

NEW SPECIES, NEW RECORDS AND NOTES ON CLICK-BEETLES FROM GREECE (COLEOPTERA: ELATERIDAE)

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Abstract: Seven species of click-beetles belonging to the genera *Dima* Charpentier, *Ampedus* Dejean, *Peripontius* Gurjeva and *Cardiophorus* Eschscholtz, are described from Greece. The characteristics to separate the males and the pictures of genitalia of *Dima fokidensis* Schimmel & Platia, 2008 and *Dima pamonensis* Schimmel & Platia 2008, originally described on female specimens, are given. New records on five species into the genera *Agriotes* Eschscholtz, *Cardiophorus* Eschscholtz and *Dicronychus* Brullé are published.

Key words: Coleoptera, Elateridae, *Dima*, *Agriotes*, *Ampedus*, *Peripontius*, *Cardiophorus*, *Dicronychus*, new species, new records, Greece.

Nuevas especies, nuevas citas y notas sobre elatéricos de Grecia (Coleoptera: Elateridae)

Resumen: Se describen siete nuevas especies de Grecia pertenecientes a los géneros *Dima* Charpentier, *Ampedus* Dejean, *Peripontius* Gurjeva y *Cardiophorus* Eschscholtz. Se aportan los caracteres para separar a los machos y las figuras de la genitalia de *Dima fokidensis* Schimmel & Platia, 2008 y *Dima pamonensis* Schimmel & Platia 2008, descritas originalmente a partir de hembras. Se publican nuevas citas de cinco especies pertenecientes a los géneros *Agriotes* Eschscholtz, *Cardiophorus* Eschscholtz y *Dicronychus* Brullé.

Palabras clave: Coleoptera, Elateridae, *Dima*, *Agriotes*, *Ampedus*, *Peripontius*, *Cardiophorus*, *Dicronychus*, especie nueva, cita nueva, Grecia.

Taxonomy / Taxonomía: *Dima schnitteri* n. sp., *Dima arndti* n. sp., *Dima neumanni* n. sp., *Peripontius lesboensis* n. sp., *Ampedus bergeri* n. sp., *Ampedus chassaini* n. sp., *Cardiophorus schneppati* n. sp.

Introduction

The examination of material of click-beetles belonging to the genera *Dima* Charpentier, *Ampedus* Dejean, *Peripontius* Gurjeva and *Cardiophorus* Eschscholtz, from Greece (particularly from Peloponnesos, Lesbos, Samos and Creta Islands) received for study from the Natural History Museum of Erfurt (Germany) by the courtesy of the curator Mr. M. Hartmann, and from the private colleagues, in alphabetic order, J. Chassain (France), R. Królik (Poland), J. Mertlik (Czech Rep.), U. Schneppat (Switzerland), give me the opportunity to describe new species and to widen the distribution of other. Particularly interesting the discovery of three new species of the genus *Dima*. All the species of this genus are apterous and nocturnal and seem to have a high degree of speciation. Now their number from Greece amount to 24 species (Schimmel & Platia, 2008; Platia & Gudenzi, 2009; Platia, 2010, 2011, 2012), it is quadruplicated in the last four years by new researchers with trapping systems and directly by night.

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: CPG, Platia coll., Gatteo (Italy), CBU, Brůha coll., Ústí nad Labem, Czech Republic, CDZ, Dušánek coll., Zábřeh na

Moravě, Kralove (Czech Republic), CKK, Królik coll., Kluczbork (Poland), CMHK, Mertlik coll., Hradec Králové (Czech Republic), CZP, Zbuzek coll., Praha; NME, Naturkundemuseum Erfurt (Germany).

The tribal placement of genera listed below follows Bouchard *et al.* (2011). We used the following jobs that include original descriptions: Platia & Gudenzi (1999 and 2002).

Taxonomy

Tribe DIMINI Candèze, 1863

Dima schnitteri n. sp.

Fig. 1, 1a, 10, 10a, 16, 16a, 24, 24a, 29, 31, 31a.

MATERIAL EXAMINED. Holotype ♂ - Greece: Peloponnesos, Panap, 23.IV-3.VI.2007, P. Schnitter (NME). 11 Paratypes (5 ♂, 6 ♀) – same data as Ht (NME, CPG).

DIAGNOSIS. A large species near *D. peloponnensis* Schimmel & Platia, 2008, it can be separated for a little shorter antennae, coarser punctuation of pronotum, this with apices of posterior angles shorter, elytral striae less distinct, partially obsolescent, different shape of the thorns of bursa copulatrix and aedeagus.

DESCRIPTION. Male. Moderately shiny; entirely brown-ferruginous with blackish shadings particularly on the disk of pronotum and at base of elytra; antennae and legs ferruginous; covered with dense, yellowish, partially erect on head, sides of pronotum and elytra, pubescence.

Frons impressed from vertex to the anterior margin, puncturation coarse, punctures umbilicate, contiguous.

