



A new species of *Polypedilum* Kieffer from bromeliads in Parque Nacional Cusuco, Honduras (Chironomidae: Chironominae)

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Abstract

Polypedilum (*P.*) *panacu* **sp. n.** is described and illustrated based on all life-stages. The larva was collected from the leaf-axils of the bromeliad *Tillandsia guatemalensis* L.B. Smith in Cusuco National Park, Honduras and reared in the laboratory. The male of the new species can be separated from the remaining Neotropical *Polypedilum* *s. str.* species by the spotted wings combined with the shape of the superior volsella and the number of setae on tergite IX; the female by the two dark spots on the anal part of the wings; the pupae on the presence of spinules on conjunctives III–IV, IV–V and V–VI and the larva on the shape of mentum and pecten epipharyngis.

Key words: Diptera, Chironomidae, *Polypedilum*, Neotropics, Honduras, Cusuco National Park, new species, phytotelmata, bromeliad

Introduction

One of the characteristic features of the exuberant Neotropical forests is the bromeliads. This diverse plant family contains species of all sizes adapted to a wide range of environmental conditions (Benzing 1980). The family is confined to the Neotropical Region with about 2600 species except for *Pitcairnia feliciana* (A.Chev.) Harms & Mildbr. which apparently have reached West Africa by long distance dispersal (Givnish *et al.* 2004). Numerous species of bromeliads are able to hold water in their central tube- or funnel-shaped tank of tightly overlapping leaves. These plant held water bodies or phytotelmata generally house complex communities of aquatic animals, ranging from protozoans to vertebrates (Picado 1913; Frank 1983; Frank & Lounibos 2009). Although these habitats always capture the attention for their potential as breeding sites for human relevant vector bearing mosquitoes or their highly specialized fauna, they are largely understudied and still house a wide variety of undiscovered organisms. During a biodiversity survey of the bromeliad inhabiting fauna in Parque Nacional Cusuco, Honduras, several chironomid species were collected, among them a new species of *Polypedilum* Kieffer, 1912.

The genus *Polypedilum* is one of the most species-rich and widespread genera of chironomids. Eight subgenera of *Polypedilum* are recognized including the subgenus *Probolum* Sæther *et Andersen* recently described based on a species from bromeliads in southern Brazil (Sæther *et al.* 2010). The larvae occur in virtually all standing and flowing waters and several species are known from phytotelmata (see *e.g.* Sæther *et al.* 2010). More than 65 named species of *Polypedilum* are known to occur in the Neotropical Region (Spies & Reiss 1996; Oyewo & Sæther 2008; Donato & Paggi 2008; Sæther *et al.* 2010), of which only *P. corniger* Sublette *et Sasa* (1994: 44), *P. parthenogeneticum* Donato *et Paggi*, 2008: 52, *P. titicacacae* Roback *et Coffman* (1983: 61), *P. umayo* Roback *et Coffman* (1983: 63), and *P. villacanota* Roback *et Coffman* (1983: 59) have been described based on all life stages. According to Spies *et al.* (2009), eleven named species of *Polypedilum* are recorded from Central America. Below we describe all life stages of *P. panacu* **n. sp.**, a bromeliad dweller collected in The Parque Nacional Cusuco in Honduras belonging to the nominal subgenus.