

## NEW SPECIES AND CHOROLOGICAL NOTES OF CLICK BEETLES FROM THE PALEARCTIC REGION, ESPECIALLY FROM THE MIDDLE EAST (COLEOPTERA, ELATERIDAE)

Giuseppe Platia

Via Molino Vecchio, 23/a, 47043 Gatteo (FC), Italia – pinoplatia@tele2.it

**Abstract:** Thirty-four new species of click beetles belonging to the genera *Lacon*, *Agriotes*, *Elathous*, *Athous* (*Orthathous*), *Dima*, *Reitterelater*, *Peripontius*, *Tolphorea*, *Porthmidius*, *Melanotus*, *Cardiophorus*, *Dicronychus* and *Craspedostethus* are described from Israel, Jordan, Tadzhikistan, Turkey, Bulgaria, Greece, Lebanon, Croatia, Iran, Syria, Iraq and Oman. New chorological records for many species of the genera *Lanelater*, *Agrypnus*, *Lacon*, *Hemicleus*, *Heteroderes*, *Neopristilophus*, *Prosternon*, *Agriotes*, *Nothodes*, *Reitterelater*, *Mulsanteus*, *Peripontius*, *Synaptus*, *Idotarmonides*, *Isidus*, *Melanotus*, *Cardiophorus*, *Dicronychus*, *Craspedostethus* and *Plastocerus*, and photos of the genitalia or the habitus of certain species are published for the first time. A Nearctic species, *Heteroderes nicholsi* Notman, is recorded from Israel.

**Key words:** Coleoptera, Elateridae, *Lacon*, *Agriotes*, *Elathous*, *Athous* (*Orthathous*), *Dima*, *Reitterelater*, *Peripontius*, *Tolphorea*, *Porthmidius*, *Melanotus*, *Cardiophorus*, *Dicronychus*, *Craspedostethus*, new species, new records, Palearctic Region.

### Especies nuevas y notas corológicas de elatéridos de la Región Paleártica, especialmente de Oriente Medio (Coleoptera, Elateridae)

**Resumen:** Se describen treinta y cuatro nuevas especies de elatéridos pertenecientes a los géneros *Lacon*, *Agriotes*, *Elathous*, *Athous* (*Orthathous*), *Dima*, *Reitterelater*, *Peripontius*, *Tolphorea*, *Porthmidius*, *Melanotus*, *Cardiophorus*, *Dicronychus* and *Craspedostethus* de Israel, Jordania, Tayikistán, Turquía, Bulgaria, Grecia, Líbano, Croacia, Irán, Siria, Iraq y Omán. Se aportan nuevas citas para muchas especies de los géneros *Lanelater*, *Agrypnus*, *Lacon*, *Hemicleus*, *Heteroderes*, *Neopristilophus*, *Prosternon*, *Agriotes*, *Nothodes*, *Reitterelater*, *Mulsanteus*, *Peripontius*, *Synaptus*, *Idotarmonides*, *Isidus*, *Melanotus*, *Cardiophorus*, *Dicronychus*, *Craspedostethus* y *Plastocerus*, y se publican por vez primera fotos de genitalias o de habitus de algunas especies. Se cita de Israel una especie neártica, *Heteroderes nicholsi* Notman.

**Palabras clave:** Coleoptera, Elateridae, *Lacon*, *Agriotes*, *Elathous*, *Athous* (*Orthathous*), *Dima*, *Reitterelater*, *Peripontius*, *Tolphorea*, *Porthmidius*, *Melanotus*, *Cardiophorus*, *Dicronychus*, *Craspedostethus*, especie nueva, nuevas citas, Región Paleártica.

#### Taxonomy / Taxonomía:

*Lacon ammanensis* n. sp.

*Lacon carmelensis* n. sp.

*Lacon freidbergi* n. sp.

*Agriotes dolini* n. sp.

*Agriotes gurjevae* n. sp.

*Elathous bicolor* n. sp.

*Elathous murzovi* n. sp.

*Athous* (*Orthathous*) *barclayi* n. sp.

*Athous* (*Orthathous*) *kabalaki* n. sp.

*Athous* (*Orthathous*) *libanensis* n. sp.

*Athous* (*Orthathous*) *mauroi* n. sp.

*Dima riesei* n. sp.

*Dima scutellaris* n. sp.

*Ampedus lasoni* n. sp.

*Reitterelater elongatus* n. sp.

*Peripontius galilaeus* n. sp.

*Peripontius maritimus* n. sp.

*Tolphorea bodenheimeri* n. sp.

*Porthmidius drymogenes* n. sp.

*Melanotus busei* n. sp.

*Melanotus chikatunovi* n. sp.

*Melanotus kravchenkoi* n. sp.

*Melanotus orbachorum* n. sp.

*Melanotus pavlicei* n. sp.

*Cardiophorus angelinii* n. sp.

*Cardiophorus bioculatus* n. sp.

*Cardiophorus intercivitates* n. sp.

*Cardiophorus kurdistanicus* n. sp.

*Cardiophorus negevensis* n. sp.

*Cardiophorus sacratoides* n. sp.

*Cardiophorus schmidi* n. sp.

*Dicronychus laevimaculatus* n. sp.

*Dicronychus syrianus* n. sp.

*Craspedostethus iucundus* n. sp.

## Introduction

The aim of this paper is to present results of a study of several click-beetles from different countries of the Palearctic Region and especially the Middle East, recently submitted by museums and colleagues.

We have recognized thirty-four undescribed species belonging to the genera *Lacon*, *Agriotes*, *Elathous*, *Athous* (*Orthathous*), *Dima*, *Reitterelater*, *Peripontius*, *Tolphorea*, *Porthmidius*, *Melanotus*, *Cardiophorus*, *Dicronychus* and *Craspedostethus* and at the same time new chorological records for many species belonging to the genera *Lanelater*, *Agrypnus*, *Lacon*, *Hemicleus*, *Heteroderes*, *Neopristilophus*, *Prosternon*, *Agriotes*, *Nothodes*, *Reitterelater*, *Mulsanteus*, *Peripontius*, *Synaptus*, *Idotarmonides*, *Isidus*, *Melanotus*, *Cardiophorus*, *Dicronychus*, *Craspedostethus* and *Plastoce-*

*rus* increase our knowledge concerning their distribution. Photos of the genitalia or the habitus of certain uncommon or misidentified species, after examination of type-material, such as *Lacon ganglbaueri* (Schwarz), *Cardiophorus reitteri* Schwarz, *C. aegyptiacus* Candèze, *Dicronychus exstinctus* (Erichson) are published for the first time. A nearctic species of the genus *Heteroderes* Latreille, *H. nicholsi* Notman, is recorded from Israel and a short explanation to understand the possible way of this introduction is given. The largest number of new species and new records come from Israel and will be useful for a future project concerning the fauna of this country.

The tribal placement of genera and species listed below follows Sánchez-Ruiz (1996).

## 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 names of institutions, museums and private collections containing the studied material are abbreviated as follows:

**AM** – Amman Museum Collection (A. Katbeh)  
**CAF** – Angelini coll., Francavilla Fontana (Italy)  
**CBMU** – Buse coll., J. Gutenberg Universität Mainz (Germany)  
**CCW** – Cate coll., Wien (Austria)  
**CDZ** – Dusanek coll., Zábřeh na Moravě, Kralove, (Czech Rep.)  
**CHCB** – Houska coll., České Budějovice (Czech Rep.)  
**CLP** – Lason coll., Białystok (Poland)  
**CMM** – Malmusi coll., Modena (Italy)  
**CMHK** – Mertlik coll., Hradec Kralove (Czech Rep.)  
**CMS** – Museum Salzburg (Austria)  
**CMSZ** – Murzov coll., Stara Zagora (Bulgaria)  
**COI** – Orbach coll., Kiryat Tivon (Israel)  
**CPG** – Platia coll., Gatteo (Italy)  
**CPT** – Preiss coll., Tellington (United Kingdom)  
**CRG** – Riese coll., Genoa (Italy)  
**CRK** – Królik coll., Kluczbork, Poland  
**CSM** – Saltini coll., Modena (Italy)  
**CSS** – Samek coll., Skalice, (Czech Rep.)  
**CTM** – Tedeschi coll., Milano (Italy)  
**DEI** – Müncheberg, Deutsches Entomologisches Institut (Dr. L. Zerche)  
**IRSNB** – Institut Royal Sciences Naturelles Bruxelles (Dr. J. Constant)  
**MCSNG** – Museo Civico di Storia Naturale, Genoa (Italy) (Dr. R. Poggi).  
**MNHU** – Berlin, Museum für Naturkunde der Humboldt Universität (Dr. M. Uhlig).  
**NHMW** – Naturhistorisches Museum, Wien (Dr. H. Schönmann).  
**TAU** – Tel Aviv University coll. (Israel) (A. Freidberg; V. Chikatinov; V. Kravchenko, T. Pavliceck).

## Results

### Tribe Agrypnini Candèze, 1857

*Lanelater wittmeri* Chassain, 1983

Fig. 1, 61, 97.

**MATERIAL EXAMINED.** 1 specm. ♂ - **Israel:** Bet, 15.IX.1995, V. Chikatinov. (TAU)

**NOTES:** Described from Saudi Arabia. New to Israel.

**Aedeagus** as in fig. 1 (length 3,18 mm).

*Agrypnus omanensis* Platia & Schimmel, 1997

**MATERIAL EXAMINED.** 1 specm. ♂ - **Yemen:** W Jabal Bura, NEE Al Hudaydah (14°52'N, 43°24'E), 200-800 m, 30.X-1.XI.2005, J. Halada (CCW).

**DISTRIBUTION.** Oman; UAE. New to Yemen.

*Lacon ammanensis* n. sp.

Fig. 42, 62, 98.

**MATERIAL EXAMINED.** Holotype ♀ - **Jordan:** Amman Governate, 27-31.V.1990, R.D. Ward (CRG don. MCSNG).

**DIAGNOSIS.** A species intermediate between *L. drusa* (Mar-seul) and *L. graeca* (Candèze), it can be separated by the moderately shining body, sparser punctures of pronotum, slender third articles of antennae and smaller sclerified pieces of bursa copulatrix.

**DESCRIPTION.** Female. Moderately shiny; entirely blackish with posterior angles of pronotum, center of scutellum, propleura, thorax, the wide lateral sides of abdomen, antennae and legs reddish; covered with declined, yellowish-whitish setae emerging from the punctures.

Head with the eyes narrower than anterior margin of pronotum; frons slightly impressed on vertex, more deeply at anterior part, margin moderately and regularly arcuate, directed downwards and covering completely the clypeal space, punctures umbilicate with variable intervals, short to contiguous.

Antennae short, just exceeding the middle of pronotum, serrated from third article on; second article small, subcylindrical, as long as wide; third slender, triangular, twice as long as wide and longer than the following; fourth-tenth strongly serrate; fourth a little longer than wide, fifth-tenth as long as wide; last longer than penultimate, ellipsoidal.

Pronotum 1,1x longer than wide, widest at middle; strongly convex, abruptly sloping at sides and base, with a short, shallow mid-longitudinal furrow at basal slope; sides regularly and moderately arcuate, slightly sinuate at posterior angles, the latter short, rather obtuse, feebly diverging, not carinate; puncturation coarse and rather uniformly distributed; punctures round, umbilicate, approximately of the same size, with intervals very finely shagreened, on average equal to their own diameters.

Scutellum shield-shaped, moderately convex, coarsely punctured.

Elytra 2,1x longer than pronotum and as wide as it, rather depressed on the disc; sides subovaliform, widest at middle; striae strongly and deeply punctured; interstriae flat, with a central row of punctures.

Pronoto-sternal sutures deeply furrowed for their entire length.

Bursa copulatrix sclerified as in fig. 42.

Male unknown.

Size. Length 9,8 mm; width 2,87 mm.

**ECOLOGICAL NOTE.** Collected under stones in field.

**ETYMOLOGY.** The name is derived by the locality of origin of the species: Amman Governate.

*Lacon carmelensis* n. sp.

Fig. 2, 63, 99.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Mt. Carmel, 1,5 km NW Gal'ed, 5.IV.1999, leg. E. Orbach. (COI don. TAU). 2 Paratypes ♂♂ - same data as Ht; Mt Carmel, Kibbutz Daliyya, 5.IV.1999, leg. B. Orbach. (COI; CPG).

**DIAGNOSIS.** For the male genitalia the species is allied to *L. candezei* (Desbrochers) but it is separated by the smaller size and the black colour.

**DESCRIPTION.** Male. Entirely black, moderately shiny, particularly on pronotum; antennae and legs ferruginous; covered with black setae emerging from the punctures, mixed with rarer whitish setae.

Frons impressed from vertex to anterior margin, punctures broad, contiguous or with very short shagreened intervals. Antennae exceeding apices of posterior angles of pronotum by one segment, serrated by third segment; second globular; third triangular, longer than wide and longer than fourth; fourth-tenth triangular, as long as wide to a little longer; eleventh ellipsoidal and notably longer than tenth.

Pronotum 1,2x longer than wide, strongly convex on the disk, abruptly sloping at sides and base, with a short mid-longitudinal furrow in the basal declivity; sides subparallel for about its entire length, narrowed at the apical extremity and feebly sinuate before the apices of posterior angles, the latter short, acute, directed downwards, not carinate; lateral border complete and apparent in dorsal view for almost all its length; punctures broad, deep, simple, on the disc with intervals on average equal to their diameters and shagreened.

Scutellum mitriform, convex on the disc, slightly sinuate at sides. Elytra 2,2x longer than pronotum and 2,4x longer than wide; sides feebly arcuate with greatest width at middle; striae punctured, interstriae convex with rough and shagreened surface.

Pronoto-sternal sutures deeply furrowed for their entire length.

Aedeagus as in fig. 2 (length 1,46 mm).

Female unknown.

Size. Length 6,7-7,2 mm; width 1,7-2 mm.

**ETYMOLOGY.** The name is derived from the locality where the species was found, Mount Carmel.

***Lacon freidbergi* n. sp.**

Fig. 3, 3a, 43, 43a, 64, 100, 100a.

**MATERIAL EXAMINED.** Holotype ♂ **Israel:** N Negev, Hazerim, 28.II.1989, E. Orbach. (COI don. TAU). -23 Paratypes (♂♀) - 5.IV.1987; 26.I.1990, 28.III.1991, 6.III.1993, E. Orbach; on road between Hazerim-Ofaqim, 23.IV.1997, E. & B. Orbach; C Negev, 4-20 km E Dimona, 22.II.1997, leg. G. Sama; 6 km S Sede Boqer, 21.III.1995, G. Sama; Gvulot, 6.IV.1985, leg. E. Shney-Dor; Dimona, 30.IV.1959, J. Wahrman; Nahal Boqer, 5.IV.1999, V. Chikatunov; Negev, str. Beer Sheva-Dimona, 15.III.2008, Tedeschi; Negev, Hazerim, 12.III.2008, Tedeschi. **Jordan:** Amman Transj., 12.IV.1935, W. Wittmer; 10 km NNE of Jarash, 20.IV.2002, M. Snizek; 50 km S Amman, 11.IV.2009, S. Ziani (COI; CPG; CRG; TAU; CPT; CTM).

**DIAGNOSIS.** Intermediate species between *L. candezei* (Desbrochers) and *L. ganglbaueri* (Schwarz), it is immediately distinct due to the shorter antennae not reaching apices of posterior angles of pronotum in both sexes and to the aedeagus.

**DESCRIPTION.** Male. Colour variable; entirely brown ferruginous to blackish, covered with whitish setae not veiling the integument.

Frons moderately impressed from the middle to the anterior margin; punctures broad, simple, with very short and shagreened intervals. Antennae short, not reaching apices of posterior angles of pronotum by about two segments, serrated from the third article; second globular, third triangular, longer than wide; fourth-tenth more strongly serrate, wider than long (IV-VII) to as long as wide (IX-X); eleventh ellipsoidal, narrowing before the apex.

Pronotum 1,2 x longer than wide, moderately but regularly convex, with a vestige of median longitudinal furrow in the basal declivity; sides regularly but moderately arcuate with the greatest width at middle, slightly sinuate before the posterior angles, the latter short, acuminate at apex, apex not carinate; punctures deep, simple, with intervals on average equal to their diameters, shagreened, at sides denser, nearly contiguous; lateral margin sublinear, complete from base to apex.

Scutellum subrectangular, a little convex on disk, rounded at apex, densely punctured. Elytra 2,1-2,2 x longer than pronotum and 2,4-2,5x longer than wide; sides subparallel in the first half, then gradually tapering towards apex; striae strongly and deeply punctured; interstriae flat with denser but finer punctures.

Prosternal sutures furrowed for entire length of propleura, the later with short, transverse depression at base.

Aedeagus as in fig. 3, 3a (length 1,56 mm).

Female. Body wider, with shorter and less serrate antennae; pronotal sides more arcuate.

Bursa copulatrix sclerified as in fig. 43, 43a.

Size. Length 8-12 mm; width 2,2-2,8 mm (males); 10-13,5; 3-3,9 mm (females).

**ETYMOLOGY.** The species is dedicated to Dr. A. Freidberg, one of the entomologists of Tel Aviv University Museum.

***Lacon delagrangei* (Buysson, 1891)**

**MATERIAL EXAMINED.** 3 specm. - **Israel:** Panyas, 15.VI.2002, V. Kravchenko, light trap; same locality, 16.V.2003, V. V. Kravchenko & V. Chikatunov, light trap. **Lebanon:** caza Aakkar, Ain Yaaqoub, 750, 20-24.VI.2009, L. Saltini, at light. (CPG; CSM).

**DISTRIBUTION.** Turkey, Syria. New to Lebanon and Israel.

***Lacon modestus* (Boisduval, 1835)**

**MATERIAL EXAMINED.** 1 specm. - **Israel:** Hazeva Field School, 16.VII.1999, I. Yarom & V. Kravchenko (light trap BL). (TAU).

**DISTRIBUTION.** Cosmopolitan species; described from Australia. In the Middle East known from Saudi Arabia, Oman, Qatar, UAE; Iran. New to Israel.

***Hemicleus ferrantei* Buysson, 1911**

**MATERIAL EXAMINED.** 3 specm. - **Israel:** Ne'ot-Hakikkar, 9.VI.1999, 13.VIII.1999, 11.IX.1999, I. Yarom & V. Kravchenko (light trap BL). (TAU).

**DISTRIBUTION.** Egypt; Saudi Arabia; Jordan. New to Israel.

**Tribe Oophorini Gistel, 1856**

***Heteroderes nicholsi* Notman, 1922**

Fig. 102.

**MATERIAL EXAMINED.** 17 specm. - **Israel:** Central coastal plaine, Sdot-Yam, 5.VI.1998, leg. E. Orbach (compared with two specimens from California, det. Wells). (COI; CPG; TAU).

**NOTES:** New to Israel and the old continent; described from Florida, the species is widely distributed in the southern states of the USA. Very probably it was imported in Israel with soil plants, and the collection of live specimens demonstrates that it has found favourable developmental conditions in Israel.

*Aeoloides heydeni* (Reitter, 1891)

MATERIAL EXAMINED. 1 specm. - **Israel**: Iddan, 18.IV.1999, I. Yarom & V. Kravchenko. (TAU).

