

FERNANDO PEDERZANI e SAVERIO ROCCHI

ON SOME MADAGASCAN HYDRADEPHAGA OF
THE NATURAL HISTORY MUSEUM, LONDON,
WITH THE DESCRIPTIONS OF FIVE
NEW SPECIES OF DYTISCIDAE
(Coleoptera Haliplidae, Dytiscidae, Noteridae)

ABSTRACT - PEDERZANI F. e ROCCHI S., 2008 - On some Madagascan Hydradephaga of the Natural History Museum, London, with the descriptions of five new species of Dytiscidae (Coleoptera Haliplidae, Dytiscidae, Noteridae).

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A list of the species found in a collection of Madagascan Hydradephaga from the Natural History Museum, London. In all 254 specimens and 52 taxa. Some species represented by females only or by teneral specimens are not identified with certainty, or just at generic level. The following species of Dytiscidae are described: *Uvarus gereckei* n. sp., *Herophydrus reticulatus* n. sp., *Herophydrus goldschmidti* n. sp., *Rbantus manjakatampo* n. sp., and *Neptosternus bilardoii* n. sp.

KEY WORDS - Haliplidae, Dytiscidae, Noteridae, Madagascar, *Uvarus*, *Herophydrus*, *Rbantus*, *Neptosternus*, New species.

RIASSUNTO - PEDERZANI F. e ROCCHI S., 2008 - Su alcuni Idroadefagi del Natural History Museum di Londra, con descrizione di cinque nuove specie di Dytiscidae (Coleoptera Haliplidae, Dytiscidae, Noteridae).

Si fornisce la lista delle specie trovate in un lotto di Coleotteri Idroadefagi del Madagascar inviati in studio dal Natural History Museum di Londra, per un totale di 254 esemplari e 52 taxa. Alcune specie non sono determinate con sicurezza perché si tratta di sole femmine o esemplari immaturi. Si descrivono le seguenti nuove specie di Dytiscidae: *Uvarus gereckei* n. sp., *Herophydrus reticulatus* n. sp., *Herophydrus goldschmidti* n. sp., *Rbantus manjakatampo* n. sp. e *Neptosternus bilardoii* n. sp.

PAROLE CHIAVE - Haliplidae, Dytiscidae, Noteridae, Madagascar, *Uvarus*, *Herophydrus*, *Rbantus*, *Neptosternus*, Specie nuove.

INTRODUCTION

The first author received a loan of Coleoptera Hydradephaga from the Natural History Museum of London for identification and study. This paper deals with the list of the identified species and the descriptions of five new species discovered in the studied material. The descriptions of the new species were conjointly carried out by both authors.

MATERIALS AND METHODS

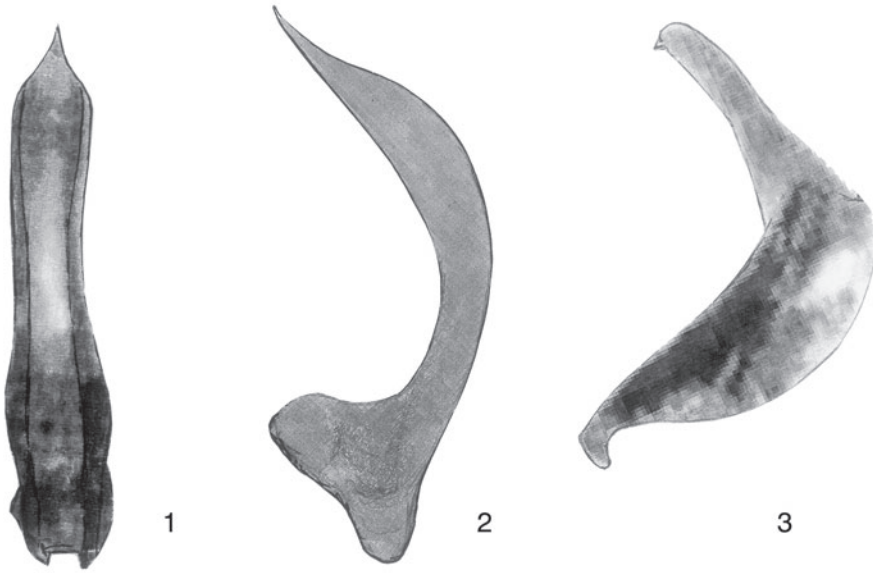
The loan No. 13574 from the Natural History Museum, London, comprised 254 Madagascan Hydradephaga collected in 2001 by R. Gerecke and T. Goldschmidt during a hydrobiological investigation of wet habitats in several Natural Reserves of Central and Southern Madagascar. These areas were poorly investigated during past centuries due to their difficult access and most of them are currently accessible for researches only with special government authorization; for these reasons the material has a peculiar scientific value.

All specimens received for study were dry mounted and provided with three labels, as a rule, with thorough collection data and basic information on the habitat, including water temperature and electrical conductivity, and the following collection label: «Gerecke & Goldschmidt collectors BMNH(E) 2004-46».

The collected material was sent to the authors for study and then returned to the N.H.M. after expiration of the loan. A few double specimens were generously left to the authors for their collections, in all 8 exx. The current location of the material (the N.H.M., London) ⁽¹⁾, and the names of collectors (Gerecke and Goldschmidt) will not be further repeated in this paper.

The authors give the descriptions of five new species. Unfortunately two of them are represented by single male specimens. In the others, represented by more than three exx., the authors left at least one undissected specimen to permit dissection and further examination by future students. As in some species the sex separation is rather difficult without genital dissection, the sex of some undissected paratypes is not stated in the description. The colour photographs have just the purpose to

⁽¹⁾ Types depository: see Appendix.



