HUNGARIAN ARCHAEOLOGY
E-JOURNAL • 2012 WINTER
www.hungarianarchaeology.hu

FIRE, WATER, EARTH: ARCHAEOLOGICAL AND HISTORICAL DATA ON COMPLEX LANDSCAPE UTILISATION IN THE DRAVA VALLEY

Csilla Zatykó

The archaeological, historical, geomorphological and geoarchaeological investigation of the Berzence region in the Middle Drava Valley had a two-fold goal: first, the investigation of how medieval settlements and farming strategies were adapted to the potentials of the environment and second, to examine how the historical and archaeological sources combined with archaeometric methods used in Hungary can contribute to a better understanding of landscape uses in different periods. The estates and lands of the former manor of Berzence lying on the boundary of two smaller regions, each with a different environment, the abundance of written sources and the fact that the area has not been built up offers an excellent opportunity for a comparative analysis of settlement patterns, farming practices and landscape uses.

One of the main goals of the research carried out at Berzence (County Somogy) and its broader area was to explore the traces of medieval landscape uses in a complex geographical environment as preserved in the historical and archaeological record. The study area lies on the boundary of two smaller regions and thus enables the comparison of landscape uses, farming practices and settlement patterns in two markedly different geographical environments. The northerly area, part of the Inner Somogy Hills covered with blown sand, is separated by an 8–10 m high flood-free high bluff from the southerly area located on the floodplain of the Drava Valley (*Fig. 1*).

The study draws from the findings of four disciplines: 1) the analysis of fourteenth-century charters detailing the division of estates that describe the area in exceptional detail, 2) data on archaeological sites recorded during field surveys, 3) a geomorphological survey, and 4) the pollen and malacological analysis

