

## A Review of the Rhopalophorini (Coleoptera: Cerambycidae) of North and Central America

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### Abstract

The tribe Rhopalophorini is reviewed for North and Central America. Keys to genera and species are provided, and known species are redescribed. The genus *Rhopalophora* Audinet-Serville is revised to include 16 species, with the following additions: *R. serripennis* n. sp. and *R. yucatanana* n. sp. are described from Mexico; *R. rugicollis hovorei* n. ssp. is described from Baja California; and *R. meeskei* Casey, 1891 is restored to species status. New synonymies are: *R. incrustata* Chevrolat, 1859 = *R. tenuis* (Chevrolat, 1855); *R. laevicollis* LeConte, 1873 = *R. cupricollis* Guérin-Méneville, 1844. Distribution maps are included for the more common species. The subgenus *Ischionodonta* Chevrolat is raised to generic status, and includes 3 species: *I. serripes* (Bates, 1872) n. comb.; *I. versicolor* (Chevrolat, 1859) n. comb.; and *I. mexicana* n. sp. from Mexico. *Cosmisoma* Audinet-Serville is revised to include 6 species, with 2 newly described: *C. militaris* n. sp. from Panama and Costa Rica, and *C. rhapsos* n. sp. from Panama and Colombia. New synonymies are: *C. nudicornis* Bates, 1892 = *C. martyr* Thomson, 1860, and *C. alboscuteolata* Linsley, 1935 = *C. reticulata* Bates, 1885. *Cynoderus* Audinet-Serville is newly recorded from Mexico and Central America with 6 species: *C. virginiae* n. sp., *C. copei* n. sp., *C. lividus* n. sp., *C. brevicolle* n. sp. from Mexico, and *C. guatemalicus* n. sp. from Guatemala. *Cynoderus barbatus* Gounelle is recorded from Costa Rica and Panama. A new genus, *Muxbalia*, is proposed and tentatively placed in the Rhopalophorini, and *M. monzoni* n. sp. is described from Guatemala. *Ozodes* Audinet-Serville, and *Lissozodes* Bates are removed from the Rhopalophorini and placed provisionally in the Necydalopsini. *Rhopalophora cupricollis*, *R. longipes*, *R. serripennis*, *Cynoderus virginiae*, *Cosmisoma rhapsos*, and *Muxbalia monzoni* are illustrated.

### Introduction

The tribe Rhopalophorini is found primarily in the Western Hemisphere (at present consisting of 119 species in 13 genera) with only 3 genera occurring elsewhere: *Ampherhoe* Newman from Australia, *Pelossus* Thomson from Africa, and *Dymorpho-cosmisoma* Pic from China (Aurivillius 1912; Gressitt 1951). The group is predominantly Neotropical with several species of *Rhopalophora* Audinet-Serville extending their range northward into the United States. These species were treated by Linsley (1964), but the

fauna north of South America has been largely ignored. Since the efforts of Bates (1879-1885), new taxa have been proposed only by Linsley (1935, 1942).

Adult specimens of Rhopalophorini are often encountered in large numbers, usually on the flowers of various plants, or on dead twigs and branches. Members of the tribe appear to be diurnal.

This revision deals with members of the tribe found from North America through Panamá, these limits being strictly a matter of convenience. Cladistic analysis has not been considered due to these geographical limitations. Portions of the South American

fauna have been studied by Zajciw (1962), Monné and Magno (1988), and by Monné (1989).

For the geographical area under consideration, the tribe Rhopalophorini consists of six genera and 33 species. In the preparation of this work, over 3000 specimens were examined. Data on the material examined for the less common species is listed individually; distributional maps have been provided for species collected in a large numbers of localities. Deposition of types and specimens in institutions and private collections are indicated by the following abbreviations: [AMNH] = American Museum of Natural History; [BMNH] = The Natural History Museum, London; [CAS] = California Academy of Sciences; [EG] = Edmund Giesbert; [FH] = Frank Hovore; [FMNH] = Field Museum of Natural History, Chicago; [GN] = Gale Nelson; [HH] = Henry Howden; [HS] = Henry Stockwell; [JAC] = John A. Chemsak; [JB] = Joseph Beier; [JC] = James Cope; [JH] = Jeff Huether; [JM] = José Monzón; [JW] = James Wappes; [KR] = Keve Ribardo; [LACM] = Los Angeles County Museum of Natural History; [MNS] = National Museum of Natural Sciences, Ottawa; [RP] = Richard Penrose; [RT] = Robert Turnbow; [RW] = Rick Westcott; [SU] = Stanford University; [TAM] = Texas A&M University; [UA] = University of Arizona; [UCB] = University of California, Berkeley; [UCD] = University of California, Davis; [UDV] = Universidad del Valle de Guatemala; [UK] = University of Kansas; [UNAM] = Universidad Nacional Autónoma de México; [UU] = University of Utah.

### Tribe RHOPALOPHORINI Lacordaire

Lacordaire, 1869:109 (as *Rhopalophorides*); LeConte, 1873:307; LeConte and Horn, 1883:292; Leng, 1884:114; Knull, 1946:187; Gressitt, 1951:315; Linsley, 1964:187.

