

LATE BRONZE-AGE GOLDEN GREAVE FROM THE OUTSKIRTS OF SZEGED¹

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In May 2017, a unique Late Bronze Age archaeological ensemble was found on the outskirts of Szeged that included an oval golden object with repoussage ornamentation. The object, presumably used as a greave, is exceptionally important not only because it is the first Late Bronze Age metal greave to have been found east of the Danube, but also because it is the very first piece of Bronze Age protective armour in precious metal to have been found in the European region. In addition to its scientific significance and unique nature, the find, which has received a great deal of attention in the Hungarian press, is also rendered special by the fairy-tale circumstances of its discovery.

THE FINDING OF THE GREAVE

The first piece of the ensemble was found by Mr. Róbert Antal, a resident of the village of Gyálarét (*Figure 1*). His unselfish handling of the find and his sincere interest in the scientific significance of the object puts the finder in the league of the legendary local patriots featured in the writings of Ferenc Móra, Dusán Sztojkov and Ferenc Máder. This versatile man who, among other occupations, grows exotic fruit, raspberries and blueberries, has a long-held interest in the history of his home town and has discovered

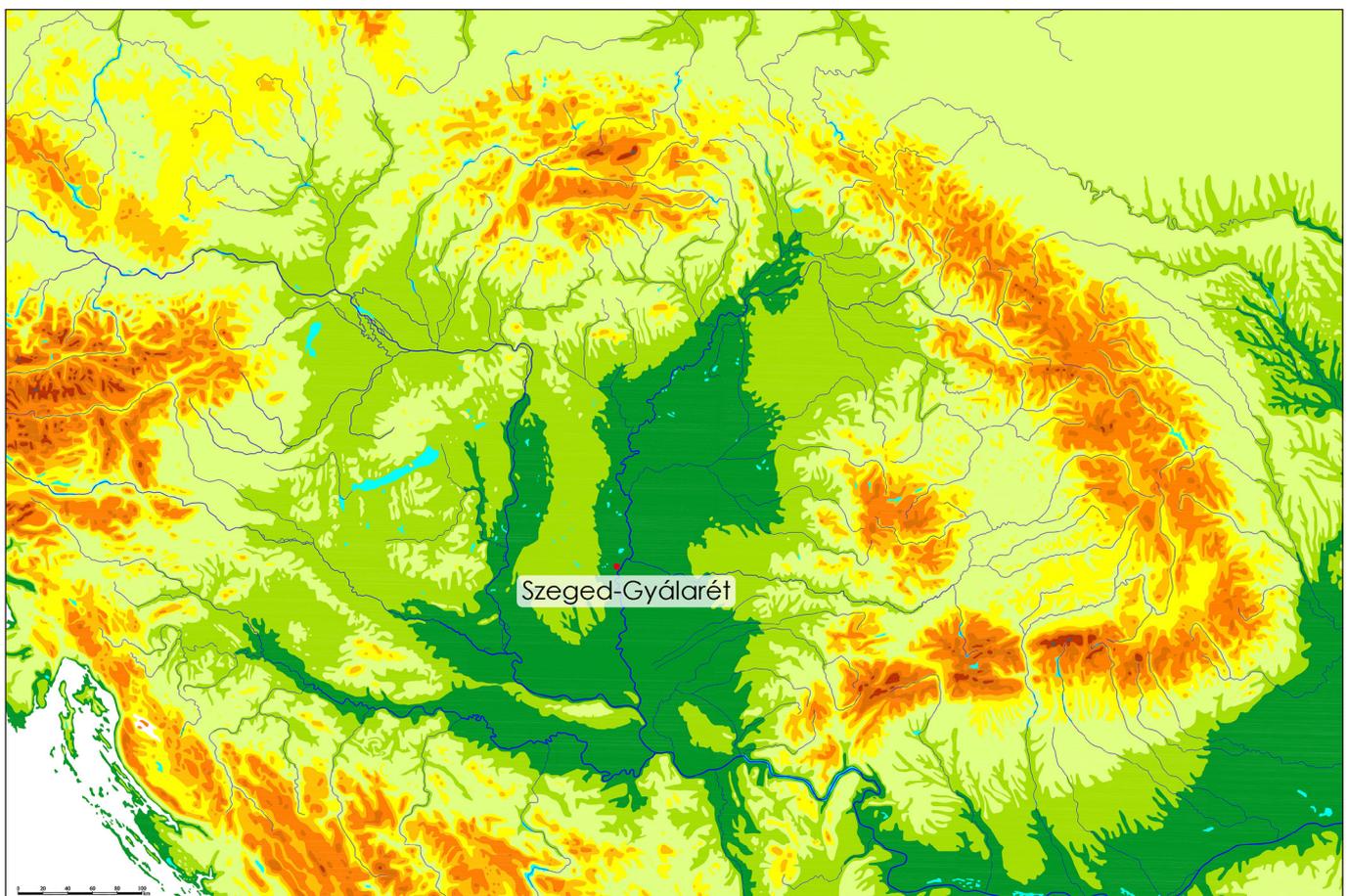


Figure 1: Position of the site within the Carpathian Basin

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a number of archaeological sites on his excursions in the area (Figure 2). On the 10th of May, he set off to pick mushrooms in a young grove of oaks outside the village. His path took him across the old riverbank where he had previously found some ancient pieces of pottery. It was on the side sloping down towards the floodplain that he found a metal plate with a golden glint crumpled up into a ball, which he then took home and carefully cleaned and unfolded.⁴ (Figure 3). As he unfolded the piece, he also found a small, conical gold plate pendant within the crumpled greave.

Mr. Antal suspected that the object might be of great scientific value, so the next day he notified the archaeological authorities in Szeged. His action is a rare example of a local patriotism infused with a strong sense of civic duty.⁵ Just one day later, specialists from the Szeged Museum (Péter Czukor, Ottó Fogas), Budavári Plc. (Kornél Sóskúti, Éva Szakos) and from the Institute of Archaeology of the Faculty of Humanities at Eötvös Loránd University (Gábor V. Szabó, Gábor Váczi, Lajos Sándor) accompanied the finder to examine the site where the gold object had been found.

