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Contribution to the fauna of click beetles (Coleoptera:
Elateridae) from Pakistan.Giuseppe Platia¹ & Zubair Ahmed²¹ Via Molino Vecchio, 21/a 47043, Gatteo (FC), ITALY. e-mail: pinoplatia@teletu.it² Department of Zoology, Federal Urdu University of Arts, Science & Technology, Karachi, PAKISTAN.
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Abstract: A large series of click beetles (Coleoptera: Elateridae) were collected in several localities of Pakistan. The series contains 48 species, being 6 of them new records for the country, *Agrypnus muscosus* (Candèze, 1893), *Conoderus vartiani* Platia, 2015, *Heteroderes lenis* Candèze, 1859, *Nipponoelater brancuccii* (Schimmel, 1996), *Dicronychus oxypterus* (Candèze, 1860), and *Dicronychus stolatus* (Erichson, 1840), and 15 new to science belonging to the genera *Rismethus* Fleutiaux, 1947 (1), *Aeoloides* Schwarz, 1906 (1), *Conoderus* Eschscholtz, 1829 (3), *Heteroderes* Latreille, 1834 (3), *Cardiophorus* Eschscholtz, 1829 (2), *Dicronychus* Brullé, 1832 (3), and *Phorocardius* Fleutiaux, 1931 (2). The genus *Phorocardius* Fleutiaux, 1931, separated of the other *Cardiophorini* on the base of the bifid apex of claws, is also recorded for the first time from Pakistan.

Key words: Coleoptera, Elateridae, new species, new records, Pakistan.

Resumen: Contribución a la fauna de elatéridos (Coleoptera: Elateridae) de Pakistán. Se ha capturado una amplia serie de elatéridos (Coleoptera: Elateridae) en varias localidades de Pakistán. Dicha serie contiene 48 especies, de las que 6 son citadas por primera vez para Pakistán, *Agrypnus muscosus* (Candèze, 1893), *Conoderus vartiani* Platia, 2015, *Heteroderes lenis* Candèze, 1859, *Nipponoelater brancuccii* (Schimmel, 1996), *Dicronychus oxypterus* (Candèze, 1860) y *Dicronychus stolatus* (Erichson, 1840), y 15 son nuevas para la ciencia, pertenecientes a los géneros *Rismethus* Fleutiaux, 1947 (1), *Aeoloides* Schwarz, 1906 (1), *Conoderus* Eschscholtz, 1829 (3), *Heteroderes* Latreille, 1834 (3), *Cardiophorus* Eschscholtz, 1829 (2), *Dicronychus* Brullé, 1832 (3) y *Phorocardius* Fleutiaux, 1931 (2). El género *Phorocardius* Fleutiaux, 1931, separado del resto de *Cardiophorini* por el ápice bífido de las mandíbulas, es también citado por primera vez de Pakistán.

Palabras clave: Coleoptera, Elateridae, especies nuevas, nuevas citas, Pakistán.

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Introduction

Pakistan is a country divided between the Oriental and Palaearctic ecozones of the Indomalayan region so therefore its fauna is very diverse. The north and west parts of the country border to India, Iran and Afghanistan, so in this transitional belt a large number of species of click beetles could be obtained.

The Pakistan fauna of click beetles is still inadequately known and it is in need of extensive research. Only some subfamilies were studied in the last years, particularly *Agrypninae* and *Cardiophorinae* (Akhter *et al.*, 2011, 2012, 2014). More recently Platia (2015a) published a big contribution with material from North Pakistan localities, describing 18 new species and reporting 20 new records for the country.

In this paper we provide the results of the study of a large series of species collected at light by the second author in several localities of North and South Pakistan, describing 15 new species more and adding another 6 new records for the country.

Material and methods

Collection methods - The most of the 1433 specimens studied were collected at night (8 p.m. - 4 a.m.) with light traps using low consumption UV bulbs of 2700K wavelength. Almost all the material was collected by Zubair Ahmed at light; if collector and collecting method are different is properly marked.

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

Abbreviations - The names of institutions, museums and collections providing material for this study are abbreviated as follows: CPG, collection of G. Platia, Gatteo (Italy); ZACP (collection of Zubair Ahmed, Pakistan); HNHM, Hungarian Natural History Museum, Budapest (Hungary).

Information on "distribution" follows Cate (2007). The subfamilial and tribal placement of genera listed below follows Bouchard *et al.* (2011). Some contributions more to carry out this work have been those by Fleutiaux (1931) and Vats & Chauhan (1991, 1992).

Results

Subfamily Agrypninae Candèze, 1857

Tribe Agrypnini Candèze, 1857

Adelocera afghana Platia & Gudenzi, 2002

Material examined. 1 spcm, sex indetermined as the abdomen is missing - **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG).

Distribution. Afghanistan (Cate, 2007); Pakistan (Platia, 2015a).

Adelocera nitidus (Candèze, 1857) (Figs. 1, 1a, 40)

Material examined. 22 spcms. ♂ - **Pakistan:** Noshero Feroz distr., 8.V.2013; Tharparkar distr., Miithi, 18.IX.2012 (CPG; ZACP). Male genitalia as in Fig. 1, 1a (length 0.96 mm).

Distribution. "North India" (Cate, 2007); Afghanistan (Platia, 2008); Pakistan (Akhter *et al.*, 2014).

Agrypnus muscosus (Candèze, 1893) (Figs. 2, 2a, 41)

Material examined. 1 spcm. ♂ - **Pakistan:** Lower Dir (Swat valley), VII.2011 (CPG). Male genitalia as in Figs. 2, 2a (length 0.87 mm).

Distribution. India (Schenkling, 1927). **New species for Pakistan.**

Agrypnus ellipticus (Candèze, 1857)

Material examined. 6 spcms. ♂♀ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Trai, Lower Dir, 3.VIII.2014; Upper Dir, Swat Valley, 11.IX.2011 (CPG; ZACP).

Distribution. Afghanistan, Pakistan, India (Himachal Pradesh, Uttar Pradesh) (Cate, 2007).

Compsolacon cashmiriensis Della Beffa, 1931

Material examined. 5 spcms. ♂ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Trai, Lower Dir, 3.VIII.2014; Upper Dir, Swat Valley, 11.IX.2011 (CPG; ZACP).

Distribution. Pakistan, India (Kashmir) (Cate, 2007).

***Rismethus pakistanicus* n. sp.** (Figs. 3, 29, 42)

Material examined. Holotype ♂ - **Pakistan:** Noshero Feroz distr., 8.V.2013 (ZACP); 6 Paratypes 2♂♂, 4♀♀ - same data as HT; Tharparkar distr., Mithi, 18.IX.2012; Trai, Lower Dir, 3.VIII.2014 (CPG; ZACP).

Diagnosis. Second species of this genus from Pakistan, separated from *Rismethus pistrinarius* (Candèze, 1857) because of the slenderer body, lighter colour and pronotum as long as wide.

Description.

Male. Moderately shiny; entirely yellowish to partially ferruginous with very vague, lighter spots on base and after the middle of elytra; entirely clothed with short, thickened, whitish scales that generally hide the integuments.

Head with the eyes just narrower than the anterior margin of pronotum with the frons slightly impressed in the middle between the eyes, then flat before the anterior margin, densely punctured.

Antennae very short, strongly serrated from the fourth article on, second and third articles subcylindrical with the second larger in diameter and length, taken together notably longer than fourth; fourth-tenth quadrangular, wider than long, last longer than penultimate and subellipsoidal.

Pronotum as long as wide, widest at the middle, strongly convex, abruptly sloping at sides, nearly vertically sloping on base with a trace of a narrow mid-longitudinal depression in the slope; sides arcuate in the middle, constricted before the anterior margin and prolonged to include the half of the head; slightly sinuate before the posterior angles, the latter short and widely truncate; lateral carina crenulate, visible in a dorsal view and interrupted just before the anterior constriction; punctures uniformly distributed, coarse, deep, with interstices smaller than their own diameters, generally the punctuation is few visible because it's hidden by the scales.

Scutellum convex with a distinct mid-longitudinal carina.

Elytra 1,95x longer than pronotum and as wide as it, convex; sides subparallel in the first third then very gradually dilated until the middle and further very gradually narrowing to the apices; striae well marked and deeply punctured, interstriae flat with roughly surface.

Male genitalia as in the Fig. 3 (length 0.37 mm).

Female. Extremely similar to the male and distinct with difficulty without examination of genitalia.

Size. Length 2.8-3.4 mm; width 1.00-1.12 mm.

Etymology. The name is derived from Pakistan, the country where the species was collected.

***Meristhus (Sulcimerus) quadripunctatus* (Candèze, 1857)** (Figs. 4, 4a, 43)

Material examined. 1 spcm. ♂ - **Pakistan:** Tharparkar distr., Mithi, 18.IX.2012 (CPG). Male genitalia as in the Figs. 4, 4a (length 0.90 mm).

Distribution. China (Fujian, Guangxi, Hubei, Jiangxi, Sichuan), Nepal, India (Uttar Pradesh), Taiwan, Oriental Region (Cate, 2007); Pakistan (Akhter *et al.*, 2012).

