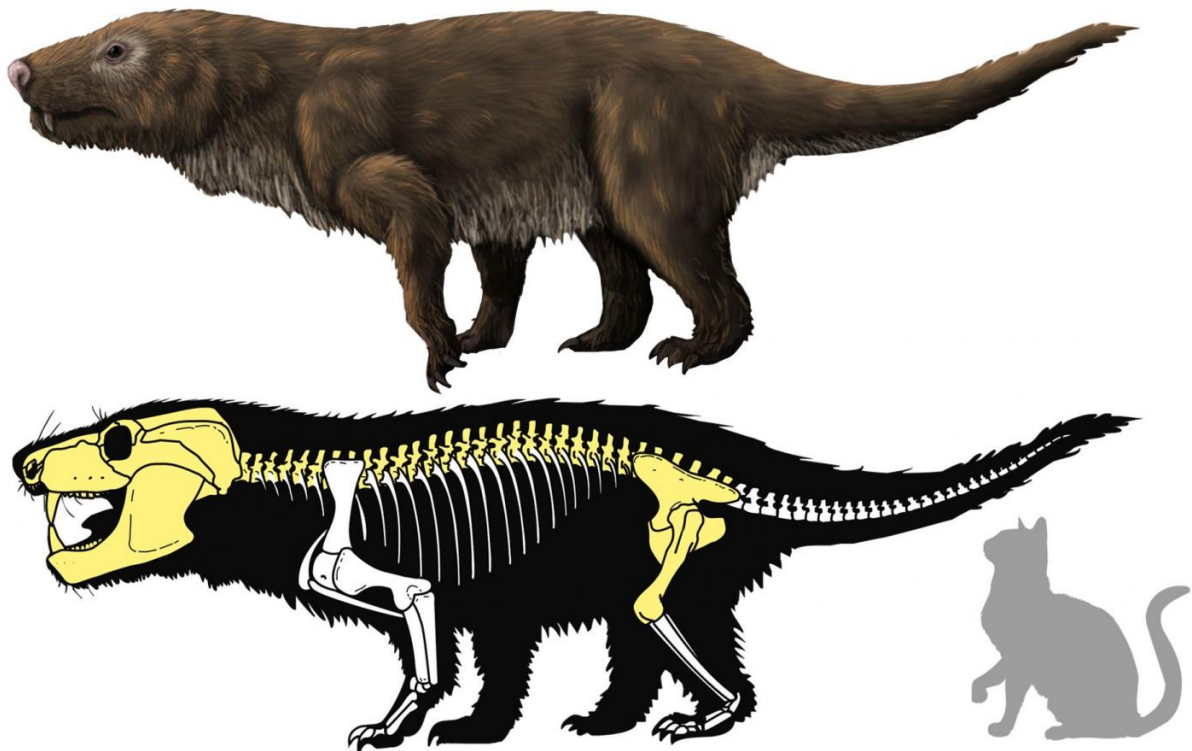


# Brazilian carnivorous mammal-like reptile fossil may be new *Aleodon* species

June 14 2017

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Artistic reconstruction and skeleton made by Voltaire Paes Neto. Credit: Voltaire Paes Neto

Some Late Triassic Brazilian fossils of mammal-like reptiles, previously identified as *Chiniquodon*, may in fact be the first *Aleodon* specimens found outside Africa, according to a study published June 14, 2017 in

the open-access journal *PLOS ONE* by Agustín Martinelli from the Universidade Federal of Rio Grande do Sul, Brazil, and colleagues.

*Aleodon* is a genus of *probainognathian cynodont*, a taxon which evolved in the Triassic period, co-existed with dinosaur precursors and other archosaurs and eventually gave rise to mammals. The *Aleodon* genus was first described using fossils from Tanzania and Namibia, but it was not clear if it belonged within the family of carnivorous mammal-like reptiles known as Chiniquodontids, which includes the morphologically similar Chiniquodon.

The authors of the present study examined the skulls, jaws and teeth of Middle-Late Triassic fossil specimens from the Dinodontosaurus Assemblage Zone in Rio Grande do Sul, Brazil, most of which were previously thought to be Chiniquodontids, and compared them to a known African *Aleodon* species, *A. brachyrhamphus*.

The researchers used tooth morphology to identify one of the specimens as a new *Aleodon* species, which they named *A. cromptoni* after Dr Alfred "Fuzz" Crompton, who described the *Aleodon* genus. They also identified as *Aleodon* seven Brazilian specimens, previously thought to be chiniquodontids or traversodontids, and possibly one Namibian specimen, noting that this may call the reliability of Chiniquodon identification into question. Phylogenetic analysis indicated that *Aleodon cromptoni* may be, as suspected, a species in the Chiniquodontidae family.

Whilst the analysis was limited by the partial nature of some of the specimens, the authors note that the identification of these Late Triassic *Aleodon* specimens in Brazil strengthens the correlation between probainognathians from this epoch in South America and in Africa.

**More information:** Agustín G. Martinelli et al, The African cynodont

Aleodon (Cynodontia, Probainognathia) in the Triassic of southern Brazil and its biostratigraphic significance, *PLOS ONE* (2017). [DOI: 10.1371/journal.pone.0177948](https://doi.org/10.1371/journal.pone.0177948)

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