New and noteworthy pleurostict scarab beetles (Coleoptera: Scarabaeidae)

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Abstract: Ten new species from the genera *Chalepides, Eutheola, Golofa, Pycnoschema* (Dynastinae), *Anomala* and *Parastasia* (Rutelinae) are described, and a new subgenus is established in *Golofa*. Taxonomic remarks and/or extension of distribution are provided for ten species of the genera *Alissonotum*, *Phileurus* (Dynastinae), *Ectinohoplia, Polyphylla* (subgen. *Granida*) (Melolonthinae), *Anomala, Parastasia, Phyllopertha* and *Trichanomala* (Rutelinae).

Key words: Scarabaeidae, new taxa, new records, taxonomic remarks.

Introduction

In the course of identification of recently collected scarabaeoid beetles deposited at my institute in Moscow, I discovered a number of new or little-known species; results of investigations of twenty of them are presented in this paper. All specimens are housed in the Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow (IEE).

Taxonomic descriptions

Subfamily Dynastinae

Alissonotum piceum (Fabricius, 1775)

Remarks: Endrodi (1985) treated a population from Sri Lanka as a distinct subspecies named *A. p. krombeini* (Endrodi, 1976) (originally described as *Heteronychus krombeini*). These subspecies are based on some differences in the shape of the male paramera. However, I had examined a male specimen from south-east India (Madras, Manapakkam, 13.09.2002) which possesses an intermediate form of the male parameres. Thus, it indicates at least an existence of an intergrading population in southern India. I prefer to fully synonymize both these forms (**syn. nov**.).

***Chalepides euhirtus* Prokofiev, sp. nov.** (Figs. 1,2)

Material: Holotype, female, Peru, Junin, near Calabaza vill., 11°29.8' S, 74°51.9' W, alt. 2964 m, 17.12.2010, V. & S. Sinyaev & V. Izerskiy leg.

Description of holotype: Length 26 mm, width across humeri 10 mm, length of elytra 14.5 mm. Body dark reddish brown to blackish here and there on head, legs, sterna and pronotum; elytra reddish-castaneous. Upperside of head, pronotum and elytra glabrous; sterna more or less dense covered by yellowish and rusty-golden hairs, except disc of metasternum, which is

glabrous, with median sulcus; sides of abdominal sternites hairy, but the middle part of abdomen glabrous; last abdominal sternite with a row of setigerous pores close to its distal margin; this row interrupted in middle by a short distance. Propygidium and anterior half of pygidium entirely covered by pale hairs of moderate length, their density is similar to such on upper parts of abdominal sternites; apical part of pygidium glabrous. Clypeus large, somewhat transverse, lateral margins parallel, anterior margin truncate, straight; anterior angles rounded (Fig. 1); clypeofrontal suture complete and well discernible, straight; clypeus, frons and vertex similarly punctate; punctures simple, moderate in size, and rather dense. Eyes somewhat bulging. Antennae 10-jointed; club scarcely shorter than summary length of segments 2-7. Mandibles broad, with apex broadly rounded and slightly angulate laterally. Last segment of mandibular palpi as long as summary length of two preceding joints, narrow, rounded at apex. Pronotum simply and weakly convex, 1.3 times as broad as long; anterior and lateral margins bordered; basis with border near posterior angles only. Sides of pronotum nearly parallel at basal half, but distinctly convergent in anterior half; anterior angles of pronotum long and acute; anterior margin gently convex in middle; basis of pronotum weakly but clearly concave before scutellum; posterior angles broadly rounded (Fig. 1). Punctation of pronotum fine and moderately sparse. Prosternal process high, with apex rounded, transversely oval. Scutellum triangular, mostly with microsculpture only, only few fine punctures observable. Elytra gently contracted backwards, with double rows of punctures well expressed, except an apical quarter, where obsolete; juxtasutural stria and first double row impressed (the latter slightly less so than the juxtasutural stria and not in apical part of elytra). First interspace (between juxtasutural stria and first double row of punctures) densely punctate, punctures deep and rather large; similar punctures are present in second interspace also (between first and second double rows); other interspaces with miscrosculpture only, except the last one (near lateral margin of elytra), which is also punctured, as well as apical quarter, but with punctures smaller and less deep than in first and second interspaces; apical part of elytra also with fine wrinkles. Lateral borders of elytra strongly dilated near middle, dilatation short but very distinct and callose (Fig. 2). Apical knob somewhat better developed than the humeral one. Propygidium not produced backward; suture between propygidium and pygidium well discernible. Pygidium twice as broad as long, strongly convex, bulging at apex, sparsely and finely punctate. Fore tibiae tridentate, teeth sharp. Hind tibiae not very broad, distinctly constricted toward apex; apical margin denticulate, with 7-9 unequal bristles. Middle and hind tarsi longer than tibiae. Male unknown.

Differential diagnosis: This new species is similar to *C. osunai* Joly et Escalona, 2002 and *C. howdenorum* Joly et Escalona, 2002 due to the presence of the well developed pilosity on the pygidium; however, the punctation of pygidium is much finer than in these compared species. Furthermore, the new species differs from *C. osunai* in the presence of the lateral dilatation of elytra in the females and from *C. howdenorum* in the absence of the green metallic sheen (Joly, Escalona, 2002).

Etymology: This species is named from its hairy pygidium.

***Chalepides unduavicus* Prokofiev, sp. nov.** (Figs. 3-6)

Material: Holotype, male, Bolivia, La Paz, 2.5 km W Unduavi, 16º18.5´ S, 67º53.9´ W, alt. 3200 m, 05.01.2010, V. & S. Sinyaev & A. Zamesov leg. Paratypes: 2 males, 2 females (including allotype), the same data as for the holotype; 1 female, Bolivia, La Paz, Lago Titicaca, 16º23.8´ S, 67º41.8´ W, alt. 4000 m, 11.01.2010, V. & S. Sinyaev & A. Zamesov leg.; 12 males, 4 females, Bolivia, Cochabamba, Sierra Siberia, 18 km SE Pojo, 17°50.2' S, 64°42.1' W, alt. 2442 m, 12-13.12.2009, V. & S. Sinyaev & A. Zamesov leg.; 1 male, 1 female, Bolivia, Cochabamba, Sierra Siberia, 16 km SE Pojo, 17°49.1' S, 64°42.5' W, alt. 2308 m, 14.12.2009, V. & S. Sinyaev & A. Zamesov leg.; 1 male, Bolivia, La Paz, 9.3 km SE Coroico, 16°14.7' S, 67°39.6' W, alt. 1980 m, 02-03.01.2010, V. & S. Sinyaev & A. Zamesov leg.; 1 female, Bolivia, La Paz, 10 km S peak Mt. Illimani, 16°44.2' S, 67°49.0' W, alt. 3130 m, 11.01.2010, V. & S. Sinyaev & A. Zamesov leg.; 2 males, Peru, Cusco, 12 km SW Marcapata, 13°35.4' S, 70°57.9' W, alt. 2850 m, 28-30.11.2010, V. & S. Sinyaev & Yu. Bezverkhov leg.; 1 male, 1 female, Peru, Junin, near Calabaza vill., 11°29.8' S, 74°51.9' W, alt. 2964 m, 17.12.2010, V. & S. Sinyaev & V. Izerskiy leg.

Description of holotype: Length 22 mm, width across humeri 9 mm, length of elytra 13 mm. Body black, here and there with slight reddish-brown tint, shining; fore tarsi reddish-brown; thorax densely covered with long rusty-golden hairs; propygidium fully covered with moderately long dense brush-like rusty-golden hairs. Upperside, abdomen and pygidium glabrous, except a transverse row of rather long rusty-golden hairs along posterior margin of each abdominal sternite and on apex of pygidium. Clypeus longer than broad, sharply contracted anteriorly, with apex bluntly pointed and distinctly recurved. Sides of clypeus very weakly emarginated immediately behind apex, but much more at the base (Fig. 3). Margins of clypeus completely bordered. Mandibles narrow, lanceolate, simple pointed at apex. Antennae 10-jointed; club slightly shorter than funicle, but distinctly longer than summary length of segments 2-7. Last joint of mandibular palpi extremely long, much longer than summary length of two preceding joints; flattened, very slightly expanded toward its obliquely curved and rounded apex. Frontoclypeal suture anteriorly convex and laterally sharp, but widely disrupted medially; on each side it terminates as a blunt tubercle separated from the contralateral one by a distance exceeding this between tubercle and lateral margin of clypeus. Frons impressed behind tubercles. Clypeus rather strongly and densely punctured; frons and vertex similarly, but more scarcely punctured. Pronotum simply convex, 1.7 times as broad as long, with maximum width at the middle, sides much more convergent anteriorly than posteriorly; anterior and lateral margins bordered, basis with border on sides only, widely disrupted medially. Anterior angles of pronotum short but rather acute, posterior angles rounded; anterior and posterior margins of pronotum weakly convex, lateral margins rounded. Pronotum nearly impunctate. Scutellum large, triangular, with slight traces of punctations. Elytra gently contracted backwards, rather scarcely and irregularly, but distinctly punctated; punctate rows indistinct; juxtasutural line weakly impressed in apical half of elytra only; humeral and apical knobs weakly expressed. Pygidium (Fig. 4) not very shortened, 2.2 times as broad as long, simply and weakly convex, glabrous, scantily punctate.

Fore tarsi strongly thickened, shortened; inner claw enlarged and strongly curved. Fore tibiae tridentate. Hind femora with two rows of setigerous punctures along anterior and posterior margins. Hind tibiae not very broad, distinctly constricted toward apex; apical margin with 8 rather long and spaced bristles. Middle and hind tarsi longer than tibiae. Aedeagus, as in Figs. 5, 6.

Female allotype: Length 26 mm, width across humeri 11 mm, length of elytra 16 mm. Anterior sides of clypeus behind apex nearly straight. Frontoclypeal suture and tubercles very weak. Pronotum 1.5 times as broad as long, sides nearly parallel in basal two-thirds, gently convergent anteriorly. Humeral and apical knobs weakly expressed; lateral margins of elytra somewhat thickened. Double rows of punctures slightly more distinct. Pygidium 2.7 times as broad as long. Fore tarsi not thickened, longer than in the males; fore claws equal, thin.

Variations. Males: Length 17-27 mm (usually 23-26 mm), width across humeri 7-11 mm, length of elytra 11-16 mm. Almost black to more or less reddish brown; freshly born specimens are more bright reddish brown or castaneous in color. Tubercles on frons variously developed. Pronotum 1.5-1.7 times as broad as long; sides nearly parallel at basal two-thirds to gently rounded; sometimes with small and very sparse punctures. Double rows of punctures on elytra sometimes better developed; elytra with weak transverse wrinkles in larger specimens; however, old individuals become smooth with punctures barely visible, especially on pronotum, and double rows on elytra become indistinguishable. Pygidium 2.1-3.0 as long as broad (usually 2.3-2.7). Most males are 23 mm in length or more; two specimens from Peru (Cusco) and one from Bolivia are much smaller (17-19 mm) but in all another features they are the same as the others including the shape of genitalia, which is very constant within all the paratypes. Females: Length 21-27 mm (rarely less than 23 mm), width across humeri 8-11.5 mm, length of elytra 13.5-16.5 mm. Black, sometimes with reddish-brown tint; recently emerged specimens are more bright reddish brown. Apex of clypeus sometimes less sharply recurved than in the males. Shape of pronotum varies as in the males. Pronotum 1.6-2.0 times as broad as long. Pygidium 2.2-2.7 times as broad as long.

Differential diagnosis: This new species can be distinguished from all other species within the genus by the clypeus which is strongly contracted and pointed forward, triangular in shape, and recurved at apex, and in the presence of two well-separated frontal tubercles, which are better expressed in the males. In male genitalia, this new species shows similarities with *C. dilatatus* (Mannerheim, 1829) and *C. comes* Prell, 1936, but differs in the shorter paramera, which are strongly contracted toward the apical hook-like extension, and in the presence of the abrupt lamellar extension of the paramera before the apical contraction in lateral view. The aforementioned large and black species are perhaps its closest relatives; however, apart from the shape of the clypeus and frons, and male genitalia, they can be distinguished from the new species in the dense punctation of the pronotum, which is stronger than on frons, and in the degree of development of the lateral elytral dilatation of the females.

Etymology: This species is named from the locality where the holotype was collected.

***Eutheola hippocrepis* Prokofiev, sp. nov.** (Figs. 7, 8)

Material: Holotype, female, Bolivia, La Paz, 9.3 km SE Coroico, 16º14.7´ S, 67º39.6´ W, alt. 1980 m, 02-03.I.2010, leg. V. & S. Sinyaev, A. Zamesov.

