



Article

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New species of Psychodidae (Diptera) from Australasia, with a checklist of the world species of Bruchomyiinae and Sycoracinae

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Abstract

Adults of one new species of Bruchomyiinae and five new species of Sycoracinae were collected from Australia and New Caledonia, respectively. *Nemopalpus glyphanos* **sp. nov.**, *Sycorax furca* **sp. nov.**, *S. sinuosa* **sp. nov.**, *S. spina* **sp. nov.**, *S. tridentata* **sp. nov.**, and *S. webbi* **sp. nov.** are described, and *Sycorax dispar* Satchell from New Zealand is redescribed. A key to males of *Sycorax* species known to occur in New Caledonia, and a checklist of the world species of Bruchomyiinae and Sycoracinae are provided. Characters of the male genital tract, and relationships among Australasian Bruchomyiinae and Sycoracinae are discussed.

Key Words: Australia, New Caledonia, moth flies, *Nemopalpus*, *Sycorax*

Introduction

Bruchomyiinae and Sycoracinae are two of six subfamilies of Psychodidae. The Neotropical fauna of both has received much attention within the past decade, during which several new species were described. Most recently, Bravo & Barata (2012) and Wagner & Stuckenberg (2012) described a total of five species of *Nemopalpus*. Moreover, four *Sycorax* and two *Parasycorax* species were described (Bejarano *et al.* 2008; Bravo & Salazar-Valenzuela 2009; Santos & Bravo 2009; Santos *et al.* 2009; Bravo *et al.* 2010). In all other biogeographical regions, no extant species of Bruchomyiinae and only one extant species of *Sycorax*, *S. usambaricus* Wagner & Andersen, 2007, has been described within the past two decades.

In particular, the Australasian fauna of Bruchomyiinae and Sycoracinae is poorly known, and has not been treated since Duckhouse (1965) described *Sycorax australis* and redescribed *Nemopalpus australiensis* Alexander, 1928. Aside from these two species, Alexander (1921) described *Nemopalpus zelandiae* and Satchell (1950) described four species of *Sycorax* from New Zealand. Despite suitable habitat for Bruchomyiinae and Sycoracinae throughout the region, the number of described Australasian species of both is very low. However, as demonstrated in the Neotropical region, that number is likely to increase as sampling increases.

Specimens of one new species of Bruchomyiinae were sorted from a Malaise trap sample collected in Lamington National Park, Queensland, Australia while five new species of Sycoracinae were collected from multiple locations in New Caledonia. *Nemopalpus glyphanos* **sp. nov.**, *Sycorax furca* **sp. nov.**, *S. sinuosa* **sp. nov.**, *S. spina* **sp. nov.**, *S. tridentata* **sp. nov.**, and *S. webbi* **sp. nov.** are described, and *Sycorax dispar* Satchell from New Zealand is redescribed in order to differentiate it from similar New Caledonia species.

Materials and Methods

Material. Specimens were collected during 1996 (Australia) and 2000 (New Caledonia) by Malaise trap. Association of adult males and females is based on morphological similarity of the head and wings. Associations for some species (e.g. *Nemopalpus glyphanos* and *Sycorax webbi*) were also based on the collection of males and females of only one morphotype from a particular locality.