

NEW MAMMALS FROM THE EARLY CRETACEOUS OF BALVE-BECKUM (NORTH RHINE-WESTPHALIA, GERMANY) AND THEIR PALAEOBIOGEOGRAPHIC IMPLICATIONS

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Three new trechnotherian and cladotherian mammals are reported from the Early Cretaceous (Barremian–Aptian) karstic fissure fillings of the Balve-Beckum locality in northwestern Germany. The locality so far yielded isolated vertebrate remains of hybodontiform sharks and other fishes, amphibians, turtles, lizards, crocodyliforms, pterosaurs, sauropod, theropod and ornithopod dinosaurs, and multituberculate mammals. The new spalacotheriid “symmetrodontan” genus and species, represented by one lower and two upper molars, is the first record of spalacotheriids in Central Europe. The new spalacotheriid is similar to *Spalacotherium*, but differs by a smaller stylocone and a larger parastyle on the upper molars, and a labially interrupted cingulid on the lower molar. A new small dryolestid genus and species is erected based on one lower and two upper molars. Phylogenetic analysis revealed the new taxon as the most primitive member of a clade comprising *Laolestes*, *Krebsotherium*, *Dryolestes*, and *Guimarotodus*. A dryolestid mandible with unevenly rooted molars and extremely worn teeth cannot be attributed to the small taxon. With unevenly rooted molars and extremely worn teeth twice as large in size as the small dryolestid, it is assigned to a separate new genus and species. The mandible has the dental formula 3i, 1c, 4p, 8m and a fully reduced Meckel’s groove. It lacks any trace of a coronoid or splenial. In the phylogenetic analysis, the new taxon appears as the most primitive member of a clade comprising *Achyrodon*, *Phascolestes*, *Crusafontia*, and *Hercynodon*. The new mammals are stratigraphically the youngest European representatives of their clades. The late survival and endemic evolution of the dryolestids is possibly the result of isolated evolution in an Early Cretaceous island environment. This finding of new spalacotheriid and dryolestid mammals from Central Europe adds to an emerging palaeobiogeographic pattern that Europe is distinct from Asia in the constituents of mammalian faunas during Barremian–Aptian.