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Taxonomic revision of New World species of the genus *Oosternum* Sharp (Coleoptera: Hydrophilidae: Sphaeridiinae) I. Definition of species groups and revision of the *Oosternum aequinoctiale* group

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Abstract

The genus *Oosternum* Sharp, 1882 is divided into ten species groups based on external adult characters. An identification key to the species groups and a table of diagnostic characters as well as many charater state illustrations for each group are provided. Representatives of the newly defined *O. aequinoctiale* species group are revised. Six species of this group are recognized, all occurring in the Neotropical region: *Oosternum acutheca* **sp.n. (**Honduras, Costa Rica, Nicaragua), *O. aequinoctiale* (Motschulsky, 1855) (Bolivia, Colombia, Costa Rica, Ecuador, Mexico, Panama, Peru, Venezuela), *O. attenuatum* **sp. n.** (Panama, Colombia, Ecuador), *O. gibbicolle* **sp. n.** (Ecuador, Panama), *O. holosericeum* **sp. n.** (Argentina), and *O. latum* **sp. n.** (Lesser Antilles: St. Vincent Island). A key to the species and drawings or SEM photographs of diagnostic characters are provided.

Key words: Coleoptera, Hydrophilidae, Sphaeridiinae, *Oosternum*, Neotropical Region, Oriental Region, Palearctic Region, species groups, new species, taxonomy

Resumen

El género *Oosternum* Sharp, 1882 se divide en diez grupos de especies sobre la base de los caracteres externos; se presenta una clave para los grupos, la tabla de los estados de los caracteres en cada grupo y los dibujos o fotografías SEM de los caracteres diagnósticos. Se revisan los representantes del grupo de *O. aequinoctiale*. Se reconocen seis especies de este grupo, todas distribuidas en la región Neotropical: *Oosternum acutheca* **sp.n. (**Honduras, Costa Rica, Nicaragua), *O. aequinoctiale* (Motschulsky, 1855) (Bolivia, Colombia, Costa Rica, Ecuador, México, Panamá, Perú, Venezuela), *O. attenuatum* **sp. n.** (Panamá, Colombia, Ecuador), *O. gibbicolle* **sp. n.** (Ecuador, Panamá), *O. holosericeum* **sp. n.** (Argentina noroeste), and *O. latum* **sp. n.** (Antillas Menores, isla de San Vincente). Se presenta una clave para las especies de este grupo y los dibujos o fotografías SEM de los caracteres diagnósticos.

Palabras clave: Coleoptera, Hydrophilidae, Sphaeridiinae, *Oosternum*, Región Neotropical, Región Oriental, Región Paleárctica, grupos de especies, especies nuevas, taxonomía

Introduction

The megasternine genus *Oosternum* Sharp, 1882 comprises small to very small terrestrial beetles inhabiting various kinds of decaying organic matter, particularly moist leaf litter in tropical and subtropical areas. A few species have also been recorded from ant nests of the genus *Atta* (Spangler 1962). At present, 16 species of *Oosternum* are described: seven from the New World (southern USA through Central and South Americas) and nine from the Old World (Oriental region, Nepal and Japan) (Hansen 1999a; Hebauer 2002; Hoshina & Satô 2004, 2005; Short & Hebauer 2006). The actual species diversity is, however, much higher: more than 50 species are known to us at present with many more likely to be discovered. The diversity seems to be especially high in New World, particularly the Neotropical Region, where the representatives of the genus *Oosternum* are quite common and most species are available for study in long series.

The genus *Oosternum* is generally recognizable using the genus-level key by Hansen (1991). In the Neotropics, the representatives of *Oosternum* are rather similar to the genera *Sacosternum* Hansen, 1989 and *Motonerus* Hansen, 1989, with which the genus probably forms a monophyletic group (Fikáček, in press a). *Oosternum* can be easily recognized from *Motonerus* by the presence of antennal grooves on the prothorax and anterolateral ridges on the metaventrite (Fikáček & Short 2006). It differs from *Sacosternum* by small to moderately large eyes and a simply elevated median portion of prosternum (Hansen 1991). In North America, the species can be identified according to Smetana (1978) (within this book, the genera *Oosternum*, *Pemelus*, and *Cercyon pubescens* species group refer to genus *Oosternum* as it is understood here). Old World representatives of *Oosternum* externally resemble the genus *Paroosternum* Scott, 1913 which differs by the absence of anterolateral ridges on the metaventrite and deeply excised lateral margins of elevated middle portion of prosternum. Some Australian genera of the Megasternini can also resemble *Oosternum* externally, but *Oosternum* has not been recorded from Australia to date (Hansen 1990).