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Revision of the Neotropical burrowing water beetle genus *Liocanthydrus* Guignot (Coleoptera: Noteridae: Noterinae: Noterini) with the description of two new species

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Abstract

The burrowing water beetle genus *Liocanthydrus* Guignot, 1957 is redefined and its species are revised. Of the four current species, three are recognized as belonging to the genus and redescribed: *L. angustus* (Guignot, 1957), *L. octoguttatus* (Zimmermann, 1921) and *L. uniformis* (Zimmermann, 1921). The fourth species, *L. buqueti* (Laporte, 1835) is found to not be a member of *Liocanthydrus*, but of an undescribed genus. The noterid genus *Siolius* J. Balfour-Browne, 1969, is synonymized with *Liocanthydrus* (new synonymy) based on comparison of type specimens in both groups. Two of the three species described in *Siolius*, *S. bicolor* J. Balfour-Browne, 1969 and *S. clayae* J. Balfour-Browne, 1969, are recognized as valid, transferred to *Liocanthydrus*, and redescribed. The third, *S. amazonicus* J. Balfour- Browne, 1969, is synonymized with *L. uniformis* (new synonymy). Two new species from South America, *L. armulatus* **sp. n.** and *L. nanops* **sp. n.** are also recognized and described. A lectotype is designated for *Canthydrus octoguttatus* Zimmermann, 1921. After this revision, there are seven valid species of *Liocanthydrus*. Habitus photos are provided, diagnostic characters of all recognized species are illustrated, distributions are provided, and a key to the species is included.

Key words: Coleoptera, Noteridae, Noterini, *Liocanthydrus*, *Siolius*, taxonomy, revision, new species, new synonymy, Neotropics

Introduction

Members of the aquatic beetle family Noteridae (Thomson, 1860) (Coleoptera: Adephaga), commonly called burrowing water beetles, typically occur in sunny aquatic environments with extensive vegetation. Most diverse in tropical areas, noterids are commonly collected and easily recognizable by aquatic workers. Despite this, Noteridae have attracted scant attention by entomologists and, for the most part, have remained neglected by aquatic beetle workers. This has left many groups within the Noteridae taxonomically unresolved; *Liocanthydrus* Guignot, 1957, is one of them.

Known only from South America, *Liocanthydrus* is currently comprised of four very poorly known species (Nilsson 2011): *L. buqueti* (Laporte, 1835), from French Guiana, *L. octoguttatus* (Zimmermann, 1921), *L. uniformis* (Zimmermann, 1921) and *L. angustus* (Guignot, 1957), these latter three from Brazil. In conducting this current revision, the generic rank of *Liocanthydrus* was confirmed and it was discovered that all species currently placed in *Siolius* J. Balfour-Browne, 1969 are members of this same genus. As a consequence *Siolius* is synonymized with *Liocanthydrus* and its species transferred. Here the genus *Liocanthydrus* is revised, with a redescription of all known members, the descriptions of two new species, and illustrations of diagnostic characters.

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lobe triangular and distal angle not projecting (Fig. 20e) . . . . . ***L. clayae***

- Eyes small (HW/EW = 1.47–1.55) (Figs 8, 9); posterior bands or spots extending anterodistally beyond middle of elytra onto basal half at lateral extreme. 6

6 Aedeagus as in Figs 21a–e, with median lobe distally shortened and attenuate in lateral aspect (Figs 21a, c); left lateral lobe broad (Fig. 21d); right lateral lobe subtriangular with distal angle strongly projecting (Fig. 21e). . . . . ***L. nanops***

- Aedeagus as in Figs 22a–e, with median lobe distally lengthened and subparallel in lateral aspect Figs 22a, c); left lateral lobe less broad and distally attenuate (Fig. 22d); right lateral lobe triangular with distal angle acute, not projecting (Fig. 22e).. . . . . ***L. octoguttatus***

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