

UDC 595.76(691)

## SOME NEW CURIOUS CLICK-BEETLE SPECIES (COLEOPTERA, ELATERIDAE) FROM MADAGASCAR

V. G. Dolin<sup>1</sup>, C. Girard<sup>2</sup>

<sup>1</sup> Schmalhausen Institute of Zoology, NAS of Ukraine, vul. B. Khmel'nitskogo, 15, Kyiv-30, 01601 Ukraine

<sup>2</sup> Museum National d'Histoire Naturelle, 45, rue de Buffon, Paris, 75005 France

Accepted 18 March 2003

**Some New Curious Click-Beetle Species (Coleoptera, Elateridae) from Madagascar.** Dolin V. G., Girard C. — Four new species of the genus *Agrypnus* Eschscholtz, 1829 are described and illustrated in this paper: *A. gilberti* Dolin & Girard, sp. n., *A. gibberiphorus* Dolin & Girard, sp. n., *A. claudinae* Dolin & Girard, sp. n., *A. latissimus* Dolin & Girard, sp. n., differing by uncommon body shape and vestiture from other species of this genus in the fauna of Madagascar.

**Key words:** Coleoptera, Elateridae, Agrypninae, *Agrypnus*, new species, Madagascar.

**Несколько новых необычных видов жуков-щелкунов (Coleoptera, Elateridae) с Мадагаскара.** Доллин В. Г., Жирар К. — Описаны 4 новых вида щелкунов рода *Agrypnus* Eschscholtz, 1829: *A. gilberti* Dolin & Girard, sp. n., *A. gibberiphorus* Dolin & Girard, sp. n., *A. latissimus* Dolin & Girard, sp. n. and *A. claudinae* Dolin & Girard, sp. n., отличающиеся необычной формой тела и опушением от всех ранее известных видов этого рода с Мадагаскара.

**Ключевые слова:** Coleoptera, Elateridae, Agrypninae, *Agrypnus*, новые виды, Мадагаскар.

### Introduction

The tropical regions still remain the source of new intriguing undescribed forms in most insect groups. This completely relates to the African region, and especially characteristic to the poorly explored island of Madagascar with its high faunal and floral endemism. Descriptions and records of Madegassian click-beetles are dispersed throughout the coleopterological literature. Only some genera have been revised thus far: *Zoro-chrus* Thomson, *Madadicus* Stibick (as *Monadicus* Candeze) and *Proquasimus* Fleutiaux (Fleutiaux, 1932 a), *Dorygopnus* Candeze (Fleutiaux, 1932 b), *Lycoreus* Candeze, *Abiphis* Fleutiaux and *Mocquersysia* Fleutiaux (Fleutiaux, 1942), *Elasmosomus* Schwarz (Mouchet, 1949), *Tabula* Fleutiaux (Mouchet, 1952), *Crepicardus* Hyslop (Calder, 1981). The species of very voluminous and complex genera like *Agrypnus*, *Lacon* Castelnau, *Phedomenus* Candeze, *Elastrus* Candeze, *Cardiophorus* Eschscholtz, *Cardiotarsus* Eschscholtz may be identified only on the direct access to the descriptions throughout entomological literature of the last two centuries and to the types deposited in the museums of Paris, Brussels, London and Genoa.

In the present paper, 4 new click-beetle species of the genus *Agrypnus* are described; they are distinct by the body shape from all hitherto known species of this genus in the world fauna. The new species were found in the collections of the Museum Nationale d'Histoire Naturelle in Paris as well as in the materials collected in Madagascar by the authors and our Czech colleagues during the last decade. Type material is deposited in the Museum Nationale d'Histoire Naturelle (Paris), the Schmalhausen Institute of Zoology (Kyiv) and in private collections of Dr. Peter Cate (Vienna), Dr. Jan Horak and Dr. Ivo Jenis (Czech Republic).

The following abbreviations are used throughout the text: MNHN — Museum d'Histoire Naturelle, Paris; SIZK — Schmalhausen Institute of Zoology, Kyiv; CCW — collection of Peter Cate, Vienna; CHP — collection of Jan Horak, Prague; CJCZ — collection of Jenis, Czech Republic.

