



Press Release

Scents of Home: The Phoenician Oil Bottles of Motya

An interdisciplinary study led by the University of Tübingen explores the role of scent in the Iron Age Mediterranean – New insights into the intangible dimensions of antiquity

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Pottery shards, coins, and bones can survive for millennia beneath the soil, but the scents of antiquity typically escape archaeological recovery. Now, for the first time, an interdisciplinary team of researchers has comprehensively analyzed the production, technology, and contents of 51 ceramic oil vessels from the Phoenician settlement of Motya, located on an island off the coast of Sicily. Their findings reveal the central role of scent in shaping identity, memory, and cross-cultural exchange in the Mediterranean region during the Iron Age. Researchers from the University of Tübingen and the Complutense University of Madrid led the study. It has been published in the *Journal of Archaeological Method and Theory*.

The vessels examined – plain, small ceramic bottles measuring between 15.5 and 18.5 cm in height – date from the 8th to 6th centuries BCE and were usually found in tombs, houses, and sacred areas. “Their widespread distribution across and beyond the Mediterranean suggests these vessels fulfilled diverse functions,” says Dr. Adriano Orsingher from the Department of Prehistory, Ancient History, and Archaeology at the Complutense University of Madrid, who is currently Honorary Research Fellow at the Institute of Biblical Archaeology at the University of Tübingen. Together with Dr. Silvia Amicone of the Archaeometry Research Group at the University of Tübingen, he led the study in collaboration with universities in Italy and the United Kingdom.

Unlocking the vessels' provenance and contents

The team examined the composition of the ceramics to determine the origin of the vessels. Further analysis of the organic residues preserved within the vessels provided insight into their original contents and intended use. Their results point to a production origin in southern Phoenicia, specifically between present-day Beirut and the Carmel region. Organic residues were detected in eight of the 51 vessels, revealing traces

of plant-based lipids, as well as pine and mastic resin, which are strong indicators of fragrant oil preparations.

A network of scent and identity

"Our research confirms these ceramic vessels were used to transport aromatic oils," says Amicone. "These oils were more than simple commodities. They functioned as cultural connectors, as expressions of identity that accompanied Phoenician migrants across the Mediterranean. Carrying scents of home, they served as instruments of memory and reinforced shared practices and olfactory experiences among dispersed communities," adds Orsingher.

The Iron Age Mediterranean was a landscape of intense mobility, trade, and cultural entanglement. Among the key agents of this connectivity were the Phoenicians, renowned sailors, traders, artisans, and migrants who established settlements far beyond their Levantine homeland. Integral to Phoenician cultural practices was the production and use of aromatic substances, both for local use and export.

The study calls for a broader reconsideration of how migration, trade, and cultural belonging were experienced in the ancient world. "We must rethink ancient mobility, not just as the movement of people and goods, but as the circulation of smells, memories, and sensory traditions," says Orsingher. "Scent is intimately tied to identity. As such, it plays a crucial, though often overlooked, role in processes of migration, settlement, and cultural exchange."

"Our work highlights the potential of interdisciplinary science to unlock the intangible dimensions of antiquity," says Amicone. "By studying what these vessels contained and how they were used, we gain unique insights into how scents connected lives, landscapes, and identities in the ancient Mediterranean," adds Orsingher.

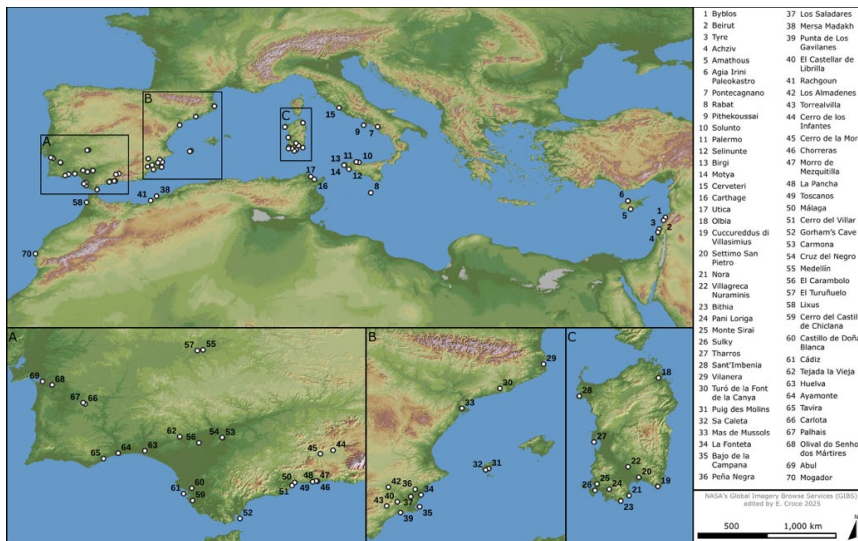
University of Tübingen President Prof. Dr. Dr. h.c. (Dōshisha) Karla Pollmann emphasizes: "Innovative research approaches continue to uncover surprising insights into the past. This study shows how even elusive traces like ancient scents can be made accessible through interdisciplinary methods, opening new windows into the sensory and cultural worlds of antiquity."

Research project:

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Publication:

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Map showing the distribution of “Phoenician oil bottles” across the Mediterranean and Atlantic regions, c. 775/760–535/500 BCE (created by E. Croce using NASA’s Global Imagery Browse Services, based on data provided by A. Orsingher)



Motya, Area V: a selection of “Phoenician oil bottles”, c. 750/740–550/530 BCE (photo by A. Orsingher)



Motya: a) view of Area V from the southeast; b) view of Area V from the south (photos by A. Orsingher).

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