Oldest carnivorous dinosaur fossil unearthed in Brazil
13 November 2019, by Bob Yirka

The researchers report that they found the fossil while digging near the city of Santa Maria in Rio Grande do Sul. They named it Gnathovorax cabreirai, which combines the name of the researcher credited with the discovery—Sergio Furtado Cabreira—with a loose translation of Latin that means "a jaw for devouring things." The researchers believe it is the oldest known example of a carnivorous dinosaur. They have dated the fossil to approximately 233 million years ago, which would put it during the Triassic, a time when South America was still part of Pangaea. They report that the fossil was intact and in excellent condition—so much so that they were able to put the head in a CT scanner, which gave them some information regarding the brain of the ancient creature. They believe it had good balance and good eyesight, two features that would have helped the dinosaur use its sharp teeth and claws to capture and eat prey. They report also that the dinosaur would have been approximately three meters long and would have weighed approximately one ton—making it somewhat close in size to a modern horse. Because of its age, the researchers believe the fossil represented an apex predator—and the largest in the area where it lived.

Study of the fossilized skeleton suggested that G. cabreirai was related to a group of dinosaurs known as Herrerasauridae, which were theropods. This finding suggests G. cabreirai can be used to better understand the traits of early meat-eating dinosaurs that came before the more famous types such as Tyrannosaurus rex, which were much larger and came tens of millions of years later. They note that fossil evidence of dinosaurs of the period is quite scarce, which makes the new finding all the more important.
(A) Right lateral view. (B) Three-dimensional rendering of the skull in right lateral view. (C) Three-dimensional rendering of the skull in left/dorsal lateral view. (D) Schematic drawing in right lateral view. an, angular; anf, antorbital fenestra; d, dentary; emf, external mandibular fenestra; en, external naris; j, jugal; l, lacrimal; m, maxilla; n, nasal; of, oval fenestra; p, parietal; pm, premaxilla; prf, prefrontal; pt, pterygoid; q, quadratojugal; qj, quadratojugal; sa, surangular; snf, subnarial foramen; sq, squamosal; stf, supratemporal fenestra. Credit: PeerJ (2019). DOI: 10.7717/peerj.7963


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