

NEW SPECIES AND NEW RECORDS OF CLICK BEETLES FROM THE PALEARCTIC REGION (COLEOPTERA, ELATERIDAE)

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Abstract: Six new species belonging to the genera *Anostirus* Thomson, 1859 (Greece and Armenia), *Haterumelater* Ohira, 1968 (Iran), *Cardiophorus* Eschscholtz, 1829 (Greece, Morocco) and *Coptostethus* Wollaston, 1854 (Canary Islands) are described. New distribution records are given for a further three species belonging to the genera *Conoderus* Eschscholtz, 1829 and *Ampedus* Dejean, 1833.

Key words: Coleoptera, Elateridae, new species, new records, Palearctic region.

Especies nuevas y nuevas citas de elatéridos de la Región Paleártica (Coleoptera, Elateridae)

Resumen: Se describen seis especies nuevas pertenecientes a los géneros *Anostirus* Thomson, 1859 (Grecia y Armenia), *Haterumelater* Ohira, 1968 (Irán), *Cardiophorus* Eschscholtz, 1829 (Grecia, Marruecos) y *Coptostethus* Wollaston, 1854 (Islas Canarias). Se aportan nuevas citas geográficas de otras tres especies pertenecientes a los géneros *Conoderus* Eschscholtz, 1829 y *Ampedus* Dejean, 1833.

Palabras clave: Coleoptera, Elateridae, especies nuevas, citas nuevas, Región Paleártica.

Taxonomy/Taxonomía. *Anostirus lucbaueri* n.sp.; *Anostirus armeniacus* n.sp.; *Haterumelater kadleci* n.sp.; *Cardiophorus ruzzantei* n.sp.; *Cardiophorus fialai* n.sp.; *Coptostethus mantici* n.sp.

Introduction

This paper reports the results of a study of some click beetles from different countries of the Palearctic Region, recently submitted by museums and colleagues. We have recognized six undescribed species belonging to the genera *Anostirus* Thomson, 1859 (Greece, Armenia), *Haterumelater* Ohira, 1968 (Iran), *Cardiophorus* Eschscholtz, 1829 (Greece, Morocco) and *Coptostethus* Wollaston, 1854 (Canary Islands).

New records for two species of the genera *Ampedus* Dejean, 1833 and *Conoderus* Eschscholtz, 1829 are given. Interesting is the expansion of the neotropical species *Conoderus posticus* (Eschscholtz, 1822) towards the east since the first record for the continental Europe (Spain) (Platia, 2010).

Material and methods

Measurements – Body length is measured along the midline from the anterior margin of frons to apex of the elytra; width is measured across the broadest part of the body. Pronotal length is measured along the midline; the width is at the broadest part, usually at hind angles.

Abbreviations – The names of institutions, museums and collections providing material for this study are abbreviated as follows:

CMHK: collection of J. Mertlik, Hradec Králové (Czech Republic)

CPG: collection of G. Platia, Gatteo (Italy)

CTO: collection of T. Sitek, Ostrava (Czech Republic)

HNHM: Hungarian Natural History Museum, Budapest (Hungary) (Dr. O. Merkl)

NME: Naturkundemuseum Erfurt, (Germany) (Dr. M. Hartmann).

The subfamilial and tribal placement of genera listed below follows Bouchard *et al.* (2011).

The abbreviations of countries, given by “distribution” follows Cate (2007).

Results

Tribe Ophorini Gistel, 1848

Conoderus posticus (Eschscholtz, 1822)

MATERIAL EXAMINED. (5) - Russia: Caucasus, Krasnaja Poljana, 10.VI.1967, R. Rous. (CMHK; CPG).

DISTRIBUTION. Açores (Cate, 2007), Spain (Platia 2010), Malte, Italie (Sicile and Sardaigne (Wurst & Mifsud, 2012), Campanie, Lazio, Basilicata (Jarzabek-Muller in litteris), Grèce continentale (Platia & Kakiopoulos, 2014), Crète (Platia, 2013), Madeira Island, (Platia, 2013), Iran province of Golestan (Mardjanian *et al.*, 2013). New species for **Russia**. **ECOLOGICAL NOTES.** Sifting in beechwood.

Tribe Prosternini Gistel, 1856

Anostirus lucbaueri n. sp.