Description of holotype (Fig. 7): Length 16 mm, width across humeri 8 mm, length of elytra 9.5 mm. Body black, tarsi dark reddish-brown, antennae and palpi reddish-brown. Clypeus transverse, isosceles trapezoidal, with lateral sides strongly convergent toward apex; anterior margin straight; outer margins raised. Frontal suture indistinct. Clypeus densely covered with rather sharp transverse rugosities forming squamate appearance; frons rather densely punctate, vertex similarly but much sparsely punctate; punctures on frons and vertex small and simple. Mandibles broadly rounded at apices, somewhat dilated at bases, with outer margins distinctly concave. Teeth of lacinia rather long, six in number (in three consecutively arranged pairs). Antennae 10-jointed, with small 3-jointed club. Last joint of mandibular palpi elongately ovate, with truncated apex. Pronotum 1.6 times as broad as long, with maximum width in middle; sides broadly rounded, somewhat more convergent anteriorly, than posteriorly; basis not bordered; posterior angles very broadly rounded, indistinct; anterior angles sharp. Punctation of pronotum much sparser on disc than on sides; punctures on sides are moderately large, much larger than on top of head, though smaller than on elytra; punctures on disc are somewhat smaller and less distinct than on sides; all punctures simple, rounded. Scutellum large, triangular, with minute sparse punctures. Elytra nearly parallel-sided, though sides somewhat concave on short distance behind humeri; 1.1 times as long as broad. Double rows of punctures on disc of elytra distinct, consisting of well-discernible, quite large, horseshoe-shaped punctures; interspaces weakly convex; first and third interspaces with few similar punctures in a short row (second interspace completely smooth); punctures on sides of elytra becoming smaller, though retaining horseshoe or crescent shape; double rows confused with complete rows of punctures in interspaces. Humeral and apical knobs very weak, smooth; no lateral dilatation of elytra. Propygidium glabrous, rather densely punctated with umbilicate punctures being somewhat smaller than on pygidium. Pygidium very weakly convex, glabrous, completely covered with annulate punctures becoming simple and much smaller on apex; punctures on sides and at basis of pygidium equal to or slightly smaller than those on disc of elytra; spaces between punctures larger than diameters of punctures. Prosternal process stout, quite short, with blunt apex bearing sparse long golden-reddish hairs. Mesosternum and sides of metasternum densely covered with large annulate punctures; disc of metasternum covered with minute sparse simple punctures, with shallow longitudinal medial sulcation. punctures of mesosternum and episterna setigerous, epimera and metasternum glabrous; mesosternal hairs very short, decumbent, rather sparse; those on episterna much longer but sparser. Abdominal sternites in upper parts densely covered with quite large annulate punctures becoming simple, minute and very sparse medially; nearly glabrous, but sides of each sternite with a row of sparse short hairs along posterior margin; these rows widely interrupted medially; anal sternite completely though

sparsely covered with shallow but quite large annulate punctures, with a short row of the densely setting hairs in its medial part; upper parts of 1-3 abdominal sternites very indistinctly carinate. Fore tibiae tridentate; teeth large and pointed; two apical teeth are closer to each other than basal tooth; internal spur strong, inserted at level of mid-length of space between second and third teeth, slightly not reaching to tip of apical tooth; fore tarsi gracile. All claws simple, acuminate, thin. Hind tibiae (Fig. 8) moderately expanded and slightly curved toward apex, with two short sub-transverse carinae dorsally only; apex with 7 widely spaced thin and pointed bristles; spurs narrow. Anal palpi irregularly oval in shape, with apices densely setose. Male unknown.

Differential diagnosis: This new species can be easily distinguished from the other members of the genus by the characteristic shape of its clypeus and by sculpture details. It is somewhat intermediate in the sculptural characters between *E. latipennis* Arrow, 1911 and *E. bidentata* (Burmeister, 1847), but is more similar to the latter due to the horseshoe-shaped elytral punctures and the similar punctation on the pronotum. However, the intervals on the elytral disc bear only few punctures and the second one is completely smooth in contrast to the densely punctate intervals in *E. bidentata*; the prosternal process is shorter and stouter in the new species, and there is no lateral thickening and dilatation of female's elytra in contrast to *E. bidentata*. All the other species within the genus lack horseshoe-shaped punctures on their elytra and pygidium.

Etymology: This species is named from the characteristic horseshoe-shaped punctures on its elytra.

***Eutheola sibericana* Prokofiev, sp. nov.** (Figs. 9, 10)

Material: Holotype, female, Bolivia, Cochabamba, Sierra Siberia, 18 km SE Pojo, 17º50.2′ S, 64º42.1′ W, alt. 2442 m, 12-13.XII.2009, leg. V. & S. Sinyaev, A. Zamesov. Paratype, female, Bolivia, La Paz, 9.3 km SE Coroico, 16º14.7′ S, 67º39.6′ W, alt. 1980 m, 02.03.I.2010, leg. V. & S. Sinyaev, A. Zamesov.

Description of holotype (Fig. 9): Length 19 mm, width across humeri 9 mm, length of elytra 12 mm. Body black, tarsi dark reddish-brown (fore tarsi lighter than remaining ones), antennae reddish-brown; underside with bright reddish hairs. Clypeus large, transverse, trapezoidal; anterior margin truncate; outer margins raised. Frontal suture obsolete, interrupted in middle, where surface of head is slightly impressed. Head with traces of very shallow, erased, though quite large punctures; posterior part of vertex appears to be almost impunctate. Mandibles simply acuminated, somewhat dilated at basis; apices pointed and curved outward; outer margin slightly concave. Teeth of lacinia large, three in number, but both basal and apical ones deeply incised, medial tooth simply acuminated. Antennae 10-jointed, with small 3-jointed club. Last joint of mandibular palpi narrow, elongately fusiform. Pronotum 1.5 times broader than long, with maximum width in middle; sides in basal halves gently concave; posterior angles broadly rounded; basis of pronotum not bordered. Pronotum sparsely punctated, with

quite small and not deep punctures, much larger and denser on sides, but strongly erased and poorly visible, very small and sparse on disc; largest punctures on sides being commensurable with those on head and much smaller than punctures on elytra. Scutellum large, triangular, nearly smooth. Elytra slightly longer than broad (1.09 times), somewhat dilated toward apex. Double rows of punctures on elytra not distinct, because of strongly developed irregular punctation of intervals; punctures in rows and in intervals strongly impressed, similar in size and shape, large and quite dense (spaces between punctures smaller or commensurable with their diameters), annulate; spaces between punctures very convex, cushion-like. Humeral knobs small and rather weak, smooth; apical knobs poorly developed; no lateral dilatation of elytra. Propygidium glabrous, with shagreen-like sculpture. Pygidium weakly convex, glabrous, rather densely punctured with quite large annulate punctures (slightly smaller than those on elytra or nearly equal to them) on disc, at basis and on sides, but almost smooth near apex. Prosternal process rather high, with triangularly pointed apex, densely pubescent, with long hairs. Sides of sterna densely punctate with large annulate setigerous punctures; hairs long and erect; disc of metasternum smooth and glabrous, with medial longitudinal sulcus. Abdominal sternites moderately carinate above, with surface being densely rugoso-punctate above this carina, and smooth below; sternites nearly glabrous except for a row of erect hairs along their posterior border; these hairs being short and rows being widely interrupted in middle except two last sternites possessing the complete rows of much longer hairs along their posterior border. Anterior tibiae tridentate, teeth large with blunt tips, apical tooth narrower than remaining ones, medial tooth largest; space between apical and medial tooth only slightly smaller than space between basal and middle tooth. Inner spur of fore tibia inserted at level of hind margin of medial tooth; spur strong but rather short, not reaching tip of apical tooth. Fore tarsi gracile. All claws simply acuminated, thin. Hind tibiae (Fig. 10) moderately expanded toward apex, on outer side with two long oblique carinae bearing a row of dense long hairs, and with 10-13 rather short, very stout, blunt bristles on apex; spurs of hind tibia flat and somewhat expanded.

Female paratype: Length 17 mm, width across humeri 7.5 mm, length of elytra 10 mm. Anterior angles of clypeus very weakly produced. Top of head much more distinctly punctured than in holotype; punctures on clypeus somewhat larger than on frons. Surface of pronotum and pygidium strongly erased. Pronotum 1.5 times as long as broad. Elytra less dilated toward apex in comparison with holotype, 1.18 times as long as broad. Apex of hind tibiae with 9 short, very stout, blunt bristles, unequal in size. Paratype specimen possesses fore tibiae with much shorter, closely spaced teeth broadly rounded at tips; however, it may have an aberrant nature. Anal palpi broadly oval, densely setose.
Males unknown.

Differential diagnosis: This new species is larger than the other known taxa within the genus (17-19 mm vs. less than 17 mm) and also differs from all the other taxa in the characters of punctation on the top of head, pronotum, elytra and pygidium; structure of legs (especially hind tibiae, see Figs. 8, 10, 13), shape of clypeus and pronotum (especially in the concave sides of the pronotum in their basal halves), rather hairy underside of body, etc. In the

structural characters this new species seems to be most similar to *E. humilis* (Burmeister, 1847), but differs also in having much larger, deeply impressed punctures on the elytra with sharply convex spaces between them, an indistinct and broadly interrupted frontal suture (vs. carinate at sides in *E. humilis*), and in some other particular details noted in the description above. There are some similarities between this new species and the members of the genus *Parapucaya* Prell, 1934; however, the former differs from the latters in black body and absence of tubercles in the anterior part of the pronotum.

Etymology: This species is named from its type locality, Sierra Siberia.

***Eutheola sinyaevi* Prokofiev, sp. nov.** (Figs. 11-15)

Material: Holotype, male, Bolivia, Santa Cruz, 7.5 km SE Comarapa, 17º58.2′ S, 64º29.2′ W, alt. 1725 m, 18.I.2010, leg. V. & S. Sinyaev, A. Zamesov. Paratypes: 2 males, 3 females (including allotype), Bolivia, Santa Cruz, 5.35 km SE Mairana, 18º09.3′ S, 63º55.6′ W, alt. 1594 m, 08-09.XII.2009, leg. V. & S. Sinyaev, A. Zamesov; 1 female, Bolivia, La Paz, 9.3 km SE Coroico, 16º14.7′ S, 67º39.6′ W, alt. 1980 m, 02.03.I.2010, leg. V. & S. Sinyaev, A. Zamesov.

Description of holotype (Fig. 11): Length 16 mm, width across humeri 6.5 mm, length of elytra 10.5 mm. Body black, with reddish-brown tint on head and underside; legs mostly dark reddish-brown, antennae and palpi reddish-brown. Clypeus transverse, trapezoidal, with lateral sides convergent anteriorly, and anterior margin straight; outer margins of clypeus raised; anterior margin thickened, especially in middle. Clypeal sculpture consisting of distinct transverse rugosities forming squamate appearance. Frontal suture well-discernible, sulcate, medially concave; top of head distinctly impressed at level of middle of frontal suture. Frons distinctly and rather densely punctate with rather large round punctures; anterior part of vertex similarly but more sparsely punctate, while posterior part being nearly smooth. Mandible somewhat dilated at basis, with bluntly pointed apex and nearly straight outer margin, nearly triangular in shape. Teeth of lacinia rather long, five in number (2 + 2 + 1; i.e. basal tooth unpaired). Antennae 10-jointed, with small 3-jointed club. Last joint of mandibular palpi elongately fusiform. Pronotum 1.7 times as broad as long, with maximum width in middle; sides broadly and uniformly rounded; basal angles very broadly rounded, indistinct; anterior angles sharp; basis of pronotum not bordered. Pronotum rather sparsely punctate with simple round punctures equalling in size to those on top of head; punctures more dense and slightly larger on sides than on disc. Scutellum large, subtriangular, with rounded apex and sparse minute punctures. Elytra weakly dilated toward apex, 1.24 times as long as broad. Double rows of punctures distinct, with quite small punctures (commensurable with those on pronotum), mostly annulate but intermixed with simple round ones; intervals flat, densely covered with irregular punctures of same shape and size as in the double rows. Humeral and apical knobs indistinct. Propygidium densely covered with rather short silky-yellowish decumbent hairs, and with some much longer hairs in the middle part; however, hindmost portion of propygidium on short distance glabrous and nearly smooth (with an

incomplete row of simple punctures along distal margin only). Pygidium weakly convex, glabrous, covered with large annulate punctures being much denser in basal half than on apex; basal part of pygidium also with small but dense wrinkles. Prosternal process quite short and stout, with apex truncate, oval, and double-margined behind. Sterna glabrous except rather dense golden hairs, varying in length, in central part of mesosternum and few rather long reddish hairs on epimera. Sides of sterna with quite large but sparse annulate punctures; disc of metasternum nearly smooth, with medial longitudinal sulcus. Sides of abdominal sternites with quite large and more or less dense annulate punctures becoming much smaller and sparser medially; uppermost parts also with more or less dense wrinkles; abdominal sternites nearly glabrous except for a short row of few widely spaced hairs on flanks along posterior border of each sternite, and a row of dense and long reddish-golden hairs along posterior margin of last sternite. Upper parts of abdominal sternites non-carinate. Fore tibia tridentate; teeth strong, sharp, two apical ones closer to each other than basal tooth; interspaces between teeth deeply incised; internal spur strong, stout, rather long, reaching third tarsal joint. Fore tarsi (Fig. 12) strongly thickened; fourth joint with tooth-like anterior expansion; inner fore claw very broad, strongly curved, incised in apical half, with dorsal lobe very narrow; outer claw narrow, thin, simply acuminate and more gently curved. Middle and hind claws simple and thin. Hind tibiae (Fig. 13) moderately dilated toward apex, outer side with a single short oblique dorsal crest bearing few stout spines, and with few similar spines widely spaced on outer surface. Apex of hind tibia with about 10 rather short and stout, acuminate bristles. Aedeagus, as in Figs. 14, 15.

