



<http://dx.doi.org/10.11646/zootaxa.3794.3.9>

<http://zoobank.org/urn:lsid:zoobank.org:pub:89145012-C411-4DD5-A255-BBB52E7C7714>

***Obesoconnus* gen. n., a new bizarre Neotropical genus of Cyrtoscydmini (Coleoptera: Staphylinidae: Scydmaeninae)**

PAWEŁ JAŁOSZYŃSKI

Museum of Natural History, University of Wrocław, Sienkiewicza 21, 50-335 Wrocław, Poland. E-mail: scydmaenus@yahoo.com

Abstract

A new Neotropical genus of Cyrtoscydmini, *Obesoconnus* gen. n., is described to accommodate two new species: *O. guyanensis* sp. n. (the type species of *Obesoconnus*) from French Guyana and *O. mexicanus* sp. n. from Mexico. The morphology of the new taxon is described and illustrated in detail, and its possible affinities to other Cyrtoscydmini are discussed. Despite external dissimilarities, the aedeagus of *Obesoconnus* highly resembles copulatory organs of *Alloraphes* and *Parastenichnaphes*; all these genera share the basal pumping apparatus and apically located ostium with asymmetrical apical projections.

Key words: Coleoptera, Staphylinidae, Scydmaeninae, Cyrtoscydmini, *Obesoconnus*, new genus, Neotropical, Mexico, French Guyana

Introduction

The only genera of Cyrtoscydmini with the basal pumping apparatus of the aedeagus known previously were *Alloraphes* Franz, 1980 and *Parastenichnaphes* Franz, 1984 (Franz 1980, 1984, 1988, 1989, 1994; Jałoszyński 2005, 2013a). The male copulatory organ of these genera is sac-shaped, with a basally located membranous diaphragm bearing a lentiform median sclerotization that provides an attachment place for muscles extending distally and laterally and anchored in the rigid walls of the median lobe. This structure apparently plays an important role during copulation, and its function can be inferred from its structure. When the oblique longitudinal muscle fibers contract, the flexible membranous area that surrounds the lentiform sclerotization is retracted and the internal volume of the aedeagus decreases. This leads to an increased internal pressure which pushes the copulatory piece outside, through the apically located ostium. *Alloraphes* and *Parastenichnaphes* were revised recently (Jałoszyński 2005, 2013a), and the structures of *Alloraphes* were described and illustrated in detail.

Both *Alloraphes* and *Parastenichnaphes* are Cyrtoscydmini showing the typical ‘ant-like’ body shape, i.e., species belonging in these genera are slender and have distinct constrictions between the head and prothorax and between the prothorax and elytra. During a survey of museum collections I encountered four specimens of undetermined Scydmaeninae representing two species, with the male genitalia strikingly similar to the aedeagus of *Alloraphes*. However, these beetles are stout and their bodies are very compact, with weakly marked constrictions between tagmata. Their body shape strikingly resembles some species of the genus *Paraneseuthia* Franz, 1986 (Eutheini) and not any Cyrtoscydmini. Closer examination revealed a structure of the maxillary palpomere IV typical of Cyrtoscydmini, and in the present paper a new genus is described to accommodate these two unusual new species.

Material and methods

Dry-mounted specimens were relaxed in warm water and dissected. Details of morphology were studied in a disarticulated specimen macerated in 10% solution of potassium hydroxide, washed in diluted acetic acid and

Acknowledgments

I thank Giulio Cuccodoro and Ivan Löbl (MHNG) for their help and hospitality during my visit to Geneva and for arranging a loan of the specimens used in the present study.

References

- Costa Lima, A. (1962) Micro-Coleóptero representante da nova subfamília Plaumanniolinae (Col., Ptinidae). *Revista Brasileira de Biologia*, 22, 413–418.
- Franz, H. (1980) Monographie der südamerikanischen Scydmaenidae mit Einschluss einiger mittelamerikanischer Arten (Coleoptera). *Folia Entomologica Hungarica*, 41, 39–264.
- Franz, H. (1984) Beitrag zur Kenntnis der Scydmaeniden von Sumatra und benachbarter Gebiete. *Sitzungsberichte der Österreichischen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse, Abt. I*, 193, 89–142.
- Franz, H. (1986) Zweiter Beitrag zur Kenntnis der Scydmaenidenfauna der Fiji-Inseln. *Entomologische Blätter*, 82, 147–178.
- Franz, H. (1988) Nachtrag zur Monographie der Scydmaeniden Venezuelas (Coleoptera, Scydmaenidae). *Elytron*, 1, 9–84.
- Franz, H. (1989) Beitrag zur Taxonomie der Scydmaenidengenera *Alloraphes* Franz und *Stenichnaphes* Franz. *Revue suisse de Zoologie*, 96, 277–278.
- Franz, H. (1994) Monographie der mexikanischen Vertreter der Familie Scydmaenidae (Coleoptera). *Beiträge zur Entomologie*, 44, 329–398.
- Hadley, A. (2010) Combine ZP software, new version, [WWW document]. Available from: <http://www.hadleyweb.pwp.blueyonder.co.uk/CZP/News.htm> (accessed 26 March 2014)
- Jałoszyński, P. (2005) Review of the Oriental species of *Parastenichnaphes* Franz (Coleoptera, Scydmaenidae). *Genus*, 16, 573–581.
- Jałoszyński, P. (2012) Taxonomy of ‘*Euconnus* complex’. Part I. Morphology of *Euconnus* s. str. and revision of *Euconnomorpha* Franz and *Venezolanoconnus* Franz (Coleoptera: Staphylinidae: Scydmaeninae). *Zootaxa*, 3555, 55–82.
- Jałoszyński, P. (2013a) Revision of the Neotropical genus *Alloraphes* Franz (Coleoptera: Staphylinidae: Scydmaeninae). *Zootaxa*, 3750 (5), 549–568.
<http://dx.doi.org/10.11646/zootaxa.3750.5.7>
- Jałoszyński, P. (2013b) Revision of subgenera of *Stenichnus* Thomson, with review of Australo-Pacific species (Coleoptera, Staphylinidae, Scydmaeninae). *Zootaxa*, 3630 (1), 39–79.
<http://dx.doi.org/10.11646/zootaxa.3630.1.2>
- Jałoszyński, P. (2013c) A new species of the putatively myrmecophilous genus *Plaumanniola* Costa Lima, with notes on the systematic position of Plaumanniolini (Coleoptera: Staphylinidae: Scydmaeninae). *Zootaxa*, 3670 (3), 317–328.
<http://dx.doi.org/10.11646/zootaxa.3670.3.2>
- Jałoszyński, P. (2014) Phylogeny of a new supertribe Cephenniitae with generic review of Eutheini and description of a new tribe Marcepaniini (Coleoptera: Staphylinidae: Scydmaeninae). *Systematic Entomology*, 39, 159–189.
<http://dx.doi.org/10.1111/syen.12044>