

THE BEGINNINGS OF A NEW RESEARCH PROGRAM – KAKUCS ARCHAEOLOGICAL EXPEDITION – KEX 1

GABRIELLA KULCSÁR¹ – MATEUSZ JAEGER² – VIKTÓRIA KISS¹ – GÁBOR MÁRKUS³ – JOHANNES MÜLLER⁴ – ÁKOS PETŐ⁵ – GÁBOR SERLEGI¹ – VAJK SZEVERÉNYI¹ AND NICOLE TAYLOR⁴

One of the areas of study for the Bronze Age research team of the Hungarian Academy of Sciences Research Centre for the Humanities Institute of Archaeology is the examination of Bronze Age settlement history in the Danube Valley in Central Hungary. Our goal is to create as complete a profile as possible of the Benta Valley to the west of the Danube and the Kakucs region to the east of the Danube. Fresh investigations in the area have been ongoing since 2010 through Hungarian, American, Polish and German cooperation, which include intensive field walks, metal detection, geophysical surveys, soil cores and archaeological excavations.⁶ Our essay briefly summarizing our first results is offered in memory of the area's greatest expert, Zsuzsa Miklós, whose aerial and on-site research and expert advice provided essential assistance to the success of our research.



Fig. 1: KEX 2014 – the international excavation team in the final days

HALF A MILLENNIUM IN THE MIDDLE OF THE CARPATHIAN BASIN – THE VATYA PERIOD

The settlements and cemeteries in the central area of the Carpathian Basin along the north-south axis of the Danube River in the Middle Bronze Age period of Hungary are characterized by the so-called Vatia style of ceramics. This period encompasses the four or five hundred years from 2000/1900 B.C. to 1500/1450 B.C. The research has interpreted the variety of ceramic and other material finds within the context of the time starting with the Nagyrév/Vatya transition then Vatia I-III and the Koszider periods. We know of numerous Vatia culture cemeteries and settlements of differing sizes and within varying natural geographical conditions in Eastern Transdanubia, the Danube Valley, the Danube-Tisza Interfluvium and the Middle Tisza regions. Recently several studies have analyzed cemeteries of various sizes,⁷ in addition to the complex, multi-tier settlement network comprising fortified multi-layered and tell settlements as well as open settlements of different sizes and character⁸ (Fig. 2). In regard to this period, one of the best researched

¹ Hungarian Academy of Sciences Research Centre for the Humanities Archaeological Institute, Budapest

² Adam Mickiewicz University in Poznań, Institute of European Culture in Gniezno, Poland

³ Archeodata 1998. Bt.

⁴ Christian-Albrechts-Universität, Kiel, Germany

⁵ Hungarian National Museum – National Heritage Preservation Center

⁶ The research is being performed with the support of the Hungarian Academy of Sciences, the National Cultural Fund and the National Science Center (Poland).

⁷ Most recently summarized in: Vicze, Magdolna: *Bronze Age Cemetery at Dunaiújváros-Duna-dűlő*. *Dissertationes Pannonicae* 4,1 (Budapest: L'Harmattan, 2011).

⁸ Most recently summarized in: Reményi, László: The Defensive Settlements of the Vatia Culture and the Central European Bronze Age Exchange System. In: *Enclosed Space – Open society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe*, ed. Jaeger, Mateusz – Czebreszuk, Janusz – P. Fischl, Klára *Studien zur Archäologie in Ostmitteleuropa* 9 (Poznań–Bonn: Bogucki Wydawnictwo Naukowe, Poznań, Dr. Rudolf Habelt GmbH, Bonn, 2012), 275–286; Szeverényi, Vajk – Kulcsár, Gabriella: Middle Bronze Age Settlement and Society in Central Hungary. In: *Enclosed Space – Open society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe*, ed. Jaeger, Mateusz – Czebreszuk, Janusz – P. Fischl, Klára, *Studien zur Archäologie in Ostmitteleuropa* 9 (Poznań–Bonn: Bogucki Wydawnictwo Naukowe, Poznań, Dr. Rudolf Habelt GmbH, Bonn, 2012), 287–351.



