











Project Gallery

Later prehistoric hoarding and habitation on Somló Hill, western Hungary

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Somló Hill (Veszprém County, Hungary) is a prominent Late Bronze Age and Early Iron Age hilltop settlement. Six new hoards present the unparalleled opportunity to study hoarding traditions and depositional practices, and to evaluate the changing roles and functions of the hilltop site.

Keywords: Eastern Europe, Hungary, Late Bronze Age, Early Iron Age, hilltop settlements, hoards

Introduction

Since the late nineteenth century, hilltop sites in western Hungary have received increasing attention. The archaeological material recovered from Velem-Szent Vid and Ság Hill fundamentally shaped our understanding of the role hilltop sites played within the settlement network of the Late Bronze Age (1450–800 BC) and Early Iron Age (800–450 BC) (Patek 1968; Ilon 2015). Yet, while research into early urbanism and the role of Early Iron Age central places in temperate Europe has proliferated in recent decades (e.g. Zamboni *et al.* 2020), investigations into these themes and systematic research of hilltop settlements has not yet occurred in western Hungary. In early 2023, the National Institute of Archaeology of the Hungarian National Museum Public Collection Centre launched a new research project on Somló Hill to investigate the activities that characterised the lives of its inhabitants and the ritual and domestic hoard landscape into which the settlement was embedded.

Somló Hill is a volcanic butte overlooking the Marcal Basin in western Hungary (Figure 1). The 431m-high hill occupies a prominent position in the surrounding landscape and has remained untouched by quarrying, making it an ideal candidate for research.

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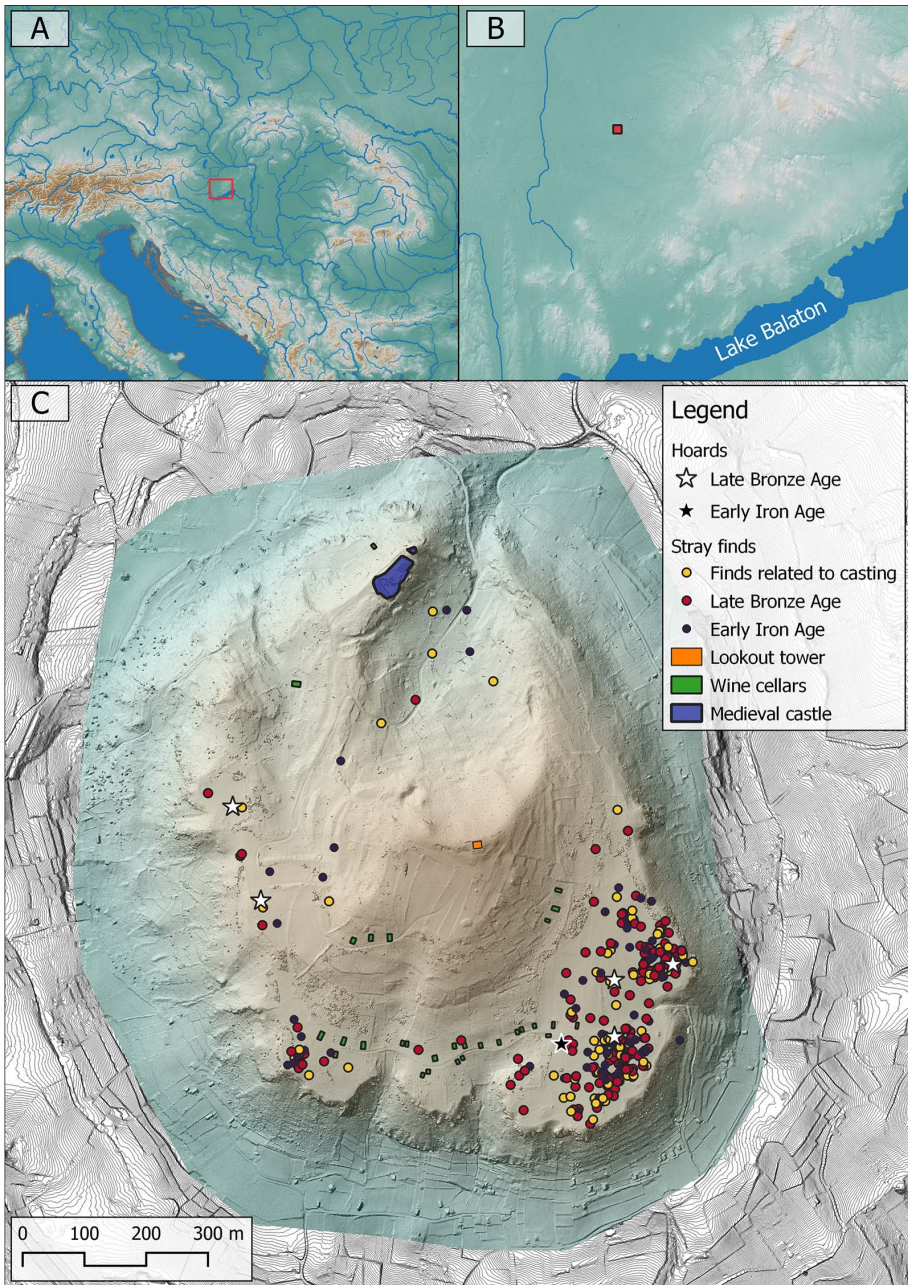


