AKADÉMIAI KIADÓ

Acta Archaeologica Academiae Scientiarum Hungaricae

72 (2021) 1, 215–233

DOI:
10.1556/072.2021.00010

ORIGINAL RESEARCH PAPER

Chronological observations and the origin of the appearance of red slip coating on Árpád Age cauldron fragments in the light of the excavations at Végegyháza, Zsibrik-domb site

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Received: June 19, 2020 • Accepted: September 19, 2020

ABSTRACT

Between 2003 and 2008 a research excavation was undertaken at the site of Végegyháza, Zsibrik-domb, also known as Kaszaper Templom-domb (medieval Pereg). The present paper describes the analysis results of the Árpád Age and the late medieval period features and the artefacts within. The pottery assemblage retrieved from the investigations offers new insights into the ceramic traditions of the Árpád Age within the area, whilst the recovery of baking bell fragments of the same date constitutes some of the best evidence for its use extending into the Árpád Age within Southeast Hungary. Analysis of painted cauldron fragments recovered from the features suggests the tradition originated in the Balkans and was brought to the area by a Slav community towards the end of 12th and beginning of 13th century. Textual evidence suggests that the area was inhabited again by a South Slav community in the 17th century. The recovery of fragments of a different type of baking bell from the late medieval archaeological assemblage corroborates these few written sources. The faunal remains analysis shows that the economy practices of the studied settlement based on animal husbandry and were similar to those of other Árpád Age rural settlements within Southeast Hungary.

KEYWORDS

Végegyháza, Zsibrik-domb, Árpád Age, clay cauldron with red slip, baking bell

ARCHAEOLOGICAL BACKGROUND

Medieval Church and cemetery excavated at the Végegyháza, Zsibrik-domb (Kaszaper, Templom-domb) site first by Alajos Bálint in 1937 and re-excavated by Zoltán Rózsa in 2003 (Fig. 1.1).[1] The following year research excavation continued with the result of Late Bronze Age, Árpád Age and late medieval features were uncovered.[2] The results of the 2004 research and the analysis of the aerial and satellite photographs exposed the presence of a fortified stronghold surrounding the Templom-domb site, covering an area of approximately 350 m by 250 m.[3] New investigations conducted in 2007 with the aim of the localisation of the fortified medieval Pereg settlement, mentioned in the manuscript of Master Roger (Rogerius

[1] Bálint 1938; Lichtenstein–Rózsa 2008.

[2] Lichtenstein–Rózsa 2005, 236. The investigations were supported by the National Cultural Fund.

[3] Lichtenstein–Rózsa 2008.

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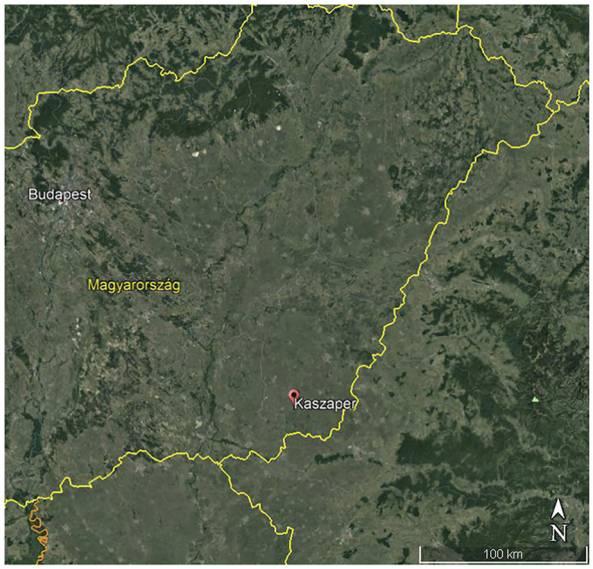

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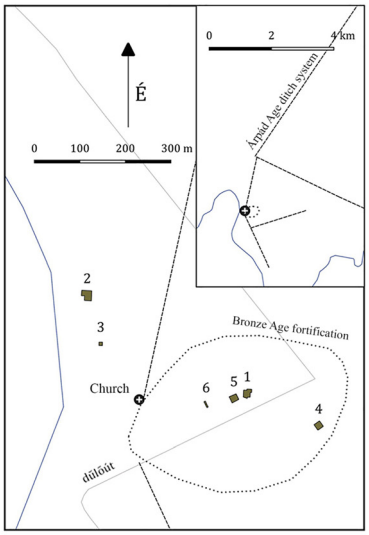

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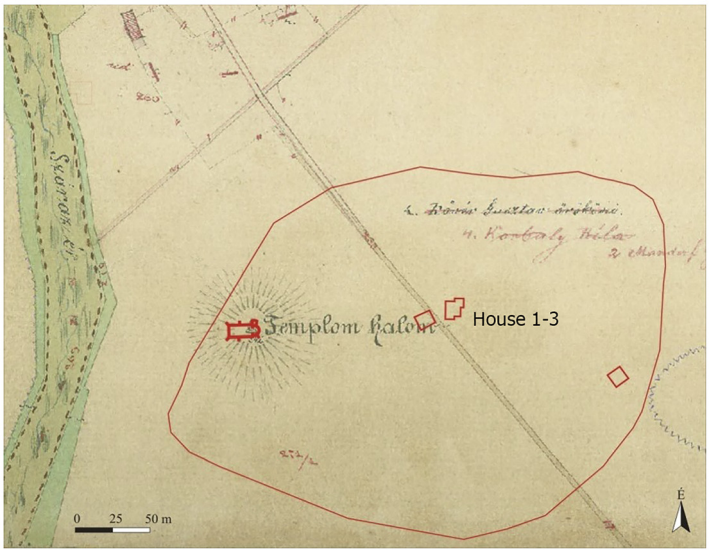

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Fig. 1. 1: The location of the study site in Hungary; 2: Location of trenches in 2004 and the Late Bronze Age fortification; 3: Location of Area 1, 4–5, Houses 1–3 and the medieval Church inside the Late Bronze Age fortification

of Apulia), the archdeacon of Várad (today Oradea in Romania) at the time of the Mongol Invasion of Hungary in 1241–42.[4] The archaeological evidence dated the initial fortified stronghold in the Gáva culture (Late Bronze Age period), however revealed a much larger system of linear ditches in the surrounding area.[5] A geophysical survey and analysis provided more details of the complex structure of the fortification and ditch system.[6] In 2007 the excavation of three open areas revealed more Late Bronze Age, Árpád Age and late medieval period features on the site.

EXCAVATION IN 2004

The first area measured 10 × 10 m in the middle of the fortified settlement, inside the perimeter of the Árpád Age longitudinal ditches. During the excavations this area was extended in west, east and south directions (Fig. 1.2 Area 1). A Late Bronze Age pit, an Árpád Age semi-subterranean house, two ditches and a late medieval semi-subterranean house excavated on a surface of 128 m^2. The second area was north of the Templom-domb, close to the Száraz-ér river but outside the Bronze Age stronghold and the perimeter of the Árpád Age ditch system (Fig. 1.2 Area 2). The area measured 10 x 10 m, however during the excavations was extended in both north and north-west directions, covering a surface of 190 m^2 together. The remains of a poorly preserved, late medieval house was observed immediately underneath the plough level, whilst a medieval semi-subterranean house and four late medieval and undated ditches were excavated.[7] Only six sherds have been dated securely and other six conditionally to the Árpád Age within the assemblage. The third area was located near the Száraz-ér riverbank, measuring 5 x 5 m, covering a surface area of 25 m^2. This area contained no archaeological features (Fig. 1.2 Area 3), howewer nine Árpád Age residual pottery sherds were collected and deposited at the museum.