Fig. 2: Fortified settlements from the Vatyá Period (1) and cemeteries and settlements of the Kakucs region (2) (From: Szeverényi, Vajk – Kulcsár, Gabriella: *Middle Bronze Age Settlement and Society in Central Hungary*. In: *Enclosed Space – Open society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe*, ed. Jaeger, Mateusz – Czebreszuk, Janusz – P. Fischl, Klára, *Studien zur Archäologie in Ostmitteleuropa 9*. [Poznań–Bonn: Bogucki Wydawnictwo Naukowe, Poznań, Dr. Rudolf Habelt GmbH, Bonn, 2012], Fig. 1, Fig. 27)

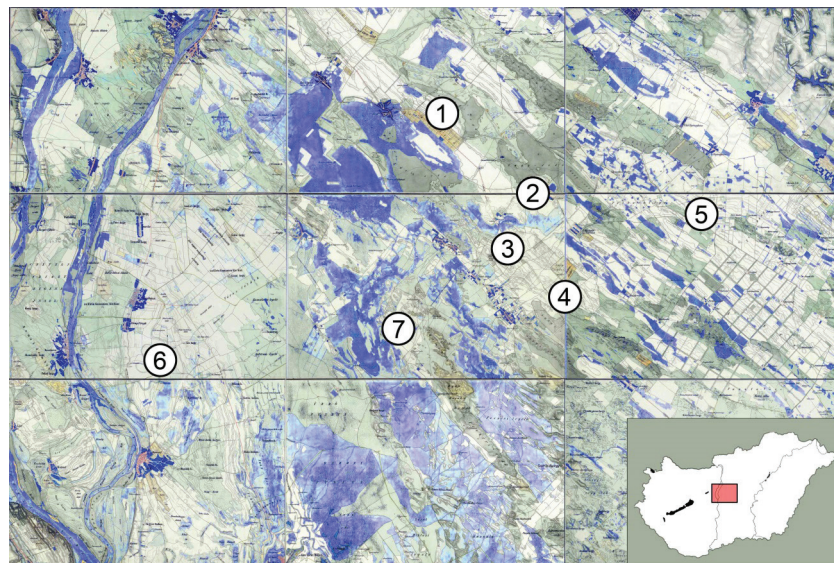
regions is Százhalombatta-Földvár and the Benta Valley to the west of the Danube.⁹ The number of known archaeological sites is also gradually increasing in other regions due to constant field walks and more excavations (e.g. in the areas of Dunaújváros, Perkáta and Solt). The publication of these and the material from settlements that have already been excavated will soon provide us, using the currently disjointed data, the opportunity to be able to sketch out the development and gradual spread of Vatyá period settlements as well as the system and dynamics of their organizational relationships that were transformed and modified over certain periods.

Across from the Benta Valley region, the Dabas and Kakucs area is one of the regions of the Vatyá settlement area that has been known for the longest time (Fig. 2/2). Research on the region goes back all the way to 1905. At that time Elek Kada excavated at Vatyapuszta on the outskirts of present-day Újlengyel (previously Újhartyán), one of the cemeteries of key significance for this period. This archaeological site gave its name to the Vatyá culture in Hungarian Bronze Age research. At this same time and afterwards numerous other burial sites came to light in the vicinity, at Ócsa, Dabas, Tatárszentgyörgy, Bugyi, Áporka, Dömsöd, Inárcs, Ráckeve and Szigetszentmiklós. Despite this, we knew of hardly any settlements in the area up until the recent past (such as Soroksár-Várhegy), and these did not really come to the forefront of the research. The multi-layered settlement on Balla Hill on the outskirts of Kakucs became known at the beginning of the 1990s,¹⁰ and this may have been one of the centers of this narrowly defined region in

⁹ Amongst others: <http://szazhalombattaexcavation.info/>; Earle, Timothy – Kristiansen, Kristian (eds): *Organizing Bronze Age Societies. The Mediterranean, Central Europe, and Scandinavia Compared* (Cambridge: Cambridge University Press, 2010).

¹⁰ Kulcsár, Gabriella: Régészeti emlékek Inárcson és környékén (Archaeological Remains in Inárcs and Its Vicinity). In: *Inárcs története 1263–1993* (History of Inárcs 1263–1993), ed. Czagányi, László (Inárcs: Inárcs község, 1995), 41–81; Kulcsár, Gabriella: Előzetes jelentés Kakucs-Balla-domb középső bronzkori tell-településének leletmentő ásatásáról 1992–1993 (Adatok Dél-Pest megye bronzkori településtörténetéhez) (Preliminary Report on the 1992–1993 Rescue Excavations on the Middle Bronze Age Tell Settlements at Kakucs-Balla Hill [Data on Southern Pest County's Bronze Age Settlement History]). *Pest Megyei Múzeumi Füzetek* 4 (1997), 343–353.

