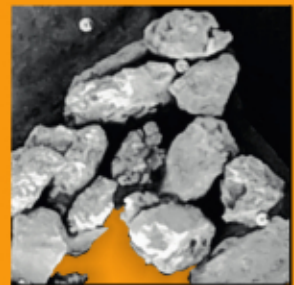
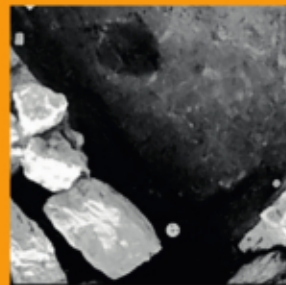
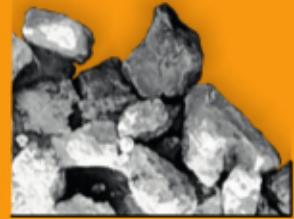
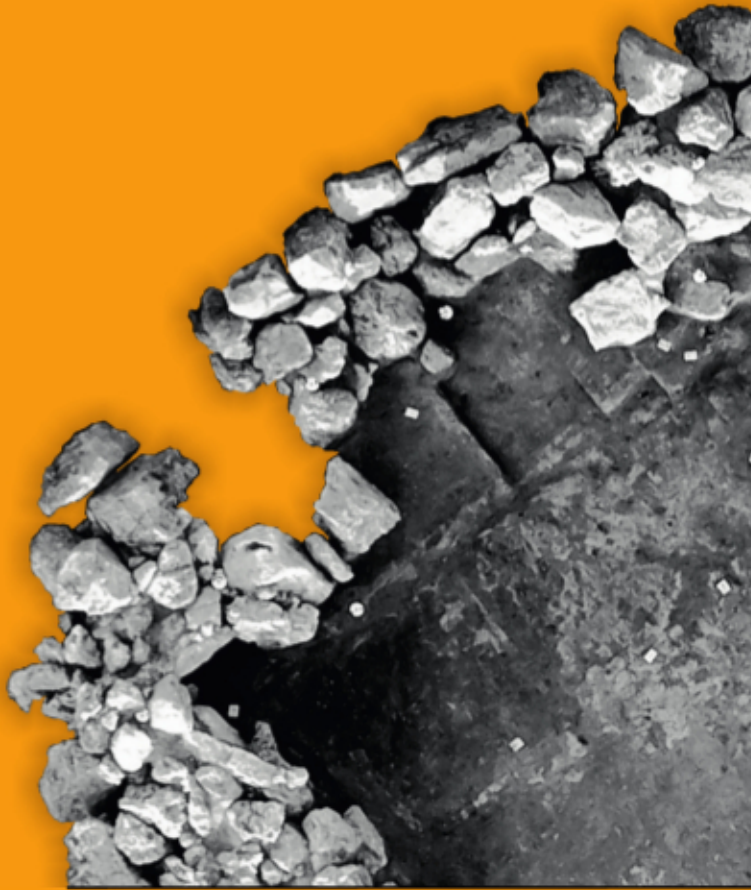


DISSERTATIONES ARCHAEOLOGICAE

ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae



Ser. 3. No. 4. | 2016

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Settlement history of the Hernád Valley in the 1st to 4/5th centuries AD

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Abstract

Abstract of PhD thesis submitted in 2016 to the Archaeology Doctoral Programme, Doctoral School of History, Eötvös Loránd University, Budapest under the supervision of Tivadar Vida.

The aim of the dissertation

In the framework of my PhD thesis I completed the chronological evaluation of the find materials of Roman Age settlement details excavated along the northern stretch of the Hernád River on Hungarian territory.

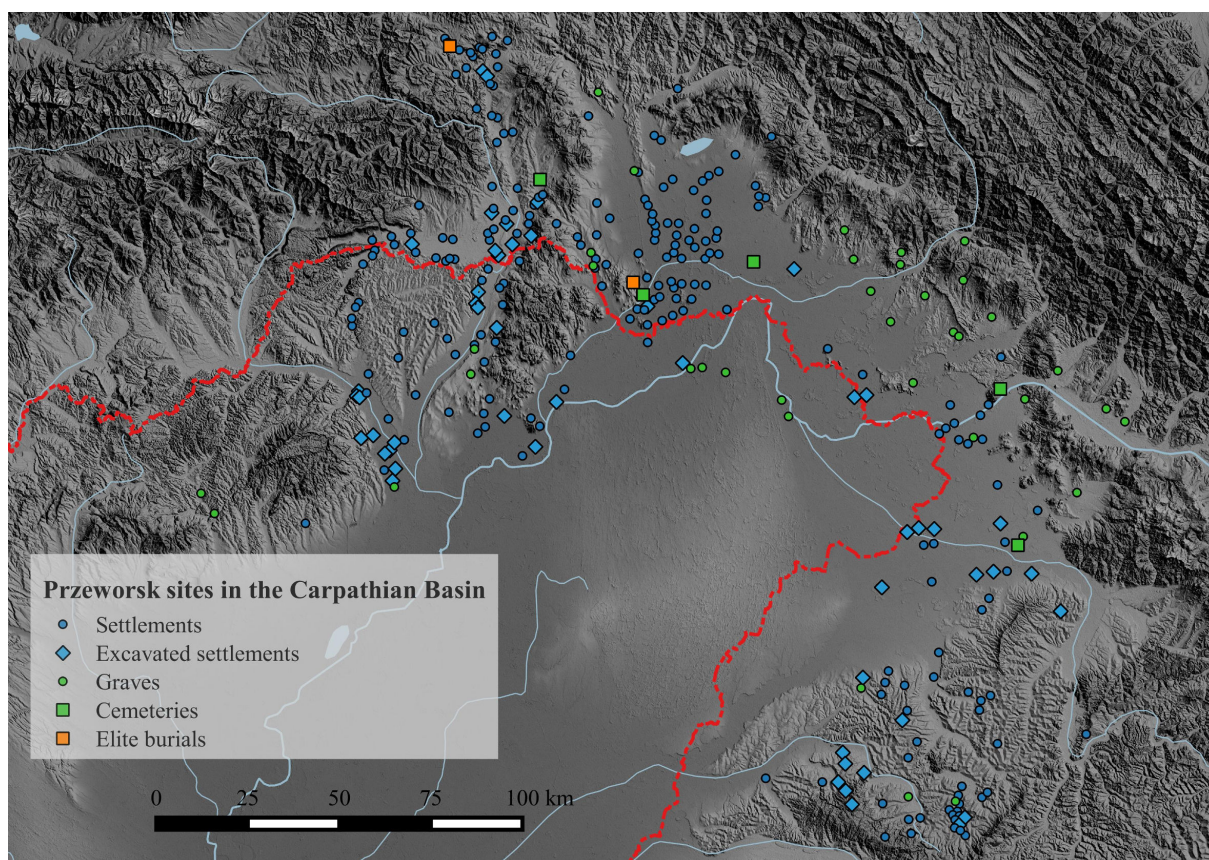


Fig. 1. Przeworsk sites in the Carpathian Basin (After LAMIOVÁ-SCHMIEDLOVÁ 1969, KOTIGOROSKO 1995, GINDELE 2010).

The relevance of the topic as well as the selection of the geographical area is justified by the current state of Hungarian research on the Roman Age Barbaricum. In contrary to the Sarmatian settlement area, there has been no recent systematic evaluation and publication of settlement find materials from the territory of the North Hungarian Mountains. The Hernád Valley belonged to the settlement area of the Przeworsk culture, spreading over Northern Hungary from the 2nd century AD. Beside Hungarian archaeologists, the research of this cultural complex involves colleagues from Romania, Slovakia as well as the Ukraine. An important goal of the dissertation was to give a detailed presentation and evaluation of the archaeological material of a geographical region, which has been quite unknown so far for both Hungarian and foreign research, in order to complement our present knowledge of the era (*Fig. 1*).

