Building context from different sources: a multimethod approach for assessing the Late Hallstatt hillfort settlements from south-western Romania (CONTEXT-MAP)

CONTEXT MAP
Landscape Archaeology

- summary -

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One of the starting points of the CONTEXT-MAP project was the imbalance between what is known about the social organisation of the communities living in south-western Romania at the end of the Early Iron Age and what is known about their settlements. While certain archaeological finds suggest the existence of hierarchical communities, led by elites with a pronounced warrior character, our knowledge of their settlements and of how these were organised has remained rather limited. Against this background, the project aimed to improve our understanding of the Early Iron Age (Hallstatt) fortifications of south-western Romania (the Banat region) through a multidisciplinary approach combining surface and subsurface mapping techniques. By integrating several methods, we set out to gather data on the spatial layout and organisation of these ancient settlements. The research was carried out at three archaeological sites: Herneacova, Remetea Pogănici and Crivina.

The methods used allowed us to acquire several types of data, providing information both from the ground surface and from the subsurface, without intervening on the investigated sites through archaeological excavation. Using a drone equipped with a LiDAR (Light Detection and Ranging) sensor, which scans the Earth's surface, we surveyed all three sites and generated a digital terrain model for each of them. These models make it possible to remove the vegetation and to represent the terrain digitally as a continuous elevation surface. In other words, this method allows the forest canopy to be "cleared" digitally, so that the area of interest can be viewed without the trees that cover it in the field. Multispectral images were also acquired, in two campaigns, in order to identify possible archaeological features from the spectral response of the vegetation, the so-called *crop marks*. Information from the subsurface (below ground) was obtained using geophysical methods. Magnetometry provides a plan view of buried archaeological structures, displayed as a magnetogram on which possible traces of habitation can be identified. Electrical resistivity tomography (ERT) and ground-penetrating radar (GPR) provide information on the depth of these structures.

Based on the results obtained, the project was able to identify patterns in the organisation of the communities living at the end of the first half of the 1st millennium BC, revealing both common features and building solutions adapted to local conditions and topography.

The sites of Herneacova and Remetea Pogănici show a similar layout (fig. 1 A and B), consisting of a central plateau surrounded by a ring terrace and defended by ramparts and ditches. This suggests that the fortified settlements of the high plains and hills were built according to common principles. Moreover, the picture of how Hallstatt communities were organised is complemented by information from the rescue excavations carried out over the past decade, which identified several rural settlements in the Bega floodplain, in the vicinity of the Herneacova site. The discovery of these settlements makes it possible to outline a model of hierarchical territorial organisation, with a possible regional centre intended for communal activities and associated with the residence of the elites, served by smaller rural communities.

The third investigated settlement, at Crivina (fig. 1 C), reflects a different way of organising and shaping space compared with the other two sites. It appears to have been adapted to the particular geological substrate and local topography, which differ from those found at Herneacova and Remetea Pogănici.

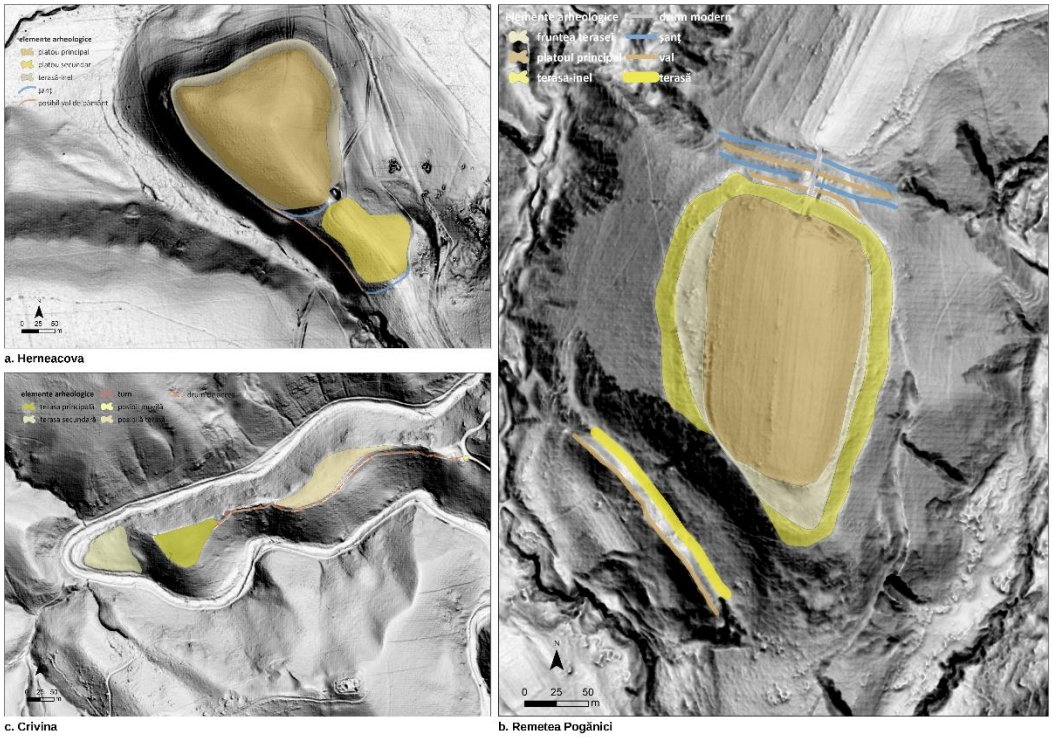

Fig. 1. Earthworks and topographic features identified from LiDAR data at the investigated sites.

The project activities also helped to improve the protection of the three archaeological sites against illegal treasure hunting, through the following measures:

1. At Herneacova and Crivina, signposting and information panels were installed, and similar procedures have been initiated for the Remetea Pogănici site.
2. At Crivina, a systematic campaign was carried out to recover the metal objects in the soil, in order to protect the archaeological heritage from looting and from illegal metal-detecting.
3. At Remetea Pogănici, the site perimeter was delineated more precisely; the site had previously been recorded in the National Archaeological Repertory only as a point on the map. Its spatial extent has now been defined on the basis of the data obtained, thus ensuring adequate legal protection.

What did these settlements look like, how were they organised and how were they connected to the surrounding villages? We do not know exactly, but the data obtained in the project made it possible to produce hypothetical reconstructions of the three investigated fortifications, which can be viewed on the project website. There, alongside the results presented at conferences and in scientific articles, the public can also visit a 3D virtual exhibition featuring the most representative archaeological objects from the end of the first half of the 1st millennium BC in the Banat.

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