



Kicking their teeth in. Researchers are fighting over how a molar fits into *Sahelanthropus tchadensis*' jaw.

Fossil Tooth Makes Fur Fly

By Ann Gibbons | Dec. 20, 2004, 12:00 AM

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 has been 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, paleontologist Michel Brunet of the University of Poitiers, France, and colleagues proposed that *Sahelanthropus tchadensis* was the earliest known hominid (*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 as a hominid, but cast a cloud over Brunet's methods.

In the current issue, Brunet presents computed tomography (CT) scans showing what he calls an "unambiguous match" between the molar and roots in the right side of the jawbone. The 28 prominent 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 critique was translated by College de France geologist Martin Pickford, who is not exactly a disinterested party. He discovered a rival fossil candidate for oldest hominid.

Now Beauvilain and Pickford are fighting back tooth and nail. In the same journal issue, Beauvilain responds to Brunet's defense by insisting that the molar, which was found separately from the jaw, was glued into the wrong side. Interviewed by *ScienceNOW*, Pickford called the multiauthor 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to reveal other fossils by raising the tantalizing possibility that leg bones of *Sahelanthropus* may be among 52 unpublished mammalian fossils from the Chadian site.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.