Tribe Oophorini Gistel, 1848***Aeoloderma brachmana* (Candèze, 1859)** (Figs. 5, 44)

Material examined. 121 spcms. ♂♀ - **Pakistan:** Tharparkar distr., Mithi, 18.IX.2012; Noshero Feroz distr., 8.V.2013; Trai, Lower Dir, 3.VIII.2014 (CPG; ZACP). Male genitalia as in the Fig. 5 (length 0.75 mm).

Distribution. China (Fujian, Guangdong, Guangxi, Hubei, Jiangxi, Sichuan), North India, Taiwan, Oriental Region (Cate, 2007); Pakistan (Akhter *et al.*, 2012).

***Aeoloides crassus* n. sp.** (Figs. 30, 45)

Material examined. Holotype ♂ - **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG); 2 Paratypes ♀ - Tharparkar distr., Mihi, 18.IX.2012 (CPG; ZACP).

Diagnosis. A species comparable to *A. filipponii* Platia & Schimmel, 1997 from Arabic Peninsula, it can be separated for the stouter body, subparallel sides of pronotum and the more developed spine at base of the same.

Description.

Male. Not shiny; entirely ferruginous with blackish undefined shadings on the disk of pronotum and elytra; antennae and legs yellowish; covered with very dense, declined, yellowish pubescence.

Head with the eyes as wide as the anterior margin of pronotum, frons flat, anterior margin moderately thickened, subarcuate, directed downwards and a little protruding above the clypeus, punctuation very dense and double, larger punctures are mixed more or less regularly with very fine.

Antennae short just exceeding the middle of pronotum, very slightly serrated from the fourth article on; second and third article subcylindrical, with the third 1,5x longer than the second; second and third, taken together notably longer than fourth; fourth longer than the following, subtriangular, last subellipsoidal constricted at the apical extremity.

Pronotum as long as wide, widest at middle and at apices of posterior angles, very convex; basal slope at base with a short and laterally compressed spine; sides subparallel from base to near the anterior margin, posterior angles long, acuminate not divergent, with a short and sharp carina slightly divergent from the lateral margins, this clearly visible in a dorsal view only in the first third; punctuation dense and double; larger punctures are more or less regularly mixed with extremely fine punctures.

Scutellum shield shaped, flat, punctured, sloping very obliquely.

Elytra 1,95x longer than pronotum and a little narrower than it at base, convex, sides subparallel from base to the middle then gradually and regularly tapering to the apices; striae regularly marked and punctured, interstriae flat, densely and finely punctured.

Tarsal article decreasing regularly in length and simple.

Female. Extremely similar to the male; distinct only after examination of genitalia.

Size. Length 6.7-7.1 mm; width 2.10-2.15 mm.

Etymology. The name is derived from the stout body, with elytra particularly short compared to pronotum.

***Aeoloides grisescens* (Germar, 1844)**

Material examined. 6 spcms. ♂♀ - **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG; ZACP).

Distribution. Armenia, Azerbaijan, Georgia, Greece, Russia (Central and South European Territory), United Kingdom; Egypt, Lybia, Morocco; Afghanistan, Cyprus, Iran, Iraq, Kazakhstan, Kirghisstan, Mongolia, Oman, Pakistan, Qatar, Russia (W Siberia), Saudi Arabia, Syria, Tadzhikistan, Turkmenistan, Turkey, Uzbekistan, Afrotropical Region (Cate, 2007); UAE (Platia, 2007); Jordan, Yemen (Platia, 2011).

***Aeoloides hreblayi* Platia, 2015**

Material examined. 2 spcms. ♀ - **Pakistan:** Noshero Feroz distr., 8.V.2013 (CPG); Trai, Lower Dir, 3.VIII.2014 (CPG). Described on two male specimens. The female is extremely similar to the male and indistinct without examination of genitalia, the body is a little larger: length 3.55-3.62 mm, width 1.21-1.25 mm.

Distribution. Pakistan (Platia, 2015a).

***Conoderus mithiensis* n. sp.** (Figs. 6, 31, 46)

Material examined. Holotype ♂ - **Pakistan:** Tharparkar distr., Mithi, 18.IX.2012 (ZACP). 1 Paratype ♀ - Noshero Feroz distr., 8.V.2013 (CPG).

Diagnosis. Species comparable with *Conoderus productus arabicus* Chassain, 1979 from Arabic Peninsula and Iran, it is easily separated by the more elongate and flattened body and very fine punctuation of pronotum.

Description.

Male. Shiny; head and pronotum yellow-ferruginous, elytra yellowish with the two first interstriae longitudinally, after the middle also the third interstria, darkened; antennae and legs yellow testaceous; covered with dense, yellowish pubescence.

Head with the eyes as wide as the anterior margin of pronotum, frons moderately convex, anterior margin regularly arcuate, protruding above the clypeus; punctuation uniformly distributed, punctures simple, deep, on average of the same size, with very short, shiny intervals.

Antennae mutilated (only seven articles of the right antenna are present) not reaching for about two articles the apices of posterior angles of pronotum (estimated); second and third articles subcylindrical, subequal in length, second with a larger diameter than third, taken together 1,1x longer than fourth; fourth-seventh subconical, elongate, with the fourth longer than following, about 3,5x longer than wide.

Pronotum as long as wide, widest at the apices of the posterior angles, moderately and regularly convex, sides arcuate from behind the middle regularly narrowing to the anterior margin, very slightly sinuate before the posterior angles, the latter, short, acute, just divergent with a fine and short carina directed forwards; lateral margins complete, from base to middle visible in a dorsal view; punctuation uniformly distributed, on the disk punctures approximately of the same size, deep, simple, with intervals shiny and on average equal to their own diameters, at base much more fine.

Scutellum rounded, convex, very finely punctured.

Elytra 2,27x longer than pronotum and as wide as it, moderately convex, ovaliform with sides widest at middle, striae well marked and deeply punctured, interstriae flat, very finely punctured.

Male genitalia as in the Fig. 6 (length 0.62 mm).

Female. Very similar to the male but with elytra nearly entirely yellowish, the dark colour in the elytra is very reduced.

Size. Length 4.9-5.3 mm; width 1.43-1.55 mm.

Etymology. From Mithi city, where the Holotype was collected.

***Conoderus drasterioides* n. sp.** (Figs. 7, 47, 48)

Material examined. Holotype ♂ - **Pakistan:** Chakri, Islamabad, 29.VI.2013 (ZACP). 1 Paratype ♀ - same data as HT (CPG).

Diagnosis. Well separated from the other Pakistan species for the very small size.

Description.

Male. Moderately shiny; head black, pronotum reddish with a mid-longitudinal, narrow black stripe, elytra reddish with the first three interstriae at base, the first two interstriae in the basal third, the first to the ninth interstriae in the apical third forming a transversal stria, black; underbody reddish, antennae and legs yellowish; covered with dense, declined, yellow-golden pubescence.

Frons convex, anterior margin subarcuate, punctuation dense with punctures deep, simple, approximately of the same size, with very short intervals.

Antennae mutilated (only the first three articles of the right antennae are present), second and third subcylindrical, with the second with larger diameter and nearly twice longer than third.

Pronotum just wider than long, widest at the apices of the posterior angles, regularly convex;

sides moderately arcuate, very slightly sinuate before the posterior angles, the latter short, acuminate, very slightly divergent, with a very short, few apparent carina directed inside; lateral margins complete and visible in a dorsal view only in the first third; punctuation uniformly distributed, punctures approximately of the same size, deep, simple with intervals variable, on average equal to the half of their own diameters.

Scutellum rounded, convex, very finely punctured.

Elytra 2,1x longer than pronotum and as wide as it, convex, sides subparallel in the first half then very gradually and regularly tapering to the apices, striae well marked and punctured, interstriae flat with subrough surface, finely punctured.

Fourth tarsal segment only with short lamella.

Male genitalia as in the Fig. 7 (length 0.52 mm).

Female. Separated by a larger body and more extensive black colour on pronotum and elytra.

Size. Length 3.43 mm (♂) - 4.55 mm (♀); width 1.1 mm (♂) - 1.34 mm (♀).

Etymology. The name is derived from the similarity with species of the genus *Drasterius* Eschscholtz, 1829.

***Conoderus cylindricus* n. sp.** (Figs. 32, 49)

Material examined. Holotype ♀ - **Pakistan:** Tharparkar distr., Mithi, 18.IX.2012 (CPG).

Diagnosis. A *Conoderus* Eschscholtz, 1829 immediately distinct from the species of the region for the cylindrical body, the larger size and the uniformity of body patterns.

Description.

Female. Moderately shiny; entirely dark-ferruginous with very dense and short yellowish pubescence that hides the colour of the integuments.

Head with the eyes as wide as the anterior margin of pronotum, frons convex with the anterior margin regularly arcuate; punctuation uniformly distributed, punctures deep, simple, approximately of the same size, with very short, shiny intervals.

Antennae mutilated (only five articles of the right antennae are present); second and third articles subcylindrical and subequal in length, taken together as long as fourth, fourth-fifth subconical, elongate.

Pronotum 1,15x longer than wide, widest behind the middle and at the apices of the posterior angles, strongly convex with a very short, narrow and shallow mid-longitudinal depression on the basal slope; sides nearly perfectly parallel from the base to nearly the anterior margin, posterior angles short, not acute, not divergent with a very short and few visible carina subparallel to the lateral margins, the latter visible in a dorsal view only in the first third; punctuation uniformly distributed; punctures approximately of the same size, deep, simple, with intervals shiny and on average a little smaller than their own diameters.

