

Preliminary review of genera of the tribe Mystropini with redescriptions and new descriptions of some genera, subgenera and species (Coleoptera: Nitidulidae: Nitidulinae)

Alexander G. Kirejtshuk⁽¹⁾ & Josef Jelínek⁽²⁾

⁽¹⁾Zoological Institute of the Russian Academy of Sciences, Sanct Petersburg, 199034, Russia

⁽²⁾Department of Entomology, National Museum, CZ-148 00 Praha 4 - Kunratice, Czech Republic

Abstract. New genus *Palmostrops* gen. n., new subgenus *Anthocorcina* (*Palaeocorcina* subgen. n.) and new species *Palmostrops obesus* sp. n., *Anthocorcina* (*Palaeocorcina*) *colastoides* sp. n. *Anthocorcina* (s. str.) *badia* sp. n., *A.* (s. str.) *incompleta* sp. n. and *A.* (s. str.) *subcalva* sp. n. are described. All these new taxa originate from South America and are trophically associated with palm inflorescences. *Epuraea ampla* Grouvelle, 1911 is transferred to the tribe Mystropini, genus *Nitidulora* Reitter, 1873 (*Nitidulora ampla* (Grouvelle, 1911), comb. n.). Keys to the genera of Mystropini and to the species of genera *Anthocorcina* Kirejtshuk, 1996 and *Nitidulora* Reitter, 1873 are provided.

Taxonomy, new genus, new subgenus, new species, new combination, keys, palms, Coleoptera, Nitidulidae, Nitidulinae, Mystropini, Neotropical Region

Introduction

The tribe Mystropini is endemic in Central and South America and includes several genera with close trophic connections with palm inflorescences. Existence of Mystropini as a distinct monophyletic taxon and its current systematic content have been recognized only recently and the classification of the group underwent a complicated development. The first genus described, *Mystrops* Erichson, 1843, was placed at the beginning of Carpophilinae as deviating from all other genera of the subfamily (Erichson, 1843: 233). Murray (1864) followed Erichson (1843) in placing *Mystrops*, with doubts, at the end of Carpophilinae with the statement that "... were I to do it over again, I should now make a separate group (Mystropidae) for its reception, between the Brachypteridae and the Carpophilidae" (p. 411). This conditional proposal is nevertheless valid (ICZN Art. 11.5.1). Reitter (1873) described his *Cychocephalus* as "n. Gen. Mystropidarum" (p. 180), placing it together with *Mystrops*, like Murray (1864) did, behind *Carpophilus*. However, he did not realize the relationship to *Mystrops* of other genera described in the same paper and scattered them in various subgroups of Nitidulidae: *Priops* Reitter, 1873 (= *Mystrops*) in Brachypterinae, *Nitidulora* Reitter, 1873 in the first section of Nitidulinae and *Cryptoraea* Reitter, 1873 in the second section of Nitidulinae along with meligethine

genera *Pria* Stephens, 1830 and *Meligethes* Stephens, 1830. Grouvelle (1913) placed genera *Cychropiestus* (= *Cychrocephalus*), *Mystrops* and *Cryptoraea* in Meligethinae, but retained *Eumystrops* Sharp, 1889 (= *Cryptoraea*), *Nitidulora* and *Platychorodes* Reitter, 1884 scattered within Nitidulinae. Jelínek (1975) realized the polyphyletic origin of Meligethinae sensu Grouvelle (1913) and the appurtenance of Neotropical genera related to *Mystrops* to Nitidulinae, but the tribe *Mystropini* was reestablished for them only by Kirejtshuk (1996, 1998). Key to genera of *Mystropini* is provided in the present paper along with descriptions of some new taxa and keys to the species of genera *Nitidulora* and *Anthocorcina* Kirejtshuk, 1996.

Following acronyms are used throughout the paper to indicate the deposition of the examined material:

- MHUB Museum für Naturkunde der Humboldt-Universität, Berlin;
MNHN Muséum national d'Histoire naturelle, Paris;
NMPC National Museum, Praha;
USNM U.S. National Museum of Natural History, Washington;
ZISP Zoological Institute of Russian Academy of Sciences, St. Petersburg.

Taxonomic part

Tribus *Mystropini* Murray, 1864

This tribe is well separated from all other groups of Nitidulidae, but it is not so easy to elaborate a simple diagnosis for it, because it displays some peculiarities in the habitus and shape of head appendages, convergent with those in anthophagous Epuraeinae and Meligethinae, in particular with those associated with palm inflorescences (Jelínek, 1975, 1992; Endrödy-Younga, 1978; Kirejtshuk, 1997 and others). Contrary to both mentioned subfamilies, distributed mostly in the Eastern Hemisphere, *Mystropini* has its range restricted only to the Central and South Americas.

The only character of this tribe which can distinguish it from other nitidulid subfamilies and tribes is the absence of antennal grooves on the ventral surface of the epicranium. In most nitidulid groups, if antennal grooves tend to be reduced, some expressed remnants of them can be traced at least between eyes and mentum, but among *Mystropini* these remnants are not present even in the species which maintained some traces of antennal grooves behind mentum. Some anthophagous representatives of Epuraeinae (*Grouvelia* Kirejtshuk, 1984 and *Propetes* Reitter, 1875) are also characterized by weakly developed antennal grooves. However, *Mystropini* differ from Epuraeinae in the nitiduline type of aedeagus and male ventral plate and by the anal sclerite concealed under pygidium (Kirejtshuk, 1986). On the other hand, *Mystropini* differ from Meligethinae by their not flattened tibiae. At the same time, aedeagal structure of *Mystropini* is more typical for the nitiduline lineage than that in Meligethinae, because among the latter a tendency to bilobed tegmen is more expressed (i.e. the aedeagi of Meligethinae demonstrate in any respect an intermediary state in structure between those in nitiduline and carpophiline lineages – Kirejtshuk, 1998).

Among the presumable relatives of Mystropini the pair of genera from the tribe Nitidulini with uncertain systematic position and with members associated with inflorescences of *Agathis* and *Araucaria* in the Southern Hemisphere (*Perilopsis* Reitter, 1875 and *Epuraeopsis* Reitter, 1875) can be considered due to their general similarity in simplified structure of many sclerites, although this similarity can be traced, as a consequence of the general process of "anthophagization", in many nitidulid groups. Nevertheless, the both genera mentioned above differ from the representatives of Mystropini in having complete elytra, well developed antennal grooves and rather small and short terminal maxillary palpomeres. Finally, there is some resemblance between Mystropini and the endemic Patagonian genus *Cratonura* Reitter, 1875 (probable member of the *Nitidula* complex of genera), showing some similarity with Mystropini on one hand, and *Perilopsis* and *Epuraeopsis* on the other. This genus can be also anthophagous, but no reliable data on its bionomy are available so far. It differs from both Mystropini and the pair *Perilopsis*-*Epuraeopsis* by its very narrow excision between labral lobes, strongly widened transverse apex of prosternal intercoxal process and not widely separated metacoxae. Besides, *Cratonura* differs from Mystropini in well developed antennal grooves and from *Perilopsis*-*Epuraeopsis* in shortened elytra and elongate terminal maxillary palpomere.

Key to the genera and subgenera of Mystropini

- 1 (4) Metacoxal lines arcuate, closely bordering posterior margins of metacoxal cavities all along their length.
- 2 (3) Head somewhat rostrate, about 1.5 times longer than the distance between eyes, mouth parts strongly prolonged; lobes of labrum sometimes longer than the width at base; mandibles straight, only at apex curved inwards; mentum elongate, almost as long as at the base wide, from base gradually narrowed towards the emarginate anterior margin. Body broadly oval and rather flat. Pronotum widest at base and gradually narrowed towards the shallowly emarginate anterior margin; all pronotal margins completely bordered. Elytra shorter than their combined width. Legs rather long and slender, tibiae not modified; outer apical angle of fore tibia subrectangular. Length (excluding strongly projecting mandibles) 3.0-7.0 mm
..... *Cychrocephalus* Reitter, 1873 (= *Cychropiestus* Reitter, 1875)
- 3 (2) Head at most slightly longer than the distance between eyes; lobes of labrum at most slightly longer than their width at base; mandibles of different shape; mentum transverse. Dorsum with more distinct punctures (sometimes dense and contiguous) and with well developed and conspicuous golden pubescence. Antennae nearly as long as the width of head or shorter, with club not more than 1.3 times longer than wide. Labrum shortly projecting and with narrow median excision. Mentum emarginate anteriorly. Sides of pronotum and elytra more or less widely explanate. Elytra without visible sutural lines. Scutellum subtrapezoidal. Prosternal process curved along coxae and clearly dilated before its V-shaped apex. Mesosternum gently convex in the middle. Tegmen bilobed *Nitidulora* Reitter, 1873
- 4 (1) Metacoxal lines deviating from inner parts of coxal cavities and running in a straight line laterocaudad towards posterior margin of the first ventrite.
- 5 (6) Head between eyes almost twice as wide as long; frons steeply sloping down and deeply hollowed in male, its punctures replaced with raised granules; lobes of labrum broad, subtruncate; mandibles arcuate, their outer margin in males with raised protuberance; antennae in both

