

## A New Species of *Phalanger* (Phalangeridae: Marsupialia) from Montane Western Papua New Guinea

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**ABSTRACT.** *Phalanger matanim* n.sp. is a plesiomorphic species of *Phalanger*, thus far known from only three specimens taken in the Telefomin area at altitudes between 1,550 and 2,600 m. Retention of a well-developed preparacrista on M2/, the presence of small simple molars, and having the periotic visible on the external basicranium in *P. matanim* are plesiomorphic features not otherwise seen in combination in the genus *Phalanger*. Although convergent with the other montane *Phalanger* species (*P. vestitus*, *P. carmelitae* and *P. interpositus*) in several external morphological features, *P. matanim* does not appear to be closely related to this group. At the upper limit of its altitudinal range, *Phalanger matanim* is sympatric with *P. vestitus* and *S. leucippus*, and at the lower end with these species and also *P. interpositus* and *P. carmelitae*.

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Between 1984 and 1987 the author conducted a survey of the mammals of southern West Sepik Province, Papua New Guinea (Fig. 1). Previously, the mammal fauna of this region was very poorly sampled, and in the course of the work several undescribed species were encountered. This work is intended as the first in a series of publications dealing with the results of this survey. The first specimen of the new *Phalanger* was collected during the 1985 field season, at a locality where four additional phalangerid species (*Strigocuscus leucippus*, *Phalanger vestitus*, *P. carmelitae* and *P. interpositus*) occur sympatrically. At first, it was thought that the specimen could have been a hybrid between two of these species, but further research and the discovery of two additional specimens has shown that the material indeed represents a distinct and, until now, undescribed species of *Phalanger*.

The taxonomy of the genus *Phalanger* has, until recently, been in a state of confusion. In the past many forms have been named and then synonymised without close examination. The

taxonomy for phalangerid species followed here is that of George (in press), while Flannery *et al.* (in press) is followed for supraspecific groupings.

### Materials and Methods

Colours, where capitalised, follow Ridgeway (1886), and dental nomenclature follows Archer (1976, 1978). AM M is the prefix for Australian Museum mammal specimens, CM is the prefix for Australian National Wildlife Collection specimens, DW is the prefix for Papua New Guinea Division of Wildlife mammal specimens (which will ultimately be housed in the PNG Museum), WSP = West Sepik Province, ESP = East Sepik Province, MBP = Milne Bay Province, NP = Northern Province, CP = Central Province, WHP = Western Highlands Province. Measurements were taken using vernier calipers, and weights and measurements were taken on freshly dead specimens in the field. Appendix 1 lists the phalangerid specimens (other than *P. matanim*) examined during this study.