

New species of *Alaus* Eschscholtz, 1829 (Coleoptera : Elateridae, Agrypninae, Hemirhipini)

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Résumé – Nouvelles espèces d'*Alaus* Eschscholtz, 1829 (Coleoptera : Elateridae, Agrypninae, Hemirhipini). – Quatre nouvelles espèces d'*Alaus* Eschscholtz, 1829 sont décrites: *A. cinnamomeus* n. sp., *A. latipennis* n. sp., *A. sericeus* n. sp. et *A. thoracopunctatus* n. sp. Trois espèces, déplacées de *Chalcolepidius* Eschscholtz, 1829, sont redécris: *A. alicii* (Pjatakowa, 1941) n. comb., *A. haroldi* (Candèze, 1878) n. comb. et *A. unicus* (Fleutiaux, 1910) n. comb. Pour chacune de ces espèces, les caractères morphologiques externes et les genitalia des mâles et des femelles, lorsqu'ils sont disponibles, sont décrits et illustrés. Une clé d'identification est fournie pour les 18 espèces du genre: *A. alicii* (Pjatakowa, 1941) n. comb., *A. calcaripilosus* Casari, 1996, *A. cinnamomeus* n. sp., *A. haroldi* (Candèze, 1878) n. comb., *A. latipennis* n. sp., *A. lusciosus* (Hope, 1832), *A. melanops* Leconte, 1863, *A. myops* (Fabricius, 1801), *A. nobilis* Sallé, 1855, *A. oculatus* (Linnaeus, 1758), *A. patricius* (Candèze, 1857), *A. plebejus* Candèze, 1874, *A. sericeus* n. sp., *A. thoracopunctatus* n. sp., *A. tricolor* (Olivier, 1790), *A. unicus* (Fleutiaux, 1910) n. comb., *A. veracruzanus* Casari, 1996, *A. zunianus* Casey, 1893.

Abstract – Four new species of *Alaus* Eschscholtz, 1829 are described: *A. cinnamomeus* n. sp., *A. latipennis* n. sp., *A. sericeus* n. sp. and *A. thoracopunctatus* n. sp. Three species removed from *Chalcolepidius* Eschscholtz, 1829, are transferred to this genus: *A. alicii* (Pjatakowa, 1941) n. comb., *A. haroldi* (Candèze, 1878) n. comb. and *A. unicus* (Fleutiaux, 1910) n. comb. The characters of external morphology of these seven species and male and female genitalia, when available, are described and illustrated. An identification key for all species of the genus is included: *A. alicii* (Pjatakowa, 1941) n. comb., *A. calcaripilosus* Casari, 1996, *A. cinnamomeus* n. sp., *A. haroldi* (Candèze, 1878) n. comb., *A. latipennis* n. sp., *A. lusciosus* (Hope, 1832), *A. melanops* Leconte, 1863, *A. myops* (Fabricius, 1801), *A. nobilis* Sallé, 1855, *A. oculatus* (Linnaeus, 1758), *A. patricius* (Candèze, 1857), *A. plebejus* Candèze, 1874, *A. sericeus* n. sp., *A. thoracopunctatus* n. sp., *A. tricolor* (Olivier, 1790), *A. unicus* (Fleutiaux, 1910) n. comb., *A. veracruzanus* Casari, 1996 and *A. zunianus* Casey, 1893.

The *Alaus* species are characterized especially by integument clothed with scale-like setae, usually forming two eye-like spots of variable sizes on pronotum, and elytra, plain or forming small patches. The larvae, like the majority of Hemirhipini, are flattened, yellowish with black head and segment IX with apex strongly notched with dorsal setous tubercles. Larvae of only three species are known (Casari 2002a).

This genus was recently reviewed by Casari (1996) and it is made up of 11 species recorded from North, Central and South America. Herein, three species removed from *Chalcolepidius* Eschscholtz, 1829 by

Casari (2002b) are transferred to *Alaus* and four new species are described. The genus now includes 18 species.

Abbreviations used for collections (curators in parentheses)

AMNH	American Museum of Natural History, New York, USA (L. Herman)
FSCA	Florida State Collection of Arthropods, Gainesville, Florida, USA (M.C. Thomas)
IMLA	Instituto Miguel Lillo, Tucuman, Argentina (A. L. Terán, R. Golbach)
IZAV	Instituto de Zoología Agrícola, Maracay, Aragua, Venezuela (L.J. Joly)
JEWC	James E. Wappes Private Collection, Bulverde, Texas, USA

MCZC	Museum of Comparative Zoology, Cambridge, Massachusetts, USA (P.D.Perkins)
MNHN	Muséum National d'Histoire Naturelle, Paris, France (C. Girard)
MZSP	Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil
SRGI	Sergio Riese Private Collection, Genova, Italy
USNM	National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA (D.G. Furth, Nathalia J. Vandenberg, G. House)
ZMHB	Museum für Naturkunde der Humboldt Universität, Berlin, Germany (M. Uhlig)

Checklist of *Alaus* species

A. alicii (Pjatakowa, 1941) **n. comb.**

A. calcaripilosus Casari, 1996

A. cinnamomeus **n. sp.**

A. haroldi (Candèze, 1878) **n. comb.**

A. latipennis **n. sp.**

A. lusciosus (Hope, 1832)

A. melanops LeConte, 1863

A. myops (Fabricius, 1801)

A. nobilis Salle, 1855

A. oculatus (Linnaeus, 1758)

A. patricius (Candèze, 1857)

A. plebejus Candèze, 1874

A. sericeus, **n. sp.**

A. thoracopunctatus, **n. sp.**

A. tricolor (Olivier, 1790)

A. unicus (Fleutiaux, 1910) **n. comb.**

A. veracruzanus Casari, 1996

A. zunianus Casey, 1893

Key to the *Alaus* species

- Pubescence of pronotum forming eye-like spots 4
- Pubescence of pronotum plain 2
- Pronotum narrowed apically and basally; anterior margin straight or sinuous; hind angles sharpened and divergent; median basal tubercle transverse, subelliptical; borders of mesosternal cavity slightly declivous 3
- Pronotum narrowed apically; anterior margin bearing two small tubercles near middle; hind angles wide and slightly divergent; median basal tubercle elongate (fig. 93) (Peru, Bolivia) *A. alicii* (Pjatakowa) **n. comb.**
- Third antennal segment elongate and triangular, slightly shorter than 4th; pronotum moderately convex; hind angles of pronotum flat, not carinate; median lobe of aedeagus with one lateral and one longitudinal ventral carina, and constricted at apex; subapical region of parameres rounded laterally (fig. 108) (Mexico) *A. veracruzanus* Casari
- Third antennal segment transverse with spiniform appendix; pronotum strongly convex; hind angles raised at middle; median lobe of aedeagus without carina, gradually narrowed to apex; subapical region of parameres with rounded tooth (fig. 105) (Mexico) *A. sericeus* **n. sp.**
- Eye-like spots of pronotum formed by velvety pubescence, surrounded or included in band of whitish pubescence; pronotum with weak longitudinal median groove; tibiae of male bearing small spines innerly; last ventrite of female with rounded apex; sternite VIII of female with distal margin slightly notched at middle and two basal darker spots; coxites cuneiform, strongly sclerotized; parameres at least two times longer than median lobe; distal region of parameres cuneiform each bearing a lateral prominent tooth near apex 5
- Eye-like spots of pronotum formed by scale-like setae; pronotum not grooved; tibiae of male variable; last ventrite of female with apex truncate with fringe of spatulate setae, or rounded; sternite VIII of female different from above; coxites partially membranous; parameres less than 1.5 times longer than median lobe; distal region of parameres variable 9
- General pubescence grayish or brownish; eye-like spots of pronotum semielliptical, moderately small and surrounded by white band; pubescence of elytra forming uneven moderately large patches; sternite VIII of male with dark area interrupted basally and distally (fig. 100) (Eastern half of North America) *A. myops* (F.)
- General pubescence black; eye-like spots of pronotum variable; pubescence of elytra forming small whitish patches 6
- Eye-like spots of pronotum almost rounded, large and surrounded by narrow white band; ventral pubescence of male longer only on metasternum; pronotum slightly convex; lateral margins of pronotum slightly widened frontally; sternite VIII of female longer than wide (fig. 99) (Western Canada, USA) *A. melanops* LeConte
- Eye-like spots of pronotum large and subelliptical; if rounded, without lateral band; ventral pubescence of male longer than dorsal; pronotum moderately or strongly convex; lateral margins of pronotum almost straight; sternite VIII of female wider than long 7
- Eye-like spots large and elliptical surrounded by whitish band distinct from lateral white stripes of pronotum; tarsal pubescence of male longer; interstices slightly convex; distal spot of sternite VIII of female continuous, without interruption; parameres more than twice longer than median lobe (fig. 102) (Eastern Canada, USA) *A. oculatus* (L.)
- Eye-like spots large, rounded or elliptical surrounded by band, indistinct from white lateral band; tarsal pubescence of male normal; interstices flat; distal spot of sternite VIII of female continuous or interrupted medially; parameres at maximum twice longer than median lobe 8
- Distance between lateroexternal margin of eye-spots and lateral margins of pronotum equal or larger than to middle; pubescence of hypomera black, each with a white spot; pronotum strongly convex; distal spot of sternite VIII of female interrupted at middle (USA: Arizona) *A. zunianus* Casey
- Distance between lateroexternal margin of eye-like spots and lateral margins of pronotum smaller than to middle; pubescence of hypomera completely white; pronotum

moderately convex; distal spot of sternite VIII of female continuous, without interruption (fig. 98) (Southwestern USA) *A. lusciosus* (Hope)

9. Pronotum elongate, strongly convex from sutures; antennae short, not reaching hind angles of pronotum; 3rd antennal segment short and triangular; borders of mesosternal cavity variable; elytral apex conjointly rounded; subapical region of parameres cuneiform 10

– Pronotum elongate or subquadrangular with longitudinal median region strongly convex, grooved laterally; antennae of male reaching or surpassing hind angles of pronotum; 3rd antennal segment transverse with spiniform appendix; borders of mesosternal cavity declivous; elytral apex emarginate; sternite IX of male glabrous; distal region of parameres with ventral uncus not continuous with lateral margins 12

10. Eye-like spots of pronotum very small; elytra plain; 3rd antennal segment short and triangular; pronotum slightly narrowed at hind angles base; hind angles of pronotum slightly divergent and raised laterally; elytra moderately convex; median lobe wide, constricted near base and slightly narrowed apicad; parameres bearing subapical small lateral tooth (fig. 94) (Peru) *A. cinnamomeus* n. sp.