Antennae exceeding by nearly four articles the apices of the posterior angles of pronotum; second article subconical, twice longer than wide, third conical, 1.9x longer than wide and just shorter than second; second and third, taken together, a little longer than fourth; fourth-fifth subtriangular more twice longer than wide, the following slenderer, on average 3x longer than wide; last longer than penultimate with subparallel sides narrowing at the apical third.

Pronotum 1.3x wider than long, widest behind the middle, moderately convex, in some specimens with a trace of mid-longitudinal line or very narrow depression; sides arcuate from behind the middle gradually converging forward, sinuate before the posterior angles, the latter acuminate and divergent, directed downwards, carina running from base to the anterior margin and parallel to the lateral margin; punctation uniformly distributed, punctures on the disk deep, simple or slightly umbilicate with very short, shiny intervals, just a little denser towards the sides.

Scutellum subcircular, wider than long, flat, ridged at base, finely punctured.

Elytra 2.9x longer than pronotum and wider than it, moderately convex; sides widest behind the middle, subparallel in the first half; striae not always clearly defined and distinct; interstriae flat, very larger and denser punctures.

Aedeagus as in fig. 1, 1a (length 3.1 mm).

Female. Very similar to the male but with shorter antennae exceeding only by one articles the apices of posterior angles of pronotum.

Bursa copulatrix sclerified as in fig. 10, 10a.

Size. Length 13.7-17 mm; width 5-6.5 mm.

ETYMOLOGY. The species is dedicated to the collector Peer Schnitter, specialist of Coleoptera Carabidae.

***Dima arndti* n. sp.**

Fig. 2, 2a, 11, 17, 17a, 25, 27, 32, 32a.

MATERIAL EXAMINED. Holotype ♂ - Greece: Peloponnesos, Langaja Pass, 7.V.2007, E. Arndt & V. Neumann (NME); 2 Paratypes ♂♀ - same data as Ht. (NME, CPG).

DIAGNOSIS. Species closed to *D. parnonensis* Schimmel & Platia, 2008 it can be separated for the shorter antennae, the sides of pronotum strongly sinuate immediately before the posterior angles, these are longer and acuminate, paramera of aedeagus

DESCRIPTION. Male. Moderately shiny; entirely brown-ferruginous with blackish undefined shadings on base of pronotum, base of elytra and scutellum; covered with dense, fine, recumbent on elytra, partially erect on head and posterior angles of pronotum, yellowish pubescence.

Frons deeply impressed from the vertex to before the anterior margin, punctures of variable size, deep, simple or slightly umbilicate with very short, variable intervals.

Antennae exceeding by three articles the apices of posterior angles of pronotum; second and third articles subconical, second just longer than second and 1.6x longer than wide; second and third, taken together, just longer than fourth; fourth-tenth subtriangular, on average twice longer than wide, last as long as penultimate, with subparallel sides, narrowing before the apex.

Pronotum 1.3x wider than long, widest behind the middle, very convex on the disk, gradually sloping at sides more abruptly at base; sides strongly arcuate, from behind the middle gradually converging forward, strongly sinuate immediately before the posterior angles, these very acuminate, not divergent at apex with a carina running parallel to the lateral margin reaching the anterior margin; puncturation moderate uniformly distributed, punctures on disk deep, simple with variable, shiny intervals, on average smaller than their own diameters, only a little denser towards the sides.

Scutellum subpentagonal, flat, ridged and substraight at base, rounded at apex, finely punctured.

Elytra 3x longer than pronotum and wider than it, convex; sides subparallel, just dilated behind the middle; striae well distinct for all its length indistinctly punctured; interstriae flat, densely punctured.

Aedeagus as in fig. 2, 2a (length 2.81 mm).

Female. Very similar to the male but with shorter antennae, just reaching the apices of the posterior angles of pronotum. Bursa copulatrix sclerified as in fig. 11.

Size. Length 11.8-12.8 mm; width 4.5-4.6.

ECOLOGICAL NOTES. The specimens were collected in *Abies cephalonica* forest.

ETYMOLOGY. The species is dedicated to one of the collectors, Erik Arndt, specialist of Coleoptera Carabidae.

***Dima neumanni* n. sp.**

Fig. 3, 3a, 18, 26, 28, 33.

MATERIAL EXAMINED. Holotype ♂ - Greece: Peloponnesos, Mt. Erimanthos, SE Kaletzi, 1190 m, 25.IV-3.VI.2007, P. Schnitter. (NME).

DIAGNOSIS. A species related to *D. raineri* Wurst, 1997 for the general shape and size it can be distinguished by the shorter antennae, conspicuously denser pubescence, semierect on head and pronotum, subparallel sides of elytra.

DESCRIPTION. Male. Moderately shiny; brown-ferruginous with head and pronotum darkened; covered with dense, semierect on head, pronotum, sides of elytra, yellowish pubescence.