FIRST SYSTEMATIC INVESTIGATION OF THE SITE

On the brief initial metal-detector survey, conducted for the sake of orientation, one hemispherical and two conical gold fittings were discovered, followed a few days later—as a result of the systematic instrumental metal detector work—by that of the missing part of the golden greave,⁶ which had been crumpled up like the first piece (Figures 4–5). In addition to the new part of the greave, four more golden buttons and a conical pendant were also unearthed. The objects were spread over an area of approximately 25 by 25 metres, disturbed by cultivation of the soil (Figure 6).

The metal-detector survey was followed by a geophysical survey of the wider vicinity of the location where the gold pieces had been found. The survey yielded no phenomena intimating the presence of any further objects related to those already found. After that, the authenticating excavation of the ensemble was performed between 26 June and 11 July.⁷ Around the find locations of the greave and the buttons, 20 x 20 metres of research trench were laid out and excavated by hand down to the undisturbed, yellow, loess



Figure 2: Róbert Antal, who discovered the object, with the fragment of the greave found second (photo: Gábor Szabó)

⁴ Unfortunately, the unfolding resulted in the loss of much irreplaceable information, but we have tried to reconstruct the manner in which the object was originally folded based on Róbert Antal's account.

⁵ In recent years, most ensembles of archaeological finds that were not discovered by archaeologists have been found through the illegal use of metal detectors. In most cases, attempts are made to sell the objects illegally, and there have even been some examples of people using metal detectors getting significant amounts of money from museums for their illegal finds. In recent years, the only other caches that have been discovered without a metal detector and taken to a museum immediately following discovery, as the one at Gyálarét was, were the pair of swords found in the autumn of 2015 on the outskirts of Mezőberény; the cache found in Oltárc in 2014; and the ensemble discovered in the built-up area of Fegyvernek during the construction of a sewer in 2015.

