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The enigmatic genus *Stenichnoteras* Scott from the Seychelles (Coleoptera: Staphylinidae: Scydmaeninae)

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Abstract

The genus *Stenichnoteras*, known from the Seychelles and represented by a single known species, *St. montanum*, is re-described and redefined. The morphological structures of *St. montanum* are described and illustrated in detail. Similarities and possible affinities with other genera of Cyrtoscydmini are discussed, and it is concluded that *Stenichnoteras* may be closely related to *Euconnus*, despite an apparent difference in the shape of prothorax and some mesoventral structures.

Key words: Coleoptera, Staphylinidae, Scydmaeninae, Cyrtoscydmini, *Stenichnoteras*, revision, morphology, Seychelles

Introduction

The genus *Stenichnoteras* Scott, 1922 was established for a single species known from only two specimens collected in the largest island of the Seychelles. Although Franz (1986) in his large monograph of the Scydmaeninae of Madagascar included also the Seychelles, he omitted *Stenichnoteras* and did not even include it in the key to genera. Apparently after Scott (1922) this genus name appeared in a taxonomic context only in the catalog by Newton & Franz (1998). Hugh Scott, who in 1908 joined the Second Percy Sladen Trust Expedition studying the fauna of the Seychelles, in his descriptions achieved a level of detail far beyond standards of that time. The characteristics of *Stenichnoteras* in his 1922 work take two pages and are supplemented by accurate figures showing the dorsal habitus and the head in lateral view. He noticed and described such fine details as different kinds of setae covering the body, bulging genae, structure of the maxillary palpi, rudiments of the basal elytral foveae and the short prosternum, details that even in papers of specialists publishing in the second half of the XX century were often ignored. Scott also mentioned that the dense setae covering some parts of the thoracic venter of the studied specimens concealed some possibly important structures. Despite this exceptional care for details, Scott was not able to identify the sex of his specimens (he only speculated that one might be a male, the other one a female), and many taxonomically important structures of the body venter remained unknown.

In the present paper *Stenichnoteras* is revised, as a part of morphological and taxonomic studies of all genera of Cyrtoscydmini, which will be redefined and subsequently included in a phylogenetic reconstruction. New specimens from the Seychelles were not available, and therefore only the two type specimens collected by Scott were possible to examine. *Stenichnoteras* is here redefined and novel morphological details are described that support a separate position of this taxon as a distinct genus.

Material and methods

Dry-mounted specimens were relaxed in warm water and dissected. Details of morphology were studied in temporary transparent mounts of intact specimens in glycerol observed under a compound light microscope and in permanent preparations in Canada balsam (only the abdomen). Habitus images were taken by a Nikon Coolpix 4500 camera mounted on a Nikon Eclipse 1500 stereoscopic microscope; image stacks were processed using COMBINE ZP (Hadley 2010). Details of morphology were figured by a freehand drawing, with exact proportions

Jałoszyński 2013a). *Stenichnus* and similar genera have the submentum laterally demarcated from postcardinal parts of hypostomae by lateral sutures (Jałoszyński 2013b); this character can also be found in *Neuraphes*. Both *Stenichnus* and *Neuraphes* have also the eyes located in the posterior part of head, prothoracic hypomera without hypomeral ridges, each elytron with single basal fovea (densely setose in *Neuraphes*) and much narrower metaventral intercoxal process with a deep median notch. These characters are clearly different in *Stenichnoteras*, although in *Neuraphes* the mesoventral process is also divided into anterior and posterior projections, which, however, are not strongly projecting ventrally, as those in *Stenichnoteras*. It seems that among genera of Cyrtoscydmini whose morphology has been described in detail, *Stenichnoteras* is most similar to *Euconnus*, even if the mesoventral process is not continuous and keel-like, as that in *Euconnus* s. str. (Jałoszyński 2012). If the pronotum of *Stenichnoteras montanum* was not so unusually broadened laterally and flattened, the general appearance of this species might have been comparable to numerous members of the large 'Euconnus complex' (see Jałoszyński 2012, 2013c). The ventral structures of the head, the short prosternum without intercoxal carina or process, presence of two pairs of lateral mesothoracic foveae, broadly separated metacoxae and two asetose basal elytral foveae are characters shared by *Euconnus* s. str. and *Stenichnoteras*. Finding a male of *Stenichnoteras* to study the aedeagus may help to clarify relationships of this enigmatic genus.

Scott (1922) discussed possible characters that suggest *Stenichnoteras* possibly as a termito- or myrmecophile. Among such characters are "curious globules on the terminal antennal segment and on the maxillary palpi", broadened pronotum, and the presence of thin setae and thick bristles on various body parts. The latter character can be found in many genera of Cyrtoscydmini and certainly is not associated with termito- or myrmecophily. The "curious globules" observed by Scott in one of his specimens are artifacts of preservation but possibly reflecting true structures. The author of the present paper have seen similar vesicular structures evaginated from intersegmental membranes between the maxillary palpomeres III and IV or along a side of the terminal antennomere in specimens of various genera either preserved in unknown liquids (different from ethanol) or dry-mounted and later relaxed by a rapid placement in boiling water. The flattened and broadened pronotum with dilated sides does not seem as a character that alone could indicate termito- or myrmecophilous mode of life.

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