- sexes about as long as the width of frons, antennal club 3-segmented, terminal antennomere very small; antennal flagellum in males bearing very long and dense hairs. Pronotum more than twice as broad as long, distinctly narrowed both anteriorly and posteriorly, with strongly arcuate and narrowly canaliculate lateral margins; border of anterior margin broadly interrupted in the middle. Body broadly oval, robust, convex, elytra shorter than their combined width. Prosternal process as wide as the globular part of procoxa, flat, not bordered, somewhat dilated before its V-shaped apex. Tibiae very short, their outer margins with at least two widely separated strong subapical teeth. Length 2.7-5.2 mm *Platychorodes* Reitter, 1884
- 6 (5) Frons punctate. Prosternal process never as wide as the globular part of procoxa. Tibiae at most with 1-2 small and narrowly separated subapical teeth. Other characters in different combination.
- 7 (8) Antennae and/or mandibles with more or less developed sexual dimorphism of various kind. Elytra usually longer than their combined width, separately rounded to subtruncate at apex. Rather variable in many characters, but male fore tibiae never considerably longer than the mid ones. Length 1.6-4.6 mm (excluding strongly projecting mandibles in some species)
..... *Mystrops* Erichson, 1843 (= *Priops* Reitter, 1873)
- 8 (7) Antennae and mandibles without pronounced sexual dimorphism, in both sexes usually somewhat longer than the width of frons between eyes.
- 9 (14) Body oval, elytra more or less shorter than their combined width.
- 10 (11) Mesosternum with high and sharp mediolongitudinal carina. Body oval and slightly convex, much less than twice as long as wide, body length 2.7 mm. Pronotum about twice as wide as long, widest at or just before its base and rather strongly narrowed anteriorly; elytra about as long as their combined width. Anterior margin of frons subtruncate. Dorsum with indistinct punctation and inconspicuous reddish hairs. Antennae much longer than the width of head, with club twice as long as wide. Labrum with long and broad lobes and widened median excision between them. Mentum convex at fore edge. Sides of pronotum and elytra very narrowly explanate. Elytra with raised visible sutural lines. Scutellum triangular. Prosternal process not curved along coxae, parallel-sided, with somewhat widened lateral lobes before subtruncate apex. Body chestnut brown, sides of pronotum, mouth parts, antennal flagella and fore legs paler, reddish brown *Palmostrops* gen. n.
- 11 (10) Mesosternum without high mediolongitudinal carina. Pronotum distinctly narrowed both anteriorly and posteriorly. Body longer than 3 mm (*Anthocorcina* Kirejtshuk, 1996).
- 12 (13) Body flattened, black. Mesosternum with pair of paramedian fossae. Mesocoxal lines deviating from posterior margins of mesocoxal cavities in the middle, their outer portion almost rectilinear, running laterocaudad to reach metasternopleural suture at its midlength and enclosing subtriangular axillary space at anterior corners of metasternum. Distance between metacoxae nearly equal to width of mentum. Dorsum with long and dense semi-recumbent pubescence. Lateral margins of pronotum and elytra fringed with long hairs
..... *Anthocorcina* (*Palaeocorcina* subgen. n.)
- 13 (12) Body oval, convex, reddish to brown. Mesosternum subcarinate, without paramedian fossae. Mesocoxal lines closely bordering posterior margins of mesocoxal cavities all along their length, axillary spaces at anterior corners of metasternum not developed. Distance between metacoxae narrower than mentum. Dorsum smooth, shining, pubescence short, sparse, sometimes erect. Lateral margins of pronotum and elytra at most very sparsely ciliate. Fore tibia in male conspicuously prolonged, nearly twice as long as the middle one
..... *Anthocorcina* (*Anthocorcina* Kirejtshuk, 1996)
- 14 (9) Body elongate and convex, at least twice as long as wide, elytra as a rule longer than their combined width.
- 15 (16) Pronotum widest at rounded and not prominent posterior angles. Elytra leaving two to three terminal tergites exposed. Dorsal surface very densely and finely punctate with contrasting microreticulation and conspicuous pubescence. Male abdomen cylindrical, female one dorso-laterally compressed. Tegmen dichotomous apically. Length 1.9-2.6 mm
..... *Antheurops* Kirejtshuk, 1996

- 16 (15) Pronotum of different shape with variable form of anterior and posterior corners, but the latter ones usually more or less angulate. Elytra leaving only pygidium exposed. Punctuation and pubescence of dorsal surface variable. Abdomen in both sexes dorsoventrally flattened. Tegmen compact. Length 1.3-2.6 mm *Cryptoraea* Reitter, 1873 (= *Eumystrops* Sharp, 1889)

***Cychrocephalus* Reitter, 1873**

Cychrocephalus Reitter, 1873: 180.

Type species. *Cychrocephalus corvinus* Reitter, 1873 (subsequent designation here).

Cychropiestus Reitter, 1875: 185 (unjustified replacement name).

The available genus name *Cychrocephalus* Reitter, 1873 was deliberately replaced with *Cychropiestus* by Reitter (1875) without any obvious reason indicated. The latter name has been used by subsequent authors, but, because it has not been used as valid by at least 10 authors in 25 publications during the past 50 years, *Cychrocephalus* must be considered a valid name of the genus. Because the validity of the second originally included species, (*Cychrocephalus luctuosus* Reitter, 1873) is doubtful (Kirejtshuk, 1996), *Cychrocephalus corvinus* Reitter, 1873 is subsequently designated here as the type species of the genus.

***Nitidulora* Reitter, 1873**

Nitidulora Reitter, 1873: 10, 42.

Type species. *Eपुरaea ephippium* Erichson, 1873 (by monotypy).

Body oval, moderately convex dorsally and subflattened ventrally. Integument densely and finely punctate, with interspaces between punctures alutaceous or microreticulate; covered with dense and short, more or less conspicuous pubescence; sides of pronotum and elytra without visible ciliae.

Head subflattened and moderately long, with labrum far projecting and with a deep narrow excision between lobes. Mandibles moderately exposed from under frons and labrum. Antennae without sexual dimorphism, about as long as head width, their 3-segmented compact club elongate oval. Pronotum and elytra evenly convex and more or less explanate at sides; pronotum with moderately projecting fore and hind corners; elytra somewhat shortened with separately or jointly arcuate apices. Scutellum trapezoidal and with transverse apex. Male anal sclerite not exposed.

Antennal grooves slightly raised behind mentum. Prosternal process slightly to moderately curved along coxal cavities, more or less widened before its rounded apex. Distance between mid coxae somewhat and that between hind ones at least twice as broad as that between fore coxae. Mesosternum slightly excavate and medially convex. Metasternum with hind edge between coxae more or less emarginate. Caudal marginal lines behind both mid and hind coxal cavities follow closely hing coxal edge.

All tibiae subtriangular and narrow. Femora of usual outline. Tarsi moderately long, with tarsomeres 1-3 narrowly lobed and with simple claws.

Aedeagus with bilobed tegmen and ovipositor of usual structure.

Nitidulora ephippium (Erichson, 1843)

(Figs 1-7)

Eपुरaea ephippium Erichson, 1843: 268.

Nitidula ephippium: Gemminger & Harold, 1868: 819.

Nitidulora ephippium: Reitter, 1873: 43.

Material examined. Lectotype, male (MHUB), designated here, and 2 paralectotypes, male and female (MHUB): "ephippium Er., Brasil, Virm.", "8425".

Redescription of lectotype. Length 6.2 mm, width 3.4 mm, height 1.8 mm. Moderately convex dorsally and subflattened ventrally; brownish, with lighter pronotum, head and lateral parts of ventral sclerites and reddish periscutellar parts of elytra and appendages; slightly shining; dorsum with extremely dense and short, rather conspicuous golden hairs, much longer than distance between their insertions (somewhat similar to pubescence of *Eपुरaea* (s. str.) *latissima* Reitter, 1880), elytra moreover with some thicker, longer and much more conspicuous hairs in not quite distinct longitudinal rows and ventral side with somewhat longer and more conspicuous hairs; pronotal and elytral sides without visible ciliae.

All body sclerites with extremely small and dense, almost contiguous, punctures, much smaller than half of eye facet, very narrow interspaces between them smooth or finely alutaceous.

Head subflattened, its length reaching nearly half of distance between eyes. Labrum far projecting, with deep narrow excision between lobes (Fig. 2). Mandibles moderately exposed. Antennae almost as long as the width of head across eyes, their club comprising two sevenths of total antennal length, oblong oval and 1.2 times longer than wide; antennomere III a little longer than scape and more than three times longer than II. Pronotum and elytra evenly convex; pronotum with moderately projecting fore and hind corners and bisinuate unbordered base, gently sloping to subexplanate sides; sides narrowly subexplanate anteriorly and very widely subexplanate at hind corners, there about as wide as antennal club; elytra with regularly explanate sides as wide as two thirds of the width of antennal club, without traceable subsutural lines. Scutellum trapezoidal with transverse apex. Widely rounded apex of anal sclerite not exposed, pygidium with flattened and widely rounded apex.

Antennal grooves moderately arcuately convergent behind mentum. Mentum elliptic, about 2.5 times wider than long. Last labial palpomere more than twice as long as wide and narrowed towards oblique apex (Fig. 3). Prosternal process moderately curved along coxal cavities, medially convex and strongly widened before its widely rounded apex (Fig. 4). Distance between mid coxae 1.5 times, between hind coxae 2.5 times broader than that between fore coxae. Mesosternum slightly exca-

vate and medially convex. Metasternum flattened with mediolongitudinal line all along its length, its posterior edge between hind coxae arcuately emarginate. Caudal marginal lines behind both mid and hind coxal cavities follow closely hind coxal edges. Ventricle I longest, about as long as II-IV combined and twice as long as hypopygium, which is widely rounded apically.

