

## First record of chimaeroid fish *Ischyodus* from the Upper Jurassic of southwestern Gondwana

Rodrigo A. Otero, Constanza Figueroa Bravo, Paula Soto-Huenchumán, Sara Fernández-Collelmann, Ana M. Valenzuela-Toro, and Carolina S. Gutstein

*Acta Palaeontologica Polonica* 66 (3), 2021: 623-630 doi:<https://doi.org/10.4202/app.00859.2020>

This study presents two specimens of Chimaeriformes from Upper Jurassic strata of central Chile. The material was recovered from Tithonian levels of the Baños del Flaco Formation and includes two different individuals, one preserving two articulated mandibular plates, and the second, a fragment of an isolated palatine plate. Morphologic traits allow us to refer the material to *Ischyodus townsendi* and *Ischyodus* sp., respectively. These are the oldest Chimaeriformes known to date in the Southern Hemisphere and the first Late Jurassic record from Gondwana. The presence of *I. townsendi* in the Tithonian of central Chile evidences this taxon as part of the proposed faunal interchange between the northern Tethys and the southeastern Pacific during the Late Jurassic.

**Key words:** Chondrichthyes, Holocephali, Callorhynchidae, cartilaginous fishes, paleobiogeography, Mesozoic, Jurassic, Tithonian.

Rodrigo A. Otero [[otero2112@gmail.com](mailto:otero2112@gmail.com)], Consultora Paleosuchus Ltda. Huelén 165 Oficina C, Providencia, Santiago, Chile; Red Paleontológica U-Chile. Laboratorio de Ontogenia y Filogenia, Departamento de Biología, Facultad de Ciencias, Universidad de Chile. Las Palmeras 3425, Santiago, Chile; Museo de Historia Natural y Cultural del Desierto de Atacama. Inferior Parque El Loa s/n, Calama, Chile. Constanza Figueroa Bravo [[constanza.figueroa@paleoconsultores.cl](mailto:constanza.figueroa@paleoconsultores.cl)] and Sara Fernández Collelmann [[sara.fernandez@paleoconsultores.cl](mailto:sara.fernandez@paleoconsultores.cl)], Consultora Paleosuchus Ltda. Huelén 165 Oficina C, Providencia, Santiago, Chile. Paula Soto-Huenchumán [[paula.soto@paleoconsultores.cl](mailto:paula.soto@paleoconsultores.cl)], Consultora Paleosuchus Ltda. Huelén 165 Oficina C, Providencia, Santiago, Chile; Red Paleontológica U-Chile. Laboratorio de Ontogenia y Filogenia, Departamento de Biología, Facultad de Ciencias, Universidad de Chile. Las Palmeras 3425, Santiago, Chile; Corporación Laguna de Taguatagua, Av. Libertador Bernardo O'Higgins 351, Santiago, Chile. Ana M. Valenzuela-Toro [[avalenzuela.toro@gmail.com](mailto:avalenzuela.toro@gmail.com)], Consultora

Paleosuchus Ltda. Huelén 165 Oficina C, Providencia, Santiago, Chile; Department of Ecology and Evolutionary Biology, University of California Santa Cruz, 130 McAllister Way, Santa Cruz, CA 95060, USA; Department of Paleobiology, National Museum of Natural History, Smithsonian Institution, 10th & Constitution NW, Washington, DC 20560 USA. Carolina S. Gutstein [[carolina.sg@paleoconsultores.cl](mailto:carolina.sg@paleoconsultores.cl)], Consultora Paleosuchus Ltda. Huelén 165 Oficina C, Providencia, Santiago, Chile; Red Paleontológica U-Chile. Laboratorio de Ontogenia y Filogenia, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Las Palmeras 3425, Santiago, Chile.

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

 [Full text \(649.8 kB\)](#)