Fig. 1, 1a, 8, 8a, 9, 13, 14, 15, 17, 18.

MATERIAL EXAMINED. Holotype ♂ - Greece: Lamia, 1 km W of Palamas, Stena Fourka, 7.V.2012, Z. Lucbauer (CMHK). 7 Paratypes (1♂, 6♀ - (♀) same data as Ht; (2♀) Kastraki, Kalambaka env., 13.V.2011, T. Sitek, Z. Malinka; (♀) Thessalia, Kria Vrisi, Pindos Mts. 9.V.2006, Z. Kraus; (♀) Thessalia, Karditsa, Pindos Mts, Neraida, m 1500, 16.VI.2014, A. Kotán; (♀) Thessalia, Karditsa, Pindos Mts, 3 km SW Neraida, m 1380, 16.VI.2014, B. Szelenczey, A. Kotán, Gy. Nemeth & V. Szénási (CMHK; CPG; CTO; HNHM), (♂) Thessalia, Karditsa, Pindos Mts., 1 km SW Neraida, spruce forest, 1290 m 3.V.2015, A. Kotán, Gy. Németh, B. Szélenczey & V. Szénási. (CMHK; CPG; CTO; HNHM).

DIAGNOSIS. A species near *Anostirus parumcostatus* (Buysson, 1894) for the general shape and colour, it can be separated by the robuster body, subtrapezoidal shape of pronotum and more strong carinate third and seventh interstriae of elytra.

DESCRIPTION. Male. Bicoloured; all the body black except for the elytra entirely red-orange; covered with long yellow-fulvous pubescence, velvety and vertical on the pronotum.

Frons flat, anterior margin obsolete in the middle touching the clypeus, punctuation coarse, punctures deep, simple, contiguous.

Antennae exceeding by three articles the apices of the posterior angles of pronotum, pectinate from the third article on; second article extremely small, globous, third-tenth articles subequal in length and pectinate; lamellae on average as long as the same articles, last article simple, a little longer than the penultimate, obliquely truncate at apex.

Pronotum as long as wide, subtrapezoidal, widest at the apices of the posterior angles, moderately convex; sides very slightly arcuate nearly regularly narrowing from near the base to the apex, just sinuate before the posterior angles, this truncate, converging at the apex, not carinate; lateral margins complete and totally visible in a dorsal view; punctuation uniformly distributed, punctures much more fine compared to the frontal, deep, simple with very short, shiny intervals.

Scutellum shield-shaped, just impressed, slightly sinuate at the sides in the first half, ridged at base, finely punctured.

Elytra 2.9x longer than pronotum and a little wider than it, convex, sides subparallel from base to after the middle, third and seventh interstriae costiform for all its length, all the other flat, striae superficial and regularly punctured; elytral apex very shortly pointed.

Seventh sternite regularly narrowing from base to the apex.

Aedeagus as in the fig. 1, 1a (length 2.81 mm).

Female. On average larger than male with shorter antennae just reaching the apices of posterior angles of pronotum and with articles only serrated from the third article and with red-purple pubescence particularly evident on the pronotum.

Size. Length 11.8 mm; width 3.5 mm (male); length 12.5-15.5 mm; 3.85-4.85 mm (females).

ETYMOLOGY. The species is dedicated to the slovak colleague Zdenko Lucbauer, specialist of Coleoptera Cerambycidae Dorcadionini, collector of the holotype male of the species.

***Anostirus armeniacus* n. sp.**

Fig. 2, 2a, 10, 10a, 11, 16, 19, 20.

MATERIAL EXAMINED. Holotype ♂ - Armenia: Garni-Gekhart, Azat river valley, 2.VI.2003, M. Múčka. (CMHK). 1 Paratype ♀ - same data as Ht. (CMHK).

DIAGNOSIS. A species comparable to *Anostirus alexandri* Wurst, 1995 from Turkey for the general shape and colour, it can be separated by the shorter antennae with lamellae on average as long as the articles.

DESCRIPTION. Male. Bicoloured; all the body black except for the tarsi brown and for the elytra entirely red-orange; covered with dense, yellow-fulvous pubescence, moderately velvety and vertical on the anterior part of pronotum.

