⁸ For the early form of rosette-decorated pipes, cf. BERTALAN 1997, 345, Ill. 13; for the variant with glazed bowl and fluted neck, cf. KOZÁK 1967, 106, Ill. 26; KOVÁCS 1963, 247, Pl. III. 6; EMÓDI 1998, 73, Ill. 38. 1.

pipe heads were modelled on Turkish types and were slightly altered by the pipe-maker, perhaps to conform to his customers' taste.¹⁹

Béla Kovács has already noted that one variant of the Turkish clay pipes can be regarded as the formal precursor of Hungarian clay pipes.²⁰ These undecorated, rather simple pieces usually have a red fabric and are often polished. One sub-variant of these simple pipes with polygonal necks occurs frequently on Turkish sites,²¹ but only a single fragment was brought to light at Ónod (Ill. 2. 7).²² Cylindrical pipe necks and a neck-ring decorated with a cogwheel pattern became popular in the late seventeenth century.²³ This latter type has also been found at Ónod (Ill. 2. 8) and Szendrő.²⁴ The specimen with a prismatic neck was probably made in a workshop in the Ottoman-ruled area, while the pipes with cylindrical stem were Hungarian products.²⁵

We can only conjecture how these pipes reached the border fortresses of the Kingdom of Hungary from the Ottoman Empire. Their low number suggests that pipes were not part of regularly traded merchandise. The stamp with Arabic letters on one of the Ónod pipes is not a craftsman's mark, but an owner's mark,²⁶ indicating that this pipe had not originally been manufactured for a Hungarian soldier. Beside trade, some of these pipes may have been given as presents, especially in the period when these border fortresses were under the control of the 'Turks' vassal princes.²⁷ The Hungarian landowners of the settlements in the Ottoman territories and the soldiers of the border fortresses who actually collected the tax from these settlements often demanded Turkish wares as "gifts". These "gifts" often took the form of carpets and footwear, but every now and then pipes, too, were included.²⁸ Finally, we cannot exclude the possibility that some of these pipes, especially the ones that were personal articles and always kept at hand, may have been part of the booty taken by Hungarian soldiers during raids.

Jugs fired in a reducing atmosphere

Beside pipes, the one other find type whose Balkan origins can hardly be challenged embraces so-called black ceramics products.²⁹ This pottery ware includes jugs tempered with sand and fired in a reducing atmosphere that were more or less carefully polished. These jugs imitated Balkan copper and silver vessels not only in their lustrous body, but also in their form.³⁰ Not one single fragment of jugs decorated with incised patterns³¹ – a type known well from the various centres in the Ottoman-occupied territory – has been found at Szendrő, while only two fragments were brought to light at Ónod, and the quality of these two fragments is vastly inferior to similar wares from Buda and Pécs. It seems likely that local Hungarian potters manufactured the black jugs found in the border fortresses of Borsod County. If this is indeed the case, Olivér Soproni's suggestion that only the unpolished jugs fired in a reducing atmosphere can be regarded as Hungarian products³² must be slightly modified. The finds from Szendrő and Ónod confirm Gyöngyi Kovács' observations made at Törökszentmiklós, namely that the thick-walled undecorated polished jugs from that site can be seen as specimens of Hungarian grey ware.³³

The earliest polished jugs fired in a reducing atmosphere, dated by coins, were manufactured shortly before the Ottoman occupation of Hungary.³⁴ Still, we cannot exclude the possibility that the adoption of this popular Balkan pottery-making technique is associable with the Ottoman expansion.³⁵ Southern Slavs had fled to Hungary in the face of the Ottoman advance as early as the fifteenth century. At the moment we can only hypothesise that Hungarian potters learnt the technique of making black pottery from these immigrants. Fragments of polished jugs fired in a reducing atmosphere appear very often among sixteenth- to seventeenth-century finds from sites along the Tisza and on the Great Hungarian Plain.³⁶ It is

¹⁹ The finds of the pipe-making workshop uncovered at Szepesvár offer an insight into the subsequent development of Hungarian rosette-ornamented pipes. Cf. VALLAŠEK 1983, 239, Ill. 7. 4, 6–7.

²⁰ KOVÁCS 1963, 248.

²¹ Füle: KALMÁR 1959, Pl. LXXVIII; Eger: KOVÁCS 1963, 245, Pl. II; KOZÁK 1967, 105, Ill. 26; Hollókő: KOZÁK 1975, 50, Ill. 31; Siklós: LEVÁRDY 1994, 89; Nógrád: TOMKA 2000, 130, 5i/1.

²² HOM inv. no. 85.33.881.

²³ TOMKA 2000, 31.

²⁴ HOM inv. nos. 85.33.1960, 87.1.714, 87.1.1431, 92.1.2261 (from Ónod).

²⁵ The variant with the cylindrical neck and a ring was also manufactured at Szepesvár. Cf. VALLAŠEK 1983, 239, Ill. 7. 1–3, 5 and 240, Ill. 8. 9.

²⁶ Kind oral communication by Ibolya Gerelyes.

²⁷ One small piece of information concerning Turkish–Hungarian relations: at the time of Gábor Bethlen's 1619 western campaign, György Rákóczi's captain at Ónod allegedly invited the *paša* of Eger to visit. Cf. SZILÁGYI 1893a, 126–127.

²⁸ For example, István Koháry regularly received pipes from the inhabitants of Kecskemét. Cf. BÁLINTNÉ MIKES 1989, 121, note 22.

²⁹ For the manufacturing technique of these vessels, cf. SZABDFALVI 1960, 177–183; SOPRONI 1981, 17.

³⁰ GARÁDY 1944, 387.

³¹ For this vessel type, cf. FEHÉR 1959, 124–126; KOVÁCS 1984a, 39; GERELYES 1990, 277; PUSZTAI 1999, 476.

³² SOPRONI 1981, 23.

³³ KOVÁCS 1990–91, 174.

³⁴ PARÁDI 1963, 210 (Túrkeve); SÁROSÁCZ 1972, 80 (Mohács).

³⁵ PARÁDI 1963, 225; KOVÁCS 1984a, 38; PUSZTAI 1999, 476–477.

³⁶ Cf. PARÁDI 1963, 220, Ill. 13 (Túrkeve, Pátroha, Tiszapolgár, Nyíribrony, Nagyhalász, Ugornya, Kondó). For more recent data, cf. also MÓDY – GEDAI – KAHLER 1965, 98–99 and KOVÁCS 1990–91, Pl. II. 5–6 and Pl. V. For the more southerly regions of the Great Hungarian Plain, cf. BENKÓ 1980, 383, Pl. 31. 19, 22–23; 393, Pl. 41. 13; GÁL 1985, 84, Pl. VIII; MRT 6, Pl. 57; MRT 8, Pl. 86; MRT 10, Pl. 137. 4 and Pl. 150. 5.



Ill. 2. 1. Pipe stamped with Arabic letters from Ónod; 2. Turkish stamped pipe from Ónod; 3. Glazed pipe from Szendrő; 4. Glazed pipe from Ónod; 5. Pipe decorated with rosettes from Ónod; 6. Pipe decorated with rosettes from Szendrő; 7. Pipe with polygonal neck from Ónod; 8. Pipe with cylindrical neck from Ónod

therefore possible that the emergence of pottery workshops well known in the nineteenth century, each with its distinctive wares (in part owing to the iron content of the available clay), had begun as early as the Ottoman period.³⁷ The fortresses of Borsod County were supplied with black pottery mainly from the Great Hungarian Plain, as shown by the finds from these sites: black pottery makes up a higher percentage of the ceramic assemblage from Ónod, lying on the edge of the plain, than it does at Szendrő, lying in the uplands,³⁸ while the finds from Füzér, lying further to the north, do not

include a single fragment of this ware.³⁹ If the black pottery in the southeast areas of Upper Hungary had indeed been manufactured in the central and northern part of the Great Hungarian Plain, the question arises as to how this Balkan technology came to be adopted far to the north of the Southern Slav settlement territory. A possible explanation may be sought in the presence of Serb villages around Debrecen, as well as in various parts of Bihar and Szabolcs counties, as attested by the contemporary tax surveys,⁴⁰ and we also know that there were five Serb villages as late as 1572–73.⁴¹ Since Serb despots had extensive holdings in this region until the mid-fifteenth century,⁴² it is possible that the potters who introduced the manufacturing technique of this black pottery to the northern part of the Great Hungarian Plain – pottery that was soon adapted to suit Hungarian tastes – arrived with the Serbs who were settled there at this time or who were later immigrants. However, the available evidence is insufficient to link this cultural transfer to a more specific date or place.

Find assemblages

The elaboration of a typochronology based on the finds from Szendrő and Ónod is hindered by the fact that the stratigraphic context of the finds from Ónod is not always unambiguous, while the finds from Szendrő are mostly indistinct fragments, and very few at that. The overwhelming majority of the Ónod finds came from the cellar of the southern wing. The lowest layer of the fill of this cellar was a thick burnt layer that can be dated to the final destruction of the fortress in 1688. Several fragments of polished jugs were recovered from this layer; their current yellow colour can be attributed to secondary oxidation at a high temperature. This secondary oxidation is also supported by the fact that some of the fragments that could be joined were yellow, while others were greyish-black in colour. The remains of the collapsed building were levelled in the early eighteenth century and the fill may therefore contain pottery fragments from earlier periods. The fill of the gun emplacement in the western part of the fortress and of the southwest bastion can be dated to the mid-seventeenth century; thus the finds from these

³⁷ According to SZABADFALVI 1960, 187 (note 53), Nádudvar tradition has it that black pottery was made as early as the Ottoman period.

³⁸ Ónod: about 3.5 per cent of the ceramic finds (inventoried until 1987); Szendrő: well under 1 per cent. Interestingly enough, only a few fragments of these grey jugs were identified at Mohi, lying a few kilometres from Ónod (PUSZTAI 1999, 477, note 11). One possible explanation may be

that the post-1550 layers had been destroyed by agricultural cultivation. Earth-moving machines removed the latest layer prior to construction of the M30 motorway.

³⁹ SIMON 2000, 139.

⁴⁰ TAKÁTS 1908, 7.

⁴¹ GYÖRFFY 1938, 24.

⁴² The holdings of István Lazarevics and György Brankovics. Cf. PESTHY 1877.

two areas predate this time. The finds from other areas of the fortress can only be approximately dated to between the early sixteenth century and the early eighteenth century. I examined a total of 289 fragments. At Szendrő, only the fill of a refuse pit that can be assigned to the period before the 1660s⁴³ yielded pottery fragments that could be evaluated.

Pottery types

The vessel types were rather uniform: with the exception of a single wide-mouthed vessel⁴⁴ (perhaps an ewer), only various jug types could be identified. Since the assemblage was made up of rather small fragments, the different vessel parts shall be discussed separately, followed by a reconstruction of possible vessel forms and their dating.

1. Fragments

(a) Base fragments

The finds from Ónod include 39 base fragments. Traces of their removal from the potter's wheel could not be observed on most of these base fragments; the parallel lines on some bases suggest that the vessels had been cut off from the wheel. Most of these fragments were undecorated, the remains of concentric burnishing could only be observed on two fragments.⁴⁵ Two fragments bore perforations that had been made after firing, indicating a secondary use after the vessel had broken.⁴⁶ Small impressions could be noted on the interior of some base fragments⁴⁷ that were probably caused by water dripping into the still-unfired jugs. The junction of the base and the vessel wall exhibited one of three features (Ills 3. 1–3). The first was that the edge of the base and the vessel wall met at an obtuse angle,⁴⁸ the second that the base and the wall met at a right angle – this being by far the most frequent – with the vessel widening only 1–2 cm above the base,⁴⁹ while the third had a narrow ridge encircling the base.⁵⁰ This last-mentioned variant has some dating value since it does not occur among the finds from Móric, but has been identified in the ceramic assemblage brought to light from the abovementioned refuse pit uncovered at Szendrő and in the 1688 destruction layer at Ónod.



Ill. 3. 1–3. Profiles of fragments from grey jugs

(2) Body fragments

The interior surface of the vessels reveals that the vessel bodies had been thrown from a single lump of clay, with the necks added separately. Grooves encircling the belly – remains of the imperfect trimming of the ribs that appeared while throwing the vessel – could be observed on some larger jugs.⁵¹ A few fragments (6–8) were horizontally burnished. The ceramic sample included both oblique and vertical polishing. The necks were without exception decorated with vertical smoothed-in lines. Compared to the jugs from Buda and Pécs, the incised decoration on these vessels was definitely unimaginative. The neck was sometimes encircled by two or three parallel lines, while wavy lines and bundles of wavy lines could only be observed on two fragments from Ónod (Ills 4. 1–2).⁵² Pattern burnishing is far more frequent on these jugs. The oblique or vertical burnishing does not cover the entire surface of the vessel wall: on the lower half of the body this pattern burnishing often takes the form of a grid pattern, with unpolished areas between the burnished stripes. One fragment of a – perhaps spindle-mouthed – jug from Ónod had zigzag lines between the burnished stripes.⁵³ Another fragment was decorated with a burnished spiral pattern (Ills 4. 3–4).⁵⁴ Both fragments are covered with a geometric pattern; floral motifs are absent, suggesting that earlier pattern burnishing used geometric motifs⁵⁵ and that the burnished floral ornamentation on black pottery only became popular during the eighteenth century. It seems that pattern burnishing using floral motifs spread at a later date⁵⁶ than did the underglaze floral patterns on “folk pottery”.

⁴³ Szendrő-Felsővár (Upper Castle), Square 10, Feature 2.

⁴⁴ HOM inv. no. 92.1.2488, as well as the body fragments that probably come from the same vessel: inv. nos. 92.1.27, 92.1.2469, 92.1.2479, 92.1.2481.

⁴⁵ HOM inv. no. 87.1.792: Square 5 (24 July 1987).

⁴⁶ HOM inv. nos. 92.1.2304, 85.33.522.

⁴⁷ HOM inv. nos. 85.33.623, 92.1.609, 92.1.2304, 92.1.2468, 92.1.2478: Square 7 (29 July 1988).

⁴⁸ HOM inv. no. 85.33.1054.

⁴⁹ HOM inv. no. 85.33.1324, 87.1.795, 92.1.2478.

⁵⁰ HOM inv. no. 92.1.690: Trench 10, –251 centimetres.

⁵¹ HOM inv. no. 87.1.1400.

⁵² HOM inv. no. 92.1.2466: Trench 10, –251 centimetres (July 1987).

⁵³ HOM inv. no. 92.1.2475.

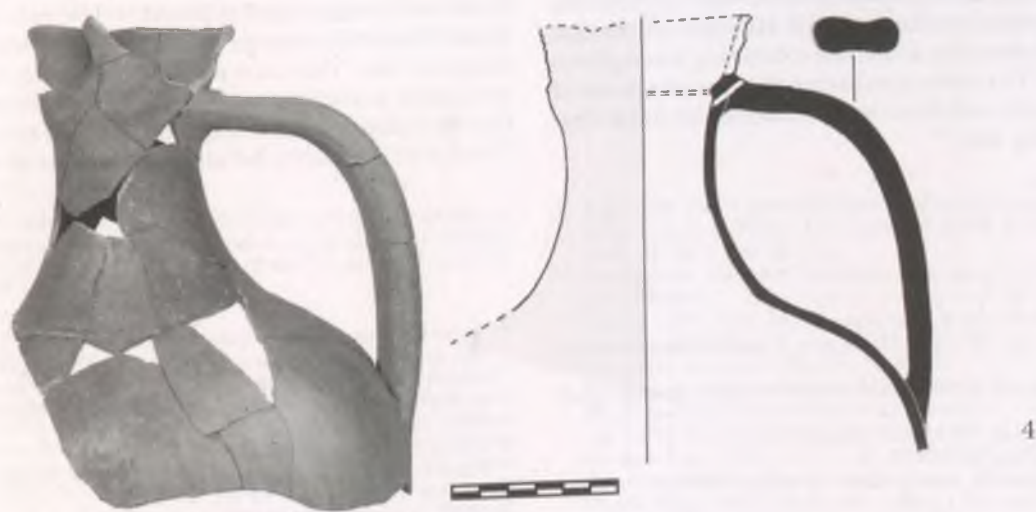
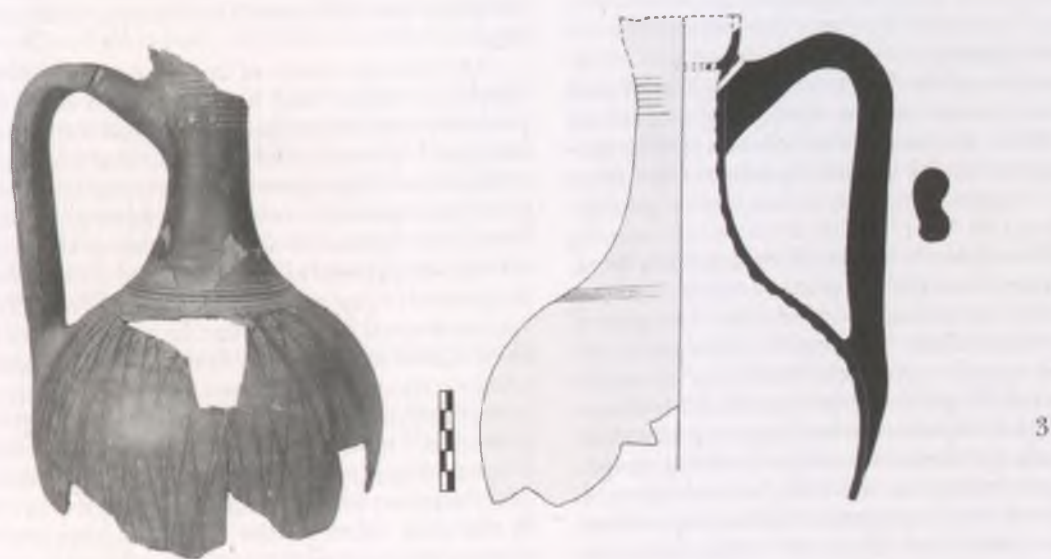
⁵⁴ HOM inv. no. 85.33.514.

⁵⁵ The pattern on the shoulder of the jug containing a coin hoard from Ugornya (the last mint date being 1683) decorated with a burnished pattern recalling petals (PARÁDI 1963, 225) and the pattern on a late seventeenth-century fragment from Hódmezővásárhely (GÁL 1985, 34, Pl. VIII. 7) can be interpreted as geometric patterns.

⁵⁶ SZABADFALVI 1960, 181.



Ill. 4. 1-2. Jug fragments with incised decoration from Ónod; 3-4. Jug fragments with burnished ornamentation from Ónod; 5. Jug fragment with a straight spout from Ónod; 6. Jug fragment with a grooved handle from Ónod



Ill. 5. 1. Fragment of a spindle-mouthed jug from Ónod; 2. Fragment from a round-mouthed jug with strainer plate from Ónod; 3-4. Fragments of lobe-mouthed jugs with strainer plate from Szendrő and Ónod

(c) Handle fragments

A smaller number (six) of the handles also functioned as spouts; half of them are decorated with incised corn motifs (Ill. 4. 5).⁵⁷ Two fragments probably come from straight spouts,⁵⁸ while the remaining pieces were probably curved spout handles. One of the most frequent handle types, decorated with a deep groove, has rounded corners and is oblong in section (Ill. 4. 6). The vessel neck was usually pierced above the upper junction of the neck and the groove, and a hole was drilled through the vessel wall at the lower junction before the handle was added.⁵⁹ The other frequent type is the strap handle flattened in section. The wider variants of this type are usually asymmetric in section. Some of these strap handles bear tiny impressions, probably to ensure an even firing.

(d) Rim fragments

The mouths of the black jugs from Ónod and Szendrő are not too varied. Only one single rim fragment allows the reconstruction of a rim diameter that suggests that the fragment perhaps came from a ewer. One fragment probably comes from a spindle-mouthed jug (Ill. 5. 1).⁶⁰ This form occurs among the pottery wares made from different fabrics. Since it rarely occurs among black pottery wares, it seems likely that this form was adopted from the glazed jugs with a white fabric. The profile of the neck and rim of these spindle-mouthed black jugs is usually coarser than of the glazed white jugs, and less robust than that of the red-painted white jugs. It seems likely that the reason for these differences should be sought in the plasticity of the clay used for the manufacture. A rim fragment from a round-mouthed jug without a spout was also found (Ill. 5. 2).⁶¹ Most often the mouth of the jugs was widened into a slight funnel form by pressing it into lobes. A strainer was fitted under the rim in these jugs (Ills 5. 3–4).⁶² The necks were sometimes decorated with ribs, usually in line with the strainer, but sometime extending lower down the neck.⁶³ On some specimens the rim was pressed together with such force when making the spout that the two sides met.⁶⁴

2. Vessel types

The currently known corpus of finds does not allow the establishment of a "final" typology of "Hungarian" grey jugs fired in a reducing atmosphere. New finds will no doubt modify the typology presented below.⁶⁵

Type I (strainer lid, spout with ledge), 1500–1570

The jugs assigned to this group have a straight spout joined to the neck by a horizontal ledge. These jugs had a tapering base and the oblong vessel body was burnished horizontally.⁶⁶ The strainer lid most likely imitated the lid of metal vessels, as did the spout itself that recalls copper vessels. The horizontal ledge prevented the spout from breaking off and its use probably also facilitated the transportation of these jugs.

An intact specimen of this jug type is known from Móric, a village that was destroyed before 1618, probably sometime around the turn of the seventeenth century.⁶⁷ The spout of a comparable jug was found at Adacs, a village likewise deserted around the turn of the seventeenth century.⁶⁸ A fragmentary jug from Túrkeve–Túrpáztó site, resembling the jug from Móric, was probably hidden around 1530.⁶⁹ Another fragmentary jug resembling the one from Túrkeve was recovered from a refuse pit at Vác whose fill has been dated to the late fifteenth to early sixteenth century; the jug was defined as one of the latest finds from the pit.⁷⁰ A jug from Vác with a straight spout provided with a strainer has also been published.⁷¹ A spout fragment similar but made from brownish gritty clay was found in association with coins minted in the first third of the sixteenth century in the Hungarian quarter at Vác.⁷² Three spouts and three ledges are known from Gyója.⁷³ A jug with a strainer lid resembling the Móric specimen was found in one of the wells excavated at Mohi.⁷⁴ The other vessels from this well, especially the red-painted jugs,⁷⁵ suggest that this assemblage fell into the well sometime in the mid-sixteenth century. Some of the horizontally polished fragments and a spout from Ónod can probably be assigned to this group. No

⁵⁷ HOM inv. no. 85.33.1811: Square 5, mortar layer; Trench 8 (1986).

⁵⁸ Ónod: Trench 8 (1986); clearing of the gate passage (July 1991).

⁵⁹ HOM inv. nos. 92.1.2459, 92.1.2477.

⁶⁰ HOM inv. no. 92.1.2476.

⁶¹ Ónod. Square 5, mortar layer (6 August 1987).

⁶² HOM inv. no. 87.1.1485: Trench 10 –251 cm.

⁶³ HOM inv. nos. 92.1.96, 92.1.285, 92.1.697 and a variant of the latter, 87.1.476.

⁶⁴ HOM inv. no. 87.1.717.

⁶⁵ The age brackets given for individual types are only approximate dates that will no doubt be made more exact in the light of new finds.

⁶⁶ According to the description given by Kovács 1984a, 40, this type is characterized by "a flat shoulder, a short neck, and a long spout that is connected to the mouth by a straight ledge; it is decorated with smoothed-in motifs."

⁶⁷ MÉRÍ 1954, 139–140, Pl. XXXV. 5.

⁶⁸ SZABÓ 1938, 106, Ill. 486.

⁶⁹ PARÁDI 1963, 210, 212 (Ill. 6. 1), 225, 235 (Ill. 20. 3).

⁷⁰ MIKLÓS 1991, 19, 38, 81 (Pl. 29. 12).

⁷¹ MRT 7, 31/3i, 444, Pl. 57. 2.

⁷² MRT 7, 31/2f, 412–413, Pl. 57. 2.

⁷³ HORVÁTH – SIMON 1996, 453, 521 (51b/6, Ills 8–9).

⁷⁴ Well S 1601, excavated by Tamás Pusztai and József Laszlovszky.

⁷⁵ LASZLOVSZKY – PUSZTAI – TOMKA 1997, cat. nos. 197–199, XX/5, 8; XXI/12; XXI/17.

fragments from jugs of this type have so far been identified among the finds from Szendrő fortress, whose construction began after 1567.

Based on the above, we can confidently assign this type to the sixteenth century; it would appear that this type was most popular in the earlier half and around the middle of the century.⁷⁶

Type II (rounded mouth, spouted handle), 1550–1650

The spout and the ledge were both part of the handle on jugs of Type I. The spouted handle of Type II probably evolved from the gradual blending of these two elements.⁷⁷ In place of the strainer lid a strainer in the form of a plate was placed in the mouth of the jugs. Vessels assigned to this group have their greatest width at a lower point, their neck is more elongated, and their body burnished horizontally or obliquely.

The jug containing a coin hoard found at Nagyhalász can be assigned to this category (the latest coin in the hoard was minted in 1628),⁷⁸ as can the vessel from Nyíribrony (the latest coin in this hoard dates to 1623).⁷⁹ It would seem that, with the exception of a single specimen, all the spouted jugs from Ónod that were fired in a reducing atmosphere can be assigned here.⁸⁰

Type III (lobed mouth, grooved handle), 1600–1700

The vast majority of the jugs from Ónod and Szendrő can be assigned to this group. The mouth of these jugs was pressed into a lobed form and the strainer was set deeper compared to the previous type. The vessel neck was pierced above the junction of the grooved handle and the vessel body. Only a single perforation can be noted on the specimens from Ónod and Szendrő.⁸¹ Since these grooved handles were made in the same manner as the interior side of the spouts of the spouted jugs, one is strongly tempted

to derive Type III from Type II. The form of the lobed mouth probably evolved in part from sixteenth-century baluster-shaped jugs with pointed spouts, and in part from Balkan prototypes.⁸² Some of these baluster-shaped jugs were polished and fired in a reducing atmosphere⁸³ and comparable jugs, albeit with slightly differing proportions, were manufactured as late as the end of the Ottoman period.⁸⁴ However, this form does not occur among the finds from Ónod and Szendrő. Jugs assigned to Type III were usually burnished vertically, even though this burnishing did not cover the entire vessel surface: the decoration is made up of vertical or oblique smoothed-in stripes or of a network pattern in the region of the shoulder and the base.

Handles with a deep groove became more common in the seventeenth century. At Törökszentmiklós this handle type was very frequent,⁸⁵ and comparable handles are known from late contexts at Vál.⁸⁶ Evidence from field surveys offers a good starting point for dating jugs with grooved handles, since these have usually been found on village sites that were still inhabited during the seventeenth century.⁸⁷

Type IV (spindle mouthed), 1550–1700

This category includes jugs with strap handles. Their neck widens at the junction of the neck and the upper end of the handle and they are provided with a narrow-lipped mouth.

The jugs from Túrkeve–Móric⁸⁸ and a specimen containing a coin hoard found at Drégelypalánk⁸⁹ indicate that this type was already common in the sixteenth century. Earlier specimens are characterised by horizontal burnishing across the vessel body, their necks were decorated with heavy wide ribs; in contrast, the jug from Ónod with its sharper neck carination and lighter ribs was most likely a later variant. Jugs of this type probably evolved from similar jugs with a glazed upper body and their formal

⁷⁶ Strainer lids also appear on the so-called hatted jugs of folk pottery, although a continuous survival seems unlikely in view of the differing shape of the strainer lid and the spouted handle.

⁷⁷ SOPRONI 1981, 27.

⁷⁸ PARÁDI 1963, 216.

⁷⁹ PARÁDI 1963, 216.

⁸⁰ BÉRES 1965, 465, 480–48. Although jugs with spouted handles were manufactured during the eighteenth and nineteenth centuries, the ethnographic material from Nádudvar reveals that these jugs usually had a lobed mouth.

⁸¹ Other jugs had their handles pierced on two sides: three almost identical small jugs found at Pomáz–Klisszadomb can be assigned to this type (Hungarian National Museum inv. no. 60.17.986.C–988.C). The strainer of one of these jugs was damaged during firing, suggesting that it had been manufactured in a workshop not far from Pomáz. The cylindrical neck joining the vessel body with a sharp break also suggests another workshop tradition.

⁸² Jugs with lobed mouths decorated with stamped patterns were found at Buda. Cf. GERELYES 1990, 278, Abb. 4. 2; 1991, Ill. 8. 3 and Ill. 9. 1.

⁸³ Hungarian National Museum, inv. no. 56.1.22.C. (Túrkeve–Móric).

⁸⁴ PARÁDI 1963, 218, 241 (Apagy, with a coin from 1702).

⁸⁵ KOVÁCS 1990–91, 174.

⁸⁶ HATHÁZI – KOVÁCS 1996, 46, Ill. 34. 7.

⁸⁷ Körösnagyharsány–Püski: MRT, Site 8/2, 124, Pl. 57. 8; Füzesgyarmat–Nagyharang: *ibid.*, Site 5/11, 84, Pl. 57. 10, 16; Dévaványa–Sima-sziget: *ibid.*, Site 3/144, 62, Pl. 57. 11; Gyoma–Ege, MRT 8, Site 4/145, 235, Pl. 86. 23; Békésszentandrás–Bika domb (Szentmiklós): *ibid.*, Site 1/24, 71, Pl. 86. 26.

⁸⁸ Hungarian National Museum (HNM) inv. no. 55.901.178.C. MÉRI 1954, Pl. XXXV. 4, with a good description by HAVASSY 1996, 110, no. 159; HNM inv. nos 55.901.111.C, 56.21.88.C.

⁸⁹ HNM inv. no. 79.30.C (the latest coin was minted in 1564). Although the mouth of this jug is broken, the surviving fragment allows the reconstruction of a spindle mouth.

development was no doubt influenced by the jugs of Type III, as indicated by the fact that the single fragment from Ónod was provided with a strainer and that the neck was perforated above the handle. These features are characteristic of the jugs with lobed mouths and are unusual for spindle-mouthed jugs; it would appear that the potter retained some elements of the lobe-mouthed jugs of the seventeenth century when making black spindle-mouthed jugs. A body fragment that probably came from the same jug is decorated with zigzag lines and burnished stripes, a pattern that can be regarded as the forerunner of pattern burnishing. The findspot of this fragment (the fill of the southwest bastion at Ónod) suggests a date around the mid-seventeenth century.⁹⁰

Type V (lobed mouth, strap handle)

It is possible that the "smoothing" of the grooved handle eventually led to the appearance of wide strap handles that became more common from the mid-seventeenth century onwards. These handles were now attached to jugs with a lobed mouth and a strainer.

Dating to the mid-1600s, one of the refuse pits in the eastern court of Szendrő Upper Fortress yielded a jug fragment whose asymmetric handle with a groove perhaps represents a transition between the grooved and the smooth strap handle, although it is equally possible that flat strap handles (they are simple to prepare) were already applied to other vessels, e.g. to smaller jugs, by potters manufacturing black wares in the early post-medieval period. Spindle-mouthed jugs and ewers were provided with strap handles throughout the sixteenth to seventeenth centuries.

The custom of pricking the handle can be dated to the later seventeenth century. One of the jug fragments brought to light from the 1688 destruction layer at Ónod had a handle with such marks.⁹¹ An unprovenanced burnished black jug in the Hungarian National Museum, dated to the eighteenth century,⁹² also has a pricked handle characteristic of this type. Jugs were decorated with burnished patterns from the late seventeenth century on. Pottery

fragments that could be assigned to this type have been recovered only from the moat at Ónod.

One of the most striking qualities of the pottery finds from the two fortresses is that the Balkan types that are totally absent from the Hungarian villages do not occur among them. It must here be emphasized that this does not mean that the occurrence of these vessel types was conspicuously lower, but that they do not occur at all. No fragments of footed bowls or of the so-called "tulip-mouthed" spouted jugs were found, nor of glazed, two-handled storage jars, cylindrical-necked jugs or sedge-leaf decorated bowls. Neither were ceramic candlesticks or perfume flasks recovered. Balkan tableware, such as flat baking pans, baking lids and slow-turned "Bosnian pots", are also absent from these assemblages. There are a good many Ottoman-Turkish loanwords in Hungarian that describe various concepts linked to eating.⁹³ These include the names of various foods, as well as of certain vessel types, suggesting that the adoption of these words also meant the adoption of the vessels. However, these vessel types were not particularly frequent in the Hungarian border fortresses: e.g. finjans made in Hungarian workshops do not occur among the finds from these two border fortresses. The spouted jugs with glazed upper parts that can perhaps be identified with the *ibrik* differ strongly from their Turkish counterparts in form; their fragments would suggest that they resembled the more common spindle-necked jugs. Neither were any clay baking pans, *tepsi*, been found during the excavations. It would appear that the adoption of the words *bogrács* ("cauldron"), *tepsi* ("baking pan") and *ibrik* ("ewer") is linkable to the use of metal vessels.⁹⁴ It therefore seems likely that Balkan influences had no effect on the production of the pottery wares used in the border fortresses lying in the vicinity of the Ottoman-occupied territories. The pottery wares recovered indicate that the Hungarian garrisons tended to adopt those dishes whose preparation and consumption did not call for the use of special clay vessels.

⁹⁰ BÉRES 1965, 533, 536. The subsequent development of this type in folk pottery is reflected in the types with differing mouths.

⁹¹ HOM inv. no. 92.1.697.

⁹² HNM inv. no. 57.57.C.

⁹³ KAKUK 1996, 291–321.

⁹⁴ Cf. KAKUK 1996, 310.

Post-medieval Pottery Finds from Hódmezővásárhely–Ótemplom

This study offers a typological and technological description of the seventeenth-century pottery finds unearthed during the excavation of the Ótemplom (Old Church) site at Hódmezővásárhely.¹ In addition to enriching our knowledge of the seventeenth-century potter's craft, the purpose of this paper is to increase the number of known pottery types from the Ottoman period.

One of the main issues during the analysis of the pottery finds was determining how the assemblage from the Ótemplom site fits into the already known pottery wares from the Ottoman and the post-medieval period in Hungary, as well as the definition of its unique, individual traits. Also, we attempted to trace the origins of the assemblage and to determine whether a direct and continuous historical development can be demonstrated between these finds from the Ottoman period and the nineteenth-century folk pottery of Hódmezővásárhely.

Archaeological research of the Ótemplom

The construction of the Ótemplom, i.e. the Calvinist Old Church, began in 1713.² The stone tower was erected on the shores of Lake Hód, at the edge of the graveyard of a seventeenth-century wooden church mentioned by Sámuel Szeremlei. The tower still stands today.³ The nave connected to the tower was constructed between 1720 and 1723 under the direction of János Helbing, an architect from Buda.⁴ The wooden panels of the gallery were made and painted by carpenters from Gyula in 1732.⁵ Count Sándor Károlyi commissioned the loop-holed brick wall around the church in 1741–42. In the early 1890s the so-called church bazaar was built against the western and northern sections of the wall.⁶

The archaeological investigation of the church, associated with the building's restoration, was begun in August 1989 under the direction of Katalin B. Nagy. The purpose of the excavation was to locate the church mentioned by Sámuel Szeremlei.

The first excavation campaign (1989–1990) explored the immediate surroundings of the church

and the fortification wall; a total of five trial trenches (1–5) and five trenches (I–V) were opened; five burials were also unearthed. The architectural history of the church was clarified, as was the relation between the tower, the nave and the fortification wall; it was noted that the foundations of the nave and tower had a uniform foundation lying at the same depth.

In the second excavation campaign (1991) the western quarter of the church was investigated. This work was performed under the direction of Éva Pávai. A total of six trenches (I–VI) were opened. Additional information was gained on the construction of the church, but the wooden church mentioned by Sámuel Szeremlei was not found.

The majority of the finds from these excavations date from the period immediately preceding the construction of the church. The observation of the stratigraphy was rather difficult owing to the loose crumbly filling around the recovered objects. The stratigraphy, the typology of the finds and the architectural history of the church all suggest that the pits were dug in the later 1600s. The majority of the pottery finds can be dated to the later part of the Ottoman period, although a subsequent date around the turn of the seventeenth and eighteenth centuries cannot be ruled out for some pottery fragments.

Pottery and animal bones dominate the finds from the seventeenth century, with a considerably smaller number of metal and other objects. Most of the finds were recovered from two locations: Pit A of Trench II in the church interior and Pit N of Trial Trench 5 opened by the southern side of the church (Diagram 1).

Methodology of the archaeological classification

During the classification of the finds we attempted to offer an overview of the potter's craft during this period. The pottery fragments weighed a total of 36,927 grams and included 15 reconstructed vessels (Diagram 2). The finds were evaluated according to

¹ I would like to thank Katalin B. Nagy for her kind permission to publish the finds and for her valuable comments while I was preparing this paper.

² The construction date of the church is determined in accordance with the date of the archaeological finds, since these indicate the upper time limit of the finds.

³ SZEREMLEI 1914, 105–106.

⁴ IMRE 1984, 616.

⁵ Now displayed in the Museum of Applied Arts: choir rail, inv. no. 57.680.1.1, ceiling panel, inv. no. 57.681.1.1.

⁶ BODNÁR 1983, 140–142.