Frons impressed from between the eyes to near the anterior margin, punctures coarse, slightly umbilicate, nearly contiguous.

Antennae exceeding by about three articles the apices of the posterior angles of pronotum; second and third articles subconical, 1.6x longer than wide and subequal in length, taken together, 1.28x longer than fourth; fourth-tenth subtriangular, fourth-sixth about twice longer than wide, the following slenderer more twice longer than wide, last longer than penultimate, with subparallel sides narrowing at the apical third.

Pronotum 1.23x wider than long, widest just behind the middle, moderately and regularly convex; sides arcuate, from behind the middle gradually converging forwards; strongly sinuate immediately before the posterior angles, the latter acuminate, divergent with a carina running parallel to the lateral margin and reaching the anterior margin; punctation uniformly distributed, punctures on the disk deep, simple with very short and shiny intervals, only just denser towards the sides.

Scutellum subcircular, wider than long, straight at base, punctured.

Elytra 3x longer than pronotum and a little wider than it, convex; sides subparallel for about the two third of its length, gradually nattowing at the apical third; striae well distinct, not punctured, interstriae flat, densely punctured.

Aedeagus as in fig. 3, 3a (length 2.75 mm).

Female unknown.

Size. Length 12 mm; width 4.3 mm.

ECOLOGICAL NOTES. The specimens were collected in *Abies cephalonica* forest.

ETYMOLOGY. The species is dedicated to Volker Neumann, collector of Col. Carabidae.

Dima fokidensis Schimmel & Platia, 2008

Fig. 4, 4a, 19, 34.

MATERIAL EXAMINED. 89 ♂, 77 ♀ - Greece: Magnissia, Pilio Mts., Chania village env., 1263 m, 15.VI.2012, J. Mertlik (CDZ; CMHK; CPG; CZP).

DESCRIBED on three female specimens.

Male. Very similar to female, it differs for the longer antennae exceeding by about four articles the apices of posterior angles of pronotum with second and third articles, taken together as long as fourth.

Aedeagus as in fig. 4, 4a (2.87 mm).

Size. Length 10.5-14.5 mm - width 4-5 mm.

Dima parnonensis Schimmel & Platia, 2008

Fig. 5, 5a, 20, 35.

MATERIAL EXAMINED. 1 ♂ - Greece: Peloponnesos, Parnon Mts., 22-30.VI.2005, I. Marvan (CMHK).

DESCRIBED on two female specimens. The male was collected together the female but was not disposable at the moment of description.

Male. Very similar to the female but with longer antennae exceeding by four articles the apices of posterior angles of pronotum, second and third articles, taken together, as long as fourth.

Aedeagus as in fig. 5, 5a (length 2.81 mm).

Size. Length 12.6 mm; width 4.68 mm.

Tribe SYNAPTINI, Gistel, 1856

***Peripontius lesboensis* n. sp.**

Fig. 6, 6a, 12, 21, 21a, 36, 36a.

MATERIAL EXAMINED. Holotype ♂ - Greece: Lesbos Isl., Mt. Olympos, 13.V.2008, P. Berger (CPG). 1 Paratype ♀ - same data as Ht. (CPG).

DIAGNOSIS. Very related to *P. omissus* (Buysson, 1889) for the general shape, colour and size, it can be separated for the subtrapezoidal shape of pronotum in the male, shorter elytra compared to pronotum, slenderer paramera in aedeagus, sclerites of bursa copulatrix.

DESCRIPTION. Male. Entirely ferruginous with undefined blackish shadings; covered with dense, yellow-fulvous pubescence.

Frons convex between the eyes, flat before the anterior margin, uniformly punctured, punctures coarse, slightly umbilicate, nearly or contiguous.

Antennae not reaching for about one article the apices of posterior angles of pronotum, serrated from fourth article on; second article subcylindrical, third subconical, subequal in

length; second and third, taken together, 1.57x longer than fourth; fourth-tenth triangular, on average 1.6 longer than wide, last longer than penultimate, ellipsoidal, constricted at the apical third.

Pronotum 1.2x wider than long, widest at the apices of posterior angles, convex, abruptly sloping at sides and base, sides nearly regularly and gradually narrowing fom base to the anterior margin, posterior angles acuminate, not divergent, with a short carina very near to the lateral margin in the first half; lateral margin complete; punctation uniformly distributed, punctures coarse, on the disk slightly umbilicate, with very short, shiny intervals, gradually denser and clearly umbilicate towards the sides, contiguous at the lateral extremities. Scutellum shield-shaped nearly as long as wide, ridged at base, flat, punctured.

Elytra 3x longer than pronotum and as wide as it, convex; sides regularly narrowing from base to apices; striae regularly marked and punctured; intersriae flat with finer punctures.

Aedeagus as in fig. 6, 6a (length 0.75 mm).

Female. Very similar to the male but with shorter antennae, more parallel sides of pronotum and of elytra.

Bursa copulatrix sclerified as in fig. 12.