Female allotype: Length 17 mm, width across humeri 7 mm, length of elytra 11 mm. Pronotum 1.75 times as broad as long. Elytra somewhat more dilated toward apex than in male holotype, 1.3 times as long as broad. Lateral sides of elytra moderately thickened and dilated in middle. Pygidium with punctures somewhat denser and larger than in holotype. Fore tarsi gracile. Inner spur of fore tibiae shorter than in male holotype, reaching anterior margin of second tarsal joint only; protibial teeth narrower, with tips somewhat sharper.

Variations of males: Length 16 mm, width across humeri 6.5-7 mm, length of elytra 10.5 mm. Pronotum 1.6-1.7 times as broad as long. Elytra 1.4 times as long as broad. Punctation of pygidium denser and stronger than in holotype, punctures larger than those on elytra; sometimes some punctures bearing very short but stout seta. Apex of hind tibiae with 8-10 short and rather stout, but acuminate bristles.

Variations of females: Length 16-17 mm, width across humeri 6-7 mm, length of elytra 10-11 mm. Pronotum 1.5-1.7 times as broad as long. Elytra 1.3-1.4 times as long as broad. Variations in sculpture as described for males.

Differential diagnosis: This new species can be distinguished from all the other members of this genus in the deeply incised fore claws of males (vs. not incised, or even not thickened), and in the shape of the clypeus having the anterior margin thickened and upturned in the middle. In the sculptural characters it is most similar to *E. humilis* (Burmeister, 1847) and *E.*

latipennis Arrow, 1911, but differs from the former in the mostly annulate (vs. simple) punctures on the elytra, and from the latter in the punctures commensurable both on the pronotum and on the top of head (vs. much larger on the pronotum). Further differences include the thickened male fore tarsi, non-carinated sides of the frontal suture and a rather short prosternal process in the new species in contrast to *E. humilis*, as well as the flattened and wholly punctate interspaces of the elytra in contrast to *E. latipennis*. The shape of the male paramera is most similar to its in *E. humilis* (see Endrody, 1985: figs. 970-976), though the opening between the left and right paramera (frontal view) is much wider, oval in the new species, and there are some other minor differences in structure (Figs. 14, 15).

Etymology: This species is named in honour of Viktor Sinyaev, one of its collectors.

Golofa, subgen. *Mixogolofa* Prokofiev, subgen. novum.

Type species: *Golofa (Mixogolofa) olsoufieffi* Prokofiev, sp. nov.

Differential diagnosis: This new subgenus differs from *Golofa* (s.str.) Hope, 1837 in its very weakly armed pronotum lacking horns, pits or well-developed tubercles, but from *Praogolofa* Bates, 1891 in its pronotum having the well-developed areola apposita and the knob poorly developed but weakly bituberculate anteriorly (vs. pronotum simply convex). Fore tarsi of males and females are not different in length and thickness.

Etymology: This name is based on the somewhat intermediate position of the new taxon between two other subgenera in the peculiarity of its pronotal shape also characterizing by the mixed features of the tribes Oryctini and Dynastini.

Golofa (Mixogolofa) olsoufieffi Prokofiev, sp. nov. (Figs. 16-19)

Material: Holotype, male, Bolivia, La Paz, 9.3 km SE Coroico, 16º14.7′ S, 67º39.6′ W, 02-03.I.2010, alt. 1980 m, leg. V. & S. Sinyaev, A. Zamesov. Paratypes: 3 females, the same data as for the holotype.

Description of holotype: Length 38 mm, width across humeri 17 mm, length of elytra 26.5 mm. Body dark reddish-brown, legs and pronotum much darker, head almost black; hairs bright rusty; shining, elytra elsewhere oily. Head rather small, subtriangular in dorsal view (Fig. 16); sides of clypeus strongly convergent toward the deeply and broadly incised (bidentate) apex, gently concave; teeth on apex strong, recurved, sharply divergent; surface of clypeus rugoso-punctate; frons and anterior part of vertex strongly rugoso-punctate, cancellate; posterior margin of vertex almost smooth. Frons with small and short horn, triangular in cross-section (Fig. 17). Antennae 10-jointed, with small 3-jointed club. Mandibles simply acuminate, apex of mandible acute and directed outward; lateral side concave. Pronotum 1.5 times as broad as long, with maximum width in middle; sides much more convergent toward anterior than posterior angles; anterior angles sharp and well-marked;

posterior angles obtuse, broadly rounded; basis of pronotum completely bordered. Pronotum steeply raised and slightly impressed behind anterior margin, forming indistinct declivous knob weakly bituberculate in middle anteriorly; sides of knob impressed anteriorly, marking an areola apposita. Anterior slope of pronotum, areola apposita, anteriormost portion of pronotal knob and a rather narrow band along lateral and posterior margin of pronotum strongly rugoso-punctate, cancellate; the rest of pronotum nearly smooth except for very sparse minute punctures (Figs. 16, 17). Anterior slope of pronotum covered with moderately long and sparse erect hairs. Scutellum quite large, triangular, cancellate except broad smooth outer margin (smooth area considerably broadened toward apex). Elytra somewhat dilated toward apex, 1.3 times as long as broad; humeral knobs well-delimited; apical knobs very weak. Punctation irregular, moderately dense; punctures small and simple; double rows of punctures very indistinct but juxtasutural stria well-marked, strongly impressed; punctures becoming much denser intermixed with wrinkles toward apex. Propygidium transversely rugose, with posterior half not densely though completely setose (also along anterior border); hairs short and decumbent. Pygidium moderately convex, smooth except a broad band of setigerous punctures (in several rows) along basal margin; these punctures bearing long erect reddish hairs; apex of pygidium also with short patch of long hairs in single row. Prosternal process rather short, blunt, completely covered with dense long hairs. Sterna strongly hairy (hairs long and dense); anterior two abdominal sternites with several rows of sparse setae; the rest of sternites with a single row of such setae along posterior margin but broadly interrupted in middle except anal sternite having a complete row of long hairs along posterior border. Fore tibiae quadridentate, fourth tooth smaller than preceding ones, but well-developed; space between apical and basal pairs of teeth much wider than space between teeth in each pair. Fore tarsi gracile, as long as fore tibiae. Hind tibiae with two strong transverse carinae; apex with somewhat irregular margin bearing 6 or 7 quite long acuminate bristles. Hind tarsi as long as hind tibiae. Outer apical angle of 2nd to 5th joint of hind tarsi somewhat produced, much more on basal joint; lower margin of these joints with a row of rigid setae. Aedeagus, as in Figs. 18-19; paramera simple, symmetrical, homogeneously arcuate in frontal view, completely bare.

Female allotype: Length 37 mm, width across humeri 17 mm, length of elytra 26 mm. Frontal horn replaced to sharp, well-developed tubercle. Elytra more shining, 1.4 times as long as broad. Pronotum 1.3 times as broad as long. Pronotal knob more indistinct, with very slight double tubercle anteriorly; cancellate area on pronotum much more extended posteriorly; areola apposita less delimited; punctation of pronotum rougher. Humeral knobs of elytra less developed. Fourth tooth of fore tibiae slightly better developed than in male holotype (however, this feature seems to have no sexual dimorphism, as it is variable within paratype females). Fore tarsi as in male, as long as fore tibiae. Apex of hind tibia with up to 9 bristles.

Variations of females: Length 38-40 mm, width across humeri 17-17.5 mm, length of elytra 25-26.5 mm. Frons with sharp tubercle or small horn. Elytra vary from shining to oily. Pronotum 1.5 times as broad as long. Humeral knobs of elytra variably developed.

Etymology: This new species is named in the memory of G.V. Olsoufieff, the well-known Russian scarabaeidologist of the beginning of the 20th century and author of the first comprehensive revision of the phanaeine dung beetles.

Phileurus lecourti Dechambre, 1998

Remarks: This species was hitherto known only from the original description (Dechambre, 1998). I have studied one male and one female with the following data: Bolivia, Santa Cruz, near Lagunillas, 18°15.5' S, 64°10.9' W, alt. 1722 m, 17.XII.2009, leg. Viktor & S. Sinyaev, A. Zamesov. It is not far from the holotype locality (Coroico in La Paz department) of this recently described species distributed in Bolivia and neighbouring Argentina (Concepcion).

***Pycnoschema mossambicum* Prokofiev, sp. nov**. (Figs. 20-24)

Material: Holotype, male, Mozambique, Zambeze R., 32 km S Caia, M'phingwe Camp, 18º02´27´´ S, 35º12´07´´ E, alt. 85 m, 15.04.2011, R.V. Yakovlev leg. Paratypes: 2 males, 1 female, the same data as for the holotype.

Description of holotype (Figs. 20, 21): Length 12.5 mm, width across humeri 6.2 mm, length of elytra 7.5 mm. Body reddish brown, shining; head and legs are more infuscate; margins of pronotum, scutellum, and elytral suture bordered with black. Glabrous from above; thorax with long and dense rusty-golden hairs; abdomen glabrous except a transverse row of hairs along posterior margin of each sternite; apical margin of pygidium also possesses long hairs. Clypeus as long as mandibles, with sides straight on most of length before a transversal carina, further strongly convergent toward the apex, which is obtusely acuminated and distinctly recurved (Fig. 22). Clypeal suture as a sharp transverse carina, connecting laterally with somewhat less carinate genal sutures. Mandibles broad, with rounded apices and outer sides shallowly emarginated. Horn short but rather strong, carinate anteriorly toward the apex of clypeus; frons flattened, vertex impressed. Clypeus possessing coarse setigerous punctures; frons and vertex coarsely rugoso-punctate. Genae sharp, triangular, with point directed forward and outward (Fig. 22). Pronotum 1.4 times as broad as long, widest at mid-length, sides convergent anteriorly much more than posteriorly; anterior and posterior angles blunt; anterior margin slightly concave, posterior margin gently convex. Anterior and lateral margins of pronotum bordered; basis bordered at sides only, border widely disappearing at the middle. Pronotum strongly convex, anterior slope slightly impressed in the middle. Pronotum coarsely and densely punctate, punctations on disc somewhat sparser than on sides and along anterior margin. Scutellum triangular, as long as broad, with pointed apex, with sparse but distinct punctures. Elytra nearly parallel-sided, slightly longer than broad (1.2 times); double rows of punctures well-expressed, their punctures deep, ocellate; the similar punctures sparsely distributed on interstries, where ocellate punctures alternate with more densely distributed smaller and simple punctures; apices of elytra very densely punctured. Pygidium simply convex, finely and densely wrinkled, apical margin bordered. Stridulatory area on propygidium with fine transverse ridges. Fore tarsi strongly thickened, short; inner

claw thicker, strongly curved. Fore tibiae tridentate. Hind femora with a double row of setigerous punctures along anterior margin, and single row of setigerous punctures along posterior margin. Hind tibiae expanded apically, constricted before apex; apical margin with 19 bristles. Aedeagus, as in Figs. 23, 24.

Variations of males: Length 10.5-13 mm, width across humeri 4.5-5.8 mm, length of elytra 6.5-7.5 mm. Clypeal horn sometimes slightly carinated posteriorly, frons impressed on sides of this carina. Pronotum 1.4-1.55 times as broad as long, elytra 1.3-1.4 times as long as broad. Apical margin of hind tibiae with 13-18 bristles. Aedeagus is very constant in shape.

Female allotype: Length 12 mm, width across humeri 5 mm, length of elytra 6.5 mm. As male, but frontal horn being replaced by transverse carina, raised in the middle and bituberculate. Pronotum 1.4 times as broad as long, simply convex. Propygidium sparsely but wholly covered with short pale decumbent hairs; pygidium and abdominal sternites completely covered with long yellowish-golden erect or semierect hairs not closely spaced. Fore tarsi slender.

Differential diagnosis: This new species is very similar externally to *P. simplicicolle* Kolbe, 1954 in small known size, shape of clypeus, mandibles and genae, weakly armed head and pronotum of the males, punctation, pilosity, etc. The only differences found include the bluntly rounded apices of mandibles (vs. acuminate in *P. simplicicolle*) and a much stronger rugosity of the head behind horn. Females differ in the more strongly pilose pygidium, propygidium and abdominal sternites in the new species. However, both species are strikingly different in the shape of the male genitalia, which shows no close similarities between this species and any other ones known within the genus. The presence of two pairs of rather short inner lamellar extensions of the paramera is distinctive feature of *P. mossambicum* sp. nov. Within other *Pycnoschema,* the presence of the inner lamellae is a characteristic of the "*subulatum*"–group, but these species possess only one pair of such lamellae and are significantly different in most other respects. Furthermore, only *P. mirei* Dechambre, 1978 from Cameroon has short inner lamellae, but in contrast to this species the parameres of *P. mossambicum* sp. n. are not hooked outward apically (besides the presence of an additional pair of such lamellar extensions in the new species).

