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The mystery of *Mystriosaurus*: Redescribing the poorly known Early Jurassic teleosauroid thalattosuchians *Mystriosaurus laurillardi* and *Steneosaurus brevior*

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The genus *Mystriosaurus*, established by Kaup in 1834, was one of the first thalattosuchian genera to be named. The holotype, an incomplete skull from the lower Toarcian Posidonienschiefer Formation of Altdorf (Bavaria, southern Germany), is poorly known with a convoluted taxonomic history. For the past 60 years, *Mystriosaurus* has been considered a subjective junior synonym of *Steneosaurus*. However, our reassessment of the *Mystriosaurus laurillardi* holotype demonstrates that it is a distinct and valid taxon. Moreover, we find the holotype of "Steneosaurus" brevior, an almost complete skull from the lower Toarcian Whitby Mudstone Formation of Whitby (Yorkshire, UK), to be a subjective junior synonym of *M. laurillardi*. *Mystriosaurus* is diagnosed in having: a heavily and extensively ornamented skull; large and numerous neurovascular foramina on the premaxillae, maxillae and dentaries; anteriorly oriented external nares; and four teeth per premaxilla. Our phylogenetic analyses reveal *M. laurillardi* to be distantly related to *Steneosaurus bollensis*, supporting our contention that they are different taxa. Interestingly, our analyses hint that *Mystriosaurus* may be more closely related to the Chinese teleosauroid (previously known as *Peipehsuchus*) than any European form.

Key words: Thalattosuchia, Teleosauroidea, *Mystriosaurus*, Jurassic, Toarcian Posidonienschiefer Formation, Whitby Mudstone Formation, Germany, UK.

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