Figure 1. Location of the research area (A) and Somló Hill (B). A digital terrain model of Somló Hill (C) shows the locations of archaeological evidence recovered (figure by authors).

The first year

While several important Late Bronze Age and Early Iron Age finds were unearthed on and around the hill during the late nineteenth century, almost no documentation of these

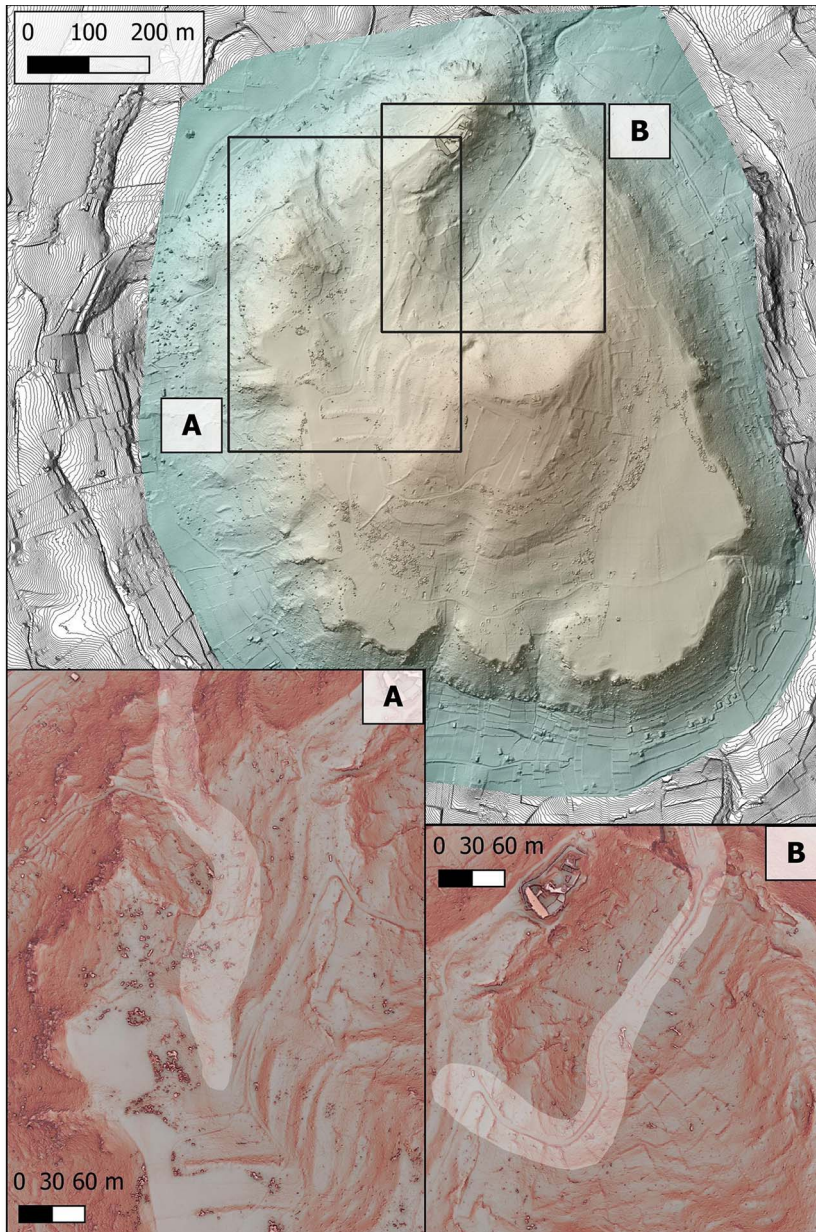


Figure 2. Red Relief Image Map representations of the digital terrain model of the western part of Somló Hill (A), with likely prehistoric pathway to the hilltop and possible prehistoric terraces, and of the northern valley (B), with the (early) modern pathway to the hilltop (shown on archaic maps) and abandoned vineyard plots (figure by authors).

discoveries survives (Darnay 1899). Consequently, extensive metal-detector and field-walking surveys were launched in the upper zones of the hill to clarify the extent and character of the area of archaeological interest. Airborne laser scanning of the hilltop was also carried

out to determine whether, despite past viticulture, ancient alterations of the landscape are still detectable.

The lidar survey was carried out with a Matrice 600 unmanned aerial vehicle and a CHCAA450 sensor in March 2024. The scanning altitude was 100m, producing a sub-metre resolution digital terrain model of the bare surface of the hill. Further maps were derived from this model to highlight differences in the topography (e.g. Red Relief Image Maps).

Metal-detector surveys in the first year identified more than 300 Late Bronze Age and Early Iron Age artefacts (Figure 1). The distribution of these finds reveals an area of high density on the south-eastern plateau and a scarcity of metal finds where abandoned vineyard plots are accentuated (i.e. where the effect of modern modification of the geomorphology is most apparent; Figure 2). In accordance with the evidence from other hilltop settlements in western Hungary, most of the metal finds from Somló Hill date to the Late Bronze Age, yet Somló Hill has also produced one of the largest collections of Early Iron Age metal finds from a hilltop location in the region (Figure 3). While the earliest Late Bronze Age finds date to the Reinecke Bronze Age C period (1400–1300 BC), finds of the Hallstatt B1–B2 periods (1080–900 BC) are most abundant. Occupation on the hilltop seems to have been



Figure 3. Early Iron Age metal finds from Somló Hill; the diameter of the phalerae with openwork decoration is 45.51mm; the length of the fibulae varies between 34.15 and 55.27mm; the large pendant is 90.1mm long (photograph by László György).

