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**DESCRIPTIONS OF NEW SPECIES OF CLICK-BEETLES
FROM THE PALEARCTIC REGION AND TAIWAN
WITH CHOROLOGICAL AND SYNONYMICAL NOTES
(Insecta Coleoptera Elateridae)**

Riassunto

[Descrizione di nuove specie di elateridi della regione paleartica e di Taiwan con note geonemiche e sinonimiche]

Nel lavoro vengono descritte 19 nuove specie di elateridi appartenenti ai seguenti generi e provenienti dai seguenti paesi: *Agrypnus* (Oman), *Adelocera* (Oman, Taiwan), *Aeoloides* (Marocco), *Selatosomus* (N Corea), *Hemicrepidius* (Azerbadjan), *Athous* (Grecia, Romania, Russia), *Agriotes* (Marocco), *Podeonius* (Iran, Taiwan), *Ampedus* (Grecia, Taiwan), *Melanotus* (Kirghizstan), *Cardiophorus* (Iran, Kuwait, Tadjikistan), *Neocardiophorus* (Iran), *Paracardiophorus* (Russia). Per due specie appartenenti ai generi *Ampedus* e *Cardiophorus* e provenienti rispettivamente dal N Africa e dalla Spagna vengono proposte delle sinonimie. Per alcune specie appartenenti ai generi *Adelocera*, *Lanelater*, *Drasterius*, *Pseudocrepidophorus*, *Melanotus* e *Cardiophorus* vengono forniti nuovi dati di distribuzione. I maschi di *Penia babai* Kishii (Taiwan) and *Sichuanelater gibbosus* Platia & Gudenzi (Cina), sconosciuti al momento della loro descrizione, vengono brevemente descritti e i loro organi genitali raffigurati. *Cardiophorus pictus* Faldermann, 1835, considerato in genere dagli Autori come sinonimo di *C. syriacus* (Linnaeus, 1758), viene ritenuto una specie valida.

Abstract

New species, new synonymies and new chorological records on click beetles from the Palearctic Region and Taiwan are given. The 19 new species belong to the following genera: *Agrypnus* (Oman), *Adelocera* (Oman, Taiwan), *Aeoloides* (Morocco), *Selatosomus* (N Korea), *Hemicrepidius* (Azerbadjan), *Athous* (Greece, Romania, Russia), *Agriotes* (Morocco), *Podeonius* (Iran, Taiwan), *Ampedus* (Greece, Taiwan), *Melanotus* (Kirghizstan), *Cardiophorus* (Iran, Kuwait, Tadjikistan), *Neocardiophorus* (Iran), *Paracardiophorus* (Russia). Two synonymies for two species of the genera *Ampedus* (Morocco, Algeria, Tunisia) and *Cardiophorus* (Spain) are proposed. New chorological data for species of the genera *Adelocera*, *Lanelater*, *Drasterius*, *Pseudocrepidophorus*, *Melanotus* and *Cardiophorus* are given. The males of *Penia babai* Kishii (Taiwan) and *Sichuanelater gibbosus* Platia & Gudenzi (China), unknown at the time of their descriptions, are figured. *Cardiophorus pictus* Faldermann, 1835, generally considered a synonym of *C. syriacus* (Linnaeus, 1758), is considered a valid species.

Key words. Elateridae, new species, new synonymies, new distributional records, Palearctic Region, Taiwan.

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 material studied are abbreviated as follows:

CAF	Angelini coll., Francavilla Fontana (Italy)
CCW	Cate coll., Wien (Austria)
CDZ	Dusanek coll., Zábřeh na Moravě, Kralove (Czech Rep.)
CFECQ	Collection of Friends of the Environment Centre of Qatar (S.A. Al Hajari) (Qatar)
CM	Carnegie Museum of Natural History, Pittsburgh (R. Davidson) (USA)
CMHK	Mertlik coll., Hradec Kralove (Czech Rep.)
CNIARM	Collection of the National Institute of Agronomic Research, Montpellier (C. Cocquempot) (France)
COA	Università degli Studi dell'Aquila, Dipartimento di Scienze Ambientali (G. Osella) (Italy)
CPG	Platia coll., Gatteo (Italy)
CRG	Riese coll., Genoa (Italy)
IRSNB	Institut royal des Sciences naturelles de Belgique, Bruxelles (J. Constant) (Belgium)
MCSNG	Museo Civico di Storia Naturale, Genoa (R. Poggi) (Italy)
MNCN	Museo Nacional de Ciencias Naturales, Madrid (I. Izquierdo) (Spain)

Introduction

The examination of click-beetles obtained for study from the Institut royal des Sciences naturelles de Belgique (Bruxelles), the Carnegie Museum of Natural History (Pittsburg) (through the courtesy of my friend Fernando Angelini), the Museo Nacional de Ciencias Naturales (Madrid), the collection of the National Institute of Agronomic Research (Montpellier) and private collections of many colleagues, has given me the opportunity to describe 19 new species belonging to various genera of the Palearctic Region and Taiwan, to better define the chorology of several species, to establish new synonymies, to describe the unknown males of two species and to recognize the validity of *Cardiophorus pictus* Falder-

mann, a nice species generally considered a synonym of *C. syriacus* (Linnaeus). Surely, the most interesting result of this study is the presence in Iran of a new species of *Neocardiophorus* Gurjeva, 1966, a genus distinguished from *Cardiophorus* Eschscholtz for the longer antennae provided with twelve articles and until now known from two species in Turkmenistan and Uzbekistan.

The genera and species are listed according to the tribal subdivision of SANCHEZ-RUIZ (1996).

Tribe **Agrypnini** (Candèze, 1857)

Agrypnus dhofarensis n. sp. (Figs 1, 49)

Material examined. Holotype - **Oman:** NE from Salalah, Dhofar Mts., Khubart (Tiger), 8-24.VII.2007, Krueger & Saldaitis (CRG don. MCSNG). 1 Paratype ♂ - same data as Ht (CPG).

Diagnosis. This species is the second of the genus known from Oman and can be easily distinguished from *A. omanensis* Platia & Schimmel, 1997, by the sides of pronotum not crenulate.

Description. Male. Moderately shiny; entirely dark-brown with indistinct ferruginous shadings; antennae and legs ferruginous; covered with short, recumbent, yellowish, setae.

Head with eyes a little narrower than anterior margin of pronotum; frons moderately impressed from middle to anterior margin, the latter almost straight and merged with the clypeus; punctures coarse, deep, simple, with very short intervals or contiguous.

Antennae not reaching apices of posterior angles of pronotum by about one article, serrated from fourth article; second article cylindrical, longer and larger in diameter than third; second and third, taken together, a little longer than fourth; fourth-tenth triangular, a little longer than wide; last longer than penultimate, regularly ellipsoidal.

Pronotum 1.1x wider than long, widest at posterior angles; convex on the disc, gradually sloping at sides, abruptly sloping to base with a shallow mid-longitudinal depression; sides subparallel, abruptly tapering to apex, gently sinuate at posterior angles; the latter short, moderately pointed, diverging, directed upwards, not carinate; punctures rather uniformly distributed, on disc deep, simple with very short intervals, towards sides gradually denser, with very short intervals at lateral extremities.

Scutellum subpentagonal, flat or feebly convex, punctured. Elytra as wide as base of pronotum, 2.6x longer than it, moderately convex; sides subparallel from base to posterior third, then gradually tapering to apices; striae well marked and distinctly punctured; interstriae flat, with finer and dense punctures.

Prosternal sutures deeply grooved for about two-thirds of its length; propleura with shallow transversal depression for the anterior tarsi; metasternum without depression to receive the metatarsi.

Aedeagus as in fig. 1 (length 1.5 mm).

Female unknown.

Size. Length 10.3 (Ht) - 10,9 mm; width 3.25 (Ht) - 3.43 mm.

Etymology. The species is named after its place of origin, the Dhofar Mts.

Adelocera omanensis n. sp. (Figs 2, 50)

Material examined. Holotype ♂ - **Oman:** W from Salalah, Al Mughsayl river valley, 8-24.VII.2007, Krueger & Saldaitis (CRG don. MCSNG).

Diagnosis. The first species of *Adelocera* recorded from Oman, it resembles *A. pygmaea* (Baudi, 1871), but can be easily distinguished by the bicoloured body, shape of pronotum, elytra non-striate and male genitalia.

Description. Male. Bicoloured; head, pronotum, first two articles of antennae, prosternum and propleura, humeral area of elytra, center of scutellum and legs ferruginous; remaining parts of elytra, thorax and abdomen black; covered with dense, elongate setae, on head and pronotum black and fulvous, on elytra yellowish.

Head with eyes as wide as anterior margin of pronotum, frons moderately impressed from vertex to anterior margin, the latter straight and merged with clypeus; punctures coarse, umbilicate, contiguous. Antennae short, exceeding the middle of pronotum by a short distance, strongly serrated from fourth article; second and third very small, globular, the second a little larger; fourth triangular, a little longer than wide; fifth-tenth notably wider than long; last regularly ellipsoidal.

Pronotum 1.13x wider than long, widest at posterior angles; very convex, abruptly sloping at sides and base; sides from middle to apex first gradually, then abruptly tapering before the apex, subparallel to posterior angles; the latter short, briefly pointed, not carinate; puncturation rather uniformly distributed, punctures coarse, on disc deep, slightly umbilicate, with very short intervals, towards the sides only a little denser.

Scutellum shield-like, flat, densely punctured. Elytra as wide as base of pronotum, 2.35x longer than it; convex; sides from base to apicis gradually and regularly tapering; striae indistinct, all the surface is densely punctured with very short, moderately shagreened intervals.

Prosternal sutures deeply furrowed for about two-thirds of their length; tarsal grooves of propleura short and very shallow.

Aedeagus as in fig. 2 (length 0.65 mm).

Female unknown.

Size. Length 4.9 mm; width 1.62 mm.

Etymology. The species is named after its country of origin, Oman.

Adelocera youngi n. sp. (Figs 3, 30, 44, 51)

Material examined. Holotype ♂ - **Taiwan:** Kaoshiung, Shanping, 640 m, 11-20.V.1988, J. Rawlins, C. Young, R. Davidson (CM). 4 Paratypes (2♂ 2♀) – same data as Ht (CM; CPG).