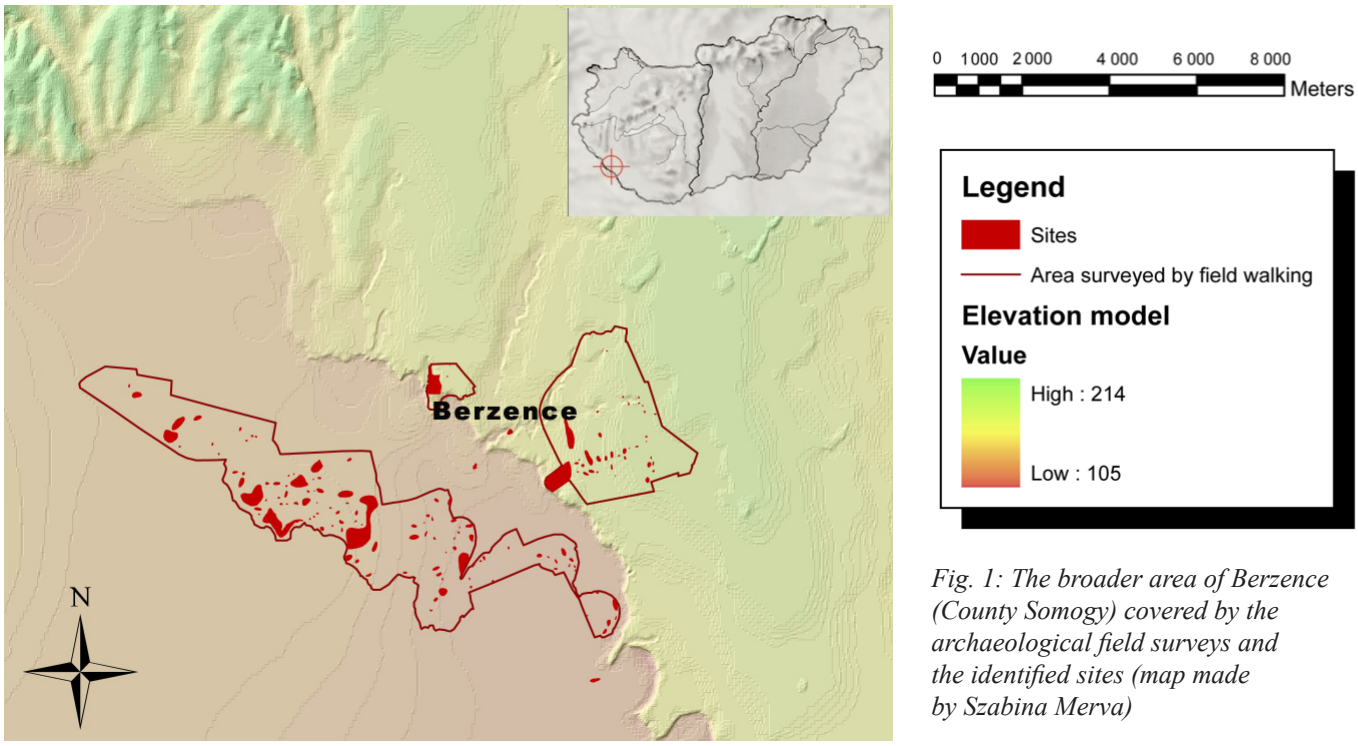

Fig. 1: The broader area of Berzence (County Somogy) covered by the archaeological field surveys and the identified sites (map made by Szabina Merva)

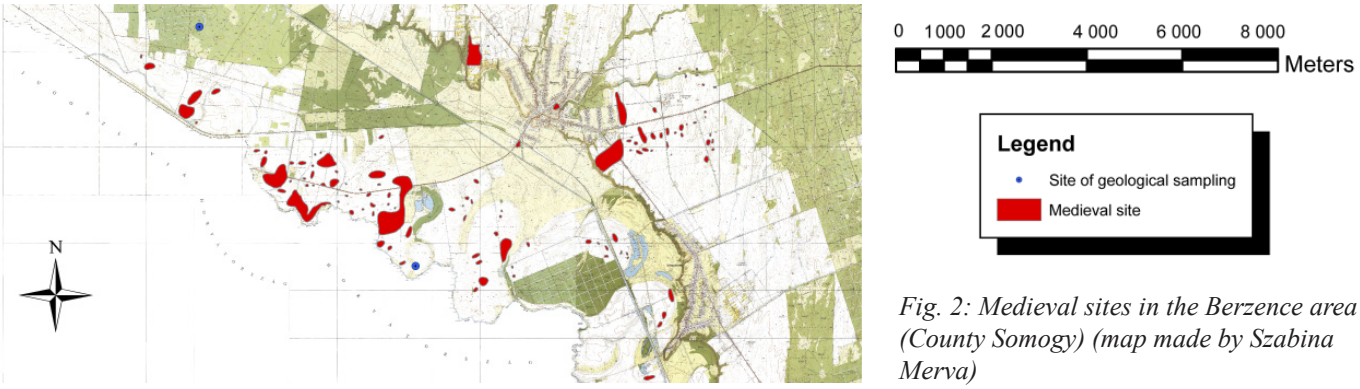

Fig. 2: Medieval sites in the Berzence area (County Somogy) (map made by Szabina Merva)

of two geoarchaeological samples.[1] This paper presents the findings of the historical, archaeological and geomorphological investigations, and how these results can be integrated.

The history of Berzence, its manor and its estates can be traced from 1230 in the written sources. The most informative records are two charters on the division of estates drawn up in 1377.[2] One records the division of the landed properties belonging to Berzence lying on the flood-free high bluff, between its new owners: Lóránt and his brothers of the Pécz kindred. The other document describes the division of settlements, now perished, which once stood on the southern floodplain. According to the charter, the northern, hilly area is dotted by cultivated fields, while the floodplain has at least twenty fishponds and fishing places in addition to fields and meadows. The lakes and fishing places, typical for the landscape use of floodplains, are usually termed fishponds (Lat. *piscina*) in the charter. However, the terms *strug* and *geregye* also appear, both in association with fishing weirs used in slow-moving, shallow waters.[3] The description contained in the document paints a picture of a landscape dotted by small, scattered settlements. In addition to fishing places, the charter also refers to meadows and hayfields. However, there are only few references to ploughlands which would suggest cereal cultivation.