⁶ The majority of the new gold objects—including the second fragment of the greave—were found by the Eötvös Loránd University team's archaeological metal-detector technician, Lajos Sándor.

⁷ The authenticating excavation was financed by Salisbury Régészeti Kft.



Figure 3: The first golden object to be discovered, unfolded by the finder (photo: Anna Markos)

undersoil. During the dig, another hemispherical golden button and a conical pendant were discovered, but no objects related to the original ensemble were found.⁸

THE DEPOSITED OBJECTS AND THEIR INTERRELATIONSHIPS

The treasure discovered in the fields between Szeged and Gyálarét consists of a gold greave broken in two, the parts of which were individually folded up (*Figures 3 and 5*), five conical golden pendants and three hemispherical golden buttons (*Figure 7*). The total weight of the ensemble of golden objects is 147 grams: the fragments of the greave weigh 141.3 grams, the buttons and the conical pendants total 5.7 grams. According to the primary material test performed by a jewellery firm, the greave is made of 20-carat gold alloyed with silver. The greave was made from a thin, oval plate of gold, and has a hole on each side at the edge, which indicates clearly that it was originally attached to an underplate made of organic material.

Greaves made of bronze plate appeared and spread across the European continent from 1300 BC.⁹ Their appearance is related to the sequence of changes that resulted in a radical transformation of the armaments used by warriors from the coast of the Atlantic Ocean all the way to the Aegean world. From that time, spears of various kinds became the dominant weapons, the number of swords increased massively, and the hitherto almost totally unknown cast and hammered bronze protective armaments: breast-plates, shields, helmets and greaves began to appear.¹⁰



Figure 4: The second fragment of the greave to be found, in its original position (photo: Gábor Szabó)



Figure 5: The crumpled up greave fragment found second (photo: György T. Szántó)

⁸ During the investigation, István Bácskai performed a systematic metal-detector survey of the wider vicinity of the site.

⁹ Schauer, Peter: Die Beinschienen der späten Bronze- und frühen Eisenzeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 29 (1982), 100–155; Clausen, Christof: Geschnürte Beinschienen der Späten Bronze- und Älteren Eisenzeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 49 (2002) 149–187.

¹⁰ Born, Hermann – Hansen, Svend: *Helme und Waffen Alteuropas* 9. Sammlung Axel Guttman. (Berlin/Mainz 2001); Mödinger, Marianne: *Herstellung und Verwendung bronzezeitlicher Schwerter Mitteleuropas. Eine vertiefende Studie zur mittelbronze- und urnenfelderzeitlichen Bewaffnung und Sozialstruktur*. UPA 193 Bonn 2011, 51–65; Mödinger, Marianne: European Bronze Age cuirasses. Aspects of chronology, typology, manufacture and usage. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 59, (2012), 1–49; Tarbay, János Gábor: A New Late Bronze Age Warrior Equipment from East Central Europe – Új késő bronzkori, kelet-közép-európai harcosfelszerelés. *Archaeologiai Értesítő* 140 (2015) 29–70.



Figure 6: Locations of the objects within the site (the yellow arrows indicate golden buttons, the blue arrow shows the location where the second piece of the greave was found, the red dotted line indicates the approximate location where the first part of the greave was found) (photo: Gábor Szabó)



Figure 7: The hemispherical and conical buttons found at the site (photo: György T. Szántó)

