

First Mesozoic record of the stingray *Myliobatis wurnoensis* from Mali and a phylogenetic analysis of Myliobatidae incorporating dental characters

Kerin M. Claeson, Maureen A. O'leary, Eric M. Roberts, Famory Sissoko, Mamadou Bouaré, Leif Tapanila, David Goodwin, and Michael D. Gottfried


Acta Palaeontologica Polonica 55 (4), 2010: 655-674 doi: <http://dx.doi.org/10.4202/app.2009.1117>

New specimens, including the first record of lower dental plates, of the extinct myliobatid *Myliobatis wurnoensis* were recovered from the Maastrichtian (Late Cretaceous) of the Iullemeden Basin, Mali, and are the oldest record of the taxon. We evaluated the phylogenetic position of this taxon with reference to other myliobatids (extinct and extant) using osteology and dentition. Our results indicate that Myliobatinae and *Myliobatis* are each paraphyletic, and that *Aetobatus* and *Rhinoptera* are monophyletic. We also found that taxa known only from the Cretaceous, *Brachyrhizodus* and *Igdabatis*, are highly nested within Myliobatidae. The phylogenetic position of these taxa unambiguously extends the origin of Myliobatidae and most of its representative taxa into the Mesozoic.

Key words: Chondrichthyes, Myliobatidae, Myliobatiformes, dentition, batoid, ghost lineage, phylogeny, Cretaceous, Maastrichtian, Mali.

Kerin M. Claeson, [kclaeson@mail.utexas.edu], Department of Geological Sciences, The University of Texas at Austin, Austin, 78712-0254, Texas, USA; Maureen A. O'leary [maureen.oleary@stonybrook.edu], Department of Anatomical Sciences, Stony Brook University, Stony Brook, 11794, New York, USA; Eric M. Roberts [robertse@suu.edu], Department of Physical Science, Southern Utah University, Cedar City, 84720, Utah, USA; Famory Sissoko, Institut des Sciences Humaines, Bamako, Mali (passed away); Mamadou Bouaré École [bouamala@yahoo.fr], Nationale des Ingénieurs, Bamako, Mali; Leif Tapanila [tapaleif@isu.edu], Department of Geosciences, Idaho State University, Pocatello, 83209-8072, Idaho, USA; David Goodwin [goodwind@denison.edu], Department of Geosciences, Denison University, Granville, 43023, Ohio, USA; Michael D. Gottfried [gottfried@msu.edu], Department of Geological Sciences and Museum, Michigan State University, East Lansing, 48824, Michigan, USA.

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 \(1,190.1 kB\)](#)