Diagnosis. Among Taiwanese species it can be distinguished by larger size, third article of antennae conical and aedeagus.

Description. Male. Moderately shiny; entirely dark-brown with rufous shadings at anterior margin and posterior angles of pronotum; antennae with first article brown, the remaining articles much lighter, yellow; covered with moderate, elongate, recumbent, yellowish setae.

Head with eyes a little narrower than anterior margin of pronotum; frons impressed at vertex and deeply indented before anterior margin; the latter almost straight and merged with clypeus; punctures very coarse, deep, contiguous and confluent. Antennae (fig. 30) not reaching apicis of posterior angles of pronotum by about two articles; second article cylindrical, as long as wide; third conical, as long as wide; fourth subtrapezoidal, as long as wide; fifth-tenth triangular, as long as wide; last longer than penultimate, ellipsoidal.

Pronotum 1.3x wider than long, widest at posterior angles; very convex on disc with a rather flat area at base of posterior angles (fig. 44); sides tapering strongly from anterior third to apex with anterior angles prolonged; posteriad sinuate at mid-length, then subparallel nearly to apicis of posterior angles, the latter acuminate, diverging; a small, hardly apparent transversal carina is present at the mid-length between the central inlet and the posterior angles; puncturation coarse, punctures on the disc deep and simple, with very short shiny intervals, gradually denser, contiguous and confluent at lateral extremities.

Scutellum shield-like, edged at base, flat, coarsely punctured. Elytra as wide as base of pronotum, 2.6x longer than it, convex; sides oval, widest at middle; striae deeply punctured, interstriae flat, with only barely finer punctures, which makes the surface appear completely punctured.

Prosternal sutures deeply furrowed for about two-thirds of their length; prosternum raised, compressed laterally and bicarinate longitudinally; propleural and metasternal grooves present, shallow.

Aedeagus as in fig. 3 (length 0.93 mm).

Female. Very similar to male with shorter antennae.

Size. Length 6.7-7.5 mm; width 2.37-2.68 mm.

Etymology. The species is dedicated to one of its collectors, C. Young.

Adelocera nitidus (Candèze, 1857) (Figs 45, 52)

Material examined. 2 ♀ - **Afghanistan:** Ghasni (IRSNB).

Distribution. India.

New to Afghanistan.

Lanelater notodonta (Latreille, 1827)

Material examined. 1 ♂ - **Qatar:** Doha (25°17.780'N, 51°29.781'E), 24.V.2005, K. Mardini, Friends of the Environment Center (F.E.C.) (CFECQ).

Distribution. Intertropical Africa; Yemen; Oman; Saudi Arabia.

Fifth species of Elateridae known from Qatar, not recorded by PLATIA (2004).

Tribe **Oophorini** Gistel, 1856

Aeoloides houschkai n. sp. (Figs. 31, 46, 53)

Material examined. Holotype ♀ - **SE Morocco**: Zagora 30 km SE, Zaouia el-Barrahnia, Dräa riv., 3.VI.2007, F. Houška (CPG).

Diagnosis. A species similar to *A. griseescens* (Germar, 1844) for size and general shape, it can be easily distinguished by the ferruginous colour, puncturation of pronotum and their clearly divergent posterior angles.

Description. Female. Moderately shiny; entirely ferruginous with indistinct blackish shadings, particularly on the sides of the body; covered with dense, very short, recumbent, yellow-fulvous vestiture.

Frons convex, gently depressed at anterior margin, the latter feebly arcuate, directed downwards and just protruding above clypeus; punctures of the same size, slightly umbilicate, with very short, shagreened intervals.

Antennae (fig. 31) short, not reaching apices of posterior angles of pronotum by about two articles; second article subcylindrical; third subconical, a little longer than second; taken together just shorter than fourth; fourth-tenth triangular, with a mid-longitudinal shallow carina; fourth longer than the following, about twice as long as wide; last a little longer than penultimate, ellipsoidal, constricted symmetrically at apex.

Pronotum as long as wide, widest at posterior angles (fig. 46), very convex, with a shallow mid-longitudinal depression before and at the basal slope; sides regularly arcuate, lengthily sinuate before the posterior angles; the latter long, acuminate, diverging, bicarinate; carinae subparallel, the outer carina is longer and prominently directed inward, the inner carina is very short; puncturation uniformly distributed, the punctures of similar size, simple or slightly umbilicate, with very short, moderately shagreened intervals.

Scutellum shield-like, convex, finely punctured. Elytra as wide as base of pronotum, 2.4x longer than it; sides suboval, widest at middle, then gradually tapering to apices; striae well-marked, finely punctured; interstriae flat, finely punctured with rough surface.

Articles of tarsi simple, regularly decreasing in length.

Male unknown.

Size. Length 10.9 mm; width 3.18 mm.

Etymology. The species is dedicated to its collector, F. Houška, who kindly sent me the beetle.

Drasterius sulcatulus Candèze, 1859

Material examined. 1 ♀ - **Oman**: Suhar, 20.III.2008, S. Ziani, at light (CPG).

Distribution. India, Nepal, Pakistan, Sri Lanka, UAE (PLATIA, 2007).

New to Oman.

Tribe **Prosternini** Gistel, 1856

Selatosomus grandis n. sp. (Figs 4, 32, 47, 54)

Material examined. Holotype ♂ - **North Korea:** Mt Yat-san, 23-27.V.1994, Lee J. Kha et alii (CPG).

Diagnosis. Immediately distinguished from other species of *Selatosomus* known from Korea by larger size, unicoloured body and male genitalia.

Description. Male. Moderately shiny; entirely blackish with bronzed reflections on entire body; antennae and legs blackish; covered with moderate, short, yellowish vestiture.

Frons flat with shallow depressions at sides, anterior margin obsolete, merged with clypeus; punctures coarse, deep, slightly umbilicate, with very short shagreened intervals.

Antennae (fig. 32) not reaching apices of posterior angles of pronotum by about 1.5 articles; second and third article subconical, of the same width; third twice as long as second; taken together 1.4x longer than fourth; fourth conical, more than twice as long as wide; fifth-tenth triangular, less than twice as long as wide; last as long as penultimate, ellipsoidal.

Pronotum 1.2x wider than long, widest at posterior angles (fig. 47), moderately convex, gradually sloping at sides, more abruptly at base; a short, very narrow, smooth mid-longitudinal line is visible on the center of the disc; sides regularly arcuate, strongly sinuate before the posterior angles; the latter long, truncate at apex, strongly diverging, unicarinate; carina short, subparallel to the lateral margins, completely visible in dorsal view; puncturation variably distributed; punctures on disc deep, simple, with intervals on average equal to their own diameters, gradually denser towards the sides, where they become umbilicate with very short, slightly shagreened intervals.

Scutellum quadrangular, gently convex, punctured. Elytra at base as wide as pronotum, 2.8x longer than it, convex; sides widest behind the middle, subparallel in the first half, then gradually broadened, rather abruptly tapering at posterior third; striae well-marked, inpunctate at base, then moderately punctured; interstriae convex at base, then flat with fine and dense punctures.

Prosternal process horizontal behind the procoxal cavities, convex before the apex.

Aedeagus as in fig. 4 (length 2.34 mm).

Female unknown.

Size. Length 18.8 mm; width 6.55 mm.

Etymology. The name is derived from the large size of the species.

Tribe **Dendrometrini** Gistel, 1856

Penia babai Kishii, 1994 (Fig. 5)

Penia babai Kishii, 1994: 211; Suzuki, 1999: 121.

Material examined. 2 ♂ - **Taiwan:** Kaoshiung, Shanping, 640 m, 23-31.III.1988, J. Rawlins, C. Young (CM; CPG).

Description based on female specimens.

The male can be distinguished by the longer antennae exceeding apicis of posterior angles of pronotum by about five articles.
Aedeagus as in fig. 5 (length 1.25 mm).

Hemicrepidius agajevi n. sp. (Figs 6, 39, 48, 55)

Athous jugicola ab. *lenkoranus* Agajev, 1988: 53 (*Athous*). (**nomen nudum**).

Material examined. Holotype ♂ - **Azerbaijan**: Jardymily, 29.VI.1977 (CPG). 1 Paratype ♀ - Talysh, Astara, Isty-Su, 23-27.V.2001, Hirkan, Wald. Dolin, Andreva (CCW).

Diagnosis. A species allied to *H. tartarus* (Candèze, 1860) by general shape and colour, it can be distinguished by the shorter antennae with intermediate articles less slender and male genitalia.

Description. Male. Moderately shiny; head, pronotum, scutellum black; elytra dark brown with blackish shadings; antennae and legs brown-ferruginous; covered with short, partially erect, yellow-fulvous vestiture.

Frons triangularly and moderately impressed from vertex to near the anterior margin, the latter thickened, regularly curved, directed downwards, just protruding above the clypeus; punctures coarse, umbilicate, contiguous or with very short intervals.

Antennae (fig. 39) just exceeding the apicis of posterior angles of pronotum, strongly serrated from third article; second subcylindrical, a little longer than wide; fourth-tenth triangular; fourth-seventh less than twice as long as wide; eighth-tenth slenderer; last longer than penultimate, with subparallel sides, constricted at apex.

Pronotum as long as wide, widest at posterior angles (fig. 48); convex, with shallow and narrow mid-longitudinal impression at basal slope; sides arcuate, tapering from middle to apex, sinuate before the posterior angles; the latter weakly diverging, then converging at apical extremity, with a very short and feeble carina subparallel to lateral margin; puncturation rather uniformly distributed, punctures on the disc deep, simple with very short intervals, gradually denser towards the sides, but generally simple or slightly umbilicate.

Scutellum shield-like, convex, with mid-longitudinal carina, punctured. Elytra as wide as base of pronotum, 2.7x longer than it; sides subparallel from base to middle, then gradually tapering to apicis; striae well-marked and punctured; interstriae subconvex, densely punctured.

Prosternal process not incurved immediately behind the procoxal cavities, but moderately incurved after the middle; apex pointed, not emarginate.

Aedeagus as in fig. 6 (length 1.5 mm).

