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EXCAVATION OF A LATE MEDIEVAL VINEYARD CELLAR IN THE TAMÁSI FOREST

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In recent years, the landscape archaeological approach has yielded significant results in Hungarian medieval archaeology. Forests provide a particularly good terrain for this, as in some cases the anthropogenic elements of the inner and outer areas of deserted medieval settlements have not been affected by the damaging effects of large-scale modern agriculture, thus functioning as landscape archaeological relics. An excellent example of this is the Gyulaj Forest, located in the north-western part of Tolna County, in the microregion known as Kelet-Külső-Somogy (Eastern Outer Somogy), which has been a closed hunting area since the end of the 18th century and where a dozen deserted medieval villages can be identified (K. Németh, 2024a).

Keywords: landscape archaeology, viticulture, cellar, Late Middle Ages

LANDSCAPE IMPRINTS OF LATE MEDIEVAL VINEYARDS IN THE GYULAJ FOREST

In recent years, I have managed to identify the physical remains of abandoned vineyards, primarily the traces of roughly a hundred former cellar buildings, on the outskirts of a total of nine medieval villages destroyed and abandoned due to the Ottoman conquest in the mid-16th century. They are near Tamási, Gyulaj, Kocsola, Nagykónyi, and Regöly. In most places, only a few cellars can be identified, but in the vicinity of three villages there are more than ten (K. Németh, 2024b). This year, after the Gyulaj Forest, I also identified similar objects in other parts of Tolna County, namely in the wooded areas of Dúzs and Udvari.

The location of these buildings, which are built into the ground to a greater or lesser extent at the bottom, side or edge of sloping hillsides, is indicated by surface depressions, which in the case of the excavated cellar measure approximately 15×7 metres. In front of the cellar entrances, depending on the steepness of the slope, there is usually a terrace formed from the earth excavated during their construction (*Fig. 1*). Their function and age of destruction can be determined from the metal finds collected from the collapsed rooms and, in particular, from those collected from the terraces, using a metal detector. Based on the few coins found, the cellars (i.e., cellar buildings) were used in the second half of the 15th and the first half of the 16th century, up to the Ottoman occupation in the 1540s.

Fig. 1. The cellar and the terrace in front of its entrance preceding the excavation (photo: András K. Németh)

Among the sites, the village of Kospa (as a present field name: Kosba, site ID: 23767) on the border of Tamási stands out for its research value in archaeological heritage. István Torma was the first to identify medieval agricultural terraces, a field system, in Hungary (Torma, 1981; Laszlovszky, 2018, 105, Fig. 4.3), and recently I was able to verify the Árpád-era origin of a cave system carved into loess, probably used as a hiding place during the Ottoman era, and to confirm its original function as a cellar (K. Németh, 2020, 174–188). On the outskirts of Kospa, I have found the sites of nearly fifty destroyed cellar buildings on both sides of the

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village, a few hundred metres away, covering an area of more than a hundred hectares. In addition to the cellar buildings, the road system criss-crossing the vineyard zone can also be explored: we can find not only the larger cut-in (deep) roads, but sometimes also the physical traces of smaller paths leading to individual cellars. From these, we cannot collect many finds, but they fit well with the era and the location: in addition to a few coins, mainly parts of carts, but also clothes, fasteners, seals, pocket knives, wooden chisels, and other small items have been found on the abandoned roads. In February 2025, János Mészáros conducted a UAV LIDAR survey of the vineyard area, which revealed additional features not visible to the naked eye, such as narrow plots and ditch systems (Mészáros et al., 2018), but their analysis is not the subject of this paper.

No written sources have survived about the medieval vineyards of Kospa (although we know of such sources from several neighbouring or nearby settlements: K. Németh, 2004). Although we could access information about grape growing in Ottoman tax (*defter*) records, by this time the settlement had been destroyed and was only noted as a wasteland. Therefore, our only source for the phenomena presented here is the landscape and its archaeological interpretation, about which – incorporating two conference papers (K. Németh, 2024a, 2024b) and an excavation report (K. Németh, 2025) – this is the first extended study.