Fig. 3: Hydrographic conditions of the Kakucs region on the basis of the maps of the Second Military Survey – 1: Ócsa, 2: Kakucs-Balla-domb, 3: Kakucs-Turján mögött, 4: Dabas-Dabasi szőlők, 5: Újlengyel-Vatyapuszta, 6: Dömsöd-Leányvár, 7: Dabas-Belső Mántelek



the first half of the second millennium B.C.¹¹ As a matter of fact, this is why we call it the Kakucs region, or rather this is why we called the new research program affecting the region the Kakucs Archaeological Expedition, or KEX for short. The objective of the program is the systematic investigation of the area linked to a palaeo-channel of the Danube leading to the fords of the river across from the former centers found on the outskirts of present-day Százhalombatta and Dunaújváros that were of crucial strategic significance. Here, on the banks and islands accompanying the streams that are no longer always visible, numerous Middle Bronze Age settlements and burial sites of varying sizes are hidden (Fig. 3).

THE LANDSCAPE IN THE KAKUCS AREA

The area examined by us is the region to the south of Budapest on the left bank of the Danube down to Dömsöd and bounded on the east by the line of Soroksár-Gyál-Kakucs¹² (Figs 2–3). The ancient hydrographical portrait of the Pest alluvial cone lowlands bisected by the Danube significantly differed from that of today. The Danube's fan-shaped alluvial cone next to Pest indicates that the direction of flow in the Pleistocene and the beginning of the Holocene period gradually changed and reached its present channel through a 90 degree turn to the west. While the Danube changed its stream step by step and built up its terraces, the surface of the area was interwoven with various braided streams and side branches.¹³

The remains of one of the Danube's ancient branches, which ran to the south of Budapest between Ócsa and Inárcs, was referred to by the name *Sárvíz* or the *Great Sár River* in 13th century deeds.¹⁴ On the basis

¹¹ Szeverényi, Vajk – Kulcsár, Gabriella: Middle Bronze Age Settlement and Society in Central Hungary. In: *Enclosed Space – Open society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe*, ed. Jaeger, Mateusz – Czebreszuk, Janusz – P. Fischl, Klára, Studien zur Archäologie in Ostmitteleuropa 9 (Poznań–Bonn: Bogucki Wydawnictwo Naukowe, Poznań, Dr. Rudolf Habelt GmbH, Bonn, 2012), 287–351; Jaeger, Mateusz – Kulcsár, Gabriella: Kakucs-Balla-domb. A case study in the absolute and relative chronology of the Vaty culture. *Acta Archaeologica Academiae Scientiarum Hungaricae* 64 (2013), 293–324.

¹² Administratively this is the southern district of present-day Pest County.

¹³ Up until regulation projects of the 19th and 20th centuries changes in the Danube's direction of flow, the development and cutting off of meanders, the formation of shoals and the wandering and creation of branches or the partial sedimentation of old branches were quite common. For a summary see: Czagányi, László: *Inárcs története 1263–1993* (History of Inárcs 1263–1993). (Inárcs: Inárcs község, 1995); Czagányi, László: *Bugyi község története I–II*. (History of the Town of Bugyi I–II) (Bugyi: Bugyi község, 2000). Historic ecological/environmental archaeological examinations in connection with the Bronze Age in the area are presently only partially at our disposal. Veres, Zsolt – Sümegi, Pál – Töröcsik, Tünde: Az ócsai láp archeomalakológiai vizsgálata – A *Pomatias elegans* első radiokarbon adatokkal korolt holocén előfordulása Magyarországon (The Archaeomalacological Examination of the Ócsa Mire – The First Incidence in Hungary of *Pomatias Elegans* in the Holocene Dated with Radiocarbon Data). *Archeometriai Műhely* 2011/2, 181–196.

