

## **Landscape with enclosures. Magnetic prospection and surface survey of the Dobużek Scarp microregion, Eastern Poland**

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Current knowledge of the Lublin–Vолhynia Culture settlement (4300–3600 BC) is mostly based on the results of large-scale excavations conducted before the II World War at Złota and occasional fieldwork carried out in later times (e.g., Kruk, Milisauskas 1985; Kowalewska-Marszałek 2007). Some more or less enigmatic features, which can be interpreted as ditches, were also discovered during archaeological research at several other sites. In 2012, magnetic prospection was undertaken to verify the character of some of these features. At Moroczyn (site 5, Hrubieszów commune) the survey did not deliver any conclusive results. The outcome of the non-invasive investigations was much more interesting at Las Stocki (site 7, Końskowola commune; Zakościelna 1986), where a chain of elongated, irregular pits was identified around the part of the site of paramount importance.

The most intriguing results were achieved in the Mikulin region (Tyszowce commune) where the research was conducted in the exceptional landscape and environmental setting

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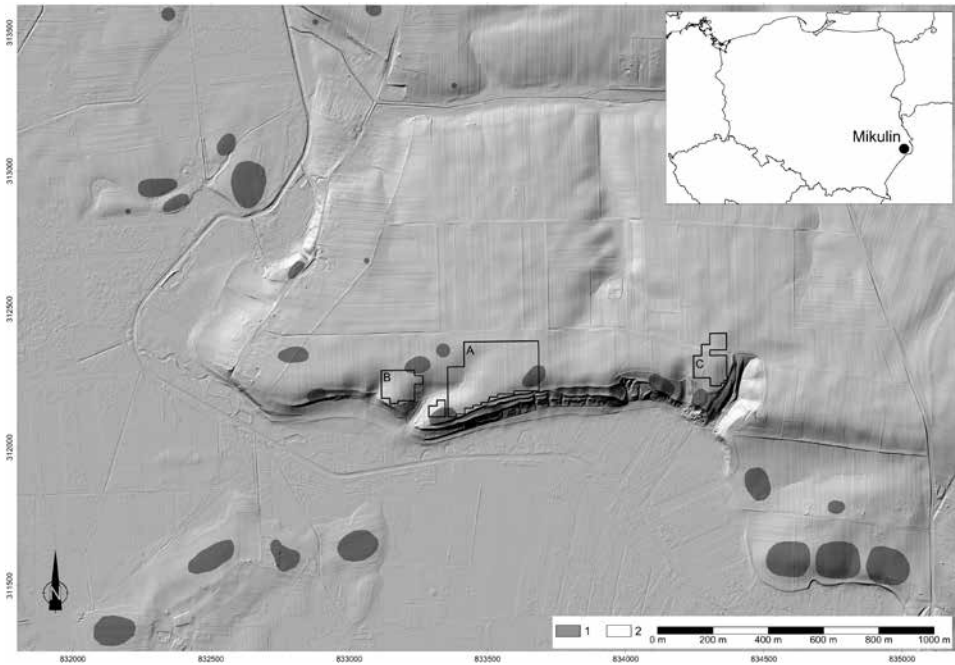


Fig. 1. Dobużańska scarp, Poland. Areas of magnetic prospection: 1 – archaeological sites according to the Polish Archaeological Record project (AZP), 2 – areas of magnetic prospection: A – Mikulin, site 8, B – Mikulin, site 10, C – Dobużek-Kolonia, site 1

of the Dobużańska scarp, on the steep loess and limestone slopes of the Huczwa River valley (Fig. 1). In 2012, studies were focused on one of the promontories of the Scarp (Mikulin, site 8), where the presence of a Lublin–Volhynia Culture ditch had been noted during fieldwork in 1986. The magnetic prospection in 2012 covered an area of 1.68 ha. It was resumed in 2014, broadening the investigated surface to 6.77 ha at the Mikulin 8 site. Additional surveys were undertaken at two neighbouring sites (Mikulin, site 10, 1.41 ha and Dobużek-Kolonia, site 1, 1.59 ha). A Bartington Grad60I-2 System was used for taking measurements.

