

## **A new gigantic titanosaurian sauropod from the early Late Cretaceous of Patagonia (Neuquén Province, Argentina)**

María Edith Simón and Leonardo Salgado

*Acta Palaeontologica Polonica* 68 (4), 2023: 719-735 doi:10.4202/app.01086.2023


A new gigantic titanosaur *Bustingorrytitan shiva* gen. et sp. nov. is described. The four specimens upon which this species is erected come from Neuquén Province, Argentina, from levels of the Huincul Formation (Cenomanian). *Bustingorrytitan shiva* gen. et sp. nov. exhibits some autapomorphic characters such as posterior dorsal vertebrae with spinodiapophyseal laminae bifurcated in two, very well developed anterior and posterior spinodiapophyseal lamina rami, which limit a deep, vertical, socket-like fossa; posterior dorsal neural arches with forked centropostzygapophyseal laminae; hyposphene in anterior caudal vertebrae; humerus with deltopectoral crest strongly expanded distally; and femur with a low longitudinal crest on the lateromedial half of the anterior face, bifurcated in two minor crests, which are directed to their respective condyles. The phylogenetic analysis performed recovers *B. shiva* gen. et sp. nov. as a lithostrotian, the sister taxon of Saltasauridae. The estimated body mass is 67.297 metric tons (with a standard error of  $\pm 17.228$ ), which makes *B. shiva* gen. et sp. nov. one of the largest sauropods ever recorded. The record of this new sauropod corroborates the idea that gigantism (evolution of forms over the 50 metric tons) would have evolved many times within Eutitanosauria.

**Key words:** Dinosauria, Sauropoda, Titanosauria, Cretaceous, Neuquén, Patagonia.

María Edith Simón [[paleoedith@gmail.com](mailto:paleoedith@gmail.com)]; ORCID: <https://orcid.org/0009-0007-0735-5567>], Agrimensur Moreno 911, Barrio Gamma, Ciudad de Neuquén (8300), 8300 Neuquén, Argentina. Leonardo Salgado [[lsalgado@unrn.edu.ar](mailto:lsalgado@unrn.edu.ar)]; ORCID: <https://orcid.org/0000-0003-3066-0870>], Instituto de Investigación en Paleobiología y Geología, Universidad Nacional de Río Negro-Conicet, Av. Julio A. Roca 1242, 8322 General Roca, Río Negro, Argentina.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see [creativecommons.org](https://creativecommons.org)), which permits unrestricted use,

distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(1,601.2 kB\)](#) |

 [Supplementary file \(463.9 kB\)](#)