**DESCRIPTION:** Form parallel-sided. Head with frons large, oblique, concave; eyes finely faceted, deeply emarginate; mandibles acute; antennae slender, elongate, without a poriferous system, segments unarmed; palpi short, equal, last segment oval, not dilated. Anterior coxal cavities small, not angulate, open behind. Legs long, slender, femora usually pedunculate and abruptly clavate; tibial spurs small. Stridulatory surface of mesonotum large, undivided; scutellum small, obtuse. Elytral disk flattened, especially near base.

The Rhopalophorini may be recognized by the slender, somewhat flattened body form, slender, elongate antennae, and usually pedunculate femora. *Ozodes* Audinet-Serville and *Lissozodes* Bates have been previously included in the Rhopalophorini but

differ from others in that tribe by the form of the pronotum, different style of prosternal sexual modifications, the exerted pro- and mesocoxae, and from all but *Muxbalian* gen. by the gradually clavate femora. Martins (1975), in attempting to clarify the status of several genera in the Rhopalophorini and Tillomophini, pointed out the close relationship of *Ozodes*, *Neozodes* Zajciw, *Parozodes* Aurivillius, *Argyrodines* Bates, *Aphysotes* Bates, and *Epropetes* Bates, but did not choose to reassign these genera tribally at that time. Of these genera, *Ozodes* and *Lissozodes* (of which an as yet undescribed species occurs in Costa Rica) occur in the the area of this study, and appear to be closely related to *Eucharassus* Audinet-Serville which is presently assigned to the Necydalopsini. Until the tribal status of this group can be definitely resolved, *Ozodes* and *Lissozodes* are placed into the Necydalopsini.

The six genera of Rhopalophorini occurring in North and Central America may be separated as follows:

### Key to the Genera of Rhopalophorini in North and Central America

1. Meso- and metafemora abruptly clavate beyond middle (See fig. 1) ..... 2.  
Meso- and metafemora gradually clavate (See fig. 12) ..... *Muxbalia*
2. Elytral apices truncate or sinuate-truncate. Antennal fourth segment much shorter than third (See fig. 1) ..... 3.  
Elytral apices acuminate or rounded. Antennal fourth segment not much shorter than third (See figs. 10, 11) ..... 4.
- 3.(2) Elytra bearing distinct transverse pubescent fasciae at base and middle ..... *Rhopalophorella*  
Elytra lacking transverse pubescent fasciae ..... *Rhopalophora*
- 4.(2) Antennal fifth segment bearing a tuft of hair-like setae, other segments sometimes tufted. Hind legs lacking tufts of setae ..... *Cosmisoma*  
Antennal fifth segment usually lacking tufts of hair-like setae [except *Cynoderus barbatus*, which has hind tibiae and tarsi also tufted] ..... 5.
- 5.(4) Antennae of males 11 segmented. Elytra dull, punctation fine, dense, uniform. Pronotum at most slightly longer than wide. Femora at least feebly asperate at base ..... *Ischionodonta*  
Antennae of males 12 segmented. Elytra shining, punctation moderately coarse, irregular. Pronotum

at least 1 1/3 times as long as wide. Femora smooth, not asperate at base ..... *Cynoderus*

### Genus *Rhopalophora* Audinet-Serville

*Rhopalophora* Audinet-Serville, 1834: 100; Chevrolat, 1859:57; Thomson, 1860: 177; Thomson, 1864:418; Lacordaire, 1869:110; Bates, 1880:61; Leng, 1886:30; Gounelle, 1911:99; Knull, 1946:227; Linsley, 1964:188.

*Rhopalophorus*, LeConte, 1873:307; LeConte and Horn, 1883:292.

*Tinopus* LeConte, 1850:19 (Type species: *Stenocorus longipes* Say, monobasic).

*Rhopalophora* (*Rhopalophora*); Aurivillius, 1912:430.

**DESCRIPTION:** Form slender, somewhat depressed; integument usually blackish, often with pronotum red. Head moderately prolonged; antennae filiform, at least as long as body in male, shorter in female, punctulate and sericeous, nearly always eleven segmented, basal segments slightly swollen apically, fourth segment distinctly shorter than third or fifth. Pronotum unarmed, usually longer than wide. Scutellum small, triangular; apex obtuse, notched. Elytra somewhat depressed near base and suture, with apices truncate, surface punctate. Abdomen normally segmented. Legs with mesoand metafemora abruptly clavate near apices, first segment of metatarsi at least twice as long as second.

**TYPE SPECIES:** *Rhopalophora sanguinicollis* Audinet-Serville (Thomson designation, 1864).

A complex of closely-related and variable phenotypes in this genus, including *R. longipes*, *R. tenuis*, *R. bicolorella*, *R. rugicollis*, *R. serripennis*, *R. punctatipennis*, and *R. miniatocollis*, has been difficult to separate in the past. In several cases, phenotypes which are sympatric and clearly separable at one location intergrade at another. Treating these forms as separate species is, we believe, preferable to wholesale synonymy, but examples from a few populations will not fit neatly into the parameters given in the following key.