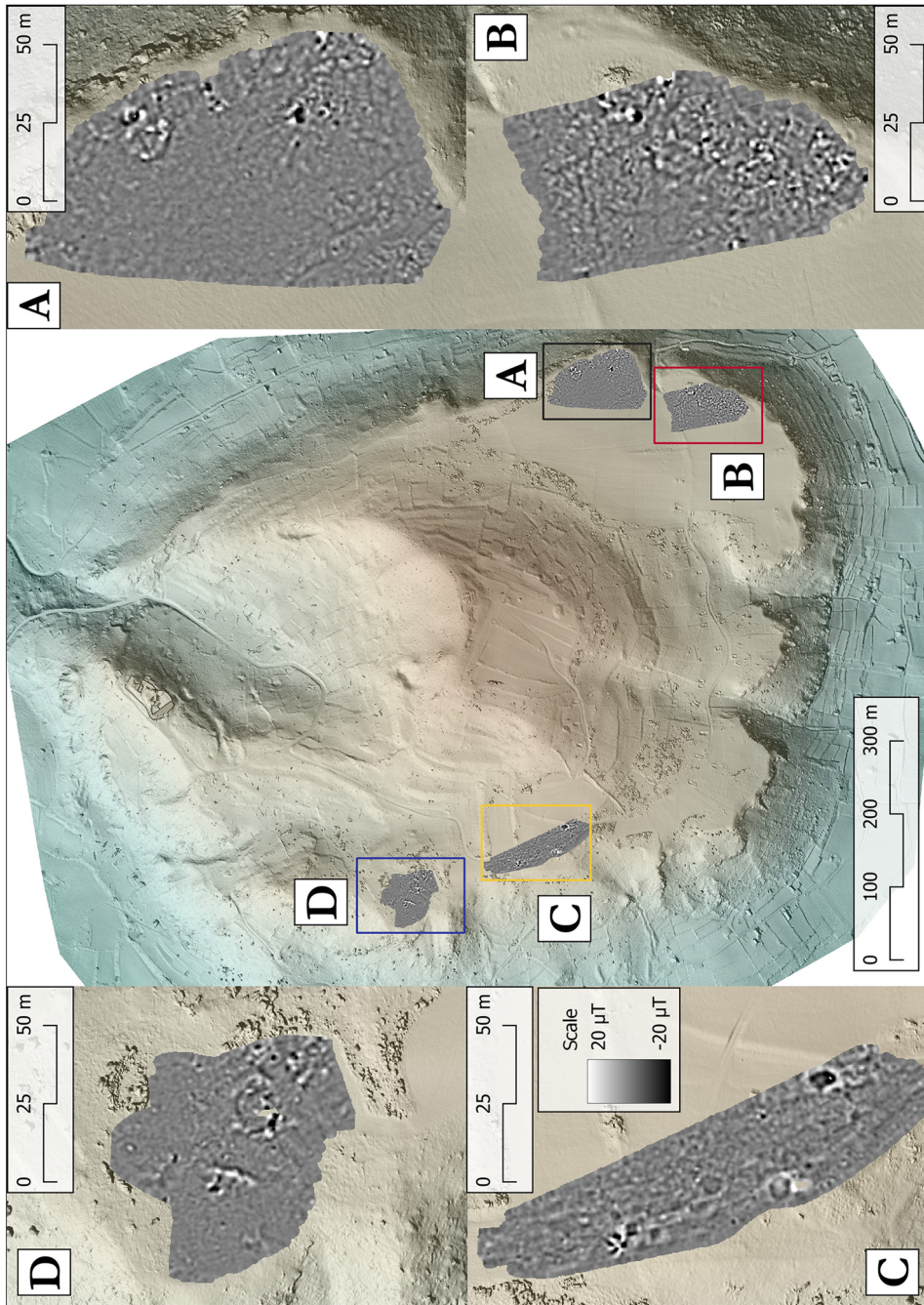


Figure 4. Results of magnetic surveys (-20 – 20 nT/m) on Somló hilltop in 2023 (figure by authors).