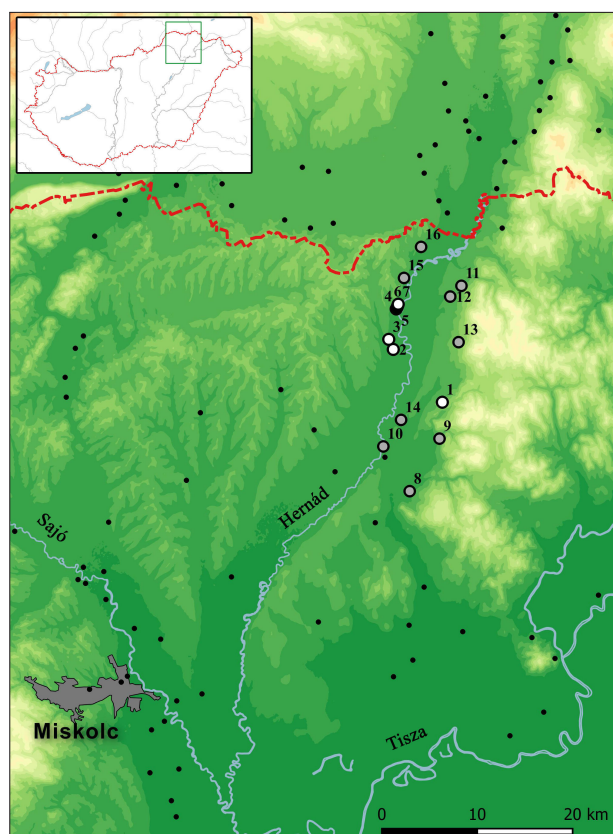


Fig. 2. Przeworsk settlements in the Hernád Valley analysed in the Dissertation. Grey: sites from field survey. White: sites from excavations. Without numbers: further Przeworsk sites, outside the research area. 1: Arka-Fónyi patak, 2: Garadna-Kastély zug, 3: Garadna-Kovács tanya, 4–7: Hernádvécse-Nagy rét, Site 4–7, 8: Abaújszántó-Cekeháza, 9: Boldogkőváralja, 10: Gibárt-Túzsza, 11: Gönc-Kenderföldek, 12: Gönc-Lúd domb, 13: Hejce-Káposztáskert, 14: Hernád-céce-Miszlonka tető, 15: Hernádszurdok-Temetőföld, 16: Hidasnémeti-Felső mező.

Systematical archaeological survey started in the beginning of the 1960s in the territory of Borsod-Abaúj-Zemplén County however, it came to a halt in the next decade.¹ Until the change of the political system in 1989, excavation and documentation methods used at smaller scale excavations mirrored those of the 1960–70s.² During the last 25 years, the number of known Roman Age settlements has significantly grown mostly due to preventive excavations, as major investments started in this county as well.³ The extensive fieldwork presented a great possibility to settlement research, however the full potential of this has not yet been exploited in the geographical area in question. The northern section of the Hungarian course of the Hernád Valley is an area easy to define both geographically and archaeologically. The selection of this representative region is justified by the fact that it shows a relatively high concentration of Roman Age settlements, known mostly from field surveys (*Fig. 2*). The findspots are situated along water courses on terraces 120–200 metres above sea level. The southern border of their expansion is approximately the line of present day settlements Abaújszántó, Gibárt, Vizsoly and Novajdrány. The area has a considerably rich archaeological record. Beside the find material of the small scale excavations carried out in the vicinity of Arka and

1 SALAMON – TÖRÖK 1960; SALAMON 1966; SOÓS 2014.

2 K. VÉGH 1964; K. VÉGH 1975; K. VÉGH 1985; K. VÉGH 1989.

3 CSENGERI – PUSZTAI 2008.

Garadna in the 1960s,⁴ the dissertation is based on the find assemblages, which came to light during the preventive excavations preceding the reconstruction works of main road no. 3 leading from Miskolc to Košice/Kassa. Between 2002 and 2004, an area of more than 35,000 square metres altogether has been excavated on the outskirts of the settlements Garadna and Hernádvécse, yielding Roman Age settlement remains. The dissertation includes the detailed evaluation of the find material of five settlements from four locations. The more than 500 archaeological features as well as the 16,000 archaeological artefacts lay a solid foundation for the survey (Fig. 3).

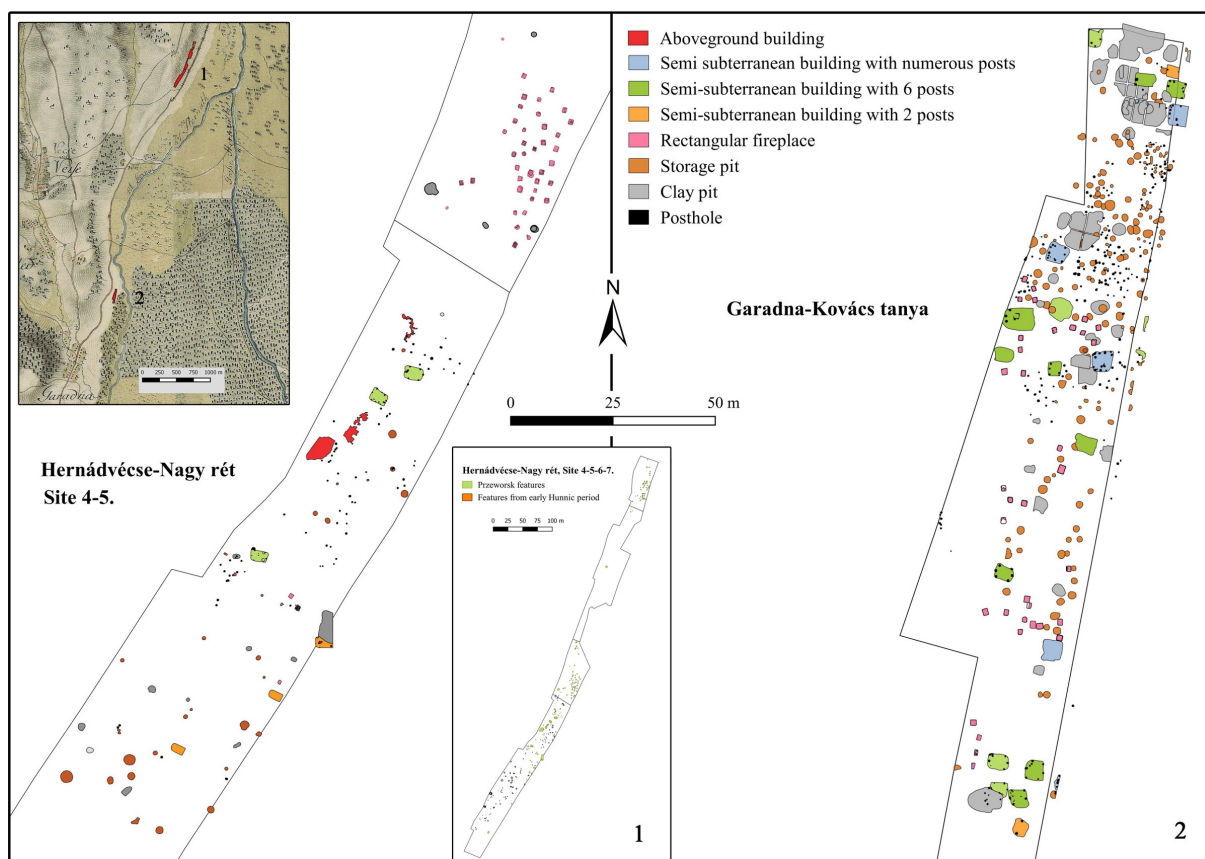


Fig. 3. Przeworsk settlements, excavated in the Hernád Valley. 1. Hernádvécse–Nagy rét; 2. Garadna–Kovács tanya.

