PTEROSAUR TRACKS (PTERAICHNUS STOKES, 1957) FROM THE LATE JURASSIC OF THE WIEHENEGEBIRGE, NORTHWESTERN GERMANY

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The Wiehengebirge is an east-west-trending hill range situated at the border of Northrine-Westfalia and Lower Saxony in northwestern Germany. It consists of sedimentary rock units, which were deposited north of the Rhenish massif during the Middle and Late Jurassic. Sea-level regressions during the Kimmeridgian resulted in terrestrial conditions becoming established in the area periodically. Consequently, tracks of dinosaurs were preserved and are frequently found at several sites throughout the hill range. One of these is the Störmer quarry north of the village Bergkirchen. In late 2019, a sandstone slab from the Störmer quarry, preserving potential pterosaur tracks, was reported to the LWL-Museum of Natural History in Münster. This triggered further explorations of the site, which yielded additional, similar ichnofossils. Nine tracks are referrable to the pterosaur ichnogenus Pteraichnus Stokes, 1957. This diagnosis is based on the presence of distinctly shaped manus and pes impressions. The manus tracks are asymmetrical, tridactyl and digitigrade imprints in which all three digits point in strongly different directions. The imprints of the pedes possess triangular outlines, often combined with a deep, V-shaped heel impression. In cases in which they are preserved, four slender pes digits with equally narrow claw traces are present. Most tracks are isolated specimens, but at least one manus-pes-set is among the material. The pes imprint is positioned anterior to the manus imprint, which is common in pterosaur ichnotaxa such as Pteraichnus. A short potential pterosaur trackway segment, consisting of two to three manus imprints and two pes imprints, was also recovered. However, it is not assigned to a particular ichnotaxon due to its bad preservation. The tracks vary between 25 and 90 mm in anteroposterior length, which covers a large portion of the size range known for Pteraichnus. Previously, only a single pterosaur manus hypichnium (Purbeckopus cf. pentadactylus) was known from Germany. In addition, this is the first German record of Pteraichnus.