Female. Larger body, totally black, shorter antennae not reaching apicis of posterior angles of pronotum by more than one article.

Size. Length 12.8 (Ht) - 14 (Pt ♀) mm; width 3.68 (Ht) - 4.06 (Pt ♀) mm.

Etymology. The species is dedicated to Dr B. I. Agajev, author of a book on the Elateridae of Azerbaijan.

Athous (Haplathous) zebeianus n. sp. (Figs 7, 36, 56)

Material examined. Holotype ♂ - **Greece:** Florina, str. Pissoderi-Florina, 1200-1350 m, 11.VI.2007, F. Angelini (CPG). 4 Paratypes (2♂2♀) - same data as Ht; Epiro, Metsovon, 1200 m, 14.VI.2003, G. Osella; Ioanina, Metsovon, Lago Aoo, 1300 m, 25.V.2004, G. Osella; Mti Pindos, Passo Katara, 1400 m, 11.V.2002, G. Osella (COA; CPG).

Diagnosis. A species similar to *A. zebei* Bach, 1854, but it can be distinguished by longer antennae, wider elytra as compared to pronotum and male genitalia.

Description. Male. Moderately shiny; entirely blackish with first two articles of antennae and legs ferruginous; covered with dense, recumbent yellowish vestiture.

Head with eyes just narrower than anterior margin of pronotum; frons triangularly impressed from middle to anterior margin, the latter directed downwards, moderately thickened, protruding a little above clypeus at middle; punctures deep, simple, with very short intervals.

Antennae (fig. 36) surpassing apicis of posterior angles of pronotum by about three articles; second and third subconical, with the third a little longer than second; second and third, taken together, longer than fourth; fourth-tenth pedunculate, triangular, about twice as long as wide; last longer than penultimate, constricted symmetrically before the apex.

Pronotum 1.18x longer than wide, widest at posterior angles; convex, with a shallow, short, mid-longitudinal depression at basal slope; sides tapering moderately and gradually from behind the middle to apex, just sinuate before the posterior angles; the latter short, diverging, not carinate; punctures moderate, on the disc deep, simple, with very short intervals, gradually becoming denser to contiguous towards the sides, some slightly umbilicate at lateral extremities.

Scutellum a little narrower than the interelytral space, basal part convex, distal part flat, punctured. Elytra clearly wider than pronotum, 3.1x longer than it; sides subparallel for about two-thirds of its length, then very gradually tapering to the apicis; striae regularly and feebly punctured; interstriae flat with dense punctures and roughly surface.

Articles of tarsi simple, decreasing regularly in length.

Aedeagus as in fig. 7 (length 1.25 mm).

Female. As in all species of this group very different from the male: body colour lighter, dark-brown with ferruginous shadings; shorter antennae not reaching apicis of posterior angles of pronotum; pronotum more convex and arcuate at sides; elytra as wide as pronotum.

Size. Length 11.8-12 mm (♂) - 12.2-14.3 mm (♀); width 3-3.1 (♂♂) - 3.2-3.8 mm (♀).

Etyymology. The species name refers to the resemblance of the species to *A. zebei* Bach.

Athous (Orthathous) petronelae n. sp. (Figs 9, 38, 57)

Material examined. Holotype ♂ - **Romania:** Bacău, Moinești, VI.2008, P. Lovin, at light (CPG).

Diagnosis. A species allied to *A. (Orthathous) kasovskyi* Platia & Gudenzi, 2007, described from W Hungary, it can be distinguished by the larger body, slenderer pronotum and elytra, frons impressed only at anterior margin, coarser puncturation of head and pronotum and the male genitalia.

Description. Male. Moderately shiny; body entirely blackish with tarsi and articulations of legs ferruginous; covered with dense, yellowish, vestiture, which is partially erect at sides of elytra.

Head with eyes a little narrower than anterior margin of pronotum; frons flat between the eyes, impressed near the anterior margin, the latter moderately thickened, regularly arcuate, just protruding above the clypeus; punctures coarse, superficial, clearly umbilicate, with very short intervals or contiguous.

Antennae (fig. 38) exceeding apicis of posterior angles of pronotum by three articles; second article subcylindrical 1.8x longer than wide; third conical, twice as long as wide; second and third, taken together, 1.3x longer than fourth; fourth to tenth subtriangular, nearly 3x longer than wide; last longer than penultimate, with subparallel sides, weakly constricted at apex.

Pronotum 1.2x longer than wide, widest at posterior angles, convex, with two symmetrical shallow depressions at mid-length on the sides and two punctiform depressions at basal slope; sides gradually narrowing from behind the middle forwards, briefly dilated before the anterior angles and then abruptly tapering to the vertex of the angles; posteriorly slightly sinuate before the posterior angles; these short, truncate, weakly diverging; punctures on the disc deep, simple, with very short intervals, gradually denser towards the sides, where they become superficial, umbilicate and contiguous at the lateral extremities.

Scutellum quadrangular, convex, narrower than inter-elytral space. Elytra a little wider than base of pronotum, 3x longer than it; sides subparallel for about two-thirds their length; striae well impressed; interstriae flat with rough surface.

Tarsal articles decreasing regularly in length; fourth article in dorsal view only a little narrower than third.

Aedeagus as in fig. 9 (length 1.12 mm).

Female unknown.

Size. Length 9.85 mm; width 2.5 mm.

Etymology. The species is dedicated to Mrs Petronela, collector of the species.

Athous (Orthathous) osipovi n. sp. (Figs 8, 37, 58)

Material examined. Holotype ♂ - **Russia:** N Caucasus, Karachaevo-Cherkessia Rep., Badujskoye Lake, 10.VII.2006, I. Osipov (CRG don. MCSNG). 5 Paratypes ♂ - same data as Ht (CPG; CRG).

Diagnosis. Small species very similar for general shape and size to *A. (Haplathous) alpestris* Orlov, 1994, but assigned to the subgenus *Orthathous* Reitter

because of the convex scutellum and allied to *A. (Orthathous) brevipennis* Schwarz, 1897; it can be distinguished by the darker colour, slenderer body and antennae.

Description. Male. Moderately shiny; head, pronotum and scutellum darker than elytra, dark-brown to blackish; elytra brown-ferruginous with indistinct blackish shadings; antennae and legs ferruginous; covered with dense, recumbent, yellowish vestiture.

Head with eyes a little narrower than anterior margin of pronotum; frons impressed from middle to anterior margin, the latter thickened, moderately arcuate or feebly sinuate at middle, directed downwards, protruding above the clypeus; punctures coarse, umbilicate, contiguous or with very short intervals. Antennae (fig. 37) exceeding apices of posterior angles of pronotum by 1-1.5 articles; second article subcylindrical, third subconical, a little longer than second; second and third, taken together, a little longer than fourth; fourth-tenth triangular, just longer than wide; last a little longer than penultimate, regularly ellipsoidal.

Pronotum as long as wide or a little longer, widest at posterior angles; strongly convex, abruptly sloping at sides and base; sides moderately and regularly arcuate to subparallel, weakly sinuate before the posterior angles, the latter short, truncate, not or gently diverging, not carinate; puncturation rather uniformly distributed; punctures on disc deep, simple, with very short intervals, gradually denser towards sides to contiguous, sometimes confluent, simple or umbilicate at lateral extremities.

Scutellum basally without edge, narrower than the interelytral space, convex, punctured. Elytra as wide as base of pronotum, 2.8x longer than it; sides subparallel for about two-thirds of its length, then gradually tapering at apex; striae well-marked and punctured; interstriae flat, with dense punctures and rough surface.

Fourth article of tarsi much shorter and narrower than third in dorsal view.

Aedeagus as in fig. 8 (length 0.87 mm).

Female unknown.

Size. Length 7-8 (Ht) mm; width 2- 2.12 (Ht) mm

Etymology. The species is dedicated to its collector, I. Osipov.

Pseudocrepidophorus flavescens (Eschscholtz, 1818) (Fig. 10)

Material examined. 1 - Greece : Evvia, Lutsa, 29.V.1930, A. d'Orchymont (IRSNB).

Male genitalia as in fig. 10 (length 1 mm).

Distribution. Bulgaria, Turkey; Iran; Azerbadjan; Georgia; Russian Caucasus.

New to Greece.

Sichuanelater gibbosus Platia & Gudenzi, 2006 (Fig. 11)

Material examined. 1 ♂ - China: N. Yunnan, 30 km N of Lijiang, 3000 m, 3.VII.1990, L. & M. Bocák (CCW).

Described on a female specimen. The male is very similar, distinguished only by the antennae a little longer and serrated.

Male genitalia as in fig. 11 (length 1.75 mm).

Tribe **Agriotini** Champion, 1894

Agriotes marocanus n. sp. (Figs 12, 33, 59)

Material examined. Holotype ♂ - **Morocco**: Marrakech, m 450, 28.V.1934, A. Ball (IRSNB). 1 Paratype ♀ - same data as Ht.

Diagnosis. A species allied to *A. curtus* Candèze, 1878, for the shape of male genitalia, it can be distinguished by the slender body, yellow-ferruginous colour, very short third article of antennae in the male nearly as long as wide and the following articles just longer than wide, parallel sides of pronotum.

Description. Male. Moderately shiny; entirely yellow-ferruginous except for the head a little darker, covered with dense, yellow-fulvous, recumbent vestiture.

Frons convex on vertex, flat at anterior margin, the latter straight, merged with the clypeus; punctures coarse, deep, simple, with very short intervals or contiguous.

Antennae (fig. 33) not reaching apicis of posterior angles of pronotum by one article; second and third articles subcylindrical, the second 1.5x longer than third, third just longer than wide; second and third, taken together, longer than fourth; fourth-tenth triangular, gradually becoming more slender, just longer than wide; last longer than penultimate, ellipsoid, pointed at apex.

Pronotum 1.06x longer than wide, widest at posterior angles, strongly convex and abruptly sloping at sides and base; sides nearly perfectly parallel, posterior angles acute, not diverging, with a very feeble and short carina parallel to the lateral margins; punctures coarse, on the disc deep, simple, with very short, moderately shagreened intervals, gradually denser and larger to sides, contiguous or confluent at lateral extremities.