Figs 1 - 3. *Uvarus gereckei* n. sp. - 1: Penis in dorsal vision. 2: Penis in lateral vision. 3: Right paramere.

show the body shape and the colour pattern of the species; because of their low depth of field they show poor details of tarsi and antennae. The figures of genitalia were drawn by elaborating images captured by an Allring digital camera attached to the microscope. Nomenclature follows NILSSON (2001) and NILSSON & VONDEL (2005).

DESCRIPTIONS OF THE NEW SPECIES

Uvarus gereckei n. sp. (fig. 18)

Type material: 4 exx. labelled: Madagascar, Tsimelahy (Tulear), Riv. Antarantsa, ca 1 km upstream from village, 300 m asl, 4.ix.2001, 20.4 °C 0.171 mS/cm. The type material includes two males (the holotype and one paratype), one female and one undissected, possibly female specimen (paratypes). One paratype deposited in Pederzani collection.

Description

Size: Length of body 2.6-2.8 mm, breadth 1.35-1.40 mm; holotype: length of body 2.6 mm, breadth 1.35 mm.

Head: Black, testaceous in front, with fine microsculpture, anteriorly very finely punctate, between eyes with large scattered punctures, posterior to eyes not punctate.

Pronotum: Testaceous. Base between striae, narrow anterior border, broad median longitudinal band and two narrow submarginal lines black. Shiny, finely and sparsely punctate. Sides with thin marginal rim.

Elytra: Confuse colour pattern, dark brown at suture, paler at sides with humeral, latero-median and preapical blackish spots. Basal striae short, well impressed, in a rather broad depression. Shiny, very finely microsculptured, finely and sparsely punctate, sparsely pubescent.

Ventral side: Black.

Antennae, mouth appendages and legs testaceous.

Male: Penis as in figs 1 and 2, parameres of symmetrical structure, as in fig. 3. See also the SEM photographs in Appendix.

Female: Difficult to separate by external characteristics. Genitalia not studied.

Etymology: Dedicated to one of its collectors, the water mites specialist Reinhard Gerecke.

Remarks: The species is easy to indentify by its large size, the characteristic colour pattern of pronotum and the structure of aedeagus. In the key to the species of *Uvarus* in Africa (BISTRÖM, 1988) the new species should be placed after point 22, easily recognized by its length, since the remaining species do not exceed 2 mm in length.

Herophydrus reticulatus n. sp. (fig. 19)

Type material: 6 exx. labelled: Madagascar, Ankaratra (Antananarivo), Reserve Manjakatampo, M. Arirana, spring area exp. SE (drainage R. Ambodimangavo) 2200 m asl, 5.x.2001, 13.5 °C, 0.01 to 0.009 mS/cm. The type material includes two males (holotype and one paratype), three females and one undissected, possibly female specimen (paratypes). One paratype deposited in Pederzani collection.

Description

Size: Length of body 4.30 - 4.70 mm, breadth 2.35 - 2.55 mm. Holotype: Length of body 4.30 mm, breadth 2.35 mm.

Head: Black with transverse yellow marking posterior to eyes. Rim of frontal margin quite distinct, medially fine, hardly discernible but continue in male, medially broken for a very short distance in females.

Punctuation somewhat coarse and dense, but almost absent near pronotum. Reticulate.

Pronotum: Black, lateral outline rounded, rim of side margin complete, extending to anterior corners, fairly broad at base; basal corners rounded. Punctures somewhat coarse, finer at middle. Submat, entirely quite distinctly microsculptured. Base equal to or slightly broader (in male) than base of elytra, with a discernible pronoto-elytral angle.

Elytra: Black with a sub-basal ferruginous band not attaining the suture, posteriorly sinuate, continued backwards (in some specimens) by traces of longitudinal lines. In a paler specimen the yellow-ferruginous pattern comprises a postmediane irregular band extending on the two outer thirds of elytron. Punctures coarse and dense. Microreticulation fairly impressed, submat in both sexes.

Ventral side: Black, microsculptured, with very coarse punctures on sides of metasternum, metacoxae and first and second abdominal sternites; fine and scattered on the rest of abdomen. Metacoxal plate not keeled. Epipleura dark ferruginous.

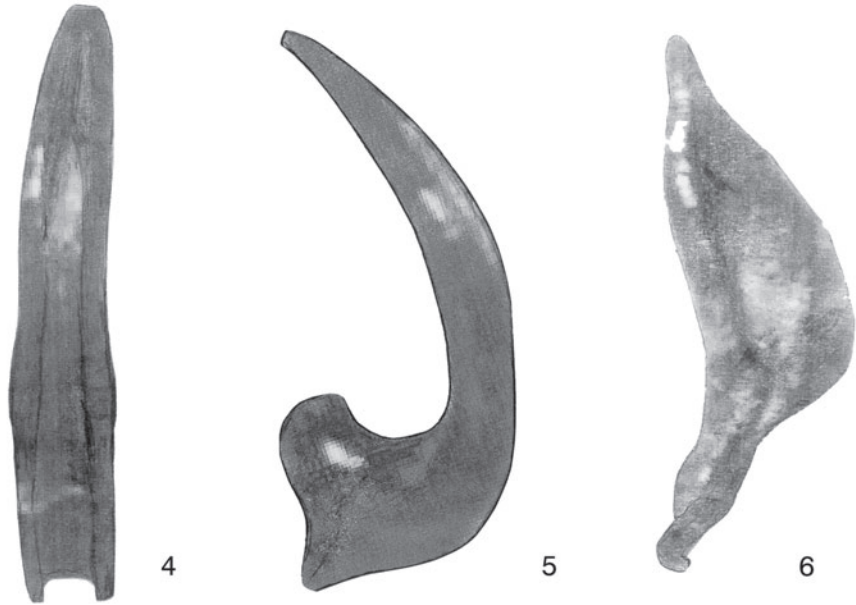
Antennae ferruginous, with segments 4-10 darkened; legs ferruginous, with darkened metatarsi.

