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## The new Andean jumping spider genus *Urupuyu* and its placement within a revised classification of the Amycoida (Araneae: Salticidae)

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### Abstract

*Urupuyu gen. nov.* is described for three new species of small black jumping spiders from the cloud forests of Ecuador: *Urupuyu antisana sp. nov.* (type species), *U. edwardsi sp. nov.*, and *U. occidentale sp. nov.* Phylogenetic analyses with DNA sequences (28S, actin 5C, wingless, 16SND1 and CO1) indicate *Urupuyu* is closely related to the huriine amycoids *Hurius* and *Scoturius*, a placement also supported by morphological traits. Our phylogenetic analysis serves to clarify the relationships within the Amycoida in general, leading to our proposing a revised classification for the group, with subfamilies Gophoinae, Sitticinae, Bredinae **subfam. nov.**, Scopocirinae, Thiodininae, Sarindinae, Huriinae, Simonellinae, and Amycinae. We confirm the marpissine-like *Breda* belongs within the Amycoida. The phylogeny implies that ant mimicry has evolved at least twice (simonellines and sarindines) and probably a third time (*Atomosphyrus* in the thiodinines) within the Amycoida. The following new synonymies are proposed for suprageneric names: *Hyetusseae* Simon, 1903 and *Arachnomureae* Mello-Leitão, 1917 = Thiodininae Simon, 1901; *Zunigeae* Simon, 1901 = Sarindinae Simon, 1901; *Synemosynae* Banks, 1892 = Simonellinae Peckham, Peckham & Wheeler, 1888; *Magoninae* Petrunkevitch, 1928 = Amycinae F.O.P.-Cambridge, 1900.

**Key words:** Araneae, Salticidae, *Urupuyu*, Canada

### Introduction

Within jumping spiders, the Amycoida was not recognized as a clade until molecular data (Maddison & Hedin 2003) showed it to be one of the major subdivisions of the diversity of this family. Amycoids represent a great percentage of the fauna in the Neotropics, where the group has radiated since 32–39 Mya (Bodner & Maddison 2012). It includes spiders with diverse shapes and colours, from traditional bark dwellers with flattened bodies (*Breda* Peckham & Peckham, 1894) to translucent foliage species with high bodies and long ornamented chelicerae (e.g. *Amicus* C.L. Koch, 1846), as well as lineages with strikingly ant-like bodies and behaviour (e.g. *Synemosyna* Hentz, 1846). The absence of a clear morphological synapomorphy of amycoids, the simple male palps, and the great diversity in body forms have blurred relationships within the entire clade, rendering the suprageneric classification chaotic. Without a well supported theory of amycoid relationships, we have been unable to update Simon's (1901, 1903) antiquated classification, and find placements for newly discovered lineages.

A lineage of unusual amycoids recently found in the cloud forests of Ecuador, the new genus *Urupuyu*, illustrates the need for a new amycoid classification. Despite having morphological traits in common with some amycoids, its phylogenetic position was not clear. In this paper we propose *Urupuyu*, describe three species of this new lineage, and use DNA sequences to determine its placement. Our phylogenetic analyses clarify the positions of various other amycoids as well, and so we take the opportunity to revise the suprageneric classification of amycoids.