Size. Length 6.80- 6.85 mm; width 1.93-2.06 mm.

ETYMOLOGY. The name is derived from the Island of Lesbo where the species was collected.

Tribe AGRIOTINI Laporte, 1840

Agriotes laevarinatus Platia & Gudenzi, 1999

Fig. 7, 7a, 37.

MATERIAL EXAMINED. 4 (3♂1♀) - Greece: Ahaia, Kalavrita, 28.29.IV.1999, F. Angelini; Is. Euboea, Emge, ex C. & O. Vogt coll; Flampoura, 24.V.1996; Skepato, Ahaia, 11.V.2004 (CPG).

In the original description of the species was not published the picture of the male genitalia.

Aedeagus as in fig. 7, 7a (length 1.43 mm).

DISTRIBUTION. Greece (Cate, 2007).

Tribu AMPEDINI Gistel, 1848

***Ampedus bergeri* n. sp.**

Fig. 8, 8a, 22, 30, 38.

MATERIAL EXAMINED. Holotype ♂ - Greece: Lesbos Isl., Karyonas, Koumeli, SE Mt Olympos, 16.V.2008, P. Berger. (CPG).

DIAGNOSIS. Species belonging to *A. sanguinolentus* group for the system of pronotal puncturation, it can be separated by the third subtriangular antennal article with a shagreened, dull surface and sides of pronotum nearly regularly narrowing from base to apex.

DESCRIPTION. Male. Bicoloured; head, pronotum, scutellum, underbody, black-piceous; elytra nearly entirely red only with the apical extremity darkened; legs blackish with yellow-ferruginous claws; covered with dense, blackish pubescence. Frons convex, punctation uniformly distributed, punctures umbilicate, nearly contiguous.

Antennae reaching the apices of posterior angles of pronotum; second article very short, as long as wide, third subtriangular with dull surface, twice longer than second and 1.3x longer than wide, second and third, taken together, 1.2x longer than

fourth; fourth-tenth triangular, on average just longer than wide, last longer than penultimate, ellipsoidal, constricted at the apical third

Pronotum 1.2x wider than long, widest at the apices of posterior angles, convex, with a very shallow mid-longitudinal depression on the basal slope, sides nearly regularly and gradually converging from base to apex, posterior angles not divergent, with a short and raised carina directed inside; punctation moderate uneven distributed, punctures on the disk deep, simple or slightly umbilicate with intervals on average equal to their own diameters, gradually larger and clearly umbilicate towards the sides, with very short intervals or nearly contiguous at the lateral extremities.

Scutellum shield-shaped, moderately convex, ridged at base, distinctly punctured.

Elytra 2.9x longer than pronotum and as wide as it, convex; sides subparallel in the first half, further gradually narrowing to the apices; striae well marked and distinctly punctured; interstriae flat or subconvex with very fine punctures.

Aedeagus as in fig. 8, 8a (1.46 mm).

Female unknown.

Size. Length 10.5 mm; width 3.25 mm.

ETYMOLOGY. The species is dedicated to the collector P. Berger, well-known specialist of Coleoptera Cerambycidae.

***Ampedus chassaini* n. sp.**

Fig. 9, 9a, 23, 39.

MATERIAL EXAMINED. Holotype ♂ - Greece: Peloponnesos, Vytina, 30.IV.1996. (CPG).

DIAGNOSIS. Species that could be compared with *A. pomonae* (Stephens, 1830) for the general shape and colour, it can be distinguished by the sides of pronotum nearly regularly converging from base to apex with less dense and subovate punctures at the lateral extremities.

DESCRIPTION. Male. Bicoloured; head, pronotum, scutellum black-piceous, elytra entirely red-orange, antennae blackish; legs brownish with light tarsi; covered with dense, erect on sides of pronotum and elytra, blackish pubescence.

Frons convex, puncturation coarse, punctures umbilicate with very short intervals.

Antennae reaching the apices of posterior angles of pronotum, serrated from fourth article on; second article subcylindrical just longer than wide, third subconical, 1.55x longer than second; second and third, taken together, just longer than fourth; fourth-tenth triangular, on average 1.5x longer than wide, last longer than penultimate, subellipsoidal.

Pronotum 1.14x wider than long, widest at the apices of posterior angles, regularly convex; sides from base gradually and regularly narrowing to apex, posterior angles not divergent, with a raised carina directed inside; punctures rather uniformly distributed, punctures on disk of variable size, simple or slightly umbilicate, with variable, very shiny intervals on average smaller than their own diameters, gradually denser towards the sides, clearly umbilicate, with very short intervals or contiguous at the lateral extremities.

Scutellum shield-shaped, with a trace of mid-longitudinal carina, ridged at base, sparsely punctured.

Elytra 2.8x longer than pronotum and as wide as it, moderately convex; sides very gradually and regularly narrowing from

base to the apices; striae regularly marked and punctured, interstriae flat, densely punctured.