EXCAVATION IN 2007

In this year, alongside the section excavations of the fortification, three additional area were investigated (Area 4–6, Fig. 1.2). All of these areas were in the middle of the stronghold, inside the perimeter of the Árpád Age longitudinal ditches. Area 4 was 100 m^2 (10 x 10 m) and Area 5 was 110 m^2 (11 x 9m), both of which contained Árpád Age and medieval semi-subterranean houses and ditches. Area 6 was 12 m^2 (6 x 2 m) and contained no archaeological features.

[4]Szabó 2010, 129–157, 211–213.

[5]Rózsa 2010.

[6]Milo *et al.* 2009.

[7]The medieval and late medieval features are to be published in a separate study.

ÁRPÁD AGE HOUSES AND FEATURES

The present paper only describes the analysis results of the Árpád Age houses and features of the site. The main parallels to the 11–13th centuries semi-subterranean houses are found in digs from the surrounding geographical region, however they are mainly unpublished.[8] The types of ovens and their locations in the houses, the features structural appearance and their proportion correspond to the general image of the surroundings of an Árpád Age village known from excavations.

House 1, Feature 2004/1 (Fig. 2 and 3)

A trapezoid-shaped semi-subterranean house (3.8 x 2.5–3.2 m), the floor level was 1 m deep from the current surface. The bottom of the house was dug to a depth of 0.2 m in the natural substratum. The longitudinal axis was E–W and its vertical walls consisted of yellow, sometimes white, clay in patches. The hard-trodden floor level could easily be separated from the fill. A fan-tail-shaped oven (0.8 x 1.2 m) was made on the top of the floor. In the middle of the west side, slightly towards the south corner, a funnel-shaped posthole (diameter of 0.5 m) was observed outside the line of the wall. Large quantities of daub lumps found in the fills. The daub lumps were not connected to the north wall of the house as a 0.3–0.4 m hiatus appeared between them. The uppermost fragments of the collapsed wall were burnt black and hard, whilst the fragments below this were brown and crumbling. There was no trace of burned daub fragments with wattle imprints, however smoothed surfaces have been observed on some fragments. The majority of the Árpád Age pottery sherds and the animal bone were found in this loose, charcoal-rich layer with daub fragments. This layer can easily be followed to the remains of the oven. Only a few finds were collected from the floor level.

The finds from this house were mostly pottery and can be divided morphologically into two main groups. Almost 50% pots and 50% cauldron fragments of the assemblage, however the forms and material of the pots are much more varied. The pots and their fragments can be divided into five pottery groups in terms of their fabric and characteristic style (Fig. 3.1–7). Most distinctively are two pottery sherds, bright orange in colour, which differ greatly from the rest of the assemblage. These two fragments were from a vessel produced on a slow wheel, the raw material tempered with sand grains and the surfaces smoothed. They are bright orange both inside and out, though the fracture surface is light grey in colour, and with an everted rim and grooved lid (Fig. 3.4–6). Red-orange coloured pottery sherds published from the excavations of Kajárpéc and the site of Sárvár-Faképi-dűlő.[9] Similar colour pottery sherds can be found in the Sáp village excavation material deposited in the Museum of Szentes. The second pottery group of vessels were formed on wheel using clay tempered coarse-grained sand and small

[8]Méri 1964.

[9]Takács 1993, 218; Pap 2013, 246.

