# ELEVEN NEW CLICK BEETLES AND RECORDS FROM THE CANARY ISLANDS, GREECE, EGYPT, TURKEY AND IRAN (COLEOPTERA, ELATERIDAE)

Giuseppe Platia<sup>1</sup> & George Kakiopoulos<sup>2</sup>

**Abstract:** Eleven species are described in the genera *Peripontius* Gurjeva, 1979 (Greece), *Cardiophorus* Eschscholtz, 1829 (Greece, Turkey), *Coptostethus* Wollaston, 1854 (Canary Islands), *Dicronychus* Brullé, 1832 (Egypt, Greece, Turkey, Iran), and a new record for *Cardiophorus schneppati* Platia, 2013 from Greece is given.

**Key words:** Coleoptera Elateridae, *Peripontius*, *Coptostethus*, *Cardiophorus*, *Dicronychus*, new records, new species, Palearctic Region.

#### Once nuevos elatéridos, y citas de las Islas Canarias, Grecia, Egipto, Turquía e Irán (Coleoptera, Elateridae)

**Resumen:** Se describen once especies de los géneros *Peripontius* Gurjeva, 1979 (Grecia), *Cardiophorus* Eschscholtz, 1829 (Grecia, Turquía), *Coptostethus* Wollaston, 1854 (Canarias) and *Dicronychus* Brullé, 1832 (Egipto, Grecia, Turquía, Irán), y se aporta una nueva cita de *Cardiophorus schneppati* Platia, 2013 de Grecia.

Palabras clave: Coleoptera Elateridae, Peripontius, Coptostethus, Cardiophorus, Dicronychus, citas nuevas, especies nuevas, Región Paleártica.

Taxonomy / Taxonomía: Peripontius icari Platia & Kakiopoulos n.sp., Cardiophorus mylonasi Platia & Kakiopoulos n.sp., Cardiophorus armathiaensis Platia & Kakiopoulos n.sp., Cardiophorus kasiensis Platia n.sp., Coptostethus salvatoi Platia n.sp., Dicronychus aegyptiacus Platia n.sp., Dicronychus meschniggi Platia & Kakiopoulos n.sp., Dicronychus ruzzantei Platia & Kakiopoulos n.sp., Dicronychus thirasiaensis Platia & Kakiopoulos n.sp., Dicronychus anatolicus Platia n.sp., Dicronychus novaki Platia n.sp.

#### Introduction

The examination of material of click-beetles, above all of the tribe Cardiophorini, from various countries of the Palearctic Region received for study from the Natural History Museum of Budapest by the courtesy of Dr. O. Merkl and T. Nemeth, and from Colleagues, give us the opportunity to describe eleven new species of the genera Peripontius Gurjeva, 1979, Cardiophorus Eschscholtz, 1829, Coptostethus Wollaston, 1854 and Dicronychus Brullé, 1832. Five of the new species, one belonging to the genus *Peripontius*, two *Cardiophorus* and three Dicronychus described from the greek Islands (Cyclades Archipelago and Ikaria Island) show as the fauna of these regions is still partially known. For Cardiophorus schneppati Platia, 2013, described on a single female from Samos Island, the record of two specimens of both the sexes from Ikaria Island, give us the possiblity to describe the male and to enlarge the distribution of the species.

#### Material and methods

Body measurements. Body length is measured along the midline from the anterior margin of the frons to the apex of the elytra; the width is measured across the broadest part of the entire beetle.

*Pronotal measurements*. The pronotal length is measured along the midline; the width at the broadest part, which is most usually at the hind angles.

Abbreviations. The material studied is preserved in:

CKA, Kakiopoulos coll., Athens (Greece).

CPG, Platia coll., Gatteo (Italy).

HNHM, Hungarian Natural History Museum, Budapest (Hungary) (Dr. Otto Merkl and T. Nemeth).

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

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

I used the following jobs that include original descriptions: Chassain, 1984, Platia, 2013, Platia & Gudenzi, 2000, 2002, 2003, 2004.

### Results

## **Tribe SYNAPTINI Gistel, 1856**

*Peripontius icari* Platia & Kakiopoulos n.sp. Fig. 1, 8, 18, 18a.

MATERIAL EXAMINED. Holotype  $\circlearrowleft$  - Greece: Ikaria Island, 9-14.V.2015, G. Kakiopoulos leg. (CKA). 4 Paratypes (2  $\circlearrowleft$ , 2  $\circlearrowleft$ ) - same data as Ht (CKA; CPG).

