

'Raptor-like' dinosaur discovered in Australian mine, actually uncovered as a timid vegetarian

October 21 2021



Life reconstruction of herbivorous dinosaurs based on 220-million-year-old fossil footprints from Ipswich, Queensland, Australia. Credit: Anthony Romilio

Fossil footprints found in an Australian coal mine around 50 years ago have long been thought to be that of a large 'raptor-like' predatory dinosaur, but scientists have in fact discovered they were instead left by

a timid long-necked herbivore.

University of Queensland paleontologist Dr. Anthony Romilio recently led an international team to re-analyze the footprints, dated to the latter part of the Triassic Period, around 220 million-year-ago.

"For years it's been believed that these tracks were made by a massive theropod predator that was part of the dinosaur family Eubrontes, with legs over two meters tall," Dr. Romilio said.

"This idea caused a sensation decades ago because no other meat-eating dinosaur in the world approached that size during the Triassic period."

However, findings made by a team of international researchers, published today in the peer-reviewed journal *Historical Biology*, in fact shows the tracks were instead made by a dinosaur known as a Prosauropod—a vegetarian dinosaur that were smaller, with legs about 1.4 meters tall and a body length of six meters.

The research team suspected there was something not-quite-right with the original size estimates and there was a good reason for their doubts.

"Unfortunately, most earlier researchers could not directly access the footprint specimen for their study, instead relying on old drawings and photographs that lacked detail," Dr. Romilio said.



3D image of the 220 million-year-old footprint from Ipswich, Queensland.
Credit: Anthony Romilio

The [dinosaur fossils](#) were discovered more than half a century ago around 200 meters deep underground at an Ipswich coal mine, just west of Brisbane.

"It must have been quite a sight for the first miners in the 1960s to see big bird-like footprints jutting down from the ceiling," Dr. Romilio said.

Hendrik Klein, co-author and fossil expert from Saurierwelt Paläontologisches Museum in Germany, said the footprints—referred to as 'Evazoum', scientifically, the footprint type made by prosauropod dinosaurs—were made on the water-sodden layers of ancient plant debris with the tracks later in-filled by silt and sand.

"This explains why today they occur in an upside-down position right above our heads," Mr Klein said.

"After millions of years, the plant material turned into coal which was extracted by the miners to reveal a ceiling of siltstone and sandstone, complete with the natural casts of dinosaur footprints."

The mine has long since closed, but fortunately, in 1964, geologists and the Queensland Museum mapped the trackway and made plaster casts, now used in current research.

"We made a virtual 3D model of the dinosaur footprint that was emailed to team members across the world to study," Mr Klein said.



Life reconstruction of the 220 million-year-old dinosaur track-maker from Ipswich, Queensland, Australia to scale with a 1.7-metre-tall person. Credit: Anthony Romilio

"The more we looked at the footprint and toe impression shapes and proportions, the less they resembled tracks made by predatory [dinosaurs](#)—this monster dinosaur was definitely a much friendlier plant-eater.

"This is still a significant discovery even if it isn't a scary Triassic carnivore.

"This is the earliest evidence we have for this type of dinosaur in Australia, marking a 50-million-year gap before the first quadrupedal sauropod fossils known."

The dinosaur footprint is on display at the Queensland Museum, Brisbane.

The 3D model of the dinosaur footprint can be viewed from MorphoSource.

More information: Anthony Romilio et al, Saurischian dinosaur tracks from the Upper Triassic of southern Queensland: possible evidence for Australia's earliest sauropodomorph trackmaker, *Historical Biology* (2021). [DOI: 10.1080/08912963.2021.1984447](https://doi.org/10.1080/08912963.2021.1984447)

Provided by Taylor & Francis

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