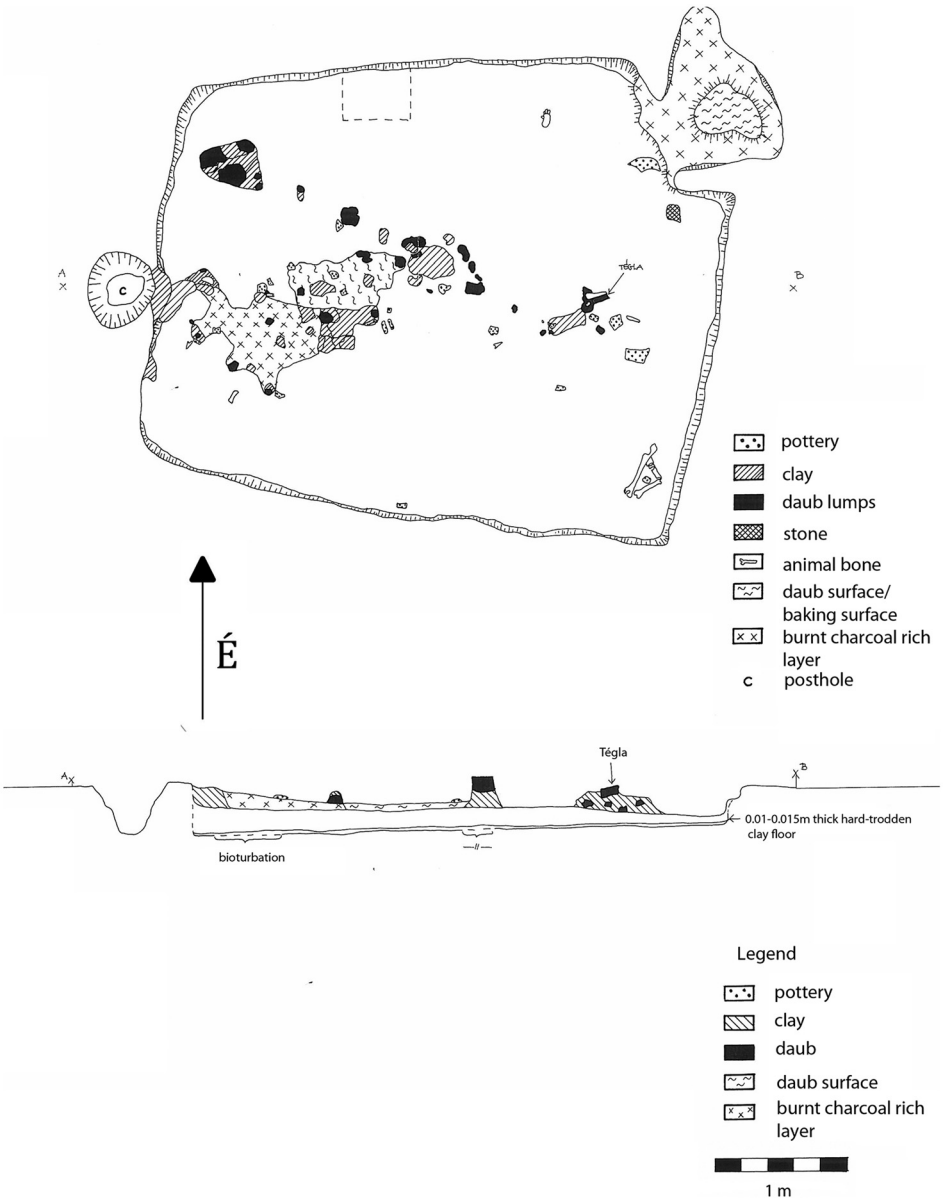

Fig. 2. Plan and section of House 1

pebbles, the surface covered by a clay-slip coating (engobe). This produced a smooth surface; however this layer can easily flake off. The most characteristic feature of these vessels is the strongly broadening shoulders with a simple, rounded rim. The third pottery group of vessels were coarse tempered, with an almost horizontally everted rim. The fourth group of vessels were tempered with a fine-grained sand, profiled and slightly visibly grooved on the surface of the rim of the lid. The fifth group of these vessels has unique characteristics of a fabric tempered with lime and small pebbles, and a smooth surface with vertical stripes. These vessels are thick-walled, burnt, dark-grey in colour on the inside and light brown outside. No wall fragments have been found from this type of pottery; therefore their form and rim cannot be described.

A particularly significant group amongst the pottery assemblage is the cauldron fragments (Fig. 3.8–9). All the cauldron fragments were made on slow wheel, tempered with gritty sand and mica, their cross-section show multi layers. The cauldron fragments are characterised by a flat form, side walls of low to medium height with a rim thickening towards the outer surface of the vessel and with broad suspension holes. It is worth mentioning that some fragments in the assemblage do not present any sign of red slip, whilst some matching sherds still have clearly visible red slip, perhaps suggesting that it has completely worn away on those with no remnants. It is very likely that all of the vessels originally had red slip, which can be observed on the rim, the inner side on the rim, sometimes the outer surface of the vessel and, very rarely, on the inner side. At the beginning of the analysis the cauldron fragments were separated by those with and without red slip yet by the end of the study all cauldron fragments were assigned to one group. The finds of this house also included a spherical and a broken disc-shaped spindle-whorl, made from the same

Fig. 3. 1–9: Pottery from the fill of House 1

material as most of the pottery fragments. A horse left forelimb (from the radius to the third phalanges) was recovered in anatomical order at the south-eastern corner of the house. The horse leg had been deliberately bent and arranged in a triangular-shaped position.

House 2, Feature 2007/1 (Fig. 4–10)

A rectangular-shaped semi-subterranean house (3.3 x 3.0 m), the floor level was uneven with spots of features. Its depth was 0.92 m from the disturbed surface and was detected at the depth of 0.7 m from the present surface. Spots of three postholes could be observed in its east-west aligned longitudinal axis (0.4 x 0.3 m; 0.4 x 0.35 m and 0.4 x 0.15 m in diameter). A rectangular-shaped sitting pit with rounded corners was found in the south-east corner (0.15 m deep). In the middle of both shorter sidewalls fantail-shaped clay ovens were found. The baking surface of each clay ovens contained sherds and their base levels were higher than the floor surface (0.1 m; 0.2 m). The oven near the east sidewall (1.6 x 1.2 m) was slightly closer to the north-east corner and its mouth was narrow (0.6 m), whilst the mouth of the oven near the west sidewall (1.5 x 1.2 m) was wider (0.8 m). In front of the eastern oven a shallow synclinal pit was excavated on the floor level and in front of the western oven a big oval working pit appeared (0.2 m). At the north wall of the pit of the house, in level with the natural, a 0.6 m wide berm surface had been made 0.1 m higher than the floor level. In the house a large quantity of pottery sherds was recovered. The baking surface of both ovens, as well as the fill of the house, contained a considerable quantity of pottery sherds. A complete pig skull and eggshell fragments were found in the western oven.