Scutellum rounded, convex, very finely punctured.

Elytra 2,08x longer than pronotum and as wide as it, convex; sides subparallel in the first half then very gradually tapering to the apices, striae well marked and punctured; interstriae subconvex, very finely punctured.

Fourth tarsal article with a narrow lamella as long as the article.

Male. Unknown.

Size. Length 7.1 mm; width 2.18 mm.

Etymology. The name is derived from the cylindrical shape of the body of the species.

***Conoderus nigromaculosus* Vats & Chauhan, 1992** (Figs. 8, 33, 50)

Material examined. 32 spcms. ♂♀ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Trai, Lower Dir, 3.VIII.2014. Male genitalia as in the Fig. 8 (length 0.67 mm).

Distribution. India (Uttar Pradesh) (Cate, 2007); Pakistan (Platia, 2015a).

***Conoderus vartiani* Platia, 2015**

Material examined. 1 spcm. ♀ - **Pakistan:** Chakri, Islamabad, 29.VI.2013. Described on two male specimens. The female is very similar to the male in the general shape and colour, the size is a little larger: length 6.5 mm; width 2.0 mm.

Distribution. Afghanistan (Platia, 2015b). **New species for Pakistan.**

***Drasterius brahminus* Candèze, 1859**

Material examined. 1 spcm. ♂ - **Pakistan:** Kashmir, Bagh, 15.VII.2011 (CPG).

Distribution. India, Pakistan (Platia & Gudenzi, 1997).

***Drasterius collaris* Candèze, 1859**

Material examined. 678 spcms. ♂♀ - **Pakistan:** Chakri, Islamabad, 29.VI.2013,; Tharparkar distr., Miithi, 18.IX.2012; Trai, Lower Dir, 3.VIII.2014.

Distribution. Pakistan, India, Nepal (Platia & Gudenzi, 1997).

***Drasterius csorbai* Platia & Gudenzi, 1997**

Material examined. 14 spcms. ♂♀ - **Pakistan:** Tharparkar distr., Miithi, 18.IX.2012; Trai, Lower Dir, 3.VIII.2014; Noshero Feroz distr., 8.V.2013.

Distribution. Pakistan, India (Platia & Gudenzi, 1997).

***Drasterius sulcatulus* Candèze, 1859**

Material examined. 25 spcms. ♂♀ - **Pakistan:** Tharparkar distr., Miithi, 18.IX.2012, Z. Ahmed leg., at light; Noshero Feroz distr., 8.V.2013, Z. Ahmed leg., at light; Trai, Lower Dir, 3.VIII.2014, Z. Ahmed leg., at light.

Distribution. Nepal, Pakistan, India (Uttar Pradesh), "Himalaya" Oriental Region (Cate, 2007); UAE (Platia, 2007); Oman (Platia, 2008); Afghanistan (Nemeth & Platia, 2014).

***Heteroderes longithorax* n. sp. (Figs. 9, 34, 51)**

Material examined. Holotype ♂ - **Pakistan:** Tharparkar distr., Miithi, 18.IX.2012 (CPG).

Diagnosis. Species comparable with *H. sabatinellii* Platia, 2015 for the similar size, it is easily separated by the more elongate pronotum and the lighter colour of the integuments.

Description.

Male. Moderately shiny; entirely ferruginous with undefined blackish shadings on pronotum and elytra, antennae and legs yellowish; covered with very dense, declined, yellow golden pubescence.

Head with the eyes just narrower than the anterior margin of pronotum, frons convex, anterior margin substraight, protruding above the clypeus; punctuation dense, punctures simple, deep, approximately of the same size with very short intervals.

Antennae not reaching for about two articles the apices of posterior angles of pronotum, very slightly serrate from fourth article on; second and third articles subcylindrical, subequal in length, taken together 1,25x longer than fourth; fourth-tenth subconical, last subellipsoidal.

Pronotum 1,17x longer than wide, widest at the middle and at the apices of the posterior angles, moderately convex; sides nearly subparallel, very slightly sinuate before the posterior angles, the latter, short, acute, very slightly divergent, very finely carinate, lateral margins entire, visible in a dorsal view only in the first third; punctuation uniformly distributed, double; larger, deep and simple punctures are more or less regularly mixed with very fine, intervals between the finer punctures smooth and subshiny.

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

Elytra 2x longer than pronotum and as wide as it, moderately convex, rather flattened on the disk; sides subparallel from the base to the middle then very gradually tapering to the apices; striae regularly marked and punctured, interstriae subconvex with very fine punctures.

Fourth tarsal segment with a long and narrow lamella.

Male genitalia as in the Fig. 9 (length 0.62 mm).

Female. Unknown.

Size. Length 5.6 mm; width 1.5 mm.

Etymology. The name is referred to the elongate pronotum of the species.

***Heteroderes opacoflavus* n. sp.** (Fig. 10)

Material examined. Holotype ♂ - **Pakistan:** Noshero Feroz distr., 8.V.2013 (CPG).

Diagnosis. Species immediately separated from all of the region by the general appearance of opaque surface of pronotum and ochraceous colour of the integuments.

Description.

Male. Not shiny; entirely yellow-ochraceous with a vague, darkish vitta along the elytral suture extending to the first four interstriae after the middle and before the apices to form a suboval vitta.

Head with the eyes as wide as the anterior margin of pronotum, frons convex, anterior margin regularly arcuate, just protruding above the clypeus; punctuation uniformly distributed; larger punctures are mixed with extremely fine punctures giving to the surface a subshiny appearance.

Antennae mutilated.

Pronotum as long as wide, widest at the middle and at the pices of the posterior angles, very convex; sides moderately arcuate from behind the middle very gradually converging forwards, subparallel to the posterior angles, the latter short, acuminate, very slightly divergent, with a fine carina subparallel to the lateral margins, this in the first half visible in a dorsal view; punctuation uniformly distributed, double; larger punctures are mixed with extremely fine punctures giving to the surface a opaque appearance.

Scutellum shield-shaped, convex, ridged at base, finely punctured.

Elytra 2,16x longer than pronotum and just narrower than it, convex; sides subparallel from base to behind the middle, then very gradually narrowing to the apices; striae well marked and punctured, interstriae subconvex with rough surface.

Fourth tarsal segment with a long and narrow lamella.

Male genitalia as in the Fig. 10 (length 0.85 mm).

Female. Unknown.

Size. Length 6.75 mm; width 1.87 mm.

Etymology. The name is derived from the combination of opaque surface and colour of the integuments.

***Heteroderes brachmanoides* n. sp.** (Figs. 11, 35, 52)

Material examined. Holotype ♂ - **Pakistan:** Noshero Feroz distr., 8.V.2013 (ZACP). 5 Paratypes (1♂, 4♀♀) - Trai, Lower Dir, 3.VIII.2014 (CPG; ZACP).

Diagnosis. Species comparable to *H. longithorax* n. sp., it is separated by the less elongate pronotum and drawings of black colours on pronotum and elytra.

Description.

Male. Moderately shiny; entirely ferruginous with blackish vittae along the midline of pronotum, at the sides of the basal slope of pronotum, the base of elytra along the second and third interstriae of elytra transversally extended to the seventh interstria in the apical third, antennae and legs yellowish; covered with short and dense yellow-golden pubescence.

Head with the eyes as wide as the anterior margin of pronotum, frons convex, anterior margin

arcuate, directed downwards, protruding above the clypeus; punctuation uniformly distributed, punctures deep, simple, approximately of the same size, with very short, smooth intervals.

Antennae nearly reaching the apices of posterior angles of pronotum slightly serrate from the fourth article on; second and third articles subcylindrical, subequal in length with the second with a larger diameter; taken together 1,28x longer than fourth; fourth-tenth subconical, on average 2,3x longer than wide, last longer than penultimate, subellipsoidal.

Pronotum as long as wide, widest at the apices of the posterior angles, convex, sides subparallel for nearly all the length, posterior angles acute, very slightly divergent, with a short and very near to the lateral margins carina, lateral margins complete and visible in a dorsal view only for a very short length; punctuation uniformly distributed, double, larger, deep, simple punctures are more or less regularly mixed with extremely fine punctures with very short, smooth intervals.

Scutellum shield-shaped, convex, ridged at base, finely punctured.

Elytra 2,2x longer than pronotum and as wide as it, moderately convex, sides subparallel from the base to behind the middle, then very gradually converging to the apices; striae regularly marked and punctured; interstriae flat with very fine punctures and subrough surface.

Fourth tarsal segment with a long and narrow lamella.

Male genitalia as in the Fig. 11 (length 0.65 mm).

Female. Extremely similar to the male, distinct only by examination of genitalia.

Size. Length 4.65-5.60 mm; width 1.37-1.56 mm.

Etymology. The name is derived from the similarity of the colour patterns to those of *Aeoloderma brachmana* (Candèze, 1857).

***Heteroderes gallagheri* Platia & Schimmel, 1997**

Material examined. 390 spcms. ♂♀ - **Pakistan:** Chakri, Islamabad, 29.VI.2013; Kashmir, Bagh, 15.VII.2011; Tharparkar distr., Mithi, 18.IX.2012, 24.IX.2014; Trai, Lower Dir, 3.VIII.2014.

Distribution. Arab Emirates, Iran, Oman, Pakistan (Cate, 2007); Afghanistan (Nemeth & Platia, 2014).

