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Bruchidae (Insecta: Coleoptera) of the Galapagos Islands with new host and locality records, new synonyms, and descriptions of two new species

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Abstract. Records and descriptions are given for the 10 known species in six genera of Bruchidae from the Archipelago including *Sennius falcatus* **New Species** and *Acanthoscelides rossi* **New Species**. *Amblycerus* (*Spermophagus*) *insularum* (Blair) is synonymized with *Amblycerus piurae* (Pierce), **New Synonymy**. Five of the species herein treated are new records for the Archipelago, and 8 of the 10 are also known from mainland South America, principally Ecuador.

Introduction

The Galapágos Islands (also known as Archipélago de Colón)is a province of Ecuador consisting of 15 large islands and many small islands. They are entirely volcanic in origin, are located about 600 miles west of the mainland, and are noted for their endemic plant and animal forms. Each of the islands has been known by more than one name. The currently accepted names are used in the map (Fig. 1) in Peck and Kukalova-Peck. Alternative names may be parenthetically listed if the original record was so given.

Eight of these ten species are also found on the mainland principally in Ecuador. One is judged to be endemic in the Archipelago. Two species are undoubtedly introduced through commerce.

Four species of Bruchidae have heretofore been reported from the Galapágos Islands. Decelle (1976) summarized the knowledge of the bruchid fauna up to that time and listed three species, *Acanthoscelides fuscomaculatus* (Blair), *Amblycerus insularum* (Blair) and *Amblycerus galapagoensis* (Blair). Kingsolver, in 1983, reported an extension of the geographical range of *Scutobruchus ceratioborus* (Philippi), a mainland South American species, to **Isla Española** and **Duncan**, now **Isla Pinzón**. Peck and Kukalova-Peck (1990) added *Zabrotes subfasciatus* (Boheman). Recent collecting expeditions to the Islands have added five species, two of which are new to science, herein described, making a total of ten known species.

Collection methods included the use of ultraviolet light (UV), mercury vapor lights (MV), and malaise and flight intercept traps (FIT), and beating with nets. Other abbreviations used in this paper are: CDRZS- Charles Darwin Research Station, and ECCD- Estacion Cientifica Charles Darwin.

The purpose of this paper is to list or describe all known species, their seasonal and elevational distribution, and their known host plants.

Acknowledgements

For loan of specimens, thanks are due to Stewart B. Peck, Carleton University, Ottawa, Canada; California Academy of Sciences, San Francisco; the National Museum of Natural History, Washington, D.C.; Gary V. Manley, Three Rivers, Michigan;; and to the Florida State Collection of Arthropods, Gainesville, for work space.

Descriptions of Species

AMBLYCERINAE

Amblycerini

Amblycerus (Spermophagus) galapagoensis (Blair, 1928:678) (Figs. 1, 19, 20)

This species was described from **Albemarle Is.** (=**Isabela**) in 1928. It was subsequently collected

from **Española** (=**Hood**) and **Santa Cruz**. Specimens collected from Ecuador (**Guyayas**, **Progreso**, and **Santa Cruz**) by Gary Manley are identical to those from the Galápagos. These are the first records from the mainland.

Additional Galapágos records include **Española**, Bahia Manzanilla, 23-VI, 2-V-1992. gen. coll, MV, Peck and Cook, 92-142, 5-10-VI-1985, S. and J. Peck, littoral *Cryptocarpus* and *Prosopis*, FIT, malaise; **Española**, Pta. Suarez, 30 m, cliff prairie, MV, 2-V-1992, Cook and Peck, 92-153; **Española**, 20-IV-1932 (Van Dyke); **Santiago** and **Española** (Linsley and Usinger); **Isabela**, Tagus Cave, 1924, (Blair); **Floreana**, Black Beach, arid zone, 20-28-III-1989, 89-163; **Genovesa,** Bahia Darwin, 25-27-III-1992, arid zone forest, MV, Cook and Peck, 92-70; **Genovesa**, July 1979, P.R.Grant, in seeds *Cordia lutea.*) (New host record); **Marchena**, SW Playa, arid zone, 23-III-1992, night, gen.coll., Peck and Cook, 92-69; **Marchena**, SW Playa, arid zone, 12-23-III-1992, night coll., Peck and Cook, 92-24; **Pinta**, Playa Ibbetson, 1-5 m, 13-23-III-1992, arid zone, gen. coll., Peck and Cook, 92-43; **Rabida**, NE coast, 100 m, 10-V-1991, Heraty, arid forest, H91-087; **San Cristobal**, 10 m, 14-II-1989, littoral arid zone, S. and J. Peck. The remaining records are from **Santa Cruz**, 6-VIII-1990, C.K. McMullen; Puerto Ayora, CDRS, arid zone, UV, III-1992, S. Peck, 92-84; CDRS, 17-30-I-1989, 10 m, arid zone, UV and at lights, 89-11; CDRS, 1-28-II-1989, 10 m, arid zone, UV, S. Peck, 89-83; CDRS, 17-30-III-1989, arid zone, lights, S. Peck, 89-136; CDRS, 1-30-III-1989, S. Peck, 89-169; Puerto Ayora, 11-VI-1991, uv, S. Peck, 91-219; Puerto Ayora, 30 m, 30-VI-1991, UV, village House, S. Peck, 91-261; Puerto Ayora, 4-7-II-1992, at lights, arid zone, S. Peck, 92-1; Puerto Ayora, 6-III-1992, arid zone, S. Peck, 92-7; Puerto Ayora, 1-30-V-1992, arid zone, malaise, FIT, 40 m, S. And J. Peck, 91-110; Puerto Ayora, CDRS, arid zone, UV, III-1992, S. Peck, 92-84.

Amblycerus (Spermophagus) piurae (Pierce, 1815:8) (Figs. 2, 21, 22)

This species was described from Peru in 1930 "from cotton squares and mesquite pods." It was subsequently described from the Marquesas Islands as *Spermophagus insularum* by Blair in 1927. Decelle (1976) reported *Amblycerus insularum* (his new combination) from **Ile de Santa Cruz** in the Galápagos Archipelago. After we compared type specimens of *A. piurae* and *A. insularum*, including examination of male genitalia, we concluded that they represent the same species (NEW SYNONYMY). This is the first record of the species under the name *A. piurae* from the Galápagos.