– Eye-like spots of pronotum variable; elytra bicolor, spotted or striped; 3rd antennal segment triangular, short or elongate; other characters different from above 11

11. General pubescence whitish; eye-like spots of pronotum brown; elytra strongly convex and striped (interstices alternated brown and whitish); 3rd antennal segment short and triangular; hind angles of pronotum backwards or slightly divergent, raised laterally; interstices slightly unequal; punctuation slightly coarser on higher interstices; median lobe wide, constricted near base and slightly narrowed apicad; each paramere bearing very prominent, short and rounded, subapical tooth; ovipositor short and wide (fig. 107) (Panama, Venezuela, French Guiana, Brazil) *A. unicus* (Fleutiaux) n. comb.

– General pubescence yellowish or grayish with brown patches; elytra strongly convex usually with three larger dark-brown spots and some smaller; 3rd antennal segment elongate and triangular; pronotum narrowed at hind angles base; hind angles of pronotum slightly divergent and raised at middle; interstices flat and micropunctate; 3rd interstice raised near base, forming small ridge; median lobe narrow, slightly narrowed apicad; parameres prominent near apex; ovipositor narrow (fig. 104) (Mexico, Belize, Nicaragua, Panama, French Guiana, Brazil) *A. plebejus* Candèze

12. Pronotum elongate with longitudinal median region strongly convex 13

– Pronotum subquadrangular strongly convex at discal region 17

13. Eye-like spots of pronotum inside subelliptical white patches; elytra forming patches; anterior margin of pronotum raised near middle forming two small tubercles 14

– Elytra striped; hind angles of pronotum wide and slightly divergent; interstices unequal (fig. 96) (Peru, Ecuador) *A. baroldi* (Candèze) n. comb.

14. General pubescence dark-brown; antennae serrate 15

– General pubescence brownish; antennae of male flabellate or strongly serrate 16

15. General pubescence white or yellowish-white with brown patches giving mottled appearance; eye-like spots of pronotum near median line; antennae of male surpassing hind angles of pronotum, strongly serrate; scape carinate, 3rd segment short, triangular very prominent laterally; hind angles of pronotum very divergent and raised at middle; borders of mesosternal cavity slightly declivous on distal half; apices of elytra emarginate bearing sutural and lateral spines; last ventrite of female with apex truncate with fringe of spatulate setae; each paramere bearing a ventral subapical uncus (fig. 97) (West Indies: Haiti, Dominican Republic) *A. latipennis* n. sp.

– General pubescence white or yellowish-white with brown patches dorsally; brownish ventrally; antennae of male short, serrate, not reaching hind angles of pronotum; 3rd segment elongate and triangular; hind angles of pronotum divergent, raised near lateral margins; borders of mesosternal cavity moderately declivous on distal half; apices of elytra conjointly rounded with sutural spine; each paramere with laterodorsal subapical well developed tooth (fig. 109) (Guatemala, Honduras) *A. thoracopunctatus* n. sp.

16. General pubescence brownish, yellowish- or grayish-white intermingled with brown pubescence; eye-like spots brown, inserted into elliptical yellowish-white spot; elytra with scutellar area and an uneven transverse median band with brown pubescence; antennae of male flabellate, surpassing hind angles of pronotum; 3rd segment transverse with spiniform appendix; hind angles of pronotum divergent, raised laterally; borders of mesosternal cavity slightly declivous on distal half; apices of elytra deeply emarginate with well developed sutural and lateral spine; each paramere bearing a dorsal uncus near apex (fig. 103) (USA: Florida; West Indies: Bahamas, Cuba, Jamaica, Dominican Republic) *A. patricius* Candèze, 1857

– General pubescence predominantly brown, intermingled with yellowish-white dorsally, and yellowish-white ventrally; eye-like spots of pronotum brown, inserted into elliptical yellowish-white spot; elytra with irregular yellowish-white spots; antennae of male surpassing hind angles of pronotum, strongly serrate; 3rd segment transverse with spiniform appendix; hind angles of pronotum divergent, raised laterally; borders of mesosternal cavity slightly declivous on distal half; apices of elytra emarginate with sutural spine; each paramere bearing dorsal uncus near apex (fig. 101) (West Indies: Dominican Republic) *A. nobilis* Sallé, 1855

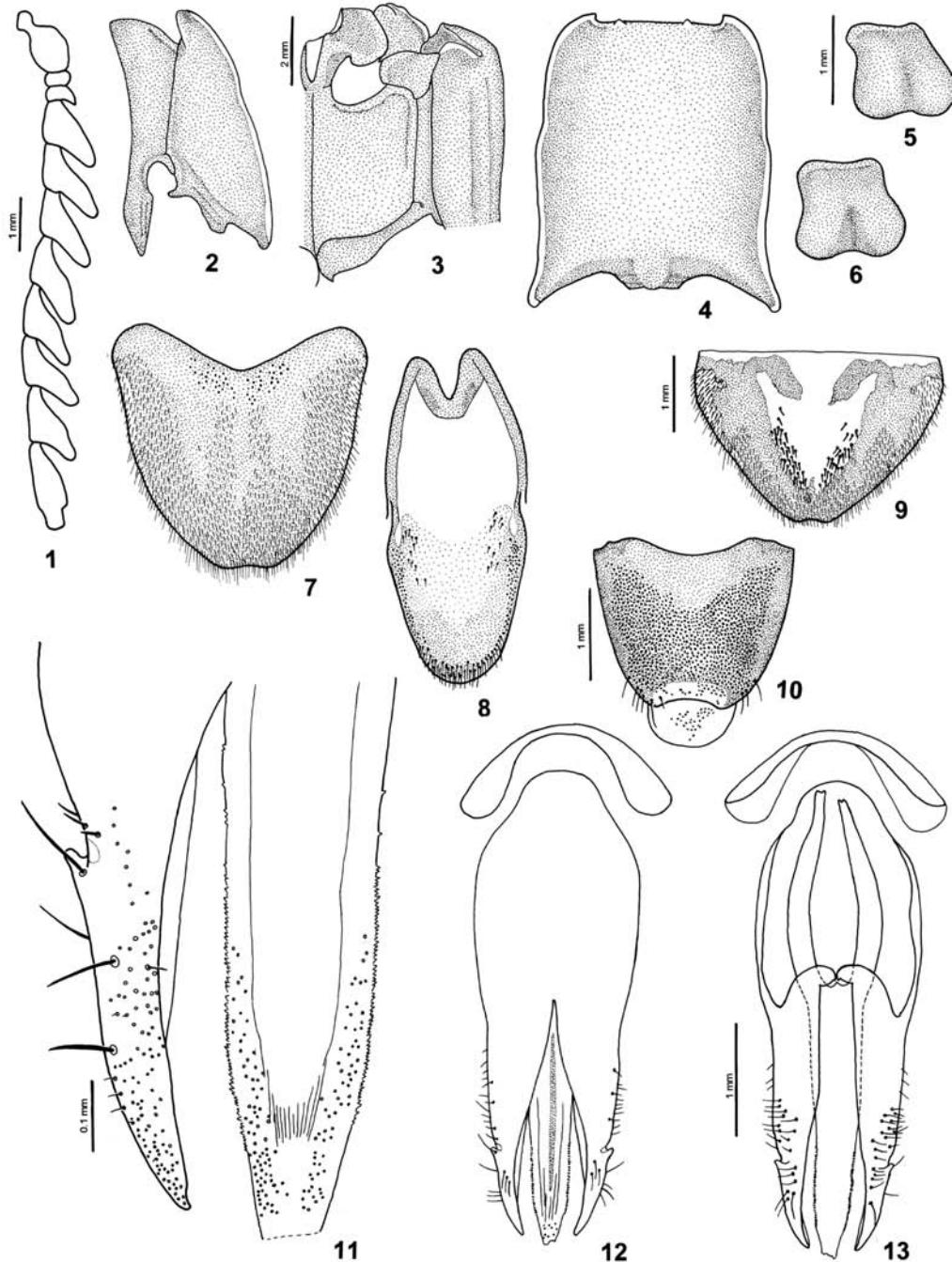
17. General pubescence from ferruginous to orange dorsally and whitish ventrally; black pubescence on two rounded small eye-like spots of pronotum and some small patches on elytra; antennae serrate, in male reaching hind angles of pronotum; 3rd antennal segment transverse with spiniform appendix; lateral margins of pronotum rounded laterally; prosternal spine with cuneiform apex; borders of mesosternal cavity moderately declivous on distal half; apices of elytra rounded with well developed sutural spine; each paramere bearing a subapical ventral uncus;

sclerotized pieces of openings of colleterial glands elongate; dorsal setae of parameres sparse and short (fig. 106)
(West Indies: Dominican Republic; Nicaragua,
Venezuela) *A. tricolor* (Olivier, 1790)

Alaus alicii (Pjatakowa, 1941) n. comb.

(figs. 1-13, 93)

Chalcolepidius alicii Pjatakowa, 1941: 97.
Alaus alicii (Pjatakowa, 1941) n. comb.



Figures 1-13

A. alicii (Pjatakowa) n. comb., male. – 1, antenna. – 2, hypomeron and prosternum (lateral). – 3, meso- and metasternum (lateral). – 4, pronotum. – 5, 6, scutellum (dorsolateral, dorsal). – 7, tergite VIII. – 8, sternite IX. – 9, sternite VIII. – 10, tergites IX-X. – 11, apex of paramere and median lobe (ventral). – 12, 13, aedeagus (ventral, dorsal). (figs. 2-4; 5, 6; 7-9; 12, 13, respectively, to same scale)

Pjatakowa (1941) described *Chalcolepidius alicii* based on one specimen from Peru, Chanchamayo and included it into the Section I of Candèze (1857). Casari (2002b), in the revision of *Chalcolepidius* Eschscholtz, removed that species from this genus and now, includes it in *Alaus*.

The type material was not located and the redescription is based on one specimen that fits very well with the original description.

Redescription – Length: 25 mm. Integument black; median region of pronotum and higher interstices wine-red. Pubescence scale-like, black dorsally (including antennae) and white ventrally (including legs).

Frons wide, narrowed on distal fourth, concave medioanteriorly in triangular area; nasal plate punctate, transverse, slightly narrower near middle. Antennae of male (fig. 1) pectinate; scape cylindrical, short and wide; 3rd segment transverse, prominent laterally.

Pronotum (fig. 4) longer than wide, almost sided parallel, narrowed apically; longitudinal median region strongly convex; densely small-punctate; punctuation sparse on longitudinal median region; anterior margin bearing two small tubercles near middle; lateral margins forming narrow smooth raised edge, grooved near internal margin; fore angles prominent, flat and rounded; hind angles wide and slightly divergent; median basal tubercle elongate. Prosternum (fig. 2) strongly convex, flattened longitudinally; punctuation small, weak and sparse, denser and coarser near sutures; prosternal spine compressed laterally with cuneiform apex. Prosternal lobe with rounded angles; punctuation sparse, coarser than prosternum. Notosternal sutures straight. Hypomera concave, densely weak and small punctate; laterointernal margin raised anteriorly forming wall of prosternal channel. Mesosternal cavity U-shaped with borders (fig. 3) wide and horizontal on basal half and strongly declivous on anterior half. Meso-metasternal suture behind mesosternal cavity weak. Metasternal plate strongly narrowed laterally. First ventrite prominent laterally; last with rounded apex in male. Scutellum (figs. 5, 6) subquadrangular, moderately declivous on anterior half; basal half wider, strongly concave and notched at middle; distal angles raised and strongly rounded. Elytra slightly narrowed on distal half; apices conjointly rounded; interstices convex and small-punctate; interstices 2, 4, 6 higher, wider, forming small ridges, and with sparser punctuation; second forming basal well developed ridge. First tibiae of male bearing short spines. Claws with tuft of long basal setae.