Etymology: This species is named from country where it was found.

Remarks: The type specimens were collected on light together with *P. scrofa* Harold, 1880, *P. operculatum musicum* Arrow, 1908 and *Heteronychus cf. atratus* Klug, 1855.

Subfamily Melolonthinae

Ectinohoplia rufipes (Motschulsky, 1860)

Remarks: This is fairly common Far Eastern species. I have examined two specimens

collected somewhat to north-west from the known area of distribution of this species (Chita region of Transbaikalia, Kovyli railway station, 15.06.2000). Surprisingly, these beetles possess 9-jointed antennae instead of 10-jointed as common for this species and for all the representatives of *Ectinohoplia* (Arrow, 1921; Medvedev, 1952; Kalinina, 1989). Furthermore, the propygidium is opened on its distal half to two-thirds instead of being nearly wholly not covered by the elytra (Medvedev, 1952: fig. 260). Thus, these specimens are somewhat intermediate between the typical specimens of this species and *H. (Euchromoplia) aureola* (Pallas, 1781). The only differences suggesting a position of the studied specimens within *E. rufipes* are the color pattern (being almost similar to the typical form) and the presence of a row of short pale decumbent setae at the apical sutural border of the elytra, though these setae are very short and observable with an adequate magnification and illumination only. All claws of the fore and middle tarsi are clefted, but the small claws are about two times shorter than the larger ones. I have no ideas about a status of the aforementioned differences.

Polyphylla (Granida) minor Nomura, 1977

Remarks: This species was described from Taiwan and was later recorded in Yunnan, China (Senhal, Bezdek, 2011). During April-May 2009-2010 I had collected 22 male and female specimens from Dalat Highlands, Vietnam (Khanh Vinh district of Khanh Hoa province and Lac Duong district of Lam Dong province). This species is quite common in the cloud montane forests at elevations of 1500-1700 m. All the specimens were collected by light; the females were more abundant than the males. These beetles are indistinguishable from the Chinese specimens described by Senhal & Bezdek (2011), except the anterodistal tooth of the third antennal joint very weakly expressed.

Subfamily Rutelinae

Anomala (sens. lato) *comma* Arrow, 1917

Remarks: Arrow (1917) described this species from a single male specimen collected in Sikkim by H. Stevens. I was unable to find a description of the female; thus, I note the sexual differences for this species herein. I had studied two female specimens with the following data: NE India, E Sikkim, Bashuk Rain Forest, 15.07.2002, O. Amosov leg., and C. Nepal, Katmandu env., Nagardzhun forest, 10.05.2000, A.A. Gorodinski leg. They are generally similar to the male description of Arrow (1917), but the top of head is fully unicoloured and testaceous. In the specimen from Sikkim the dark marks on the pronotum are nearly absent, being replaced to the very indistinct and vague subtriangular zones of grayish pigment. In the specimen from Nepal, the dark marks are much more pronounced, similar to Arrow's description of "inverted comma shape" and are dull brownish. The fore tarsi are not thickened. A direct comparison with the females of *A. variegata* Hope, 1831 from the same locality in Sikkim shows that these species can be hardly distinguished in punctation of the pronotum, though *A. comma* is a larger species, with much more elongate and parallel-sided

body having a deeper greenish-golden suffusion. *A. comma* seems to be most similar to *A. angusta* Arrow, 1912, from which it differs mostly in its hairless pygidium (except few long hairs near lateral margins and a row of such hairs at apex).

Anomala (Idiocnema) costifera Reitter, 1895 (Figs. 25, 26)

Remarks: This species was synonymized with *A. aulax* (Wiedemann, 1823) in the catalogue of the Palearctic Coleoptera (Zorn, 2006). I have examined the male and female specimens from Far East of Russia (S. Primorje reg., Partizansk vill., 18.VII.1991) and North Korea (S Hamgyong prov., Solhan Ridge Mt., alt. 1433 m, 02-30.VI.2008), compared them with the specimens of *A. aulax* from Yunnan and Vietnam, and found that this synonymy cannot be accepted. *A. costifera* should be resurrected as a distinct species, which can be distinguished from *A. aulax* in (1) ribs on elytra the same as interspaces between them in color and shining, more or less coarsely punctate and/or rugose (vs. ribs distinctly more shining than interspaces, sharply expressed on green background, finely punctured to nearly smooth); (2) underside mostly metallic green (vs. yellow-brown with greenish or purplish lustre); (3) simple middle claws in both sexes (vs. inner middle claws clefted in both sexes); and (4) parameres rather short, symmetrical, simply rounded apically (vs. longer, asymmetrical, of complex shape).

Anomala (sens. lato) *langbianensis* Zorn, 2011

Remarks: I have examined a male specimen collected not far from the type locality of this species (75 km W Phan Thiet, 1100 m, 18.04.2007, P. Udovichenko leg.), which well fits the original description (Zorn, 2011). This specimen, however, possesses a pair of the very indistinct and vague darkish marks on the pronotum. Thus, it is not clear if this species can be really separated from *A. viridimicans* Benderitter, 1929, or not. The latter species was described from two females, which possess "deux grand macules vert fonce" on the pronotum (Benderitter, 1929). As development of the pronotal markings can be very variable in some *Anomala* species. I am not sure that these two species cannot be conspecific. But on the other hand, it should be noted than there were no specimens having pronotal markings within my large samples of *A. langbianensis* from Bi Doup – Nui Ba National Park (Lamdong province, between Hon Giao Pass and Giang Ly). Thus, relationships between these two forms require further investigations. The type locality of *A. viridimicans* is said to be "Tu-du-Mot", which is apparently Thu Dau Mot, a district and city in Binh Duong province of southern Vietnam. In this case the types of *A. viridimicans* were collected more southwards than the types of *A. langbianensi*s, and in the lowlands, not in the montane forests. However, many species of *Anomala* are characterized by a rather wide altitudinal distribution. For the final conclusion, the shape of the female vaginal palpi should be studied in the type specimens of *A. viridimicans*, as Zorn (2011) pointed out that the females of his new species are distinct in the claw-shaped, pointed vaginal palpi. It should be noted, however, that it is not an unique character, the similarly pointed though more strongly and regularly curved palpi are known, for example, for *A. hirsutula* Nonfried, 1892.

***Anomala* (sens. lato) *mariposa* Prokofiev, sp. nov.** (Figs. 27-30)

Material: Holotype, male, Peru, Junin, near Mariposa vill., 11°24.9' S, 74°43.7' W, alt. 1637 m, 14-16.12.2010, V. & S. Sinyaev & V. Izerskiy leg. Paratypes: 2 males, 4 females, the same data as for the holotype.

Description of holotype (Fig. 27): Length 14.5 mm, width across humeri 6.5 mm, length of elytra 9 mm. Body black, with indistinct greenish-blue luster visible under direct light only; outer margin and posterior quarter of clypeus, frons and most of vertex cherry-red; uppermost parts of abdominal sternites reddish; antennae reddish, with dorsoposterior side of scapus blackish. Clypeus transverse, broadly rounded, lacking anterior angles, anterior margin thickened and elevated. Clypeus coarsely transversely rugoso-punctate; frons coarsely rugoso-punctate, vertex and occiput with coarse but rather sparse punctures. Antennal club slightly longer than funicle (scapus excluded); scapus securiform; last joint of mandibular palpi elongate-oval. Pronotum 1.7 times as broad as long. Sides of pronotum gradually convergent anteriorly, much stronger in its anterior third; anterior angles acute, anterior margin gently convex; basis more strongly convex, rounded in middle, slightly sinuated before shoulders; posterior angles nearly straight. Anterior and lateral margins of pronotum bordered, basis with border along most of its length, basal border interrupted before the middle third of scutellum only. Pronotum uniformly coarsely punctated; spaces between punctures clearly exceed their diameter. Scutellum coarsely and densely but irregularly (with smooth fields between punctate spaces) punctured. Elytra slightly expanded toward apex, with strong humeral knobs and each with ten punctate rows (the last one along the lateral margin of elytra); punctate rows impressed, with small shining punctures; interspaces sharply convex, rib-like, rather uniform in width and convexity (only first interspace somewhat broader than others). Punctate rows between scutellum and humeral knob five in number. First interspace coarsely and irregularly punctate along all its length, with punctures being more regular apically, where they are arranged in rows, impressed and subdivided this interspace on two ribs. Third interspace with a row of large coarse punctures widely interrupted in the middle; fourth and fifth interspaces with a short row of the same punctures near humeral knob; other interspaces with small and rather sparse irregular punctures only. Sixth punctate row connected with the second one, bordering an apical knob; apical margin of elytra wrinkled. Membranous border of elytra extends laterally to level of first abdominal sternite. Propygidium partly covered by elytra, punctate anteriorly, coarsely transversely rugoso-punctate posteriorly. Pygidium coarsely rugoso-reticulate, bordered along outer margin, glabrous, with a row of long setae along apex. Metasternum with intercoxal space wide, as broad as width of middle femora; mesosternum steep, produced between middle coxae as short blunt transversely oval tumidity, separated from anterior border of metasternum by well-developed suture (Fig. 28). Sterna rather densely covered by pale hairs. Abdominal sternites mostly glabrous, coarsely and more or less densely punctate; second abdominal sternite with two rows of setigerous pores, the remaining ones having a single row of them; these rows are more or less broadly interrupted in middle except posteriormost sternite, which possesses a complete row of long setae along its posterior margin. First to third

abdominal sternites distinctly carinate; uppermost parts of first to fourth sternites densely pilose by minute pale hairs. Fore tarsi not strongly thickened, last tarsal joint rather elongate, with small tooth in middle, inner claw unequally clefted. Fore tibiae tridentate, two anterior teeth strong and sharp but third tooth obsolescent though well-expressed, distinctly remote; inner spur of fore tibiae small, opposite the second tooth. Middle and hind tibiae distinctly expanded at middle, rather gracile basally and apically; hind tarsi longer than hind tibiae. Aedeagus, as in Figs. 29, 30.

Female allotype: Length 13.5 mm, width across humeri 6.2 mm, length of elytra 9 mm. Top of head dark cherry-red except occiput blackish, body with some reddish tint besides a light bluish luster; tarsi reddish, hind tarsi varies to black. Punctures of first interspace (between juxtasutural and the neighbouring striae) in a regular impressed row, being irregular in its anteriormost parascutellar portion only; thus, six punctate rows between scutellum and humeral knob. Third interspace with a row of large coarse punctures somewhat interrupted in its anterior third; fourth interspace with similar punctures inside from humeral knob only. Humeral and apical knobs less developed than in male holotype; sides of abdominal sternites much less carinate. Apical tooth of fore tibiae much more obtuse; claw joint of fore legs more elongate, lacking a tooth; larger piece of inner fore claw narrower than in males. Vaginal palpi ovate, with long sparse setae apically.

Variations: Length 13.5-14 mm, width across humeri 6-6.5 mm, length of elytra 8.5-9 mm. All paratypes have the top of the head dark-cherry red in color except for the occiput which is blackish; the intensity of the reddish and metallic greenish blue to bluish luster varies in great extent. Both males and females have the punctation of the first interspace as described for female allotype; in one male the 2nd to 4th interspaces possess a short row of coarse punctures at beginning; in one female these punctures in the 4th interspace extend to mid-length of elytra. Pronotum sometimes with a trace of very weak median furrow; scutellum in most cases more regularly punctured, although usually less densely in its center. Weakly developed third tooth on fore tibiae present in all cases.

Differential diagnosis and Remarks: This new species is very similar in appearance to the members of the "*microcephala* Gruppe" sensu Ohaus (1897); however, it can be easily distinguished by the presence of the minute but always constant third tooth on the fore tibiae. Furthermore, none of the known species share the same combination of the coloration and sculpture; the aforementioned details of the elytral sculpture are most important for definition of this new species. Unfortunately, the types of the formerly described species of the "*microcephala* Gruppe" are unavailable for study; however, examination of a series of the beetles from Chuquisaca (Bolivia) including at least two species apparently belonging to the "*microcephala* Gruppe" shows that the latter possess the different male genitalia having paramera short, subtriangular and simply rounded at apex. Thus, the shape of paramera is diagnostic for *A. mariposa* at least in comparison with a part of externally similar species (unfortunately, the genitalia of most of Neotropical Anomalini are not described; thus, it is not possible to compare most of the species by genitalic characters). I'm not sure that the

aforementioned Bolivian specimens belong to the already described species, but without a complete revision, I abstain from their definition, as only *A. mariposa* sp. nov. can be well separated from the existing species using the old original descriptions only.

