

Hyphydrus cuppeni n. sp., with taxonomic notes on the genus in Africa (Coleoptera: Dytiscidae)¹⁾

by

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ABSTRACT. — *Hyphydrus cuppeni*, n. sp. is described based on two male specimens from Madagascar. *Hyphydrus malawiensis* Omer-Cooper, 1971 and *H. nigeriensis* Omer-Cooper, 1971 are synonymized with *H. cycloides* Régimbart, 1889. Lectotype of *H. malawiensis* is designated.

Introduction. — Recently I received from two colleagues material of *Hyphydrus* for identification and type material of three *Hyphydrus* species which had not been located when I revised the genus (Biström, 1982). The study of the present material resulted in the discovery of a new species and two new synonymies.

Hyphydrus cuppeni n. sp. (figs 1 a-c)

Type locality. — Moramanga, Madagascar.

Type material. — Holotype, ♂: *Hyphydrus signatus* groep/Madagascar: "Moramanga 21.XII.1980, Rice-field 3", leg. & det. J. Cuppen. Paratype: Madagascar: "Moramanga 21.XII.1980, Rijstveld", leg. & det. J. Cuppen. Both specimens in the J. Cuppen collection.

Diagnosis. — The new species belongs to the species group *H. signatus* and it is characterized by the almost unicolored dark ferrugineous body, by the elytral punctation and the male genitalia. The new species cannot be confused with any other recognized *Hyphydrus* species.

Description

Length 4.4-4.7 mm, breadth 2.8-3.0 mm.

Head. — Between and posterior to eyes blackish to dark ferrugineous (interocular dark marking vague), frontally and posteriorly head paler, ferrugineous. Foremargin of head rounded, rather finely and narrowly bordered. Punctation fairly coarse and dense except posteriorly where it is lacking. Head almost totally with rather fine but distinct microsculpture. Head rather flat, frontally at each side with a shallow depression. Antennae and palpi pale ferrugineous.

Pronotum. — Dark ferrugineous, laterally sometimes slightly paler, ferrugineous to pale ferrugineous. Punctation fairly coarse to rather fine, fairly dense, except discally on each side where punctation narrowly lacking or distinctly finer and sparser. Microsculpture fine to very fine, partly indistinct or lacking. (Sometimes all microsculpture on pronotum indistinct.) Sides of pronotum almost evenly rounded. Angle between pronotum and elytra rather indistinct.

Elytra. — Dark ferrugineous to ferrugineous, lacking distinct markings. Punctation double, of two different kinds. Finer kind of punctation fine, dense and evenly distributed. Coarser punctation distinctly sparser, somewhat irregularly distributed. Coarser punctures about two to three times bigger than finer punctures. Each elytron with a somewhat indistinct, discal row of punctures which disappears posteriorly and with a lateral row of punctures which is rather indistinct with punctures irregularly and sparsely placed. Shiny, microsculpture almost totally lacking (sporadic fragments of reticulation may be discerned). Epipleura ferrugineous to pale ferrugineous, shiny, lacking microsculpture, and with fairly distinct, fine punctation.

Ventral side. — Dark ferrugineous to ferrugineous, prothorax sometimes partly somewhat

¹⁾ Contribution to the study of Dytiscidae 29.