Genital segments of male and aedeagus. Tergite VIII (fig. 7) almost as long as wide, gradually narrowed to apex; setous with truncate apex. Sternite VIII (fig. 9) wider than long, subtriangular; darker area interrupted at base; marginate laterally by fringe of short setae; two convergent rows of stouter setae near middle. Sternite IX (fig. 8) elongate; distal margin wide and rounded; marginate latero- and anteriorly by short setae (lateral represented by punctures). Tergite IX (fig. 10) slightly wider than long, densely punctate, narrowed apicad; distal margin slightly notched; moderately long lateroanterior setae. Aedeagus (figs. 12, 13) strongly narrowed near base and slightly narrowed

to apex; median lobe strongly narrowed near base and apex (apex broken), bearing small teeth laterally (fig. 13); each paramere with subapical dorsal rounded tooth.

Remarks – *A. alicii* n. comb. is characterized especially by pubescence black dorsally and white ventrally; antennae of male pectinate; pronotum strongly convex at longitudinal median region; scutellum subquadrangular, moderately declivous on anterior half; elytral interstices 2, 4, 6, raised forming small ridges; first tibiae of male bearing small spines; median lobe of aedeagus bearing small teeth laterally; each paramere with subapical dorsal rounded tooth.

Material examined – BOLIVIA. Carinavi 1,500 m, 1 ♂ (SRGI).

Alaus cinnamomeus n. sp.
(figs. 14-21, 94)

Type material – Holotype male, “Peru, Boquerón de Abad 500 m 4.X.62 leg J. Schunke” (IMLA).

Description (holotype male) – Length: 21 mm. Integument dark-brown to black, clothed with scale-like setae brown (cinnamon) dorsally and white ventrally, including legs (except tarsi); pronotum with two small eye-like spots with black pubescence; antennae (except three first segments, white) and tarsi, with thin brown pubescence; basal margins of pronotum and elytra with narrow irregular band with white pubescence.

Frons slightly concave medioanteriorly, with punctuation coarse and moderately dense, intermingled with small and dense. Nasal plate declivous and coarsely punctate. Antennae (fig. 15) (partially broken): serrate, 3rd segment elongate and triangular, shorter than 4th.

Pronotum (fig. 16) longer than wide, almost sided parallel; strongly convex from sutures, slightly grooved laterally; hind angles sharpened, divergent and raised laterally; punctuation small and dense, intermingled with moderately coarse at middle and near margins; median basal tubercle transverse, subelliptical. Prosternum (fig. 19) convex from sutures, rounded longitudinally medially; punctuation small and dense intermingled with coarse punctuation, denser near sutures and anteriorly. Prosternal lobe slightly rounded with coarse and dense punctuation; prosternal spine compressed laterally with cuneiform apex and punctuation coarse and dense. Hypomera densely small-punctate, intumescent anteriorly. Notosternal suture straight. Mesosternal cavity (fig. 20) U-shaped with borders horizontal on anterior half and moderately declivous on basal half. First ventrite prominent laterally, last almost triangular with rounded apex. Tibiae apparently without spines. Claws with tuft of basal setae. Scutellum (figs. 17, 18) elongate, declivous on anterior half; anterior margin rounded and posterior notched at middle. Elytra slightly wider than pronotum, slightly narrowed at apex; strongly convex with apex conjointly rounded; interstices slightly convex

and unequal; higher interstices with punctuation small and moderately dense; lower interstices densely micropunctate.

Aedeagus (figs. 14, 21) relatively wide; median lobe constricted near base and gradually narrowed to apex; subapical region of parameres cuneiform, densely setous dorsally, with subapical lateral small rounded tooth.

Remarks – *Alaus cinnamomeus* n. sp. is characterized especially by its pubescence brown dorsally and white ventrally; pronotum with two small eye-like spots with black pubescence; 3rd antennal segment triangular elongate, shorter than 4th; pronotum elongate and almost parallel sided, convex from sutures; scutellum elongate, declivous on anterior half; elytral interstices slightly convex and unequal; median lobe narrowed near base and gradually narrowed apicad; apex of median lobe rounded.

Etymology – Epithet derived from one of the latin words for brown, “cinnamomeus”, related to coloration of dorsal pubescence.

Alaus haroldi (Candèze, 1878) n. comb.

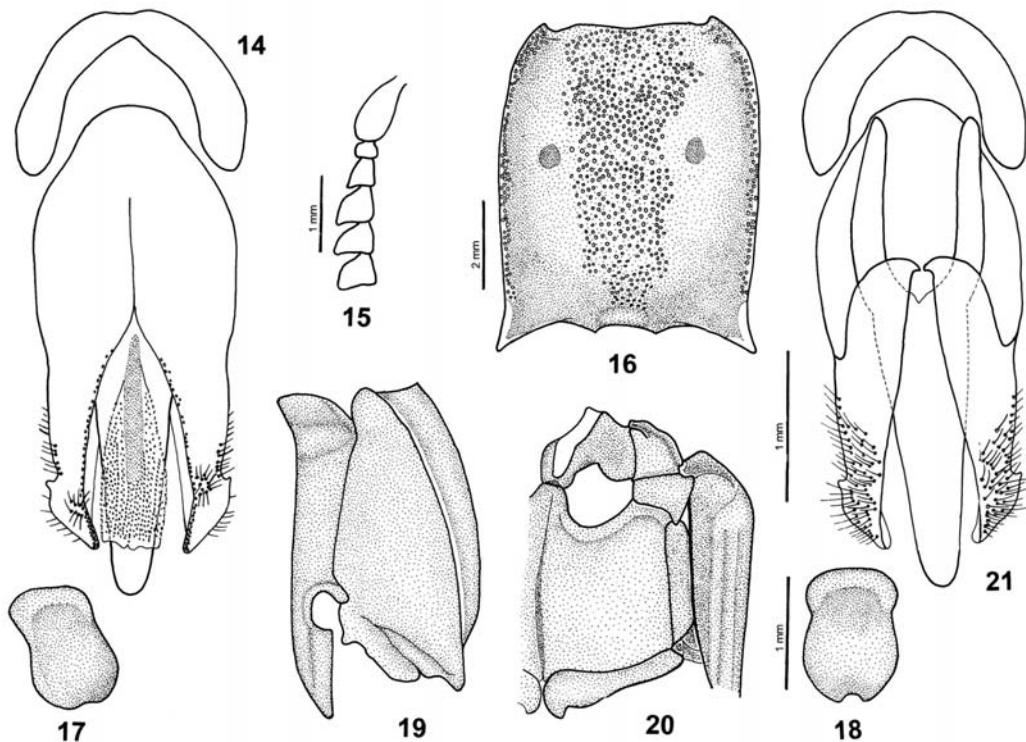
(figs. 22-31, 96)

Chalcolepidius haroldi Candèze, 1878: 9; 1886: 66, 69; 1891: 37 (Cat.); Schenkling, 1925: 56 (Cat.); Blackwelder, 1944: 282 (Cat.). Holotype female: “44009; Thomm.; Chalcolepidius haroldi Cdz, n.sp.; Haroldi Cand* Peru mont.; Holotype Chalcolepidius haroldi Candèze 1878 CMF von Hayek 1980” (ZMHB) (examined).

Chalcolepidius buckleyi Janson, 1882: 33. Candèze 1886: 66, 69; 1891: 37 (Cat.); Schenkling 1925: 56 (Cat.) (Syn.).

Alaus haroldi (Candèze, 1878) n. comb.

Candèze (1878) described *Chalcolepidius haroldi*, from “Pérou”, and stated about the prothorax parallel sided. Janson (1882) described *C. buckleyi* from Chiguinda (Ecuador) and compared it with *Chalcolepis luczotii*. Candèze (1886) included *Chalcolepidius haroldi* and *C. buckleyi* into de “Section I”: “Écuiss plus large que long dans la partie située au niveau des élytres”. He also stated about *C. buckleyi* in the “bibliographie”: “Cette espèce, que je n'ai point vue et qui est du même pays que la précédente [*C. haroldi*], pourrait bien n'en être qu'une variété”. In fact, the species are not from the



