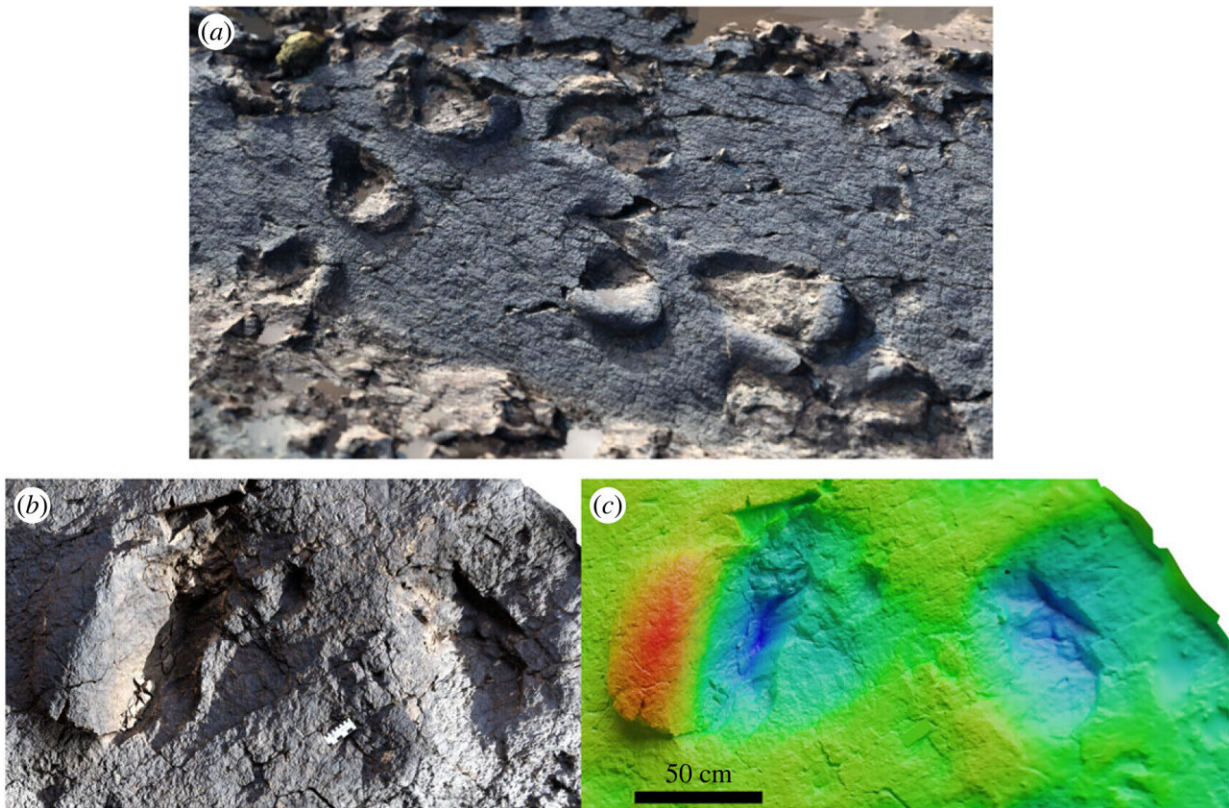


Three new Jurassic-era dinosaur track sites found in Morocco

September 27 2023, by Bob Yirka

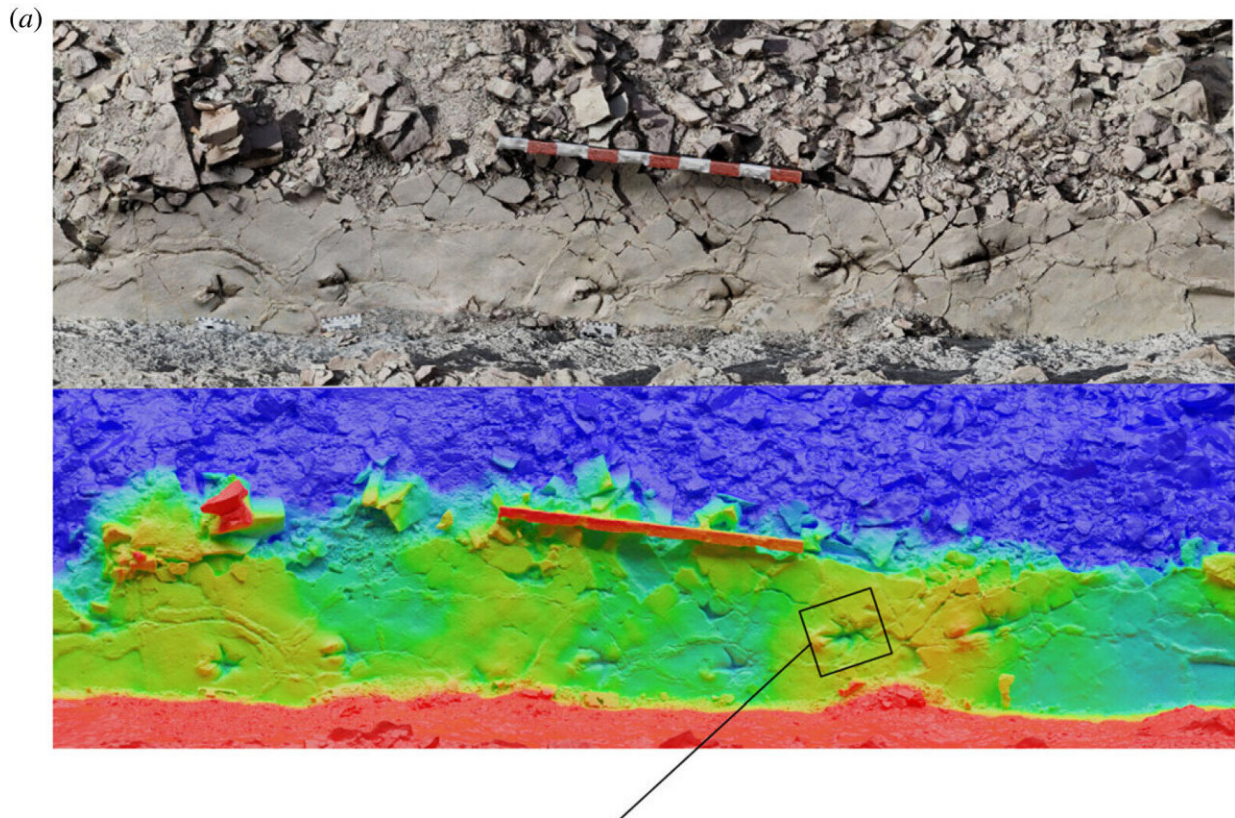


(a) Close-up of isometric view displaying several sauropod tracks with displacement rims occurring in the same direction for each. (b), (c): close ups of track in true color and height map, respectively (red–blue = 30 cm), showing how the raised area of sediment in front of the track remains coherent, slipping at the sides. Credit: *Royal Society Open Science* (2023). DOI: 10.1098/rsos.231091

A small team of paleobiologists, with members from Sidi Mohamed Ben Abdellah University, Liverpool John Moores University and the University of Birmingham has discovered three new Jurassic-era dinosaur track sites in Morocco. In their paper published in the journal *Royal Society Open Science*, the group describes where the track sites were found and the types of tracks that were preserved.

Track sites are areas where tracks of ancient creatures have been preserved in stone; a trackway is a series of tracks made by the same creature as it walked. Track sites occur when an ancient creature, such as a dinosaur, walks across wet ground, often a type of [sediment](#). Over time, the tracks become filled with new sediment and are buried. Eventually, the sediment compacts into rock. Then, as environmental conditions change, the sediment on top of the tracks erodes away, revealing the tracks.