### Key to the Species of *Rhopalophora* in North and Central America

1. Elytra broadly, shallowly, medially depressed; punctures small, often partially obscured; margins not asperate (See fig. 1). Pronotum with disk usually dorsally sculptured, with a broad obtuse swelling near base on each side of a broad median impression; sides swollen somewhat behind middle,

transversely, somewhat narrowed behind apex; pubescence, if evident, moderately dense, transversely appressed, usually interrupted at middle; punctation absent or mostly obscured. Length 8-15.5mm. .... 2

Elytra subdepressed or not; margins often at least somewhat asperate; punctures usually coarse, not obscured (See fig. 3). Pronotum lacking distinct sculpturing; pubescence, if present, usually forming narrow vittae; punctation usually evident. Length 6-11mm ..... 6

2. (1) Integument with strong metallic greenish reflections, appendages metallic bluish. Pronotal pubescence yellowish. Length 11-14.5mm. Mexico (Hidalgo, Guerrero) ..... *R. eximia* Bates  
Integument without distinct metallic reflections 3
3. (2) Pronotal pubescence indistinct or obscure. Integument brightly, distinctly reddish orange and black. Pubescence of elytra and underside obscure. Length 10-11mm. Guatemala .....  
..... *R. nigriventris* Bates  
Pronotal pubescence distinct, whitish to bright orange. Elytra and underside densely golden or whitish pubescent ..... 4.
4. (3) Pronotal disk piceous, with a pair of broad, golden pubescent vittae; prosternum broadly orange at apex. Length 8-13mm. Mexico (Chiapas) to Costa Rica ..... *R. rubecula* Bates  
Pronotum dark red to reddish-orange, often with a piceous macula at middle of disk, clothed with whitish to bright orange pubescence not forming distinct vittae, middle irregularly glabrous, sparse punctures often visible ..... 5.
5. (4) Pronotum and elytra uniformly dark reddish, appendages darker. Pronotal pubescence fine, whitish, broadly interrupted at middle, with a wide glabrous lateral vitta above a narrow pubescent vitta on each side; sculpturing reduced. Length 8-10.5mm. Mexico (Yucatán, Quintana Roo) .....  
..... *R. yucatanana* n. sp.  
Pronotum not concolorous with elytra, often with a dark spot at middle of disk; pubescence variable, whitish to bright orange, narrowly interrupted at middle, without lateral vittae; surface strongly sculptured. Length 10-15.5mm. Southern Texas to Costa Rica .... *R. cupricollis* Guérin-Méneville
6. (1) Head red, or mostly red ..... 7.  
Head blackish, sometimes with occiput partly red ..... 9.
7. (6) Pronotum nearly twice as long as wide, nearly parallel-sided, only slightly wider at middle; disk nearly impunctate, with a pair of whitish pubescent vittae. Length 6-8.5mm. Lower Rio Grande

- Valley, Texas to Mexico (Nuevo Leon, Tamaulipas) ..... *R. angustata* Schaeffer  
 Pronotum slightly less than 1 1/2 times as long as wide, sides slightly rounded, widest behind middle ..... 8.
8. (7) Pronotal disk moderately coarsely, densely punctate, pubescent vittae (sometimes indistinct) composed of pale golden pubescence. Length 6-8.5mm. Mexico (Sinaloa) .....  
 ..... *R. miniatocollis* Chevrolat (in part)  
 Pronotal disk nearly impunctate, lacking vittae. Length 5-8mm. Southern Arizona, Mexico (Sonora) .....  
 ..... *R. prorubra* Knull
9. (6) Pronotal disk not plicate nor rugulose ..... 10.  
 Pronotal disk transversely rugose. Length 7-10mm. Texas, New Mexico, Arizona and Baja California south to Guatemala ..... *R. rugicollis* (LeConte)
10. (9) Elytral punctation subseriate; epipleural margins strongly asperate. Pronotum red, subcylindrical, pubescent vittae absent or feeble. Length 5-9mm. Southwestern Mexico (see fig. 8) .....  
 ..... *R. serripennis* n. sp.  
 Elytra with punctation irregular, not subseriate; epipleural margins feebly to moderately asperate. Pronotum red or black ..... 11.
11. (10) Pronotum black ..... 12.  
 Pronotum red (sometimes piceous in *R. bicolorella*) ..... 13.
12. (11) Pronotum with sides feebly rounded, tapering to apex; disk with a wide, golden vitta on each side of a narrow, glabrous, sparsely punctate median vitta; prosternum of males without erect setae. Length 8-11mm. Mexico to El Salvador .....  
 ..... *R. lineicollis* Chevrolat  
 Pronotum subcylindrical, slightly wider behind middle; disk moderately densely punctate, vittae varying from moderately wide to indistinct, white to pale golden; prosternum of males with short, pale, erect setae present. Length 6-9mm. Mexico to Costa Rica ..... *R. tenuis* (Chevrolat)
13. (11) Male prosternal punctate patches small, indistinct, elongate. Pronotal punctures deep, moderately dense on each side of median impunctate area, usually separated by about one diameter; pubescent vittae broad, usually distinct. Elytra castaneous to piceous; pubescence fine, pale. Length 6-10mm. Mexico .....  
 ..... *R. miniatocollis* Chevrolat (in part)  
 Male prosternal punctate patches moderately large, distinct, rounded. Pronotum with punctures moderately dense to indistinct; pubescent vittae narrow, indistinct, or absent. Elytra blackish to piceous ..... 14.
14. (13) Pronotum about as wide as long, sides moderately widely rounded, obtusely tuberculate on each side of disk near base, base constricted; pubescent vittae orange or golden. Length 6-10mm. Utah, Colorado, Arizona and Texas to Mexico (widespread) ..... *R. meeshei* Casey  
 Pronotum distinctly longer than wide ..... 15.
15. (14) Pronotum feebly subangulate at sides, widest slightly behind middle; punctures indistinct. Length 5-9mm. Eastern and midwestern North America to central Texas (see fig. 3) .....  
 ..... *R. longipes* (Say)  
 Pronotum subcylindrical or slightly tapering, punctures distinct ..... 16.
16. (15) Metafemora short, at most barely attaining elytral apices in female, barely surpassing apices in male. Antennae with terminal segment shorter than tenth, apex strongly curved, blunt. Pronotum subcylindrical, pubescence evenly distributed on each side of middle, usually not forming distinct vittae. Length 4.5-9mm. Texas (Rio Grande Valley) to southern Arizona and Mexico (Tamaulipas, Coahuila, Sonora, Baja California) .....  
 ..... *R. bicolorella* Knull  
 Metafemora surpassing elytral apices in female, surpassing apices by more than half the length of club in male. Antennae with terminal segment at least subequal to tenth, apex subacute, feebly appendiculate (sometimes forming short twelfth segment at appendiculation). Pronotum slightly tapering, sides slightly rounded, pubescence usually forming distinct vittae. Elytra piceous, shining, pubescence moderately indistinct. Length 6-10mm. Mexico to Guatemala .....  
 ..... *R. punctatipennis* Linsley