DISTRIBUTION. S Pakistan; Central Asia; Iran. New to Israel.

### Tribe Prosternini Gistel, 1856

*Neopristilophus gougeletii* (Fairmaire, 1859)

Fig. 6, 6a, 65.

MATERIAL EXAMINED. 35 specm. - **Spain**: Puerto de Bejar, Castilla, 800-1400 m, V.VI.1957, G. Fagel; Penaparda (Salamanca), 28.IV.1982, J.I.López-Colón (CPG; IRSNB).

NOTES: The species considered a junior synonym or a variety of *N. insitivus* (Germar, 1824) in the catalogues (Schenkling, 1927; Sánchez-Ruiz, 1996) was recently treated as valid species in the catalogue of Palearctic Fauna (Cate, 2007), endemic from the Iberian Peninsula.

The examination of a long series of specimens gives us the opportunity to confirm that it is specifically distinct from *N. insitivus* (Germar) from Central and East Europe. *N. gougeletii* (Fairmaire) is distinguished by a shinier body because of lighter puncturation, particularly on the pronotum, by slightly longer and slenderer antennae and the male genitalia.

Male genitalia of the two species as in fig. 6, 6a (length 2,18 mm) and fig. 7, 7a (length 2,43 mm) (specimen from Ukraine).

*Prosternon syriacum* (Buysson, 1891)

MATERIAL EXAMINED. 1 specm. - **Lebanon**: Zgharta, Horsh Ehden nat. Res., m 1350-1500, 8.16.VI.1999, G. Sama. (CPG).

DISTRIBUTION. Syria; Turkey. New to Lebanon.

### Tribe Agriotini Champion, 1894

*Agriotes dolini* n. sp.

Fig. 8, 8a, 44, 67, 68, 90, 103, 103a.

MATERIAL EXAMINED. Holotype ♂ - **Kyrgyzstan**: Chüy r., Kyrgyz Ala-Too Mts., Ala Archa N. P. (42°36'N, 74°29'E), 1300 m, 4.VI.2003, A. Lason (CLP). 2 Paratypes ♀ - same data as Ht, 15.VI.2003; Jalal Abad, Suusamy-Too Mts, Toktogul (41°51'N, 72°56'E), 870 m, 26.VI.2003, A. Lason (CLP; CPG).

DIAGNOSIS. A species resembling *A. kirghisicus* Iablokoff-Khnzorian, but it can be separated by the lighter pronotal puncturation, not impressed scutellum, more developed wings and the aedeagus.

DESCRIPTION. Male. Moderately shiny; head and pronotum blackish, elytra dark brown with blackish shadings; antennae and legs lighter, yellow-ferruginous; covered with dense, declined, yellowish, vestiture.

Frons convex, flat at anterior margin, suprantennal carinae not reaching anterior margin; punctures coarse, deep, simple or vaguely umbilicate, with very short shiny intervals. Antennae nearly reaching the apices of posterior angles of pronotum, serrated from fourth article on; second article subcylindrical, more than twice as long as wide and a little longer than third, both taken together twice as long as fourth; fourth-tenth subtriangular, shortly pedunculate, less than twice as long as wide; last longer than penultimate, ellipsoidal, symmetrically constricted at apical third.

Pronotum slightly wider than long, globous, widest about at middle, strongly convex and abruptly sloping at sides and base with a trace of mid-longitudinal depression at basal slope; sides strongly arcuate, from middle forwards conspicuously tapering, backwards sinuate to posterior angles, the latter long, acuminate, gently diverging with a fine carina subparallel to the lateral margins; puncturation rather uniformly distributed, on disc with punctures simple or slightly umbilicate with very short shiny intervals, gradually denser at sides, contiguous at lateral extremities.

Scutellum shield-shaped, ridged at base, round at apex, densely punctured.

Elytra 2,25x longer than pronotum and as wide as it, very convex after the middle; sides ovaliform, widest about at middle; striae well punctured, interstriae flat with rugose surface.

Wings just reaching the length of elytra.

Aedeagus as in fig. 8, 8a (length 1,06 mm).

Female. Very similar to male with a slightly shorter antennae.

Bursa copulatrix sclerified as in fig. 44.

Size. Length 8- 9 mm; width 2,6- 2,86 mm.

ETYMOLOGY. The species is dedicated to the memory of Prof. W. Dolin, one of the more important specialists on Elateridae from Central Asia.

*Agriotes gurjevae* n. sp.

Fig. 9, 69, 104.

MATERIAL EXAMINED. Holotype ♂ - **Tadzhikistan**: Kummel Pass, 3600 m, VI.1983, Cerny (CRG don. MCSNG).

DIAGNOSIS. Species allied to *A. turkmenicus* Platia & Gudenzi, 1999 due to the same characters of male genitalia with simple paramera, but separated by the shape of the pronotum wider than long and by serrate and shorter antennae.

DESCRIPTION. Male. Moderately shiny; head and pronotum dark brown, scutellum and elytra lighter brown; antennae and legs ferruginous; covered with dense, recumbent, yellowish vestiture.

Frons convex on vertex, flat at anterior margin, suprantennal carinae interrupted before the anterior margin; punctures coarse, deep, moderately umbilicate, with very short, shiny intervals.

Antennae short, not reaching apices of posterior angles of pronotum by about two articles, strongly serrated from fourth article on; second subcylindrical, third subconical, both subequal in length and very slightly longer than wide; taken together 1,3x longer than fourth; fourth-tenth triangular, just longer than wide (fourth) to as long as wide; last a little longer than the previous, nearly regularly ellipsoidal.

Pronotum 1,18x wider than long, widest at posterior angles, strongly convex, abruptly sloping at sides and at base with a shallow and narrow mid-longitudinal declivity; sides subparallel, suddenly tapering before the apex, gently sinuate before the posterior angles, the latter rather acute, slightly diverging with a carina subparallel to the lateral margins, this very fine and obsolete after the middle; puncturation rather uniformly distributed, on disc with punctures deep, slightly umbilicate with very short intervals, becoming gradually larger, denser, more superficial and clearly umbilicate towards the sides, contiguous at the extremities.

Scutellum shield-like, flat, densely punctured. Elytra 3x longer than pronotum and as wide as it, convex; sides subparallel for about two-thirds of its length, then gradually tapering to the apices, these rather acute and feebly divaricate; striae punctured, interstriae flat, with finer punctures.

Male genitalia as in fig. 9 (length 1,68 mm).

Female unknown.

Size. Length 9,9 mm; width 2,84 mm.

**ETYMOLOGY.** The species is dedicated to the memory of E. Gurjeva, one of the more important specialist of Elateridae and author of a revision of the palearctic species of the genus *Agriotes* Eschscholtz.

***Agriotes brevis* Candèze, 1863**

**MATERIAL EXAMINED.** 1 specm. ♀ - **Israel:** Mt Hermon, Biq'at Mart, m 1430, 23.V.1997, E. & B. Orbach. (COI).

**DISTRIBUTION.** Europe, Turkmenistan; Iran; Turkey. New to Israel.

***Agriotes colonnellii* Guglielmi & Platia, 1985**

**MATERIAL EXAMINED.** 1 specm. ♂ - **Israel:** Mt Carmel, Kibutz Dalya, 5.IV.1999, B. Orbach. (COI).

**DISTRIBUTION.** Turkey. New to Israel.

***Agriotes kinzelbachi* Platia & Schimmel, 1994**

**MATERIAL EXAMINED.** 1 specm. ♂ - **Israel:** N. Tut, 9.V.1979, D. Furth. (TAU).

**DISTRIBUTION.** Syria. New to Israel.

***Agriotes lineatus* (Linnaeus, 1758)**

**MATERIAL EXAMINED.** 1 specm. - **Lebanon:** caza Jbayl, El Laqlouq, 1300-1400 m, A. Kairouz. (CSM).

**DISTRIBUTION.** Europe; Turkey; Iran; Israel; Syria; Central Asia. New to Lebanon.

***Agriotes nigricans* Platia & Gudenzi, 1997**

Fig. 10, 70, 105.

**MATERIAL EXAMINED.** 8 specm. ♂ - **N Lebanon:** caza Aakkar, Ain Yaaqoub, 750 m, 20-24.VI.2009, L. Saltini, Padovani & Malmusi (at light). (CMM; CPG; CSM)

**NOTES:** Described from a single male specimen from Syria. The female is still unknown. The new specimens present a larger size than the typical specimen (length 12,5 mm).

Aedeagus as in fig. 10 (length 1,62 mm).

Size. Length 13-13,8 mm; width 3,7-4,1 mm.

**DISTRIBUTION.** Syria. New to Lebanon.

***Agriotes proximus* Schwarz, 1891**

**MATERIAL EXAMINED.** 3 specm. - **Israel:** Mt Hermon, m 1500-2000, 21.V.1987, 25.VI.1999, leg. E. Orbach. (COI).

**DISTRIBUTION.** Europe; Turkey; Jordan. New to Israel.

***Agriotes turcicus* Candèze, 1863**

**MATERIAL EXAMINED.** 1 specm. ♂ - **Israel:** Upper Galilee, Mt Kfir Nahal, HarAri, m 800-900, 2.VI.1995, E. Orbach. (COI).

**DISTRIBUTION.** Bulgaria; Turkey. New to Israel.

**Tribe Dendrometrini Gistel, 1856**

***Elathous bicolor* n. sp.**

Fig. 11, 71, 84, 106.

**MATERIAL EXAMINED.** Holotype ♂ - **Turkey:** Darende, Malatya, 1570 m, 28.VII.2008 (CPG).

**DIAGNOSIS.** Species immediately separated from all known Turkish species by the bicoloured body.

**DESCRIPTION.** Male. Shiny; bicoloured; head, pronotum, scutellum and underbody black piceous; elytra completely brown ferruginous; antennae and legs brown; covered with moderate, long, blackish vestiture, partially erect at sides of body.

Frons flat between the eyes, slightly impressed at middle before the anterior margin, the latter sublinear, moderately thickened, and protruding above the clypeus; punctures coarse, umbilicate, with very short shiny intervals. Antennae short, serrate from fourth article on, not reaching apices of posterior angles of pronotum by about two articles; second article subcylindrical, third subconical, both subequal in length and about 1,6x longer than wide, taken together about twice as long as fourth; fourth-tenth triangular, less than twice as long as wide.

Pronotum as long as wide, widest at posterior angles, convex, with a trace of shallow, narrow, mid-longitudinal line at basal declivity; sides arcuate, gradually tapering forwards from middle, sinuate before the posterior angles, the latter diverging and truncate at apices with a sharp, short carina directed medially; lateral margin sublinear, obliterated at anterior half; puncturation rather uniformly distributed; punctures on disc deep, simple, with intervals on average equal to or larger than their own diameters, gradually denser towards the sides, moderately umbilicate and nearly contiguous only at extremities.

Scutellum shield-like, moderately convex, densely punctured. Elytra 2,7x longer than pronotum and as wide as it; sides widest at middle; striae well-marked and punctured; third interstriae moderately convex at base; all others flat with finer and denser punctures.

Male genitalia as in fig. 11 (length 1,5 mm).

Female unknown.

Size. Length 12 mm; width 3,68 mm.

**ETYMOLOGY.** The name of the species refers to the characteristic bicoloured body.

***Elathous murzovi* n. sp.**

Fig. 12, 72, 85, 107.

**MATERIAL EXAMINED.** Holotype ♂ - **Bulgaria:** Pastren vill., Stara Zagora, 23.VIII.2009, G. Murzov (CMSZ). 3 Paratypes ♂ - same data as Ht, 29.VIII., 2.IX., 4.IX.2009 (CMSZ; CPG).

**DIAGNOSIS.** First species of the genus recorded from Bulgaria. Comparable to *E. syriacus* Schwarz as to general shape, size and colour, but it is immediately separable by the straight and strongly thickened anterior margin of frons.

**DESCRIPTION.** Male. Moderately shiny; entirely yellow-ferruginous, sometimes with blackish shadings around scutellum and carinae of posterior angles of pronotum; covered with long, dense yellowish vestiture, partially erect at sides of elytra and pronotum.

Frons flat to moderately impressed, anterior margin nearly straight, strongly thickened, clearly protruding above clypeus; punctures coarse, umbilicate, with very short intervals to contiguous.

Antennae not reaching apicis of posterior angles of pronotum by about 1-1,5 articles, clearly serrated from fourth on; second subcylindrical, just longer than wide, third conical, twice as long as wide; second and third, taken together, longer than fourth; fourth-tenth triangular, shortly pedunculate, less than twice as long as wide; last a little longer than penultimate, nearly regularly ellipsoidal.

Pronotum as long as wide or just wider than long, widest at posterior angles, strongly convex, abruptly sloping at sides, nearly vertically at base; sides arcuate, gradually tapering from behind the middle to anterior angle; sinuate before the posterior angles, the latter clearly divergent and truncate at apicis, with a sharp, distinct carina directed mediad; lateral margin almost straight and complete; puncturation rather uniformly distributed; punctures on disc deep, simple or moderately umbilicate with very short, shiny intervals; gradually a little larger and denser towards the sides, contiguous or nearly so at the extremities.

Scutellum quadrangular, moderately convex, more or less sinuate at sides, punctured. Elytra 2,7x longer than pronotum and as wide as it; sides subparallel, widest at middle or just behind the middle; striae well-marked and deeply punctured; interstriae flat, more finely punctured.

Male genitalia as in fig. 12 (length 1,31 mm).

Female unknown.

Size. Length 8,6-9,5 mm; width 2,5-2,62 mm.

**ETYMOLOGY.** The species is dedicated to the collector G. Murzov, who kindly sent me the material for study.

***Athous (Orthathous) barclayi* n. sp.**

Fig. 13, 73, 87, 108.

**MATERIAL EXAMINED.** Holotype ♂ - **Greece:** Kerkini Wetland, Sultanitsa Site, 14-21.VII.2008, G. Ramel, Malaise trap.(CPG).

**DIAGNOSIS.** Species allied to *A. (Orthathous) stoimenovae* Platia, 2001, from Bulgaria by the general shape and size; it can be distinguished by the darker colour and shorter, just diverging posterior angles of pronotum.

**DESCRIPTION.** Male. Moderately shiny; entirely dark brown with antennae and legs brown ferruginous; covered with dense, recumbent, yellowish vestiture.

Frons slightly impressed from the middle forwards, anterior margin regularly arcuate, moderately thickened, protruding slightly above the clypeus; punctures coarse, strongly umbilicate, with very short intervals or contiguous. Antennae robust, exceeding apicis of posterior angles of pronotum by about two articles; second article short, globous, as long as wide, third conical nearly twice as long as second; second and third, taken together, a little longer than fourth; fourth-tenth triangular, less than twice as long as wide; last a little longer than penultimate, nearly regularly ellipsoidal.

Pronotum as long as wide, widest at middle and posterior angles, regularly convex, with a trace of mid-longitudinal, very narrow, smooth and shiny line from base to apex; sides slightly and regularly arcuate, slightly sinuate before the posterior angles, the latter short, truncate, diverging; puncturation rather uniformly distributed, on disc punctures deep, weakly umbilicate, with very short shiny intervals and becoming gradually denser, more superficial and clearly umbilicate towards the sides, contiguous at the extremities.

Scutellum smaller than the interelytral space, subrectangular, moderately convex, roughly punctured. Elytra 3x longer than pronotum and moderately wider than it; sides subparallel from base to middle, then gradually tapering to apicis; striae well-marked, deeply punctured, interstriae flat, more finely punctured, with rough surface.

First three articles of tarsi gradually decreasing in length, fourth very small and in dorsal view narrower than the previous.

Male genitalia as in fig. 13 (length 1 mm).

Female unknown.

Size. Length 8,3 mm; width 2,3 mm.

**ETYMOLOGY.** The species is dedicated to Dr. M. V. L. Barclay, Head Curator of Coleoptera, British Museum of Natural History, London, Wetland Kerkini Project.

**TRAP SITE DESCRIPTION.** Sultanitsa Site. North = 41°19'02,1 East = 023°12'05,0 Altitude = 1485 metres a.s.l. Run from 28/04/2008 until the present. This trap is situated over the bog/seep that is the start of the Sultanitsa stream. This is an entirely homemade trap in the shape of a simple cone of blue material leading to a collecting bottle. It is placed immediately above the place where the bog turns into a stream and enters a beech forest. It faces down hill into the forest. The glade is the result of human endeavour, and the army used the site for an unknown purpose about 50 years ago.

***Athous (Orthathous) kabalaki* n. sp.**

Fig. 14, 74, 88, 109.

**MATERIAL EXAMINED.** Holotype ♂ - **Turkey:** Golpazari, 18-20.V.1996, D. Farbiak (CPG).

**DIAGNOSIS.** A species allied to *A. graecus* Platia, it can be separated by the flat frons, slightly impressed only at anterior margin, and particularly by the very elongate and wide elytra compared to pronotum.

**DESCRIPTION.** Male. Head, antennae, pronotum and scutellum black; elytra and legs lighter, dark brown with undefined black shadings; covered with moderate, yellowish, recumbent vestiture. Head with eyes just narrower than anterior margin of pronotum; frons flat, slightly impressed at anterior margin, the latter very fine at the middle and touching clypeus; punctures coarse, strongly umbilicate, with very short intervals to contiguous. Antennae exceeding apicis of posterior angles of pronotum by about three articles; second article subcylindrical, just longer than wide; third conical, 1,5x longer than second; second and third, taken together, 1,28x longer than fourth; fourth-tenth subtriangular, more than twice as long as wide, gradually slenderer; last a little longer than penultimate, regularly ellipsoidal.

Pronotum quadrangular, as long as wide, widest at middle and at posterior angles, strongly convex, abruptly sloping at sides and nearly vertically at base; sides slightly and regularly arcuate, shortly sinuate at posterior angles, the latter short, moderately diverging; punctures coarse, on the disc umbilicate, with very short intervals, gradually denser to the sides, contiguous or nearly so at lateral extremities.

Scutellum smaller than interelytral space, convex, roughly punctured. Elytra 3,6x longer than pronotum and a little wider than it at the base, convex, sides subparallel for about two-thirds of its length, then gradually tapering to api-



cis; striae well-marked and punctured; interstriae flat with rough surface and finer, denser punctures.

Second, third and fourth tarsal articles decreasing regularly in length.

Male genitalia as in fig. 14 (length 0,81 mm).

Size. Length 7,3 mm; width 1,84 mm.

**ETYMOLOGY.** The species is dedicated to our Turkish colleague M. Kabalak, a young specialist of Elateridae.

***Athous (Orthathous) libanensis* n. sp.**

Fig. 15, 86, 89, 110.

**MATERIAL EXAMINED.** Holotype ♂ - **Lebanon:** Ain Zhalta, Jabal el Jaidi, cédraie, 1750 m, V.1966, G. Fagel (IRSNB).

**DIAGNOSIS.** A species resembling *A. (s. str.) haemorrhoidalis* (F.) for the general shape, colour and size, but it can be separated by the impressed frons, more convex scutellum, fourth tarsal article only partially absorbed by the third and thus included in the subgenus *Orthathous* Reitter.

**DESCRIPTION.** Male. Moderately shiny; head and pronotum except for the apicis of posterior angles reddish; Scutellum and underbody black; elytra brown, reddish along the suture and at the lateral extremities, first two articles of antennae black (only these are present), legs dark brown with reddish articulations.

