

Poster presentation

New contribution on the presence of singular sauropods in the Jurassic-Cretaceous transition of the Iberian Peninsula (Soria, Spain)

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The palaeogeographical position of the Iberian Peninsula at the end of the Upper Jurassic and in the Lower Cretaceous favoured the proliferation and development of a singular dinosaur fauna. At this time, the Iberian Peninsula formed part of Laurasia, but it was close enough to Gondwana for the existence of intercontinental bridges between the two supercontinents via Iberia to have been proposed. In this context, dinosaurs with Gondwanan and Laurasiatic affinities as well as endemisms have been described. To explain this mixture of faunas, the concept of “palaeobiogeographical ambiguity” has been introduced for the dinosaur faunas of the Iberian Peninsula. In recent decades a singular association of sauropods has been described from the Jurassic-Cretaceous transition of the Iberian Peninsula. These endemic sauropods are a consequence of the isolation of Iberia due to the position of the Iberian Plate between Laurasia and Gondwana during this period of time. In this context a sauropod femur from the Tithonian-Berriasian of Spain is studied for the first time. The femur in question is an isolated specimen, recovered from the Tera Group in Tera (Soria). It displays a mosaic of derived and primitive characters as yet undescribed in the fossil record. A prominent lateral bulge, high eccentricity, and a lateromedially flattened proximal end link the femur from Tera with Titanosauriformes. However, its distally developed tibial condyle suggests that it belongs to a sauropod with a narrow gait, a type of sauropod as yet undescribed in this clade. The femur from Tera might belong either to a basal representative of Titanosauriformes or to a representative of a clade of primitive macronarians that convergently developed a femur similar to Titanosauriformes. The singular nature of the Tera femur thus lends weight to the idea of the presence of a singular fauna of sauropods during the Jurassic-Cretaceous transition of the Iberian Peninsula.