Aedeagus as in fig. 9, 9a (length 1.25 mm).

Female unknown.

Size. Length 10.9 mm; width 3.1 mm.

ETYMOLOGY. The species is dedicated to the french colleague, Jacques Chassain, well-known specialist of Coleoptera Elateridae, that sent me many interesting material.

Tribe CARDIOPHORINI Candèze, 1859

***Cardiophorus schneppati* n. sp.**

Fig. 14, 14a, 14b, 40, 40a.

MATERIAL EXAMINED. Holotype ♀ - Greece: Samos Isl., Stella beech, Kokkari, 13.V.2008, U. Schneppat (CPG).

DIAGNOSIS. Species very closed to *C. foveiventris* Schwarz, 1900 for the general shape, colour and depression on the last abdominal sternite, it can be separate for the less dense puncturation of pronotum and characters of bursa copulatrix.

DESCRIPTION. Female. Entirely black with moderate bronzed lustre; legs reddish; covered with dense, short, yellowish pubescence.

Frons convex between the eyes, flat before the anterior margin, punctures fine, of variable size and intervals on average smaller than their own diameters.

Antennae reaching the apices of posterior angles of pronotum, moderately serrated from fourth article on; second article subcylindrical, 1.75x longer than wide; third-tenth triangular, on average 2.5x longer than wide.

Pronotum just wider than long, widest at middle, very and regularly convex; sides very arcuate, from middle anteriorly and posteriorly equally narrowing, posterior angles shortly carinate; lateral margin complete and regularly curved; puncturation uniformly distributed, punctures on the disk deep, simple, of two sizes regularly mixed with very shiny intervals on average equal to larger than their own diameters, towards the sides just denser.

Scutellum heart-shaped, as long as wide, pointed at apex, deeply emarginate at middle of base, flat, very finely punctured.

Elytra 2.34x longer than pronotum and as wide as it, convex; sides ovaliform, widest at middle; striae well marked and punctured; interstriae subconvex, very densely punctured.

Last visible abdominal sternite with a preapical shallow depression.

Claws simple.

Bursa copulatrix sclerified as in fig. 14, 14a, 14b.

Size. Length 7.0 mm; width 2.18 mm.

Male unknown.

ETYMOLOGY. The species is dedicated to the collector Ulrich E. Schneppat, of the Bündner Naturmuseum / Amt für Kultur of Chur (Switzerland).

***Cardiophorus agilis* Platia & Gudenzi, 2002**

MATERIAL EXAMINED. 2♂ 1♀ - Greece: Lesbos Isl., Agiasos Keramos, 13.V.2008, P. Berger; Lesbos Isl., Mt Olympos, 11.V.2008, P. Berger. (CPG).

DISTRIBUTION. Turkey (Cate, 2007). **New to Greece.**

Cardiophorus foveiventris Schwarz, 1900

Figs. 15, 15a, 15b, 41

MATERIAL EXAMINED. 3 ♀ - Greece: Crete Is., 1 km S Ali-chambos, Chania Pref., 400 m, 17.V.2011, R. Królik; Omalos env., Chania Pref., 1049 m, 16.V.2011, R. Krolik. (CKK; CPG).

DISTRIBUTION. Species known till now from several localities of continental Greece. (Cate, 2007). **New to Crete Island.**

Dicronychus senaci (Desbrochers, 1870)

MATERIAL EXAMINED. 15 ♂ ♀ - Greece: Lesbos Isl., Filia, 17.V.2008, P. Berger. (CPG).

DISTRIBUTION. Turkey (Cate, 2007). **New to Greece.**

Dicronychus variatus (Desbrochers, 1875)

MATERIAL EXAMINED. 11 ♂ ♀ - Greece: Lesbos Isl., Agiasos Keramos, 13.V.2008, P. Berger; Lesbos Isl., Anemotia, 11.V.2008, P. Berger; Lesbos Isl., Mt Olympos, 11.V.2008, P. Berger. (CPG).

DISTRIBUTION. Syria; Turkey (Cate, 2007). **New to Greece.**

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. ŚLIPINSKI & 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. (eds.). *Catalogue of Palaearctic Coleoptera vol. 4. Elateroidea-Derontoidea-Bostrichoidea-Limexyloidea-Cleroidea- Cucujoidea*. Apollo Books, Stenstrup, 935 pp.
- PLATIA, G. 2010. New species and chorological notes of click beetles from Palearctic Region, especially from the Middle East (Coleoptera Elateridae). *Boletín de la Sociedad Entomológica Aragonesa, (S.E.A.)*, **46**: 23-49.
- PLATIA, G. 2011. New species and new records of click beetles from the Palearctic region (Coleoptera Elateridae). *Boletín de la Sociedad Entomológica Aragonesa (S.E.A.)*, **48**: 47-60.
- PLATIA, G. 2012. Description of ten new species of click-beetles from the Palearctic region, with new distributional records (Coleoptera, Elateridae). *Boletín de la Sociedad Entomológica Aragonesa (S.E.A.)*, **50**: 199-207.
- PLATIA G. & I. GUDENZI 1999. Descrizione di nuove specie di Elateridi della regione paleartica con note geonemiche e sinonimiche (Insecta Coleoptera Elateridae). *Quaderno di Studi e Notizie di Storia Naturale della Romagna*, **11**, suppl.: 17-31.
- 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 2009. Descriptions of new species of click-beetles from Palearctic region with chorological notes (Insecta Coleoptera Elateridae). *Quaderno di Studi e Notizie di Storia naturale della Romagna*, **28**: 111-131.
- SCHIMMEL, R. & G. PLATIA 2008. The European species of the genus *Dima* Charpentier, 1825 (Insecta: Coleoptera, Elateridae). *Bollettino del Museo regionale di Scienze naturali, Torino*, **25**(2): 559-594.

