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Revision of the Neotropical genus *Alloraphes* Franz (Coleoptera: Staphylinidae: Scydmaeninae)

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Abstract

The Neotropical genus *Alloraphes* Franz belonging to the tribe Cyrtoscydmini is revised. *Alloraphes* is redefined based on a detailed morphological study, and *Parastenichnaphes myrmecophilus* (Franz) is transferred back to *Alloraphes*, where it was originally placed. *Alloraphes jamaicae* Franz, *A. peruanus* Franz, *A. lenkoi* Franz, *A. yucatanii* Franz, *A. chiapasensis* Franz and *A. myrmecophilus* Franz, **stat. rest.** are redescribed; *A. dentatus* **sp. n.** from Peru and *A. peckorum* **sp. n.** from Bolivia are described. *Alloraphes magnus* Franz and *A. bolivarensis* Franz are treated as *species inquirendae* pending further study. The placement of ?*Alloraphes magnus*, known from a single female only, remains unclear. The type material of *A. bolivarensis* was not found in the Franz Collection and the original description hardly allows for the species identification.

Key words: Coleoptera, Staphylinidae, Scydmaeninae, Cyrtoscydmini, *Alloraphes*, *Parastenichnaphes*, new species, revision, morphology, Neotropical

Introduction

Alloraphes was originally described by Franz (1980a) to accommodate five new and one previously described Neotropical species of very small (up to 1.25 mm) Cyrtoscydmini that resemble *Neuraphes* Thomson, 1859 and *Scydmoraphes* Reitter, 1891. Franz (1980a) placed in his new genus *A. jamaicae* Franz, 1980a from Jamaica, *A. peruanus* Franz, 1980a from Peru, *A. myrmecophilus* Franz, 1980a from Brazil, *A. lenkoi* Franz, 1980a from Brazil, *A. magnus* Franz, 1980a from Brazil, and transferred *Scydmoraphes brasiliensis* Franz, 1967 to *Alloraphes*. Later, Franz (1988) added to this list *A. bolivarensis* Franz, 1988 from Venezuela. A year later in a short paper Franz (1989) reconsidered the taxonomy of this and allied genera based on genital characters and transferred *A. myrmecophilus* to *Parastenichnaphes* Franz, 1984 (elevated to the genus rank from the subgenus of *Stenichnaphes* Franz, 1980b), and *A. brasiliensis* (Franz) to *Stenichnaphes*. Finally, in a subsequent paper, Franz (1994) described *A. yucatanii* Franz, 1994 and *A. chiapasensis* Franz, 1994 from Mexico. Since then *Alloraphes* was not a subject of any taxonomic studies, and Newton & Franz (1998) in the world catalogue of the Scydmaeninae genera mention seven species in this genus, in agreement with the above inventory.

Franz (1989) redefined the genera *Alloraphes*, *Parastenichnaphes* and *Stenichnaphes* mostly based on the structure of the aedeagus. *Alloraphes* and *Parastenichnaphes* share an interesting pumping apparatus of the median lobe, composed of a basally located membranous area (a diaphragm) with 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 can be imagined as playing an important role during copulation to erect the copulatory piece by increasing the internal pressure. This is achieved by contraction of the muscles, which leads to retraction of the flexible membranous area and therefore a reduction of the internal volume of aedeagus. While a similar mechanism seems to be commonly utilized by Scydmaeninae (and other Staphylinoidea), the specific arrangement and shape of its components, especially the basal location of the diaphragm and the strongly sclerotized lentiform structure in the middle is known in Cyrtoscydmini only in *Alloraphes* and *Parastenichnaphes*. Interestingly, a similarly built device can be seen also in some Eutheini (e.g., Jałoszyński 2003). *Stenichnaphes*, a genus externally

Type material. Holotype: Brazil (São Paulo): ♀, three labels (Fig. 67): "Barueri, Sao Paulo / Brasij [sic!], lg. K. Lenko" with "No 10" on reverse side [white, printed; reverse handwritten in blue ink]; "*Alloraphes / magnus / m.* / det. H. Franz" [white, handwritten and printed]; "Holotypus" [red, handwritten] (NHMW).

Remarks. *Alloraphes magnus* is known from a single female collected in the southern part of Brazil (Fig. 68j). It differs from all species of *Alloraphes* in the pronotum without even traces of lateral marginal carinae or edges, different shape of the mesoventral intercoxal process and the presence of an additional median carina within the asetose impressions of mesoventrite (Fig. 26). All other characters agree with those of *Alloraphes*, but basing only on a single female specimen it is not possible to clarify the taxonomic placement of this interesting and unusually large (BL 1.25 mm) species. Examination of males and their genital characters may help solving this problem. Currently *A. magnus* should be treated as a *species inquirenda*, genus *incertae sedis* within Cyrtoscydmini, but certainly close to *Alloraphes*.

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