The "*microcephala* Gruppe" was characterized by Ohaus (1897) in particular by the wide and tumid intermesocoxal region; a number of the Central American species with "mesosternum latior, apice plus minusve incrassatum" also exists (Bates, 1886-1890). According to a recent revision of the New World Anomalini genera (Jameson *et al.*, 2003), the structure of the intercoxal process of the mesosternum is the only character separating the genera *Anomala* Samouelle, 1819 and *Callistethus* Blanchard, 1851 (the latter is indistinguishable from Asian *Spilota* Burmeister, 1844, in my opinion). *Anomala* has a narrow mesosternal intercoxal region (not more than one-fourth width of the base of the mesofemur) and lacks the mesometasternal process contrary to a more or less wide intercoxal region (not less than one-half width of the base of the mesofemur) and presence of the mesometasternal process in *Callistethus*. However, the members of the "*microcephala* Gruppe" are intermediate: like *Callistethus* they possess a conspicuously wide intercoxal area subequal to the width of the mesofemur, as well as a small and tumid but fairly distinct process between the middle femora; however, the mesosternum is separated from the metasternum by the well-expressed suture behind the process (Fig. 28), as common for *Anomala*, and the process is not produced but tumid and transversely oval. The most important difference is the presence of a suture between the meso- and metasternum, while in both American "true" *Callistethus* and Asian *Spilota*, as well as in the other anomaline genera with the mesosternal process (*Strigoderma* Burmeister, 1844 and the various Popillina taxa), the meso- and metasternum are completely fused, without a suture behind the process, which is more or less produced anteriorly. Actually, the separation of *Callistethus* or *Spilota* as distinct genera is not more justified than the acceptance as distinct genera such subdivisions of *Anomala* as *Euchlora* Macleay, 1819, *Idiocnema* Falderman, 1835, *Idiocnemina* Reitter, 1903, *Orphnomala* Reitter, 1903, etc. Furthermore, in this case the "*microcephala* Gruppe" also can be raised onto generic level as the mesosternal intercoxal area in this association of species is different from both "true" *Anomala* and *Callistethus*. As there are no data supporting a monophyletic origin of most of the subdivisions of *Anomala* sens. lato (including *Callisthetus* and the "*microcephala* Gruppe") any further descriptions of the supraspecific taxa seem to be premature at present.

It should be noted that *A. mariposa* sp. nov. cannot be placed to any groups of *Spilota* (= *Callistethus*) designated by Casey (1915) due to the presence of the following characters in combination: basal pronotal bead strong, only shortly interrupted before the middle third of scutellum; elytral striation deep and distinct, and body of quite large size.

Ramirez-Ponce & Moron (2009) separated the American species in the genus *Paranomala* Casey, 1915; however, the characters used for separation of the New World species are not exceeding the differences between many of the intrageneric groups of the Old World species. These authors also noted the presence of the poorly developed mesometasternal process in

some of the "*Paranomala*" species.

Etymology: This species is named from its type locality.

***Parastasia gymnopleuridis* Prokofiev, sp. nov.** (Figs. 31-34)

Material: Holotype, male, Papua New Guinea, Genyyem R., 02º38´ S, 140º10´ E, 30.XII.2008–02.I.2009, Zamesov, Sinyaev & Romanenko leg.

Description of holotype (Fig. 31): Length 11.5 mm, width across humeri 6.5 mm, length of elytra 6.5 mm. Body longitudinally oval, very convex; dark purple brown to black, shining; margins of pronotum, proepisternum, underside of head, sides of thorax, legs yellowish brown; middle and hind legs, apices of femora, apical and basal parts of tibiae more infuscate; teeth of fore tibiae black; uppermost parts of abdominal sternites rusty yellowish brown except dark brownish black distal margins; antennae and palpi reddish brown. Clypeus with anterior denticles sharp, erect, well separated; lateral margins straight, convergent; anterior margin truncate, very weakly concave between denticles. Clypeofrontal suture complete, carinate, weak in middle, sharply angularly raised at junction with lateral margin. Clypeus nearly smooth; frons and vertex coarsely but sparsely punctate; frons rugulose anteriorly. Pronotum twice as broad as long, with rather small and sparse punctures on sides, very finely and scantily punctate on disc. Anterior and posterior angles of pronotum rectangular; sides very weakly convergent anteriorly in basal two-thirds, but strongly convergent anteriorly in first third. Anterior and lateral margins of pronotum completely bordered; basis bordered on sides, but border widely disconnected before scutellum; each side of basis with a very narrow longitudinal impression. Scutellum large, subtriangular, very broadly rounded at apex, with small, partly clustered punctures. Elytra as long as broad; with large and deep, strongly ocellate punctures arranged in regular longitudinal rows; spaces between punctures strongly rugulose; rugules raised, smooth, wavy, connecting with each other transversely and longitudinally (Fig. 32) (sculpture is very similar to elytral sculpture in *Gymnopleurus flagellatus* (Fabricius, 1787)); suture somewhat elevate apically. Propygidium and pygidium bare; propygidium with fine and sparse punctures; spiracles on one level with surface, but margined with well expressed sulcus. Pygidium with thin but rather coarse transverse wrinkles. Mesosternal process short, subtriangular, rounded at apex. Meso- and sides of metasternum with short and sparse pale hairs, sides of metasternum coarsely rugulose transversely, disc of metasternum bare and smooth; abdominal sternites finely and sparsely punctate, each near its distal margin with a transverse row of very short pale setae on sides, but not in middle. Fore tibiae tridentate, basal and middle teeth closely spaced; internobasal angle rectangular; inner side with rather long, spaced setae, more numerous basally. Fore coxa and fore femora with rather long and numerous pale hairs, outer sides of middle femora with short and sparse pale setae; hind femora glabrous. Middle tibiae with dorsal margin sinuate, ending in a long dentiform protrusion; the oblique submedian dorsolateral carina strong, sinuate, not toothed above; outer sides of middle tibiae nearly glabrous and smooth. All claws simple and of equal size. Parameres symmentrical, simple, as in Figs. 33, 34. Female unknown.

Differential diagnosis: The most exclusive feature of this new species is its very peculiar elytral sculpture. By its other characters, the new species belongs to the *P. confluens*–group (Ohaus, 1900), but shares no close relations with any other species.

Etymology: This species is named after its characteristic elytral sculpture resembling such in *Gymnopleurus flagellatus* (F.) and related species.

Parastasia marginata (Boisduval, 1835)

Remarks: This is a rather common species in New Guinea and some adjacent islands, but it was known westward from the main island of New Guinea on Aru and Kei islands only (Kuijten, 1992). I had studied one female with the following data: Seram I., ~40 km N Elpa Putih, Waipia district, 17-20.XI.2011, on light, leg. A.M. Prokofiev; this finding extends the area of distribution of this species to southern Moluccas. This female possesses the head and underside dark reddish-brown to blackish, pronotum black, widely margined by orange laterally, and elytra fully black; structurally it is the same as described by Kuijten (1992) and as a female from New Guinea studied by me (Papua New Guinea, Imino, 02º38´S, 140º10´E, 19.I-31.II.2009, leg. Zamesov, Sinyaev & Romanenko), though slightly larger (11.5 mm vs. 7.5-10.5 mm according Kuijten (op. cit), 9.5 mm in my New Guinean specimen).

***Parastasia medvedevi* Prokofiev, sp. nov.** (Figs. 35-38)

Material: Holotype, male, Arfak, West Papua, Indonesia, from local collector, no date. Paratypes: male, the same data as for the holotype; female, Papua New Guinea, Genyyem R., 02º38´ S, 140º10´ E, 30.XII.2008–02.I.2009, Zamesov, Sinyaev & Romanenko leg.

Description of holotype (Fig. 35): Length 12 mm, width across humeri 6.0 mm, length of elytra 6.5 mm. Body yellowish-brown with orange tint above, dark reddish brown below, partially shaded with rusty orange brown on sides of thorax and upper parts of abdominal sternites; legs orange brown, fore tibiae partially varies to black. Head black, clypeus dark reddish brown. Pronotum with a pair of black spots in posterior half, and with two pairs of very obscure dark marks anteriorly (one as two strips making V-shape on disc, the second as longitudinal strip on each side of pronotum). Elytra with two dark brown parascutellar spots and a dark brown reticulate pattern, more developed posteriorly. Propygidium darker on disc than on margins. Thorax, anterior and middle coax and femora with long dense yellowish hairs. Clypeus rugulose, trapezoidal from above; anterior denticles short, erect, spaced; clypeofrontal suture angularly raised at junction with lateral margin, widely interrupted in middle. Frons coarsely rugulose; vertex with coarse but sparse punctures, mesially rugulose. Pronotum 1.7 times as broad as long, sides very weakly convergent anteriorly, subparallel in posterior half, strongly convergent anteriorly in anterior half; anterior angles obtuse, posterior angles nearly rectangular; anterior and lateral margins of pronotum bordered, basis unbordered. Pronotum coarsely but sparsely punctured, similarly on sides and on disc. Scutellum large, subtriangular, broadly rounded at apex, finely and scantily punctate. Elytra slightly longer

than broad, mostly parallel-sided; humeral bulge distinct; punctures coarse, round; punctate rows very slightly impressed, intervals similarly regularly to irregularly punctate; suture elevated, more strongly posteriorly. Pygidium and propygidium bare, with fine transverse wrinkles; propygidial spiracles on one level with surface. Mesosternal process very short, triangular, smoothly rounded at apex. Metasternum longitudinally impressed medially. Abdominal sternites finely transversely rugulose, each on sides with a transverse row of pale setae disappearing in middle. Fore tibiae tridentate, basal and middle teeth more closely spaced; internobasal angle rectangular; inner and lower sides setigerous. Middle tibiae with dorsal margin sinuate, ending in a long dentiform protrusion; the oblique submedian dorsolateral carina strong, sinuate, with a short tooth apically; outer sides of middle tibiae with very sparse short setae and few arcuate rugules. All claws simple and of equal size. Parameres symmentrical, simple, rather narrow, with smoothly but distinctly concave sides in frontal view, as in Figs 36, 37.

Male paratype: Length 12 mm, width across humeri 6.5 mm, length of elytra 7 mm. Slightly more yellowish above than the holotype. Clypeus more reddish; parascutellar spots of irregular shape and reticulate dark pattern of elytra slightly more rich. Clypeal denticles less developed. Vertex punctate only. Sides of pronotum very slightly concave in basal two-thirds; pronotum 1.9 times as broad as long. Propygidium and pygidium unicolored, light.

Female allotype (Fig. 38): Length 12 mm, width across humeri 6 mm, length of elytra 7 mm. Similar to male, but more light, yellowish in color above; light spaces on underside more developed; parascutellar spots absent, reticulate dark pattern of elytra dusty brownish, much less developed. Head black, clypeus reddish brown. Clypeal denticles and angular extension of clypeofrontal suture more sharp and better developed. Clypeus and frons coarsely rugulose, vertex coarsely but sparsely punctate. Pronotum 1.6 times as broad as long, sides very slightly sinuate in basal two-thirds. Submedian dorsolateral carina of middle tibiae developed as in the male paratype.

Differential diagnosis: This new species is very similar to *P. exophthalma* Kuijten, 1992, but differs in the shape of the male genitalia (Kuijten, 1992: figs 91, 92), in the dorsal color pattern (Kuijten, 1992: fig. 93), and in the generally dark color of the underside. The latter species was described from two males from Arfak and Vogelkop; thus, it is sympatric with the newly described one. The color pattern can be very variable in *Parastasia* spp. and as a result, can be not informative in this case; however, the male genitalia of *P. medvedevi* sp. nov. and *P. exophthalma* are sharply different what prevents their synonymy. The parameres are much broader, abruptly concave before middle, slightly asymmetrical, with apices narrow and clearly curved upward in lateral view in *P. exophthalma.*

Etymology: This species is named in honour of the outstanding Soviet coleopterologist and scarabaeidologist, S.I. Medvedev (1899-1979).

Remarks: The differences in color between the males and females possibly indicate not a

sexual but an individual variation. This species was collected at Arfak together with *P. nigromaculata* (Blanchard, 1850) and at Genyyem R. together with the holotype of *P. gymnopleuridis* sp. n.

Phyllopertha glabripennis Medvedev, 1949 (Figs. 39-41)

Remarks: This poorly known species has been described from a single male and 4 females collected in Sichuan by G.V. Potanin in June 1893 (Medvedev, 1949). I have studied 7 recently collected female specimens with the following data: P.R. China, S. Gansu, Min Shan Mts., alt. 2700 m, 70 km NW Wudu, 01.VI.1997, leg. A.A. Gorodinski. These specimens conform well to the original description of this species (Figs. 39-41). This is a new province record and the second discovery of this rare species.

Trichanomala callosa (Fairmaire, 1888) (Fig. 42)
Singhala callosa: Fairmaire, 1888: 343.
Strigoderma callosa: Paulian, 1959: 103.

Material: 1 female, N. Viet Nam, Lao Cai, Hoanh bo, 20.VI.1992.