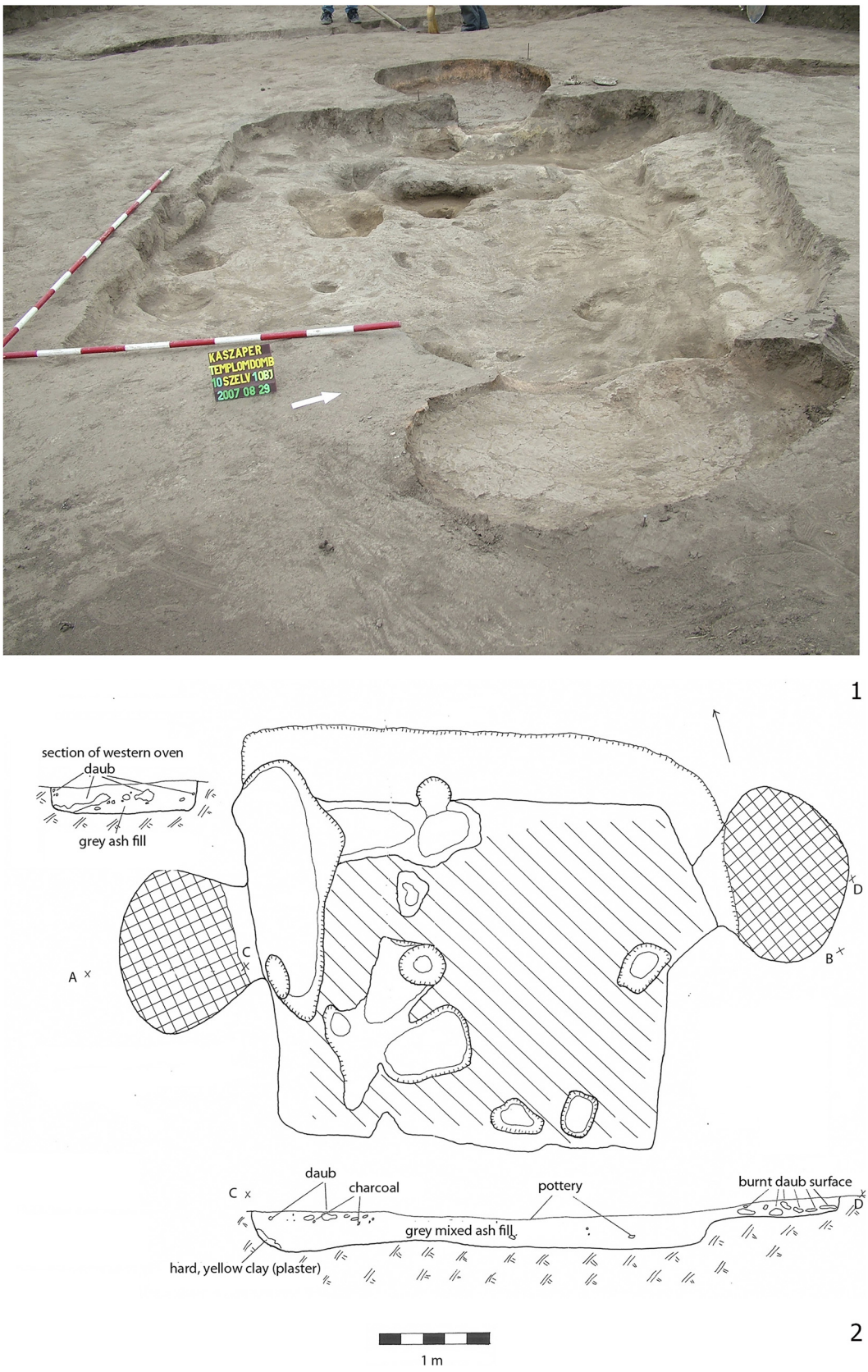

Fig. 4. 1: View of House 2; 2: Plan and section of House 2

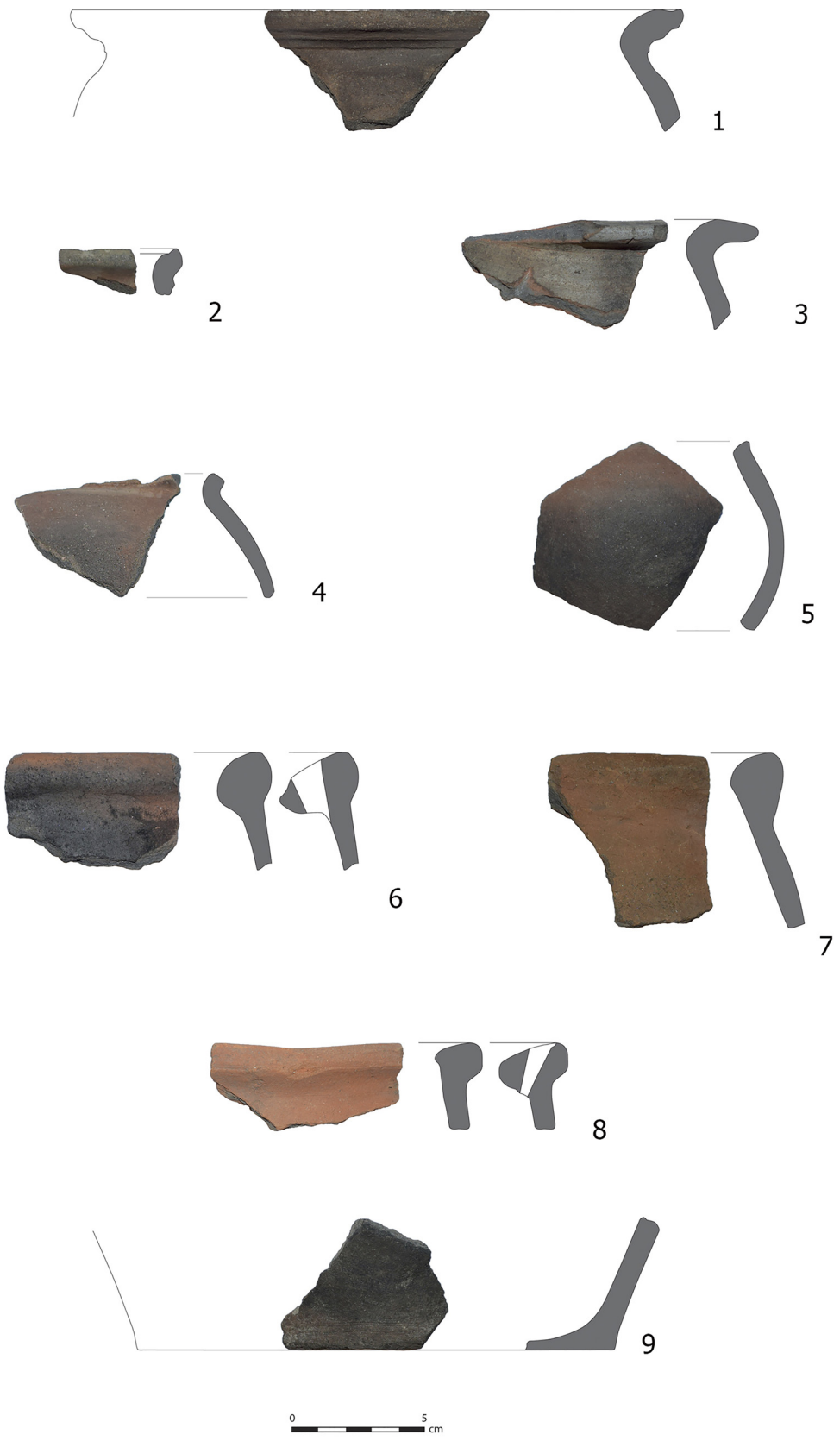

Fig. 5. 1–9. Pottery from the fill of House 2

Fig. 6. 1–7: Pottery from the baking surface of House 2, eastern oven

Fig. 7. 1–3: Vessels from the baking surface of House 2, eastern oven

The baking surface of the eastern oven (Fig. 6 and 7)

The baking surface of the oven contained mostly clay cauldron fragments, some of them with red slip and some of them without (see the description above of House 1), with sharp fracture surface, sand crested rims thickening towards the outer surface. The handles thickened towards the outer surface of the vessel with suspension holes close to each other. In comparison, another fragment had an inverted rim, but was made from the same raw material, whilst the third type had an incurving, angled profiled rim. All the cauldron fragments were made from the same raw material, with only the rim style differing amongs them: some of them P-shaped and some with an inverted rim (Fig. 6.1–6). The baking surface also contained pottery sherds. One pot fragment had a coarse fabric, having been tempered by lime and small pebbles, and had a very thick wall, with its surface covered by a clay slip coating (engobe), similar to the fifth group found in House 1. It is worth noting two pot fragments which were dark brown in colour, tempered with coarse-grained sand and small pebbles. A special coiling technique could be observed on a base fragment, where the base part of the pot being formed first, then the first coil being attached from the outside to the base. The fragment's surface is cracked, suggesting a secondary firing. All the pottery sherds are undecorated. A daub fragment with textile impression survived from the baking surface of this oven. Sherds of three completable pot daubed into its baking surface amongst other pottery fragments. One of them was a small pot, formed on slow wheel, the raw material was tempered with gritty sand and mica, fired with grey patches in places. Its rim is everted and rounded and the shoulder and above

