



## MACROGYNOPLAX DUIDA, A NEW SPECIES OF STONEFLY (PLECOPTERA: PERLIDAE) FROM CERRO DUIDA, VENEZUELA

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### ABSTRACT

*Macrogynoplax duida* sp. n. is described from a male and female specimen collected from Cerro Duida, Venezuela, in 1928. The species is a close relative of *M. geijskesii* Zwick, known from Surinam.

**Keywords:** Plecoptera, Stonefly, *Macrogynoplax*, New species, Cerro Duida, Venezuela

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### INTRODUCTION

*Macrogynoplax* currently includes 14 species of distinctive, pale green stoneflies found primarily in the Amazonian drainage basin (DeWalt et al. 2010). Six species have been described from Brazil (Bispo et al. 2005; Froehlich 1984; Ribeiro-Ferreira & Froehlich 1999; Ribeiro & Rafael 2007), three from Guyana (Enderlein 1909; Stark 1996; Zwick 1973), two each from Peru (Stark 1996) and Venezuela (Stark & Zwick 1989) and one from Surinam (Stark & Zwick 1989). An additional specimen of an undetermined *Macrogynoplax* female was reported from the Colombian Amazonas by Zúñiga & Stark (2007).

Recently four specimens from "Mt. Duida", Venezuela were passed to me for study. Included in this sample are two specimens of an undescribed *Macrogynoplax* species bearing American Museum of Natural History labels and a label with "Ac. 29500". "Tate No. 406" is also on the accession label for the female specimen but that number could not be discerned for the male. Both specimens were originally pinned but had been removed to alcohol and the abdomens cleared. In the process the abdomen of both specimens was damaged, but the female subgenital plate and male aedeagus were sufficiently intact to allow diagnosis. The specimen vials contain a respective handwritten label with "♂ *Macrogynoplax*" or "♀ *Macrogynoplax*", similar to

those used by S.G. Jewett, but without his initials or name. I assume these specimens were sent to Mr. Jewett and were misplaced in his collection after his death and never returned to the American Museum. Two additional specimens in this series also bear *Macrogynoplax* labels but one is a female *Anacroneuria* and the other, a *Macrogynoplax*, has no abdomen. Because additional material is not expected from this site in the near future, I am pleased to provide a description for this interesting species, and to have the opportunity to return the specimens to the American Museum of Natural History.

### RESULTS AND DISCUSSION

#### *Macrogynoplax duida* sp. n. (Figs. 1-4)

**Material examined.** Holotype ♂, Venezuela, Mt. Duida, November 1928, Ac. 29500, Tate No. ? (AMNH). Paratype, same site, 29 November 1928, Ac. 29500, Tate No. 406, 1 ♀ (AMNH).

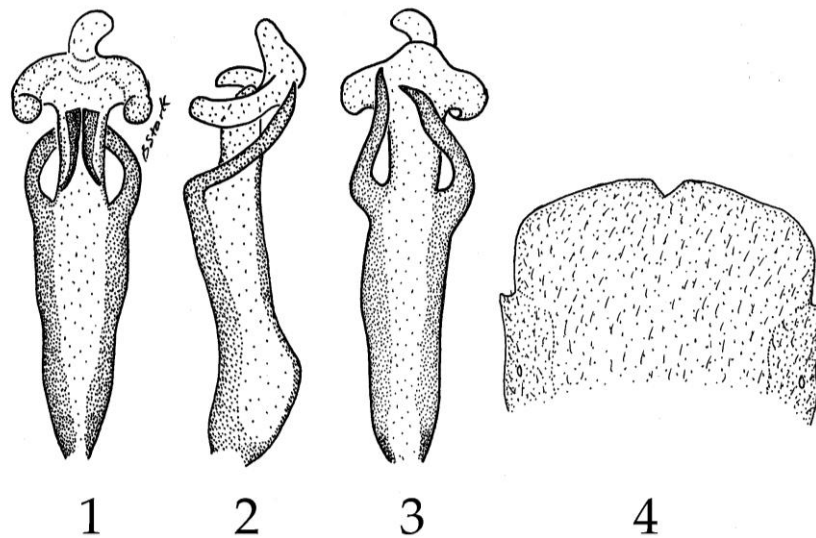
**Adult habitus.** Biocellate, ocelli small and widely separated. General color pale, pattern obscured by specimen condition. Unpigmented ommatidia on inner margins of eyes absent or obscured by specimen condition.

**Male.** Forewing length 14 mm. Abdominal apex

damaged, paraprocts apparently lacking anteroapical spine; tergum 10 without sensilla basiconica patch, hammer small, circular in outline and apparently oriented horizontally on surface of sternum 9. Apical section of aedeagal tube narrow at base in dorsal aspect and gradually widened to base of subterminal hooks (Fig. 1); lateral margins of tube strongly sclerotized but mesal strip membranous; hooks asymmetrical, curved ventrad; left hook directed dextrally across venter of tube and right hook extending apically toward aedeagal tip (Fig. 3 ).

Aedeagal section beyond bases of hooks bearing a pair of weakly sclerotized, dorsally curved finger-like lobes and a dorsomesal sclerotized process consisting of a pair of longitudinally oriented blades and a terminal membranous lobe (Figs. 1-2).

**Female.** Forewing length 15 mm. Abdominal segments 9 and 10 missing. Subgenital plate with subparallel sides and a curved, mesally notched apical margin (Fig. 4); plate covers an estimated 2/3 of sternum 9 (missing) and is almost as wide as sternum 8. Lateral bars not observed due to specimen condition.



Figs. 1-4. *Macrogynoplax duida* genitalic structures. 1. Male aedeagus, dorsal aspect. 2. Male aedeagus, lateral aspect. 3. Male aedeagus, ventral aspect. 4. Female subgenital plate.

**Larva.** Unknown.

**Etymology.** The species name, used as a noun in apposition, is based on the type locality.

**Diagnosis.** The male aedeagus of this species is most similar to that of *M. geijskesii* Zwick (Stark & Zwick 1989) among known species, but in that species the aedeagal hooks are symmetrical and the section of the aedeagus distal to the hooks lacks dorsally curved finger-like lobes and a dorsomesal pair of longitudinally oriented blade-like structures. Males key to *M. poranga* Ribeiro-Ferreira & Froehlich (if the hammer orientation is on the horizontal surface of sternum 9) in the Froehlich (2003) key. However, that

orientation is not certain due to specimen condition. The female subgenital plate appears indistinguishable from that of *M. pulchra* Ribeiro & Froehlich (Ribeiro & Rafael 2007).

#### ACKNOWLEDGMENTS

I thank R.W. Baumann, Monte L. Bean Life Science Museum, Brigham Young University for locating and directing these specimens to me.

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Received 8 February 2011, Accepted 23 February 2011, Published 4 April 2011

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Autor(en)/Author(s): Stark Bill P.

Artikel/Article: [Macrogynoplax duida, a new species of stonefly \(Plecoptera: Perlidae\) from Cerro Duida, Venezuela. 86-88](#)