

Scientists discover a new human ancestor that roamed with 'Lucy'

By Rachel Feltman May 27, 2015

A potential new hominin has been discovered, giving the first indication that the human family was full of variety long before our own genus came along. *Australopithecus deyiremeda*, described for the first time in a paper published Wednesday in Nature, lived at the same time -- and in the same place -- as the species *Australopithecus afarensis*. That means the famous "Lucy" shared her turf with very close evolutionary cousins.

We know that members of our own genus -- *Homo* -- overlapped with each other as our branch of the family tree narrowed toward modern humanity. But it's generally thought that that species diversity was unique to the genus, with ones that came before only sustaining one man-like species at a time. The new species, which was identified using a partial jaw found in Ethiopia, is the first conclusive evidence otherwise.

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It has teeth and a jaw similar enough to Lucy's ilk to place them in the same genus, but the differences hint at what allowed the two species to exist at the same time: In addition to other differences in tooth and jaw shape, *Australopithecus deyiremeda* has smaller front teeth than *afarensis*, which the researchers say probably indicates that they ate different things.

"This new species from Ethiopia takes the ongoing debate on early hominin diversity to another level," Yohannes Haile-Selassie, lead study author and curator of physical anthropology at The Cleveland Museum of Natural History, said in a statement.

"Some of our colleagues are going to be skeptical about this new species, which is not unusual. However, I think it is time that we look into the earlier phases of our evolution with an open mind and carefully examine the currently available fossil evidence rather than immediately dismissing the fossils that do not fit our long-held hypotheses," said Haile-Selassie.

Haile-Selassie and his co-authors believe the find should encourage reexamination of other possible instances of pre-*Homo* cohabitation. Two other species have been proposed as living at the same time as *Australopithecus afarensis* -

- *Australopithecus bahrelghazali* and *Kenyanthropus platyops* -- but both remain controversial, with some scientists saying they aren't different enough from *A. afarensis* to constitute a new species. And in a previous expedition, Haile-Selassie himself found a partial foot that he believed was from the same time period -- but not the same species -- as Lucy. Unlike the jaw reported in Nature, the foot didn't provide enough evidence to name a new species.

In an accompanying opinion article for Nature, Max Planck Institute for Evolutionary Anthropology researcher [Fred Spoor](#) (who wasn't involved in the new study) pointed out that more work needs to be done to distinguish these three potential species from one another. With so few pieces of the potential hominins to examine, it's hard to say whether they're different enough to be three different species (with one being placed in an entirely different genus).

But it seems increasingly likely that Lucy was not alone, and she may indeed have had quite a crowd of close relatives on the tree of life. And according to the [recent discovery of stone tools from the era](#), at least one of these early species was advanced enough to be crafty. For now, it's impossible to say how these species might have mingled, or how behavior might have varied from one to the next. But hopefully this isn't the last sign we'll see of Lucy's neighbors.

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Rachel Feltman is now an editor at Popular Science Magazine.