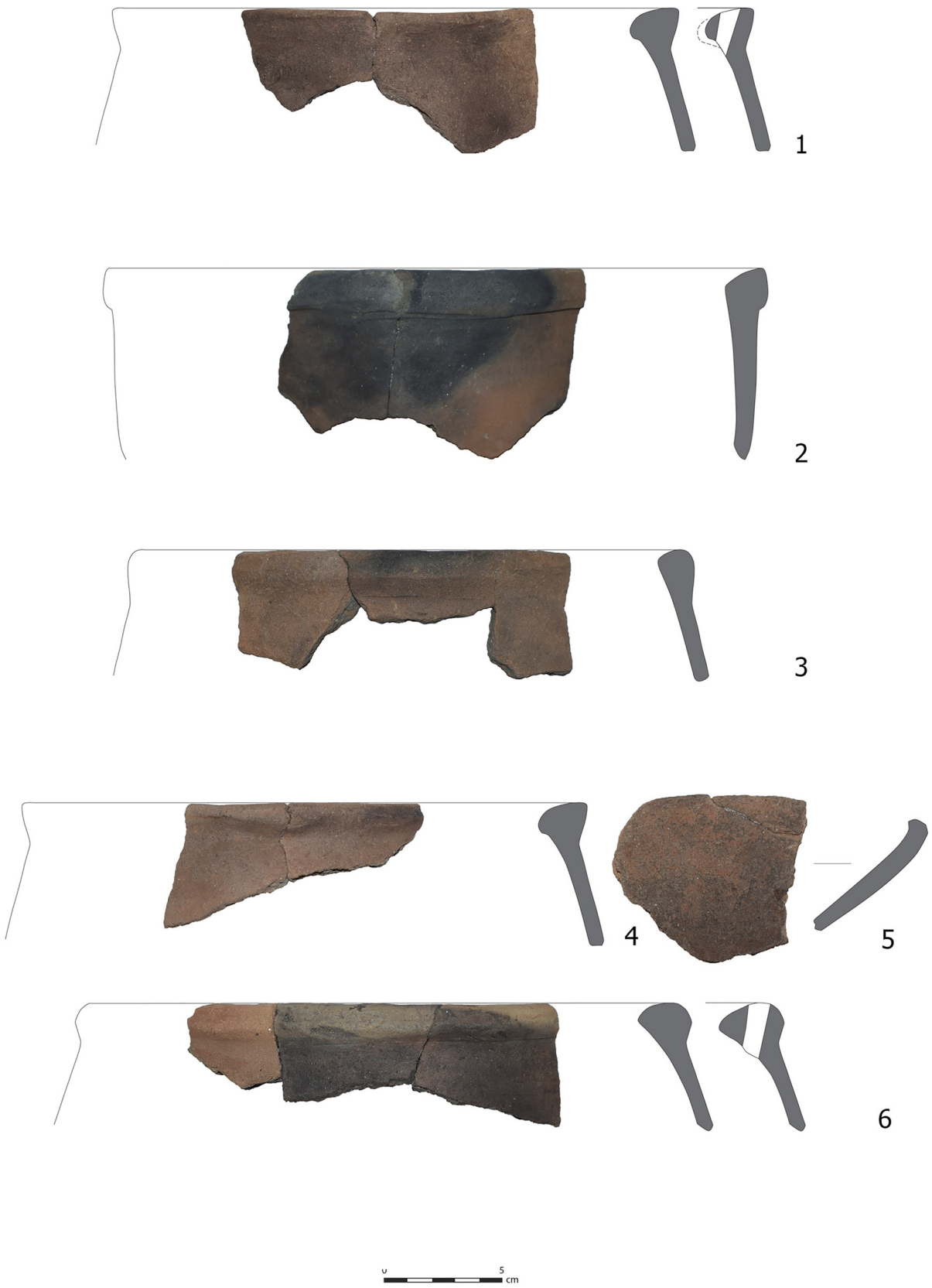

Fig. 8. 1–6: Clay cauldron fragments from the baking surface of House 2, western oven

Fig. 9. 1–5: Clay cauldron fragments from the baking surface of House 2, western oven

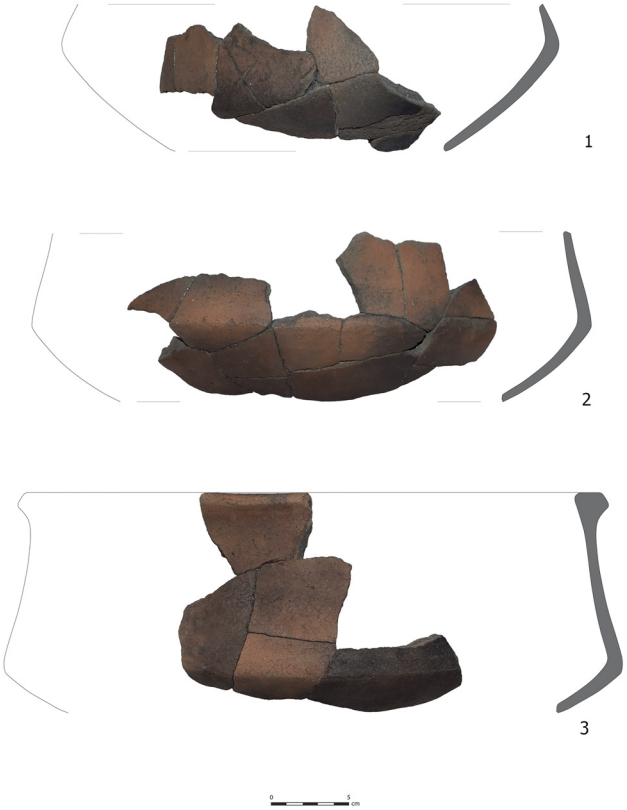

Fig. 10. 1–3: Clay cauldron fragments from the baking surface of House 2, western oven

the belly are decorated with double curved wavy line rows and one horizontal line. The small pot shows typical characteristics and decorations of 10–11th century pottery (Fig. 7.1). This is the most archaic vessel from the assemblage.[10] Two pots, prepared on a slow wheel, have similar colour and raw material, however their form is slightly different. Their shoulders are more characteristic and can be dated to the 12th century (Fig. 7.2 and 3). Some thick-walled fragments of a large pot also have a more characteristic shoulder and neck, as well as nail impression decoration on its shoulder, supporting the 12th century dating of the assemblage. Worth mentioning that two base fragments have textile and stone impressions. These are probably part of the same vessel. A thick-walled base fragment displays a possible line of a base stamp. Four rim fragments are a different colour than the rest of the assemblage. An everted, slightly profiled rim has a very thick wall, red brown in colour and has a smooth surface covered by a clay slip coating (engobe).

The baking surface of the western oven contained many clay cauldrons fragments (Fig. 8–10). One clay cauldron body fragment has low side walls, without red slip and is slightly concaved with an everted, vertically cut crested rim, thickening towards the outer surface of the vessel. Another large clay cauldron fragment has an inverted rim, is square in shape and slightly thickening towards the outer surface of the vessel, by its suspension hole. Again, red slip was not observed on this fragment. Two of the six bigger clay cauldron fragments join together, thickening towards the outer surface of the vessel and have remnants of red slip. One of them is tempered with coarse-grained sand and has worn down red slip (Fig. 9.5). All rim fragments are thicker towards the outer surface, rounded with broad suspension hole. Amongst the clay cauldron fragments were thin-walled sherds, tempered with coarse-grained sand and showing worn down red slip. The majority of these clay cauldron fragments had red slip layers on the rim and the outer surface and some also had it on the inside. A particularly special form of the clay cauldron sherds have inverted, profiled rims, thickening towards the outer surface of the vessel. Other large inverted, triangular profiled clay cauldron rim sherds show signs of worn-down red slip. A daub fragment with textile impression was recovered from the baking surface of this oven.