New records: Duncan Is., 1-17-XII-1905, F.X. Williams; **Santa Cruz Is.**, Academy Bay, 21-I-1964; **Baltra**, 30 m, 24-I-1989, arid zone, grass and *Bursera* forest, UV, 89-4; **Baltra**, arid zone, 24-1-1989, ex. *Parkinsonia* seed pods, S. Peck, 89-165; **Floreana**, near coast, Las Cuevas, 17-31-I-1991, B. Valentine; **Floreana**, Black Beach, arid zone, 20-28-III-1989, beating, S. Peck; **Floreana**, 3 km e Black Beach, 120 m, 21-28-III-1989, upper arid, malaise, Peck and Sinclair, 89-140; **NE Floreana**, Las Cuevas, 22-IV-1992, arid zone, night coll., Cook and Peck, 92-140; **Seymour Norte**, arid, 29-III-1992, night coll., MV, Peck and Cook, 92-67; **Isabela**, 4 km NW Villamil, 2-15-III-1989, arid forest, malaise, 20 m, Peck and Sinclair, 89-90; **Pinzón (Duncan)**, 1-17-XII-1905, F.X. Williams; **Pinzón**, 19-VI-1991, 10 m, *Prosopis juliflora* seed pods, S. Peck, 91-264; **San Cristobal**, 14-II-1989, littoral arid, 1-10 m, S. Peck *et al.* The following collections are from **Santa Cruz**: Academy Bay, 21-I and 15-II-1964, malaise, Ashlock; Academy Bay, ECCD, 14-vii-1985, 30 m, thorn scrub, malaise, FIT, S. and J. Peck; CDRS, 10 m, arid, malaise, 1-30-III-1989, S. Peck, 89-169; CDRS, 3-50 m, 1-10-IV-1989, S. Peck, 89-208; CDRS, 1-3-VI-1991, 40 m, FIT, malaise, S. and J. Peck, 91-110; CDRS, above baranca, 1-30-VI-1991, 40 m, arid, malaise, S. Peck, 91-266.

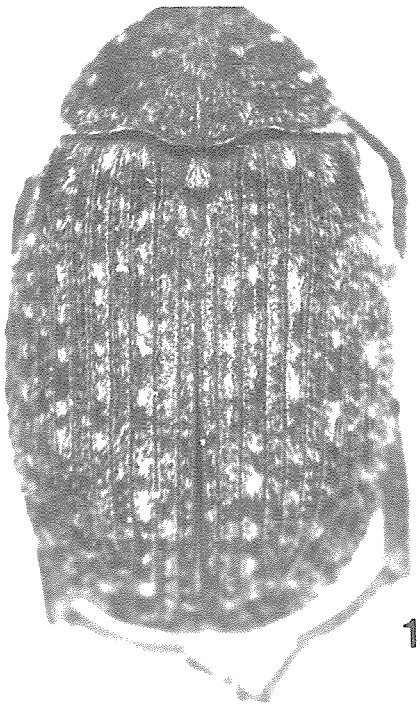
Previously recorded hosts for *A. piurae* are *Prosopis juliflora* (Sw.)DC. and *Parkinsonia aculeata* L. Host records for the Galápagos Islands coincide.

Spermophagini

Zabrotes subfasciatus (Boheman). (Figs. 3, 7, 23, 24)

Santa Cruz, Los Gemelos, 31 km N Sta. Rosa, 13-VI-15-VII-1985, S. & J. Peck, *Scalesia* forest, 570 m, FIT & malaise; **Santa Cruz**, Los Gemelos,

Figures 1-7. Habitus and pygidia. 1) *Amblycerus galapagoensis*, dorsal habitus; 2) *Amblycerus piurae, dorsal habitus*; 3) *Zabrotes subfasciatus*, male pygidium; 4) same, female pygidium; 5) same, dorsal habitus, female; 6) same, dorsal habitus, male; 7) same, ventral aspect, male, metasternal pit (arrow).



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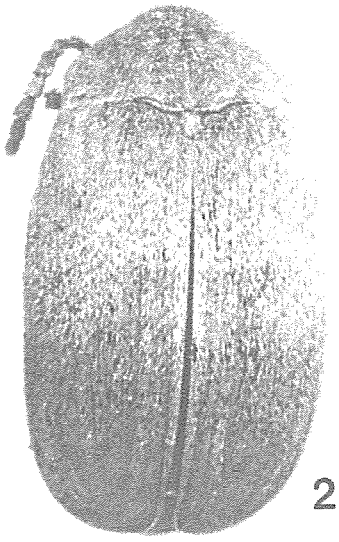

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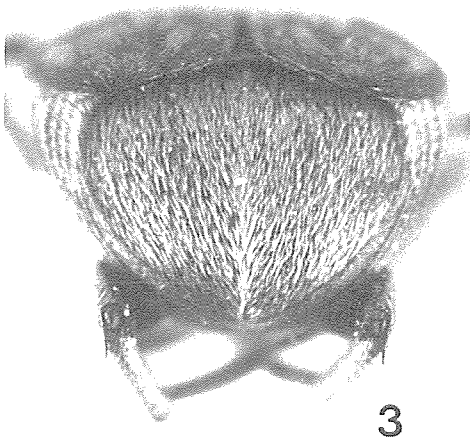

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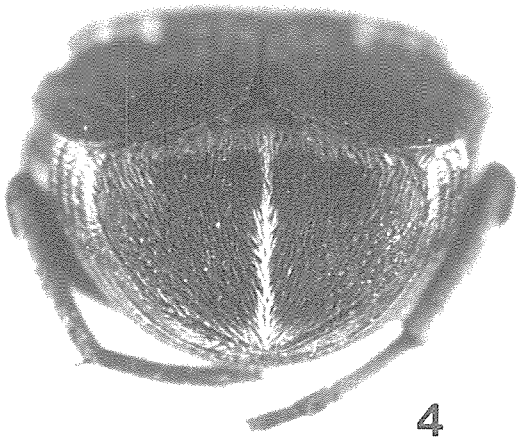

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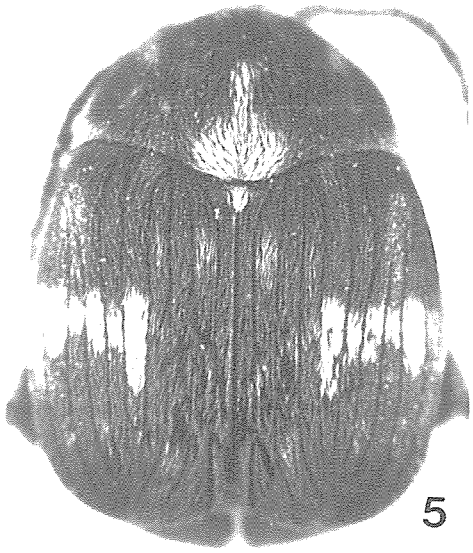