Head with eyes narrower than anterior margin of pronotum, frons deeply impressed from middle to the anterior margin, this moderately thickened, arcuate, directed downwards at center and slightly protruding above clypeus; punctures coarse, umbilicate, contiguous or confluent. Antennae mutilated, only first two articles present, second article subcylindrical, a little longer than wide.

Pronotum 1,06x longer than wide, widest at apicis of posterior angles, convex, with two symmetrical, shallow, undefined depressions in anterior third at the beginning of the lateral slopes; with a trace of a very narrow mid-longitudinal line before the basal declivity; sides very slightly and regularly arcuate (nearly subparallel), sinuate at the posterior angles, the latter divergent, rather acute, with apicis shortly pointed and directed upwards; punctures uniformly distributed, on disc deep, simple or very vaguely umbilicate, with very short intervals, towards the sides only a little denser, more or less contiguous at lateral extremities.

Scutellum rather globous, convex, punctured. Elytra 2,9x longer than pronotum and a little wider than it, convex, gradually sloping at sides; sides subparallel from base to the middle, then slightly dilated and gradually tapering at posterior third; striae deeply punctured; interstriae flat, punctured, with rough surface.

Fourth tarsal article much smaller and in dorsal view clearly narrower than the third but free for about half of its length.

Aedeagus as in fig. 15 (apex of left paramere damaged) (length 1,18 mm).

Female unknown.

Size. Length 12,8 mm; width 3,3 mm.

**REMARKS.** The presence of an *Athous* species in Lebanon is particularly interesting as no species of this genus were known south of Turkey.

**ETYMOLOGY.** The name is derived from the country where the species was found.

***Athous (Orthathous) mauroi* n. sp.**

Fig. 16, 111.

**MATERIAL EXAMINED.** Holotype ♂ - **Croatia:** Sinj, Trilj-Vukic, 27.V.2009, M. Malmusi (CPG).

**DIAGNOSIS.** A species that can be compared with *A. serbicus* Reitter by size, colour and features of tarsal articles, it is separated by the slender body, longer antennae, more depressed pronotum and male genitalia.

**DESCRIPTION.** Male. Shiny; head and pronotum black except the apicis of anterior and posterior angles reddish; elytra brown with suture and extremities of sides reddish; antennae blackish with first articles reddish; legs brownish, reddish at the articulations; covered with moderate, yellow vestiture, partially erect at sides of elytra.

Frons with eyes a little narrower than anterior margin of pronotum, deeply impressed from middle to the anterior margin, this moderately thickened, smooth, shiny, at center feebly sinuate and directed downwards, slightly protruding above clypeus; punctures coarse, umbilicate, with very short intervals or contiguous.

Antennae exceeding apicis of posterior angles of pronotum by about 2,5 articles; second article subcylindrical, a little longer than wide, third conical, about twice as long as second and twice as long as wide with the same sculpture as the following; fourth-sixth subtriangular, more than twice as long as wide, slender, with nearly subparallel sides, last longer than penultimate, cylindrically constricted after the middle.

Pronotum 1,15x longer than wide, widest at middle and posterior angles; moderately but regularly convex, sides slightly and regularly arcuate, shortly sinuate before the posterior angles, the latter shorter, feebly divergent with apicis pointed and directed upwards; punctures uniformly distributed, on disc deep, simple or very vaguely umbilicate, with very short subshagreened intervals, becoming clearly umbilicate towards the sides and contiguous at lateral extremities.

Scutellum small, globular, notably narrower than the interelytral space, convex and coarsely punctured. Elytra 2,96x longer than pronotum and a little wider than it; rather depressed on the disc, sloping nearly vertically after the seventh intervals; sides subparallel for about the two-thirds of its length; striae well-marked and punctured; interstriae flat and densely punctured.

Fourth tarsal article longer than half of the third and, in dorsal view, slightly narrower than it.

Aedeagus as in fig. 16 (length 0,96 mm).

Female unknown.

Size. Length 8,1 mm; width 2,15 mm.

**ETYMOLOGY.** The species is dedicated to the collector Mauro Malmusi from Modena, who gave us this specimen for study.

***Nothodes parvulus* (Panzer, 1799)**

**MATERIAL EXAMINED.** **Lebanon:** caza Bcharre, Horch Ehdén, 1400-1600 m, 19-26.VI.2009, L. Saltini. (CSM).

**DISTRIBUTION.** Europe, N Africa, Turkey, Syria. New to Lebanon.

***Dima riesei* n. sp.**

Fig. 17, 17a, 75, 91, 112.

**MATERIAL EXAMINED.** Holotype ♂ - **Greece:** Kajmakalan (Voras-Skicenter), 1500-2000 m, 30.V.-6.VI.2004, Heinz (CRG don. MCSNG). 2 Paratypes ♂ - same data as Ht (CPG; CRG).

**DIAGNOSIS.** The species resembles *D. lebenbaueri* Platia & Schimmel, but can be separated by the smaller body, flat frons, apicis of posterior angles of pronotum directed laterally, scutellum moderately concave at base and on the surface, subconvex elytral interstriae and aedeagus.

**DESCRIPTION.** Male. Moderately shiny; entirely ferruginous, darkened at base of pronotum, around scutellum and elytra, to blackish but ferruginous all around the body and along the elytral suture; antennae and legs ferruginous; covered with yellow-fulvous vestiture, long and partially erect on head and pronotum, particularly at sides and posterior angles, short, dense and declined on elytra.

Head with eyes a little narrower than anterior margin of pronotum; frons nearly flat, anterior margin obsolete, merged with clypeus, punctures coarse, variable in diameter, more or less clearly umbilicate with variable intervals on average much more shorter than their own diameters or contiguous. Antennae exceeding apicis of posterior angles of pronotum by about two articles; second and third articles conical, subequal in length, 1,3x longer than wider; taken together 1,2x longer than fourth; fourth-tenth triangular, twice as long as wide or longer; last longer than the previous, subellipsoidal, rather pointed at extremity.

Pronotum 1,4x wider than long and widest at middle; moderately and regularly convex, gradually sloping at sides, more abruptly so at base; sides strongly arcuate, tapering forwards and backwards equally suddenly and shortly sinuate at posterior angles, the latter rather acute, strongly divergent with a carina running parallel to the lateral margins and reaching the anterior margin of pronotum; puncturation rather uniformly distributed; on disc punctures deep, simple to vaguely umbilicate with shiny intervals on average a little shorter or large than their own diameters, generally denser at the lateral extremities.

Scutellum regularly sloping forwards, a little wider than long, heart-shaped but with rounded apex, moderately emarginate at middle of base, concave at middle, densely punctured.

Elytra 3x longer than pronotum and clearly wider than it; convex, ovaliform, widest just behind the middle; striae superficial but regularly marked, unpunctured; interstriae subconvex, densely punctured.

Aedeagus as in fig. 17, 17a (length 3 mm).

Female unknown.

Size. Length 11- 11,5 mm; width 4,5-4,6 mm.

**ETYMOLOGY.** Dedicated to my friend and colleague, S. Riese from Genoa, who has been sending me material for study for many years.

***Dima scutellaris* n. sp.**

Fig. 45, 76, 92, 95, 96, 113.

**MATERIAL EXAMINED.** Holotype ♀ - **Greece:** nom. Fokida, O. Giona, vers. N str. Kaloskopi Stromi, 1170 m, 21.VI.2001/11.VI.2002, M. Giachino & D. Vailati. (CPG).

**DIAGNOSIS.** A species allied to *D. pecoudi* Fleutiaux by the general shape, colour and size, but it can be separated from all known Greek species by the subhorizontal scutellum.

**DESCRIPTION.** Female. Rather shiny on head, pronotum and scutellum, rather dull on elytra; entirely brown-ferruginous, blackish around the pronotum, basis of elytra and scutellum; covered with yellow-fulvous moderately erect vestiture, sparse on head and pronotum, denser and declined on elytra.

Head with eyes a little narrower than anterior margin of pronotum, frons depressed in the middle from vertex to anterior margin, this obsolete and confused with clypeus; puncturation coarse with punctures umbilicate, contiguous or nearly so.

Antennae reaching and just exceeding the apicis of posterior angles of pronotum; second and third articles conical, subequal in length and 1,5x longer than wide; taken together 1,4x longer than fourth; fourth-tenth triangular, pedunculate, about twice as long as wide; last a little longer than penultimate, ellipsoidal.

Pronotum 1,4x wider than long, widest at middle, conspicuously convex on the centre of disc, abruptly sloping at sides and base with a trace of a smooth mid-longitudinal line from middle to basal declivity and shallow, nearly punctiform, symmetrical depressions at middle before the lateral slopes and at basal declivity; sides strongly arcuate from the middle forwards and strongly tapering backwards, sinuate before the posterior angles, the latter acuminate, slightly diverging with carina running parallel to the lateral margins and reaching the anterior margin of pronotum, forming a narrow and regular conduit; puncturation rather uniformly distributed; punctures on disc approximately of the same size, finely umbilicate, with very short intervals or contiguous, gradually denser to the sides, at lateral extremities contiguous or confluent.

Scutellum nearly horizontal, in lateral view at a higher level than elytra, a little wider than long, heart-shaped but with rounded apex, moderately emarginate at middle of base, concave at middle, densely and coarsely punctured.

Elytra 3x longer than pronotum and clearly wider than it; convex, only a little depressed along the suture, ovaliform, widest at middle; striae moderate, superficial, indistinctly punctured; interstriae subconvex with densely punctured rough surface.

Size. Length 14,5 mm; width 5,68 mm.

Falcula of bursa copulatrix sclerified as in fig. 45.

Male unknown.

**ETYMOLOGY.** The name is derived from the particular scutellum of the species, which is nearly horizontal and at a higher level than the base of elytra.

**Tribe Ampedini Gistel, 1856**

***Ampedus lasoni* n. sp.**

Fig. 18, 18a, 46, 46a, 77, 77a, 114, 114a.

**MATERIAL EXAMINED.** Holotype ♂ - **Turkey:** Kırklareli, Yıldız Dağları, 5 km NE of Yenice (41°45'N, 27°41'E), 720 m, 30.V.2008, A. Lason (CLP). 3 Paratypes ♀ - same data as Ht; 3 km NE of Yenice pass, 735 m, 22-23.V.2008, R. Krolík (CPG; CRK).

**DIAGNOSIS.** A species resembling *A. pomonae* (Stephens) but separable by the less dense punctures on sides of pronotum, the subtriangular third article of antennae and the aedeagus.

**DESCRIPTION.** Male. Shiny; bicoloured; head, pronotum, scutellum and underbody black; elytra red-orange with a trace



of blackish colour at apical extremity; covered with short, semierect, blackish vestiture.

Frons convex with punctures of variable diameters, umbilicate, with very short to contiguous intervals. Antennae reaching the apicis of posterior angles of pronotum; second article small, as long as wide, third subtriangular, 1,4x longer than wide, nearly twice as long as second; second and third, taken together, just longer than fourth; fourth-tenth triangular, on average 1,4x longer than wide; last as long as penultimate, subellipsoid.

Pronotum 1,21x wider than long, widest at apicis of posterior angles; convex, with a trace of mid-longitudinal depression at basal declivity; sides from middle forwards rather suddenly tapering to apex, backwards nearly subparallel to posterior angles, the latter short, subtruncate at apex, convergent at extremities, with an elevated and short carina directed inwards; punctures on disc approximately of the same diameter, slightly umbilicate with intervals on average equal to or a little shorter than their own diameter, towards the sides becoming denser and clearly umbilicate, rounded or slightly ovate at the extremities with very short intervals or contiguous.

Scutellum shield-shaped, flat, punctured. Elytra 2,9x longer than pronotum and as wide as it; moderately convex; sides subparallel in the first half, then very gradually tapering to apicis; striae punctured; interstriae subconvex with finer punctures.

Aedeagus as in fig. 18, 18a (length 1,31 mm):

Female. Body a little larger, shorter antennae not reaching the apicis of posterior angles of pronotum, third article only subconical and with sculptured as the second, deeper mid-longitudinal depression at basal slope of pronotum.

Bursa copulatrix sclerified as in fig. 46, 46a.

Size. Length 9,6 (Ht)-10,7 (Pt) mm – width 2,87 (Ht) – 3,25 (Pt) mm.

**ECOLOGICAL NOTES:** collected by swiping in oak forest (*Quercus* sp.).

**ETYMOLOGY.** Dedicated to the collector A. Lason, who sent us the material for study.

#### *Reitterelater elongatus* n. sp.

Fig. 19, 78, 115.

**MATERIAL EXAMINED.** Holotype ♂ - **Iran:** Golestan, 20 km S Gorgan city (36°43'N, 54°35'E), 700 m, 10.V.2009, A. Klimenko (CRG don. MCSNG).

**DIAGNOSIS.** The species is comparable to *R. bouyoni* (Chasain, 1992), but can be separated by the longer antennae, elongate elytra as compared with length of pronotum and prosternal process abruptly bent behind the procoxal cavities.

**DESCRIPTION.** Male. Moderately shiny; nearly entirely blackish; antennae, legs and underbody totally reddish like anterior part of frons, apicis of posterior angles of pronotum, central part of scutellum; covered with moderate, brownish, partially erect vestiture.

Frons convex on vertex, flat at anterior margin, punctures coarse, simple or vaguely umbilicate, with very short or contiguous intervals. Antennae exceeding apicis of posterior angles of pronotum by about one article; second article subcylindrical, 1,25x longer than wide; third subconical, 1,25x longer than second; second and third, taken together, as long

as fourth; fourth-tenth triangular, on average 1,8x longer than wide; last as long as penultimate, regularly ellipsoidal.

Pronotum 1,28x wider than long, widest at apicis of posterior angles, moderately and regularly convex; sides arcuate, gradually narrowing from the middle forwards, gently sinuate before the posterior angles, the latter rather acute, converging at extremities, bicarinate, the outer carina is shorter and scarcely apparent; puncturation variable; on disc punctures deep, simple or gently umbilicate with intervals on average equal to or a little smaller than their own diameter, gradually denser towards the sides, clearly umbilicate, contiguous at the extremities.

Scutellum shield-shaped, flat, densely punctured. Elytra 3,4x longer than pronotum and as wide as it; flat on the disc; sides subparallel in the first half, then very gradually tapering to the apicis; striae well-marked and punctured; interstriae flat with smaller and denser punctures.

Prosternal process abruptly bent immediately behind the procoxae, subhorizontal before the apex, this briefly emarginate.

Aedeagus as in fig. 19 (length 1,5 mm).

Female unknown.

Size. Length 12,3 mm; width 3,5 mm.

**ETYMOLOGY.** The name is derived from the very long elytra as compared to the length of pronotum.

*Reitterelater dubius* Platia & Cate, 1990

**MATERIAL EXAMINED.** 3 specm. (1♂ 2♀) - **Israel:** Kiryat Tivon, 15.IV.1989, leg. E. Orbach; Mt Meron, 12.VII.2002, V. Kravchenko, light trap; Panyas, 15.VI.2002, V. Kravchenko. (CPG; TAU).

**DISTRIBUTION.** SE Europe; Turkey. New to Israel.

#### Tribe Elaterini Leach, 1815

*Mulsanteus adanensis* Schimmel, Platia & Tarnawski, 2009

**MATERIAL EXAMINED.** 7 specm. (6♂ 1♀) - **Lebanon:** caza Aakkar, Ain Yaaqoub, 750 m, 20-24.VI.2009, L. Saltini, Padovani & Malmusi (at light); caza Jbayl, El Laqlouq, 1300-1400 m, A. Kairouz.

**NOTES:** The female was undescribed. It is characterised by the larger body, shorter antennae reaching only to the apicis of posterior angles of pronotum, quadrangular pronotum with subparallel sides and elytra more convex with subparallel sides. Length 14,5 mm; width 4 mm.

**DISTRIBUTION.** S Turkey. New to Lebanon.

#### Tribe Synaptini Gistel, 1856

*Peripontius galilaeus* n. sp.

Fig. 20, 116.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Sasa, 11.V.1996, G. Magnani. (CPG). 2 Paratypes ♂♀ - Jericho, 21.IV.1973, Bytinski-Salz; Montfort, 1.V.1973, D. Furth (TAU).

**DIAGNOSIS.** The new species is separated from the other unicoloured and ferruginous species of *Peripontius* from the same region by perfectly parallel sides of pronotum and fourth tarsal article excavated only in the first half.

**DESCRIPTION.** Male. Entirely ferruginous, covered with dense, yellow-golden pubescence.

Frons convex with punctures broad, deep, slightly umbilicate, with very short and shiny interstices. Antennae just exceeding apices of posterior angles of pronotum; second and third articles subcylindrical, with second slightly longer than third, of the same diameter, both, taken together, notably longer than fourth; fourth longer than following; fourth - tenth subtriangular; eleventh regularly ellipsoidal.

Pronotum as long as wide, strongly convex on disk, abruptly declivous at sides and base; sides perfectly parallel for about two-thirds of its length; apices of posterior angles acuminate, not diverging, with short but clear carina; lateral margins complete; punctures on disc deep, simple to slightly umbilicate, with very short and shiny interstices, at sides denser.

Scutellum mitriform, flat, densely punctured. Elytra 2,6-2,7 times longer than pronotum and 2,4 times longer than wide; sides subparallel to about the middle, then narrowing to apex; striae well-marked, interstriae punctured, flat, with rough surface.

Fourth article of tarsi excavated in the first half, longer than wide; claws pectinate.

Aedeagus as in fig. 20 (length 0,65 mm).

Female unknown.

Size. Length 5,5-6,1 mm; width 1,55-1,8 mm.

**ETYMOLOGY.** The name is derived from the region in which the species lives, Galilee.

***Peripontius maritimus* n. sp.**

Fig. 21, 117.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Northern Coastal Plain, Ir Ganim, 13.IV.1994, E. Orbach. (COI don. TAU). 4 Paratypes ♂ - same data as Ht; Haifa Bay, Ir Ganim, 13.IV.1994, B. Orbach. (COI; CPG).

**DIAGNOSIS.** Very allied to *P. dentatus* Platia & Schimmel, 1991 because of male genitalia with toothed apices of paramera, but can be separated by longer antennae, parallel sides of pronotum and fourth tarsal article only feebly excavated.

**DESCRIPTION.** Male. Entirely ferruginous, covered with fine yellow-fulvous pubescence.

Frons convex with strong, deep, simple punctures, with very short to contiguous intervals. Antennae not reaching apices of posterior angles of pronotum by about one segment; second and third segment subcylindrical with the second just shorter than third, together very much longer than fourth; fourth longer than following; fourth-tenth triangular, longer than wide; eleventh ellipsoidal.

Pronotum just wider than long, regularly convex, with a vestige of smooth, median longitudinal line from the posterior half to basal declivity; sides gradually and regularly narrowing from base to apex; posterior angles acuminate, not diverging, with carina prolonged for about one-third of the pronotum; lateral border complete and arcuate in the first half; punctures broad, deep, slightly umbilicate, with very short intervals on the disk, denser and contiguous at sides.

