Retesting of ancient teeth found in China shows they are 16,000 years old—not 120,000

9 February 2021, by Bob Yirka

A team of researchers affiliated with a host of institutions in China, along with one from Australia, one from Taiwan and one from the U.S., has found evidence that contradicts the finding of a prior effort that reported ancient human teeth found at a dig site in China were 120,000 years old. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes how they tested the teeth and what they found.

Most archeologists agree that modern humans evolved approximately 500,000 to 315,000 years ago, and they migrated out of Africa approximately 65,000 to 45,000 years ago into parts of Eurasia—other non-modern-human hominins made the trek much earlier, but all went extinct. This timeline was called into question back in 2015 when a team of archeologists found fossilized teeth in five caves in a southern part of China, and claimed they were approximately 120,000 years old. In this new effort, the researchers have reexamined the teeth and have found the original researchers were in error—their testing showed the teeth are just 16,000 years old.

In looking at the methods used to date the teeth by the original team, the researchers found that most of the work had involved testing materials such as sediment and capping flowstones found in the vicinity of the teeth. The teeth themselves had not been tested. In the new effort, the researchers found small bits of mitochondrial DNA in some of the teeth (and some nearby charcoal) and tested them using carbon-14 dating. Their results showed the teeth belonged to modern humans living in the area during the Holocene. The researchers also found that the DNA from one of the tested samples matched people living in modern Tibet and Burma. They conclude that the teeth did not come from modern humans 120,000 years ago, and thus, the theory that modern humans migrated to Eurasia 65,000 to 45,000 years ago still stands. They also suggest that other researchers carrying out similar research efforts always directly test samples they find using carbon-14 dating to ensure accuracy.


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