Two enclosures were identified within the limits of the Mikulin 8 site (Fig. 2). The first one consists of two parallel ditches (A1 and A2), which separate the eastern part of the distinct promontory from the loess high ground that stretches westwards and a ravine located to the north. A third ditch (A3), wider than the previous two, was recognized in the northern part of the promontory; together with another one of similar width (A4), it forms a vast enclosure adjacent to the first one from the east and north-east. Apart from the ditches there was a significant number of positive point anomalies, which can be interpreted as the remains of settlement features (pits). They form a belt, several dozens of meters wide, running along the inner part of ditch A3 and the natural ravine, as well as through the inner meadow, which is nearly devoid of features. This arrangement may suggest a chronological relationship between most of these pits and the enclosure formed by ditches A3 and

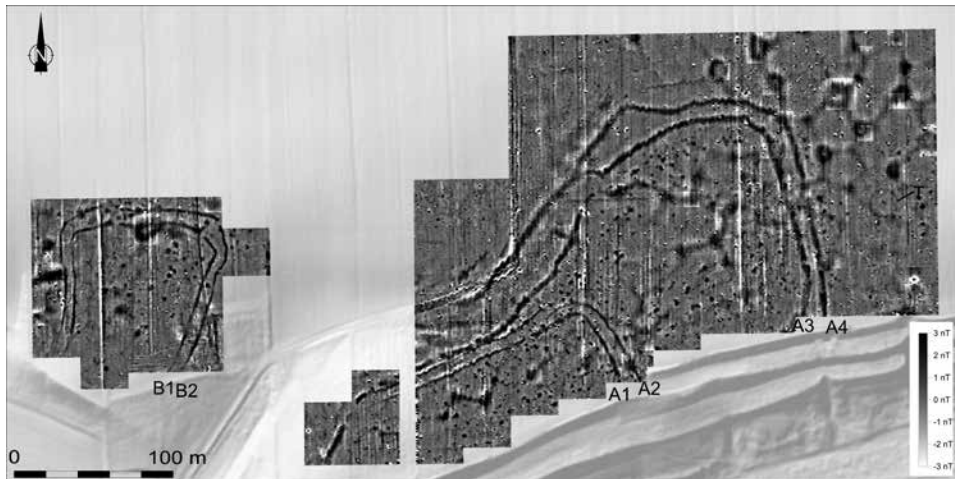


Fig. 2. Dobużańska scarp, Poland. Results of magnetic prospection (left, Mikulin, site 10; right, Mikulin, site 8)

A4. The relics of a tumulus, namely a circular ditch 18–20 m in diameter and a central rectangular pit aligned SE–NW, were identified west of the enclosure (Fig. 2: T).

It can be confirmed based on the results of surface surveys and excavations conducted between 2012 and 2014 that the smaller enclosure formed by ditches A1 and A2 was associated with Lublin–Volhynia Culture occupation. The V-shaped ditch sections typical of the Neolithic and Eneolithic, the collection of specific artifacts and radiocarbon dating support this chronology. Additionally, two richly equipped Lublin–Volhynia Culture burials were discovered in 2012 in an excavation trench located between ditches A1 and A2.

At present there are no conclusive premises for dating the enclosure formed by ditches A3 and A4. The excavations conducted in 2013 revealed a trough-like cross-section of ditch A3, suggesting a younger chronology related probably to Funnel Beaker Culture or early Bronze Age communities.

Detailed research was also conducted at a second site located on a promontory immediately adjacent to the Mikulin 8 site. During a surface survey at this landform (designated Mikulin, site 10) 50 clusters and single finds of human bones were recorded. A test trench excavation revealed that the skeletal material came from ploughed-up graves, which formed a cemetery from the Early Bronze Age. Artifacts collected during the survey could be attributed to communities of the Lublin–Volhynia, Funnel Beaker and Early Bronze Age and Lusatian cultures.

The magnetic prospection (Figs 1 and 2) showed the presence of various anomalies, including two parallel linear anomalies that can be interpreted as ditches forming a hoof-like (trapezoidal) enclosure. In the northern part of the enclosure, two gaps that could be gateways were identified in the line of the ditches. Despite the fact that there is no definite chronological data currently available for this enclosure, certain features, such as the arrangement of the ditches and their width, bear resemblance to the smaller enclosure discovered at the neighbouring Mikulin 8 site, suggesting a relation with the Lublin–Volhynia Culture.