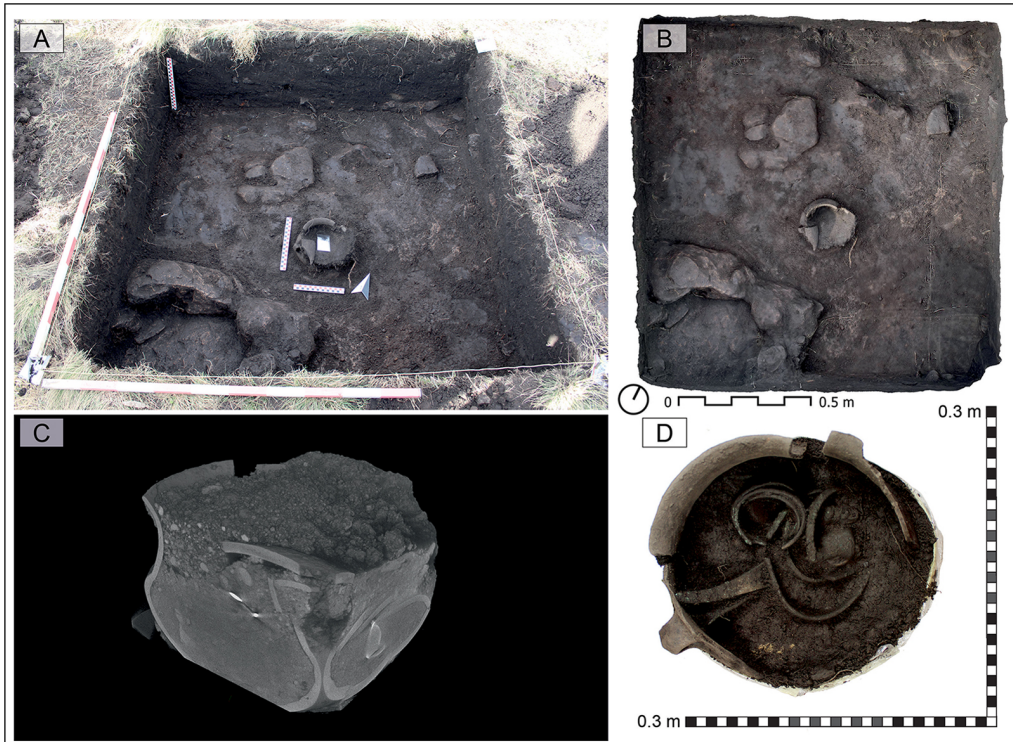


Figure 5. Investigation of Hoard V: A) photograph of the sondage around the hoard; B) photogrammetric representation of the in situ hoard; C) CT inspection of the assemblage; D) photograph of contents taken during the excavation (figure by authors).

uninterrupted during the transition into the Early Iron Age and, contrary to our previous understanding, some finds suggest that the area continued to be occupied in the Hallstatt D2–D3 periods (between the second half of the sixth century and the beginning of the fifth century BC). Large quantities of bronze lumps, droplets, casting jets and fragmented plano-convex ingots suggest the presence of bronzeworking workshops on the plateau.

Magnetic surveys were conducted over four small areas (Figure 4). In total, 2.5ha were measured with a SENSYS MXPDA magnetometer mounted with Fluxgate probes and the JAVAD Triumph-1 DGPS system. The high (100+ nT/m) values reflect the near-surface volcanic bedrock in all areas, making the identification of archaeological features problematic.

Since 2023, five Late Bronze Age and one Early Iron Age metal hoards have been discovered. Detailed documentation—including photogrammetry and professional video recording—of the excavation of these new hoards presents hitherto unparalleled opportunities for understanding depositional practices during the Late Bronze Age in Hungary. Preliminary typo-chronological evaluation of the hoards suggests that deposition occurred around the Hallstatt B1 and B2 periods. Hoards from the Hallstatt B period in Transdanubia are scarce and lack secure archaeological contexts. Somló Hill therefore provides unique information about the arrangement of bronze items (layering and combination of objects, dual hoarding),



Figure 6. Alpine-style spearhead from Hoard I (figure by authors).

the pattern of fragmentation of metal objects without modern influences, and the presence of non-metal components in hoards, such as amber beads, boar and domestic pig tusks, and fabric and leather components. Deposition inside ceramic pots was suggested from this period but never documented. On Somló Hill, two such depositions were excavated (Hoards III and V), presenting an opportunity