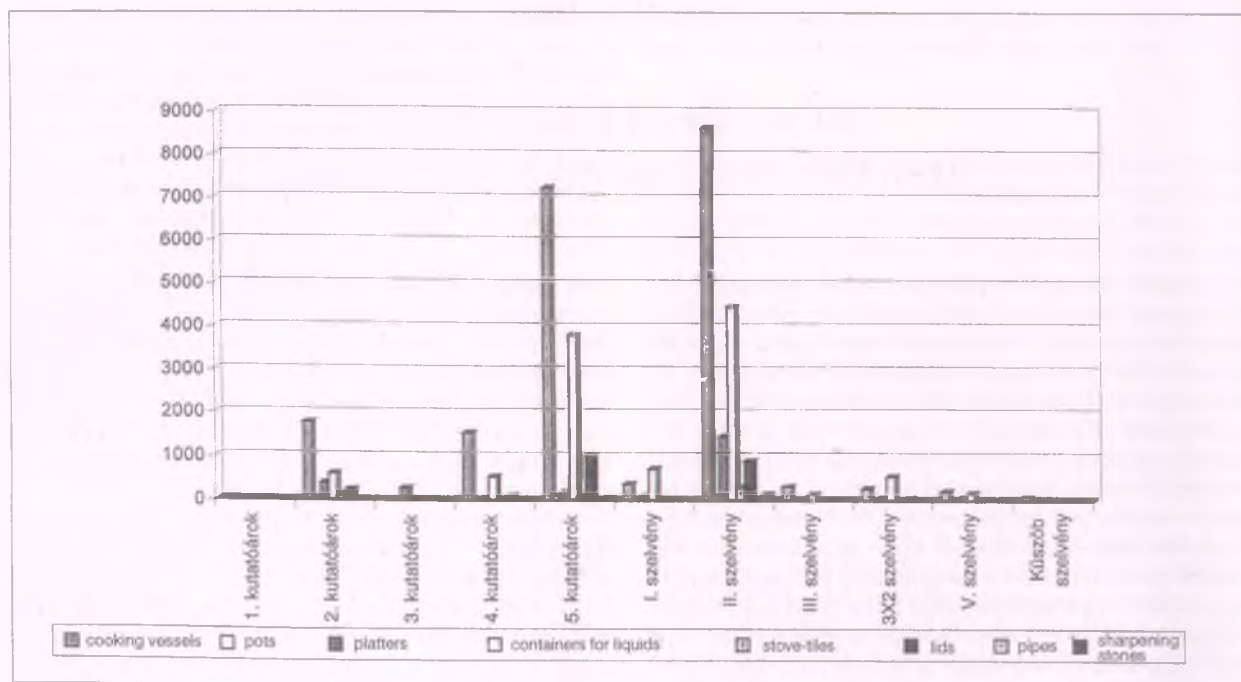


Diagram 1. Distribution of the ceramic finds in the trenches. Key: Kutatóárok=trial trench; szelvény=trench

pottery type;⁷ the categories were based on the typology of folk pottery.⁸

The determination of individual vessel types was based on their function as defined in the ethnographical literature.⁹ When assigning the pottery fragments to a specific type, the main considerations were differences in the form and decorative patterns and techniques, while the determination of pottery groups based on size was based on rim and base diameters. The main categories were the following:

- I. Cooking vessels
- II. Baking vessels
- III. Storage and serving vessels
 - vessels for storing liquids
 - platters
- IV. Other ceramic products:
 - stove-tiles
 - weights for nets
 - pipes

The scope of this study does not permit a detailed description of each group; instead, a description of some distinctive types and decorative techniques will be given.¹⁰

Cooking vessels

The ceramic assemblage from the Ótemplom site is dominated by pots, or to be more precise, by their fragments. Over half (56 per cent) of the pottery finds could be assigned to this group. The sherds in this category weighed 20,526 grams and a total of six vessels could be assembled from the fragments (Diagram 2).

Sixty per cent of the fragments came from normal pots, while nearly 30 per cent came from small pots; roughly 5 per cent could be assigned to the category of mugs. The diameter sizes of certain rim and base fragments suggest a few larger pots.¹¹

⁷ The typological features (form and decoration) and the technological characteristics (fabric, temper, turning, firing) of the finds, as well as the number of finds, the size and weight of the sherds and reconstructed vessels were recorded on 3x5 centimetre punch cards. I used accumulated figures for calculating the statistical indexes since I consider these to be more accurate than calculations based on quantitative figures. Nevertheless, the determination and application of correction factors based on a special combination of these methods is worth considering.

⁸ The use of ethnographical terminology for describing archaeological finds is often problematic since ethnographic assemblages usually contain intact, unbroken vessels. In contrast, the ceramic inventory of an archaeological assemblage from a given period can usually only be reconstructed

from the surviving pottery sherds. The number of intact or reconstructed vessels is very low in the Ótemplom assemblage.

⁹ IGÁZ – KRESZ 1965, 87–132.

¹⁰ For a detailed description of all the types in the assemblage, cf. LAJKÓ 2000, 1–96.

¹¹ The sizes can be reconstructed on the basis of rim diameters and base diameters since only fragments have survived for the most part. Assuming that the vessel height does not exceed by much the rim diameter in the case of pot-type vessels – a deviation of 5–10 centimetres based on ethnographic data – and that cooking pots that are higher than 30 centimetres can be assigned to the category of large pots (based also on ethnographical terminology), the presence of these vessel types must also be assumed in the Ótemplom assemblage.

VESSEL TYPES	RECONSTRUCTED VESSELS (number)	TOTAL WEIGHT OF THE SHERDS (in grams)
Cooking vessels	6 1 mug 2 small pots 3 pots	20,526 g
Baking vessels	(2)	140 g
Lids	3	2258 g
Platters	3 2 footed platters 1 plate	2508 g
Containers for liquids	1 jug	10,865
Stove-tiles	–	120 g stove-tiles 310 g bowl-shaped stove-tiles
Sharpening stones	–	190 g
Pipes	–	10 g
Weights for nets	2	–
SUM TOTAL	15	36, 927 g

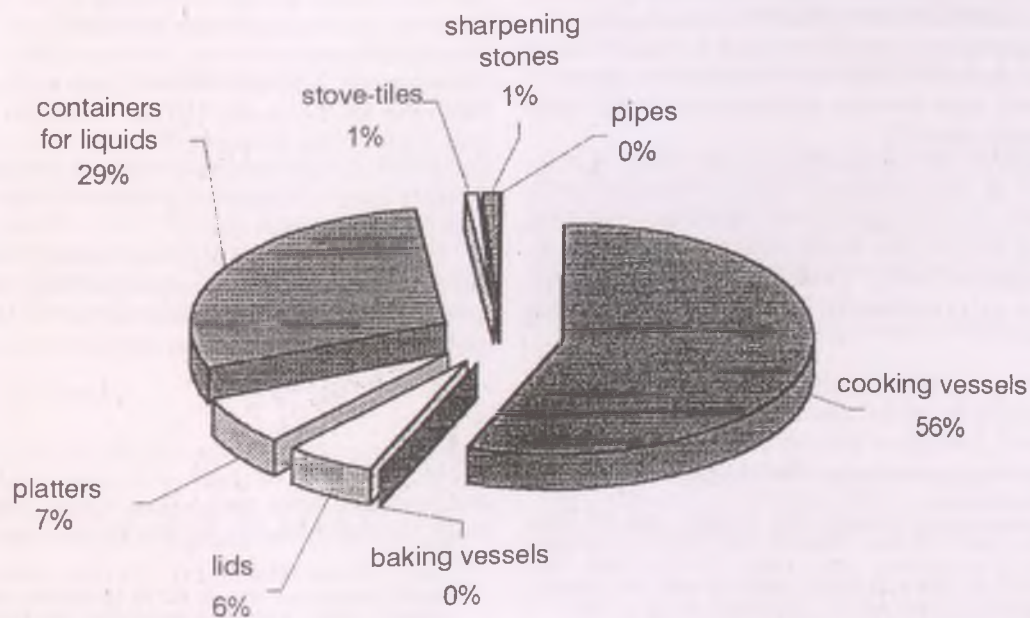


Diagram 2. The proportions of the vessel types in the ceramic finds

A distinction can be drawn between slow-turned vessels and those made on a fast wheel. However, the number of slow-turned pots is negligible in the entire assemblage.¹² This low percentage is particularly striking compared to the amount of slow-turned pottery found on sixteenth- and seventeenth-century sites in southern Transdanubia.¹³

Most of the pots were fired to a reddish-brown, brown or light red colour, with a smaller number fired to a whitish-yellow or light brown colour and few to a greyish-white or greyish-brown hue. Most of the fragments were sooty, with the soot often burnt onto the exterior of the pot.

Rim diameters ranged from 10 to 35 centimetres, usually with a mouth diameter of 12 to 24 centimetres; base diameters ranged from 7 to 16 centimetres.

The pots were rather squat, with outwardly curving funnel necks and slight pronounced shoulders. Most are egg shaped, with their widest diameter occurring around the belly. Vessel types with handles were common: the strap handles tended to span the rim and the shoulder of the vessel (Ill. 3). Low narrowing necks had a turned-out or slightly pressed-in rim. The rim of these vessels was quite varied: plain or rounded, made to accommodate a lid, while the end of the rim might be rounded down or cut off straight or at an angle. Pots and mugs with a scalloped (Ill. 2) or collared rim formed a separate category.

A common type among the Ótemplom collared pots was a thin-walled vessel fired to a whitish-yellow colour; it had one or more small strap-handles springing from the rim and a glazed interior. The exterior was either undecorated, or, very rarely, fluted, or covered with reddish-brown engobe.

The appearance of collared rims is usually dated to the late sixteenth and early seventeenth century.¹⁴ This vessel type became widespread in the later seventeenth century.¹⁵

As regards the chronology of the finds, the occurrence of the scalloped rim on pot and mug fragments was also significant. All of the vessels in this category are fine wares with thin walls (0.3 to 0.4 centimetres thick). Their fabric is usually whitish-yellow or, occasionally, brick red, this last being unglazed.

Wavy-rimmed pots, storage vessels and platters appeared in the fifteenth century,¹⁶ remaining in use during the sixteenth and seventeenth centuries;¹⁷ comparable wares are also known from assemblages dating from the turn of the seventeenth and eighteenth centuries.¹⁸

It is quite striking that over half (54 per cent) of the pots were undecorated; the decorated wares were ornamented with one of the following techniques: incised or appliqué ornaments, glazing or painted decoration.

The decorated specimens were covered with a red or reddish-brown engobe.¹⁹ Painted decoration mainly occurred on white or whitish-yellow vessels, but also on pieces fired to a light red or light brown colour. Painted decoration was rarely combined with glazing or other ornamentation. Engobe painting always appeared in arranged motifs, most often a pattern of thin parallel lines encircling the pot, wavy lines or wide bands. Also common were U-shaped patterns, flower-petal and spiral motifs, grid patterns decorating the neck and shoulder of the vessel, and simple dot-and-line decorations (Ill. 2).

The majority of the red or reddish-brown engobe pots came from the central, northern and southeast parts of Hungary; comparable wares are rare in Transdanubian assemblages from the same period.²⁰

Pot and mug fragments with a white fabric decorated with incised motifs and painting, usually with a glazed interior, formed a separate group. The decoration was usually made up of bundles of straight or wavy lines painted in engobe (Ill. 3). Similar vessels are known from various sixteenth and seventeenth-century sites.²¹

Fragment from pots with glazed interiors formed another major group. The finds from the Ótemplom were lead glazed without exception. This glaze was usually green, brown, yellow, or their shades, or transparent. Yellowish-brown glaze appears to have been the most popular (40 per cent); green glazing was slightly less frequent (25 per cent), and usually occurred on light brown or yellowish-white pottery. Pottery fired to a grey or greyish-brown colour was rarely glazed (4 per cent).

Glazed household pots first appeared in the thirteenth and fourteenth centuries; they were either produced in royal workshops or were Austrian imports.²² These vessels apparently became common in

¹² Owing to limitations of space, slow-turned vessels will not be discussed here.

¹³ FEHÉR 1959, 126–127; GERŐ 1978, 351–352, Abb. 13; 1985, 197–200, Abb. 4; KOVÁCS 1990–91, 172; Pl. IX. 1–10; 1998, 156, Ills. 2–5; GERELYES – FELD 1986, 177; GAÁL 1985, 189.

¹⁴ NAGY 1936, Pl. XIV 2; GERELYES 1986, 77; 1987, 171, Ill. 4. 4; 1991, 26, 32, 46, Ill. 19. 4; LÁZÁR 1986, 39, Ill. 4. 1.

¹⁵ GERELYES 1987, 174, Ill. 5. 9–10, Ill. 7. 4; 1991, 36–37, 46; SIKLÓSI 1982, 9–10; KOZÁK 1966, 84, 86, Ill. 2. 11–13, Ill. 3. 1–9, Ill. 5. 5–7, 9–12; LÁZÁR 1986, 42–43, Ill. 7. 1, Ill. 8. 1, Ill. 10. 1; HATHÁZI – KOVÁCS 1996, 43–43, Ill. 33. 1, Ill. 25. 4, 6.

¹⁶ GARÁDY 1944, 434, Ill. 40; GEREVICH 1966, Ill. 128. 12; MIKLÓS 1991, 11–12, Pl. 19. 2, 17, Pl. 25. 5, Pl. 26. 3.

¹⁷ LÁZÁR 1986, 38–39, Ill. 2. 1, 4–5, 7; KOZÁK 1964, 222, 246, Ill. 15; SZABÓ 1938, 105, Ill. 479–480; GERELYES – FELD 1986, 174.

¹⁸ FODOR – KOZÁK 1970–71, 147, Ill. 2; GÁL 1985, 84, Pl. VI. 1.

¹⁹ Unglazed-painted sherds (4330 grams, 46 per cent) and painted sherds with glazed interior (1839 grams) sherds represent 65 per cent (6169 grams) of the decorated pot-type vessels.

²⁰ KOVÁCS 1990–91, 171, HATHÁZI – KOVÁCS 1996, 42.

²¹ HORVÁTH – SIMON 1996, 445, Ill. 66. 1; GÁL 1985, 86, Pl. VII. 4; LUKÓ 1939–40, 160.

²² HOLL 1952, 182.

the fifteenth century.²³ The use of different glazing techniques, as well as glazing and painting in one or more colours on an individual vessel, appeared in the sixteenth century.²⁴ Evenly applied thin and bright glazes appeared in the late seventeenth century.

The least common decorative technique was incised or appliqué ornamentation.²⁵ The most popular motifs using this decorative technique were deeply incised horizontal lines or fluted decoration, the latter usually on the belly or the middle of the body of pots and mugs having a white or whitish-yellow fabric and a glazed interior.



Ill. 1. Jug with filter from Pit "N".

be assembled from some of the fragments (Ill. 1). Most common were handle fragments (35 per cent) and body sherds (43 per cent). These vessels were usually carefully made and appropriately fired. Most were wheel-thrown, tempered with sand and made from finely levigated clay. Their rim diameters ranged between 4 and 15 centimetres.

The highest percentage of these storage vessels underwent firing in a reducing atmosphere (44 per cent). Also common (40 per cent) were unglazed fragments with a brick-red fabric, with rough surfaces and tempered with sand, while a modest 15 per cent consisted of thin-walled, carefully made vessels of a whitish-yellow, light brown or light red colour.

The high number of greyish-white pitchers and jugs fired in a reducing atmosphere offers a secure chronological anchor, even though opinions vary as regards the origins of locally made black pottery



Ill. 2. Finds from Trench 4

This decorative technique was quite common by the late fourteenth century; it again became popular in the sixteenth century,²⁶ and was a characteristic feature of Hungarian pottery from the Ottoman and the post-medieval period.²⁷ Ribbed decoration also appears on Hungarian folk pottery.²⁸

Containers for liquids

Containers for liquids made up the second largest category of the pottery finds from the Óteplom site (29 per cent, cf. Diagram 2). The sherds in this category weighed 10,865 grams and a pitcher could

wares.²⁹ Pottery finds dated through coins indicate that Hungarian black ceramics appeared in the early sixteenth century,³⁰ confirming the view that Balkan folk pottery played a role in the temporary or permanent adoption of certain vessel forms and decorative techniques.³¹

In terms of shape, two major categories can be distinguished:

(1) One-handed pitchers with a narrow neck, round or pinched mouth, often provided with a strainer; these were usually unglazed, brick red in colour. The light brown or white, occasionally light red pitchers for serving, often painted with a reddish-brown engobe, can also be assigned here.

²³ FELD 1987, 269–270.

²⁴ HOLL 1963a, 72; PARÁDI 1963, 227.

²⁵ Decorated pots constitute 13 per cent (1256 grams) of all fragments. Ribbed rim types were not included in this discussion.

²⁶ HOLL 1963b, 343–349; MIKLÓS 1991, 17, Pl. 27. 2–5, Pl. 26. 13, 26, Pl. 27. 24–26; HORVÁTH – SIMON 1996, 440, Ill. 1. 5–6, Ill. 4. 11, Ill. 5. 9, Ill. 43. 7, Ill. 47. 7, Ill. 48. 11.

²⁷ HATHÁZI – KOVÁCS 1996, 55, Ill. 25. 6, 56, Ill. 25. 4; GERELYES 1987, 174, Ill. 5. 9–10, Ill. 7. 2–4, Ill. 6. 3; KOZÁK 1966, 86, Ill. 5. 5–7, 9–11, 84, Ill. 2. 11–12; KOVÁCS 1990–91, 179, Pl. IV 2.

²⁸ CSUPOR – CSUPORNÉ ANGYAL 1998, 102.

²⁹ DOMANOVSKY 1968, 52; FEHÉR 1959, 124; SAROSÁZS 1972, 80.

³⁰ PARÁDI 1963, 225; MÉRI 1954, Pl. XXXV. 5.

³¹ SZABADFALVI 1986, 10.

(2) One-handled large jugs with a wide mouth and plain or segmented rim and the occasional spouted variant form the second group.

However, considerably more forms may be assumed from the variety of types represented by the pottery sherds.

A fairly high proportion (36 per cent) of the pitcher and jug sherds were undecorated. The majority of the decorated fragments came from vessels fired in a reducing atmosphere that had a carefully smoothed black surface and were decorated with vertical or oblique polished bands. Fragments with incised decoration were also quite frequent (12 per cent). The most common incised patterns were wavy lines, garlands and rouletted patterns, which usually appeared on vessels fired to a black or brick red colour. Simple lead glazing occurred on about 10 per cent of the vessels, while red or reddish-brown engobe painting featured on 13 per cent; appliqué decoration represented about 1 per cent.

A separate group consisted of storage vessels tempered with kaolin that have a white, light brown or light red fabric decorated with green and brick red stylised leaf or flower motifs edged with dark brown on a yellowish-white ground.³²

Various types of pitchers and jugs decorated with vegetal patterns are known, not only from the Ottoman,³³ but also from later periods.³⁴

Platters

Plates and platters made up 7 per cent of the ceramic assemblage (Diagram 2). The proportions of plates and platters in the ceramic assemblage were roughly identical.

Most typical were carefully crafted vessels made from finely levigated clay tempered with sand and usually with a red or white or, occasionally, light brown fabric. All the pieces were glazed.³⁵

A distinction can be drawn between Turkish footed bowls and local Hungarian wares, platters with loops for hanging and floral ornamentation.

Turkish footed bowls are one of the most common vessel types in the assemblages of the Ottoman period. They were usually covered with monochrome glazes, incised decoration and drip glazing.³⁶

The proportion of the latter type was negligible in the total material found (Ill. 4). The bowls varied in shape and size. The rims were straight, slightly drawn in or turned out, and usually plain. The rim was usually rounded, although some rim fragments

had a grooved decoration. The vessel body was usually rounded, while the foot was conical. The overwhelming majority of the footed bowls dishes were glazed, most often with a green glaze.

No bowl fragments with *sgraffito* decoration were found in the Ótemplom assemblage. Only two sherds had a combed decoration.

The greater part of the Hungarian plates and platters were decorated with floral patterns (Ill. 5). Their fabric was usually white, whitish-yellow or light brown, occasionally light red. The rim was straight or slightly drawn in, plain or with simple segmentation. The rim was either rounded or cut. Some of these vessels had loops for hanging, attached horizontally or vertically.

Lead-glazed plates and platters became characteristic products of local Hungarian pottery from the late sixteenth century onwards; loops for hanging appeared in the early seventeenth century.³⁷

Almost all the decorated fragments in this category bore red and green stylised floral patterns, leaf clusters and flower motifs drawn with brown contours on a clear, whitish-yellow or occasionally ochre base under a transparent or light yellow glaze. Plate rims were often framed with a dark brown straight or wavy line. Spiral motifs and lattice patterns with dark brown contours also occurred, together with scrolling and spirals.³⁸

Based on their production techniques, typical patterns and colouring, the pottery from the Ótemplom site with floral decoration can be dated to the later part of the Ottoman period. The best parallels with these vessels can be quoted from various seventeenth century assemblages.³⁹

Connections between the Ótemplom ceramic finds and the folk pottery of Hódmezővásárhely

The possible connection between local folk pottery and the ceramic finds from the Ótemplom site can best be demonstrated by examining the similarities and differences in vessel types and decorative patterns.

The Ótemplom pottery wares have little in common with nineteenth-century folk pottery. For example, the vessel sets differ considerably. About 17 per cent of the vessels in the Ótemplom assemblage are grey or greyish-white and were fired in a reducing atmosphere; in contrast, vessels fired to a black colour are entirely absent from nineteenth-century folk pottery.⁴⁰

³² Classified as glaze decorated fragments in the statistics.

³³ FEHÉR 1959, Pl. IX, Ill. 2.

³⁴ GÁL 1985, Pl. XI. 1–6, Pl. XIII. 2.

³⁵ The glazed fragments mostly come from plates.

³⁶ KOVÁCS 1984a, 20.

³⁷ GERELYES 1991, 31, 46; LÁZÁR 1986, Ill. 6. 3, Ill. 7. 1.

³⁸ This motif is seen as a result of Italian influence. MÉSZÁROS 1968, 12–13; 1996, 222.

³⁹ GÁL 1985, Pl. XI. 1–6, Pl. XIII. 1–7; GERELYES 1991, 46, Ill. 15. 1, 3, Ill. 16. 3, Ill. 17. 1, 3; LÁZÁR 1986, 45, Ill. 13. 3; MITHAY 1988, 75–76, Ill. 22. 1–26; LUKÓ 1939–40, Ill. 3; SOPRONI 1981, 193.

⁴⁰ The ethnographical collections indicate that black pottery was also produced in Hódmezővásárhely until the mid- or late eighteenth century. KRESZ 1961, 153; KISS 1964, 370.



Ill. 3. Painted cooking pot from Pit "N"



Ill. 4. Turkish footed bowl from Pit "N"



Ill. 5. Finds from Pit "A"

Summary

Moreover, the Ótemplom assemblage does not include the typical decorative wares in folk pottery, such as bottles, phials and flasks.

The decorative techniques of the two periods also differ. Folk pottery is most often decorated with appliqué decoration, incised patterns combined with painting, and floral patterns. Stains, foaling and monochrome glazing are less characteristic.⁴¹

In contrast, the most common decoration in the archaeological material was monochrome glazing (21 per cent) and reddish-brown or red engobe painting (17 per cent). Floral patterns were also popular, as were incised and burnished patterns. The use of appliqué ribs was not common and other appliqué decoration, too, are entirely missing. It is my belief that the differences in the frequency of decoration types should not be attributed to differences in their chronology, but rather to the differences in the proportions of the vessel types in the ceramic inventories of the two periods.

Here it should also be noted that the pottery finds from the Ótemplom site lack the colouring that is typical of Hódmezővásárhely folk pottery. Only six fragments bore a mottled green glazing on an ochre base, and only a single pottery fragment had an orange-white floral pattern on a reddish-brown base.⁴² Most vessels with floral decoration were more closely allied to the folk pottery of the Central Tisza region, in a broader chronological and geographical context.⁴³

The pottery from the Ótemplom site can be dated to the seventeenth century. The composition of the

vessel sets and the decorative techniques do not differ significantly from those of contemporary pottery finds uncovered in other areas of Hungary.

By far the greater part of the material consists of local Hungarian wares (pots with collared rim, lead-glazed dishes and plates with floral decorations, and red or whitish-yellow pitchers). By contrast, the proportion of Turkish wares is surprisingly low. The Turkish finds in the assemblage are restricted to the glazed footed bowls and the containers for liquid that were fired in a reducing atmosphere and decorated with garlands and wavy lines. The reason for this may be that the Ottoman occupation did not play a major role in the history of the settlement.⁴⁴

A comparison of the archaeological assemblage and nineteenth-century local folk pottery revealed that the two had little in common; as a matter of fact, the forms and decorative motifs of the archaeological finds can be linked to the folk pottery of the Central Tisza region. This would perhaps imply that Hódmezővásárhely folk pottery did not evolve in one place, but should instead be seen as absorbing influences from various pottery centres on the Great Hungarian Plain; its appearance can be dated to the post-medieval period and it has no visible links with the pottery of the seventeenth century.

However, further studies will be necessary in order to clarify the social, economic and cultural impacts that led to the emergence of the distinctive forms and colours in local Hódmezővásárhely pottery wares, and also to illuminate why the forms and decorative patterns of seventeenth-century pottery have survived in their purest form in the folk pottery of the Central Tisza region.⁴⁵

⁴¹ KRESZ 1990, 583.

⁴² KRESZ 1954, 133.

⁴³ KRESZ 1991, Ill. 195, Ill. 214, Ill. 189; DOMANOVSKY 1981, II. 219, Ills. 2–3, 233, Ills. 36–37.

⁴⁴ VASS 1980, 11–12.

⁴⁵ The photographs were made by Éva Szajcsán and Norbert Ferke; the photographs were digitalised by Olga Hajdú. I would like to thank them all.

The “Tiled Room” in the Palace of the Ruling Prince at Gyulafehérvár

In July 1996 the fragments of tiles that had probably ornamented walls in the one-time palace of the ruling prince at Gyulafehérvár (today: Alba Iulia, Romania) came to light. A “tiled room” there is described in several sources from the time.¹ Together with the remains of two *Haban* stoves – one made from green lead-glazed tiles, the other from blue-and-white tin-glazed tiles – a total of thirty-two wall tiles were recovered from debris that included roof tiles, bricks, mortar, stucco, and mortar fragments in the barrel-vaulting above the main entrance of the building, which is now the bishop’s palace (Ill. 6). Additional tiles were found in the debris used to fill recesses in the north facade investigated in May 2000; these apertures had originally served to secure the scaffolding put up in the eighteenth century.

These wall tiles were tempered with sand and fired to a red colour. Most had been used secondarily for some sort of border or for the replacement of missing pieces of a tile panel, since they had been cut and mortar remains could be noted on the cut surfaces. The tiles that could be reconstructed measured 25 centimetres by 25 centimetres and 26 centimetres by 26 centimetres respectively; their thickness varied between 1.3 and 1.5 centimetres, and their edges were cut at an angle of 30 degrees towards their reverse. A light bluish-white *engobe* with cobalt oxide was painted onto the clay plaques that were then fired. The floral motifs were painted onto the tiles with cobalt blue, green and yellowish-brown lead glaze; their contours were highlighted with a manganese mauve pigment. After drying, the surface was covered with a transparent lead glaze that attained a glass-like quality after firing; the surface is criss-crossed by tiny cracks.

Most of these tiles are ornamented with naturalistic designs: two curling blue twigs, yellow-veined green palm leaves with blue rosettes and blue hyacinths (or lilies-of-the-valley), and tulips with yellowish-brown cups. The framing motifs are more stylised: on some tiles part of a blue-petalled flower-cup with curved palmette-like green leaves in the corners and a stylised semi-palmette along the edges, or an arabesque-like pattern set within a cartouche on some tiles, or – alternately – the concentric ribbons of a cartouche painted green, yellow and blue. The

half and quarter elements made up the design in sets of four. Two basic tile types, mirror images of each other, were made and combined into sets of four, giving an infinite repeating design (Ill. 2).

Unfortunately, none of the tiles can be restored and the theoretical reconstruction of the design (Ill. 1) is essentially based on the regularity of the composition since the smaller details of the surviving fragments differ from each other. They were apparently drawn freehand, without a stencil; the basic design was used as a model and not as a pre-drawn design. Judging from the smaller details, the tiles were painted by at least five hands.

The fabric, the colours, the lack of a pre-conceived design and, especially, the bluish glaze suggest that these tiles were not manufactured in the Anatolian centres of wall-tile production. The *Habans* – Anabaptist refugees from Moravia – were settled in Alvinc (today: Vințu de Jos, Romania) by Prince Gábor Bethlen in 1621–22 and can be regarded as being the best local masters of more complicated glazing techniques. For this reason it seems obvious to link the manufacture of these tiles to *Haban* potters.

The three tile fragments (Ill. 7) – measuring 7 x 3 centimetres and 5 x 3.5 or 4 centimetres – that finally provided the key to the attribution of the tiles from the tiled room were found in front of the northeast wing of the palace, during the laying of drains, and west of the north wing. Their fabric consisted of creamy white clay and a mixture of quartz and frit.² The clear lead glaze is practically free from cracks, covering the design painted in so-called Armenian *bole* or sealing-wax red pigment (here represented by a brownish hue) that was a distinctive feature of Anatolian pottery workshops and that can, at the same time, be regarded as an excellent chronological indicator. In spite of the fragmentary nature of these tiles, it can be clearly seen that the motifs are more or less identical with the ones decorating the *Haban* pieces. Since the *Habans* were unable to produce a red colour from red clay of high iron content,³ on their tiles the corresponding parts are usually yellowish-brown. On the tiles made in the Turkish workshops the contours of the ornamental motifs drawn using a stencil were coloured using a black,

¹ HERPEI 1957, 326–333, mainly after CSEFKÓ 1927.

² HAGEDORN 1998, 33.

³ KATONA 1983, 53.



Ill. 1. Reconstruction of a *Haban* tile. Gyulafehérvár, c. 1660–70

manganese-dioxide pigment that probably also contained sugar (as on the tiles of the tiled house at Sárospatak) in order to prevent the colour glazes from running into each other.⁴ A comparison of the two tile types reveals that one of the *Haban* masters had copied the design on the Turkish tile quite accurately and with a good artistic instinct, while the same design had become rather distorted, occasionally to beyond all recognition, in the hands of other *Haban* craftsmen. On several tiles the positioning and the colouring are misjudged and the hyacinth sometimes appears as a lily-of-the-valley.

The examination of the origins of the designs appearing on the Gyulafehérvár tiles reveals that the design and form of the ornamental motifs are strongly

archaic compared to the usual, popular designs of the early seventeenth century.

Our knowledge of Ottoman tile production calls for a more prudent approach owing to the difficulties and inaccuracies of the traditional chronological and typological classification based on manufacturing techniques, colours and stylistic traits. The interaction between different traditions and demands, as well as between ornamental ceramics and tile manufacture, combined with the existence of various manufacturing centres drawing on a wealth of different traditions, has strongly modified earlier

⁴ For a discussion of manufacturing techniques, cf. SZEBÉNYI 1997.



Ill. 2. Reconstruction of the design of one panel of *Haban* tiles. Gyulafehérvár, c. 1660–70

views that regarded new developments as being essentially linear and continuous.⁵ At the same time, there have also been many efforts to define more precisely the various periods and ornamental styles, as well as individual workshops, based on the classification of a growing corpus of finds.⁶

From the mid-sixteenth century on, the formerly insignificant Iznik workshops responded to the new aesthetic demands evolving at the imperial court in Constantinople with such high quality work that they ensured their clear superiority over all other Anatolian workshops for a century.

The entire stock of ornamental motifs appeared as early as the second, so-called Damascus, period of Ottoman ceramics on ornamental vessels and, to a

lesser extent, on tiles. The hand-drawn vibrant leaves arranged into elaborate designs and their counterparts, the "static" palmettes and rosettes, were borrowed from the Iranian *saz* leaves style of textile art; these became the distinctive hallmark of the court workshop led by Şahkulu.⁷ The Gyulafehérvár tiles also contain two elements of the naturalistic "four-flower" style introduced by Kara Memi: tulips and hyacinths (but not carnations). The style of Master Musli, dated to the 1540s and 1550s by Julian Raby,⁸

⁵ NECİPOĞLU 1990, 156.

⁶ ATASOY – RABY 1994.

⁷ ATASOY – RABY 1994, 133.

⁸ ATASOY – RABY 1994, 135 and Ills. 232–241.



Ill. 3. Vertical elevation of the north wing of the palace of the ruling prince, with the place the tiles were found

and the influence of the so-called “Master of Hyacinths”,⁹ can be felt in many tiny details. The vitality of the open design covering several tiles echoes the dynamism of *saz* designs rather than the axial composition characterizing the “four-flower” style. In view of the vivid colours replacing the earlier blue-and-white, the designer of the Gyulafehérvár tiles combined elements and influences that appear in the classical, flourishing phase of the Iznik workshops from the 1560s onwards.

Tiles exhibiting the compositional system and stock of motifs found on the panels, but nevertheless primarily *saz* in style and blue-and-white in coloration, can be seen in the mosque built by Grand Vizier Rüstem Paşa in Constantinople in 1561, especially on the pillars of the gallery (Ill. 4).¹⁰ This was the first building featuring Iznik tiles of the so-called Rhodes group,¹¹ in which the pieces are characterized by a polychrome design under a colourless glaze. Other models include *saz*-style tiles from the mosque erected by Ramazan Efendi in 1587.¹² Other tiles in this style can be found in the Caykun *cami*,¹³ as well as in a *cami* in Eyüp;¹⁴ those in the last-mentioned are blue-and-white and combine the *saz* style with chinoiserie-style flowers. We discovered an exact seventeenth-century copy of the Gyulafehérvár tiles in the very citadel of the bole-using ceramics industry, Iznik. Curiously enough, in the town of

Iznik earlier on there was not a single building of any significance that may have been embellished with tiles.¹⁵ The architectural complex constructed between 1469 and 1518 and now completely destroyed – it contained the tomb of the Islamic mystic Eşref Rumi Zade, who died in the town, and later became a place of pilgrimage – was, according to the written sources and the inscribed tiles, substantially restored and covered with tiles under Murad IV, between 1619 (?) and 1629.¹⁶ One of the fragments found under the ruins of the *cami* during the excavations conducted by Gaston Migeon is decorated with a design similar to the one on the Gyulafehérvár pieces, although there are slight differences (Ill. 5).¹⁷ The tomb and the entrance facade were covered with tiles, and, according to F. R. Martin, tiles from the mid-sixteenth century were also used.¹⁸ The tile decoration bearing votive inscriptions and dates between 1619/29 and 1642 also incorporates pieces inspired by the designs of the Takeci Ibrahim *cami*, built in 1591.¹⁹ The date 1619 in Raymond’s study is probably a misprint,²⁰ since the reconstruction work is usually associated with Murad IV (1623–1640), who ascended the throne in 1623 while still a child.

The Gyulafehérvár tiles were ordered from Constantinople in 1623. Although attributing a date to them seems quite straightforward in view of the Iznik analogies, some caution must nevertheless be exercised.

⁹ ATASOY – RABY 1994, 138.

¹⁰ DENNY 1978, 269, Ill. 24; OTTO-DORN 1957, 118, Ills. 51, 55, 59–60; 1967, 198; ÖZ 1957, 30–31, Pl. XXXIX/73 and Ill. 103.

¹¹ ASLANAPA 1965, 36.

¹² OTTO-DORN 1957, 118.

¹³ HAGEDORN 1998, 40, Ill. 27.

¹⁴ PORTER 1995, 107, Ill. 96.

¹⁵ ATASOY – RABY 1994, 21. The town itself was rather impoverished and shabby even at the time of the greatest flourishing of its ceramics industry. When Hans Dernschwam, director of the Fuggers’ company in Besztercebánya, visited the town in the mid-sixteenth century, he was struck by

how dilapidated it was, saying that “there is not a single old house left in it”. Cf. TARDY 1984, 342.

¹⁶ RAYMOND 1922a, Ills. 14–20; 1922b, 22–23; OTTO-DORN 1957, 120–123, 131; ATASOY – RABY 1994, 20–21, 279.

¹⁷ ATASOY – RABY 1994, Ill. 71/2. The building was destroyed in 1922 during the war between Greece and Turkey. Unfortunately, the *cami* has not fallen into the area investigated over the past few decades. Cf. ASLANAPA – YETKIN – ALTUN 1989.

¹⁸ MARTIN 1909.

¹⁹ ATASOY – RABY 1994, 279.

²⁰ RAYMOND 1922b, 22.

From the late sixteenth century onwards orders for the sultan's court were placed through middlemen and became oriented to finished products.²¹ In this way standardised products began to set limits on variety and on the development of artistic creativity. Naturally, in time this was accompanied by rigidity in the stock of motifs, and by its becoming hackneyed. In connection with this, Katharina Otto-Dorn, a publisher of Iznik fragments, has drawn conclusions concerning the decline of Iznik ceramic culture in comparison with its heyday, the deterioration of glazing techniques, the less frequent use of bole red, the diminished brightness of the white backgrounds, the dimming of the coloration, and the running together of individual hues.²² It is thus understandable why tile-panels taken from buildings erected some fifty to eighty years earlier were used in the earlier seventeenth century,²³ even in the case of construction work patronized by the sultan, as, in the case of the Baghdad Pavilion (1693), the Circum-



Ill. 4. Wall tile. Rüstem Paşa Cami, c. 1561

cisio Hall (1641) and the Audience Hall of the Topkapi Palace; why tiles fully identical to earlier ones were made, as in the case of the Hall of the Princes in the Double Pavilion;²⁴ or why similar ones were produced on which we encounter compositions and details resembling those on the Iznik and Gyulafehérvár pieces, as in the case of Murad III's cabinet,²⁵ its antechamber and the walls of the neighbouring well house.²⁶ In this way the outmoded nature of the patterns for the Gyulafehérvár tiles becomes understandable. The supremacy of the market from the early seventeenth century onwards as

opposed to the earlier innovative and individual designs of court workshops responding to particular interior design tasks explains why the Transylvanian princes' envoys – probably even as early as Mihály Tholdalagi – did not have to travel to Iznik to purchase tiles, but could do so in Constantinople.

To all intents and purposes, the sixteenth- to seventeenth-century products of Kütahya, perhaps the most important ceramics centre apart from Iznik, cannot be distinguished from the Iznik wares in terms of either quality or stylistic traits. A more individual Kütahya style only appeared in the early eighteenth



Ill. 5. Fragment of a wall tile. Eşref Rumi Zade Mosque. Iznik, c. 1623–28 (after OTTO-DORN 1957)

century.²⁷ Even in the nineteenth century the Armenian potters working there were making tile-panels – in fact often more richly coloured ones – that drew on the stock of motifs from the heyday of Iznik ceramics for the renovation of wall tiling on Turkish mosques, among other buildings, that dated back one or two centuries. Accordingly, it was only natural that the motifs of the "Damascus" or "Rhodes" period should appear in their repertoire, and it is therefore not surprising that certain tiles, dated by Alexander Raymond to the late eighteenth–early nineteenth cen-

²¹ ATASOY – RABY 1994, 278, 287.

²² OTTO-DORN 1957, 123.

²³ LANE 1957, 55; 1960.

²⁴ ROGERS 1988, Ill. 81.

²⁵ CARSWELL 1982, Ill. 103.

²⁶ CARSWELL 1982, Ills. 55–56, 62–64.

²⁷ CARSWELL 1982, 88; LANE 1957, 64; 1960, 23; ASLANAPA 1965, 39; ZICK-NISSEN 1985, 133; ATASOY – RABY 1994, 74.



Ill. 6. Fragments of *Haban* tiles. Gyulafehérvár, c. 1660–70



Ill. 7. Fragment of an Iznik tile from Gyulafehérvár, c. 1623

tury and linked by him to Kütahya workshops,²⁸ bear a design almost identical to the ones ornamenting the Gyulafehérvár tiles even if the Kütahya tiles are more clumsily fashioned, by way of a common source still unknown to us.