EXCAVATION OF THE CELLAR BUILDING

During a metal detector survey of one of the cellars, we found a collection of artefacts which led us to conduct a short rescue excavation in the summer of 2024 with the extensive support of the Gyulaj Forestry and Hunting Plc. This site is located on the eastern side of the main north-south valley of the vineyard hill west of the medieval village, near the top of the hill, on the medieval vineyard hill's "main road" – from which a path leading to the cellar is sunk a few centimetres into the ground – near a forest road running parallel to it (*Fig. 2*). The nearest cellar is 140 metres to the north and 120 metres to the south-east.

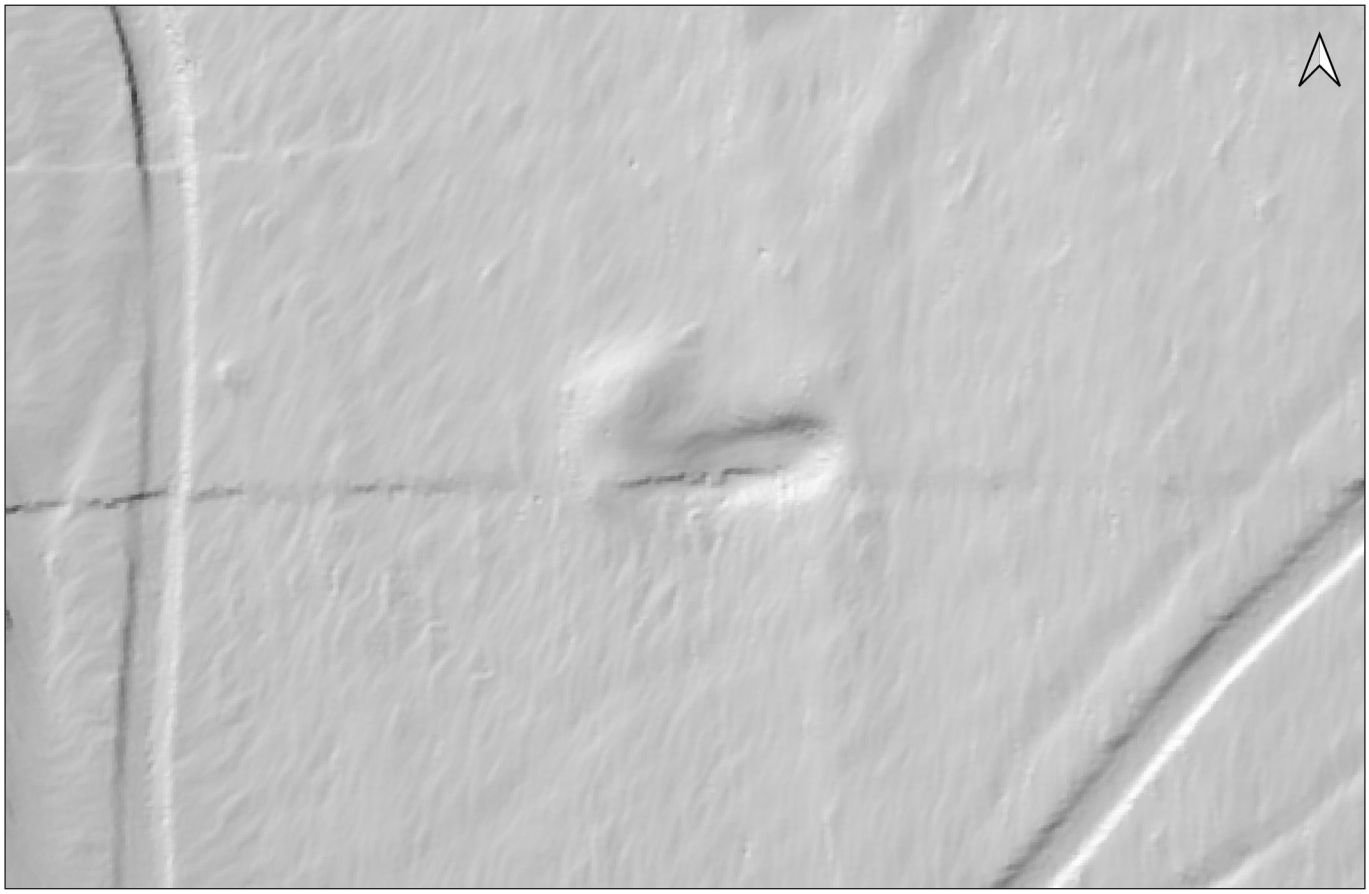

Fig. 2. UAV LIDAR survey of the cellar and its surroundings (created by János Mészáros, HUN-REN Centre for Agricultural Research, Institute for Soil Sciences, Department of Soil Mapping and Environmental Informatics Agricultural Research Centre, Soil Science Institute, Soil Mapping and Environmental Informatics Department)