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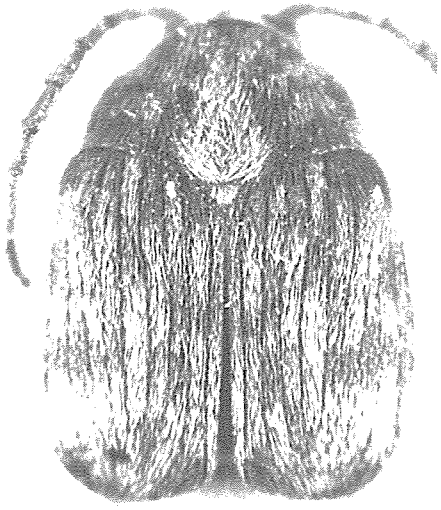

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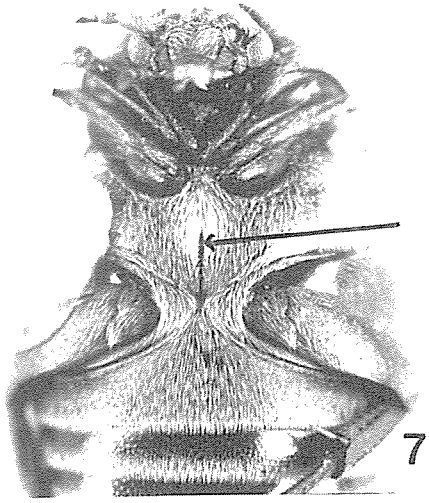

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1-9-IV-1989, 600 m, malaise, Peck and Sinclair, 89-206; **Santa Cruz**, 7.2 mi N Sta. Rosa, 1-30-VI-1991, 600 m, trans. forest, FIT, S. Peck, 91-231; **Santa Cruz**, 10 km N Sta Rosa, 7-30-III-1992, 500 m, trans. zone forest, malaise, S. Peck, 92-4; **Santa Cruz**, 4 km N Bellavista, Median Luna, 620 m, 13-VII, 14-V-1985, Miconia zone, FIT, S. and J. Peck.

This tropicopolitan species has been spread around the warmer parts of the world in seeds of varieties of the common bean, *Phaseolus vulgaris* (L.), and is capable of multiplying in beans in storage.

BRUCHINAE

Acanthoscelidini

Acanthoscelides (Bruchus) fuscomaculatus (Blair), 1928:679 Figs. 8, 9, 25, 26)

This species heretofore was represented by the female type specimen from **San Salvador (James, Santiago)** in the Galápagos deposited in the British Museum in London. Nine specimens have recently been examined from the following localities: **Isabela**, Alcedo, 7 km SW NE Playa, 600 m., 25-VI-1991, J. Heraty, arid forest, H91/118; **Fernandina**, SW side, 1000 ft., 5-II-1964, P. Ashlock; **James** Is.; **Isabela**, Volcan Alcedo, crater rim, 1100 m., 21-23-VI-1991, Vogel, CVALC 24-006; **Isabela**, Tagus Cove, arid zone, 13-V-1992, MV light, 20 m., Peck and Cook 92-176; **Isabela**, 6 mi NE Tagus Cove, 600 m., V. Darwin, 16-V-1992, arid zone, MV light, Cook and Peck 92-189; **Santa Cruz**, Academy Bay, 22-24-I-1964, P. Ashlock, with *Scalesia* sp.; **Santa Cruz**, CDRS, arid zone, cactus forest, 6-30-III-1992, 10 m., bait trap, Moraima and Peck 92-74.

The host is not known.

This species is known only from the Galápagos Islands and is presently considered endemic.

Acanthoscelides manleyi Johnson, 1990:425 (Figs. 10, 11, 27, 28)

Described from Guayas, Ecuador, this species is here recorded for the first time from the Galápagos Archipelago. Localities include: **St. Cruz**, Academy Bay, ECCD, 14-VII-1985, S & J Peck, 30 m, arid zone, thorn scrub, malaise trap-FIT trap; **St. Cruz**, 2 km N Bella Vista, 360 m, guava thicket, 13-VII-1985, S & J Peck, Agricultural area, FIT; **St. Cruz**, Media Luna to Puntudo, pampa sweeps, IV-1989, 600-700 m, S. Peck, 89-198; **St. Cruz**, Cerro Crocker, sphagnum bog pit traps, 825 m, 10-30-IV-1996, Sta. 19, S. Peck, 96-150; **Seymour**, SW end, 23-I-1989. litter under littoral shrubs, 1 m, S. Peck 89-20; **Seymour**, 10 m, 23-1-1989, S. Peck, arid zone, *Bursera* forest, UV light, 89-5; **Floreana**, 8 km E Black Beach, 360 m, 22-28-III-1989, *Scalesia*, FIT, Peck & Sinclair, 89-147; **Floreana**, Finca Cruz, 130 m, arid zone forest, 16-22-IV-1996, FIT, S. Peck, 96-108; **Isabela**, Villamil, 9-III-1989, night, beating *Scalesia*, arid zone, 5 m, S. Peck, 89-118; **Isabela**, SW Sierra Negra, 800m, 29-14-1996, grass pampa sweeps, S. Peck, 96-132; **Santa Fe**, malaise, arid zone, 4-6-IV-1989, 10-50 m, Peck & Sinclair, 89-186; **Fernandina**, 18 km NE Cabo Hammond, 1350 m, crater rim, 8-V-1991, general sweeping, S. Peck, 91-139; **Rabida**, NE coast, 250 m, 2-vi-1991, J. Heraty, arid Palo Santo, H91/072.

Kingsolver (1991:24) reported *A. manleyi* interceptions at U.S. ports of entry in *Vigna radiata* (L.) Wilczek var. *radiata* from Peru.

Acanthoscelides obtectus (Say 1831:1) (Figs. 14, 31, 32)

Santa Cruz, 8 mi N Academy Bay, 24-I-1964, P. Ashlock; **Santa Cruz**, Puerto Syons (sic), 3-I-1989, S. Abedrabbo.

This species without doubt was brought in by man in leguminous seeds. Its preferred host genus is Phaseolus.

Acanthoscelides rossi, new species (Figs. 14, 31, 32)

Holotype, male. Length.- (pronotum-elytra) 1.9-2.2 mm; width.- pronotum 0.8-1.1 mm, elytra 1.1-1.4 mm.

