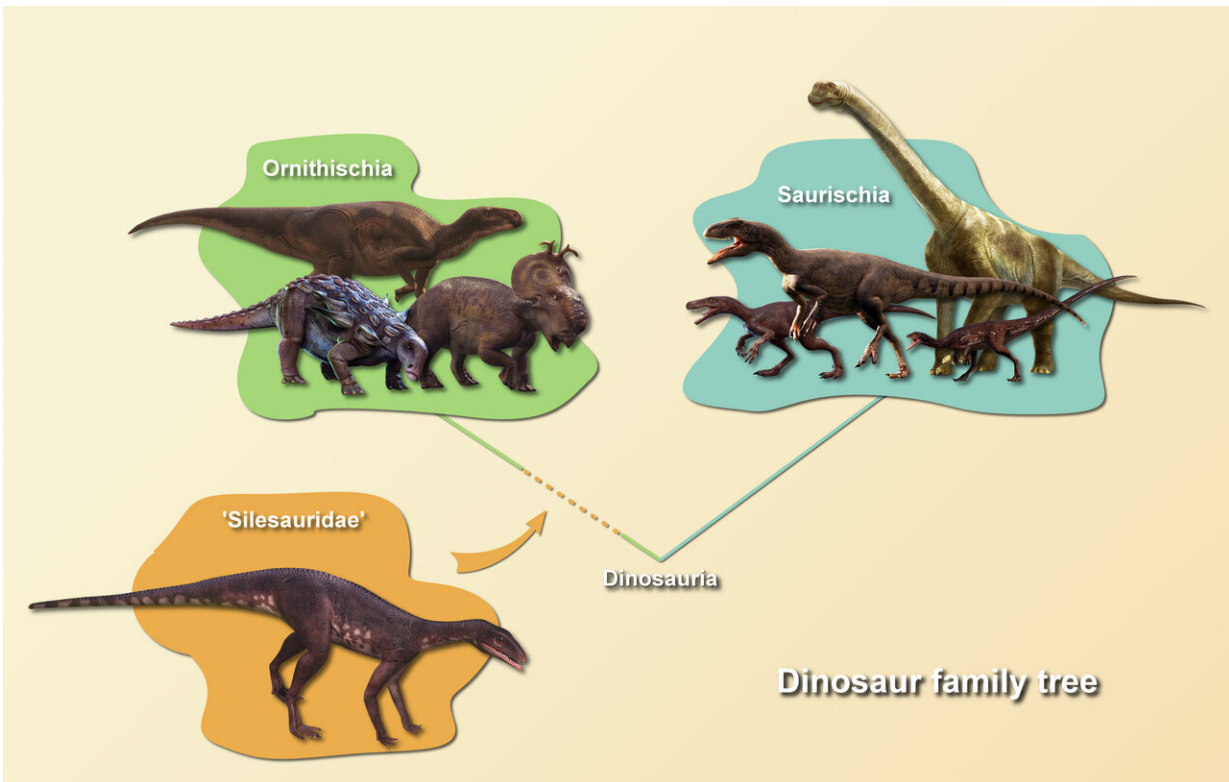


Sacisaurus helps to fill the hole in the evolution of ornithischians

August 26 2020, by Bob Yirka



Credit: Rodrigo Temp Müller

A pair of researchers with Universidade Federal de Santa Maria has pieced together fossilized bones of a species of dinosaur called *Sacisaurus agudoensis*, a creature that was not much bigger than a modern dog. In their paper published in the journal *Biology Letters*,

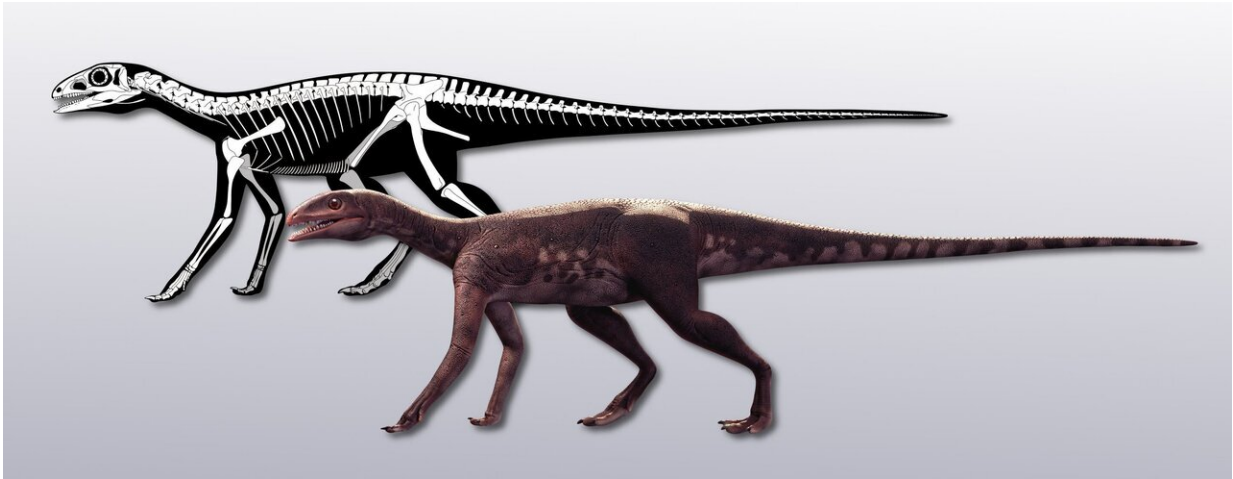
Rodrigo Temp Müller and Maurício Silva Garcia discuss their work and why they believe what they learned can fill in a major part of the story of ornithischians.

Scientists have been eager to learn more about the evolutionary history of ornithischians, a line of [dinosaurs](#) that evolved into species such as triceratops, but little evidence of their existence has been found.

Approximately 200 million years ago, [volcanic eruptions](#) led to mass extinctions that wiped out most of those that were alive at the time. In their new effort, the researchers found evidence of the existence of silesaurids, one of which was the sacisaurus.

The researchers found that the sacisaurus lived approximately 230 million years ago, and was approximately five feet in length. It also stood approximately four feet tall and weighed just over 32 kilograms. It walked on four legs, had a slender but athletic body and a [long neck](#)—and a set of razor-sharp teeth in a bird-like bill. The researchers found evidence in the fossils that suggested the early dinosaur survived by eating insects, turtles and lizards, indicating that it was not an apex predator. More likely, it was hunted by a wide variety of larger creatures. The timeframe puts the dinosaur during the period just before the first dinosaurs split into two groups: saurischian and ornithischians. The saurischians evolved into a line of dinosaurs with lizard-like hips, such as T-rex. They were also the line that eventually evolved into birds.

The researchers suggest that some species of silesaurids survived the [mass extinction](#), leaving them with few predators trying to eat them. That allowed them to prosper and very quickly diversify and spread around the world. The pieces of the sacisaurus they used in their study came from Africa, South America, the U.S. and Europe. They claim the resulting creature will shake up the family tree of early dinosaurs by its roots.



Credit: Rodrigo Temp Müller



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More information: Rodrigo Temp Müller et al. A paraphyletic 'Silesauridae' as an alternative hypothesis for the initial radiation of ornithischian dinosaurs, *Biology Letters* (2020). [DOI: 10.1098/rsbl.2020.0417](https://doi.org/10.1098/rsbl.2020.0417)

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