Tibiae subtriangular and strongly flattened, about as wide as antennal club, fore ones with finely crenulate outer edge, mid and hind ones with dense row of short setae at outer edges. Femora with evenly convex fore and hind edges, fore and mid ones 1.5 times, hind twice as wide as corresponding tibiae. Tarsi narrowly lobed, moderately long with very long simple claws, fore ones as wide as one third of fore tibia width, mid and hind ones narrower.

Aedeagus weakly sclerotized (Figs 6-7).

Variation. Length 5.3-6.5 mm, width 3.0-3.5 mm. Coloration somewhat variable to almost reddish in the smallest paralectotype, which has only elytral sides and apices darkened.

Differential diagnosis. *N. ephippium* differs from *N. ampla* in larger body, darker coloration, longer and denser hairs and some thicker and more conspicuous hairs on elytra, extremely dense and fine punctation, shorter head with longer antennae bearing more elongate club, separately rounded elytral apices, widely rounded pygidial apex and narrower tibiae. Differences between *N. ephippium* and *N. glabrata* are given in the above key.

Nitidulora ampla (Grouvelle, 1911) comb. n.

(Figs 8-14)

Eपुरaea ampla Grouvelle, 1911: 236.

Material examined. "Estancia, Pastillon, Puerto Max a. Rio Paraguay", 1 ♂, lectotype (designated here), MNHN; "N. Paraguay, Louis Des Arts jr. Leg. Ded. 9.iii.1905", 1 ♂, paralectotype (designated here), MNHN.

Moderately convex dorsally and almost flat ventrally. Bright reddish, slightly shiny. Both dorsal and ventral surface with extremely dense and short, rather conspicuous, golden hairs, which are about as long as distances between their insertions (somewhat similar to the pubescence in *Eपुरaea (Eपुरaea) latissima* Reitter, 1880). Length 3.3 mm, width 1.3 mm, height 0.7 mm (Fig. 8).

Head and pronotum with distinct, very small and dense punctures, which are by about one half smaller than eye facets and separated by nearly one diameter; spaces between them slightly and finely alutaceous. Surface of elytra and exposed tergites somewhat similar to that on head and pronotum, but with punctation less regular (punctures seem to be smaller and variable in size).

Head slightly depressed, about as long as two thirds of the width of frons between eyes. Antennae as long as three fourths of the width of head, antennal club comprising two sevenths of total length of antenna, ovoid and 1.3 times longer than

wide. Pronotum and elytra evenly convex and gently sloping down towards widely explanate sides. Widely rounded apex of anal sclerite not exposed. Apex of pygidium subangular.

Distance between mid coxae 1.5 times and that between hind coxae 2.5 times as broad as between fore coxae. Mesosternum rather excavate, with median button-like prominence. Metasternum flattened with mediolongitudinal furrow all along its length, its posterior margin between hind coxae arcuately emarginate.

Femora with evenly arcuate fore and hind edges, fore and mid ones 1.3 times, hind ones 1.5 times as wide as corresponding tibiae. Tibiae strongly flattened, 1.5 times as wide as antennal club, fore ones extremely finely crenulate, mid and hind ones with dense rows of setae at their outer edges. Fore tarsi narrowly bilobed, moderately long. Tarsal claws simple.

Male genitalia as figured (Figs 13-14), weakly sclerotized.

Differential diagnosis. This species differs from both its congeners in smaller and lighter body. The other diagnostic characters are given in the above key and in the differential diagnosis of *N. ephippium*.

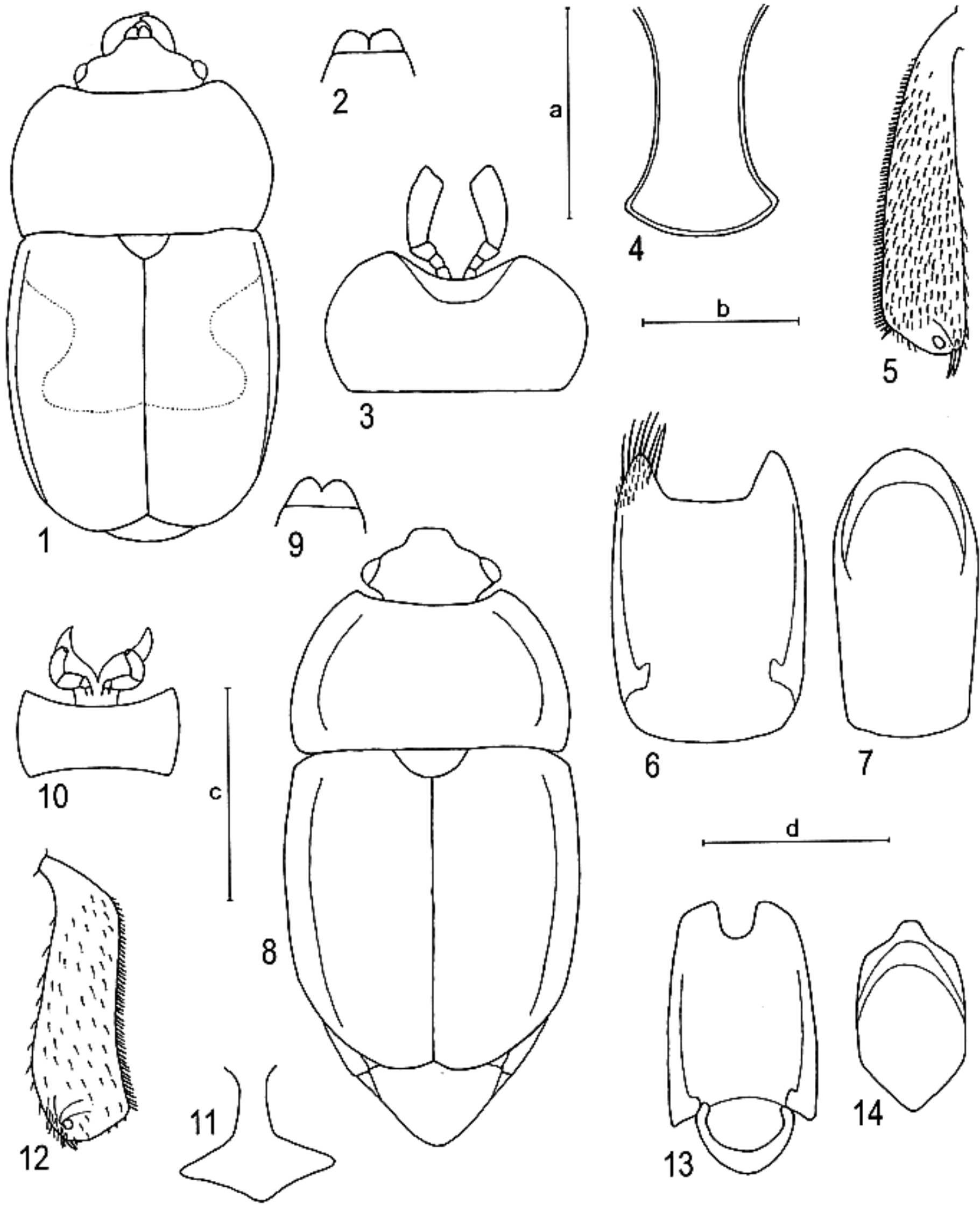
Nitidulora glabrata Reitter, 1875

Nitidulora glabrata Reitter, 1875: 102.

This species is known to the authors only after the original description and provisionally included in the key following the characters listed in the description. However, the authors are not sure that the generic attribution of this species corresponds to the interpretation of the genus proposed in this paper. It cannot be excluded that the species is indeed one of the members of the genus *Anthocorcina*.

Key to the species of *Nitidulora*

- 1 (2) Body elongate; dorsum completely smooth and glabrous, densely punctate with punctation on elytra obsolete; pronotal base more or less distinctly bisinuate; elytra subparallel-sided; body reddish with darkened elytra. Length 3.5-4.0 mm. Brazil ("Neu Freiburg") *N. glabrata* Reitter, 1875
- 2 (1) Body oblong oval; dorsum with more or less distinct microreticulation and rather conspicuous pubescence; pronotal base subtruncate; elytra more or less rounded laterally.
- 3 (4) Body brownish with elytra reddish at scutellum and blackish at sides and at apices, and with reddish appendages; pronotum with distinct hind corners; pronotal sides subexplanate and elytral sides moderately explanate; mentum with sides rather strongly arcuate (Fig. 3); last maxillary palpomere nearly three times as long as the preceding one; prosternal process slightly widened before apex (Fig. 4). Length 5.3-6.5 mm. Brazil *N. ephippium* (Erichson, 1843)
- 4 (3) Body concolorous, straw reddish; elytral and pronotal sides as widely explanate as the width of antennal club; pronotum with rounded hind corners; mentum with sides slightly arcuate (Fig. 10); last maxillary palpomere about 1.5 times as long as the preceding one; prosternal process strongly widened before apex (Fig. 11). Length 3.3-3.5 mm. Paraguay *N. ampla* (Grouvelle, 1911)



Figs 1-14. 1-7: *Nitidulora ephippium* (Erichson); body form (1), labrum (2), mentum ventrally (3), prosternal process (4), mesotibia (5), tegmen ventrally (6), median lobe of aedeagus dorsally (7). 8-14: *N. ampla* (Grouvelle); body form (8), labrum (9), mentum ventrally (10), prosternal process (11), male mesotibia (12), tegmen ventrally (13), median lobe of aedeagus dorsally (14). Scales: a = 1 mm (Figs 3-4), b = 1 mm (Fig. 5) or 0.5 mm (Figs 6-7), c = 0.25 mm (Fig. 9) or 0.5 mm (Figs 10-12), d = 0.25 mm (Figs 13-14).