***Heteroderes heydeni* (Reitter, 1891)**

Material examined. 2 spcms. ♂♀ - **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG; ZACP).

Distribution. Afghanistan, Iran, Pakistan, Tadjikistan, Turkmenistan, Uzbekistan (Cate, 2007).

***Heteroderes lenis* Candèze, 1859**

Material examined. 1 spcm. ♂ - **Pakistan:** Lower Dir (Swat), VII.2011 (ZACP).

Distribution. India (Himachal Pradesh, Kashmir, Uttar Pradesh), Oriental Region (Cate, 2007); Afghanistan (Platia, 2015b). **New species for Pakistan.**

***Heteroderes sabatinellii* Platia, 2015**

Material examined. 53 spcms. ♂♀ - **Pakistan:** Chakri, Islamabad, 29.VI.2013 (CPG; ZACP).

Distribution. Pakistan (Platia, 2015a).

***Heteroderes spinosus* Candèze, 1890**

Material examined. 7 spcms. ♂♀- **Pakistan:** Noshero Feroz distr., 8.V.2013; Trai, Lower Dir, 3.VIII.2014.

Distribution. India, Pakistan (Cate, 2007).

***Heteroderes subtilis* Jagemann, 1945**

Material examined. 2 spcm. ♂♀ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Tharparkar distr., Mithi, 18.IX.2012.

Distribution. India, Pakistan (Akhter *et al.*, 2012).

Tribe Dendrometrini Gistel, 1848

***Neothousius loebli* Schimmel & Platia, 1991** (Figs. 12, 12a, 53)

Material examined. 2 spcm. ♂ - **Pakistan:** Kashmir, Bagh, 15.VII.2011 (CPG). Male genitalia as in the Figs. 12, 12a (length 2.18 mm).

Distribution. Pakistan (Cate, 2007).

Tribe Elaterini Leach, 1815

***Mulsanteus sabatinellii* Platia, 2015**

Material examined. 1 spcm. ♂ - **Pakistan:** Kashmir, Pulandari, VII.2009 (CPG). Described on a single male specimen from Islamabad. The new specimen is larger than the holo type: length 12.5 mm; width 3.25 mm.

Distribution. Pakistan (Platia, 2015a).

***Nipponoelater brancuccii* (Schimmel, 1996)** (Figs. 13, 13a)

Material examined. 1 spcm. ♂ - **Pakistan:** Swat Valley, Kalam, 28.VI.2009 (CPG). Male genitalia as in the Figs. 13, 13a (length 3.5 mm).

Distribution. Nepal, India (Darjeeling), Thailand, Myanmar (Schimmel, 1996). **New species for Pakistan.**

Tribe Melanotini Candèze, 1859

***Melanotus loebli* Platia & Schimmel, 2001**

Material examined. 9 spcm. ♂♀ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Upper Dir, Swat, 11.IX.2011 (CPG; ZACP).

Distribution. India (Himachal Pradesh, Kashmir, Uttar Pradesh), Pakistan (Cate, 2007).

***Melanotus opicus* Candèze, 1900**

Material examined. 1 spcm. ♂ - **Pakistan:** Kashmir, Bagh, 15.VII.2011 (CPG).

Distribution. India (Kashmir), Pakistan (Cate, 2007).

***Melanotus punctosinus* Cate, Platia & Schimmel, 2002**

Material examined. 9 specm. ♂♀ - **Pakistan:** Noshero Feroz distr., 8.V.2013; Tharparkar distr., Miithi, 18.IX.2012; Lower Dir (Swat), VII.2011 (CPG; ZACP).

Distribution. Iran (Cate, 2007); Afghanistan (Platia, 2008); Pakistan (Platia, 2015a).

***Melanotus punctosus* (Walker, 1854)**

Material examined. 1 spcm. ♂ - **Pakistan:** Kashmir, Pulandari, VII.2009 (ZACP).

Distribution. India (Kashmir, Uttar Pradesh), Nepal, Pakistan, Oriental Region (Cate, 2007).

Tribe Pleonomini Semenov & Pjatakova, 1936

***Gurjevelater vartianorum* Platia & Gudenzi, 2000**

Material examined. 1 spcm. ♂ - **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG).

Distribution. Afghanistan, Pakistan (Cate, 2007).

Subfamily Cardiophorinae Candèze, 1860

Cardiophorus tharensis n. sp. (Figs. 20, 20a, 36, 54)

Material examined. Holotype ♀ - **Pakistan:** Thar, 2.VII.2013 (CPG).

Diagnosis. A species immediately separated from the all known of the region because of the large size.

Description.

Female. Not shiny; entirely blackish with antennae and legs ferruginous; covered with very dense, yellowish pubescence.

Frons slightly impressed in the anterior half, anterior margin moderately thickened, sinuate at the sides and at the middle, protruding above the clypeus; punctuation dense, punctures approximately of the same size, with very short, variable intervals and also contiguous.

Antennae not reaching for more of two articles the apices of posterior angles of pronotum, slightly serrated from the third article on; second article subcylindrical, twice longer than wide and 1,25x shorter than third; third-tenth conical, subequal in length, on average twice longer than wide, last as long as the previous, strongly constricted before the apex.

Pronotum 1,12x wider than long, widest at the middle, strongly convex with a vestige of superficial mid-longitudinal depression on the basal slope; sides very arcuate, from the middle equally converging forwards and backwards; posterior angles short, truncate, not divergent; lateral suture-like margins obsolescent at the anterior third; punctuation very dense and uniformly distributed, punctures variable in diameters but without two clear separate sizes, simple or very vaguely umbilicate with intervals smooth and on average a little smaller than their own diameters. Scutellum heart-shaped, as long as wide, impressed at middle, emarginate at base, finely punctured.

Elytra 2,4x longer than pronotum and as wide as it, convex, ovaliform with the great width at the middlestriae well marked and punctured; interstriae subconvex with very fine punctures.

Claws simple.

Bursa copulatrix sclerified as in the Figs. 20, 20a.

Male. Unknown.

Size. Length 8.75 mm; width 2.75 mm.

Etymology. The name is derived from Thar, where the species was collected.

Cardiophorus doggerioides n. sp. (Figs. 14, 14a, 55)

Material examined. Holotype ♂ - **Pakistan:** Chakri, Islamabad, 29.VI.2013 (CPG). 1 Paratype ♂ - Northwest Frontier, Barseen, 900 m, 10.VII.1998, G. Csorba & L. Ronkay leg. (HNHM).

Diagnosis. A species very allied to *C. doggeri* Vats & Chauhan, 1991, it is separated by the punctuation of pronotum not regularly double and by the shape of male genitalia.

Description.

Male. Shiny; entirely blackish with ferruginous shadings on base of elytra sometimes extended to the disk of pronotum and elytral suture; antennae and legs ferruginous; covered with very dense, declined, yellowish pubescence.

Frons slightly impressed before the anterior margin, this moderately thickened and substraight in the middle, punctuation very fine, punctures simple, very small with intervals smooth, and on average larger than their diameters.

Antennae reaching the apices of the posterior angles of pronotum, slightly serrated from the third article on; second article subcylindrical, twice longer than wide, 1,5x shorter than fourth;

fourth-tenth conical, third a little longer than following, fourth-tenth less twice longer than wide, last subellipsoidal.

Pronotum 1,1x wider than long, widest at the middle, very convex; sides very arcuate, slightly sinuate before the posterior angles, the latter, short, truncate, not divergent, not carinate; lateral suture-like margin obsolete after the middle; punctuation very fine and regularly distributed; punctures extremely small, approximately of the same size, only some of a little larger size very irregularly mixed, intervals very shiny and on average larger than their diameters. Scutellum heart-shaped, as long as wide, impressed in the middle, finely punctured and emarginate at the middle on the base.

Elytra 2,5x longer than pronotum and as wide as it, convex, ovaliform, widest at middle, striae well marked superficially punctured, interstriae subconvex with very fine punctuation.

Claws simple.

Male genitalia as in the Figs. 14, 14a (length 1.07 mm).

Female. Unknown.

Size. Length 6.2-6.3 mm; width 1.93-1.95 mm.

Etymology. The name is derived from the similarity of the species with *C. doggeri* Vats & Chauhan, 1991.

***Cardiophorus pakistanicus* Platia, 2015** (Figs. 21, 21a, 56)

Material examined. 2 spcms. ♂♀ - **Pakistan:** Kashmir, Bagh, 15.VII.2011; Tharparkar distr., Mithi, 24.IX. 2014 (CPG; ZACP). Described on two male specimens. Female extremely similar to male and difficult to separate without examination of genitalia. Bursa copulatrix sclerified as in the Figs. 21, 21a.

Distribution. Pakistan (Platia, 2015b).

***Cardiophorus pseudofebriens* Buysson, 1912**

Cardiophorus varius Cate, Platia & Schimmel, 2002

Material examined. 3 spcms. ♀♀- **Pakistan:** Trai, Lower Dir, 3.VIII.2014 (CPG). Described from Egypt (Sinai).

Distribution. Egypt (Sinai) (Arabien) (Schenkling, 1927); Iran (Cate, 2007); Turkey, Israel, Jordan (Platia, 2010); Pakistan (Akhter *et al.*, 2011) (under *C. varius* Cate, Platia & Schimmel, 2002 syn. in Nemeth & Platia, 2014).