### *Rhopalophora angustata* Schaeffer

*Rhopalophora angustata* Schaeffer, 1905:162 (TYPE LOCALITY: Esperanza Ranch, Brownsville, Texas); Linsley and Martin, 1933:181 (habits); Vogt, 1949:175 (habits); Linsley, 1964:188; Hovore and Giesbert, 1976:357 (habits); Manley and French, 1976:49; Turnbow and Wappes, 1978:369 (habits); Hovore, Penrose, and Neck, 1987:308 (habits).

*Rhopalophora (Rhopalophora) angustata*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form moderately small, elongate, slender; integument piceous, head and prothorax red, elytra rufopiceous. Head finely punctate above, more coarsely so on frons; antennae extending 3 segments at most beyond elytral apices, eleventh segment filiform, nearly as long as tenth. Pronotum

distinctly narrower than elytral humeri, about 1 1/2 times as long as broad, subcylindrical, feebly wider at middle; disk with a shallow, median, longitudinal impression near base; surface with punctation indistinct, sparse, each side with a longitudinal vitta of moderately sparse, whitish, appressed pubescence above; prosternum with a small, triangular, coarsely punctate patch on each side in front of coxae, surface nearly impunctate, clothed with whitish pubescence near base and at sides; meso- and metasternum densely whitish pubescent. Elytra more than 3 times as long as width across humeri, sides subparallel; apices transversely truncate; disk with punctures moderately coarse, dense, vaguely sublinear; pubescence fine, short, recurved, pale golden, slightly obscuring surface. Abdomen densely whitish pubescent; fifth sternite broadly rounded at apex. Legs slender; metafemora exceeding elytral apices by about half length of club. Length 6-8.5mm.

**FEMALE:** Form similar to male. Antennae and metafemora at most barely surpassing elytral apices. Prosternum lacking punctate patches. Abdomen with fifth sternite narrowly, subtruncately rounded. Length 6-8mm.

**RANGE:** Lower Rio Grande Valley of Texas to north-eastern Mexico (Tamaulipas, Nuevo Leon).

**MATERIAL EXAMINED:** TEXAS: 2 males, Cameron Co., Brownsville-Southmost, Sabal Palm Grove, 10-11 X, 1975 (E. Giesbert)[EG]; 1 male, same locality, 13 X, 1977 (J. Wappes)[JW]; 2 females, same locality, 18 X, 1985 (Wappes)[JW]; 1 male, 1 female, same locality, 9 V, 1986 (Downie & Wappes); San Patricio Co., 11 males, 18 females, Welder Wildlife Refuge, 12-15 X, 1975 (Giesbert)[EG]; 3 males, 2 females, same locality, 27 IX, 1976 (Wappes)[JW]; 1 female, Nueces Co., Corpus Christi (Rodd Field), 27 III, 1973 (W.E. Clark)[TAM]; 1 female, Cameron Co., Brownsville, 24 X, 1982 (C.W. Agnew); 1 female, Live Oak Co., 10 mi. E G. West, 4 IV, 1980 (Wappes)[JW]. MEXICO: 1 female, Tamaulipas, Villagran, 7 VI, 1951 (H.E. Evans) [UCB]; 2 females, same locality, 22 V, 1952 (M. Cazier, W. Gertsch & R. Schrammel)[UCB]; 2 females, Tamaulipas, Tampico, 10 VI, 1951 (Evans)[UCB]; 1 female, Tamaulipas, 5 mi. NE Llera, 21 VI, 1964 (A.G. Raske)[UCB]; 1 male, Nuevo Leon, 10 mi. W Linares, 13 IX, 1976 (J.A. Chemsak, J. Powell, A. & M. Michelbacher) [UCB].

