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NOTES ON TWO SPECIES OF THE GENUS *FAIRMAIROPLIA* (COLEOPTERA: SCARABAEIDAE: MELOLONTHINAE: HOPLIINI) FROM MADAGASCAR

Васько, Б. М. Нотатки щодо двох видів роду *Fairmairoplia* (Coleoptera: Scarabaeidae: Melolonthinae: Hopliini) з Мадагаскару. *Вісник Харківського ентомологічного товариства*. 2025. Т. XXXIII, вип. 1-2. С. 8–11. DOI: 10.36016/KhESG-2025-33-1-2-2.

Для видів *Fairmairoplia carinata* Lacroix, 1997 та *F. compacta* Lacroix, 1997 наведено нові точки знахідок на території Мадагаскару. На підставі наявного матеріалу доповнено опис виду *F. carinata*, описаного за єдиним екземпляром зі Східного Мадагаскару.

7 рис., 1 назв.

Ключові слова: Хрущі-гоплії, Афротропіка, діагнози, нова локація, таксономія, морфологія.

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New records for *Fairmairoplia carinata* Lacroix, 1997 and *F. compacta* Lacroix, 1997 in Madagascar are given. On the basis of the available material, the description of *F. carinata*, based on a single specimen from Eastern Madagascar, has been supplemented.

7 figs, 1 refs.

Keywords: Monkey beetles, Afrotropical realm, diagnoses, new location, taxonomy, morphology.

Introduction. Lacroix (1997) described the genus *Fairmairoplia* Lacroix, 1997 with 12 species, characterized by compact, short body and small size (4.5–6.5 mm). Among these species, *F. carinata* was described from a single specimen from Eastern Madagascar, and therefore the description was generalized. Based on the analysis of the available material, additional information on the morphology of *F. carinata* was obtained and new data on distribution of *F. carinata* and *F. compacta* are provided.

Materials and methods. This study is based on specimens belonging to the genus *Fairmairoplia* from the personal collection of the author among the unidentified materials collected by Prof. V. G. Dolin† and Dr. R. V. Andreeva on Madagascar in 2000–2002.

The specimens were examined using a stereomicroscope MBS-9; measurements were carried out using an integrated reticle. Length measurement is from the anterior margin of the clypeus to the apex of elytra. All material is from the author's working collection and will be deposited in the I. I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine, Kyiv, Ukraine (SIZK).

Photographs were taken using a Leica Z16 APO stereomicroscope equipped with a Leica DFC 450 camera and processed with LAS Core and Adobe Photoshop software.

The labels are given *verbatim* for the material under study. Terminology and abbreviations follow Lacroix (1997) with minor modifications. Coordinates are given in decimal format.

The map of distribution is modified from map of Google Earth with data from SIO, NOAA, U. S. Navy, NGA, GEBCO Landsat/Copernicus AfriGIS Pty Ltd IBCAO.

Results and discussions.

Genus *Fairmairoplia* Lacroix, 1997

Type species: *Hoplia plicata* Fairmaire, 1903 (original designation).

Diagnosis. Clypeus modified, front edge elongated, in many species with teeth around the angles. Clypeofrontal suture is usually clearly visible. Anterior margin and base of pronotum without marginal bead. Protibiae tridentate, strong, all teeth are located at approximately equal distances. Elytra short, smoothly rounded on apex, not completely covering propygidium. Sexual dimorphism is indistinct.

Geographic distribution. Species of the genus are relatively unevenly distributed in Madagascar: most species are found in the western and eastern regions.

In my opinion (see discussion below), the genus *Fairmairoplia* requires careful examination and division into several species groups. At least, this is true for *F. carinata*, and perhaps also for several other species of the genus. The species is presently known only from two females, therefore additional materials and collecting the male are required to resolve this issue.

***Fairmairoplia carinata* Lacroix, 1997** (Figs 1–5)

Material. Madagascar, Perinet Nat. Park, 1200 m, Andasibe env., 28.11–11.12.2000 (V. Dolin & R. Andreeva leg.) — 1 ♀ (SIZK).

Addition to the description. Habitus of this species resembles *Anisoplia* sp. (Scarabaeidae: Rutelinae: Anomalini) (Fig. 1). Habitus oval (Fig. 1), compact, slightly shiny, rarely and unevenly covered with long, bristle-like scales (only front of the head) and greyish bristles, denser on the lateral margins and apex of elytra. Maxillary palps, antennal segments, antennal club, pro-, meso-, metatibiae (except for apex), entire dorsal (except for head) and ventral side, propygidium, and pygidium brown-yellow; clypeus, apex of pro-, meso-, metatibiae, lateral margins of pronotum and elytra, protarsi and mesotarsi and all claws brownish; front of head and metatarsi dark brown.

Head (Fig. 3). Surface of clypeus with rough punctuation, moderately shiny, matte, frons slightly shiny, with single standing bristles. Clypeus narrowed, front margin with a weak recess, rounded on margins, without teeth. Lateral margins extended in the middle of the length. Genal margin and the basal segment of antenna sparsely covered with yellow elongated bristles with a sharp apex. Clypeofrontal suture is well defined. Ocular canthus hardly goes beyond the eye line, smoothly rounded, covered with thick, dense and long yellow bristles with a sharp apex.