Male: Metacoxal plate and metafemurs not modified. Protarsi narrowing anteriorly. Penis as in figs 4 and 5. Parameres of symmetrical structure, as in fig. 6. The male holotype is almost complete (segments 7 to 11 of right antenna missing); the second male (paratype) lacks the left fore leg and both mid legs. See also the SEM photographs in Appendix.

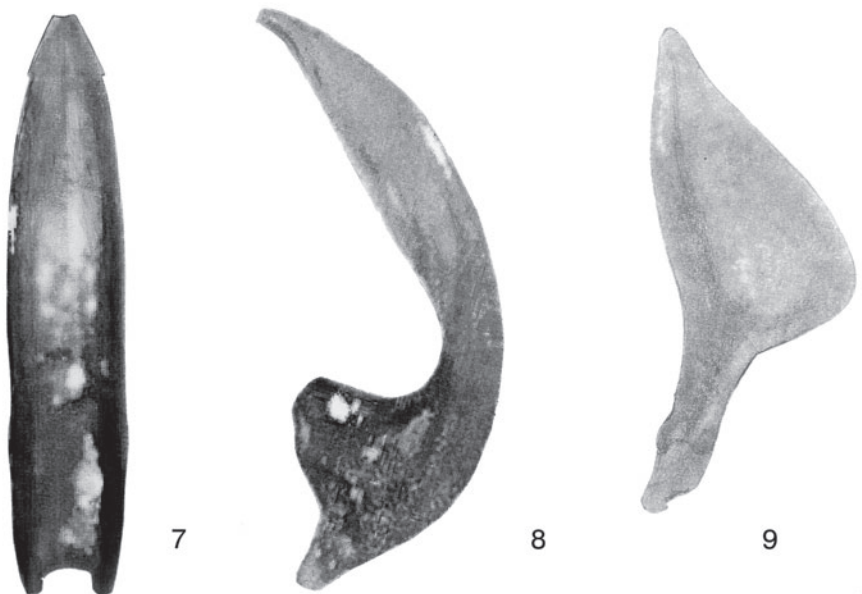
Female: Difficult to separate by external characteristics.

Etymology: The name is an adjective that emphasizes the reticulate dorsal surface of the species.

Remarks: The new species is characterized by the reticulate dorsal surface, the broad base of pronotum and the structure of aedeagus. It is difficult to fit this species into the revised key to African *Herophydrus* (BISTRÖM & NILSSON, 2002) because the head frontal margin is slightly different in the sexes: rim complete in male, shortly broken in females. However, as the key applies to males, its best position is at point 8, close to *H. confusus* and *H. pauliani*. The label data show that *H. reticulatus* lives in cold mountain waters, with very low dissolved electrolytes.



Figs 4 - 6. *Herophydrus reticulatus* n. sp. - 4: Penis in dorsal vision. 5: Penis in lateral vision. 6: Right paramere.



Figs 7 - 9. *Herophydrus goldschmidti* n. sp. - 7: Penis in dorsal vision. 8: Penis in lateral vision. 9: Right paramere.

Herophydrus goldschmidti n. sp.

Type material: 1 male, labelled: Madagascar, Tampoketsan Ankazobe (Antananarivo), spring stream exp. W. W from R.N. 4 (km 157) m 1400 asl, 29.XI.2001, 20.1 °C, 0.002 mS/cm. The only specimen is the holotype of the new species.

Description

Size: Length of body 4.20 mm, breadth 2.50 mm.

Head: Black with transverse ferruginous marking posterior to eyes. Rim of frontal margin quite distinct, medially fine, hardly discernible but continue. Frontal outline rounded, medially slightly concave. Frontal depressions clearly visible. Punctuation rather fine, almost evenly distributed, finer and sparser posteriorly. At inner margin of eyes a dense row of punctures. Finely microreticulate.

Pronotum: Black, lateral outline somewhat curved; marginal rim continue, nearly reaching the anterior corners. Punctures coarse and dense at base and along anterior margin, finer on the disc. Obscurely microreticulate, rather shiny at base.

Elytra: Black with confuse transverse ferruginous markings, near base and at middle, and a preapical spot. The lateral outline near apex is slightly incavate, with a slightly hydrovatine shape. Medium size punctures, becoming denser and almost confluent at apex. Shiny, not reticulate. Dorsal and lateral rows of punctures clearly visible, deepened at middle.

Ventral side: Black, shiny, with fairly coarse punctures on sides of metasternum, metacoxae and basal abdominal sternites, finer and sparser on other sternites, but apical sternite fairly densely punctured. Metacoxal plate not keeled. Epipleura dark ferruginous.

Antennae ferruginous with segments 5 - 11 darkened in part. Legs dark ferruginous.

Male: Metacoxal plate and metafemurs not modified. Protarsi narrowing anteriorly. Penis as in figs 7 and 8. Parameres of symmetrical structure, as in fig. 9; they exhibit a peculiar shape: narrow at base, then widened and subtriangular. See also the SEM photographs in Appendix.

Female: Unknown.

Etymology: The species is dedicated to Tom Goldschmidt, one of its collectors together with Reinhard Gerecke.

Remarks: A species recognizable by the following features: large size, unbroken rim of frontal margin of head, entirely black pronotum, evi-

dent elytral rows of punctures, shape of penis and parameres. In the key by BISTRÖM & NILSSON (2002) *Herophydrus goldschmidti* n. sp. should be placed at point 8 close to *H. pauliani* Guignot, from which it differs mainly by the shape of penis, that is narrowly truncate and even incised at apex in dorsal aspect, and lacking the apical denticle of *pauliani* in lateral aspect.