The tiles are first mentioned in a document from 1623: Prince Gábor Bethlen instructed Mihály Tholdalagi, his envoy in Constantinople, to purchase 1400 tiles²⁹ and also asked for two craftsmen who would be able to mount them. In his letter, Bethlen speaks of two rooms to be decorated with tiles. The fact that the tiles were purchased and reached their destination is clear from a letter written some twenty years later by Tamás Debreczeni, prefect of the princely estates, to Zsuzsanna Lórántffy:³⁰ "I myself had them mounted onto the audience room in the year 1624 [...] but the craftsman who mounted them was sent by Mihály Tholdalagi." By way of his envoy to the Porte, Prince György Rákóczi I requested – in 1632 – the same craftsman for work to be performed in the Gyulafehérvár palace,³¹ since of the two other tile-ornamented rooms mentioned in the sources, the one in Sárospatak was, it seems, only finished in the summer of 1642,³² and in any case after 1639, while the one in Gyalu was completed after 1634, and probably after the end of the 1630s.³³ However, wall tiles are mentioned as ornamenting only a single room. The first reference occurs in 1634;³⁴ another,

in 1643, derives from by two persons present at György Rákóczi's wedding held in that year. The secretary to Jerzy Ballaban, the envoy of the king of Poland, describes how the envoy, having requested an audience, was led up a stairway and through a number of halls to the prince's apartments, where the prince invited him into his own room, the walls of which were covered with beautiful tiles.³⁵ (The detailed description mentions only a table and a few paintings in this room.) Gábor Haller's diary reveals that the audience room was situated between the ladies' apartments and the wing containing the dining hall and the hall for dancing.³⁶ A report prepared for Palatine Miklós Esterházy mentions that the guests ascended a stairway to the "tiled room", from where they proceeded to the "house of the prince's consort".³⁷ Judging from these descriptions, the tiled room lay somewhere between the upper-storey halls (the assembly hall, the council chamber),³⁸ accessible from the courtyard by way of the ornamented stairway, and the apartments of the prince and the prince's consort. The spot where the tiles were found suggests that the tiled room lay close to the main entrance. The antechamber where envoys waited to be received is mentioned more than once in the sources.³⁹

In September 1658 the Tartars ransacked the palace. Evlia Çelebi saw its rooms following this event

²⁸ RAYMOND 1922b, 24 and Pl. 36, lower right and upper figure, and Pl. 39.

²⁹ *Török–Magyarokori Történelmi Emlékek III. Török–Magyarokori Államokmánytár* [State Documents from the Turkish Time in Hungary] I. Pest 1868, 391.

³⁰ DÉTSHY 1994, 39. The letter is dated 2 January 1642.

³¹ SZILÁGYI 1893b, 39.

³² GERVERS-MOLNÁR 1972b, 194; DÉTSHY 1994, 41.

³³ HERPEI 1957, 327; KOVÁCS, A. 2000, 80.

³⁴ BEKE – BARABÁS 1888, 855.

³⁵ VÁRKONYI 1990, 23.

³⁶ SZABÓ 1862, 64, 83.

³⁷ VÁRKONYI 1990, 67.

³⁸ The halls must have been the most important rooms in the one-time palace of Queen Isabella and, later, of King John Sigismund that were reconstructed perhaps by Gábor Bethlen.

³⁹ HORVÁTH 1862, 176–77.

and, in a description clearly not free of exaggeration and referring to an earlier state of affairs, mentions “pillars ornamented with green granite and Damascus marble and floors covered with Indian mosaics and fine marble”.⁴⁰ This description must be treated with caution since, strangely, Evlia Çelebi is silent concerning the wall tiles that would no doubt have aroused his greatest interest. The destruction of the “expensively built chambers” may have affected primarily the roof structure and the furnishings, but if the audience room was affected, the damage must have been only partial, since the tile-lined room continues to be mentioned in the sources. The first reference following the destruction is from 1676 and records that the Mihály Tofeus, a Calvinist bishop, christened Mihály Apafi II in the “tiled audience room”.⁴¹ In his recollections of this event three years later, Bishop Tofeus himself mentions the ornamented room.⁴² In 1678 the room was the scene of discussions between the prince and the nobility,⁴³ and in 1680 the general assembly of the Calvinist Church was held in it,⁴⁴ suggesting that it was a rather capacious. In 1684 György Vass de Czege mentions a “tiled” room in his diary.⁴⁵

The last mention of the tiled room is by Miklós Bethlen, who in his diary around 1703 mentions a room presumably used as storehouse or dormitory. Between 1687 and 1714 Austrian garrison troops were stationed in a part of the palace. The traces of plaster and whitewash observed on a number of *Haban* tiles can be dated to this period, when the display character of the interior decoration ceased and when temporary alterations may have been carried out in the rooms. The wall tiles and the stove tiles were probably used in the fill of the vaulting when the first important interior alterations were carried out. These took place sometime after 1714/15 when the Catholic Church

recovered its medieval residence; they were probably executed in the 1710s to 1720s.

It therefore seems obvious to associate our tile fragments with the sole tiled room mentioned during the rule of Prince Mihály Apafi I of Transylvania (1661–1690). Apafi inherited the audience room, which had probably been damaged to some degree during the events of 1658 and which may have been in need of restoration. In this way we can explain how the *Habans* used tiling that was still extant as the model for their panels, and also why the interior of the room must have been embellished or supplemented with *Haban* products. Apafi had far fewer opportunities than his predecessors for ordering expensive imported tiles and, at the same time, he could easily count on the Alvinc craftsmen. On the other hand, he resided in the capital much more seldom than the ruling princes before him, and on a regular basis only after 1666. Accordingly, it was most probably in this post-1666 period that the *Haban* tiles were made, when the palace was renovated. It was earlier supposed that the task – or one of the tasks – of the craftsman brought from Turkey was to train *Haban* potters in the techniques of manufacturing wall tiles.⁴⁶ We consider this possibility to be excluded, primarily because the use of a stencil is a precondition for a high aesthetic standard in tiles arranged into symmetrically repeated compositions and with an infinite pattern, and it is precisely this use that is lacking on the freer *Haban* pieces. The published finds suggest that the ornamental tiles of the audience room had no directly influence on *Haban* ceramics, and that the origins of the stock of motifs on the tile-panels at Sárospatak should not be sought in Transylvania. Neither do we find any Turkish influence on the tile-panels at Sárospatak’s-museum that have been published by Vera Molnár.⁴⁷

⁴⁰ KARÁCSON 1904, 76.

⁴¹ TÓTH 1900, 215.

⁴² BOD 1766, 120, 126.

⁴³ *Erdélyi Országgyűlési Emlékek*. (Ed. Szilágyi, S.) XVI. Teleki Mihály apológiája [Mihály Teleki's Apologia]. Budapest 1893, 485.

⁴⁴ TÓTH 1902, 568.

⁴⁵ *Monumenta Hungariae Historica*, Scriptorum XXXV. Czegei Vass György és László naplója [Diary of György and László Vass de Czege]. Budapest 1896, 42.

⁴⁶ KATONA 1983, 52, 53. Although New Christian (i.e. Anabaptist) prisoners, among them potters, worked on the tiling of the Blue Mosque built by Ahmed II and some later returned home, there is no evidence that they ever made Turkish-style architectural elements in Transylvania.

⁴⁷ GERVERS-MOLNÁR 1978, 367–368, note 20; cf. also BUNTA 1973, 67.

Differentiation or Homogenisation?

STRUCTURAL CHANGES IN THE COMPOSITION OF COIN FINDS
IN SIXTEENTH-CENTURY HUNGARY

In the course of the sixteenth century important changes took place in the minting and circulation of money in Hungary. The process, which began in the second quarter of the sixteenth century, speeded up following the country's split into three parts, in consequence of which the regions, each now under different political influence, developed separate and divergent forms of money stock. Naturally, the changes in the political situation would later exercise a gradual influence on money in circulation.

Coin finds from the second quarter of the sixteenth century indicate that at that time there were as yet no significant differences in the money circulating in the various regions: throughout the country Hungarian gold coins and silver *denariuses* were predominant. With regard to small change, foreign coins appear primarily in the western part of the country, and include the coins of the Austrian provinces (*kreuzers*, *zweiers* and *pfennigs*), as well as the silver coins of Salzburg and Passau and the Bavarian farthing types (*batzen* and *half-batzen*). Czech farthings and *weisspfennigs* occur in smaller quantities, and there are scattered instances of other foreign coins.¹

On the territory of the medieval Kingdom of Hungary the traditional and characteristic Hungarian monetary system flourished for two centuries up to the middle of the sixteenth century.² This system featured the gold florin–farthing–*denarius*–*obulus* quartet, in which the gold florin and the *denarius* played major roles.³ The most valuable coin of that era was the gold florin, which at the time was more commonly called the ducat. Hungary ranked high in Europe in the issuing of gold coins, as the Körmöc ducat was a model gold coin by virtue of its consistently high precious metal content. The rise in the value of gold coins that occurred in the sixteenth century stemmed from the influx of large amounts of silver from the New World. This caused a shift in the relative values of the two metals in favour of gold, with the value of gold expressed in silver rising

steadily. During the sixteenth century the Hungarian gold ducat was minted on a relatively continual basis, and a fairly significant number entered circulation not only in Hungary, but also in Europe as a whole. Its continuous presence and standing are reflected in its leading position in exchange rate lists, as well as by its occurrence in coin finds abroad and by the large number of foreign coins copied from it.⁴ The Hungarian gold ducat's only European competitor was the *zecchino* – the gold coin of the Venetian Republic –, whose circulation was ensured by the economic supremacy of that state. Of other coins in circulation in the Levant, the Genovese ducat and the gold coins of Egypt deserve mention.

The Principality of Transylvania, created in the mid-sixteenth century, initially minted primarily gold coins.⁵ As the specification and appearance of the Transylvanian gold ducat were similar to those of the Körmöc ducat, it also circulated alongside the Hungarian ducat in Royal Hungary, in the central area occupied by the Ottomans, and even in far-flung regions of Europe.⁶ A small percentage of the Transylvanian ducats were in circulation in Turkish-occupied areas of Hungary, while a greater number made their way to the Ottoman Empire in the form of taxes.

Hungarian ducats naturally made up the greater part of the gold coin circulating in Hungary. Austrian, German, Silesian, and Venetian gold coins were also present in smaller proportions, joined at the end of the century by Dutch gold coins. The incidence of gold coins from the Principality of Transylvania and the Ottoman Empire was, according to the coin finds, rare.⁷

Gold coinage from the Austrian provinces and from the Holy Roman Empire more generally came to Hungary largely for the same reasons and by the same routes as did the thaler, although the volume of the former fell below that of the thaler, and even below that of less valuable silver coins.

¹ HUSZÁR 1975, 11–18; V. SZÉKELY 1991, 181–183.

² HUSZÁR 1979, 12–14; V. SZÉKELY 1993–1994, 47–50.

³ KOVÁTS 1922, 17–20.

⁴ HUSZÁR 1977, 71–88; GEDAI 1987–1988, 167–168; HUSZÁR 1967–1968, 57–72.

⁵ HUSZÁR 1995, 12.

⁶ ILISCH 1980, 204; BUZA 1996a, 267–268.

⁷ GEDAI 1988, 102–119; DÁVID – GERELYES 1999, 55–59, 65–68. In addition to the above, Turkish gold coins have also been reported from the following sites: Tihany (Veszprém Co.) 13/1567 = NK 32–33, 95; Székesfehérvár–Városháza (Fejér Co.) 22/1526–1564 = *Székesfehérvár Évszázadai* 2, 196; Székesfehérvár–5 Bank Str. (Fejér Co.) 16/1520–1566 = *Székesfehérvár Évszázadai* 2, 196. The low proportion of Turkish coins is also demonstrated by the inventories made of the treasures belonging to Friar György, who was murdered in 1551. MAKKAY 1995, 983.

By contrast, in Northern Italy the situation was the exact opposite. The minting of silver coin in this area began rather late, and even then was sporadic. The most important and most valuable coin of the Venetian Republic was the gold ducat, or *zecchino*, generally referred to in the Hungarian sources as "cziklin gold". The republic's economic power in the Eastern Mediterranean ensured the conditions for the free circulation of the *zecchino* and for the bolstering of its exchange value. Venetian ducats entered circulation in Hungary, including the occupied areas, both from Northern Italy and from the Ottoman-ruled Balkan territories, but the archaeological finds suggest that they did not occur in great quantities.⁸

In the southeast of Europe there was one other gold coin that played a substantial role. This was the gold coin of the Ottoman Empire – called the *altun/altın* or *sultani* in Turkish – minted after 1477; in weight and fineness it was similar to the Venetian ducat.⁹ It was circulated primarily in the provinces of the Ottoman Empire, and was therefore important in the Balkans. However, it was also found in the Romanian principalities,¹⁰ in Transylvania and in the Turkish-occupied areas of Hungary, and there are even indications of its occurrence in the Austrian and German territories.¹¹

In the second quarter of the sixteenth century, and especially from the middle of the century, a change occurred in the composition of the money circulating in Hungary: alongside the gold coinage already in circulation, a new currency of the era, the thalers of the Austrian provinces and elsewhere in the Holy Roman Empire, appears in increasing quantities, making up a growing share of the money in circulation from the middle of the century on.¹² Although Hungarian thalers were minted more or less regularly from 1553, they occur in relatively small numbers in the archaeological finds, and their circulation appears to have been rather limited compared to that of the foreign thalers.¹³ A significant proportion of the major silver coins consisted of thalers from the cities and provinces of the Holy Roman Empire, in addition to thalers minted in the Austrian provinces (especially Tyrol) and in Bohemia.¹⁴ More than half of the thalers in finds from the Turkish-occupied areas were minted in Germany, while a quarter came from the Austrian provinces. Smaller quantities of thalers from Holland, Switzer-

land, Italy, and Sweden occur in the finds.¹⁵ There were a number of reasons for the high percentage of foreign thalers in the money circulating in Hungary. One was the high level of participation by Hungarian merchants in European commerce, with growing exports especially in agricultural products (cattle, leather, cash crops, wine, etc.). Another was the foreign monetary assistance from abroad to help offset the expenses in the war against the Ottomans. Coin finds from the second half of the century indicate that there was no substantial divergence between the various regions of the country with regard to the circulation of major coins; in fact the coin finds do not differ substantially from contemporary coin finds elsewhere in Central Europe.¹⁶ The explanation is that the thalers minted by the various powers differed little in respect to coinage standard, crude weight and silver content, so much so that in everyday transactions they were considered practically equivalent in value.

In addition to the gold florin, the other important actor in the traditional Hungarian money system was the *denarius*. Following a period of debasement between 1521 and 1526 with the minting of "nova moneta", the *denarius* restabilized in value and was minted in large quantities throughout the century.¹⁷

The *denarius* was the quality silver small coin of its era, as proven not only by its relatively high silver content, but also by its circulation beyond the borders of the Kingdom of Hungary. It played an important role not only in the neighbouring Principality of Transylvania, but also in the Romanian principalities,¹⁸ and in other Balkan areas of the Ottoman Empire.¹⁹ It was a popular means of payment in the Polish areas bordering on Hungary,²⁰ and although officially banned was also accepted in the hereditary provinces of Austria,²¹ and also in Northern Italy.²² Its use in the Balkans is confirmed by a contemporary observation: Pierre Lescalopier, travelling from Constantinople to Transylvania, noted upon crossing the Danube that "from here onwards the *akçe* is no longer used, in its place in Hungary a coin is employed on which the image of the Virgin Mary appears".²³ The popularity of the Hungarian *denarius* is also clearly indicated by the fact that several despots of Moldavia – Alexandru Lăpușneanu in 1558, Ioan Jacob Heraclides in 1562/1563 and Ștefan Tomșa in 1563/1564 – modelled their

⁸ Finds containing Venetian coins: Tihany (Veszprém Co.) 13/1567 = NK 32–33, 95 (3 coins); Budapest–Fortuna utca 141/1576 = TBM 7, 181–187 (1 coin); Székesfehérvár–Bank utca (Fejér Co.) 16/1520–1566 = Székesfehérvár Évszázadai 2, 196 (2 coins); Tarnaméra–Pusztafogacs (Heves Co.) 11/1593 = DA.HNM. 31/1879 (3 coins).

⁹ SCHRÖTTER 1930, 23–24; SCHAENDLINGER 1973, 59; PÁVÓ 1986, 3–4.

¹⁰ MURGESCU 1996, 97–100.

¹¹ CERVENKA – ROTH 1972, 329; ILISCH 1980, 199, 204, 215.

¹² V. SZÉKELY 1998, 12–14.

¹³ V. SZÉKELY 1998, 23.

¹⁴ V. SZÉKELY 1998, 21–22; 1999, 321–323.

¹⁵ V. SZÉKELY 1999, 322, 325–326.

¹⁶ V. SZÉKELY 1998, 18–20.

¹⁷ HUSZÁR 1975, 15–16, 29–30.

¹⁸ MURGESCU 1996, 104–110; 1997–1998, 39–44.

¹⁹ VINAVER 1970, 19, 75, 104.

²⁰ MIKOŁAJCZYK 1980, 79–83; 1988, 124–127; HUSZÁR 1975, 30.

²¹ NEWALD 1883, 82–85; PROBSZT 1924, 69–72.

²² BUZA 1996b, 89–98.

²³ BENDA – TARDY – BENDA 1982, 59.

own small coins on it.²⁴ The decisive role of the Hungarian *denarius* among the small coins circulating in the Balkans is demonstrated by economic historians' view of the Balkans as an area of *pénz* – namely the Hungarian *denarius* – when categorising Ottoman provinces according to money used.²⁵

In addition to the Hungarian *denarius*, some other small coins appeared in everyday circulation. Particular mention should be made of the Aquileian *denarius*, the silver small coin of the Aquileian patriarchs that had been present for roughly a century and that resembled the "Madonna" *denarius* in both design and precious metal content.²⁶ Its presence in the money circulating in Hungary was minor. Present in much larger proportions were the small coins of the Austrian provinces, primarily the *kreuzer*, the *zweier* and the *pfennig*.²⁷ In addition to the Austrian coins, the Czech *weisspfennig* was also in circulation. Struck on one side only, the coin was called the "babka" in contemporary Hungarian sources and passed at a rate of two Czech *weisspfennigs* per Hungarian *denarius*.²⁸ The small coins from the Holy Roman Empire, the *pfennigs* and *hellers*, were present in insubstantial quantities, and their exchange value may have been the same as that of similar Austrian coins.

Of the foreign coins in circulation in the occupied areas of Hungary, mention should be made of the silver coin transmitted by the Turkish conquerors, the *akçe*. First minted in the early fourteenth century, the *akçe* was the main coin of the Ottoman Empire for more than a century and a half; its circulation spread further and further westward with the empire's advance up through the Balkans.²⁹ When the Ottoman conquerors installed their own administrative and financial systems in the conquered areas of Hungary, the *akçe* became the basic unit for official financial reports.³⁰ Although the *akçe* in the middle of the sixteenth century may well have surpassed the Hungarian *denarius* in precious metal content, its outward appearance and technical production level were vastly inferior. Its exchange value at that time was 1 *akçe* = 2 and 2.5 *denarius*es. While the standard for Turkish gold coins hardly changed at all, the *akçe*, which contained one gram of silver in 1440, gradually depreciated in value.³¹ Despite the fact that the Ottomans had acquired rich silver mines

through the conquest of the Balkan Peninsula, the empire struggled with a perpetual lack of coins due to the constant wars. They attempted to solve this problem by reducing the precious metal content of the *akçe*. The most severe of a series of debasements took place in the late 1580s.³² All this further decreased the *akçe*'s popularity, which was low to begin with, in the occupied areas of Hungary. Although in Turkish financial accounts the overwhelming majority of payments are listed in it,³³ contemporary coin finds indicate that role of the *akçe* in everyday circulation was much smaller:³⁴ in Hungary the coin never obtained the influence it exercised in the Balkan Turkish provinces or in Moldavia and Wallachia.³⁵

The gap between the valuable precious metal coins (ducats and thalers) and the small coins containing less silver was filled by medium-value coins, the farthings, of various origins and silver contents. Although the farthing was minted continually in Hungary, the Hungarian farthing occupied a rather modest position among the coins circulating in Hungary. The magnitude of the minting is not known, but the reason why the coin was less common than one would expect is that various foreign farthings took its place. At the same time it is not impossible that Hungarian farthings were taken abroad and melted down along with other Hungarian silver coins.³⁶

One of the largest groups of the foreign farthings consisted of coins minted in the southern areas of Germany and called *rollbatzen* (later on *batzen*), or *patzes* in the Hungarian sources.³⁷ These coins were minted up to the middle of the 1530s, but they remained in circulation in Hungary for decades after that. Worth 4 *kreuzers* and containing approximately one and a half grams of silver, each *patz* had an exchange value ranging between 5 and 6 *denarius*es.³⁸ In Hungary the most common were the *batzen* and half-*batzen* coins minted in southern Germany (Isny, Kempten, Konstanz, Leuchtenberg, Nördlingen, Öttingen), with smaller proportions of Saxon farthings and farthings from other German cities (Hanover, Goslar, Hörter, Nordheim). These were supplemented by similar coins issued by the archbishopric of Salzburg and the bishopric of Passau. Less common than the German farthings were the various medium-value coins from the Austrian provinces (the 3-, 6- and 12-*kreuzer* coins), although the

²⁴ BUZDUGAN – LUCHIAN – OPRESCU 1977, 87–90.

²⁵ SAHILLIOLČU 1983, 279.

²⁶ HUSZÁR 1975, 50.

²⁷ Many examples of the exchange rates between Austrian coins and the Hungarian *denarius*es are given in BARACZKA 1965, 237–250 and HUSZÁR 1971, 1169–1177.

²⁸ HUSZÁR 1975, 51.

²⁹ SCHAEIDLINGER 1973, 57–58.

³⁰ HEGYI 1987–1988, 78.

³¹ RÁDÓCZI 1968, 18–21; SCHAEIDLINGER 1973, 73; FODOR 1999, 29.

³² For a detailed survey of the issue see FODOR 1999, 27–39.

³³ HEGYI 1987–1988, 78–80.

³⁴ GEDAI 1988, 102, 119; DÁVID – GERELYES 1999, 55–58; In

addition to those listed so far, the following sites have also yielded *akçe*: Nagyszékely II (Tolna Co.) 3288/1577 = NK 90–91, 233; Gyerk/Hrkovce (o. Levice, Slovakia) 2084/1558 = NumZbor 6 (1960) 401–402, NMS II, 88; Ipolyszalka/Salka (o. Nové Zámky, Slovakia) 85/1585 = NumZbor 9 (1966) 258–259, NMS II, 92; Székesfehérvár–Bank utca 5. (Fejér Co.) 16/1520–1566 = Székesfehérvár Évszázadai 2, 196; Igar–Falu helyi-dűlő (Fejér Co.) 2912/1592 = NK 82–83, 121; Fegyvernek (JNSz. Co.) 1286/1600 = SzMMÉ 1984–1988, 216–221.

³⁵ MURGESCU 1996, 74–88.

³⁶ MIKOLAJCZYK 1988, 125; KAZIMÍR 1980, 175–185.

³⁷ SCHRÖTTER 1930, 63–64; HUSZÁR 1975, 50.

³⁸ BARACZKA 1965, 241–242; HUSZÁR 1975, 50.

Czech farthing, a coin with a long tradition, was present to a notable degree.³⁹

Separate mention should be made of the Polish coins, which were always present, albeit in varying proportions, all over Hungary.⁴⁰ In addition to the actual royal Polish coins, this group includes the coins of other authorised mints (Gdąnsk, Elbląg, Torún, Riga, Lithuania, Courland, Prussia) under the authority of the Polish crown, as well as coins minted on similar patterns in Schweidnitz and elsewhere in Silesia (and in Liegnitz, Brandenburg, and the Duchy of Prussia).

There was considerable circulation of Polish coins, particularly in the area of Royal Hungary and especially in Upper Hungary, but by the end of the century Polish coins had also achieved a decisive presence in the Partium and in Transylvania. Accordingly, these coins entered the Turkish-occupied areas of the country not only from the counties of Upper Hungary in the north, but also from eastern counties and even from Transylvania. In Hungarian coin finds in the first half of the sixteenth century there are occurrences of the half-farthings minted by Sigismund I (1506–1548) and his predecessors, as well as the Sweidnitz half-farthings modelled on them and the Polish farthings introduced during the reign of Sigismund I. These occur along with Brandenburg and Prussian farthings featuring similar portraits and similar quality. At the same time as Polish coins were strengthening their presence in Hungary's stock of money, there were, beginning in the 1540s, continual, albeit almost completely futile, protests against them, particularly in the counties of Upper Hungary. The reason for the protests was primarily the extremely low silver content of the Polish coins, yet their exchange value remained quite high. Up until 1578 a Polish half-farthing was exchanged for one and a half Hungarian *denariuses* and a Polish farthing for 3 *denariuses*; only later did the rates fall by half a *denarius*.⁴¹ The fineness of the half-farthing minted from 1507 was the same as that of the Polish farthing introduced in 1526 (6 *lats*, or 0.375 grams). The net weight of the half-farthing was 0.3861 grams and that of the farthing 0.7222 grams, while by contrast the net weight of three Hungarian *denariuses* came to 0.87 grams.⁴² These Polish coins were minted in vast quantities: it is estimated that more than 33 million farthings were issued during the reign of Sigismund I.⁴³ The half-farthings were

issued in similar quantities, with the Wilna mint producing more than 41 million between 1512 and 1514.⁴⁴ The number of three-farthing and six-farthing coins minted in the first half of the century was, however, insubstantial.

The number of genuinely Polish half-farthings in circulation was further increased by the Sweidnitz half-farthings minted in the last years of the reign of Louis II (1516–1526). Similarly, the volume of Polish farthings in circulation received a boost from the minting of copies of them at Brandenburg–Küstrin and Liegnitz-Brieg. These farthings and half-farthings, together with other Polish coin, entered the Turkish-occupied areas of Hungary, where their circulation was observable from the middle to the end of the sixteenth century.

In addition to the Polish half-farthings and farthings, a new coin type – the three-farthing coin – played an increasingly important role from the mid-sixteenth century onwards. This silver coin, referred to as the *novenarius* in Hungarian sources but more popularly called the *dutka*, proved to be one of the most successful coins of the era.⁴⁵ The minting of coins of this kind began in 1528 during the reign of Sigismund I, but speeded up after the 1580 monetary reforms of King Stephen Báthori of Poland. The *dutka* was struck at all the mints belonging to the Polish crown. Precise data is not available, but it is estimated that several million entered circulation. By the last decade of the century it had become one of the most common Polish coins circulating in Hungary.⁴⁶ Contemporary sources raise few objections to the presence of the three-farthing coin, as its fineness was 84.4 per cent, in contrast to the 35.9 per cent silver content of the contemporary half-farthing and farthing.⁴⁷ In the area ruled by the Ottomans, the circulation of Polish coins was particularly important in northern and eastern regions adjacent to the counties of Upper Hungary and the Partium, respectively, but these coins were presumably present throughout the Turkish-occupied areas.

Having surveyed the composition of the money in circulation and the individual coin types, let us now examine the composition of coin finds in the Turkish-occupied territories from the 1540s to the end of the sixteenth century.⁴⁸

The overwhelming majority of the finds from the 1540s consist exclusively of Hungarian *denariuses* (Palotás, Regöly, Ecséd, Tizsakécske, Szederkény,

³⁹ SCHRÖTTER 1930, 529–530.

⁴⁰ HUSZÁR 1969–1970, 57–62; PAP – WINKLER 1966, 197–211; GEDAI 1985, 37–50.

⁴¹ HUSZÁR 1975, 41–42.

⁴² HUSZÁR 1975, 42.

⁴³ MIKOŁAJCZYK 1988, 26.

⁴⁴ MIKOŁAJCZYK 1988, 18.

⁴⁵ HUSZÁR 1975, 51–52; MIKOŁAJCZYK 1982a, 281–299; 1982b; BUZA 1989–1990, 89–97.

⁴⁶ MIKOŁAJCZYK 1988, 59–61; GEDAI 1985, 48.

⁴⁷ MIKOŁAJCZYK 1988, 50.

⁴⁸ For purposes of comparison and a better overview, the period under examination has been broken down into ten-year segments. The composition of the finds generally reflects the money circulating in the years preceding the close of the decade.

Endrefalva, Nagykáta I and III, Nagytótfalu, and Guszona/Husiná).⁴⁹ Alongside Hungarian *denarius*-es, the proportion of Austrian and southern German small coins in southern Transdanubian finds is also high. Scattered incidences of Turkish *akçes* may be observed (Endrefalva, Mosdós), but these coins occur in large numbers in only two finds (Ozora-Vár II, and Kötcsé-Póczapuszta). In addition to a solitary find consisting solely of gold coins (Nagybörzsöny), there are also finds showing the first appearance of foreign thalers (Bolhó, Ozora-Vár I, Kötcsé-Póczapuszta, and Mosdós).

The finds from the 1550s continue in the majority of the cases to consist exclusively or predominantly of Hungarian *denarius*es (Fajsz, Császártöltés, Hatvan, Lakócsa, Nógrádszakál, Gyerk/Hrkovce, Ada). In southern Transdanubia Austrian coins continue to be present (Adony), while the first Polish coins appear in the northern parts of the Turkish-occupied territory (Kakasalja/Muránska Zdychava). As in the previous period, there is only one find containing large quantities of Turkish *akçe* (Nagyszékely II). An increasing number of finds contain more valuable coins (Kakasalja/Muránska Zdychava, Sajógömör/Gemer), and once again there is a find consisting entirely of gold coins (Karcag-Asszonyszállás). The percentage of thalers and their share in the total value of the finds increase dynamically.

The majority of small coins recovered from finds from the 1560s are Hungarian *denarius*es (Nagykeszi/Vel'ké Koshiy, Decs-Ete, Kunhegyes, Drégelypalánk, Uraj, Kiskunhalas-Alsószállás). The circulation of Austrian small coins now begins to decline. An increasing number of finds are of mixed composition, with both valuable silver and gold coins as well as small coins (Nagykeszi/Vel'ké Koshiy, Ecseg, Uraj/Ózd, Bolhás), and there is a particularly remarkable increase in the number of finds consisting entirely of thalers (Kiskorpád, Érd, Sávoly, Nagytétény). Turkish gold coins are found in only a few sites (Decs-Ete, Székesfehérvár-Városháza, Bank utca).

The composition of the finds from the 1570s is similar to that of the finds in the preceding decades, with most of the small coins consisting of Hungarian *denarius*es (Nógrádverőce) and with most of the more valuable coins consisting of foreign thalers (Bükkösd). The occurrence of Turkish *akçes* is practically negligible (Pécsbányatelep/Komló).

The majority of small coins from finds from the 1580s continue to be Hungarian *denarius*es (Hidas, Érsekvadkert, Somogydöröcske). An increasing number of finds have a mixed composition of Hungarian and foreign small coins (Csomád, Mánfa, Ipolyszalka/Salka, Csabacsúd). Of the more valuable coins, the proportion of thalers in the finds is in-

creasingly important (Nógrádsáp, Dunakömlőd, Nagyszékely I, Szebény, Bonyhád). Among the foreign coins, Polish examples occur in ever increasing proportions (Mogyoród, Hidas).

In the last decade of the sixteenth century the tendencies begun in the previous decades grew stronger in the money circulating in the Turkish-occupied areas.⁵⁰ The proportion of Hungarian *denarius*es in the finds continues to be significant, and in fact there continue to be sites consisting exclusively of Hungarian *denarius*es. In the foreign small coins the proportion of silver coins from Austria and Germany continues to decline, while at the same time the number of Polish coins rises steadily. The vast majority of the more valuable coins are thalers, the make-up of which is considerably more varied than at any time previously.⁵¹

Summary

This examination of the composition of sixteenth-century coin finds unearthed in the areas of Hungary occupied by the Ottomans can be summarized as follows. With regard to money in circulation, the occupied region was not a distinct and separate area, as it was in the political and administrative sense. Instead, it exhibited an intermingling of the money circulating in the neighbouring areas, serving as a point of intersection for the various influences.

As it did throughout Europe, the silver thaler gained significant ground in Hungary, too, during the sixteenth century. High-value coins were suited for long-distance commerce and for hoarding alike, and among them the proportion and significance of thalers, mostly of foreign origin, rose steadily.

Although the coins of smaller value were less frequent in everyday money circulation, the importance of the Hungarian *denarius* remained. Small coins of the Austrian provinces and farthings from German areas are present in large proportions only in the middle of the century; by 1600 these had yielded their place to coins from Poland.

In closing, it should be noted that the finds confirm the hypothesis that Turkish and Turkish-mediated coins did not play an important role in the money circulating in the Turkish-occupied areas of Hungary, and that the Ottomans conquerors themselves had little influence on the shaping of the money in circulation. Although Hungary was split into three parts, in terms of money in circulation the Ottoman-occupied area was much closer to the other areas of the divided country than it was to the neighbouring provinces of the Ottoman Empire.

* The excavation data serving as the basis for this examination may be found in the appendix to this study.

** A detailed analysis of the large number of sites unearthed from the last decade of the sixteenth century, the time of

the Fifteen Years War, is beyond the scope of this article. For sites from this period see V. SZÉKELY 1995-1996, 27-31. V. SZÉKELY 1999, 325-326.

APPENDIX⁵²

(List of the hoards mentioned in the study)

Site	Last Year	Sum	Notes, literature
Palotás (JNSz. Co.)	1541	2,336	DA. HNM. 112/1873.
Regöly (Tolna Co.)	1541	49	DA. HNM. 363/1894.
Ecséd (Heves Co.)	1542	1,562	DA. HNM. 194/1882.
Tizsakécske (Bács-Kiskun Co.)	1542	53	NK 48–49, 57.
Szederkény (Baranya Co.)	1542	1,137	NC. HNM. 108/1963.
Ozora-Vár II. (Tolna Co.)	1544	cc	Unpublished
		2,200	
Bolhó (Somogy Co.)	1544	109	NC. HNM. 125/1928, NK 34–35, 79.
Nagybörzsöny (Hont Co., Nógrád Co.)	1544	24	NC. HNM. 262/1932.
Endrefalva (Nógrád Co.)	1545	850	NK 64–65, 93.
Ozora-Vár I. (Tolna Co.)	1545	14,338	Unpublished
Kötcse-Póczapuszta (Somogy Co.)	1548	1,216	NK 43, 54.
Nagykátá I. (Pest Co.)	1548	41	NK 64–65, 95.
Nagykátá III. (Pest Co.)	1548	832	NK 64–65, 95.
Mosdós (Somogy Co.)	1549	1,075	DA. HNM. 259/1884.
Nagytótfalu (Baranya Co.)	1549	180	DA. HNM. 363/1899.
Erdőtelek-Pusztatenk (Heves Co.)	1549	1,190	NC. HNM. 101B/1910.
Gusznó-Apátipuszta (Gömör and Kishont Co.), Husiná (o. Rimavská Sobota, SK.)	1550	501	DA. HNM. 102/1882.
Fajsz-Ösztövény (Bács-Kiskun Co.)	1551	1,017	NK 66–67, 105.
Császártöltés II. (Bács-Kiskun Co.)	1552	700	NK 41, 66.
Kakasalja (Gömör and Kishont vm.) = Muránska Zdychava (o. Rožnava, SK.)	1553	136	NK 15, 85.
Hatvan (Heves Co.)	1553	782	NK 62–63, 97.
Adony (Fejér Co.)	1553	902	NK 82–83, 119.
Lakócsa-Pulkovapuszta (Somogy Co.)	1554	1,375	NC. HNM. 20/1927.
Nagyszékely II. (Tolna Co.)	1557	3,288	NK 90–91, 233.
Nógrádszakál (Nógrád Co.)	1557	102	NK 76–77, 127.
Gyerk (Hont Co.) = Hrkovce (o. Levice, SK.)	1558	2,084	NumZbor 6 (1960) 401–402.
Ada (Bács-Bodrog Co.), Ada (Vo. Ada, YU)	1559	2,206	NC. HNM. 298B/1916.
Karcag-Asszony szállás (JNSz. Co.)	1559	92	DA. HNM. 263/1900.
Sajógömör (Gömör and Kishont Co.) = Gemer (o. Rimavská Sobota, SK.)	1560	+6,000	ArchÉrt 1889, 417–418, NMS. II, 89.
Decs-Etepuszta (Tolna Co.)	1561	5,314	BÁMÉ 1 (1970) 223–235.
Kunhegyes (JNSz. Co.)	1561	1,349	SZMMÉ 1984–1988, 222–226.
Nagykeszi (Komárom Co.) = Velké Kosihy (o. Komarno, SK.)	1561	506	NK 11, 16, NMS. II, 95–96.
Ecseg (Nógrád Co.)	1561	146	NK 11, 18.
Kiskorpád (Somogy Co.)	1563	25	NK 42, 69.
Drégelypalánk (Nógrád m.)	1564	52	NK 64–65, 93.
Érd II. (Fejér Co.)	1564	33	NK 60–61, 94.
Uraj (Gömör and Kishont Co.) = Ózd (BAZ. Co.)	1565	3,436	DA. HNM. 419/1904.
Sávoly (Somogy Co.)	1565	5	NC. HNM. 86/1943.
Székesfehérvár-Városháza (Fejér Co.)	b. 1566	22	Székesfehérvár Évszázadai 2, 196.
Székesfehérvár-Bank u. 5. (Fejér Co.)	b. 1566	16	Székesfehérvár Évszázadai 2, 196.
Kiskunhalas-Alsószállás (Bács-Kiskun Co.)	1567	331	NK 90–91, 233.
Pálmonostora (PPSK vm., Bács-Kiskun Co.)	1568	931	NK 7, 24, 25, 203–204. Cumania 15, 5–92.
Bolhás-Szentlászlópuszta (Somogy Co.)	1570	230	NK 11, 16.
Nagytétény-Kastély (Pest Co.)	1570	21	NK 80–81, 153.
Érd I. (Pest Co.)	1573	108	NC. HNM. 43/1928.
Nógrádverőce (Nógrád Co.)	1574	1,104	NK 58–59, 75.
Bükkösd (Baranya Co.)	1576	209	NC. HNM. 33/1938.
Budapest-Fortuna utca	1576	141	TBM 7, 181–187.
Pécsbányatelep/Komló (Baranya Co.)	1580	87	NC. HNM. 65/1936.
Mogyoród (PPSK Co., Pest Co.)	1581	141	NK 5, 140.
Csomád (PPSK Co., Pest Co.)	1583	107	DA. HNM. 293/1895.

⁵² Sites excavated prior to 1918 or 1945 are given with both their earlier and their present place-names.

	Last Year	Sum	Notes, literature
Nógrádsáp (Nógrád Co.)	1585	2,918	NK 62-63, 96.
Hidas (Baranya Co.)	1585	1,401	DA. HNM. 230/1902.
Mánfa (Baranya Co.)	1585	148	NK 62-63, 96-97.
Csabacsúd (Békés Co.)	1585	85	NK 70-71, 81.
Ipolyszalka (Hont Co.) Salka (o. Nové Zámky, SK.)	1585	85	<i>NumZbor</i> 9 (1966) 258-259.
Dunakömlőd (Tolna Co.)	1587	26	NC. HNM. 5/1938.
Nagyszékely I. (Tolna Co.)	1588	69	NC. HNM. 41/1964.
Érsekvadkert (Nógrád Co.)	1589	351	NK 60-61, 93.
Szebény (Baranya Co.)	1589	13	DA. HNM. 205/1891.
Döröcske/Somogydöröcske (Somogy Co.)	1590	1,243	DA. HNM. 283/1901.
Bonyhád (Tolna Co.)	1590	80	DA. HNM. 20/1896.