House 3, Feature 2007/2 (Fig. 11 and 12)

A trapezoid-shaped building with rounded corners and a hard-trodden clay uneven floor level (3.0 x 1.8–2.6 m). The depth of the floor level was 0.76–1.05 m from the present surface. Spots of two postholes were observed in its

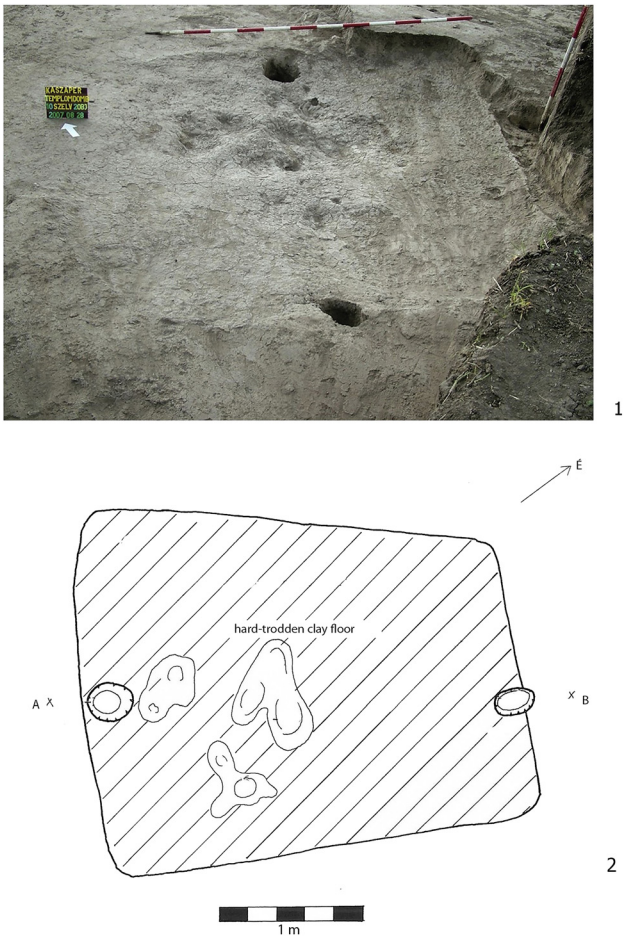

Fig. 11. 1: House 3; 2: Plan of House 3

[10] Wolf 2019, 35–37.

Fig. 12. 1–3: Finds from the fill of House 3

northeast-southwest aligned longitudinal axis (0.3 x 0.22 m and 0.26 x 0.16 m in diameter; 0.09 m and 0.41 m deep). The posthole found at the north side was not located in the middle of the sidewalls, but extended outwards from the building. The house had no ovens. Numerous fragments of bricks tempered with straw, a large-sized baking bell lug and a piece of a flanged baking tray were found in its fill, with some ceramic finds typical of the Árpád Age.

The Árpád Age settlement of Orosháza, yielded numerous similar fragments of baking bells and baking trays from the same dwelling where a brick-built, 'barrel type' oven was constructed.[11] The baking bell and flanged baking tray fragments in House 3 from Pereg also are contemporaneous. The similar pottery assemblage suggest the Árpád Age dating of House 3, with rounded corners and a hard-trodden clay floor. The excavation of an Árpád Age settlement near Oradea support this dating evidence, where the remains of a short, square-shaped baking tray or baking surface, very similar to the finds at Pereg and Orosháza, have been recovered (Mărginean, unpublished).[12]

[11]Rózsa 2016, 218–219.

[12]We are grateful to Florin Mărginean for granting access to the assemblage.

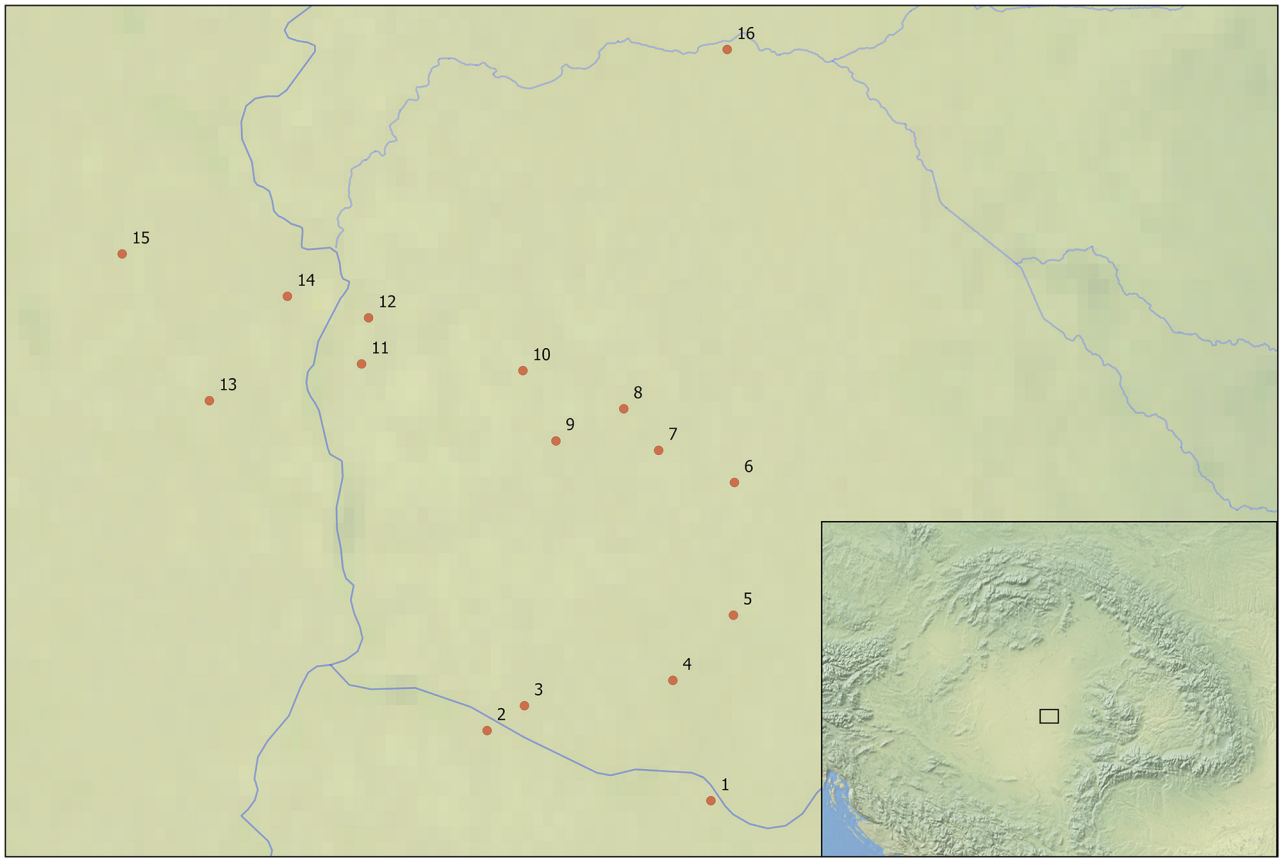

Fig. 13. Excavation sites of red slip coated pottery fragments mentioned in the text
1: Egres; 2: Kiszombor; 3: Makó Iglási út; 4: Csanádpalota; 5: Mezőhegyes; 6: Végegyháza, Zsibrik-domb; 7: Kardoskút; 8: Orosháza-Bónum; 9: Székkutas; 10: Nagymágocs-Szendrei-major Hűtőtó; 11: Szegvár-Kontrapart; 12: Szentes-Szentilona-domb; 13: Pusztaszer; 14: Csongrád-Felgyő; 15: Kiskunfélegyháza; 16: Endrőd

Ditches

Three ditches in the vicinity of the semi-subterranean houses could be dated securely to the Árpád Age, through vessel fragments. In Area 4 Ditch 7 contained seven wall fragments of vessels; in Area 5 Ditch 8 contained vessel fragments alongisde residual Late Bronze Age pottery sherds and Ditch 10 contained seven vessel fragments. These ditches were all shallow, running only a short distance before disappearing into the ploughed horizon. All of them were disturbed and probably partially destroyed by heavy Earth scraping of the area.