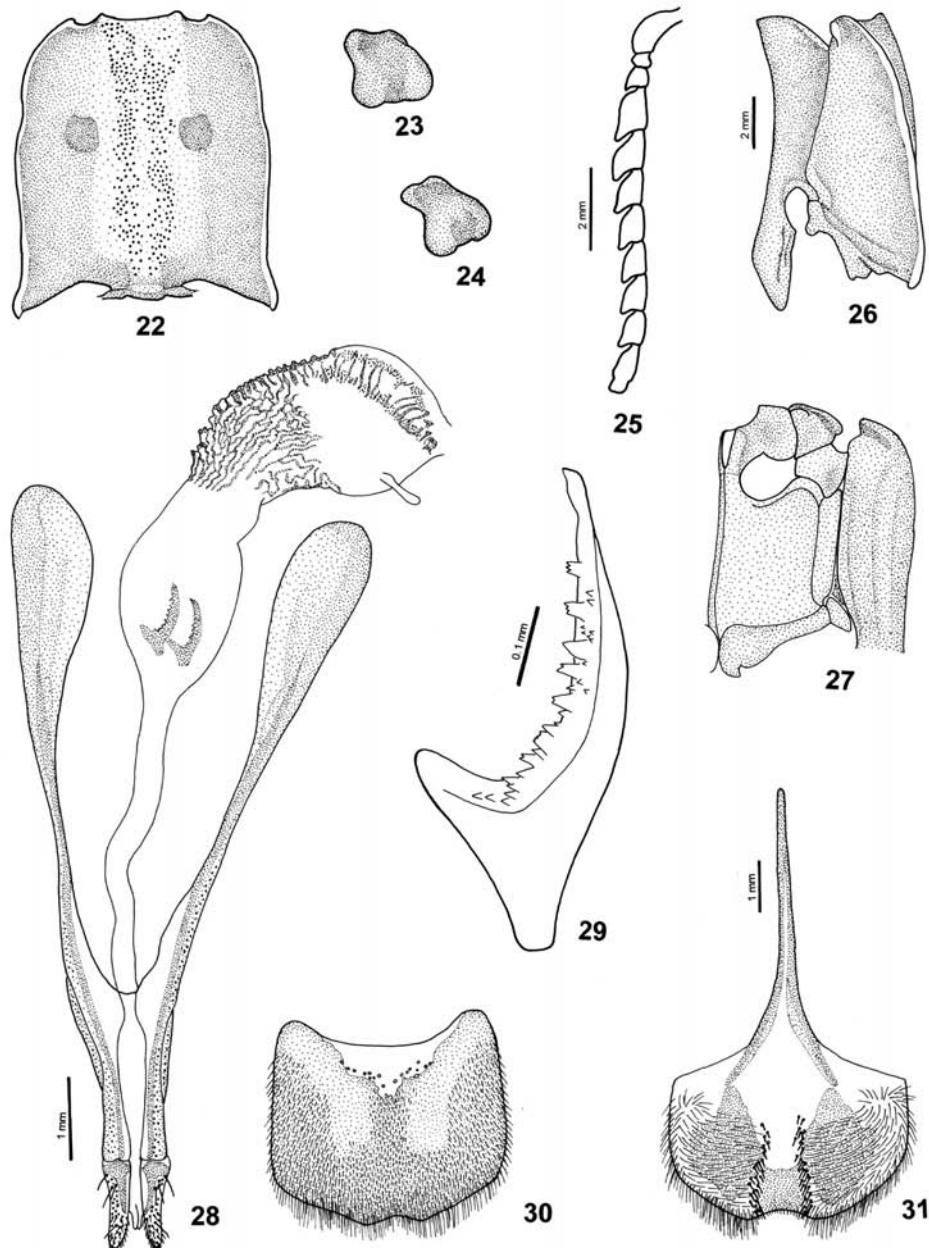
Figures 14-21

A. cinnamomeus n. sp., Holotype male. – 14, 21, aedeagus (ventral, dorsal). – 15, antenna (basal segments). – 16, pronotum. – 17, 18, scutellum (dorsolateral, dorsal). – 19, hypomeron and prosternum (lateral). – 20, meso- and metasternum (lateral). (figs. 14, 21; 16, 19, 20; 17, 18, respectively, to same scale)

same country. In 1891, he catalogued both species, as recorded from different countries, and added a note about *C. buckley*: "Cette espèce, que je n'ai point vue, me paraît la même que la précédente". The synonymization was formalized by Schenkling (1925). Casari

(2002b) in the revision of *Chalcolepidius*, removed *C. haroldi* from this genus and now, included it in *Alaus*.

Redescription – Length: 24-36 mm. Integument totally black or reddish-brown, or black with pronotum and elytra reddish-brown. General pubescence scale-like, dull, grayish- or yellow-



Figures 22-31

A. haroldi (Candèze) n. comb., female. – 22, pronotum. – 23, 24, scutellum (dorsal, dorsolateral). – 25, antenna. – 26, hypomeron and prosternum (lateral). – 27, meso- and metasternum (lateral). – 28, genitalia (dorsal). – 29, sclerotized piece of openings of colleterial glands. – 30, tergite VIII. – 31, sternite VIII. (figs. 22, 26, 27; 23, 24, 30, 31, respectively, to same scale)

ish-white; pronotum glabrous on longitudinal median third, with two small rounded brown patches; higher interstices clothed with sparser and brownish pubescence; antennae with dark-brown pubescence except three first segments, white.

Frons wide, inclined, narrowed on distal fourth, concave at triangular medioanterior area; punctuation small and dense with coarse punctures very sparse, more concentrate lateroanteriorly; nasal plate high, transverse with coarse and sparse punctuation. Antennae of female (fig. 25) short, not reaching hind angles of pronotum, strongly serrate; 3rd segment triangular and short, 4th very long.

Pronotum (fig. 22) slightly longer than wide, subrectangular, strongly convex at longitudinal median region, strongly grooved laterally; anterior margin forming two teeth near middle; lateral margin raised forming narrow edge, sinuous on anterior half; fore angles prominent, flat and rounded; hind angles wide and slightly divergent, raised laterally; median basal tubercle elongate; punctuation small and dense, coarser and sparser at longitudinal median band. Prosternum (fig. 26) strongly convex, flattened longitudinal medially; general punctuation small and dense, sparser at middle, coarser near sutures; prosternal spine compressed laterally with cuneiform apex; prosternal lobe marginate and rounded laterally, with punctuation sparser and coarser than prosternum. Notosternal sutures straight. Hypomera concave, small and densely punctate; laterointernal margin raised and carinate anteriorly forming wall of prosternal channel. Mesosternal cavity (fig. 27) V-shaped with borders wide and horizontal on basal half and narrow and strongly declivous on distal half. Meso-metasternal suture behind mesosternal cavity very weak. Metasternum with punctuation small and dense. First ventrite of female prominent laterally; last with apex truncate with fringe of spatulate setae. Scutellum (figs. 23, 24) subquadangular, strongly declivous on anterior two thirds; basal third transverse, notched and concave at middle. Elytra slightly narrowed apicad; apices conjointly rounded; interstices convex and small-punctate; interstices 2, 4, 6 wider and higher; second forming longitudinal ridge near base. Anterior tibiae of female with small spines; claws with tuft of long basal setae.

Genital segments and genitalia of female. Tergite VIII (fig. 30) slightly wider than long, densely setous, translucent mediobasally; distal margin slightly notched at middle. Sternite VIII (fig. 31) wider than long, slight- and widely notched at middle of distal margin; two irregular longitudinal rows of darker and stouter setae near middle; spiculum almost twice sternite length. Genitalia (fig. 28): coxites short; baculi long, 8.25 times coxites length; sclerotized pieces of openings of colleterial glands (fig. 29) short and toothed internally; bursa copulatrix elongate, with small innerly teeth at base and dorsally; two spermathecae: distal lost.

Male was not studied.

Remarks – *Alaus haroldi*, comb. n. is characterized especially by general pubescence whitish with two small rounded brown patches on anterior half of pronotum and higher interstices with sparser brownish pubescence; antennae serrate with 3rd segment short and triangular; pronotum subrectangular, strongly convex on longitudinal median region and grooved laterally; borders of

mesosternal cavity strongly declivous on distal half; scutellum subquadangular, strongly declivous on anterior 2/3; elytral interstices 2, 4, 6, wider and higher.

Material examined – ECUADOR. *Zamora-Chinchipe*: Zamora, 1 ♀ (AMNH). PERU. 1 ♀ (MCZC), 1 ♀ (MZSP). *Huánuco*: Pozuzo, 4 ♀ (1 dissected) (ZMHB). *Loreto*: Puerto Pucallpa, 1 ♀ (IMLA). *Junín*: Chanchamayo, 1 ♀ (AMNH), ex- Collection Fleutiaux, 12 ♀ ♀ (MNHN); La Merced, Rio Oxabamba, 1 F (ZMHB); La Merced, Chanchamayo, Rio Toro, 1 ♀ (ZMHB); Satipo, 1 ♀ (SRGI).

***Alaus latipennis* n. sp.**

(figs. 32-47, 97)

Type material – Holotype male, “Dominican Rep: Prov. Barahona, nr Filipinas, Larimar Mine 26-VI-7-VII.1992: R.E. Woodruff, P. E. Skelley; at light” (FSCA).

– **Paratypes**: “Dominican Rep: Prov. Barahona, nr Filipinas, Larimar Mine: 26-VI-7-VII-1992: R. E. Woodruff, P. E. Skelley; at light”, 1 ♂ (dissected) (MZSP, retained FSCA), 4 ♂, 1 ♀ (dissected) (FSCA). “HAITI: Dept. Sud-Ouest, Massif de La Selle, saddle between d’Enfer & Fe Moir, 1,700 m 16-V-1984 MC Thomas” 1 ♂, 1 ♀ (FSCA).

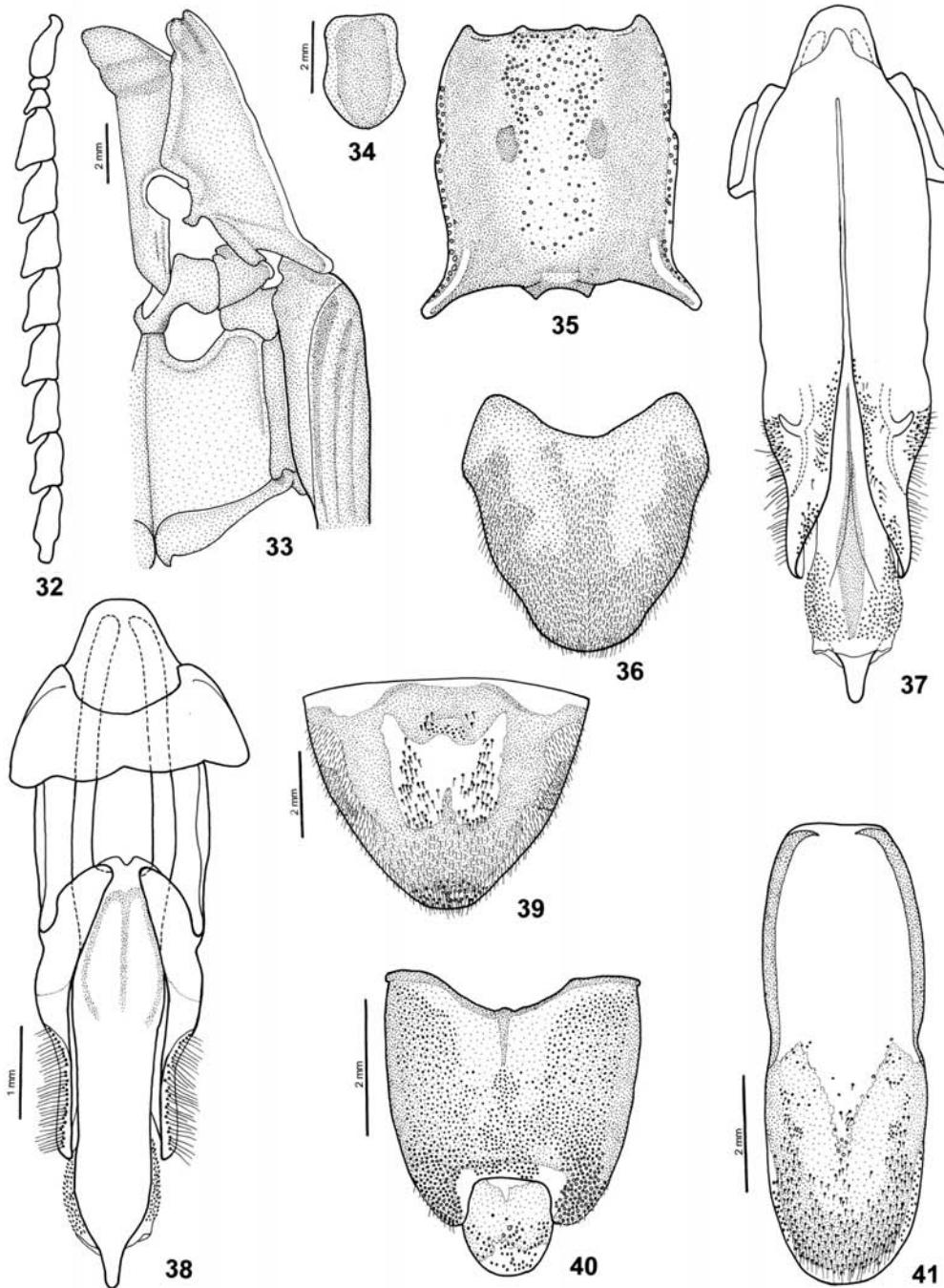
Description (holotype male) – Length: 36 mm. Integument dark-brown clothed with scale-like setae dull, yellowish-white, longer ventrally and intermingled with brown setae dorsally; pronotum with two small rounded patches with brown pubescence, near median line; elytra with several small irregular brown patches, giving mottled appearance; one lateral median larger patch, six interstices wide; three first segments of antennae bright, 1st segment partially clothed with white scale-like setae and partially, with brownish and thinner setae; segments 4-11 clothed with very short, dense, thick and erected black setae, giving dull appearance; segments 4-11 bearing each side, 4 long setae near distal margin.