Frons flat, anterior margin obsolete in the middle touching the clypeus, punctuation coarse, punctures deep, simple, contiguous.

Antennae exceeding for about 2.5 articles the apices of the posterior angles of pronotum, pectinate from the third

article on; second article extremely small, globous, third longer than the following with lamella much more shorter than the article, fourth-tenth subequal in length with lamellae on average as long as the articles themselves; last longer than the penultimate, simple, with subparallel sides, slightly emarginate at apex.

Pronotum as long as wide, widest at the apices of the posterior angles, convex with a short mid-longitudinal furrow on the basal slope; sides regularly arcuate, sinuate before the posterior angles, the latter, short, truncate, not carinate, divergent; lateral margins complete and totally visible in a dorsal view; punctuation uniformly distributed, punctures deep, simple, with very short intervals on the disk, contiguous at the sides.

Scutellum shield-shaped, just impressed before the apex, slightly sinuate at the sides in the first half, ridged at base, densely punctured.

Elytra 2.85x longer than pronotum and a little wider than it, convex, sides subparallel from base to after the middle, third interstria basally shortly carinate, seventh interstriae very moderately carinate for all its length, the remaining interstriae only moderately convex with very fine punctures.

Seventh sternite regularly narrowing from base to the apex.

Aedeagus as in the fig. 2, 2a (length 2.5 mm).

Female. Body larger with shorter antennae only reaching the apices of the posterior angles of pronotum and modestly serrated from the third article on.

Size. Length 10.8 (male)-11.8 mm (female); width 3.25 mm (male)-3.75 mm (female).

ETYMOLOGY. The name is derived from the country where the species was collected, Armenia.

Tribe Ampedini Gistel, 1848

Ampedus sofiae Platia, 2008.

MATERIAL EXAMINED. 1 ♀ - Bulgaria: Okres Burgas, Primorsko, 1.VI.2009, H. Müller. (NME).

DISTRIBUTION. Greece. (Platia, 2008). New species for **Bulgaria**.

***Haterumelater kadleci* n. sp.**

Fig. 3, 3a, 12, 12a, 21.

MATERIAL EXAMINED. Holotype ♂ - Iran: Ilam prov., 30 km NW of Ilam (33°43'N46°25'E), m 1786, 7.VII.2004, S. Kadlec (CHKM); 4 Paratypes (3♂ 1♀) - (2) same data as Ht; (1) Lorestan prov., 25 km NWW Dorud (33°33'N, 48°53'E), m 1874, 8.VII.2004, S. Kadlec; (1) Buyer Ahmad -o-Kuhgiluyeh Prov., 9km S Yasuj, m 1800-2300, 28-30.VI.2003, I. Jenis (CMHK; CPG).

DIAGNOSIS. Species separated from *H. fulvago* (Marseul, 1868) because of the more serrated intermediate articles of antennae.

DESCRIPTION. Male. Entirely dark brown with ferruginous shades on base of pronotum and scutellum; antennae and legs ferruginous; covered with dense, short, yellow-fulvous pubescence.

Frons convex, anterior margin regularly arcuate, punctuation coarse, uniformly distributed, punctures of the same sizes, umbilicate, contiguous or with very short intervals.