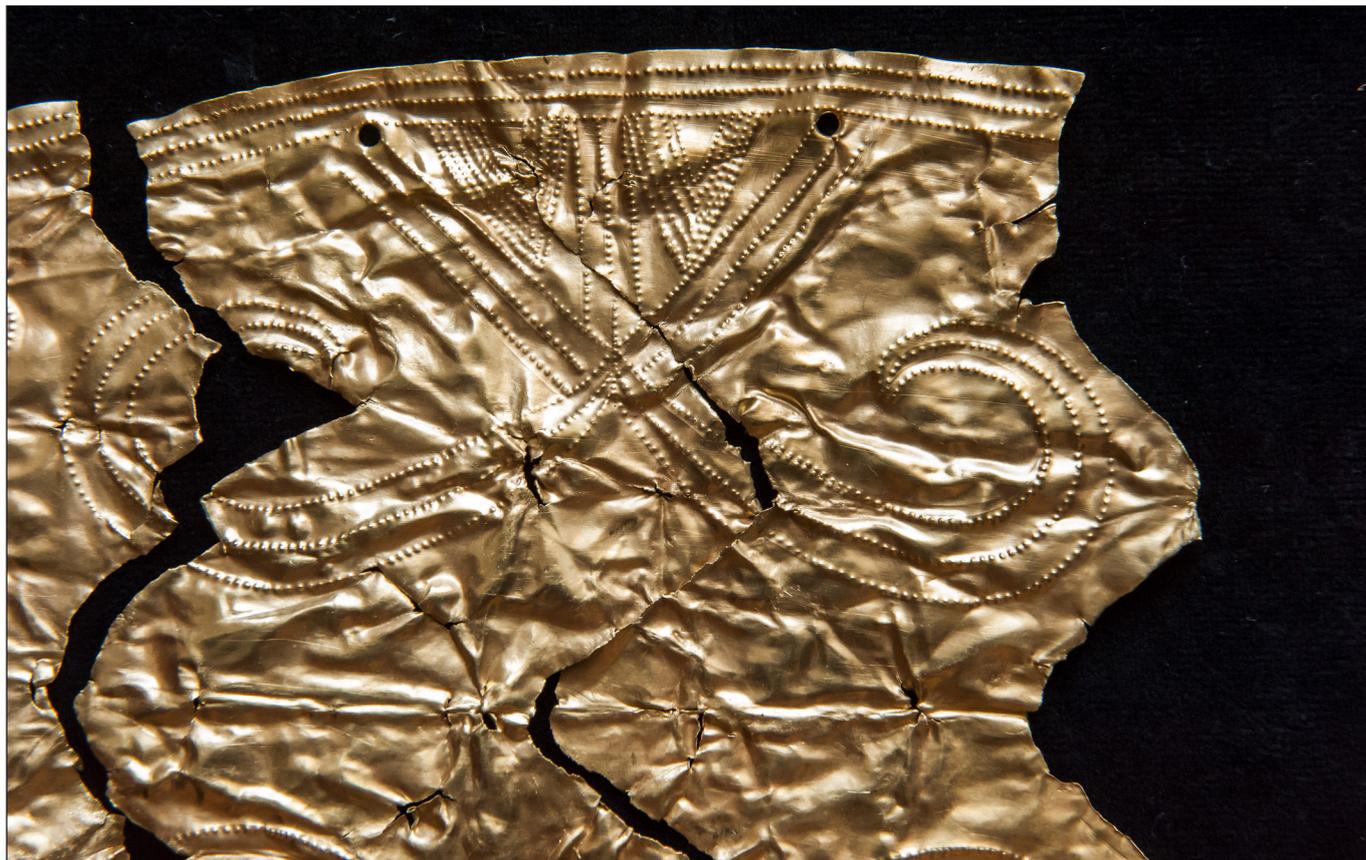


Figure 8: A detail of the ornamentation on the greave (photo: György T. Szántó)

Despite the fact that the various types of bronze protective armaments and armour spread over such a massive area in a relatively short period of time, only a few such pieces have been found so far.¹¹ This may indicate that only a rather small group of elite Bronze Age warriors possessed such objects. This is borne out by the distribution of Late Bronze Age greaves similar to the object found in Gyálarét: all across Europe, such objects have only been found at 35 sites from the 250 to 300-year period of the Late Bronze Age.¹² In Hungary, greaves were found at a total of seven sites—all of them in Transdanubia—but none of the objects found in Hungary or anywhere else in Europe were made of gold.