***Dicronychus islamabadensis* n. sp.** (Figs. 22, 22a, 27, 38, 57)

Material examined. Holotype ♀ - **Pakistan:** Islamabad, 15.VIII.2011 (CPG).

Diagnosis. A species immediately separated from all the known species of the region because of the last abdominal sternite shortly emarginated before the apex.

Description.

Female. Moderately shiny; entirely dark ferruginous with undefined blackish shadings; antennae and legs yellow-ferruginous; covered with dense yellow-golden pubescence.

Frons flat, only just impressed before the anterior margin, this moderately arcuate and just protruding above the clypeus; punctuation dense, coarse; punctures deep, simple or vaguely umbilicate with very short intervals or contiguous.

Antennae mutilated (only five articles of the left antenna are present), not reaching the apices of posterior angles for about two articles (estimated); second article subcylindrical, twice longer than wide, fourth-fifth conical, 2,7x longer than wide and subequal in length.

Pronotum 1,1x wider than long, widest at the middle, convex; sides arcuate, from the middle nearly regularly converging to the posterior angles, the latter truncate, not divergent, with a very short,

few visible carina; lateral suture-like margin curved and interrupted after the middle; punctuation dense, uniformly distributed, punctures fine, simple, approximately of the same size with intervals smooth and smaller than their diameters, on the basal slope the punctures are extremely fine.

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

Elytra 2,6x longer than pronotum and as wide as it, very convex, ovaliform with sides widest at the middle, striae well marked and punctured, interstriae subconvex finely punctured.

Claws dilated in the first half.

Last abdominal sternite emarginate before the apex as in the Fig. 27.

Bursa copulatrix sclerified as in the Figs. 22, 22a.

Male. Unknown.

Size. Length 9.0 mm; width 3.0 mm.

Etymology. From the city of Islamabad, where the species was collected.

***Dicronychus mithiensis* n. sp.** (Figs. 23, 23a, 37, 58)

Material examined. Holotype ♀ - **Pakistan:** Tharparkar distr., Mithi, 24.IX.2014 (CPG).

Diagnosis. A species comparable with *D. oxypterus* (Candèze, 1860) for the general shape and size, it can be separated by the clear, double punctuation of pronotum.

Description.

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

Frons flat, just impressed before the anterior margin, this moderately and regularly arcuate, protruding above the clypeus; punctuation moderate, uniformly distributed, punctures deep, simple, approximately of the same size with smooth intervals on average equal to a little smaller than their own diameters.

Antennae not reaching for about two articles the apices of posterior angles of pronotum, slightly serrated from the third article; second article subcylindrical, twice longer than wide and 1,35x shorter than fourth; fourth-tenth conical, subequal in length and on average 2,5x longer than wide, last subellipsoidal.

Pronotum 1,1x longer than wide, widest at the middle, regularly convex; sides regularly arcuate, posterior angles short, truncate, not divergent with a short carina; lateral suture-like margins substraight and complete; punctuation dense, uniformly distributed, double; larger punctures are more or less regularly mixed with much more fine punctures, intervals very short and smooth.

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

Elytra 2,34x longer than pronotum and wide as it, convex; sides widest before the middle then very gradually converging to the apices; striae well marked and punctured, interstriae subconvex with very fine punctures.

Claws dilated in the first half.

Bursa copulatrix sclerified as in the Figs. 23, 23a.

Male. Unknown.

Size. Length 9.3 mm; width 2.68 mm.

Etymology. The name is derived from Mithi city, where the species was collected.

***Dicronychus stolatoides* n. sp.** (Figs. 15, 15a, 59)

Material examined. Holotype ♂ - **Pakistan:** Tharparkar distr., Mithi, 18.IX.2012 (ZACP); 2 Paratypes ♂ - same data as HT (CPG).

Diagnosis. A species comparable with *D. stolatus* (Erichson, 1840) for the general shape, colour and size it is easily separated by the very visible double punctuation of pronotum.

Description.

Male. Moderately shiny; head, pronotum except the anterior angles yellowish, scutellum, first elytral interstria black to dark ferruginous, remaining part of elytra, antennae and legs yellowish; covered with dense, yellow-fulvous pubescence.

Frons convex, flat before the anterior margin, this regularly arcuate and just protruding above the clypeus; punctuation very dense, double; larger punctures are more or less regularly mixed with finer punctures with very short intervals.

Antennae not reaching for more of two articles the apices of posterior angles of pronotum slightly serrated from third article on; second article subcylindrical, twice longer than wide and 1.5x shorter than fourth; fourth-tenth subtriangular, on average twice longer than wide, last subellipsoidal.

Pronotum just wider than long, widest at the middle, strongly convex, abruptly sloping at sides and at base, sides arcuate, from the middle converging and very slightly sinuate before the posterior angles, the latter short, truncate, just divergent with fine carina; lateral suture-like margins obsolete at the anterior third; punctuation dense, uniformly distributed, double, larger, deep, simple punctures are regularly mixed with extremely fine punctures with very small and smooth intervals.

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

Elytra 2.2x longer than pronotum and as wide as it, convex, ovaliform with sides widest at the middle, striae well marked and punctured, interstriae flat with very fine punctures.

Claws dilated in the first half.

Male genitalia as in the Figs. 15, 15a (length 1.03 mm).

Female. Unknown.

Size. Length 6.6-7.0 mm; width 2.0-2.15 mm.

Etymology. The name is derived from the similarity of the species with *Dicronychus stolatus* (Erichson, 1840).

***Dicronychus oxypterus* (Candèze, 1860)** (Figs. 16, 16a, 60)

Material examined. 2 spcm. ♂ - **Pakistan:** Islamabad, 600 m, 1-15.IX.2012, G. Sabatinelli leg.; Thar, 2.VII.2013 (CPG). Male genitalia as in the Figs. 16, 16a (length 1.4 mm).

Distribution. Hindoustan (Schenkling, 1927); Afghanistan (Nemeth & Platia, 2014). **New species for Pakistan.**

***Dicronychus stolatus* (Erichson, 1840)** (Figs 17, 17a, 24, 24a, 61)

Material examined. 6 spcm. (1♂, 5♀♀) - **Pakistan:** Tharparkar distr., Mithi, 24.IX. 2014 (CPG; ZACP). Male genitalia as in the Figs. 17, 17a (length 0.8 mm). Bursa copulatrix sclerified as in the Figs. 24, 24a.

Distribution. Described from Oriental India (Ostindien). India, Sri Lanka (Schenkling, 1927); Maldives (Platia, 2015c). **New species for Pakistan.**

***Phorocardius pakistanicus* n. sp.** (Figs. 18, 18a, 25, 25a, 62, 63, 64)

Material examined. Holotype ♂ - **Pakistan:** Thar, 2.VII.2013 (ZACP). 6 Paratypes (5♂♂, 1♀) - (4) same data as HT; (1) Lower Dir (Swat), VII.2011 (CPG; ZACP).

Diagnosis. Very similar to *P. tibialis* n. sp. but without dilated tibiae.

Description.

Male. Shiny; colour variable; head, base of elytra, around of scutellum and first two-three elytral striae, blackish, remaining part of pronotum, elytra, antennae and legs reddish-yellowish (HT and three paratypes) to entirely dark ferruginous (1 paratype) to only with pronotum ferruginous and head and elytra blackish (1 paratype); covered with dense yellow-golden pubescence.

Frons slightly impressed at the anterior margin, this substraight or subarcuate, moderately thickened and protruding above the clypeus; punctuation very dense with very small intervals, punctures of the same size, deep, simple.

Antennae reaching the apices and exceeding for the half of the last article the posterior angles of pronotum, slightly serrated from the third article on; second article subcylindrical, 1,7x longer than wide and 1,5x shorter than third; third-tenth subtriangular, gradually slenderer from twice longer than wide to 3x longer than wide, last subellipsoidal constricted before the apex.

Pronotum just longer than wide, widest behind the middle, convex, with a very narrow and shallow mid-longitudinal line on the basal slope; sides moderately arcuate, shortly sinuate before the posterior angles, the latter short, truncate not divergent shortly carinate; lateral suture-like margins substraight, very fine and nearly complete; punctuation uniformly distributed, punctures fine, simple, approximately of the same size, some a little larger but very irregularly distributed can be present.

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

Elytra 2,9-3x longer than pronotum and a little wider than it, convex; sides subparallel from base to the middle then gradually narrowing and more strongly tapering in the last third to the apices, these are subtruncate; striae well marked and deeply punctured; interstriae flat from base to the middle then convex to subcostiform in the last third.

Claws bifid before the apex.

Male genitalia as in the Figs. 18, 18a (length 1.37 mm).

Female. Completely blackish except for antennae and legs ferruginous; very similar to the male with antennae just a little shorter.

Bursa copulatrix sclerified as in the Figs. 25, 25a.

Size. Length 8.8-10 mm; width 2.35-2.68 mm.

Etymology. The name is derived from the country where the species was collected.

Phorocardius tibialis n. sp. (Figs. 19, 19a, 26, 26a, 28, 39, 65)

Material examined. Holotype ♂ - **Pakistan:** Chakri, Islamabad, 29.VI.2013 (ZACP); 1 Paratype ♀ - Trai, Lower Dir, 3.VIII.2014 (CPG).

Diagnosis. Very similar to *P. pakistanicus* n. sp., it is immediately separated by the tibiae dilated and with very strong, thickened pubescence.

