

Found the oldest Neanderthal wooden tools in the Iberian Peninsula

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Credit: Centro Nacional de Investigación sobre la Evolución Humana

Archaeological excavations at the Aranbaltza site in the Basque Country coast (Northern Spain) have revealed several episodes of neandertal occupations with preserved wooden remains. The fieldwork is led by



Joseba Rios-Garaizar, archaeologist from the Spanish Centro Nacional de Investigación sobre la Evolución Humana (CENIEH). In 2015, the excavation revealed two very well preserved wooden tools, one of which is a 15 cm-long digging stick. The report has been published in the journal *PLOS ONE*.

The detailed analysis of this <u>tool</u> and the luminescence dating of the sediment that bears the wooden remains indicate that the objects were deposited around 90,000 years ago, and thus were made by neandertals.

The Micro-CT analysis and a close examination of the surface have shown that a yew trunk was cut longitudinally into two halves. One of this halves was scraped with a stone tool and treated with fire to harden it and to facilitate the scraping to obtain a pointed morphology. Usewear analysis revealed that it was used for digging in search of food, flint, or simply to make holes in the ground.

The preservation of wooden tools associated with neandertals is very rare because wood degrades very quickly. Only in very specific environments, like the waterlogged sediments from Aranbaltza, it has been possible to find evidence of wooden technology. As it was suggested by indirect evidence, this type of technology was relevant in neandertal daily life.

In the Iberian Peninsula wooden tools associated to neandertals have been found only in the travertine from Abric Romaní (Catalonia), and in the rest of Europe only four sites (Clacton on Sea, Schöningen, Lehringen and Poggeti Vechi) have provided wooden tools associated to neandertals or pre-neandertals. Therefore, findings like the one from Aranbaltza are crucial to investigate the neandertal technology and use of wood.

The archaeological project at Aranbaltza started in 2013 to investigate



the last <u>neandertals</u> from Western Europe, who were responsible of the Chatelperronian culture. The ongoing excavations have revealed different neandertal occupation events spanning from 100 to 44,000 years. This makes of Aranbaltza an exceptional site to investigate neandertal evolution and behavioral variability.

More information: Joseba Rios-Garaizar et al. A Middle Palaeolithic wooden digging stick from Aranbaltza III, Spain, *PLOS ONE* (2018). DOI: 10.1371/journal.pone.0195044

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