Description: Body obovate, dorsally convex; lateral outline in dorsal aspect constricted at pronotum-elytra juncture; pronotal margins gently rounded, elytral margins arcuate.

Integumental color. Head; frons piceous, extended as broad median band on vertex, lateral portions of vertex red, or head mostly red with black macula on vertex; antenna dark red to piceous, sometimes with apical one-half of each seg-

Figures 8-14. Habitus and pygidia. 8) *Acanthoscelides fuscomaculatus*, dorsal habitus; 9) same, pygidium; 10) *Acanthoscelides manleyi*, dorsal habitus; 11) same, pygidium; 12) *Acanthoscelides obtectus*, dorsal habitus: 13) *Scutobruchus ceratioborus*, dorsal habitus; 14) *Acanthoscelides rossi*, dorsal habitus.


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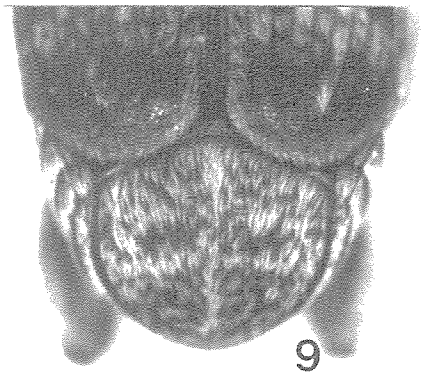
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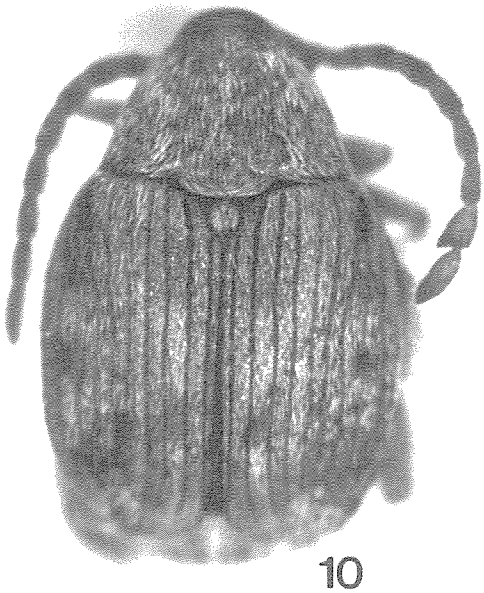
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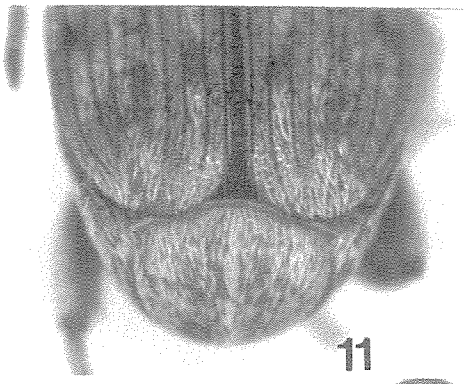
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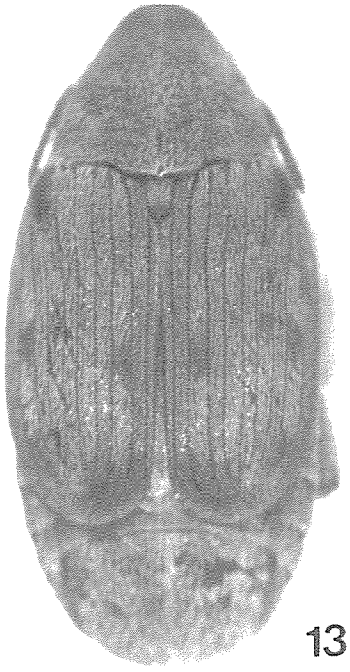
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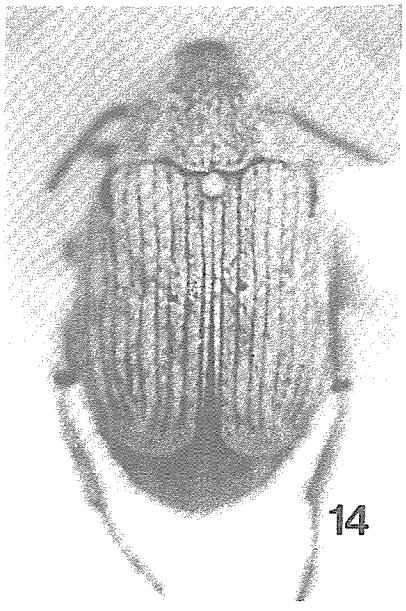
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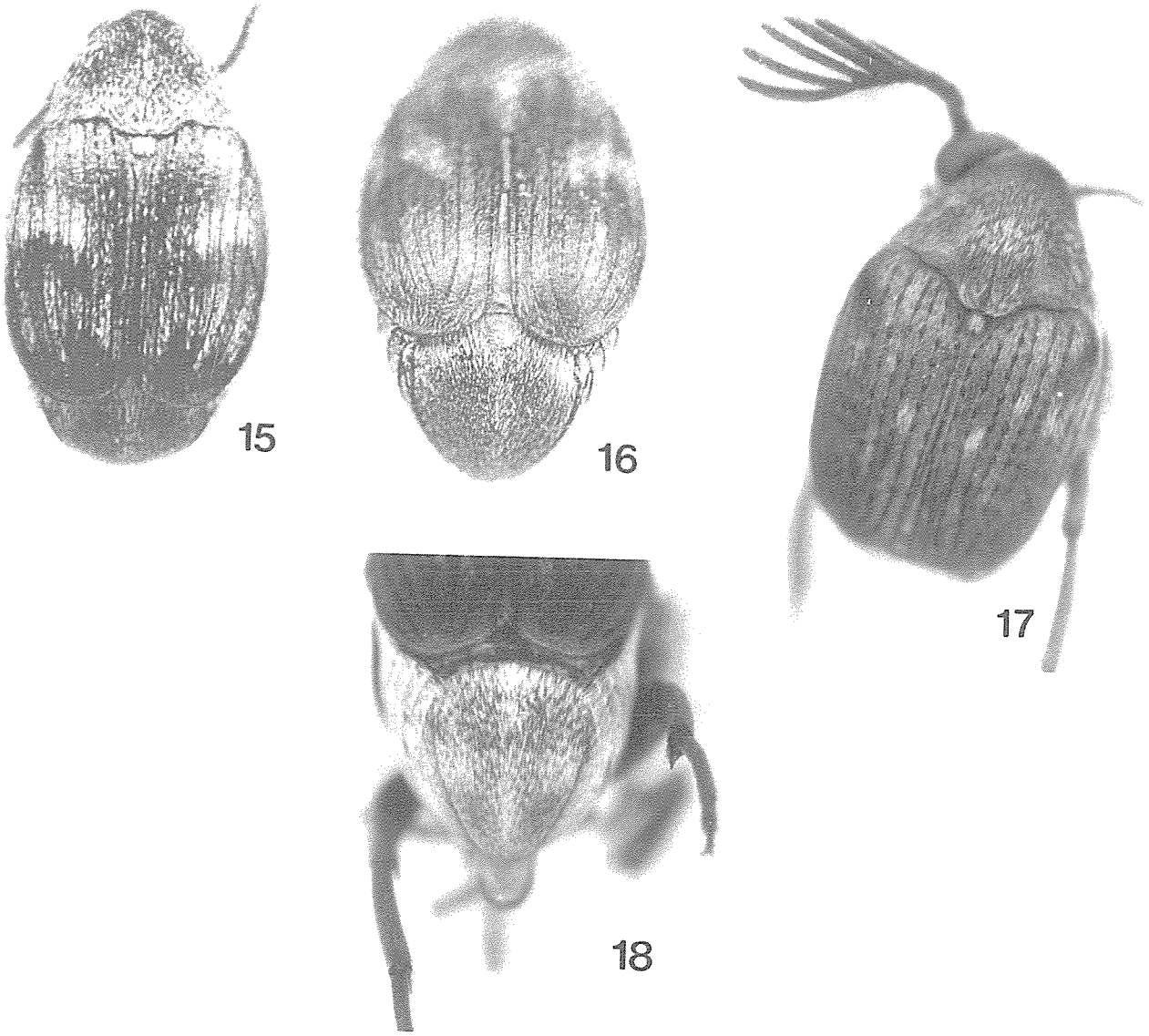