**DIAGNOSIS.** A species very similar to *P. omissus* (Buysson, 1889) for the general shape and colour, it can be separated for the little shorter antennae, more subparallel sides of pronotum, characters of aedeagus and sclerites of bursa copulatrix.

**DESCRIPTION**. Male. Moderately shiny; entirely dark-ferruginous with irregular blackish shadings on pronotum and elytra; antennae and legs ferruginous; covered with dense, yellow-golden pubescence.

Frons convex between the eyes, flat before the anterior margin, suprantennal carinae reaching the anterior margin, punctuation coarse, punctures deep, simple, with very short, shiny intervals.

<sup>&</sup>lt;sup>1</sup>Via Molino Vecchio, 21a, 47043 Gatteo (FC, Italia) — pinoplatia-@teletu.it

<sup>&</sup>lt;sup>2</sup> Ilidos 60-62 street, 11527 Athens (Ambelokipi, Greece) — strepens@yahoo.com

Antennae not reaching for about one article the apices of posterior angles of pronotum, slightly serrated from the fourth article on; second and third articles subconical and subequal in length, taken together, 1.4x longer than fourth; fourth-tenth subtriangular, subequal in length and on average 1.7x longer than wide, last subellipsoidal, pointed at apex.

Pronotum just wider than long, widest at the apices of the posterior angles, convex; sides subparallel or very gradually narrowing from base to near the anterior margin, posterior angles acuminate, not divergent, with a carina nearly reaching the middle; lateral margin curved and complete; punctuation uniformly distributed, punctures on the disk variable in diameters, simple, deep, with very short, shiny intervals, towards the sides more superficial, more or less clearly umbilicate.

Scutellum shield-shaped, flat, just longer than wide, finely punctured.

Elytra 2.8-3x longer than pronotum and as wide as it, convex; sides subparallel from base to the middle then very gradually narrowing to the apices; striae regularly marked and punctured, interstriae flat with roughly surface, punctured.

Aedeagus as in the fig. 1 (length 0.77 mm).

Female. Identical to the male, with more parallel body and just shorter antennae.

Bursa copulatrix sclerified as in the fig. 8. Size. Length 5.9-6.8 mm; width 1.6-2.0 mm.

**ETYMOLOGY**. The name is derived from Ikaria, the island where the species was found.

#### Tribe CARDIOPHORINI Candèze, 1859

Cardiophorus mylonasi Platia & Kakiopulos n.sp. Fig. 2, 2a, 10, 10a, 19, 19a.

**MATERIAL EXAMINED**. Holotype  $\bigcirc$  – Greece: Kasos Island, Karofylla Islet, 13.II.1992, M. Mylonas leg. (HNHM) – 1 Paratype  $\bigcirc$  – same data as HT (HNHM).

**DIAGNOSIS**. A species allied to *C. stussineri* Buysson, 1913 but separated for the longer antennae in both the sexes.

**DESCRIPTION**. FEMALE. Moderately shiny; entirely black with bronzed shadings, legs dark-brown; covered with fine and dense yellowish pubescence.

Frons flat between the eyes, slightly impressed before the anterior margin, this regularly arcuate; punctuation very dense with punctures variable in diameters, deep, simple, contiguous.

Antennae reaching the apices of the posterior angles of pronotum, moderately serrated from the third article on, second article subcylindrical, twice longer than wide, third-tenth subtriangular, more twice longer than wide, last ellipsoidal, a little longer than penultimate.

Pronotum 1.17x wider than long, widest at the middle, very convex, abruptly sloping at sides and base; sides very arcuate, from middle regularly narrowing to the posterior angles, the latter short, not divergent, briefly carinate; lateral suture-like moderately arcuate and obsolete at the anterior third; punctuation dense and regularly distributed, punctures approximately of the same size, deep, simple, with smooth intervals on average equal to their own diameters.

Scutellum heart-shaped, as long as wide, slightly impressed and punctured.

Elytra 2.68x longer than pronotum and as wide as it, convex, sides subparallel in the first half then very gradually

narrowing to the apices; striae regularly marked and punctured, interstriae subconvex and more finely punctured.

Last abdominal segment with a shallow, round depression before the apex.

Claws simple. Bursa copulatrix sclerified as in the fig. 10, 10a.

MALE. Body smaller and slenderer, antennae exceeding by about two articles the apices of posterior angles of pronotum, sides of pronotum slightly sinuate before the posterior angles.

Aedeagus as in fig. 2, 2a (length 1.0 mm).

Size. Length 5.68 (male) - 6.87 (female); width 1.87 (male) - 2.31 mm.