¹⁴ See footnote 11.

of Antal Balla's hydrographic chart of 1793, the image emerges of a marshy river with a wide flood plain from Budapest-Soroksár all the way to Kalocsa. Some of the branches in this enormous wetland preserved their fluvial character for a long time. 18th century maps depicted an unbroken land of lakes and marshes on the western outskirts of Ócsa, Inárcs, Kakucs and between Bugyi, Sári, Gyón, Kunszentmiklós and Dömsöd. Only a few sand banks of varying sizes provided an opportunity for settlement, which one could reach by boat for most of the year. Starting from the 1910s and 1920s the problem of drainage in the area was resolved through an extensive system of man-made canals. This was also when the 150 km long Danube Valley Main Canal was constructed. One of the main lessons from the knowledge of natural geography is that these branches of the channel fundamentally determined the area's former appearance.

MIDDLE BRONZE AGE SETTLEMENT PATTERN ON THE LEFT BANK OF THE DANUBE – THE KAKUCS REGION

Following these antecedents that were determining factors from many aspects, further research in this promising region was continued with new impetus from 2010, now in the context of a larger research program. The basic idea was that in connection with the previous Benta Valley research we examine the Bronze Age use of the landscape in a Central Transdanubian region to the west and a region to the East of the Danube. A research program employing the same methods in the three regions makes it possible to compare the determining elements and aspects in the use of the landscape and social organization. The research was begun in conjunction with Timothy Earle¹⁵ who directed the Benta Valley project.¹⁶ The research team from Adam Mickiewicz University in Poznań under the direction of Janusz Czebreszuk and Mateusz Jaeger joined our initiative in 2010. In conjunction with the first joint Benta Valley field work we also began research in the Kakucs region.

Through a fortunate accident of fate, Zoltán Czajlik and Zsuzsa Miklós had just completed aerial archaeological research in the region between 2007 and 2010, and also at this time the Google Earth satellite images became more widely available.¹⁷ In addition to taking aerial photographs Zsuzsa Miklós also performed field walks and surveys on the archaeological sites.¹⁸ Thanks to these investigations three new settlements became known within a short period of time: Kakucs-Turján mögött, Dabas-Dabasi Szőlők and



Fig. 4: Google Earth image of the Dömsöd-Leányvár site



Fig. 5: Google Earth image of the Dabas-Dabasi szőlők site

¹⁵ Northwestern University, Department of Anthropology, Evanston, IL, USA

¹⁶ Earle, Timothy – Kiss, Viktória – Kulcsár, Gabriella – Szeverényi, Vajk – Polányi, Tamás – Czebreszuk, Janusz – Jaeger, Mateusz – Pospieszny, Łukasz: *Bronzkori tájakon a Benta völgyében / Bronze Age Landscapes in the Benta Valley. Magyar Régészet / Hungarian Archaeology 2012/4*; Earle, Timothy – Kulcsár, Gabriella – Kiss, Viktória – Serlegi, Gábor – Szeverényi, Vajk: *A Benta-völgyi bronzkori kutatások új eredményei / Recent results from the Bronze Age into the Benta Valley. Magyar Régészet / Hungarian Archaeology 2014/2.*

¹⁷ A summary of the archaeological sites with further literature: Szeverényi, Vajk – Kulcsár, Gabriella: *Middle Bronze Age Settlement and Society in Central Hungary*. In: *Enclosed Space – Open society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe*, ed. Jaeger, Mateusz – Czebreszuk, Janusz – P. Fischl, Klára. Studien zur Archäologie in Ostmitteleuropa 9 (Poznań–Bonn: Bogucki Wydawnictwo Naukowe, Poznań, Dr. Rudolf Habelt GmbH, Bonn, 2012), 287–351.

¹⁸ In connection with the research program studying the castles of Pest County.

Dömsöd-Leányvár (Figs 4–6). The continuous field walks as well as the research and reports of our volunteer helpers (including in particular István Greman) fundamentally altered the view we had developed of the region's history. It came to light that in addition to the previously known graves and cemeteries, a series of settlements of varying intensity, with varying structures and presumably different functions could be found here. Due to this it became clear that research on the area was not just a promising idea, but demanded further systematic analysis.

