A skull bone found in Greece may alter human prehistory

Carl Zimmer

A skull fragment found in the roof of a cave in southern Greece is the oldest fossil of Homo sapiens ever discovered in Europe, scientists reported. Until now, the earliest remains of modern humans found on the Continent were less than 45,000 years old. The skull bone is more than four times as old, dating back over 210,000 years, researchers reported in 'Nature'. The finding is likely to reshape the story of how humans spread into Europe, and may revise theories about the history of our species. Homo sapiens evolved in Africa around 300,000 years ago. The new fossil bolsters an emerging view that our species migrated from Africa in several waves, beginning early in our history. But the first waves of migrants vanished. All humans who have ancestry outside of Africa today descended from a later migration, about 70,000 years ago.

Katerina Harvati of University of Tübingen, Germany and lead author of the study, said it’s impossible to say how long the earliest Europeans endured on the continent, or why they disappeared.

The skull first came to light in 1978, as anthropologists explored a cave called Apidima, on the Peloponnese. They found fragments from a pair of skulls lodged in the roof of the cave.

One of the fossils, called Apidima 1, turned out to be part of the back of a skull. The other, Apidima 2, consisted of 66 fragments from an individual’s face. When the researchers virtually reassembled the face of Apidima 2, they realised they were looking at a Neanderthal. But when the team analysed the back of Apidima 1’s skull, they knew that they were dealing with something different.

In Neanderthals and other extinct human relatives, the back of the skull bulges outward. But in our own species, there is no bulge. Compared with our extinct cousins, the back of the modern human skull is distinctively round.

To Harvati’s surprise, so was the back of Apidima 1’s skull. It also had other features found in Homo sapiens but not in other species. One speculation is Neanderthals moved into Greece and Israel, and outcompeted the modern humans they faced. That wave of humans may have thrived outside Africa as they brought better tools. “If there’s an explanation, it’d be cultural process,” Harvati said. NYT