Abbreviations used in the list:

BAZ. = Borsod-Abaúj-Zemplén
 YU = Yugoslavia
 JNSz. = Jász-Nagykun-Szolnok
 Co. = County
 o. = okres (Slovakia)
 PPSK. = Pest-Pilis-Solt Kiskun
 SK = Slovakia
 Vo. = Voivodina (YU)

DA. HNM. = Department of Antiquities at the
 Hungarian National Museum
 NC. HNM. = Numismatical Collection of the
 Hungarian National Museum
 NMS. = Nálezy mincí na Slovensku



III. 1. Part of hoard no. 2 from the Ozora-Vár site

The following table shows the results of the experiment. The first column lists the different conditions, and the second column shows the corresponding values. The data indicates that the system performs best under condition X, with a value of approximately 0.85.

Condition	Value
Condition A	0.72
Condition B	0.78
Condition C	0.81
Condition D	0.83
Condition E	0.85
Condition F	0.82
Condition G	0.79
Condition H	0.76
Condition I	0.74
Condition J	0.71

These results suggest that the system is most effective when the input parameters are set to the values corresponding to condition E. Further analysis is required to understand the underlying reasons for this performance.



In conclusion, the experiment demonstrates that the system's performance is highly dependent on the input conditions. The optimal configuration is achieved under condition E, which yields the highest performance metric.

Cowry Shells in Seventeenth- and Eighteenth-century Hungary

In honour of Ferenc Temesváry, aged 70

There are many species in the cowry family (*Cypraeidae*). Cowry shells are some of the oldest natural amulets used by humankind, especially women, since they are associated with femininity and fertility and, in a wider and not unconnected sense, are believed to be efficacious against eye trouble.¹ Occurring in similar shapes, but in varying sizes and in an abundance of colours, cowry shells were found suitable for these roles since when held vertically their serrated lengthways opening was thought to resemble the female pudenda, while when held horizontally their shape seemed to suggest the half-closed human eye.

Arriving in isolated waves, cowry shells of many different species appear among archaeological finds in the Carpathian Basin from the Scythian period (sixth to third or second centuries B.C.), the Celtic time (500–10 B.C.), the Sarmatian age (20–432 A.D.) and the early (tenth- to eleventh-century) part of the Hungarian era. Although cowry shells played a prominent role in the beliefs of the ancient Hungarians, their use as dress ornaments declined – probably owing to Church influence – in the early twelfth century, after which they no longer formed part of Hungarian folk costume. This was not the case among the Hungarians' Finno-Ugrian relations, who continue to use cowry shells to this day. A later appearance of these shells can be linked to the Jazygians, who settled in Hungary in the thirteenth century but whose use of shells as dress ornaments similarly ceased, on account of assimilation. This cessation took place around the turn of the fifteenth century, on the testimony of the burial finds.

Cowry shells appear again in Hungary subsequently, in burials sites not of Hungarians but of Balkan peoples settled in the country during the Ottoman era. The most significant burial ground in this respect is the sixteenth- to seventeenth-century cemetery section with 259 graves uncovered by Attila Gaál at Békátó near Dombóvár (Tolna County). This is believed to be the resting place of non-Christian² Vlachs (*Iflaks*). These people probably came from Montenegro, Albania or northwest Greece, as indi-

cated by the anthropological and the laboratory analyses conducted by Kinga Éry and Imre Lengyel.

By courtesy of the archaeologist, I could obtain a malacological study of thirty-four cowry shells recovered from six graves; the geologist and snail expert Gyula Radócz performed this work. He established that the Dombóvár cemetery contained specimens from two species, identifying with relatively high reliability twenty ringed cowries (*Cypraea [Erosaria] annulus* Linné 1758) and fourteen money cowries (*Cypraea [Erosaria] moneta* Linné 1758).³ These two species (their shells are small⁴) live in the Indian and Pacific oceans and both, especially the money cowry, were used as currency in the Far East, China, India, and Central Africa, hence the name. Viewed from above, the shell of the money cowry is deltoid and has a knobby surface; its colour ranges from yellow to white. The shell of the ringed cowry is oval in shape and has a smooth surface; it is greyish-whitish in colour with an orange ring around the hump on the back, hence its name. In medieval and modern times ringed cowries were collected primarily around the island of Mafia (now part of Tanzania), south of Zanzibar and Dar-es-Salaam (Ill. 1. 1); money cowries were gathered mainly in the waters of the Maldives (Ill. 1. 2). Here it should be noted that earlier on these two species, though similar, were rarely mixed. It is therefore possible that in later periods less care was taken in their selection, as indicated by their usage together.⁵

Returning to the six graves with cowry shells in the Dombóvár cemetery, five of these were child burials: two boys aged 3–4 and 6–7 respectively, three girls aged 7–10, 12–13, and 14 respectively, and a young woman aged 16–17 (Ill. 1. 3). Although boys may indeed have worn cowries as an amulet against eye disease, Gaál offered another, more convincing, explanation. As late as the twentieth century, Šokacs and Bosnians in Baranya County placed the mother's headdress, an ornate headband, on the head of a deceased child; this custom would also explain the deposition of rather valuable head ornaments in the graves of children, including boys.⁶ The textile part

¹ This paper is a shortened version of the last chapter of the book on which I am currently working; cf. Kovács 2001a. See also Kovács 1999; 1999–2000; 2001b; 2001c; Kovács – Vaday 1999.

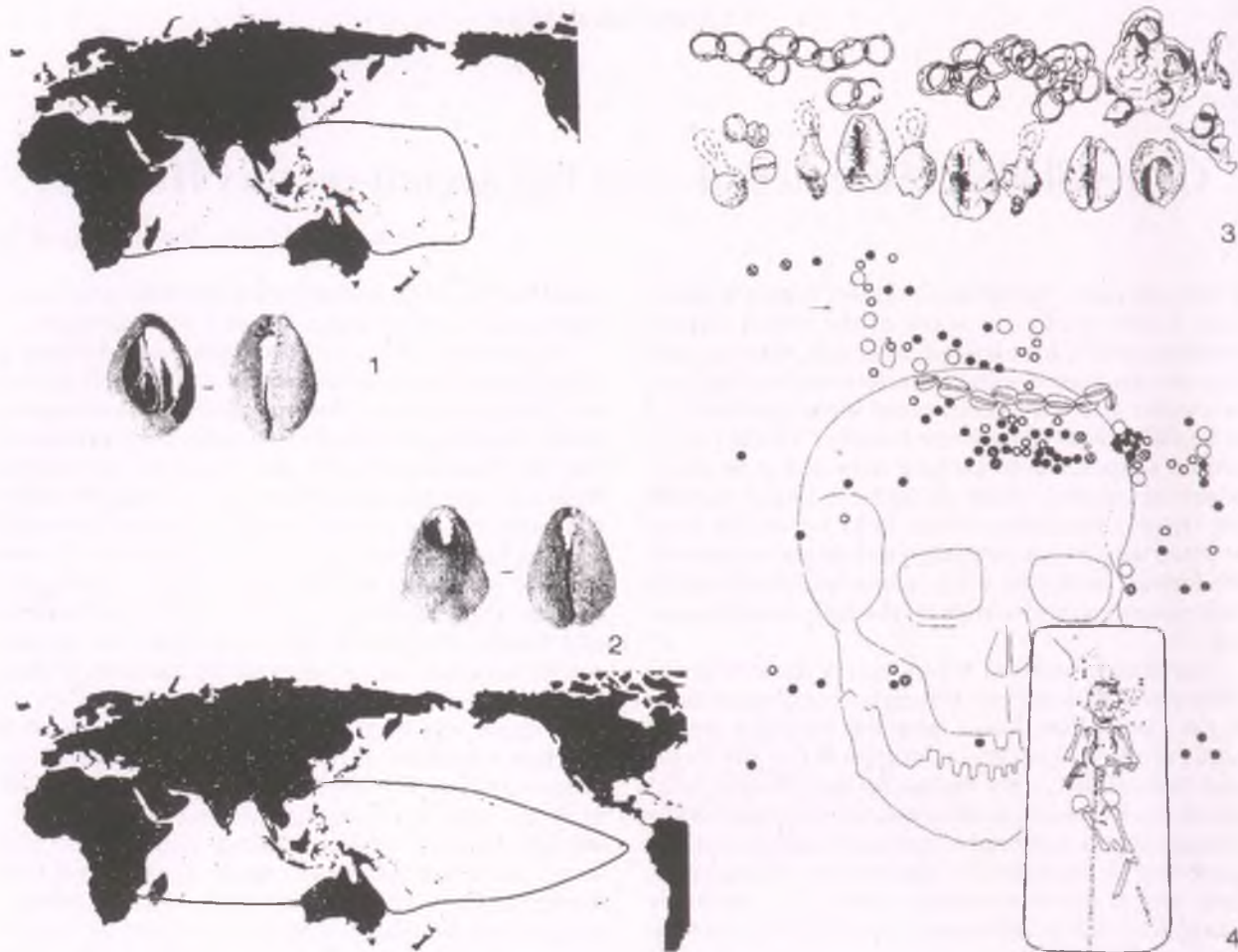
² Gaál 1979–80, 180.

³ Cf. Gaál 1979–80, Éry 1979–80. Here I would like to thank Gyula Radócz for his work.

⁴ Ringed cowry (*Cypraea [Erosaria] annulus*): l. 0.8–1.7–2.5–4.0 cm; money cowry (*Cypraea [Erosaria] moneta*) l.: 0.9–1.7–2.8–4.4 cm. These measurements are based on the study by Lorenz – Hubert 1993.

⁵ See the headdress from graves 130 and 224.

⁶ Gaál 1979–80, 171–172.



Ill. 1. 1. Ringed cowry shell with the hump removed and the distribution of the species; 2. Pieced money cowry shell and the distribution of the species (after LORENZ – HUBERT 1993); 3. Dombóvár-Békató, the grave furniture of Grave 65, including 4 money cowry shells with their humps removed; 4. The same place, a sketch of Grave 130 and a detailed depiction; on the skull there were 10 cowry shells (9 ringed and 1 money) with their humps removed (after GAÁL 1979–80)

of the headbands rarely survived, and the ornaments sewn onto the textile either lay on the skull, preserving their original arrangement, or became dispersed in the grave. The reconstructions of these headbands suggest that their decoration was, to some extent, a matter of individual taste. One band had five large pearls placed at equal distances along its length, with smaller blue, white, green and striped glass beads sewn irregularly along the entire surface. There were also three cowry shells, with another at each of the two ends of the band.⁷ On the other there were larger ornaments: a Nuremberg token, three cowries,

another bronze coin, and a clasp of sheet silver.⁸ One of the graves probably contained a pearl headdress and a string of cowry shells sewn onto a separate ribbon: the ten shells were set closely, almost touching, and each end of the ribbon was fastened to the hair by a bronze pin surmounted by a blue pearl (Ill. 1. 4).⁹ In another grave a band with eleven cowry shells appears to have been placed behind the skull, since the shells lay in a cluster.¹⁰ The headdresses from two other burials were found on the body and could not be reconstructed with precision.¹¹ In order that the shells could be sewn onto the headdress, the

⁷ Grave 100: five money cowries from the grave of a 3–4-year-old boy: GAÁL 1979–80, 143, 170, 195, Ill. 16.

⁸ Grave 193: three money cowries from the grave of a 6–8-year-old boy: GAÁL 1979–80, 152, 170, 209, Ill. 30, 219, Pl. 7.

⁹ Grave 130: nine ringed cowries and one money cowry from the grave of a 7–10-year-old girl: GAÁL 1979–80, 146, 170–171, 202–203, Ills 23–24, 218, Pl. 6.

¹⁰ Grave 224: nine or ten ringed cowries and one or two money cowries from the grave of a 12–13-year-old girl: GAÁL 1979–80, 155, 171, 210, Ill. 31, 220, Pl. 8.

¹¹ Grave 65: the headdress decorated with four money cowries may have slipped off in the grave of a 16–17-year-old girl; Grave 84: the ornaments (pearls, sheet bronze beads and a money cowry) from the burial of a 14-year-old girl may have become displaced: GAÁL 1979–80, 139, 169, 191, Ill. 12 and Pl. 3, and 141, 169–170, 192, Ill. 13 and Pl. 3.

hump on the back was filed off, thus making a “pearl” open at the bottom that sat better on the base. After this, the shells were sewn onto the textile with their openings facing outwards; this had symbolic meaning.

Unfortunately, other archaeological finds cannot be reconstructed as accurately in the absence of on-site observation. In the seventeenth-century Šokac church cemetery at Zombor–Bükkszállás (today: Sombor–Bukovac, Serbia) in former Bács-Bodrog County, some 300 graves were disturbed, but descriptions were made of only 145; two women’s graves had one cowry shell each (although its position in the grave was not recorded) and another apparently contained eleven,¹² while a further nine specimens could not be associated with specific burials. The majority were probably shells of money cowries, but some may have been those of the ringed variety.¹³ It seems likely that the burials in this cemetery contained more than the 22 specimens currently known, since according to József Korek, who published the finds based on a report by the leader of the excavation, “the poorly observed graves often contained as many as twenty to thirty grave goods”.¹⁴ The situation is no better as regards the finds from the seventeenth-century Šokac cemetery in Bodrogonostorszeg (today: Bački Monoštor, Serbia) in former Bács-Bodrog County: these burials probably contained similar grave goods. Four graves yielded cowry shells that had been arranged into rows. Since the majority of the surviving photographs appear to indicate money cowry shells with the humps removed,¹⁵ it seems more likely that instead of being strung together, the shells had been sewn onto a pearl headdress, and that this was not noticed at the time of the excavation. Another comparable find comes from the disturbed grave of a small child in the seventeenth-century Serb cemetery uncovered at Bácsalmás–Óalmás (Bács-Kiskun County): a cowry shell was found in the earth around the grave.¹⁶

Foreign, Balkan, cowry-shell embellishments appearing in Hungary in the sixteenth and seventeenth centuries occur in the Balkans, and on the territory of Romania in the twelfth- to fifteenth-century period directly preceding this time. My random investigations¹⁷ produced no sixteenth- to seventeenth-

century parallels with the Hungarian material; only from the territory of Romania did I find somewhat earlier fifteenth- to sixteenth-century examples strung on pearl necklaces.¹⁸ These finds, as well as an Estonian woman’s cowry-shell necklace from the fifteenth to sixteenth century¹⁹ and an embellishment featuring pearls and, possibly, cowry shells from an Udmurt woman’s headdress found in a seventeenth- to nineteenth-century grave,²⁰ already show a transition towards the ethnographical material. From the rich eighteenth- to twentieth-century ethnographical heritage, I shall mention without going into detail only the headdresses of the Baltic peoples and of the Maris and Mordvins of the Volga region; the amulets of the Kazakhs; and the cowry shells of the peoples and tribes of the Altaj region, the Amur and Mongolia worn as embellishments or as part of the shaman’s accoutrements. Most of these were thought to be effective against evil spirits or were connected with the snake cult.

Although I found no material evidence to confirm this, it is possible that cowry shells came to the Balkans through Ottoman influence; Islamic tradition traces their use as amulets as far back as the Prophet Mohamed. In his *Lisan al-`arab* (d. 711/1311), Ibn Mukarram notes: “God will not prosper him who hangs a necklace of cowry shells round his neck”, commenting that “He [Mohamed] only forbade them because people were wont to use them in necklaces out of fear of the evil eye.” This would suggest that the Arabs had used cowry shells during and even before the lifetime of the Prophet; and indeed E. G. Gobert inserted a note to one passage of al-Mustaraf’s *al-Jahiliya* that mentions the use of cowry shells as a talisman against the pains of love.²¹ Evidence of their early use includes a phrase in a poem by Jamil Buthaynah (d. 82/701): “mother of the boy with the cowry-shell necklace”. There is a definition of the word *samma* in al-Jahwari’s *Sihah* (d. 398/1007–1108): “a lump called *wadin* on a belt or band” and “anything resembling cowry shells [*wada`*] brought up from the sea”. This definition was also adopted by fifteenth- and eighteenth-century writers, e.g. by al-Firuzabadi (d. 817/1415) in *Qamus* and

¹² KOREK 1989–90, 185–187, 191, Pl. I (Grave 22), 21 (Grave 72), 192, Pl. II. 27–37 (Grave 85).

¹³ The finds from 10 burials with grave goods were taken to the Szentes museum: KOREK 1989–90, 181, 193, Pl. III 18–26.

¹⁴ KOREK 1989–90, 196; cf. BARTUCZ 1960, 26.

¹⁵ KOREK 1989–90, 189–190, 194, Pl. IV. 10, 15, 18, 195, Pl. VI. 6, 8, 28–30, 34–39.

¹⁶ WICKER 1999; see also Erika Wicker’s paper in this volume.

¹⁷ Without listing them now, I refer to the ten assemblages in my investigation activity from a total of six sites in Bulgaria, Croatia, Romania, and Serbia.

¹⁸ Suceava (jud. Suceava, Romania), Cetatea de Scaun, Câmpul Șanțurilor, Grave 18: eight cowries in a necklace without any identification or illustration: MITREA – NESTOR 1953, 363. Cf. CONSTANTINESCU 1972, 99, note 109; Enisala (jud. Tulcea, Romania), La Biserica, Grave VIII, fourteen cowry shells in a girl’s necklace (?): MĂNUCU ADAMEȘTEANU 1980; 1993, 455–456, 459, 460, Ill. 2. M VIII, 3.

¹⁹ MOORA 1960, 19, 21, Ill. 19. Additional rich material lies concealed in the thirteenth- to eighteenth-century village cemeteries of Estonia, mainly in the southern part of the country. In these cemeteries, most cowry-shell finds – sometimes necklaces containing around 100 such shells – are from the period up to the mid-fifteenth century. There are fewer from the sixteenth century, and none later than the early eighteenth century. VALK 1999, 50–51, Ill. 41.

²⁰ Cip’ja (Baltasinski rai., Tatarstan, Russian Federation), Grave 14: 17th- to 19th-century Udmurt woman’s headdress (*ajson*) in connection with which the researcher makes no mention of cowry shells. However, judging from the drawing showing a reconstruction, such shells – probably 14 – sewn on perpendicularly in one row can be seen: SEMENOV 1987, 103, Ill. 6, and 109, 97, Ill. 3.

²¹ GOBERT 1951, 8, and note 9; HISKETT 1966, 341, and note 21.

by Sayyid Murtada al-Zabidi in *Taj al`arus*, completed in 1181/1767.²²

Unfortunately, there is no archaeological evidence to confirm the Islamic data quoted above, since ethnographic parallels for the widespread use of cowry shells as amulets exist only from the nineteenth and twentieth centuries. For example, cowry shells are occasionally strung onto the end parts of a type of amulets known as the Hand of Fatima.²³ This resembles an outspread palm and often ends in five rows of beads symbolising the five basic pillars of Islam;²⁴ it is also thought to protect against eye diseases.²⁵ Cowry shells also formed parts of so-called composite amulets, chains strung together from a variety of objects.²⁶ The phallic, fish-shaped amulet against *Qarina*, a female water and sea demon, was a row of beads strung onto a wire that often included a few cowry-shell pendants.²⁷ However, the familiar symbolism of cowry shells, the most popular of all amulets of animal origin, was based on their resemblance to the female pudenda, this being the reason that even in the Islamic world they were worn mainly by women as magic sources of fertility, and by both sexes as protection against eye diseases and dangerous genii. Pendants and strings strung from larger or smaller species suited both purposes.²⁸ Cowry shells also ornamented the dress of participants in the *zar*, a ritual to appease evil spirits possessing a person;²⁹ however, knowing as we do that this ritual did not reach Egypt from Central Africa until the mid-nineteenth century,³⁰ we can hardly associate it with the presumed earlier spread of these shells in the Balkans under the Ottomans.

In view of the above, the origins of the use of cowry shells among the Balkan peoples settling in the Carpathian Basin during the Ottoman period can be traced in two directions. First, the tradition may date as far back as the tenth century, and may

have been adopted from the ancient Hungarians of the Conquest period, although there is little in the way of documentation for this.³¹ Second, it may be associated with the Ottoman conquest, although possible fifteenth and sixteenth-century prototypes from Anatolia still need to be presented. I have found no archaeological evidence in this respect, even though there is no prohibition in Islam against burying women with their jewellery.³² Of these two possibilities the latter seems more likely, since it appears to be supported by the evidence of seventeenth- and eighteenth-century harness gear decorated with snail and cowry shells.

In his memoirs written in 1736, Baron Péter Apor de Altorja (1676–1752) reports: “Youths in particular were very fond of decorating their horses’ bridles, breast-straps and cruppers with snail shells.³³ On their straps, young noblemen put snail shells small as beans, which they called pearl snails,³⁴ adding also variously coloured sea-snail shells the size of small apples. Noble youths used harness with shells of other types, since this was so much cheaper.”³⁵ The use of snail shells as harness ornaments is also mentioned in a number of other sources between 1681 and 1821. Of these, the accident recorded by György Ottlyk (1663–1711) in his memoirs is worth mentioning: during the recapture of Buda, a colonel’s horse fell into a pit and the shell-embellished bridle snapped.³⁶ More important, however, is a guild-book entry dated 21 July 1706 from Rimaszombat (today: Rimavská Sobota, Slovakia) according to which “a pair of well-made bridles decorated with snail shells, along with breast-straps and cruppers, [costs] 7 forints 70 denars.”³⁷ This information from Upper Hungary indicates that Hungarians living outside Transylvania were also familiar with the harness-gear in question and it also proves that such gear was manufactured not only in Transylvania, but also in Hungary proper.

²² Annotated source of all quotes: HISKETT 1966, 341–342.

²³ The hand was a symbol of the planet Venus as early as the Babylonians. In Christianity it represented the Virgin Mary, and in Islam Fatima, the youngest daughter of the Prophet Mohamed. By-names of Fatima were *Al-Zahra* (“Vénus”) and, although she was a mother, *Al-Batul* (“the Virgin”). EL-ADLY 1981, 27. Some of the cowry shells fixed to the ends of the fingers of hand-amulets made from glass beads were collected at the desert tomb of a *veli* named Abu Sria, a “miracle-worker venerated as a saint”. In other words, these were fossilised examples. “In this kind of usage the view that spirits inhabit shells [i.e. cowry shells] can in any case play a part, and also the fact that the shape of the shells employed recalls the shape of the female pudenda.” EL-ADLY 1981, 28, 44–45, 99, Pl. VI. 1.

²⁴ These are faith (*sahada*), prayer (*salat*), fasting (*saun*), charity (*zakat*), and pilgrimages (*hadj*). KRISS – KRISS – HEINRICH 1962, 2; EL-ADLY 1981, 27.

²⁵ The hand was regarded as a person’s principal means of defence and its outspread fingers formed arrows that pointed in five different directions. The hand-amulet substituted for this gesture; the amulet’s use can be traced back uninterrupted to Ancient Egypt. KRISS – KRISS – HEINRICH 1962, 2–3; EL-ADLY 1981, 26–27.

²⁶ KRISS – KRISS – HEINRICH 1962, 7, 48–49, Ill. 12. 3–4.

²⁷ KRISS – KRISS – HEINRICH 1962, 30, Ill. 24.

²⁸ KRISS – KRISS – HEINRICH 1962, 34, Ill. 30. 1, 3.

²⁹ KRISS – KRISS – HEINRICH 1962, 144, 156–157, 159, 184–185, 187, Ill. 127. 1–3, 5, 7–20, Ill. 139.

³⁰ EL-ADLY 1981, 61.

³¹ Archaeological evidence will not be presented here, owing to lack of space. Cf. KOVÁCS 2001a.

³² The Kazakhs, who were not converted to Islam until the eighteenth century, “buried high-ranking individuals in battle attire, and the women with their jewels.” BARTHA 1998, 48–49.

³³ In his entry for “farmatring” (“crupper”), Attila T. Szabó refers only to Péter Apor’s description; in the entry for “lószerszám” (“harness”) he cites a datum from 1754. EMSzT III: Elt–Felzs (1982) 710 and VII: Kl–Ly (1995) 1211 respectively.

³⁴ Szabó’s entry for “gyöngycsiga” (“pearl snail”) reads as follows: “the shell of a particular kind of (sea) snail; un fel de cochilie de melc (de mare); Art (See) Schnecke.” By way of reference, Szabó gives only Apor’s text. EMSzT IV: Fém–Ha (1984) 805.

³⁵ APOR 1736/1972, 31.

³⁶ THALY 1875, VII, 45.

³⁷ NAGY 1872, 258; CZUBERKA 1906, 137, note 2.



Ill. 2. 1. István Makrai's 1694 harness embellished with sea snails (Hungarian National Museum). 2. Eighteenth-century harness embellished with cowry shells. Detail (Hungarian National Museum).

As regards actual appearance of the harness-gear, the passages quoted offer no enlightenment. However, two genuine examples of such gear survive in the Armoury of the Hungarian National Museum. One of these, the harness-gear made in 1694 for István Makrai de Vízszentgyörgy, is decorated with a species of sea snail (*Marginella* sp.) living in warm waters (including the Mediterranean but also further east; Ill. 2. 1).³⁸ The second is decorated with cowry shells (Ill. 2. 2); Ferenc Temesváry has dated this piece to the eighteenth century. It consists of a bridle made of black leather, ornamentation, a breast-strap, and a crupper. The humps have been filed off and the cowry shells set out with their serrated mouths upwards. Most are money cowry shells, although there are perhaps a few of the ringed variety, too. The shells have been arranged into star-shaped patterns, while the leather roses have been decorated with cowry rosettes and the points of the star-shaped pieces³⁹ with cowries in groups of three.⁴⁰ Although it is unclear whether Péter Apor meant both *Marginella* snails and cowries when talking about the

bean-sized objects he called "pearl snails", it seems quite sure that the colourful, apple-shaped, round sea-snail shells mentioned by him may have been a third, as yet unidentified, species.

Snail-decorated harness⁴¹ may well have been Turkish/Arab in origin. We know that the mainly the princes and noblemen of Transylvania, but also leading figures in Royal Hungary, obtained Oriental (Arab, Berber and Syrian) horses both commercially and as gifts, and bred them so skilfully that experts consider the 150 years of the Ottoman era to be an age of Arab horses.⁴² Ottoman influences also led to the adoption of an Oriental style in the horse equipment of the Hungarian aristocrats of the day, since the beauty and ornamentation of the splendid harnesses, saddles, stirrups, bits, and saddle- and horse-blankets surpassed those of all other kinds.⁴³ Turkish products, sometimes in the style of the workshops active at the Sublime Porte, and Tartar products are known from various aristocratic collections. When these are decorated with cowry shells, we may perhaps assume

³⁸ Hungarian National Museum, Arms Collection, inv. no. 57.6699: the ornamental silver-gilt plate hanging from the brow band by a chain identifies the date: the inscription is MAKRAI ISTVÁN DE VÍZ-SZENTGYÖRGY with a coat of arms and the date 1694. TEMESVÁRY 1995a, 18, 196, no. 140, Ill. 140 and Ills 190–194 (at the right edge of the left-hand illustration). Gyula Radócz identified the snails.

³⁹ The star motif, recalling a four-petaled flower or a cross, was also thought to have magical power. Cf. EL-ADLY 1981, 37–38.

⁴⁰ Hungarian National Museum, Arms Collection, inv. no. 57.6692 (old inv. no. 17–18/1861.VI). Presented by Ferenc Kubinyi. For a detailed description, cf. TEMESVÁRY 1995b.

⁴¹ SCHNEIDER 1905, 117, mentions their use in Hungary, but without any references to his source; SCHILDER 1926, 316.

⁴² ÓCSAG 1988, 92–94.

⁴³ CZUBERKA 1906, 134–135.

that their one-time owners possibly intended to protect their animals against eye trouble and evil spirits.⁴⁴

This custom predates the rise and spread of Islam: one may quote a few scattered examples from the later part of the second millennium B.C. in China, the royal burial sites in the Sudan from the early part of the first millennium B.C. and the rather more recent Scythian-period graves of the elite on the steppes of southern Russia. A relatively up-to-date depiction survives in a fresco painted at the turn of the eleventh century in the Coptic church of Abdallah Nirqi in Egypt. In Persia cowry shells were used to ornament the harness for donkeys, hence the name "donkey shells" (*charmuneh*). In his poem *Gulistan* ("Rose Garden"), the Persian poet Sadi (1184/1213-1219-1292) compared their frequency to that of dewdrops. The Russian traveller Adam Olearius (1603-1671) noted that donkey-shell ornaments were arranged into patterns made of "little snake-heads" (*Schneckenköpfchen*), in other words cowry shells. Such shells were also used to decorate horse harness in modern-age Persia; these were called *khurmohnu*, or "horse shells", and the patterns on horse, donkey, mule and camel harnesses all bring to mind the ornamental style on the examples in the Hungarian National Museum: the shells are set in rows with the mouths turned upwards, the most common pattern being a flower-petal arrangement of cowry shells around the metal buttons.⁴⁵ There are also references to a similar use of the shells in Arabia, Lebanon, Syria and Libya.⁴⁶

The Near Eastern, Balkan and Hungarian evidence for this practice in the seventeenth to eighteenth centuries or in later periods provides the opportunity to uncover additional connections, the most interesting of which may be the possible role of cowry-decorated harness in the equipment used by Hungarian hussars.⁴⁷

From late seventeenth century onwards, the splendidly equipped, mobile and effective hussar units became so popular in the armies of Western and Northern Europe they were organised – under Hungarian direction and with Hungarian volunteers or pressed men – in Bavaria in 1688, in France in the early eighteenth century, in Prussia after 1711,⁴⁸ in Russia beginning in 1738 and in Sweden in 1742.⁴⁹ Harness decorated with cowry shells appears among the items of equipment used by these troops. The Prussian hussars may have been familiar with cowry shells as early as the first half of the eighteenth century, since there is a tradition that the Saxon hussars, first raised in 1741, adopted use of the shells from them; in any event, Prussian officers and men used harness with cowry shells until military reorganization in 1809. We also know that after a long pause these shells again became fashionable among the officers, their use surviving until the early twentieth century.⁵⁰ This fashion probably spread to Norway sometime later, in the early nineteenth century,⁵¹ although it appeared in Sweden as early as the eighteenth century, retaining its popularity there until the mid-nineteenth century⁵² (one such harness is kept in the Nordiska Museet in Stockholm).⁵³

In conclusion it may be said that the origins of the use of cowry shells for the ornamentation of dress and harness during the sixteenth to eighteenth centuries in the Carpathian Basin can most likely be traced to the Islamic world. While the Hungarian hussars may have introduced the fashion for harness ornamented with cowry shells, the use of cowries in Hungary declined after the end of the Ottoman period and eventually disappeared. This was not true for the Balkans, much of which remained under Ottoman rule; cowry-shell decoration remained in use there up until the nineteenth to twentieth centuries.⁵⁴

⁴⁴ The Prophet Mohamed himself also believed in the power of the evil eye, and the saying "The eye can take a man to the grave, or a camel to the slaughterhouse" is attributed to him. AL-BAYDAWI, *Tafsir*. Cairo 1305/1877, 755, quoted by EL-ADLY 1981, 26, 84, note 75. It is thus no accident that Muslims protected their more valuable animals, too, from eye disease.

⁴⁵ Cf. KOVÁCS 2001a. Also decorated with money cowries arranged into rows and floral patterns is a camel harness, purchased in 1989 and probably twentieth century, in the collection at Budapest's Museum of Military History (inv. no. 93.383.1).

⁴⁶ KRISS – KRISS – HEINLICH 1962, 34, 43.

⁴⁷ Hungarian scholars appear to be unaware of this possible connection. Although I have not come across any references to a possible origin, it seems to me that shell-decorated harness in Northern Europe may have been adopted from the immediate Turkish-Mongol-Arab environment.

⁴⁸ King Frederick the Great (1740-1786) not only ordered Hungarian saddles for his cavalry, which he modelled on the Hungarian hussars, but also brought saddlers from Tiszafüred to Prussia. TEMESVÁRY 1995a, 8.

⁴⁹ In Northern Europe, for example, Baron Gábor Bellay-Bellawitz with 150 of his hussars was in the Dutch service from 1704 until 1710, before entering the Danish service. In Prussia, Hungarian hussars attained their greatest role during the reign of Frederick the Great, and the trainers of the first Swedish hussar units were Hungarians who had deserted from the Russian army; cf. FLANDORFFER 1988, 44.

⁵⁰ SCHNEIDER 1905, 111. He based his information on a summary by Hugo Conwentz, who, in turn, had obtained up-to-date information from General of Cavalry August von Mackensen (1849-1945), a commander of Saxon hussars, renowned soldier and writer on military affairs. CONWENTZ 1902, 10.

⁵¹ "In Norwegen ... wohin sie nach mündlicher Angabe des Heften Jacobsen erst während der Napoleonischen Kriege im Anfange des vorigen Jahrhunderts gedungen sein soll." SCHNEIDER 1905, 117; cf. also SCHILDER 1926, 316.

⁵² "In Sweden horse trappings decorated with cowry shells were still in use on special occasions in the middle of 19th century [sic]." JOHANSSON 1995, 351.

⁵³ Inv. no. 43120, 76889; JOHANSSON 1990, 43, 44, Ills 6-7.

⁵⁴ Ethnographers have noted them on Albanian and Bosnian women's attire, on children's bonnets and cradleblankets (DURHAM 1940; 1941); on the headwear of Bosnian Gypsy women and Bulgarian women, on the kerchiefs and belts of Dalmatian Morlak girls (SCHILDER 1926, 316), and on the headdress of women in the Versec region (noted without more precise reference by BIRTAŠEVIĆ 1973, 186). Here I would like to thank Walter Hecker (Kaposvár Equestrian Academy), Tóbor S. Kovács (Hungarian National Museum, Arms Collection), Emese Pásztor (Museum of Applied Arts), György Ságvári (Institute of Military History), and Ferenc Temesváry (HNM, Arms Collection) for their generous help.

Sixteenth- and Seventeenth-century Animal Bone Finds in Hungary

This paper will give a brief presentation of the animal bone finds for the period in question and will describe some new species and breeds of domestic animals. Analysis of the species composition of the cattle and sheep stock, and the chronological classification of the finds, called for a survey of the eighteenth and nineteenth-century material also.

The political and economic history of the sixteenth and seventeenth centuries is well known; warfare, natural disasters and epidemics made life even more difficult. On the basis of the available written sources, economic and agricultural historians have explored the qualitative and quantitative parameters of sixteenth- to seventeenth-century animal husbandry and the trade in animals with nearly calendar accuracy. Agro-zoological data (e.g. live and dressed weights, external appearance and place of origin of animals) found rarely if at all for earlier centuries is available in abundance for this period.¹

One question that written sources cannot answer is what the domesticated and hunted animals of this period were like zoologically. Archaeological and historical zoology attempts to determine and describe the zoological characteristics and specifics of these animals using the methods and approaches characteristic of the two disciplines.

The informational value of modern-age animal bone material differs fundamentally from that of previous periods. While for earlier times the species composition and ratios of the local animal stock can be reconstructed from recovered animal bones, in the modern age – with the exception of villages and manors – only the species composition and ratios of local consumption can be established.

The places of origin of animals driven to cities and castles are unknown. The nutritional role and ratios of animals used for meat very probably reflects the species frequency within the actual animal stock.

The number of animal bone remains varies radically from site to site, ranging from one to 8439.

It seems practicable to group the sites by type. General conclusions can be reached from the deviations between the collective finds from cities, castles and villages. Of course, significant local deviations can also be observed within given site-types.

Based on recent chronological and species-history findings, the species lists of a few sites had to be modified. The map shown in Ill. 1 summarises the classified animal bones and bone data for fifteenth- to sixteenth-, sixteenth- and seventeenth-, and eighteenth- to nineteenth-century sites.

33. Aszód – Kossuth Lajos utca (1983. Zs. Miklós)²
2. Bajcsa – Vár (Castle) (1999. L. Vándor – Gy. Kovács)³
5. Barcs – 2. számú Általános Iskola, Vár (General School No. 2 – Palisade)⁴
43. Békés – Kastélyzug, Vár (Palisade)⁵
19. Buda – Várhegy (Castle Hill), *Paşa's* palace⁶
20. Buda – Várhegy, Royal Palace⁷
21. Buda – Várhegy, Royal Palace, northern court⁸
22. Buda – Várhegy, Dominican cloister⁹
23. Csepel – M0 motorway¹⁰
36. Diósgyőr – Vár (Castle) (1967)
35. Eger – Vár (Castle), Casemate¹¹
13. Esztergom – Víziváros hídfő (Water-Town bridgehead)¹²
14. Esztergom – Alsósziget (Lower Island) (1982–83. Zs. Lovag)
24. Érd – Palánkvár (Palisade) (1962–65. G. Fehér)
6. Fonyód – Vár (Castle)¹³
44. Gyula – Vár (Castle)¹⁴
41. Kecskemét – Bocskai utca¹⁵
1. Kőszeg – Vár (Castle)¹⁶
42. Lászlófalva – Szentkirály¹⁷
26. Márianosztra – Pálos kolostor (Pauline monastery)¹⁸
27. Nógrád – Vár (Castle)¹⁹
3. Nagykanizsa – Vár (Castle)²⁰
9. Nagyvázsony – Csepely²¹

¹ For references to the ample literature on the subject, cf. GAÁL 1966; N. KISS 1973; PALÁDI – KOVÁCS 1993.

² MRT XIII/3, site: 2/4.

³ *Zalai Hírlap* 31 July, 1999, 7.

⁴ BARTOSIEWICZ 1999a.

⁵ VÖRÖS 1980.

⁶ BÖKÖNYI 1974, 350.

⁷ BÖKÖNYI 1958, 474; 1959; 1963, 404–405.

⁸ MATOLCSI 1977, 182.

⁹ MATOLCSI 1981.

¹⁰ VÖRÖS 1998.

¹¹ Oral communication from A. Lénárt and I. Sugár.

¹² NÉMETHY 1900b, 119.

¹³ BÖKÖNYI 1974, 361.

¹⁴ BÖKÖNYI 1974, 366.

¹⁵ BÖKÖNYI 1974, 372.

¹⁶ BÖKÖNYI 1974, 378.

¹⁷ SOMHEGYI 1995–1997.

¹⁸ BARTOSIEWICZ 1997a.

¹⁹ BÖKÖNYI 1974, 387.

²⁰ BÖKÖNYI 1974, 384.

²¹ BÖKÖNYI 1974, 386.



