

First spalacotheriid and dryolestid mammals from the Cretaceous of Germany

Thomas Martin, Alexander O. Averianov, Julia A. Schultz, Rico Schellhorn, and Achim H. Schwermann
Acta Palaeontologica Polonica 67 (1), 2022: 155–175 doi:<https://doi.org/10.4202/app.00914.2021>


The new spalacotheriid “symmetrodontan” *Cifellitherium suderlandicum* gen. et sp. nov. from the Barremian–Aptian of the Balve locality in northwestern Germany is the first record of spalacotheriids in Central Europe. The new taxon is based on one lower and two upper molars. *Cifellitherium* is similar to *Spalacotherium*, but differs by smaller stylocone and larger parastyle on the upper molars, and a labially interrupted cingulid on the lower molar. The new dryolestid *Minutolestes submersus* gen. et sp. nov. is based on one lower and two upper molars of small size. Phylogenetic analysis revealed it as sister taxon of the clade comprising *Laolestes*, *Krebsotherium*, *Dryolestes*, and *Guimarotodus*. A dryolestid mandible with unevenly rooted molars and extremely worn down teeth cannot be attributed to *Minutolestes submersus* gen. et sp. nov. due to possessing molars twice as large in size. The mandible is assigned to a new dryolestid taxon, *Beckumia sinemeckelia* gen. et sp. nov., and has the dental formula 3i, 1c, 4p, 8m and a fully reduced Meckel’s groove. The mandible lacks any trace of a coronoid or splenial. In the phylogenetic analysis, it appears as sister taxon of a clade comprising *Achyrodon*, *Phascolestes*, *Crusafontia*, and *Hercynodon*. The new mammals are the stratigraphically youngest European representatives of their clades. The late survival of *Beckumia sinemeckelia* gen. et sp. nov. and *Minutolestes submersus* gen. et sp. nov. 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 paleobiogeographic pattern that Europe was distinct from Asia in the constituents of mammalian faunas during the Barremian–Aptian.

Key words: Mammalia, Spalacotheriidae, *Cifellitherium*, *Crusafontia*, Dryolestidae, *Beckumia*, *Minutolestes*, Balve, Cretaceous.

Thomas Martin [tmartin@uni-bonn.de], Julia A. Schultz [jaschultz@uni-bonn.de], and Rico Schellhorn [rico.schellhorn@uni-bonn.de], Institute of Geosciences, Section Paleontology, Rheinische Friedrich-Wilhelms-Universität Bonn, Nussallee 8, 53115 Bonn, Germany. Alexander O. Averianov [dzaharakuduk@mail.ru], Zoological Institute of the Russian Academy of Sciences, Universitetskaya Emb. 1, Saint Petersburg, 199034, Russia. Achim H. Schwermann [achim.schwermann@lwl.org], LWL-Museum of Natural History, Westphalian State Museum and Planetarium, Sentruper Straße 285,

48161 Münster, Germany.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(3,098.8 kB\)](#) |

 [Supplementary file \(180.9 kB\)](#)