Scutellum as long as wide, flat to slightly convex. Elytra 2,7 times longer than pronotum and 2,3 times longer than wide; sides very gradually but regularly narrowing from base to apex; striae well-marked and punctured; interstriae flat, with rough surface.

Fourth tarsal segment excavate, as long as wide; claws pectinate.

Aedeagus as in fig. 21 (length 0,87 mm).

Female unknown.

Size. Length 6,5-7,5 mm; width 1,8-2,1 mm.

**ETYMOLOGY.** The name is derived from the fact that the species lives near the sea.

***Peripontius dentatus* Platia & Schimmel, 1991**

**MATERIAL EXAMINED.** 2 specm. ♂ - **Israel:** Nahal Kziv, 12.III.1999, bot-net, M. Finkel; Nahal Kziv, 4.IV.1978, D. Furth. (TAU).

**DISTRIBUTION.** Greece (Rhodes); Turkey. New to Israel.

***Peripontius omissus* (Buysson, 1889)**

**MATERIAL EXAMINED.** 15 specm. - **Greece:** Kawallos, 10.VI.1983, Barries. **Lebanon:** caza Aakkar, Ain Yaaqoub, 750 m, 20-24.VI.2009, L. Saltini, Padovani & Malmusi (at light).

**Israel:** Upper Galilee, Nahal Kziv, 1 km SE Avdon, 27.VII.2000, leg. E. Orbach; Mt Meron, m 1100, 17.VIII.1977, A. Freidberg; Hoch Hasharon, VII.1987, Y. Gasith; Tel Dan, 5.X.2002, V. Kravchenko & V. Chikatunov (CCW; CMM; COI; CPG; CSM; TAU).

**DISTRIBUTION.** Turkey; Syria. New to Greece, Lebanon and Israel.

***Tolphorea bodenheimeri* n. sp.**

Fig. 22, 47, 118, 118a.

**MATERIAL EXAMINED.** Holotype ♂ - „Palestine“, 31.III.1935, F.S. Bodenheimer (det. *Silesis concolor* Desb.) (TAU). 1 Paratype ♀ - same data as Ht. (CPG).

**DIAGNOSIS.** Species comparable with *T. pallida* Platia from Turkey, it can be separated by the darker colour, shorter antennae and coarser puncturation of pronotum.

**DESCRIPTION.** Male. Moderately shiny; entirely ferruginous; covered with dense, yellowish, recumbent vestiture.

Frons convex, punctures deep, simple, with very short intervals. Antennae not reaching apices of posterior angles of pronotum, serrated from the fourth article on; second and third subcylindrical, subequal in length, taken together longer than fourth; fourth-tenth triangular, just longer than wide, last longer than penultimate, ellipsoidal symmetrically narrowed at apex.

Pronotum as long as wide, widest at anterior third and apices of posterior angles, convex, especially in anterior third, gradually sloping at base; sides feebly dilated in anterior third, then subparallel and slightly sinuate at posterior angles, the latter rather acute, slightly divergent, carinate; punctures uniformly distributed, deep, simple or very vaguely umbilicate, with very short interstices.

Scutellum shield-shaped, flat, finely punctured. Elytra (damaged, only the first half of the left elytra is present) about 2x longer than pronotum and as wide as it, deeply punctured; interstriae moderately convex, sparsely punctured.

Aedeagus as in fig. 22 (length 0,62 mm)

Female. Very similar to male; body larger, pronotum with subparallel sides and uniformly convex.

Sclerified plates of bursa copulatrix as in fig. 47.

Size. Length 3,7 – 4,6 mm; width 1,18 – 1,43 mm.

**ECOLOGICAL NOTES.** Collected on plants of *Aristolochia maurorum* L.

**ETYMOLOGY.** Dedicated to the collector, the biologist Prof. F. S. Bodenheimer.

***Synaptus filiformis* (Fabricius, 1781)**

**MATERIAL EXAMINED.** 2 specm. - **Lebanon:** Chouf, Barouk dint. m 1100, 4.7.VI.1999, G. Sama. (CPG). **Tadzhikistan:** Bedi vill. Env., 7.VI.1990, J. Louda (CRG).

**DISTRIBUTION.** Europe, Caucasus, Turkey, Syria, Iran, Kazakhstan. New to Lebanon and Tadzhikistan.

### Tribe Physorhinini Candèze, 1859

***Porthmidius drymogenes* n. sp.**

*Porthmidius drymogenes* n. sp. (Wurst in litteris)

Fig. 23, 23a, 48, 119, 119a.

**MATERIAL EXAMINED.** Holotype ♂ - **Turkey** : vil. Konya, Beyşehir env., Yeşiltaş, 30.V.1995, J. Mertlik (CMHK). **Turkey:** 13 Paratypes (3♂ 10♀) - same data as Ht; vil. Konya, Beyşehir env., 3 km NW Yesildag, 21.V.2001, J. Mertlik; Beyşehir, 26.VI.1996, V. Dusanek; vil. Isparta, Beyşehir env., 30.V.-1.VI.1995, M. Samek; Akseki, 29.V.1989, G. Gillerfors; Akseki, V.1997, G. Sama; Bilecik, Izmit, 15.V.1986, K. Adlbauer; W Yarpuz, m 1200, 26.V.1988, W. Kronblad; Antalya, Yarpuz, m 1200, 17.25.V.1988, I. Rydh. **Israel:** Alta Galilea, Kfir Meron, m 700, 17.V.1996, D. Gianasso (CD; CMHK; CPG; CSS)

**DIAGNOSIS.** Species very similar to *P. austriacus* (Schrank) for the general shape, colour and size, it can be easily separated by the coarser puncturation of pronotum, umbilicate punctures giving the surface a rough appearance.

**DESCRIPTION.** Male. Moderately shiny; Entirely yellow-ferruginous to ferruginous, sometimes with undefined, irregular blackish shadings; covered with dense, long, partially erect, yellow fulvous vestiture.

Frons convex with coarse puncturation, punctures umbilicate and contiguous. Antennae exceeding apicis of posterior angles of pronotum by 2-3 articles; second article subcylindrical, third subconical, just longer than second; second and third combined nearly as long as fourth; fourth-tenth triangular, twice as long as wide and slender; last longer than penultimate, lengthily ellipsoidal.

Pronotum 1,3x wider than long, widest at posterior angles, strongly convex, abruptly sloping at sides and nearly vertically declined at base; sides tapering to apex from the middle forwards, posteriorly subparallel; posterior angles rather acute, not diverging, bicarinate; outer carina longer than inner and running subparallel very near to the lateral margin, this straight and reaching the anterior margin; puncturation uniformly distributed, sparser at basal declivity; punctures superficial, clearly umbilicate, on the disc with very short intervals or contiguous, at sides a little denser, giving the surface a rough appearance.

Scutellum shield-shaped, flat, sparsely punctured. Elytra 3,3x longer than pronotum and just wider than it, convex; sides suboval, widest at middle; striae punctured; interstriae flat with denser and finer punctures and a rough surface.

Male genitalia as in fig. 23, 23a (length 1,06).

Female. Shorter antennae reaching or just exceeding the apicis of posterior angles of pronotum; elytral sides slightly dilated after the middle.

Copulatrix bursa sclerified as in fig. 48.

Size. Length 6,4- 7,5 mm; width 2,0- 2,3 mm.

**ETYMOLOGY.** We have kept the original name given in litteris by our colleague C. Wurst.

### Tribe Pomachiliini Candèze, 1859

***Idotarmonides anaticus* (Candèze, 1882)**

**MATERIAL EXAMINED.** 2 specm. ♂ - **Israel:** Mt Hermon, m 1400, m 1650, 8.VII.1975, 10.VIII.1975, A. Freidberg. (TAU).

**DISTRIBUTION.** Caucasian Region; Turkey. New to Israel.

***Isidus letourneuxi* Pic, 1902**

Fig. 24.

**MATERIAL EXAMINED.** 3 specm. - **Israel:** Akko Bay, N Coastal Plain, 28.VI.1994, E. Orbach (on light); Nizzanim, 9.VI.1999, V. Chikatunov. (COI; CPG; TAU).

**NOTES:** Aedeagus as in fig. 24 (length

**DISTRIBUTION.** Egypt; Turkey. New to Israel.

### Tribe Melanotini Candèze, 1859

***Melanotus busei* n. sp.**

Fig. 25, 25a, 49, 79, 79a, 120.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Mt Carmel, Nakhal Oren, 19.VI-2.VII.2009, window trap, south facing slope, J. Buse & T. Pavlicek (CBMU). 13 Paratypes (10♂, 3♀) - same data as HT, 21.V.- 5.VI.2009, 5.VI-19.VI.2009, 19.VI-2.VII.2009 and 2-30.VII.2009 (CBMU; CPG).

**DIAGNOSIS.** A large species near *M. brignolii* Guglielmi & Platia from Greece and Turkey, it can be separated by the longer antennae with second and third articles, taken together, clearly shorter than fourth, coarser puncturation of head and pronotum and the aedeagus.

**DESCRIPTION.** Male. Moderately shiny; entirely dark brown with undefined ferruginous shadings; antennae and legs ferruginous; covered with moderate, yellow-fulvous vestiture.

Frons flat to slightly impressed before the anterior margin, the latter finely ridged, regularly arcuate and directed downwards, just protruding above the clypeus; punctures coarse, umbilicate, contiguous or nearly so.

Antennae exceeding apicis of posterior angles of pronotum by one article, strongly serrated from fourth article on; second article very small, globous, just wider than long, third conical, slightly longer than second, second and third, taken together, very much shorter than fourth; fourth-tenth triangular, fourth-sixth less than twice as long as wide; seventh-tenth slender, twice as long as wide; last longer than penultimate, subellipsoidal, more or less constricted at apical third and subtruncate at apex.

Pronotum 1,18-1,2x wider than long, widest at apicis of posterior angles; moderately and regularly convex, in some specimens with a trace of very narrow mid-longitudinal smooth line from middle to basal slope; sides very slightly arcuate, from behind the middle forwards tapering very gradually, backwards sinuate before the posterior angles, the latter short, truncate and a little convergent at apical extremity, with a fine

carina very near and running parallel to the lateral margins prolonged to the first third of pronotum; puncturation coarse, punctures on the disc deep, more or less clearly umbilicate, with very short, shiny intervals, on average very much smaller than their own diameters, gradually denser to sides, contiguous at lateral extremities.

Scutellum shield-shaped, flat or slightly convex, strongly punctured. Elytra 2,7-2,9x longer than pronotum and as wide as it, rather depressed on the disc; sides subparallel from base to middle or very gradually tapering from base to apicis, striae deeply and strongly punctured; interstriae flat with denser and finer punctures

Aedeagus as in fig. 25, 25a (length 2,18 mm).

Size. Length 13-16 mm; width 4,1-4,6 mm.

Female. Similar to male but with a little shorter antennae not or just reaching the apicis of posterior angles of pronotum with second and third articles, taken together as long as fourth.

Bursa copulatrix elongated and sclerified as in fig. 49.

**ETYMOLOGY.** The species is dedicated to the collector Dr. J. Buse of the J. Gutenberg University of Mainz, Germany, who has been studying the saproxylic coleopterological fauna of Israel and Middle-East for some years.

***Melanotus chikatunovi* n. sp.**

Fig. 26, 80, 80a, 121.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Golan Heights, Hermon sut, 2000 m, 10.VIII.2002 Upper Galilee, Nahal Kziv, 1 km SE Avdon, 27.VII.2000, E. Orbach (at light) (COI don. TAU). 2 Paratypes ♂ – Nahal Oren, 30.V.1998, A. Freidberg (CCW; CPG).

**DIAGNOSIS.** Species resembling *M. fulvus* Reitter as to general shape and colour, but it is separated for the larger and elongate body, longer antennae with the last article more or less constricted at apex and simulating in some specimens a twelve article and the aedeagus.

**DESCRIPTION.** Male. Body entirely yellow-ferruginous; covered with dense and long yellow fulvous vestiture, partially erect at sides of elytra.

Frons flat to feebly convex with anterior margin sublinear; punctures strong, umbilicate, with very short to contiguous interstices. Antennae exceeding apicis of posterior angles of pronotum by about 2-2,5 articles; second and third articles globous, subequal, taken together notably shorter than fourth; fourth-tenth serrated, triangular, longer than wide; last with subparallel sides narrowed at apical third, simulating in some specimens a twelfth article.

Pronotum just wider than long, widest at apicis of posterior angles, regularly and moderately convex on disc, with a trace of a mid-longitudinal inpunctate line before or at basal declivity; sides moderately arcuate, sinuate before the posterior angles, the later short, truncate, not diverging, with a feeble carina very near to the lateral margins and directed inside; puncturation uniformly distributed; punctures slightly umbilicate or simple, on the disc with variable interstices, on average equal to their own diameter.

Scutellum shield-shaped, flat, punctured. Elytra 3x longer than pronotum and as wide as it; sides subparallel for about two-thirds of its length; striae well-marked, punctured; interstriae flat, densely and finely punctured.

Aedeagus as in fig. 26 (length 2,18 mm).

Female unknown.

Size. Length 12,5- 13 mm; width 3,5-3,6 mm.

**ETYMOLOGY.** The species is dedicated to V. Chikatunov, one of the entomologists of the staff of Tel Aviv Museum University, who caught much of the material we have studied in this paper.

***Melanotus kravchenkoi* n. sp.**

Fig. 27, 81, 122.

**MATERIAL EXAMINED.** Holotype ♂ - “**Palestine**” Mikve Israel, 1931, F.S. Bodenheimer (*M. acuminatus* Reitter det. Fleutiaux) (TAU). 3 Paratypes ♂ - **Israel:** Golan Heights, Yehudiyya-Brehat haMeshushim nat. res., Nahal Zavitan, Brehat haMeshushim, 22.V.2000, E. Orbach; Golan, Snir, 25.IV.1997, V. Chikatunov; Kokhav Ha Yarden, 29.VII.2002, V. Kravchenko & V. Chikatunov (CPG; TAU).

**DIAGNOSIS.** Very similar to *M. chikatunovi* n. sp. as to general shape and antennae, it can be separated by the darker colour, more elevated carina of posterior angles of pronotum, shorter elytra as compared to pronotum and aedeagus.

**DESCRIPTION.** Male. Moderately shiny; entirely dark ferruginous, sometimes with ill-defined blackish shadings; covered with dense, thin yellowish vestiture, partially erect at sides of body.

Frons flat to feebly convex with anterior margin sublinear; punctures strong, umbilicate, with very short to contiguous interstices. Antennae exceeding apicis of posterior angles of pronotum by about two articles; second and third articles globous, subequal, taken together notably shorter than fourth; fourth-tenth serrated, triangular, conspicuously longer than wide; last longer than penultimate with subparallel sides and asymmetrically constricted at apical third.

Pronotum 1,1x wider than long, widest at apicis of posterior angles; convex, with a shallow mid-longitudinal depression at basal slope; sides moderately arcuate, sinuate before the posterior angles, the later short, truncate, not diverging, with a distinct elevated carina running subparallel to the lateral margins; puncturation rather uniformly distributed; punctures deep, simple or slightly umbilicate, on the disc with variable interstices, on average a little smaller than their own diameter, denser at sides where they can be contiguous.

Scutellum shield-shaped, flat to moderately concave, punctured. Elytra 2,6-2,7x longer than pronotum and as wide as it; sides tapering very gradually but regularly from base to apicis; striae well-marked and coarsely punctured; interstriae flat, densely punctured on a rough surface.

Aedeagus as in fig. 27 (length 1,9 mm).

Female unknown.

Size. Length 11 – 12 mm; width 3,3 – 3,4 mm.

**ETYMOLOGY.** The species is dedicated to V. Kravchenko, one of the entomologists of the staff of Tel Aviv Museum University, who caught much of the material we have studied in this paper.

***Melanotus orbachorum* n. sp.**

Fig. 28, 50, 82, 123, 123a

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Lower Galilee, Qiryat Tiv'on, 13.iv.1989, E. Orbach. ( COI don. TAU). 49

Paratypes ♂♀ - same data as Ht, 15.V.1992, 10.V.1997, VI.1997; Mt Carmel, Haifa, 11.V.1993, B. Orbach; Upper Galilee, Mt. Meron, 'En haZaqen, 950m, 8.VII.2004, E. Orbach; Lower Galilee, Qiryat Tiv'on, 3.v.2007, E. Orbach. Kfir Etsion, 18.V.1967, leg. Blondheim; Alonim, 10.V.1948, leg. Bytinski-Salz; Mt Carmel, Ha'arbaim (Fourties), 8.VI.2007, window trap on *Quercus calliprinos*, J. Buse; same locality, 15-28.V.2009, J. Buse & T. Pavlicek; Upper Galilee, Mt Meron, 16.V.-6.VI.2007, window trap on *Pinus halepensis*, J. Buse; same locality, 5-26.VI.2007, window trap on *Pinus brutia*, J. Buse; same locality 15.V.-5.VI.2007, 5-26.VI.2007, window trap on *Quercus calliprinos*, J. Buse; same locality, 15.V.-5.VI.2007, window trap on *Quercus boissieri*, J. Buse; Mt meron, 1000 m, 30.V.2008, G. Sabatinelli. **Jordan:** Ajlun, S of Anjara, 27.IV.2002, M. Snizek; SW Jarash, Alhuna, 12.IV.2009, M. Snizek; Jordan: Ajlun, S of Anjara, 27.IV.2002, M. Snizek; Wadi As Sir1.V.1993, M. Karuti. (AM; CHCB; COI; CPG; CPT; TAU).

**DIAGNOSIS.** Similar to *M. crassicollis* (Erichson) but with a more robust body, coarser and strongly umbilicate pronotal puncturation, longer antennae with second and third segments, taken together, shorter than fourth.

**DESCRIPTION.** Male. Entirely blackish with ferrugineous shadings; antennae and legs ferrugineous; covered with fine but not dense pubescence, partially erect on head and pronotum.

Frons flat with anterior margin subarcuate, directed downwards and just protruding above clypeus; punctures broad, clearly umbilicate, contiguous. Antennae exceeding apicis of posterior angles of pronotum by about two segments; second segment subcylindrical, as long as wide; third subconical, less than twice as long as second, together shorter than fourth; fourth-tenth triangular, longer than wide; eleventh ellipsoidal, narrowed at apex.

Pronotum 1,3 times wider than long, moderately convex with a vestige of a mid-longitudinal carina at the basal declivity; sides strongly arcuate with lateral margin entire and nearly completely visible in dorsal view; sides arcuate with greatest width at middle or just behind it, strongly narrowed towards apex, sinuate before posterior angles, the latter feebly divergent, with a short carina running parallel to lateral border; punctures broad, superficial, strongly umbilicate, on the disc with very short intervals, at sides contiguous.

Scutellum tongue-shaped, flat or feebly concave. Elytra 3x longer than pronotum and 2,5x longer than wide; sides subparallel for the first half, then gradually narrowing towards apex; striae well-marked and punctured; interstriae flat to subconvex, densely and finely punctured.

Aedeagus as in fig. 28 (length 1,87 mm).

Female. Body more convex and parallel; shorter antennae, not reaching the apices of posterior angles of pronotum, with second and third segments together a little longer than fourth.

Bursa copulatrix sclerified as in fig. 50.

Size. Length 14-17,5 mm; width 4-4,8 mm.

