Zootaxa 1972: 53–58 (2009)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

A new species of *Pseudogaurax* Malloch (Diptera: Chloropidae) reared from dobsonfly egg-masses (Megaloptera: Corydalidae) in Brazil

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Abstract

Pseudogaurax idiogenes Wheeler **sp. n.** (type locality: Iporanga, São Paulo, Brazil) is described from specimens reared from the egg masses of dobsonflies (Corydalidae) in southern Brazil. This is only the second record of *Pseudogaurax* larvae feeding on Megaloptera eggs (first from the Neotropical region). Larvae of most species of *Pseudogaurax* are predators of spider eggs.

Key Words: Chloropidae, Neotropical, Megaloptera, ecology, aquatic insects, stream, egg predation

Introduction

Flies in the family Chloropidae have a broader range of larval ecological roles than almost any other family of Diptera; chloropids whose larval habits are known include species that are phytophagous, mycetophagous, saprophagous, predaceous or parasitic, sometimes showing great ecological specialization (Ferrar 1987). *Pseudogaurax* Malloch is one of the few genera of Chloropidae whose larval habits have been studied in some detail, and probably as many specimens have been obtained by rearing as by general collecting. Larvae of *Pseudogaurax* species are predators, usually in the egg sacs of spiders (Ferrar 1987; Barnes *et al*. 1992). This known association with spider egg masses has led to studies of the life history of selected species of *Pseudogaurax* dating back more than 100 years (e.g., Davidson 1896; Barnes *et al*. 1992). Although most rearing records of larval *Pseudogaurax* are from spider egg masses, there are scattered records from egg masses or cocoons of insects in multiple orders including Mantodea, Lepidoptera and Rhaphidioptera (Kanmiya 1983; Ferrar 1987; Barnes *et al*. 1992). All the previously mentioned records are from terrestrial arthropods, but Coquillett (1898) reared one adult of *Pseudogaurax anchora* (Loew) from "egg shells" of *Corydalus cornutus* (L.) (Megaloptera: Corydalidae) in Washington DC, USA. This appears to be the only record to date of *Pseudogaurax* (or any predaceous chloropid) associated with aquatic insects (although the eggs are deposited outside water).

Megalopterans are large insects, usually 20–90 mm long. The order is divided in two families, Sialidae and Corydalidae. Both families occur in the Neotropical Region, although only a few individuals of a few species of Sialidae are known. Corydalidae, in contrast, are quite common and comprise two subfamilies, Corydalinae and Chauliodinae. Larvae of Corydalinae are easily found in streams, particularly those with rocky bottoms and clear water. Larvae are predators and feed on a variety of aquatic invertebrates. Mature larvae leave the stream and search for a protected place where they pupate. Adults are highly seasonal, being commonly collected at lights close to streams during warm summer nights (Contreras-Ramos 1998). Egg-masses,

Accepted by D. Bickel: 13 Nov. 2008; published: 7 Jan. 2009