First, we excavated the northern half of the cellar, wider trenches running west to east, then we excavated the southern part, leaving one-metre-wide baulks to the south, and finally we connected the sections. We dug short trenches perpendicular to the centre of the northern and eastern sides to examine whether there were any traces of other phenomena related to the building on the loess surface outside the building, but they yielded no results. The floor of the building was covered with burnt pieces of plaster daub with plant imprints, with an average thickness of 10 cm, as were the walls and probably the ceiling as well. This layer thickened along the walls and was approximately 50 cm thick at the base of the eastern wall in a strip approximately one metre wide. The lower strip of the walls carved into the loess and the floor were reddened by the fire, and the loess wall was burnt red up to a height of one metre next to the post holes.

The excavated building was oriented roughly west-east, with an internal floor area of 3.9-4.5×6.6 metres (slightly widening from the entrance towards

Fig. 3. Photogrammetric survey of the cellar (prepared by Norbert Sandó, Pazirik Informatics Informatikai Ltd.)

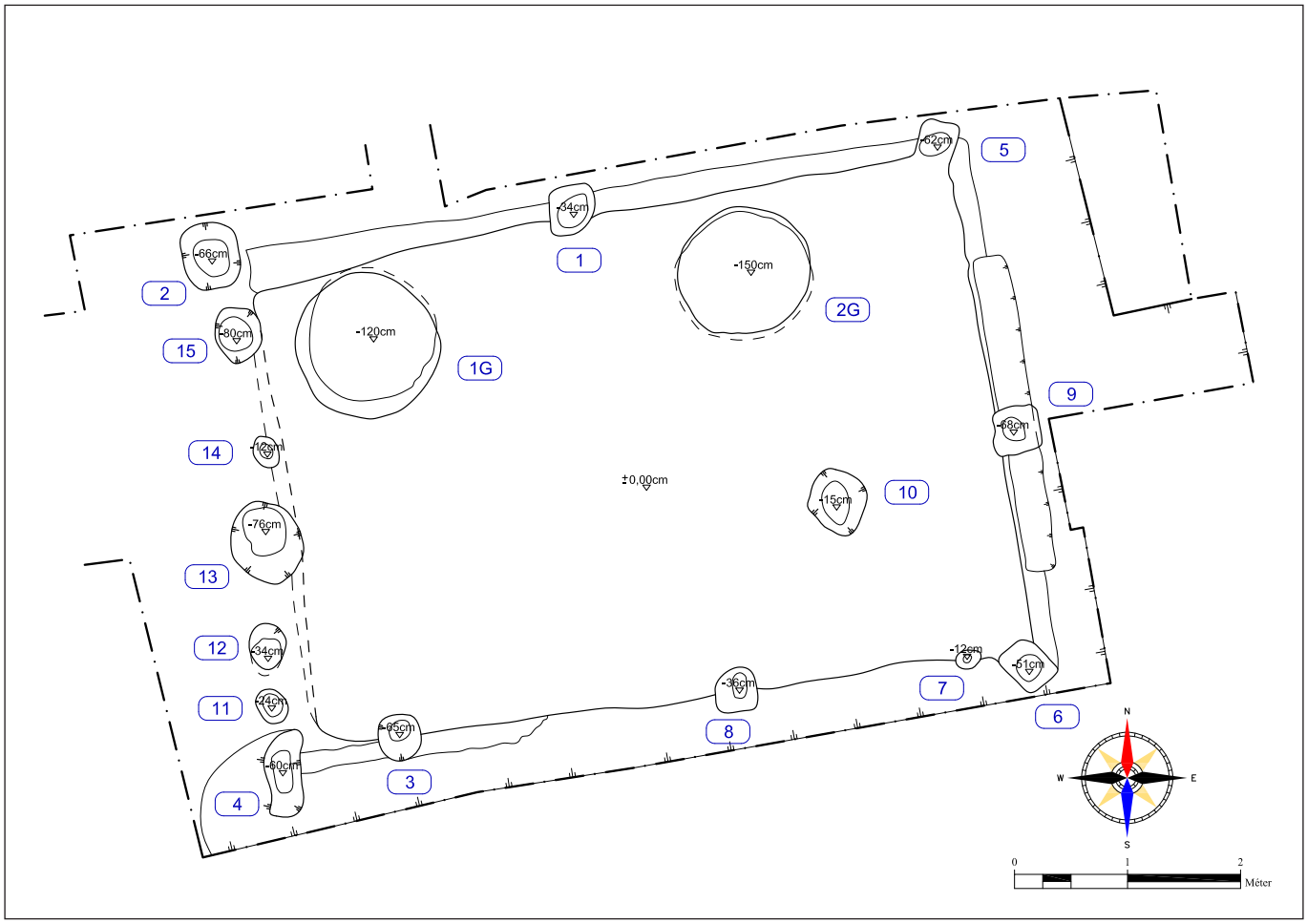

Fig. 4. Floor plan of the cellar (drawing: Melinda Vindus; digital drawing: Tímea Pájer, Meridián Engineering Office Ltd.)

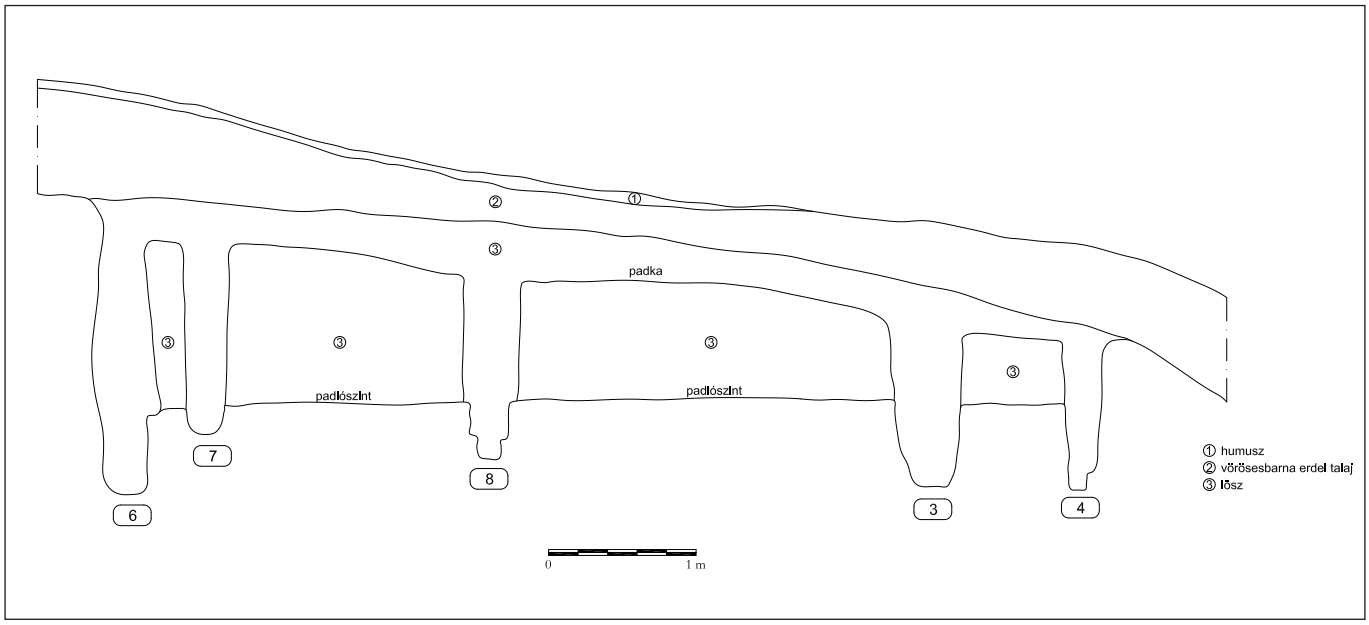

Fig. 5. Cross-sections of the cellar's southern wall[2] *(drawing: Melinda Vindus; digital drawing: Tímea Pájer, Meridián Engineering Ltd.). 1: topsoil, 2: reddish brown forest soil, 3: loess; padlószint: floor level, padka: wall-seat*

