

Bone tools found in Kimberley region are among oldest discovered in Australia

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The ancient bone tools were found in the Riwi Cave in Mimbi country in the south-central Kimberley region of Western Australia. Credit: Jane Balme

Bone tools found in a well-known Kimberley cave site are more than 35,000 years old and among the oldest discovered in Australia, according to new research.

The research team from Griffith University, The University of Western

Australia (UWA) and The Australian National University (ANU) analyzed eight bone tools from Riwi Cave in Mimbi country in the south-central Kimberley region of Western Australia.

Four of the bone tools found in layers dating to between 35,000 and 46,000 years ago indicate the artifacts are among the oldest uncovered in Australia.

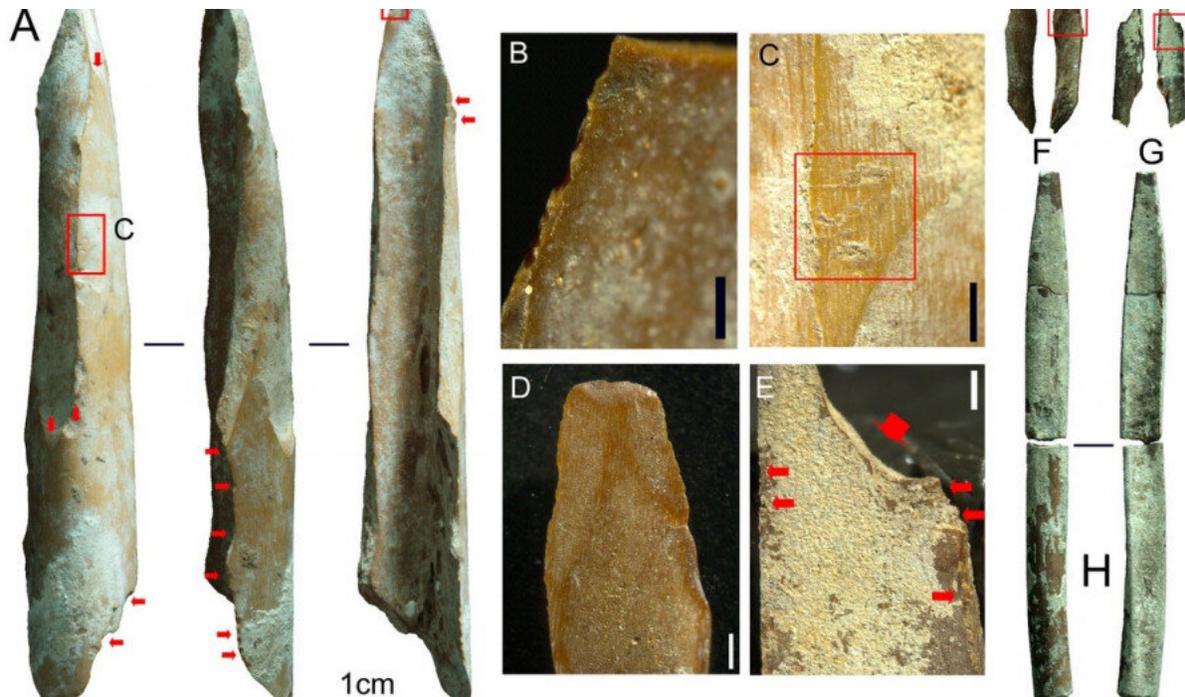
The tools were used for a range of activities at the site, including the manufacture of plant fibre items, the processing of spinifex resin and hunting.

Co-researcher ANU Professor Sue O'Connor said bone tools of this age were thought, until recently, to be confined to the cold southern regions of Australia and Tasmania, and to have been used in skin working to make clothing as protection against the cold.

"These new finds from the arid zone have changed our perspective," Professor O'Connor said.

The research is published in the *International Journal of Osteoarchaeology*.

Lead author Dr. Michelle Langley, from Griffith University, said the tools indicated that bone tools had been around for a very long time in the Indigenous Australian toolkit.



The bone tools were found in layers dating to between 35,000 and 46,000 years ago. Credit: Michelle Langley and colleagues

"We once thought that [bone](#) tools were not so important in the north of Australia and were only brought into the toolkit relatively recently," Dr. Langley said.

"These tools show that wasn't the case—they were always made and used; we just hadn't found them because they haven't been surviving long time periods in the hostile preservation conditions of northern Australia.

"One indicates plant or skin working (making baskets or working skins), while another appears to have been used in digging up or working resin. Resin was used to glue together [tool](#) parts and to make hand holds for tools."

Co-researcher UWA Professor Jane Balme worked with researchers from across Australia to identify the [bone tools](#) from the Riwi excavation.

Professor Balme said the tools showed the importance of organic materials in the early technologies of First Nations people.

"They provide a window into a greater diversity of activities undertaken by people than are revealed by stone artifacts alone," Professor Balme said.

"We are grateful for the generosity of the Mimbi Community who gave us the opportunity to study this site."

More information: Michelle C. Langley et al. Bone artifacts from Riwi Cave, south-central Kimberley: Reappraisal of the timing and role of osseous artifacts in northern Australia, *International Journal of Osteoarchaeology* (2021). [DOI: 10.1002/oa.2981](https://doi.org/10.1002/oa.2981)

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