

First record of the ichthyodectiform fish *Cladocyclus* from eastern Gondwana: A new species from the Lower Cretaceous of Queensland, Australia

Rodney W. Berrell, Jesús Alvarado-Ortega, Yoshitaka Yabumoto, and Steven W. Salisbury
Acta Palaeontologica Polonica 59 (4), 2014: 903-920 doi: <http://dx.doi.org/10.4202/app.2012.0019>

Cladocyclus is a genus of ichthyodectiform fish that is best known from fossils found in shallow marine Cretaceous deposits in Brazil and Morocco. Herein, a new species of *Cladocyclus* is described on the basis of a fossil that comprises an articulated skull and anterior part of the body, preserved as part and counter-part in what was originally a single eroded nodule of fluvially-deposited volcanolithic sandstone from the Lower Cretaceous (upper Albian) portion of the Winton Formation near Isisford, central-western Queensland, Australia. This specimen represents the first record of *Cladocyclus* in eastern Gondwana, and indicates that species of this fish may also have inhabited freshwater environments. The new species is assigned to the genus *Cladocyclus* based on the morphology of the cleithrum (the arms are oriented at approximately 90° to each other) and a mandibular articular facet that incorporates portions of the angular, the articular and the retroarticular. *Cladocyclus geddesi* sp. nov. can be distinguished from other congeners based on the possession of a more elongate horizontal arm of the cleithrum and a supraoccipital crest that is gently convex posteriorly. This discovery greatly expands the geographic range of *Cladocyclus*, and supports the idea of a distinct southern fish fauna in the seas surrounding the fragmenting Gondwanan landmasses during the mid-Cretaceous.

Key words: Teleostei, *Cladocyclus*, Cretaceous, Winton Formation, Australia.

Rodney W. Berrell [rodneyberrell@yahoo.com] and Steven W. Salisbury [s.salisbury@uq.edu.au] (corresponding author), School of Biological Sciences, The University of Queensland, Brisbane, Qld 4072, Australia; Jesús Alvarado-Ortega [alvarado@geol-sun.igeolcu.unam.mx], Departamento de Paleontología, Instituto de Geología, Universidad Nacional Autónoma de México, Circuito de la Investigación S/N, Ciudad Universitaria, Coyoacán, Distrito Federal, 04510 México; Yoshitaka Yabumoto [yabumoto@kmnh.jp], Kitakyushu Museum of Natural History and Human History, 2-4-1, Higashida, Yahatahigashiku, Kitakyushu, Fukuoka, 805-0071, Japan.

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 \(821.8 kB\)](#)