The integuments of the studied specimen were partly covered by a hard ferruginous scale, difficult to remove, particularly so inside punctures; the scale was not removed from part of the left elytron, near apex.

Also this species was collected in very fresh spring water, in the mountains.

Rbantus manjakatampo n. sp. (fig. 20)

Type material: 1 male, labelled: Madagascar, Ankaratra (Antananarivo), Reserve Manjakatampo, spring stream exp. SE. N deviation to Analamitana (left affl. MD 107) m 1850 asl, 8.x.2001, 16.0 °C, 0.003 mS/cm. The only specimen is the holotype of the new species.

Description

Size: Length of body 11.88 mm, breadth 5.94 mm.

Head: Testaceous and black, with colour pattern as in fig. 20. Dense reticulation of well impressed meshes, each containing one or two very fine punctures. A few scattered medium size punctures between eyes.

Pronotum: Testaceous ferruginous, without rim at lateral margin. Dense reticulation of well impressed meshes, smaller than on head; some meshes contain a very fine puncture. Medium size punctures arranged along the anterior and posterior borders, as usual in most species of *Rbantus*. The dense reticulation gives the appearance of a rugulose surface.

Elytra: Testaceous ferruginous, with regularly interspersed dark spots, leaving paler sides and yellow sutural lines. Reticulation of polygonal meshes, larger and less impressed than on pronotum, some containing a very fine puncture; the reticulation is double at middle and posteriorly.

Ventral side: Dark brown to black, prosternum ferruginous, posterior margin of abdominal sternites brownish, epipleura ferruginous.

Antennae and mouth appendages, fore and mid legs ferruginous with darkened femora; hind legs brown.

Male: Penis as in fig. 13; left paramere as in fig. 12. Fore and mid tarsi broadened. Fore claws robust, elongate, regularly curved, of nearly equal shape and length (Fig. 11). Mid claws different in shape and nearly equal in length; the posterior (inner) claw is broad, less curved and very strong (Fig. 10). See also the SEM photographs in Appendix.

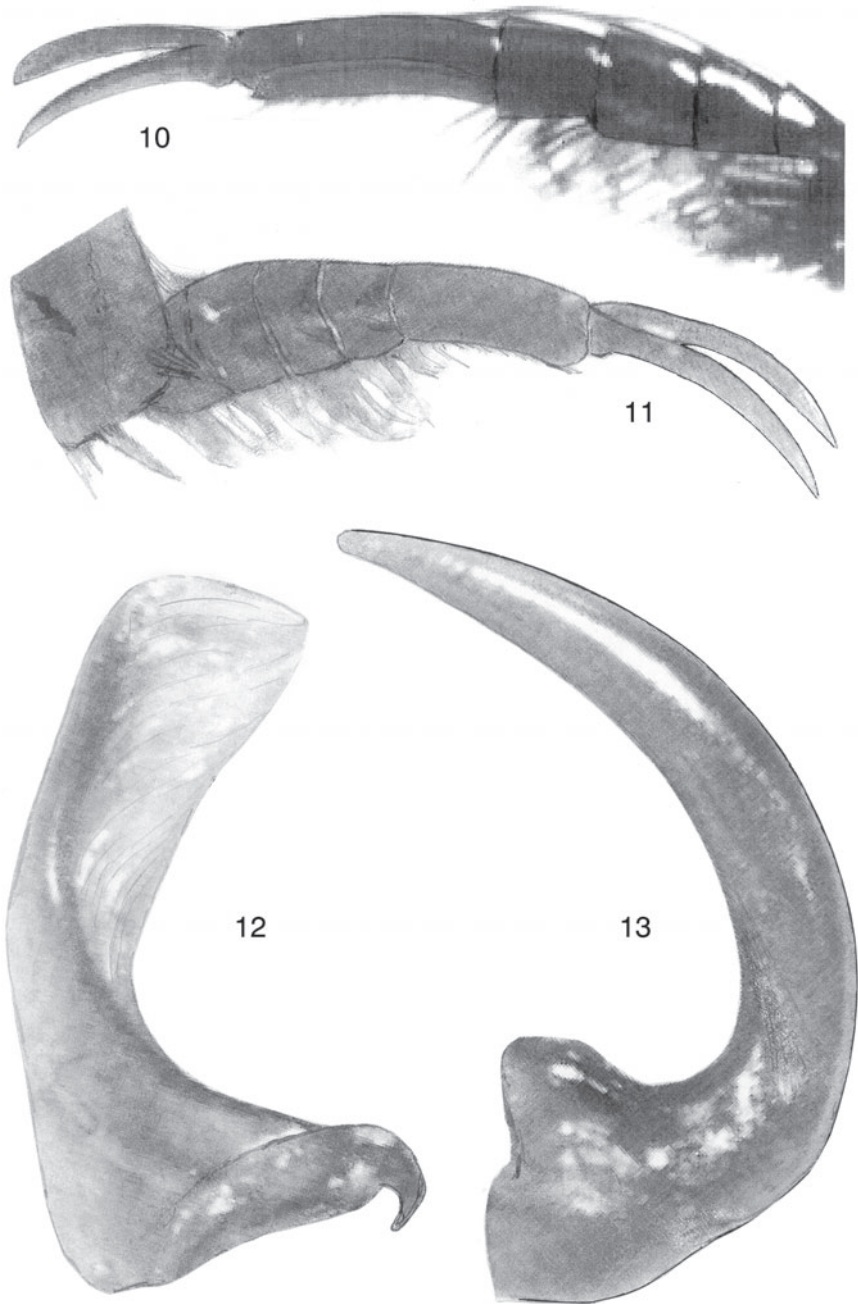
Female: Unknown.