The primary significance of the Gyálarét greave is that in the European region, it is the first piece of Late Bronze Age armour made of a precious metal.¹³ Gold, electrum and silver offensive weapons (axes, daggers and spears) have been in evidence since the Late Bronze Age,¹⁴ but every single one of the greaves, helmets, pieces of armour and shields discovered so far has been made of bronze or organic material.

¹¹ Uckelmann, Marion: The Function of Bronze Age Shields. In: Uckelmann, Marion – Mödinger, Marianne (eds.): *Bronze Age Warfare: Manufacture and Use of Weaponry*. BAR International Series 2255 (Oxford 2011), 187–199, Fig. 5.

¹² Clausen, Christof: Geschnürte Beinschienen der Späten Bronze- und Älteren Eisenzeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 49 (2002) 149–187, Abb. 4. Abb. 7.; Honti, Szilvia – Jankovits, Katalin: A New Grave from the Late Bronze Age Hoard found at Lengyeltóti in Southern Transdanubia. *Communicationes Archaeologicae Hungariae* 2015–2016 (2016) 79, Fig. 9.

¹³ The only other protective weapon made of precious metal was found in Mesopotamia: the Meskalamdug war helmet discovered at Ur in Grave no. PG 755 (Wolley, Charles Leonard: *Ur Excavations Volume I-II. The Royal Cemetery* [New York 1934], 552, Pl. 150).

¹⁴ Primas, Margarita: Waffen aus Edelmetall. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 35, (1988), 161–185; Hansen, Svend: „Überausstattungen“ in Gräbern und Horten in der Frühbronzezeit. In: J. Müller (Hrsg.), *Vom Endneolithikum zur Frühbronzezeit: Muster sozialen Wandels? Tagung Bamberg 2001. Universitätsforschungen zur Prähistorischen Archäologie* 90 (Bonn 2002), 151–173, Abb. 13; Hansen, Svend: Waffen aus Edelmetall. In: Meller, Harald – Schefzik, Michael (Hrsg.): *Krieg. Eine archäologische Spurensuche*. Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale). 6. November 2015 bis Mai 2016. Halle (Saale) 2015, 297–300.

However, it is not just its being made of gold that makes the object special, its value is increased by its unique ornamentation, which has few parallels (*Figure 8*). The fine embossed pattern consists of three basic motifs: the three lines that run parallel to the edges, and the motifs placed above them periodically, consisting of triangles and vine-shoot shaped components.¹⁵

Oval greaves made from thinner plate and using repoussage for ornamentation, related in some ways to the Gyálarét find, were made in the 12th and 11th centuries BC (the HaA1 period), but those were characterised by a tradition of ornamentation with a more rigid style that filled the entire surface with a regular pattern. Forms related to the curved lines of the Gyálarét greave are present on a piece found in Cannes-Écluse in France,¹⁶ while figures similar to the triangles were found on a greave¹⁷ found in Schäfstall, Austria.¹⁸ A curved motif reminiscent of a vine shoot or an elongated leaf appears on several prehistoric gold objects from the southern regions of the Carpathian Basin. The motif appears in a sculptural form on the golden bracelets found in Dunavecse (the dating of which is uncertain), Magyarbénye (Biia) and Abrudbánya (Abrud).¹⁹

Bronze versions of the hemispherical buttons and conical pendants found with the greave are considered quite common designs for the Late Bronze Age and the Early Iron Age. Pieces of approximately that size were generally used as ornaments for clothing or headware, but the hemispherical bronze button found in one of the eyelets of the Lengyeltóti bronze greave²⁰ suggests that similar pieces may also have been accessories for greaves.

