



## The Conopidae of Costa Rica (Diptera) (Part 1: Conopinae – Conopini & Tropidomyiini)

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## Abstract

The first part of a Conopid faunal review for Costa Rica presents data for 25 species from the Conopinae (tribes Tropidomyiini and Conopini). Two hundred and eighty-five specimens have been examined and identified. *Physocephala herzerai* **spec. nov.** and *Physoconops zumbadoi* **spec. nov.** are new to science. Sixteen species are reported the first time for the country. We introduce the following taxonomic changes: *Physoconops* (*Gyroconops*) *ocellatus* (Giglio-Tos, 1892) is a valid species [**status rev.**]; *Physoconops rufipennis* (Macquart, 1844) belongs to the subgenus *Pachyconops* Camras, 1955 [**status rev.**]; *Physoconops gracilianus* Camras, 1955 is a junior synonym of *Physoconops pallifrons* (Coquillett, 1904) [**syn. nov.**]. Keys for the species of the genera *Physocephala* Schiner, 1861 and *Physoconops* Szilady, 1926 are presented. Most species are illustrated with photo plates.

**Key words:** Diptera, Conopidae, Conopinae, Conopini, Tropidomyiini, fauna, Costa Rica. **spec. nov.**, **syn. nov.**, **status rev.**, key

## Introduction

Kröber (1937) was the first to compile a species list of Costa Rica's Conopidae. Since then, some species have been published as new for the country and many new specimens have been collected but there hasn't been a second attempt to summarise the knowledge. The aim of this work is to update Kröber's list by collecting the newly published faunistic data and by adding new records of Conopidae. To make the work easier for research in the future we add determination keys for the species and illustrate most of the species with photographs. This is the first of three parts of this project. We present the Conopinae now. The second part will deal with Myopinae and the third part with Stylogastrinae.

## Materials & methods

For determination to subgenus, the key of Thompson et al. (in press) is used. A key is presented for each subgenus or genus with more than one species recorded in Costa Rica. Synonyms used in older literature follow Thompson et al. (in press). Literature citing faunistic records of Conopidae from Costa Rica is listed for each species. The genera, subgenera and species are presented in alphabetical order. Unless otherwise stated, the material has been determined by using the original description, using the keys of Camras (1955, 1957a, 1996) and comparing the material with specimens determined by Camras. Material was used from the following collections:

CNC	Canada, Ottawa, Canadian National Collection of Insects, Arachnids and Nematodes
INBC	Costa Rica, Santo Domingo de Heredia, Instituto Nacional de Biodiversidad (INBio)
MNHN	France, Paris, Muséum National d'Histoire Naturelle
SMTD	Germany, Dresden, Staatliches Museum für Tierkunde
UMBB	Germany, Bremen, Übersee-Museum
USNM	Washington, DC, USA, National Museum of Natural History
ZMAN	Netherlands, Amsterdam, Universiteit van Amsterdam, Instituut voor Taxonomische Zoologie, Zoologisch Museum
ZSMC	Germany, München, Zoologische Staatssammlung

Duplicates of some material from the INBC are deposited in the CNC and the Museum für Naturkunde der Humboldt Universität, Berlin (ZMHB).

The original labels on the holotypes are listed in sequence from the topmost downwards, and the text of each label is reproduced. A slash mark ("/ ") indicates a line break on the label