ETYMOLOGY. The species is dedicated to Moysis Mylonas entomologist in University of Crete, collector of the species. NOTE. Very probably on the base of the drawing of bursa copulatrix given by the author (Chassain, 1984) the *C. stussineri* Buysson, 1913 of Santorini Island belong to this species; the same author supposed that it could be a subspecies of the true *C. stussineri* described from Thessaly.

*Cardiophorus armathiaensis* Platia & Kakiopoulos n.sp. Fig. 3, 3a, 20.

MATERIAL EXAMINED. Holotype ♂ – Greece: Kasos Island, Armathia Islet, 14.II.1992, M. Mylonas leg. (HNHM).

**DIAGNOSIS.** A species separated by all of the region because of the robust body, the very dense and double punctuation of pronotum and the particular shape and length of apex of aedeagus.

**DESCRIPTION.** Male. Moderately shiny; entirely black-piceous with legs dark-brown; covered with fine and dense yellowish pubescence.

Frons flat between the eyes, slightly impressed before the anterior margin, this regularly arcuate; puncuation very dense with punctures variable in diameters, deep, simple, contiguous.

Antennae just exceeding the apices of the posterior angles of pronotum, slightly serrated from the third article on, second article subcylindrical, twice longer than wide, third-tenth subtriangular, more twice longer than wide, last with subparallel sides, constricted before the apex, as long as penultimate.

Pronotum 1.11x wider than long, widest at the middle, very convex, abruptly sloping at base and sides; sides arcuate, from middle regularly narrowing backwards and slightly sinuate before the posterior angles, the latter just divergent and briefly carinate; lateral suture-like margin regularly curved and obsolete at the anterior third; punctuation very dense and regularly distributed; punctures deep, simple of two sizes, smaller punctures with very short intervals are irregularly mixed with larger, approximately of double size, punctures.

Scutellum heart-shaped, as long as wide, flat, with a very fine punctures.

Elytra 2.57x longer than pronotum and as wide as it, convex, ovaliform; striae well marked and punctured; interstriae flat, densely and more finely punctured.

Claws simple.

Aedeagus as in the fig. 3, 3a (length 1.3 mm).

 $Female\ unknown.$ 

Size. Length 7.93 mm; width 2.62 mm.

ETYMOLOGY. The name is derived from the Armathia Islet.

# Cardiophorus kasiensis Platia n.sp.

Fig. 11, 21.

**MATERIAL EXAMINED**. Holotype  $\bigcirc$  - Turkey: Kaş, Antalya Prov., 22.V.1986 (CPG).

**DIAGNOSIS.** A species similar for the colour and morphological characters to *C. podlussanyi* Nemeth & Platia, 2014 but with integuments less shiny; the sclerites of the copulatrix bursa are very distinctive.

**DESCRIPTION**. Female. Moderately shiny; entirely black with legs dark-brown; covered with very dense and fine, yellowish pubescence.

Frons convex between the eyes, flat at the anterior margin, this regularly arcuate; punctuation with punctures approximately of the same size, deep, simple, with very short intervals

Antennae nearly reaching the apices of the posterior angles of pronotum, slightly serrated from third article on, second article subcylindrical, 1.7x longer than wide, third-tenth subtriangular, subequal in length, on average 2.5x longer than wide, the last as long as the penultimate, ellipsoidal.

Pronotum just wider than long, widest at the middle, very convex with a short and shallow mid-longitudinal impression at the basal slope; sides very arcuate, from middle nearly regularly narrowing to the posterior angles, the latter short, truncate, not divergent, carinate; lateral suture-like margin normally curved and obsolete at the anterior third; punctuation uniformly distributed, punctures deep, simple, with very short intervals.

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

Elytra 2.4x longer than pronotum and as wide as it, convex; sides subparallel from base to just behind the middle the very gradually narrowing to the apices; striae well marked and punctured, interstriae flat, finely punctured.

Claws simple.

Bursa copulatrix sclerified as in the fig. 11.

Size. Length 6.85 mm; width 2.06 mm.

**ETYMOLOGY**. The name is derived from Kaş, the town where the species was collected.

## Cardiophorus schneppati Platia, 2013

Fig. 4, 4a, 22.

MATERIAL EXAMINED. 2 spcm. ( $\lozenge$   $\lozenge$ ) - Greece: Ikaria Island, 9-14.V.2015, G. Kakiopoulos leg. (CKA).

DESCRIBED from the Samos Island on a female specimen. Male. Very similar to the female with antennae just a little longer. Aedeagus as in the fig. 4, 4a (length 1.02 mm).