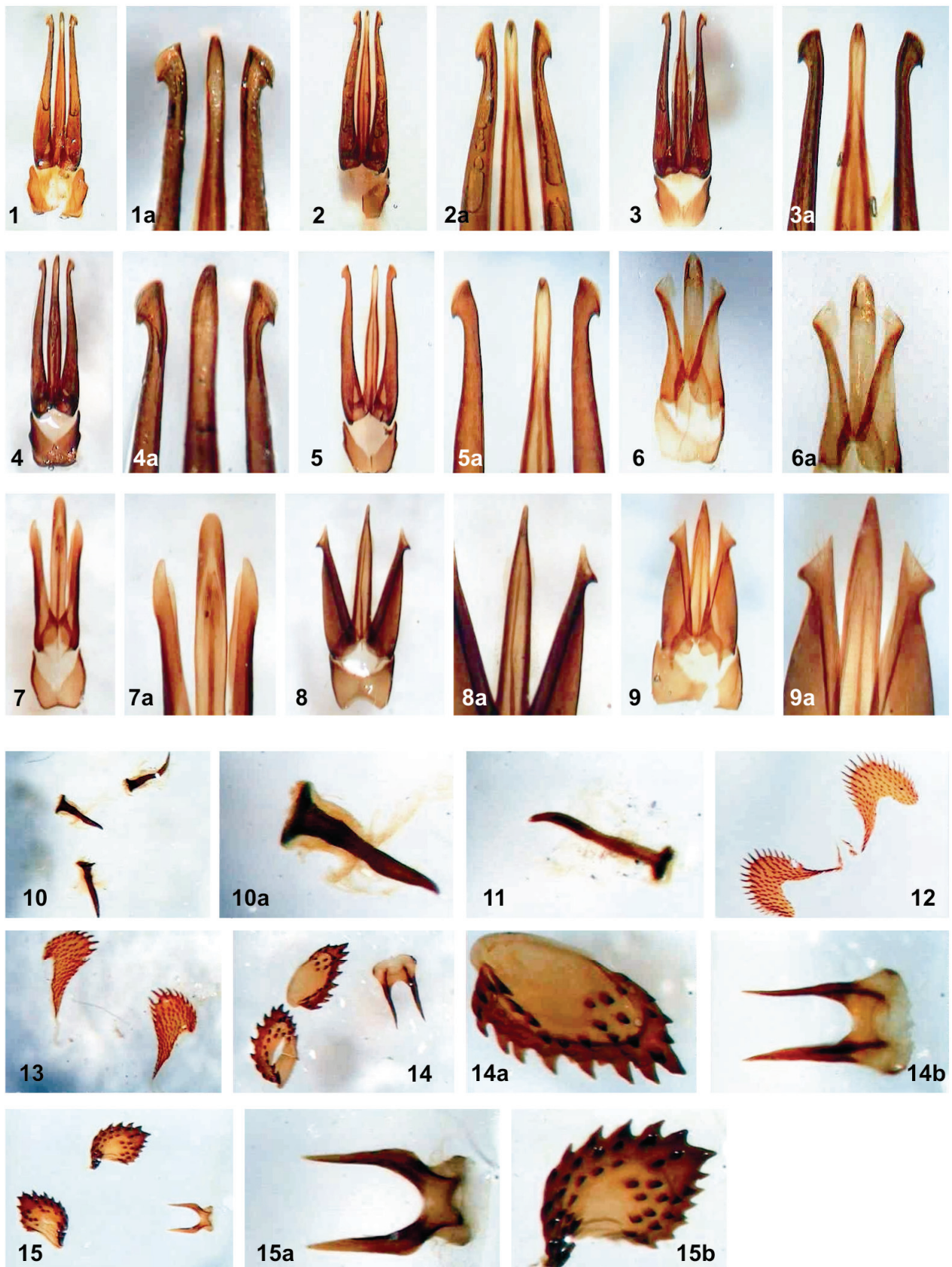


Fig. 1-9. Male genitalia in dorsal view. **1, 1a.** *Dima schnitteri* n. sp.; **2, 2a.** *Dima arndti* n. sp.; **3, 3a.** *Dima neumanni* n. sp.; **4, 4a.** *Dima fokidensis* Schimmel & Platia; **5, 5a.** *Dima parnonensis* Schimmel & Platia; **6, 6a.** *Peripontius lesboensis* n. sp.; **7, 7a.** *Agriotes laevicarinatus* Platia & Gudenzi; **8, 8a.** *Ampedus bergeri* n. sp.; **9, 9a.** *Ampedus chassaini* n. sp. **Fig. 10-15.** Sclerites of bursa copulatrix. **10, 10a.** *Dima schnitteri* n. sp.; **11.** *Dima arndti* n. sp.; **12.