The large extension of the settlements, the up-to-date documentation at hand as well as the fact that the find material has not yet been sorted, necessitated a survey method different in several ways from that used in former research. This problem is not specific to the Roman Age, the amount and nature of the find material from large-scale settlement excavations implies a challenge to researchers of any archaeological period. Therefore the other main aim of the dissertation is of methodological nature. Beside the traditional evaluation my goal was to create a new system of processing fit to handle find assemblages counting several tens of thousands of pieces, as well as providing answers to questions asked from a new perspective.

Following a traditional analysis of the cultural connections I interpreted the sites from a relative chronological and inner structural point of view, partly using mathematical statistic methods. In this I had a dual goal: first, I aimed at a new approach and model for synthetizing the

4 SALAMON – TÖRÖK 1960.

data coming from the evaluation of single artefact types with an overall evaluation of the site. I believe this to be essential when investigating the spatial and chronological relations of settlement structure, its transformation as well as household units and zones of different domestic activities. My analyses can also be considered as a trial of the multivariate mathematical statistic methods which are a promising perspective for future research. Thus, the dissertation raised the issue of the applicability of these procedures, becoming widely used in Hungarian research, in the case of Roman Age barbarian settlement archaeology.

Structure and methods of the dissertation

Based on methodology, the dissertation can be divided into two main parts. As our knowledge of the area in question has so far been rather scarce, the main aim of the first part of the dissertation was the promptest possible presentation of the archaeological features as well as the find material, followed by the introduction of the new pieces of information into the present state of research of the era. To complete this task, I turned to more traditional archaeological survey methods such as typology, artefacts and artefact types with a specific dating, as well as cross-dating. In the second part of the dissertation I examined the settlements from the aspect of internal chronology, settlement structure, zones of different domestic activities, and also the functionality of the finds, using mathematical statistic methods.

According to our present knowledge, the archaeological material attributed to the Przeworsk culture from the Upper Tisza region shows strong microregional variance.⁵ Therefore the settlements were presented separately in the dissertation, so that their unique features as well as the differences between them are clear. The presentation of each settlement starts with a general description of the site, followed by the presentation of the archaeological features based on structural and formal criteria. The second volume of the dissertation includes the detailed description of the features. The introduction of the find material begins with ceramics, classified according to typology. As there were all together more than 15,000 pottery sherds to be evaluated, I excluded the traditional way of textual description. Instead, I included the relevant data in a spreadsheet, also to be found in the second volume. The presentation of the ceramic find material is followed by that of the metal and glass objects, clay objects, bone and stone tools. There were only a limited amount of these, therefore the detailed description of the objects is included in the main text of the dissertation.

Absolute chronology, archaeological parallels

A survey into the absolute dating and cultural connections of the settlements is integral to the presentation of the find material. This is based on the parallels of the archaeological features and finds. The absolute lifespan of a settlement can only be determined approximately. As we lack natural science data sources, it is the chronologically sensitive artefacts, mostly originating from the Roman Empire, which can be used to define a *terminus post quem* within the geographical area and era in question.

I also used the parallels of the find material to trace the cultural connections of the settlements. In this I presumed that the appearance and spread of certain structural solutions, artefact

5 GINDELE 2010.

types, unique elements of form and style indicate a cultural relationship and/or a similar chronological setting. As this line of thought follows the former, traditional archaeological survey methods, it is easy to integrate and compare the new data with previous research results. The related chapters are thus descriptive the results are based on relevant published data.

Inner chronology, settlement structure, functional analysis

In the case of those settlements which provided the necessary information, I made a survey into inner chronology, settlement structure as well as areal functional organization, the method of which differs from the traditional approach of archaeological evaluation.

In Hungarian research, there is no standardized practice when it comes to the study of the inner structure of Roman Age barbarian horizontal settlements. Instead of the observation of the situation of features and groups of features, recent studies increasingly rely on the systematic processing of the find material.⁶

In contrary to the Sarmatian settlement area, the research of the germanic Barbaricum in the Carpathian Basin has an inevitable connection to the German school. This means that it is not the inner structure of the settlements that research is centered around, but rather the different types of settlements.⁷ Therefore the emphasis is more likely on the distinction between feature and settlement types instead of the evaluation of the find material. Detailed studies include a separation of the feature types according to their form, that is, a morphology-based typology and comparison of structures visible on the map of the settlement. On the contrary, the Anglo-Saxon school concentrates on the distinction of individual domestic units, households within a settlement, focusing on questions of function and social archaeology. Although these two approaches are different, they do not contradict but rather complement each other.

Defining domestic units and households

So far there has been no attempt to separate domestic units or households within settlements of the Barbaricum in the Carpathian Basin. The 'household' is a manifold concept, concerning not only material culture, but also the role of a certain group of people within a community, and the economic, ritual and social activity of its members.⁸ I basically approached this complex question from a functional viewpoint, thus I only used a few facets of the concept of the 'household' in my research.

I find it important to pinpoint, that it is not possible to locate full households at the sites, at least not in the original sense of the concept, as there are several factors which cannot be investigated by the methods of archaeology. We can only rely on the data at hand: archaeological features and find assemblages. Therefore I decided to put the question the other way round, and approach the issue of the domestic units within a settlement from the remnants of this structure, rather than its original, complete form.

6 VADAY 1996; GINDELE – ISTVÁNOVITS 2009.

7 JAHNKUHN 1969; DONAT 1988, 132–146; LEUBE 1998, 8–9; LEUBE 2009, 170–171; NÜSSE 2014, 114–132, 285–295.

8 SOUVATZI 2008, 1.

It is fundamental that not only a single artefact, an artefact type, a settlement type or settlement feature, but also a household can be specific to an archaeological culture.⁹ This means that the structure and composition of a household or a domestic unit within a settlement is characteristic to a certain culture, moreover it characterizes the settlement, that is, the community itself. As the concept of the household includes the schemes of behaviour as well as the material culture, we can state that the spreading of domestic waste within a settlement can be considered specific of the culture, more precisely, of a certain group of people. Based on this assertion, I examined and compared the patterns perceptible in the spread of domestic waste. Focusing on single domestic units and households, I regarded the hitherto defined functions of a household as a starting point. Most of the data derived from the find material likely represents production and distribution (including consumption), that is, the basic self-supporting functions of individuals or groups. As the find assemblage mainly consists of ceramics and animal bones, I primarily investigated eating habits. I also dealt with the remains indicating other domestic production, for example iron- and boneworking, weaving, et cetera. My fundamental concept was that a household should yield the traces of all the basic self-supporting activities which were present at a settlement.

In summary, I simplified the complex method of identifying households: with production and distribution in view, I analysed the settlement waste and the possible functions of settlement features.

In the dissertation I gave special emphasis to a question which has been constantly debated in early Roman Age research: the function of semi-subterranean buildings (*Grubenhäuser*). The quasi lack of aboveground buildings as well as the possible function of small-sized, semi-subterranean buildings (mostly described as pit dwellings in archaeological literature) is a recurrent problem for the researchers of the Roman Age Barbaricum. I also encountered this dilemma in the case of the Przeworsk culture settlements included in the dissertation, therefore I aimed at creating a survey method which could bring us closer to a realistic interpretation of the function of these semi-subterranean structures.

Because of its experimental nature, I found it advisable to separate this investigation from the traditional presentation of the find material and its evaluation. While using archaeological parallels may be considered exact, an evaluation of inner structure can only be regarded as a model. For a functioning model it is necessary to define premises. According to my system, domestic units within a settlement can be separated under the following conditions:

No. 1 *The accumulation of settlement waste is continuous.*

With this I state that the life of the settlement was uninterrupted within the investigated time period, the waste, accumulated as a result of the activity of the households, filled the settlement features with no chronological hiatus.