THE CONTEXT OF THE SITE AND MANNER OF DEPOSITION

The objects were placed in the ground on the western edge of a lonely little island rising from an area that was once floodplain marshland of the Tisza River²¹ (*Figure 9*). The long north-south shore of the island has a whole sequence of archaeological sites from various ages, but our surface explorations and geophysical surveys so far indicate that no traces of a Late Bronze Age settlement should be expected in the immediate vicinity of the location where the gold objects were hidden. During the inspection, a few, not particularly characteristic Early and Late Neolithic ceramic fragments and Árpád Age and Late Mediaeval pottery were found. Approximately 400–500 metres from the site of the gold objects, in the island's interior, Ottó Trogmayer's excavations in the 1960's uncovered an Early Neolithic settlement, the exploration of which unearthed a few pieces of ceramic from the Late Bronze Age, bearing the characteristic stylistic marks of Gáva ceramics in some of the pits.²²

¹⁵ The pattern, etched onto the golden plate before embossing, is clearly visible.

¹⁶ Dehn, Wolfgang: Zur Beinschiene von Schäfstall bei Donauwörth. *Zeitschrift des historischen Vereins für Schwaben und Neuburg (Augsburg)* 74 (1980) 29–33.

¹⁷ Gaucher, Gilles. – Robert, Yves: Les dépôts de bronze de Cannes-Écluse (Seine-et-Marne). *Gallia Préhistoire* 10 (1967) 169–223, Fig. 46.

¹⁸ A similar pattern of curved lines can be seen on two Late Bronze Age clay objects from the Lower Danube region that Oliver Dietrich believes to be miniature clay copies of metal greaves (Dietrich, Olivier: Tönerne Miniaturen von Beinschienen? Gedanken zu zwei Tonobjekten der Gárla Mare-Kultur. *Materiale și Cercetări Arheologice* 5 [2009] 91–96).

¹⁹ The dating of those gold objects is still disputed today: some researchers believe them to have been made in the Late Bronze Age (Kovács, Tibor: Bronzkori ékszerek, fegyverek, aranykincsek [Bronze Age jewellery, weapons and golden treasures]. In: Kovács, Tibor – Raczky, Pál (eds.): *A Nemzeti Múzeum őskori aranykincsei* [Prehistoric golden treasures of the Hungarian National Museum] [Budapest 2000], 46–47, Figure 24, figures 26–27), while others date them to the Early Iron Age (Kemenczei, Tibor: *Funde ostkarpatenländischen Typs im Karpatenbecken*. Prähistorische Bronzefunde Abteilung XX. Band 10. [Stuttgart 2005], 81–82).

²⁰ Honti, Szilvia – Jankovits, Katalin: A New Grave from the Late Bronze Age Hoard found at Lengyeltóti in Southern Transdanubia. *Communicationes Archaeologicae Hungariae* 2015–2016 (2016), 71–86, Fig. 3, Fig. 5.

²¹ Prior to the regulation of the Tisza, the river's bed lay west of the site. Today's artificial river-bed is to the east. The appropriate map in the First Military Survey designates the island as “*Insul Siladg*”.

²² V. Szabó, Gábor: A Csorva-csoport és a Gáva-kultúra kutatásának problémái néhány Csongrád megyei leletgyűttes alapján – Forschungsprobleme der Csorva-Gruppe und der Gáva-Kultur aufgrund einiger Fundverbände aus dem Komitat Csongrád (*Problems of researching the Csorva group and the Gáva culture based on a few ensembles of objects from Csongrád County*). A Móra Ferenc Múzeum Évkönyve (*Yearbook of the Móra Ferenc Museum*) – *Studia Archaeologica* 2 (1996), 21, 31, 40.

