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Sobarocephala (Diptera: Clusiidae: Sobarocesphalinae)—Subgeneric classification and Revision of the New World species

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Abstract

Sobarocephala Czerny is divided into nine newly erected species groups: the *S. archisobarocephala* (4 spp.), *S. erwini* (3 spp.), *S. flava* (8 New World spp.; 2 Old World spp.), *S. flaviseta* (86 New World spp.; 1 Old World sp.), *S. interrupta* (86 spp.), *S. isla* (25 spp.), *S. latipennis* (16 spp.), *S. plumicornis* (9 Old World spp.), and *S. ruebsaameni* (11 spp.) groups; 1 species (*S. setulocetra* **spec. nov.**) remains unplaced. There are 240 species of *Sobarocephala* in the New World, including 17 Nearctic (2 extend into the Neotropical Region) and 170 **new species**, some of which were previously considered varieties of *S. humeralis* Melander & Argo. The Neotropical fauna is here described, illustrated, keyed, and placed in a phylogenetic context. *Sobarocephala peruana* Soós **stat. nov.**, formerly a subspecies of *S. nigronota* Melander & Argo, is raised to the species level, *S. imitans* Curran **syn. nov.** and *S. diversipes* Curran **syn. nov.** are synonymized with *S. liturata* Melander & Argo, *S. annulata albiventris* Soós **syn. nov.** is synonymized with *S. annulata* Melander & Argo, *S. albitarsis* Czerny **syn. nov.** is synonymized with *S. humeralis*, and *S. pruinosa pallidor* Steyskal **syn. n.** is synonymized with *S. pruinosa* Soós. Lectotypes are designated for *S. bistrigata* (Kertesz) , *S. lumbalis* Williston, *S. plumicornis* Lamb and *S. variegata* Melander & Argo. The egg of *S. uberis* **spec. nov.** is described.

Key words: Neotropical Region, revision, 170 new species, species groups, syn. nov., stat. nov. Diptera, Clusiidae, *Sobarocephala*.

Introduction

The most speciose genus in the family Clusiidae (Diptera: Schizophora) is *Sobarocephala* Czerny (subfamily Sobarocephalinae), an infrequently encountered but highly diverse group of flies defined by two synapomorphies of the male genitalia: an additional sclerite at the base of the distiphallus (the "basal shield") and an accessory thumb-like structure on the paraphallus (treated as the "lateral lobe of the distiphallus" in Lonsdale & Marshall (2006a)) (Fig. 182). Although the basal shield has become secondarily fused to the distiphallus or the basiphallus in a small number of species (Fig. 365, for example), and the "thumb" is frequently modified or reduced, these two synapomorphies effectively differentiate this genus from other Clusiidae.

There are no apparent non-genitalic synapomorphies for the genus, but *Sobarocephala* can nonetheless be diagnosed externally on the basis of the following combination of characters: the anterior fronto-orbital bristle is inclinate (reclinate in the Clusiodinae exclusive of *Heteromeringia* Czerny), the mid tibia has a dorsal preapical bristle (absent in *Allometopon* Kertész, *Clusia* Haliday, *Heteromeringia*, *Melanoclusia* Lonsdale & Marshall, *Phylloclusia* Hendel, *Procerosoma* Lonsdale & Marshall and *Tetrameringia* McAlpine) while the hind tibia does not (present in *Czernyola* Bezzi, *Clusiodes* Coquillett and *Hendelia* Czerny), vein R_1 is bare dorsally (setose in *Chaetoclusia* Coquillett), there are only two dorsocentral bristles, the extension on the outer margin of the pedicel is strongly produced (not shallow as in most Clusiodinae) and the scutellum is smooth and convex (flat and wrinkled in most Clusiodinae). Cell bm is also open, as in the closely related *Procerosoma*, but this cell has become secondarily closed in a number of lineages, particularly within the *S. flaviseta* species group.

There are 240 species of *Sobarocephala* now known from the New World, including 15 species restricted to the Nearctic and two (*S. atrifacies* and *S. quadrimaculata*) found in both the Nearctic and Neotropical Regions. Of the Neotropical species revised here, 170 are described as new, including a number of former varieties described after 1960 that did not meet the requirements of the ICZN (1999), as discussed below.