Culunnedda (Ustica):

new evidence on a hypothetical Bronze Age fortified settlement

Giacomo Vinci[1], Claudia Speciale[2], Helen Dawson[3], Nunzia Larosa[4], Alessandra Magrì[5], Giuseppina Battaglia[6]

[1] Department of Ancient Civilizations, University of Basel, Switzerland;
[2] Department of Geography, History and Art History, University of Lleida, Spain;
[3] Institute of Prehistoric Archaeology, FU Berlin, Germany;
[4] School of Humanities, Arts and Social Sciences, University of New England, Australia;
[5] Department of Classics and Archaeology, University of Malta;
[6] Regione Siciliana, Soprintendenza Palermo, Unità Operativa Archeologica, Palermo, Italy

USTICA is a small, extinct volcanic island (ca. 8.5 km²) in the southern Tyrrhenian Sea, north of Palermo. Its position made it a natural stepping stone between Sicily, the Aeolian Islands and the wider central Mediterranean. Permanent settlement is well documented by the Middle Bronze Age at the fortified village of I Faraglioni (Spatafora, 2016), but little is known about the preceding Early Bronze Age (ca. 2300–1500 BCE).

CULUNNEDDA sits on an inner plateau in the highest part of the island, with wide views over northern Sicily and the sea. Earlier work (Mannino 1991, 2008) identified a small group of rock-cut tombs there, recently reexamined and attributed to the transition between the Copper and Early Bronze Ages (ca. 2500-2300 BCE; Speciale et al., 2025; **Figs. 1 and 2a**).

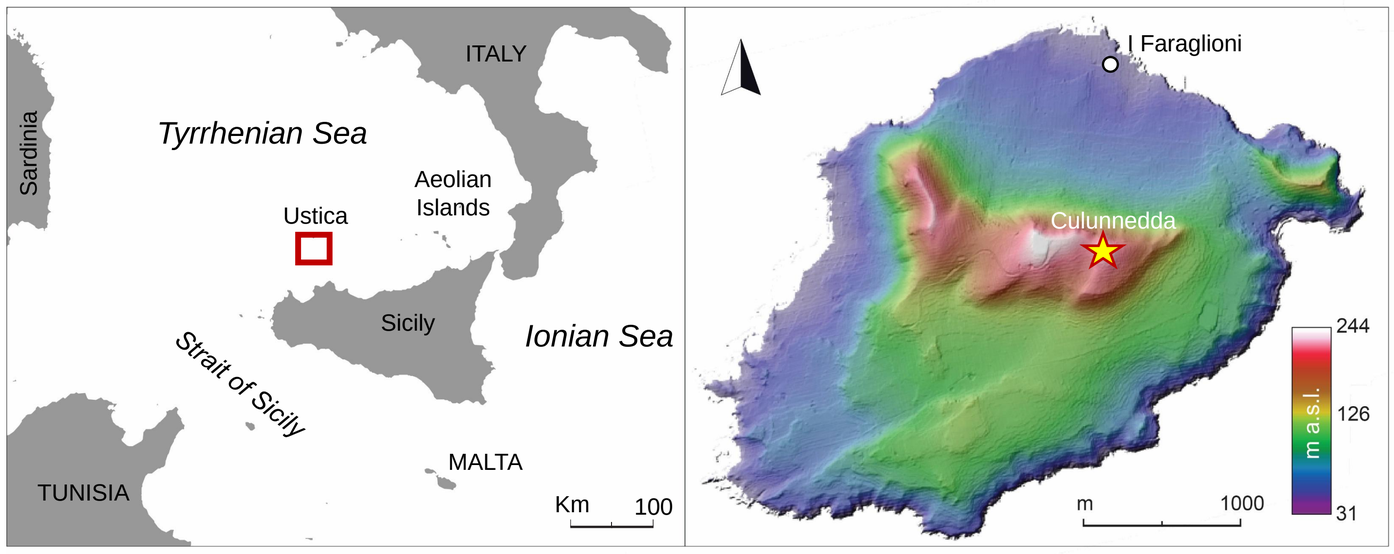


Fig. 1 – Location (left) and Digital terrain Model (DTM) of the island of the island of Ustica (right).

METHODS By combining LiDAR-based acquisitions, systematic field survey, spatial modelling and, in the next phase, targeted geophysical survey and excavation, this project tests the presence of enclosures, fortifications and dwellings at Culunnedda. It aims to reconstruct the daily life of the site's inhabitants and their exchange networks, particularly their interactions with Sicily and the Aeolian Islands. More broadly, the project investigates the emergence of social complexity, landscape change and interaction networks in the central Mediterranean during the Bronze Age. It addresses the role of small islands like Ustica in maritime networks at a time when fortified settlements were rising in coastal and island locations. These fortifications, often placed in naturally defensible positions, reflect both growing connectivity and exchange, as well as potential conflicts among communities.