Figures 15-18. Habitus and pygidia. 15) *Sennius falcatus*, dorsal habitus; 16) same, pygidium; 17) *Megacerus minusculus*, dorsal habitus; 18) same, pygidium.

ment darker than base; pronotum, elytra, pygidium and legs red; abdomen piceous with dark red on sutures. **Vestiture**.- Composed of dense white setae over most of body; pronotum sometimes with faint broad, brown median stripe bisected by narrow line of white setae; elytra sometimes with faint brown spots on 3d, 5th and 9th interstices; pygidial vestiture directed toward median line of disk; vestiture of ventral sclerites and legs evenly distributed.

Structure. Body obovate, dorsally convex; lateral outline in dorsal aspect constricted at pronotum-elytra juncture; pronotal margins gently rounded, elytral margins arcuate. **Head** short, turbiniform, eyes moderately protuberant, ocular sinus one-half length of eye, setae on frons extended toward brief median carina; dorsal angles of eyes connected by indistinct transverse ridge; vertex and frons finely punctate, clypeus more coarsely punctate, antenna slender, segments 5-10 slightly eccentric, 11 obovate with apex acute; postocular lobe narrow, fringed, following caudal contour of eye. **Pronotum** subcampanulate, disk evenly convex, surface densely punctate, punctures separated by 1

to 2 diameters, apical margin evenly rounded, not constricted, lateral margins gently sinuate, basal lobe broad well-marked, basal sulcus obscure; lateral carina short, obtuse, obscured by setae; procoxae apically contiguous; cervical sulcus obscured by setae; fore legs not modified. **Elytra** evenly convex, lateral margins arcuate; striae narrow, regular in course, evenly spaced at base, 2-6 finely denticulate on basal margin; scutellum rectangular, bidentate; meso-and metapleura and sterna densely pubescent concealing sculpture. **Abdomen** with surface densely pubescent; basal abdominal segment depressed on midline, depression pollinose, basal segment longer than remaining segments together in male, subequal in female. Pygidium arcuate in male with apex of 8th tergite visible between emarginate terminal segment of abdomen and pygidium; pygidial disk densely punctate, setal pattern obliquely convergent toward midline, pygidian margins arcuate in basal ½, converging and nearly straight in apical ½. Metafemur moderately swollen, lacking ventral carina, mesoventral margin with acute denticle slightly longer than width of tibia at base followed by 3 minute denticles; metatibia slightly arcuate at base, straight and gradually widened toward apex; mucro slender, 3 coronal denticles short, acute; lateral, ventrolateral, ventral and ventromesal carinae complete to apex of tibia.

Male genitalia: (figs. 31,32), median lobe slender (fig. 31); ventral valve narrowly acute; armature of internal sac consisting of a hook-like basal sclerite, 2 pairs of slender thorn-like sclerites of 2 sizes, and a pair of brush-like bundles of setae near apex; lateral lobes slender, slightly expanded at extreme apices.

Variations. Body length 1.9-2.4; head mostly red with black macula on vertex; pronotum sometimes with indistinct broad, brown median stripe bisected by narrow line of white setae; elytral spots sometimes obsolete.

Female similar in coloration to male. Pygidium more oblique than in male and with a small emargination at the apex of the pygidium.

All specimens are from the Galápagos Islands.

HOLOTYPE male.- ECUADOR, Galápagos Islands, **Seymour**, 10 m, 23-I-1989, S. Peck, arid zone, beating or on ground, 89-12. Allotype female and 1 male, 2 female paratypes, same data. Other paratypes: Same locality and date but in *Bursera* forest, uv light, 2 males, 2 females; same locality, 23-I-1989, S. Abedrabbo, 1 male, 1 female; **Santa Fe**, on *Scalesia*, night beatings, 5-IV-1989, arid zone, S. Peck, 89-189, 1 male; **Isabela**, Vol. Alcedo, arid zone, 3-IV-1996, 200 m, Palo Santo woodland, S. Peck, 96-78, 1 male **Santa Cruz**, Tortuga Bay, 30-I-1989, swale, S. Peck, at light and night beating, 89-2, 1 male; **Floreana**, 3 km E Black Beach, 120 m, 21-28-III-1989, upper arid zone, FIT, Peck and Sinclair, 89-141, 1 female. Holotype and 2 paratyes deposited in the Canadian National Collection, Ottawa; allotype and 1 paratype deposited in the National Museum of Natural History, Washington, DC., 1 paratype deposited in the California Academy of Sciences, San Francisco, 2 in the Florida State Collection of Arthropods, Gainesville, and 2 deposited in the S.B. Peck Collection, Ottawa, Canada.