Palmostrops gen. n.

Type species. *Palmostrops obesus* sp. n.

Body small, oval, moderately convex (Fig. 15). Dorsal surface with fine recumbent pubescence.

Head transverse. Narrowed anterior portion of frons short, gradually narrowed anteriorly towards truncate anterior margin. Eyes large, temples converging posteriorly. Antennal furrows straight, subparallel. Antennae equal in both sexes, fairly as long as the width of head, eleven-segmented with three segmented oblong oval club, which is nearly twice as long as wide. Labrum transverse, bilobed, broadly rounded lobes separated by broad and deep median excision, which reaches anterior margin of frons (Fig. 16).

Pronotum widest in basal portion, strongly narrowed anteriorly. Anterior margin arcuately emarginate, finely bordered. Sides of pronotum arcuate, hardly explanate, not fringed with hairs. Base of pronotum arcuately emarginate besides posterior angles, those blunt, subrectangular. Scutellum subtriangular.

Elytra nearly as long as their combined width, broadly separately rounded at apex, not explanate laterally. Sutural lines distinct.

Prosternal process straight, not longitudinally curved, parallel-sided, with subtriangular lateral lobes before its narrowly subtruncate apex. Mesosternum with high and sharp mediolongitudinal carina. Caudal marginal lines of mid coxal cavities in their lateral portions arcuate, reaching metepisterna at their midlength. Caudal marginal lines of hind coxal cavities rectilinear, running from inner corners of coxal cavities laterocaudally towards posterior margin of the first abdominal sternum.

All tibiae narrow, slender, somewhat dorsoventrally flattened. Outer margin of fore tibia very finely crenulate, almost smooth, those of mid and hind tibiae with dense fine setae. Three basal segments of all tarsi narrowly bilobed, tarsal claws simple.

Tegmen compact.

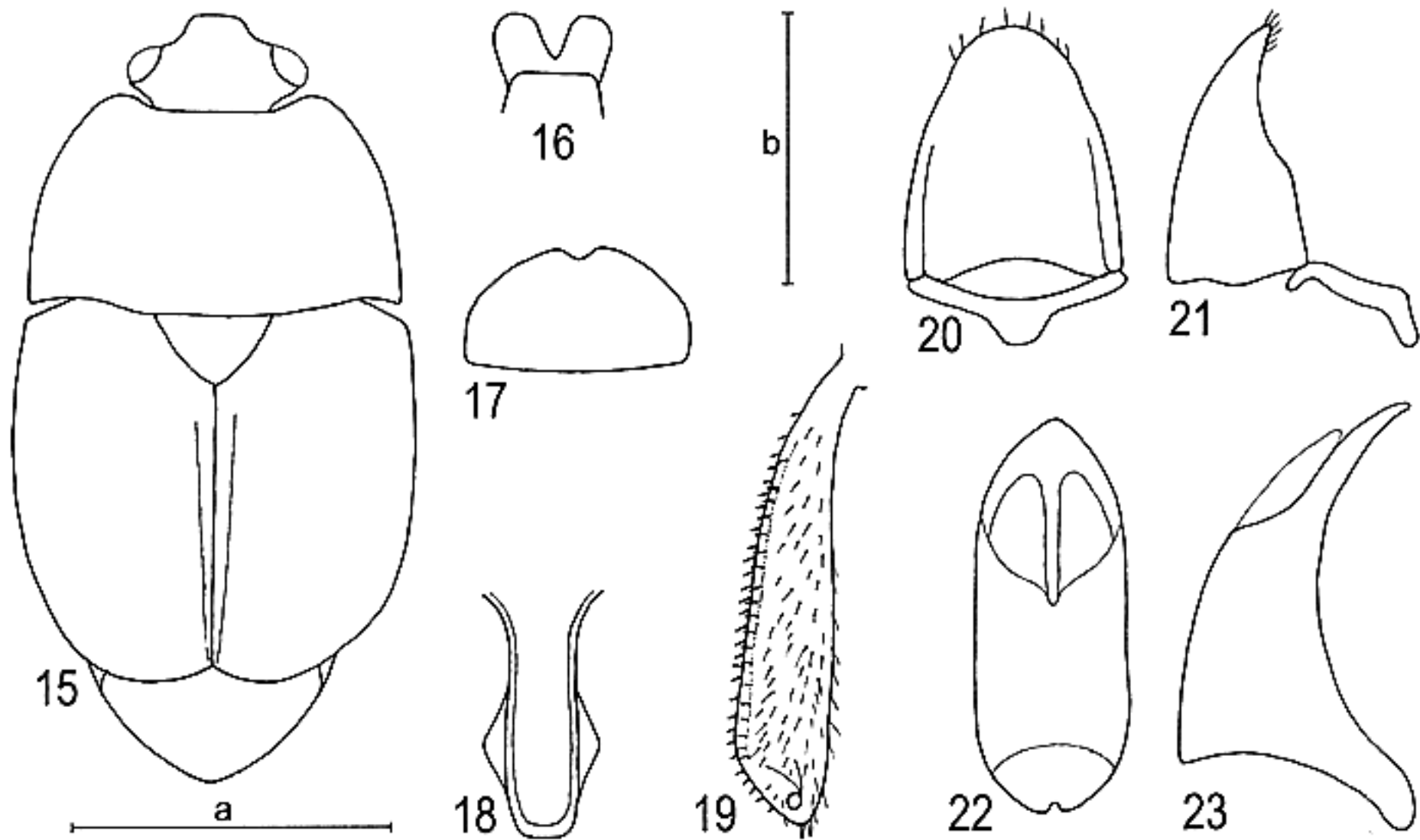
Differential diagnosis is given in the above key. The new genus can be distinguished from all other genera of Mystropini by the following combination of characters: absence of sexual dimorphism in the shape of antennae and mandibles, truncate anterior margin of transverse anterior portion of frons, and sharply mediolongitudinally carinate mesosternum.

Name derivation. *Palmostrops* (gender: masculine), combination of the name of host plant (palm) and the genus name *Mystrops*.

Palmostrops obesus sp. n.

(Figs 15-23)

Type material. Holotype, ♂, Ecuador (Napo), Jatun Sacha Biological Station, 01°04'S, 77°36'W, 16.xii.1992, Finn Ervik leg. (NMPC). Paratypes: 2 ♂, the same data as holotype (NMPC and ZISP).



Figs 15-23. *Palmostrops obesus* gen. n., sp. n.: body form (15), labrum (16), mentum (17), prosternal process (18), mesotibia (19), tegmen ventrally (20) and laterally (21), median lobe of aedeagus dorsally (22) and laterally (23). Scale a = 0.25 mm (Fig. 16) or 0.5 mm (Figs 17-19), b = 0.25 mm (Figs 20-23).

Oval, convex. Chestnut brown, lateral portions of pronotum, clypeus, mouth parts, antennae, legs and ventral surface red-brown; antennal club dark. Pubescence very thin, recumbent, dark, inconspicuous. Length 2.6-2.8 mm, width 1.3-1.4 mm, height 0.7 mm.

Male. Frons flat, its narrowed anterior portion short, subtruncate, not bordered. Punctures of frons much smaller than eye facets, shallow, separated by several diameters; spaces between them densely and obsoletely microreticulate. Antennae somewhat longer than the width of head across eyes, antennal club twice as long as wide.

Pronotum widest near posterior angles, 1.96-1.97 times wider than long, at base slightly wider than base of elytra. Anterior margin very shallowly emarginate, almost subtruncate, anterior angles rounded. Sides arcuate, neither explanate nor fringed with hairs. Base arcuately emarginate besides posterior angles, those subrectangular and projecting posteriorly. Surface convex, with very fine and shallow indistinct punctures separated by more than one diameter, obsoletely microreticulate, with feeble fatty shine. Scutellum subtriangular, punctate like pronotum.

Elytra widest at about one third of their length, almost as long as their combined width, separately rounded at apex. Sides only in anterior half narrowly canaliculate, not fringed with hairs. Sutural lines distinct all along suture. Surface transversely convex (lateral margins not visible simultaneously in their posterior half), punctate and reticulate like pronotum. Pygidium rounded at apex.

Prosternum punctate and reticulate like dorsal surface; prosternal process straight, parallel-sided, bordered, narrowly rounded (subtruncate) at apex, sparsely punctate and shining (Fig. 18). Hypomera broad, impunctate, rather shining. Notosternal sutures distinct. Mesosternum with sharp and high mediolongitudinal carina, its crest reaching the level of metasternum. Metasternum broadly convex, without incised mediolongitudinal line, finely and sparsely punctate and obsolete alutaceous. Punctures of abdominal sterna more distinct than those of metasternum, separated by more than one diameter.