**ETYMOLOGY.** The species is dedicated to the entomologist brothers Benjamin and Eylon Orbach, who collected the largest part of the Israelian material and gave it to us for study.

#### *Melanotus pavlicei* n. sp.

Fig. 29, 29a, 51, 83, 83a, 124, 124a.

**MATERIAL EXAMINED.** Holotype ♂ - **Israel:** Nahal Oren, 30.V.1998, A. Freidberg (TAU). 1 Paratype ♀ - Nahal Oren, 4.VI.1999, SFS2, V. Chikatunov & T. Pavlicek, light trap (CPG).

**DIAGNOSIS.** A species resembling *M. dichrous* (Erichson) as to general shape, it can be separated by the denser pronotal puncturation, aedeagus and bursa copulatrix.

**DESCRIPTION.** Male. Moderately shiny; entirely blackish with antennae and legs ferruginous, covered with dense, yellowish vestiture, semierect at sides of body.

Frons flat, anterior margin moderately thickened, subarcuate, not protruding above clypeus, punctures coarse, umbilicate, contiguous. Antennae just exceeding apicis of posterior angles of pronotum, serrated from fourth article on; second and third small, second globous, a little wider than long, third subconical, a little longer than second and longer than wide, second and third, taken together, clearly shorter than fourth, this 1,5x longer than the previous two taken together; fourth-tenth triangular, gradually becoming more slender toward apex, twice as long as wide to longer; last longer than penultimate, subellipsoidal, asymmetrically constricted at apical third.

Pronotum 1,2x wider than long, widest at posterior angles, very convex, with a short, shallow mid-longitudinal depression at basal slope, sides arcuate, regularly narrowing from behind the middle forwards; sinuate before the posterior angles, the latter rather acuminate, not diverging with a short and elevated carina running parallel to the lateral margin; punctures on the disc deep, umbilicate, with variable, shiny intervals, on average smaller than their own diameter, gradually denser to the sides, ovate and more or less contiguous at lateral extremities.

Scutellum shield-shaped, flat, densely punctured. Elytra 3x longer than pronotum and as wide as it at base, convex; sides subparallel in the first half, then regularly tapering to the apicis; striae deeply punctured, well-marked; interstriae flat, finely punctured.

Aedeagus as in fig. 29, 29a (length 2 mm).

Female. Smaller body, identical colour, shorter antennae not reaching the apicis of posterior angles of pronotum; second and third antennal articles, taken together as long as fourth, pronotum less convex.

Bursa copulatrix as in fig. 51.

Size. Length 13 mm; width 3,8 mm (HT); length 11 mm; width 3,5 mm (Pt).

**ETYMOLOGY.** The species is dedicated to the entomologist T. Pavlicek, member of the staff of Tel Aviv Museum, who collected one of the specimens of this species.

#### *Melanotus crassicollis* (Erichson, 1841)

**MATERIAL EXAMINED.** Many specms - **Lebanon:** Ain Zhalta, Jabal el Jaidi, 1750 m, V.1966, cédraie, G. Fagel; caza Jbayl, El Laqlouq, 1300-1400 m, A. Kairouz; caza Aakkar, Ain Yaaqoub, 750 m, 20-24.VI.2009, L. Saltini; Padovani & Malmusi (at light); Bcharre, Dahr El Qadib, m 2200, 15.VI.1999, G. Sama; Akkar, Fnaideq, m 1200-1600, 14.VI.1999, G. Sama; Zgharta, Horsh Edhen Nat. Res., m 1300-1500, 8.16.VI.1999, G. Sama; Zedern v. Tannourine el F., 1600 m, 21-30.V.1999, Heinz. **Israel:** Odem, 11.17.V.1996, G. Magnani. (CMM; CPG; CSM; IRSNB).

**DISTRIBUTION.** Europe; Turkey. New to Lebanon.

***Melanotus dichrous* (Erichson, 1841)**

**MATERIAL EXAMINED.** 3 specm. (2 ♂ 1 ♀) – **Israel:** Upper Galilee, Mt Meron, 8.VIII.1972, D.F.; Panyas, 30.VII.2002, V. Kravchenko & V. Chikatunov (CPG; TAU).

**DISTRIBUTION.** South Europe, Turkey. It has been previously recorded from “Palestine”. New to Israel.

***Melanotus fulvus* Reitter, 1891**

**MATERIAL EXAMINED.** 2 specm. ♂ – **Israel:** Dead Sea Area, near Ne’ot haKiklar, 5-11.V.2006, E. Orbach (COI).

**DISTRIBUTION.** Turkmenistan; Iran; Iraq. New to Israel.

**Tribe Cardiophorini Candèze, 1860**

***Cardiophorus angelinii* n. sp.**

Fig. 52, 125.

**MATERIAL EXAMINED.** Holotype ♀ – **Turkey:** Kastamonu prov., Ilgaz, Ilgazdagi Geç., 1700 m, 19.VI.2009, F. Angelini. (CPG).

**DIAGNOSIS.** Among the bicoloured species from Turkey it can be compared with *C. anticus* Erichson, for the same colour pattern, but can be separated by the orange colour less bright, the pronotum widest at middle and the different shape of the sclerotized parts of the bursa copulatrix.

**DESCRIPTION.** Female. Shiny; bicoloured; head, anterior third of pronotum, scutellum, elytra, prosternum, anterior third of propleura, thorax and abdomen black piceous; remaining part of pronotum and propleura orange; antennae blackish, legs ferruginous; covered with fine, recumbent, yellow fulvous vestiture.

Frons convex on vertex, slightly impressed at anterior margin, the latter moderately thickened, smooth, shiny, regularly arcuate; punctures deep, of variable diameter, regularly mixed with very short, shiny intervals. Antennae short, not reaching apicis of posterior angles of pronotum by about two articles; second article subcylindrical, less than twice as long as wide, third subtriangular, 1,8x longer than second and subequal to fourth and following and about twice as long as wide; last a little longer than penultimate, regularly ellipsoidal.

Pronotum as long as wide, widest at middle, very convex, sloping abruptly at sides and base with a trace of a short mid-longitudinal impressed line; sides regularly arcuate, slightly and lengthily sinuate behind the middle to posterior angles, the latter short, acute, briefly carinate, not divergent; puncturation very fine, indistinct, rather uniformly distributed; on disc punctures deep, simple, their diameters very variable, irregularly mixed with intervals on average smaller than their own diameters.

Scutellum heart-shaped, as long as wide, feebly impressed at center, finely punctured. Elytra 2,45x longer than pronotum and as wide as it; sides suboval, widest at middle; striae distinctly and regularly punctured; interstriae flat to subconvex with denser and finer punctures.

Claws simple.

Copulatrix bursa sclerified as in fig. 52.

Male unknown.

Size. Length 6,35 mm; width 1,95 mm.

**ETYMOLOGY.** The species is dedicated to the collector F. Angelini, who gave us this material for study.

***Cardiophorus bioculatus* n. sp.**

Fig. 30, 94, 126.

**MATERIAL EXAMINED.** Holotype ♂ – **S Iran:** Kohkiluyeh-va-Boyerahmad Prov., Yasui Area, 10 km SE Sepidar, 5-6.V.2007, A. Klimenko (CRG don. MCSNG).

**DIAGNOSIS.** Species immediately separated by all the known bicoloured Iranian species by its distinct colour pattern and especially by the black spot at center of propleura.

**DESCRIPTION.** Male. Shiny, bicoloured; head, scutellum elytra, prosternum, thorax and abdomen black piceous; pronotum orange with central, black, rhombic spot departing from the anterior margin to the middle of the disc, two symmetrical small and round black spots at sides above the lateral suture, not visible in dorsal view; two other symmetrical, small, oblong black spots at centre of the orange propleura; antennae black with the first two articles orange, legs orange; covered with dense, recumbent, yellow-fulvous vestiture.

Frons convex on vertex, flat forwards, anterior margin regularly arcuate and moderately ridged; punctures deep, simple, with very short intervals. Antennae exceeding apicis of posterior angles of pronotum by about two articles; second article subcylindrical, slender, nearly twice as long as wide; third and fourth twice as long as wide and subequal in length, fifth-tenth a little shorter; last as long as penultimate, subellipsoidal, symmetrically constricted before the apex.

Pronotum as long as wide, widest at the middle, convex; sides regularly arcuate, slightly sinuate from middle to base, posterior angles short, feebly divergent; lateral suture fine, gently arcuate, obsolete at anterior third; punctures approximately of the same size, on disc deep, simple, with variable, shiny intervals on average smaller than their own diameter, at sides only a little denser.

Scutellum heart-shaped, as long as wide, slightly depressed at middle, finely punctured. Elytra 2,35x longer than pronotum and as wide as it; moderately convex; sides suboval, widest at middle; striae punctured; interstriae flat, densely and more finely punctured.

Claws simple.

Male genitalia as in fig. 30 (length 0,82 mm).

Size. Length 5,4 mm; width 1,59 mm.

**ETYMOLOGY.** The name is derived from the characteristic double black spots resembling eyes at sides of pronotum and at propleura.

***Cardiophorus intercivitates* n. sp.**

Fig. 31, 31a, 53, 127, 127a.

**MATERIAL EXAMINED.** Holotype ♀ – **Jordan:** Irbid region, Sahm vill., 400 m, 17.IV.2003, I. Pljushtch (CCW). 33 Paratypes ♂♀ – same data as ht; Harta, 14 km N Irbid, Abila (Quwayliba) arch. Site (32°40'N, 35°52'E), 943 m, 10.IV.2008, G. Sama; Wadi Araba, 5 km E for Trafila, 20.III.1998, G. Sama; Ajlun, Dibbin N. P., 1000 m, 15.IV.2000, G. Zappi; Jarash, 12.IV.2000, G. Zappi. **Israel:** Jericho, U. Sahlberg; B. Sheba env., 3.II.1985, Jäch; N Samq Kh Golan, 31.III.1985, Jäch; Nahal Peleq, 15.II.1997, R. Hoffman; Jordan Valley, Menahemya, 20-25.III.1991, B. Orbach; Lower Galilee, Yavne’el, W Mizde Elot, 100-350 m, 19.III.1999, E. & B. Orbach; ?Hadena, 24.II.1997, R. Hoffman (AM; CCW; CMS; COI; CPG; CRG; NHMW; TAU).

**DIAGNOSIS.** A species resembling *C. tenellus* Reiche as to general shape and colour, it can be separated by the normally smaller size, longer antennae and particularly by the genitalia.

**DESCRIPTION.** Female. Shiny; entirely black to blackish with antennae black and legs of variable colour, entirely yellowish or with darkened tarsi or more or less entirely darkened; covered with yellowish, short and recumbent vestiture, more apparent on elytra.

Frons convex on vertex, flat or slightly depressed at anterior margin, the latter moderately thickened and more or less regularly arcuate; punctures deep, simple, with very short intervals. Antennae reaching and exceeding apices of posterior angles of pronotum by about one article; second article subcylindrical, longer than wide; third and following conical, slender, more than twice as long as wide, last as long as penultimate, subellipsoidal.

Pronotum as wide as long, widest at middle, strongly and regularly convex, abruptly sloping at sides and base; sides very arcuate, tapering gradually from middle forwards, more abruptly posteriorly, subsinuate before the posterior angles, the latter short, truncate, gently diverging, briefly carinate; punctures rather uniformly distributed, approximately of the same size; on disc deep, with interstices on average equal to or smaller than their own diameter.

Scutellum heart-shaped, as long as wide, deeply emarginate at center of base, flat, finely punctured. Elytra 2,3-2,5x longer than pronotum, moderately convex; sides widest just behind the middle; striae punctured, interstriae flat with denser and finer punctures.

Claws simple.

Sclerified plates of bursa copulatrix as in fig. 53.

Male. Very similar to female, with longer antennae exceeding apices of posterior angles of pronotum by about two articles.

Aedeagus as in fig. 31, 31a (length 0,93 mm)

Size. Length 5,0-6,7 mm; width 1,8-2,03 mm.

**ETYMOLOGY.** The name is derived from the latin "civitas" (state) for the presence of the species in the two states, Israel and Jordan.

***Cardiophorus kurdistanicus* n. sp.**

Fig. 32, 128.

**MATERIAL EXAMINED.** Holotype ♂ - **Iraq:** "Mesopotamia", Mosul, without any data (CCW).

**DIAGNOSIS.** A small species immediately separated from all known species of the region by the colour pattern.

**DESCRIPTION.** Male. Moderately shiny; bicoloured; head, antennae from third article on, pronotum, underbody black; first two articles of antennae, apices of posterior angles of pronotum, scutellum, elytra, legs and prosternal process brown ferruginous; covered with yellowish, recumbent vestiture.

Antennae exceeding apices of posterior angles of pronotum by about one article, feebly serrated from third article on; second article subcylindrical, 1,8x longer than wide; third conical, 1,6x longer than second and less than twice as long as wide; taken together 1,4x longer than fourth; fourth-tenth subtriangular, twice as long as wide and slender; last as long as penultimate, subellipsoidal.

Pronotum just longer than wide, widest just behind the middle; regularly convex; sides arcuate, tapering from behind

the middle forwards and backwards, very slightly sinuate before the posterior angles, the latter short, truncate, not divergent; puncturation very fine and uniformly distributed, punctures approximately of the same size, deep, simple, with very short shiny intervals.

Scutellum heart-shaped, small, deep-set into the interelytral space, as long as wide, pointed at apex, deeply emarginate at middle of base, impressed and densely punctured. Elytra 2,3x longer than pronotum and as wide as it; rather depressed on disc, sides subparallel for about two-thirds of its length, then gradually tapering to the apices; striae well-marked and deeply punctured; interstriae subconvex, finely punctured.

Claws simple.

Aedeagus basally damaged, only the apical part is present as in fig. 32.

Female unknown.

Size. Length 5,5 mm; width 1,68 mm.

**ETYMOLOGY.** The name is derived from Kurdistan, the region in which Mosul, the town where the species was collected, is located.

***Cardiophorus negevensis* n. sp.**

Fig. 33, 33a, 54, 129.

**MATERIAL EXAMINED.** Holotype ♀ - **Israel:** Negev, Nabel Nizanah, 21.IV.1982, H. Mühle. (CPG). 4 Paratypes ♂ - Negev, 6 km S Sede Boqer, 21.III.1995, G. Sama; Sede Boqer 16.II.1985, Jäch; 4-20 km E Dimona, 22.II.1997, G. Sama; Har Boqer, 25.XII.2001, F. Groner (CCW; CPG; NHMW).

**DIAGNOSIS.** Allied to *C. intercivitates* n. sp. as to general shape, size and colour, it can be separated by the first two reddish articles of antenna and by the median piece of the bursa copulatrix much smaller than the symmetrical plates.

**DESCRIPTION.** Female. Entirely blackish with bronze reflexions; antennae black except for the first two articles reddish; legs yellow-ferruginous; covered with fine, yellow-fulvous pubescence.

Frons convex, slightly impressed near the anterior margin, with fine and very dense punctures. Antennae reaching apices of posterior angles of pronotum; second segment subconical, shorter than third; third-tenth subtriangular, longer than wide.

Pronotum as long as wide, strongly and regularly convex; sides very arcuate with greatest width in the middle, more strongly narrowed toward base, feebly sinuate before posterior angles, the latter short, truncate, with a very short carina; lateral suture obsolete; punctures regular on entire surface, fine, very dense, of the same size.

Scutellum heart-shaped, as long as wide, emarginate at base in the middle, feebly concave. Elytra 2,4x longer than pronotum and 2x longer than wide; suboval, with greatest width behind the middle; striae well-marked and punctured; interstriae subconvex with finer punctures.

Claws simple.

Copulatrix bursa as in fig. 54.

Male. Body smaller, longer antennae exceeding apices of posterior angles of pronotum by about two segments, elytra less dilated behind the middle.

Aedeagus as in fig. 33, 33a (length 1 mm).

Size. Length 5-6 mm; width 1,7-2 mm.



**ETYMOLOGY.** The name is derived by the Negev region, where the species was found

***Cardiophorus sacratoides* n. sp.**

Fig. 34, 34a, 55, 130.

**MATERIAL EXAMINED.** Holotype ♀ - **Israel:** Upper Galilee, Mt Kfir-Nahal, m 800-900, 26.V.1995, E. Orbach (COI don. TAU). 18 Paratypes (9♂, 9♀) – (16) Mt Carmel, Nakhal Oren, 16.III.-8.IV.2009, 8.IV.-8.V.2009, 8-21.V.2009, window trap, north & south facing slope, J. Buse & T. Pavlicek Kiryat Tivon, 1.13.V.1989, leg. E. Orbach; N Coastal Plaine, Megadim, 7.V.1996, B. Orbach (CBMU; COI; CPG).

**DIAGNOSIS.** In the general colour pattern the species is allied to *C. sacratius* Erichson, but the median spot of pronotum is limited to the posterior half; as to the features of the bursa copulatrix it is allied to *C. bellus* Platia & Gudenzi from Turkey but in this species only a single, small black spot is present on the disc of pronotum

**DESCRIPTION.** Female. Bicoloured pronotum, red with three black spots, one larger in the middle departing from anterior margin to behind the middle; two symmetrical subcircular spots at sides in the anterior third reaching propleurae; prosternum and inner half of propleura partially or totally black; scutellum and elytra black; antennae brown, legs with femura darker than tibia and tarsi ferruginous; covered with fine yellow pubescence.

Frons flat on vertex, slightly impressed at anterior margin; punctures nearly contiguous. Antennae reaching apicis of posterior angles of pronotum; second article subcylindrical, longer than wide and shorter than third; third – tenth subtriangular, about twice as long as wide; eleventh regularly ellipsoidal.

Pronotum just wider than long, strongly and regularly convex on disk; sides arcuate with the greatest width near the middle, feebly sinuate before the posterior angles, the latter not divergent, with a short carina directed inwards; lateral suture fine and complete, gently curved; punctures of the same size, deep, simple, with interstices generally much shorter than their own diameter.

Scutellum heart-shaped, as long as wide, feebly concave and finely punctured. Elytra 2,5x longer than pronotum and 2,1x longer than wide; sides parallel in the first half, then gradually narrowing to apex; striae well-marked and punctured; interstriae flat to subconvex with finer and dense punctures.

Claws simple.

Copulatrix bursa sclerified as in fig. 55.

Male. Very similar to female, with antennae a little longer.

Aedeagus as in fig. 34, 34a (length 0,81 mm).

Size. Length mm 6,2- 7,1; width mm 2- 2,1.

**ETYMOLOGY.** The name is derived from the resemblance of the species to *C. sacratius* Erichson.

***Cardiophorus schmidi* n. sp.**

Fig. 35, 35a, 131.

**MATERIAL EXAMINED.** Holotype ♂ - **Turkey:** Antalya, Olimpos, 16.V.2001, H. Schmid (CCW). 1 Paratype ♂ - **Turkey:** Antalya, Beldibi, 12.V.2001, H. Schmid (CPG).

**DIAGNOSIS.** Species very similar to *C. apterus* Platia & Gudenzi, 2002 (known only as female) for the absence of wings, it can be separated by the larger body, longer antennae and last abdominal segment without pit.

**DESCRIPTION.** Male. Entirely dark-brown with antennae and legs ferruginous; covered with very fine, dense, recumbent, yellow-fulvous vestiture.