### Description of new species

#### *Agrypnus* (s. str.) *gilberti* Dolin & Girard, sp. n. (fig. 1–3)

**Material.** Holotype ♂, "Central Madagascar, Fenerive, Perrot Frere, 1<sup>er</sup> Trim, 1896", with the handwritten label by E. Fleutiaux: "gen. nov, voisin Adelocera Lacon Fleutiaux det." (MNHN). paratypes: ♂, geographical label as in the holotype (MNHN); 4 ♂, 4 ♀, SW Madagascar, Morondava distr., Miandrivazo, 246 km W of Antsirabe, 5.01.2002, ♂, D. Hauk (CCW), with same label, ♀ (SIZK); 3 ex., C. Madagascar, Fianarantsoa prov., Ranomafana env., 28.01–6.02.1995, I. Enis (CCW); ♀, Madagascar mer. or., Ranomafana, 90 km E Fianarantsoa, 1–5.12.1999, F. & L. Kantner (CCW); 3 ♂, ♀, E Madagascar, Tamatave distr, Andasibe, 17–30.12.2001, J. Horak (CHP; ♂ — SIZK); 2 ♂, ♀, ibidem, "Perinet" Nat. Parc, 19–31.12.2001, V. Dolin, R. Andreeva (SIZK).

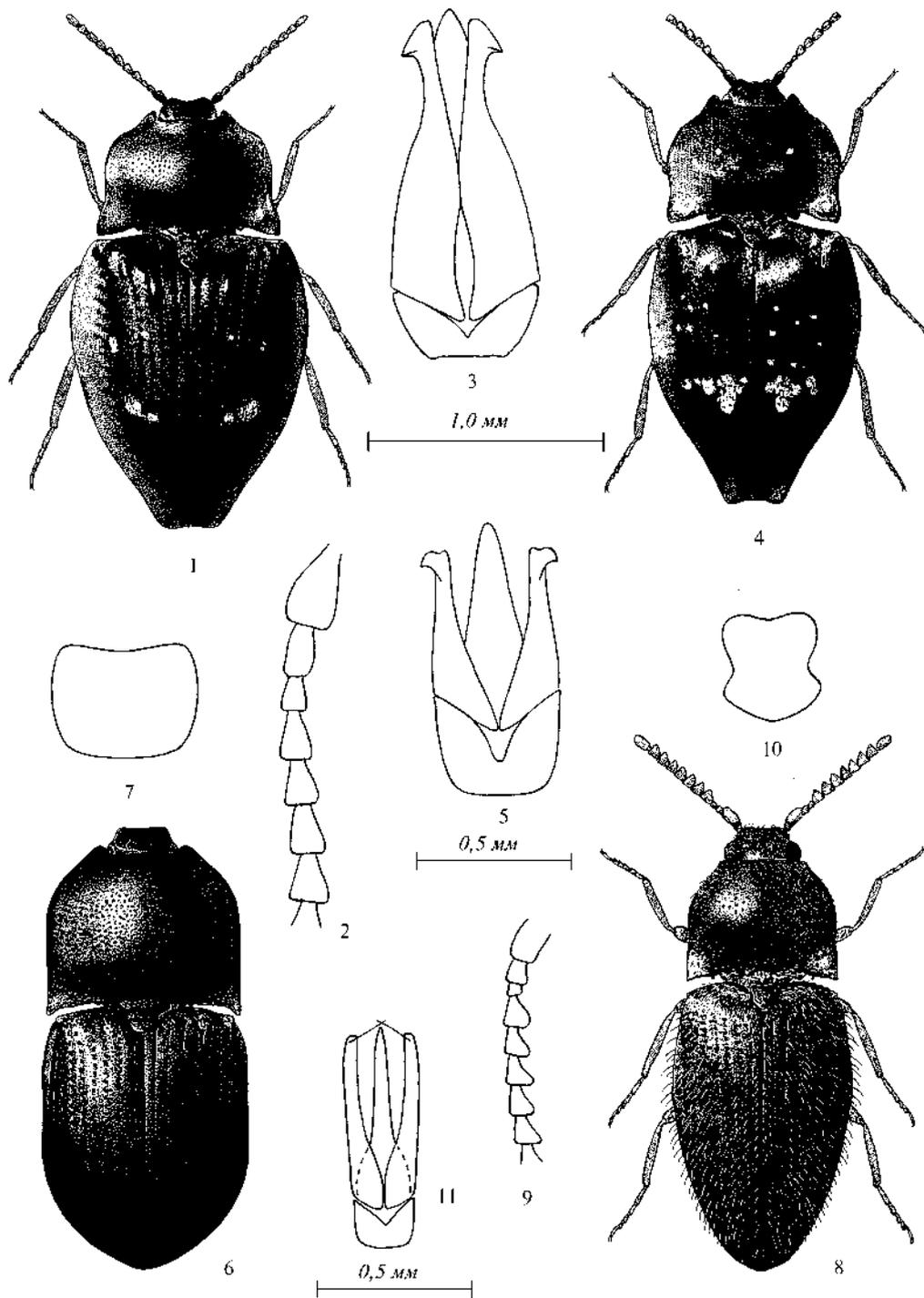


Fig. 1-11. 1-3. *Agrypnus gilberti* (holotype ♂): 1 — dorsal view; 2 — first segments of antenna; 3 — aedeagus; 4-5. *Agrypnus gibberiphorus* (holotype ♂): 4 — dorsal view; 5 — aedeagus; 6-7. *Agrypnus latissimus* (holotype ♀): 6 — dorsal view; 7 — scutellum; 8-11. *Agrypnus claudinae* (holotype ♂): 8 — dorsal view; 9 — first segments of antenna; 10 — scutellum; 11 — aedeagus.

Рис. 1-11. 1-3. *Agrypnus gilberti* (голотип ♂): 1 — жук сверху; 2 — первые членики усиков; 3 — эдеагус; 4-5. *Agrypnus gibberiphorus* (голотип ♂): 4 — вид сверху; 5 — эдеагус; 6-7. *Agrypnus latissimus* (голотип ♀): 6 — вид сверху; 7 — щитик; 8-11. *Agrypnus claudinae* (голотип ♂): 8 — вид сверху; 9 — первые членики усиков; 10 — щитик; 11 — эдеагус.

Description of holotype (fig. 1). Body very wide, strongly flattened, dark-brown to black-brown, along the elytra margins red-brown, antennae and legs yellow-brown. Dorsal surface with spot of short and long whitish and bronze scales arising from punctures. Length 11.6 mm, width 6.0 mm.

Frons flat on vertex, strongly depressed near the anterior margin, deep unevenly punctured. Antenna short, not reaching apex of posterior angle of pronotum on the length of 2 last joints; 2nd antennal joint feebly depressed, a little longer than third; 3rd subconical, twice as long as wide, joints 4–10 serrate, subequal (fig. 2).

