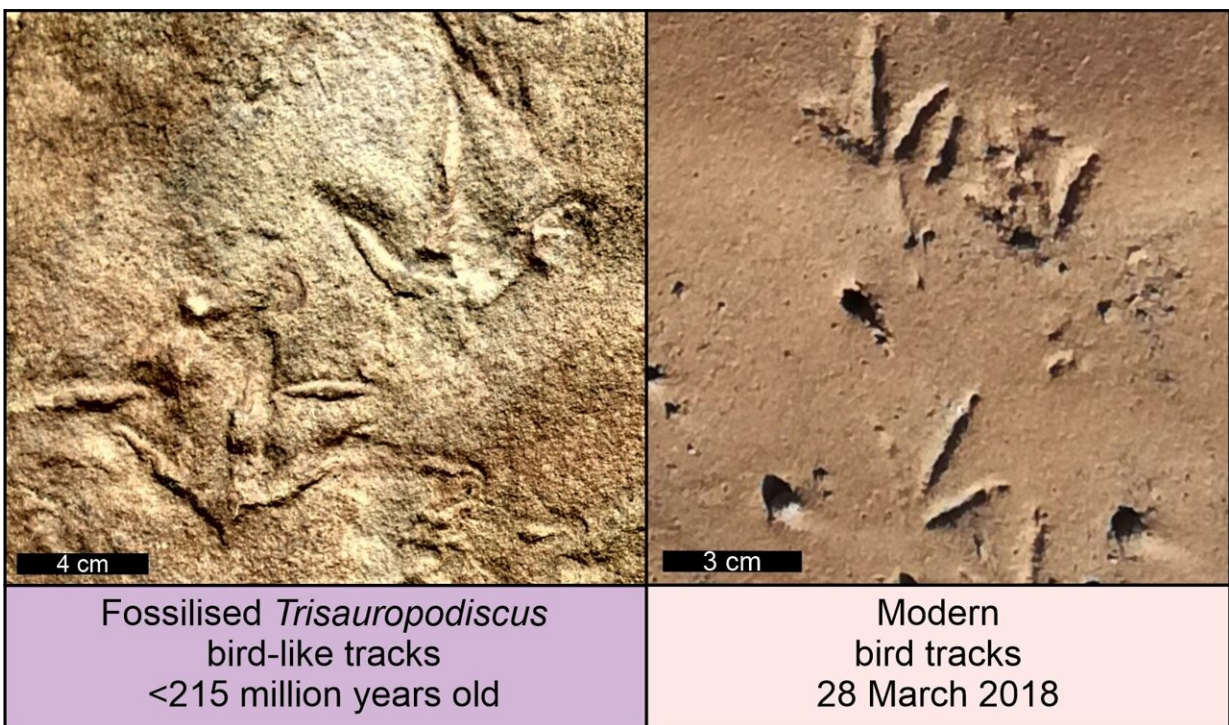


Exploring bird-like footprints left by unknown animals in Late Triassic Southern Africa

November 29 2023



Fossilized *Trisauropodiscus* tracks and modern bird tracks. Credit: Abrahams et al., CC-BY 4.0 (creativecommons.org/licenses/by/4.0/)

Ancient animals were walking around on bird-like feet over 210 million years ago, according to a study published November 29, 2023 in the open-access journal *PLOS ONE* by Miengah Abrahams and Emese M.

Bordy of the University of Cape Town, South Africa.

Numerous fossil sites in southern Africa preserve distinctive three-toed footprints that have been named Trisauropodiscus. For many years, researchers have debated what [animals](#) might have left these tracks, as well as precisely how many different species (technically called ichnospecies) of Trisauropodiscus there are.

In this study, the researchers reassessed the fossil record of these footprints, examining physical fossil traces alongside published materials documenting Trisauropodiscus at four sites in Lesotho dating to the Late Triassic and Early Jurassic Periods. The authors also provided a detailed field-based description of footprints from an 80-meter-long tracksite in Maphutseng.

They identified two distinct morphologies among Trisauropodiscus footprints, the first of which is similar to certain non-bird dinosaur tracks, and the second of which is very similar in size and proportions to the footprints of birds.

These tracks aren't a direct match for any fossil animals known from this region and time period. The most ancient of these footprints, at over 210 million years old, are 60 million years older than the earliest known body fossils of true birds.

It's possible that these tracks were produced by early dinosaurs, and potentially even early members of a near-bird lineage, but the authors note that there could also have been other reptiles, cousins of dinosaurs, that convergently evolved bird-like [feet](#). Whoever the trackmakers are, these footprints establish the origin of bird-like feet at least as early as the Late Triassic Period.

The authors add, "Trisauropodiscus tracks are known from numerous

southern African sites dating back to approximately 215 million years ago. The shape of the tracks is consistent with modern and more recent fossil bird [tracks](#), but it is likely a dinosaur with a bird-like foot produced *Trisauropodiscus*."

More information: The oldest fossil bird-like footprints from the upper Triassic of southern Africa, *PLoS ONE* (2023). [DOI: 10.1371/journal.pone.0293021](#)

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Citation: Exploring bird-like footprints left by unknown animals in Late Triassic Southern Africa (2023, November 29) retrieved 12 May 2024 from <https://phys.org/news/2023-11-exploring-bird-like-footprints-left-unknown.html>

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