No. 2 *The find material coming from a single feature can be considered a closed assemblage.*

To be able to compare the assemblages, it is necessary to handle them as closed although it is clear that they may have accumulated over a longer period of time.

No. 3 *The find material coming from a feature represents (at least to some extent) the original function of that feature.*

9 RATHJE-WILK 1982, 619; SOUVATZI 2008, 10–11.

This stipulation is closely connected to no. 4. Even though most of the features were filled with domestic waste, this premise must be taken into account when defining their original function.

No. 4 *Waste and articles of personal use were disposed of at their original place of accumulation/usage or in its close surroundings.*

This stipulation may seem quite rigid, as different types of waste may have been disposed of in different ways. Still, as we cannot make a hierarchy between find types, at this moment we can only draw conclusions with regard to this premise.

No. 5 *Sorting of the find materials from earlier excavations was done with regard of their original proportional composition.*

This premise concerns the find materials of the sites Arka-Fónyi patak and Garadna-Kastély zug. The information value of these smaller scale settlements is rather limited, nevertheless I completed some of the analyses with these find assemblages as well.

No. 6 *It is possible to define the original function attached to the find material.*

The fact that articles used in domestic activities can be identified and that their spatial spread is in connection with the place of the activity itself, is fundamental to the analysis of functional units within a settlement.

Pottery inventory of the households

Following the reconstruction of areal functional organization (domestic units) within the settlements, I focused on the definition of the assortment of utensils and objects of everyday use. Due to taphonomic reasons, no full reconstruction of an inventory belonging to a unit was possible. Thus, in my research I relied mainly on the largest available object group with the highest information value: ceramics. In the dissertation I use the term 'household's pottery inventory' instead of dinner service. The separation between the vessels used for different purposes can be done according to vessel forms. Based on this, I created three main groups: table ware for food consumption, cooking vessels used to prepare food and storage vessels. Within these functional groups I described two subgroups: vessels for liquids and solid food. This system does not match precisely the traditional typology of Roman Age barbarian ceramics, but my interest lay not in the changes of form and decoration styles of vessels, but rather in the transformation of eating habits. My survey can only be regarded as a model and a hypothetical reconstruction. In summary, it is not possible to precisely describe the complete household pottery assortment in a certain period. Instead, we can only make a close assumption to its proportional composition.

Mathematical statistic analyses

In some of my evaluations I used multivariate mathematical statistic methods.¹⁰ On the one hand, this was justified by the large amount of finds to be analysed: 2,206 pottery sherds from Hernádvécse, as well as 12,916 pottery sherds and 12,312 animal bone pieces from the Site Garadna-Kovács tanya. A traditional comparison and evaluation of such an amount of finds, or their depiction in the form of spreadsheets or diagrams is quite impossible. On the other hand, a more important reason for using mathematical statistic methods was that I did not only

¹⁰ CLARKE 1971, 512–567.

want the presence of the structures to be perceptible, but also their absence. With data input based on the correct premises, previously unknown tendencies and coherences may reveal themselves.

Out of the mathematical statistic methods I employed correspondence analysis as well as cluster analysis, I completed the evaluations with Past version 3.0, while the principal component analysis and factor analysis was done in SPSS 22.0.

At the center of the dissertation there are the evaluations of the five settlement details. Their presentation and investigation was done according to the same methods: the description of the site and the excavation is followed by the systematic presentation of the settlement features and the find material along with their archaeological parallels. Based on the results, I investigated the data concerning the absolute chronology of the settlements, and determined the most probable period of their occupation. Furthermore, based on the archaeological parallels I attempted to draw the cultural connections of the settlements. In the case of the settlement details with sufficient information value such as Hernádvécse-Nagy rét sites no. 4, 5, 6 and 7 as well as Garadna-Kovács tanya site no. 1, I made a detailed investigation of inner chronology and transformations of settlement structure. Through the functional analysis of the settlement features and the find material I studied the places of domestic activities within the settlements and finally reconstructed the household pottery assortment. A detailed, comparative analysis of the settlements is included in the summary of the dissertation.

Results

Results gained through the processing and evaluation of the find material can be grouped, correspondingly to the structure of evaluation in the case of the settlements, according to chronology, cultural connections and functional analysis.

Results concerning chronology

The absolute chronological situation of the early Roman Age barbarian settlements of the Hernád Valley does not match precisely the time period given in the title of the dissertation. It is utmost problematic to define the beginning of the era. Archaeologically this geographical area is connected to the Košice/Kassa Basin, in which Slovakian research reckons with the find material belonging the so-called Daco-Celtic horizon in the 1st century AD.¹¹ In the region researched in the dissertation, beside a few objects of Celtic origin collected as stray finds and fragments of graphitic situlae, no artefacts came to light which would indicate a late Iron Age antecedent for the Germanic settlements. No examples of the Dacian type coarse ware with plastic decoration were found either. Within the settlement find assemblages I analysed, there was no obvious horizon datable to the 1st century AD. A possible explanation to this may be regional differences in the late Iron Age-early Roman Age settlement of the area.

I outlined the absolute chronological situation of the Roman Age settlements according to some chronologically sensitive artefacts, mostly of Roman origin. Most of the Przeworsk settlements of the Upper Tisza region and the Hernád Valley can be dated from the 2nd century AD.¹² In

11 BENADIK 1965; LAMIOVÁ-SCHMIEDLOVÁ 1969, 430.

12 JUREČKO 1983; GINDELE 2010; GINDELE 2013.

all of the settlements included in the dissertation, a clear horizon datable to the end of the 2nd century – turn of the 2nd and 3rd centuries could be documented. Some artefacts with a solid dating, such as a Sarmatian belt buckle, Roman 'Kniefibel' as well as fragments of *mortaria* and glassware, furthermore fragments of *terra sigillata* produced at the Rheinzabern and Westerndorf workshops can indeed be dated to this period,¹³ but only at their place of production, while a much longer period of use can be assumed in the Barbaricum. An even more problematic area is the dating of the settlements within the 3rd–4th centuries AD. The Almgren 158 type bent-foot fibulae,¹⁴ *terra sigillata* from the Pfaffenhofen workshop and bone combs with curved back¹⁵ do not mark a narrower time period within the late Roman Age. Based on the fragment of a Roman conical glass beaker¹⁶ and a two-sided bone comb, the settlement at Garadna-Kovács tanya was certainly occupied until the middle third of the 4th century AD. Due to its uninterrupted occupation, this settlement presented a fine basis for chronological investigations concerning the middle and late Roman Age (Fig. 4).

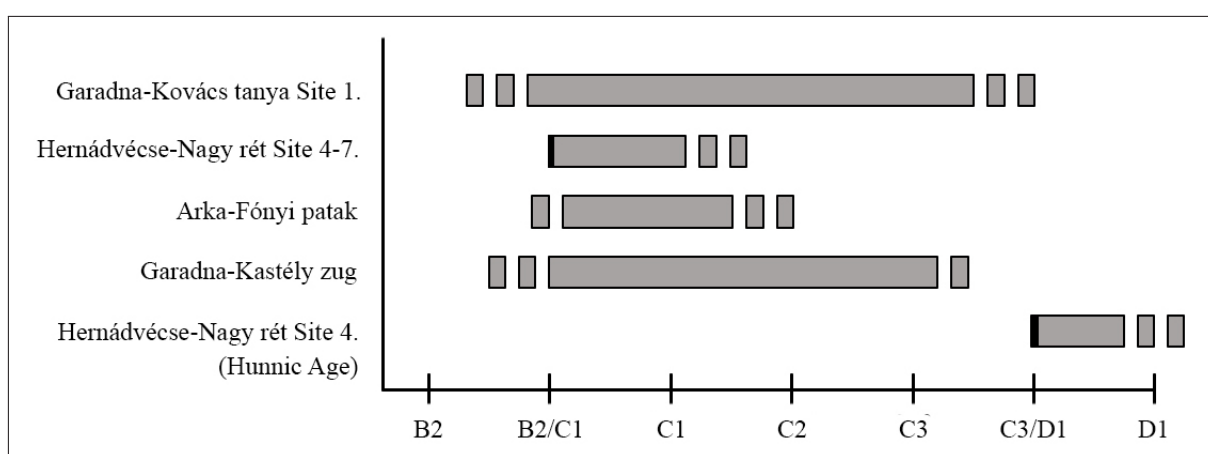


Fig. 4. Chronology of Przeworsk settlements of the Hernád Valley.

