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LACCOPHILUS COMOENSIS N. SP. FROM IVORY COAST

(Insecta Coleoptera Dytiscidae)

Riassunto

[*Laccophilus comoensis* n. sp. della Costa d'Avorio]

Si descrive *Laccophilus comoensis* nuova specie della Costa d'Avorio, appartenente al gruppo *vermiculosus*. La serie tipica è formata da quattro esemplari maschi, raccolti durante la stagione secca in acque temporanee e permanenti del Parco Nazionale della Comoé, situato nella savana nel nord della Costa d'Avorio. L'olotipo è depositato presso il Museo di Storia Naturale di Vienna. La specie si distingue soprattutto per i caratteri dell'edeago.

Abstract

Laccophilus comoensis new species from northern Ivory Coast is described and outlined. It belongs to the *vermiculosus* group. The four male specimens of the type series were sampled during dry season from both temporary and permanent waters of the Guinea savannah in Comoé National Park. The holotype is deposited in the Natural History Museum of Vienna. The new species is easily identified by the structure of aedeagus.

Key words: Dytiscidae, *Laccophilus*, Comoé National Park, Ivory Coast, West Africa.

Introduction

The following species description is based on material that was collected during studies on the faunistics and ecology of water beetles in Comoé National Park, Ivory Coast, conducted by the second author. The study area is situated in the Guinea savannah and characterised by a highly seasonal climate. Therefore, the majority of water bodies are temporary and dry out during the pronounced dry season. A more detailed description of the region is given in REINTJES & LINSÉNMAIR (2001). The specimens were collected with a dipnet, from the margins (within 1 m) of different waters.

Laccophilus comoensis n. sp. (Fig. 1)

Type material. Comoé National Park, Ivory Coast. Holotype ♂: Comoé river

bank at 8°45.236 N, 3°49.031 W, 4.II.1999, (sample code CB6A). - Paratypes (three specimens). 1 ♂: pond at 8°50.512 N, 3°46.274 W, 26.XII.1998, (sample code TB1A); 1 ♂: pond at 8°45.309 N, 3°46.625 W, 2.I.1999, (sample code HB2A); 1 ♂: pond at 8°46.373 N, 3°45.957 W, 3.I.1999, (sample code AB1A).

Holotype and two paratypes in the Natural History Museum of Vienna; 1 paratype (code HB2A) in coll. Pederzani.

Body large and not very convex, narrowed behind. Length: 4.46 to 4.59 mm; width: 2.48 to 2.54 mm.

Head testaceous with a double darker spot behind; in one paratype (code TB1A) also clypeus darkened at the middle. Finely, doubly reticulated, with the small reticulation more impressed. Antennae yellow; palpi reddish.

Pronotum testaceous with a transverse brownish band at the anterior border and a narrow brownish margin at the middle of base joining two black spots laterally. Very finely, irregularly doubly reticulated and finely and sparsely punctured.

Elytra testaceous with a black pattern of flexuous irregular lines and vermiculations, disappearing anteriorly beside the black suture but leaving traces of three twinned lines at the base, and much reduced behind, leaving lighter apical and sub-apical spots. The vermiculations are occasionally confluent at the middle to form a wavy transverse dark band. Reticulation double and weakly impressed. Small meshes of the elytral network hardly visible on the basal third. Large meshes distinct only on the anterior half and occasionally incomplete; elytral surface with punctures at many points where large meshes meet, detectable also on the posterior half, where large meshes disappear; serial punctures large and rather irregularly arranged.

Ventral side yellow with metacoxae and metacoxal process darkened, without a coxal file. Elytral epipleura brownish. Legs ferruginous; metatibial spines bifid at the apex.

Male with fore and mid tarsi laterally compressed and provided with small suckers. Last visible sternite slightly asymmetric, with a sub-basal ridge or tubercle at the middle of the left side; hind border emarginate at the sides, pointed in the middle (Fig. 5). Aedeagus very distinctive: median lobe with a post-basal process on the dorsal-left side, obtuse pre-apical tooth (or lamellar process) at the right side, projecting pre-apical ridge at the ventral side, and apical indentation (Fig. 2 a, b, c); right paramer fairly irregular in shape (Fig. 3); the apical seta usually inserted at the apex is not detectable; left paramer as in fig. 4.

Female unknown. The type material was collected in association with several specimens of closely related species. The identification of females should be based on two characters that presumably distinguish the n. sp. from the others: large size and weak elytral reticulation with small punctures at the intersection of meshes. Unfortunately no specimen was found showing those characters. Unless a reliable specimen or a population of pure *L. comoensis* is found, the identification of females is debatable.

Derivatio nominis. From Comoé National Park, Ivory Coast.

Habitat. Habitat info is given with reference to the sample code reported in the label of each specimen.

Holotype.