**REMARKS:** This species may be easily distinguished by the slender and subcylindrical prothorax with the

width of the base and apex subequal, and by the entirely red head. Adults have been taken from flowers of *Baccharis*, *Monarda*, and *Clematis*, and reared from *Celtis*, *Citrus*, *Pithecellobium*, *Eysenhardtia*, *Zanthoxylum* and *Diospyros*.

### *Rhopalophora bicolorella* Knull (Fig-4)

*Rhopalophora bicolorella* Knull, 1934:336 (TYPE LOCALITY: Palmerlee, Cochise Co., Arizona); Linsley, Knull, and Statham, 1961:19 (habits); Linsley, 1964:192; Hovore and Giesbert, 1976:357 (habits).

**DESCRIPTION: MALE:** Form moderately small, slender; integument piceous, prothorax often red with base and apex piceous, head rarely red. Head distinctly punctate; antennae exceeding elytral apices by about 3 segments, terminal segment slightly shorter than tenth, curved and blunt at apex. Pronotum longer than broad, subcylindrical or with sides moderately rounded, slightly wider behind middle; disk sometimes slightly longitudinally impressed at middle near base; surface moderately sparsely punctate; pubescence short, moderately sparse, subrecumbent, usually widespread on each side of glabrous middle; prosternum bearing a large, suboval, granular and punctate patch in front of each coxa; meso- and metasternum moderately densely whitish pubescent. Elytra slightly more than 3 times as long as width across humeri, sides subparallel, feebly widened near apex, margins at most feebly asperate; apices obliquely, subsinuately truncate, with hind angles dentate; disk moderately coarsely and densely, irregularly punctate, finely pubescent. Abdomen moderately densely whitish pubescent; fifth sternite shallowly rounded at apex. Legs slender; metafemora at most slightly exceeding elytral apices. Length 4.5-9mm.

**FEMALE:** Similar to male. Antennae not attaining elytral apices. Prosternum lacking granular patches. Metafemora not reaching elytral apices. Length 5-9mm.

**RANGE:** Southern Texas to southern Arizona, and Mexico (Tamaulipas, Coahuila, Sonora, Baja California). See fig. 4.

**REMARKS:** This species may be separated from the similar *Rhopalophora longipes* by the usually subcylindrical or slightly rounded form of the pronotum, the wider extent and less clearly vittate

appearance of the pronotal pubescence, and by the shorter legs and antennae. *Rhopalophora bicolorella* exhibits several variable characteristics in both color and form. The pronotum may be piceous, red with base and apex infuscated, or more rarely the entire pronotum and head may be red. A fairly large amount of variation also occurs in the pronotal form and pubescence. The Baja California specimens seen, sympatric with *R. rugicollis hovorei*, are nearly always bicolored, with the pronotum red, may also be separated from that species by the lack of shallow grooves on the basal antennal segments and the usually obvious lack of pronotal rugosities.

Series of *R. bicolorella* have been reared from *Salix* in Arizona [F. Hovore, pers. comm.]. Adults have been collected on a variety of flowers, including *Bumelia*, *Melilotus*, *Buddleia* and *Acacia*; and have been beaten from *Wislezonia* in Baja California and from *Cercocarpus* in New Mexico.

*Rhopalophora cupricollis* Guérin-Ménéville  
(Figs. 1 & 2)

*Rhopalophora cupricollis* Guérin-Ménéville, 1844:235 (TYPE LOCALITY: "Mexico"); Chevrolat, 1859:60; White, 1855:205; Bates, 1872:188; Bates, 1874:224; Bates, 1880:62; Bates, 1885:309.

*Rhopalophora (Rhopalophora) cupricollis*; Aurivillius, 1912:431.

*Rhopalophorus laevicollis* LeConte, 1873:193 (TYPE LOCALITY: "Texas"). NEW SYNONYMY

*Rhopalophora laevicollis*; Bates, 1880:62; Leng, 1886:31; Casey, 1891:30; Linsley and Martin, 1933:181 (habits); Linsley, 1935:91; Vogt, 1949:144 (habits); Linsley, 1964:190; Manley and French, 1976:50; Chemsak, Linsley, and Mankins, 1980:32; Hovore, Penrose, and Neck, 1987:308, fig.6 (habits).

*Rhopalophora (Rhopalophora) laevicollis*; Aurivillius, 1912:431.

DESCRIPTION: MALE: (See fig. 1) Form moderately large, slender, elongate; integument piceous to rufopiceous with head sometimes partially orange or red and pronotum usually orange to reddish (rarely piceous), often with a variable-sized piceous median macula, antennae and legs piceous. Head with frons deeply, transversely impressed below eyes, concave between antennal tubercles; pubescence dense, appressed, whitish to bright orange; antennae exceeding elytral apices by about 4 to 4 1/2 segments, scape shallowly, longitudinally impressed, segments 3-5 flattened or shallowly grooved dorsally. Pronotum longer than wide, sides somewhat swollen behind middle, base slightly wider than apex; disk uneven,

