

Fernando Pederzani & Antonio Schizzerotto

Notes on West African *Methles*. 2.

Description of *Methles norberti* n. sp. from Ivory Coast

(Insecta Coleoptera Dytiscidae)

Riassunto

[*Note sui Methles dell’Africa occidentale. 2. Descrizione di Methles norberti n. sp. della Costa d’Avorio*]

L’articolo descrive ed illustra *Methles norberti* n. sp. Si tratta di un *Methles* Sharp, 1882, di piccole dimensioni, inferiori a quelle di tutte le altre specie del genere, eccezione fatta per *Methles freyi* Guignot, 1953. *Methles norberti* n. sp. si distingue da *Methles freyi* per la statura, il profilo e la punteggiatura del pronoto e delle elitre e per la configurazione del lobo mediano dell’edeago.

Abstract

The article describes and illustrates *Methles norberti* n. sp. from Ivory Coast.

Key words: *Methles*, Dytiscidae, Ivory Coast, Comoé National Park.

Introduction

In 1999 the German colleague Norbert Reintjes carried out intensive field researches on the diving beetles of the Comoé National Park, Ivory Coast, aimed at preparing his Ph. D. dissertation (REINTJES, 2004a), to be defended at the Julius-Maximilians-Universität, Würzburg. The researches and the dissertation focused on taxonomic, faunistic and life-history traits of Dytiscidae and Noteridae in a West African savannah. In the years 2000-2002 the senior author (FP) and Norbert Reintjes cooperated in the study of part of the diving beetles collected in the Comoé National Park. That study brought to the discovery of new taxa and the first report, for the Ivory Coast, of several species (PEDERZANI & REINTJES, 2002; REINTJES & PEDERZANI, 2002).

The collections from Comoé National Park included several specimens of a small *Methles* Sharp, 1882, living in association with a larger species currently known as *Methles cribratellus*¹. It immediately turned out that the “small” *Methles*

¹ The African *Methles* attaining the Palaearctic Region are *M. cribratellus* (Fairmaire, 1880) and *Methles spinosus* Sharp, 1882. Their status is not clear and the species need a taxonomic revision. Hans Fery (Berlin) is preparing a revision of types and materials recorded from various countries of North Africa, South Europe and Middle East (H. Fery, pers. comm.).

belonged to a new species (REINTJES, 2004a: 4). However, its description was left as an unsolved problem, because of its affinities with *Methles freyi* Guignot, 1953, at that time known only by the single female holotype. Recent collections from West Africa yielded several specimens of *Methles freyi* Guignot, that allowed the description of the male of this species (PEDERZANI & SCHIZZEROTTO, 2013). As a consequence, we have been able to compare the males of the “small” *Methles* from Comoé National Park to those of *Methles freyi*. On the basis of this comparison we are now in the position of maintaining that the specimens of the “small” *Methles* from Comoé National Park actually belong to a new species, which is described here below.

***Methles norberti* n. sp.**

Diagnosis: A really small *Methles* characterised, besides its size, by the outline and the punctuation of both pronotum and elytra and by the shape of penis. *M. norberti* n. sp. is remarkably much slender and shorter than the other known species of the genus², except *M. freyi* Guignot, 1953. The former can be quite easily separated from the latter because: i) the rather bigger, thicker and uniformly coloured body; ii) the evenly rounded pronotal outline; iii) the slightly rounded elytral sides; iv) the less extended punctuation of sides and angles of pronotum; v) the less pronounced punctuation of elytra; vi) the more parallel sides (in lateral view) and the much longer, not ventrally swelling, apex of the mid lobe of the aedeagus.

Type locality: Ivory Coast, Comoé National Park, N 8,5°, W 3,5°.

Type material: Holotype ♂, labelled: Côte d’Ivoire, Comoé National Park, leg. Norbert Reintjes, 3.IV.1999, [handwritten label] AB4A; length = 2.94 mm; width = 1.38 mm. Deposited in the collection of ZSM (Zoologische Staatssammlung München, Germany).

Paratypes: 24 paratypes, in the following collections: ZSM (München), F. Pederzani (Ravenna), A. Schizzerotto (Trento), S. Rocchi (Florence) and H. Fery (Berlin). Most specimens bear a handwritten label with a conventional abbreviation of collecting locality, that enables to get more information from collector’s database. Collection dates of the paratypes range from December 1998 to May 1999.

Description: Length: 2.7 to 3.0 mm, mean length 2.89 mm ($\sigma = 0.095$ mm); width: ± 1.38 mm³. Elongate, with slightly rounded sides, apex of elytra acuminate, shiny and distinctly microreticulate.

Head uniformly pale brown, distinctly microreticulate but non-punctate. Antennae quite long with rather thick segments.

² Some specimens of *Methles cribratellus* s. l. from Central Africa exceptionally show a length as low as 3.0 mm.

³ Most paratypes of *Methles norberti* n. sp. (not only soft specimens) both dry mounted and preserved in alcohol, have the elytra slightly wide apart at apex, that makes it difficult to correctly measure the width of the body.