Frons narrow, sided parallel, strongly convex medioanteriorly making fore angles very raised, tooth-like; nasal plate low. Labrum and mandibles very prominent, forwardly directed. Antennae (fig. 32) longer than hind angles of pronotum, strongly serrate; scape carinate dorsally at internal margin, setous on internal face; 3rd segment short and very prominent laterally.

Pronotum (fig. 35) slightly longer than wide, strongly convex on longitudinal median third, grooved on lateral thirds; narrowed apically; lateral margins sinuous on anterior half, with narrow punctate slightly raised edge; fore angles prominent, flat and rounded; hind angles very divergent and raised at middle; anterior margin raised near middle with two small tubercles; median basal tubercle transverse, subelliptical and flat; punctuation small and dense, intermingled with sparse, moderately coarse and umbilicate. Prosternum (fig. 33) very convex, flattened longitudinal medially; punctuation coarse and sparse, intermingled with small, more concentrate near sutures; prosternal spine

compressed laterally with cuneiform apex. Prosternal lobe rounded with punctuation coarse and dense. Notosternal sutures straight. Hypomera convex, marginate laterally by raised narrow edge; grooved longitudinally at apex; laterointernal margin raised near apex, not forming channel; punctuation moderately small,

dense and weak, intermingled with very coarse and sparse. Mesosternal cavity V-shaped with borders (fig. 33) very wide, rounded and slightly declivous on basal half, and almost horizontal on distal half. Meso-metasternal suture behind mesosternal cavity strongly grooved laterally. Metacoxal plate strongly



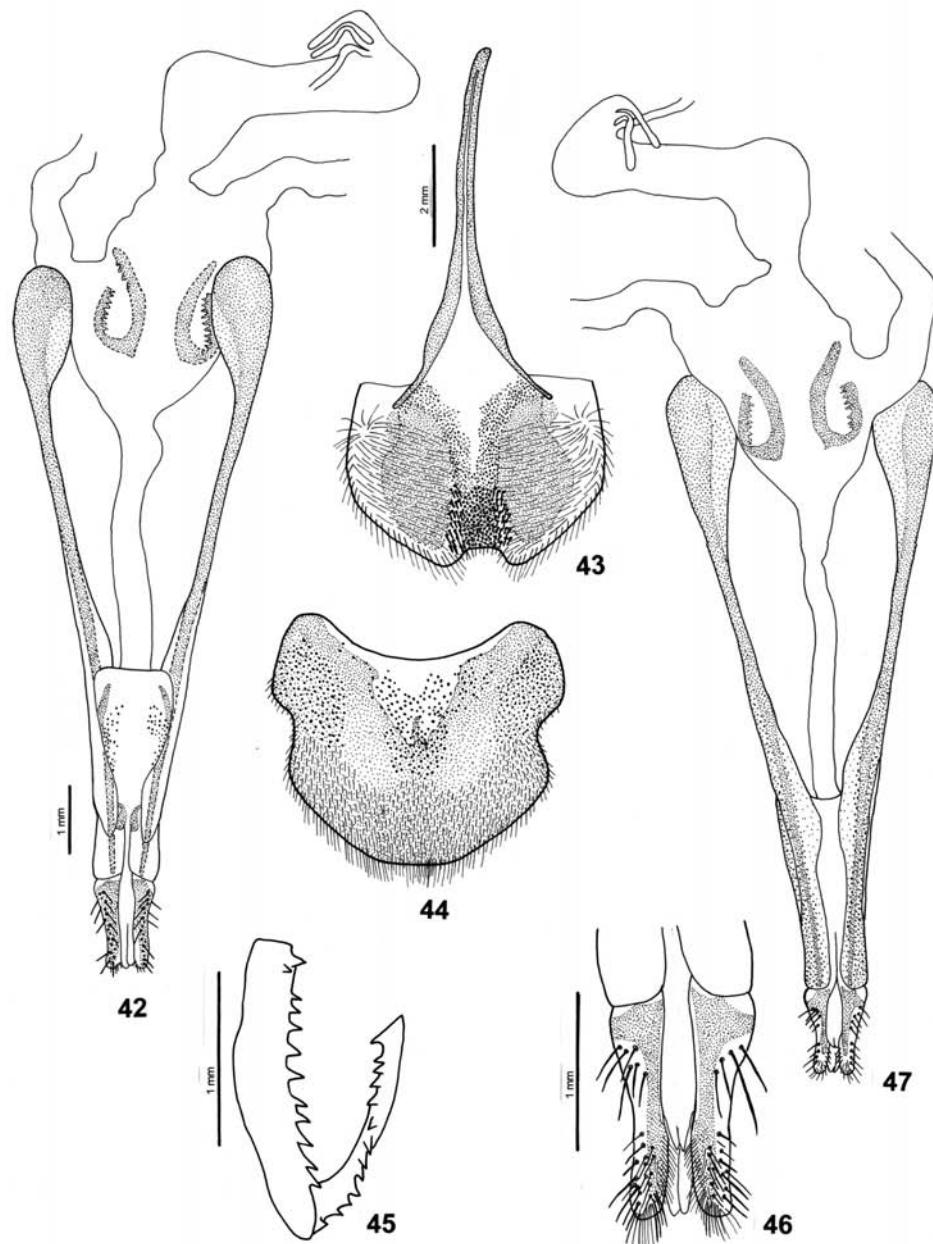
Figures 32-41

A. latipennis n. sp., holotype male. – 32, antenna. – 33, thorax (ventrolateral). – 34, scutellum (dorsal). – 35, pronotum. Paratype male. – 36, tergite VIII. – 37, 38, aedeagus (ventral, dorsal). – 39, sternite VIII. – 40, tergites IX-X. – 41, sternite IX. (figs. 32, 34; 33, 35; 36, 39; 37, 38, respectively, to same scale)

narrowed laterally. First ventrite slightly prominent laterally and strongly fitted in elytral groove; last with apex rounded and margins raised forming narrow edge. Anterior tibiae dilated apicad, with small spines near apex; claws with tuft of long basal setae. Scutellum (fig. 34) elongate, subpentagonal and declivous. Elytra wider than pronotum, slightly wider than hind angles of pronotum, almost parallel, slightly narrow at apex; strongly convex; striae marked by row of coarse punctures; interstices

slightly unequal in width, flattened at base, slightly convex at apex; apices emarginate bearing a sutural and a lateral spine (sutural more developed).

Genital segments of male and aedeagus (paratype: Dominican Rep: Prov. Barahona, nr Filipinas, Larimar Mine). Tergite VIII (fig. 36) slightly longer than wide; distal $\frac{3}{4}$ slightly narrowed to apex; densely clothed with short setae. Sternite VIII (fig. 39) slightly wider than long, gradually narrowed to apex; darker area



Figures 42-47

A. latipennis n. sp., paratype female. – 42, 47, genitalia (ventral, dorsal). – 43, sternite VIII. – 44, tergite VIII. – 45, sclerotized piece of openings of colleterial glands. – 46, coxites (dorsal). (figs. 42, 47; 43, 44, respectively, to same scale)

continuous; densely setous near lateral and anterior margins; stouter setae near middle. Tergite IX (fig. 40) almost as wide as long, narrowed at apex; densely punctate and bearing small setae near anterior angles; distal margin narrow-and deeply notched. Sternite IX (fig. 41) elongate with anterior margin slightly rounded; short setae scattered on anterior half. Aedeagus (figs. 37, 38): lateral margins sinuous; median lobe wide with lateral margins sinuous and constricted apex; ventral membrane microspined; parameres short, not reaching median lobe apex; subapical region densely setous dorsally; shorter and sparser setae ventrally; each bearing a subapical ventral uncus near middle.

Genital segments and genitalia of female (paratype: Dominican Rep: Prov. Barahona, nr Filipinas, Larimar Mine). Tergite VIII (fig. 44) wider than long; distal margin rounded and prominent; setous near margins and translucent in subtriangular basal area. Sternite VIII (fig. 43) wider than long; distal margin narrow and deeply notched at middle; densely setous; two longitudinal median rows of stouter setae near apex; spiculum 2.25 times sternite length. Genitalia (figs. 42, 47): coxites bearing several setae, a longitudinal dorsal internal row of finer setae near apex (fig. 46); baculi long, 6.84 times coxites length; sclerotized pieces of openings of colletarial glands U-shaped and toothed; bursa copulatrix membranous; two distal spermathecae.

Remarks – The male paratypes vary from 34-44 mm; the females are larger, varying from 40-43 mm. In females, the antennae are shorter, not reaching hind angles of pronotum, and less strongly serrate, and the apex of last ventrite is truncate with fringe of spatulate setae.

Alaus latipennis n. sp. is characterized especially by dorsal pubescence whitish with brown patches giving a mottled appearance; pronotum with two small brown spots near midline; antennae of male longer than hind angles of pronotum and strongly serrate; pronotum strongly convex on longitudinal median third, with hind angles strongly divergent; elytra wider than pronotum with apices emarginate, bearing a sutural and a lateral spine.

A. latipennis n. sp. is similar to *A. thoracopunctatus* n. sp. in shape and pubescence coloration, but they are easily separated by antennal and pronotal shapes and elytral apex.

Etymology – Epithet derived from one of the latin words for wide, “latus”, related to elytra, “pennis”.

***Alaus sericeus* n. sp.**
(figs. 48-59, 105)

Type material – Holotype male, MEX. Jalisco, Chamela, vic UNAM 9-19.VII.1993 JEWappes (JEW).
Holotype male

Description (holotype male) – Length: 21 mm. Integument black clothed with scale-like setae, silky, brownish dorsally and

yellowish-white ventrally; antennae (except three first segments) and tarsi clothed with thin brown setae.