Scutellum shield-like, flat, punctured. Elytra as wide as base of pronotum, 2.5x longer than it; sides parallel in anterior third, then gradually dilated and widest just behind the middle; striae well marked and punctured; interstriae flat, densely punctured and with rough surface.

Aedeagus as in fig. 12 (length 1 mm).

Female. Same colour, body larger with pronotum as long as wide and third antennal article slender.

Size. Length 6.8 (Ht) - 8.7 (Pt) mm; width 1.87 (Ht) - 2.43 (Pt) mm.

Etymology. The species is named after its country of origin, Morocco.

Tribe **Physorhinini** Candèze, 1859

Podeonius bimaculatus n. sp. (Figs 41, 60)

Material examined. Holotype ♀ - **Iran**: Golestan, 55 km E of Minudasht, 1500 m, 25.IV.2008, G. Sama (CPG).

Diagnosis. Species immediately distinguishably from the two known species of the West Palearctic Region by the two orange spots on elytra.

Description. Female. Bicoloured; entirely black-piceous except for two suboval orange spots on each elytra extending from the second to seventh intervals and placed in the anterior half behind the scutellum; covered with recumbent, blackish vestiture.

Frons convex, anterior margin arcuate, directed downwards and briefly protruding above clypeus; punctures umbilicate, with very short intervals.

Antennae (fig. 41) nearly reaching apicis of posterior angles of pronotum, serrated from the third article; second small, globular; third conical, a little longer than fourth and the following articles; fourth-tenth triangular, a little wider than long; last just longer than penultimate, ellipsoidal, weakly constricted before apex.

Pronotum 1.12x wider than long, widest at posterior angles, regularly convex, sloping gradually at sides, abruptly at base; sides tapering strongly from middle towards apex, subparallel to posterior angles, the latter rather acute, not diverging, bicarinate, the inner carina longer and prominent, directed inward, the outer finer and subparallel to the lateral margins; punctures on disc deep, simple or slightly umbilicate, with very short intervals, gradually denser towards the sides, contiguous and umbilicate at the lateral extremities.

Scutellum shield-like, flat, roughly punctured. Elytra as wide as base of pronotum, 2.3x longer than it; sides subparallel in the first half, widest at middle, gradually tapering to apicis; striae well-marked and punctured; interstriae flat, densely punctured with rough surface.

Third article of the tarsi shortly lamellate, fourth much smaller.

Male unknown.

Size. Length 7.7 mm; width 2.18 mm.

Etymology. The name is derived from the presence of the two spots on elytra.

Podeonius rawlinsi n. sp. (Figs 13, 42, 61)

Material examined. Holotype ♂ - **Taiwan:** Kaoshiung, Shanping, 640 m, 1-10.IV.1988, R. Davidson, J. Rawlins, C. Young (CM). 1 Paratype ♂ - Kaoshiung, Shanping, 640 m, 23-31.III.1988, J. Rawlins & C. Young (CPG).

Diagnosis. A species allied to *P. csorbai* Platia & Schimmel, 2007, it can be distinguished by the slender body and particularly the puncturation of pronotum, which is lighter, with finer punctures and shining intervals.

Description. Male. Head, pronotum, basal edge of elytra, scutellum, underbody, antennae and legs dark ferruginous with indistinct blackish shadings; elytra blackish; covered with dense, semi-erect and recumbent yellow-fulvous vestiture.

Frons convex, anterior margin arcuate, directed downwards, touching the clypeus; punctures deep, slightly umbilicate, with very short intervals.

Antennae (fig. 42) reaching apicis of posterior angles of pronotum, moderately serrated from fourth article on; second subcylindrical; third subconical, a little longer than second; second and third, taken together, as long as fourth; fourth-tenth subtriangular, about twice as long as wide; last ellipsoidal, a little longer than penultimate, moderately constricted at apex.

Pronotum 1.15x wider than long, widest at posterior angles; convex, with a short mid-longitudinal depression at the basal slope; sides from base to apex tapering gradually and regularly; posterior angles long, acuminate, not diverging, bicarinate; inner carina prominent, directed inwards; outer carina very feeble and subparallel to the lateral margins; punctures on the disc deep, simple, with short intervals, on average smaller than their own diameters, gradually denser towards the sides, becoming slightly umbilicate and with very short intervals.

Scutellum shield-like, flat, densely punctured. Elytra as wide as base of pronotum, 2.8x longer than it; sides lengthily subparallel for about two-thirds of its length; striae punctured; interstriae flat with finer punctures and rough surface.

Third article of tarsi with a long lamella.

Aedeagus as in fig. 13 (length 1.09 mm).

Female unknown.

Size. Length 9.3 - 9.7(Ht) mm; width 2.81 - 2.84 (Ht) mm.

Etymology. The species is dedicated to one of its collectors, J. Rawlins.

Tribe **Ampedini** Gistel, 1856

Ampedus sofiae n. sp. (Figs 14, 21, 34, 35, 62)

Material examined. Holotype ♂ - Greece: Rodopi, Nea Santa, 10 km Megateo, 700 m, 29.V.2007, F. Angelini (CPG). 6 Paratypes ♀ - same data as HT (CPG; CFA).

Diagnosis. A species of the *rufipennis*-group, it can be distinguished by shorter and less robust antennae with less dilated third article.

Description. Male. Moderately shiny; bicoloured; completely black except for red elytra and ferruginous tarsi; covered with dense, blackish vestiture.

Frons convex, punctures umbilicate with very short intervals. Antennae (fig. 34) nearly reaching apices of posterior angles of pronotum; second article globular, a little wider than long; third conical, about twice as long as second and a little longer than wide, sculptured as the following articles; second and third, taken together, a little longer than fourth; fourth-tenth triangular, a little longer than wide; last longer than penultimate, regularly ellipsoidal.

Pronotum 1.2x wider than long, widest at posterior angles, convex, with a trace of shallow mid-longitudinal depression at basal slope; sides from behind the middle to apex tapering regularly, subparallel to posterior angles; the latter moderately acute, converging at extremity, with a prominent and short carina directed inward; puncturation variable, punctures on disc deep, simple, with variable intervals, on average equal to or smaller than their own diameters, gradually denser towards the sides, umbilicate but with very short intervals; some punctures become subovate and can be contiguous or confluent only at lateral extremities.

Scutellum shield-like, convex, punctured. Elytra as wide as base of pronotum 2.9x longer than it; sides from base to apices tapering gradually and regularly; striae regularly punctured, interstriae subconvex, densely punctured.

Aedeagus as in fig. 14 (length 1.31 mm).

Female. Colour similar to male, but differing by the more convex pronotum, generally denser puncturation, and a little shorter antennae (fig. 35) with the third article slender and just wider than second.

Bursa copulatrix sclerified as in fig. 21.

Size. Length 11.5 (Ht) - 12 mm; width 3.3 (Ht) - 3.8 mm.

Etymology. The species is dedicated to my new-born first grandchild, Sofia.

Ampedus procerus n. sp. (Figs 15, 43, 63)

Material examined. Holotype ♂ - **Taiwan:** Kaoshiung, Shanping, 640 m, 21-30.IV.1988, C. Young, R. Davidson, J. Rawlins (CM).

Diagnosis. A species resembling small specimens of the European *A. nemoralis* Bouwer, 1980, it can be distinguished by the more slender body, longer antennae and male genitalia.

Description. Male. Bicoloured; head, pronotum, scutellum and underbody blackish; elytra dark orange; antennae blackish, with first three articles dark ferruginous; covered with long, partially erect, yellow-fulvous vestiture.

Frons convex, anterior margin arcuate, in the middle touching the clypeus; punctures deep, slightly umbilicate, with very short, shiny intervals.

Antennae (fig. 43) exceeding apicis of posterior angles of pronotum by about two articles; second article subcylindrical; third subconical, as wide as and a little longer than second; second and third, taken together, just longer than fourth; fourth-tenth triangular, about twice as long as wide; last longer than penultimate, ellipsoidal.

Pronotum 1.2x wider than long, widest at posterior angles, moderately and regularly convex; sides tapering nearly regularly from base to apex; posterior angles short, truncate, gently converging at apex, unicarinate; carina feeble, short, directed inward; puncturation very feeble and rather uniformly distributed; punctures of diameters rather variable, on complete surface deep, simple or slightly umbilicate, with variable intervals on average larger than their own diameters, at basal slope sparser and finer.

Scutellum shield-like, edged at the base, with a trace of a mid-longitudinal carina, densely punctured. Elytra as wide as base of pronotum, 3.25x longer than it; sides subparallel for about two-thirds of its length, then gradually narrowing; striae strongly and deeply punctured; interstriae subconvex, with sparse punctures.

Aedeagus as in fig. 15 (length 1.07 mm).

Female unknown.

Size. Length 8 mm; width 2.06 mm.

Etymology. The name of the species is derived from its slender shape.

Ampedus samai Schimmel & Platia, 1988

Ampedus martini Zeising & Sieg, 1992 (**syn. n.**) (Tunisia)

In their description of *Ampedus martini* from Tunisia, ZEISING & SIEG (1992) did not mention *A. samai* Schimmel & Platia, 1988, described on basis of specimens from Morocco and Algeria, and included their species, because of the characters of third article of antennae, in the *A. rufipennis* group. After examination of specimens of *Ampedus samai* recently caught in Tunisia by my friend, G. Sama, and compared with a male specimen of *A. martini* from Algeria (det. Zeising, in CPG), I conclude that both descriptions refer to the same species. I am therefore treating *A. martini* as a synonym of *A. samai*.

Tribe **Melanotini** Candèze, 1859

Melanotus davidsoni n. sp. (Figs 16, 40, 64)

Material examined. Holotype ♂ - **Kirghizstan:** Dzhahalabad, Kurp Saj Ravine (41°29'N, 72°22'E), 900 m, 23.VI.1999, C. Young (CM). 1 Paratype ♂ - same data as Ht (CPG).

Diagnosis. A species resembling *M. morbosus* Candèze, 1886, it can be distinguished by the particular shape of pronotum, which is widest at middle and posterior angles, with the disc moderately convex and gradually sloping at sides as well as the parameres of male genitalia more acutely toothed.