the rear wall). Its walls were half buried in the ground, and those rising above ground were of a construction of pile and wattle and daub (*Figs. 3–5*). The cellar consisted of a single room, with no evidence of internal divisions. Its entrance opened from the valley on the western side, where the wall of the building was sunk about 50 cm into the ground, then cut into the ground more and more towards the east, with its eastern wall formed by a vertical loess bank at a height of 1.5 metres. On its two long sides, we uncovered three large post holes, each with an average diameter of 30–40 cm (range: 25–42 cm) and an average depth of 60 cm (extreme values: 34–62 cm), and in the middle of its shorter sides, we discovered the location of two ears supporting the structure, the dimensions of which on the eastern side matched those of the side holes, while the entrance (western) branch ear, with a diameter of 60–70 cm and a depth of 76 cm, stood out from the other post holes. At the bottom of the post holes, in some places we found the remains of charred posts, which had been buried by falling debris and thus had not burned completely. The density of the pile holes on the western side suggests a wattle-and-daub wall fence (in pit 1, next to the entrance, we also observed the charred remains of a similar wattle-and-daub wall fence among the collapsed pieces of clay plasters), while the sparse distribution of pile holes on the longitudinal side suggests a plastered reed wall (cf. Pálóczi Horváth, 2005), which is also supported by the distribution of the plaster remains. At the base of the eastern wall, we observed traces of a 2 cm thick layer of mud plaster on a small area, with a palm-sized square grid pattern scratched into it (*Fig. 6*).

Fig. 6. Engraved pattern in the mud plaster (photo: András K. Németh)

The 120 cm wide entrance, which, based on the parallels, was once closed by a heavy oak door, was located on the western side, north of the axis of the cellar and the western ear, but it did not fill the entire space up to the north-western corner post, because another post was dug immediately to the south of it. We found a total of six post holes on this side (including the corner posts), i.e., there was only the

[2] The drawing shows the section wall and the cross-section of the building along the wall (extending a few 10 cm inward from the section walls) combined.

Fig. 7. The second pit (photo: András K. Németh)

Fig. 8. Wall niche in the rear wall of the cellar (photo: András K. Németh)

one mentioned above between the branch ear and the corner posts in the north, but there were two smaller post holes in the south.

Inside the building, directly along the northern wall, we uncovered two larger, roughly circular pits with vertical walls and flat bottoms, 110 and 130 cm in diameter and 120 and 150 cm deep, respectively (*Fig. 7*), which, based on the large amount of charred clay plaster residue found in them, were still in use when the building was destroyed. It would be logical to consider that these were grain pits, but caution is advised due to their characteristic narrowing mouths, burnt walls, and lack of burnt seeds (Nováki, 1983). The pits were probably once covered with a wooden lid: there is a similar solution in a 20th-century cellar in Szenna (Máté, 2021, 101, Fig. 18).

A niche approximately 280 cm long and 20–25 cm wide was cut into the rear wall of the building at chest height (*Fig. 8*). In its considerable length and narrowness it is different from similar niches often found at the end of today's cellars, but I cannot interpret it as anything other than a storage space.

We did not find any cellar openings in the continuation of the eastern end wall in the embankment, so the wine may have been stored inside the building itself, where it could have been separated from the rest of the building by a wooden or wicker wall, which may have disappeared without a trace. In front of the south-western corner of the building, a distinct "bubble" was carved out of the loess, which may have protected the corner and also facilitated the drainage of rainwater.

In front of the entrance, we dug a 6.5-metre-long and 2-metre-wide trench to the west, cutting through the terrace in front of the building, which strangely slopes slightly to the northwest. At the bottom of the trench, we found the original subsoil level, which sloped slightly westward from the entrance, i.e., in the opposite direction to the building. The terrace was probably used as a turning place for carts, and various tasks (e.g., cart repair) and activities (e.g., cooking) were carried out on it, as indicated by the metal objects found in the area. In addition, it could also have been the site of tasks that left no artefacts behind (e.g., grape treading and pressing).