** *Peripontius lesboensis* n. sp.; **13.** *Peripontius omissus* (Buysson); **14, 14a, 14b.** *Cardiophorus schneppati* n. sp.; **15, 15a, 15b.** *Cardiophorus foveiventris* Schwarz.

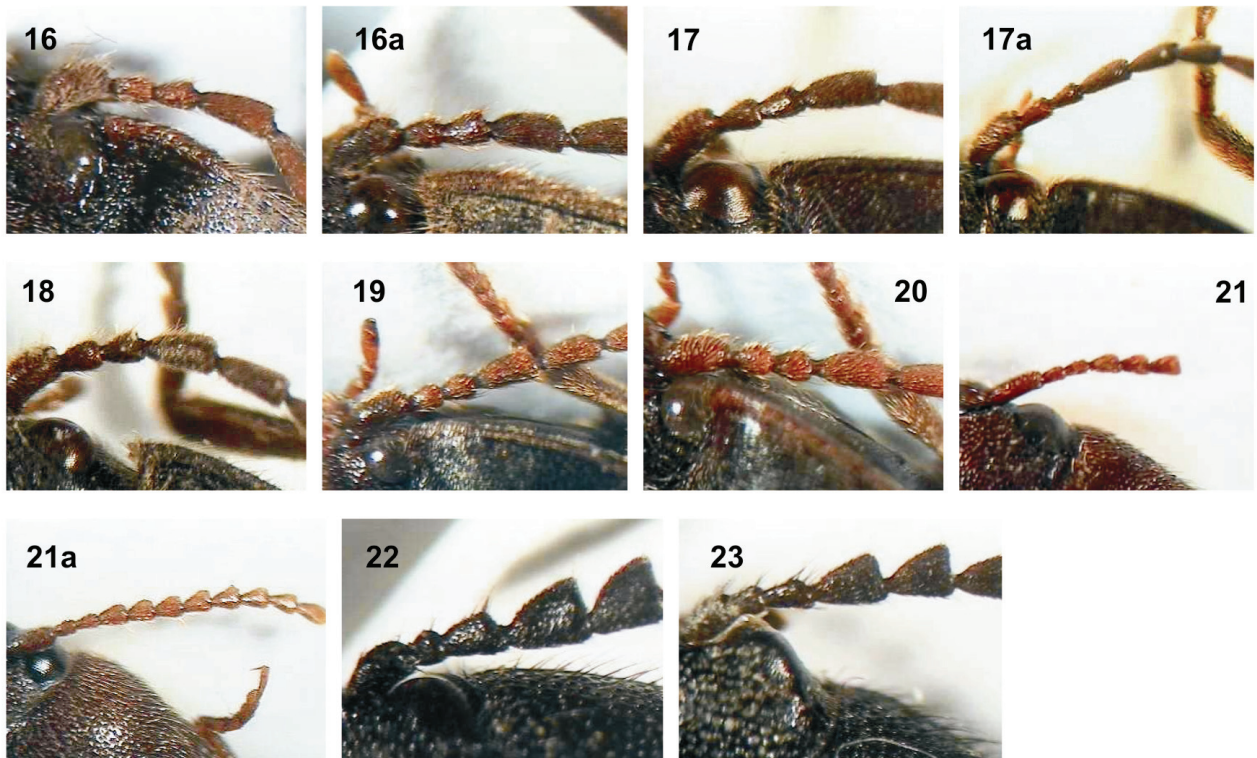


Fig. 16-23. First articles of antennae. **16, 16a.** *Dima schnitteri* n. sp. ♂♀; **17, 17a.** *Dima arndti* n. sp. ♂♀; **18.** *Dima neumanni* n. sp. ♂; **19.** *Dima fokidensis* Schimmel & Platia, ♂; **20.** *Dima parnonensis* Schimmel & Platia, ♂; **21, 21a.** *Peripontius lesboensis* n. sp. ♂♀; **22.** *Ampedus bergeri* n. sp.; **23.** *Ampedus chassaini* n. sp.

