

This simple log structure may be the oldest example of early humans building with wood

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In this photo provided by researchers, an excavation team uncovers a wooden structure found on a riverbed near a waterfall in Zambia in 2019. The pair of crossed logs may be the oldest evidence of early humans building with wood, nearly half a million years old, according to a study published Wednesday, Sept. 19, 2023 in the journal *Nature*. Credit: Larry Barham/University of Liverpool via AP

Researchers have uncovered a simple structure from the Stone Age that may be the oldest evidence yet of early humans building with wood.

The construction is basic: a pair of overlapping [logs](#), fitted together with a notch. It's nearly half a million years old and provides a rare look at how ancient human relatives were working with wood and changing their environments, authors wrote in a [study published Wednesday in *Nature*](#).

"It took me a while before I appreciated what we were looking at," said study author Larry Barham, an archaeologist at the University of Liverpool. "It didn't look very nice, to be honest. But it is much more complex than I thought."

Barham and his team dug up the log structure—plus a handful of wooden tools—from a riverbed site that sits above a waterfall in Zambia. They think the crossed logs could have been the base for a bigger structure like a walkway or a platform.

Usually, wood rots quickly when it's exposed to the elements, which has left us with little evidence of how our ancient relatives used the material, Barham explained. But these materials were submerged in the river, which helped preserve them.

So when his team uncovered the logs in 2019, they were still able to see telltale signs that [early humans](#) had shaped them—carving out a notch in the upper log, tapering off the ends and leaving tool marks across the surface.



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"Everything just looks so fresh, you think, 'It cannot be this old,'" Barham said.

Figuring out just how old posed its own challenge, since traditional dating techniques couldn't get deep enough into the past. In this study, researchers used a new method called luminescence dating, which uses tiny minerals in the sand to estimate how long materials have been buried, explained study author Geoff Duller, an expert in dating methods at Aberystwyth University in Wales.

The log structure was made at least 476,000 years ago, while the [wood](#) tools are slightly younger, under 400,000 years old. That places the materials in a time before our species, *Homo sapiens*, evolved.

They would have been made by another kind of early human cousin—possibly *Homo heidelbergensis*, which was around in Africa at the time, authors said.

If these ancient humans were putting effort into "the furniture of the site," it suggests they may have stayed for a while or made repeat visits—not just roamed around as bands of hunter-gatherers, according to Dirk Leder, an archaeologist at Germany's Lower Saxony State Office

for Cultural Heritage who was not involved with the research.



This photo provided by researchers shows Kalambo Falls in Zambia in 2019. A pair of crossed logs found on a riverbed nearby may be the oldest evidence of early humans building with wood, nearly half a million years old, according to a study published Wednesday, Sept. 19, 2023 in the journal *Nature*. Credit: Geoff Duller/Aberystwyth University via AP

And if "laying a couple of logs down doesn't sound that exciting," said Annemieke Milks, an archaeologist at the University of Reading who also was not involved in the study, consider this—it shows a [different perspective](#) from the usual stone tools that are often discovered.

"It's an important window into what these humans were capable of," Milks said.

More information: Lawrence Barham, Evidence for the earliest structural use of wood at least 476,000 years ago, *Nature* (2023). [DOI: 10.1038/s41586-023-06557-9](https://doi.org/10.1038/s41586-023-06557-9).
www.nature.com/articles/s41586-023-06557-9

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