#### Coptostethus salvatoi Platia n.sp.

Fig. 12, 12a, 23.

MATERIAL EXAMINED. Holotype ♀ - Spain: Canary Islands, Gran Canaria, Baia Taurito (27°49′05.50″N, 15°45′03.53″W), 26.XI.2014, G. Salvato leg. (CPG).

**DIAGNOSIS.** Species closed to *C. vittatus* (Lindberg, 1953) (Cobos, 1969) for the general shape and colour, it can be separated for the shorter antennae and the shorter elytra compared to pronotum.

**DESCRIPTION**. Female. Shiny; head blackish, pronotum blackish with the apices of posterior angles reddish, scutellum

reddish on center, blackish around, elytra blackish with subelongate, from base to the middle reddish vittae from fourth to the eighth interstriae; antennae and legs yellowish; covered with yellow-golden, semierect on elytra, pubescence.

Frons convex, flat before the anterior margin, this moderately thickened, subarcuate and protruding above the clypeus; punctuation with punctures simple with short intervals.

Antennae reaching the apices of posterior angles of pronotum, slightly serrated from third article on; second article subconical, 1.7x longer than wide; third-tenth subtriangular, subequal in length, on average 2.5x longer than wide, last as long as penultimate, subellipsoidal.

Pronotum just wider than long, widest at middle, strongly convex, abruptly sloping at sides and base, sides very arcuate, regularly narrowing to the posterior angles, the latter short, truncate, not divergent, shortly carinate; lateral suture-like margin very fine, obsolete from middle; punctuation extremely fine and regularly distributed, punctures simple, very small, approximately of the same size with very short and very shiny intervals.

Scutellum heart-shaped, wider than long, flat, very finely punctured.

Elytra 2x longer than pronotum and as wide as it, convex, ovaliform, widest just behind the middle; striae regularly marked and punctured, interstriae flat, densely and more finely punctured.

Claws simple.

Copulatrix bursa sclerified as in the fig. 12, 12a.

Male unknown.

Size. Length 6.1 mm; width 2.25 mm.

**ETYMOLOGY**. The species is dedicated to the colleague entomologist G. Salvato, collector of the species that I thank very much for the present of the specimen.

**ECOLOGICAL NOTES**. In a garden on the ground, above a flower of *Ravenala madagascariensis* Sonn. fallen after a storm.

#### Dicronychus aegyptiacus Platia n.sp.

Fig. 13, 13a, 24.

**DIAGNOSIS.** Species that can be compared with *D. buettikeri* Platia & Schimmel, 1997 of the arabian peninsula, it is separated for the different punctuation of the pronotum with the larger punctures much more big and the different shape of the intermediate sclerites in the bursa copulatrix.

**DESCRIPTION**. Female. Moderately shiny; head and pronotum blackish with reddish shadings; elytra red-yellowish with a central, subellipsoidal, blackish vitta from the first to the third intervals; antennae and legs ferruginous; covered with fine and dense yellow-fulvous, pubescence.

Frons convex between the eyes, flat before the anterior margin, this moderately thickened, regularly arcuate and just protruding above the clypeus; punctuation dense, punctures deep, simple, of two diameters, more or less regularly mixed. Antennae not reaching for about two article the apices of posterior angles of pronotum, slightly serrated from third article on; second article subcylindrical, 1.7x longer than

wide, third-tenth subtriangular, subequal in length, on average 2.5x longer than wide, the last a little longer, subellipsoidal. Pronotum as long as wide, widest at the anterior third, strongly convex, abruptly sloping at sides and base; sides from the anterior third nearly regularly narrowing to the posterior angles, the latter short, truncate, very slightly divergent, shortly carinate; lateral suture-like margin moderately curved and obsolete at the anterior third; punctuation very dense and regularly distributed; punctures of two sizes, very small, numerous and simple punctures are regularly mixed with larger, simple punctures.

Scutellum heart-shaped, as long as wide, slightly impressed at middle and very finely punctured.

Elytra 2.1x longer than pronotum and as wide as it, convex; sides widest at the first third then regularly narrowing to the apices; striae regularly marked and punctured; interstriae flat and very finely punctured.

Claws slightly dilated in the first half.

Bursa copulatrix sclerified as in the fig. 13, 13a.

Prosternum with impressed V-shaped lines running subparallel to the prosternal sutures.

Male unknown.

Size. Length 7.7 mm; width 2.56 mm.

