

A reassessment of the purported ankylosaurian dinosaur *Bienosaurus lufengensis* from the Lower Lufeng Formation of Yunnan, China

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The earliest definitive ornithischian dinosaurs are from the Early Jurassic and are rare components of early dinosaur faunas. The Lower Lufeng Formation (Hettangian–Sinemurian) of Yunnan Province, China, has yielded a diverse Early Jurassic terrestrial vertebrate fauna. This includes several incomplete specimens have been referred to Ornithischia, including the type specimen of the thyreophoran “*Tatisaurus*” and other generically indeterminate material. The highly fragmentary Lufeng ornithischian *Bienosaurus lufengensis* was described briefly in 2001 and identified as an ankylosaurian dinosaur. Recent studies have cast doubt on this hypothesis, however, and given that the referral of *Bienosaurus* to Ankylosauria would result in an extensive ghost-lineage extending between it and the first definitive eurypodans (ankylosaurs + stegosaurs) in the Middle Jurassic, the holotype specimen is re-examined and re-described. We identify *Bienosaurus* as a probable thyreophoran dinosaur, although the fragmentary nature of the material and the absence of autapomorphies means that the specimen should be regarded as a nomen dubium.

Key words: Dinosauria, Ornithischia, Thyreophora, anatomy, Jurassic, Lufeng Formation, Yunnan, China.

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