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## Three new species of *Polypedilum* Kieffer (Diptera: Chironomidae) from Neotropical region

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### Abstract

Three new species of *Polypedilum* from Brazil, belonging to subgenera *Tripodura* and *Pentapedilum* are described and illustrated. *P. (Pe.) puri* sp. n. and *P. (Tr.) guato* sp. n. are described based on male adults and *P. (Tr.) kadiweu* sp. n. on male adult, pupa and larva.

**Key words:** new species, Brazil, *Pentapedilum*, *Tripodura*, taxonomy

### Introduction

The genus *Polypedilum* Kieffer has a worldwide distribution, known from all biogeographic regions, except Antarctica. The larvae occur in all types of standing and flowing waters, except at high altitudes and latitudes. According to Sæther *et al.* (2010) eight subgenera are recognized: *Cerobregma* Sæther *et* Sundal, *Kribionympha* Kieffer, *Polypedilum sensu strictus* Kieffer, *Pentapedilum* Kieffer, *Probolum* Sæther *et* Andersen, *Tripedilum* Kieffer, *Tripodura* Townes and *Uresipedilum* Oyewo *et* Sæther.

The subgenus *Tripodura* Townes was revised by Vårdal *et al.* (2002) and comprises 135 species worldwide, 42 of them are Neotropical (Vårdal *et al.*, 2002). It is an heterogeneous genus, more easily recognized by antennal larval characters like long antennal blade reaching well beyond the flagellum and antennal segment 3 at most one-third the length of segment 2 (Sæther *et al.*, 2010).

The subgenus *Pentapedilum* has 61 species including ten *nomina dubia* as considered by Oyewo & Sæther (2008), present in nearly all zoogeographical regions. Most species are Palaearctic or Afrotropical (Oyewo & Sæther, 2008). No species are known from New Zealand, only *P. (Pe.) leei* Freeman has been found in Australia, *P. (Pe.) camposense* Oyewo *et* Sæther in South America (Brazil), *P. (Pe.) botosaneanui* Oyewo *et* Sæther in Central America (Martinique) and none in western South America. Most features of species in subgenus *Pentapedilum* Kieffer are extremely similar to those of *Polypedilum s. str.* The most distinguishing character is the presence of macrotrichia, at least at the apex of the wing membrane (Oyewo & Sæther, 2008).

Immature stages are known only for 11 of the 65 *Polypedilum* species found in Neotropics. Their larva and pupa are described in Roback & Coffman (1983), Sublette & Sasa (1994), Serpa-Filho *et al.* (2007), Donato & Paggi (2008), Sæther *et al.* (2010), Mendes *et al.* (2011) and Pinho *et al.* (2013). In this paper, three new species of *Polypedilum* Kieffer are described from Brazil.

### Material and methods

The material examined was mounted in Euparal® following the procedures outlined by Sæther (1969). The general terminology follows Sæther (1980). Measurements are given as ranges and were made according to the methods suggested by Sæther (1968) and Schlee (1966).

lateral teeth, which are equal. Ventromental plate 85 µm wide, with anteriorly produced median ends and without posterior projection, distance between plates 40 µm. *Abdomen*. Lost.

**Remarks.** Larval ventromental plates with anteriorly produced median ends have been found only in *P. (Uresipedilum)* (Sæther & Sundal, 1999; Sæther *et al.*, 2010) and this character should be emended to diagnosis of *P. (Tripodura)* larvae.

The new species keys to couplet 30 in Bidawid-Kafka (1996), which leads to *P. (Tripodura) kajapo* and *P. (Tripodura) yanomami*, but differs from *P. kajapo* by having wings with maculae and from *P. yanomami* by its high antennal ratio (1.48 in *P. kadiweu* **sp. n.** and 0.31–0.36 in *P. yanomami*) and pattern of maculae on wings (three markings in cell  $r_{4+5}$ , two in  $m_{1+2}$ , one in  $m_{3+4}$  and three in cu for *P. kadiweu* **sp. n.** and two markings in cell  $r_{4+5}$ , one in  $m_{1+2}$ , one in  $m_{3+4}$  and two in cu for *P. yanomami*).

By abdominal tergite II without shagreen, the pupa of *P. kadiweu* **sp. n.** does not correspond to any of the ten *Polypedilum* morphotypes described by Wiedenbrug (2000).

**Distribution.** The species is known from Mato Grosso do Sul and Pará States, Brazil.

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