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

# *Dicronychus meschniggi* Platia & Kakiopulos n.sp. Fig. 5, 5a, 14, 14a, 25, 25a.

**MATERIAL EXAMINED**. Holotype  $\mathcal{P}$ - Greece: Ikaria Island, 9-14.V.2015, G. Kakiopoulos (CKA). 3 Paratypes (1  $\mathcal{P}$ , 2  $\mathcal{O}$ ), same data as Ht (CKA; CPG).

**DIAGNOSIS.** A species easily separated from all of the region for the smaller body, length of antennae and genitalia.

**DESCRIPTION**. Female. Moderately shiny; entirely black with antennae and legs ferruginous; covered with dense, yellowish pubescence.

Frons flat between the eyes, slightly impressed at the anterior margin, this regularly arcuate, punctuation dense with punctures approximately of the same size, deep, simple, with very short intervals.

Antennae exceeding by one article the apices of the posterior angles of pronotum, slightly serrated from the third article on; second article subconical, twice longer than wide; third-tenth subtriangular, subequal in length and on average twice longer than wide; last subellipsoidal, constricted before the apex.

Pronotum as long as wide, widest at the middle, convex; sides arcuate, slightly sinuate before the posterior angles, the latter short, truncate, not divergent, carinate; lateral suture-like margin fine and obsolete after the middle; punctuation uniformly distributed, punctures deep, simple, approximately of the same size, with variable, very short intervals.

Scutellum heart-shaped, as long as wide, slightly impressed at middle, finely punctured.

Elytra 2.3-2.4x longer than pronotum and as wide as it, sides widest at the middle; striae marked and punctured, interstriae flat, densely and finely punctured.

Bursa copulatrix sclerified as in the fig. 14, 14a, Claws dilated in the first half.

Male. Body smaller and slender with longer antennae exceeding by about two articles the apices of posterior angles of pronotum.

Aedeagus as in the fig. 5, 5a (length 0.87 mm). Size. Length 5.1-6.2 mm; width 1.43-1.93 mm.

**ETYMOLOGY**. The species is dedicated to entomologist Josef Meschnigg, author of works on the Coleoptera of the Balkan peninsula.

# *Dicronychus ruzzantei* Platia & Kakiopoulos n.sp. Fig. 6, 6a, 15, 15a, 26, 26a.

**DIAGNOSIS.** A species comparable to *D. variatus* (Desbrochers des Loges, 1875) for the general shape and colour but can be separated for the longer antennae and differences in the genitalia of male and female.

**DESCRIPTION**. Female. Moderately shiny; entirely blackish with a more or less developed red-yellowish vitta from the base of the fifth and sixth elytral interstriae, very short or prolonged to the middle of elytra; antennae and legs ferruginous; covered with dense yellow-fulvous pubescence.

Frons flat, slightly impressed before the anterior margin, the later regularly arcuate.

Antennae exceeding by about one article the apices of the posterior angles of pronotum, slightly serrated from third article on; second article subconical, twice longer than wide; third-tenth subtriangular, subequal in length and on average twice longer than wide; last subellipsoidal, constricted before the apex.

Pronotum as long as wide, widest at the middle, convex; sides regularly arcuate, slightly sinuate before the posterior angles, the latter, short, truncate, not divergent, shortly carinate; lateral suture-like margin curved and obsolete after the middle; punctuation dense, uniformly distributed, punctures very small, approximately of the same diameters, with very short intervals.

Scutellum heart-shaped as long as wide, slightly impressed, finely punctured.

Elytra 2.45x longer than pronotum and as wide as it, convex; sides ovaliform, widest at the middle; striae well marked and punctured; interstriae flat with very fine punctures.

Bursa copulatrix sclerified as in the fig. 15, 15a.

Claws dilated in the first half.

Male. Extremely similar to the female, only with a little longer antennae.

Aedeagus as in the fig. 6, 6a (length 1.07 mm). Size. Length 6.6-6.8 mm; width 2.0 mm.

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

# *Dicronychus thirasiaensis* Platia & Kakiopoulos n.sp. Fig. 16, 16a, 27.

**MATERIAL EXAMINED**. Holotype  $\bigcirc$  – Greece: Thira Island (Santorini), Thirasia Islet, 4.VI.2006, Chatzaki leg. (HNHM).

**DIAGNOSIS.** Species allied to *D. schmalfussi* Chassain, 1984 from Santorini, it can be separated for the vey small size and the shorter antennae.

**DESCRIPTION**. Female. Moderately shiny; entirely yellow-ferruginous with blackish shadings on head and pronotum.

Frons convex between the eyes, just impressed before the anterior margin, this regularly arcuate, punctures deep, simple with very short shiny intervals.