Frons concave medioanteriorly; punctation moderately coarse, dense and heterogeneous. Nasal plate high and coarsely punctate. Antennae (fig. 48) surpassing hind margin of procoxae, 11-segmented and strongly serrate; 3rd segment transverse with dentiform appendix.

Pronotum (fig. 51) longer than wide, sub-rectangular, slightly narrowed anteriorly and at hind angles base; strongly convex from lateral sutures; lateral sutures interrupted in small anterior area; hind angles short and divergent, raised at middle; median basal tubercle elliptical and transverse; punctation small and dense, intermingled with coarse and sparse near middle. Prosternum (fig. 49) moderately convex from sutures; punctation dense and small, intermingled with coarse and sparse, coarser near sutures. Prosternal lobe slightly rounded with coarse punctuation. Prosternal spine compressed laterally with cuneiform apex. Borders of mesosternal cavity (fig. 50) horizontal on anterior half and slightly declivous on basal half. Meso-metasternal suture behind mesosternal cavity widely grooved. Tibiae bearing small spines. First ventrite prominent laterally; last with apex rounded bearing fringe of setae. Scutellum (figs. 52, 53) elongate, subrectangular, declivous forwards with rounded angles. Elytra slightly wider than prothorax, narrowed on distal fourth; interstices slightly convex, equal and small punctate; striae marked by row of coarse punctures; apices narrow and conjointly rounded.

Genital segments of male and aedeagus. Tergite VIII (fig. 58) transverse, subtriangular with distal margin rounded; marginate by short setae. Sternite VIII (fig. 57) transverse, narrowed on distal half; darker area continuous. Tergite IX (fig. 59) transverse, slightly narrowed apicad; distal margin wide-and slightly notched; densely punctate with moderately long setae near anterior angles. Sternite IX (fig. 54) elongate; distal margin slightly rounded, marginate by short setae. Aedeagus (figs. 55, 56): median lobe constricted near base and gradually narrowed to apex; parameres fused in 0.32 times its length, with apex cuneiform; subapical lateral teeth.

Remarks – *Alaus sericeus* n. sp. is characterized specially by general pubescence brownish and silky dorsally and whitish ventrally; antennae of male surpassing hind margin of procoxae, strongly serrate with 3rd segment transverse with dentiform appendix; pronotum subrectangular, strongly convex from lateral sutures; scutellum elongate, declivous forwards; elytral interstices slightly convex and equal in width.

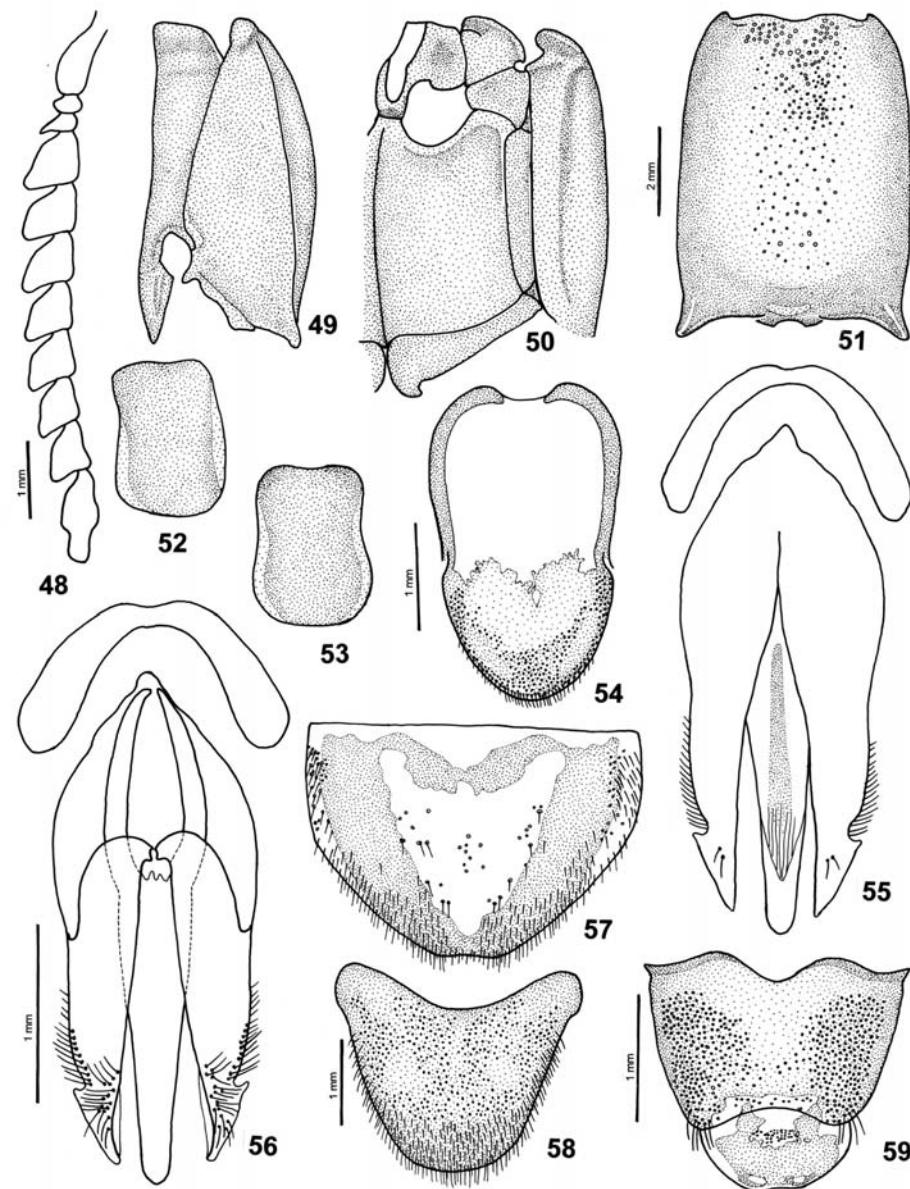
Etymology – Epithet derived from one of the latin words for silk, “sericeus”, related to silky appearance of the pubescence.

***Alaus thoracopunctatus* n. sp.**
(figs. 60-76, 109)

Type material – Holotype female, “HOND. Olancho La Muralla Pq Nac 24-27 May 1995 JEWappes”

(JEWC). – **Paratypes:** “HOND. Olancho La Muralla Pq Nac 24-27 May 1995 JEWappes” 1 ♂ (JEWC); “HONDURAS: Dept. Olancho La Muralla Pk. N. 24-27.V.1995, J. Huether”, 1 ♂ (FSCA); “Guatemala, Zacapa 6 km S La Union, 4600 May 5-11, 1991 E. Giesbert coll.”, 1 ♂ (dissected) (MZSP, retained FSCA), 1 ♂, 1 ♀ (dissected) (FSCA).

Description (holotype female) – Length: 30 mm. Integument black clothed dorsally with short scale-like setae white or yellowish-white with brown patches, and ventrally, brownish, longer on thorax; pronotum with two small elliptical black patches near middle; each elytra with several small irregular patches clothed with black pubescence and four larger: one on anterior half of interstices 2-3, one lateral median 5 interstices wide, one lateral



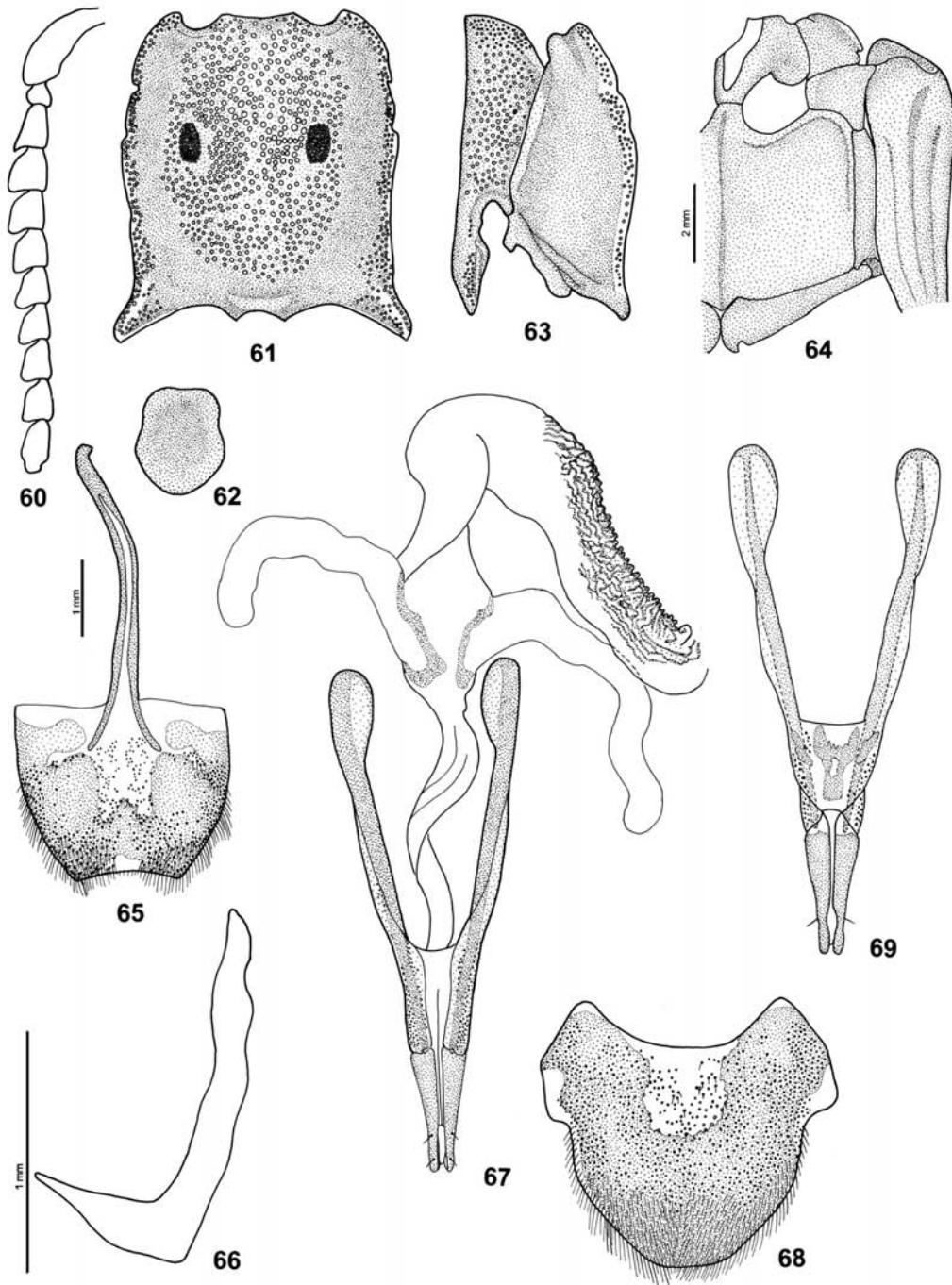
Figures 48-59

A. sericeus n. sp., holotype male. – 48, antenna. – 49, hypomeron and prosternum (lateral). – 50, meso- and metasternum (lateral). – 51, pronotum. – 52, 53, scutellum (laterodorsal, dorsal). – 54, sternite IX. – 55, 56, aedeagus (ventral, dorsal). – 57, sternite VIII. – 58, tergite VIII. – 59, tergites IX-X. (figs. 49-51; 52-54; 55, 56; 57, 59, respectively, to same scale)

on distal fourth (regular shape on three lateral interstices and irregular throughout whole elytral width) and one lateral smaller near apex; legs with pubescence yellowish-white and sparse except tibiae and tarsi with brown pubescence; antennae with pubes-

cence short, brown and dense, except three first segments with yellowish-white and sparse setae.

