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


*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.