Comment: This species belongs to the puellus species group (Johnson, 1990) and appears to most closely resemble *Acanthoscelides caroni* Johnson described from Venezuela, Colombia and Ecuador but differing in size (*caroni*, 1.4-1.8 mm, 1.9-2-2 mm), and details of the male genitalia (*cf.* Johnson, 1990, fig. 97). In males of both species as in several species of the puellus group, the first abdominal segment is flattened or slightly concave.

Etymology. The specific name is a patronym honoring the Late Ross H. Arnett, Jr.

No host association is known for this species.

At least two other species of *Acanthoscelides* are represented by single females and cannot be identified at this time.

Scutobruchus ceratioborus (Philippi, 1859:670) (*Bruchus*)

Kingsolver (1983) listed the first record of this species from **Española Is**. and **Duncan Is**. in the Galápagos. Additional records are: **Española Is**., Bahia Gardner, 5-20 m., 27-IV-1991, arid zone, J. Heraty, H 91/004; **Española**. Bahia Manzanillo, 5 m, arid, FIT, 23-IV-1992. S. Peck, 92-146; **Española**, Central Ridge, 100m, arid, MV light, 30-IV-1992, Peck & Cook; **Española**, Bahia Manzanillo, 22-III-1996, reared from *Prosopis juliflora* pods, S. Peck, 96=44; **Santa Cruz**, Tortuga Bay, arid zone, 9-IV-1985, ex. pods *Prosopis juliflora*, S. Peck, 96-95; **Santa Cruz**, Academy Bay, Darwin Station, 10-V-14-VII-1985, S. and J. Peck, FIT; **Santa Cruz**, 2 km N Bellavista, 13-VII-1985, S. and J. Peck, FIT; **Santa Cruz**, CDRS, on lab window sill, arid zone, V-1996, S. Peck, 96-141, may be escape from rearing containers.

The host plant of this species on the mainland is also *Prosopis juliflora* (Sw.)DC.

Sennius falcatus, new species

Figs. 15, 16, 36, 37, 42)

Description: Male: Length.- 1.7-2.1 mm., width.- 0.9-1.4 mm. Integument mostly black with elytra usually or mostly red, sometimes all black, or black with a broad red stripe; legs red; antenna yellowish red to dark red.

Vestiture: Basic color white or yellow setae, head sparsely clothed except for dense patch behind eye, some specimens with vague to well defined elytral maculae of brown setae, median elytral macula crescentic in well marked specimens figs. 15, 16); pronotal vestiture usually uniformly white or yellow with at most a faint narrow, median stripe; pygidium venter of body and legs likewise clothed, pygidium usually with faint median line of paler setae (fig. 16).

Structure: **Head** short, obovate, eyes moderately protuberant, ocular sinus about ½ length of eye, frontal setae directed toward median impunctate boss, remainder of frons and vertex densely, finely punctate, clypeus more coarsely punctate, postocular fringe narrow. **Pronotum** strongly, uniformly convex, anterior margin evenly rounded, basal lobe well-marked, basal sulcus shallow, obscured by vestiture; lateral margins straight in basal ½, then curved toward apex, cervical sulcus prominent, extending dorsad ½ way to dorsal midline; pronotal punctures fine, dense, evenly distributed, separated by a diameter of one, lateral carina obsolete; procoxae contiguous. Scutellum transverse, bidentate. Elytral length equal to their combined width, convex except slightly depressed around scutellum; striae well-marked 9FIG. 16), shallow, narrow, 3d and 4th each with minute basal denticle. interstices subequal in width except 5th slightly broadened at middle. Fore- and midlegs normal for genus; metacoxa densely punctulate, metafemur moderately swollen, ventromesal margin intermittently carinate, subapical denticle small, acute, slightly angled toward apex of femur (fig. 42); metatibia slender at articulation, gradually widened to apex, mucro and 3 coronal denticles subequal in length; lateral, ventral and ventromesal carinae complete to apex, ventrolateral carina absent; basitarsus with short mucro.

Abdomen with basal segment slightly longer than remaining segments together, apical margin of terminal sternum emarginate; pygidium obovate, basal margin arcuate; disk convex, reflexed apically, finely foveate, densely setose.

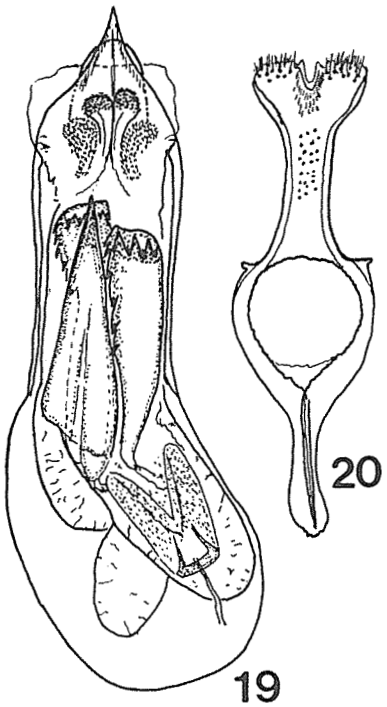
Male genitalia: Median lobe short (fig. 36), apex slightly expanded, ventral valve triangular; internal sac with falcate hinge sclerites, internal structure of each hinge sclerite appearing bifurcate; middle of sac with pair of setal clusters; apex of sac bilobed, lined with fine spicules.

Female. Similar in size and color to male except pattern of brown maculae on elytra more contrasting, the median maculae usually falcate and each bordered anteriorly by a white macula (fig. 15); pygidial pattern of pale setae in basal band and contrasting narrow median vitta, integument usually darker than in male, pygidium occasionally uniformly clothed with white setae. Pygidium vertical, terminal abdominal segment not emarginate but rounded.

Holotype, male. ECUADOR, Galápagos: **Santiago** Espumilla to Aguacate, 300 m, 3-VI-1991, ex. *Cassia occidentalis* pods, S. Peck, 91-218. Allotype female and 122 malemale and 8 femalefemale paratypes, same data. Other paratypes from Galápagos, **Baltra**, 30 m. 24-I-1989, arid zone, grass and *Bursera* forest, UV light, S. Peck, 89-4; Pinzón, 3 km SE Pl. Escondida, 380 m, 27-VI-1991, J. Heraty, bromeliad pampa, 91-121; Same data except 2.5 km SE Pl. Escondida, 390 m, *Scalesia* scrub, H91-122; **Santa Cruz**, agric. zone, 1-9-IV-1989, malaise, Peck and Sinclair, 89-204; **Santa Cruz**, Putundo, 700 m, 22-I-1989, pampa zone, day beating, S. Peck, 89-9; **Santa Cruz**, Bellavista, field, 160 m, FIT, 89205; **Ecuador, Guyaquil**, 3-I-1986, P. Skelley; Guyas, 20 km N Guyaquil, 23--I-1982, G.V. Manley; Playa Progresso, 24-V-1980, G.V. Manley.