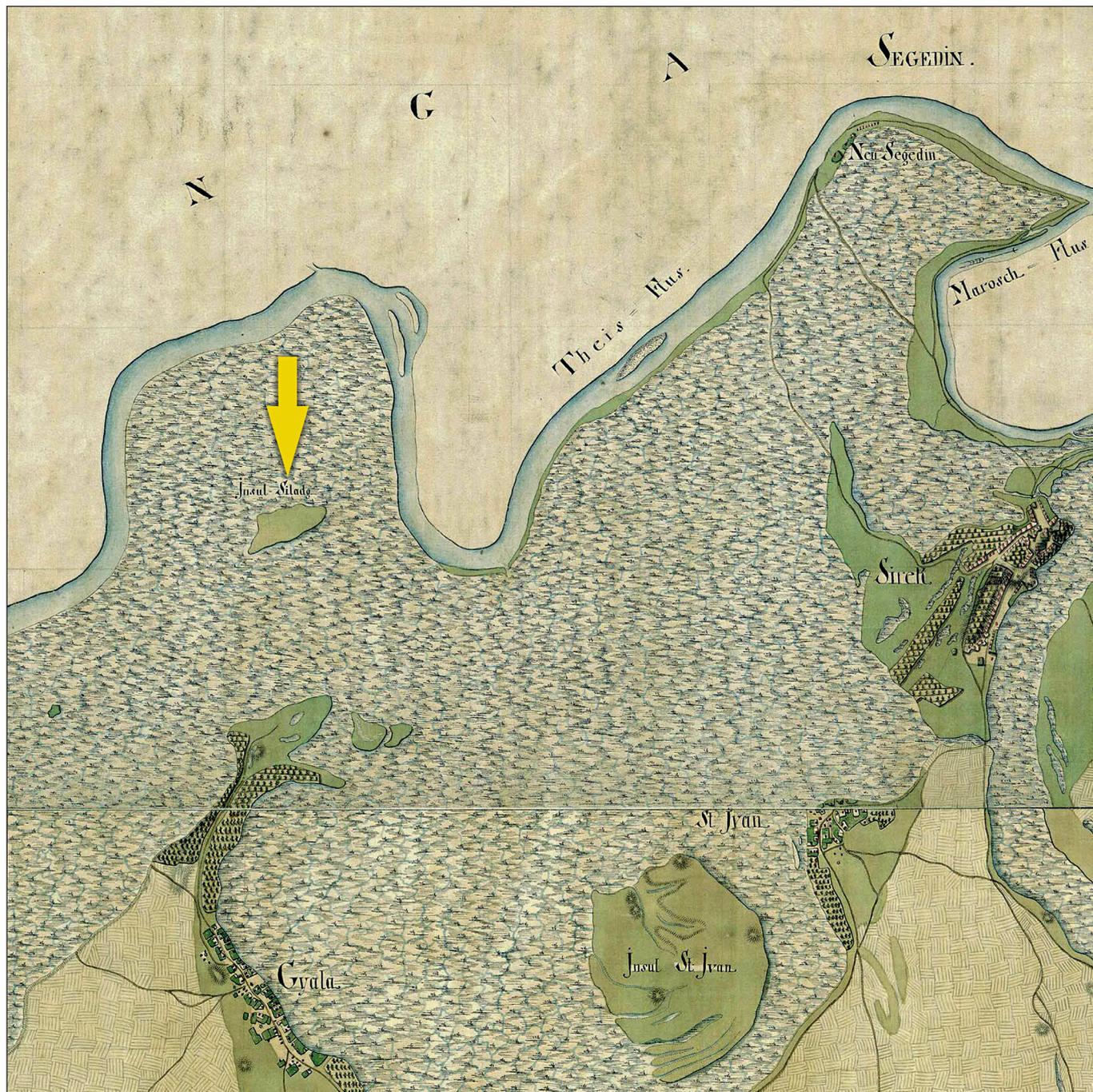


Figure 9: Location of the island containing the site on a map from the First Military Survey

Based on all of that, as far as we know, the ensemble of golden objects was hidden on the western shore of the island directly at the edge of what was then marshland adjacent to the Tisza, but it was not related to any settlement or cemetery of the same period. A Late Bronze Age settlement is known some 500 metres from the site.