CB6A - Bank of Comoé river. Maximal depth within 10 m from sampling site: 150 cm; rocks and little mud; pH 8,1 ; conductivity 64 μ S; dense stock of *Polygonum sp.* (Polygonaceae). Other Dytiscidae (including other *Laccophilus sp.*), Noteridae, Hydraenidae, Pleidae, Corixidae (Micronectinae), Belostomatidae, Veliidae, Zygoptera and fish present.

Paratypes.

TB1A - Shallow pond surrounded by open savannah, approx. 50 m from the margin of dense gallery forest accompanying the river Iringou; diameter of pond approx. 20 m, maximal depth 60 cm; muddy soil; pH 8,3; conductivity 26 μ S; submerse

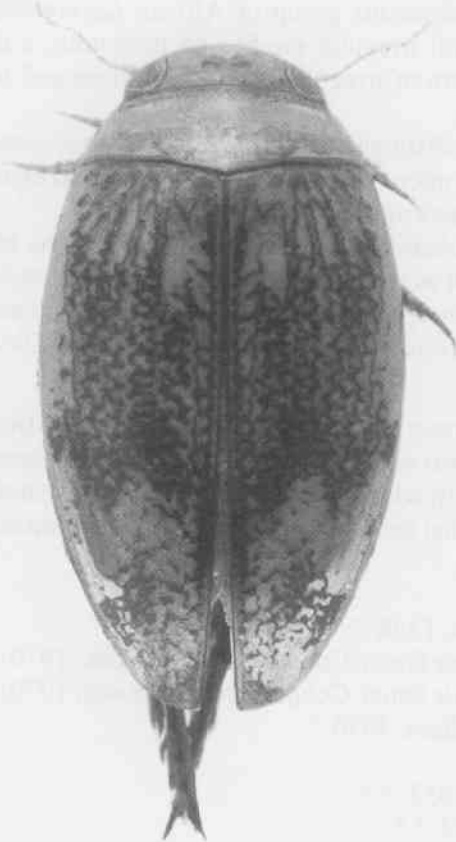


Fig. 1 - *Laccophilus comoensis* n. sp.: habitus (last abdominal segments removed). (Photo by Gabriele Fiumi).

vegetation: *Dopatrium* cf. *junceum* (Scrophulariaceae). Other Dytiscidae (including other *Laccophilus* sp.), Noteridae, Hydrophilidae, Gyrinidae, Notonectidae, Pleidae, Corixidae (Micronectinae), Zygoptera and fish present.

HB2A - Pond B in REINTJES & LINSENMAIR (2001). At the date of sampling, estimated surface approx. 750 m², maximal depth 55 cm; muddy soil; pH 6,7; conductivity 59 µS; dense submerge vegetation (Cyperaceae) at the margins. Other Dytiscidae (including other *Laccophilus* sp.), Noteridae, Hydrophilidae, Haliplidae, Hydraenidae, Notonectidae, Pleidae, Corixidae (Micronectinae), Belostomatidae, Veliidae, Anisoptera and Zygoptera present.

AB1A - Pond A in REINTJES & LINSENMAIR (2001). Surface approx. 6 m², maximal depth 15 cm; muddy soil; pH 6,8; conductivity 180 µS; no submerge vegetation. Other Dytiscidae (including other *Laccophilus* sp.), Noteridae, Hydrophilidae, Notonectidae, Anisoptera, Zygoptera, tadpoles and fish present.

Systematic position. Although *L. comoensis* n. sp. is obscurely reticulated and the double reticulation is detectable only at the middle of elytra, it undoubtedly belongs to the *vermiculosus* group of African *Laccophilus* (GUIGNOT, 1959b), grouping species with irregular meshes on pronotum, a double reticulation on elytra, a dorsal pattern of irregular wavy black lines and lacking well-delimited testaceous markings.

The new species is distinguishable by its large size, weakly impressed elytral reticulation, distinct micro-punctures on pronotum and elytra, and particularly by the structure of the aedeagus.

It shares the pale colour of head and pronotum and the black elytral pattern of several species, such as *remex*, *flaveolus*, *pampinatus*, *nodieri*, etc.

It is the single African species of the *vermiculosus* group with a postbasal process at the dorsal side of penis; that process is only found in a few species of Guignot's *variegatus* group.

The *vermiculosus* group now comprises 23 taxa in the Afrotropical and Malagasy regions, including two subspecies of *L. adpersus* Boheman. The species of this group are listed below, with literature references for taxa not included in Guignot's key. The following list includes also four taxa synonymized after the publication of GUIGNOT (1959b).

adpersus Boheman, 1848 ° *

adpersus nigeriensis Omer-Cooper (OMER-COOPER, 1970)

adpersus sudanensis Omer-Cooper (OMER-COOPER, 1970)