DISCUSSION

The first mention of a visible red slip layer in the 12–13th century is with the pottery assemblage from the recovered material of the excavation of Kardoskút by István Méri.[13] He also referenced similar assemblages from his excavations at Visegrád-Várkert and the unpublished material of the excavations of Csongrád-Felgyő by Gyula László.[14] Since then, any mention of 12–13th century pottery assemblages containing the presence of a red slip layer has been kept brief. Mária Béres writes of the excavations at Nagymágocs-Szendrei-major Hűtőtó, that all of the rim fragments from the settlement show signs of red slip, both on the inner and outer surfaces. The red slip layer covers the entirety of the outer surface of the vessels. She supposed that this practise was common from the end of the 12th century.[15] Béres also mentioned red slip in her excavation of Sáp village, from the same period at Szegvár-Kontrapart. She analysed the pottery assemblage and called attention to a group of polished pottery sherds with probable red slip layers, which were dated to the 10th century and parallel to the pottery assemblage from Pusztaszer.[16] She supposed that a dense red slip layer helps to decrease permeability.[17] M. Béres classified these sherds as part of the Szarvas-Rózsás early pottery

[13] Méri 1964, 46.

[14] Méri 1964, 46, footnotes 146–147.

[15] Béres 1989, 67.

[16] Béres 1985, 183, footnote 27.

[17] See more Vályi 1996.

group, originating within the Bulgarian ethnical group.[18] With her kind permission we had the possibility to study the assemblage in person. In the material recovered from field walking, 12th century polished bottle sherds were identified, as well as fine sand-tempered fragments with signs of red slip, which are thought to be earlier material. Large amounts of 12th century clay cauldron fragments with red slip were also recovered, which supports the multi-period dating of the site. István Paszternák published a report regarding the excavation results at Szentes-Szentilona-domb in 2000. The author called attention to the presence of red slip on the outer surface of clay cauldron fragments, which he interpreted as either fulfilling a decorative purpose or decreasing the permeability of the vessel.[19] Gyöngyi Gulyás published an assemblage from Makó, Igási út in 2012, in which she dated the presence of red slip to the 11–12th centuries, with continuation to the 13th century.[20] Archaeologists of the partially excavated late Árpád Age site near Kiskunfélegyháza observed the presence of red slip on five pottery sherds and, similarly to Paszternák, interpreted this as being either decorative or decreasing the permeability of the vessel.[21] Zsolt Gallina and Gy. Gulyás mentioned in their report of the partially excavated settlement at Csanádpalota, that all of the rim fragments of clay cauldrons recovered from the site showed signs of red slip.[22] Miklós Takács, in his latest analysis of two regional groups of clay cauldron types, pointed out that slip strongly red in colour was frequently present in the Great Hungarian Plain.[23] In summary, it can be stated that the presence of red slip was widely distributed in the Middle Tisza region from the middle of the 12th century through to the end of the 12th century (Fig. 13). Red slip was frequently used on pots and clay cauldrons, especially on the outer surface and rim, however in the 13th century its presence gradually declined.

CONCLUSION

The baking surface of the western oven in House 2 contained more pottery sherds. The clay cauldron fragments show signs of red slip, as observed earlier in House 1. The rims vary in size and either thicken towards the outer surface or slope inwards. The form and decoration of the pottery sherds dates the baking surface of the oven to the 11–12th century, however, the large quantities of clay cauldron fragments with red slip further specify this date to the 12th century. The presence of the most archaic small pot dating to the 10–11th century, together with a pot fragment with nail impression decoration and clay cauldron fragments with red slip coating suggest traditions originated from the South Balkans. This is the region in which we believe the influx of the slow-wheeled pottery tradition originated and was practised up until the 17th century in the Carpathian Basin.

The analysis of the pottery sherds from House 2 could offer answers to some important questions: could the assemblage from the fill be dated to the same period as the construction of the ovens? Could we observe any differences between the pottery dating from the construction of the house and the end of the occupation? In theory, it is unequivocal that the finds from the fill of the house are later than the finds from the baking surface of the oven. The question is whether we can observe chronological differences between these two groups. The uncovered pottery assemblage from the fill of the house constitutes only a fraction of the quantity of the pottery sherds recovered from the baking surface of the two ovens: mainly pottery sherds and some clay cauldron fragments. Interestingly, it was observed within the pottery assemblage that none of the oven baking surfaces contained bright orange-coloured pottery fragments, as those described above from House 1, though said sherds are present in the later fills of both Houses 1 and 2. Profiled lid groove rim sherds were also recovered, as they were amongst the pottery sherds in House 1 also (Fig. 3.1–4). The fill of the house did not contain inverted rim fragments of clay cauldrons or pottery sherds dating to the earliest period (10–11th centuries), however these finds were present under the baking surface of the oven. The comparative analysis of the pottery sherds from the dwellings and from the baking surfaces of the ovens suggests some chronological differences. This certainly follows the relative chronology, that the building of the ovens inevitably took place ahead of the abandonment of the dwelling. Accordingly, it seems probable that the bright orange-coloured pots appeared later than the clay cauldrons with inverted rim. The construction of the dwelling and the ovens can be dated to the end of the 11th and the beginning of the 12th centuries.

ARCHEOZOOLOGICAL ANALYSIS

By Beáta Tugya

A total of 178 animal bone elements and fragments were assessed from features dating to the Árpád Age. The material was collected from the site during the excavations of semi-subterranean houses and ditches in 2004 (13 fragments) and in 2007 (165 fragments). The animal bone assemblage is small, however, the analysis result provides some insight into the domestic activities of the site and so contributes to our knowledge of the settlement economy.

The majority of the bones were the remains of domesticated animals. Predominating the assemblage are cattle and sheep/goat: these were the most numerous taxon at the site from this period, followed by fewer numbers of pig and horse. The finds include a single fragment of red deer and an unidentifiable bird bone.

[18] Jankovich 1994, 410; Béres 1998, 174–175, Abb. 4.

[19] Paszternák 2000, 408, 413.

[20] Gulyás 2012, 58.

[21] Gallina *et al.* 2014, 317–318.

[22] Gallina–Gulyás 2017, 757–758.

[23] Takács 2017, 513.

