

## The dentary of *Wareolestes rex* and new fossil mammal material from the Middle Jurassic of Skye, Scotland

The Middle Jurassic was a pivotal time for many vertebrate groups: recent research suggests mammals experienced a surge in ecological diversity at this time. However, vertebrate fossils from the Middle Jurassic are rare. Until now, Middle Jurassic mammals in the UK came almost exclusively from Bathonian deposits in England, while globally the most complete specimens are mainly found in China. Ongoing fieldwork on the Isle of Skye suggests this locality is of international significance for microvertebrate skeletal remains. So far, Skye has yielded skeletal associations and fragmentary material including early mammals, tritylodontids, salamanders and basal squamates.

We report the most complete specimen of the Middle Jurassic morganucodontan *Wareolestes rex*, from the Bathonian Kilmaluag Formation of Skye, Scotland. The specimen was digitally reconstructed using microCT scan data. It comprises a partial left dentary with two erupted molars, one unerupted molar, and three unerupted premolars. Empty alveoli for a canine, p1 and p3 are also present.

*Wareolestes* was previously known from four isolated molars from Kirtlington, England, and there was debate over the position of the holotype tooth as an upper or lower molar. Comparing our new material with the holotype, we support the original diagnosis of the holotype as a lower molar, most likely m1. In the Scottish specimen, unerupted and erupted premolars, and presence of permanent molars, supports diphyodonty in *Wareolestes*. This has previously been suggested for other morganucodontans. Damage to the dentary of *Wareolestes* means questions remain regarding the sequence of replacement along the tooth row in this genus.

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## THE DENTARY OF *WAREOLESTES REX* AND NEW FOSSIL MAMMAL MATERIAL FROM THE MIDDLE JURASSIC OF SKYE, SCOTLAND

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