Frons convex on vertex, flat forwards, anterior margin regularly arcuate and moderately ridged; punctures fine, deep, simple, with very short intervals. Antennae exceeding apicis of posterior angles of pronotum by one article; second article subconical, twice as long as wide, third conical, 1,6x longer than second, as long as the fourth and following, all about 2,3x longer than wide; last as long as penultimate, regularly ellipsoidal.

Pronotum just wider than long, widest at middle, strongly convex, abruptly sloping at sides and base, with a trace of a shallow, very narrow impressed mid-longitudinal line; sides notably and regularly arcuate, shortly sinuate before the posterior angles, the latter short, briefly dilated and then converging at apicis, with a short carina thickened at base; lateral suture regularly curved, obsolete after the middle; puncturation very fine and uniformly distributed; punctures approximately of the same size or regularly mixed with some slightly larger ones, deep, simple, with very short intervals.

Scutellum heart-shaped, wider than long, flat, densely punctured. Elytra 2-2,1x longer than pronotum and as wide as it at base; convex, ovaliform; sides widest at middle, very arcuate; striae regularly punctured, interstriae flat, finely and densely punctured, seventh interstria carinate at base.

Wings absent.

Male genitalia as in fig. 35, 35a (length 1,21 mm).

Female unknown.

Size. Length 7,5-7,7 mm; width 2,75-2,81 mm.

**ETYMOLOGY.** The species is dedicated to the collector, Herbert Schmid, Vienna.

***Cardiophorus aegyptiacus* Candèze, 1860**

Fig. 36, 36a, 56, 132, 132a.

**MATERIAL EXAMINED.** 7 specm (6♂1♀) - **Israel:** Negev, Bir Aslug, 21.IV.1982, leg. H. Mühle; Mt. Zavoa, 7.IV.1996, V. Chikatunov; Gvui Ot, 29.III.1986, E. Shney-Dor; N Negev, Retamin, Fenix, 5.V.2002, V. Kravchenko; Holot Haluza, 22.III.2008, Ittai Renan (CPG; CPT; TAU).

**NOTES:** Aedeagus as in fig. 36, 36a (length 0,95 mm).

Copulatrix bursa sclerified as in fig. 56.

Size. ♂ Length 5,8- 7,3 mm; width 1,56-2 mm ;♀ length 6 mm; width 1,65 mm,

**DISTRIBUTION.** Egypt. New to Israel.

***Cardiophorus gerhardi* Platia & Gudenzi, 2007**

**MATERIAL EXAMINED.** 1 specm.: **Israel:** Qeren Naftali (33° 05'N, 35°34'E), 474 m, 23.V.2008, G. Wagner (CZH).

**DISTRIBUTION.** Syria. New to Israel.

***Cardiophorus insignis* Desbrochers des Loges, 1875**

Fig. 133.

**MATERIAL EXAMINED.** 4 specm.: **Jordan:** 10 km N Laban, m 1000, 26.III.1987, M. Bologna; 50 km S of Amman, 11.IV.2009, S. Ziani (CPG).

DISTRIBUTION. Israel; Syria, "Palestine"; Turkey (coll. Dolin, Kiev). New to Jordan.

***Cardiophorus kindermanni*** Candèze, 1860

MATERIAL EXAMINED. 1 specm.: **NW Jordan**: SW Jarash, , Alhuna, 12.IV.2009 (CHCB)

DISTRIBUTION: Lebanon, Syria, Turkey. New to Jordan.

***Cardiophorus miniaticollis*** Candèze, 1860

MATERIAL EXAMINED. 1 specm.: **Jordan**: Harta, 14 km N Irbid Abila (Quwayliba) arch. Site (32°40'N, 35°25'E), 943 m, 10.IV.2008, G. Sama.

DISTRIBUTION. Greece, Turkey, Armenia, Iran, Syria, Lebanon "Palestine". New to Jordan.

***Cardiophorus neolienus*** Platia & Gudenzi, 1999

Fig. 57.

MATERIAL EXAMINED. 3 specm. (2♂1♀) – **Turkey**: Mus, Serafettin Daglari, Buglan Geç., 11.VI.2009, A. Lason. **Israel**: Bet She'an (32°30'N, 35°30'E), 9.III.2007, G. Wagner. Qeren Naftali (33°05'N, 35°34'E), 474 m, 23.V.2008, G. Wagner. **Jordan**: Amman, Ma'in, 4.IV.2002, S. Ziani. (CLP; CPG; CZH).

NOTES: Copulatrix bursa sclerified as in fig. 57.

DISTRIBUTION. Armenia; Azerbaijan; Iraq. New to Turkey, Israel and Jordan.

***Cardiophorus pharaonum*** Buysson, 1910

MATERIAL EXAMINED. Many specms. - **Israel**: En-Zin, 30° 53'60N, 35°09'17E - Israel: En-Zin, 16.IV.1999, 9.VII. 1999, I. Yarom & V. Kravchenko (at light trap); Arava Valley, Nahal Omer, 21.III.1995, G. Sama; Nahal Neqarot, 19.III. 1999, I. Yarom & V. Kravchenko; Finam, 28.IX.1977, A. Freidberg; Tiberias, 25.IV.1981, D. Furth; **Jordan**: Univ. Farm, Cows Farm, Balqa Gov., 18.IV.1998, Tamam Jaaran; Dair Alls, Balqa Gov., 19.VI.1995; Ghawr Kabid, 19.V.1995, A. Katbeh; Ghawr Kabid, 22.29.V.1995, A. Katbeh. (CPG; CPT, TAU).

DISTRIBUTION. Algeria; Egypt; Cyprus; Jordan. New to Israel.

***Cardiophorus reitteri*** Schwarz, 1891

Fig. 37, 37a, 134.

MATERIAL EXAMINED. Syntypus ♂ - Israel: Haifa, leg. Reitter (Schwarz coll., DEI); 6 ♂ - Israel: Akko Bay, N Coastal Plain, 28.VI.1994, E. Orbach, on light; Lower Galilee, Aloxim Hills, 10.V.1989, E. Orbach; Nizzanim, 7.VI.2007, J. Buse, sands on UV light (CBMU; CPG).

NOTES: Aedeagus as in fig. 37, 37a (length 1,12 mm).

DISTRIBUTION. Israel.

***Cardiophorus skulei*** Platia & Schimmel, 1997

MATERIAL EXAMINED. 4 specm. ♂ ♀ - **Israel**: "Shizal" Nat. Res., 14.V.1999, leg. I. Yarom & V. Kravchenko; Gerofit, 5.IX.2002, V. Kravchenko & V. Chikatunov; Gerofit, 24.III. 2007, V. Kravchenko, on light trap (TAU).

DISTRIBUTION. Saudi Arabia; Kuwait, Oman, UAE, Yemen. New to Israel.

***Cardiophorus varius*** Cate, Platia & Schimmel, 2002

MATERIAL EXAMINED. 1 specm. - **Jordan**: Urdunn, Aqaba env., 16-20.XI.2004, Orszulik. (CPG).

DISTRIBUTION. Iran, Turkey; Israel. New to Jordan.

***Cardiophorus vestigialis*** Erichson, 1840

MATERIAL EXAMINED. Many specm. ♂ ♀ - **Syria**: Coastal Mts, vill. Jobet Borghal, m 1000, 21.29.V.1987, O. Kodym; Slinfah, 16.V.1999, R. Pettersson; env. Slinfah, 1000-1300 m, 29.V.-3.VI.2007, L. Saltini. **Lebanon**: Akkar, Fnaideq, m 1200-1600, 14.VI.1999, G. Magnani; Zgharta, Horsh Edhen Nat. Res., m 1350-1500, 8.18.VI.1999, G. Magnani. Byblos, Laqlouq, 1300-1400 m, 25.VI.2009, Padovani & Malmusi; caza Bcharre, Horch Ehden, 1400-1600 m, 19-26.VI.2009, Padovani & Malmusi; caza Aakkar, Ain Yaaqoub, 750 m, 20-24.VI.2009, L. Saltini, at light. **Jordan**: Ajloun N. P., 977 m, 10.IV.2008, G. Sama; Harta, 14 km N Irbid, Abila (Quwayliba) arch. Site (32°40'N, 35°52'E), 943 m, 10.IV.2008, G. Sama. (CMM; CPG; CSM).

DISTRIBUTION. Europe, Turkey; Central Asia; N Africa. New to Syria, Lebanon, Jordan.

***Dicronychus laevimaculatus* n. sp.**

Fig. 38, 38a, 135.

MATERIAL EXAMINED. Holotype ♂ - **Oman**: Tanuf, 630 m, 11-13.X.2006, Ströhle (CPG).

**DIAGNOSIS.** Species resembling *D. exstinctus* (Erichson) as to general shape and colour, but it can be separated by the pronotum widest at middle, larger punctures of pronotum, claws more feebly dilated in the first half and male genitalia.

**DESCRIPTION.** Male. Head, pronotum and scutellum dark brown; elytra blackish with two undefined, indistinct, yellowish spots from base to humera and epipleura; antennae and legs yellowish; covered with dense, yellowish, recumbent vestiture.

Frons moderately convex on the vertex, flat at anterior margin, the latter slightly thickened and regularly curved; puncturation double, finer, denser punctures are irregularly mixed with sparser, larger punctures. Antennae not reaching apices of posterior angles of pronotum by about one article, very slightly serrate from third article on; second article sub-cylindrical, more than twice as long as wide; third-tenth sub-triangular, approximately of the same length and about 3x longer than wide; last as long as the previous, ellipsoidal, narrowed at apical third.

Pronotum as long as wide, widest at middle; strongly convex, abruptly sloping at sides and base; sides regularly arcuate, feebly sinuate before the posterior angles, the latter short, truncate, slightly divergent; puncturation double, very fine punctures are mixed more or less regularly with clearly larger punctures, interstices between the larger punctures on average equal to their own diameters.

Scutellum heart-shaped, as long as wide, emarginate at center of base, feebly impressed, finely punctured. Elytra 2,18x longer than pronotum and as wide as it; moderately convex on disc; sides subparallel in the first half, then clearly tapering to apices; striae well-marked and punctured; interstriae flat with rough surface.

Claws moderately dilated in the first half.

Aedeagus as in fig. 38, 38a (length 0,96 mm).

Size. Length 6,5 mm; width 2 mm.

Female unknown.

**ETYMOLOGY.** The name of the species is derived by the indistinct maculae at base of elytra.

***Dicronychus brancuccii* Platia & Schimmel, 1997**

MATERIAL EXAMINED. 1 specm. ♀ - **Jordan:** Qa Disi (Aqaba), 26.IV.1996, F. Fabiano (CPG).

DISTRIBUTION. Oman; Saudi Arabia; Qatar; Kuwait. New to Jordan.

***Dicronychus exstinctus* (Erichson, 1840)**

Fig. 39, 136.

MATERIAL EXAMINED. Lectotypus ♀ (des. Hayek, 1956) (MNHU) – **Mesopotamia**; 3 Paralectotypes (2 ♂ 1 ♀) – same data as Lect.; 1 ♂ - **E Syria:** Khabour/Euphrat river (35°08'N, 40°25'E), 30.IV.2002, Barries, Dostal & Preiss (det. *drurei* by Preiss). (CPG).

NOTES. Aedeagus as in fig. 39 (length 1,12 mm).

DISTRIBUTION. Iraq. New to Syria.

***Dicronychus fusivittatus* Platia & Gudenzi, 1999**

Fig. 58, 137.

MATERIAL EXAMINED. 2 specm. ♂ ♀ - **Syria**: Halabiyveh (35°41'N, 39°49'E), 160 m, 17-18.VI.1998, P. Kabatek; Tell Sheikh Hamad (35°38'N, 40°44'E), 277m, P. Kabatek (CCW; CPG).

DESCRIBED from male specimens.

FEMALE. Body larger, antennae shorter, not reaching apicis of posterior angles of pronotum by more than two articles, pronotum very convex, widest at anterior third.

Bursa copulatrix with sclerified plates as in fig. 58.

Size. Length 7,5 mm; width 2,25 mm.

DISTRIBUTION. Iraq; S Iran. New to Syria.

***Dicronychus syrianus* n. sp.**

Fig. 40, 40a, 59, 59a, 138, 138a.

MATERIAL EXAMINED. Holotype ♀ - **E Syria**: Khabour-Euphrat river (35°08'N, 40°25'E), 30.IV.2002, Barries, Dostal & Preiss, at light (TAU). 6 Paratypes (3 ♂ 3 ♀) – same data as Ht (CPG; CPT).

**DIAGNOSIS.** A species allied to *D. brancuccii* Platia & Schimmel as to the similarities in the sclerified plates of bursa copularix, it can be easily separated by a series of morphological features such as longer antennae in the male, dilated sides at anterior third of pronotum and absence of the v-shaped lines at base of prosternum.

**DESCRIPTION.** Female. Head and pronotum dark ferruginous, scutellum yellowish at center, black all around its perimeter; elytra yellowish, darkened on the disc for about the first four interstriae from behind the scutellum to the apical third; antennae and legs yellowish; covered with very dense yellow, recumbent vestiture.

Frons convex, flat only at the anterior margin, the latter feebly thickened and regularly arcuate; punctures dense, with very short intervals and approximately of the same size. Antennae not reaching apicis of posterior angles of pronotum by about one article, very slightly serrated from third article on; second article subcylindrical, more than twice as long as wide, third and following conical, approximately subequal in length and more than twice as long as wide, last as long as the previous, subellipsoidal, narrowed apically.

Pronotum a little wider than long or as long as wide, widest at anterior third; strongly convex, suddenly sloping at side and base with a trace of a mid-longitudinal impressed line immediately before the basal declivity; sides arcuate,

dilated at anterior third, slightly sinuate before the posterior angles, the latter short, truncate, not or slightly divergent, with a short carina directed inside; lateral suture moderately arcuate, obsolete at anterior third; puncturation double; very fine punctures are regularly mixed with larger punctures, the intervals between the larger punctures are on average larger than their own diameters.

Scutellum heart-shaped, about as long as wide, emarginate at center of base, pointed at apex, slightly impressed, finely punctured. Elytra 2,3-2,4x longer than pronotum and just wider than it, convex, gradually sloping towards the sides; sides ovaliform, widest at middle; striae well-marked and deeply punctured; interstiae flat, densely punctured.

Claws feebly dilated in the first half.

Bursa copulatrix sclerified as in fig. 59, 59a.

Male. Very similar to the female, with longer antennae surpassing apicis of posterior angles of pronotum by one article.

Aedeagus as in fig. 40, 40a (length 1,06 mm).

Size. ♂ length 6,2- 7,8 mm; width 1,93- 2,18 mm; ♀ length 7- 8 mm; width 2,1-2,5 mm.

**ETYMOLOGY.** The name is derived from Syria, the country of origin of the species.

***Craspedostethus iucundus* n. sp.**

Fig. 41, 60, 139.

MATERIAL EXAMINED. Holotype ♂ - **Israel:** Arava Valley, Hai-Bar nat. reserve (29°52'16"N, 35°02'57"E), m 85, 1.VIII.1997, E. Orbach. (COI don. TAU). 53 Paratypes (♂ ♀) - Shezaf N. R., Nahal Shezaf, 2.vi.2000, E. & B. Orbach; 'Arava Valley, Hai Bar natural reserve, 1.5 km S. Yotveta, 24.vii.2003, E. Orbach; Dead Sea Area, near Ne'ot haKikkar, 18.vi.2004, E. Orbach; Hai Bar natural reserve, 1.5 km S. Yotveta, 16.vii.2004, E. Orbach; Hai Bar natural reserve, 1.5 km S. Yotveta, 27.vii.2007, E. Orbach; Arava Valley, Yotveta, 17.VI.1994, E. Orbach; Hazeva Field School, 13.V.1999, I. Yarom & V. Kravchenko (*Tamarix* organic matter); 'En-Zin, 9.VII.1999, I. Yarom & V. Kravchenko (light trap BL) (COI; CPG; CPT; TAU).

**DIAGNOSIS.** The new species is immediately separated from other species of this region by the bicolourous body.

**DESCRIPTION.** Male. Head, pronotum and central area of elytral disc behind the scutellum

to the preapical area brown-ferruginous; antennae, base, sides and apical area of elytra and legs yellowish; covered with yellow-golden vestiture.

Frons feebly convex with double punctures, finer and denser ones mixed with sparser and larger ones. Antennae not reaching apicis of posterior angles of pronotum; second and third segments subcylindrical, second a little shorter than third; fourth-tenth subtriangular, longer than wide; eleventh ellipsoidal.

Pronotum as wide as long, regularly convex; sides arcuate with greatest width in the anterior third, then gradually and nearly regularly narrowed towards base; posterior angles short; lateral border prolonged for about two-thirds of the pronotal length; puncturation double, very fine and dense punctures mixed with larger and sparser irregularly spaced ones; intervals between the latter contain about three or four of the finer punctures.

Scutellum heart-shaped, flat, as long as wide, smooth or with a few indistinct punctures. Elytra 2,4x longer than pronotum and 2x longer than wide, suboval, convex on the disk; striae well-marked with coarse punctures; interstriae flat to subconvex with finer punctures.

Claws simple.

Aedeagus as in fig. 41 (length 0,72 mm).

Female. Very similar to male, with larger body and slightly shorter antennae.

Bursa copulatrix with sclerified plates as in fig. 60.

Size. Length 3,6-5,8 mm; width 1,2-2 mm.

**ETYMOLOGY.** The name refers to the fine shape of the species.

***Craspedostethus linnavuorii*** Platia & Gudenzi, 1999

MATERIAL EXAMINED. 1 specm. ♂ - **Israel:** Wadi Qelt, 23. VII. 2002, V. Kravhenko & V. Chikatunov. (TAU).

DISTRIBUTION. Iraq; Turkey. New to Israel.