Altogether 152 sites were identified during the systematic archaeological field surveys conducted over an area of 2940 hectares. The relatively high number of sites (118) that also yielded medieval finds suggested that the Berzence area was used to be densely settled in the Middle Ages, even if the sites were not all occupied simultaneously. A comparison of the northern flood-free high bluff with the southern floodplain on the map showing the distribution of medieval sites (*Fig. 2*) reveals that there were countless small, low-intensity sites – presumably temporary settlements – surrounded by four larger, village-like settlements on the floodplain covered with a network of meanders and oxbow lakes. In contrast, there are large tracts of land devoid of any sites between the villages that once stood in the northern, hilly area. The larger settlements of the southern area were spaced 2–3 km apart along the Zsdála Stream,[4] a former tributary of the River Drava. The smaller sites situated between them on the western, slightly higher-lying area (118–120 m) have a more even distribution than the ones in the eastern, lower-lying (115–117 m) and thus more waterlogged area, where they are strung out along the former meanders and dead channels (*Fig. 3*). The written records and the results of geoarchaeological sampling suggest that the differences observed in the settlement patterns of the two areas can most likely be explained by different farming practices. Villages

[1] "Studies on the settlement archaeology and environment in southern Transdanubia (14th–17th centuries)". Research project funded by a grant from the Hungarian Scientific Research Fund (OTKA, K 72231).

[2] DL 6418, DL 6419. They are published as regestas: Borsa, Iván: A Somogyi Konvent oklevelei az Országos Levéltárban (Forrásközlés) (Ötödik közlemény) 1371–1380 (The Records of the Somogy County Convent in the National Archives / Source Publication/ /Fifth Publication/ 1371–1380). *Somogy Megye Múltjából* 30 (1999), 7–54.

[3] Belényesy, Márta: A halászat a XIV. században (Fishing in the fourteenth century). *Ethnographia* 64 (1953), 1–4, 148–165; Szilágyi, Miklós: Halászat (Fishing), in: *Magyar Néprajz* II, ed. Paládi-Kovács, Attila (Budapest: Akadémiai Kiadó, 2001), 104–146.

[4] For the area's medieval hydrographical conditions, see Viczián, István – Zatykó, Csilla: Geomorphology and Environmental History in the Drava Valley, near Berzence. *Hungarian Geographical Bulletin* 60 (2011)/ 4, 357–377.

