

was considerable biogeographic interchange between the seep faunas of the Pacific and the Caribbean region prior to the closure of the Isthmus of Panama.

The dentition of *Megacephalosaurus eulerti* (Plesiosauria, Pliosauridae) from the Turonian of Kansas and comments on the phylogenetic relationships of the last brachauchenines

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Megacephalosaurus eulerti was a large brachauchenine pliosaurid that roamed the Western Interior Seaway during the middle Turonian (Late Cretaceous). The type specimen (FHSM VP-321) consists of a nearly complete skull including the dentaries, and associated incomplete postcranial material. We assessed the dental morphology of *Megacephalosaurus* and the variability observed in its dentition. The results show that the dentition of *M. eulerti* was subisodont and subhomodont, with the most apparent differences observed in the development of the apicobasal ridges, which branch in some teeth. However, the taxonomic utility of this feature is debatable and perhaps depends on the part of the tooth crown where it develops. We further revised the cranial anatomy of the taxon, which allowed for a reassessment of some of its morphological characters used in recent phylogenetic studies. Our parsimony analyses inferred a single unambiguous synapomorphy uniting the node comprising mid- to Late Cretaceous brachauchenines (presence of conical teeth with a subcircular cross-sectional shape). The latest brachauchenines (*Brachauchenius* and *Megacephalosaurus*) can be also roughly characterized by reduction of their maxillary tooth count and, perhaps, a switch from anisodont to subisodont dentition. However, the phylogenetic relationships remain somewhat elusive and would probably improve following modifications in data sampling.