The assemblage is dominated by cattle bones, with this bring the most numerous taxon at the site from this period. Although cattle produced the most identifiable elements recorded in the assemblage (NISP, Number of Identifiable Specimens), the calculation of the minimum number of individuals (MNI) indicates a dominance of pig remains, despite the lower number of bone fragments from the site (Table 1). In terms of quantity, the remains of horse and pig bones were almost the same for this assemblage, however, their minimum number of individuals indicate considerable differences in their importance. The cattle bones came from at least three individuals, two of them were recorded as young animal (less than three years old). The ageing data indicates that cattle was mainly utilised for its meat and was the most important species in terms of food. Its secondary product, milk, seems to have been of less importance, as does the utilisation for traction. Ageing data was obtainable from the ovicaprid bones retrieved. Amongst the ovicaprid bones recovered, a juvenile and an adult individual were recorded and a sheep humerus was positively identified. It is presumed that most of the ovicaprid bones are of sheep: providing primarily meat, wool, milk and other by-products. The 26 pig bones account for only 14.9% of the total NISP, however, the calculation of MNI makes this percentage higher. Amongst four individuals, three were juveniles (1 year, 1.5–2 and 2.5 years) and one was an adult (3.5 years). It is worth mentioning that 15 bone fragments of the skull and long bones of a juvenile individual were found in the western oven of the house.

The 24 horse bones from the remains also includes associate bone groups (ABG) and comprise 13 elements of a horse leg. The horse bones are from the same individual and include left elements from the fore limb (from the radius to the third phalanges). This horse leg was found in anatomical order in the corner of the house and had been deliberately bended and arranged in a triangular shape position. This lower limb bones wear a relatively small amount of meat, the meat bearing scapula and the humerus are missing. The lack of the meat-bearing limb bones indicate that this ABG cannot be interpreted as a food reserve for consumption. The horse bones recovered from this context were those of an adult individual. Biometrical data was available from the measureable long bone: using Vitt'index the shoulder height of this animal been estimated to be 132–133 cm (Table 2).[24] This individual was therefore a small-sized horse in comparison to several Árpád Age assemblages.[25]

The only dog bone found on site indicates an adult individual. Canid gnawing was noted in a relatively low frequency, with multiple chewing marks being observed on a cattle calcaneus and teeth marks on a sheep/goat lower legbone. The evidence of gnawing by dogs supports the skeletal evidence for the presence of the species on the site. Red deer remains were represented by a single bone fragment: a post-cranial element that indicates the deer had been hunted and utilised for venison. This element in the assemblage acts as an indicator of the general environmental background of the site. It is probable that deer was hunted regularly in this period near the Száraz-ér, as they would have been locally available in the forest near the course of the river. The only bird bone recovered from the site was a *circa* 4 cm long fragment of tarsometatarsus, but it cannot be identified to species level.

Table 1. Bones of animals from Árpád Age and late medieval features at Végegyháza Zsibrik-domb site

Species	NISP (db)	%	Number of Individuals
Cattle (*Bos taurus* L.)	79	45.4	3
Sheep (*Ovis aries* L.), sheep/goat (Caprinae sp.)	42	24.1	2
Pig (*Sus domesticus* Erxl.)	26	14.9	4
Horse (*Equus caballus* L.)	24	13.8	1
Dog (*Canis familiaris* L.)	1	0.6	1
Domestic species	***172***	***98.8***	***11***
Red deer (*Cervus elaphus* L.)	1	0.6	1
Wild species	***1***	***0.6***	***1***
Bird (Aves sp.)	1	0.6	1
Domestic or wild species	***1***	***0.6***	***1***
Small and large mammal	4	-	-
Total	***178***	***100***	***13***

Though a small assemblage, the species present and their relative proportions appear to be typical compared to other Árpád Age rural settlements. The site economy characterised as animal husbandry was dominant within the settlement. Cattle was the most important species in terms of food, shown in the greater carcass weight of this phase. The data from the pig remains indicates their local slaughter and consumption. Pigs are usually slaughtered at a younger age than other livestock because they have large litters, sometimes even twice in a year, and cannot be utilised in any other way than cleaning up the rubbish. They reach full body weight very quickly and provide no secondary product. In the region of South Hungary, the relative proportion of pig and horse remains are almost the same in animal bone assemblages from this period. The analysis of the animal remains at Pereg shows the same pattern, with a dominance of cattle and sheep/goat bones, however, based on the calculation of the MNI of the pig remains, they were the most slaughtered species in the assemblage.

The Orosháza-Tesco excavation of the early Árpád Age settlement yielded a similar sized animal bone assemblage as Pereg: even the percentage of cattle bones were almost the same amount. The sheep/goat and horse bone quantity and MNI was the same, followed by almost insignificant numbers of pig. No domestic fowl bones were recovered

[24] Vitt 1952, Table 2.

[25] Vörös 2000, 94–95

Table 2. List of measurements

CATTLE										
	M3 h.									
Maxilla	27.1									
	DC									
Femur	38.6									
	Bp	Dp	Bd							
Radius	69.4	35.9								
			61.1							
	Bp	Bd	Dd							
Tibia	82.8									
Tibia		53.7	39.4							
	GL	Glm	Dl	Dm	Bd					
Astragalus	58.9	55.5	31.2	31.6	34.6					
Astragalus	86.5	80.1								
	GB									
Os centrotarsale	49									
	Bd									
Metacarpus	50.1									
	Bp	Dp								
Metatarsus	41.2	41.6								
SHEEP										
	SB									
Humerus	14.6									
SHEEP/GOAT										
	LA									
Pelvis	29.6									
	SB	SD								
Femur	18.8	20.9								
	Dp	SB	SD	Bd	Dd					
Tibia	39.9	15.5	11.7	29	20.9					
Tibia		13.1	9.8							
PIG										
	P1-M3 h.	P1-4 h.	P2-4 h.	M1-3 h.	M3 h.	M3 sz.				
Maxilla	98.5	39.4	32.6	59						
Maxilla	97.5	38.6	32	59						
Maxilla					30.2	17.8				

(continued)

Table 2. Continued

HORSE										
	GL	LI	Bp	Dp	SB	SD	Bd	Dd	LmT	Ld
Humerus					30.9	35.9				
Radius	313		77.6	43.45	36.7	26.4	72.93	43.2		
Astragalus									52.3	
Metacarpus (III.)	213	208	50.48	32.64	33.14	21.3	47.98	35.2		
Phalanx proximalis anterior	78		55.5	38	34.5	20.8	41.6	23.6		
Phalanx medialis anterior	46		52.7	30	42.3	23	47.3	25.2		
Phalanx distalis anterior										45.5
RED DEER										
	SB	SD								
Radius	29.9	18.2								

from this site.[26] This pattern of spatial distribution is not rare in the Árpád Age sites, as they are very similar to the economy practices of the Hungarian Conquest Period. The lack of poultry bones is not unexpected as they are generally less common from Árpád Age settlements and often completely missing. The broken bird bone fragment recovered from the site cannot be distinguished between a wild or domestic form.

ACKNOWLEDGEMENT

The authors would like to thank Dr. Takács Miklós DSc for invaluable advice as academic referee during the production of this publication. We are also like to express our gratitude to Mária Béres, for her help in accessing the Sáp village excavation material and to Edit Király and Florin Mărginean for granting access to this unpublished assemblage.

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