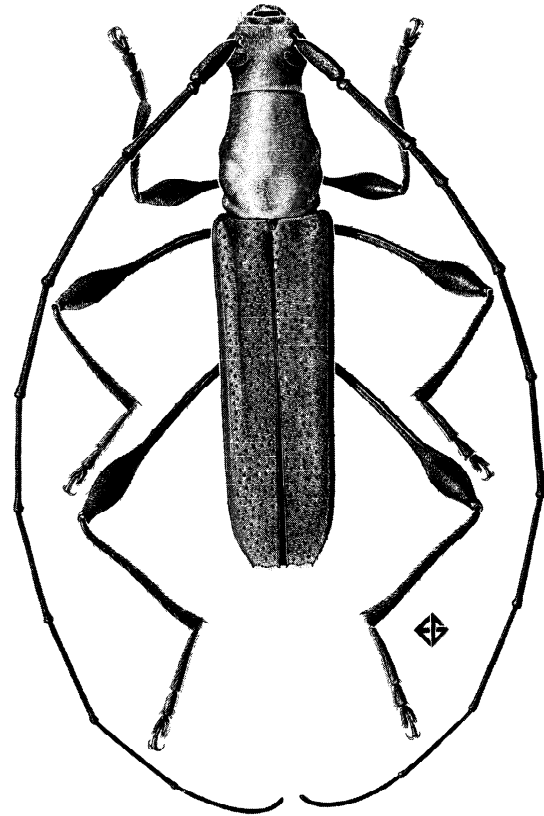
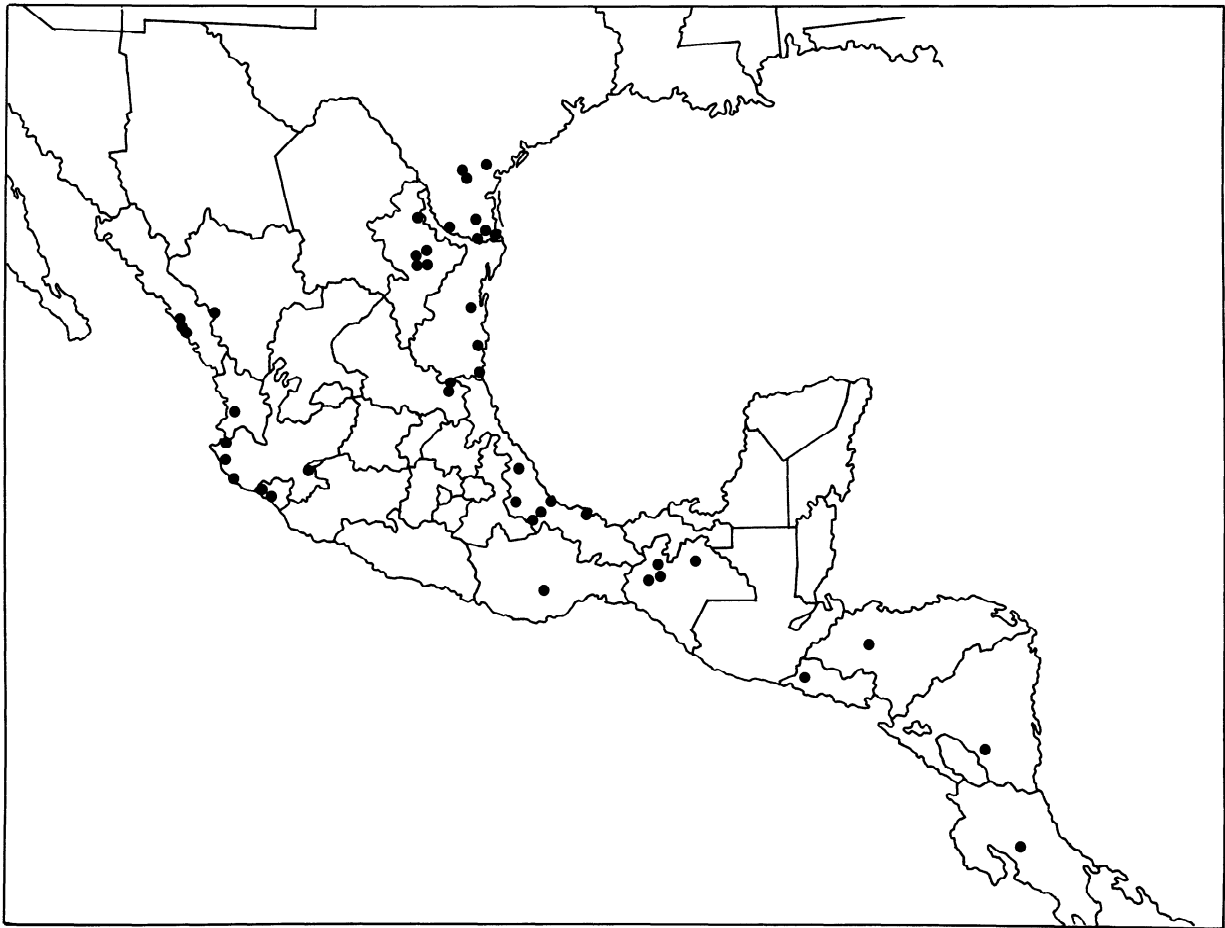


Figure 1. *Rhopalophora cupricollis* Guérin-Ménéville, male.