With respect to the investigated sites we can state that the settlements datable to the turn of the 2nd and 3rd centuries AD or to the first half of the 3rd century based on artefacts of Roman origin, may have lived far longer. According to the evaluation of the Garadna-Kovács tanya site, the northern part of the Hernád Valley was settled until the end of the late Roman Age.

The spread of wheel thrown pottery with stamped decoration plays an important role in the chronology of the Przeworsk settlements in the Carpathian Basin.¹⁷ It is noteworthy that only very few specimens of this type of ceramics came to light along the Hungarian section of the Hernád River, despite the short geographical distance from the pottery workshops and a large amount of stamped pottery that turned up in the find material of the contemporary settlements. The lack of stamped pottery may be of chronological importance, indicating that the life of the settlements presented in the dissertation ended about the very start of the production of this ceramic type. However, the evaluation of the find material from the Garadna-Kovács tanya

13 ISINGS 1957; GABLER 2006; KUZMOVÁ 2011.

14 SZYDŁOWSKI 1979.

15 TEJRAL 2008, Obr. 10–12.

16 DÉVAI 2012, 164.

17 GINDELE – ISTVÁNOVITS 2011.

site, which can be considered representative, shows that the lack of stamped ceramics in this case is due to a geographical and not a chronological deviation. As the pottery assemblage of this settlement lacks not only ceramics with stamped decoration, but the amount of pottery with incised, smoothed or plastic decoration is also minimal, this can probably be explained as a fashion phenomenon. This may be true in the case of all the settlements excavated along the Hungarian section of the Hernád Valley (Fig. 5).

Period \ Technology	B2-B2/C1-C1a	C1b-C2	C2-C3
Wheel-turned, fine			
Hand-made, fine			
Hand-made, coarse			
Wheel-turned, coarse			
Storage vessels			
Imports			

Fig. 5. The main type of finds according to periods.

Cultural connections

The best parallels of the finds from the Roman Age settlements included in the dissertation are to present in the find materials of the contemporary settlements from the Slovakian part of the Upper Tisza region, and more precisely from the Košice/Kassa Basin. The Hernád Valley, a geographically rather closed area, preserved archaic cultural elements much longer than the areas east of the Slovak Ore Mountains. The largest difference can be detected in the times following the formation of *Dacia provincia*: with the start of the production of wheel thrown pottery in the Barbaricum at the beginning of the 3rd century AD, pottery manufacturing in the geographical area of the Partium and Transsylvania transformed at a different pace.¹⁸ The products of those pottery workshops which emerged along the Hernád River at this same time and supplied the settlements in their close vicinity, constitute a discrete group. Fine,

18 GINDELE 2010.

hand-formed Przeworsk-type pottery survived until the end of the Roman Age, although in much smaller numbers as wheel thrown ceramics gradually gained importance. However, the proportion of this type of hand-made, fine pottery in the area was still higher than in the eastern regions. Change did not only show in pottery technology but also in ceramic forms and functions: the assortment of several types of hand-made pots, small bowls and mugs was gradually complemented with different types of wheel thrown vessels.

Aside from a single belt buckle from Garadna-Kovács tanya, there is no other evidence as to a direct connection to the Sarmatian settlement area. The explicit difference of the material culture does not only show in the pottery assemblage but also with respect to other types of objects.

Likewise, a loose connection can be traced toward the western, Germanic (Quad) settlement area. There are indeed some pottery forms and types of decoration, which are characteristic of the West-Slovakian territories, but the number of fragments is infinitesimal within the find assemblages.

Based on the find material, cultural connections between the Roman Empire and areas settled by the Przeworsk culture in the Carpathian Basin cannot be treated as uniform. There are far more artefacts of Roman origin in the find assemblages of East-Slovakian barbarian settlements than in those on the northwestern fringes of Dacia. *terra sigillata* export towards the Carpathian Barbaricum could have arrived in several waves, as it is shown even in the differences between the origin (workshops) of the *terra sigillata* vessels found in the Quad, Sarmatian and Przeworsk territories. As the chronological aspects of the use of Roman pottery manufactured at different workshops are quite unsettled when speaking of the Barbaricum, the differences in Roman import are more precisely expressed in the ceramic forms and types. The pottery assortment of Roman origin in the Upper Tisza region differs from that of the Sarmatian territory. Based on the detailed evaluation of the ceramics assemblage of the settlements excavated in the Hernád Valley, especially Garadna-Kovács tanya, we can state that from the viewpoint of use the form of the Roman vessels was more important than its origin. For example, small-sized vessels, such as Drag. 33 type cups and Drag. 52/54 type mugs only appeared in the settlements as long as the local, small-sized vessels formed part of the household pottery assortment anyway. But as these disappeared along with the transformation of the assortment, a large proportion of fine ware was made up of semicircular bowls complemented with Drag. 37 type *terra sigillata* bowls by the inhabitants of the settlements.

In contrary to the Slovakian Quad territory, Roman import is scant in the Upper Tisza region. However, Roman pottery forms exactly complement the local range of ceramic types. In the Przeworsk settlement area the production and spread of wheel thrown pottery started already in the first half of the 3rd century AD. A speciality of the Przeworsk culture is that wheel thrown pottery forms were shaped according to the local, hand-made fine ware. This means, that it were not the products of the new pottery workshops which influenced local handicraft, but potters rather tried to reproduce biconical forms – archaic elements of Germanic pottery – by means of the new technology. This process finally created a distinctive range of pottery forms, considerably different from that of the neighbouring territories.

According to the evaluation of the ceramic finds of the settlements along the Hernád Valley, these were inhabited by communities eager to preserve their strong local traditions. Cultural

connections were quite alive towards the Roman Empire, while the connections to other communities of the Barbaricum seem rather scant.

From the last quarter of the 4th century AD the cultural connections of the region in question show a definite transformation. The early Hun Age horizon of the settlement at Hernádvécse introduces a different direction of cultural connections than in the Roman Age, it belongs to the rare, newly founded settlements in the Upper Tisza region. The unique elements of the pottery assemblage as well as the forms of bowls have their best parallels in the find material of sites excavated in the territory of the former Pannonia *provincia* and Moravia. Settlement continuity, undisturbed in the Hernád Valley during the Roman Age, breaks at the turn of the 4th-5th centuries AD.¹⁹ The settlement detail from the early Hun Age excavated at Hernádvécse-Nagy rét site no. 4 bears evidence to the arrival of a newly arrived community with wide cultural connections spreading the whole Carpathian Basin.²⁰

The evolution of material culture, space management

The sites of the Przeworsk culture in the Carpathian Basin show strong microregional variance. With a detailed study of the archaeological material these differences became perceptible not only within pottery production but also with respect to settlement structure, space management and the household's pottery inventory.

The find assemblage of the Garadna-Kovács tanya site shows a community with steady cultural connections, settling the same place for a longer period. Within the ceramic assemblage fine hand-made Przeworsk ware has an important role with special, locally evolved forms, characteristic of the settlement. The same tendency is demonstrable in the case of hand-made coarse bowls and pots. According to the Roman Age trend, the wheel thrown pottery assortment of the settlement could have been produced in one of the – as yet unknown – pottery workshops in the vicinity, supplying a limited area. The proportions of pottery forms and types within the ceramic assemblage of the Garadna site as well as a few direct analogies show strong resemblance to the assortment of wheel thrown ceramics from the Slovakian Trstené pri Hernáde/Abaújnádasd settlement, one of the earliest Przeworsk sites in Eastern Slovakia according to our present knowledge.