Etymology: Named after the type locality of the species, the natural reserve of Manjakatampo, well-known for its peculiar biodiversity and the richness of Dytiscidae (see also ROCCHI, 1991). The name is a noun in apposition.

Remarks: Due to the complete lack of marginal rim of pronotum, the n. sp. belongs to Guignot's «groupe latus» (GUIGNOT, 1961). We have no doubt that this taxon differs from all known Madagascan *Rhantus*, but for the enigmatic *Rhantus stenonychus* Régimbart, whose description fits well the new species except for the fore and mid claws. The fore and mid claws of *R. stenonychus* are different in length and shape, according to Régimbart's description (RÉGIMBART, 1895: 179): «ongles antérieurs très longs et grêles, sinués en dessous, courbés d'abord en dehors, puis en dedans, un peu divergents au sommet, l'externe à peine plus court; ongle intermédiaire externe dilaté et aplati en forme de faucille large, arquée et aiguë, l'interne du double plus court, grêle, non aplati et beaucoup plus arqué».

Neither Guignot (GUIGNOT, 1961) nor Balke (BALKE, 1992) could trace the type of *R. stenonychus*, which is possibly lost. Since the shape of fore and mid claws is very important in the genus *Rhantus* and often conclusive in species taxonomy, we assign the specimen from Manjakatampo to a new species although we could not compare it with the unobtainable *R. stenonychus*.

The label data show that *Rhantus manjakatampo* n. sp. was collected at high elevation in cold spring water, with very low content of dissolved electrolytes.



Figs 10 - 13. *Rbantus manjakatampo* n. sp. - 10: Mesotarsi and mid claws. 11: Protarsi and fore claws. 12: Left paramere. 13: Penis in dorsal vision.

Neptosternus bilardo n. sp. (fig. 21)

Type material: 6 exx. labelled: Madagascar, Andohahela (Tulear), Isaka, W stream at S Nat. Pk border, 200 m asl, 9.IX.2001, 19.2 °C, 0.091 mS/cm. The series comprises three males (holotype and 2 paratypes), two female paratypes and one undissected, possibly female, paratype. One paratype is deposited in Rocchi collection.

Description

Size: Length of body 4.00 - 4.10 mm, breadth 2.10 - 2.20 mm. Holotype: Length of body 4.05 mm, breadth 2.15 mm.

Head: Black, shiny, very finely microreticulate and indistinctly micropunctate, with sparse fine punctures. Microreticulation more impressed on vertex. Internal border of the eyes rather coarsely punctured, with a short longitudinal depression also densely punctured.

Pronotum: Piceous to black, unicoloured. Microreticulate and very finely and sparsely micropunctate, more evidently so at base, with a few fine punctures along the base and in the anterior transverse row, interrupted at middle.

Elytra: Black with a yellow pattern as in fig. 21. The juxta sutural, rectangular mark, at the middle, is present in two exx. only (one male and one female paratypes). The holotype and three paratypes completely lack that yellow spot. The remaining yellow marks are approximately constant in all specimens. Elytral surface indistinctly microreticulate.

Ventral side: Ferruginous, indistinctly microreticulate, almost impunctate. Prosternal process bordered with a brown margin. Prosternum keeled. Median spine of the prosternal process long and stout, gradually narrowed to apex; lateral spines much shorter. The almost parallel metacoxal lines are deeply incised and continue to metasternum. Last sternite keeled.

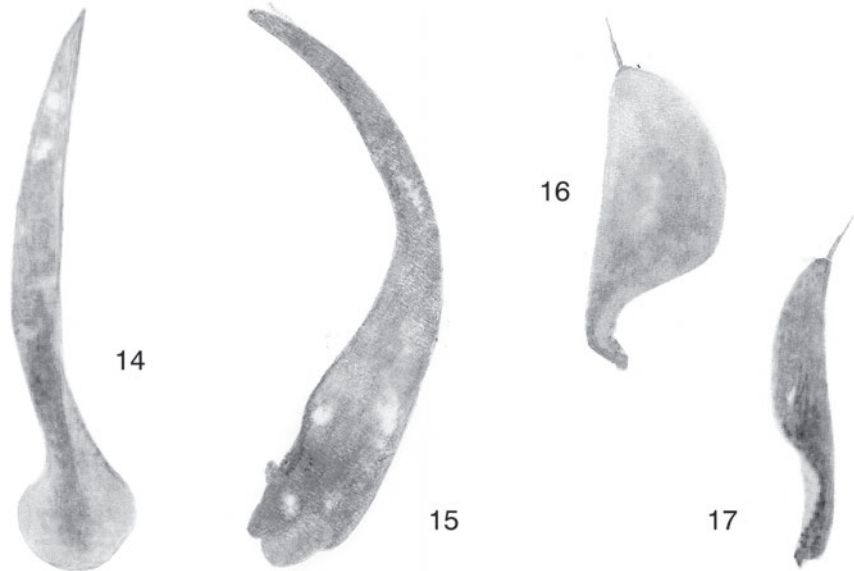
Antennae and mouth appendages testaceous; antennal segments 4 to 7 almost 2.5 times longer than broad.

Legs ferruginous.

Male: Penis as in figs 14 and 15. Parameres as in figs 16 and 17. See also the SEM photographs in Appendix.

Etymology: Named in honour of our friend Armando Bilardo, for his thirty-five-year researches on the Dytiscidae of Gabon.

