



Press Release

Sardinian Bronze Age towers repurposed as sacred sites in the Iron Age

Ritual objects from the Nuraghe Barru site point to island-wide networks of interaction, as indicated by recent research conducted by the University of Tübingen in collaboration with the Soprintendenza

Christfried Dornis
Director

Janna Eberhardt
Research reporter

Phone +49 7071 29-77853
janna.eberhardt[at]uni-tuebingen.de

presse[at]uni-tuebingen.de
www.uni-tuebingen.de/aktuell

Tübingen, 06.05.2026

An international team of researchers from the University of Tübingen has shed new light on how Sardinia's nuraghi – iconic stone towers constructed more than 3200 years ago – continued to play an important social and spiritual role centuries later, even as religious practices changed in prehistory. A votive sword and ceremonial vessels found at the Nuraghe Barru site in central-southern Sardinia show that the Bronze Age site retained its significance well into the Iron Age.

Dr. Silvia Amicone from the Department of Archaeometry at the University of Tübingen and her team worked with the local archaeological authority, the Soprintendenza Archeologia, Belle Arti e Paesaggio per la Città Metropolitana di Cagliari e le Province di Oristano e Sud Sardegna to produce a new study incorporating methods from archaeology, geology, and materials science. The results contribute to a growing body of evidence that people in Sardinia were connected through networks in which objects, ideas, and practices circulated in the late Bronze Age and early Iron Age. The study has been published in the latest edition of *Open Archaeology*.

Sardinia is famous for its nearly 7,000 nuraghi, built during the Bronze Age between 1700 and 1100 BCE. "Whether they were used as defensive structures, elite residences, or ritual monuments is still a matter of debate," says Silvia Amicone. "They dominated the island's landscape for centuries." At the end of the Bronze Age and in the early Iron Age between 1200 and 800 BC, Sardinian society changed. Sanctuaries and sacred wells were built on the island. "In the light of this transformation, we wanted to investigate whether the ancient towers had lost their significance," Amicone says.

A sealed well and sacred offerings

During excavations at Nuraghe Barru, the research team directed by Dr Chiara Pilo from the Soprintendenza uncovered a carefully sealed cistern-well inside the tower complex. "At the bottom of it were various deliberately smashed ceramic vessels, including what were clearly jugs, a miniature amphora, and a rare ceremonial vessel with four handles," Pilo says. "We also found animal and human remains." After the objects were deposited, the well had been closed with limestone slabs.

Nearby, archaeologists found votive offerings deposited along a staircase. They included a 94 cm long bronze sword, three razor-like bronze objects, and a lump of copper. The staircase was then blocked, permanently sealing access to the upper floor. "Overall, the finds suggest an episode of ritual activity rather than randomly discarded objects," says Pilo. "The building itself was also changed by this."

A Network of People, Goods, and Ideas

To learn more about where these objects came from and what significance they had, the research team combined classical archaeological investigations with modern scientific techniques. Thin section petrography, a method used to identify the minerals contained in pottery, revealed that most of the ceramic vessels had not been produced locally. "They came from different geological regions of Sardinia, some from more than 40 kilometers away," Amicone says. The materials from Barru therefore reflect wider patterns of interaction across the island. It is likely that Nuraghe Barru was part of an extensive network. "People, goods, and ideas moved across the island, and Barru may have been an important hub for this exchange."

X-ray fluorescence analysis of the metal objects revealed that both the sword and the bronze blades had a low proportion of tin to copper. "Such alloys are common for Nuragic votive swords, which were not made for combat but for symbolic or ritual purposes," explains Amicone. The razor-like objects resembled others found in mainland Italy. This could indicate an extra insular connectivity, Amicone says, "however, the composition of the material might suggest that the blades were not imported but produced locally."

Ritual, power and identity

Overall, the research team concluded that at the beginning of the Iron Age around 3000 years ago, Nuraghe Barru was no tumbledown relic from earlier times. "Nuraghe Barru is a well-documented case," says Dr Gianfranca Salis, the current scientific director of the ongoing excavations at the site for the Soprintendenza. "It was an active center during the Iron Age, where ritual practices and social identities were expressed in a period of transformation. When new places of worship emerged, not all of the old buildings were abandoned. Certain Nuragic culture towers were reused for ceremonial purposes."

“This study shows once again that interdisciplinary research approaches provide a wealth of complementary information that allows us to create impressively comprehensive pictures of past worlds,” said Professor Karla Pollmann, University of Tübingen president.

The project was also supported by the Comune di Guamaggiore, whose continued engagement has been fundamental to the investigation and preservation of the site.