The settlement unearthed at Hernádvécse-Nagy rét sites no. 4, 5, 6 and 7, datable to the turn of the 2nd and 3rd centuries AD, yielded a different material culture. Table ware consisted almost exclusively of hand-made fine, polished vessels, while wheel thrown pieces appeared only occasionally. The archaic, uniform shapes of fine ware, the absence of wheel thrown pottery indicating a lack of regional cultural connections as well as the small number of large storage vessels hints to a newly arrived community.

These two settlements fit well with the formerly circumscribed colonization horizons in the Carpathian Basin. The peoples populating the Upper Tisza region in the 2nd century were joined by new groups of immigrants during the Marcomannic Wars.²¹ The way of life and material culture of these two groups of people show clear differences which manifest in the

19 STANCIU 2008, Fig. 1–2.

20 Soós 2016.

21 GINDELE 2014.

archaeological material of the Garadna and Hernádvécse settlements described above. In summary, the two waves of settlement can now be demonstrated in the sites unearthed in Hungary as well.

Beside the different composition and cultural connections of the find materials, differences in the way of life and space management are also visible between the two settlements.

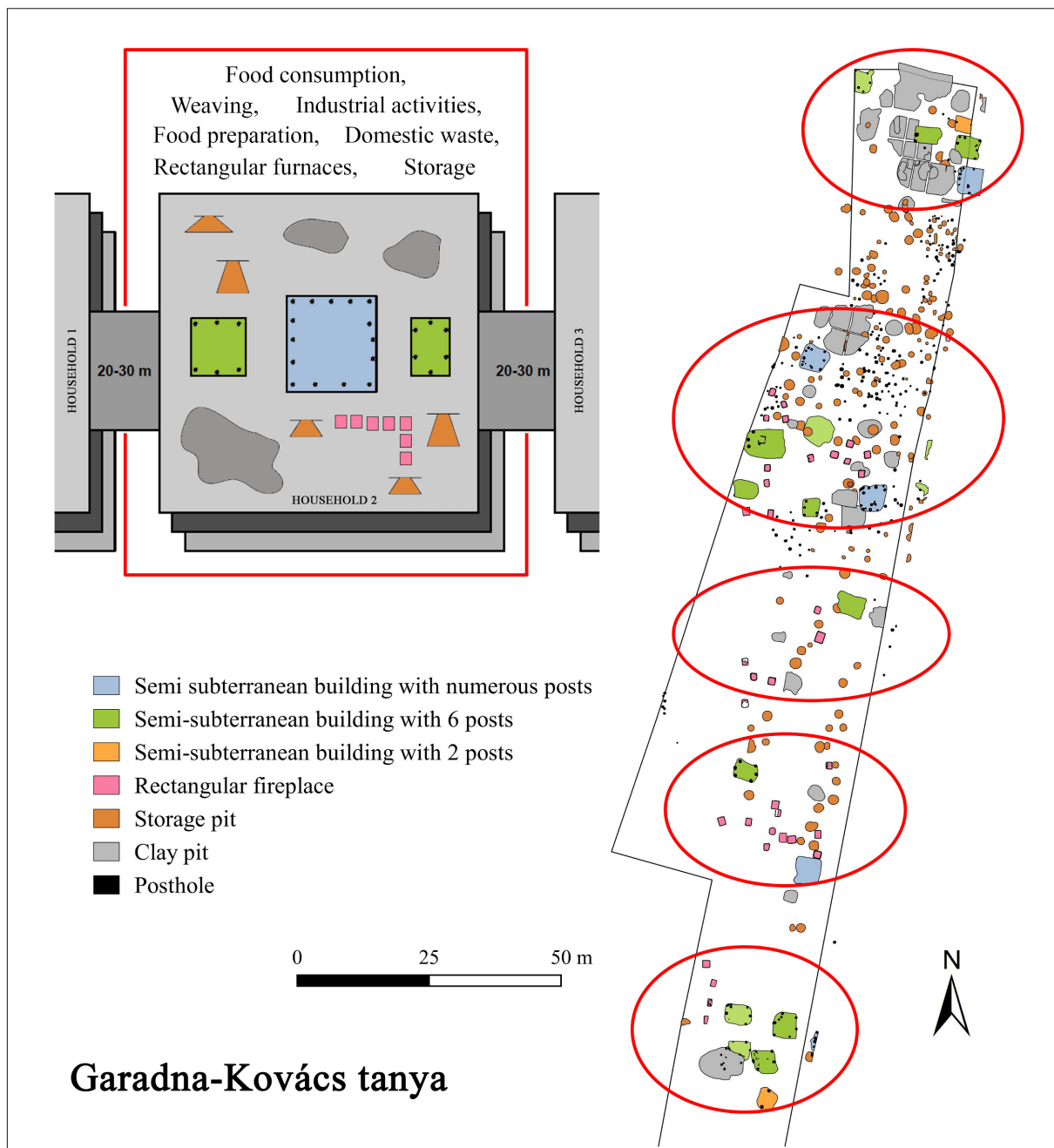


Fig. 6. Household model and the reconstructed household units in Garadna-Kovács tanya.

The Garadna-Kovács tanya settlement stretched approximately 580-600 metres south-north. The household units, situated 15-20-30 metres apart, consisted of one building supported by numerous posts, two or three buildings with six posts, as well as one large and two or three smaller clay pits filled with household waste. The rectangular fireplaces came to light in north-

south and east-west rows strictly within the territory flanked by the buildings. Cylindrical, beehive-shaped and cambered storage pits came to light among the other settlement feature groups. According to the functional analysis of settlement structure, this strictly defined space of 30-35 metres was the scene of household activities. Beside the preparation and consumption of food, weaving could take place in this same space. The scene of food preparation and storage did not clearly separate from where other domestic activities, such as leather processing were done. The animal bone waste accumulated during food consumption was deposited again elsewhere. All these activities took place within the territory defined by the groups of buildings. Single activities were in no connection with certain types of settlement features, therefore it is not possible to attribute them to single buildings or structures. Households were renewed at the same spot, indicating continuous space management (*Fig. 6*).

At the Roman Age site of Hernádvécse-Nagy rét a different settlement structure came to light. The household units were located along the Bársonyos Creek at about 180–200 metres from each other. In the centre of the household occupying an area of some 100–150 metres there was a larger aboveground structure supported by numerous posts and a semi-subterranean building with six posts. 40 metres both north and south of these a group of a larger and two smaller clay pits were situated, filled with domestic waste. The rectangular fireplaces were dug at this same distance from the centre, also in north-south rows but in a discrete group, separated from other features. Finally, another smaller building with either two or no posts and surrounding storage pits completed the domestic unit, situated some 30–40 metres from the clay pits. According to functional analysis, different domestic activities were carried out at separate locations within the households. Food preparation and consumption and weaving shows a connection also at this settlement, however, here these activities were carried out in the larger aboveground and semi-subterranean buildings supported by posts. Waste accumulating in the buildings was deposited in the clay pits, 30-40 away metres from the houses. Based on the find material collected from them, the smaller structures with two posts served as places for the preparation of food and maybe other industrial activities. The pits surrounding them were used for storing. In summary, at Hernádvécse space was managed so that each individual domestic activity was practiced at a distinct location. Aside from this, the Hernádvécse settlement resembles the Garadna-Kovács tanya site in the fact that the households were renewed within the same zone (*Fig. 7*).