with a broad, obtuse swelling on each side of a postmedian shallow impression, apex broadly, shallowly impressed; surface sparsely, somewhat indistinctly punctate, clothed with dense, appressed, more or less transversely laid pubescence interrupted at middle by a longitudinal glabrous area; prosternum impressed, feebly, transversely plicate, with an indistinct, round, granulate patch of punctures in front of each coxa, pubescence on basal two-thirds fine, short, pale; meso- and metasternum densely clothed with short, appressed, pale pubescence. Elytra about 3 times as long as width across humeri, widest at humeri, tapering slightly; apices truncate, hind angles dentate; disk broadly subdepressed in middle, longitudinally elevated and broadly, shallowly subcostate near lateral margins; surface moderately coarsely, irregularly punctate; pubescence short, dense, appressed, sometimes partially obscuring punctures. Abdomen densely clothed with short, appressed, pale pubescence. Legs elongate; metafemora exceeding



**Figure 2.** Known geographic distribution of *Rhopalophora cupricollis* Guérin-Méneville.

elytral apices by about length of club. Length 10-15.5mm

**FEMALE:** Form similar to male. Antennae exceeding elytral apices by about 2 segments. Prosternum lacking glabrous punctate patches. Metafemora exceeding elytral apices by less than length of club. Length 10-15mm.

**RANGE:** Lower Rio Grande Valley, Texas to Costa Rica. (See fig. 2)

**REMARKS:** Distinguished by the larger size, non-metallic integument, and dense, silky, appressed pubescence of the pronotum, this widespread species appears to be quite variable. Typical *R. cupricollis*, with the pubescence of the head and pronotum dense, bright golden or coppery, occur over most of the

southern part of the range. In the north, from Texas to northern Mexico, this pubescence is whitish, with a dark pronotal macula usually present and sometimes quite large. These characters appear to intergrade clinally and individuals with pale golden or light orange pubescence occur in central Mexico. Elytral pubescence appears to be denser and more coppery in the southern populations and in Costa Rica, and elytral punctation is also somewhat finer and partially obscured by the pubescence. The form of the pronotum is also somewhat variable, with individuals from central Mexico often showing a tendency toward more pronounced sculpturing of the discal surface.

Host plants are recorded as *Pithecellobium*, *Prosopis*, *Condalia*, *Citrus*, *Diospyros*, and *Zanthoxylum*. Specimens have been collected on a variety of flowers.

*Rhopalophora eximia* Bates

*Rhopalophora eximia* Bates, 1892:166 pl.7, fig. 1 (TYPE LOCALITY: Chilpancingo, Guerrero, Mexico).  
*Rhopalophora (Rhopalophora) eximia*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form moderate-sized, elongate, slender; integument black with metallic green reflections, antennae and legs with metallic blue reflections. Head with frons deeply transversely impressed, moderately coarsely punctate between antennal tubercles, vertex finely granulate, rugulose; antennae exceeding elytral apices by about 3 segments, scape finely punctate, third and fifth segments each nearly twice as long as fourth. Pronotum longer than wide, sides somewhat swollen behind middle, base wider than apex; disk with an obtuse tubercle on each side of shallow, median, longitudinal, subbasal impression, surface sparsely punctate, transversely, shallowly rugose, clothed with moderately dense, transversely appressed, yellowish pubescence interrupted at middle by longitudinal glabrous vitta; prosternum shallowly rugose, with indistinct precoxal oval patches of denser punctures; meso- and metasternum moderately densely clothed with fine, short, golden pubescence, episterna more densely pubescent. Elytra slightly more than 3 times as long as width across humeri, sides subparallel, slightly narrower at middle, apices truncate, sutural angles dentate; disk subdepressed, surface densely micropunctate, with larger punctures moderately dense, irregular; pubescence obliquely transverse, appressed, yellowish, moderately dense toward suture, moderately sparse toward margins. Abdomen moderately densely clothed with fine, short, golden pubescence which is more dense laterally. Legs long, slender; metafemora surpassing elytral apices by entire length of club. Length 11-14.5mm.

FEMALE: Unknown

RANGE: Central Mexican highlands (Guerrero, Hidalgo).

MATERIAL EXAMINED: MEXICO: 1 male, Hidalgo, 1km N Tlachinol, Hwy 105, 30-31 V, 1984 (D.L. Caldwell) [JW].

REMARKS: This species appears to be rare in collections. It may be recognized immediately by the metallic greenish integument, yellowish pubescence, and rugose pronotal disk.

*Rhopalophora lineicollis* Chevrolat (Fig.9)

*Rhopalophora lineicollis* Chevrolat, 1859:60 (TYPE LOCALITY: "Mexico"); Bates, 1880:62; Bates, 1885:309.  
*Rhopalophora (Rhopalophora) lineicollis*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form moderately small, slender, elongate; integument piceous black. Head moderately sparsely punctate, densely clothed with recumbent golden pubescence; antennae long, exceeding elytral apices by about 4 segments, scape subcylindrical, canaliculate, eleventh segment subequal to tenth. Pronotum about 1 1/2 times longer than wide, sides feebly rounded, tapering slightly to apex, widest at base, with subbasal impression feeble; disk with an inconspicuous tubercle on each side near base, surface sparsely punctate and glabrous at middle; disk with a wide, dense, golden pubescent vitta on each side from base to apex, bordered laterally by a glabrous vitta on each side; prosternum with basal 3/4 densely clothed with whitish appressed pubescence, erect setae lacking, with an indistinct, triangular, glabrous, punctate patch on each side in front of coxae; meso- and metasternum clothed with whitish pubescence. Elytra 3 times as long as width across humeri, sides slightly tapering, outer margins feebly serrate; apices truncate with hind angles dentate; disk feebly, longitudinally concave at middle near base, usually bordered by a vague carina on basal half; surface moderately coarsely, densely punctate, pubescence short, fine, appressed, pale golden, partially obscuring surface. Abdomen densely clothed with appressed whitish pubescence. Legs with metafemora exceeding elytral apices by at least length of club. Length 8-11mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 2 1/2 segments. Prosternum lacking glabrous punctate patches. Metafemora exceeding elytral apices by about half length of club. Length 8-10.5mm