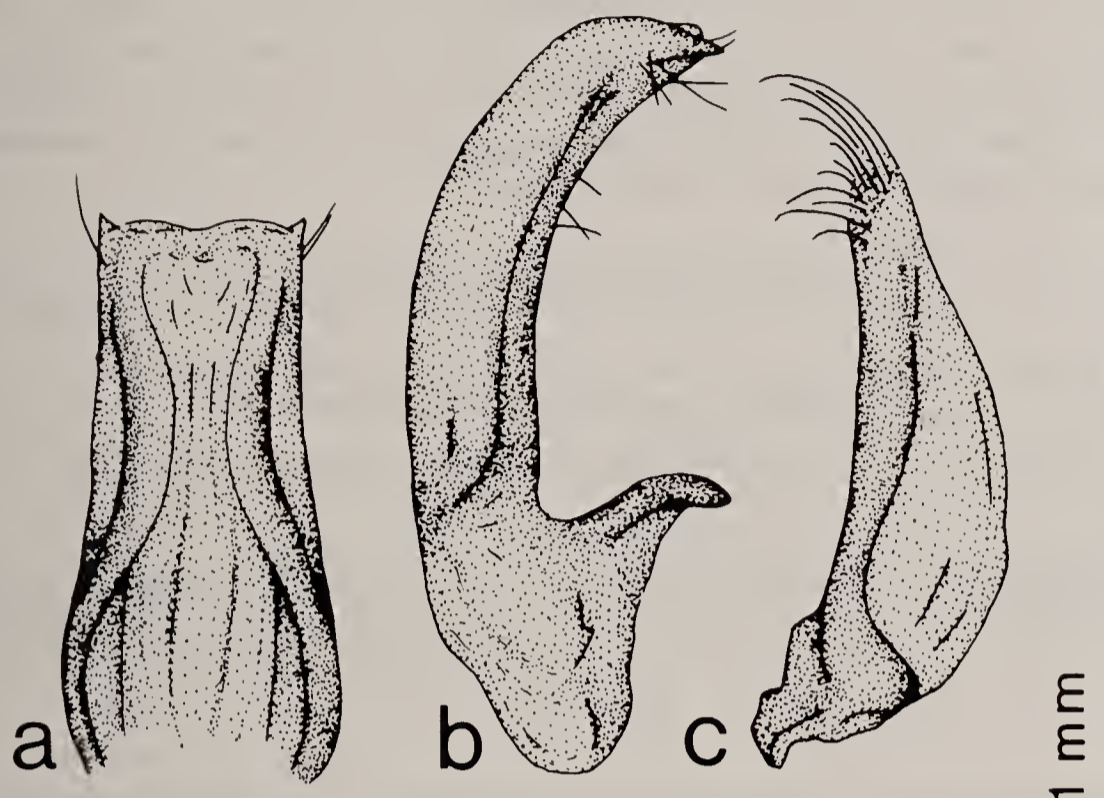


Fig. 1. Male genitalia of *H. cuppeni*. a, penis, dorsal view; b, penis, lateral view; c, paramere.

paler, pale ferrugineous. Prothorax impunctate, metathorax with fine punctation, metacoxal plates with fairly coarse punctation and abdomen with fine to very fine punctation. Punctation apically on abdomen partly indistinct. Ventral side mainly shiny, lacking almost totally reticulation. Apical sternite rather weakly transversely depressed. Prosternal process with some hairs.

Legs. — Ferrugineous to pale ferrugineous, except hindlegs which are almost totally dark ferrugineous. Pro- and mesotarsi slightly broadened. Protrochanters incised.

Aedeagus. — As in figs 1a-c.

Named after Drs. J. G. M. Cuppen who kindly placed the specimens at my disposal.

The *Hyphydrus* material of Cuppen included also two specimens of *H. stipator* Guignot (in sp. gr. *H. cycloides*), labelled: "Nigeria, Saminaka, small side-stream river 11.II.1978, Karami Sid. Vic." These are the first specimens from Nigeria of this species I have examined.

Omer-Cooper (1971) described three *Hyphydrus* species in a taxonomic work on a group of species now included in the species group *H. cycloides*. When revising the genus (Biström, 1982) the type material of the three species was not located. However after a new search through the Omer-Cooper collection, deposited in the Albany Museum, Grahamstown, South Africa, the missing specimens were found and became available for examination. The result of the examination is given below.

H. malawiensis Omer-Cooper, 1971

Material studied: Lectotype, ♂, by present designation: "Type ♂/*Hyphydrus malawiensis* n. sp. Det. J. Omer-Cooper/Nyasaland Fort Hill Yambe stream 5.X.1948 J. O. C." Paralectotype: same as lectotype except labelled "Type ♀" (1 ex.). From the original description it remains unclear which specimen is meant to be the holotype and therefore a lectotype is here designated.