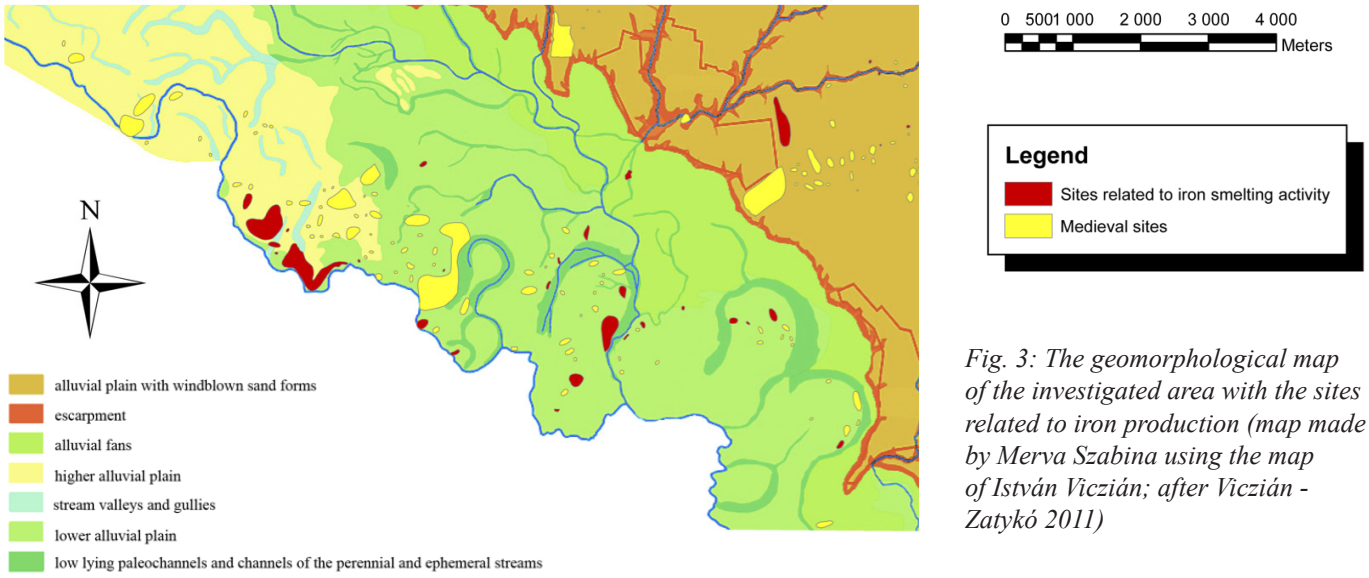

Fig. 3: The geomorphological map of the investigated area with the sites related to iron production (map made by Merva Szabina using the map of István Viczián; after Viczián - Zatykó 2011)