Description. Male. Moderately shiny; head, pronotum, antennae, legs and underbody lighter, ferruginous; elytra brown with ferruginous shadings; covered with dense, yellow-fulvous vestiture.

Frons flat, feebly impressed anteriorly; anterior margin moderately thickened, weakly arcuate and just protruding above the clypeus; punctures coarse, of variable diameters, umbilicate, contiguous or with very short intervals.

Antennae (fig. 40) just reaching apicis of posterior angles of pronotum; second article subcylindrical, longer than wide; third subconical, 1.5x longer than second; second and third, taken together, a little longer than fourth; fourth-tenth triangular, 1.6x longer than wide; last as long as penultimate, regularly ellipsoidal.

Pronotum 1.05x wider than long, widest at middle and posterior angles, convex, gradually sloping at sides; sides strongly arcuate, from middle to apex abruptly tapering, sinuate before the posterior angles, the latter acute, converging at extremity, with a short carina directed inward; punctures rather uniformly distributed, on the disc deep, simple, with very short intervals, gradually denser towards the sides, becoming clearly umbilicate and contiguous at the extremities.

Scutellum shield-like, flat, punctured. Elytra as wide as base of pronotum, 2.7x longer than it; sides suboval, widest at middle; striae well-marked and punctured; interstriae flat, densely punctured.

Aedeagus as in fig. 16 (length 1.43 mm).

Female unknown.

Size. Length 9.5 (Ht) - 9.8 mm; width 2.68 (Ht) - 2.8 mm.

Etymology. The species is dedicated to Dr R. Davidson, curator of the Carnegie Museum.

Melanotus punctosinus Cate, Platia & Schimmel, 2002 (Fig. 22)

Material examined. 2 ♂ ♀ - **Afghanistan:** Ghasni. (IRSNB).

Bursa copulatrix sclerified as in fig. 22.

Described from Iran.

New to Afghanistan.

Tribe **Cardiophorini** Candèze, 1860

Cardiophorus wardi n. sp. (Figs 17, 23, 23a, 65)

Material examined. Holotype ♀ - **Kuwait:** Kuwait City, N of Bay (29°20'N, 48°00'E), 30.III.1996, R. D. Ward (CM). 3 Paratypes (2♂1♀) - same data as Ht (CM; CPG).

Diagnosis. A species similar to *C. skulei* Platia & Schimmel, 1997, it can be distinguished by the nearly uniform dark colour, denser pronotal puncturation, less distinctly pointed scutellum and u-shaped asymmetrical piece of bursa copulatrix.

Description. Female. Head and pronotum dark ferruginous, a little darker than elytra, yellow-ferruginous with indistinct blackish shadings around the scutellum and at apicis; covered with very dense, short, recumbent yellowish vestiture. Frons convex on vertex, flat anteriorly, anterior margin moderately thickened, regularly arcuate, just protruding above the clypeus; punctures moderate, umbilicate, contiguous.

Antennae short, just supplanting middle of pronotum; second article subconical, longer than wide; third-tenth subtriangular, about twice as long as wide; last longer than penultimate, ellipsoidal, constricted before the apex.

Pronotum as long as wide, widest at anterior third, very convex, abruptly sloping at sides and base, with a vestige of a very narrow and punctured mid-longitudinal line from the anterior margin to the beginning of the basal slope; sides very arcuate, lengthily sinuate from about the middle to the posterior angles; the latter short, truncate, just diverging, with a short carina directed inward; suture-like margin moderately arcuate, vanishing at anterior third; puncturation uniformly distributed, fine but extremely dense; punctures contiguous and of two sizes, the larger slightly embossed, their intervals embracing three or four smaller punctures; this kind of puncturation gives the surface a rather dull and rough appearance.

Scutellum heart-shaped, as long as wide, with a narrow impressed mid-longitudinal line. Elytra a little wider than pronotum, 2.7x longer than it, convex; sides ovaliform, widest at middle; striae strongly punctured; interstriae convex with finer punctures.

Bursa copulatrix sclerified as in fig. 23 and 23a, with two symmetrical plates and two asymmetrical plates, one cylindrical and one u-shaped.

Claws simple.

Male. Very similar, with slender body and longer antennae reaching apicis of posterior angles of pronotum.

Aedeagus as in fig. 17 (length 0.9 mm).

Size. Length 6.35 - 7.85 (Ht) mm, width 1.87 - 2.37 (Ht) mm.

Etymology. The species is dedicated to its collector, R. D. Ward.

Cardiophorus klimenkoi n. sp. (Figs 24, 66)

Material examined. Holotype ♀ - **Iran:** Boyerahmad prov., Kohkiloye-va, Yasuj area, 10 km SE Sepidar, 5-6.V.2007, A. Klimenko (CRG don. MCSNG).

Diagnosis. A species allied to *C. bogatschevi* Dolin, 1985, it can be distinguished by the first two antennal articles and the last two abdominal segments reddish.

Description. Female. Moderately shiny; entirely piceous except for the first two antennal articles and the last two visible sternites reddish; covered with fine, recumbent, yellowish vestiture.

Frons moderately convex, anterior margin regularly arcuate, punctures deep, simple, contiguous or with very short subshagreened intervals. Antennae not reaching apicis of posterior angles of pronotum by about one article; second article subconical, a little shorter than third; third-tenth subequal in length, subtriangular, more than twice as long as wide; last mutilated.

Pronotum 1.09x wider than long, widest at middle; strongly convex, abruptly sloping at sides and base; sides strongly and regularly arcuate, sinuate just at posterior angles; the latter truncate at apex, not diverging, with a short carina; suture-like margin moderately curved, obsolete at anterior third; punctures moderate, approximately of the same size, simple, on the disc with variable intervals equal to their diameters or shorter, towards the sides only a little denser.

Scutellum heart-shaped, wider than long, nearly flat, emarginate just at middle of base, punctured. Elytra as wide as base of pronotum, 2.3x longer than it; sides oval, widest at middle; striae regularly punctured; interstriae flat with finer punctures.

Claws simple.

Copulatrix bursa sclerified as in fig. 24.

Male unknown.

Size. Length 7.3 mm; width 2.43 mm.

Etymology. The species is dedicated to its collector, A. Klimenko.

Cardiophorus puncticollis n. sp. (Figs 25, 67)

Material examined. Holotype ♀ - **Tadzhikistan:** W Gissar, Sangardak, 2-4.V.2007, V. Gurko (CRG don. MCSNG).

Diagnosis. The species remembers *C. maculicollis* Reiche & Saulcy, 1856 by its colour, but can be distinguished by having only the third to fifth abdominal seg-

ments reddish, the pronotum less transverse and the sclerifications of the bursa copulatrix.

Description. Female. Shiny; bicoloured; head, small round spot at center of pronotum, scutellum, elytra, prosternum, thorax and first two abdominal sternites black; pronotum, propleura, third to fifth abdominal sternites and legs orange; antennae blackish with first articles partially reddish; covered with short, recumbent, yellowish vestiture.

Frons flat, gently impressed at anterior margin, the latter moderately thickened, almost straight at middle, protruding above the clypeus; punctures very dense, of variable intervals, contiguous or with very short intervals.

Antennae exceeding apices of posterior angles of pronotum by one article; second article subconical, 1.75x longer than wide; third-tenth subtriangular, more than twice as long as wide; last longer than penultimate, subellipsoidal.

Pronotum 1.12x wider than long, widest at middle; convex, sides arcuate and strongly tapering from middle to posterior angles; the latter short, truncate, not diverging, with a very short carina; suture-like margins subarcuate, obsolete at anterior third; punctures of approximately two sizes, smaller simples, distributed uniformly on entire surface, with very short intervals.

Scutellum heart-shaped, as long as wide, emarginate at base, concave, with fine punctures. Elytra as wide as base of pronotum, 2.7x longer than it, sides suboval, widest just behind the middle; striae well-marked, finely punctured; interstriae flat, with dense and finer punctures.

Claws simple.

Bursa copulatrix sclerified as in fig. 25.

Male unknown.

Size. Length 7.3 mm; width 2.25 mm.

Etymology. The name is derived from the black circular spot on the centre of pronotum.

Cardiophorus hispanicus Cobos, 1961 (Figs 18, 26)

Cardiophorus hispanicus Cobos, 1961: 78.

Cardiophorus frigidus Cobos, 1961: 79 (**syn. n.**) - Holotype ♀ - Spain: Tragacete (Cuenca), Dr. J. Selgas (MNCN). Paratype ♀ - Puerto de la Ragua (Granada), Mateu-Cobos (MNCN) (examined).

Material examined. Holotype ♀ - Spain: S. de María (Almería), A. Cobos coll. (MNCN); Paratype ♀ - La Sagra (Granada), Mateu-Cobos (MNCN). 31 ♂ ♀ - 1 ♀ - Senen? (Cuenca) (det. *C. ulcerosus* Gené) (MNCN); 1 ♀ - 15 km W of Cuenca, Puerto de Cabrejas (Cuenca), 1150 m, 10.VI.2004, J. Mertlik (CMHK); 1 ♀ - Llosa de Ranes (Valencia) (MNCN); F. del Tay, 4.VI.1938 (MNCN); 1 ♀ - Albalate (Huesca), VI.1928, M. Escalera (MNCN); 2 ♂ ♀ - Albalate (Huesca), 12.VI.1928 (MNCN); 1 ♂ - Bolarque (Guadalajara), VI.1928, M. Escalera (MNCN); 1 ♀ - Tortosa (Tarragona) (*Cardiophorus* sp. det. F. Español 1934) (MZB); 1 ♀ - Col d'Ager (Lerida), 20.V.1956 (MZB); Vistabella (Castellón),

12.IV.1968, F. Español (MZB); 13 ♂ ♀ - 14 km SW of Morella, Cincorres Pass (Castellón), 9.VI.2005, J. Mertlik, V. Dusanek (CDZ ; CMHK ; CPG); 1 ♀ - road Calaceite-Morella (Teruel), 9.VI.2005 V. Dusanek (CDZ); 2 ♀ - Nogueruelas env. (Teruel), 10.VI.2005, V. Dusanek (CDZ); 2 ♂ ♀ - 3 km E of Castel de Cabra, Puerto de las Traviesas (Teruel), 9.VI.2004, J. Mertlik, B. Zbuzek (CMHK ; CZP); 1 ♂ - Puerto de Quarrasqueta (Alicante), 25.III.1978 (CPG); 1 ♂ - Sierra de Javalambre, 5 km N of Javalambre (Teruel), 1700 m, 22.V.2000, C. Giusto (CPG).