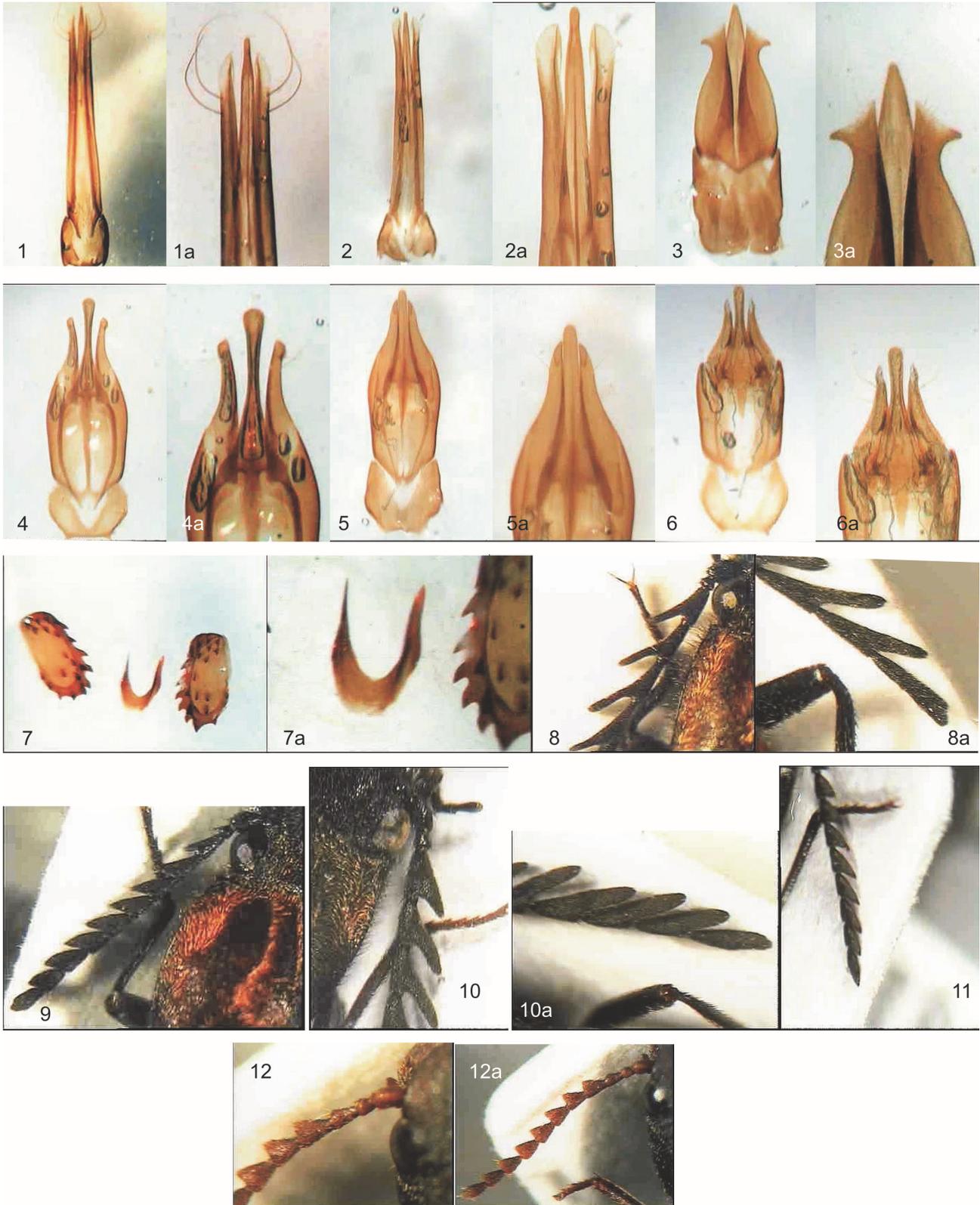


Fig. 1-6. Male genitalia in dorsal view. **1, 1a.** *Anostirus lucbaueri* n. sp.; **2, 2a.** *Anostirus armeniacus* n. sp.; **3, 3a.** *Haterumelater kadleci* n. sp.; **4, 4a.** *Cardiophorus ruzzantei* n. sp.; **5, 5a.** *Cardiophorus fialai* n. sp.; **6, 6a.** *Coptostethus mantici* n. sp. **Fig. 7.** Sclerites of bursa copulatrix. **7, 7a.** *Cardiophorus fialai* n. sp. **Fig. 8-12.** First, last or total articles of antennae. **8, 8a.** *Anostirus lucbaueri* n. sp. ♂; **9.** *Anostirus lucbaueri* n. sp. ♀; **10, 10a.** *Anostirus armeniacus* n. sp. ♂; **11.** *Anostirus armeniacus* n. sp. ♀; **12, 12a.** *Haterumelater kadleci* n. sp.

Antennae short, not reaching for more than two articles the apices of posterior angles of pronotum, serrate from the third article on; second article small, as long as wide, third subtriangular, 1.8x longer than second, second and third, taken together 1.25x longer than fourth; fourth-tenth triangu-

lar, the fourth 1.3x longer than wide, the following shorter, more strongly triangular, on average a little longer than wide, last a little longer than the penultimate, more or less regularly ellipsoidal.

