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Evidence of macrophagous teleosaurids in the Corallian Group (Oxfordian, Late Jurassic) of the UK

Davide Foffa ¹, Mark T. Young ^{1,2}, Stephen L. Brusatte ^{1,3}

¹ School of GeoSciences, University of Edinburgh, Edinburgh, UK

Teleosaurids were a semi-aquatic group of crocodylomorphs with a fossil record that spanned the Jurassic Period. Abundant specimens are known from Oxford Clay (OCF, Callovian to lower Oxfordian) and Kimmeridge Clay (KCF, Kimmeridgian to lower Tithonian) Formations of the UK, and contemporaneous deposits in northern France. Unfortunately, due to the paucity of material from the intermediate 'Corallian Gap' (middle to upper Oxfordian), we lack an understanding of how and why teleosaurid taxic abundance and diversity declined from the OCF to the KCF. Our discovery of an incomplete teleosaurid lower jaw from the Corallian of Weymouth (Dorset, UK) begins to help rectify this. The vertically oriented dentition, blunt tooth apices, and intense enamel ornamentation that shifts apical to an anastomosed pattern, and deep reception pits on dentary unambiguously demonstrates the affinity of this specimen with a sub-clade of macrophagous/durophagous teleosaurids ('Steneosaurus' obtusidens + Machimosaurus>). The high symphyseal tooth count allows us to exclude the specimen from M. hugii and M. mosae, but in absence of more diagnostic material we cannot unambiguously assign the specimen to a more specific level. Nevertheless, this specimen represents the first UK mandibular material referable to Teleosauridae from this poorly known time-span.

² National Oceanography Centre, University of Southampton, Southampton, UK

³ National Museums Scotland, Edinburgh, UK