

A titanosaurian sauropod dinosaur from the Upper Cretaceous of Antarctica

Paul M. Barrett, Philip D. Mannion, Samantha L. Beeston, Matthew C. Lamanna, Brett Clark, Alejandro Otero, José P. O’gorman, and Mark Evans

Acta Palaeontologica Polonica 71 (2), 2026: 349-362 doi:10.4202/app.01315.2025

Antarctica preserves a meagre Mesozoic dinosaur record, with fossils known only from the Lower Jurassic Hanson Formation of the Transantarctic Mountains and Upper Cretaceous units of the James Ross Sub-Basin of the Antarctic Peninsula. Upper Cretaceous assemblages include ankylosaurs, ornithopods, and non-avian and avian theropods, but sauropods are exceptionally rare. Here, we describe a titanosaurian caudal vertebra from a lower Campanian (Upper Cretaceous) horizon of the Santa Marta Formation of James Ross Island and discuss its implications for the evolutionary and palaeobiogeographic history of Antarctic sauropods. The specimen is a small, procoelous anterior caudal vertebra, identified as that of a non-saltasaurid eutitanosaurian. Its morphology closely corresponds to that of rincosaurians and aeolosaurines, particularly a specimen previously assigned to the Late Cretaceous Argentinean species *Muyelensaurus pecheni*, and it differs from earlier-diverging titanosaurs, although its fragmentary preservation warrants a conservative taxonomic assignment of Eutitanosauria indet. Size comparisons indicate that the individual in question was small for a titanosaur, possibly reflecting immaturity or a genuinely small-bodied form. This discovery represents only the second sauropod body fossil known from Antarctica, although it was the first dinosaur bone to be collected from the continent. Coupled with the occurrence of diamantinasaurians in Patagonia and Australia during the mid-Cretaceous, its eutitanosaurian affinities imply the presence of multiple somphospondylan lineages in Antarctica, informing dispersal patterns and highlighting biogeographic links with other Gondwanan landmasses.

Key words: Sauropoda, Titanosauria, Eutitanosauria, caudal vertebra, Cretaceous, Campanian, Santa Marta Formation, Antarctica, James Ross Island.

Paul M. Barrett [p.barrett@nhm.ac.uk; ORCID: <https://orcid.org/0000-0003-0412-3000>], Fossil Reptiles, Amphibians and Birds Section, Natural History Museum, Cromwell Road, London, SW7 5BD, UK; Evolutionary Studies Centre, University of the Witwatersrand, Johannesburg, South Africa; Department of Earth Sciences, UCL, Gower Street, London, WC1E 6BT, UK. Philip D. Mannion [philipdmannion@gmail.com; ORCID: <https://orcid.org/0000-0002-9361-6941>]

] and Samantha L. Beeston [samantha.beeston.23@ucl.ac.uk;
ORCID: <https://orcid.org/0000-0002-7403-0910>], Department of Earth
Sciences, UCL, Gower Street, London, WC1E 6BT, UK. Matthew C.
Lamanna [lamannam@carnegiemnh.org; ORCID: <https://orcid.org/0000-0001-9845-0728>
], Section of Vertebrate Paleontology, Carnegie Museum of Natural History,
4400 Forbes Avenue, Pittsburgh, PA 15213, USA. Brett Clark [bclark@britishmuseum.org
; ORCID: <https://orcid.org/0000-0002-5888-9223>], The British Museum,
Great Russell Street, London, WC1B 3DG, UK. Alejandro Otero [alexandros.otero@gmail.com
; ORCID: <https://orcid.org/0000-0002-4766-7086>] and José P.
O’Gorman [joseogorman@fcnym.unlp.edu.ar; ORCID: <https://orcid.org/0000-0001-9279-6314>
], División Paleontología de Vertebrados, Museo de La Plata (Anexo Laboratorios),
Paseo del Bosque s/n, La Plata, B1900FWA, Argentina. Mark Evans [maans@bas.ac.uk
; ORCID: <https://orcid.org/0009-0002-5928-6464>], British Antarctic Survey, High Cross, Madingley
Road, Cambridge, CB3 0ET, UK; Centre for Palaeobiology and Biosphere Evolution, University of
Leicester, Leicester, LE1 7RH, UK.

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 \(1.619.6 kB\)](#)