



Mayflies of the genus *Nonnullidens* Grant & Peters 1993 (Ephemeroptera: Leptophlebiidae) from New Guinea

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Abstract

In light of the discovery of four new species of Leptophlebiidae (Ephemeroptera) from the Indonesian part of New Guinea, the generic name *Barba* Grant & Peters 1993 **syn.n.** is regarded here to be a junior synonym of *Nonnullidens* Grant & Peters 1993. *Nonnullidens variegatus* **sp. n.**, *N. niger* **sp. n.** and *N. reductus* **sp. n.** are described from larvae, subimagoes and imagoes, with the stages associated by rearing. *Nonnullidens depapricus* **sp. n.** is described from an immature male larva of the last instar. *Nonnullidens mariae* **comb.n.** formerly known only from eastern New Guinea, is reported from the Baliem Valley.

Key words: New Guinea, mayflies, Ephemeroptera, Leptophlebiidae, systematics, new species

Introduction

Peters & Tsui (1972) described imagoes and larvae of two New Guinean species, which they placed in the genus *Thraululus*—*T. mariae* Peters & Tsui 1972 and *T. hsui* Peters & Tsui 1972. Later, Grant and Peters (1993) divided the former genus *Thraululus* s.l. into smaller genera and among them established genera *Nonnullidens* Grant & Peters 1993 and *Barba* Grant & Peters 1993 for these New Guinean species; they also described *Nonnullidens billhilli* Grant & Peters 1993, based on larvae only. Recent collecting in New Guinea revealed 4 new species related to the type species of *Nonnullidens* and *Barba*.

All material, including holotypes and paratypes of new species, will be permanently deposited in the Zoological Institute of the Russian Academy of Sciences (Saint Petersburg, Russia), but is temporarily located in the Department of Entomology of Saint Petersburg State University. In the lists of material examined, the following arbitrary signs are used: **L**—larva; **S**—subimago; **I**—imago; **L-S-I♂**—male imago reared from larva, with larval and subimaginal exuviae; **L-S-I♀**—female imago reared from larva, with larval and subimaginal exuviae; **S-I♂**—male imago reared from subimago, with subimaginal exuviae; **L-S♂**—male subimago reared from larva, with larval exuviae; **S/I♂**—male imago extracted from mature subimago.

Nonnullidens Grant & Peters 1993

= *Barba* Grant & Peters 1993, **syn. n.**

Type species: *Thraululus hsui* Peters & Tsui 1972.

The genus *Nonnullidens* belongs to Atalophlebolinguata Kluge 2009 and has all characters of this taxon (Kluge, 2009). Within Atalophlebolinguata, *Nonnullidens* is most closely related to Choroterpini Kluge 2012 and probably can be included in this tribe. It has the following characters of Choroterpini:

- (1) Larval patella-tibial suture is lost on all legs; in contrast to larva, in imago and subimago patella-tibial suture usually retains the plesiomorphic condition, being present on middle and hind legs and absent on fore legs.