Pronotum 1.1x wider than long, widest at the apices of posterior angles, convex, with a trace of a short and superficial mid-longitudinal depression on the basal slope; sides nearly regularly narrowing from base to the apex or subparallel in the posterior half, posterior angles long, acuminate, not divergent, bicarinate, inner carina very sharp and directed inside, outer carina very fine and poorly visible; lateral margins complete and substraight; punctuation uniformly distributed, punctures on the disk deep, simple or vaguely umbilicate with very short, shiny intervals, towards the sides just a little denser and normally umbilicate, sometimes contiguous.

Scutellum mitriform, flat or slightly convex, punctured.

Elytra 2.5x longer than pronotum and as wide as it, convex; sides regularly narrowing from base to the apices, striae well marked and punctured, interstriae flat, densely punctured.

Aedeagus as in the fig. 3, 3a (length 1.1 mm).

Female. Extremely similar to the male with a little shorter antennae with the third article more elongate compared to the fourth.

Size. Length 8.9-10.6 mm; width 3.0-3.15 mm.

ETYMOLOGY. The species is dedicated to the memory of the collector S. Kadlec from Litvinov (Czech Republic).

Tribe *Cardiophorini* Candèze, 1859

Cardiophorus ruzzantei n. sp.

Fig. 4, 4a, 22.

MATERIAL EXAMINED. Holotype ♂ - Greece: Cyclades, Sifnos Island, Kastro (36°58'29"N, 24°44'42"E), m 50, 31.III.2016, G. Ruzzante. (CPG).

DIAGNOSIS. A species comparable to *Cardiophorus platiai* Chassain, 1985 for the general shape, size and penis with spatulated apex, it can be separated for the yellowish first two articles of antennae, yellowish posterior half of the last sternite and shorter penis with apex less dilated.

DESCRIPTION. Male. Moderately shiny; entirely black with two first articles of antennae, posterior half of the last sternite and legs yellowish; covered with dense, short yellowish pubescence.

Frons flat, only just impressed before the anterior margin, this regularly arcuate, punctuation dense with punctures approximately of the same size, simple, with very short, shiny intervals.

Antennae reaching the apices of the posterior angles of pronotum, slightly serrated from the third article on; second article subcylindrical, 1.7x longer than wide and 1.5x shorter than third; third-tenth subtriangular, subequal in length, on average 2.2x longer than wide, last as long as the penultimate, shortly constricted before the apex.

Pronotum just wider than long, widest at the middle, very convex; sides arcuate, very slightly sinuate before the posterior angles, the latter short, truncate, not divergent, shortly carinate; punctuation uniformly distributed, punctures simple, approximately of the same sizes with intervals shiny, on average smaller than their own diameters.

Scutellum heart-shaped, as long as wide, flat, densely punctured.

Elytra 2.4x longer than pronotum and as wide as it, convex; sides subovaliform, widest at the middle, striae regularly marked and punctured, interstriae flat, finely punctured.

Wings regularly developed.

Claws simple.

Male genitalia as in the fig. 4, 4a (length 0.97 mm).

Female unknown.

Size. Length 6.25 mm; width 1.93 mm.

ETYMOLOGY. The species is dedicated to the colleague Giampaolo Ruzzante, collector of the species.

Cardiophorus fialai n. sp.

Fig. 5, 5a, 7, 7a, 23, 24.

MATERIAL EXAMINED. Holotype ♀ - Morocco: Haut Atlas, Tizi-n-Tichka, 4-5.V.2013, M. Fiala. (CMHK). 14 Paratypes (6♀, 8♂) - (9) same data as Ht; (1) same data, 28.IV.2014; (4) Tizi-n-Tichka, m 2050-2100, 24.V.2013, V. Zieris. (CMHK; CPG).

DIAGNOSIS. A species allied to *C. poncyi* Buysson, 1903 from Morocco and Spain for the very variable colour and size, it can be separated by the shape of pronotum widest at the middle and sclerites of bursa copulatrix with a small median piece.

DESCRIPTION. Female. Colour variable; entirely blackish to bicoloured with pronotum and propleura entirely reddish and intermediate forms with pronotum darkened with reddish shades; antennae reddish gradually darkened from the fourth articles, legs reddish; covered with dense and short yellowish pubescence.