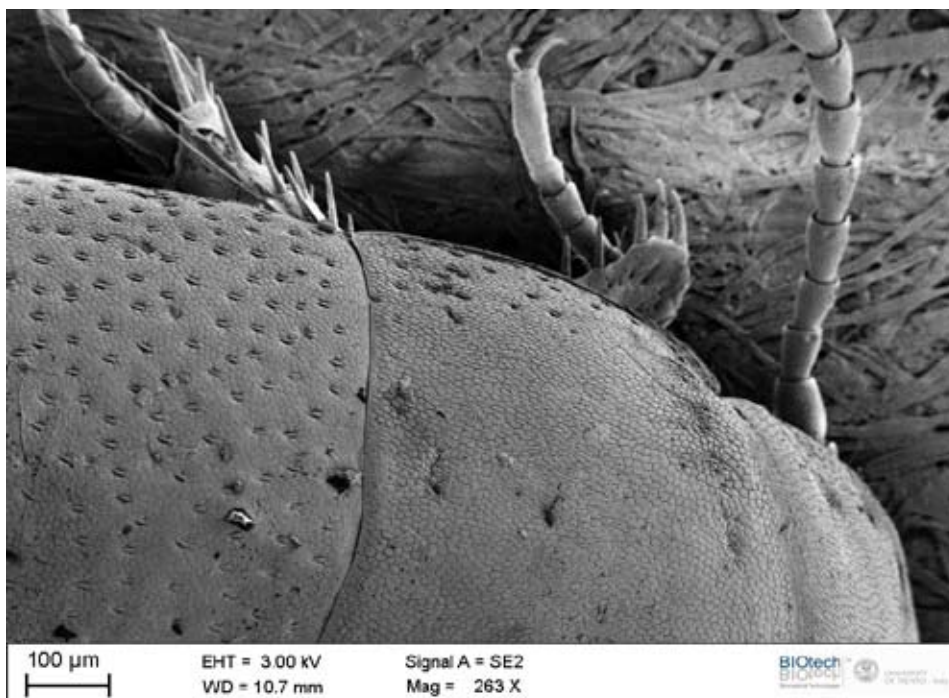


Fig. 1 - *Methles norberti* n. sp. SEM photo showing shape and puncturation of the base of pronotum.

Pronotum uniformly pale brown except a darker posterior line. Maximum width of pronotum at the base which is as large as the base of elytra (and, sometime, a bit larger). Sides of pronotum evenly rounded from the head to the base of elytra. Surface distinctly microreticulate, like the head, but the posterior angles bear some impressed punctures, each puncture with a slender backward bristle. At each angle these punctures cover about one eighth of the pronotal base (fig. 1).

Elytra uniformly pale brown. Maximum width around their middle. Surface strongly microreticulated and bearing several, moderately dense and slight punctures, each partially covered by a backward bristle that appears to be a bit wider and (sometime) shorter than those of the pronotum. Apex obviously acuminate.

Underside pale brown, microreticulate and non-punctate. Epipleurae rather shiny, with a very light, not always discernible, microreticulation. Prosternal process ovate, with rimmed sides. Metacoxal process deeply incised. Legs pale brown. Protarsi and mesotarsi pentamerous.

Male: habitus as in figure 2. First three segments of protarsi and mesotarsi obviously widened. Protarsal claws hook shaped, rather short and enlarged; the outer one slightly larger. Penis, in dorsal view, quite long and rather narrow with sides regularly tapering to a rounded apex, which bears several small spinous setae (fig. 3a).

A row of less dense and smaller spinous setae is present on each side of the penis in its distal third. In lateral view, the penis is strongly sloped toward the base and displays rather parallel sides, which extend over two thirds of its length. Then the sides of penis restrict up to a narrow subparallel apex, extending up to about one sixth of the penis length, distally rounded and bearing apical bristles on the dorsal side (fig. 3b). Base of penis, in lateral view, rather wide and sinuate at both ventral and dorsal margin. Parameres alike, trapezium shaped, bearing a very long and thin, lance shaped apical lobe. The parameres are not figured as they do not display any specific feature.

Female: besides sexual characteristics, females are identical to males. Seemingly, female copulatory apparatus does not bear specific characters.

Ecology: The specimens of *Methles* (both species) were collected mainly in lentic habitats throughout the whole research period, but with very scarce records during the dry months (February and March), when their usual habitats dry up. Contrary to most species of diving beetles *Methles* probably aestivate in terrestrial habitats (REINTJES, 2004a: 117) instead of moving to water remnants.

Derivatio nominis: the new species is dedicated to its collector, professor Norbert Reintjes, University of Lübeck (Germany).



Fig. 2 - *Methles norberti* n. sp. Habitus of a male paratype.

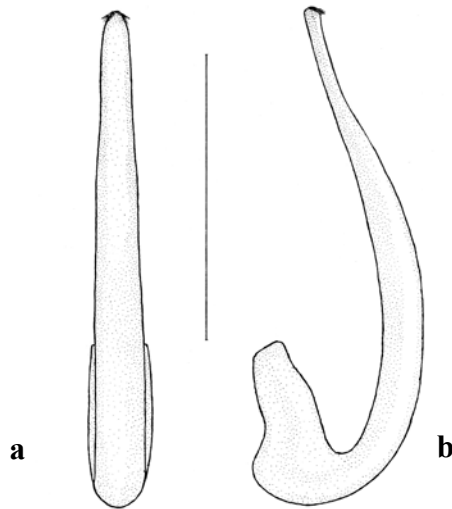


Fig. 3 - *Methles norberti* n. sp. Outline of the penis. 3a: dorsal view; 3b: lateral view. (measure bar = 0.5 mm)

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Authors' addresses:

Fernando Pederzani
via Landoni, 35
I- 48121 Ravenna
e-mail: pedernando@libero.it

Antonio Schizzerotto
via Prati, 8
I- 38122 Trento
e-mail: antonio.schizzerotto@unitn.it