Mid coxae 1.5 times and hind coxae 2.7 times more widely separated than the anterior ones. Femora with evenly arcuate fore and hind margins, fore and mid ones 2.5 times, hind ones almost three times as wide as corresponding tibiae. Tibiae narrow and moderately flattened, of subequal width, fore ones with extremely finely crenulate outer margins and subrectangular outer apical angles, mid and hind ones with a pair of rows of sparse setae at outer margins (Fig. 19). Tarsi bilobed, anterior ones reaching about two thirds of the width of fore tibia. Tarsal claws simple.

Male genitalia weakly sclerotized, as figured (Figs 20-23).

Female unknown.

Variation. No substantial variation observed in the available material.

Differential diagnosis. As a single species of its genus the new species can be distinguished from other *Mystropini* by the characters given in the above key and in the description of the genus.

Name derivation. Latin adjective "obesus" = fatty, thick, swollen, referring to the body form of the species.

Bionomy. All the specimens examined were collected in the male inflorescences of the palm *Prestoea schulzeana* (Burret) H. E. Moore (Arecaceae, Arecoideae, Euterpeinae). The species is mentioned as "*Mystrops obesus* sp. n." in the paper by Ervik & Feil (1997).

***Anthocorcina* Kirejtshuk, 1996**

Anthocorcina Kirejtshuk, 1996: 58.

Type species. *Anthocorcina connelli* Kirejtshuk, 1996 (original designation).

***Anthocorcina* (*Palaeocorcina* subgen. n.)**

Type species. *Anthocorcina* (*Palaeocorcina*) *colastoides* sp. n.

Body broadly oval, flatly convex, inner halves of elytra almost flat. Dorsal surface with well developed, rather dense, recumbent pubescence, lateral margins of pronotum and elytra fringed with rather long and dense hairs. Prosternal process broad, flat, with broadly rounded apex. Mesosternum convex anteriorly, at posterior

corners with pair of broad and deep impressions narrowly separated by low and blunt mediolongitudinal carina. Mesocoxal lines deviating from posterior margins of mesocoxal cavities at their midlength, their outer recurrent portions reaching metasternopleural sutures at about their midlength, thus enclosing rather large subtriangular axillary spaces at anterior corners of metasternum. Male unknown.

Name derivation. Derived from the Greek praefix palaeo- (ancient) and the genus-group name *Anthocorcina*, referring to some ancestral traits of the subgenus, e.g. the well developed pubescence.

Anthocorcina (Palaeocorcina subgen. n.) colastoides sp. n.

(Figs 24-27)

Type material. Holotype, ♀, Ecuador (Napo), Jatun Sacha Biological Station, 01°04'S, 77°36'A, 7.vi.1994, Rodriguez leg., male inflorescence of *Wettinia maynensis* (NMPC). Paratype, 1 ♀, the same data as holotype (ZISP).

Broadly oval, rather flat (Fig. 24). Black, legs, labrum and mandibles brown, antennae, maxillae, palpi and tarsi yellow-brown, antennal club dark. Pubescence long, fine, recumbent, dark, particular hairs reaching or exceeding the base of the following ones; hairs on antennae and legs yellow. Length 3.2-4.3 mm, width 1.7-2.3 mm, height 1.0 mm.

Female. Head transversely impressed between insertions of antennae, behind them with short and blunt longitudinal carinae, which are nearly as long as the third antennomere. Anterior margin of frons very shallowly emarginate, adjacent area impunctate. Frons flat, punctures markedly larger than eye facets, separated by 1 to 2 diameters; spaces between them smooth and shining. Antennae slightly longer than the width of head across eyes, antennal club oval, 1.5 times as long as wide, comprising about two sevenths of total length of antenna (Fig. 25).

Pronotum widest behind its midlength, distinctly narrowed both anteriorly and posteriorly, 2.12-2.13 times wider than long. Anterior margin broadly arcuately emarginate, bordered, anterior angles obtuse. Sides arcuate, hardly explanate. Lateral margins fringed with rather long and thick sparse black hairs. Posterior angles obtuse, not prominent, 1.60-1.83 times more widely separated than anterior ones. Surface broadly and flatly convex, somewhat depressed at posterior corners. Punctures somewhat smaller than those of frons (still larger than eye facets), rather irregularly dispersed and separated by several diameters in the middle, becoming closer laterally; spaces between them smooth, shining. Scutellum triangular, rather densely punctate, with broad impunctate borders.

Elytra widest at about their midlength, 1.19 times wider than long, broadly separately rounded at apex. Sides arcuate, narrowly explanate and ciliate like those of pronotum. Sutural lines almost indistinct. Punctures larger than those of frons, separated by 0.5-1.7 diameters in the middle, becoming finer along suture and very dense laterally; spaces between them smooth. Punctures of exposed abdominal

terga VI and VII nearly equal in size to those of frons, rather irregularly dispersed. Tergum V well sclerotized, black, distinctly more finely and sparsely punctate, not pubescent. Pygidium rounded apically.

Prosternum sparsely punctate, obsoletely alutaceous. Prosternal process broad, straight, rather strongly gradually dilated posteriorly, broadly rounded apically (Fig. 26). Hypomera sparsely shallowly punctate, densely alutaceous, dull, inner portion with transverse wrinkles. Mesosternum in anterior half convex, in posterior half concave, at posterior corners with pair of broad fossae separated by low and blunt mediolongitudinal carina. Metasternum almost flat in the middle, with indistinct traces of mediolongitudinal line behind its midlength. Punctures in the middle smaller than eye facets and very widely scattered, becoming much larger and closer laterally, at sides separated by 1.5-3.0 diameters. Surface in the middle obsoletely alutaceous, moderately shining, at sides densely microreticulate, dull. Outer parts of caudal marginal lines of mid coxal cavities rectilinear, running posterolaterally from the middle of hind margins of cavities to reach metepisterna behind their midlength. First abdominal sternum as long as two following ones combined. Caudal marginal lines of hind coxal cavities running in straight line posterolaterally from inner corner of hind tibiae towards posterior margin of the first abdominal sternum and then laterally along the margin. Apex of hypopygium arcuately emarginate. Punctures of abdominal sterna larger than those in the middle of metasternum, rather irregularly dispersed; spaces between them alutaceous, moderately shining.

Distance between mid coxae slightly, between hind coxae 1.7 times wider than that between fore coxae. Femora of normal shape, with smooth and evenly arcuate anterior and posterior margins. Fore tibia slightly shorter than hind one, its outer margin finely crenulate with two small and narrowly separated subapical teeth, inner margin with rather long outstanding hairs. Mid tibia by about one fourth shorter than hind one. Tarsi lobed, anterior tarsus reaching three fifths of the width of fore tibia. Tarsal claws simple.

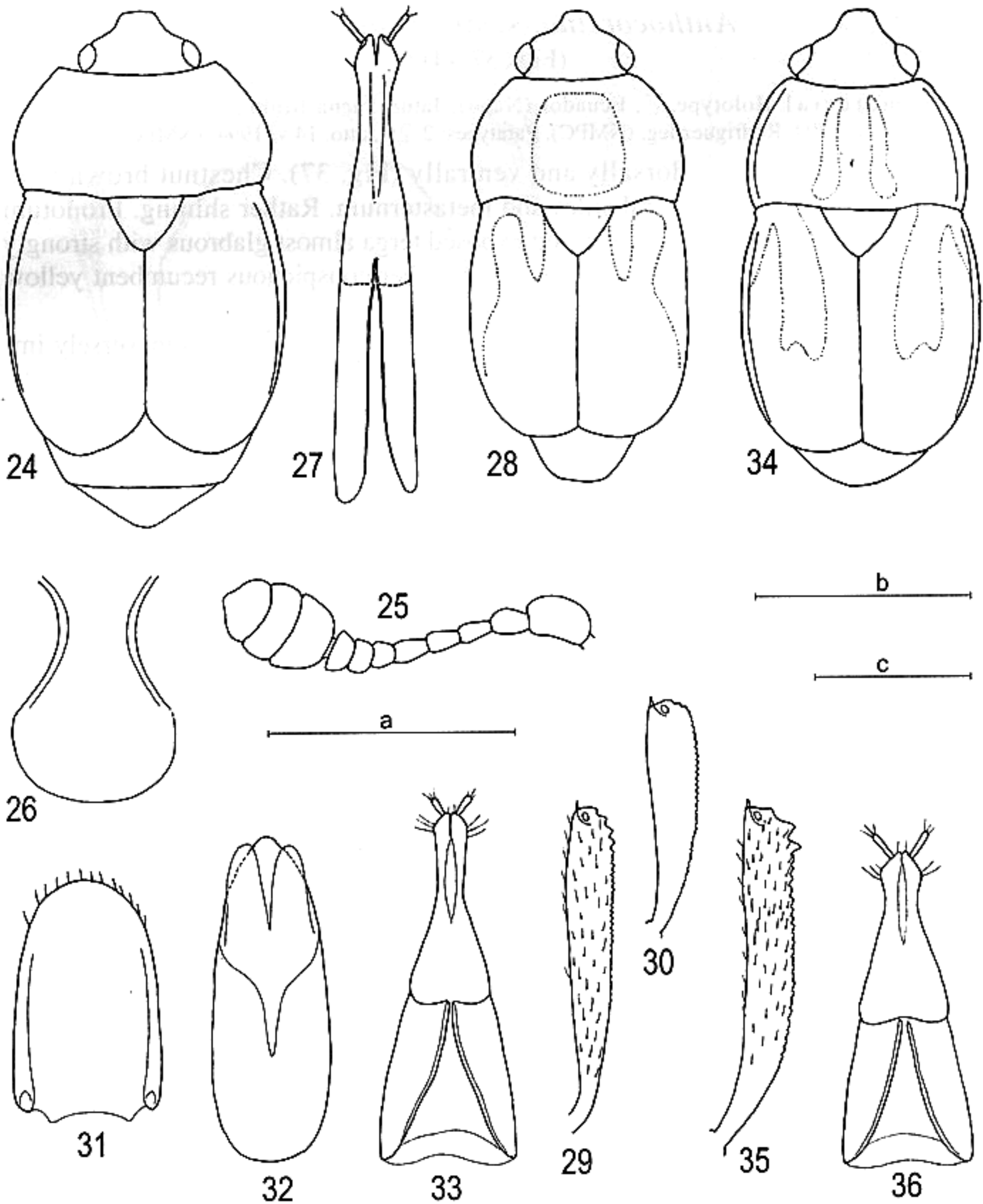
Ovipositor as figured (Fig. 27).

