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**Revision of *Polypedilum* (*Pentapedilum*) Kieffer and
Ainuyusurika Sasa et Shirasaki (Diptera: Chironomidae)**

EMMANUEL ADEOYE OYEWO & OLE A. SÆTHER



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Abstract

Six new species are described as males: *P. (Pe.) botiense*, *P. (Pe.) botosaneanui*, *P. (Pe.) camposense*, *P. (Pe.) intuber*, *P. (Pe.) reei*, and *P. (Pe.) tissamaharensis*. One additional species is described as female imago. *P. (Pe.) pseudotritum* and *P. (Pe.) utonaiprimum* are synonyms of *P. (Pe.) tigrinum*, and *P. (Pe.) takorageheum* and *P. (Pe.) famibeceum* synonyms of *P. (Pe.) furusecundum*. Five species misidentified as *Pentapedilum* and one as *Polypedilum s. str.* have been transferred, four to *Polypedilum s. str.* [*P. (P.) inaijeum* Sasa, Kitami et Suzuki, *P. (P.) iriodeeum* Sasa et Suzuki, *P. (P.) jokasecundum* Sasa et Ogata, and *P. (P.) parasordens* Ree], one to *Ainuyusurika* [*A. yakuabeum* (Sasa et Suzuki)] and one to *P. (Uresipedilum)*. *P. (Pe.) pseudotritum* and *P. (Pe.) utonaiprimum* are synonymized with *P. (Pe.) tigrinum*, and *P. (Pe.) tokorageheum* and *P. (Pe.) famibeceum* synonymized with *P. (Pe.) furudosecundum*.

Subgeneric diagnoses are given for all stages and sexes of the subgenus *Pentapedilum* Kieffer. Keys are provided for all stages and sexes of all available material from all zoogeographical regions. The phylogenetic analysis, which included some species of *Polypedilum s. str.* and all available *Pentapedilum* indicate that *Pentapedilum* is likely monophyletic, while *Polypedilum s. str.* is polyphyletic.

The subgenus *Pentapedilum* can be divided into three relatively distinct apical groups and the remaining species in a basal Hennigian comb when a parsimony analysis is done. The *convexum* group consists of one Afrotropical species, and five High, East and South Asian species with one of them also occurring in the Indo-Pacific. The *sordens* group consists of 13 species from Asia, the Indo-Pacific and Africa. The apparently paraphyletic *uncinatum* group consists of 9 species from the Holarctic and Oriental regions. The zoogeographical distribution does not support any vicariance patterns, but indicates that the present distribution is caused by dispersal.

Diagnostic characters and keys to the males of *Ainuyusurika* Sasa et Shirasaki is given and *Pentapedilum yakuabeum* Sasa et Suzuki and *Polypedilum (P.) yakucedum* Sasa et Suzuki assigned to the genus. The genus appears to be close to *Phaenopsectra* Kieffer and is known from Japan only.

Key words: Chironomidae, Chironominae, *Polypedilum*, *Pentapedilum*, revision, phylogeny, keys