Frons flat, impressed before the anterior margin with coarse punctuation and punctures contiguous approximately of the same sizes.

Antennae not reaching for about one articles the apices of posterior angles of pronotum, slightly serrated from the third article on; second article subcylindrical, 1.4x longer than wide, third-tenth subtriangular and subequal in length, 2x longer than wide, last subellipsoidal, pointed at the apex.

Pronotum 1.09-1.1x wider than long, widest at the middle, very convex; sides very arcuate, more and gradually narrowing from the middle to the base, posterior angles short, truncate, not divergent, with a very short carina; lateral suture-like margin obsolete after the middle; punctuation uniformly distributed, lighter than the frontal punctuation, punctures approximately of the same size, simple or very slightly umbilicate with very short intervals.

Scutellum heart-shaped, as long as wide, emarginate at middle of base, weakly impressed and finely punctured.

Elytra 2.1-2.2x longer than pronotum, convex; sides widest just after the middle, striae well marked and punctured; interstriae slightly convex and finely punctured.

Claws simple.

Bursa copulatrix sclerified as in the fig. 7, 7a.

Male. On average smaller than the females, all are uniformly black with antennae darkened from the third article; antennae longer exceeding by more than one article the apices of the posterior angles of pronotum.

Aedeagus as in the fig. 5, 5a (length 1.02 mm).

Size. Length 5.6-6.5 mm width 1.78-1.96 (males); length 7.1-7.8 mm, width 2.3-2.6 mm (females).

ETYMOLOGY. The species is dedicated to one of the collectors, Martin Fiala from Trutnov (Czech Republic).