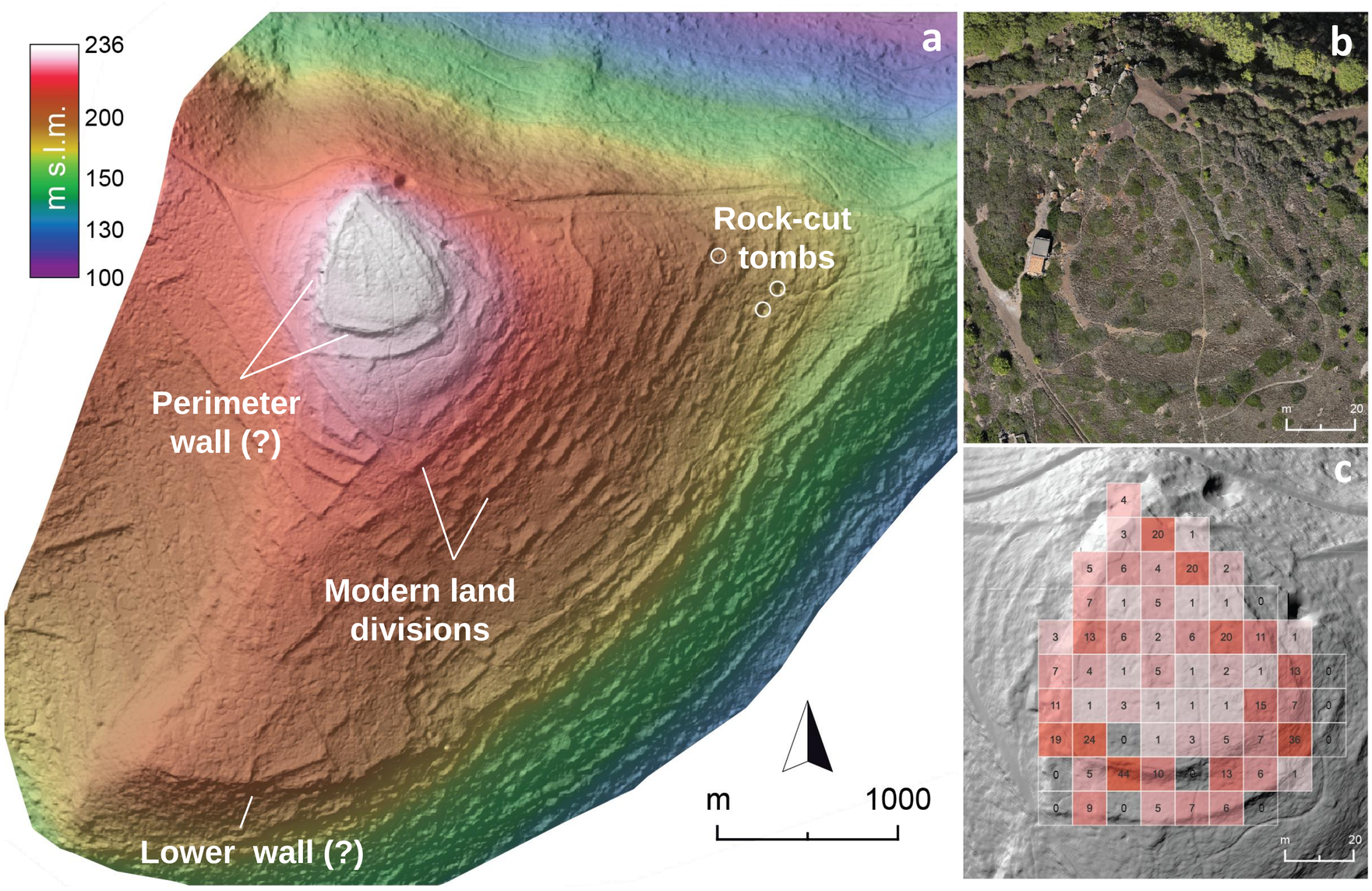


Fig. 2. High-resolution digital terrain model (DTM) of the Culunnedda plateau (a), drone-based orthophoto of the area (b), and Bronze Age pottery recovered through systematic fieldwalking within a 10 × 10 m grid (c).

LIDAR Drone LiDAR survey conducted in September 2024 using a DJI Matrice 350 with Zenmuse L2 produced a high-resolution digital terrain model (DTM) after ground–vegetation classification.