Ill. 1. Ottoman-period sites (with known, defined animal bones). 1. Kőszeg, 2. Bajcsa, 3. Nagykanizsa, 4. Segesd, 5. Barcs, 6. Fonyód, 7. Sarvaly, 8. Ugod, 9. Nagyvázsony, 10. Veszprém, 11–12. Székesfehérvár, 13–14. Esztergom, 15–18. Visegrád, 19–22. Buda–Castle Hill, 23. Csepel, 24. Érd, 25. Szekszárd, 26. Márianosztra, 27. Nógrád, 28–31. Vác, 32. Pest, 33. Aszód, 34. Pásztó, 35. Eger, 36. Diósgyőr, 37. Sárospatak, 38. Nyársapát, 39. Szolnok, 40. Túrkeve, 41. Kecskemét, 42. Lászlófalva, 43. Békés, 44. Gyula.

38. Nyársapát²²
 34. Pásztó – Gótikus lakóház (Gothic dwelling-house) (1978–79. I. Walter)
 32. Pest – Bródy Sándor utca (Garden of the Hungarian National Museum) (1983)
 7. Sarvaly²³
 37. Sárospatak – Vár (Castle)²⁴
 4. Segesd – Pékó föld²⁵
 25. Szekszárd – Újpalánk (Palisade)²⁶
 11. Székesfehérvár – Ady Endre and Jókai Mór utca²⁷
 12. Székesfehérvár – Basilica (1936–37)
 39. Szolnok – Vár (Castle)²⁸
 40. Túrkeve – Móric²⁹
 8. Ugod – Vár (Castle)³⁰
 28. Vác – Műszaki Főiskola (College of Technology) (*MRT* 9, 31/2e), Kossuth Lajos utca 2 (*MRT* 9, 31/3j), Zeneiskola (Music School) (*MRT* 9, 31/2j)³¹
 29. Vác – Szentháromság tér – Strand (Swimming Pool) (K. Kővári 1982, *MRT* 9, 31/3h)

30. Vác – Köztársaság utca 11 (*MRT* 9, 31/3h)³²
 31. Vác – Köztársaság utca 11 (*MRT* 9, 31/3h), Zeneiskola (Music School) (*MRT* 9, 31/2j)³³
 10. Veszprém – Tűztorony (Fire Tower) (P. Rainer 1984)
 15. Visegrád – Alsóvár (Lower Castle)³⁴
 16. Visegrád – Palota (Palace)³⁵
 17. Visegrád – Rév utca³⁶
 18. Visegrád – Fellegvár (Citadel)³⁷

Animal bone remains are known from 44 sites in 33 Ottoman-period settlements. Six of these sites have yielded only one species each. These are: Bajcsa (2), Buda, Castle Hill (21), Diósgyőr (36), Esztergom (13) and Eger (35).

Of the 38 sites whose bone samples have been analysed and evaluated, 12 are urban settlements (App. 1), 14 are forts or fortresses (App. 2), 9 are villages (App. 3), and 3 are monastic sites (App. 4). The collective species lists and species frequencies (number of bones) by settlement type are given in

²² BÖKÖNYI 1974, 387.

²³ MATOLCSI 1882.

²⁴ BÖKÖNYI 1974, 398.

²⁵ BARTOSIEWICZ 1996a.

²⁶ BARTOSIEWICZ 1997–1998, T. 4.

²⁷ BARTOSIEWICZ 1997b.

²⁸ BÖKÖNYI 1974, 406.

²⁹ BÖKÖNYI 1974, 420.

³⁰ VÖRÖS 1988a.

³¹ BARTOSIEWICZ 1995a, sites VIII, IX, X.

³² Corrected data: BARTOSIEWICZ 1995a, site VI.

³³ BARTOSIEWICZ 1995a, sites VI, X.

³⁴ Salamon-torony (Solomon Tower), BÖKÖNYI 1974, 429.

³⁵ BÖKÖNYI 1974, 427.

³⁶ Beneda-kert (Beneda Garden), cloister, BÖKÖNYI 1974, 428.

³⁷ BÖKÖNYI 1974, 423.

Table 1. Animal bone finds (nr) from Ottoman-date sites, by settlement type

Species	12 town	14 castle	9 village	3 monasteries	Total
cattle	8,923	8,931	3,341	1,065	22,260
small ruminants	5,478	4,221	1,140	370	11,209
pig	1,757	1,955	1,474	377	5,563
domestic rabbit	100	-	-	-	100
horse	108	380	370	52	910
water buffalo	2	1	-	-	3
camel	1	27	-	-	28
donkey	3	1	-	-	4
dog	205	142	110	728	1,185
cat	159	102	207	99	567
dog/cat	-	137	-	-	137
Totals for domestic mammal	16,736	15,897	6,642	2,691	41,966
everyday poultry	3,013	1,102	214	132	4,461
peacock	3	-	-	-	3
turkey	12	-	-	-	12
Totals for poultry	3,028	1,102	214	132	4,476
bison	-	3	-	-	3
hind	176	82	67	19	344
deer	48	75	29	34	186
wild boar	45	47	5	3	100
wolf	-	-	-	1	1
fox	7	2	1	25	35
badger	-	4	-	-	4
weasel	-	1	-	-	1
wildcat	4	-	-	-	4
wild rabbit	98	32	13	18	161
hedgehog	-	-	1	1	1
Total for game mammals	378	440+	115	101	1,034
wild birds					
fish	383	55	262	12	713
turtle					
GRAND TOTALS	20,526	17,494	7,233	2,936	48,189

(--440 = 246+194 game mammals from Szekszárd)

An examination of the frequency of animal stocks reveals the following:

(1) Bones of farm animals predominate among those of domestic animals, as follows: forts: 89 per cent, villages: 86.8 per cent, towns: 82.2 per cent; the poultry frequencies are the following: town: 15.5 per cent, forts: 6.6 per cent, villages: 3.2 per cent; horse frequencies are: villages 5.4 per cent, forts: 2.2 per cent, town: 0.5 per cent; dog/cat:

Table 2. Animal distribution for 38 sites from the 15th-16th, 16th, 17th and 17th-18th centuries

	Percentage	Number
TOTAL ANIMAL BONE REMAINS		48,189
<i>Domestic animals</i>	96.4	46,442
Domestic mammal	87.1	41,966
Poultry	9.3	4,476
<i>Game animals</i>	3.6	1,747
Game mammal	2.1	1,034
Bird/turtle	1.5	713
Fish		
<i>Domestic animal bone distribution (11 species)</i>		41,966
Cattle	53.0	22,260
Sheep/goat	26.7	11,209
Pig	13.3	5,563
Rabbit	0.2	100
Horse	2.2	910
Water buffalo		3
Camel		28
Donkey		4
Dog		1,185
	4.5+%	
Cat		567
<i>Species distribution of poultry remains</i>		4,029
Chicken	92.6	3,729
Goose	6.6	264
Duck	0.5	21
Peacock		3
Turkey	0.3	12

(+137 dog/cat finds from Szekszárd)

villages: 4.6 per cent, forts: 2.2 per cent, towns: 1.8 per cent.

(2) Among those of farm animals, bones of cattle form a majority, as follows: forts: 59.2 per cent, villages: 56.1 per cent, towns: 55.2 per cent; sheep/goat frequencies are the following: towns: 34 per cent, forts: 28 per cent, villages: 19.2 per cent; pig frequencies are the following: villages: 24.7 per cent, forts: 13.0 per cent, towns: 10.8 per cent.

The distribution of domestic animal remains shows that the consumption of poultry, too, was highest in towns; it was less than half as much in the forts and only a fifth as much in villages. Horses were most frequent in villages, with less than half as many in forts and a sixth as many in towns. The number of dog and cat bones was more or less the same in the three settlement types, but their relative frequencies differ. Dog and cat remains were proportionally greatest in the villages, with half as many in forts and a third as many in towns. At some sites the bones came from complete or partial skeletons.

Of the farm animals, cattle remains form the majority in almost identical proportions; next come those of sheep/goats in the towns and pigs in the villages. In terms of the relative frequencies of farm animal remains, the towns and forts are very similar.

Zoological features of the domestic animals

Cattle

In addition to the osteological material, drawings, descriptions and butchers' records of live and dressed weights are available for the zoological characterization of the cattle of the period. Two specific characteristics of the animals can be determined precisely from the examination of the

cattle bones, namely the shape and size of the horns (horn cores), and the withers height.

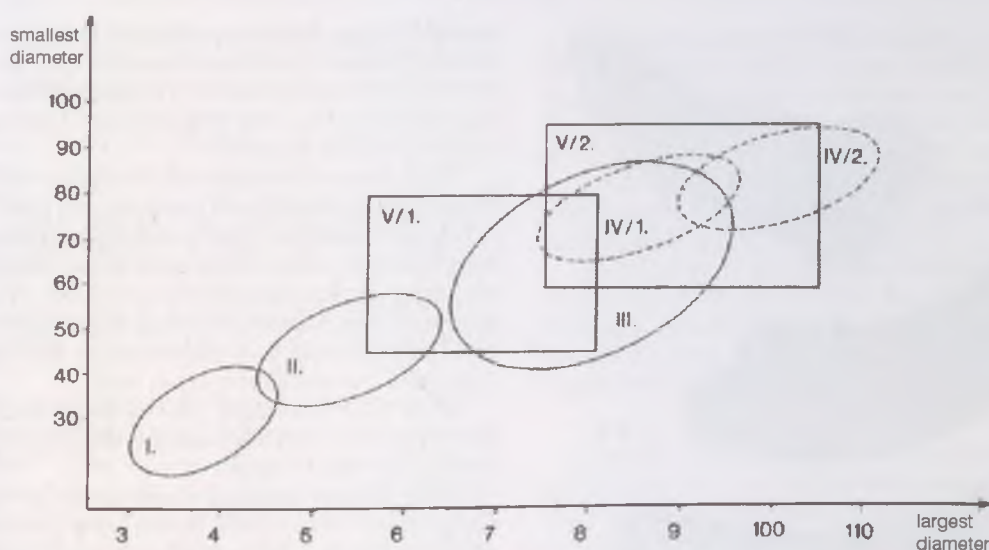
The distribution of horn-core sizes (Table 3) indicates the extremely varied breed/type composition of the cattle stock. Horn-core length in developed individual animals ranges from 74 to 427 mm, and base circumference from 94 to 305 mm. The short horn cores are straight or curved; the medium and long horn cores stand to the side and forward, curving upwards at the tips. With few exceptions, the horn cores twist backwards along their longitudinal axis. (The horn core on the right twists in an anti-clockwise direction.) A narrow trench stretches along the lower third of the back wall of the long, large horn cores, with a corneous strip fitting into the inside of the rear of the horn. This prevents the horn itself from twisting on the bony base.

Other characteristic features of the horns are the base diameters and circumferences. The largest and smallest base diameter measures show the following distribution (Ill. 2): I. Cows and bulls with small horns, II. Medium horned and III. Cows, bulls and oxen with large horns. Group IV gives the horn cores (IV/1) and horns (IV/2) for nineteenth- to twentieth-century Hungarian grey cattle, while Group V gives the horn measurements for modern grey cattle (V/1) and for oxen (V/2). Measurement III includes cattle with large, wide and thick horn cores from the

Table 3. Distribution of horn-core sizes for cattle in the 16th and 17th centuries (mm)

Site	N	length	largest diameter	smallest diameter	base circumference
Fonyód (6.)	1		33.0	33.0	108.0
Ugod (8.)	1		43.0	38.0	150.0
Szolnok (39.)	1	155	46.0	36.0	133.0
Sarvaly (7.)	1		69.0	69.0	187.0
Budai Vh. (19.)	1	118	46.0	32.0	
Budai Vh. (20.)	2	380	51.0–78.0	42.0–65.0	155.0–226.0
Békés	2	115	31.0–47.0	27.0–38.0	98.0–140.0
Sárospatak (37.)	3	300	45.0–65.0	36.0–51.0	133.0–186.0
Veszprém (10.)	4	235–260	45.0–55.0	38.0–50.0	130.0–176.0
Székesfehérvár (12.)	4	68–85	33.0–44.0	27.0–56.0	96.0–97.0
Kőszeg (1.)	4	93–100	36.0–50.5	30.5–47.0	104.0–157.0
Nagyvázsony (9.)	5		55.5–62.0	43.0–49.0	160.0–184.0
Kecskemét (41.)	8	320–427	45.0–98.0	42.0–91.0	142.0–305.0
Pásztó (34.)	14	98–215	30.0–50.0	26.0–46.0	94.0–148.0
Gyula (44.)	16	164–235	40.5–68.0	32.0–52.5	126.0–192.0
Vác (29.)	20	74–230	35.0–75.0	35.0–53.0	98.0–200.0
Vác (30–30.)	26	91–300	29.0–85.0	27.0–69.0	
Túrkeve (40.)	30	97–180	37.0–70.0	28.0–58.0	100.0–215.0
Aszód (33.)	34	226–290	45.0–76.0	33.0–65.0	120.0–290.0
<i>cattle</i>					
HNM. horn	6	1040–1240	90.0–112	76.0–88.0	275.0–330.0
horn core	5	670–830	75.0–97.0	68.0–84.0	280.0–290.0
HMM. *horn ♂	24	535–862			
∅	15	658–1132			
horn core ♀	24		57.5–81.5	44.0–79.5	
∅	15		74.5–105.5	58.5–94.0	

(+ BARTOSIEWICZ 1999b. App. 2.)



Ill. 2. Base size distributions (mm) for Ottoman-period cattle horn cores. I–III. Archaeological material (16th and 18th–19th century); IV. 19th–20th century Hungarian grey (horn base IV/1, horn IV/2); V. Modern Hungarian grey (cow V/1, ox V/2)

seventeenth and the eighteenth to nineteenth centuries from Aszód (33), Buda Castle (20), Gyula (44), Kecskemét (41), Túrkeve (40), Sáropatak (37) and Vác (30–31). These measurements correspond to the horn-core base measurements of modern Hungarian grey cattle. The significant differences can be noted in the lengths, shapes and positions of the horns and horn cores. While the length of the largest known horn cores from the seventeenth and eighteenth to nineteenth centuries are 290–427 mm, those from the nineteenth to twentieth centuries are 520–830 mm in length. The grey cattle skulls in the Matolcsi Collection (Hungarian National Museum) have the following average horn-core lengths: cows (n: 16): 520 mm, bulls (n: 4): 420 mm and oxen (n: 7): 640 mm.³⁸ Horn cores unearthed from archaeological excavations are usually 50 to 80 per cent shorter than those of modern Hungarian grey cattle. The classic grey horn position, with the horns on the plane of the forehead, has not yet been found among seventeenth- and eighteenth to nineteenth-century animal bone assemblages. Birckenstein's engraving of Csesznek Castle (1686) depicts large-bodied bulls with horns standing to the side and forward, with the tips curving upwards. Extreme variations occur in the metacarpals and tarsals of the cattle stock. The cows had short, narrow and wide tarsals; the bulls had short, narrow and wide or long and wide tarsals; oxen had long and narrow ones. In this last-mentioned case it is striking that while the withers height yielded the highest values, the anterior tarsals were relatively narrow. This leg construction made the oxen less suited to use as draught animals.³⁹

Table 4. Heights of cattle withers according to sex (cm)

	n	X	min.	max.
Cow	64	113.0	100.0	-120.0 cm
Bull+oxen	52	125.6	120.3	-131.7 cm
Oxen	25	133.4	129.3	-144.4 cm

It was necessary to group bulls and smaller, shorter oxen together in this measurement because the two forms cannot be separated osteologically.

Tall, large-bodied bulls and oxen with long horns are usually found at customs houses (Buda Castle [20], Vác [30–31]), cattle-breeding sites (Kecskemét [41], Szolnok [39], Túrkeve [40]). In Debrecen, a number of large modern-era Hungarian grey cattle horn cores were unearthed in the early 1970s from an excavation near the market. Sites in southern Hungary, too, yielded similar finds (Gyula [44] and Segesd [4]). Live weight data from butchers in the northern and western towns of Hungary indicate that oxen weighing 450–500 kg appeared in the seventeenth century.⁴⁰

There is a general consensus that the favourable changes in grey cattle husbandry in the sixteenth and seventeenth centuries resulted in extremely significant weight increases.⁴¹ However, it seems likely that, in the seventeenth century, this was due to a breed change rather than to an "improvement". This is supported not only by the seventeenth- to eighteenth-century bone finds, but also by various portrayals from the turn of the nineteenth century that depict cattle exhibiting the traits of the modern Hungarian grey species.⁴²

³⁸ Extreme values not given. BARTOSIEWICZ 1997c, Table 2.

³⁹ For a record of 1647 cf. MAKKAJ 1954, 546, 549.

⁴⁰ N. KISS 1973.

⁴¹ PALÁDI – KOVÁCS 1993, 165.

⁴² BALASSA 1981, Ill. 1. Mezőcsát (Borsod Co.), church, 1771; Ill. 2. Körömös (today: Kožuovce, Slovakia), church, 1785; Ill. 3. Gyula (Békés Co.), church, early nineteenth century.



Ill. 3. Ottoman-period buffalo horn cores, 16th–17th/18th century. 1. Budapest, Hungarian National Museum garden; 2. Budapest, Castle Hill, Castle Palace; 3. Nagykanizsa-Castle

A description of the breed composition and horn shapes for the seventeenth to eighteenth-century cattle stock is found in a 1727 inventory from the castle of Gyálu:⁴³ “*Brown* cow – stumpy, forward-leaning, irregular, pointed round horns; bullock – upright, cylindrical, blunt, wide horns. *White* cow – cylindrical, pointed horns; bullock – irregular, wide horns. *Bay* cow – pointed, forward-leaning, wide horns. *Blue* cows – irregular horns; bullock – wide horns; ox –

upright horns. *Red* cow – forward-leaning, irregular, pointed horns. *Grey* blunt-horned ox.” In addition to the above, on the estates of György Rákóczi I yellow and mottled cows, dun and dark red bulls, and black oxen were kept as well.⁴⁴

Depictions of seventeenth to eighteenth-century cattle clearly distinguish between two basic types:

(1) A “northern type”, with an angular, square-shaped body, deep chest and spear-shaped horns standing on the plane of the forehead. It can be no accident that, based on various descriptions (e.g. by A. Hirsfogel and S. F. Herberstein 1557), modern “aurochs” resemble this type; and

(2) A “southern type”, with a large angular body, rectangular or deltoid in shape, shallow chest, horns to the side and forward.

The “square-shaped” Hungarian grey – with a long body, muscular limbs and long horns – appeared in the eighteenth century. The 50 to 80 per cent length increase in the horns and the appearance of 1000–1300-mm-long ox horns are the results of nineteenth-century breeding.

Water buffalo

Originating from India, the domesticated buffalo was in general use in the Balkan countries in the seventeenth century. It arrived in Hungary as a draught animal with the Ottoman army.

Horn-core and mandible finds were unearthed at Buda Castle (Palace: [20], Northern Outer Courtyard: [21]), in Pest in the garden of the Hungarian National Museum (32), at Vác–Szentháromság tér (29), and in Nagykanizsa (3), in sixteenth- to seventeenth- and eighteenth-century contexts.

There is a surprisingly large amount of written information available on water buffalo. One of the earliest descriptions comes from a letter written by a *servitor* of Queen Isabella to Antal Verancsics in

Table 5. Heights of cattle withers in the 16th and 17th centuries (cm) (MATOLCSI 1970)

Site	cow			bull+ox			ox		
	n	x	min-max	n	x	min-max	n	x	min-max
Ugod (8)	2		109.8–116.4						
Sarvaly (7)	3	114.5	107.0–120.0						
Kőszeg (1)	4	111.0	108.5–114.0	1	123.6				
Vác (29)	1	108.0		4	125.5	121.5–128.2			
Buda, Castle Hill (20)	3	117.8	116.4–120.0	1	126.5				
Békés (43)				1	125.4				
Veszprém (10)	1	120.6					1	131.0	
Székesfehérvár (12)	5	107.6	100.0–120.0				1	132.6	
Pásztó (34)	3	112.6	108.0–119.5				1	129.3	
Nagyvázsony (9)	2		109.7–112.4	3	125.0	122.5–126.4	1	129.3	
Segesd (49)	4	110.3	104.0–115.7	4	124.8	121.0–17.5	1	134.2	
Túrkeve (40)	10	112.5	106.7–116.2	9	123.5	120.5–126.0	2		136.0–137.7
Vác (30–31)	5	111.2	106.0–114.4	5	126.0	122.5–129.0	2		132.1–133.8
Buda, Castle Hill (19)	3	113.4	112.8–114	1	128.2		1	131.0	
Gyula (44)	16	113.3	106.2–119.4	16	126.6	121.5–131.7	10	134.5	130.4–144.4
Szolnok (39)	3	115.0	113.0–116.2	7	126.4	121.0–131.7	4	135.2	133.8–137.0
Kecskemét (41)							1	137.8	

⁴³ JÁKÓ 1994, 251.

⁴⁴ MAKKAI 1954, 242.

Table 6. Horn-core lengths for water buffalo (mm)⁴⁵

	1	2	3	4	5	6	7	8	
Buda									
Castle Hill	350	225	81	55	75	43	64	33	Ill. 3. 2.
Budapest									
Garden of the									
Nat. Mus.	(340)	205	78	49	69	40	64	32	Ill. 3. 1.
Nagykanizsa	185	200	73	47	56	39			Ill. 3. 3.
Transylvania									
(recent)	355	180	66	43	56	36	43	26	
Full horn	630	205	78	46	78	45	75	43	

September 1541: when the queen was compelled to leave Buda, she purchased "oxen and buffalo to carry her goods."⁴⁶ The *Erdélyi Magyar Szótörténeti Tár* [Dictionary of Transylvanian Hungarian Etymology] cites their first mention as "water buffalo driven to Torda", in 1588, while from among powder-flasks "two curved water-buffalo bones [i.e. horns]" are mentioned in 1589.⁴⁷ In 1522, six water buffaloes were kept at the Sárvár hunting grounds.⁴⁸ In 1592, twelve buffaloes are mentioned in the inventory drawn up for György Zrínyi's estate in Csáktornya.⁴⁹ The figures from seventeenth-century inventories suggest a rather high number of water buffaloes. Seven were kept at the Rohonc manor belonging to the Batthyány family (in the period 1642–1686).⁵⁰ György Rákóczi I had 126 buffaloes on estates belonging to him in Hungary (Szerencs, Sáropatak and Munkács, in the period 1634–1645) and 157 on estates belonging to him in Transylvania (Gyulafehérvár, Fogaras and Gyalu, in the period 1630–1648).⁵¹ An estate inventory from 1642 mentions an additional 142 buffaloes.⁵² In 1655, there were 16 buffaloes at György Rákóczi II's estate in Déva.⁵³ In 1656, the Doboka estates of the Mikó and Rhédey families had 34 buffaloes.⁵⁴ In 1696, there were 46 buffaloes on the Szentpéter manor of István Apor.⁵⁵ Interestingly enough, the account-books of the court of Mihály Apafi I do not list any buffaloes. The fact that he kept buffaloes nonetheless is indicated by an entry stating that in June 1688 the Ebesfalva steward handed out "water-buffalo buttermilk/butter".⁵⁶ In the spring of 1698, 15 water buffaloes were recorded at the Miklósvár estate of Sámuel Kálnoki and 12 at his estate at Köröspatak.⁵⁷ The manor at Gyalu listed 22 water buffaloes (in the period 1642–1737),⁵⁸ while an estate inventory from 1642 recorded an additional 19 water buffaloes.⁵⁹

⁴⁵ 1. length; 2. base circumference; 3. largest diameter at horn-core base; 4. smallest diameter at horn-core base; 5. largest diameter 10 cm from horn-core base; 6. smallest diameter 10 cm from horn-core base; 7. largest diameter 20 cm from horn-core base; 8. smallest diameter 20 cm from horn-core base.

⁴⁶ HARGITTAY 1981, 82.

⁴⁷ EMSzT I (1976) 922, 924.

⁴⁸ TAKÁTS 1917, 398.

⁴⁹ BARABÁS 1895, 339.

⁵⁰ MRÁZ 1957, 258–259, 262.

Seventeenth-century descriptions from the Nagy-Küküllő Valley speak of water buffalo as milk and draught animals and of strong iron buffalo carts. Buffalo hides from animals wintered in pens and stables were very valuable; they were treated with oil.

We know from the reports of Edward Brown that in seventeenth-century Hungary water buffaloes were used to draw ploughs and carts.⁶⁰

More than 50 water buffalo horns came to light on the coast of the North Sea and near Gdansk (Danzig). Horns from water buffalo were brought to northern ports from Southeast Asia and Southeast Europe in the sixteenth century.⁶¹

Camel

Camels were used as pack-animals by Turkish merchants and by the Turkish army. A number of pieces of bone have been found at Bajcsa (2), Diósgyőr (36), Eger (35), Esztergom (13), Szekszárd (25) and Székesfehérvár (12).

Sheep

Besides descriptions in manorial records and by peasant herdsmen, the extremely diverse breed composition of the period's sheep stock is demonstrated unequivocally by the osteological finds. Similarly to cattle, sheep are characterized zoologically by their skull and horn-core shape, as well as by their withers height. The breed-specific traits are the skull profile, especially the frontal-parietal plane of the forehead bone, and the shape and size of the horn cores, determined by sexual dimorphism. The base cross-sections and sizes of the horn cores are extremely varied.

On the basis of the horn cores, sheep occurred in roughly equal proportions, divided between so-called "scrub" sheep, narrow and thick spiral-horned sheep, curving-horned sheep, and straight twisted-horned sheep.

Table 7. Heights of sheep withers in the 16th and 17th centuries (cm) (TEICHERT 1975)

SITE	N	X	min.–max.
Pásztó (34.)	1	62.2	
Fonyód (6.)	1	67.0	
Segesd (4.)	12	68.3	58.0–74.3
Budai – Castle Hill (19.)	43	68.6	58.5–78.7
Gyula (44.)	20	69.0	60.6–77.2
Békés (43.)	5	69.5	66.8–74.0
Szolnok (39.)	114	70.3	60.8–79.5
Vác (30–31.)	8	70.6	58.2–84.0

⁵¹ MAKKAJ 1954.

⁵² TT 1895, 185–186.

⁵³ MAKKAJ 1957, 275.

⁵⁴ EMSzT I. (1976) 922.

⁵⁵ BIRÓ 1986, 303.

⁵⁶ *Bornemissza Anna gazdasági naplói* [Farm Records of Anna Bornemissza]. Book IV, 583. Quoted by SZÁDECZKY 1911.

⁵⁷ S. TUDÓS 1998, 198, 205.

⁵⁸ JAKÓ 1944, 81, 251, 364.

⁵⁹ TT 1895, 186.

⁶⁰ SZAMOTA 1891, 305.

⁶¹ MOHR – HAYEN 1967.

Originating from different places, the sheep breeds differed in body size and withers height. The Table 7. gives the maximum and minimum values of the combined size distribution for both sexes taken together.

It is generally accepted that the most widespread sheep species in Hungary in the seventeenth century was the so-called Hungarian sheep often arbitrarily identified as the *racka* sheep.⁶²

Béla Hankó offers an excellent overview of the literary data on the Hungarian *racka* sheep. In his view this breed was domesticated in the Caspian region and a "mutation to straight horns" probably occurred on the southern slopes of the Urals, from where the ancient Hungarians brought these sheep to the Carpathian Basin.⁶³ Hankó believes that the Hungarian *racka* has remained unchanged since the Conquest period (tenth to eleventh centuries).

Archaeological finds, descriptions and depictions clearly show that the Hungarian sheep of the sixteenth to seventeenth century is not identical with the *racka* sheep with V-shaped, twisted horns documented from the eighteenth century onwards. Edward Brown, visiting Hungary in 1669–1670, mentioned in his travel-account that he saw sheep in huge flocks that in some districts had long, pointed horns and very long curly fleeces.⁶⁴ Brown made no mention of the positioning of the horns.

The following horn-core shapes occur in the archaeological finds:

(1) Small horn cores bending in an arc to the side, twisting slightly inward on their axis (Ill. 4. 1–3);

(2) Horn cores of various sizes starting in a wide V-shape, then twisting to varying extents on their axis bending in an arc to the side (appearing in the sixteenth and seventeenth centuries) (Ill. 5. 3, 5); Their artistic depiction appeared in works by Master M. S., namely in his altar-pieces "Christ on the Mount of Olives" and "Calvary" (1506).⁶⁵ Sheep-heads represented on synagogue flags are different from those of the later type of *racka* sheep.⁶⁶

(3) A third type of sheep appearing in an engraving by Birckenstein (1686) showing Devecser.

(4) The *racka* type in the modern sense: long straight horns (twisted along the inner axis) in a narrow or wider upward V, occurring in sites also containing eighteenth-century material (Ill. 5. 4). The first description of the breed can be read in a book by J. B. Grossinger: "among the large-bodied sheep known as Hungarian sheep (*Ovis hungaricos*) both sexes have horns, the rams' horns being larger. Because of their horns, these sheep are sometimes called 'twis-

ted-horned sheep' (*Ovis strepsiceros*)."⁶⁷ The earliest depiction is found in L. F. Marsigli's *Danubius Pannonico – Mysicus* [...], published in 1726. The ram's enormous twisted horns are positioned almost horizontally.⁶⁸ The horn is twisted twice, and flat at the peak.

Béla Hankó made a "slip of the tongue" in his description of the Hungarian sheep, claiming that the "Hungarian sheep, the Hungarian *racka* [...] belongs to the group of long-tailed, mixed-wool *racka*, being the youngest member of the group."⁶⁹ As a matter of fact, the Hungarian *racka* evolved in the eighteenth century, since earlier horn-core finds and depictions indicate that the *racka* types occurring in Hungary can be identified with the Wallachian, Greek (Macedonian) and Moldavian *racka* (to use the modern terminology). The evidence thus indicates that the Hungarian *racka* was a late, local breed.

The first mention of *racka* sheep occurs in a German text from 1799,⁷⁰ in which they are called *rasco*. The original meaning was "mongrel", a mixture of two different breeds. According to L. J. Fitzinger (1895), the *Racoschaf* type originates from a cross between Wallachian and German sheep. In Ottó Herman's study on the vocabulary of Hungarian shepherds (*A magyar pásztorok nyelvükincse*), "raczkás" is the name of the longhaired Cigala sheep (Ivád), while "raczka" denoted a coarse-furred lamb (Szihalom).⁷¹ Writing in the early nineteenth century, Nagyváthy notes that the Hungarian sheep is also called the "curly" (*Strepsicheros*) sheep, whose "disappearance has made cordova and curly fleeces more expensive."⁷²

Goat

Goats with straight small or medium horns were widespread. Their breeding was restricted to the mining towns.

Pig

Large and medium-sized pigs were kept. Their withers heights are as follows:⁷³ Sarvaly (6): 72.8 cm; Ugod (8): 66.3–73.4 cm; Segesd (4): 67.3 cm; Csepel (23): 55.5–57.7 cm (juv.); Túrkeve (40): 71.3 cm.

Horse

There is little archaeo-zoological evidence on the horse breeds or hybrids of the period. Horses and breeds were named after their place of origin (or breeding). Thus, in Hungary there were Hungarian, Polish, Turkish, Saracen, Arab, Tatar, Transylvanian, Szekler, Vlach, Spanish, and other horses. There is no way of knowing to which "type" the horse bones

⁶² GAÁL 1966, 189; PALÁDI – KOVÁCS 1993, 194.

⁶³ HANKÓ 1940, 75, 77.

⁶⁴ SZAMOTA 1891, 305.

⁶⁵ MOJZER 1976, 16, 28.

⁶⁶ BOKÓNYI 1964, 45–46.

⁶⁷ GROSSINGER 1793, 169–170.

⁶⁸ In: KÁDÁR – PISZTER 1992, Ill. 16.

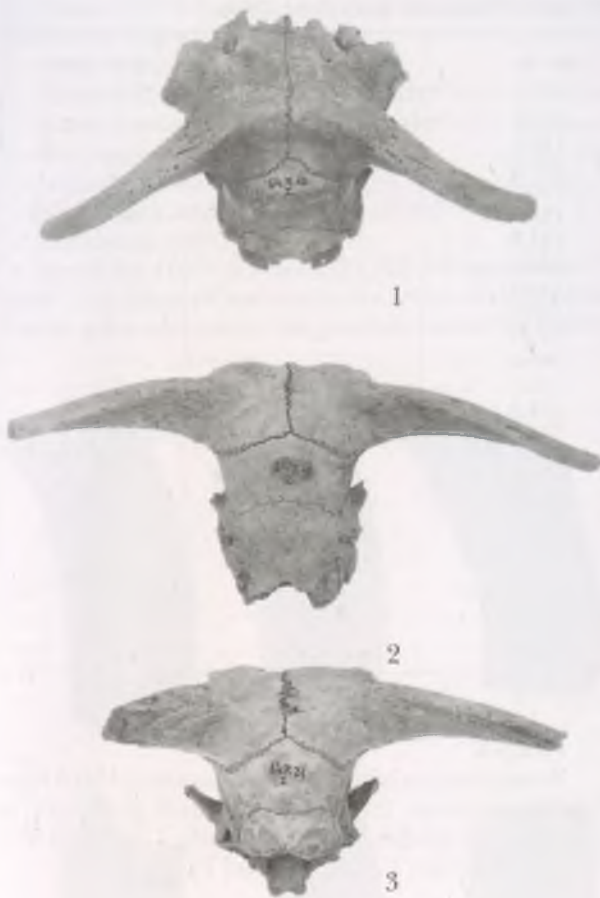
⁶⁹ HANKÓ 1940, 85.

⁷⁰ TESZ 3, 326–327.

⁷¹ HERMAN 1914, 501, 517.

⁷² NAGYVÁTHY 1822, 145.

⁷³ TEGHERT 1969.



Ill. 4. Farrow sheep skulls from Szolnok fortress, 16th-17th century



Ill. 5. Ottoman-period sheep horn cores. 1, 3. Érd; 2, 5. Gyula; 4. Vác

from a specific sample belong. With withers heights ranging from 120 to 156 cm (Table 8), the horses had body-size categories of small, short, medium, high and large. High horses are found in material from Kecskemét (41), Szolnok (39), Túrkeve (40) and Gyula (44), while large horses occur at Fonyód (6) and Szolnok (39).

Based on known contemporary depictions of horses, two major types can be distinguished: an "eastern" and a "western" type. The two types differ with regard to physique, vitality, control, harness, and primary uses.

Domestic donkey

Remains have been found in Visegrád–Alsóvár/Lower Castle (15), Vác (29) and Békés (43).

Domestic rabbit

Only in one place, Visegrád–Alsóvár (Lower Castle), have remains of the domestic rabbit been found, in material from the fifteenth and sixteenth to seventeenth centuries.

Everyday poultry

Chicken remains are in the majority, with those of goose and duck occurring in lesser numbers.

Turkey

Turkey bones have been recovered from sixteenth- to seventeenth-century material at Buda's Castle Hill (20), at Székesfehérvár (11) and at Vác (30).

In seventeenth-century account-books the bird went under the names "póka", "indiák" and "pulyka", the last of which is used today.

We have data concerning 111 turkeys on the Bathány family's Rohonc manor for the period between 1635 and 1702,⁷⁴ but turkeys were kept on its Németújvár estate, too.⁷⁵ The town of Sopron purchased 51 turkeys between 1627 and 1649, and 7 between 1707 and 1713.⁷⁶

⁷⁴ MRÁZ 1957.

⁷⁵ ZIMÁNYI 1968, 49.

⁷⁶ DÁNYI – ZIMÁNYI 1989, 146–148.

Table 8. Heights of horses withers in the 16th and 17th centuries (cm) (VITTT 1952)

Site	bone	l.	Sh. ht.	X	min-max
Ugod (8)	Mt	230	120.0		
Kőszeg (1)	rad	312	129.2		
Békés (43)	mc	223	137.6		
Pásztó (34)	mc	229	140.0		
Túrkeve (40)	mc	217	134.4	142.2	134.4–148.3
		230	141.3		
		234	143.5		
	mt	257	134.4		
		280	146.7		
		280	146.7		
		283	148.3		
Szolnok (39)	rad	380	156.0		
	mc	206	128.5		
		238	145.6		
		237.5	245.3	143.0	128.5–156.0
		215	133.4		
	mt	267	140.0		
		290	152.0		
Gyula (44)	tib	361	148.4		
		348	143.2	147.0	143.2–149.4
	mt	285	149.3		
Kecskemét (41)	mt	286	150.0		
Fonyód (6)	rad	380	156.0		

l. = greatest length, Sh. ht = withers height

Between 1643 and 1645, a total of 65 turkeys are recorded on estates in Hungary belonging to György Rákóczi I (Ónod, Szerencs, Sáros, and Munkács). The most northerly point they were kept was the manor of Hrabocz, on the Makovica estate.⁷⁷

In Transylvania the rearing and consumption of turkey was a big fashion. On György Rákóczi I's Transylvanian estates 391 turkeys were recorded in the period 1630–47.⁷⁸ An inventory of 1642 features an additional 270 turkeys.⁷⁹ The most important turkey-rearing manors were Fogaras, Porumbák, Gyula, and Örményes. The turkey stock of country seats was Kisbarcsa 13 (1624), Oprakercisóra 13 (1683), and Nyujtód 2 (1684).⁸⁰

On Mihály Apafi I's estates 577 turkeys were recorded between 1669 and 1688. Of these, 50.2 per cent (290 birds) featured between 1685 and 1688. The most important turkey-rearing manors were Szombafalva, Balasfalva and Fogaras.⁸¹ At Sámuel Kálnoki's manors a total of 23 turkeys were kept in 1698.⁸² On the manors belonging to the castle of Gyula, 12 turkeys are mentioned in 1666 and 7 in 1727.⁸³

From the notes relating to turkeys (e.g. fat, fattened, young turkey and so on) it is possible to deduce the ways they were reared and the uses to which they were put.

In Western Europe turkey was a popular gourmet meat. In her cookery book (1680) – this was a translation of a 1604 edition of Rumpolt's work – Anna Bornemissza wrote of twenty different ways of preparing it.⁸⁴

Peacock

Bone remains of this exotic ornamental bird have been recovered from fifteenth- and sixteen- to seventeenth-century material at Buda–Castle Hill (20), Visegrád–Lower Castle (15) and Pásztó (34).

Game

All the known game animals of the period in question were hunted. These species included bison, hind, fallow deer, roe, wild boar, brown bear, wolf, fox, lynx, badger, wildcat, otter, pine marten, beaver, and hare. Only remains of the lynx have not been unearthed.

Two antlers of a fallow deer were unearthed in 1850 from the Szolnok fortress (39).

The Segesd (4) cattle-bone sizes include 14 bone sizes⁸⁵ that are not those of cattle, since they correspond to the bone sizes of bison.⁸⁶ The published hum-rad-fem proximal sizes are low (narrow) in value. The withers height calculated from the long bones is 151.2–165.2 cm.

It was fashionable to keep game animals received as presents or found in the wild in game parks or game reserves. The best-known game reserves were the following:

Babócsa 1556;

Buda–Nyék (destroyed in 1526/27);

Csáktornya 1550–1561: deer, roe, fallow deer;

Csepel Island 1502: deer, fallow deer, roe, wild boar, hare;⁸⁷

⁷⁷ MAKKAI 1954, 125.