Pronotum (Fig. 3). Anterior margin of pronotum with a row of long, erect bristles; single erect setae are also found on the disc of pronotum. Lateral margins uniformly rounded, slightly serrated in the middle to the posterior angles with a row of long, erect bristles. Base of pronotum in the middle with long, ciliated hairs, and with several short bristles, with single standing bristles near the posterior angles.

Scutellum triangular, with rough micro-sculpture on the surface, not tightly covered with short yellow bristles.

Elytra compact, smoothly rounded to apex, with single standing bristles on the disk. Sutural striae with several erect bristles near the apex of elytra. Epipleuron poorly defined, quite narrow, not reaching the apex of elytra (Figs 2 and 4). A detailed study does not confirm Lacroix (1997) according to whom: elytra do not completely cover the propygidium: in fact, when viewed from the side and from behind, it can be seen that they are rounded on apex and almost completely cover propygidium.

Venter. Mesepisternum and metepisternum are not tightly covered with short yellow bristles. Metasternum and abdominal sternites covered with single bristles.

Pygidium (Fig. 4). Moderately convex, almost equal in length and width. Surface with strong wrinkles and punctuation, moderately shiny, unevenly covered with long yellowish bristles. Lateral margins and apex of the abdominal sternite VI and the apex of pygidium, covered with long yellowish bristles. Apex of pygidium with thickening of border by about a third of its length, matt.

Protibiae short, tridentate with short, equally distant teeth. Meso- and metatibiae short, covered with single bristles.

Other characters, including body size, according to Lacroix (1997).

Male unknown.

Distinctive characters. In particular, only this species is characterized by: unique colour scheme; presence of erect bristles on the head, near the anterior margin and disc of the pronotum, disc of elytra, and the sutural striae; lateral margins of pronotum uniformly rounded, slightly serrated in the middle to the posterior angles; the elytra completely covering the propygidium; surface of elytra with ribs and rough micro-sculpture.

A separate question is the comparison of the structure of the epipleura with other species of the genus. A poorly defined and narrow epipleura also characteristic for *F. compacta* (this characteristic is probably peculiar to all species of the genus *Fairmairoplia*, but will require verification), but in this case, it reaches the apex of the elytra.

Discussion. A detailed study of the external morphological characters of *F. carinata* indicates significant differences from other species, and for some characteristics even proposed before to the genus *Fairmairoplia*.

It should be noted that almost all species of the genus *Fairmairoplia* are characterized by well-developed hairs or bristles, except *F. plicata* (Fairmaire, 1903). The presence of distinct ribs on elytra is characteristic of

F. cristata Lacroix, 1997, but this species is characterized by a dense cover of bristles and bristle-like scales in the dorsal view.

For *F. carinata*, two locations are currently confirmed, one of which is new, specifying its distribution in Eastern Madagascar. Probably, a very rare species.

Geographic distribution (Fig. 5). This species described by Lacroix (1997) on a single female from ‘Zahamena, Antenina’ (Zahamena National Park, Ambodimangavalo, Toamasina II and Vavatenina, Ambatondrazaka District, Analanjirofo, Alaotra-Mangoro and Atsinanana Regions, Toamasina Province in Eastern Madagascar, Coordinates: 17.612291 S, 48.779409 E).

New location: Andasibe-Mantidia National Park, Moramanga District (Périnet), Alaotra-Mangoro Region, Toamasina Province in Eastern Madagascar. Coordinates: 18.990449 S, 48.630131 E.

***Fairmairoplia compacta* Lacroix, 1997 (Figs 6–7)**

Material. Madagascar, Isalo, 19.03.1998 (J. Kunte leg.) — 2 ♂♂, 6 ♀♀ (SIZK).

Note. This species is significantly different from other species of the genus *Fairmairoplia* by its appearance with a dense cover of scales and long bristles (Fig. 6).

Geographic distribution (Fig. 7). The species was described by Lacroix (1997) from a small series of specimens collected in:

1. ‘Entre Betafo et Ambositra’ (Ambositra District, Amoron’i Mania Region, Central Madagascar, Coordinates: 20.536509 S 47.247930 E).

2. ‘Ranohira, 91 km à l’Ouest d’Ihoso’ (Ranohira, Ivosy District, Ihorombe Region, SW Fianarantsoa Province in Southwestern Madagascar. Coordinates: 22.626274 S, 45.394977 E).

New location: Isalo National Park, Toliara District, Ihorombe Region, SW Fianarantsoa Province in Southwestern Madagascar. Coordinates: 22.450000 S, 45.266667 E.

For *F. compacta*, three locations are currently confirmed, one of which is new, specifying its distribution in Central and Southwestern Madagascar. Judging by the amount of collection materials available, we can assume that in the places of its range this species is quite common.

Conclusions. As a result of study the collection material, New localities for two species of the genus *Fairmairoplia* were given: *F. carinata* and *F. compacta*. For *F. carinata* new characters that were not mentioned in the original description are proposed. Morphological characters of some distinctive species of the genus are discussed.

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Figs 1–5. *F. carinata*: 1 — dorsal view, ♀; 2 — lateral view, ♀; 3 — head and pronotum, ♀; 4 — pygidium, ♀; distribution in Eastern Madagascar.
Figs 6–7. *F. compacta*: 6 — dorsal view, ♂; 7 — distribution in Central and Southwestern Madagascar.