Variation. Sutural lines are indistinct in holotype, fine but distinct along posterior half of suture in paratype.

Differential diagnosis. *A. colastoides* sp. n. is the only known representative of the new subgenus *Palaeocorcina*. It differs from species of the nominotypical subgenus in the characters of the subgenus given above as well as in its black pigmentation and a very slender ovipositor.

Name derivation. The name of this new species is derived from the genus-group name *Colastus*, referring to certain external similarity with some members of the genus *Colopterus* Erichson (= *Colastus* Erichson).

Bionomy. All the specimens examined were collected in male inflorescences of the palm *Wettinia maynensis* Spruce (Areceae, Arecoideae, Wettiniinae).



Figs 24-36. 24-27: *Anthocorcina* (*Palaeocorcina* subgen. n.) *colastoides* sp. n.; body form (24), female antenna (25), prosternal process (26), ovipositor (27). 28-33: *A. (Anthocorcina) incompleta* sp. n.; body form (28), male (29) and female (30) protibia, tegmen ventrally (31), median lobe of aedeagus dorsally (32), ovipositor (33). 34-36: *A. (A.) subcalva* sp. n.; body form (34), female protibia (35), ovipositor (36). Scale a = 0.5 mm (Figs 25-27), b = 0.5 mm (Figs 31-32) or 1 mm (Figs 29-30, 35), c = 0.5 mm (Figs 33, 36).

Anthocorcina (s. str.) *badia* sp. n.

(Figs 37-44)

Type material. Holotype, ♂, Ecuador (Napó), Jatun Sacha Biological Station, 01°04'S, 77°36'W, 8.vi.1994, Rodríguez leg. (NMPC). Paratypes: 2 ♀♀, dtdo, 14.vi.1994. (NMPC. and ZISP).

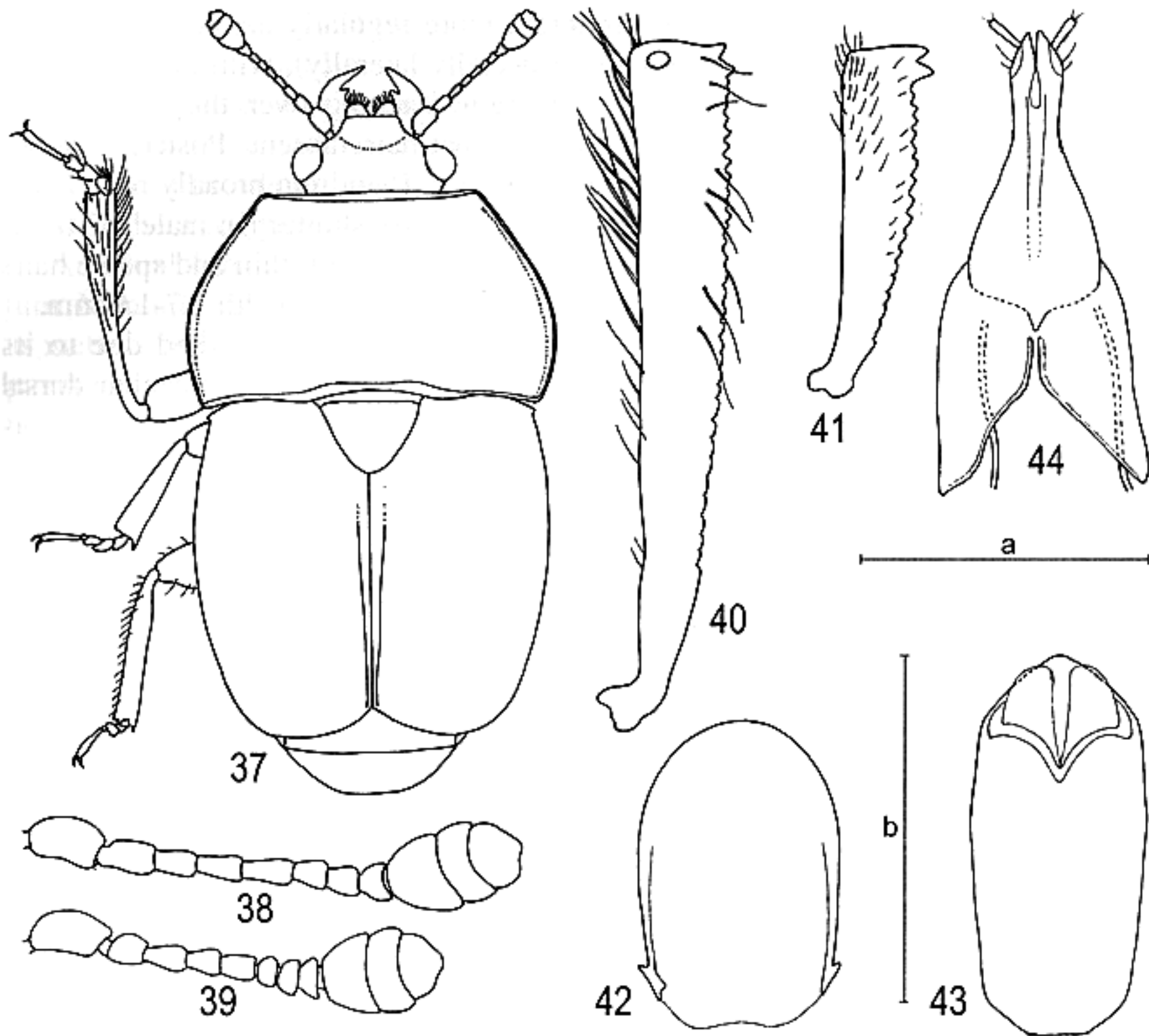
Oval, rather convex dorsally and ventrally (Fig. 37). Chestnut brown with blackish pronotal disc, elytral sides and metasternum. Rather shining. Pronotum with semierect yellow hairs, elytra and exposed terga almost glabrous with strongly reduced indistinct hairs, ventral surface with rather conspicuous recumbent yellow hairs. Length 3.6 mm, width 1.8 mm, height 0.9 mm.

Male. Head about as long as the width of frons between eyes, transversely impressed between insertions of antennae. Narrowed anterior portion of frons impunctate, its anterior margin deeply arcuately emarginate, not bordered. Punctures of frons twice as large as eye facets in the middle, becoming as large as eye facets laterally. Surface densely and obsoletely isodiametrically reticulate. Antennae somewhat longer than the width of head across eyes, antennal club comprising two sevenths of total length of antenna, almost twice as long as wide; scapus about three times as long as wide (Fig. 38).

Pronotum widest at two thirds of its length, 1.92 times as wide as long. Anterior margin very shallowly emarginate, bordered. Basal margin shallowly arcuately emarginate in front of scutellum and besides posterior angles, those obtuse, 1.77 times more widely separated than anterior ones. Sides of pronotum narrowly explanate, lateral margins with long and sparse yellow hairs. Surface transversely convex, punctate like the middle of frons but punctures separated by 2 to 4 diameters; spaces between them obsoletely microreticulate. Scutellum large, triangular, punctate and reticulate like pronotum, with impunctate borders.

Elytra 0.8 times as long as their combined width, with narrowly explanate sides, lateral margins with few widely spaced hairs. Punctures of elytra markedly larger than those of pronotum, separated by one diameter or more; spaces between them smooth. Hairs at base of elytra and on scutellum longer, reaching over the base of following ones, on disc very short, hardly exceeding the outline of relevant punctures. Exposed abdominal terga with punctures nearly as large as eye facets, separated by 1.5-2.5 diameters, between them obsoletely isodiametrically reticulate. Pygidium truncate at apex.