Description.

Male. Moderately shiny; entirely ferruginous with blackish shadings on the base of elytra around the scutellum; covered with dense, long and thickened, particularly on the tibiae, yellowish pubescence.

Frons slightly impressed between the eyes and before the anterior margin, this subarcuate, directed downwards and protruding above the clypeus; punctuation coarse with punctures variable in size, simple or vaguely umbilicate with very short shiny intervals or contiguous.

Antennae mutilated.

Pronotum 1,15x longer than wide, widest at the middle, convex; sides moderately arcuate from the middle regularly converging to the posterior angles, the latter short, truncate, not divergent, with a very fine, few visible carina; lateral suture-like margins substraight, very fine, obsolete before the anterior margin; punctuation much more fine than frontal punctuation, uniformly distributed,

punctures approximately of the same size, deep, simple with intervals, shiny, on average equal to their diameters.

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

Elytra 2,5x longer than pronotum and a little wider than it, convex, rather acuminate at apices; sides from base regularly converging to the apices; striae well marked and punctured, interstriae convex from base to near the apices with the eighth interstria subcostiform and the extreme compressed.

Anterior and median tibiae dilated in the middle with very strong, thickened pubescence on the outer margin as in the fig. 28.

Claws bifid before the apex.

Male genitalia as in the Figs. 19, 19a (length 1.31 mm).

Female. Identical to the male. We can evaluate the length of antennae because they are also mutilated.

Bursa copulatrix sclerified as in the Figs. 26, 26a.

Size. Length 8.5 (♂) - 10.0 mm (♀); width 2.09 (♂) - 2.50 mm (♀).

Etymology. The name is derived from the dilated tibiae.

References

Akhter, A.M.; Drumont, A.; Rizvi, A.S. & Ahmed, Z. 2011. Notes on species of *Cardiophorinae* (Candèze, 1860) from Pakistan with description of a new species (Coleoptera Elateridae) and new records. *Pakistan Journal of Zoology*, **43**(3): 477-481.

Akhter, A.M.; Kabalak, M.; Rizvi, A.S. & Ahmed, Z. 2014. Contributions to *Agrypninae* (Coleoptera: Elateridae) fauna of Pakistan with four new species three new records. *Turkish Journal of Entomology*, **38**(2): 113-123.

Akhter, A.M.; Platia, G.; Rizvi, A.S. & Ahmed, Z. 2012. Notes on species of the genus *Meristhus* Candèze, 1857 (Coleoptera: Elateridae: Agrypninae) from Pakistan with a description of a new species. *Pakistan Journal of Zoology*, **44**(1): 67-70.

Bouchard, P.; Bousquet, Y.; Davies, A.E.; Alonso-Zarazaga, M.A.; Lawrence, J.F.; Lyal, C.H.C.; Newton, A.F.; Reid, C.A.M.; Schmitt, M.; Ślipiński, S.A. & Smith, A.B.T. 2011. Family-group names in Coleoptera (Insecta). *ZooKeys*, **88**: 1-972.

Cate, P.C. 2007. *Family Elateridae*, pp. 89-209. In: Löbl, I. & Smetana, A. (eds.). *Catalogue of Palaearctic Coleoptera, vol. 4. Elateroidea-Derontoidea-Bostrichoidea-Limexyloidea-Cleroidea-Cucujoidea*. Apollo Books, Stenstrup, 935 pp.

Fleutiaux, E. 1931. Les Élatérides de l'Indochine Française (Catalogue raisonné). Quatrième partie. *Bulletin de la Société zoologique de France*, **56**: 306-334.

Nemeth, T. & Platia, G. 2014. On some Palaearctic click beetles deposited in the Hungarian Natural History Museum, 2 (Coleoptera: Elateridae). *Zootaxa*, **3841**(4): 451-490.

Platia, G. 2007. Order Coleoptera, family Elateridae. *Arthropod fauna of the UAE*, **1**: 194-210.

Platia, G. 2008. Descriptions of new species of click beetles from the Palaearctic Region and Taiwan, with chorological and synonymical notes (Insecta Coleoptera Elateridae). *Quaderno di Studi e Notizie di Storia naturale della Romagna*, **27**: 187-215.

Platia, G. 2010. New species and chorological notes of click beetles from Palearctic Region, especially from the Middle East (Coleoptera Elateridae). *Boletín de la Sociedad Entomológica Aragonesa*, **46**: 23-49.

Platia, G. 2011. New species and new records of click beetles from the Palearctic region (Coleoptera Elateridae). *Boletín de la Sociedad Entomológica Aragonesa*, **48**: 47-60.

Platia, G. 2015a. New species and records of Elateridae from North Pakistan, mostly collected by Guido Sabatinelli in 2011-2012 (Coleoptera). *Arquivos Entomoloxicos*, **13**: 3-52.

Platia, G. 2015b. Description of new species of click-beetles from the Palearctic region with interesting new records (Coleoptera, Elateridae). *Boletín de la Sociedad Entomológica Aragonesa*, **56**: 13-25.

Platia G. 2015c. Contribution to the knowledge of click beetles from Maldives (Coleoptera: Elateridae). *Boletín de la Sociedad Entomológica Aragonesa*, **57**: 182-184.

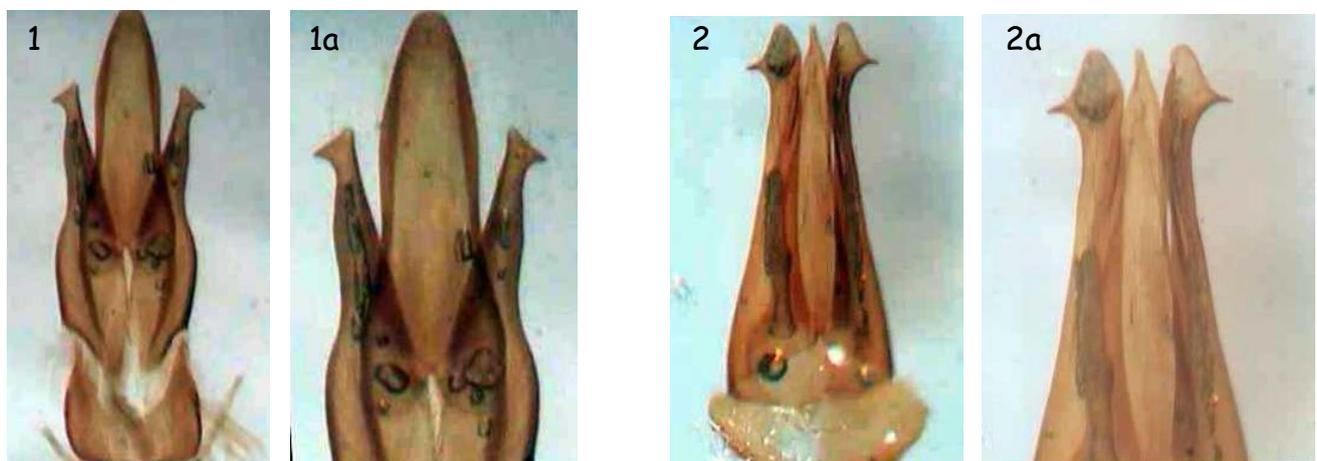
Platia, G. & Gudenzi, I. 1997. Revisione delle specie del genere *Drasterius* Eschscholtz della regione orientale. (Coleoptera Elateridae, Conoderini). *Lambillionea*, **97**: 402-416.

Schenkling, S. 1925-1927. *Coleopterorum Catalogus auspiciis et auxilio W. Junk*. Pars 80-88, Elateridae I-II. In: *Junk, W. Berlin*, pp. 1-636.

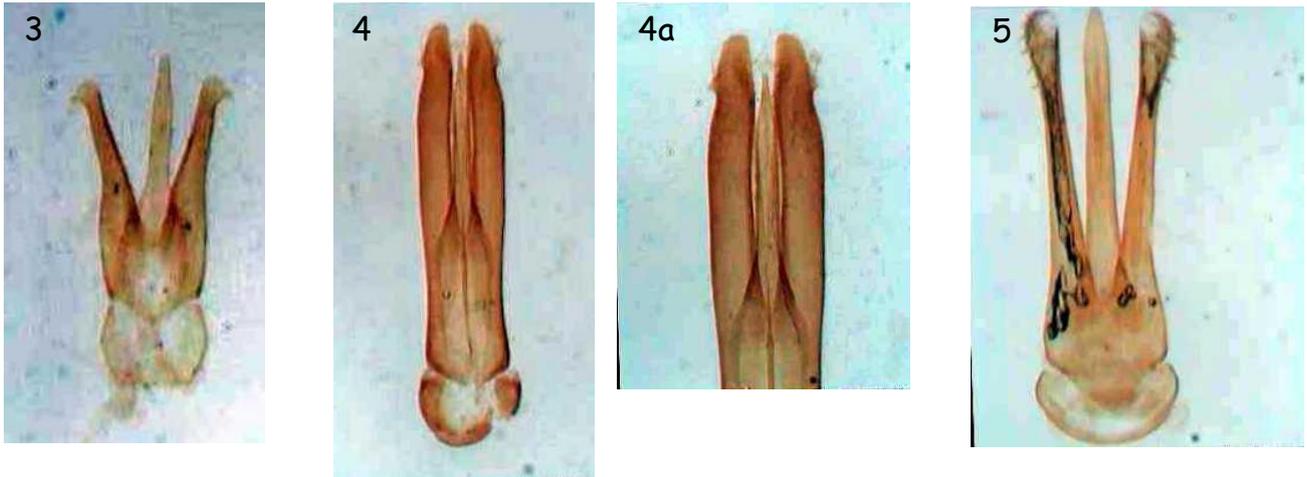
Schimmel, R. 1996. Neue Arten aus den- *Elater*- und *Megapenthes*-Gruppen aus Indien und Neuseeland (Coleoptera, Elateridae). *Entomologische Blätter*, **92**(3): 121-128.