The model I have created, focusing on function and space management, brought numerous results based on the settlements presented in the dissertation. One of the questions I have formulated at the beginning of my study concerned the possible identification of the function of semi-subterranean buildings (*Grubenhaus*). Hernádvécse-Nagy rét site no. 4 gave a fine basis for the comparison of the two constructions, in this regard, the settlement can be considered as a case-study. The functional analysis of the find material showed that the same activities were carried out in the larger aboveground buildings and the smaller semi-subterranean ones. This means we cannot exclude the possibility that the 15–20 square metres large semi-subterranean buildings supported by posts could have served as dwellings.

The original function of the rectangular fireplaces unearthed at the early Roman Age settlements of the Hernád Valley remains unclear. Based on the settlements excavated at Garadna-Kovács tanya and Hernádvécse-Nagy rét sites no. 4, 5, 6 and 7 these features could be the remains of a repetitive activity closely connected to the household and the group of people living in it.

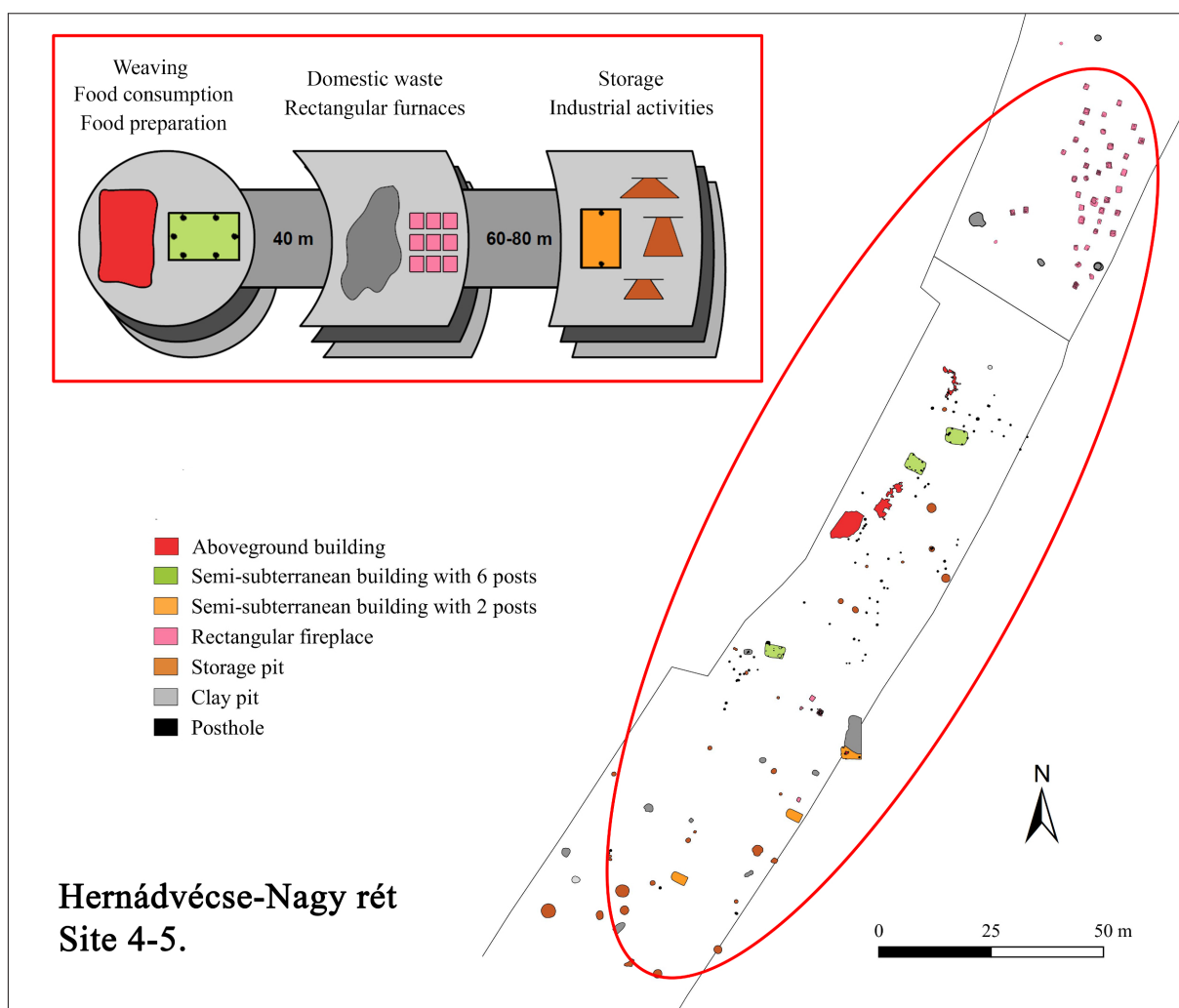


Fig. 7. Household model and the reconstructed household units in Hernádvecse-Nagy rét.

Irrespective of typology, the pottery spectrum shows a continuous change between the 2nd and 5th centuries AD. At the end of the 2nd century AD table ware was dominated by hand-made pottery. Beside bowls and smaller dishpans for the consumption of solid food, pots and mugs were also present for liquids, completed by wheel thrown jugs. The variability of vessel types is also perceptible in the case of cooking vessels: beside bowls and several types of pots, smaller dishpans and mugs, as well as lids were in frequent use. In the pottery assemblages of the settlement details with the earliest parallels small dishpans were still present both among table ware and cooking vessels, and oven pans also occur.

During the 3rd and 4th centuries AD the effacement of the consumption of solid food is perceptible. Small dishpans disappeared from the assortments of table ware and cooking vessels, and the proportion of bowls used in food preparation dropped significantly. However, pots and mugs for storing and preparing liquid food-stuff remained in use. The rise of the proportion of wheel thrown jugs within the pottery assortment is an obvious sign of the growing importance of liquid food-stuffs in contrast to solid food. At the same time there has been a considerable growth in the number of large storage vessels which can be traced until the end of the era and indicates an obvious increase in storing capacity.

Based on the early Hunnic Age settlement horizon at Hernádvécse, the transformation of pottery production took place at the turn of the 4th and 5th centuries AD. In contrary to material culture and cultural connections, eating habits did not change considerably. The rise of the importance of liquid storing vessels continued, the outstandingly high amount of jugs is characteristic of the period. The most conspicuous difference is the significant drop in the number of large storage vessels. In my opinion this phenomenon is in connection with the disappearance of storage pits and hints to a brand new strategy of storing food-stuffs.

To summarize the results of the dissertation, we can state that the aims set at the beginning of the survey were achieved. The study fills a gap in Hungarian research as it presents the systematic, up-to-date evaluation of the settlement history of a region which has received little attention so far. With the detailed processing of the find material, the Hungarian territories can be integrated with the international research of the Roman Age of the Upper Tisza region.

The other, methodological conclusion of the dissertation is likewise very important. Based on my survey we can now state that archaeological questions put in the correct way may be answered by the means of mathematical statistic methods in the case of this research area. I trust that the model I have created may be useful for future research, especially in the case of vast find assemblages of large-scale settlement excavations, the processing of which constituted a methodological problem until now.

With the help of my model focusing on functionality and space management, single domestic units and households within a settlement became distinguishable. It requires further research as to how these units correspond with the cognitive elements of the previously described concept of 'household' in archaeology. Although I used mathematical statistic methods in this analysis as well, it is rather the novel approach to the question which should be highlighted. A survey into the households can act as link between the research of the settlement as a whole and the evaluation of the find material, offering a new perspective for settlement research.