Antennae just reaching the apices of the posterior angles of pronotum (estimation because it lack the last four articles), moderately serrated from the third article on, second article subcylindrical, more twice longer than wide; third-seventh subtriangular, subequal in length and more twice longer than wide.

Pronotum as long as wide, widest at the middle, convex, abruptly sloping at sides and base, sides arcuate from the middle regularly narrowing backwards, slightly sinuate before the posterior angles, the latter short, not divergent, briefly carinate; lateral suture-like just traced at base; punctuation dense, regularly distributed, punctures very fine, deep, simple, approximately of the same size, with very short intervals.

Scutellum heart-shaped, as long as wide, impressed at middle, finely punctured.

Elytra 2.4x longer than pronotum and as wide as it, ovaliform; striae regularly marked and punctured, interstriae flat with very fine punctuation.

Claws dilated in the first half.

Wings atrophied not reaching the middle of elytra and not able to fly.

Bursa copulatrix sclerified as in the figs. 16, 16a.

Male unknown.

Size. Length 6.1 mm; width 1.87 mm.

ETYMOLOGY. The name is derived from the Thirasia Islet.

# Dicronychus anatolicus Platia n.sp.

Fig. 17, 17a, 28.

MATERIAL EXAMINED. Holotype ♀ - Turkey: Bozdag, Ödemis, 24.V.1978 (CPG).

**DIAGNOSIS.** Species comparable with *D. obscuripennis* (Pic, 1899) for the general shape and colour, it can be separated for the sides of pronotum not equally narrowing from middle but more strongly backwards and the differences in the sclerites of bursa copulatrix.

**DESCRIPTION**. Female. Moderately shiny; entirely black with antennae and legs ferruginous; covered with very fine and dense yellow-fulvous pubescence.

Frons flat, just impressed before the anterior margin; punctures approximately of the same size with very short intervals or contiguous.

Antennae not reaching the posterior angles of pronotum for about one article (estimation, because mutilated from the sixth article), slightly serrated from the third article on; second article subcylindrical, twice longer than wide, third-sixth subtriangular, subequal in length, twice longer than wide.

Pronotum 1.08x wider than long widest at the middle, strongly convex, abruptly sloping at sides and base; sides very arcuate from middle more strongly narrowing backwards, slightly sinuate just before the posterior angles, the latter truncate, not divergent, shortly carinate; lateral margin suture-

like, fine and obsolete after the middle; punctuation uniformly distributed, punctures very fine, simple, approximately of the same size, with very short intervals.

Scutellum heart-shaped, as long as wide, slightly impressed and finely punctured.

Elytra 2.1x longer than pronotum and as wide as it, convex, ovaliform with sides widest at middle; striae well marked and punctured; interstriae flat and very finely punctured

Claws dilated in the first half.

Bursa copulatrix sclerified as in the fig. 17, 17a.

Male unknown.

Size. Length 7.6 mm; width 2.43 mm.

**ETYMOLOGY**. The name is derived from Anatolia where the species lives.

#### Dicronychus novaki Platia n.sp.

Fig. 7, 7a, 29.

MATERIAL EXAMINED. Holotype &-Iran: Mazandaran Prov., Abe Gam, Damavand Mt., 15-16.VI.2005, R. Novak (CPG).

**DIAGNOSIS.** A bicoloured species comparable only with *D. latescapulatus* (Buysson, 1905) but easily separated for the slenderer body, longer antennae and simple punctuation of pronotum.

**DESCRIPTION**. Male. Moderately shiny; bicoloured; head, pronotum, scutellum, posterior half of elytra blackish with reddish shadings; antennae, first half of elytra and legs yellow-reddish; covered with moderate, yellowish pubescence.

Frons convex between the eyes, slightly impressed before the anterior margin, this substraight at middle; punctures simple, approximately of the same size with very short intervals or contiguous.

Antennae exceeding by about two articles the apices of posterior angles of pronotum, slightly serrated from third article on; second article subcylindrical, twice longer than wide, third conical, a little longer than second and a little shorter than fourth; fourth-tenth subtriangular, fourth twice longer than wide, the following slenderer; last subellipsoidal a little longer than penultimate.

Pronotum as long as wide, widest just behind the middle, convex, abruptly sloping at sides and base; sides arcuate, from behind the middle narrowing backwards, slightly sinuate before the posterior angles, the latter rounded at apex, not divergent, shorthly carinate; lateral suture-like margin obsolete after the middle; punctuation dense, uniformly distributed, punctures approximately of the same size, simple with very short intervals much more smaller than their own diameters.

