



Pteraichnus nipponensis

Pterosaur tracks

Kitadani Formation, Fukui Prefecture, Japan.

No Image

Holotype: NHCG 10169

Lee, Y.-N., Azuma, Y., Lee, H.-J., Shibata, M., and Lü, J., 2009., The first pterosaur trackways from japan. *Cretaceous Research*

Abstract: In 1990, five well-preserved pterosaur trackways were discovered in the Kitadani Formation (Lower Cretaceous) of the Kitadani Dinosaur Quarry, Fukui Prefecture, Japan. They occur on the surface of an isolated dark grey siltstone slab (70 × 50 cm) along with amphibian and bird tracks as well as feeding marks. All pterosaur trackways (a total of 64 imprints) show a clear quadrupedal gait pattern comprising manus and pes prints which reflect their detailed anatomy of the feet. Manus and pes imprint is very small, average 22.6 mm and 21.9 mm long, respectively. The manus has an anteriorly oriented digit I imprint with a medially oriented hook-like sharp claw mark, which makes a high divarication (average 155.4°) between the posteriorly oriented digit III imprint. The high digital abduction clearly shows that digit I of the manus could be more hyper-extended anteriorly than previously thought: spreading the digits as much as possible would provide a more stable contact with substrate as well as better support the center of pterosaur body mass displaced anteriorly. The interdigital webbing of the pes imprint extends from the metatarso-phalangeal joint near to the bases of four claws. As these features clearly distinguish the Kitadani pterosaur trackways from five known ichnospecies of *Pteraichnus*, we assign them to a new ichnospecies, *Pteraichnus nipponensis*. Abundant small pterosaur ichnotaxa from Spain, Korea, and Japan indicate that many small pterodactyloid pterosaur species existed in the Early Cretaceous although there is no single skeletal datum yet.