⁷⁸ MAKKAI 1954.

⁷⁹ *TT* 1895, 178.

⁸⁰ B. NAGY 1973, 59, 211, 214.

⁸¹ SZÁDECZKY 1911.

⁸² S. TUDÓS 1998, 198, 205, 213.

⁸³ JAKÓ 1944, 173, 250.

⁸⁴ LAKÓ 1983, 135–136.

⁸⁵ BARTOSIEWICZ 1996a, 212–214.

⁸⁶ EMPEL – ROSKOSZ 1964, Tables 13–14.

⁸⁷ SZAMOTA 1891, 144; NÉMETH 2000, 4.

Dömös 1518: bison, described by Herberstein as "auroxen" (sic); 1527: bison;⁸⁸
 Felső-Vadász 1731: roe deer;⁸⁹
 Füzér 1620: 7 bucks and 4 hinds;⁹⁰
 Kasza Castle 1671: deer, fallow deer;⁹¹
 Kis-Tapolcsány 1670;
 Lánzsér 1560–61;
 Makovica Castle 1634: 7 roe deer;⁹²
 Marchegg 1653;
 Munkács 1627: 87 deer, 10 old barren hinds;⁹³
 1638: 219 pairs of antlers in the attics of the Inner Castle, a few animals in the grounds below the castle;



Ill. 6. Horn-core finds from a horn-working workshop. Aszód, 17th–18th century

1645: 75 hinds and 30 deer in the grounds outside the palisades;⁹⁴ 1685: deer and fallow deer;⁹⁵
 Sáropatak 1639; Kis Patak 1648;
 Sárvár 1541: deer, fallow-deer; 1550: deer, hinds, roe deer, hare, white fallow deer; 1552: hinds, fallow deer;⁹⁶
 Vöröskő 1523, 1535: deer, wild goat, bear;
 Zay-Ugróc 1568, 1588: bison, fallow deer, lambs with 4 and 5 horns;⁹⁷
 Zólyom–Lipcse 1650, 1660: deer, fallow deer;

⁸⁸ SZALAY 1917; TAKÁTS 1917, 396.

⁸⁹ VINCZE 1878, 936.

⁹⁰ TAKÁTS 1917, 399.

⁹¹ *Ibid.*, 401.

⁹² MAKKAI 1954, 113.

⁹³ TAKÁTS 1917, 399.

⁹⁴ MAKKAI 1954, 329–330, 334.

⁹⁵ TAKÁTS 1917, 400.

⁹⁶ *Ibid.*, 397–398, 400.

Erdőd destroyed in 1565: deer, fallow deer, roe;⁹⁸
 Fogaras 1632: 1 bison, 13 deer, 14 hind, 6 roe deer and 39 does in the lands belonging to Mondra;⁹⁹
 1637: 27 deer;¹⁰⁰ 1656: 10 bucks, 11 does, 6 third-stage bucks and 5 females; 1676: 22 deer;¹⁰¹



Ill. 7. Fragment (no. 1) of an antler powder horn. Ugod Castle, 16th–17th century

Görgény 1607;
 Gyalu Castle 1676: 6 bucks, 18 does;¹⁰²
 Gyergyószék: in 1551, István Lázár sent four bison to the Fogaras hunting grounds;¹⁰³
 Szentdemeter 1629: 21 deer.¹⁰⁴
 In 1572, István Báthory sent "5 splendid bisons, 9 excellent horses and 2 elks" to Vienna from Transylvania.¹⁰⁵
 Elk, when not migratory, was of Baltic origin.

⁹⁷ SZALAY 1917.

⁹⁸ TAKÁTS 1917, 388.

⁹⁹ MAKKAI 1954, 455; TAKÁTS 1917, 400.

¹⁰⁰ MAKKAI 1954, 474.

¹⁰¹ TAKÁTS 1917, 400–401.

¹⁰² *Ibid.* 401.

¹⁰³ *MGTörtSz* 1900, 141.

¹⁰⁴ B. NAGY 1973, 69.

¹⁰⁵ SZALAY 1916, 199, 211.

In addition to the 24 game reserves listed above, there were a number of other game reserves, but their precise locations are not known. In addition to hind and roe, fallow deer were kept in six places, and some also lived in the wild. We know that Polish–Baltic bison was kept in three Transylvanian game reserves in the sixteenth century (Dömös, Zay-Ugróc and Gyergyószék), but in only one (Fogaras) in the seventeenth century.

The osteological evidence for handicrafts

Sheep leather/coats – tanners

The 114 sheep metapodials (mc/mt) collected from a small area in the Szolnok fortress¹⁰⁶ indicate that the animals had already been skinned by the time they reached the fortress. The metapodials all come from adult animals. The bone sample did not include the bones of young animals, indicating that lambskin tanning was not practised at the site. The shape and form of the skulls and horn cores show that the hides of at least four breeds of sheep were used in Szolnok.

Cattle horn – comb and button makers

The seventeenth- to eighteenth-century finds from Aszód¹⁰⁷ included 39 cattle horn cores, nine of which had been cut in two at the middle or lower third. On the lower (thicker) section of the horns a thin straight lengthwise cut can be found on the upper side (Ill. 6) indicating that after removal from the parietal bone, the horns were cut at 55, 80, 85, 110, 115, 125 and 130 mm from the base, parallel to the plane of the base. A cut was made along the length of the shorter curved upper side of the corneous cylinder, which was then removed from the stem. The cutting was done with a metal saw that left thin 1–1.5-mm cut traces. The sheet horn thus obtained was 140, 170–180, or 210–220 sq cm in size. The cellar of the Pászto schoolmaster's house yielded 14 cattle horn cores that had not been worked. It cannot therefore be proven that there was any local working of horn there.¹⁰⁸

According to one statement, the horns of early cattle were worked in Vác in the Middle Ages.¹⁰⁹ In 1951, early cattle and *racka* sheep horn cores (Ill. 5. 4) collected when the Vác bathing facility was being built were taken, along with finds from prehistoric

and modern times, to Vác's museum. In 1982, Klára Kóvári rescued finds on Szentháromság tér. Among these (which included prehistoric, Celtic and modern-age material) there were two bone fragments from early cattle. It is indubitable that these fragments are prehistoric: by the tenth century early cattle had died out in Hungary. The early cattle finds from Zalavár–Mosaburg are ninth century. The fragments of early cattle horn core from Csongrád–Felgyő are prehistoric.¹¹⁰ The crescent-shaped drinking vessel was made from bison horn; not one long, twisting drinking vessel or horn has come to light in Hungary.¹¹¹ The importing into Hungary of "raw" horn (with the horn core in it) from such cattle may be assumed.

Antler powder horns

The sixteenth–seventeenth-century material unearthed at Ugod Castle included fragments of antler powder horns.¹¹² Powder horn 1 was made from the corona branching of a deer's antlers, and was decorated on the wall and right-hand stem (Ill. 7). The powder horn was approximately 200 mm high. Powder horn 2 was smaller, and also made from the corona branching. The long neck was carved into an octagon and had a worn double line along the rim.

Fragments of similar powder horns made from antler were recovered from the sixteenth-century layers of the castles at Hollókő¹¹³ and Ozora.¹¹⁴

In sum it may be said that the virtually limitless demand for live animal exports in the sixteenth and seventeenth centuries, the meat consumption habits of the Turks and the immigration of Balkan groups all affected the species/breed composition of the domestic animal stock in Hungary. New animals appeared, such as water buffalo; camel, albeit temporarily; large-bodied cattle with different colours and horns; sheep with spiral or sidewise horns; and turkey.

One task of future research will be the assignment of the animal bone material to the smallest time periods possible. The bone samples from sites spanning a brief period of time will be no doubt be vital in this respect.

¹⁰⁶ Sándor Bökönyi, 1962.

¹⁰⁷ Zsuzsa Miklós, 1983.

¹⁰⁸ BARTOSIEWICZ 1995a, 74.

¹⁰⁹ BARTOSIEWICZ 1995a; 1997d; 1999b.

¹¹⁰ VÖRÖS 1985, 219, 202.

¹¹¹ VÖRÖS 1985, 209, T. 2.

¹¹² VÖRÖS 1988b.

¹¹³ BOROS 1982, 27.

¹¹⁴ *Ibid.*, 28.

Photographs: Bence Képešy (HNM)

Drawings: Ildikó Pisch

Graphic design: Ágnes Vári (HNM)

Appendix 1. Animal bone finds (nr) from 15th-16th, 16th, 17th, and 17th-18th-century settlements. Cities

Settlement Nr. Century	Buda Pp. 16-17.	Vp. 20. 15-17.	Kiskörnye 41. 17/18-19.	Pásztó 34. 16.	Székesfehérvár		Vác				Visegrád		Total
					11. 16-17.	12. 16/17-18.	28. 16.	29. 16-17.	30. 16-17.	31. 18-19.	15. 15-17.	16. 16-17.	
cattle	151	27	3	556	119	1,842	1,299	736	381	530	3,053	226	8,923
small ruminants	1,245	39	3	145	80	1,281	335	54	73	70	2,005	148	5,478
pig	5	13		240	8	399	126	57	151	102	534	182	1,757
water buffalo		1						1					2
camel						1							1
horse	2	5		9		24	7	2	1	1	56	1	108
donkey								1			2		3
dog	7	11		10	10	48	15	1		11	79	13	205
cat					1	6	1				49	84	159
domestic rabbit											100		100
	1,410	96	6	960	218	3,541	1,783	852	606	763	5,913	588	16,736
chicken	27	2		48	3	100	64	8	27	86	2,040	414	2,819
goose	8	1		15	4	20	10	9	6	12	59	37	181
duck				1		10					2		13
peacock		1		1							1		3
turkey		1			1				10				12
	35	5		65	8	130	74	17	43	98	2,102	451	3,028
hind	9	13			1	7	4		1	2	127	12	176
deer	5	1		1		1	3			1	29	7	48
wild boar		2		1		6	3		1	3	21	8	45
wolf													
fox						3					4		7
wildcat											2	2	4
wild rabbit	1					8	1	1		4	41	42	98
	15	16		2	1	25	11	1	2	10	224	71	378
wild birds					9		4	1	4	4	111	15	148
marsh turtle						7		3					5
fish		7		11		31	11	2	3	2	89	70	231
		7		11	9	38	15	6	7	6	200	85	384
Total	1,460	124	6	1,038	236	3,734	1,883	876	658	877	8,439	1,195	20,526

Appendix 2. Animal bone finds (nr) from 15th-16th, 16th, 17th, and 17th-18th-century settlements. Villages

Settlement Nr. Century	Aszód 33. 17-18	Csepel 23. 16	Esztergom 14. 16-17.	Lászlófalva 42. 16-17.	Nagyvázsony 9. 16.	Nyársapát 18. 15-16.	Sarvaly 7. 15-16.	Segesd 4. 16.	Túrkeve 40. 15-16.	Total
cattle	39	460	200	530	217	222	581	651	441	3,341
small ruminants		42	162	208	26	83	9	290	320	1,140
pig		518	39	92	109	56	369	70	221	1,474
water buffalo										
camel										
horse			2	71	17	44	19	8	209	370
donkey										110
dog			61	1	9	3	4	2	30	207
cat						7			200	
domestic rabbit										
	39	1,020	464	902	378	415	982	1,021	1,421	6,642
chicken		110	7	3			12	22	26	180
goose			7				7		15	29
duck							2	3		5
peacock										
turkey										
		110	14	3			21	25	41	214
hind			2	1	28	1	35			67
deer			1	1	5	1	16	4	1	29
wild boar							4			5
fox							1			1
wild rabbit		3		1			5	1	2	13
		3	3	3	34	3	61	5	3	115
wild birds		84	9			2	13		43	151
marsh turtle									1	1
fish		89	21							110
		173	30			2	13		44	262
Total	39	1,306	511	908	412	420	1,077	1,051	1,509	7,233

Appendix 3. Animal bones finds (nr) from 15th-16th, 16th, 17th, and 17th-18th-century settlements. Forts

Settlement Nr. Century	Barcs 5. 16-17.	Békés 43. 16.	Erd 24. 16-17.	Fonyód 6. 16.	Gyula 44. 15-17.	Kőszeg 1. 15-17.	Nagy- kanizsa 3. 15/16-17.	Nógrád 27. 16-17.	Sáros- patak 37. 17-18.	Szekszárd 25. 16-17.	Szalnok 39. 16-17.	Ugod 8. 16-17.	Visegrád 18. 15/16-17.	Veszprém 10. 17-18.	Total
cattle	2,811	1,024	178	357	11	25	1,267	11	2	1,841	16	1,130	75	183	8,931
small ruminants	442	720	106	17	21	3	305	4	2	2,333	122	91	41	14	4,221
pig	34	40	17	119	5	11	234	6		452		884	106	47	1,955
water buffalo							1								1
camel										27					27
horse	8	13	20	8	1	11	73	1		227	9	8	1		380
donkey		1													1
dog	64	6	14			1	42			137		1		14	142
cat	20	6	1	3		2	9								+137
dom.rabbit														61	102
	3,379	1,810	336	504	38	53	1,931	22	4	5,017	147	2,114	223	319	15,897
chicken	192	32	7	13	1	56	65					95	121	16	598
goose	8			5		2	7					15	6	11	54
duck							1							2	3
ev.poultry										447					447
	200	32	7	18	1	58	73			447		110	127	29	1,102
bison							3								3
hind	31			3	2	4	5	3				27	4	3	82
deer	10			3	4	4	17	3				35		1	75
wild boar	4	1	1	14	1	1	9					10		6	47
fox				1			1								2
badger															4
weasel												4			4
wild rabbit	10	3	1				5					1			1
	55	4	2	21	7	9	40	4		194		5	8		32
wild birds							3					82	12	10	440+
marsh turtle					12							3	2	7	27
fish				1			2							6	6
				1	12		5					15	3	1	22
												18	5	14	55
Total	3,634	1,846	345	544	58	120	2,049	26	4	5,658	147	2,324	367	372	17,494

Appendix 4. Animal bone finds (nr) from 15th-16th, 16th, 17th, and 17th-18th-century settlements. Monasteries

Settlement Nr. Century	Buda 22. 16.	Visegrád 17. 14/15-16.	Márianosztra 26. 16.	Total
cattle	62	797	206	1,065
small ruminants	213	123	34	370
pig	64	204	109	377
water buffalo				-
camel				-
horse	13	35	4	52
donkey				-
dog		4	724	728
cat	54	6	39	99
	406	1,169	1,116	2,691
chicken		63	69	132
goose				-
duck				-
peacock				-
turkey				-
		63	69	132
hind		15	4	19
deer			34	34
wild boar		3		3
wolf		1		1
fox			25	25
wild rabbit	1	3	14	1
hedgehog			1	1
	1	22	78	101
wild birds		4	1	5
fish		5	2	7
		9	3	12
Total	407	1,263	1,266	2,936

Animal Exploitation in Hungary during the Ottoman Era

Archaeozoological research can contribute two basic forms of information in the reconstruction of Ottoman-era Hungary. The composition of animal bone assemblages from archaeological sites may be compared with the coeval written record, especially tax rolls that for the first time in Hungarian history survived in greater numbers. Discrepancies between documented and zoologically identified animals contribute to our understanding of the unwritten history of animal exploitation.

Animal bones from archaeological sites are also of help in reconstructing the size and shape of domestic animals, rarely mentioned in documents and shown only selectively in coeval pictorial representations that were often strongly influenced by the artistic traditions of the time and place. Archaeological artefacts as well as iconographic and written sources should be used as *a priori* information, which can be tested using archaeozoological data.

Stock raising and trading

One characteristic of these uncertain times, which were associated with military operations and shifting political power, was that the mobility of the population increased: people in many areas, such as the main corridor of Ottoman military expansion along the Danube Valley, often had to abandon their homes, seeking refuge in the forests and marshland.¹ For example, both Hungarian and Turkish taxes were sometimes imposed on the inhabitants of Vác, since the bishop remained the city's Hungarian landlord even during Turkish times. On the part of the Turks, the town was directed as part of the sultan's estate system. Within the region of Székesfehérvár, some Turkish landlords asked the Catholic priest of Pápa to persuade local serfs who were reluctant to pay their dues.

Under these circumstances, mobility became a key to survival in Hungary. Meanwhile, as a result of urban development in German-speaking Central Europe, an immense market emerged for food. This created a demand that especially stimulated the

keeping of cattle (*Bos taurus* L. 1758), based on free-range grazing and animals that were easily herded over long distances.

Beef became a staple in the provisioning of rapidly expanding, concentrated human populations and led to what is known as the *Verrinderung* of late medieval cities.² This demand could not be met locally, which encouraged imports from countries from more "peripheral" areas such as Denmark, Poland and Hungary. The sale of 187,875 individual animals was recorded at the weekly fairs in Vienna between 1549 and 1551.³ Between 1548 and 1558, 550,000 oxen were sold in the markets of Vienna, although less than 10 per cent (only 46,183) of these remained in that town. The rest were sent on to Augsburg, Nuremberg and other urban centres in Germany.⁴ At that time, Cuspinianus, the rector of the university in Vienna, noted the immense numbers of Hungarian cattle passing through on their way to Bavaria, Tyrol, Swabia, Dalmatia, and Italy. He wondered whether any beasts would be left in Hungary for the following year.⁵ Sigismund Herberstein (1486–1566) wrote: "Stocks are so abundant in Hungary that one justifiably wonders where the huge army of cattle exported to Italy, Germany and Bohemia comes from."⁶

Radially oriented major routes already led from the Great Hungarian Plain to the country's heartland along the River Danube during the Late Middle Ages. For many generations, these *viae bovariae* or cattle trails, carried the immense herds driven west. Southern Transdanubia was an important transit region in the large-scale cattle trade.⁷ Animals from the rich grazing regions in the Great Hungarian Plain may have crossed the Danube over several fords within the area under Turkish control. Cattle dealers had established guilds by the mid-seventeenth century along the western border of Hungary. *Hansgrafs* were in charge of export-import deals, livestock fairs and the issuing of animal passes (*libere venda*). Herberstein reported that in 1549 some 80,000 cattle were exported annually to Vienna, a major transit post, and thereafter to Germany.⁸ This does not include animals that were driven southwest to the markets of northern Italy.⁹

¹ BOHDANETZKY 1940, 73.

² FEHRING 1977, 16.

³ TAKÁTS 1927, 135.

⁴ TAKÁTS 1929, 334.

⁵ SZÉKELY 1961, 319.

⁶ HERMAN 1909, 170.

⁷ SZAKÁLY 1973, 70.

⁸ HERBERSTEINI [1841] 97.

⁹ BARTOSIEWICZ 1999a, 47.

Archaeological sites

Two recent publications on Ottoman-era archaeozoology provide faunal inventories and brief site descriptions.¹⁰ Animal remains from at most 37 known Ottoman-period sites may be taken into consideration, while Vörös has discussed some fifteenth- and eighteenth-century assemblages as contextually relevant to the problem.¹¹ Even locations among the "core data" from the sixteenth to seventeenth century reflect Turkish influences to varying degrees. Some locations were *de facto* occupied; others are coeval Christian settlements.

All assemblages under discussion here were acquired through hand collection. This means that recovery should be considered partial, with a strong bias against the taxa of small-sized animals, especially fish and micromammals, as well as some bird species. A water-sieving experiment showed that using only hand collection, bone fragments smaller than 19 mm are likely to be lost with a 95 per cent probability.¹²

It is also very important to note that the archaeozoological assemblages under discussion here are of varying sizes, which has a direct impact on their interpretation. When the numbers of animal species identified are plotted against the number of identifiable bone specimens (Ill. 2), a well-known general trend again becomes evident in the case of Ottoman-period sites: a greater variety of animal species could be identified at settlements represented by large assemblages (marked by full circles in Ill. 1). Species composition, i.e. taxonomic richness, is therefore difficult to compare directly between samples of greatly differing sizes: small assemblages are more likely to contain fewer species when samples are drawn in a random fashion.¹³

The stochastic relationship between the number of identifiable specimens ($NISP = x$) and the number of species represented in an assemblage ($R = y$) is best expressed by the linear regression between the decimal logarithms of these two variables.

Such equations (Table 1) tend to differ between main settlement types (rural, urban and high status, i.e. religious, military etc.).

Table 1. The relationship between the number of identifiable specimens ($\log NISP, x$) and taxonomic richness ($\log R, y$)

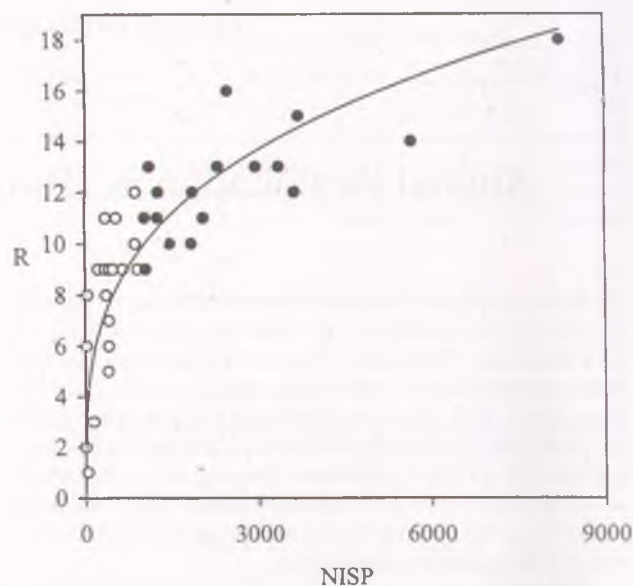
Settlement type	N	Regression equation	r	P level
Castle/fort	15	$y = 0.191x + 0.421$	0.694	0.010
Urban	12	$y = 0.259x + 0.274$	0.874	0.001
Rural	9	$y = 0.601x - 0.821$	0.870	0.010
Total*	39	$y = 0.255x + 0.233$	0.726	0.001

*Also including 3 monasteries

¹⁰ BARTOSIEWICZ 1997–1998, 38; VÖRÖS 2002.

¹¹ VÖRÖS 2002, 339–340.

¹² BARTOSIEWICZ 1983, 50.



Ill. 1. The relationship between assemblage size (NISP) and taxonomic richness (R). Assemblages with $NISP > 1000$ are marked by full circles*

High and significant correlations ($P \leq 0.01$) indicate that the recovery of bones from each new species follows a consistent trend. The number of species represented in a sample of 1000 bones is approximately 10, but this number varies with settlement type: food refuse from castles and forts seem to be most monotonous, while greatest variability may be expected at rural settlements. This phenomenon is consistent with the idea of standard military provisioning from external sources in central places, as opposed to local food production (relying on all sorts of domesticates, as well as small game and fish). The latter may have been reduced to the level of subsistence farming in Ottoman-era villages. Food refuse from urban settlements falls between these extremes: increasing assemblage size did not necessarily mean the presence of too many new species in urban meat markets. At all three types of settlements, however, more unusual animal remains can be expected only in large assemblages.

Cattle drives and beef consumption

When Turkish authorities took toll operations over countrywide, they introduced the *mugataa* system.¹⁴ Consequently, their tax records offer an unusually good source for livestock trading. Although sheep and horses are also sporadically listed in these documents, the overwhelming proportion of information concerns cattle. Tax records on the cattle trade have recently been reviewed in detail in the light of archaeozoological finds.¹⁵

¹⁴ GRAYSON 1984, 137.

¹⁵ FEKETE 1955, 62.

¹⁵ BARTOSIEWICZ 1995a; 1995b.

Owing to the importance of cattle in feeding the armies of this time, these remains are of special interest at various fortifications. The timber forts under discussion here yielded animal remains left behind by largely military personnel. Only a few civilians may be reckoned with. In addition to diet, therefore, faunal material also reflects special forms of military provisioning at these settlements.

Two of the Turkish timber forts (Barcs-2. számú Általános Iskola [General School No. 2] and Szekszárd-Palánk) were located in the southern part of Transdanubia, the western third of modern Hungary occupying the right bank of the River Danube. The late sixteenth- to early seventeenth-century timber fort of Szekszárd lay relatively deep within the 1576 boundaries of the Ottoman Empire less than 20 kilometres west of the River Danube. It guarded the routes to newly occupied Turkish frontier strongholds in the rapidly expanding Ottoman Empire. The first-mentioned fort (Barcs-2. számú Általános Iskola [General School No. 2]) lay along the River Drava, within the western border zone. It was established in 1567 by order of the *bey* of Szigetvár, another major stronghold 30 kilometres to the east. Although the Turkish palisade at Barcs was burned down in 1595, its complete destruction followed only during the winter of 1664.¹⁶

A third coeval fort in the area, Bajcsavár, existed between 1578 and 1600 southwest of Kanizsa. Hundreds of Hungarian, German and Croatian soldiers stationed here defended the eastern border of the Kingdom of Hungary against Ottoman expansion. In terms of beef consumption, however, it was comparable to the aforementioned Ottoman military forts in the region.

The approximately sixty-year occupation period at Szekszárd was somewhat shorter than that at the Barcs castle. Written sources reveal that military units of 150–200 soldiers were stationed at such forts.

The castle at Békés-Kastélyzug, located on the left bank of the River Kettős Körös, lay on the opposite side of modern-day Hungary, in the southeast. In comparison with the other three strongholds, this site was far from the border zone during the Ottoman period. It was built sometime between 1566, when the Ottoman army occupied the castle of nearby Gyula, and 1584, when the Békés castle itself is first mentioned in written documents. Between 1590 and 1599, an average of 238 soldiers were stationed here. The list of inhabitants also included a *müezzin*, which even in the absence of architectural evidence raises the possibility that a mosque may have served the faithful living in this castle.¹⁷

Differences in beef consumption at these sites may be measured by examining differential body-part

representation.¹⁸ On the basis of the anatomical distribution of cattle bones at the timber fort of Békés-Kastélyzug, István Vörös raised the possibility that meat-rich parts of the axial skeleton (i.e. dressed carcasses) had been brought to the site¹⁹ following primary butchering. This form of large-scale military provisioning seems to have been characteristic since at least Roman times. A comparison between cattle body-part distributions²⁰ at Békés, Barcs and Bajcsavár confirms this hypothesis: while the percentage of trunk elements (associated with commercial carcasses) is higher at Békés, other regions of the body with poor meat content (such the head or distal, i.e. "dry" and terminal limb segments) are better represented at Barcs along the trading route. These occurrences may be the result of the on-site primary butchering of complete animals (Ill. 2).

Vác is an episcopal centre located downstream from the Danube Bend gorge. This area was both a natural ecotone between hills and plains and a geopolitically important border region between the Kingdom of Hungary to the north and the Ottoman Empire to the south. The medieval German settlers of Vác were evacuated following a royal decree in 1530. Turkish administration started in 1546. Throughout its history Vác was an important market town and crossing point across the Danube,²¹ especially for the herds of cattle bound for Western markets. Animal remains representing both Hungarian and Turkish meat consumption have been studied from the Ottoman period of Vác.²² Four slaughterhouses were taxed in the city, where four to six cattle were slaughtered weekly during 1546/1547. This increased to 20–25 animals by 1558/1559. Lambs were occasionally also taxed, with an estimated 1200 killed in August 1561. While Turkish records mention four Hungarian butchers, the 1560 tax rolls documented the continuous activities of two Turkish butchers.²³

Various bones of the skeleton may be associated with differing quantities of edible tissue, muscle ("meat") and fat. Weight ratios between various bones thus allow a more sophisticated approach to this problem.²⁴ Unfortunately, bone weights could not be recorded at most of the sites under discussion in this paper. However, NISP values as well as produce weights were used in reconstructing beef consumption at least in the case of Vác. Cattle bone samples from the thirteenth to fifteenth centuries and early Modern Age assemblages display high (60–75 per cent) percentages of meat estimates. This phenomenon is synchronous with increasing cattle trading and suggests that beef supplies were improving. Meanwhile, a high relative fat content (over 30 per cent) is represented by Ottoman period cattle bone refuse. Although further research is

¹⁶ KOVÁCS – RÓZSÁS 1996, 164.

¹⁷ GERELYES 1980, 104.

¹⁸ CRABTREE 1990, 171.

¹⁹ VÖRÖS 1980, 113.

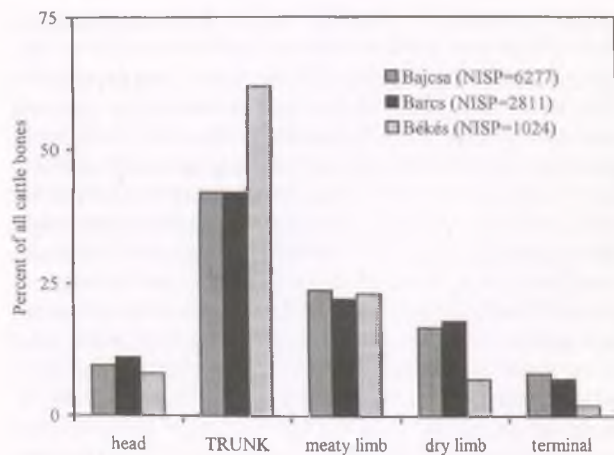
²⁰ KRETZOI 1968, 59–104.

²¹ BARTOSIEWICZ 1995b.

²² BARTOSIEWICZ 1995a, 71–73.

²³ VASS 1983, 95–97.

²⁴ BARTOSIEWICZ 1988, 361–367.



Ill. 2. The body-part distribution of cattle in three forts

needed in this direction, one may hypothesise that this was the consequence of the avoidance of lard as well as the use of ground meat in traditional Turkish cuisine.²⁵

Pig and sheep exploitation

Owing to their similar body sizes and key roles in identifying religious food restrictions, domestic pig (*Sus domesticus* Erxl. 1777) and sheep (*Ovis aries* L. 1758) may be considered complementary to each other in terms of meat yields and will thus be discussed together in this paper. Bones of a third species, goat (*Capra hircus* L. 1758), are not easily distinguished from those of sheep and are therefore included within this discussion. Possibly under Asiatic influence, the contribution of identifiable goat bones seems to have increased (from 10 per cent to approximately 30 per cent at Ottoman-era sites relative to the identifiable remains of sheep.²⁶

While the dietary contribution of omnipresent beef did not substantially decline during the Ottoman period in Hungary, mutton substituted for pork under Islamic influence. At the Paşa's Palace in Buda, over 85 per cent of the 1460 animal bones described by Bökönyi originated from sheep and/or goat.²⁷ From this he concluded that there were two pre-historic waves bringing southeastern influences to the domestic fauna,²⁸ Ottoman occupation had again brought unambiguous traditions where caprine keeping predominated. He, however, also pointed out that in this case it was not the animals themselves but the dietary custom that had been imported: mutton had been acquired locally. Of the settlements

under discussion here, the Turkish palisades of Békés and Szekszárd as well as the urban deposit of Segesd yielded more caprine bones than would have been expected on the basis of their sample sizes. On the other hand, pig bone is never completely absent from the Ottoman-period assemblages under discussion here.

The percentage contribution of pig to NISP increased steadily in medieval Hungary. This trend may in part be explained by the influence of Germanic traditions brought by thirteenth-century settlers.²⁹ Notably, early medieval animal remains predating that time still reflect a preference for mutton, characteristic of mobile pastoralists such as the conquering Hungarians who had reached the Carpathian Basin during the tenth century.³⁰

These trends are apparent in the pooled medieval assemblages from all three urban settlements with known medieval predecessors. The percentage proportion of pig bones increased in medieval Vác and especially Székesfehérvár. The latter, a traditional royal seat and episcopal centre located in central Transdanubia, fell under Ottoman rule in 1543. Most of the animal bones originate from the excavations of the inner castrum wall within the urban settlement. It was this section that was most intensively inhabited by the Turkish population.³¹ Nevertheless, the contribution of pig bones remained relatively high even in this section.

Pork on the other hand, seems to have played a negligible role at Segesd, even prior to Ottoman occupation. This important medieval centre was abandoned by its Hungarian defenders in 1566 and stood empty until 1570. Following Ottoman occupation, it remained a significant stronghold until 1687. Incessant warfare characterised this area until 1600, when nearby Kanizsa fell and Ottoman rule was firmly established in the area, until Zrínyi's aforementioned 1664 campaign that damaged the local fort.³² The animal bone material originates from the urban settlement around this stronghold. As is shown by the relatively high number of bones from mature individuals, the medieval importance of mutton in this town may have been related to wool manufacturing, especially felt.³³ Given these antecedents, Turkish preference for these animals was less dramatically manifested following the town's occupation.

Low percentages of pig bones (NISP) are characteristic of the Barcs and Békés timber forts and the urban sites of Vác. The relatively high proportion of pig bones at the site of Szekszárd–Palánk is widely regarded as the consequence of stationing non-Islamic (usually Bosnian or Serbian) salaried troops of the Sublime Porte at such forts. Most notably, although

²⁵ RAMAZANOGLU 1993, 61.

²⁶ BARTOSIEWICZ 1999c, 56, Table 1.

²⁷ BÖKÖNYI 1974, 350.

²⁸ BÖKÖNYI 1974, 44.

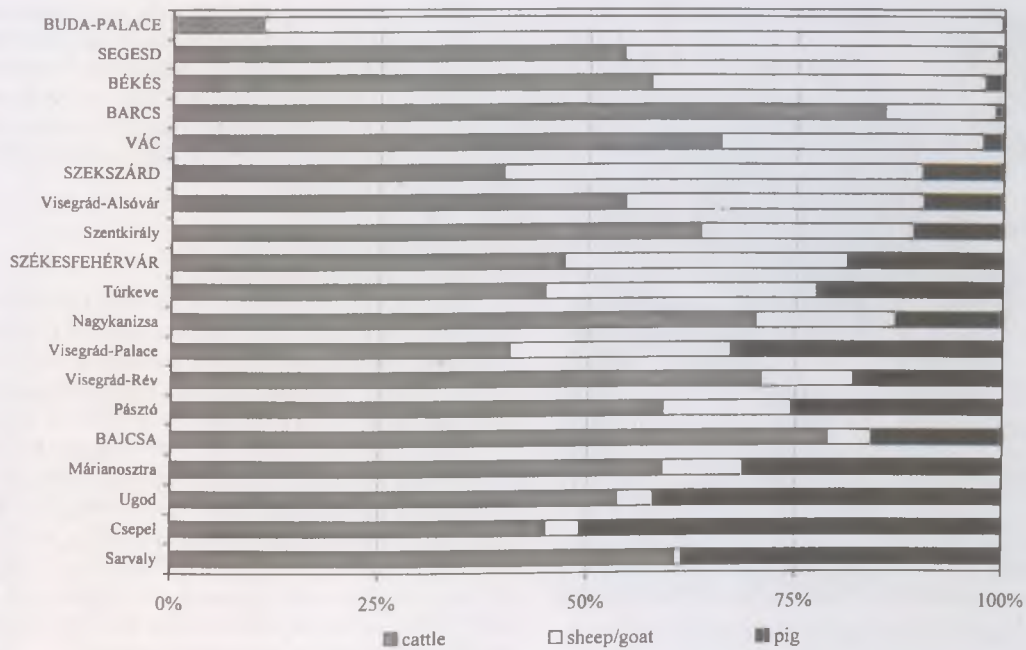
²⁹ BARTOSIEWICZ 1995a, 49.

³⁰ BARTOSIEWICZ 1993, 123–132.

³¹ BARTOSIEWICZ 1997b, 133.

³² MAGYAR 1988, 90–92.

³³ BARTOSIEWICZ 1996a.



Ill. 3. The percentage of meat-purpose domestic mammals in major assemblages (NISP>1000). Capitals indicate sites detailed in the text

the presence of these two ethnic groups has also been documented at the urban settlement of Vác,³⁴ they did not seem to have substantially contributed to pork consumption. On the other hand, at the sites studied from Székesfehérvár, Ottoman occupation brought about only a small drop in the percentage of pig bones.

Of the forts, Bajcsa stands out with the greatest contribution of pig remains. This is fully understandable, given the fact that the Turks never occupied it. In fact, this fort was inhabited by Germanic and Croatian mercenaries, whose traditional diet would have largely relied on pork; the aforementioned dominance of cattle bones may in part be explained by easy access and/or military provisioning.

While the Paşa's Palace in Buda was evidently inhabited by the Turkish elite whose food refuse clearly reflected Islamic prohibition of pork, the documented populations of other occupied towns were of mixed ethnic composition. It must also be added that the highly variable contributions of pig at the urban sites under discussion here may also be prone to sampling bias, depending on the particular household whose food refuse was recovered during the course of small-scale rescue excavations.

In Ill. 3, these trends may be viewed within the context of 19 major assemblages that represent both the Middle Ages and the Ottoman period. The ratio of pig bones to those of sheep/goat increases toward the bottom of the graph, and the aforementioned

Ottoman-age assemblages are spread along this continuum accordingly.

Pigs are not mentioned in Turkish livestock trading documents. Nevertheless, they were subject to local taxing. According to 1564 Turkish records from Vác, taxes were collected in January based on 513 pigs in one neighbouring village and on 190 in a second, as well as after 272 pigs in the town itself. An additional group of 113 pigs were taxed in another satellite village during March.³⁵

These thousand individual animals would have meant an average of five pigs for each registered serf household.³⁶ Around 1562, pig keeping was sufficiently widespread to meet local needs and, actually, some surplus may have been produced for sale.³⁷ In light of the increasing pork consumption under Ottoman occupation in at least one town, Segesd,³⁸ this animal may have played an important role in local meat supplies. Thus, even in the absence of detailed tax registers discussing pig keeping, the high contribution of pork should not be regarded as unusual in Székesfehérvár.

Comparing statistics on caprines and pig, it is of special interest that as sheep keeping begins to prosper during the Ottoman period, pig keeping also increases. The greater the concentration of sheep owned by one peasant, the larger the number of pigs kept by the same person. It is possible that, in this situation, owning pigs was another way to increase one's wealth further.

³⁴ BARTOSIEWICZ 1995a, 16, Table 3.

³⁵ KÁLDY-NAGY 1968, 78.

³⁶ VASS 1983, 94.

³⁷ KÁLDY-NAGY 1985, 677.

³⁸ MAGYAR 1988, 157.



Ill. 4. Turkish pack mule (After MARSIGLI 1726)

The number of pigs in tax rolls also suggests that during the first year available for study (1546) only a few (25) pigs may have been kept around the house. Fattening pigs on the household level seems to have become popular during the sixteenth century in Hungary. This is consonant with *decima* dues paid in barley in the village of Szentkirály at a time when pigs seem to begin appearing in small numbers. It seems that during the years that followed, the number of pigs kept was far greater (225 in 1562) than would have been typical for small-scale, household rearing.³⁹

Horse, ass and mule

Unfortunately, similarly to camels whose meat must have been consumed only under exceptional circumstances, horse bones occur but infrequently in Ottoman-period settlement refuse. They are especially rare at urban settlements. Although these sporadic remains do not allow zoological reconstruction, measurable horse finds reflect great size variability. This may be related to the great popularity of horses in a time period when they were of key importance, especially to the military forces on both sides. Owing to the aforementioned poor recovery of horse remains, the full range of their size variability is less visible than with cattle. A rare find from the Turkish deposits of Buda Castle included not only the remains of a fine, Arab-type horse with gracile skeletal makeup, but also oriental harness elements.⁴⁰

While the bones of domestic ass (*Equus asinus* L. 1758), an important domesticate in the Mediterranean and the Middle East, occur even more rarely in Hungary,⁴¹ it is impossible to tell how many bones from “small horses” may have belonged to mules, important beasts of burden in the Turkish military (Ill. 4).