Scutellum heart-shaped, as long as wide, impressed at middle, very finely punctured.

Elytra 2.5x longer than pronotum and as wide as it, convex; sides subparallel for the first half then very gradually narrowing to the apices; striae punctured, interstriae subconvex, finely punctured.

Claws dilated in the first half.

Aedeagus as in fig. 7, 7a (length 1.1 mm).

Female unknown.

Size. Length 6.2 mm; width 1.81 mm.

**ETYMOLOGY**. The species is dedicated to the collector R. Novak.

#### Acknowledgements

We thank very much the colleagues G. Ruzzante and G. Salvato for the kindness to give us the elaterids collected in their excursions and Dr. O. Merkl and T. Nemeth of the Museum of Budapest for the envoice of the specimens of Cardiophorini from the Greek Islands.

### **Bibliography**

- BOUCHARD P., Y. BOUSQUET, A.E. DAVIES, M.A. ALONSO–ZARAZAGA, J.F. LAWRENCE, C.H.C. LYAL, A.F. NEWTON, C.A.M. REID, M. SCHMITT, S.A. ŚLIPIŃSKI & A.B.T. SMITH 2011. Family-group names in Coleoptera (Insecta). *ZooKeys*, **88**: 1-972.
- CATE P.C. 2007. Family Elateridae, pp. 89-209, in Löbl I. & Smetana A. (ed.): Catalogue of Palaearctic Coleoptera, Vol. 4. Elateroidea Derontoidea Bostrichoidea Limexyloidea-Cleroidea Cucujoidea. Stenstrup: Apollo Books, 935 pp.
- CHASSAIN, J. 1984. La faune de l'île égéenne de Santorin. Part 4. Elateridae (Coleoptera). *Entomologische Blätter für Biologie und Systematik der Käfer*, **80**(2-3): 91-100.
- COBOS, A. 1969. Ensayo monografico sobre los *Cardiophorus* Esch., 1829 de Canarias (Col. Elateridae). *Eos.*, **45**: 29-96.

- PLATIA, G. 2013. New species and new records of click beetles from the Palearctic region (Coleoptera, Elateridae). *Boletin de la Sociedad Entomologica Aragonesa* (S.E.A.), **53**: 121-124.
- PLATIA, G. & I. GUDENZI 2000. Contributo alla conoscenza dei *Cardiophorus* della Grecia. *Bollettino della Società entomologica Italiana*, Genova, **132**(2): 135-155.
- PLATIA, G. & I. GUDENZI 2002. Revisione dei *Cardiophorus* della Turchia. II. Le specie unicolori (Coleoptera Elateridae). *Bollettino della Società entomologica italiana*, Genova, **134**(1): 27-55
- PLATIA, G. & I. GUDENZI 2003. Contributo alla conoscenza dei *Dicronychus* Brullé della Grecia con descrizione di nuove specie e chiave di determinazione per quelle note. (Coleoptera, Elateridae, Cardiophorini). *Annali del Museo civico i Storia naturale di Ferrara*, **5**(2002): 27-39.
- PLATIA, G. & I. GUDENZI 2004. Contributo alla conoscenza dei *Dicronychus* Brullé, 1832 della Turchia con descrizione di nuove specie e chiave di determinazione per le specie note (Coleoptera: Elateridae: Cardiophorini). *Boletin de la Sociedad Entomologica Aragonesa*, **34**: 9-22.