Vats, L.K. & Chauhan, R.L. 1991. The species of *Cardiophorus* from North India (Elateridae: Coleoptera). *Research Bulletin (Science) of the Panjab University Science*, **42**(1-4): 11-29.

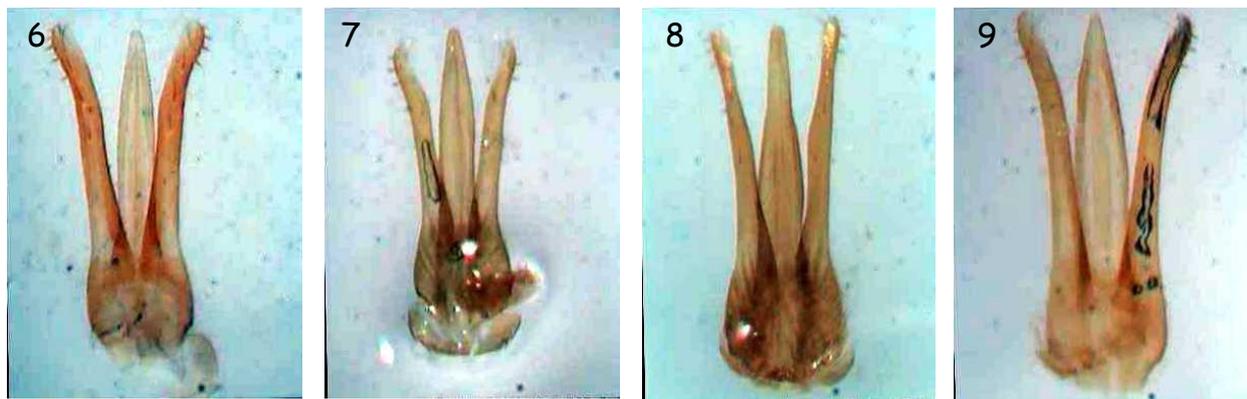
Vats, L.K. & Chauhan, R.L. 1992. Species of *Conoderus* Esch. with notes on genus (Conoderinae, Elateridae: Coleoptera). *Uttar Pradesh Journal of Zoology*, **12**(1): 28-36.



Figs. 1-2.- Male genitalia in dorsal view. 1, 1a.- *Adebocera nitidus* (Candèze, 1857). 2, 2a.- *Agrypnus muscosus* (Candèze, 1893).



Figs. 3-5.- Male genitalia in dorsal view. **3.-** *Rismethus pakistanicus* n. sp. **4, 4a.-** *Meristhus (Sulcimerus) quadripunctatus* (Candèze, 1857). **5.-** *Aeoloderma brachmana* (Candèze, 1859).



Figs. 6-9.- Male genitalia in dorsal view. **6.-** *Conoderus mithiensis* n. sp. **7.-** *Conoderus drasterioides* n. sp. **8.-** *Conoderus nigromaculosus* Vats & Chauhan, 1992. **9.-** *Heteroderes longithorax* n. sp.



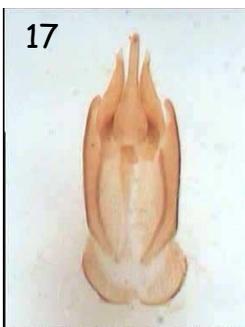
Figs. 10-12.- Male genitalia in dorsal view. **10.-** *Heteroderes opacofulvus* n. sp. **11.-** *Heteroderes brachmanoides* n. sp.; **12, 12a.-** *Neathousius loebli* Schimmel & Platia, 1991.



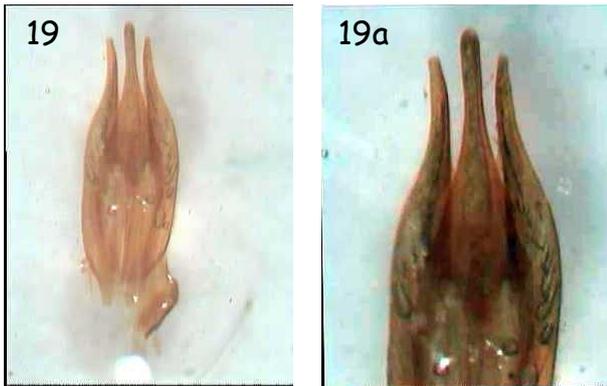
Figs. 13-14.- Male genitalia in dorsal view. 13, 13a.- *Nipponoelater brancuccii* (Schimmel, 1996). 14, 14a.- *Cardiophorus doggerioides* n. sp.



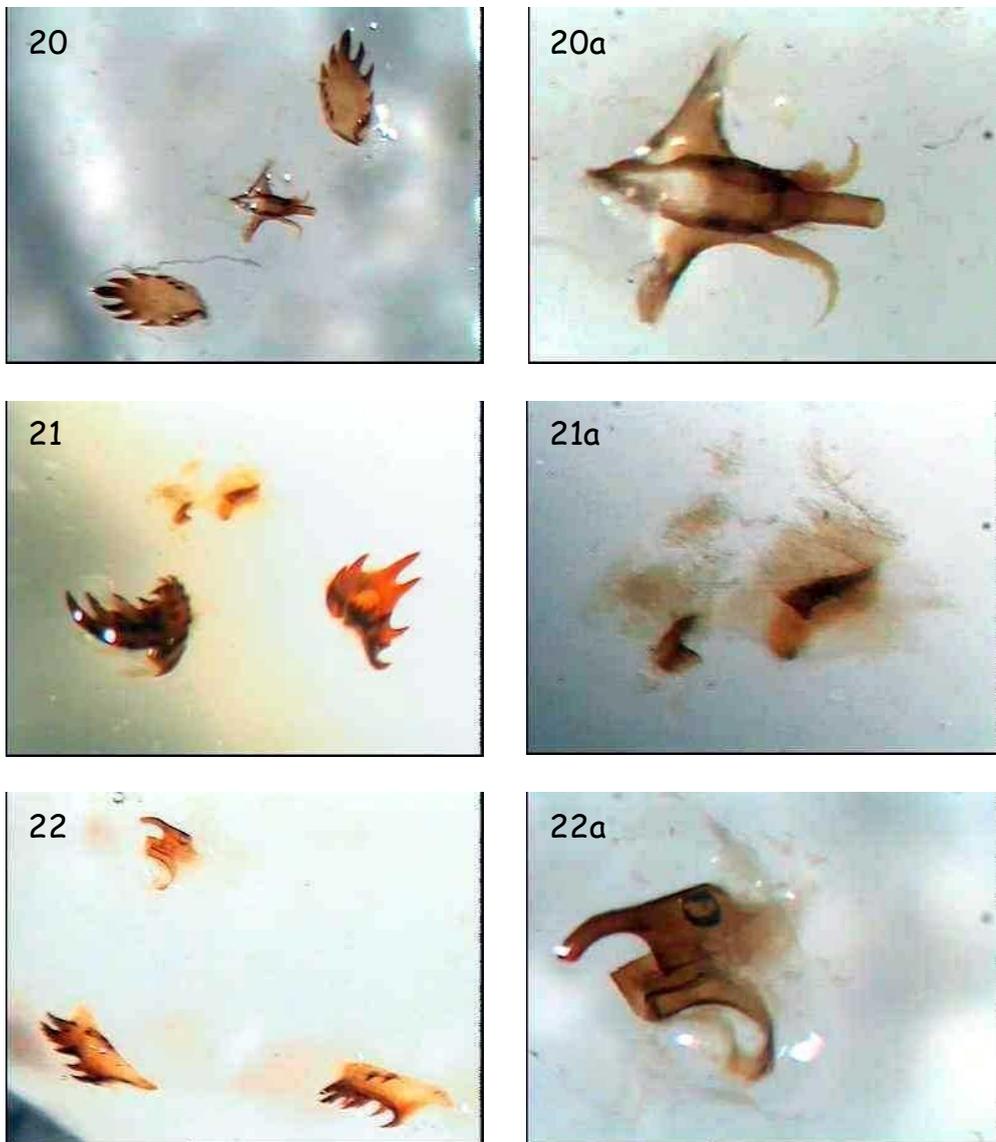
Figs. 15-16.- Male genitalia in dorsal view. 15, 15a.- *Dicronychus stolatoides* n. sp. 16, 16a.- *Dicronychus oxypterus* (Candèze, 1860).



Figs. 17-18.- Male genitalia in dorsal view. 17, 17a.- *Dicronychus stolatus* (Erichson, 1840). 18, 18a.- *Phorocardius pakistanicus* n. sp.



Figs. 19, 19a. - Male genitalia in dorsal view. *Phorocardius tibialis* n. sp.