Pronotum very wide, 1.6 times wider than long, widest at hind angles, slightly narrowed to the anterior third and strongly arcuate. Posterior angles short, flat, without carina, to form an angle of 80°. Central part of disc flat, unevenly punctured.

Scutellum subpentagonal, slightly concave, covered with bronze scales. Elytra egg-shaped, with the extreme width at anterior third, only 1.33 times longer than wide, striae formed by deep punctuation, interstriae slightly convex, smooth, brilliant, very finely wrinkled. Apex of elytra almost straight.

Aedeagus as in figure 3.

The female does not differ substantially from the male.

Variability. Length 10.8–12.3 mm, width 5.8–6.5 mm.

Etymology. The new species is dedicated to the chef of de Department Faune of the Parc Botanique et Zoologique de Tsimbazaza, Dr. Rakotoarivo Gilbert, to whom we mostly obliged for generous support he provided.

Comparative remarks. The new species belongs to the same group with *A. sinuatus* Candeze, 1857; it fits near to *A. badeni* Candeze, 1878 in the shape of pronotum, but differs from all species of this group by the shape of very short elytra.

***Agrypnus gibberiphorus* Dolin & Girard, sp. n. (fig. 4–5)**

Material. Holotype ♂, NE Madagascar, Antalaha, C. L. Vadon (MNHN). Paratype ♀, with same labels as in the holotype (SIZK).

Description of the holotype. (fig. 4). Length 11.7 mm, width 7.5 mm.

Almost identical to previous species, of the same colour, size, shape and proportions of the body. As in *A. gilberti* sp. n. pronotum is widest at the hind corners, which form ca. 90° angle; pronotum disc with two tubercles, located in the middle of hind third of the segment, sides slightly undulated at anterior half. Elytra with two big tubercles in anterior third, apex concave, striae formed by deep points, interstriae flat, slightly wrinkled.

Aedeagus as in figure 5.

Female does not differ substantially from the male.

Comparative remarks. From previous species can be distinguished by the indicated characters and shape of aedeagus.

***Agrypnus latissimus* Dolin & Girard, sp. n. (fig. 6–7)**

Material. Holotype ♀, SW Madagascar, Toliara prov., Saint Augustin env., 13–18.02. 1995, Ivo Jenis) (CCW). Paratype ♀, with same labels as in holotype (CJCZ)

Description of the holotype (fig. 6). Body very wide, robust, parallel-sided, black, covered with whitish scales arising from punctures, antennae and legs dark brown. Length 12.2 mm, width 5.4 mm.