Remarks: As for the elytral pattern and the keeled prosternum, the species belongs to Groupe I in OMER-COOPER (1970). The other Madagascan species attaining 4 mm in length are *Neptosternus oblongus* Régim-



FIGS 14 -17. *Neptosternus biaraoi* n. sp. - 14: PENIS in dorsal vision. 15: PENIS in lateral vision. 16: Right paramere. 17: Left paramere.

bart, 1895 (3.6 to 4.2 mm) and *N. silvester* Guignot, 1960 (3.7 to 3.9 mm). *Neptosternus bilardoii* n. sp. differs from both by the narrow, regularly tapering penis, not sinuate at the right side before apex, and the unicoloured pronotum. The strongly impressed metacoxal lines and the narrow, elongate, left paramere are also good diagnostic characters. This species shares the very short lateral spines of the prosternal process with most Madagascan *Neptosternus*.

The African and Madagascan species of *Neptosternus* are very difficult to identify. Joyce Omer-Cooper (OMER-COOPER, 1970) made a great revisional work and described or redescribed several African species, studying the principal dorsal, ventral and sexual features, and criticizing the reliability of the taxonomic characters used so far. However the taxonomy of *Neptosternus* still remains problematic. As stated by OMER-COOPER (l.c.), in some species the microsculpture of the dorsal side can be differently described either as microreticulation or micropunctuation depending on slight changes in the direction of light and in the focus. That is why in the description of the new species we assign little taxonomic value to the microsculpture of the upper side.



Fig. 18. *Uvarus gereckei* n. sp. (scale bar = 1 mm)



Fig. 19. *Herophydrus reticulatus* n. sp. (scale bar = 1 mm)

LIST OF THE IDENTIFIED SPECIES

The following species were found in the studied material. Species marked with (?) are either represented by females only, or have been identified with doubt or not at all being teneral specimens. The number of exx. is given. *Hydrovatus oblongus* Omer-Cooper is apparently new to Madagascar, but we declare that we could not compare this species with typical *oblongus*; its identification rests on BISTRÖM (1996). In each family the species are in alphabetical order. Species in bold are new species.

Haliplidae

Peltodytes quadratus Régimbart, 1895 2

Dytiscidae

Africophilus bartolozzii Rocchi, 1991 (fem.) 1

Bidessus ceratus Guignot, 1941 7

Bidessus longistriga Régimbart, 1895 (?) (fem.) 1

Bidessus perexiguus Kolbe, 1883 5

Clypeodytes concivis Guignot, 1955 15



Fig. 20. *Rhantus manjakatampo* n. sp. (scale bar = 3 mm)



Fig. 21. *Neptosternus bilardoii* n. sp. (scale bar = 1 mm)

<i>Clypeodytes insularis</i> Guignot, 1956 (?) (fem.)	3
<i>Clypeodytes sordidipennis</i> Régimbart, 1903	5
<i>Copelatus distinguendus</i> Régimbart, 1903	1
<i>Copelatus owas</i> Régimbart, 1895	3
<i>Copelatus polystrigus</i> Sharp, 1882	2
<i>Herophydrus goldschmidti</i> n. sp.	1
<i>Herophydrus reticulatus</i> n. sp.	6
<i>Herophydrus</i> sp. (?) (fem.)	1
<i>Hydaticus bivittatus</i> Laporte de Castelnau, 1835	1
<i>Hydaticus dorsiger</i> Aubé, 1838	5
<i>Hydaticus exclamationis</i> Aubé, 1838	1
<i>Hydroglyphus flavoguttatus</i> (Régimbart, 1895)	5
<i>Hydroglyphus geminodes</i> (Régimbart, 1895) (?) (fem.)	2
<i>Hydroglyphus plagiatu</i> s (Kolbe, 1883)	3
<i>Hydrovatus oblongus</i> Omer-Cooper, 1957	5
[new to Madagascar]	

<i>Hydrovatus parvulus</i> Régimbart, 1899	3
<i>Hydrovatus pictulus</i> Sharp, 1882	3
<i>Hydrovatus</i> sp. 1 (?) (fem.)	1
<i>Hydrovatus</i> sp. 2 (?) (fem.)	1
<i>Hyphydrus cycloides</i> Régimbart, 1889	1
<i>Hyphydrus separandus</i> Régimbart, 1895	7
<i>Laccophilus addendus</i> Sharp, 1882	1
<i>Laccophilus alluaudi</i> Régimbart, 1899	11
<i>Laccophilus complicatus</i> Sharp, 1882	11
<i>Laccophilus lateralis</i> Sharp, 1882	1
<i>Laccophilus pallescens</i> Régimbart, 1903	2
<i>Laccophilus posticus</i> Aubé, 1838	7
<i>Laccophilus pseustes</i> Guignot, 1955 (?) (fem.)	1
<i>Liodessus luteopictus</i> (Régimbart, 1897)	7
<i>Neptosternus bilardoï</i> n. sp.	6
<i>Pachynectes hygrotoides</i> (Régimbart, 1895)	7
<i>Philaccolus elongatus</i> (Régimbart, 1903)	1
<i>Pseuduvarus vitticollis</i> (Boheman, 1848)	20
<i>Rhantaticus congestus</i> (Klug, 1833)	4
<i>Rhantus manjakatampo</i> n. sp.	1
<i>Uvarus gereckei</i> n. sp.	4
<i>Uvarus betsimisarakus</i> Guignot, 1939	2
<i>Uvarus</i> sp. 1 (not dissected)	1
<i>Uvarus</i> sp. 2 (not dissected)	1
<i>Uvarus</i> sp. near <i>ejuncidus/venustus</i> (?) (soft)	2
<i>Yola costipennis</i> (Fairmaire, 1869)	19
Noteridae	
<i>Canthydrus concolor</i> Sharp, 1882	28
<i>Canthydrus gibberosus</i> Guignot, 1951	2
<i>Canthydrus guttula</i> (Aubé, 1838)	12
<i>Hydrocanthus constrictus</i> Régimbart, 1895	2
<i>Neohydrocoptus seriatus</i> (Sharp, 1882)	9
<i>Synchortus asperatus</i> (Fairmaire, 1869) (?) (fem.)	1

CONCLUSIONS

The studied material (254 exx.) comprises 1 species of Haliplidae, 46 species of Dytiscidae and 6 species of Noteridae, in all 53 species, among which there are 10 unidentified taxa, represented by either females only or teneral specimens that cannot be identified with certainty. Five new species are described.

