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SOPRINTENDENZA NAZIONALE PER IL PATRIMONIO CULTURALE SUBACQUEO
MiC

UNIVERSITÄT TRIER

Monte Sant'Elia (Roccaforzata, TA): A New Archaeological Project

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In 2025, the Universität Trier led an archaeological campaign at Monte Sant'Elia, Roccaforzata (TA), under concession of the Ministero della Cultura and with the supervision of Dott. Valerio Frabotta of the Soprintendenza Nazionale per il Patrimonio Culturale Subacqueo. The investigations focused on two primary areas: the first area was the slope of the hill, where several materials (e.g. a column rest, tombs, a production area) were analysed; the second was the plateau, where the Greek settlement had been identified by previous excavations conducted by the Soprintendenza. The project Monte Sant'Elia has two main aims, to elucidate the role and strategic significance of the settlement in relation to the foundation of the Spartan *apoikia* of Taras, and to reconstruct the settlement's diachronic development through an examination of its phases. This has been made at various levels. An excavation was conducted in three main areas on the plateau, revealing interesting materials of various kinds (ceramics, terracotta figurines, mural structures, that date the site between the Bronze and Hellenistic age). Non-invasive analyses featured RTI and GIS reliefs, as well as aerial drone photography.

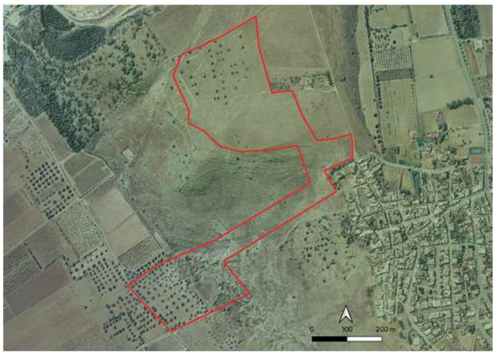

Fig. 1 – LiDAR of the archaeological park in Roccaforzata, from the Geoportale of Regione Puglia (2025). Processed by Iris Hoogeweij.

A Historical Overview of Apulia

With the beginning of Greek colonization in the 8th century BC, an increasing number of indigenous settlements can be attested. Especially through the Spartan foundation of Taras, Greek influences spread among the Messapian settlements in the surrounding area. The Messapians, who lived in the immediate vicinity of Taras, repeatedly engaged in military conflicts with the Greek city (in the 5th century BC, among others: Paus. 10.10.6; Hdt. 7.170.2–4; Diod. 11.52; in the 4th century BC, among others: Strab. 6.3.4). From the 4th century BC onward, Apulia's history was shaped by the fact that the Epirote ruler Alexander the Molossian and later his son Pyrrhus brought numerous mercenaries into the region. As a result, from the Hellenistic period onward, changes can be observed in Apulian sacred architecture and burial customs. From the 3rd century BC, Roman influence also became evident in the region, leading to Roman supremacy in the region.

Framework of the Site

Monte Sant'Elia, about 15 km east of the city of Taranto, is located on a plateau about 133 m above sea level (Fig. 1). The hilltop settlement belongs to the Mediterranean colonisation area, the former Magna Graecia. The plateau is characterised by white limestone, some of which is heavily fissured. Monte Sant'Elia is situated in the southern Murge ('rocky land'). The location of the settlement offers a fantastic view to the southwest of the Gulf of Taranto and to the north of the hilly landscape of the Murge: ideal conditions for early protective measures.

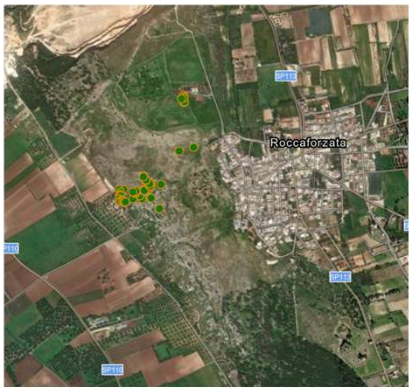

Fig. 2 – Example of localisation of the findings (D. Reschke/ I. Göbel).

Information about the Inhabitants of Monte Sant'Elia?

According to A. Alessio (1993, 8), the necropoleis of the settlement on Mount Sant'Elia are located outside the ancient walls, beneath the modern settlement, and along the slopes of Mount Sant'Elia in the NE/E and SW. The tombs (*tombe a fossa rettangolare*, or rectangular pit graves) were excavated into the underlying tuff bedrock. Even though they were largely plundered, their internal dimensions provide a strong indication of who was interred (children vs. adults). Other tombs were individuated along the slopes of the hill.

GIS to Mark the Findings and Documentation

As part of the investigations, an archaeological survey was conducted across the entire study area. The results, the diverse finds and presumed findings, were recorded on a virtual map using the Survey123 app from the web-based mapping software ArcGis (Fig. 2). This application does not only allow the user to briefly describe and document the finds or findings, but also stores photos and the location, creating an interactive map. Although the location does not correspond to the exact position (as it is based on the GPS of the smartphone used), the resulting map provides an initial form of surveying and documentation that can be referred to repeatedly in further investigations of the area.

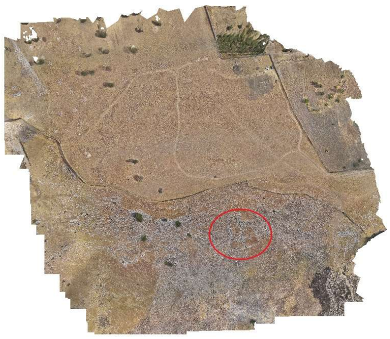

Fig. 3 – Orthomosaic of the settlement with example of anomaly (C. Beck).

The Aerial Drone Investigations on the Site

The drone-based surveys conducted on the site encompassed the entire archaeological park and pursued three principal objectives: 1) The generation of a 3D model; 2) The creation of a digital terrain model (DTM); 3) The production of orthomosaics based on RGB and thermal imagery with the goal to identify previously unknown subsurface anomalies. Two daily flights were conducted in the early morning and late evening, to maximize temperature contrasts conducive to effective thermal imaging. In total, 26,740 images were created and subsequently processed into several models (Fig. 2). The orthomosaics (Fig. 3) revealed several anomalies within and around the archaeological park. These were considered significant only when they were simultaneously visible in the RGB, DTM, and thermal datasets.