Prosternum as long as metasternum, with very small and sparse punctures and rather obsolete microreticulation. Notosternal sutures distinct. Prosternal process moderately curved along coxae, with sloping sides at apex. Mesosternum subcarinate. Metasternum convex, with mediolongitudinal line in three posterior fourths, its posterior margin between hind coxae slightly angulate emarginate. Caudal marginal lines of mid coxal cavities closely bordering posterior margins of coxal cavities. Punctures of metasternum nearly equal in size to eye facets, separated by about four diameters, those on abdominal sterna closer, separated by 1.5 to 2.5 diameters; spaces between them obsoletely isodiametrically microreticulate. Caudal marginal lines of hind coxal cavities as in other species of the genus.



Figs 37-44. *Anthocorcina (Anthocorcina) badia* sp. n. Body form of male (37), male (38) and female (39) antenna, male (40) and female (41) protibia, tegmen ventrally (42), median lobe of aedeagus dorsally (43), ovipositor (44). Scale a = 0.5 mm (Figs 38-41, 44), b = 0.4 mm (Figs 42-43).

Legs rather long. Fore tibia nearly as long as head and pronotum combined, somewhat wider than antennal club, its inner margin with long rusty hairs in sub-apical portion (Fig. 41). Mid tibia markedly shorter than the hind one, about as wide as antennal club; hind tibia narrower than antennal club. Fore femora with concave fore and slightly convex hind margins. Fore femora 1.5 times, mid ones 2.5 times and hind ones more than 3 times as wide as corresponding tibiae. Tarsi moderately long and moderately lobed, fore ones as wide as two fifths of the width of fore tibia. Tarsal claws simple.

Male genitalia moderately sclerotized, as figured (Figs 42-43).

Female. Antennae somewhat shorter than the width of head across eyes (Fig. 39). Pronotum widest just before base, slightly narrowed posteriorly, 1.96-2.0 times

wider than long. Lateral margins of pronotum more regularly arcuate, not ciliate. Surface of pronotum more flatly convex (especially laterally), with inconspicuous recumbent pubescence; hairs at anterior margin reaching over the base of the following ones, becoming shorter posteriorly; erect hairs absent. Posterior angles 1.76 times more widely separated than anterior ones. Pygidium broadly rounded at apex, shallowly concave posteriorly. Fore tibiae slightly shorter (in male 1.5 times longer) than hind ones, their inner margins with row of short, thin and sparse hairs (Fig. 41). Ovipositor as figured (Fig. 44). Length 3.0-3.4 mm, width 1.7-1.9 mm.

Differential diagnosis. This species is well distinguished due to its body coloration darker than in other members of the subgenus and peculiar dorsal pubescence. In contrast to *A. connelli* and *A. longimana*, this new species has anterior margin of frons as deeply emarginate as in *A. incompleta* sp. n. and *A. subcalva* sp. n. Narrowly explanate pronotal and elytral sides, slightly raised subapical teeth on outer edge of fore tibiae as well as reduced dorsal pubescence resemble *A. subcalva* sp. n., but both species differ not only in their coloration, but also in the pubescence of pronotum, puncturation of elytra and explanation of lateral margins of pronotum and elytra.

Name derivation. From Latin adjective "badius", meaning chestnut brown.

Bionomy. All available specimens were collected in male inflorescences of the palm *Wettinia maynensis* Spruce (Arecaceae, Arecoideae, Wettiniinae).

Anthocorcina (s. str.) *incompleta* sp. n.

(Figs 28-33)

Type material. Holotype, ♂, Colombia, Putumayo, Santa Rosa (Kofan Indian village), headwaters of Rio San Migel, 4.-6.x.1970, B. Malkin & P. Burchard leg. (USNM). Paratype, ♀, the same data (ZISP).

Male. Rather convex both dorsally and ventrally (Fig. 28). Reddish with infuscate (brown) basal portion of head, pronotal disc, base of scutellum, longitudinal humeral and lateral stripes on elytra, and metasternum, rather shining. Pubescence very sparse (although moderately dense on ventrites), short (especially on elytra), recumbent and very inconspicuous. Length 3.2 mm, width 1.7 mm, height 1.0 mm.

Head about as long as the distance between eyes, transversely depressed between insertions of antennae. Anterior edge of frons deeply emarginate. Narrowed anterior portion of frons impunctate, punctation of frons irregular: punctures on basal part about twice as large as eye facets, almost contiguous in the middle, laterally separated by markedly less than one diameter. Surface isodiametrically and somewhat obsoletely microreticulate. Antennae somewhat longer than the width of head across eyes; antennal club comprising two sevenths of the total length of antenna, somewhat less than twice as long as wide; scapus about twice as long as wide.

Pronotum slightly wider than elytra, rather convex, with sides much more narrowly explanate than the width of antennal flagellum. Punctures three to four times larger

than eye facets, separated by about 1.5 to 3.0 diameters; spaces between them very obsolete microreticulate.

Elytra 0.9 times as long as their combined width, with sides much more narrowly explanate than the width of antennal flagellum. Punctures of elytra markedly larger than those of pronotum, separated by about one diameter or somewhat more, spaces between them completely smooth. Pygidium with widely rounded subtruncate apex.

Antennal furrows weakly raised, straight, converging posteriorly behind mentum. Mentum with pore bearing some long hairs in the middle. Prosternum as long as metasternum, with distinct notosternal sutures, with obsolete and scarcely traced punctures, extremely densely and somewhat obsolete microreticulate, almost alutaceous. Prosternal process moderately curved along coxae, with sloping sides at apex. Mesosternum gently convex medially, subcarinate. Metasternum convex, with mediolongitudinal line in three posterior fourths, its hind margin between coxae slightly angularly excised. Caudal marginal lines of mid coxal cavities closely following hind edges of cavities. Punctures of metasternum as large as eye facets or somewhat smaller, separated by about two diameters; spaces between them with isodiametrical smooth microreticulation. Punctation and reticulation of abdominal sterna and exposed terga similar to those of metasternum, punctures separated by 1.2 to 2.5 diameters. Caudal marginal lines of hind coxal cavities as in other species of the genus.

Distances between mid and hind coxae 1.5 times and twice as broad as that between fore coxae respectively. Femora of usual shape (fore ones with slightly convex fore and hind edges), fore twice, mid 2.5 times and hind more than three times as wide as corresponding tibiae. Fore tibia narrow, much longer than antennae and nearly as long as lateral margin of pronotum, slightly narrower than antennal club (Fig. 29). Mid tibia markedly shorter than hind one and about twice as short as the fore one, narrower than antennal club. Hind tibia narrower than antennal club, as long as five eighths of the length of the fore one. Tarsi moderately long and moderately lobed, fore ones as wide as three fifths of the width of fore tibia. Tarsal claws simple.

Aedeagus moderately sclerotized (Figs 31-32).

Female. Length 3.5 mm. Differs from the male by shorter legs with tibiae comparable in length and shape, not longer than antennae. Pronotum clearly narrower than elytra. Antennal club shorter than in male, about 1.3 times longer than wide. Mentum without any setiferous pore. Fore tibia as wide as antennal club and nearly as long as antenna, middle and hind ones somewhat narrower than antennal club. Pygidium with subangulate apex. Ventral surface brightly reddish, dorsum except for reddish pronotal margins dark brown, with evenly short and slightly conspicuous pubescence. Ovipositor as in *A. connelli*, slightly sclerotized, gonocoxites about 2.5 times as long as at the base wide (Fig. 33).

Differential diagnosis. The new species can easily be distinguished due to its extremely narrowly explanate pronotal and elytral sides and comparatively

short protibiae in both sexes, with unraised subapical teeth at their outer edge. It differs from *A. connelli* and *A. longimana* in the fore edge of frons as deeply emarginate as in *A. badia* sp. n. and *A. subcalva* sp. n.

Name derivation. From the Latin adjective "completus" (complete, perfect).

***Anthocorcina* (s. str.) *subcalva* sp. n.**

(Figs 34-36)

Type material. Holotype. ♀, "Peru: Madre de Dios, Rio Tampobata Res., 30 km (air) SW Pto. Maldonado, 290 m, 12°50'S, 69°20'W, Canopy fogging project, T. L. Ervin et al., 08Sep84, 04/01/011, fogging 0032880" (USNM); Paratype, 1 ♀, the same data as holotype (ZISP).

Female. Reddish with infusate (light brown) basal portion of head, paramedian stripes on pronotal disc, base of scutellum, longitudinal humeral and lateral stripes on elytra (paratype with wide blackish mediolongitudinal stripe on pronotum), basal two thirds of elytra and mediolongitudinal stripe on exposed tergites, rather shining (Fig. 34). Pubescence of dorsum visible only under great magnification, consisting of extremely fine, short and sparse, hairs, ventral surface with slightly short, recumbent and very slightly conspicuous hairs. Length 3.9-4.2 mm, width 2.0-2.4 mm, height 1.0 mm.

Anterior margin of frons deeply emarginate. Antennae slightly longer than width of head across eyes, their club comprising two sevenths of total antennal length, somewhat less than twice as long as wide; scapus about 2.5 times longer than wide. Pronotum rather convex at disc, with sides somewhat more broadly explanate than width of antennal flagellum. Elytra 0.9 times as long as their combined width, with sides about as widely explanate as width of antennal flagellum. Punctures of elytra about as large as those on pronotum, interspaces between them markedly narrower than puncture diameter, completely smooth. Pygidium with widely rounded apex.

