

# A New Genus of Hemibelideine Possum (Marsupialia: Pseudocheiridae) from New Guinea and Australia, Including a Lazarus Taxon from the Vogelkop Peninsula

TIM F. FLANNERY<sup>1</sup> , LOUKAS G. KOUNGOULOS<sup>1</sup> , ERIK MEIJAARD<sup>2</sup> ,  
AKSAMINA M. YOHANITA<sup>3</sup> , ARMAN MUHARMANSYAH<sup>4</sup>, ICHLAS ALZAQIE<sup>5</sup>, KENNETH P. APLIN<sup>1†</sup> ,  
FREDERIKA KORAIN<sup>6</sup>, MARNEKS MJAM<sup>7</sup>, and KRISTOFER M. HELGEN<sup>8</sup> 

<sup>1</sup> Australian Museum Research Institute, 1 William Street, Sydney NSW 2010, Australia

<sup>2</sup> Borneo Futures, Brunei Darussalam Unit503-505, 5th floor, Teck Guan Plaza,  
Bandar Seri Begawan BS8811, Negara Brunei Darussalam

<sup>3</sup> University of Papua, Jalan Gunung Salju, Amban, Manokwari Baru, Papua Barat, 98314 Indonesia

<sup>4</sup> Goodhope, Indonesia

<sup>5</sup> Yayasan Orangutan Indonesia /Orangutan Foundation Indonesia (YAYORIN). Yayorin.com Jl. Bhayangkara No. Km 1,  
Pasir Panjang Kec. Arut Selatan, Kabupaten Kotawaringin Barat, Central Kalimantan 74112, Indonesia

<sup>6</sup> Jayapura, Papua, Indonesia

<sup>7</sup> Tomolol Village, Misool, Indonesia

<sup>8</sup> Bernice Pauahi Bishop Museum, 1525 Bernice Street, Honolulu, Hawai'i 96817, United States of America

† Kenneth P. Aplin 1958–2019, deceased.

**ABSTRACT.** A new genus of gliding marsupial (Hemibelideinae; Pseudocheiridae) is proposed for several possums previously known only as fossils: *Petauroides ayamaruensis* Aplin, 1999 (Quaternary of the Vogelkop Peninsula of western New Guinea), *Pseudocheirus stirtoni* Turnbull and Lundelius, 1970 (Pliocene of Victoria and New South Wales), and an unallocated species from the Middle Pleistocene of Queensland. The type species (*ayamaruensis*) is based on early Holocene archaeological material from the Vogelkop, mainly lower jaws and teeth, and was presumed to have been extinct for around 6,000 years. However, here we describe living individuals of *ayamaruensis*, thus a ‘Lazarus species’ (‘rediscovered’ after considered to be extinct), from several locations in the West Papuan region, as well as abundant archaeological material from ca. 1,000 km to the east in Sandaun Province, Papua New Guinea. The Sandaun material provides the first upper dentition known for this species. *Petauroides ayamaruensis* is restricted to the Vogelkop and North Coast Ranges, and is the only hemibelideine known from New Guinea. Observations of modern animals representing *ayamaruensis* help to cement its status as an extremely distinctive marsupial, and

**Keywords:** New genus of marsupial, Australasia, Lazarus taxon, Misool Island, Vogelkop, Indonesia, Pliocene, Pleistocene, Australia  
**ZooBank registration:** urn:lsid:zoobank.org:pub:6135E7ED-6D9C-4167-BC04-5C5597D00628

**ORCID iD:** Flannery, 0000-0002-3005-8305; Koungoulos, 0000-0002-5148-0142; Meijaard, 0000-0001-8685-3685;  
Yohanita, 0000-0003-4724-1648; Aplin, 0000-0003-0403-8690; Helgen, 0000-0002-8776-4040

**Corresponding authors:** Tim F. Flannery [tim.fridtjof.flannery@gmail.com](mailto:tim.fridtjof.flannery@gmail.com) and Kristofer M. Helgen [kris.helgen@bishopmuseum.org](mailto:kris.helgen@bishopmuseum.org)

**Submitted:** 24 July 2025 **Accepted:** 18 August 2025 **Published:** 6 March 2026 (in print and online simultaneously)

**Publisher:** The Australian Museum, Sydney, Australia (a statutory authority of, and principally funded by, the NSW State Government)

**Citation:** Flannery, Tim F., Loukas G. Koungoulos, Erik Meijaard, Aksamina M. Yohanita, Arman Muharmansyah, Ichlas AlZaqie, Kenneth P. Aplin, Frederika Korain, Marneks Mjam, and Kristofer M. Helgen. 2026. A new genus of hemibelideine possum (Marsupialia: Pseudocheiridae) from New Guinea and Australia, including a Lazarus taxon from the Vogelkop Peninsula. In *Contributions to the Mammalogy of New Guinea*, ed. Tim F. Flannery and Kristofer M. Helgen. *Records of the Australian Museum* 78(1): 35–52.  
<https://doi.org/10.3853/j.2201-4349.78.2026.3004>

**Copyright:** © 2026 Flannery, Koungoulos, Meijaard, Yohanita, Muharmansyah, AlZaqie, Aplin, Korain, Helgen. This is an open access article licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original authors and source are credited.