Frons narrow, concave medioanteriorly, with coarse and sparse punctuation. Antennae (fig. 60) short, not reaching ante-



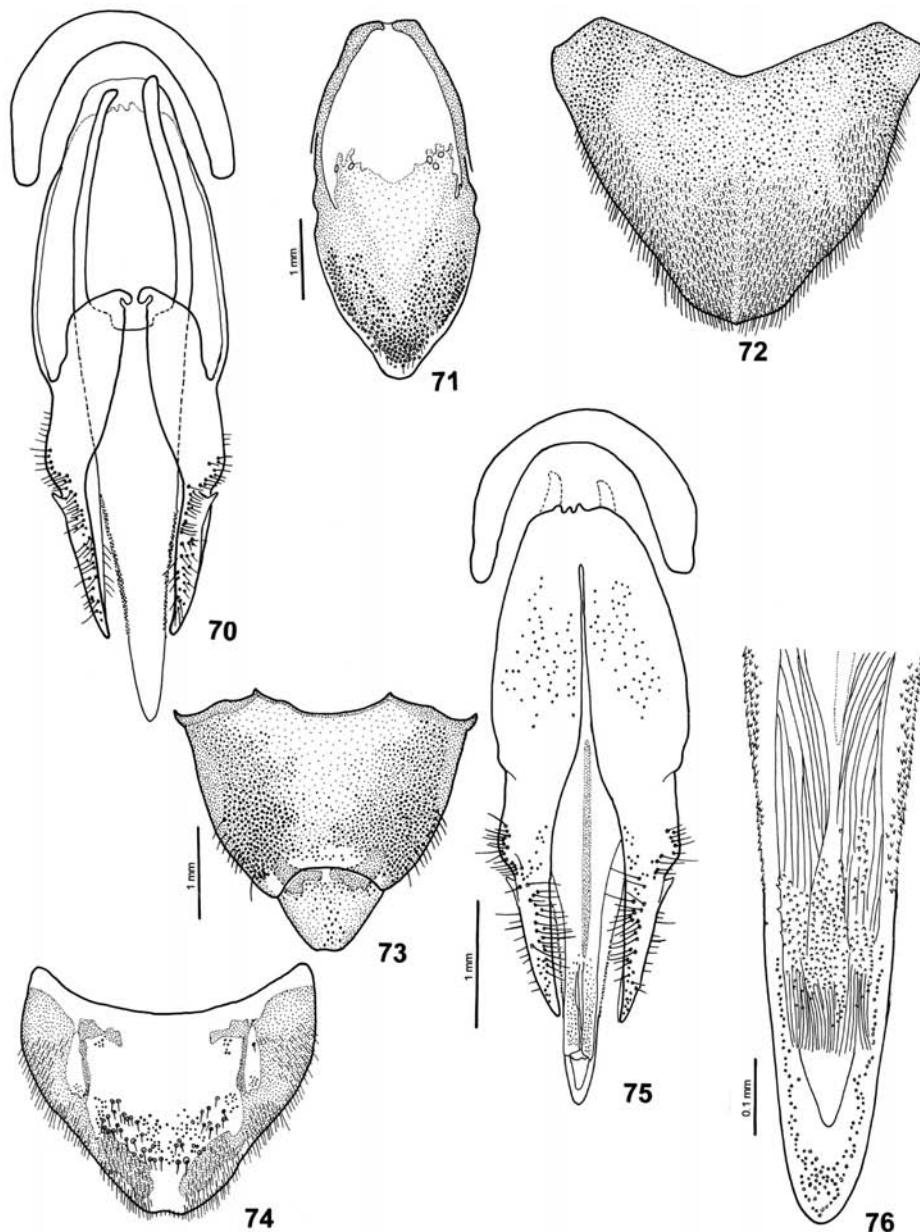
Figures 60-69

A. thoracopunctatus n. sp., holotype male. – 60, antenna. – 61, pronotum. – 62, scutellum. – 63, hypomeron and prosternum (lateral). – 64, meso- and metasternum (lateral). Paratype female. – 65, sternite VIII. – 66, sclerotized piece of openings of colletarial glands. – 67, genitalia (dorsal). – 68, tergite VIII. – 69, ovipositor and baculi (ventral). (figs. 60, 62, 65, 67-69; 61, 63, 64, respectively, to same scale)

rior margin of procoxae, serrate and 11-segmented, 3rd segment elongate and triangular, as long as 4th.

Pronotum (fig. 61) longer than wide, almost sided parallel; anterior margin raised near middle forming two small tubercles; anterior angles prominent, flat and rounded; hind angles wide and divergent, raised near lateral margins; very coarsely punctate, grooved near lateral margins and strongly convex; median basal tubercle transverse and subelliptical. Hypomera (fig. 63)

concave near lateral margins and parallel to notosternal sutures; narrow raised band parallel notosternal sutures; shortly grooved anteriorly parallel lateral margins; internal margin raised anteriorly (not forming channel); punctuation very coarse and moderately dense, smaller at lateral margins. Prosternum very convex from sutures, very coarsely and irregularly punctate; prosternal spine compressed laterally with cuneiform apex; prosternal lobe densely punctate, punctuation smaller than prosternum.



Figures 70-76

A. thoracopunctatus n. sp., paratype male. – 70, 75, aedeagus (dorsal, ventral). – 71, sternite IX. – 72, tergite VIII. – 73, tergites IX-X. – 74, sternite VIII. – 76, apex of median lobe (ventral). (figs. 70, 75; 71, 74; 72, 73, respectively, to same scale)

Mesosternal cavity (fig. 64) V-shaped with borders wide and horizontal on basal half and moderately declivous on anterior half. Metasternal media suture widely grooved behind mesosternal cavity and deeply grooved on basal 2/3. Metacoxal plate narrowed laterally. First ventrite prominent laterally and fitted in groove of elytra; last with rounded apex. Claws with tuft of long basal setae. Scutellum (fig. 62) elongate, subpentagonal and declivous. Elytra convex, wider than pronotum, slightly narrowed on distal fourth; apices rounded with sutural spine; striae marked by row of coarse punctures; interstices flat and equal in width; last interstice forming narrow edge.

Genital segments of male and aedeagus (paratype: Guatemala, Zacapa 6 km S La Union). Tergite VIII (fig. 72) wider than long, subtriangular, densely setous. Sternite VIII (fig. 74) wider than long, setous; narrowed from basal third to apex; darker marginal band interrupted at apex and base. Sternite IX (fig. 71) elongate, subelliptical; distal half densely punctate near margins with dispersed short setae. Tergite IX (fig. 73) wider than long, gradually narrowed to apex; densely punctate with laterodistal setae; anterior margin widely notched. Aedeagus (figs. 70, 75): median lobe (fig. 76) gradually narrowed apicad, bearing lateral microspines near middle; parameres narrower on distal half, bearing a lateral dorsal tooth near apex; subapical region densely setous dorsal- and ventrally.

Genital segments and genitalia of female (paratype: Guatemala, Zacapa 6 km S La Union) Tergite VIII (fig. 68) as long as wide, narrowed to apex; translucent in basal area, densely setous. Sternite VIII (fig. 65) wider than long, slightly narrowed to apex; distal margin wide-and slightly notched; setous near lateral and anterior margins; spiculum 2.3 times sternite length. Genitalia (figs. 67, 69): coxites narrow, cuneiform, sclerotized, each with two dorsal short setae; baculi short, 3.27 times coxites length; sclerotized pieces of openings of colletarial glands (fig. 66) L-shaped, slightly sclerotized and without teeth; bursa copulatrix elongate, spiny dorsally.

Etymology – Epithet derived from one of the latin words for punctuation, “punctatus”, related to the coarse punctuation of pronotum.

Remarks – The paratypes are 29-34 mm long. One specimen from Honduras (Olancho, La Muralla, J. Huether) has integument reddish-brown with median region of pronotum, four spots on elytra, legs, prosternum and ventrites dark-brown. In all paratypes the general dorsal pubescence is clearer than ventral, except one with the same data of holotype and one from Guatemala (FSCA), with general pubescence white.

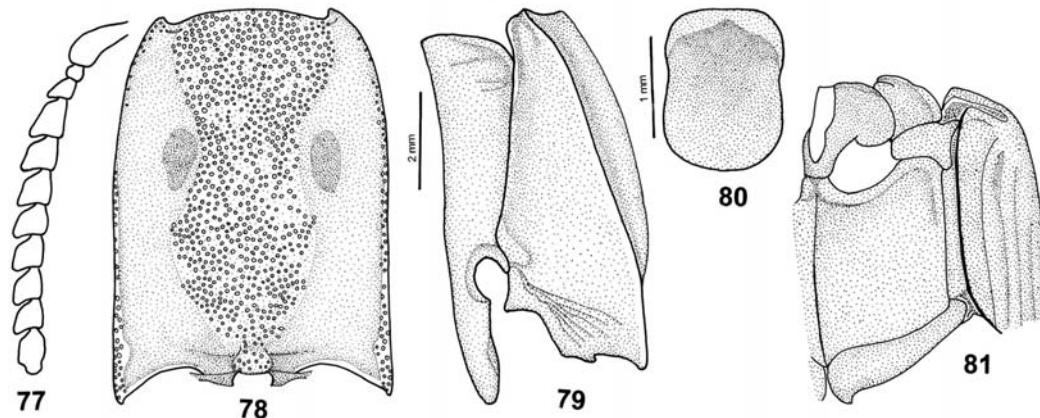
Alaus thoracopunctatus n. sp. is characterized especially by general pubescence whitish with several dorsal irregular black patches and two black spots on pronotum and two larger each elytra; antennae short, serrate with 3rd segment triangular elongate; pronotum coarsely punctate with hind angles robust and divergent; elytra with apices rounded with sutural spine; coxites cuneiform and sclerotized.

***Alaus unicus* (Fleutiaux, 1910) n. comb.**
(figs. 77- 92, 107)

Chalcolepidius unicus Fleutiaux, 1910: 174. Schenkling 1925: 59 (Cat.); Blackwelder 1944: 283 (Cat.). Syntype male: “aout; Guyane Française, Paricaboo rivière de Kourou, Coll. Le Moult; Chalcolepidius unicus Fleut. Type, Collection Fleutiaux [underside] Fleut. Bull. Soc. Ent. Fr. 1910 p. 174” (MNHN) (examined).

