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Tooth Fight

How many paleoanthropologists does it take to locate a molar on the correct side of a fossil jawbone? The short answer to this joke, which was winging around the Internet this month, is 28. That's the number of paleoanthropologists who, in the current issue of the *South African Journal of Science*, declare that a fossilized wisdom tooth belonged in the right rather than the left lower jaw of a famous fossil of a putative human ancestor from Chad.

In 2002, *Sahelanthropus tchadensis* was proposed as the earliest known hominid by paleontologist Michel Brunet of the University of Poitiers, France, and colleagues (*Science*, 12 July 2002, p. 171). But earlier this year, University of Paris X geographer Alain Beauvilain, a former member of Brunet's team, and orthodontist Yves Le Guellec questioned Brunet's placement of the isolated molar in the right lower jawbone and questioned why other fossils found at the same site have not yet been published. Their challenge in last spring's issue of the *South African journal*, reported widely by the French media, did not cast doubt on the fossil's status, but it did cast a cloud over Brunet's methods.



In the current issue, Brunet presents computed tomography scans showing what he calls an “unambiguous match” between the molar and roots in the right side of the jawbone. The 28 paleoanthropologists signing the letter back up that conclusion. One of the letter's organizers, Tim White of the University of California, Berkeley, notes that Beauvilain's report was translated by College de France geologist Martin Pickford, who discovered a rival fossil candidate for oldest hominid.

But Beauvilain and Pickford—who has now rescinded an earlier apology to Brunet—are fighting back tooth and nail. In the same journal issue, Beauvilain responds to Brunet's defense by insisting that the molar that was found separately from the jaw was glued into the wrong side. Interviewed by *Science*, Pickford called the multi-author letter an intimidation tactic designed to squelch scientific debate on published fossils.

Beauvilain also seems intent on forcing Brunet to reveal other fossils by raising the tantalizing possibility that leg bones of *Sahelanthropus* may be included in 52 unpublished mammalian

fossils from the Chadian site*. A leg bone could shed light on whether *Sahelanthropus* was an upright-walking ancestor of humans or a quadrupedal ape. Brunet declines to comment, saying that the fossils are still under study.

[La Recherche](#)

The femur of Toumaï



Primate femur, fossil TM266-01-63, photo [Aude Bergeret](#).

Eight years after the discovery of the skull of the oldest known hominid, an unedited photo shows that a femur of the same species was found simultaneously. Why hasn't it been published?

The skull of Toumaï is considered by many paleontologists as that of the oldest known hominid, *Sahelanthropus tchadensis*. The position of the hole connecting its vertebral column indicates that it was probably a biped. But to know how it walked would require one of the bones of the leg.

Unfortunately, none were found at the site, as stated in 2002 by the CNRS. However, a photograph from the day of the discovery has now been published in a Normandy review (pictured above).

It shows the skull posed on the sand next to a bone, designated as the femur of a hominid. What many paleontologists privately confided for several years is from now on in the public square. Why did this announcement not follow the normal publication channels?...

[I]s the bone in the photo really the femur of a hominid? And why wasn't it published along with the skull? According to Aude Bergeret, today director of the Musée de la Haute-Auvergne, in Saint-Flour, who in 2004 carried out research in Michel Brunet's Poitiers laboratory, it is because it had not been identified by the beginning of 2004. At that time, when she was studying the fossilization of animal bones found at the Toumaï site, she solicited the opinion of one of her professors on this subject, who addressed it: "*During the conversation, he saw that the bone, the species of which had not yet been determined, was not the femur of an ordinary animal, but that of a hominid. Then he alerted a researcher in the laboratory. This bone, which I had many times in my hands, is indeed that figured in the photograph.*"