Description of female (Fig. 42): Length 8 mm, width across humeri = maximum width of body 3.5 mm, length of elytra 5 mm. Elongate, parallel-sided, moderately flattened. Top of head and most of pronotum metallic dark-green, lateral margins of pronotum yellow; elytra bronze-brown, with metallic luster, darkened along lateral sides, with small rounded yellowish spot on border between middle and posterior thirds of their length at level of 7th to 9th interspaces. Propygidium dark-brown with greenish luster in anterior third; pygidium and last sternite of abdomen bronze-green, other abdominal sternites yellow, with thin greenish-black border along their posterior margins; sterna with yellow and greenish-black pattern. Legs pale, yellow-bronze to brownish; hind tibiae and especially tarsi darker; hind femora with vague dark pattern and greenish metallic luster. Antennae with club blackish, funicle yellowish-brown; palpi reddish-brown. Clypeus as long as broad, clearly and equally convergent anteriorly, with anterior margin broadly rounded, and anterior angles not expressed; external border of clypeus sharply raised. Frons and clypeus with strong and rather big punctures being confluent to transverse wrinkles; vertex with similarly strong but sparser punctures. Antennae 9-jointed, with 3-jointed club which length equals to summary length of 2nd to 6th joints; last joint of maxillary palpi elongate-oval. Eyes small and flat. Top of head glabrous, except few short setae along anterior and inner margins of eye. Pronotum as long as base of elytra, with maximum breadth at base, 1.75 times as broad as long; lateral sides rounded, parallel-sided in basal half, strongly convergent in anterior half; anterior angles long and sharp; anterior margin gently concave. Posterior angles of pronotum straight; posterior margin slightly concave laterally but straight in middle third; thus, posterior margin bisinuate. Pronotum wholly bordered from all sides, with a row of long well-spaced strong setae having tips curved internally; in the rest, pronotum glabrous. Pronotum sharply and closely, nearly uniformly punctured; spaces between punctures smaller than their diameter; pronotal disc

with weak, rather broad impression along medial line, less closely spaced but similarly tightly punctured (spaces between punctures clearly exceeding their diameter). Very weak roundish impressions being visible in front and inside from posterior angles, and more anteriorly and internally from the aforementioned ones; narrow longitudinal impressions are also expressed along lateral thirds of pronotal basis. Scutellum as long as broad, subtriangular, with blunt apex, with big and closely spaced punctures and microsculpture. Elytra 1.4 times as long as broad, parallel-sided, slightly narrowed toward apex, each being separately rounded at apex, their apical sutural angles being not extended into denticle, though apical margin of elytra slightly concave near sutural angles. Weak parascutellar sulcation present. Surface of elytra entirely microsculptured and with large and irregularly distributed punctures completely hiding punctate rows but not confluent, somewhat raspy near lateral sides. Odd interspaces of elytra clearly more convex than even ones; 7th interspace connecting the well-developed, elongated humeral and apical knobs, but not in form of strong callus, not more convex than 1st, 3rd or 5th interspaces. Lateral margin of elytra narrowly and uniformly flattened. Elytra glabrous. Epipleures of elytra rather wide below humeral knobs, but rapidly though gently narrowed caudally, extended nearly to outer apical angles; in humeral part possessing a longitudinal row of unequally long strong setae similar to these along borders of pronotum. Membranous apical border of elytra very wide at sutural angles, narrow laterally, but expressed along lateral sides of elytra nearly to their mid-length. Propygidium being covered by elytra on its anterior quarter only, with thin but sharp transverse wrinkles and microsculpture, with transverse row of rather short pale setae. Pygidium nearly flat, longitudinally extended, in rough concentric sculpture and with microsculpture, with rather long, spaced pale hairs on margins but glabrous on disc. Sterna with sparse and short pale hairs, with thin transverse rugosities and microsculpture; disc of metasternum with longitudinal medial sulcation and with rather large but sparse punctures; epimera of mesosternum not visible from above. Mesosternum very narrow between middle coxae, cushion-like, lacking a process; prosternal process also absent. Sternites 1-3 and the beginning of 4th one quite sharply carinate from above; sculpture from above consisting of closely spaced small punctures and microsculpture, from below consisting of microsculpture and rare small punctures. Upper parts of sternites bearing moderately long pale hairs in few rows near their posterior margin; these hairs passing below into a single transverse row, more or less interrupted near mid-line; last sternite with complete transverse row of rather long hairs near its posterior margin. Fore tibiae with two widely spaced teeth directed anteriorly and laterally, bluntly pointed at apices; spur well-developed, at level of basal tooth. Last joint of fore tarsi elongate, lacking tooth; inner claw of fore tarsi clefted in anterior half, with lower lobe not more than twice broader than upper one. Inner claw of middle tarsi clefted, of hind tarsi not clefted. Femora and tibiae gracile; hind tibiae gently broadened distally, lacking constriction before apex; hind tarsi slightly longer than tibiae. Vaginal palpi rounded, their length only slightly exceeding width.

Comparative remarks: The genus *Trichanomala* was erected by Arrow (1917) for the Himalayan *Popillia fimbriata* Newmann, 1841; Arrow had also classified within this genus the Tonkin species *Phyllopertha dentipennis* Fairmaire, 1896. The latter was omitted by Paulian

(1959) in his revision of Rutelinae from French Indo-China, where he characterized four other North Vietnamese species wrongly placed by him within New World genus *Strigoderma* Burmeister, 1844, but actually also representing *Trichanomala*: *T. apicalis* (Benderitter, 1923), *T. callosa* (Fairmaire, 1888), *T. fossulata* (Benderitter, 1929), and *T. trichaspis* (Ohaus, 1915). The first of these appears to be conspecific with *T. dentipennis*. According to Arrow (op. cit) the separation of this genus is based on the following main features: (a) mesepimera visible from above, and (b) characteristic setosity of the pronotum. It should be noted, however, that this genus appears to be heterogeneous in these features. In the Tonkin species studied by me, the characteristic pronotal setosity (and also in the humeral portion of the epipleures) is present, but the mesepimera are not visible from above. The latter character has been considered as having a great importance in the generic classification of the anomalines (Jameson *et al.*, 2003; Ramirez-Ponce & Moron, 2009); however, in my opinion, its rather mosaic distribution in the tribe essentially belittles its phylogenetic value. It should be also noted that, contrary to Paulian's mention (op. cit: 75, 103), I have found that the epipleures extend along nearly the whole lateral margin of the elytra (though being broad at anterior third only) in the North Vietnamese species of *Trichanomala* studied by me. Thus, specificity of the genus *Trichanomala* can be supported by a single character, which however, apparently represents an autapomorphic state: the presence of the specific setosity on the pronotum (perhaps also in the expanded anterior portion of the epipleures, but this feature is not studied for all the known species). In several traits (flattened and elongated body, shape of the pronotum, elongate and rather hairy pygidium, gracile legs, middle and hind tibiae lacking constriction) this genus appears to be similar to the genus *Ischnopopillia*, being different from the latter also in the absence of the mesometasternal process.

Within the Indo-Chinese *Trichanomala,* only *T. callosa* has the pronotum uniformly punctured, while in the other species, its medial part is smooth. I did not study the males of this species, but according to the descriptions (Fairmaire, 1888; Paulian, 1959) the males of this species possess such characteristic features as the presence of the deeply impressed medial sulcus on the pronotum as well as the similarly impressed pits on the sides of the pronotum, and the presence of a well-developed lateral callus connecting the humeral and apical knobs of the elytra. All these features are represented in the described female, though are much less expressed. Thus, *T. callosa* is characterized by the striking sexual dimorphism in the sculpture of the pronotum and elytra, which is also known only in the members of the genus *Ischnopopillia* and in the Himalayan species *Anomala rugosa*. The last joint of the fore tarsi is gracile in the females, and the lower lobe of the inner claw is not broadened. In the other features the female described above is not different from the known descriptions of the male of this species.

In coloration *T. callosa* is well different from all known species within the genus except *T. dentipennis* (= *apicalis*?), from which it can be distinguished, besides the sculptural traits, also in the absence of the dentiform extensions of the apical sutural angles of the elytra (Fairmaire, 1896; Benderitter, 1923; Arrow, 1917; Paulian, 1959).

Comparative material examined: *T. trichaspis* (Ohaus, 1915), 1 male, 3 females, N. Viet Nam, Lao Cai prov., Sa Pa vill., VI.2000.