Frons flat on vertex, feebly depressed near anterior margin; punctures deep, coarse, very dense with very narrow intervals. Antenna short, just reaching middle of pronotum; 2nd and 3rd segments subequal, together clearly longer than 4th; segments from 4th serrate, subtriangular, as long as wide.

Pronotum 1.25 times wider than long, at anterior third almost parallel, a little wider in the middle, in anterior third strongly rounded, regularly convex at middle. Pun-

ctuation deep as on head, but distance between the dots as wide as diameter of dot or a little more. Posterior angles short, triangular (ca. 90°), flat, without carina.

Scutellum 1.6 times wider than long, slightly convex, coarsely punctuated (fig. 7).

Elytra 1.7 times longer than pronotum and 1.3 times longer than wide, subparallel to hind third and wide rounded at apex. Striae strongly punctured, interstriae flat, coarsely wrinkled, deep strongly punctured, the points two times smaller only than the ones in striae.

Male unknown.

Comparative remarks. The new species can be distinguished from all known *Agrypnus* species by the uncommon shape and proportion of the body.

***Agrypnus claudinae* Dolin & Girard, sp. n. (fig. 8–11)**

Material. Holotype (♂) and 2 paratypes (♀), Central Madagascar, Moramanga distr., Andasibe env., National Park "Perinet", 950 m, 1–5.01.2002, V. Dolin, R. Andreeva (SIZK).

Description of the holotype. Body porrect oval, moderately convex, dark red brown except hind half of elytra black-brown, head and pronotum closed with recumbent whitish yellow moderately long setae, pubescence on the elytra double: short recumbent and long stand-up (see fig. 8). Length 4.5 mm, width 2.1 mm (fig. 8).

Head with weak longitudinal impression at the middle, strongly impressed between antennae; deeply and coarsely punctuated. Antenna short, not reaching the base of posterior angles of pronotum on the length of two last segments; 2<sup>nd</sup> segment short, a little longer than wide, 3<sup>rd</sup> segment globose, clearly shorter and smaller than 2<sup>nd</sup>; 4–10<sup>th</sup> segments triangular, serrate, visible widest than long (fig. 9).

Pronotum strongly convex at middle, 1.3 times wider than long, sides parallel on basal half and strongly rounded narrow toward anterior angles; disc moderate densely, deeply and regularly punctuate. Posterior angles of segment flat and wide, pointed apically and form angle almost 90°. Propleuron each with oblique groove for front femur with tibia and tarsus.

Scutellum elongate, slightly convex at the middle, 1.2 times longer than wide in base, with two rounded incisions on the sides in the middle, deeply and scarcely punctuated (fig. 10). Elytra porrect oval, widest before its middle, 2.5 times longer than pronotum and 1.75 times longer than wide. Striae formed by deep punctuation, interstriae flat, shine, sparsely punctured.

Aedeagus as in figure 11.

Female not differing substantially from the male.

Etymology. The new species is dedicated to M-me Marie Claudine Ranorofoa, assistante Primatologiste Nutritionniste Department Faune of the Parc Botanique et Zoologique de Tsimbazaza for her kind assistance during our work in Madagascar.

Comparative remarks. In the habitus, the new species is similar to *Agrypnus albopictus* Candeze, but differs well from the latter by the colour, shape of aedeagus and joints of antenna, from the species with double pubescence can be distinguished by the small size and colour of the body, groove on the propleuron and the shape of scutellum and aedeagus.

Calder A. A. The Madagascan click-beetle genus *Crepicardus* (Elateridae) and its relationship to the Pyrophorinae // Syst. Entomol. — 1981. — 6. — P. 355–372.

Fleutiaux E. Sur quelques Elaterides de Madagascar // Soc. Entomol. Fr., Livre de centenaire. — 1932 a. — P. 189–193.  
Fleutiaux E. Revision des especes malgaches du genre *Dorygopus* Candeze (Coleoptera — Elateridae) // Bull. Mus. — 1932 b. — 2<sup>e</sup> s. — 4, N 7. — P. 856–867.

Fleutiaux E. Sur certains Hemirhipides (Col. Elateridae) // Ann. Soc. Entomol. France. — 1942. — 61. — P. 91–116.

Mouchet J. Deux Elasmosomus nouveaux de Madagascar (Col. Elateridae) // Mem. l'institut sci. de Madagascar. — 1949. — Ser. A. — 3, N 1. — P. 113–115.

Mouchet J. Revision du genre *Tabula* (Coleop. Elateridae) et description d'une espece nouvelle de Madagascar // Naturaliste Malgache. — 1952. — P. 83–86.