Holotype and paratypes deposited in the Canadian National Museum, Ottawa, Canada. Allotype and four paratypes deposited in the National Museum of Natural History, Washington, DC., two paratypes in the California Academy of Sciences, San Francisco, CA, two in the Gary V. Manley private collection, Three Rivers MI, and eight in the Florida Department of Agriculture Collection, Gainesville FL.

Figures 19-30. Male genitalia. 19) *Amblycerus galapagoensis*, median lobe; 20) same, lateral lobes; 21) *Amblycerus piurae*, median lobe; 22) same, lateral lobes; 23) *Zabrotes subfasciatus*, median lobe; 24) same, lateral lobes; 25) *Acanthoscelides fuscomaculatus*, median lobe; 26) same, lateral lobes; 27) *Acanthoscelides manleyi*. median lobe; 28) same, lateral lobes; 29) *Acanthoscelides obtectus*, median lobe; 30) same, lateral lobes.



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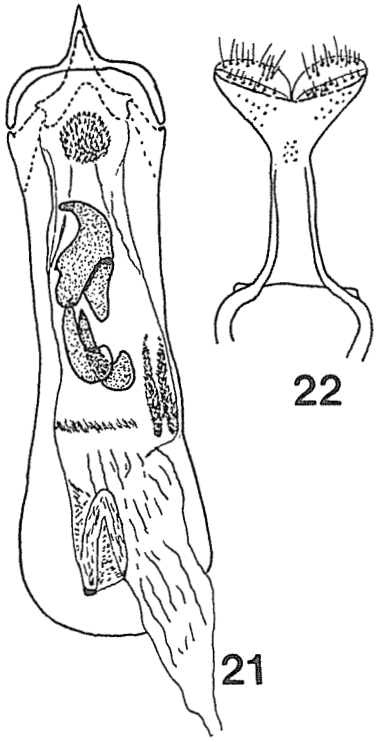

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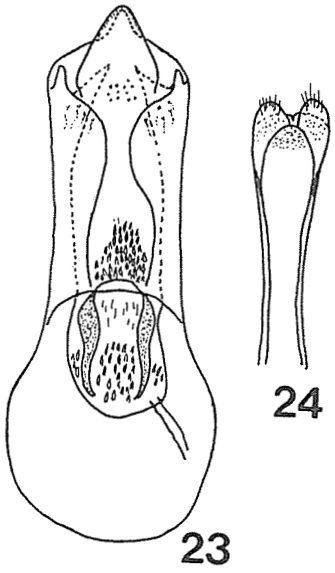

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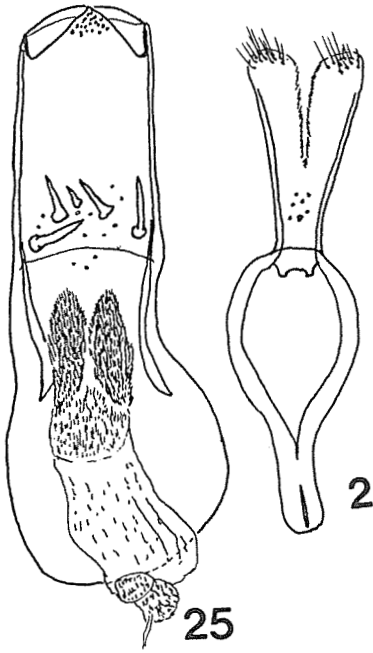

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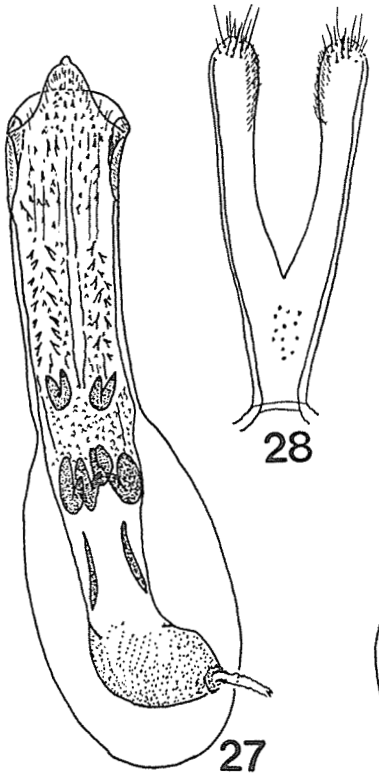

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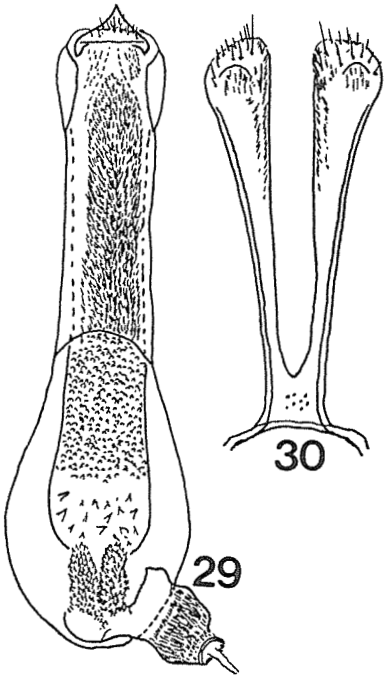

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Comments: A comparison of male genitalia (cf. Johnson and Kingsolver, 1973, fig. 65) indicates that *Sennius falcatus*, n. sp., is closely related to *Sennius fallax* (Boheman) which ranges from the West Indies through the Gulf Coast states, parts of Mexico and Central America to Guatemala. The latter species averages slightly larger than *falcatus* (1.3-2.5mm) and the color pattern is different.

The paratypes from Guyaquil and environs and from Playas Progresso establish the connection with the mainland fauna. No revisionary studies have been undertaken of South American *Sennius* so that other comparisons cannot confidently be made at this time.

The specific name alludes to the falcate elytral maculations in the darker specimens, especially prominent in females. The single host plant was recorded as *Cassia occidentalis* but this species should now be listed as *Senna occidentalis* (L.) Irwin and Barneby.

