



# Article

urn:lsid:zoobank.org:pub:1C88D39B-92D0-4045-8E96-59A820FD14B5

## Revision of Neotropical species of Empididae (Diptera) described by Mario Bezzi. XI. The species described in *Empis* Linnaeus

J.A. RAFAEL<sup>1</sup> & J.T. CÂMARA

Instituto Nacional de Pesquisas da Amazônia, INPA, Caixa Postal 2223, 69080-971 Manaus, Amazonas, Brazil

<sup>1</sup>Corresponding author: E-mail: jarafael@inpa.gov.br

### Abstract

Bezzi described 11 Neotropical species in *Empis* Linnaeus, 1758. Eight of them are re-described and illustrated from type and non-type specimens. Currently all re-described species remain in *Empis*: *E. angustipennis* Bezzi, 1909, *E. chiragra* Bezzi, 1909, *E. induta* Bezzi, 1909, *E. leucostigma* Bezzi, 1909, *E. liodes* Bezzi, 1909, *E. lucidilabris* Bezzi, 1905, *E. penniventris* Bezzi, 1909 and *E. spinifera* Bezzi, 1909. The primary or secondary type specimens of these species were examined, (except for *E. lucidilabris*), and lectotype specimens are here designated for *E. angustipennis*, *E. chiragra* and *E. spinifera*. The type specimens of the remaining three species of *Empis* described by Bezzi were destroyed.

**Key words:** *Empis*, Empidinae, Empidini, Empidoidea, Neotropical Region, taxonomy

### Introduction

This paper is the last treatment of the Neotropical species described by Bezzi (1905, 1909) and the second focusing on the tribe Empidini. The first paper which focused on this tribe treated the species described in *Rhamphomyia* Meigen (Rafael 2010). According to Sinclair and Cumming (2006) the tribe is paraphyletic and is presently a dumping group for all genera not assigned to Hilarini. The genera included in the Empidini have been listed by Sinclair and Cumming (2006). *Empis* L. is a cosmopolitan genus with 748 described species (Yang *et al.* 2007), most of them are found in the Palearctic Region (382), the remaining in the Nearctic (90), Oriental (89), Afrotropical (76), Neotropical (75) and Australasian (36) regions. Neotropical species have not been assigned to subgenera but the genus was divided into six groups (Collin 1933) with some of them probably more closely related to Hilarini than to the remaining Empidini (Daugeron *et al.* 2009).

Bezzi (1905, 1909) described 11 species in *Empis*. The type specimens of four species, described in 1905, were destroyed in 1956 when Russian artillery bombed Budapest: *Empis ambigua* Bezzi, from Vilcanota, Peru, *E. lucidilabris* Bezzi, from Callanga, Peru, *E. micropyga* Bezzi, from Callanga, Peru, and *E. bullata* Bezzi, from Coroico, Bolivia. The remaining seven type specimens, described in 1909, are deposited in Dresden, Germany, and are re-described below. *Empis lucidilabris* is re-described based on a non-type specimen from Peru.

The re-descriptions presented here are complementary to the original descriptions, and are supplemented with illustrations in order to facilitate the identification of species.

### Material and methods

This study is based on the examination of type and non-type specimens of *Empis* housed in the Staatliches Museum für Tierkunde (SMT), Dresden, Germany. Terminology follows McAlpine (1981), as presented in the first paper of this series (Rafael & Ale-Rocha 1995), with some updated terms following Cumming and Wood (2009). Dorsal view illustrations of symmetrical structures have setae represented only on one side if the same pattern is