### Tribe Aplastini Stibick, 1979

***Plastocerus angulosus*** (Germar, 1845)

MATERIAL EXAMINED. 1 specm. ♂ - **Israel:** Beit Guvriot, 16. VI. 1964, leg. Kugler (TAU)

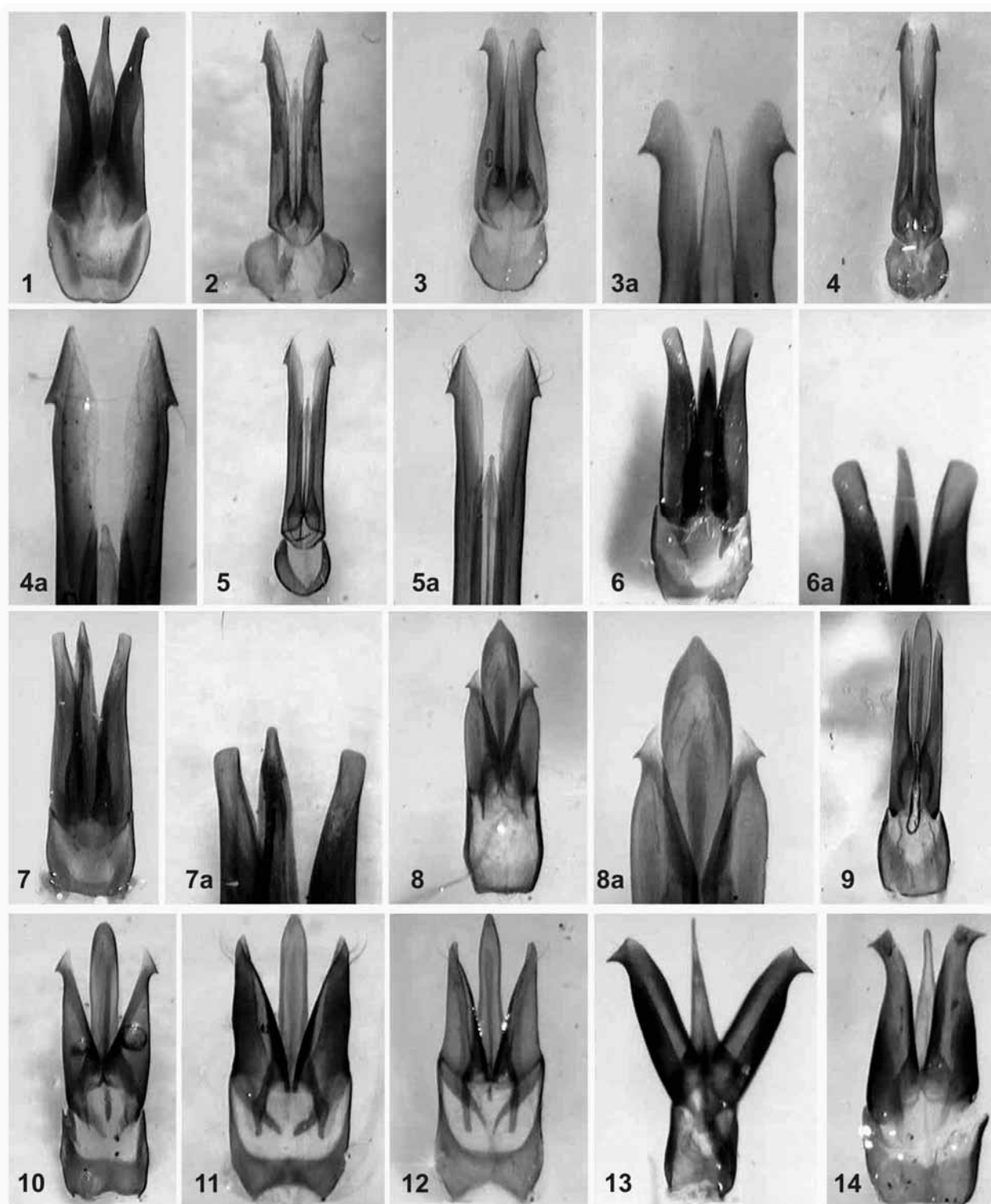
DISTRIBUTION. Turkey. New to Israel.

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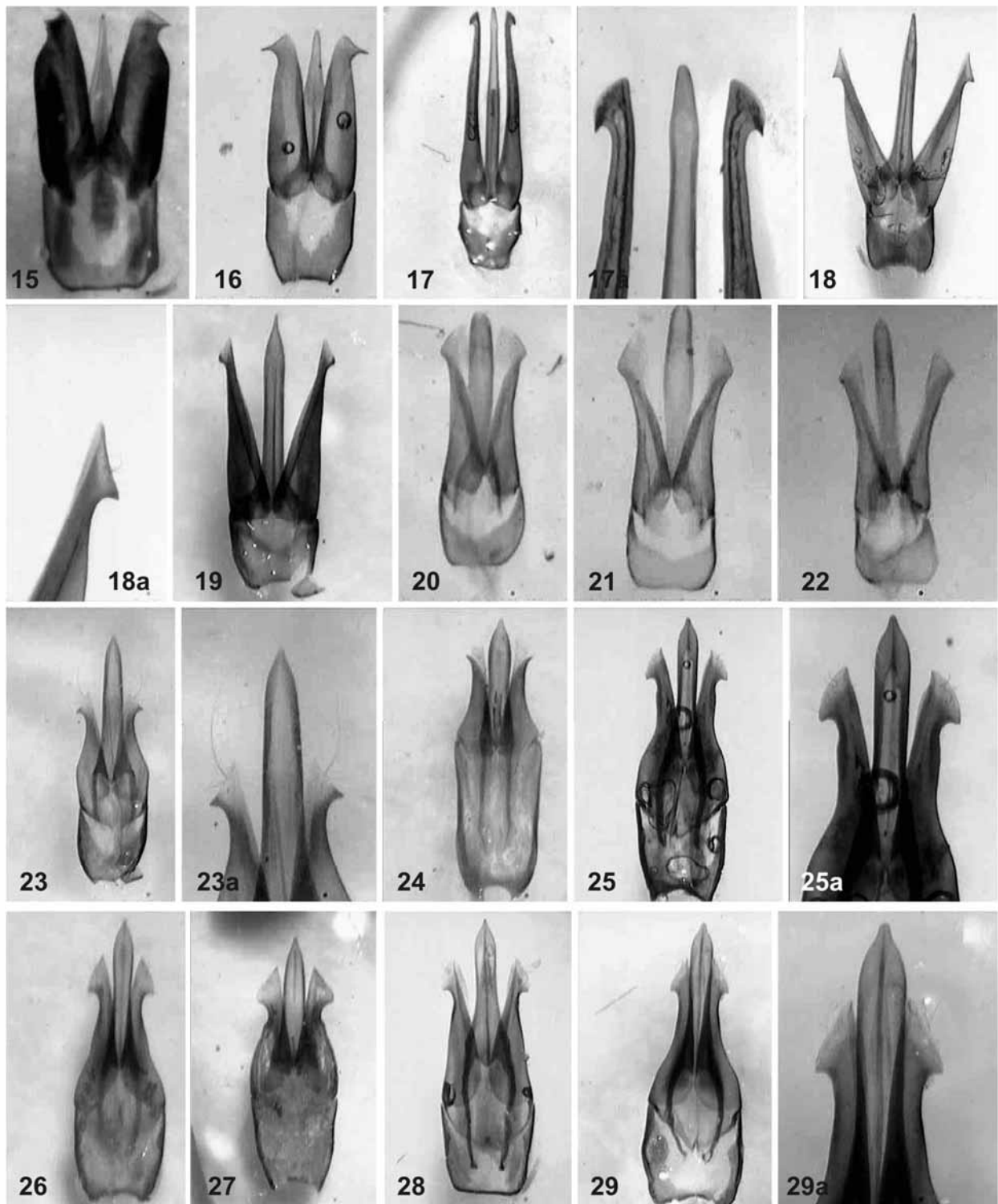
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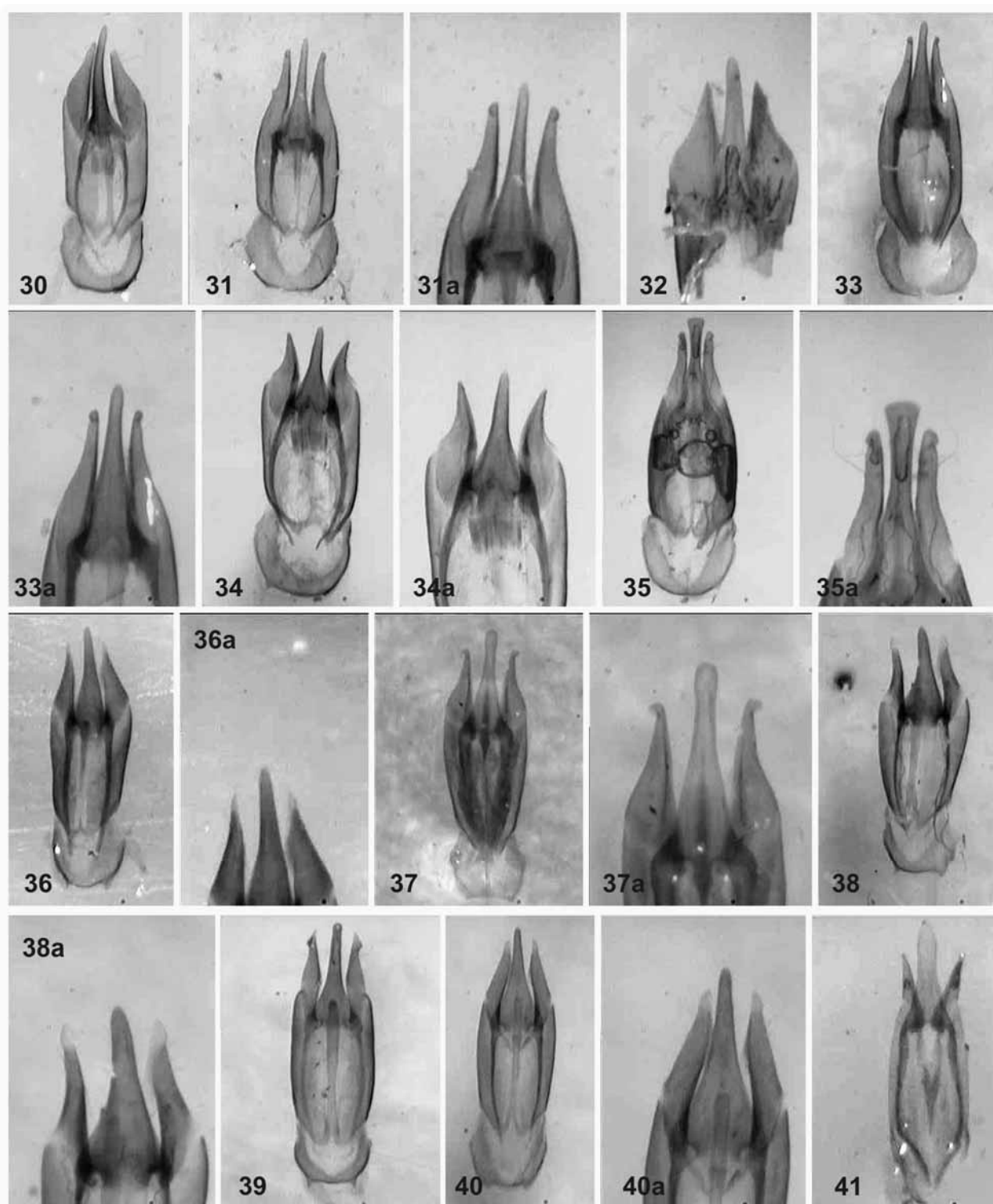


**Fig. 1-14.** Male genitalia in dorsal view. 1. *Lanelater wittmeri* Chassain; 2. *Lacon carmelensis* n. sp.; 3, 3a. *Lacon freidbergi* n. sp.; 4, 4a. *Lacon candezei* (Desbrochers); 5, 5a. *Lacon ganglbaueri* (Schwarz); 6, 6a. *Neopristilophus gougeletii* (Fainmaire); 7, 7a. *Neopristilophus insitivus* (Gemmar); 8, 8a. *Agriotes dolini* n. sp.; 9. *Agriotes gurjevae* n. sp.; 10. *Agriotes nigricans* Platia & Gudenzi; 11. *Elathous bicolor* n. sp.; 12. *Elathous murzovi* n. sp.; 13. *Athous (Orthathous) barclayi* n. sp.; 14. *Athous (Orthathous) kabalaki* n. sp.



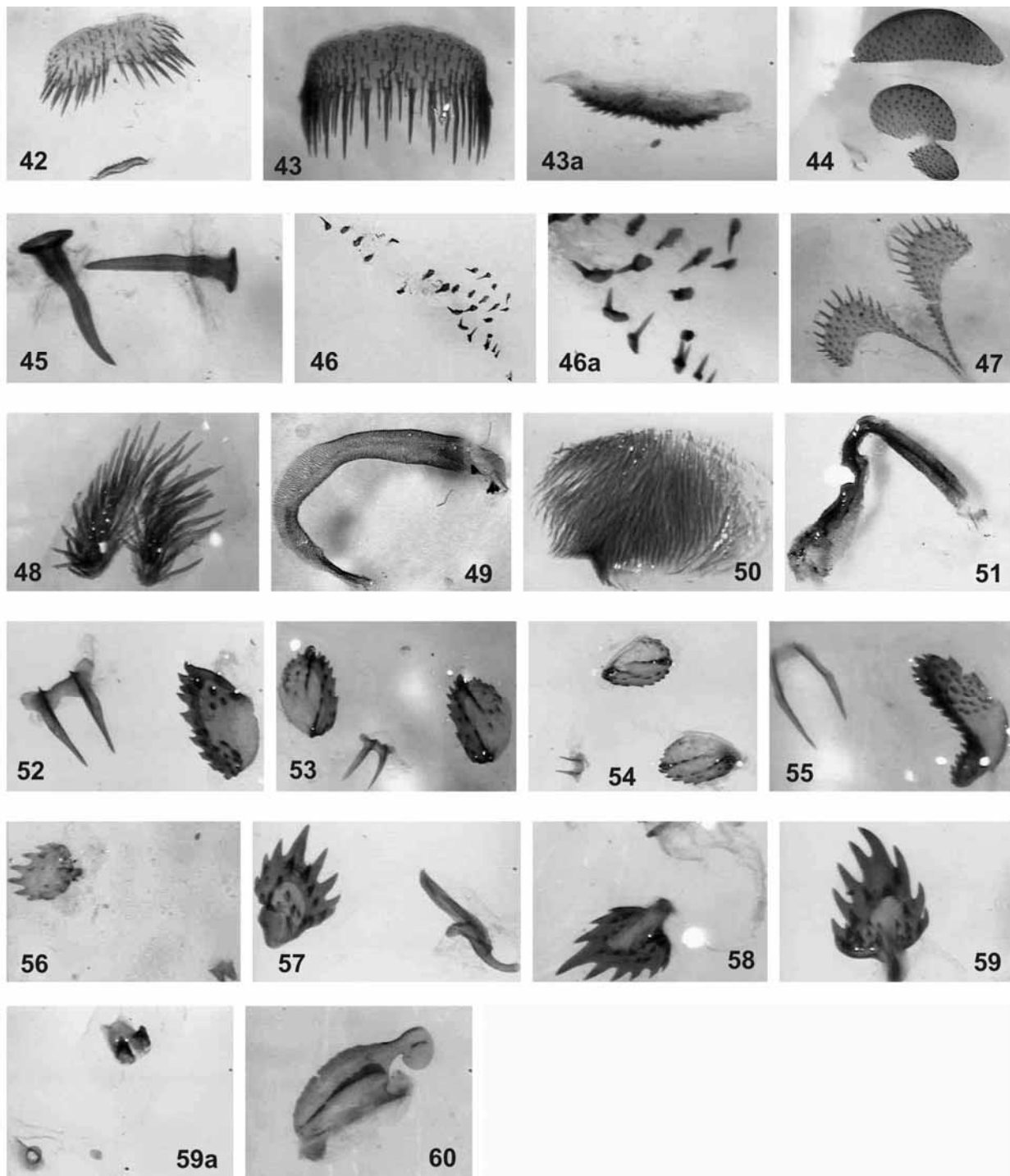
**Fig. 15-29.** Male genitalia in dorsal view. **15.** *Athous (Orthathous) libanensis* n. sp.; **16.** *Athous (Orthathous) mauroi* n. sp.; **17, 17a.** *Dima riesei* n. sp.; **18, 18 a.** *Ampedus lasoni* n. sp.; **19.** *Reitterelater elongatus* n. sp.; **20.** *Peripontius galilaeus* n. sp.; **21.** *Peripontius maritimus* n. sp.; **22.** *Tolphorea bodenheimeri* n. sp.; **23, 23a.** *Porthmidius drymogenes* n. sp.; **24.** *Isidus letournexi* Pic; **25, 25a.** *Melanotus busei* n. sp.; **26.** *Melanotus chikatunovi* n. sp.; **27.** *Melanotus kravchenko* n. sp.; **28.** *Melanotus orbachorum* n. sp.; **29, 29a.** *Melanotus pavlicei* n. sp.



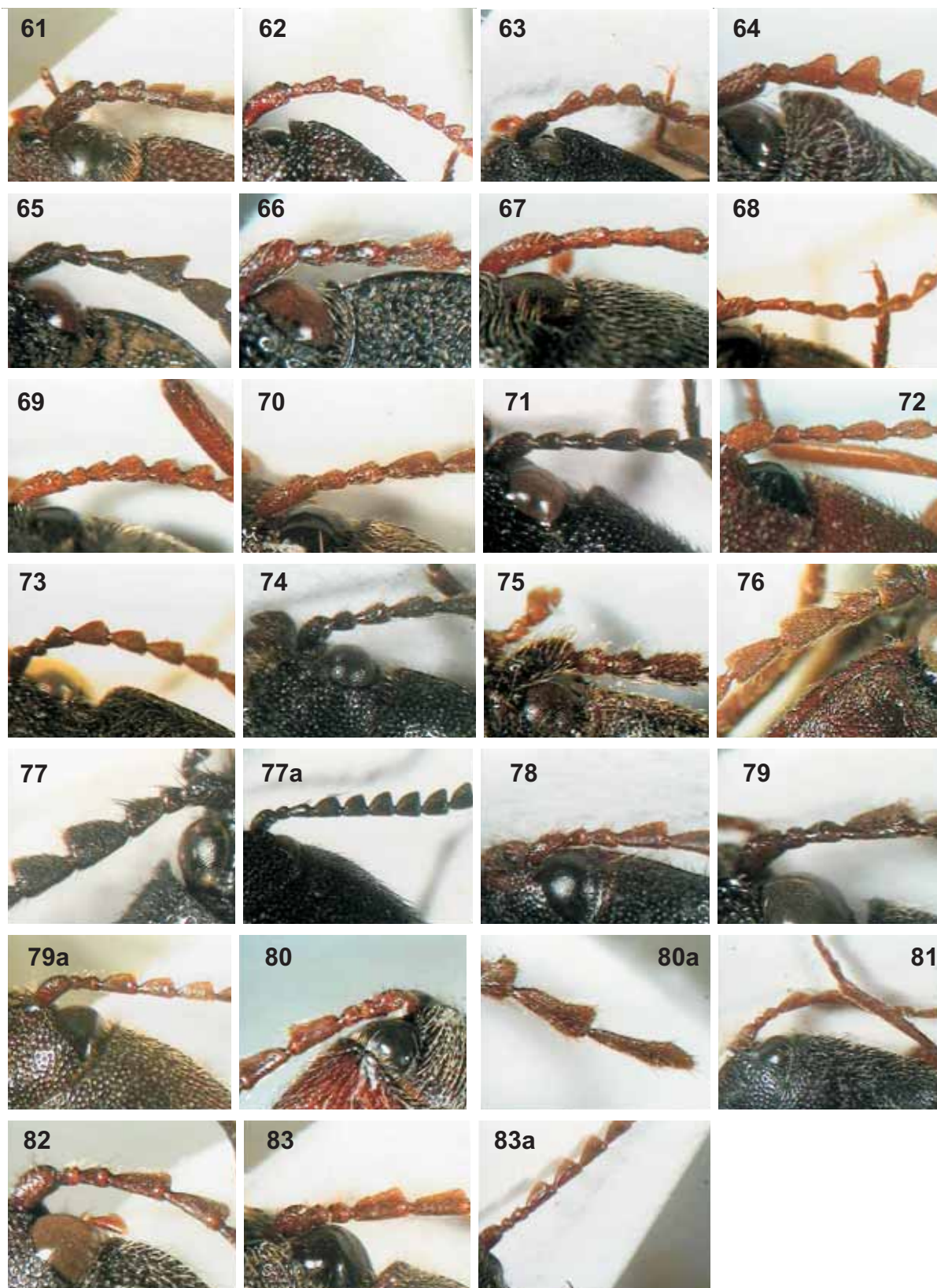


**Fig. 30-41.** Male genitalia in dorsal view. 30. *Cardiophorus bioculatus* n. sp.; 31, 31a. *Cardiophorus intercivitates* n. sp.; 32. *Cardiophorus kurdistanicus* n. sp.; 33, 33a. *Cardiophorus negevensis* n. sp.; 34, 34 a. *Cardiophorus sacratoides* n. sp.; 35, 35a. *Cardiophorus schmidi* n. sp.; 36, 36a. *Cardiophorus aegyptiacus* Buysson; 37, 37a. *Cardiophorus reitteri* Schwarz; 38, 38a. *Dicronychus laevimaculatus* n. sp.; 39. *Dicronychus exstinctus* (Erichson); 40, 40a. *Dicronychus syrianus* n. sp.; 41. *Craspedostethus jucundus* n. sp.