The starting point was the investigation of a central settlement comprised of two large hills – the sites of Kakucs-Balla domb and Szélmalom-domb – on the southwestern outskirts of Kakucs rising from the marshes of the former Tó-környék (lake region) that is on the left bank of the Danube Valley Main Canal that now drains the area. We identified a multi-layered settlement here during the rescue excavations performed between 1991 and 1993. In 2010 the opportunity arose to perform ten radiocarbon measurements on the finds from the settlement layers together with our Polish colleagues. The settlement existed for about five hundred years, from the late Nagyrév/early Vatyá period all the way to the Vatyá III/Vatyá III-Koszider period, which was also confirmed by the absolute chronological data (2000/1900–1600/1500 B.C.).¹⁹

Also in 2010 we became more closely familiar with the Kakucs-Turján mögött archaeological site, just 3 km as the crow flies from the Kakucs-Balla domb site, and the Dabas-Dabasi-Szőlők archaeological site nearly 6 km away, as well as the Dömsöd-Leányvár settlement. Field walks also verified that we were dealing with Middle Bronze Age settlements surrounded by one or more ditches in all three cases. Together with our Polish colleagues we performed a magnetic survey on nearly 1.5 hectares at the Kakucs-Turján mögött site. As a result of this the image of a settlement with a tripartite structure divided by ditches emerged, with traces of dwellings appearing in the central portion. In 2012 Gábor Márkus also joined the research team and he performed a magnetic survey over nearly 12 hectares on the settlement surrounded by ditches at Dömsöd-Leányvár and the external settlement connected to this, which we supplemented with systematic field walks.



Fig. 6: Google Earth image of the Kakucs-Turján mögött site

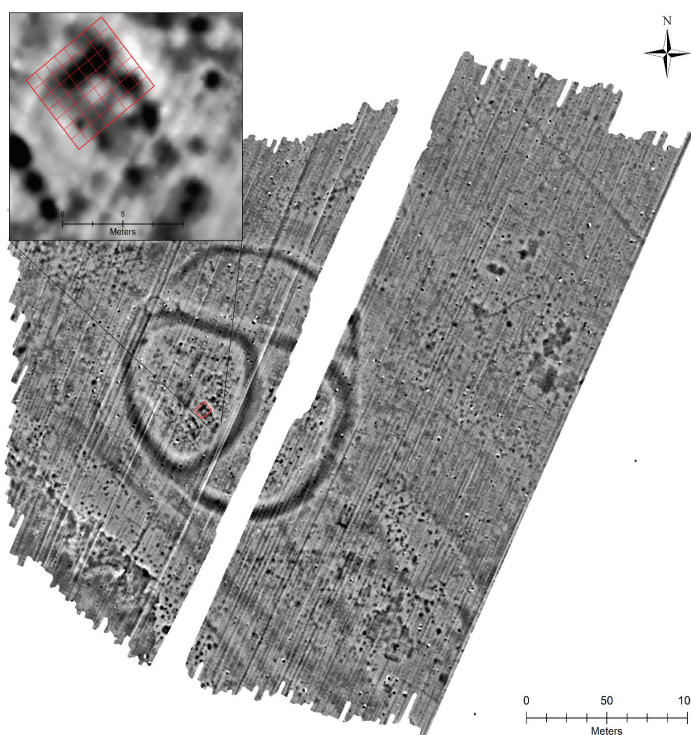


Fig. 7: The Kakucs-Turján mögött site and the magnetic survey image of the house excavated in 2013–2014

¹⁹ Jaeger, Mateusz – Kulcsár, Gabriella: Kakucs-Balla-domb. A case study in the absolute and relative chronology of the Vatyá culture. *Acta Archaeologica Academiae Scientiarum Hungaricae* 64 (2013), 293–324.