Megacerus minusculus (Pic, 1934:28) (*Bruchus*)

(Figs. 17, 18, 38, 39, 40, 43, 44)

This species was described from Costa Rica but is widely distributed in Brazil, Colombia, Ecuador, Mexico, Nicaragua, Panama, and Venezuela. The first records from the Galápagos are: **Española Is.**, North Playa, 5-20 m., Arid zone, 27-IV-1991, J. Heraty, H 91/002; **Sta. Cruz**, CDRS, above baranca, 1-30-VI-1991, 40 m., arid zone, malaise trap, S. Peck, 91-266; **Santiago**, Playa Espumilla, 5 m, arid, mv and night collecting, 4-IV-1992, 92-97; **Marchena**, SW Playa, arid, 12-23-III-1992. night collecting, Peck & Cook, 92-24; **Santa Cruz**. 10 km N Sta. Rosa, 7-30-III-1992, 500 m, trans. zone forest, malaise, S. Peck, 92-4; **Santa Cruz**, CDRS, arid, above barranca, 1-30-VI-1991, 40 m, malaise, S. Peck, 91-266.

No host plant asssociations are known for this species, but the genus *Megacerus* is associated exclusively with seeds of plants in the family Convolvulaceae.

Host Plant List

Acanthoscelides fuscomaculatus	Not known
Acanthoscelides manleyi	*Vigna radiata* (L.) Wilczek var. *radiata*
Acanthoscelides obtectus	*Phaseolus* spp.
Acanthoscelides rossi	Not known
Amblycerus galapagoensis	*Cordia lutea* Lam.
Amblycerus piurae	*Prosopis juliflora* *Parkinsonia aculeata*
Megacerus minusculus	not known but in Convolvulaceae
Scutobruchus ceratioborus	*Prosopis juliflora*
Sennius falcatus	*Senna occidentalis* (L.) Irwin & Barneby
Zabrotes subfasciatus	*Phaseolus* spp.

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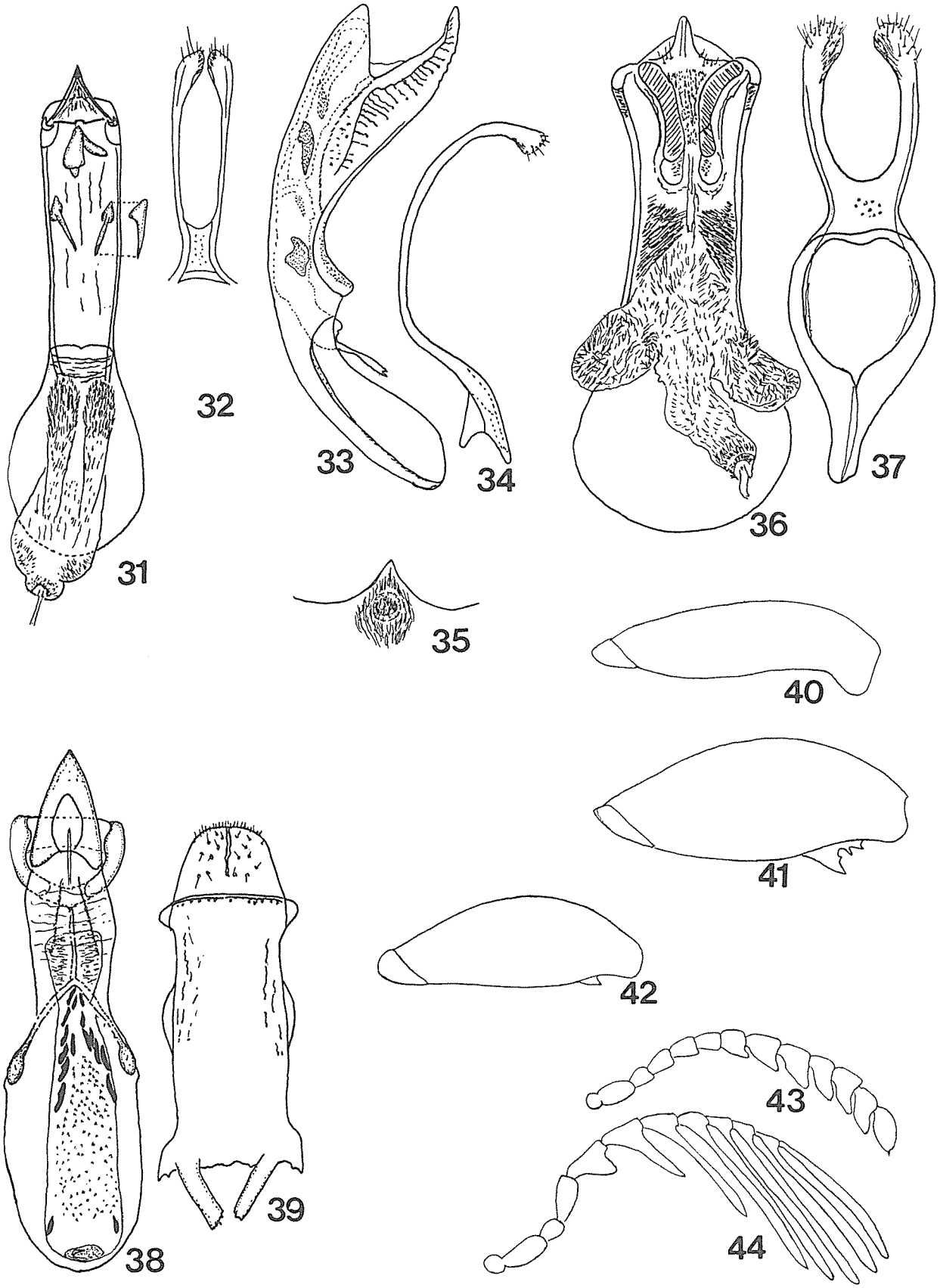
Figures 31-44. Male genitalia, femora, and antennae. 31) *Acanthoscelides rossi*, median lobe; 32) same, lateral lobes; 33) *Scutobruchus ceratioborus*. median lobe, lateral aspect; 34) same, lateral lobes lateral aspect; 35) same, median depression, basal abdominal segment, male; 36, *Sennius falcatus*, median lobe; 37) same, lateral lobes; 38, *Megacerus minusculus*, median lobe; 39) same, lateral lobes; 40) same, metafemur, lateral aspect; 41) *Acanthoscelides obtectus*, metafemur, lateral aspect; 42) *Sennius falcatus*, metafemur, lateral aspect; 43 and 44) *Megacerus minusculus*, female and male antennae, respectively.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