Redescription. Female. Colour variable; pronotum black with anterior margin and basal slope red-orange (form typ.) to nearly entirely black except for the extremities of posterior angles and propleura red-orange, many intermediate forms; head, scutellum and elytra always black with submetallic bronzed lustre; antennae blackish with reddish base of articles; legs yellowish with femura darkened; covered with fine, dense, yellowish vestiture.

Bursa copulatrix sclerified as in fig. 26.

Male. Extremely similar to female, antennae just barely longer.

Aedeagus as in fig. 18 (length 1.02 mm).

Size. Length 5.85 - 7.8 mm ; width 1.75 - 2.43 mm.

Cardiophorus exaratus Erichson, 1840

Material examined. 3 ♂ - **Malta** : Gozo Island, 2 km NE Xhagra, Ramla Bay, 30.III.2002, Schuh & Mifsud, sand dunes (CCW); Gozo, Ramla Beach, 28.III.2005, A. Link (CCW).

Distribution. Italy, France, Portugal, Spain, Greece, N. Africa.

New to Malta.

Cardiophorus kryzhanovskyi Dolin & Chantladze, 1980 (Fig. 27).

Material examined. 3 ♂ ♀ - **Iran** : Golestan, Sah Kuh Razi, 1400-1500 m, 25.IV.2008, G. Sama (CPG).

Bursa copulatrix sclerified as in fig. 27.

Described from Georgia.

New to Iran.

Cardiophorus pictus Faldermann, 1835 (**sp. res.**) (Fig. 28)

Cardiophorus pictus Faldermann, 1835: 170.

Material examined. 4 ♂ ♀ - **Iran**: SE Azerbaijan Prov., 5 km N of Kaleybar, 16-17.V.2007, A. Klimenko (CPG; CRG).

Previously considered a synonym of *Cardiophorus syriacus* (Linnaeus, 1758), it can be distinguished by the less dense puncturation of pronotum, giving the surface a slightly shiny appearance, by longer antennae in the male, exceeding apicis of posterior angles of pronotum by about one article and by the bursa copulatrix.

Bursa copulatrix sclerified as in fig. 28.

Described from Transcaucasia.

New to Iran.

Neocardiophorus pilicornis n. sp. (Figs 19, 68)

Material examined. Holotype ♂ - **Iran:** Esfahan Prov., Kashan area, 25 km NE Aran-va-Bitgol, 26-27.IV.2007, A. Klimenko (CRG don. MCSNG). 31 Paratypes ♂ - same data as Ht (CPG; CRG).

Diagnosis. The first species of the genus from Iran and the third known species after *N. fausti* Gurjeva, 1966, from Turkmenistan and *N. mamajevi*, Gurjeva, 1966, from Uzbekistan; the species can be immediately distinguished by the shorter antennae, exceeding apicis of posterior angles of pronotum only by about three articles.

Description. Male. Moderately shiny; tricoloured; head blackish except for anterior margin rufous; pronotum ferruginous with indistinct, variously expansive blackish shadings; scutellum entirely blackish or blackish with rufous shadings; elytra yellowish with a narrow subellipsoidal black spot extending from apex of scutellum to the posterior third and, at its widest part, including the first three interstriae; antennae ferruginous; legs yellowish; covered with dense, yellow vestiture, partially erect on elytra, erect on antennae.

Frons flat, impressed just at anterior margin, the latter moderately thickened, almost straight in the middle, just protruding above the clypeus; punctures small but very dense, contiguous or with very short intervals.

Antennae long, exceeding apicis of posterior angles of pronotum by about three articles, provided with twelve complete articles. Second subconical, a little longer than wide; third-seventh subtriangular, about 3x longer than wide; eighth-eleventh more slender, with subparallel sides; last shorter than penultimate, ellipsoidal.

Pronotum 1.15x longer than wide, widest about at middle, very convex; sides strongly arcuate, lengthily sinuate towards base; posterior angles rather acute, gently diverging, with very fine carina; punctures of two sizes; larger, embossed and slightly umbilicate punctures are regularly admixed with two or three very fine and simple punctures on entire surface.

Scutellum heart-shaped, as long as wide or a little longer than wide, moderately impressed and finely punctured. Elytra widest at base of pronotum, 2.5x longer than it; sides suboval, widest at middle; striae well-marked and punctured; interstriae subconvex, with dense puncturation and rough surface.

Claws simple.

Aedeagus as in fig. 19 (length 0.83 mm).

Female unknown.

Size. Length 5.8 - 7.8 mm; width 1.68 - 2.18 mm.

Etymology. The name is derived from the presence of erect hairs on the articles of antennae.

Paracardiophorus rostovensis n. sp. (Figs 20, 29, 29 a, 69)

Material examined. Holotype ♂: **Russia:** Rostov, VII.1981, N. Petrov (CRG don. MCSNG). 1 Paratype ♀ - same data as Ht (CPG).

Diagnosis. A species that can be distinguished from *P. musculus* (Erichson, 1840), the only species living in the same territory, by the pronotum widest behind the middle, with finer and less dense punctures and by the male and female genitalia.

Description. Male. Moderately shiny; entirely piceous with dark-brown legs; covered with short, dense, yellow-fulvous vestiture.

Frons with a vestige of a mid-longitudinal carina on vertex, just barely impressed at anterior margin, the latter moderately thickened, subarcuate and just protruding above the clypeus; punctures deep, simple, with very short shiny intervals. Antennae not reaching apices of posterior angles of pronotum by about 1.5 articles; second article subconical, 1.5x longer than wide; third-tenth subtriangular, less than twice as long as wide; last as long as penultimate, ellipsoidal.

Pronotum as long as wide, widest behind the middle, strongly convex; sides arcuate, rather strongly tapering from behind the middle forwards, more gradually narrowing toward posterior angles; the latter short, truncate, converging at extremities; puncturation rather uniformly distributed, punctures fine, rather variable in diameters, deep, simple, with very short shiny intervals.

Scutellum heart-shaped, as long as wide, emarginate at middle of base, longitudinally impressed, finely punctured. Elytra as wide as base of pronotum, 2.25x longer than it, convex; sides oval, widest at middle; striae well-marked and punctured; interstriae flat to subconvex, densely punctured.

Claws simple.

Aedeagus as in fig. 20 (length 1.06 mm).

Female. Extremely similar to male but with the body slightly more convex.

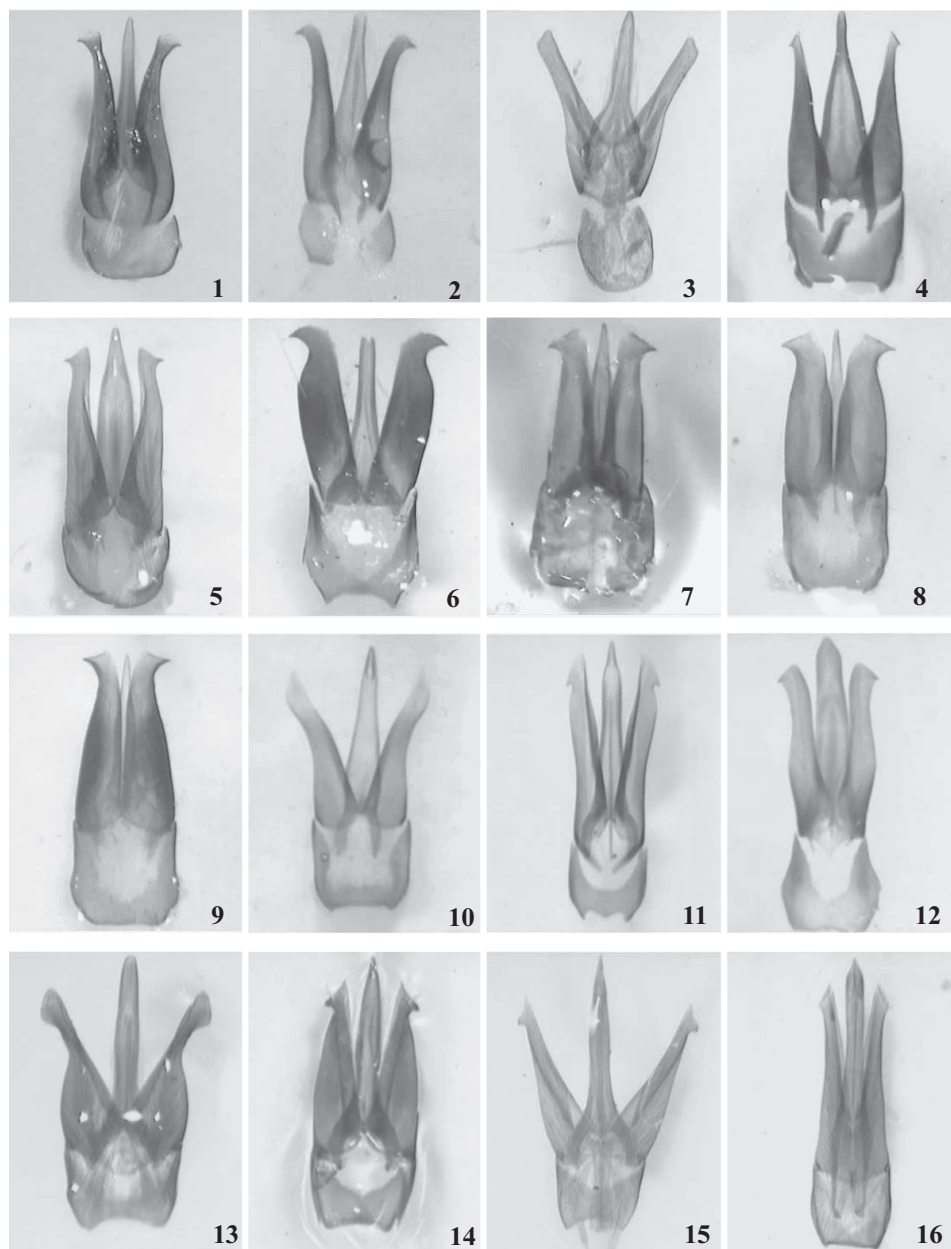
Bursa copulatrix sclerified as in figs. 29 and 29a.