Dog and cat

Dog (*Canis familiaris* L. 1758) must have been present at almost all studied sites. In spite of the marks of dog gnawing on animal bones recovered from many Ottoman period sites, dog remains are found relatively infrequently at sites of this period.

Two skeletons from an Ottoman period pit at Site VIII in Vác represent a medium-size form with straight legs. On the basis of stature, they belong to the upper-size range of Bökönyi's 4th, “medium size”, category (mean withers heights = 57.9 cm).⁴² They more or less correspond to small-size modern Alsatians. Their skulls are also medium large, falling within Bökönyi's 3rd cranial group.⁴³

The status of dogs during this period is difficult to assess. It may be hypothesised that aside from extreme cases of famine possibly created by the Turkish wars, dog was not eaten. Islam considers the animal itself to be unclean. The historical judgment on this animal in Europe has ranged from detested servant to appreciated companion. While dog breeding flourished in the noble households of medieval Hungary, vernacular mythology also retained elements of negative imagery.⁴⁴ This is also reflected in Hungarian proverbs, significantly more hostile towards dogs than sayings in neighbouring countries.⁴⁵

Commensal dogs must have been important scavengers, which would have made their roles reminiscent of pariah dogs. The term pariah dog is not meant to reflect any direct Asian connection in the case of Ottoman-era dogs in Hungary. It only refers to animals that may have lived in a semi-feral state within the human environment. Packs of such neglected animals with their non-distinct appearance may even have posed a danger. Sporadic warfare and the abandonment of settlements may have created situations in which such animals thrived.

Adaptable and prolific cats (*Felis catus* L. 1758), introduced to Hungary during the Roman period, are common in the medieval fauna. With the advancement of Christianity, however, these animals often fell victim to superstitious witch-hunts all over Europe. Cats, on the other hand, were among the favourite animals of the Prophet Mohammed and were therefore probably better tolerated by the Turkish inhabitants of settlements occupied in Hungary. Their bones occur relatively commonly at high status and urban sites.

³⁹ NVERGES 2003.

⁴⁰ BÖKÖNYI 1974, 296.

⁴¹ VÖRÖS 2002, 347.

⁴² BÖKÖNYI 1984, 66.

⁴³ BÖKÖNYI 1984, 75.

⁴⁴ VÖRÖS 1991, 184.

⁴⁵ BARTOSIEWICZ 1998, 14.

⁴⁶ PALÁDI-KOVÁCS 1993, 91.



Ill. 5. Water buffaloes used in transportation (After MARSIGLI 1726)

Domestic mammals of oriental origins

Water buffalo

In keeping with its Asiatic origins, water buffalo (*Bubalis bubalis* L. 1758) was probably first brought to Hungary in greater numbers by Turkish occupiers. Although sporadic references to this animal are known in medieval written sources in Hungary, the inconsistent use of these terms makes their unambiguous zoological interpretation difficult.⁴⁶ It is unknown whether the term also included aurochs, the wild ancestor of domestic cattle. In a 1507 inventory from southern Transdanubia, however, water buffalo is mentioned as "*uros vulgariter Byalokaath*" together with other domesticates.⁴⁷ The context and synonymous use of the two terms make it likely that this is indeed domestic water buffalo that is listed. Notably, this document predates Ottoman occupation, although it seems that these animals first spread in Hungary as beasts of burden used by the Turkish military (Ill. 5). Water buffaloes became a common item in late sixteenth- to seventeenth-century inventories,⁴⁸ and it is at this time that their presence is also confirmed by archaeological finds from the Buda Castle and Nagykanizsa.⁴⁹ Especially in Transylvania, non-demanding water buffaloes had replaced draught oxen in many farms by the early eighteenth century.⁵⁰

Camels

The largest ever concentration of camel bones in Hungary came to light at Szekszárd–Palánk in the form of more than two dozen fragments from several individual animals. On the basis of measurable bones, they originate most probably from the one-humped dromedary (*Camelus* cf. *dromedarius* L. 1758), which is the smaller, more gracile form.

Moreover, castration or the selection of strong dromedaries for military use may have further narrowed the diagnostic size gap between dromedary and Bactrian camel. Finally, should hybridisation have taken place, F₁ generation offspring are larger than the average between dromedary and Bactrian camel as a result of heterosis.⁵¹ Such hybrids, on the other hand, tend to display bone proportions intermediate between dromedary and Bactrian camel.⁵² Some of these remains, in all likelihood from military transport animals (Ill. 6), also show unambiguous marks of butchering in meat-bearing regions, indicative of defleshing (Ill. 7).⁵³

Thousands of camels served in the mass transport of Turkish artillery supplies.⁵⁴ They hauled gunpowder and equipment from seaports to Belgrade to be loaded into northbound barges on the Danube. Prior to the discovery of the Szekszárd finds, the only authentic Ottoman-era camel bone (a maxilla fragment) was known from Diósgyőr Castle by the northern border of the Ottoman Empire, while another fragment came to light from excavations in Buda.⁵⁵ The most recent camel find, another maxilla fragment from Bajcsa, also represents the border region. It came to light in the periphery of a fort that faced Turkish forces, but was maintained by German, Austrian and Croatian salaried troops.⁵⁶ This makes the interpretation of the bone difficult, although we know that camels were surrendered by Turkish forces in the proximity of Győr near the northwestern border of the empire.⁵⁷

Camel finds are rare, since single-purpose beasts of burden are typically underrepresented in mundane settlement deposits.⁵⁸ It is noteworthy that at the site of Szekszárd unusually high numbers of horse bone were identified as well. Although camels are animals of great utilitarian value, their cultural appreciation varies strongly. Their peculiar mating phenomena⁵⁹ probably meant that among Hungarians there would

⁴⁶ Hungarian National Archives, DI 82259. Prof. András Kubinyi, personal communication.
⁴⁷ VÖRÖS 2002, 345.
⁴⁸ BÖRÖNYI 1959; 1961.
⁴⁹ PALÁDI-KOVÁCS 1993, 249.
⁵⁰ BAIMURANOV 1989, 348.
⁵¹ UERPMANN 1999, 112–114, Figs. 7–9.

⁵² BARTOSIEWICZ 1996b, 447.
⁵³ ÁGOSTON 1985, 177.
⁵⁴ BÖRÖNYI 1974, 228.
⁵⁵ BARTOSIEWICZ 2002, 95.
⁵⁶ FIGLER 1995, 24.
⁵⁷ BARTOSIEWICZ 1993, 127.
⁵⁸ PETZSCH 1966, 365.

have been no prestige attached to owning camels. Unattractive physical traits, however, may have been dwarfed by cultural resentment against these animals brought to Eastern Europe by Ottoman conquerors.⁶⁰ Thus, in Hungary, camel remained nothing but a colourful episode in the Holocene faunal history of the Carpathian Basin.

Bird remains

Ottoman-period bird remains from Hungary form three major groups:

1. Remains of poultry forming part of the ordinary food refuse
2. Bones of wild birds, representing predominantly wading birds, raptors and song birds. These may have been actively hunted or trapped. Most of them were probably acquired during recreational hunting and had a trophy value. Only a few of them may have been eaten.
3. Special birds rarely encountered in or missing from the present-day fauna of Hungary (e. g. black vulture, steppe eagle)

Poultry are best represented by domestic hen (*Gallus domesticus* L. 1758), and to a lesser extent by domestic goose (*Anser domesticus* L. 1758) and domestic duck (*Anas domestica* L. 1758). Bones of peacock (*Pavo cristatus* L. 1578) and turkey (*Meleagris gallopavo* Gould 1800) also occur, albeit sporadically.

Domestic hen was the first bird to have been domesticated. The exact place and time of its origins, however, have been widely debated among specialists. However, by the end of the Bronze Age and the beginning of the Iron Age this bird was to be found throughout Europe. Hen remains are first encountered in Hungary on sites dating from the eight to seventh centuries BC. Size variability observed in the bones of thirteenth- to fourteenth-century hens recovered from the Buda Castle already indicates that a process of breed formation was under way.⁶¹ In contrast to geese and ducks, hens are prolific and non-demanding. Their feathers are considered useless. These traits may explain why they were kept and slaughtered frequently.

In the case of goose and duck remains it is actually impossible to determine whether they originate from the wild or the domestic form. In addition to trying to appraise size (extremely variable in both species), one must also rely on the archaeological context, the character of the site, in trying to answer this question. Domestic geese have been present in Hungary since Roman times, while early domestic ducks seem to date to the fourteenth to fifteenth centuries (Segesd),

preceding the Ottoman period.⁶² A duck skull, carefully split longitudinally, came to light in the Ottoman-era German/Hungarian border fort of Bajcsa.⁶³ It is possible that the brain of this bird was removed as a delicacy.

The first occurrence of turkey in Europe is another interesting problem. Pictorial evidence in the form of a tenth- to twelfth-century signet ring found in a burial, as well as a stray bone from the fourteenth (?) century from Buda Castle in Hungary,⁶⁴ inspired speculation concerning the pre-Columbian presence of this New World bird. Additional "evidence" was hypothesised from a 1490 document from the court of King Matthias that mentioned "Indian fowl", two years before the historic trip by Columbus. Unfortunately, the interpretation of iconographic sources is often open to discussion, and the chronostratigraphic position of a stray find cannot be taken at face value. Indian fowl, in this case, is possibly a term used for guinea fowl, known in Europe since Classical times. Reliable osteological evidence for this bird comes from sites at Székesfehérvár (sixteenth century),⁶⁵ Vác (sixteenth to seventeenth centuries)⁶⁶ and Szendrő-Felső vár (Upper Castle) (seventeenth century).⁶⁷ Turkeys became a common item in inventory books by the seventeenth to eighteenth centuries on the territory of both modern-day Hungary and Transylvania. Various forms are also mentioned, and the widespread exploitation of this bird is evidenced in cookbooks of the time.⁶⁸

The remains of peacock, a rare luxury bird, came to light at three high-status sites at Buda, Visegrád and Pásztó.⁶⁹ These birds of Asiatic origin, however, cannot be unambiguously associated with Turkish cultural influence.

A relatively high number of the bird bones recovered in the fifteenth- to seventeenth-century Gyula Castle⁷⁰ originate from game birds. Additional specimens were identified at the sites of Visegrád-Alsövár (Lower Castle) (fifteenth to seventeenth centuries)⁷¹ and Bajcsa-Törökvár (sixteenth century).⁷² These species lists include water fowl (waders and ducks), raptors (both diurnal and owls) and grouse and partridge, as well as great bustard, pigeon and various song birds.

The majority of these birds are relatively large and most are considered quite tasty. Meanwhile, several species (especially birds of prey) may have been hunted for sport or were perhaps used in falconry. Feathers of eagle or crane may even have been looked upon as trophies. Pigeon, hoopoe, crow or starling may have been kept as pets. If one hypothesises that these birds were killed in the

⁶⁰ SZILADY 1930, 354.

⁶¹ BARTOSIEWICZ 1995a; 1995b.

⁶² BARTOSIEWICZ 1996a.

⁶³ GÁL 2002, 245, Fig. 381.

⁶⁴ BOKÓNYI – JÁNOSSY 1958.

⁶⁵ BARTOSIEWICZ 1997b, 157.

⁶⁶ BARTOSIEWICZ 1995a.

⁶⁷ M. Tassi, personal communication.

⁶⁸ VÖRÖS 2002, 348.

⁶⁹ BOKÓNYI 1974, 429; VÖRÖS 2002, 348.

⁷⁰ JÁNOSSY 1985.

⁷¹ JÁNOSSY 1985.

⁷² GÁL 2002, 102–103.



Ill. 6. Camel used by the Turkish military (After MARSIGLI 1726)

immediate vicinity of settlements, their culture historical meaning may be complemented with environmental interpretations. Ornithologists have noted, for example, that black grouse (*Lyrurus tetrix* L. 1758) was no longer to be found in Hungary by the early twentieth century.

Similar conclusions may be drawn from the presence of species summarised in the third group of archaeological bird remains. The bones of black vulture (*Aegypius monachus*) found in Visegrád, as well as a bone from a steppe eagle (*Aquila rapax*) recovered at Bajcsa, belong to birds that are no longer part of the Hungarian avifauna. Recently, only stragglers from these two species have been recorded. Since black vulture is a resident species in Spain, Turkey, the Crimea, and the Caucasus, its remains may originate from an imported bird. Steppe eagle is common in Africa and Southern Asia and individuals rarely stray into Europe.⁷³ It may therefore be hypothesised that this bird was brought to Ottoman-period Hungary as a present or through some other form of import.

Hunting

The role of subsistence hunting was minimised in Hungary already by the Middle Ages, and became

a codified royal privilege in much of Europe. Among mammalian remains, the proportion of hunted animals did not exceed 3 per cent in any of the three gross settlement categories listed in Table 1. Some of the red deer and roe deer remains published in the earlier literature undoubtedly include antler, an important raw material that could also be collected during the spring without actually hunting. Medieval hunting and fishing rights point beyond complementary meat supplies since they were often linked with rights of forest grazing, wood collection and quarrying. Even in the absence of detailed documentation, however, one may hypothesise that the rights of the king, the local clergy and the Turkish authorities differed with regard to hunting and fishing.

In Hungary, hunting by serfs was banned in 1504, prior to Ottoman occupation. This measure led to the proliferation of pests and stimulated poaching.⁷⁴ Meanwhile, the rendering of hunting dues remained a part of serfs' obligations.⁷⁵ Large game animals were kept in royal hunting grounds and game parks, two dozens of which have been identified by István Vörös on the basis of the written sources. Twenty-four additional game parks were mentioned in documents, although they have been impossible to localise.⁷⁶ In addition to the commonly occurring remains of red deer (*Cervus elaphus* L. 1758), roe deer (*Capreolus capreolus* L. 1758) and wild boar (*Sus scrofa* L. 1758), luxury hunting must have contributed the bones of bison (*Bison bonasus* L. 1758) and fallow deer (*Dama dama* L. 1758) to archaeozoological assemblages. Small game such as brown hare (*Lepus europaeus* Pall. 1778) and beaver (*Castor fiber* L. 1758)⁷⁷ may have been more easily available to ordinary people and provided both meat and fur to the hunter. It is impossible to tell whether animals such as wolf (*Canis lupus* L. 1758), lynx (*Lynx lynx* L. 1758), red fox (*Vulpes vulpes* L. 1758), and badger (*Meles meles* L. 1758) were targeted for their furs or killed as noxious vermin. Since fox and badger are burrowing animals, their remains sometimes originate from natural deposits, resulting from secondary bioturbation in archaeological strata.

The lawless conditions created by warfare sometimes favoured the proliferation of large carnivores by devastating inhabited areas and thus creating natural refugia for all sorts of game. One would also expect that hunting regulations became less relevant in a society in occasional turmoil. The small contribution of wild animal remains to Ottoman-era food refuse, however, does not support the hypothesis of increasing reliance on hunting for food, as was seen at twelve military settlements in the Pannonian *limes* region of the Roman Empire as centralised power dwindled.⁷⁸

⁷³ PETERSON ET AL. 1977, 82; CRAMP 1998.

⁷⁴ ZOLNAY 1975, 166.

⁷⁵ ZOLNAY 1971, 199.

⁷⁶ VÖRÖS 2002, 349.

⁷⁷ BARTOSIEWICZ 1995c, 120; 2002, 98.

⁷⁸ BARTOSIEWICZ 1990–1991: 113.



Ill. 7. Humerus, radiocubitus and ilium fragments of camel from Szekszárd–Palánk (left to right), showing marks caused by hacking and defleshing

Fishing

In the natural environment of the Carpathian Basin, the exploitation of aquatic resources would have been one of the most obvious ways of food acquisition. Fish, a staple in the medieval Christian diet, remained a highly appreciated source of food in Hungary during Ottoman times, in part owing to its importance in traditional Turkish cuisine.⁷⁹ During his trip to Hungary, the Turkish traveller Evlia Celebi especially praised carp stew, fried pikeperch and a soup made from Crucian carp.⁸⁰ Also, Ottoman occupation covered mostly lowland areas in the centre of the Carpathian Basin, whose floodplain habitats would have been especially rich in fish throughout the year.

In the absence of water-sieved archaeozoological samples, the significance of fishing is impossible to reconstruct reliably,⁸¹ since only bones of a few large species are regularly available for study. These usually include carp (*Cyprinus carpio* L. 1758), catfish (*Silurus glanis* L. 1758) and pike (*Esox lucius* L. 1758). While carp may be considered ubiquitous in Hungary, its preferred habitat is warm, silt-rich, still waters, oxbows and slowly moving sections of rivers.⁸² Catfish lives in very similar environments and, in fact, cyprinid fish provide most of its diet in the shallow, muddy waters of floodplain areas. Both fish were

represented in the assemblage recovered from the forts of Bajcsavár,⁸³ and Szekszárd–Palánk,⁸⁴ possibly as a result of fishing by the fort's inhabitants in neighbouring rivers and backwaters.

Written sources, however, indicate that fishing was often one of the chief sources of income for serfs. In the city of Vác, for example, *decima* tax was paid after catches from the Danube, and half of the haul from Bishop's Lake had to be given up in the form of taxes as well. From these data, a catch of almost 3 tons of fish may be estimated for the year 1546, while the 1562 catch may have reached 8.5 tons,⁸⁵ although only one fish merchant was registered in this town of almost 400 families.⁸⁶ It is possible that part of the catch was directly distributed. Additional Turkish tax rolls show that the income from fish varied between late July 1563 and early March 1564.⁸⁷ It is possible that regardless of catch size, fish was somewhat more intensively traded during colder months since it would have kept better in cooler weather. It may be assumed that fishing declined during the Ottoman occupation of Vác, as fishermen were taxed not only by the bishop, but also by the Turkish authorities. Sturgeon for the bishop was caught in the Danube, but the Turks banned all other fishing in the Danube near Vác in 1621.⁸⁸ Local fishermen were forced to work more upstream, near the village of Nagymaros.

⁷⁹ RAMAZANOGLU 1993, 6.

⁸⁰ ZOLNAY 1975, 169.

⁸¹ BARTOSIEWICZ 1983.

⁸² BERINKEY 1966, 18.

⁸³ BARTOSIEWICZ 2002, 98.

⁸⁴ BARTOSIEWICZ 1995c, 120.

⁸⁵ VASS 1983, 94.

⁸⁶ KÁLDY-NAGY 1968, 42.

⁸⁷ KÁLDY-NAGY 1968, 42.

⁸⁸ VASS 1983, 95–97.

Great sturgeon (*Huso huso* L. 1758), the largest fish species in the Danube, had a privileged position. Fishing rights concerning sturgeons were jealously guarded by the royal authorities and occasionally granted as a special honour. A 150-kilogram sturgeon caught in 1593⁸⁹ would not qualify as particularly large by historical standards but, owing to a recent dramatic decline in sturgeon size, its weight exceeds those of the largest specimens caught during the twentieth century.⁹⁰ A sixteenth-century, Ottoman-period deposit in Vác⁹¹ contained the right dentale from this species, while its seventeenth-century dietary role in the same city is illustrated by a dermal scute from the middle of the dorsal region.⁹² A large sturgeon bone recovered from the Turkish palisade of Szekszárd–Palánk⁹³ may originate either from local vernacular fishing or from short-distance trade.

"Breeds" and breeding

In addition to the breeders' culturally idiosyncratic mental template of how animals "should look",⁹⁴ stocks are continuously adapted to changes in historical and economic situations. Massive cultural influences and economic pressures during the Ottoman period influenced the composition of animal stocks both quantitatively and qualitatively. The importance of animal husbandry offered a broad basis for selective breeding that could exploit and expand genetic variability in domestic animal stocks.

In relation to the widely discussed increase in cattle keeping, phenotypic variability in these animals also increased. This is best illustrated by the great variety of horn cores recovered from late medieval and Ottoman-age sites. Although remains reminiscent of long-horned modern Hungarian Grey cattle are known only from eighteenth-century deposits, a gradual increase in horn core length may already be observed by the Ottoman period. Limb bone measurements show that both large and small individuals were equally likely to occur among these animals.

It remains an open question whether eastern influences during the Ottoman period contributed to the emergence of Hungarian Grey cattle.

Market driven, target-oriented breeding probably played a decisive role in consolidating the trademark appearance of the Hungarian Grey cattle, which became a *de facto* common breed by the seventeenth to eighteenth centuries.⁹⁵ Prior to the First World

War, breeding stock was exported to the Balkans where it was used in upgrading local grey cattle.⁹⁶

Horse was an animal whose new breeds were almost certainly imported during the Ottoman period as a result of the military occupation. Although the Turkish authorities tried to control the export and breeding of their best animals,⁹⁷ the high demand for good military horses on both sides must have resulted in an unprecedented fluctuation of animals across the country. In peacetime, horses were widely traded and changed hands as high-class presents, while warfare resulted in their being taken as booty and their redistribution over wide areas. Of the numerous breeds named after their origins,⁹⁸ Saracen, Arab and Tartar horses were undoubtedly of Eastern descent. Asian horses were highly esteemed by the Hungarian aristocracy as well.⁹⁹

Aside from beasts of burden used by the military, it seems that the conquering Turks imported few animals. Ottoman occupation seems to have increased the phenotypic variability in goat stocks. Aside from a single specimen from Roman period Pannonia,¹⁰⁰ skulls of hornless goat first occurred during the Ottoman period in Hungary. In addition to the first such find, from Buda–Pasa palota (Paşa's Palace),¹⁰¹ similar cranial fragments were found at the site of Segesd–Pékófold.¹⁰² Whether these animals were actually imported directly, however, may be questioned. In purely probabilistic terms, hornlessness, as a genetically dominant trait,¹⁰³ is manifested with greater likelihood in Ottoman-period archaeozoological assemblages at a time when, at many sites, the contribution of goat bone increases in general.

In the case of dogs, linking form directly with specialised dog function is a modern concept dependent on cultural variables and should therefore be avoided. Although jackal (*Canis aureus* L. 1758) has long been ruled out as the ancestor of domestic dogs, the general, jackal-like appearance of many modern pariah dogs (gracile skeleton, grey tawny, brownish or yellow-red colour, upright ears) is known from Western Asia and India.¹⁰⁴ Evolution cannot be reversed. Therefore, even in the case of panmixis, dogs will never regress to the full physiognomy of wolves. Owing to the fast reproduction rate of multipara dogs, however, breeds can be selected in a relatively short time. Meanwhile flexible forms in a panmictic dog population can also quickly regress into animals of optimal size and shape that help them survive in human environments: both the emergence and disappearance of breeds may be characteristic of culture historical and economic phenomena.

⁸⁹ VASS 1983, 94.

⁹⁰ BARTOSIEWICZ – TAKÁCS 1997, 13.

⁹¹ BARTOSIEWICZ 1995a, 64.

⁹² BARTOSIEWICZ 1995a, Plate 13.

⁹³ BARTOSIEWICZ 1995c, 120.

⁹⁴ KROEBER – RICHARDSON 1940.

⁹⁵ BARTOSIEWICZ, 1996a.

⁹⁶ MATTESZ 1927.

⁹⁷ GAÁL 1966a, 207.

⁹⁸ VÖRÖS 2002, 347.

⁹⁹ PALÁDI-KOVÁCS 1993, 180.

¹⁰⁰ BOKÖNYI 1984, 50, Fig. 15.

¹⁰¹ BOKÖNYI 1974, 200, Fig. 71.

¹⁰² BARTOSIEWICZ 1996a, 184, Pl. V.

¹⁰³ VÁRKONYI – ÁTS 1984, 72.

¹⁰⁴ DENNIS-BRYAN – CLUITON-BROCK 1988, 20.

Conclusions

The one and a half centuries of Ottoman rule in Hungary is stereotypically seen as a time of general economic decline. Archaeozoological data, on the other hand, offer details on an important aspect of everyday life: animal exploitation. The following observations help to fine-tune our view of Hungary in the Ottoman era:

(1) Over the long run, the Turkish authorities must have had a greater interest in exploiting medieval economic infrastructures rather than mindlessly destroying them. They apparently encouraged the maintenance of the already existing cattle trade, which became a source of massive tax revenues. Ranging livestock in devastated agricultural areas remained one of the few profitable branches of farming anyway, especially in light of the increasing demand for beef in adjacent areas of Europe. Although direct relationships between beef consumption and cattle drives cannot be proven, patterning in faunal materials corresponds to this geopolitical situation at Barcs, Bajcsa and Vác, and in trading data from coeval documents.

(2) The study of pig remains at Ottoman-era sites in Hungary is probably as good an example of ethnic/religious differences manifested in excavated animal bone assemblages as can be expected. The use of

faunal remains in detecting ethnic differences in animal exploitation would be more difficult in less well-documented situations. Inconsistencies within the generally declining trend of pork consumption, however, also show the strong influence of the economic/political situation on diet, as well as individual (ethnic) variability among settlements.

(3) Three military settlements discussed in this study yielded special faunal assemblages in which camel bones offer precious evidence of *de facto* imported animals. Bones of water buffalo are known from other forts, although these animals of Asiatic origin started appearing in southern Hungary prior to Ottoman occupation. Aside from their military character, these assemblages of food refuse differ depending on their geographical proximity to fords on major cattle trading routes and on the ethnic composition of forces stationed there. Remains of turkey, another domestic animal that had reached Hungary by importation during the Ottoman period, were found at urban (Székesfehérvár, Vác) and high-status sites (Szendrő–Felsővár [Upper Castle]).

(4) Intensified cultural exchange as well as favourable economic conditions in animal husbandry gave rise to increasing variability in animal stocks. This seems to have created a broad basis for selective breeding and contributed to the emergence of breeds in a modern sense by the subsequent, the eighteenth, century.

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Post-medieval or Historical Archaeology: Terminology and Discourses in the Archaeology of the Ottoman Period

This volume deals with the archaeology of the Ottoman period (*hódoltság kori régészet*) in Hungary. As other articles of this volume have demonstrated,¹ early attempts to record Ottoman Turkish monuments, inscriptions and architectural details began immediately after the reconquest of Hungary at the end of the seventeenth century. Later, interest in the applied arts led to academic studies of the material culture of the Ottoman period,² the art objects of fine craftsmanship particularly were catalogued and studied.³ In the 1920s and 1930s, rural settlements in the areas conquered by the Ottoman Empire in the former territory of the Kingdom of Hungary were excavated,⁴ which can be seen as some of the earliest examples of post-medieval settlement archaeology in Europe. After the Second World War, the archaeology of the Ottoman period emerged as an independent field of archaeological study.⁵ This expanded the traditional time limit of medieval archaeology from 1526, the Battle of Mohács, or 1541, the conquest of Buda, to the reconquest of Hungary at the end of the seventeenth century.⁶ From the 1970s onwards, archaeologists showed increasing interest in the non-Turkish elements of the Ottoman Conquest period;⁷ as a consequence, terminological problems of what to call the archaeology of this period started to emerge. The term Turkish archaeological finds was replaced by a more neutral *terminus technicus*, the archaeological materials of the Ottoman period.⁸ Parallel to this development, Hungarian archaeologists started to seek out similar materials and archaeological features in a larger region not limited to the area of the Ottoman Empire.⁹ However, the borders of the Ottoman Empire changed throughout the so-called Turkish period and some parts of medieval Hungary – and even some small parts of present-day Hungary – were never conquered by the Turks.¹⁰ This recognition of the complexity of the historical situation requires a change in archaeological terminology. The question arises, why should we call it the archaeology of the Ottoman-Turkish period?

This rather longish introduction has been necessary to explain why Hungarian archaeology is deal-

ing with particular terminological problems concerning the post-medieval period. Examination of the international literature also reveals terminological variability and fundamental differences in discourse. The aim of this article, therefore, is to present these different terminologies and discourses and to discuss their applicability to the archaeological research of the post-medieval period in East-Central Europe.

The first part of this article summarises the most important *termini* for the archaeological research of this period in the international scholarly literature. Further on we discuss the different concepts and the particular features of these archaeological discourses in order to demonstrate the local, regional, and even global understanding of chronology. Thus, we will not discuss theoretical debates in archaeology, but illuminate the terminological chaos existing in this field. This chaos means different attitudes, even theoretical concepts, oriented particularly towards the use of written evidence in archaeology of a particular period. The most obvious difficulties will be demonstrated with the *terminus* “historical archaeology”, and with the theoretical issues of using historical sources in archaeological interpretation.

This terminological chaos is complicated even further by the use of the same and different *termini* in different languages. In most cases we will refer to the English/American terminology, but at some points also discuss the use of these words in other languages.

Post-medieval archaeology

The most colourful terminological picture can be found in the English/American literature, although the most general and often-used term is post-medieval archaeology (at least in the European English-language literature). This term is quite neutral and does not imply anything more than the archaeology of a period that is later than the Middle Ages.¹¹ Therefore, at first glance it is a chronological discourse. However, the term can be regarded as geographical discourse as well, since the concept of Middle Ages¹² cannot be applied to large areas of

¹ The articles of Gy. Gerő in this volume, see also: GERŐ 1980.

² FEKETE 1944.

³ FEHÉR 1962; 1963a; 1964; 1965; 1968a; KOVÁCS 1984b; GERELYES 1994; 1997.

⁴ SZABÓ 1938.

⁵ LASZLOVSZKY 2003; KOVÁCS – TOMKA 2003.

⁶ KUBINYI – LASZLOVSZKY 1993, 362–363.

⁷ GERŐ 1978; KATONA 1983; KOVÁCS 1990–91; SIMON 2000.

⁸ KOVÁCS 1984a; GERELYES – FELD 1986.

⁹ GERŐ 1990; GERELYES 2001.

¹⁰ HEGYI 1995.

¹¹ CROSSLEY 1990.

¹² For the “Notion of the Middle Ages” see: KLANICZAY 2001, 9785–9786.

the world. It is convenient for European archaeology,¹³ but the global character of the archaeology of the Early Modern and Modern periods requires perhaps a *terminus* more applicable to the larger part of the world as well. Post-medieval archaeology is a chronological extension of medieval archaeology;¹⁴ in most European countries, university departments of medieval archaeology have extended their academic interest to later periods.¹⁵ Another significant feature of this term is that the most important and earliest journal in this field, *Post-Medieval Archaeology* (founded in 1967), emerged from pottery studies rather than documentary research. This search for patterning in the archaeological record is a typical academic development in archaeology. The picture is further complicated by the fact that in German and some other languages like Hungarian, post-medieval is translated as the archaeology of the early modern period or of the modern age (*Frühneuzeitliche Archäologie, Neuzeitliche Archäologie; Kora Újkori Régészet, Újkori Régészet*).

Historical archaeology

This *terminus* is used widely in the English-language literature, but more often in American archaeological discourse.¹⁶ As a result, it is also often used in non-European post-medieval archaeology. This *terminus* has a long tradition in European archaeology, but with a totally different meaning. In this understanding, historical archaeology does not imply a chronological framework, but is a branch of archaeology in which the archaeological source material can and should be compared with the written evidence. We can even translate it as the archaeology of historical periods. In this meaning, historical archaeology can be the archaeology of Mesopotamia in the third millennium, Classical Greek and Roman archaeology, the archaeology of the Celts or of the Carolingian Empire, or a Sub-Saharan iron-smelting site. This understanding of historical archaeology (in German *Historische Archäologie*) derives from the traditional division of the past into prehistory, without written sources, and history, with written evidence.

However, in twentieth century the development of archaeology, this dividing line lost its importance, partly because archaeology started to produce written

documents for previously prehistoric periods by finding previously unknown texts. It was archaeology which transformed ancient Mesopotamia from a prehistoric society to a literate society by finding clay tablets and deciphering them. Such situations emerged even in much later historical periods like the birchbark letter finds from Novgorod,¹⁷ which fundamentally changed our understanding of everyday literacy in medieval Russia. Furthermore, it has been accepted that archaeology can play a crucial role in understanding later historical periods in which an abundance of written evidence does not exclude the use of the material culture in historical reconstructions. This was the case in the emergence of medieval archaeology. The dividing line between medieval and post-medieval archaeology in different parts of Europe lies at fundamentally different dates. Even in English archaeology, it has been demonstrated that we can use *The Age of Transition*¹⁸ as a framework rather than the traditional rigid historical system (1492 or 1500). The further eastwards, the longer the Middle Ages lasted. The long Middle Ages in Central European or German discourse can even mean the mid-sixteenth century.¹⁹ In Eastern Europe, however, medieval or often its synonym, feudal, is used for the period until the nineteenth century (in Rumania and Russia, for example). This in itself creates an awkward situation for the usage of post-medieval as a *terminus*.

The attitude towards the existence of written evidence and archaeological material has resulted in further variations in the meaning of historical archaeology. In former Czechoslovakia, for example, a very important archaeological journal was published under the title *Archaeologia Historica*. The first feature of this journal is that it is still published every year in a single volume as a joint Czech and Slovak project, even after the separation of the countries. The second important feature is that, despite its title, this is a journal of medieval archaeology per se that does not cover the archaeology of the post-medieval period. The roots of this discourse lie in the fact that the Czech lands and Slovakia were not incorporated in the Roman Empire, so the first period when archaeologists have written sources as well as archaeological materials is the Middle Ages. This chronological discourse is corroborated by the fact that the first volume of essays on the archaeology of the post-medieval period in Bohemia was entitled “post-

¹³ For medieval and post-medieval archaeology discussed in the European context, see: SHAW – JAMESON 1999, 226–229.

¹⁴ CRABTREE 2000. Different regional aspects of medieval archaeology in Europe is another important question, one which cannot be discussed in this article. Crabtree, for example, excludes the Byzantine world and the Balkans from the encyclopedia (and includes Russia), although the archeological research of these very important areas is an integral part of medieval archaeology.

¹⁵ ANDERSSON – WIENBERG 1993, 351–385. See also the program of the 5th European Symposium for Teachers of Medieval Archaeology, Bamberg 10–14. April 2002 with the discussion on the archaeology of the post-medieval period.

¹⁶ THOMAS 1998, 508–555; ORSER 1996; 2002.

¹⁷ BRISBANE 1992.

¹⁸ GAIMSTER – STAMPER 1997.

¹⁹ KLANICZAY 2001, 9786–9787.

medieval".²⁰ The same situation applies to Polish archaeology, where a basic handbook of medieval archaeology has been published under the title *Introduction to the Historical Archaeological Archaeology in Poland* (Wstęp do archeologii historycznej w Polsce).²¹ The confusion of terms and chronological sequences is even more obvious when we examine this volume, since there are discussions of the archaeology of the early Middle Ages (also called "Early historical archaeology") and "the archaeology of the Late Middle Ages and modern times". Moreover, one of the most important centers of Polish archaeology, the Center of the Archaeology of Middle Ages and the Modern Period, publishes a series under the title *Archaeologia Historica Polona*,²² which incorporates studies on medieval as well as post-medieval topics. This confusing situation is helpful in understanding why the *terminus* "historical archaeology" can have such different meanings and chronological significance. The American case shows an even more complex situation with a rather similar conceptual framework, but in a totally different chronological discourse.

The principal divisions of archaeology in the Americas are prehistoric and historic. The reason is twofold, the dates of the contact period and the nature of the cultures in contact. The time of overlap is relatively short from the earliest European contact with the New World to the establishment of European dominance over Native Americans. This was the result of the state-level (and literate) socio-economic organization and technological level of the Europeans, which put them in a position to overwhelm Native American cultures, aided by European-introduced infectious diseases.

Roughly, before 1492 is prehistory and after 1492 is history, although there are few documentary sources before the 1600s. The specifics of dating prehistoric lifeways vary from region to region; in New England (Massachusetts, New York, and so on), the "historic" period starts in the early 1600s, while in the Far West (California, Oregon, and so on) the "historic" period does not begin before the 1700s. Although apparently a monolithic construct, the division between history and prehistory works relatively well in practice in most areas of the Americas. This is because although the absolute date varies, "prehistory" ended with the advent of written records, rapid and imposed from without, even in areas where there had been indigenous writing systems.

The second reason for defining the historic period, for both North and South America, was that history was seen as an extension of what was happening in Europe, not what was happening in the Americas. Defining the relations between Native Americans and Europeans was difficult; in the first instance the pope had to rule that Native Americans were human. Only then they could be fitted into a standard European view of The Other and likened to people such as the Mongols, who were the object of mission activities. The practices of missionisation, ushered in by immigrants from a well-developed literate tradition and employed by both Roman Catholics and Protestants, were extended to Native Americans, creating early historical documents.²³

The history of the discipline of archaeology affected the adoption of terminology and also paralleled developments in Europe. In both areas the earliest interest in archaeology was largely antiquarian, collecting information for the novelty of speculating on it. With a handful of notable earlier examples,²⁴ professional archaeology developed in the nineteenth century,²⁵ as did ethnography.²⁶ They were united in the American discipline of anthropology²⁷ in the early 1900s through the educational activities of Franz Boas, an Austrian immigrant trained as a physicist who is credited with founding American anthropology.²⁸ The dominance of anthropology in American archaeological discourse is evident in the popular saying of the 1960s, coined by Gordon Willey and Philip Phillips, "Archaeology is anthropology or it is nothing".²⁹ Although the discourse of archaeology in the Americas is dominated by prehistory, historical archaeology is widely practiced (often by those trained in prehistory). The principal journal, *Historical Archaeology*, was first issued in 1967, and a Society for Historical Archaeology holds national annual meetings.³⁰

The earliest American historical archaeology, beginning in the 1920s, had the same concerns as a great deal of European historical archaeology at the same time: to reveal national history and the glories of the past. In America this was explicitly the history of European colonization. Thus, in 1926, President Thomas Jefferson's estate, Monticello, was acquired as a heritage site. In the same year Nelson Rockefeller, Jr., bought the entire town of Williamsburg, Virginia, in order to restore it to its former colonial state.³¹ In some cases the historical interest in a property preceded archaeological research, which was only undertaken later. Most of these acquisitions,

²⁰ *Studies in Post-mediaeval Archaeology*, 1. Prague, 1990. See: SMETANKA – ŽEGKLITZ 1990; PAJER 1990.

²¹ KAJZER 1996.

²² Published by Uniwersyteckie Centrum Archeologii Średniowiecza I Nowożytności, Uniwersytet Mikołaja Kopernika, Toruń.

²³ KENTON 1954, for example.

²⁴ Among them Thomas Jefferson, who conducted a scientific excavation in Virginia as early as the 1780s.

²⁵ ANDRÉN 1998, 97.