Archaeobotanist András Grynaeus examined seven of the charred piles, but they were unsuitable for dendrochronological dating. Based on the tree species identification, three types of building timber came from pedunculate oak, and three from sessile oak, while one charred sample collected from the charred clay plaster rubble came from beech, which was rarely used as building timber (Grynaeus, 2024).

FINDINGS

Fig. 9. Coin find in the pit of the middle pile on the north side (photo: András K. Németh)

The excavation was prompted by the discovery of coins, the first few of which were found during a metal detector instrumental survey in the dent in the cellar. The core of the coin hoard was found in the lower part of the central pile hole on the northern (longitudinal) side (*Fig. 9*). The find may have been placed in some kind of organic material at the base of a pile. The pile had perhaps become loose and some pieces may have come to the surface over the centuries, because the roots of the tree grew above it, or due to erosion and animal disturbance. The 730 finds consist of 564 Hungarian and 166 Austrian silver coins, mostly Ferdinand I denars and Austrian pfennigs, which, based on the closing date, were left in the ground in 1541. Despite the closing date, the destruction of the building can be dated to a few years later, to the time of the Ottoman military campaign of 1543 or the Ottoman conquest of the region in 1545.

Before the excavation, an axe-shaped hatchet-style grape vine pruning knife (*Fig. 10.1*) was found in the recess of the cellar, and on the terrace in front of the entrance, an iron puller (*Fig. 10.3*), a fragment of a cauldron hook (*Fig. 10. 4*), a spearhead (*Fig. 10.6*), a fragmentary peasant knife (*Fig.*

Fig. 10. Selection of finds from the cellar (photo: Tamás Retkes, image editing: László Vicze)

10.11), a knife blade, a boot jack (*Fig. 10.13*), a button with a loop (*Fig. 10.12*), and two peculiar L-shaped nails with flattened ends (*Fig. 10.15*). During the excavation, we found the other half of the cauldron hook (*Fig. 10.5*), a hay hook (*Fig. 10.7*), an eating fork (*Fig. 10.8),* and several fragments of knives with flat handles (*Fig. 10.9*) in the rubble of the building. Only a few iron nails were found. It is clear that not only tools used in viticulture but other agricultural tools, implements and utensils were also found in the building and on the terrace in front of it, the function of which I will return to.

We could not collect pottery fragments on the surface beforehand, and during the excavation no more than one or two late medieval fragments were found inside the building. However, in the trench cutting across the terrace, there were several 15th and 16th century pottery fragments under the humus near the entrance.

FUNCTION AND PARALLELS

Late medieval written sources sometimes mention cellars located on the outskirts. Márta Belényesy compiled 14th- and 15th-century documentary evidence showing that in the Balaton region and in more urbanised areas, such as around Buda and Sopron, in addition to "internal" cellars, "external" ones in vineyards were common in villages (Belényesy, 1955, 20). Based on data from Zala County, József Holub believed – and his description broadly fits our excavated structure – that "Most of these cellars were probably just large cavities dug into the hillside with a small entrance hall (...)" (Holub, 1960, 198). In his analysis of some late 17th-century wilful damage, Gábor Máté concluded that "there were so-called wine press cellars in the vineyards of Hungarian villages in the northern part of Outer Somogy" (Máté, 2021, 101).

The cellar was located roughly in the middle of the slope between the valley floor and the hilltop. Based on modern analogies, this part may have been planted with vines, while the lower part of the plot may have been used for making hay and vegetable gardening, and the upper part, closer to the hilltop, may have been used for growing fruit (Égető, 2001, 540). No visible traces of the vineyard itself remain today, presumably due to the use of canes for cultivation and the absence of terraces. The planting holes of the individual vines could perhaps be identified by excavating a larger area.

According to metal finds, the building was not simply a cellar, but a complex external economic unit, a "hill farm" (Kecskés, 1992, 168), which was used not only for grape processing and wine storage, but also for storing fodder, and served as a shelter during temporary stays in the vineyards. In addition to the above, the storage pits dug into the floor could also be used to store grain (possibly set aside as seed or as a safety reserve). Finally, one can also mention the storage and safekeeping of money; a similar practice – hiding money chests in vineyard cellars – is also known from 18th-century records from Somogy County (Knézy, 2001, 80).