References

- BENADIK, J. 1965: Die spätlatènezeitliche Siedlung von Zemplín in der Ostlowakei. *Germania* 43, 63–91.
- CLARKE, L. 1971: *Analytical Archaeology*. London.
- CSENGERI, P. – PUSZTAI T. 2008: Császárkori germán település a Hernád völgyében. Germanic (Vandal) settlement of the Roman Period from the Hernád Valley (northeastern Hungary). Preliminary report on the excavation at Garadna-Elkerülő út, site No. 1. *Herman Ottó Múzeum Évkönyve* 47, 89–106.
- DÉVAI, K. 2012: *Késő római temetkezések üveg mellékletei Pannoniában. Üvegdedények a mai Magyarországtól területéről I*. Budapest (unpublished Phd-thesis).
- DONAT, P. 1988: Probleme der Erforschung kaiserzeitlich-völkerwanderungszeitlicher Haus- und Siedlungsformen zwischen Elbe/Saale und Weichsel. *Slavia Antiqua* 30, 1–43.
- GABLER, D. 2006: *Terra sigillata, a rómaiak luxuskerámiaja*. MOYΣEION 6. Budapest.
- GINDELE, R. 2010: *Die Entwicklung der kaiserzeitlichen Siedlungen im Barbaricum im nordwestlichen Gebiet Rumäniens*. Satu Mare.

- GINDELE, R. 2013: Die Problematik der barbarischen Siedlungen im nord-westen Rumäniens zwischen der Gründung der Provinz Dakien und den Markomannenkriegen. *Ephemeris Napocensis* 23, 11–30.
- GINDELE, R. 2014: Die Siedlung in Moftinu Mic – Merli tag. Probleme im Zusammenhang mit den Markomannenkriegen in den Siedlungen im Nordwesten Rumäniens. In: COCIȘ, S. (ed.): *Archäologische Beiträge. Gedenkschrift zum hundertsten Geburtstag von Kurt Horedt*. Patrimonium Archaeologicum Transylvanicum, Volume 7. Cluj-Napoca, 139–152.
- GINDELE, R. – ISTVÁNOVITS E. 2009: *Die römerzeitliche Siedlung von Csengersima-Petea*. Satu Mare.
- GINDELE, R. – ISTVÁNOVITS E. 2011: *Die römerzeitlichen Töpferöfen von Csengersima-Petea*. Satu Mare.
- ISINGS, C. 1957: *Roman glass from dated finds*. Groningen-Djakarta.
- JAHNKAHN, H. 1969: Dorf, Weiler und Einzelhof in der Germania Magna. In: OTTO, K.H. – HERRMANN, J. (eds.): *Siedlung, Burg und Stadt. Schriftliche Sektion Vor- und Frühgeschichte* 25. Berlin, 114–128.
- JUREČKO, P. 1983: Príspevok k riešeniu problematiky osídlenia východného Slovenska v dobe rímskej. *Historica Carpatica* 14, 277–384.
- KOTIGORSKO, V. G. 1995: *Ținuturile Tisei Superioare în veacurile III. î.e.n. – IV. î.e.n. (Perioadele La Tène și romană)*. Biblioteca Thracologica XI. București.
- KUZMOVÁ, K. 2011: Roman Pottery in Barbaricum: the case of terra sigillata in north-eastern part of the Carpathian Basin (Eastern Slovakia). *Anodos* 11, 171–184.
- LAMIOVÁ-SCHMIEDLOVÁ, M. 1969: Römerzeitliche Siedlungskeramik in der Südostslowakei. *Slovenská Archeológia* 17/2, 403–502.
- LEUBE, A. 1998: Haus und Hof im östlichen Germanien während der römischen Kaiser- und Völkerwanderungszeit. Ein Beitrag zur Forschungsgeschichte. In: LEUBE, A. (ed.): *Haus und Hof im östlichen Germanien*. Bonn, 1–13.
- LEUBE, A. 2009: *Studien zur Wirtschaft und Siedlung bei den germanischen Stämmen im nördlichen Mitteleuropa während des 1. bis 5/6. Jh n. Chr.* Römisch-Germanischen Forschungen Band 64. Mainz am Rhein.
- NÜSSE, H-J. 2014: *Haus, Gehöft und Siedlung im Norden und Westen der Germania Magna*. Berliner Archäologische Forschungen Band 13. Rahden–Westfalen.
- RATHJE, W. L. – WILK, R. R. 1982: Household Archaeology. *American Behavioral Scientist* 25, 617–639.
- SALAMON, Á. 1966: Észak-Magyarország császárkori történetének kutatása. *Antik Tanulmányok* 13, 84–87.
- SALAMON Á. – TÖRÖK Gy. 1960: Funde von Nordost-Ungarn aus der Römerzeit. *Folia Archaeologica* 12, 145–172.
- SOÓS, E. 2014: Garadna–Kastély zug. A római császárkori germán település újraértékelése. Garadna–Kastély zug. Reassessment of a germanic settlement from the Roman Age. *Communicationes Archaeologicae Hungariae*, 121–152.
- SOÓS, E. 2016: Kora hun kori edényégető kemence Hernádvécsén. A Hun Age pottery kiln from Hernádvécse. In: CSÉCS, T. – TAKÁCS, M. (eds.): *Beatus Homo Qui Invenit Sapientiam. Ünnepi kötet Tomka Péter 75. születésnapjára*. Győr, 649–669.
- SOUVATZI, S. G. 2008: *A social archaeology of households in neolithic Greece. An anthropological approach*. Cambridge.

- STANCIU, I. 2008: Etapa finală a epocii romane imperiale și începutul epocii migrațiilor în Barbaricum-ul din Nord-Vestul României. The final stage of the roman imperial period and the beginning of the migration in the Barbaricum from North-West Romania. *Ephemeris Napocensis* 18, 147–169.
- SZYDŁOWSKI, J. 1979: Die eingliedrigen Fibeln mit umgeschlagenem Fuss in Österreich im Rahmen ihres Vorkommens in Mitteleuropa. *Archaeologia Austriaca* 63, 21–29.
- TEJRAL, J. 2008: Ke zvláštnostem sídlištního vývoje v době římské na území severně od středního Dunaje. Zu den Besonderheiten der kaiserzeitlichen Siedlungsentwicklung nördlich des mittleren Donaupraumes. In: DROBERJAR, E. – KOMORÓCZY, B. – VACHŮTOVÁ, D. (eds.): *Barbarská Sídliště. Chronologické, ekonomické a historické aspekty jejich vývoje ve nových archeologických výzkumů (Archeologie barbarů)*. Brno, 67–98.
- VADAY, A. 1996: Roman Period Barbarian Settlement at the Site of Gyoma 133. In: VADAY, A. – BARTOSIEWITZ, L. – BEREZ, K. – CHOYKE, A. M. – MEDZIHRADSKY, Zs. – PUSZTA, S. – SZÉKELY, B. – VICZE, M. – VIDA, T.: *Cultural and Landscape Changes in South-East Hungary II.: Prehistoric, Roman Period Barbarian and Late Avar Settlement at Gyoma 133 (Békés Country Microregion)*. Budapest, 51–307.
- K. VÉGH, K. 1964: Koracsászárkori település maradványa a miskolci Szabadság téren. Frühkaiserzeitliche Siedlungsreste auf dem Szabadság tér in Miskolc. The relic of a settlement from the late period of the empire (Miskolc). *Herman Ottó Múzeum Évkönyve* 4, 45–62.
- K. VÉGH, K. 1975: Régészeti adatok Észak-Magyarország I-IV. századi történetéhez. Archäologische Beiträge zur Geschichte Nordostungarn im I-IV. Jh. u. Z. *Herman Ottó Múzeum Évkönyve* 13–14, 65–130.
- K. VÉGH, K. 1985: Császárkori telep Észak-Magyarországon. Kaiserzeitliche Siedlung in Nordungarn. *Archaeologiai Értesítő* 112, 92–108.
- K. VÉGH, K. 1989: Császárkori telep Miskolc-Szirmán. Kaiserzeitliche Siedlung in Miskolc-Szirma. *Herman Ottó Múzeum Évkönyve* 27, 463–500.