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New euophryine jumping spiders from Papua New Guinea (Araneae: Salticidae: Euophryinae)

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Abstract

Thirty-four new species and five new genera of euophryine jumping spiders from Papua New Guinea are described. The new genera are *Chalcolemia* (type species *C. nakanai* sp. nov.), *Phasmolia* (type species *P. elegans* sp. nov.), *Variratina* (type species *V. minuta* sp. nov.), *Viribestus* (type species *V. suyanensis* sp. nov.) and *Zabkattus* (type species *Z. brevis* sp. nov., plus new species *Z. furcatus* sp. nov., *Z. richardsi* sp. nov. and *Z. trapeziformis* sp. nov.). The other new species belong to the genera *Bathippus* (*B. directus* sp. nov., *B. gahavisuka* sp. nov., *B. korei* sp. nov., *B. madang* sp. nov.), *Canama*

(*C. extranea* sp. nov., *C. fimoi* sp. nov., *C. triramosa* sp. nov.), *Omoedus* (*O. brevis* sp. nov., *O. darleyorum* sp. nov., *O. meyeri* sp. nov., *O. omundseni* sp. nov., *O. papuanus* sp. nov., *O. swiftorum* sp. nov., *O. tortuosus* sp. nov.), *Paraharmochirus* (*P. tualapaensis* sp. nov.), *Sobasina* (*S. wanlessi* sp. nov.), *Thorelliola* (*T. aliena* sp. nov., *T. crebra* sp. nov., *T. joannae* sp. nov., *T. squamosa* sp. nov., *T. tamasi* sp. nov., *T. tualapa* sp. nov., *T. zabkai* sp. nov.) and *Xenocytaea* (*X. agnarssoni* sp. nov., *X. albomaculata* sp. nov., *X. proszynskii* sp. nov.). The genera *Pystira* and *Zenodorus* are both considered as junior synonyms of *Omoedus* because of their similar genital structure. Species of these two genera are therefore transferred to *Omoedus*. Diagnostic illustrations are provided for all new species, and photographs of living spiders are also provided when available.

Key words: Araneae, Salticidae, Euophryinae, new genera, new species, new synonym, new combination, jumping spider, Papua New Guinea

Introduction

Euophryine jumping spiders are unusually abundant and diverse in New Guinea (Maddison & Zhang 2011). In expeditions to Papua New Guinea in 2008 and 2009 organized by Conservation International, the majority of salticid species collected were euophryines, about 80 species. In addition to the high species diversity, the fauna of euophryines in Papua New Guinea is also remarkable for the presence of some unique body forms not seen in euophryines elsewhere. For instance, *Coccorchestes* closely resemble curculionid beetles; *Leptathamas* and *Athamas* have a very high carapace, and males of *Leptathamas* resemble piles of debris, holding legs in strange poses and walking in a jerky fashion (Maddison & Zhang 2011); spiders of *Sobasina* and *Paraharmochirus* are ant-like. Euophryines have also adapted to various microhabitats in New Guinea. On leaf litter can be found *Zabkattus*, *Sobasina* and some species of *Omoedus* and *Thorelliola*, on tree trunks can be found *Variratina*, *Paraharmochirus* and other *Thorelliola*, while on foliage are many genera including *Bathippus*, *Bulolia*, *Canama*, *Chalcolemia*, *Coccorchestes*, *Cytaea*, *Euryattus*, *Palpelius*, *Phasmolia*, *Viribestus*, *Xenocytaea* and other species of *Omoedus.*

In this paper, we report five new genera: *Chalcolemia* (one species), *Phasmolia* (one species), *Variratina* (one species), *Viribestus* (one species) and *Zabkattus* (four species). In addition, 26 species of the genera *Bathippus* (four species), *Canama* (three species), *Omoedus* (seven species), *Paraharmochirus* (one species), *Sobasina* (one species), *Thorelliola* (seven species) and *Xenocytaea* (three species) are also described. Here we consider the genera *Pystira* and *Zenodorus* as junior synonyms of *Omoedus* because of their similar genital structure. Species of these two genera are transferred to *Omoedus*. Most of the species described here were chosen in order to give names for the taxa included in a forthcoming molecular phylogenetic study on the subfamily Euophryinae.

Material and methods

During expeditions to Papua New Guinea in 2008 and 2009, jumping spiders from five areas were sampled (Maddison & Zhang 2011): Wanakipa (Southern Highlands Province), near Porgera (Enga Province), Mt. Gahavisuka (Eastern Highlands Province), Varirata National Park (Central Province), and Mts. Nakanai (New Britain). Multiple habitats ranging from the highland wet forest to the lowland rainforest and disturbed forest were explored. Collecting mainly involved beating foliage and visual inspection on ground and on tree trunks.

Photographs of living specimens were mostly taken with a Pentax Optio 33WR digital camera. For the macro capability, a small lens was glued to it. Living spider photographs of *Xenocytaea albomaculata* were taken by Piotr Naskrecki with a Canon 40D camera with a 100 mm macrolens. Photographs of preserved specimens were taken under a Leica MZ16 dissecting microscope with Leica Application Suite version 3.1.0. Preserved specimens were examined under both dissecting microscopes and a compound microscope with reflected light. Drawings were made with a drawing tube on a Nikon ME600L compound microscope.

Terminology is standard for Araneae. All measurements are given in millimeters. Descriptions of color pattern are based on the alcohol-preserved specimens. Carapace length was measured from the base of the anterior median eyes not including the lenses to the rear margin of the carapace medially; abdomen length to the end of the anal tubercle. The following abbreviations are used: ALE, anterior lateral eyes; AME, anterior median eyes; PLE, posterior lateral eyes; PME, posterior median eyes (the "small eyes"). Specimens are deposited in the Spencer Entomological Collection at the Beaty Biodiversity Museum, University of British Columbia (UBC-SEM).