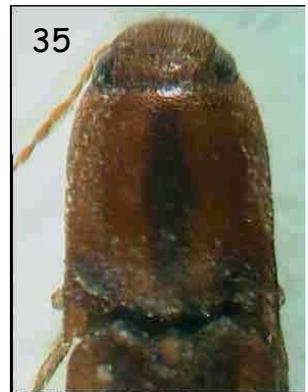
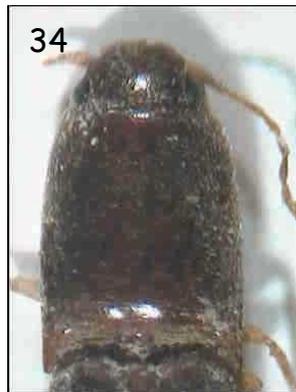
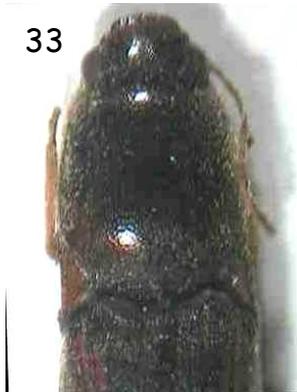
Figs. 20-22.- Sclerites of the bursa copulatrix. 20, 20a.- *Cardiophorus tharensis* n. sp. 21, 21a.- *Cardiophorus pakistanicus* Platia, 2015. 22, 22a.- *Dicronychus islamabadensis* n. sp.



Figs. 23-26.- Sclerites of the bursa copulatrix. 23, 23a.- *Dicronychus mithiensis* n. sp. 24, 24a.- *Dicronychus stolatus* (Erichson, 1840). 25, 25a.- *Phorocardius pakistanicus* n. sp. 26, 26a.- *Phorocardius tibialis* n. sp.

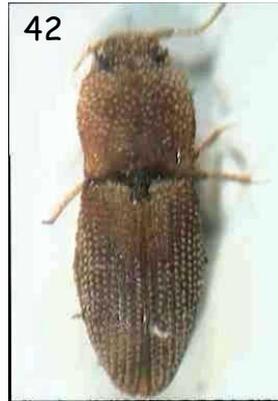
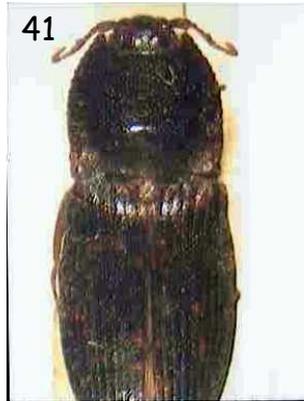
Fig. 27.- *Dicronychus islamabadensis* n. sp., last abdominal sternite.

Fig. 28.- *Phorocardius tibialis* n. sp., median tibia.



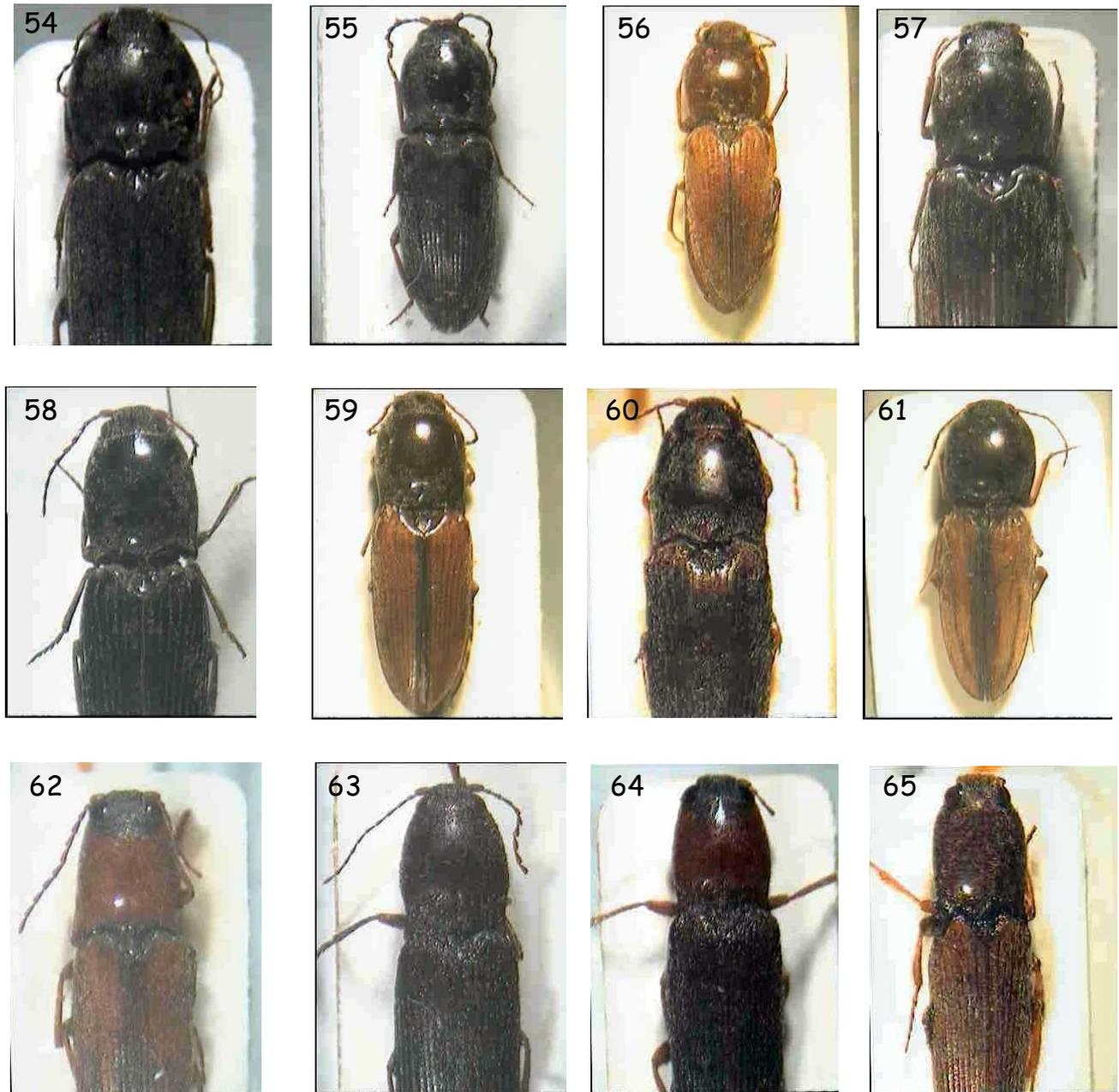
Figs. 29-39.- Details of profile of pronotum or elytra.

- 29.- *Rismethus pakistanicus* n. sp.
- 30.- *Aeoloides crassus* n. sp.
- 31.- *Conoderus mithiensis* n. sp.
- 32.- *Conoderus cylindricus* n. sp.
- 33.- *Conoderus nigromaculosus* Vats & Chauhan, 1992.
- 34.- *Heteroderes longithorax* n. sp.
- 35.- *Heteroderes brachmanoides* n. sp.
- 36.- *Cardiophorus tharensis* n. sp.
- 37.- *Dicronychus mithiensis* n. sp.
- 38.- *Dicronychus islamabadensis* n. sp.
- 39.- *Phorocardius tibialis* n. sp. (♂).



Figs. 40-53.- Habitus in total or partial view.

- 40.- *Adelocera nitidus* (Candèze, 1857) (♂).
 41.- *Agrypnus muscosus* (Candèze, 1893).
 42.- *Rismethus pakistanicus* n. sp.
 43.- *Meristhus (Sulcimerus) quadripunctatus* (Candèze, 1857).
 44.- *Aeoloderma brachmana* (Candèze, 1859).
 45.- *Aeoloides crassus* n. sp.
 46.- *Conoderus mithiensis* n. sp.
 47.- *Conoderus drasterioides* n. sp. (♂).
 48.- *Conoderus drasterioides* n. sp. (♀).
 49.- *Conoderus cylindricus* n. sp.
 50.- *Conoderus nigromaculosus* Vats & Chauhan, 1992.
 51.- *Heteroderes longithorax* n. sp.
 52.- *Heteroderes brachmanooides* n. sp.
 53.- *Neoathousius loebli* Schimmel & Platia, 1991.



Figs. 54-65.- Habitus in total or partial view.

- 54.- *Cardiophorus tharensis* n. sp.
- 55.- *Cardiophorus doggerioides* n. sp.
- 56.- *Cardiophorus pakistanicus* Platia, 2015 (♀).
- 57.- *Dicronychus islamabadensis* n. sp.
- 58.- *Dicronychus mithiensis* n. sp.
- 59.- *Dicronychus stolatoides* n. sp.
- 60.- *Dicronychus oxypterus* (Candèze, 1860).
- 61.- *Dicronychus stolatatus* (Erichson, 1840) (♀).
- 62.- *Phorcardius pakistanicus* n. sp. (♂).
- 63-64.- *Phorcardius pakistanicus* n. sp. (♀♀).
- 65.- *Phorcardius tibialis* n. sp. (♂).



Fig. 66.- Landscapes of some Pakistan collecting localities. Mithi town.



Figs. 67-71. Landscapes of some Pakistan collecting localities.

67.- Mithi desert.

68-69.- Trai village in the Lower Dir.





Figs. 70-71. Landscapes of some Pakistan collecting localities. Noshero Feroz district.