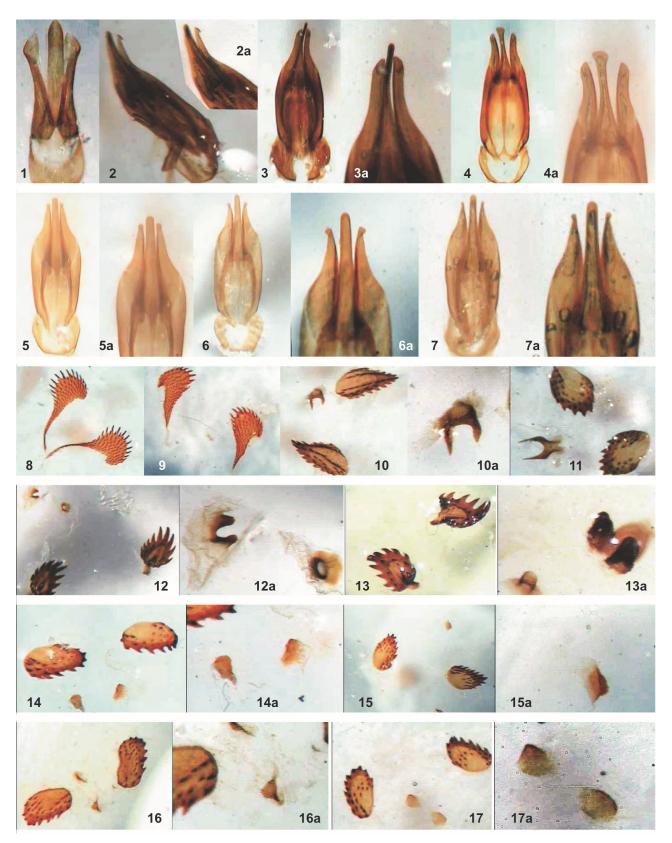


Fig. 1-7. Male genitalia in dorsal and lateral view. 1. Peripontius icari n.sp.; 2, 2a, Cardiophorus mylonasi n.sp.; 3, 3a. Cardiophorus armathiaensis n.sp.; 4, 4a. Cardiophorus schneppati Platia; 5, 5a. Dicronychus meschniggi n.sp.; 6, 6a. Dicronychus ruzzantei n.sp.; 7, 7a. Dicronychus novaki n.sp.

Fig. 8- 17. Sclerites of bursa copulatrix. 8. Peripontius icari n.sp.; 9. Peripontius omissus (Buysson); 10, 10a. Cardiophorus mylonasi n.sp.; 11. Cardiophorus kasiensis n.sp.; 12, 12a. Coptostethus salvatoi n.sp.; 13, 13a. Dicronychus aegyptiacus n.sp.; 14, 14a. Dicronychus meschniggi n.sp.; 15, 15a. Dicronychus ruzzantei n.sp.; 16, 16a. Dicronychus thirasiaensis n. sp; 17, 17a. Dicronychus anatolicus n.sp.

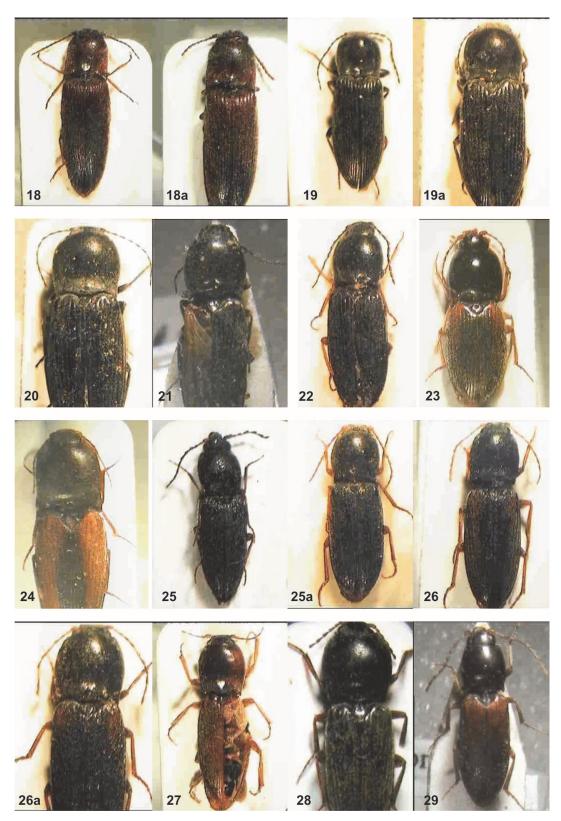


Fig. 18-29. Habitus in total or partial view. 18. Peripontius icari n.sp.  $\Diamond \Diamond ;$  19. Cardiophorus mylonasi n.sp.  $\partial \Diamond ;$  20. Cardiophorus armathiaensis n.sp.  $\partial ;$  21. Cardiophorus kasiensis n.sp.  $\Diamond ;$  22. Cardiophorus schneppati Platia  $\partial ;$  23. Coptostethus salvatoi n.sp.  $\Diamond ;$  24. Dicronychus aegyptiacus n.sp.  $\Diamond ;$  25, 25a. Dicronychus meschniggi n.sp.  $\partial \Diamond ;$  26, 26a. Dicronychus ruzzantei n.sp.  $\partial \Diamond ;$  27. Dicronychus thirasiaensis n.sp.  $\Diamond ;$  28. Dicronychus anatolicus n.sp.  $\Diamond ;$  29. Dicronychus novaki n.sp.  $\partial .$