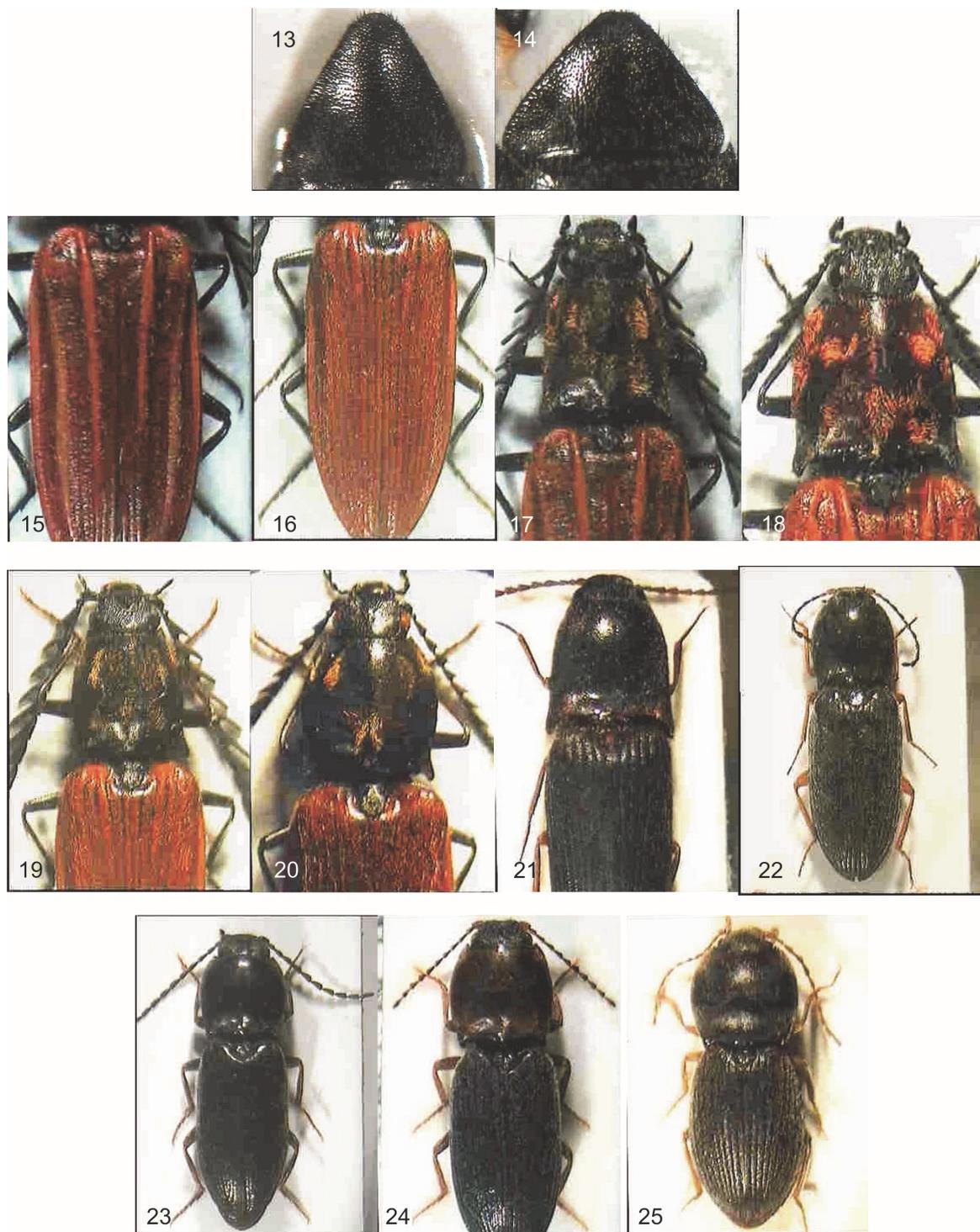


Fig. 13-14. Last abdominal sternite. *Anostirus lucbaueri* n. sp. ♂ ♀. **Fig. 15-16.** Elytra. **15** *Anostirus lucbaueri* n. sp. ♂; **16** *Anostirus armeniacus* n. sp. ♂. **Fig. 17-25.** Habitus in partial or total view. **17-18.** *Anostirus lucbaueri* n. sp. ♂♀; **19-20.** *Anostirus armeniacus* n. sp. ♂♀; **21.** *Haterumelater kadleci* n. sp. ♂; **22.** *Cardiophorus ruzzantei* n. sp.; **23-24.** *Cardiophorus fialai* n. sp. ♂♀; **25.** *Coptostethus mantici* n. sp.

***Coptostethus mantici* n. sp.**

Fig. 6, 6a, 25.

MATERIAL EXAMINED. Holotype ♂ - Spain: Canary Islands, Tenerife Island, Guimar 2,5 km S (16°25'12"W, 28°17'31"N), m 750, 23.XII.2015, M. Mantič (CMHK); 2 Paratypes ♂ - same data as Ht (CMHK, CPG).

DIAGNOSIS. A small species allied to *C. globulicollis* Wollaston, 1862 but separated for the shorter antennae and elytra as wide as the pronotum (Cobos, 1970).

DESCRIPTION. Male. Head and pronotum blackish; elytra blackish or dark brown with humeral angles reddish, more or less evident, center of scutellum too reddish; antennae and legs yellow testaceous; covered with dense, relined, yellowish pubescence.

Frons flat with very dense punctuation, punctures contiguous.

Antennae exceeding by one articles the apices of posterior angles of pronotum slightly serrated from the third article on; second article subconical, 2.1x longer than wide; third-tenth subtriangular, subequal in length, on average

2.5x longer than wide, last as long as the penultimate, subellipsoidal.

Pronotum 1.14x wider than long, widest at the middle, globous, strongly convex, abruptly sloping at sides and base; sides arcuate more strongly narrowing from the middle to the base; posterior angles converging to the apex, truncate, shortly carinate; lateral suture-like margin moderately arcuate and obsolete at the anterior third; punctuation uniformly distributed, punctures deep, simple, approximately of the same size, with very short intervals or contiguous.

Scutellum heart-shaped a little wider than long, flat and emarginate at middle of base.

Elytra 1.8-1.9x longer than pronotum and as wide as it, very convex, ovaliform widest at the middle; striae well marked and punctured, interstriae flat, more finely punctured.

Claws simple.

Aedeagus as in the fig. 6, 6a (length 0.87 mm).

Size. Length 4.8-5.3 mm; width 1.87-1.93 mm.

Female unknown.

ECOLOGICAL NOTES. Under rocks in succulent bush.

ETYMOLOGY. The species is dedicated to the collector of the species, Dr. Marion Mantič, Hlučín city, Czech Republic, specialist on Coleoptera.

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