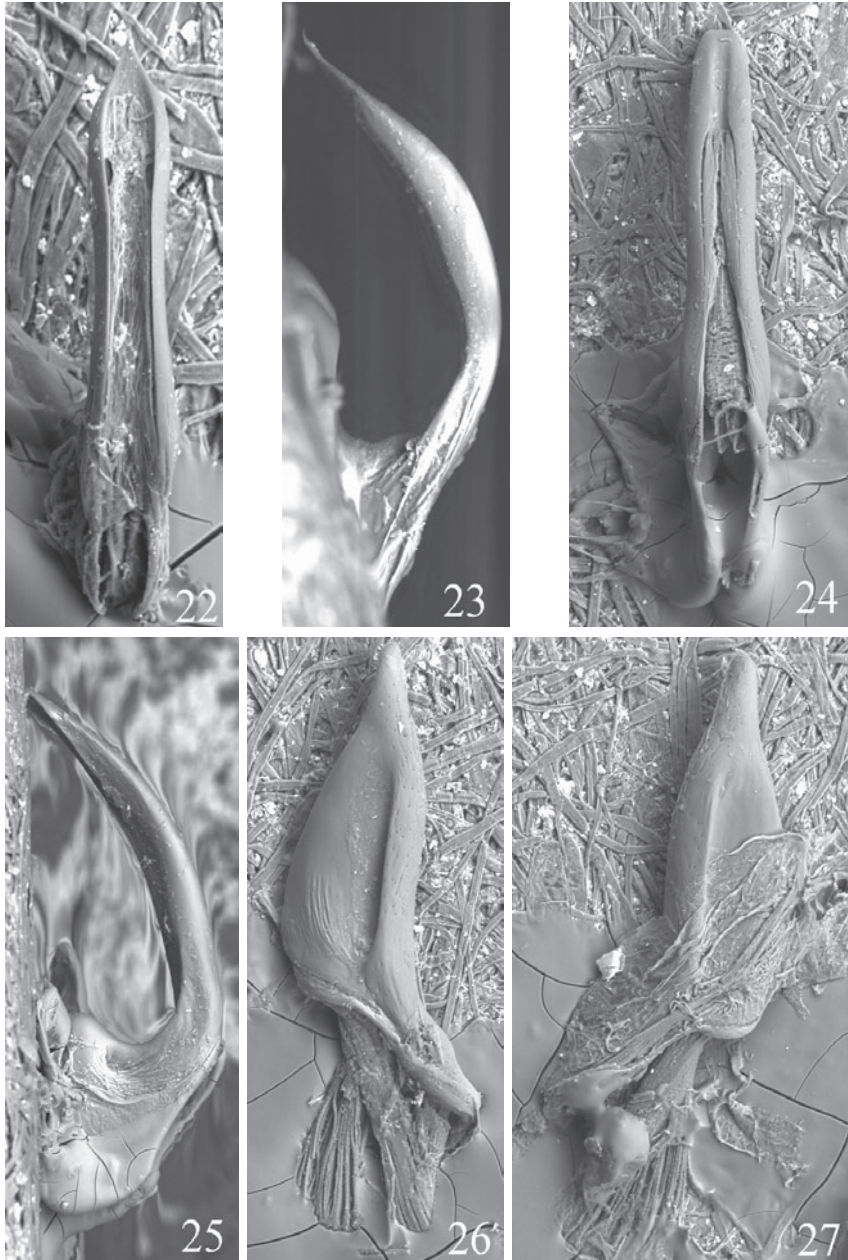
APPENDIX

Additional SEM photographs

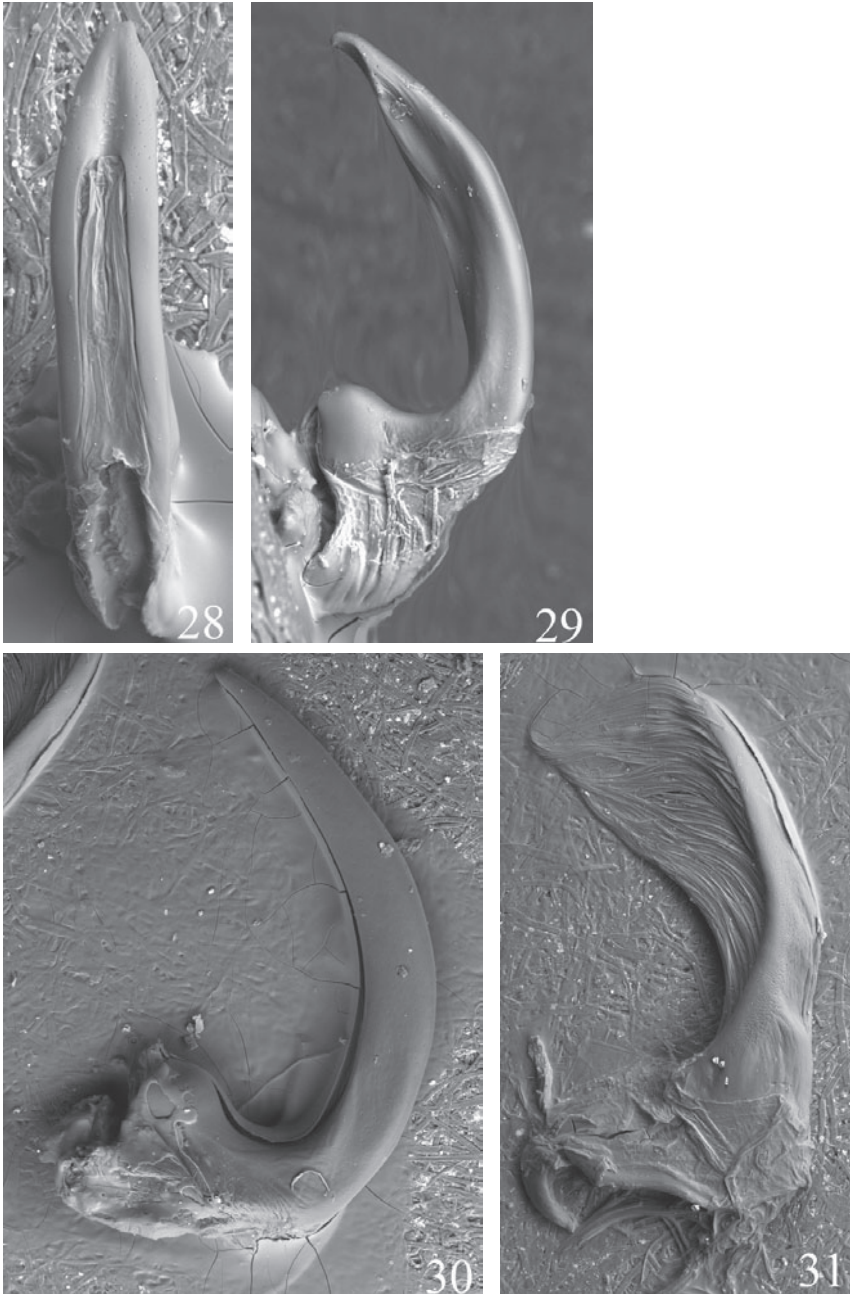
After this paper was sent to the editor and the studied material was returned to the Natural History Museum, London, the new species were examined by the water-beetles specialist Johannes Bergsten, temporarily co-operating with the N.H.M., London. He took some SEM photographs of the new species dealt with here, and very kindly sent us the files with the permission to use them in this paper. The photographs of genital pieces were taken as they are glued near the specimens, so they show traces of glue and residual dust, however they add important details to our drawings. Unfortunately, since the paper was already in print, we can hardly insert a few SEM photographs in the following pages, as far as such addition is compatible with the journal pagination. We gratefully acknowledge Bergsten's friendly co-operation.

Note on types depository

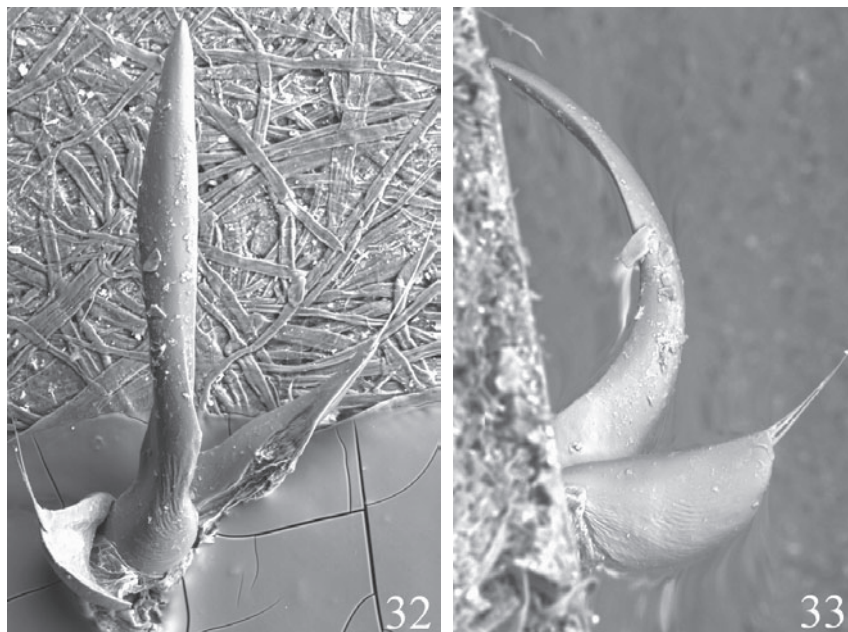
While this paper was in print, we were informed of a controversy on the actual ownership of the Madagascan material dealt with here. All aquatic insects collected in 2001-2002 by Gerecke and Goldschmidt