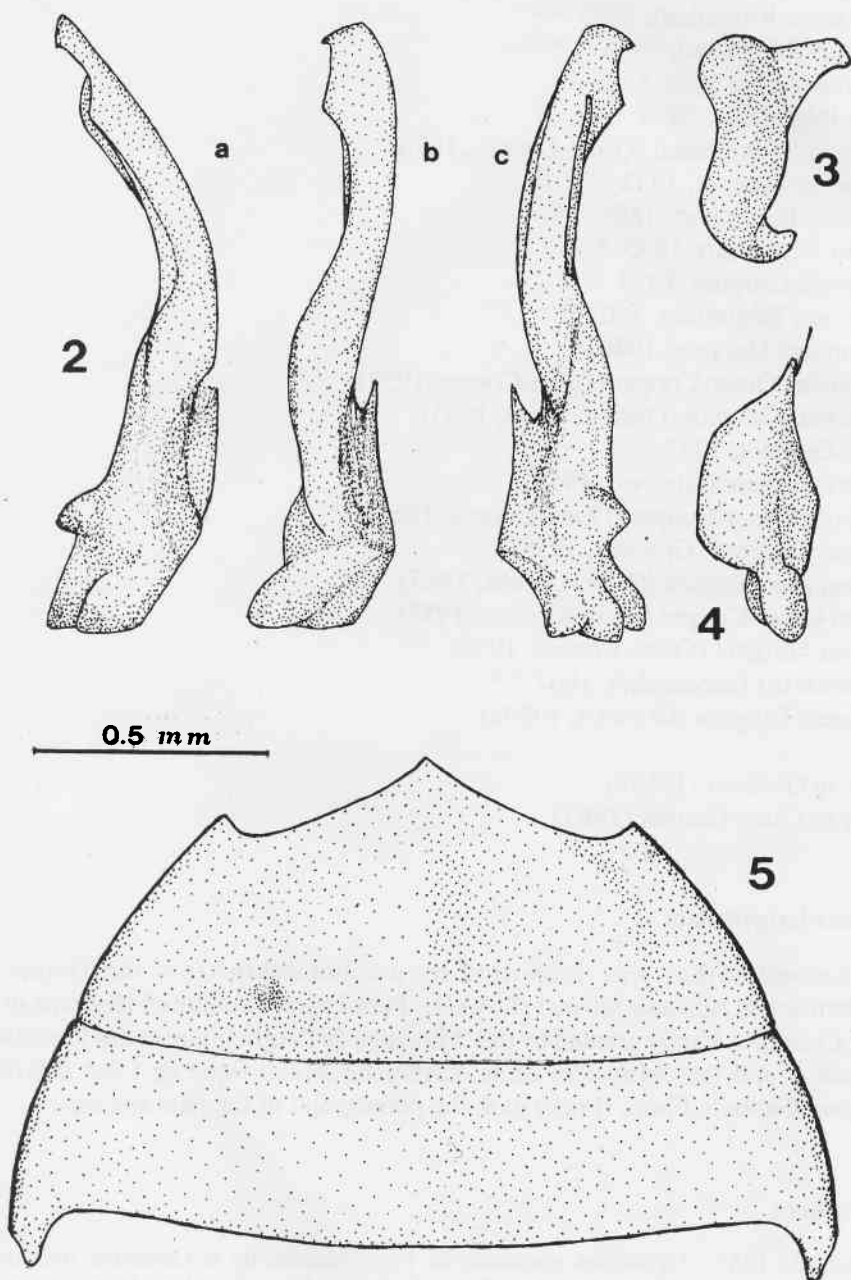
burgeoni Gschwendtner, 1930 °

comoensis n. sp.

concisus Guignot, 1953 ° *

cyclopis Sharp, 1882 ° *

epinephes Guignot (GUIGNOT, 1955)



Figs. 2-5 - *Laccophilus comoensis* n. sp., male paratype: 2. Penis (a, b, c: three views); 3. Right paramere; 4. Left paramere; 5. Last two visible abdominal segments.

espanyoli Hernando (HERNANDO, 1990)
evanescens Régimbart, 1895 ° *
flaveolus Régimbart, 1906 ° *
irroratus Aubé, 1838 °
livens Régimbart, 1895
 = *adpersus* Boheman (OMER-COOPER, 1970)
mediocris Guignot, 1952 °
modestus Régimbart, 1895 ° *
nodieri Régimbart, 1895 °
olsoufieffi Guignot, 1937 °
pallescens Régimbart, 1903 ° *
pampinatus Guignot, 1940 °
praeteritus Omer-Cooper (OMER-COOPER, 1957)
 = *concisus* Guignot (OMER-COOPER, 1965)
remex Guignot, 1952 ° *
saegeri Guignot (GUIGNOT, 1958)
simulator Omer-Cooper (OMER-COOPER, 1958)
turbatus Guignot (GUIGNOT, 1958)
 = ? *concisus* Guignot (OMER-COOPER, 1965)
turneri Omer-Cooper (OMER-COOPER, 1957)
 = *remex* Guignot (OMER-COOPER, 1958)
vermiculosus Gerstaecker, 1867 ° *
vitshumbi Guignot (GUIGNOT, 1959a)

° Key in GUIGNOT (1959b)

* Key in OMER-COOPER (1965)

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