



## Two new species of *Opeatocerata* Melander (Diptera, Empididae, Empidinae) from the Brazilian Amazon Basin

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### Abstract

Two new species of the Neotropical genus of Empidinae, *Opeatocerata*: *O. trilobata* **sp. nov.** and *O. melanderi* **sp. nov.**, are described and illustrated from Manaus. This is the first record of the genus from Brazilian Amazonia.

**Key words:** Neotropical, distribution, Empidini, Brazilian Amazon

### Introduction

Over 4,000 species of the Empididae have been described worldwide, and it is estimated that well over 7,500 species exist (Smith 1989). The family is poorly known in the Amazon Basin. The Neotropical *Opeatocerata* Melander, 1928 is known from four species, namely: *O. rubida* (Wheeler & Melander, 1901) from Mexico, and identified erroneously as such from Costa Rica, Panama and Bolivia; *O. cooperi* Smith, 1989 from Ecuador; *O. stubbsi* Smith, 1989 from Trinidad; and *O. lopesi* Smith, 1989 from Brazil. The genus has not been previously recorded from the Amazon Basin. The major taxonomic contribution to the genus was made by Smith (1989) who described three species. The four known species are based on 15 specimens, most of which are females (twelve) with the males known only for *O. lopesi* (2 ♂) and *O. stubbsi*. *Opeatocerata* can be recognized by the predominantly yellow body, antennae inserted below the middle of head, thorax distinctly convex, wing with  $R_{4+5}$  forked,  $R_4$  forming an angle of about 90 degrees in relation to  $R_5$ , and the presence of a pterostigma (Smith 1989). The genus is currently under revision, and new species will be described in the near future, including a key to species and a phylogenetic analysis. Based on recent collections of several hundred specimens, we describe herein two new species.

### Material and methods

This study is based on the examination of 455 specimens collected at the Tropical Silviculture Station of the Brazilian National Institute of Amazonian Research (INPA), on road ZF-2 (02°35'21"S, 60°05'55"W), Manaus, a region mainly composed of primary *terra firme* rainforest. Within the context of a broader study on forest canopy insect diversity, a light-trap, consisting of a vertical white sheet lit by a 250-watt mercury vapour lamp, was set in the storage trunk of a pick-up truck (Fig. 1), and in the canopy (Fig. 2), 35 m above ground level. The traps were operated for three consecutive nights from 6:00 pm-6:00 am during the waning moon-new moon transition, in March 2011, the rainy season. Specimens landing on the sheet were collected each three hours, putting the sheet inside a plastic bag with ethyl acetate and brought to the laboratory for sorting, mounting and species determination. In the car trap the collections were made continuously by two persons and the car was moved around 200 m every three hours. The canopy trap was slowly dropped to ground level in order to put the sheet inside a plastic bag.