in Madagascar were purchased by the Natural History Museum, Vienna, but were wrongly deposited in the N.H.M., London. As a consequence of an agreement between the curators of these Museums, the material shall be transferred from London to Vienna. Therefore it must be emphasized that the true depository of the collections and the types of the new species will be «Naturhistorisches Museum Wien» instead of the Natural History Museum, London.



Figs. 22-27. SEM photographs by Johannes Bergsten. 22: *Uvarus gereckei* n. sp., penis dorsal; 23: *Uvarus gereckei* n. sp., penis lateral; 24: *Herophydrus reticulatus* n. sp., penis dorsal; 25: *Herophydrus reticulatus* n. sp., penis lateral; 26 - 27: *Herophydrus reticulatus* n. sp., parameres.



Figs. 28-31. SEM photographs by Johannes Bergsten. 28: *Herophydrus goldschmidti* n. sp., penis dorsal; 29: *Herophydrus goldschmidti* n. sp., penis lateral; 30: *Rhantus manjakatempo* n. sp., penis lateral; 31: *Rhantus manjakatempo* n. sp., right paramere.



Figs. 32-33. SEM photographs by Johannes Bergsten. 32: *Neptosternus bilardoï* n. sp., penis dorsal; 33: *Neptosternus bilardoï* n. sp., penis lateral.

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