The model revealed a sub-circular rampart ca. 4 m thick, enclosing 0.4 ha and following the plateau's natural contours. A possible outer perimeter may extend onto the lower terrace and encompass the Early Bronze Age rock-cut tombs (**Fig. 2a**).

SURVEY Systematic fieldwalking carried out in January 2025 identified predominantly Early Bronze Age coarse wares, flaked and polished lithics, including obsidian. Finds were concentrated on the upper plateau, with the highest pottery density within the rampart-enclosed area (**Fig. 2b-c**). Diagnostic material from the clearing of the perimeter wall, including cups and a stone axe, indicates occupation from the Early to early Middle Bronze Age and connections with the Aeolian Islands.

VISIBILITY GIS-based visibility analyses suggest that Culunnedda was strategically positioned to oversee the southern part of the island of Ustica.

The site is also intervisible with numerous locations along the northern coast of Sicily and the Aeolian Islands. (**Fig. 3a-b**).

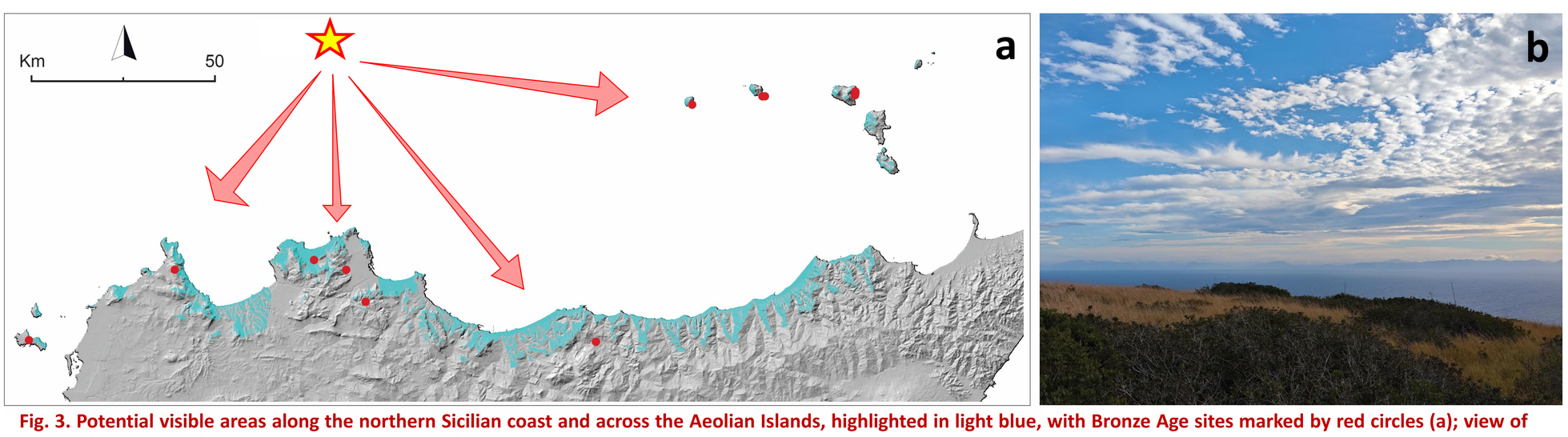


Fig. 3. Potential visible areas along the northern Sicilian coast and across the Aeolian Islands, highlighted in light blue, with Bronze Age sites marked by red circles (a); view of the northern coast of Sicily from the Culunnedda plateau (b);

CONCLUSIONS Although further confirmation is needed, the topographic evidence of the rampart, the pottery assemblage, and Culunnedda's commanding position support its interpretation as an Early Bronze Age fortified settlement with connections to Sicily and the Aeolian Islands. Planned GPR surveys and excavations will help establish its chronology, clarify its relationship with the tombs, and determine its role in the island's settlement history.

REFERENCES

Mannino G. 1991, Ustica: Nuove e più antiche testimonianze archeologiche. Sicilia Archeologica 75: 65–85.
Mannino G. 2008, Culunnella: il villaggio e la necropoli dell'Antica età del Bronzo, Lettera del Centro Studi e Documentazione Isola di Ustica 28-29: 1-6.
Spatafora F. 2016, Tra mare e terra: la preistoria di Ustica e il Villaggio dei Faraglioni, in Cazzella A., Guidi A., Nomi F. , (eds.) - Ubi minor… Le isole minori del Mediterraneo centrale dal Neolitico ai primi contatti coloniali. Scienze dell'Antichità 22, 2: 315-326.
Speciale C., Battaglia G., Larosa N., Magrì A. 2022, Contrada Culunnedda (Ustica, PA). Notiziario Istituto di Preistoria e Protostoria 8.2: 75-78.