Size. Length 6.6 (Ht) - 7.3 (Pt ♀) mm; width 2.25 (Ht) - 2.5 (Pt ♀) mm.

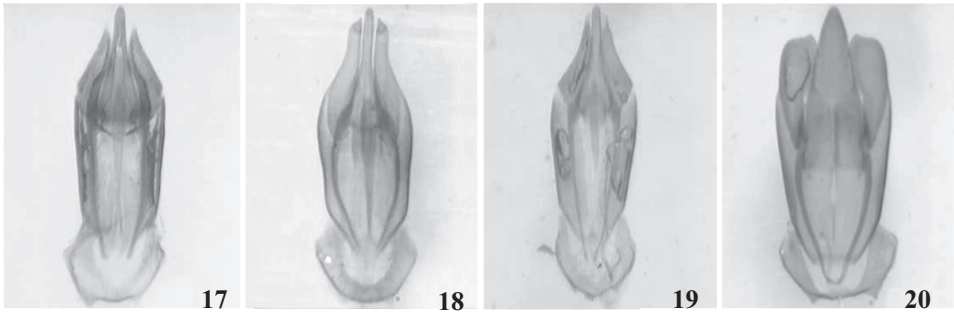
Etymology. The species is named after its place of origin, Rostov.

Acknowledgements

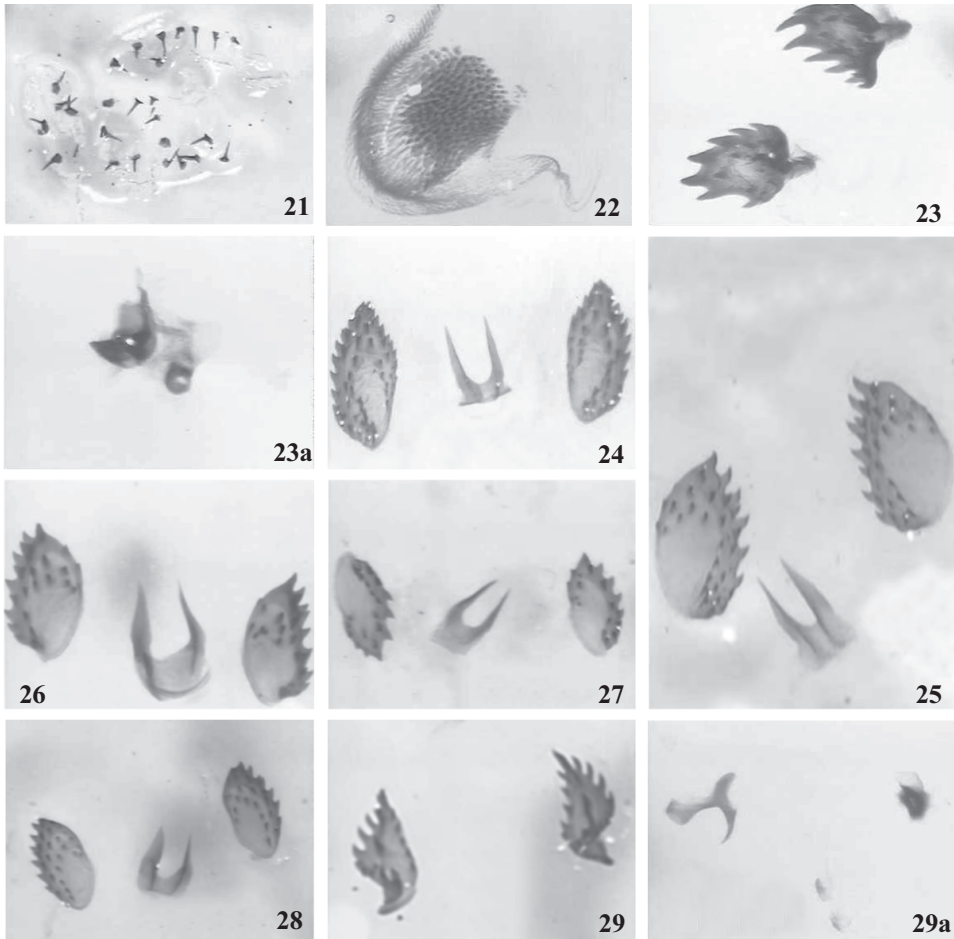
I wish to thank Dr P. Cate (Wien) for his revision of the English text.



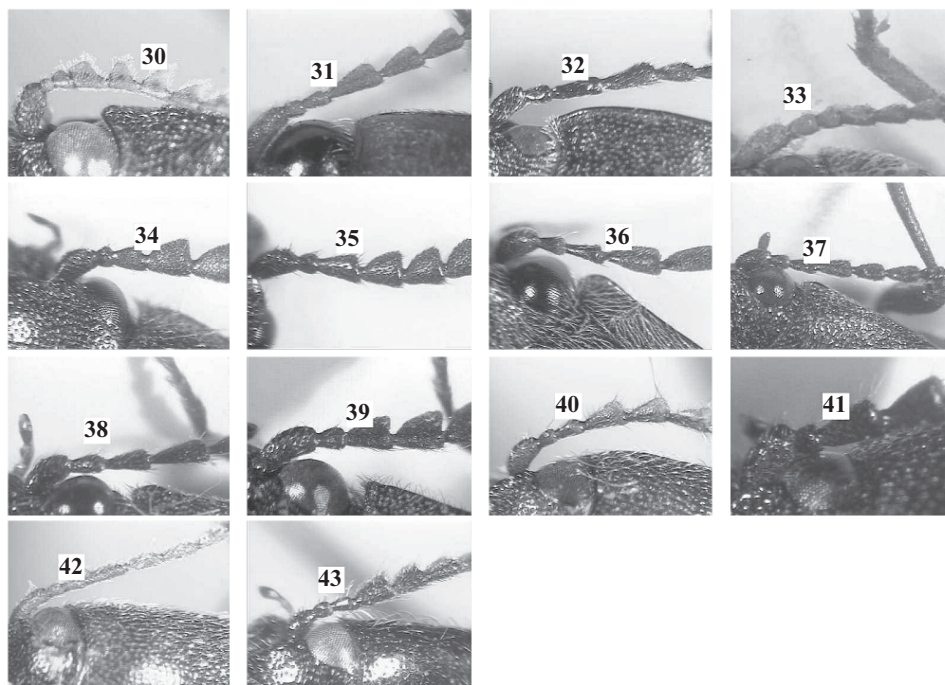
Figs 1 - 16. Male genitalia in dorsal view. 1. *Agrypnus dhofarensis* n. sp.; 2. *Adelocera omanensis* n. sp.; 3. *A. youngi* n. sp.; 4. *Selatosomus grandis* n. sp.; 5. *Penia babai* Kishii; 6. *Hemicrepidius agajewi* n. sp.; 7. *Athous (Haplathous) zebeianus* n. sp.; 8. *Athous (Orthathous) osipovi* n. sp.; 9. *Athous (Orthathous) petronelae* n. sp.; 10. *Pseudocrepidophorus flavescens* (Eschscholtz); 11. *Sichuanelater gibbosus* n. sp.; 12. *Agriotes maroccanus* n. sp.; 13. *Podeonius rawlini* n. sp.; 14. *Ampedus sofiae* n. sp.; 15. *A. procerus* n. sp.; 16. *Melanotus davidsoni* n. sp.



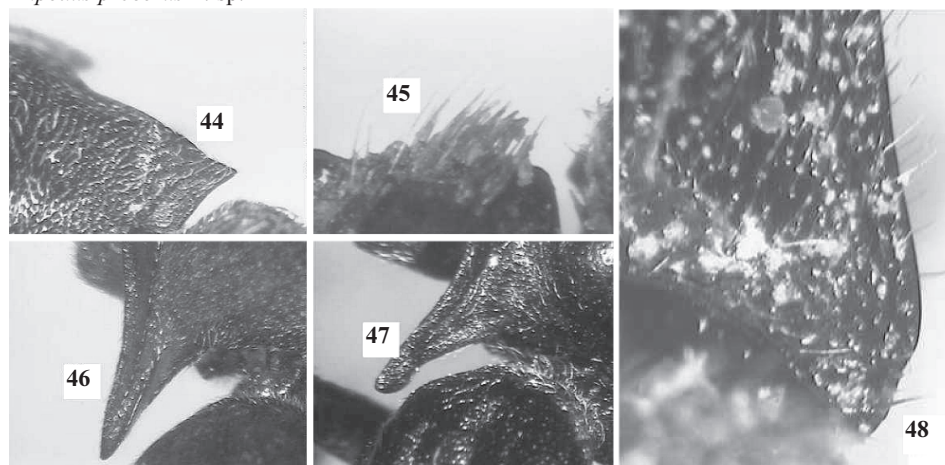
Figs 17 - 20. Male genitalia in dorsal view. 17. *Cardiophorus wardi* n. sp.; 18. *Cardiophorus hispanicus* Cobos; 19. *Neocardiophorus pilicornis* n. sp.; 20. *Paracardiophorus rostovensis* n. sp.