Fore tibiae markedly shorter than the head and pronotum combined, longer than antennae and about as long as lateral edge of pronotum, about as wide as antennal club (Fig. 35); mid ones markedly shorter than hind ones and by about one fourth shorter than fore ones, nearly as wide as four fifths of the width of antennal club; hind tibiae much narrower than antennal club and almost as long as fore ones. Femora of usual configuration, fore 2.0 times, mid 2.5 times and hind more than 3.0 times wider than corresponding tibiae. Tarsi moderately long and moderately lobed, fore ones as wide as three fifths of the width of fore tibia; tarsal claws simple and moderately long.

Ovipositor moderately sclerotized. Gonocoxites about twice as long as at the base wide (Fig. 36).

Differential diagnosis. *A. subcalva* is well characterized by its extremely reduced dorsal pubescence and very dense punctation of elytra. It rather resembles *A. badia* sp. n. and *A. incompleta* sp. n., although it has larger and somewhat more robust body than these species and its protibiae display well raised subapical teeth at outer edge, like in *A. longimana*. For other differences see the above key as well as differential diagnoses of *A. badia* sp. n. and *A. incompleta* sp. n.

Key to the species of *Anthocorcina*

- 1 (2) Body feebly convex, somewhat flattened, slightly shining and completely black with partly paler appendages. Pronotum with gently arcuate sides and distinctly bordered lateral margins. Mesosternum with pair of distal paramedian fossae. Mesocoxal lines deviating in straight line from the middle of posterior coxal margins and reaching metepisterna at their midlength. Metacoxae widely separated, distance between them nearly equal to width of mentum. Body with comparatively dense, subrecumbent, long and dark hairs, lateral margins of pronotum and elytra fringed with dense long hairs. 4.5 mm. Ecuador *A. (Palaeocorcina subgen. n.) colastoides sp. n.*
- 2 (1) Body rather convex, very shining, reddish or brown, sometimes with more or less infuscate parts of body. Pronotum with rather strongly arcuate and more or less widely explanate sides (at least in males). Dorsum glabrous and shining, head and pronotum sometimes smoothly alutaceous. Mesosternum subcarinate or gently convex along its longitudinal axis, never with pair of distal paramedian fossae. Mesocoxal lines closely follow posterior margins of coxal cavities. Hind coxae narrowly to moderately separated, the distance between them always smaller than width of mentum. Body with sparse, very short and light hairs or nearly glabrous; if longer, then the hairs are suberect to erect. Lateral margins of pronotum and elytra at most very sparsely ciliate (*Anthocorcina s. str.*).
- 3 (4) Body with suberect or erect stout hairs, reddish, sometimes with light brownish pronotal disc and elytra. Sides of pronotum as widely explanate as the width of antennal flagellum. Male: fore femora with sparse crenelation along blackish subapical part of their inner edge. Fore tibiae with sharp processes along inner edge. Fore tarsi with tarsomere IV asymmetrical and about as long as the preceding ones combined. 4.5-5.3 mm. Ecuador, Colombia *A. (s. str.) connelli* Kirejtshuk, 1996
- 4 (3) Body with recumbent fine hairs, at most pronotum partly with suberect fine hairs (*A. badia sp. n.*). Male: fore femora without distinct crenelation along inner edge. Fore tibiae without processes along inner edge. Fore tarsi with tarsomere IV symmetrical and much shorter than other ones combined.
- 5 (6) Pronotum and elytra with very narrowly explanate sides. Body straw reddish with darker pronotal and elytral discs to dark brown, almost black, dorsum, and very darkened metasternum. Entire body with very sparse, recumbent, short and slightly conspicuous hairs. Male: scapus about twice as long as wide. Fore tibiae without long hairs along inner edge. Female: fore tibiae not longer than antennae, antennal scape about twice as long as wide. Length 3.2-3.5 mm. Colombia *A. (s. str.) incompleta sp. n.*
- 6 (5) Pronotum and elytra with sides nearly as widely explanate as the width of antennal flagellum. Coloured either as the preceding species, or completely dark brownish. Dorsum nearly glabrous or with rather sparse, but moderately long and moderately conspicuous hairs. Male: scapus about three times as long as wide; fore tibia with long hairs along inner edge. Female: fore tibiae markedly longer than antennae (except for *A. badia sp. n.*).
- 7 (8) Dorsum nearly glabrous, very fine and sparse hairs slightly visible at high magnification. Punctures on elytra finer and very dense, smooth interspaces markedly narrower than puncture diameter. Body coloration as in *A. incompleta*, but with entirely light ventral side. Fore edge of frons rather deeply emarginate. Male unknown. Female: antennal scape more than twice as long as thick. Length 3.9-4.2 mm. Peru *A. (s. str.) subcalva sp. n.*
- 8 (7) Dorsum with quite well developed, conspicuous and well visible hairs, at least on head and pronotum. Punctures on elytra more sparse and coarser with interspaces about as broad as or markedly broader than puncture diameter. Female: antennal scape about twice as long as wide.
- 9 (10) Fore edge of frons shallowly emarginate to subtruncate. Unicoloured reddish, sometimes with partly infuscate dorsum (usually pronotal disc and elytra). Pronotum with sides as widely explanate as the width of antennal flagellum. Entire body with recumbent and rather conspicuous hairs. 3.2-4.5 mm. Panama, Ecuador ... *A. (s. str.) longimana* Kirejtshuk, 1996

- 10 (9) Fore edge of frons rather deeply emarginate. Dark chestnut brown with blackish pronotal disc, sides of elytra and metasternum. Pronotum with narrowly explanate sides. Prothorax in male partly with suberect fine hairs, in female with recumbent inconspicuous hairs becoming shorter posteriorly; elytra almost glabrous. 3.0-3.6 mm. Ecuador A. (s. str.) *badia* sp. n.

Acknowledgments

Authors are obliged to the following colleagues and institutions, who provided them with the material upon which the present paper is based: Miss Nicole Berti (Muséum national d'Histoire naturelle, Paris), Finn Ervik (Institut des Sciences de l'Environnement, Université Cheikh Anta Odiop, Dakar), T. L. Erwin and J. Pakaluk (U.S. National Museum of Natural History, Washington), F. Hieke, M. Uhlig and H. Wendt (Naturhistorisches Museum der Humboldt-Universität, Berlin).

References

- ENDRÖDY-YOUNGA S. 1978: Systematic revision and phylogeny of some Meligethinae genera from the Ethiopian region (Coleoptera: Nitidulidae). *Entomol. German.* 4: 295-316.
- ERICHSON W. F. 1843: Versuch einer systematischen Eintheilung der Nitidularien. *Ztschr. Entomol.* 4: 225-361.
- ERVIK F. & FEIL J. P. 1997: Reproductive biology of the monoecious understory palm *Prestoea schultzeana* in Amazonian Ecuador. *Biotropica* 29: 309-317.
- GEMMINGER M. & HAROLD E. 1868: *Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus*, vol. 3, E. H. Gumm, München, pp. 753-978.
- GROUVELLE A. 1911: Description d'un *Epuraea* et d'un *Diphylus* nouveaux (Col. Clavicornia). *Bull. Soc. Entomol. Fr.* 1911: 236-239.
- GROUVELLE A. 1913: *Byturidae, Nitidulidae*. In: JUNK W. & SCHENKLING S. (eds): *Coleopterorum Catalogus*, vol. 56. W. Junk, Berlin, 223 pp.
- JELÍNEK J. 1975: New genus of Oriental Meligethinae with notes on supergeneric classification of Nitidulidae (Coleoptera, Nitidulidae). *Annot. Zool. Bot.* 102: 1-9.
- JELÍNEK J. 1992: Nitidulidae (Coleoptera) associated with flowers of oil palm, *Elaeis guineensis* (Arecales, Arecaceae), in Rwanda. *Acta Entomol. Bohemoslov.* 89: 409-428.
- KIREJTSHUK A. G. 1984: New taxa of Nitidulidae (Coleoptera) from the Indo-Malayan fauna. *Ann. Hist.-Natur. Mus. Natl. Hung.* 76: 196-195.
- KIREJTSHUK A. G. 1986: Analysis of structure of genitalia for reconstruction of phylogeny and foundation of system of the family Nitidulidae (Coleoptera). *Trudy Vsesoyuzn. Entomol. Obshch.* 68: 22-28 (in Russian).
- KIREJTSHUK A. G. 1996: Sistema, evolyutsiya obraza zhizni i filogeniya otryada zhukov (Coleoptera) II. [System, evolution of mode of life and phylogeny of the order Coleoptera (Insecta) II.] *Entomol. Obozr.* 75: 39-62 (in Russian).
- KIREJTSHUK A. G. 1997: On the evolution of anthophilous Nitidulidae (Coleoptera) in tropical and subtropical regions. *Bonner Zool. Beitr.* 47: 111-134.
- KIREJTSHUK A. G. 1998: *Nitidulidae (Coleoptera) of the Himalayas and northern Indochina. Part 1: subfamily Epuraeinae*. Koeltz Scientific Books, Koenigstein, 489 pp.
- MURRAY A. 1864: Monograph of the Family of Nitidulariae. Part I. *Trans. Linn. Soc. London* 24: 211-414, pls. 32-35.
- REITTER E. 1873: Systematische Eintheilung der Nitidularien. *Verh. Naturforsch. Ver. Brünn* 12: 1-194.
- REITTER E. 1875: Geänderte Namen. *Col. Hefte* 13: 185.