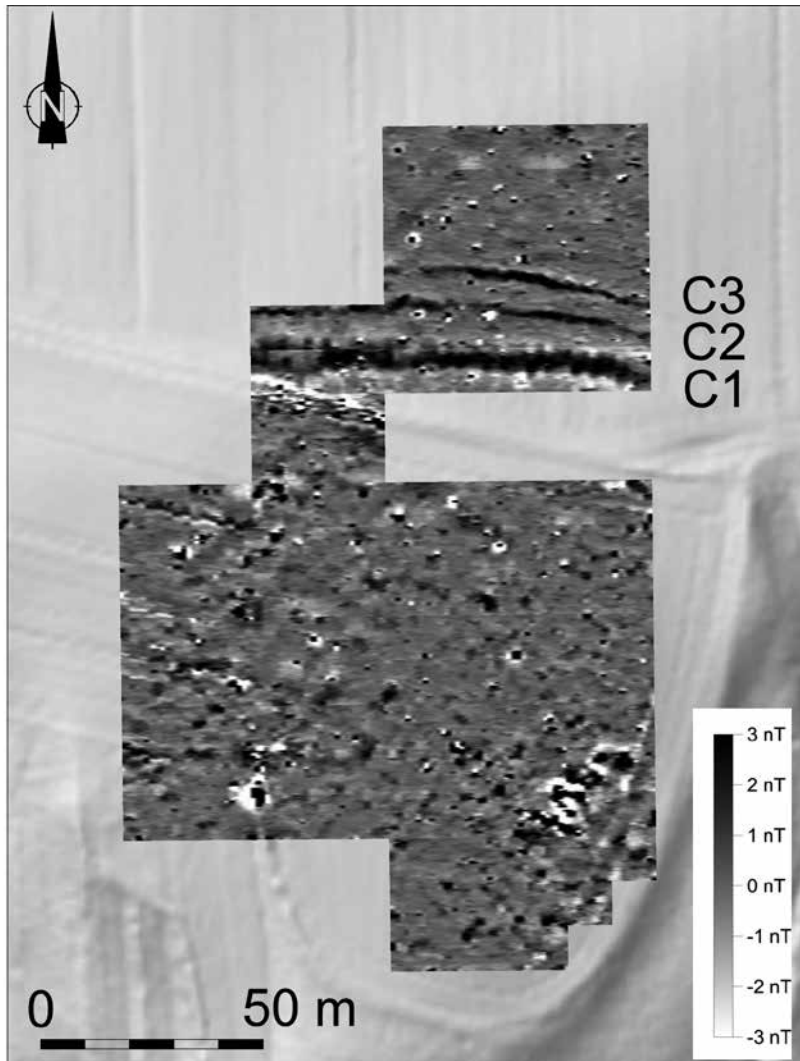


Fig. 3. Dobużańska scarp, Poland. Results of magnetic prospecting (Dobużek-Kolonia, site 1)

Other anomalies can be considered as archaeological features forming a number of clusters. The largest one is located within the enclosure, while two more were found between the ditches and outside their perimeter in the northern and northwestern parts of the investigated area. Their chronology is unclear; it seems, however, that they do not have any chronological connection with the enclosure. No spatial relationship was noted between them and the scatters of human bones and other artifacts discovered during the surface survey.

The last investigated part of the Dobużańska Scarp was its eastern periphery where the surface survey resulted in the identification of a new site, Dobużek-Kolonia 1, characterized by an abundance of surface finds (e.g., pottery, flint artifacts, spindle whorls) associated with the Funnel Beaker Culture (including numerous Tripolye Culture pottery), the younger Danubian, Corded Ware as well as early Bronze and Iron Age cultural occupation episodes (Figs 1 and 3).

Surprisingly, the magnetic prospection results seem to suggest the existence of another enclosure. Its form cannot be fully reconstructed due to the limited extent of the magnetometry, however the course of the ditches in the western part of the site can be traced on the basis of poorly visible vegetation marks. Fragments of three ditches were recorded in the northern part of the studied area. The two outer ditches (C<sub>2</sub>, C<sub>3</sub>) are visibly narrower than the inner one, reassembling the ditches of the smaller enclosure at the Mikulin 8 and 10 sites. This difference in size may suggest two developmental phases of the enclosure. The rest of the anomalies represent the relics of prehistoric occupational features and some of them are related to the existence of a POW camp at that location.

Artifacts of Funnel Beaker Culture were concentrated within a wide belt located inside the ditch perimeter, with the central part of the enclosure almost devoid of finds. This coincidence is an important chronological and functional premise, suggesting that the enclosure functioned in the Funnel Beaker Culture period, but an older phase associated with the Lublin–Volhynia Culture cannot be ruled out.

Intensive non-invasive research conducted in the Dobużańska Scarp region revealed an outstanding picture of various forms of spatial and cultural landscape management by prehistoric communities. Particularly intriguing is the concentration of enclosures in this area, which regardless of their interpretation, whether in practical, utilitarian terms or symbolic and ritual ones, manifests the uniqueness of the place.

#### ACKNOWLEDGMENTS

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