to lift these assemblages en bloc and examine them using computed tomography at the University of Pannonia (Veszprém) to explore the arrangement of the items within the vessels (Figure 5). Special objects, such as the large and elaborate Alpine-style spearhead from Hoard I (Figure 6), were subjected to neutron tomography to identify specific production traces and defects (Tarbay *et al.* 2024). Archaeobotanical analysis of anthropogenic sediment samples collected from Hoard III revealed small-seeded lentil (*Lens culinaris* L. subsp. *microsperma*), cereal caryopses fragments and a few fragmented small-seeded cereals (likely broomcorn millet caryopses, cf. *Panicum miliaceum* L.); all well-known elements of Late Bronze Age–Early Iron Age subsistence.

The unearthed hoards testify to an intentional and complex hoarding tradition on Somló Hill. They offer a unique opportunity to redefine hoards during the Hallstatt B period in Transdanubia through the patterning and study of previously unknown hoard components and phenomena, using advanced analytical techniques and methods.

Next steps

The discovery of Hoard V (Figure 5) has helped inform plans for future fieldwork. The assemblage was situated on the south-eastern plateau, the area that has so far yielded the highest density of metal finds. We anticipate that excavating the immediate environment of the hoard could shed light on how the hoard relates to the Late Bronze Age settlement on the south-eastern plateau; whether it was deposited in a mundane or ritual setting far from settled areas.

One of our main goals is to clarify the chronology of hoarding and habitation on Somló Hill in absolute terms. Hoard I contained zooarchaeological material suitable for radiocarbon dating, something that is lacking from contemporaneous hoards in the region. Typo-chronological analysis indicates that Hoard V is probably the most recent of the Late Bronze Age depositions so far identified on the hill; radiocarbon dating of zooarchaeological material associated with this hoard, therefore, could provide clearer chronological understanding of the transitional period between the Late Bronze Age and the Early Iron Age at the site.

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