H. nigeriensis Omer-Cooper, 1971

Material studied: "Holotype, ♂: Types ♂ & ♀/*Hyphydrus nigeriensis* n. sp. Det. J. Omer-Cooper/Nigeria Stream, reservoir, Jos 10.IV.1963 J. O. C." Paratype (= Allotype): on the

same label as the holotype and mounted posterior to the holotype (1 ex.).

Notes on *H. malawiensis* and *H. nigeriensis*: The characters given by Omer-Cooper (1971) are subject to variation in such a degree that no species can be distinguished using them. Also there is no geographic correlation and *H. malawiensis* and *H. nigeriensis* are thus junior synonyms of *H. cycloides* Régimbart, 1889. The morphology of *H. cycloides* is somewhat variable and it has a wide distribution in the Ethiopian region.

H. inopinatus Omer-Cooper, 1971

Material studied: "Holotype, ♂: Types ♂ & ♀/*Hyphydrus inopinatus* O-C. Det. J. Omer-Cooper/Nigeria, stream escarpment, Jos-Wamba Road 13.IV.1963 J. O. C." Paratype (= Allotype): on the same label as the holotype and mounted posterior to it (1 ex.). Undoubtedly a good species.

Acknowledgements. — I wish to thank Drs. J. G. M. Cuppen, Wageningen, Netherlands and Dr. B. C. Wilmot, Grahamstown, South Africa for placing the material at my disposal.

REFERENCES

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STRONG, D. E., J. H. LAWTON & Sir RICHARD SOUTHWOOD, 1984. *Insects on plants — community patterns and mechanisms*. pp VI, 313; ca. 550 referenties, auteurs index 13, organismen index 16, subject index 9 kolommen. Blackwell Scientific Publications, Oxford etc., ISBN 0-632-00909-8 prijs (paperback) £ 11,80; ISBN 0-632-00907-1 prijs (gebonden) £ 22,00.

Zoals uit de inleiding blijkt richt dit boek zich op drie actuele vraagstukken uit de studie van de oecologie van levensgemeenschappen: hoe voorspelbaar is het „gedrag” van natuurlijke levensgemeenschappen, hoe groot is de rol van competitie, en hoezeer kan men zeggen dat de soorten van zo'n gemeenschap hun huidige kenmerken hebben gekregen als gevolg van aanpassingen aan de andere soorten van de gemeenschap? Insekten op planten zijn voor het beantwoorden van deze vragen uitstekende proefobjecten.

Het boek is het resultaat van de samenwerking tussen drie prominenten juist in het onderzoek naar de oecologie van insecten op planten. Dat staat borg voor een goed gebalanceerde samenvatting op zeer hoog niveau. Het boekje is desalniettemin bijzonder gemakkelijk leesbaar.

De leesbaarheid is zo nadrukkelijk, en het boek is zo uitbundig voorzien van schema's en andere figuren dat het meer de taak lijkt te hebben van een leerboek dan een betrekkelijk gespecialiseerd oecologisch betoog. De onduidelijkheid, die zo ontstaat over de doelstelling van het boek, wordt versterkt doordat het eerste hoofdstuk (de evolutie van fytofage insecten) zeer schetsmatig en ronduit onbevredigend is, en vooral door de toevoeging van twee appendices, een met een wel erg simpel overzicht van de fytofage insecten, een tweede met een geheel niet ter zake doend historisch overzicht van het aantal beschreven fytofage insectesoorten.

Maar de vier kern-hoofdstukken (voornaamste determinanten van diversiteit, dynamiek van kolonisatie en speciatie, interacties tussen fytofagen onderling, en interacties tussen insecten en hun waardplanten) zijn fascinerend, en geven in heel kort bestek een flitsende ontsluiting van de enorme hoeveelheid literatuur over deze onderwerpen. — W. N. Ellis