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The ankle joint of *Pterodaustro guinazui*

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The hindlimb of pterosaurs has been much less studied than the pterosaur wing. However, it is relevant to understand the evolution, phylogeny and ecology of these animals. This study provides the first complete and detailed description of the ankle of *Pterodaustro guinazui*. It documents three ontogenetic stages observed for the fusion of the tibiotarsus: in the youngest specimens the proximal tarsals are not fused to the tibia; in the subadults the tibiotarsus is formed, but with the suture still visible; in the adults, the tibiotarsus is entirely formed, without any suture. The fusion between astragalus and calcaneum precedes tibiotarsal fusion, but in close succession. The medial condyle of the tibiotarsus is made up of the astragalus, and the lateral condyle is composed of the calcaneum and part of the astragalus. The distal tibiotarsus has three articular facets, the most medial of which seems to greatly restrict the flexion-extension movement, a feature atypical of pterosaurs. The lateral part of the distal tibiotarsus, on the contrary, allows a very wide range of movement. *Pterodaustro guinazui* seems to have had an asymmetrical ankle joint, which could facilitate movements linked to wading behavior. We describe juvenile specimens that retain discrete distal tarsals II and III (common in the “non-pterodactyloid” pterosaurs), but also more mature specimens with completely fused distal tarsals II and III (a condition always observed in the late pterodactyloids). Moreover, the lateral distal tarsal (LDT) appears more robust in *Pterodaustro* than in *Peteinosaurus* or *Dimorphodon*, but shares a waisted shape with these taxa, unlike the more robust shape of the LDT of late pterodacty-loids. The new information on the *Pterodaustro* ankle improves our anatomical knowledge of the basal Pterodactyloidea.

Key words: Pterosauria, Pterodactyloidea, *Pterodaustro*, ankle.

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