Alaus unicus (Fleutiaux, 1910) n. comb.

Fleutiaux (1910) described *Chalcolepidius unicus*, based on particular shapes of body and scutellum, and suggested to include it in a special division of the genus. According to him, this species resembles *C. dugesii*

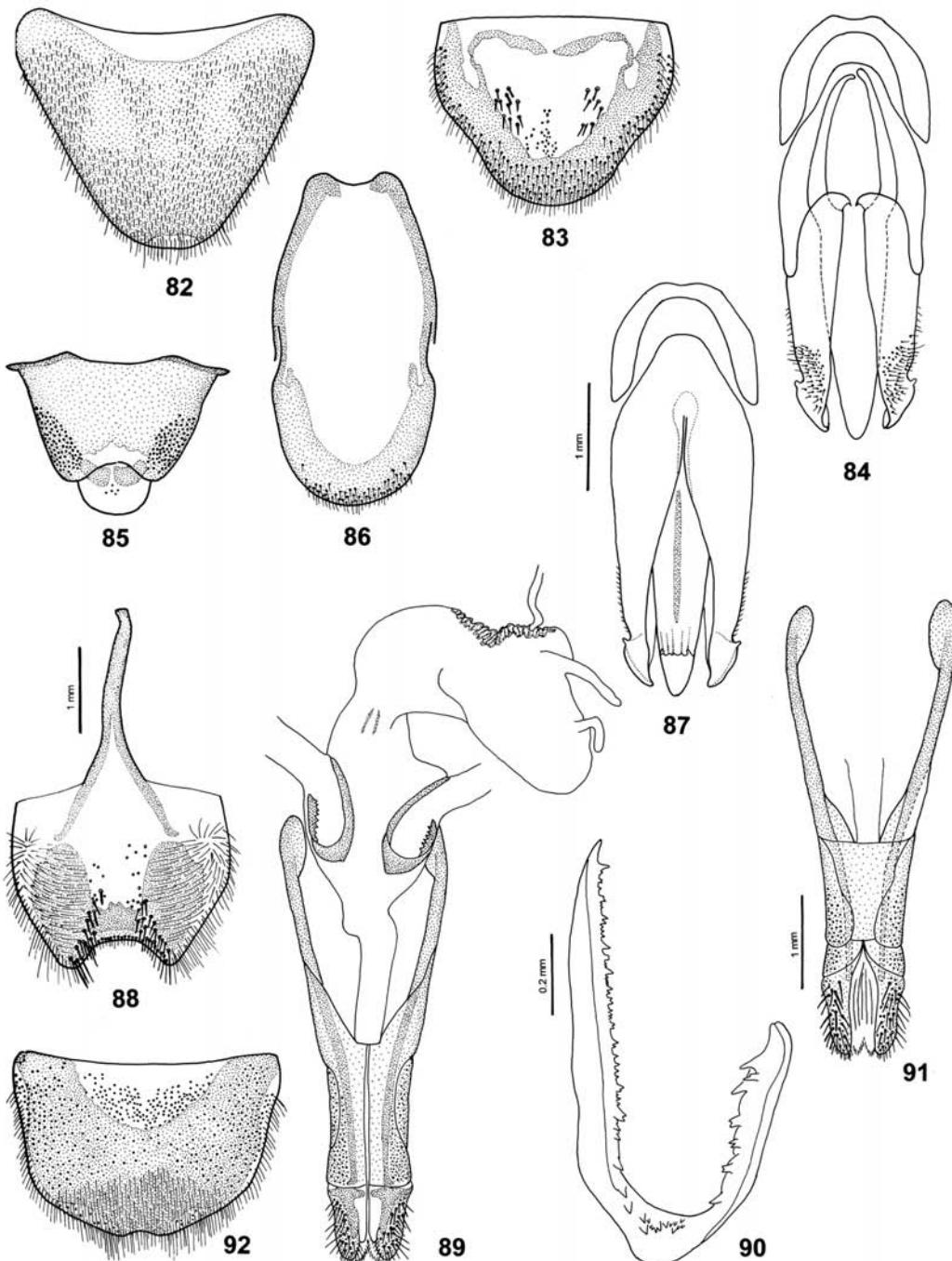


Figures 77-81

A. unicus (Fleutiaux) n. comb., male. – 77, antenna. – 78, pronotum. – 79, hypomeron and prosternum (lateral). – 80, scutellum. – 81, meso- and metasternum (lateral). (figs. 77, 80; 78, 79, 81, respectively, to same scale)

Candèze, but with more convex shape, longer prothorax and stouter pubescence. Casari (2002b) reviewing the *Chalcolepidius*, removed that species from this genus and now included it in *Alaus*.

Redescription – Length: 21.5-25.0 mm. Integument from dark-brown to black, clothed dorsally and ventrally, including legs, with scale-like setae, white, grayish-white or yellowish-white, or yellowish- or grayish-white dorsally and white ventrally (like



Figures 82-92

A. unicus (Fleutiaux) n. comb., male. – 82, tergite VIII. – 83, sternite VIII. – 84, 87, aedeagus (dorsal, ventral). 85, tergites IX-X. – 86, sternite IX. Female. – 88, sternite VIII. – 89, genitalia (dorsal). – 90, sclerotized piece of openings colleterial glands. – 91, ovipositor and baculi (ventral). – 92, tergite VIII. (figs. 82, 83, 85, 88, 92; 84, 87; 86, 89, 91, respectively, to same scale)



Figures 93-104

Habitus. – 93, *A. alicii* (Pjatakowa) n. comb. – 94, *A. cinnamoeus* n. sp. – 95, *A. calcaripilosus* Casari (black and white). – 96, *A. haroldi* (Candèze) n. comb. – 97, *A. latipennis* n. sp. (black and white) – 98, *A. luciosus* (Hope). – 99, *A. melanops* Leconte. – 100, *A. myops* (Fabricius). – 101, *A. nobilis* Sallé. – 102, *A. oculatus* (Linnaeus). – 103, *A. patricius* (Candèze). – 104, *A. plebejus* Candèze.

syntype); pronotum with brown pubescence on lateroanterior narrow bands and two small eye-like spots of variable sizes; median region of pronotum with sparse brown pubescence intermingled with white, glabrous in several examined specimens; elytra with interstices alternating brown and whitish (sutural brown); antennae with pubescence short and dense, brownish-golden; tarsi with brownish golden pubescence, sparse dorsally and brush-like ventrally.

Frons strongly concave medioanteriorly, raised on fore angles; punctuation coarse, dense and heterogeneous; nasal plate declivous and punctate, continuous with frons. Antennae (fig. 77) short, in male not reaching hind margins of procoxae, shorter in female; serrate and 11-segmented in both sexes; 3rd segment short and triangular.

Pronotum (fig. 78) longer than wide, almost sided parallel, strongly convex from lateral sutures; lateral margins forming narrow edge on basal two thirds; punctuation short and very dense under white pubescence and heterogeneous and coarse at longitudinal median area and lateral margins; hind angles raised laterally, backwards or slightly divergent; median basal tubercle transverse, elliptical. Prosternum (fig. 79) strongly convex from sutures, flattened longitudinal medially; punctuation coarse and dense intercalated by small, more concentrate laterally; prosternal spine gradually narrowed apicad with rounded apex. Prosternal lobe rounded anteriorly with punctuation like that of pronotum. Notosternal sutures straight. Hypomera concave near sutures, raised anteriorly; punctuation heterogeneous, moderately small and dense; glabrous narrow band near lateral margins. Mesosternal cavity (fig. 81) U-shaped with borders horizontal on basal half and slightly declivous on anterior half. Mesomesternal suture behind mesosternal cavity grooved and well marked. Tibiae apparently without small spines. First ventrite prominent laterally; last with apex rounded in male and truncate with fringe of spatulate setae in female. Scutellum (fig. 80) elongate with rounded margins; declivous forward. Elytra strongly convex, slightly narrowed on distal half; apices conjointly rounded; interstices slightly convex, unequal; interstices 2, 4, 6, 8 (under brownish pubescence) slightly higher and small punctate; remainders (under white pubescence) micropunctate.

Genital segments of male and aedeagus. Tergite VIII (fig. 82) subtriangular, densely setous, translucent at base and apex. Sternite VIII (fig. 83) wider than long, narrowed on distal half; darker area narrower and interrupted mediobasally; marginate lateral- and anteriorly by irregular band of setae; stouter setae near middle. Sternite IX (fig. 86) elongate; anterior margin slightly rounded with band of short setae. Tergite IX (fig. 85) transverse, narrowed apicad; distal margin strongly notched; densely punctate lateroanteriorly; X reduced, translucent with two darker spots. Aedeagus (figs. 84, 87) almost sided parallel, narrowed basally; median lobe constricted near base and gradually narrowed to apex; apex wide and rounded; each paramere bearing a subapical rounded tooth.

Genital segments and genitalia of female. Tergite VIII (fig. 92) transverse slightly narrow apicad; distal margin prominent and slightly notched at middle; translucent at base and in narrow lateral band; densely setous near margins. Sternite VIII (fig. 88) wider than long; distal margin wide-and deeply notched; two irregular rows of stouter setae medioanteriorly; spiculum almost



Figures 105-109

Habitus. – 105, *A. sericeus* n. sp. (black and white) – 106, *A. tricolor* (Olivier). – 107, *A. unicus* (Fleutiaux) n. comb. – 108, *A. veracruzanus* Casari. – 109, *A. thoracopunctatus* n. sp.

two times sternite length. Genitalia (fig. 89): coxites (figs. 89, 91) robust; baculi short, 5.27 times coxites length; sclerotized pieces of openings of colletarial glands (fig. 90) U-shaped and toothed; bursa copulatrix microspined dorsally; two distal spermathecae.

Remarks – *Alaus unicus* n. comb. is characterized especially by general pubescence whitish, with two small spots on pronotum and elytral interstices 2, 4, 6, brown; antennae short and serrate, 3rd segment short and triangular; pronotum subquadangular with hind angles backwards or slightly divergent; scutellum elongate,

declivous forward; elytral interstices slightly convex and unequal.

Material examined – PANAMA. *Panama*: 15 km N El llano mv + bl, 13 May 1991 R. Turnbow, 1 ♂ (FSCA). *Colón*: Pt Espanar vic Marg 2 May 1992, J.E. Wappes, 1 ♂ (JEWC). VENEZUELA. *Amazonas*: 1 ♂ (IAZV). COLOMBIA. ex-coll. Oberthür, 1 ♂ dissected (MNHN). BRAZIL. *Amazonas*: Rio Juruá, 1 ♀ (MZSP). *Goiás*: Jatahy, ex-coll. Oberthür, 1 ♀ dissected (MNHN).

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