In this new effort, the researchers found three previously unknown track sites in a part of Morocco known as the Imilchil-Outerbat region, which is situated in the Isli [geological formation](#). All three of the track sites have been dated to between 145 and 165 million years ago, dating the tracks to the Jurassic period. Also, all three of sites have a variety of tracks believed to have been created by different kinds of dinosaurs.



Tracks from tracksite 3, displaying penetrative nature and avian-like morphology. (a) True color and height map of the complete trackway (red–blue scale = 10 cm). (b) Interpretation of one track, displaying both entry and exit traces, and raised area at the anterior of the track. Credit: *Royal Society Open Science* (2023). DOI: 10.1098/rsos.231091

One of the track sites was found to be approximately 61 meters long and had 18 trackways, six of which are believed to have been made by sauropods, 11 by theropods and one by an ornithopod. Another of the track sites was measured at just over 9 meters long and preserves two trackways made by adult theropods along with a scattering of juvenile theropods. The third was just shy of 5 meters in length and had an assortment of bird-like [theropod](#) tracks.

The researchers note that despite the large number of [tracks](#) found in the track sites, they have yet to specifically link any to a body fossil record. That, they note, is due to the dearth of dinosaur fossils in the area against which to compare them.

More information: Ahmed Oussou et al, New Middle to ?Late Jurassic dinosaur tracksites in the Central High Atlas Mountains, Morocco, *Royal Society Open Science* (2023). [DOI: 10.1098/rsos.231091](https://doi.org/10.1098/rsos.231091)

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