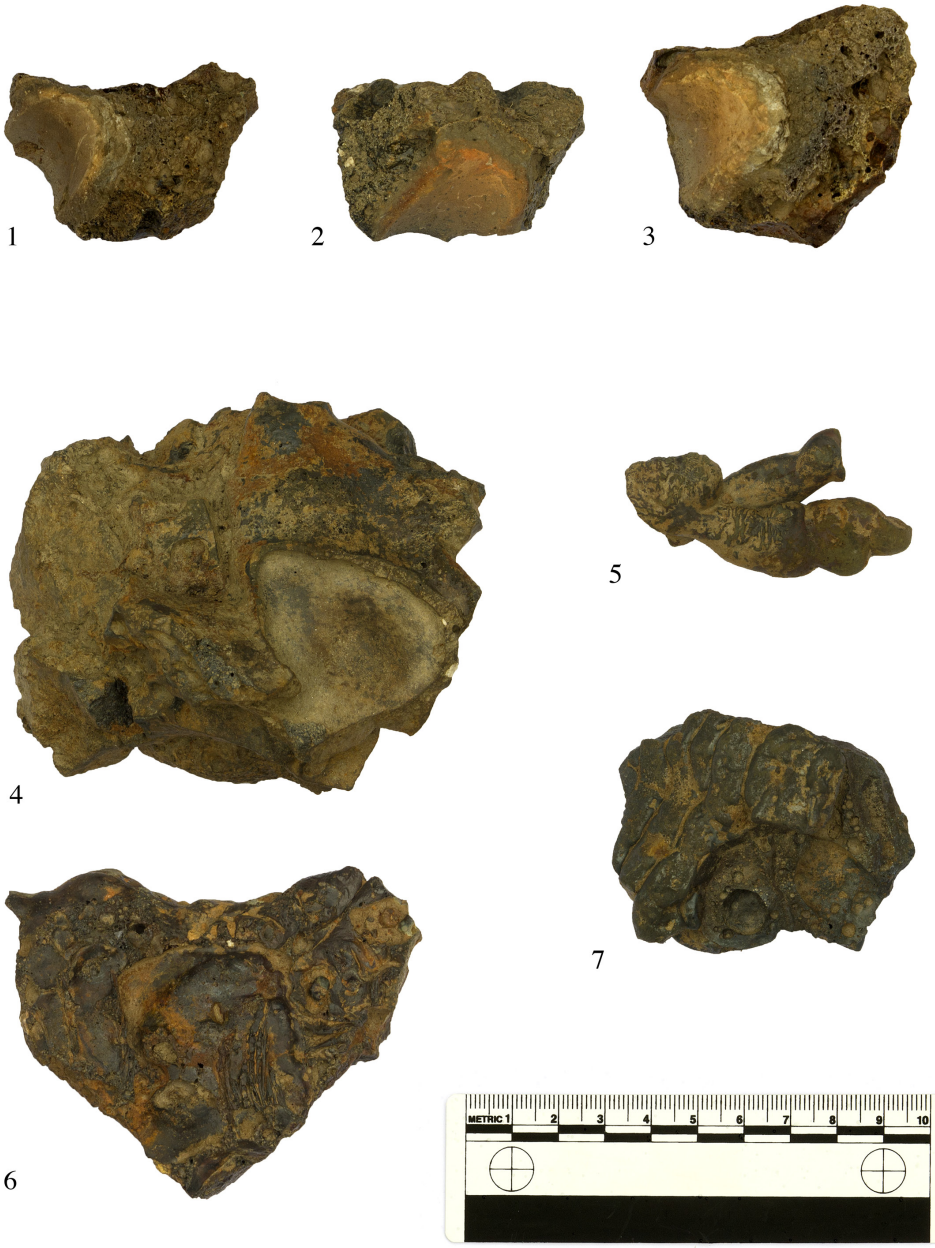

Fig. 4: 1–3: Tuyère fragments with iron slag fused onto them, 4-7: Iron slag

with larger fields engaged in arable farming were established in the northern area covered with sandy soils suitable for crop cultivation, while hayfield management, grazing and fishing was the basis of subsistence in the waterlogged southern territories, which also called for smaller, temporary sites. The archaeological field surveys highlighted another important dimension of the medieval economy and land uses: finds reflecting ironworking such as iron slag, iron blooms and tuyère fragments bearing iron slag fused onto them used at iron smelting furnaces were often found on lower-lying sites in the eastern area, often located along the meanders.[5] These finds reflect the local processing of bog iron ores that were formed in swampy, marshy areas with a high water table (*Fig. 4*).

Lying on the boundary between two small regions, different settlement patterns, subsistence practices and land use patterns adapted to the diverse geographic conditions could be distinguished in the study area. A dominance of cereal cultivation and arable farming can be noted in the northern, high bluff area, while meadow management and fishing in oxbow lakes was the norm in the south, on the former floodplain of the River Drava, coupled with iron production based on bog iron ores that developed in the waterlogged area. Different settlement patterns could be reconstructed in the two areas, conforming to the area's occupation adapted to both subsistence practices and the geographical environment.

Recommended reading

Lóczy, Dénes
The Changing Geomorphology of Danubian Floodplains in Hungary. *Hrvatski Geografski Glasnik* 69 (2007), 2, 5–20.

Takács, Károly
Medieval Hydraulic Systems in Hungary. In: *People and Nature in Historical Perspective*, eds Laszlovszky, J. – Szabó, P., 289–311. Budapest: CEU Press, 2003.

Viczián, István – Zatykó, Csilla
Geomorphology and Environmental History in the Drava Valley, near Berzence. *Hungarian Geographical Bulletin* 60 (2011) 4, 357–377.

Zatykó, Csilla – Juhász, Imola – Sümegi, Pál (eds)
Environmental Archaeology in Transdanubia. Varia Archaeologica Hungarica 20. Budapest: Archaeological Institute of the Hungarian Academy of Sciences, 2007.

Zatykó, Csilla
Aspects of Fishing in Medieval Hungary. In: *Ruralia VIII: Processing, Storage, Distribution of Food – Food in the Medieval Rural Environment,* eds Klapste, J. – Sommer, P., 399–408. Turnhout: Brepols, 2011.

[5] The small number of finds collected at the sites mentioned above was generally unsuitable for a closer dating. Eight of the medieval sites yielding evidence of iron production could be dated to the Árpádian Age, the rest were late medieval ones. Two of the sites with finds reflecting iron production did not yield any pottery.