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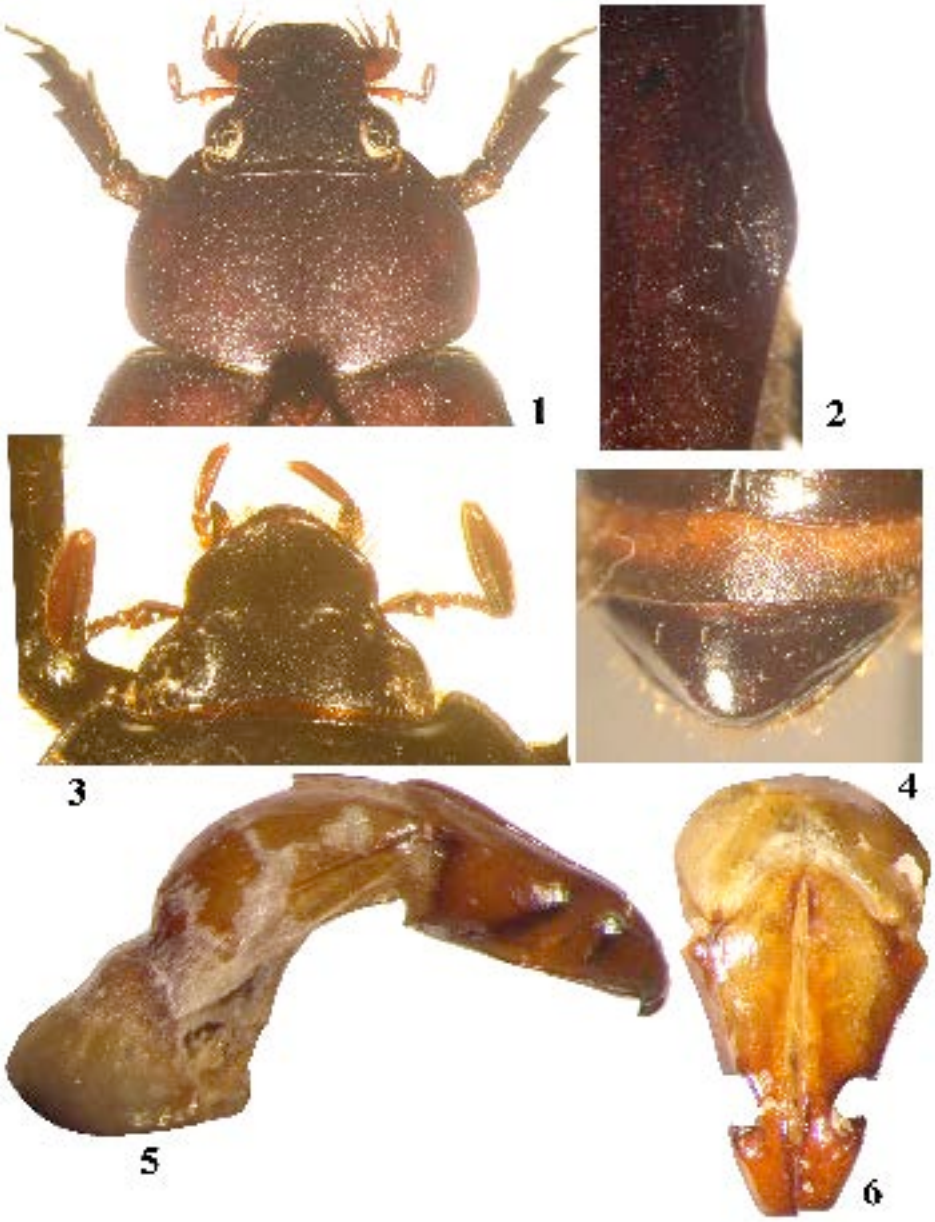
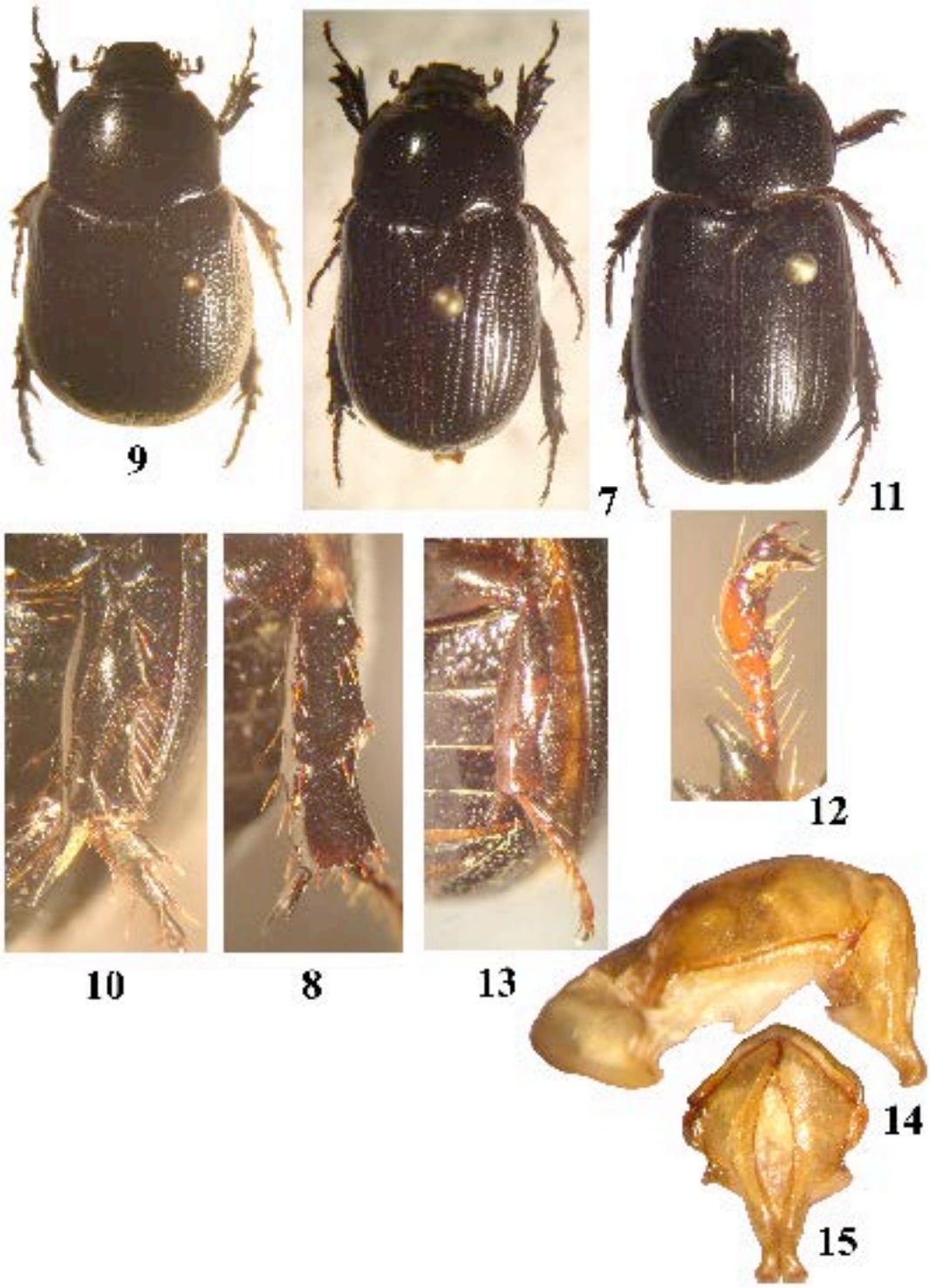
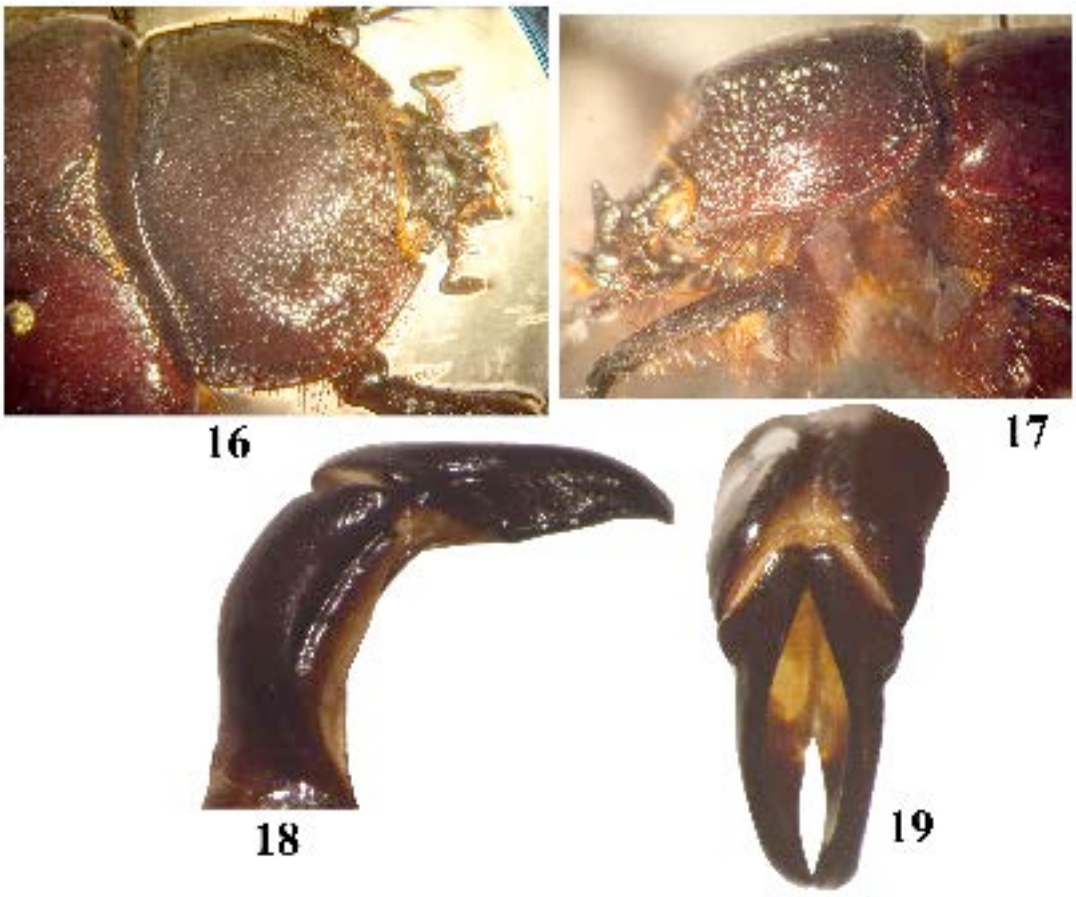


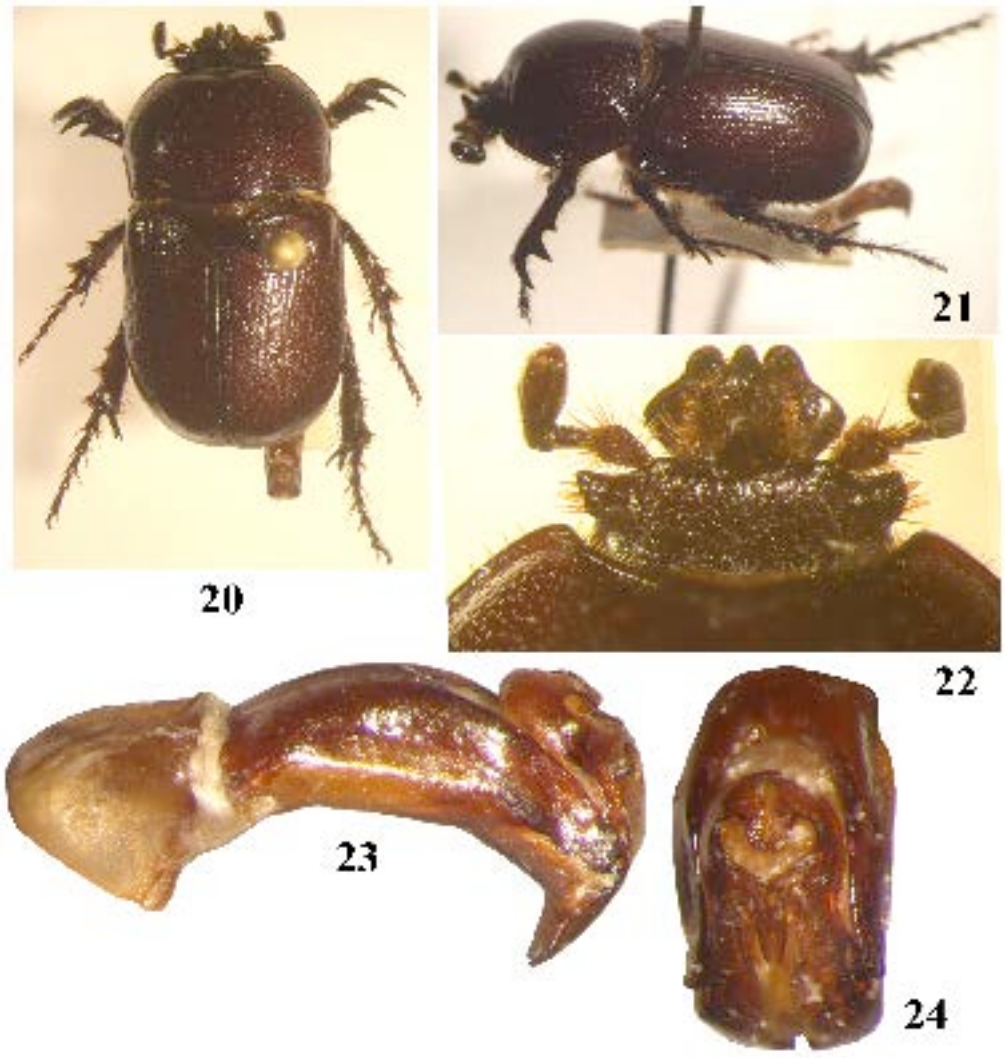
Figs. 1-6. *Chalepides euhirtus* sp. nov., holotype (1, 2) and *C. unduavicus* sp. nov., holotype (3-6): 1, head and pronotum; 2, lateral side of elytron; 3, head; 4, pygidium; 5, 6, male genitalia (5, lateral view; 6, frontal view).



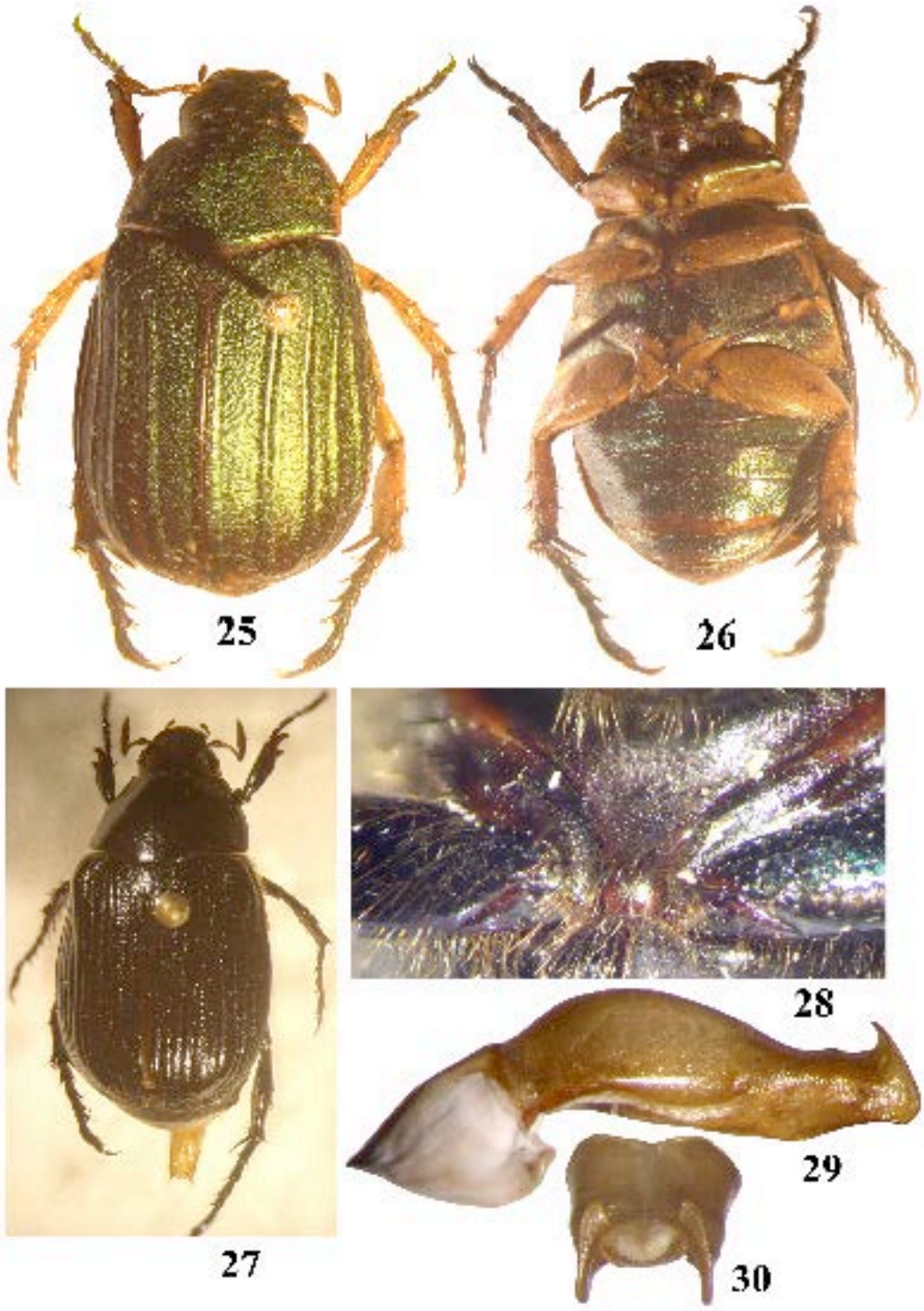
Figs. 7-15. *Eutheola hippocrepis* sp. nov., holotype (7, 8), *E. sibericana* sp. nov., holotype (9, 10) and *E. sinyaevi* sp. nov., holotype (11-15): 7, 9, 11, general view; 8, 10, 12, hind tibia; 13, fore tarsus; 14, 15, male genitalia (14, lateral view; 15, frontal view).