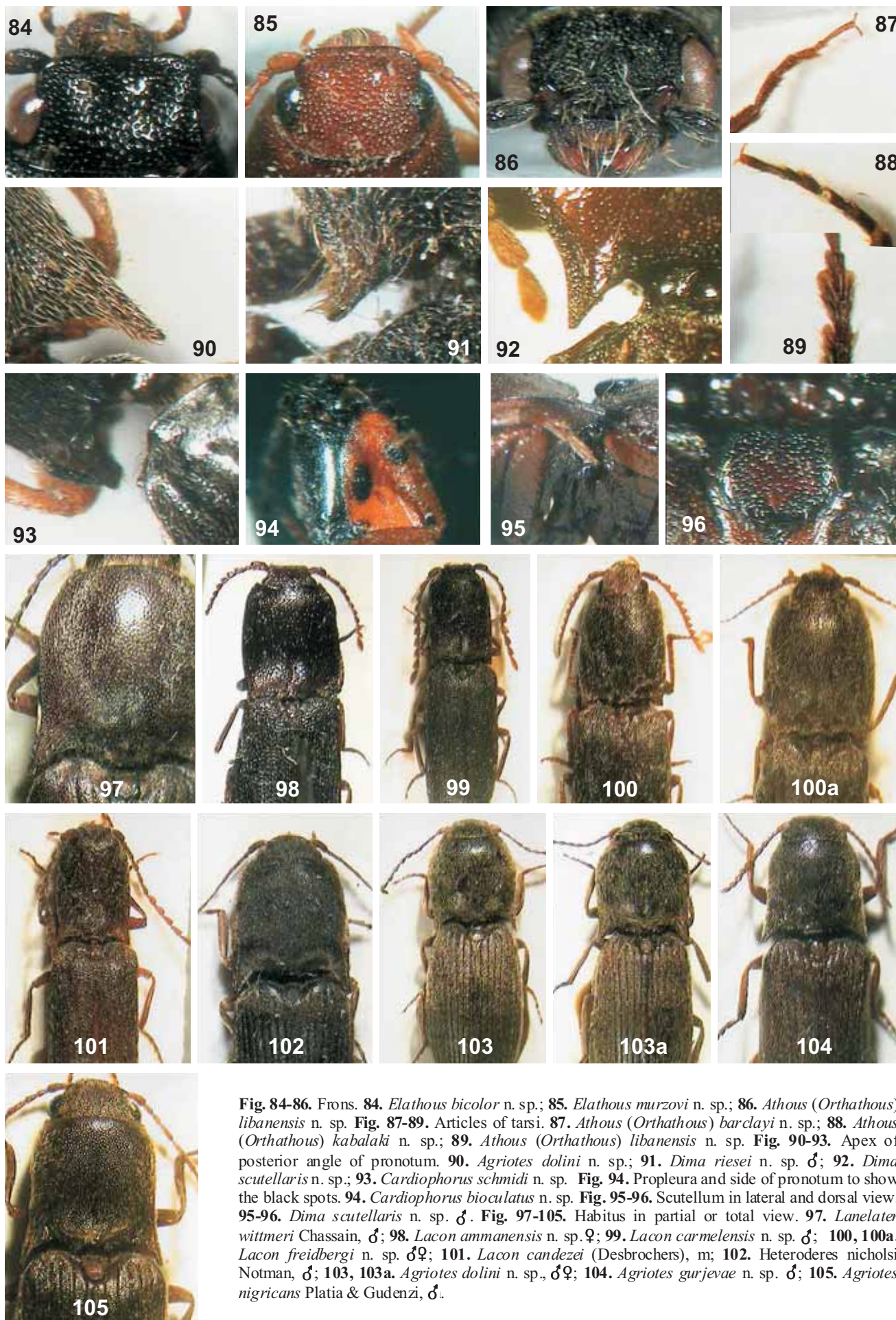


**Fig. 42-60.** Sclerites of bursa copulatrix. **42.** *Lacon ammanensis* n. sp.; **43, 43a.** *Lacon freidbergi* n. sp.; **44.** *Agriotes dolini* n. sp.; **45.** *Dima scutellaris* n. sp.; **46, 46a.** *Ampedus lasoni* n. sp.; **47.** *Tolphorea bodenheimeri* n. sp.; **48.** *Porthmidius drymogenes* n. sp.; **49.** *Melanotus busei* n. sp.; **50.** *Melanotus orbachorum* n. sp.; **51.** *Melanotus pavlicei* n. sp.; **52.** *Cardiophorus angelinii* n. sp.; **53.** *Cardiophorus intercivitates* n. sp.; **54.** *Cardiophorus negevensis* n. sp.; **55.** *Cardiophorus sacratoides* n. sp.; **56.** *Cardiophorus aegyptiacus* n. sp.; **57.** *Cardiophorus neoalienus* Platia & Gudenzi; **58.** *Dicronychus fusivittatus* Platia & Gudenzi; **59, 59a.** *Dicronychus syrianus* n. sp.; **60.** *Craspedostethus jucundus* n. sp.



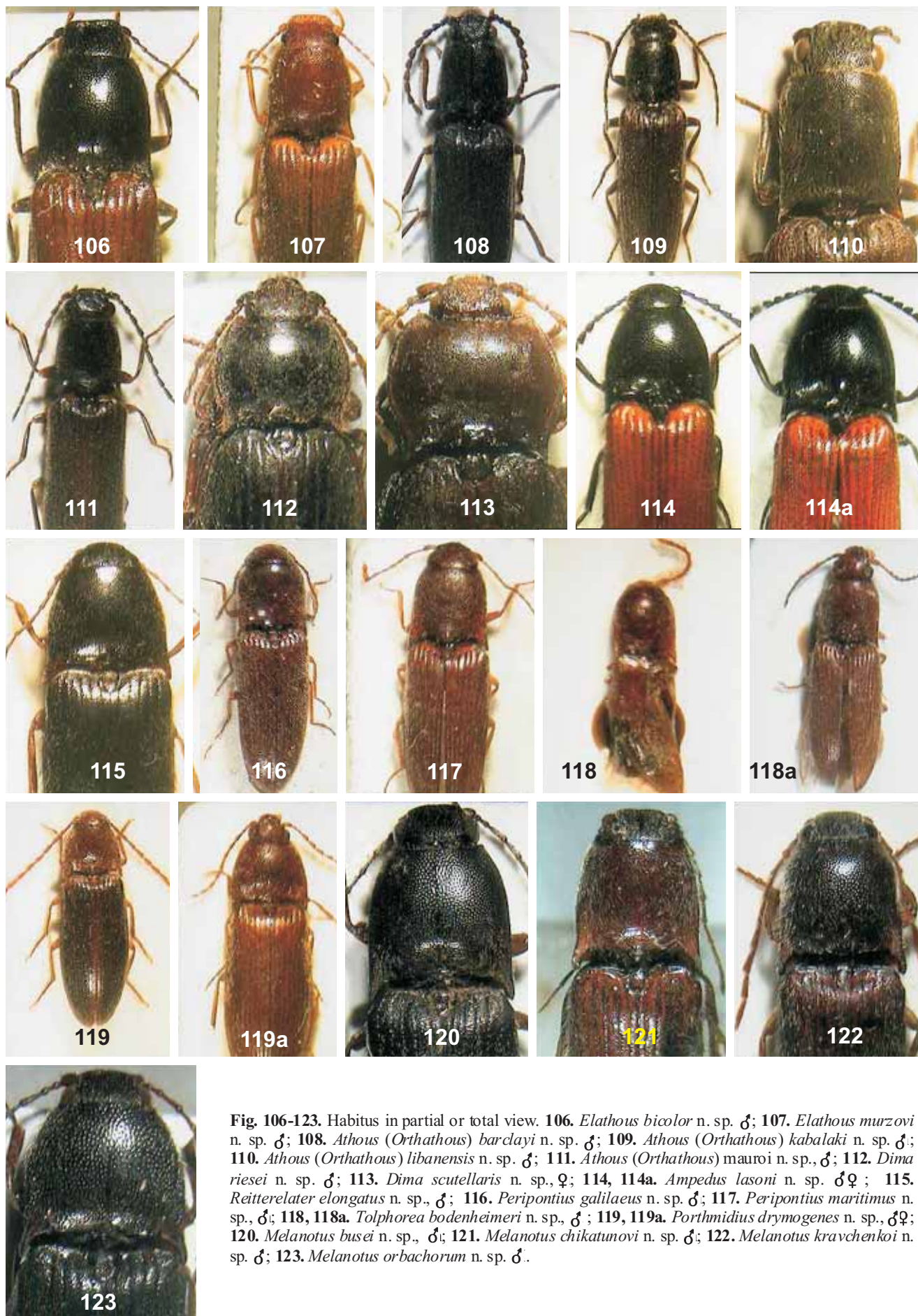
**Fig. 61-83.** First articles of antennae. **61.** *Lanelater wittmeri* Chassain, ♂; **62.** *Lacon ammanensis* n. sp. ♀; **63.** *Lacon carmelensis* n. sp. ♂; **64.** *Lacon freidbergi* n. sp. ♂; **65.** *Neopristilophus gougeletii* (Fairmaire) ♂; **66.** *Neopristilophus insitivus* (Germar) ♂; **67-68.** *Agriotes dolini* n. sp. ♂♀; **69.** *Agriotes gurjevae* n. sp. ♂; **70.** *Agriotes nigricans* Platia & Gudenzi, ♂; **71.** *Elathous bicolor* n. sp. ♂; **72.** *Elathous murzovi* n. sp. ♂; **73.** *Athous (Orthathous) barclayi* n. sp. ♂; **74.** *Athous (Orthathous) kabalaki* n. sp. ♂; **75.** *Dima riesei* n. sp. ♂; **76.** *Dima scutellaris* n. sp. ♀; **77, 77a.** *Ampedus lasoni* n. sp. ♂♀; **78.** *Reitterelater elongatus* n. sp. ♂; **79, 79a.** *Melanotus busei* n. sp. ♂♀; **80, 80a.** *Melanotus chikatunovi* n. sp. ♂; **81.** *Melanotus kravchenko* n. sp. ♂; **82.** *Melanotus orbachorum* n. sp. ♂; **83, 83a.** *Melanotus pavlicei* n. sp. ♂♀.





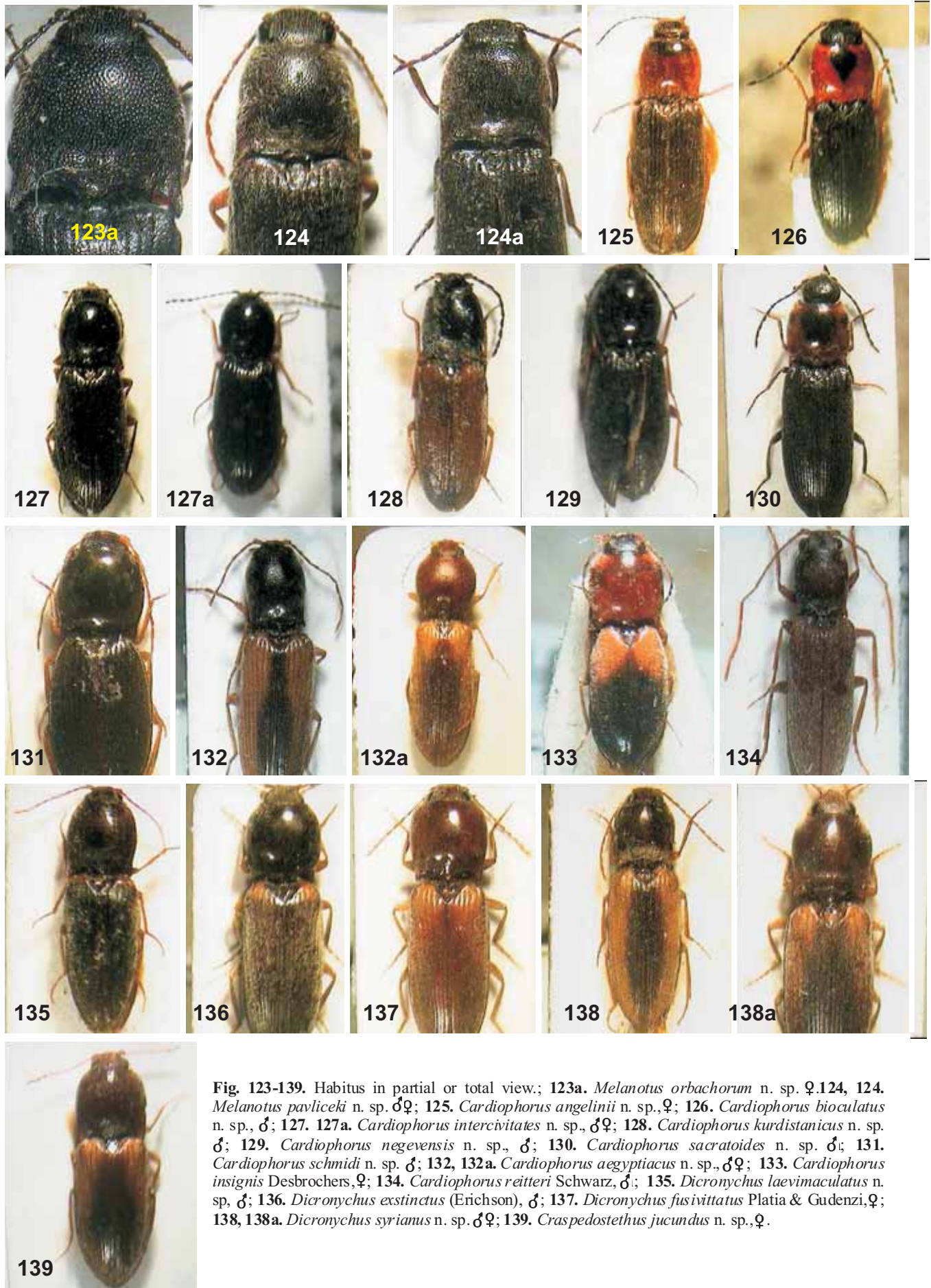
**Fig. 84-86.** Frons. **84.** *Elathous bicolor* n. sp.; **85.** *Elathous murzovi* n. sp.; **86.** *Athous* (*Orthathous*) *libanensis* n. sp. **Fig. 87-89.** Articles of tarsi. **87.** *Athous* (*Orthathous*) *barclayi* n. sp.; **88.** *Athous* (*Orthathous*) *kabalaki* n. sp.; **89.** *Athous* (*Orthathous*) *libanensis* n. sp. **Fig. 90-93.** Apex of posterior angle of pronotum. **90.** *Agriotes dolini* n. sp.; **91.** *Dima riesei* n. sp. ♂; **92.** *Dima scutellaris* n. sp.; **93.** *Cardiophorus schmidi* n. sp. **Fig. 94.** Propleura and side of pronotum to show the black spots. **94.** *Cardiophorus bioculatus* n. sp. **Fig. 95-96.** Scutellum in lateral and dorsal view. **95-96.** *Dima scutellaris* n. sp. ♂. **Fig. 97-105.** Habitus in partial or total view. **97.** *Lanelater wittmeri* Chassain, ♂; **98.** *Lacon ammanensis* n. sp. ♀; **99.** *Lacon carmelensis* n. sp. ♂; **100, 100a.** *Lacon freidbergi* n. sp. ♂♀; **101.** *Lacon candezei* (Desbrochers), m; **102.** *Heteroderes nicholsi* Notman, ♂; **103, 103a.** *Agriotes dolini* n. sp., ♂♀; **104.** *Agriotes gurjevae* n. sp. ♂; **105.** *Agriotes nigricans* Platia & Gudenzi, ♂.





**Fig. 106-123.** Habitus in partial or total view. **106.** *Elathous bicolor* n. sp. ♂; **107.** *Elathous murzovi* n. sp. ♂; **108.** *Athous (Orthathous) barclayi* n. sp. ♂; **109.** *Athous (Orthathous) kabalaki* n. sp. ♂; **110.** *Athous (Orthathous) libanensis* n. sp. ♂; **111.** *Athous (Orthathous) mauroi* n. sp., ♂; **112.** *Dima riesei* n. sp. ♂; **113.** *Dima scutellaris* n. sp., ♀; **114, 114a.** *Ampedus lasoni* n. sp. ♂♀; **115.** *Reitterelater elongatus* n. sp., ♂; **116.** *Peripontius galilaeus* n. sp. ♂; **117.** *Peripontius maritimus* n. sp., ♂; **118, 118a.** *Tolphorea bodenheimeri* n. sp., ♂; **119, 119a.** *Porthmidius drymogenes* n. sp., ♂♀; **120.** *Melanotus busei* n. sp., ♂; **121.** *Melanotus chikatunovi* n. sp. ♂; **122.** *Melanotus kravchenko* n. sp. ♂; **123.** *Melanotus orbachorum* n. sp. ♂.





**Fig. 123-139.** Habitus in partial or total view.; **123a.** *Melanotus orbachorum* n. sp. ♀; **124, 124a.** *Melanotus pavlicei* n. sp. ♂♀; **125.** *Cardiophorus angelinii* n. sp., ♀; **126.** *Cardiophorus bioculatus* n. sp., ♂; **127, 127a.** *Cardiophorus intercivitates* n. sp., ♂♀; **128.** *Cardiophorus kurdistanicus* n. sp. ♂; **129.** *Cardiophorus negevensis* n. sp., ♂; **130.** *Cardiophorus sacratoides* n. sp. ♂; **131.** *Cardiophorus schmidi* n. sp. ♂; **132, 132a.** *Cardiophorus aegyptiacus* n. sp., ♂♀; **133.** *Cardiophorus insignis* Desbrochers, ♀; **134.** *Cardiophorus reitteri* Schwarz, ♂; **135.** *Dicronychus laevimaculatus* n. sp. ♂; **136.** *Dicronychus exstinctus* (Erichson), ♂; **137.** *Dicronychus fusivittatus* Platia & Gudenzi, ♀; **138, 138a.** *Dicronychus syrianus* n. sp. ♂♀; **139.** *Craspedostethus jucundus* n. sp., ♀.