



The genus *Birdantis* Stål in Australia (Hemiptera: Fulgoromorpha: Fulgoridae)

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Abstract

Three new species of *Birdantis* Stål, 1863, *B. virginiae* n. sp., *B. goemansi* n. sp. and *B. mouldsi* n. sp. are described from Queensland, Australia. The species are endemic in Australia and compared to the other species of the mainly Papuan genus. Male genitalia and habitus are illustrated. Distribution maps and an identification key are given.

Key words: Lantern-fly, Auchenorrhyncha, Cairns, Kuranda, Cape York, biodiversity

Introduction

The genus *Birdantis* presently comprises twelve species distributed in New Guinea and neighbouring islands (Nagai and Porion, 1996). It is divided into two subgenera: *Birdantis* Stål, 1863 (ten species and one subspecies), and *Myrilla* Distant 1888 (two species) (Fennah, 1977; Nagai and Porion, 1996). The genus is close to the Oriental *Polydictya* Guérin-Méneville, 1844 and *Gebenna* Stål, 1863, and the Australian *Desudaboides* Musgrave, 1927 (Lallemand, 1963; Nagai and Porion, 1996; Constant, 2010).

Lallemand (1963) synonymized *Myrilla* Distant, 1888 under *Birdantis* Stål, 1863 and proposed a key to the species of *Birdantis*. Fennah (1977) did not share this view, considering *Myrilla* as a subgenus of *Birdantis*, separating them on characters of the vertex, i.e. anterior margin of vertex straight, without deep transverse sulcus behind it in *Myrilla*; anterior margin of vertex concave, with a deep transverse sulcus behind it in *Birdantis* s.s. He additionally described two species in the subgenus *Birdantis* and keyed all the species. Nagai and Porion (1996) followed the view of Fennah (1977). The value of the subgenera as defined by Fennah (1977) is doubtful and needs to be tested at the scale of the whole genus as they are supported by a very small set of rather variable characters. For that reason, Lallemand's (1963) classification is followed here.

Fletcher (2005) first recorded the genus in Australia, with two species which he identified as *Birdantis obscura* (Distant, 1888) and *B. similis* Schmidt, 1911 on the basis of Lallemand's (1963) keys. Both species are actually undescribed and a third one, also new, has been found in Australian collections. *Birdantis obscura* (Distant, 1888) and *B. similis* Schmidt, 1911 are restricted to New Guinea, and all Australian species seem to be endemic in Northern Queensland.

Material and methods

The genitalia were dissected from softened specimens and boiled in potassium hydroxide for about one hour. Fine dissection was made in alcohol using a needle blade. The organs are preserved in glycerin, in a plastic tube fixed on the pin of the corresponding specimen. A distribution map produced by the software *CFF 2.0* (Barbier & Rasmont, 2000) and photos of habitus are provided.

The following acronyms are used for the measurements (taken as in Constant, 2004): BF, breadth of the frons; BT, breadth of the thorax; BTg, breadth of the tegmen; BV, breadth of the vertex; LF, length of the frons; LM, length of the mesonotum; LP, length of the pronotum; LT, total length; LTg, length of the tegmen; LV, length of the vertex.