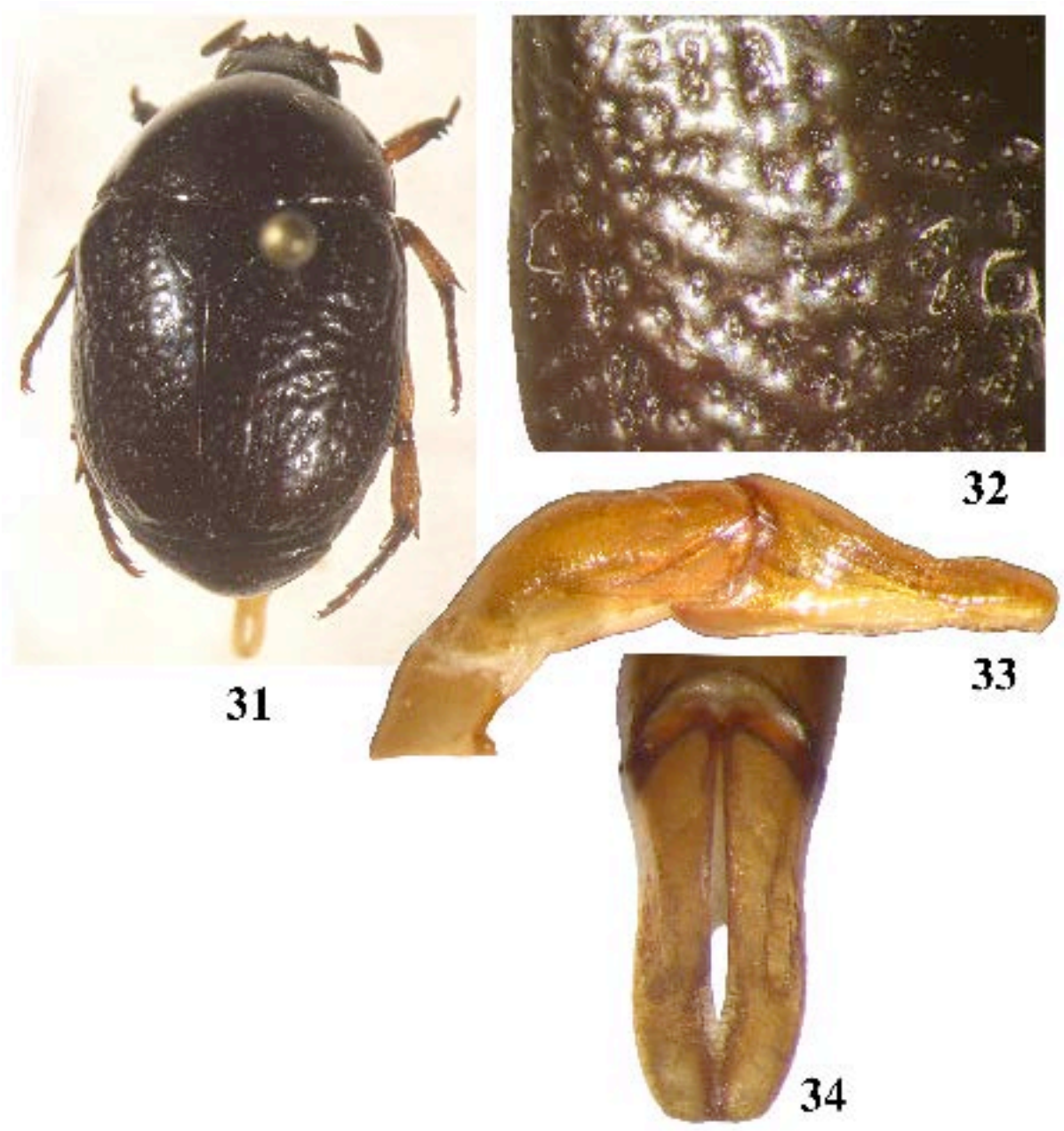
Figs. 16-19. *Golofa (Mixogolofa) olsoufieffi* subgen. et sp. nov., holotype: 16, 17, head and pronotum (16, dorsal view; 17, lateral view); 18, 19, male genitalia (18, lateral view; 19, frontal view).



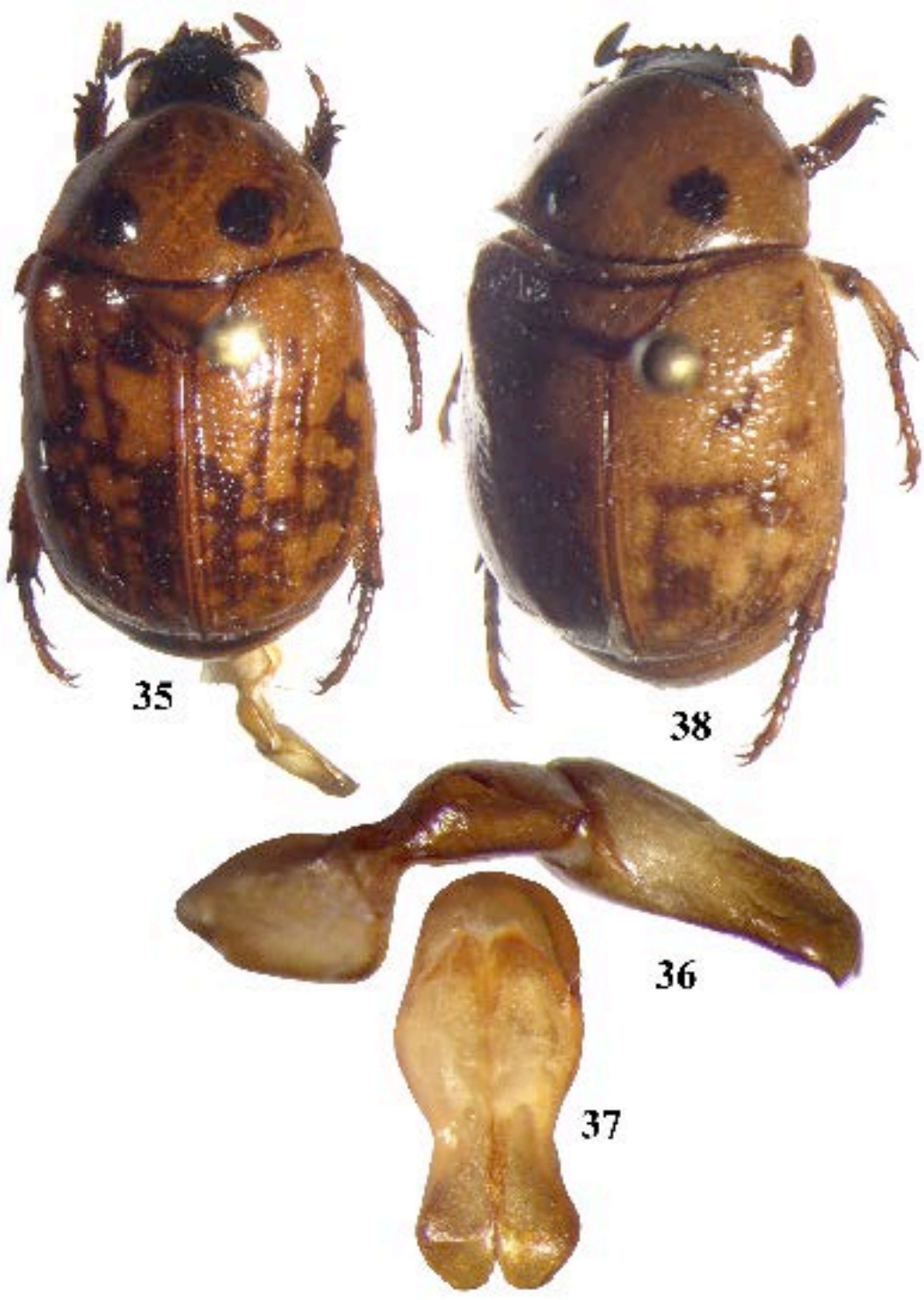
Figs. 20-24. *Pycnoschema mossambicum* sp. nov., holotype: 20, 21, general view (20, dorsal view; 21, lateral view), 22, head, dorsal view; 23, 24, male genitalia (23, lateral view; 24, frontal view).



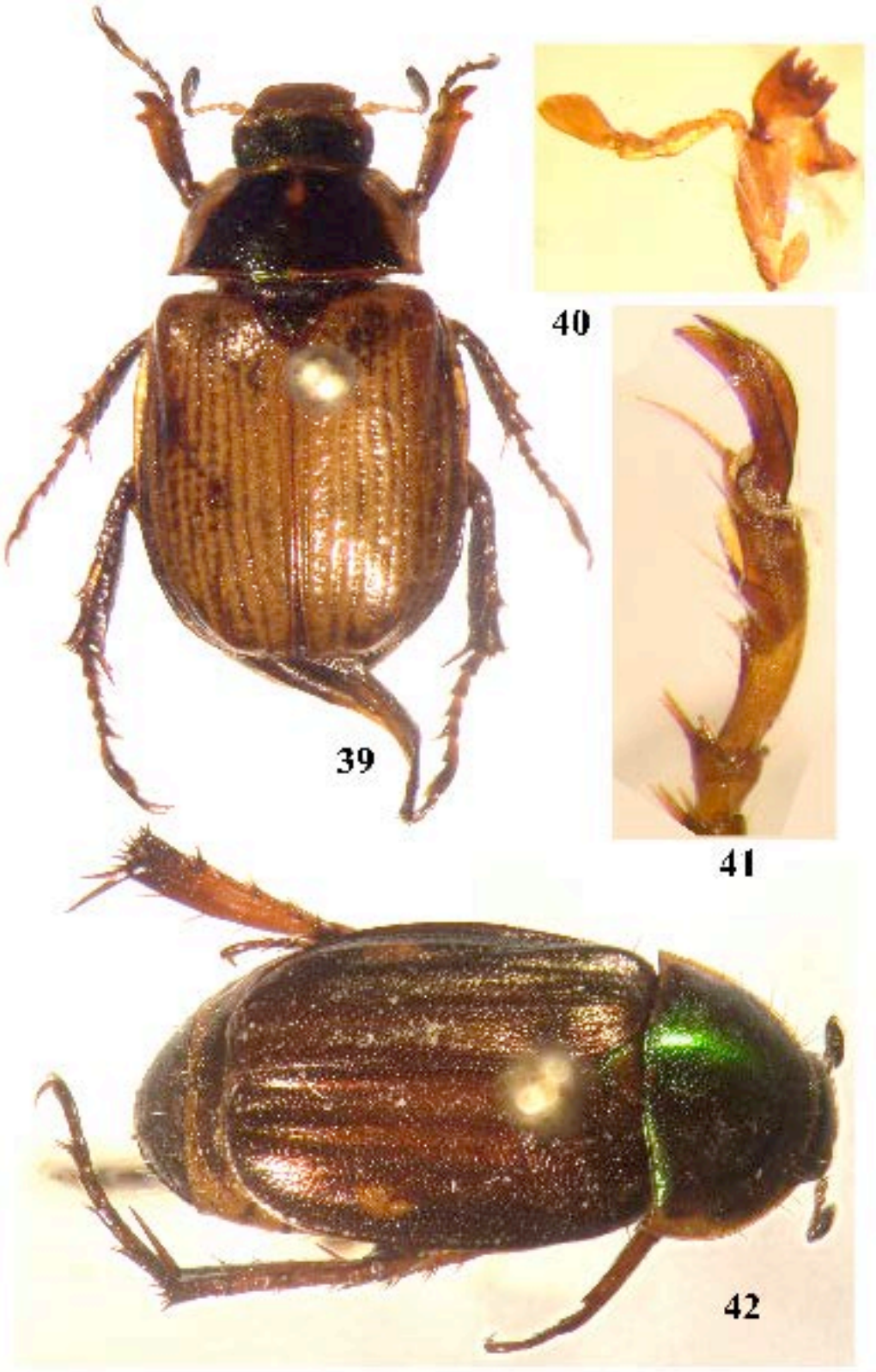
Figs. 25-30. *Anomala costifera* Reitt., female (25, 26) and *Anomala mariposa* sp. nov., holotype (27-30): 25-27, general view (25, 27, dorsal view; 26, ventral view); 28, metasternal process; 29, 30, male genitalia (29, lateral view; 30, frontal view).



Figs. 31-34. *Parastasia gymnopleuridis* sp. nov., holotype: 31, general view; 32, sculpture of elytron; 33, 34, male genitalia (33, lateral view; 34, frontal view).



Figs. 35-38. *Parastasia medvedevi* sp. nov.: 35, holotype, general view; 36, 37, male genitalia, holotype (36, lateral view; 37, frontal view); 38, female allotype, general view.



Figs. 39-42. *Phyllopertha glabripennis* Medv., female (39, general view; 40, lacinia and labial palp; 41, fore tarsus) and *Trichanomala callosa* (Fairm.), female, general view (42).