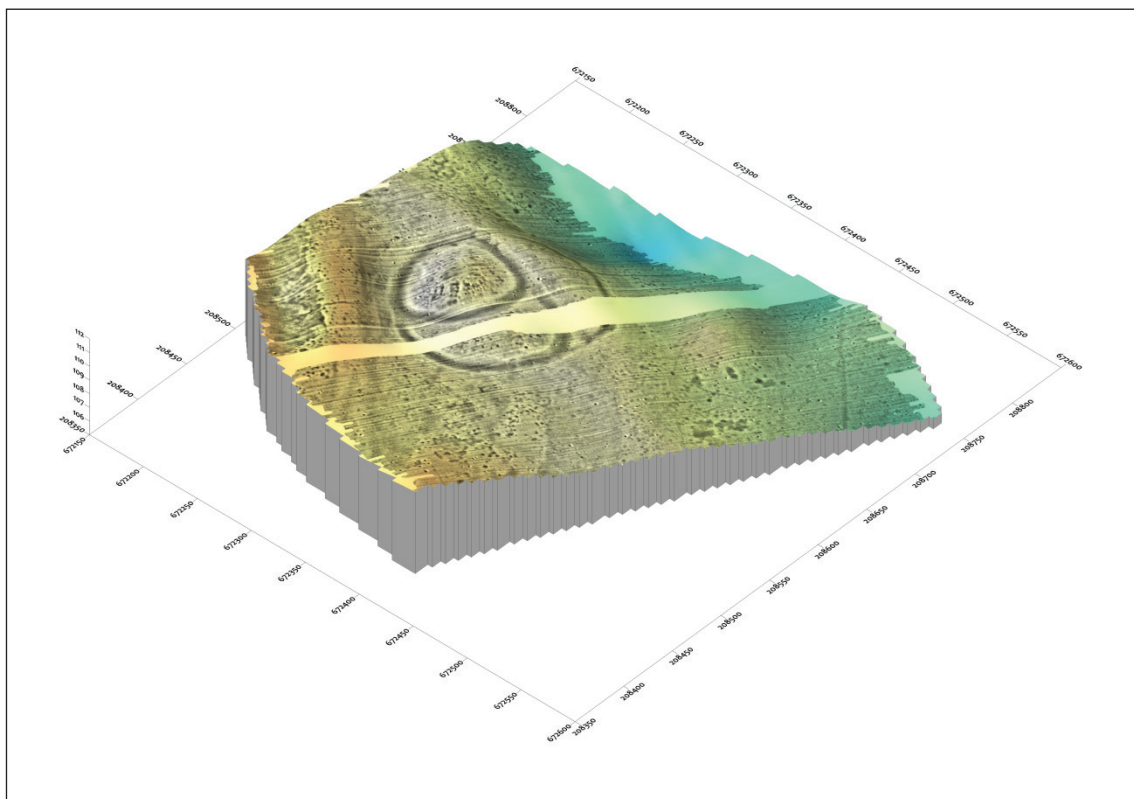


Fig. 8: 3D reconstruction made on the basis of the magnetic survey of the Kakucs-Turján mögött site

Following this, the idea took shape for us to examine the fortified settlements of the area through a multifaceted program. Our joint grant proposal submitted by Mateusz Jaeger to the Polish Research Fund received support for the period between 2013 and 2016. The research team was further supplemented by our colleagues from the Christian-Albrechts Universität in Kiel, under the leadership of Johannes Müller. Within the framework of the grant there is the opportunity to perform further magnetic surveys on 3-4 settlements and archaeological excavations at the Kakucs-Turján mögött site.

KAKUCS-TURJÁN MÖGÖTT²⁰

Prior to the archaeological excavations on this site, Gábor Márkus performed a fresh magnetic survey over 4.5 hectares in the spring of 2013 (Figs 7–8). Taking these results into account, work was begun on the central section of the settlement by the research teams from Poznań and Budapest in August of 2013. Here we selected one of the most promising anomalies, which indicated a house. We began the



Fig. 9: KEX 2014 – finds from this year from the Kakucs-Turján mögött site – meeting of West and East along the Danube

²⁰ The research is being supported by the National Science Center (Poland); project no.2012/05/B/HS3/03714; the National Cultural Fund (3234/261) and the Hungarian Academy of Sciences' Mobilitás grant and Seed Money Funding provided by the Graduate School 'Human Development in Landscapes', University of Kiel.

excavation with an 8×7 meter trench at the northern half of this house that was oriented in a northwest-southeast direction. Following the promising results of the first year, in August of 2014 we continued the work on the southern half of the house as well, joined by the research team from the University of Kiel led by Nicole Taylor, with an 8×6 meter trench (*Fig. 9*). In the forthcoming year, in addition to the full excavation of the house, we are also planning test excavations on the exterior sections of the settlement. The further examination of this site with a rather complex internal structure will be supplemented through the support of the National Cultural Fund. In the context of this we will have the opportunity to perform systematic field walks and in collaboration with the research team from the Hungarian National Museum's National Heritage Preservation Center led by Ákos Pető we will scientifically study the settlement's soil through coring. On the basis of the preliminary results it can be stated that the village was once surrounded by a 4-4.5 meter deep ditch. The evaluation of the internal functions of the settlement sections also demands further examination.

RECOMMENDED LITERATURE

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