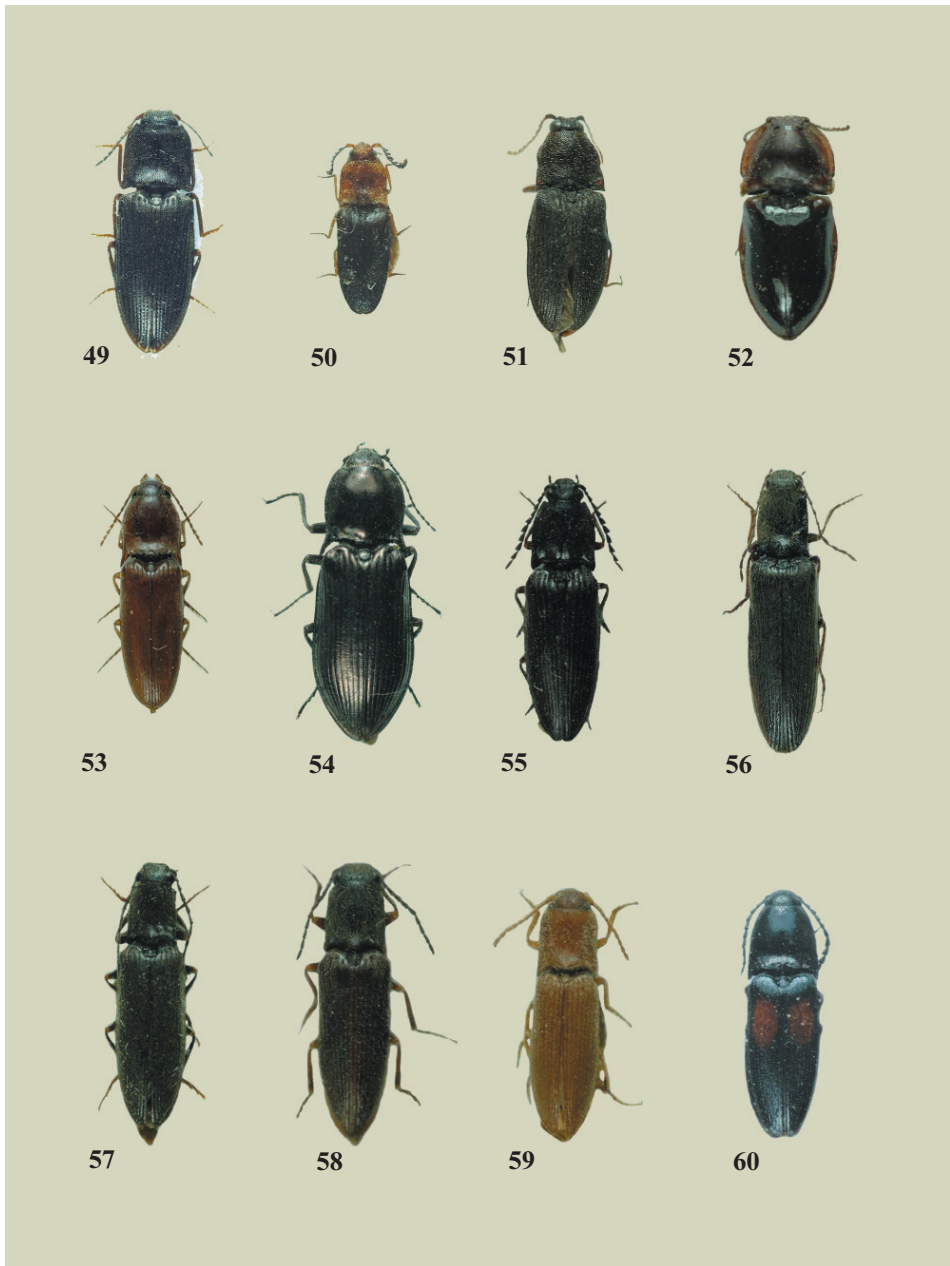
Figs 21 - 29. Sclerifications of bursa copulatrix. 21. *Ampedus soflae* n. sp.; 22. *Melanotus punctosimus* Cate, Platia & Schimmel; 23, 23a *Cardiophorus wardi* n. sp.; 24. *C. klimenkoi* n. sp.; 25. *C. puncticollis* n. sp.; 26. *C. hispanicus* Cobos (Ht); 27. *C. kryzhanovskyi* Dolin & Chantladze; 28. *C. pictus* Faldermann; 29, 29a. *Paracardiophorus rostovensis* n. sp.



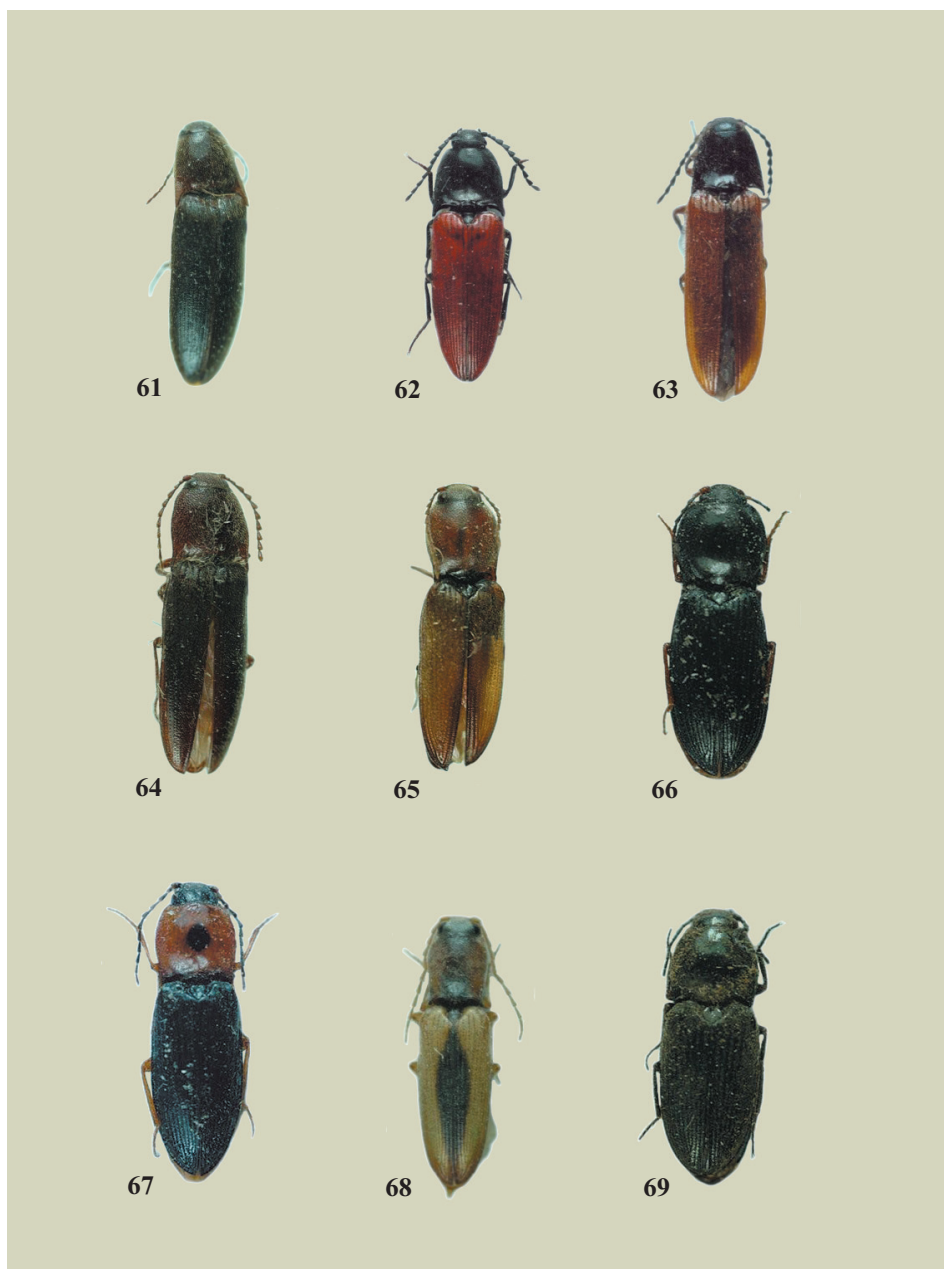
Figs 30 - 43. Basal articles of antennae. 30. *Adelocera youngi* n. sp.; 31. *Aeoloides houschkai* n. sp.; 32. *Selatosomus grandis* n. sp.; 33. *Agriotes maro canus* n. sp.; 34. *Ampedus sofiae* n. sp. ♂; 35. *Ampedus sofiae* n. sp. ♀; 36. *Athous (Haplathous) zebeianus* n. sp.; 37. *Athous (Orthathous) osipovi* n. sp.; 38. *Athous (Orthathous) petronelae* n. sp.; 39. *Hemicrepidius agajewi* n. sp.; 40. *Melanotus davidsoni* n. sp.; 41. *Podeonius bimaculatus* n. sp.; 42. *Podeonius rawlinsi* n. sp.; 43. *Ampedus procerus* n. sp.



Figs 44 - 48. Posterior angle of pronotum. 44. *Adelocera youngi* n. sp.; 45. *Adelocera nitida* (Candèze); 46. *Aeoloides houschkai* n. sp.; 47. *Selatosomus grandis* n. sp.; 48. *Hemicrepidius agajewi* n. sp. ♂.



Figs 49 - 60. Habitus of adults. 49. *Agrypnus dhofarensis* n. sp. (10.3 mm); 50. *Adelocera omanensis* n. sp. (4.9 mm); 51. *A. youngi* n. sp. (7.5 mm); 52. *Adelocera nitidus* (Candèze) (7 mm); 53. *Aeoloides houschkai* n. sp. (10.9 mm); 54. *Selatosomus grandis* n. sp. (18.8 mm); 55. *Hemicrepidius agajewi* n. sp. ♂ (12.8 mm); 56. *Athous (Haplathous) zebeianus* n. sp. (12.7 mm); 57. *Athous (Orthathous) petronelae* n. sp. (9.85 mm); 58. *Athous (Orthathous) osipovi* n. sp. (8 mm); 59. *Agriotes maroccanus* n. sp. (6.8 mm); 60. *Podeonius bimaculatus* n. sp. (7.7 mm).



Figs 61 - 69. Habitus of adults. 61. *Podeonius rawlinsi* n. sp. (9.7 mm); 62. *Ampedus sofiae* n. sp. (11.5 mm); 63. *Ampedus procerus* n. sp. (8 mm); 64. *Melanotus davidsoni* n. sp. (9.5 mm); 65. *Cardiophorus wardi* n. sp. (7.8 mm); 66. *C. klimenkoi* n. sp. (7.3 mm); 67. *C. puncticollis* n. sp. (7.3 mm); 68. *Neocardiophorus pilicornis* n. sp. (6.5 mm); 69. *Paracardiophorus rostovensis* n. sp. (6.6 mm).

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