The metal-detector survey and the authenticating excavation proved that that objects were buried in a shallow pit in the top 30cm of soil, presumably in a single pile, so that the hole that was dug did not reach the yellow subsoil. We can assume that the ensemble, located at the bottom of the layer reached by ploughing, was disturbed in recent years by steadily deeper cultivation of land.

The greave was broken in two pieces and the pieces were individually folded up before deposition. Among deposition patterns known from the Late Bronze Age, the deposition of metal objects that were deliberately damaged and then meticulously folded or randomly crumpled up is quite common. Similar

damage and folding was observed in the cases of the bronze greaves found in Lengyeltóti, Várvölgy and Cannes-Écluse.²³

SUMMARY

Based on analogues from Central and Western Europe, the oval gold object found at Szeged-Gyálarét and identified as a greave can be dated to the 13th-12th centuries BC, the HaA1 period. Its appearance in the Tisza region indicates that greaves and probably other elements of armour were not only popular in the Transdanubian region, but also in Eastern Hungary.

The Szeged-Gyálarét greave is the only known example of protective armour made of precious metal yet found in Europe. If we take into account that the components of Late Bronze Age armour, as well as shields and helmets, were in themselves rare privileges for the most prestigious members of the warrior elite, we can conclude that the golden greave must have represented truly exceptional prestige. Its occurrence at this location indicates that the warrior elite represented in other regions of the Carpathian Basin with rich tumuli, weapon depots or forts was also present in the southern part of the Hungarian Great Plain, and war and various items of weaponry may have played a very important role in its ideology.²⁴

The above approach implies that the golden greave was part of a military representation, but the context of the Gyálarét find may also support another interpretation of the object's role. Thus far it seems that the greave was deposited without its matching partner. The golden buttons and conical pendants that were buried with it may have been components of a set of attire also including the greave. On that basis, it is not out of the question, either, that the greave may have been a symbolic object, not the part of the armour of an existing person, but associated with a supernatural power, a hero or a mythical ancestor or possibly their cult, as a ceremonial object.²⁵

The above only constitutes our first impressions of this newly found object, as more complex research of the ensemble, discovered a few months ago, is only just beginning. In the following months, the part of the greave that was found later will be unfolded, the entire object will be examined to establish the production technology, and the material composition will also be tested in greater detail. We also plan to investigate the area surrounding the site of its discovery, the deposition landscape: within the scope of that study, we will attempt to reconstruct the position of the small island on which the object was hidden in the Late Bronze Age network of settlements of the wider region.

RECOMMENDED LITERATURE:

CLAUSING, CHRISTOF

Geschnürte Beinschienen der Späten Bronze- und Älteren Eisenzeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 49 (2002) 149–187.

SCHAUER, PETER

Die Beinschienen der späten Bronze- und frühen Eisenzeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 29, 100–155.

²³ Gaucher, Gilles – Robert, Yves: Les dépôts de bronze de Cannes-Écluse (Seine-et-Marne). *Gallia Préhistoire* 10 (1967) 169–223, Fig. 46–47; Nebelsick, Louis: Rent asunder: ritual violence in Late Bronze Age hoards. In: Pare, Christopher (ed.): *Metals Make the World Go Round. The Supply and Circulation of Metals in Bronze Age Europe*. Proceedings of a conference held at the University of Birmingham in June 1997. Oxford, 160–175; Honti, Szilvia – Jankovits, Katalin: A New Grave from the Late Bronze Age Hoard found at Lengyeltóti in Southern Transdanubia. *Communicationes Archaeologicae Hungariae* 2015–2016 (2016) 71–86, Fig. 2, Fig. 8.

²⁴ In general, the appearance of the various articles of protective armour indicates the existence of professionally organised military formations.

²⁵ About Bronze Age ritual weapons that are no utility in an actual armed conflict, see Harding, Anthony: *Warriors and Weapons in Bronze Age Europe* (Budapest, 2007), 118–123.

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