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Abstract

The species of the Neotropical genus *Belostoma* Latreille,1807 from southeastern Brazil are poorly known. Therefore here I review and key for the first time the *Belostoma* species from these southeastern states: Espírito Santo, Minas Gerais, Rio de Janeiro, and São Paulo. The following 22 species are recorded and redescribed: *Belostoma anurum* (Herrich-Schäffer), *B. aurivillianum* (Montandon), *B. bergi* (Montandon), *B. bosqi* De Carlo, *B. candidulum* Montandon, *B. costalimai* De Carlo, *B. cummingsi* De Carlo, *B. dallasi* De Carlo, *B. dentatum* (Mayr), *B. dilatatum* (Dufour), *B. discretum* Montandon, *B. elongatum* Montandon, *B. foveolatum* (Mayr), *B. horvathi* Montandon, *B. micantulum* (Stål), *B. noualhieri* Montandon, *B. orbiculatum* Estévez & Polhemus, *B. plebejum* (Stål), *B. ribeiroi* De Carlo, *B. sanctulum* Montandon, *B. stollii* (Amyot & Serville), and *B. testaceopallidum* Latreille. Three new records from this region are reported: *B. bergi*, *B. bosqi*, and *B. elongatum*. *Belostoma minor* (Palisot de Beauvois) and *B. oxyurum* (Dufour) probably do not occur in southeastern Brazil. The single record of the first species and the several records of the second one in the region are cases of misidentification. Nine new synonymies are established (junior synonymies within parentheses): *B. candidulum* (*B. amici*), *B. costalimai* (*B. truxali*), *B. cummingsi* (*B. cachoeirinhensis*), *B. dilatatum* (*B. ripicolum*), *B. ribeiroi* (*B. lundbladi*), *B. stollii* (*B. brasiliensis*; *B. planum*; and *B. stolii*), and *B. testaceopallidum* (*B. grandicollum*). Lectotypes are designated for *B. aurivillianum*, *B. bergi*, and *B. discretum*. Four characters have proven useful for species delimitation: the ratio between the greatest pronotal width and its length in the midline, the aspect of the prosternal keel, the pilosity pattern of the connexivum, and the ratio between the width of the ventral diverticulum and its length in ventral view. Lists with the morphological terms and characters suggested for these species are included, together with synonyms proposed by other taxonomists and morphologists.

Key words: *Belostoma*, key to species, male genitalia, Nepomorpha, taxonomy, water bug, Neotropics

Introduction

Belostomatidae Leach, 1815 is almost world-wide in distribution, although it is absent in most of Europe and its greatest diversity is in the tropics (Merritt & Cummins 1996; Schuh & Slater 1995). This family includes the largest of all Heteroptera. Dufour (1863: 373) reported specimens of *Lethocerus maximus* De Carlo, 1938 having a length of up to 110 mm: “Dans le groupe des Bélostomides se voient les plus gigantesques Hydrocorises du globe, puisqu’il y en a dont la taille mesure douze centimètres.”

Lauck and Menke (1961) treated the higher classification of the family and recognized three subfamilies comprising seven genera. Polhemus (1995) having recently resurrected *Appasus* Amyot & Serville, 1843, there are now eight genera. The subfamily Belostomatinae *sensu* Lauck and Menke, 1961 can be distinguished from the other subfamilies of Belostomatidae mainly by the sternites not being subdivided by a suture (autapomorphic state, see Mahner 1993); and the peculiar egg-laying habit of females (Lauck & Menke 1961; see Nieser 1975), which attracted early attention because the males of this subfamily carry the eggs on their backs, a characteristic unique within the aquatic Heteroptera as far as is known (Merritt & Cummins 1996; Schuh & Slater 1995).

Belostoma can be distinguished from other genera of Belostomatinae by the large membrane of hemelytra, the phallobase bifurcate dorsally, and dorsal arms of phallotheca extending nearly to apex of ventral diverticulum (De Carlo 1968, Nieser 1975).

According to Nieser (1975) and Lanzer-de-Souza (1980), *Belostoma* Latreille, 1807 has about seventy described species, and is most richly represented in tropical South America. Forty-six species are currently reported from Brazil (Lanzer-de-Souza 1980, 1992, 1996).

The classification and species concept in *Belostoma* have been based on the unfinished monograph of the genus by Lauck (1962, 1963, 1964). Lauck (1962) was the first to use male genital structures for distinguishing species within *Belostoma*. In his study he proposed sixteen groups of species based on features of the male genitalia.

According to Merritt and Cummins (1996) and Ribeiro (1999), identification is often difficult because many species are very similar in appearance, and the rarity of some taxa also contributes to confusion. Other