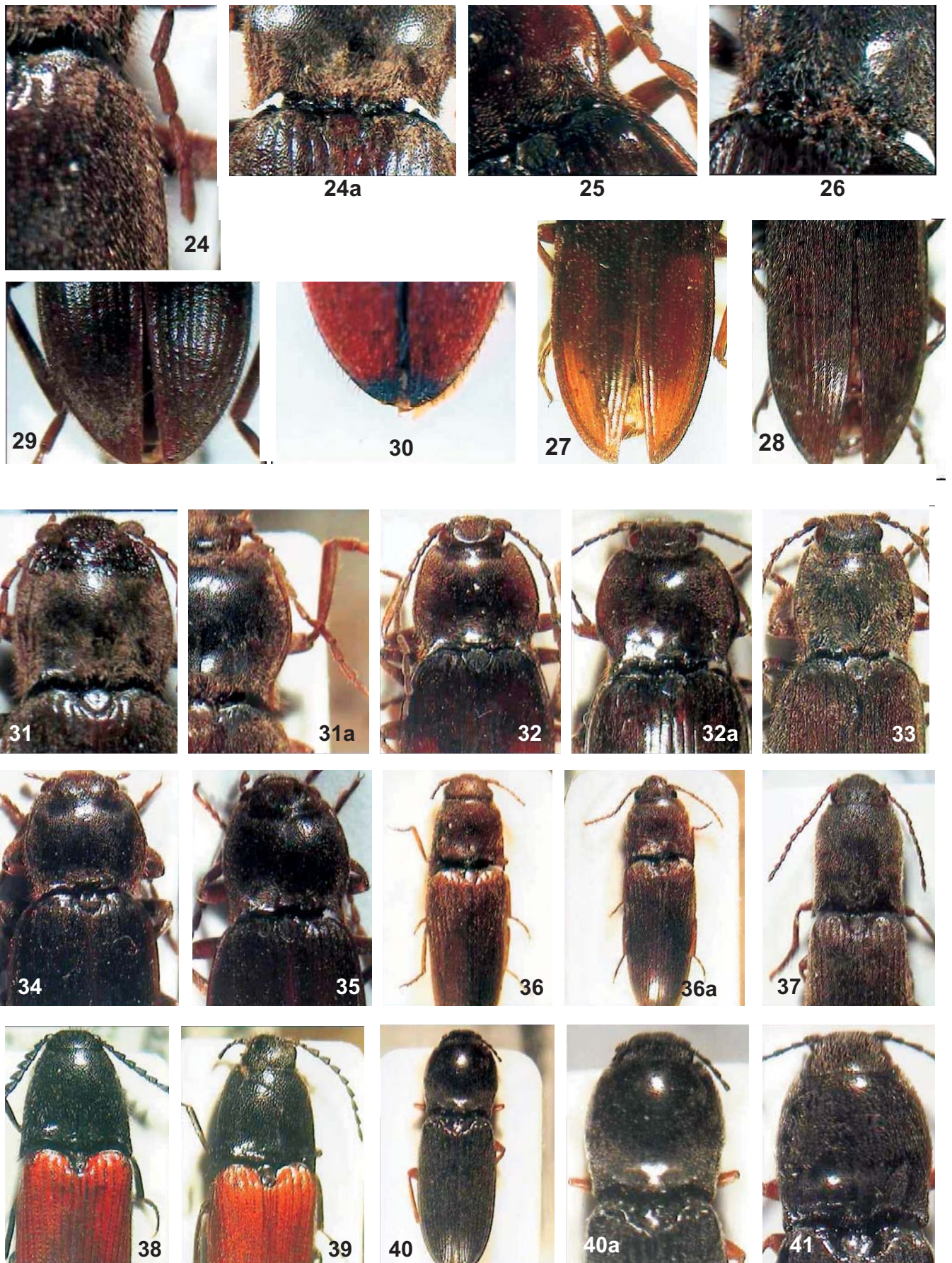


Fig. 24-30. Sides of pronotum and elytra or elytral apex. 24, 24a. *Dima schnitteri* n. sp. ♂; 25. *Dima arndti* n. sp. ♂; 26. *Dima neumanni* n. sp.; 27. *Dima arndti* n. sp. ♂; 28. *Dima neumanni* n. sp. ♂; 29. *Dima schnitteri* n. sp. ♂; 30. *Ampedus bergeri* n. sp. Fig. 31-41. Habitus in total or partial view. 31, 31a. *Dima schnitteri* n. sp. ♂♀; 32, 32a. *Dima arndti* n. sp. ♂♀; 33. *Dima neumanni* n. sp. ♂; 34. *Dima fokidensis* Schimmel & Platia, ♂; 35. *Dima parnonensis* Schimmel & Platia, ♂; 36, 36a. *Peripontius lesboensis* n. sp. ♂♀; 37. *Agriotes laeovicarinatus* Platia & Gudenzi; 38. *Ampedus bergeri* n. sp.; 39. *Ampedus chassaini* n. sp.; 40, 40a. *Cardiophorus schneppati* n. sp.; 41. *Cardiophorus foveiventris* Schwarz.