



## Neotropical Mecoptera (Insecta): New generic synonymies, new combinations, key to families and genera, and checklist of species

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### Abstract

Two Neotropical genera of Mecoptera (*Thyridates* Navás, 1908, *Neobittacus* Esben-Petersen, 1914 n. syn.) are synonymized under *Bittacus* Latreille, 1805. The following are new combinations: *Bittacus aripuanaensis* (Penny, 1977) **n. comb.**, *B. brunnipenis* (Collucci & Amorim, 2000) **n. comb.**, *B. froehlichii* (Collucci & Amorim, 2000) **n. comb.**, *B. latreillei* (Collucci & Amorim, 2000) **n. comb.**, *B. novokschonovi* (Petrulevičius, 2003) **n. comb.** and *B. willmanni* (Collucci & Amorim, 2001) **n. comb.**. A pictorial key to Neotropical families and genera and a checklist of Neotropical species are presented.

**Key words:** *Bittacus*, key, *Neobittacus*, taxonomy, *Thyridates*

### Introduction

Currently there is agreement that Mecoptera is a paraphyletic group including Siphonaptera (Whiting 2002; Grimaldi & Engel 2005; Beutel & Baum 2008) forming the clade Mecopterida (Grimaldi & Engel 2005). Mecopterida (excluding Siphonaptera) is traditionally called Mecoptera; the latter is one of the smallest orders of insects, with approximately 600 known species divided into nine families (Grimaldi & Engel 2005). The Neotropical fauna currently contains 66 species distributed in nine genera and three families: Nannochoristidae, Eomeropidae and Bittacidae (Table 1).

Nannochoristidae is believed to be the most basal group of Mecopterida (Whiting 2002; Grimaldi & Engel 2005) and is treated by Beutel & Baum (2008) as a separate order, Nannomecoptera. It occurs in the Neotropical and Australian regions. Adults are usually found near streams, where the immature stages are inhabit (Ferrington 2008). This family contains two genera: *Nannochorista* Tillyard, 1917 and *Microchorista* Byers, 1974, but only the first occurs in the Neotropical region, with three species (Table 1) restricted to the Chilean and Argentinean Andes (Byers 1989).

Eomeropidae (= Notiothaumidae) is the smallest family, represented by only one extant species restricted to Chile, *Notiothauma reedi* MacLachlan, 1877 (Penny 1975).

Bittacidae is the largest Neotropical family with 62 species distributed in seven genera: *Anabittacus* Kimmins, 1928; *Bittacus* Latreille, 1805 (= *Thyridates* Navás, 1908; *Neobittacus* Esben-Petersen, 1914, **n. syn.**); *Eremobittacus* Byers, 1997; *Issikiella* Byers, 1972; *Kalobittacus* Esben-Petersen, 1914; *Nannobittacus* Esben-Petersen, 1927; and *Pazius* Navás, 1913. *Anabittacus* is considered the most basal genus within the family (Penny 1975), with only one known species: *A. iridipennis* Kimmins, 1929, found in Chile (Penny & Byers 1979b). *Bittacus* is the most widespread genus of the family, with species in all tropical and temperate areas of the world and it is the most speciose genus in the Neotropics. It contains two synonymies proposed here: *Thyridates*, which has been moved into and out of *Bittacus* several times, and *Neobittacus*, **n. syn.** *Eremobittacus* is monotypic, known only from a single male and restricted to a semidesert area south of