Ethnographic parallels to these undivided, single-room vineyard buildings with (partially) rising walls, presumably without a fireplace, a chimney or windows are known from western Hungary from the 18th century. Considering the most basic classification used in ethnographic literature for vineyard buildings – hole cellar, press house cellar, press house hole cellar (Kecskés, 1973, 3) – our building can be considered a press house cellar, but since this inevitably brings to mind the larger, multi-cell buildings that have survived in greater numbers, for the time being, I consider that the term *vineyard dwelling*, which is used in different ethnographic regions (shelter, barn, farmstead, etc.), is the most appropriate term for the excavated building, which ethnographic research defines as an undivided structure with rising walls, without an attic or a fireplace (Kecskés, 1992, 91–92).

The most archaic group of buildings in the vineyards are these single-cell, multifunctional buildings, of which relatively few have survived due to their simplicity and subsequent modification (Kecskés, 1992, 178). The Kosba cellar may have been similar in size and layout to its 18th- and 19th-century counterparts that we see in the well-known open-air exhibition museums of Szenna and Cák, except that its walls were not made of logs, but of wattle and daub.

CONCLUSION

Although research into the history of viticulture and wine production has a long tradition in both history and ethnography, cooperation between the two academic fields is limited in terms of research into vineyards, and specifically vineyard structures, as medieval written sources rarely mention buildings, and even these cannot be clearly matched with the archaic vineyard structures ethnography has traced back to the early 18th century. It seems that we have managed to find the "missing link": the single-celled building without a cellar hole, excavated in Eastern Transdanubia, which was destroyed in the middle of the 16th century. This is an accurate counterpart of the vernacular cellars in Western Transdanubia, some of which still stand today, built one and a half to two centuries later.

According to Miklós Oláh's 1536 description, wines from Szerém were considered the best in Hungary at the time, followed in the contemporary ranking by wines from Somogy and "Baronya" (Oláh, 2000, 47), including wines of the Tolna County areas along the Danube in Baranya, namely the Szekszárd wine region (Szakály, 1999, 119–120). Contemporaries probably considered the wines of inner Tolna County, to which Kosba belonged, as the produce of Somogy. The geographical region is still called Külső-Somogy or Outer Somogy, and the border of Somogy County is 15 km away from the site as the crow flies.

Based on documented traces of late medieval viticulture at the micro-regional level, we see a wine region emerging that is largely unknown from written sources. The extensive vineyard on the outskirts of the village of Kospa, consisting of a few houses, suggests the presence of significant extraneous ownership and intensive wine production for the market, beyond self-sufficiency (cf. Szakály, 1999). Perhaps this is reflected in the Austrian coins found in the excavated cellar, which make up one-sixth of the coin hoard.

The significance of the excavation is that the existence of the single-celled archaic vineyard cellar building can be traced back two centuries, and its geographical presence can also be verified in Eastern Transdanubia. This also indicates a new type of archaeological feature; similar features will certainly be found later in other undisturbed forest areas of the country, while exact parallels have recently been reported from Tolna County. This other area is of the historic Szekszárd wine region, the site of the village of Bat, which was destroyed during the Fifteen Years' War and has also been overgrown with forest vegetation, as recently been reported (K. Tóth, 2023, 111, 115, 118: Fig. 9). Since the physical traces of viticulture – probably due to the use of canes – cannot be identified in the landscape, the vineyard structures themselves may indicate and mark the area of the former vineyards Our excavation could not provide answers to many questions raised by ethnographic research on viticulture, but with the continuation and spatial extension of the research, we may be able to find answers to some of them.

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The coin finds are being processed by Máté Varga. I plan to evaluate the building from the perspective of folk architecture and address terminological issues in a later study with Gábor Máté, who has already

shared numerous observations and literature references with me, some of which have already been incorporated into this paper, and he also reviewed the manuscript for the present paper. I am grateful for his multifaceted assistance. I will evaluate the UAV LIDAR survey of the medieval vineyard in Kosba in a joint study with János Mészáros (HUN-REN Centre for Agricultural Research Centre, Institute of for Soil Sciences, Department of Soil Mapping and Environmental Informatics Department).

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