²⁶ Lewis Henry Morgan (1818–1881) (MORGAN 1851).

²⁷ THOMAS 1998, 29–35.

²⁸ Franz Boas was born in Germany in 1858. He immigrated to the United States and in 1896 began to teach anthropology at Columbia University in New York City, where he continued to work until his death in 1942.

²⁹ WILLEY – PHILLIPS 1958, 2.

³⁰ This is paralleled in Australia, where the *Australian Journal of Historical Archaeology* began publication in 1983.

³¹ The site remains a major tourist attraction, see www.history.org/noflash.cfm.

largely made by private organizations headed by members of the social elite, were aimed at reconstructing the past at these locations and providing an educational venue to promote interest in America's history.

After the Second World War, historical archaeology continued to develop along its own path.³² Interest grew in a history that reflected more texture drawn from everyday life and more cultural diversity: African-American descendents of former slaves, other immigrant groups, women, and so on. Historical archaeology turned toward the investigation of people with unwritten histories; the 1960s, for instance, saw the beginnings of the archaeology of slavery, a practice with few and biased written records.³³ By the 1990s, historical archaeology had developed a list of topics that were rooted in anthropology and compatible with historical processes, but rarely addressed in the historical record. "1. the colonization process; 2. understanding the physical world of the historical past; 3. examining health and nutrition of the historical past; 3. documenting the lives of the disenfranchised and the oppressed; 5. documenting illicit or illegal behaviors; 6. evaluating and revising historical accounts of known events."³⁴

American historical archaeology has now developed a meaning quite divergent from the current meaning of historical archaeology in European contexts, however, American (and American-trained) archaeologists have conducted historical archaeology in many places around the world and this has become a widely used term. This has partly been due to American archaeologists' belief in an anthropological comparative method.³⁵ Historical archaeology has become a global concept; there is even a publication series called Contributions to Global Historical Archaeology.³⁶

Industrial archaeology

Another *terminus* often used in English-language literature is industrial archaeology.³⁷ However, this discourse of archaeology in the post-medieval period is very much a British phenomenon. To understand this process of developing terminology, we may draw a parallel to medieval archaeology. What today is called medieval archaeology started with a Romantic antiquarian interest, followed by academic interest in the most important monuments from the Middle

Ages (castles, cathedrals, and monasteries). In a similar way, industrial archaeology started by documenting and recording the most important monuments of the Industrial Revolution (smelters, factories, and canals). It was very much a field for monument protection, which later started to merge with other archaeological studies of the same period, such as pottery studies, settlement studies, and so on. Later, the term started to be used in other European countries as well, and also in America and Australia. This term is also problematic, not because it started from British discourse, but because it was used earlier in the literature with a totally different meaning. Industrial archaeology, or *Industriearchäologie*, has been used frequently as a topical research area rather than as a chronological reference. In the topical context, "industrial" means any kind of technological process (pottery production, iron production) regardless of the chronological period. Therefore, furnaces, production centers, and lime kilns in the Roman or medieval periods were discussed under this rubric.³⁸ It can be compared to other topical categories of archaeology such as mining archaeology (*Montanarchäologie*³⁹) or even the archaeology of taverns (*Gasthausarchäologie*). Furthermore, the concept of the archaeology of industrialisation (as in the Industrial Revolution) creates further problems of discourse. In many European countries, the Industrial Revolution did not occur at the same time as in Western Europe, and in some parts of the world it did not happen at all. Industrial archaeology in a global sense can be understood as monument protection and archaeological research on industrial processes and of the industrialisation (Industrial Revolution), but cannot be used in any way as the *terminus* for the archaeology of the post-medieval period, neither in Europe nor elsewhere.

These three categories: post-medieval, historical, and industrial archaeology, are in fact the most often used *termini*, but some variants are in use. The archaeology of capitalism⁴⁰ has been proposed without gaining significant acceptance in the literature. As with the term "industrial archaeology," this term has little chronological utility because capitalism developed in different places at different times. It is not a synonym for global archaeology. Chronological and terminological meanings are sometimes confused in application. Christian archaeology, for example, does not necessarily mean a specific period of research; it started as the archaeology of late antiquity and early Christianity, and in some ways it

³² FONTANA 1965, suggested a typology of sites: protohistoric, contact, postcontact, frontier, and nonaboriginal.

³³ E.g. SINGLETON 1985.

³⁴ DEAGAN 1991, 104–105.

³⁵ LIGHTFOOT 1995, discusses pan-regional comparisons, among other things.

³⁶ The series is edited by Charles E. Orser, Jr., published by Kluwer/Plenum Press, New York between 1996 and 2003, and includes the volumes written by Dalglish, C. J., Mat-

thews, C. N., Shackel, P. A., Schávelon, D. and South, S., Shackel, P. A., Crowell, A. L., Orser, C. E.; and see also ANDRÉN 1998; BARAM – CARROLL 2000; GROOVER 2003.

³⁷ HUDSON 1966; JONES 1996; PALMER – NEAVERTON 1999.

³⁸ Industrial archaeology used in this context: *Iparrégészeti* (Industrial archaeology).

³⁹ STEUER – ZIMMERMANN 1999.

⁴⁰ Despite LEONE – POTTER 1999 and GROOVER 2003.

can also be regarded as one of the roots of medieval archaeology, which in fact emerged from Classical archaeology. In Christian archaeology⁴¹ the methodological discourse, the period, and the topical character of dealing with Christian things are mixed. This is in contrast to Islamic archaeology, which is not limited to religious buildings and religion-related objects, but encompasses the areas dominated by Islam in different periods.⁴² Thus, the archaeology of the Ottoman period in Hungary can be regarded as a branch of Islamic archaeology as well as historical or post-medieval archaeology.⁴³ Just to demonstrate the controversial issue of terminology in this context, a recent publication is entitled *A Historical Archaeology of the Ottoman Empire*.⁴⁴ Given that this work is published in the United States, this *terminus* has been used under the influence of American archaeology, but what it really means is post-medieval. When considering the northern Balkan region or parts of Central Europe (the Ottoman-Turkish area of Hungary) there is a conflict in the use of "post-medieval" and "historical". This reflects the meeting of terminology from Central Europe and Turkey itself, overlain with an American gloss of "historical archaeology". However, historical does not at all mean the lack of written sources in a previous period, it simply situates material in a chronological framework.

This leads us back to the central question of this article, the terminological discourse of what has been called the archaeology of the Ottoman-Turkish period. The main question is: Why are these terminological, and to some extent theoretical, frameworks so important in this context? It is not only the question of whether one uses "post-medieval" or "historical" to describe the archaeology of this period. This situation reflects the different character of the archaeology of this period, which is different from all other archaeologies (Classical, medieval, and so on). The Ottoman-Turkish period is useful for discussing all the points raised above because it deals with the same chronological period, but in a very different cultural and material world.

Three main points indicate the special character of the archaeology of the Ottoman period: the global character of the material culture, the relationship between the archaeological material and the written record, and the theoretical background of the archaeology of the Ottoman period.

In Ottoman-Turkish material culture, for the first time in history of the region of Central and East Central Europe, international trade was based on a global network incorporating the Americas and the Far East. In this period in Hungary, the former Europe-dominated market changed; objects of daily life originating from far distant areas appeared among all groups in society. Iznik faience⁴⁵ and Chinese porcelain⁴⁶ are clear archaeological indicators of this process, but these finds can only be connected with the upper strata of society. In contrast, tobacco,⁴⁷ maize, paprika, and later coffee reached all levels of society, transmitted by the Ottoman Empire.⁴⁸ Although these goods originated in the West, they arrived in Central Europe from the East. Thus, globalisation of world trade is revealed in a poor country affected by conquest and civil war.

The second point goes to the heart of the question: the relationship of archaeological material and written records regardless of chronological placement.⁴⁹ Recent studies in the field of the Ottoman-Turkish period in Hungary have focussed on a growing quantity of written records and their implications for archaeological interpretation.⁵⁰ Although late medieval Hungary has a significant number of extant written sources (not to be compared with the Western European situation, however), sixteenth and seventeenth century archival materials are a magnitude larger. This situation is not only a result of the better survival of these documents, but reflects another global historical development. Early Modern states and even more, empires, went through a fundamental administrative change that resulted in the emergence of modern bureaucracy. The Ottoman Empire was no exception; even in its frontier regions such as Hungary, detailed documents survive concerning military organization, taxes, and official correspondence.⁵¹ On the other side of Hungary, the Habsburg Empire created similarly detailed documents. Therefore, this period is truly historical in the sense of the number of written sources, although historians themselves have started to recognize that archaeology can offer new insights into many previously unknown topics.

The third point is the theoretical background of the archaeology of the Ottoman-Turkish period, or the post-medieval period in general. In most European countries, this field started to emerge as an

⁴¹ ANDRESEN 1971, for the chronological problems see: 62–143.

⁴² INSOLL 1999, although areas of the Ottoman Empire (such as the conquered parts of Hungary) were not or only very marginally discussed (p. 103–104).

⁴³ However, it can also be discussed in the framework of other religions as well. Protestantism was an important factor in the history of the region in the sixteenth and seventeenth centuries, in the Habsburg Empire, in the area conquered by the Ottoman Empire, and in Transylvania. Therefore, the application of a new research direction, *The Archaeology of Reformation*, will also be possible in the future. See the

forthcoming volume with this title to be published in the Society for post-medieval archaeology monograph series.

⁴⁴ BARAM – CAROLL 2000.

⁴⁵ GERŐ 1990.

⁴⁶ See the article of Gy. Kovács in this volume.

⁴⁷ For tobacco pipes and for smoking see the article of G. Tomka in this volume and TOMKA 2000.

⁴⁸ For the transmission of cultural goods as reflected in the language see: KAKUK 1996.

⁴⁹ TABACZYŃSKI 2001.

⁵⁰ See the article of G. Dávid in this volume. Further discussion of the topic: VÁNDOR – KOVÁCS – PÁLFFY 1998/2000.

⁵¹ HEGYI – ZIMÁNYI 1988.

extension of medieval archaeology, while in America it was heavily influenced by anthropological discourse. Anthropology or its Central European parallel, ethnography, has played a similarly important role in the emergence of post-medieval archaeology, but for a very different reason. The Industrial Revolution occurred much later in this region than in Western Europe, therefore elements of archaic rural life continued into until the nineteenth and early twentieth century. The study of contemporary material culture and folklore played a significant role in the emergence of several fields of study (human geography and environmental studies, among others) and has also influenced archaeology. The first excavation of a post-medieval village site was made by an ethnographer with the help of a prehistoric archaeologist.⁵² In this case, the process of Ottoman-Turkish period village desertion was the impetus for this early research, which was also seeking late medieval roots for different types of contemporary peasant houses. Similarly, pottery studies in the Early Modern and Modern period, were mainly made by ethnographers,⁵³ except for the Turkish material, which was first studied by scholars of the applied arts.⁵⁴ This complex picture shows how local tradition can fundamentally change the trajectory of the methodological discourse of the archaeology of the post-medieval period.

This terminologically chaotic situation around the world is not a surprise if one studies the emergence of medieval archaeology. As elsewhere, there was a long period where the fields of present-day medieval archaeology were called by different names and conducted by different scholars. Christian archaeology, coming from Classical archaeology, contributed to the emergence of medieval archaeology in the architectural or art historical study of medieval monuments. Prehistoric archaeology introduced its own methods (stratigraphy, typology, and so on) to the archaeology of the Middle Ages, gradually expanding the field of its investigation into a later period. Thus, the process is well-known; the cases of post-medieval and historical archaeology are similar. The roots and the traditions are slightly different, but the most important difference is the global character of Ottoman archaeology in contrast to the

mainly European medieval archaeology.

Corroboration of the emergence of this new archaeology can be seen in signs and indicators such as specific journals, handbooks, and specialized university departments. *Post-Medieval Archaeology* and *Historical Archaeology* are the best-known examples of this trend and a more recent project, *The Encyclopedia of Historical Archaeology*,⁵⁵ clearly shows that the field has been established. University departments or journals may have different names, mirroring the terminological chaos described above, but there is little doubt that they will soon be accepted all over the world where archaeology is practiced.

The other sign is that this process has started to encompass everything. When such an archaeology is established, it should mean total understanding; it should integrate various types of knowledge. It is no longer only the archaeological study of certain object groups like faience and imported pottery or monuments (mosques and baths), but it includes all the physical remains of the study period.⁵⁶ This process is demonstrated well in the archaeology of the Ottoman period. The non-Turkish pottery of the Turkish period is also studied now, for instance, the archaic type of pot originating in the northern Balkans.⁵⁷ We have just experienced the preparations for the first complex typo-chronology of pottery in the period, which will connect the dating of archaeological layers regardless of their origin.⁵⁸ In this way, building archaeological investigation of Turkish religious buildings, of Hungarian castles, or even of eighteenth century palaces, can be connected to the archaeological investigations of Early Modern rural sites or urban settlements. Pottery studies, therefore, are indicators of the emergence of a new research field in Hungary. Whether it will be called historical archaeology, post-medieval archaeology, or the archaeology of the Ottoman-Turkish period is still unclear and remains to be decided by practice. What is much clearer is that the theoretical and methodological issues of this new research field cannot be avoided because they are part of the growth process of the discipline. Terminology may help to identify some of these issues and the archaeology of the Ottoman-Turkish period in Hungary can also contribute in this way to more global theoretical debates.

⁵² Kálmán Szabó the ethnographer was the director of the museum at Kecskemét and his excavations were led by László Papp, a prehistoric archaeologist. SZABÓ 1938.

⁵³ KRESZ 1991.

⁵⁴ SOPRONI 1981.

⁵⁵ ORSER 2002.

⁵⁶ INSOLL 1999.

⁵⁷ GERÓ 1985. The topic was recently discussed in a PhD dissertation by T. Pusztai. See also his article in this volume.

⁵⁸ A series of PhD dissertations were recently defended or are in progress in the doctoral school of the Eötvös Loránd University (Budapest). T. Pusztai, M. Vizi, O. Lajkó, and G. Tomka has already published parts of these studies, see their articles in this volume. Another similar project is on the pottery material in Transylvania, see: Szócs 2003.

Maps, Plans and Sketches Illuminating Two Russian Fleet Actions during the First Aegean Expedition of 1769–1770

The naval engagements in the Chios Channel and at Çeşme (Chesme) – or, as they were originally called in the official reports, the Battle of Sios (Chios) – were important episodes during the first Russian expedition to the Aegean in 1769–1770, during the Russo-Turkish war of 1768–1774. There is considerable scientific literature on these engagements, but it is necessary to remark that the various writers sometimes give rather contradictory accounts and analyses concerning the different participants and the outcomes of their endeavours at that dramatic time.

In one of the oldest Russian archives, the Russian State Archive for the Navy, founded in St. Petersburg by a decree of Emperor Peter the Great (on 28 January 1724), there is a huge quantity of documents. Among those collected over a more than two-hundred-year period are the documents of the Admiralty Board (*Admiralteyskaya Kollegiya*) and General Headquarters (*Generalny Shtab*), as well as those pertaining to different fleets, squadrons, expeditions, battles and combat operations, naval construction work, ports and naval bases, outstanding naval commanders and seamen, and scientific research of a marine nature. Of the documents relating to foreign countries, those for the Ottoman Empire and Turkey are some of the most numerous. They include, among the papers from the eighteenth and nineteenth centuries, very many documents reflecting the history of military, political and economic relations between the Ottoman Porte and Russia. This material has remained virtually unexplored by scholars and is largely unpublished.

In the abovementioned material two *fonds* attract especial attention, and it is these with which this paper deals. *Fond* No. 315, inventory 2, dossier 134 contains "An Album of Eighteenth-century Maps and Plans Relating to the Campaigns and Operations of the Russian Navy in 1770–1774".

Prominent among the sketches and engravings are the maps of Çeşme bay showing the citadel, the town and the famous engagements between the two navies in June and July 1770. The events are recorded in eyewitness accounts by naval officers, accounts that are of enormous historical value as sources for the history of the Ottoman and Russian navies. Explicit analysis of the political situation preceding the First Aegean Expedition, of the Russian navy's combat operations in the Mediterranean, and of the consequences of these for European states is provided by special research undertaken by the academician E. V. Tarle.¹ The sketches from *Fond* No. 315

show, very precisely, different episodes in the fighting, which turned out tragically for the Turkish fleet when, while at anchor in Çeşme harbour, it was set ablaze by Russian fireships and destroyed.

The manoeuvres of the Russian fleet on the first day of the fighting (the Battle of the Chios Channel) are shown in a series of sketches and engravings, and also on the plans indicating the movements of individual vessels. I have visited Çeşme twice, and could see that a fleet of sailing ships becalmed there was truly doomed. An unfortunate end for the Ottoman fleet, by then anchored in a closed bay under cover of coastal batteries on the northern cape and of the guns of a citadel constructed in the time of Umur Bey Andınoğlu, was ordained for the night of 7 July 1770. The various stages of this engagement – the Battles of Çeşme – are shown in watercolour sketches.

Russian quarterdeck logbooks preserve an order by Admiral Spiridov to cease firing on Ottoman seamen abandoning their ships. The sketches by a certain Russian officer – an eyewitness of the battle – are a most valuable source for the history of these events. Apparently, it was on the basis of these very sketches that the battle engravings that later achieved fame at home and abroad were made. As well as the sketches, the victory message and the official report on the battle sent to Empress Catherine II by Alexei Chesmensky Orlov, the officer in overall command, are also to be found in the album.

According to a tradition adopted in Russian clerical work of the eighteenth century, the inventories of *fonds* and descriptions of individual items are written in French (sometimes Russian entries are made as well). In the next two sections, use of English indicates Russian text as the original and no French; where French was used instead of or alongside Russian, the French is given alone.

Fond No. 315, inventory 2, dossier 134; 56 leaves
Materials Concerning the History of the Russian Navy

An Album of Eighteenth-century Maps and Plans Relating to the Campaigns and Operations of the Russian Navy in 1770–1774

- (1) Map of the Aegean
- (2) Map of the Aegean made by Mr. Gron Ardom in 1745
- (3) Plan No. 1

¹ TARLE 1947.

(6) Plan of the battle between the Russian fleet and the Turkish fleets in the Chios Channel, in which the entire Turkish fleet was driven under the citadel of Çeşme, 24 June 1770

(7) Plan showing the victory gained by Imperial Russian fleet under the command of the admiral and Count Orlov over the Turkish fleet and the total defeat of the latter, 24 June 1770

(9) The schedule from 2 July until 4 July 1771 for troops operating with support from the Russian navy (Colonel von Tol)

(10) Plan of the eastern part of Mitelin Island showing the attack launched with the support of the navy, 2–4 November 1771

(11) Plan No. 2. Turkish ships on fire

Fond 1331, inventory 1, dossier 20.

Maps showing the Battle of Çeşme in July 1770. With a report by Count Orlov.

Engravings in the Russian and French languages

(1) Pour l'éclairement des plans des actions jointes; on donne ici la relation de la destruction totale de la Flotte Ottomane; Sur les côtes de l'Asie, tell qu'on la reçut le 13 Septembre 1770 à la Cour de Sa Majesté Imperiale, par un courier dépêché d'Italie par le Générale Comte [Alexei Orloff]".

(2) La Destruction de la Flotte Ottomane par l'Escadre Russe sous les Ordres de S. E. M. le Comte Orloff dans les Port de Chisme la Nuit du 7 Juillet 1770.

(3) Plan générale de la Victoire, remportée sur les Turcs par la Flotte de S. M. I. de Toutes les Russies sous les Ordres du Général Comandant le Comte Orloff.

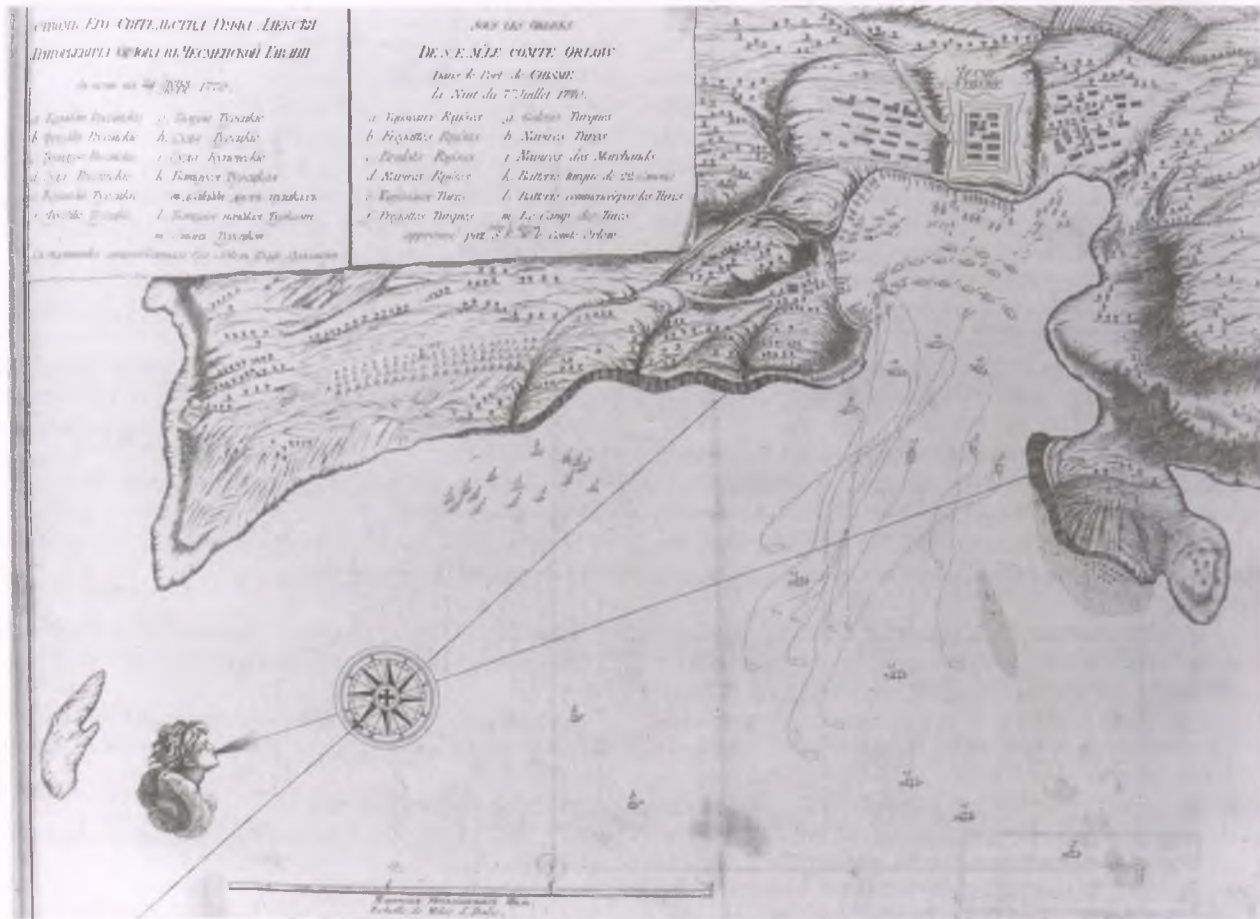
(4) Vue du Port de Chesme avec la destruction de la Flotte Ottomane par l'Escadre Russe.

(5) Plan du combat naval de Flotte de S. M. I. de Toutes les Russies sous les Ordres du Général Comandant le Comte Orloff.

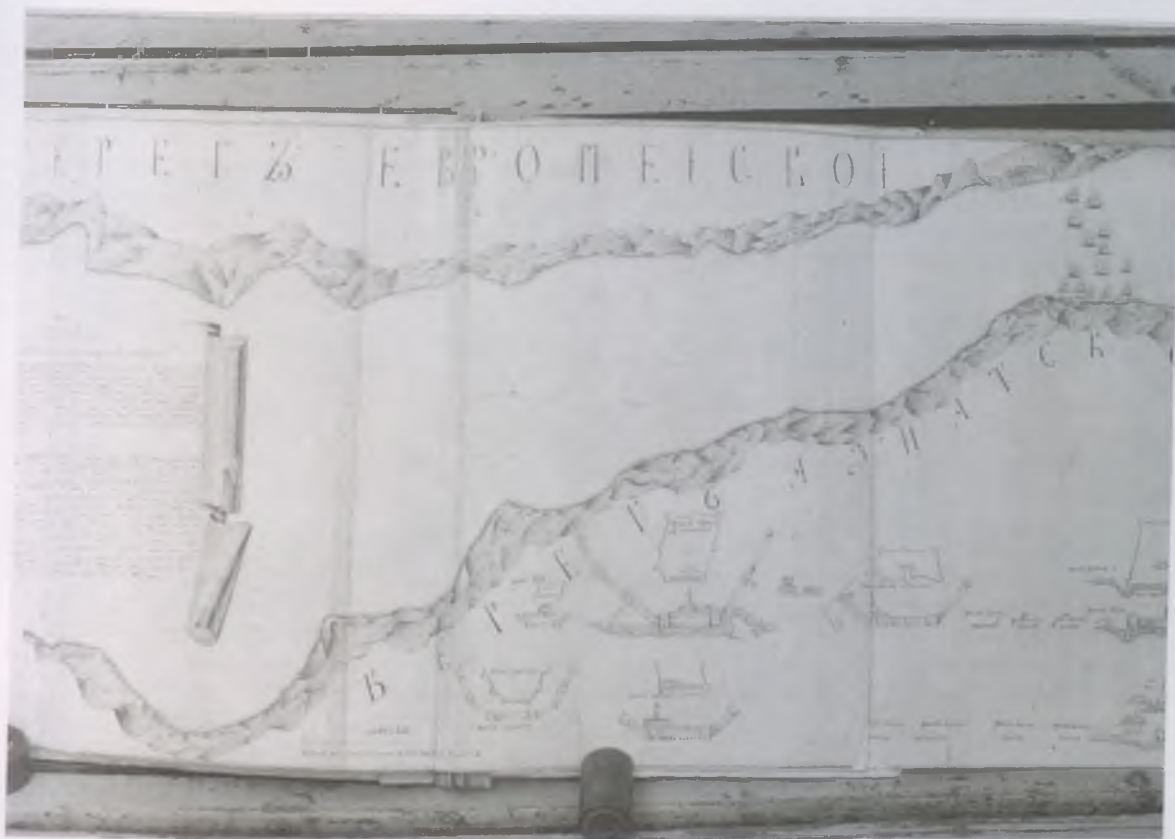
(6) La destruction de la Flotte Ottomane par l'Escadre russe dans le Porte Chesme. La Nuit du 7 Juillet 1770.

(7) Map showing the victory gained over the Turkish fleet by the navy of Her Majesty the Empress of All the Russias under the command of General Count Orlov:

- a) Manevre de la Flotte russe;
- b) La Flotte russe en ligne;
- c) L'attaque de la Flotte russe;
- d) La Flotte ottomane à l'ancre;
- m) Le camp des Turcs.



Ill. 1. Map of Çeşme harbour showing the citadel, 1770



Ill. 2. Map showing the Sea of Marmora with the Ottoman fortifications, 1769-70



Ill. 3. The Battle of the Chios Channel, June 1770

As we know, Turkish underwater archaeologists have conducted searches for artefacts and treasure from the sunken Russian flagship *Estafii*. Guns, items of ship's equipment, medals, and gold coins minted beforehand for the Balkan states to be created with Russian support were retrieved. I believe that the sketches of the fighting and the plans showing the ships' manoeuvres in the combat will facilitate the updating of the positions at which vessels were lost and will make searches by underwater archaeologists more productive.

After the battle, the Russian ships sailed for the Dardanelles. The Russians had rather detailed maps and other aids. Maps of the Aegean and of the Turkish coast showing Turkish citadels, fortified settlements and navigable channels are also available in the *fonds*. With its diagrammatic representations of the Ottoman fortifications on both shores, the map of the Dardanelles, the Sea of Marmora and the Bosphorus represents the main item of interest. Manoeuvres and episodes of naval battles feature as watercolour sketches and engravings; the positions of ships lost are marked.

The Ottoman military command was in full disarray after the Battle of Çeşme. The French engineer Baron de Tott sent especially for military consultations and the protective strengthening the Dardanelles and Constantinople wrote that the shore fortifications were in an appalling condition, and that the Russian fleet could easily could pass the batteries of the channel citadels and burn the sultan's palace.

As S. M. Solovyev wrote: "De Tott was entrusted with strengthening the fortifications and therefore it was expedient for him to present earlier improvements to them in a miserable light."² However, this view is challenged by the data collected from a variety of sources by A. B. Shirokorad. We present the following quotation so that these data may be compared to the schemes of fortifications on the maps from the navy archive.

"In 1453, Sultan Mehmed II had two castles constructed: Sultane-Kale and Kilidel-Bahr. The first one was square and had eight towers; the second was pentagonal with three round bastions and with two linked inner fortifications. In 1658, Sultan Mehmed IV had strengthened these old castles against the

Venetian fleet. He had also constructed two new ones in the mouth of the channel: Kum-kale, pentagonal with nine bastions; and Sedel-Bahr (Yeni-Kale), hexagonal with seven round and one square bastion. In 1770, Baron de Tott initiated the creation of a fifth castle: Eski-Hisarli, a little to the north by Sedel-Bahr. The four existing castles were strengthened by the addition of batteries protected by earthworks.

Only the old castles of Sultane-Kale and Sedel-Bahr, facing each other where the width of the waterway reached 1195 metres, raked the navigable channel from both sides. Shots from the new castles where the waterway was some 4 kilometres wide could not reach this channel."³

All these and a number of other fortifications are shown on the maps accurately enough for the cartography of the time and testify to special training and experience on the part of their creators. Nevertheless, these materials allow us to accept the viewpoint of S. M. Solovyev, S. F. Platonov and E. V. Tarle that because the maps of this rather fortified region were made before the period when De Tott conducted modernisation of the defences, access to the Dardanelles for the Russian squadron would have been problematic.⁴

In Admiral Spiridov's campaign office material (Fond 190, inventory 1, dossier 24) kept in the Russian State Archive for the Navy there are sixty-five documents written in Ottoman Turkish; these include financial documents, diplomatic messages, and reports of a political and intelligence character from agents of the Russian intelligence service. These materials cover the period 1770–1771 and have never been examined by scholars before now. The handwritten character of the documents and the use of the *Siyakat* script in some (this script was adopted as standard for financial documents in the Ottoman Empire) make them rather difficult to read. The greater part of this material consists of documents of an economic character: deliveries of supplies to the squadron, contracts and receipts. Despite their standard form and brevity, these documents enable us to imagine the ethno-social circle of those compiling them as well as the points of geographical contact made by Russian seamen in the Mediterranean.

² SOLOVYEV 1994, T. XIV, chapter 2, 358–367.

³ SHIROKORAD 2000, part 4, chapter 7, 192.

⁴ PLATONOV 1993, 634.

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ABBREVIATIONS

After Magda TULOK 1984

(Abbreviations of Periodicals and Series of Archaeology and Auxiliary Sciences. *Acta ArchHung* 36, 333–384)

AAŁódz	Acta Archaeologica Lodziensia (Łódź)
AAArch	Acta Antiqua et Archaeologica (Szeged)
Acta ArchHung	Acta Archaeologica Academiae Scientiarum Hungaricae (Budapest)
Acta MN	Acta Musei Napocensis (Cluj)
Acta OrHung	Acta Orientalia Academiae Scientiarum Hungaricae (Budapest)
AgrSz	Agrártörténeti Szemle (Budapest)
AH	Archaeologia Historica (Brno)
AI	Archaeologia Iugoslavica (Beograd)
AmAnt	American Antiquity (Gainesville)
AnthrK	Anthropológiai Közlemények (Budapest)
Araştırma STöpl	Araştırma Sonuçları Toplantısı (Ankara)
ArchÉrt	Archaeológiai Értesítő (Budapest)
ArhMold	Arheologia Moldovei (București)
ArsHung	<i>Ars Hungarica</i> . A MTA Művészettörténeti Kutató csoportjának Közleményei (Budapest)
AUBSB	<i>Annales Universitatis Budapestinensis de Rolando Eötvös Nominatae. Sectio Biologica</i> . (Budapest)
BÁMÉ	A szekszárdi Béni Balogh Ádám Múzeum Évkönyve (Szekszárd)
BCMI	Buletinul Comisiunii Monumentelor Istorice (București)
BRTÉ	A Békésvármegyei Régészeti és Művelődéstörténeti Társulat Évkönyve (Gyula)
BSOAS	<i>Bulletin of the School of Oriental and African Studies</i> University of London (London)
BSt	Balkan Studies (Thessaloniki)
BudRég	Budapest Régiségei (Budapest)
CommArchHung	Communicationes Archaeologicae Hungariae (Budapest)
Cumania	Cumania (Kecskemét)
CNH	Corpus Nummorum Hungariae
DMÉ	A debreceni Déri Múzeum Évkönyve (Debrecen)
Dolg	<i>Dolgozatok a Szegedi Tudományegyetem Régiségtudományi Intézetéből</i> (Szeged)
EBalk	Études Balkaniques (Sofia)
ELTE ÓTTK	<i>Az Eötvös Loránd Tudományegyetem Ókori Történeti Tanszékeinek Kiadványai</i> (Budapest)
EMÉ	Az Egeri Múzeum Évkönyve (Eger)
Érem	Az Érem (Budapest)
ERTÉ	Esztergom-vidéki Régészeti és Történelmi Társulat Évkönyve (Esztergom)
ÉTK	Értekezések a történeti tudományok köréből (Budapest)
FmTÉ	Fejér megyei Történeti Évkönyv (Székesfehérvár)
FolArch	Folia Archaeologica (Budapest)
Fontes ArchHung	Fontes Archaeologici Hungariae (Budapest)
GEM	Glasnik Etnografskog Muzeja u Beogradu (Beograd)
GGB	Godišnjak Grada Beograda (Beograd)
GZM	Glasnik Zemaljskog Muzeja u Sarajevu (Sarajevo)
HBN	Hamburger Beiträge zur Numismatik (Hamburg)
HK	Hadtörténelmi Közlemények (Budapest)
HOMÉ	A Herman Ottó Múzeum Évkönyve (Miskolc)
IAI	Izvestija na Arheoloģičeski Institut pri Bălgarska Akademiya na Naukite (BAN) (Sofija)
ICTA	International Congress of Turkish Art. Proceedings.

IKMK	Az István Király Múzeum Közleményei (Székesfehérvár)
IMÉ	Az Iparművészeti Múzeum Évkönyve (Budapest)
IstMitt	Istanbuler Mitteilungen (Tübingen)
JPMÉ	A Janus Pannonius Múzeum Évkönyve (Pécs)
Kazi STopl	Kazı Sonuçları Toplantısı (Ankara)
Kk	Keletkutatás (Budapest)
KMK	A Komárommegyei Múzeumok Közleményei (Tata)
LK	Levéltári Közlemények (Budapest)
MAG	Mitteilungen der Anthropologischen Gesellschaft (Wien)
Magyar TT	Magyar Történelmi Tár
MCA	Materiale și Cercetări Arheologice (București)
MFME	A Móra Ferenc Múzeum Évkönyve (Szeged)
MMMK	Magyar Mezőgazdasági Múzeum Közleményei (Budapest)
MNTÉ	Magyar Numizmatikai Társulat Évkönyve (Budapest)
MNy	Magyar Nyelv (Budapest)
MTAÉ	A Magyar Tudományos Akadémia Értesítője (Budapest)
MTAK(II)	A Magyar Tudományos Akadémia Társadalmi-Történelmi (II.) Osztályának Közleményei (Budapest)
MúÉ	Művészettörténeti Értesítő (Budapest)
MúF	Művészettörténeti Füzetek (Budapest)
MVGSN	Mitteilungen des Vereins für Geschichte der Stadt Nürnberg (Nürnberg)
NÉrt	Néprajzi Értesítő (Budapest)
NK	Numizmatikai Közöny (Budapest)
NMMÉ	Nógrád Megyei Múzeumok Évkönyve (Balassagyarmat)
NZ	Numismatische Zeitschrift (Wien)
NumZbor	Numismaticky Sbornik (Praha)
OTAM	Ankara Üniversitesi, Osmanlı Tarihi Araştırma ve Uygulama Merkezi Dergisi (Ankara)
Pápai MúzÉrt	A Pápai Múzeum Értesítője (Pápa)
PBMÉ	A „Pécs-Baranyamegyei Múzeum-Egyesület” Értesítője (Pécs)
PMÉ	Pécs sz. kir. város Majorossy Imre Múzeumának Értesítője (Pécs)
RAfr	Revue Africaine (Alger)
RégFüz	Régészeti Füzetek (Budapest)
SAO	Studia et Acta Orientalia (București)
SCIV	Studii și Cercetări de Istorie Veche (București)
SF	Südostforschungen (München)
SMK	Somogyi Múzeumok Közleményei (Kaposvár)
SMMIM	Studii e Materiale de Muzeografie și Istorie Militară (București)
SA	Sovetskaja Arheologija (Moskva)
StAgr	Studia Agriensia (Eger)
StComit	Studia Comitatus (Budapest)
SzMMÉ	A Szolnok Megyei Múzeumok Évkönyve (Szolnok)
SzSz	Székesfehérvári Szemle (Székesfehérvár)
TtK	Természettudományi Közöny (Budapest)
TBM	Tanulmányok Budapest Múltjából (Budapest)
TRÉ	Történelmi és Régészeti Értesítő (Temesvár)
TörtStK	Történelmi Statisztikai Közlemények (Budapest)
TSz	Történelmi Szemle (Budapest)
TT	Történelmi Tár (Budapest)
Varia ArchHung	Varia Archaeologica Hungarica (Budapest)
VEAB Értesítő	MTA Veszprémi Akadémiai Bizottsága Történelmi szakbizottságának Értesítője
VMMK	A Veszprém Megyei Múzeumok Közleményei (Veszprém)
WMMÉ	A Wosinsky Mór Múzeum Évkönyve (Szekszárd)
ZfE	Zeitschrift für Ethnologie. Organ der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte (Braunschweig)
ZHVSt	Zeitschrift des Historischen Vereines für Steiermark (Graz)
ZNM	Zbornik Narodnog Muzeja (Beograd)

Key to Hungarian words occurring in the English text and on the illustrations:

Duna	=	Danube
utca	=	street
út	=	road, avenue
tér	=	square
hegy	=	hill
É (észak)	=	North
D (dél)	=	South
K (kelet)	=	East
Ny (nyugat)	=	West
század	=	century
kapu	=	Gate
árok	=	moat
fal	=	wall




Frontier of the Ottoman-dominated territory of Hungary after 1568

Key: Habsburg Birodalom = Habsburg Empire; Oszmán Birodalom = Ottoman Empire;

Magyar Királyság = Kingdom of Hungary; Erdélyi Fejedelemség = Principality of Transylvania; Lengyelország = Poland; Moldva = Moldavia;

Havasalföld = Wallachia



*Glazed vessel from the Gaziantep
area
Selcuk-Ottoman period*

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