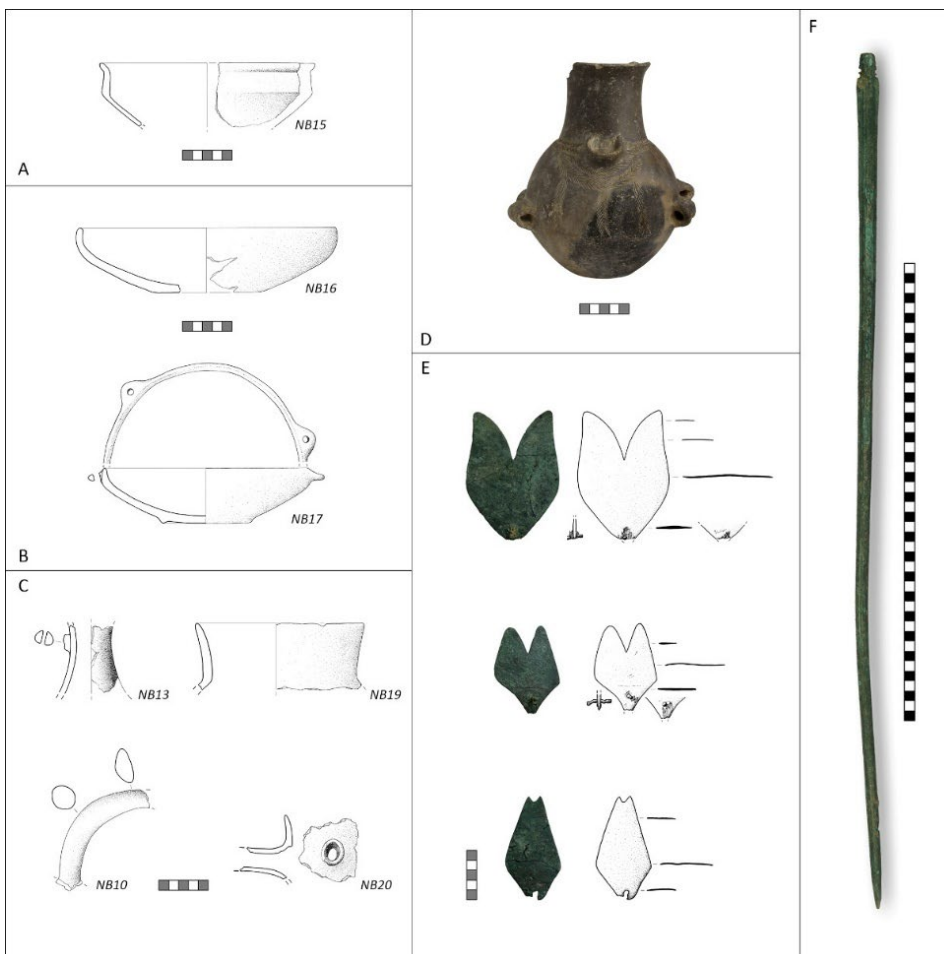
Aerial view of the Nuraghe Barru site in central-southern Sardinia (drone photo by Lars Heinze).



Aerial view of the Nuraghe Barru site in central-southern Sardinia (drone photo by Lars Heinze).



The Nuragic complex of Barru with the location of the cistern-well. The multi-towered nuraghe is surrounded by predominantly circular huts. Orthophoto-graph by Amir Ahmadpour and Lars Heinze.



Selected ceramics and metal objects from Nuraghe Barru (pictures after Pilo and Usai, 2020; pottery and razor illustrations by Lionello F. Morandi).

Further information:

3D model of Nuraghe Barru (labeled in Italian): <https://sketchfab.com/3d-models/nuraghe-barru-7a93b0f714144e95b3a4eb5e11ba6098>

Publication:

Amicone, S., Tiezzi, V., Broisch-Höhner, M., Freund, K. P., Heinze, L., Morandi, L. F., Salis, G., Pilo, C.: Ritual and connectivity in Nuragic Sardinia: an interdisciplinary study of ceramics and metalwork from Nuraghe Barru. *Open Archaeology*, <https://doi.org/10.1515/opar-2025-0078>

Contact:

Dr. Silvia Rita Amicone

University of Tübingen

Early Prehistory and Quaternary Ecology – Archaeometry

Competence Center Archaeometry Baden-Wuerttemberg (CCA-BW Geosciences)

Phone +49 7071 29-76801

[silvia.amicone\[at\]uni-tuebingen.de](mailto:silvia.amicone[at]uni-tuebingen.de)