RANGE: Central Mexico to El Salvador. (See fig. 9)

REMARKS: This species may be distinguished by the pair of wide, distinct, golden pubescent vittae on the black prothorax. From *R. tenuis*, which also may have a vittate pronotum, it may be separated by the larger average size, less coarsely, indistinctly punctate pronotum with the punctures less evident at the



middle of the disk between the vittae, and by the absence of erect setae on the prosternum.

*Rhopalophora longipes* (Say)  
(Figs. 3&4)

*Stenocorus longipes* Say, 1823:426 (TYPE LOCALITY: Fort Kennedy, on Barek Creek, Missouri).

*Tinopus longipes*; LeConte, 1850:20.

*Rhopalophorus (longipes)*; LeConte, 1854:218.

*Rhopalophora longipes*; Chevrolat, 1859:61; Leng, 1886:30,31, pl. 2, fig. 28; Casey, 1891:30; Hamilton, 1892:159; Chittenden, 1895:97 (habits); Craighead, 1923:65, pl. 15, figs. 1, 12, pl. 21, fig. 1 (larva); Linsley, 1935:91; Linsley, 1942:59; Knull, 1946:228, pl. 19, fig. 76; Fattig, 1947:27 (habits); Linsley, 1964:191, fig. 60; Gosling, 1973:83; Gosling, 1984a:73 (habits); Gosling, 1984b:80 (habits); Hovore, Penrose, and Neck, 1987:308 (habits); Lago and Mann, 1987:5 (habits).

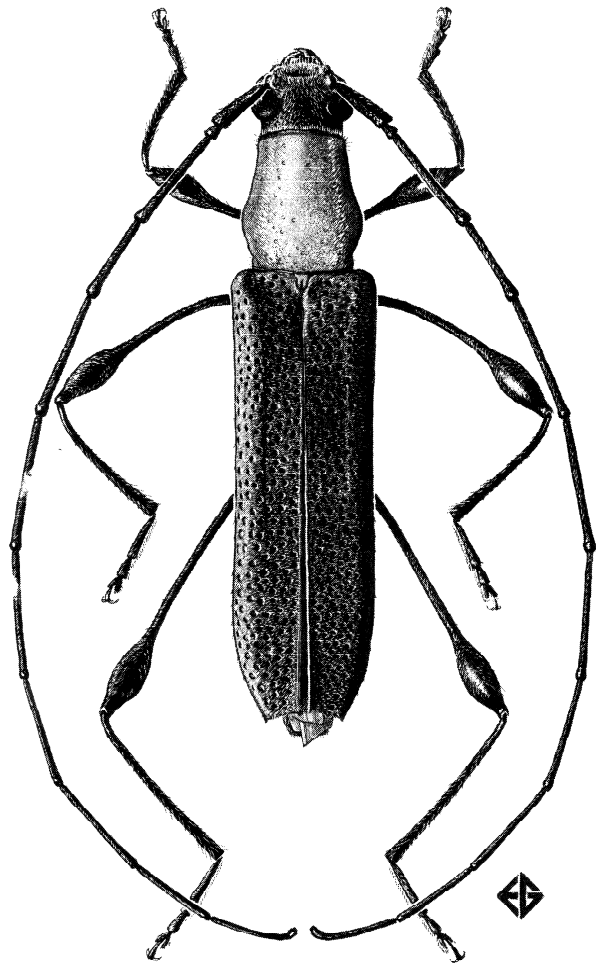
*Rhopalophora (Rhopalophora) longipes*; Aurivillius, 1912:431.

*Rhopalophora porosa* White, 1855:206 (TYPE LOCALITY: "North America").

**MALE:** (See fig. 3) Form moderately small, slender; integument piceous, prothorax red. Head distinctly punctate; antennae exceeding elytral apices by 3 to 5 segments, terminal segment slightly shorter than tenth, curved and blunt at apex. Pronotum longer than broad, sides wider and feebly, subangulately inflated behind middle; disk with surface indistinctly punctate; pubescence sparse, short, subrecumbent, forming a pair of more or less distinct longitudinal vittae; prosternum with a very large, suboval, granular and punctate patch in front of each coxa. Elytra more than 3 times as long as width across humeri, sides subparallel, feebly widened near apex, margins not at all, or at most feebly asperate; apices obliquely, subsinuately truncate, with inner angle minutely dentate; disk moderately coarsely, moderately densely, irregularly punctate, finely, indistinctly pubescent. Abdomen densely whitish pubescent; fifth sternite shallowly rounded at apex. Legs slender; metafemora surpassing elytral apices by about 1/2 length of club. Length 4.5-9mm.

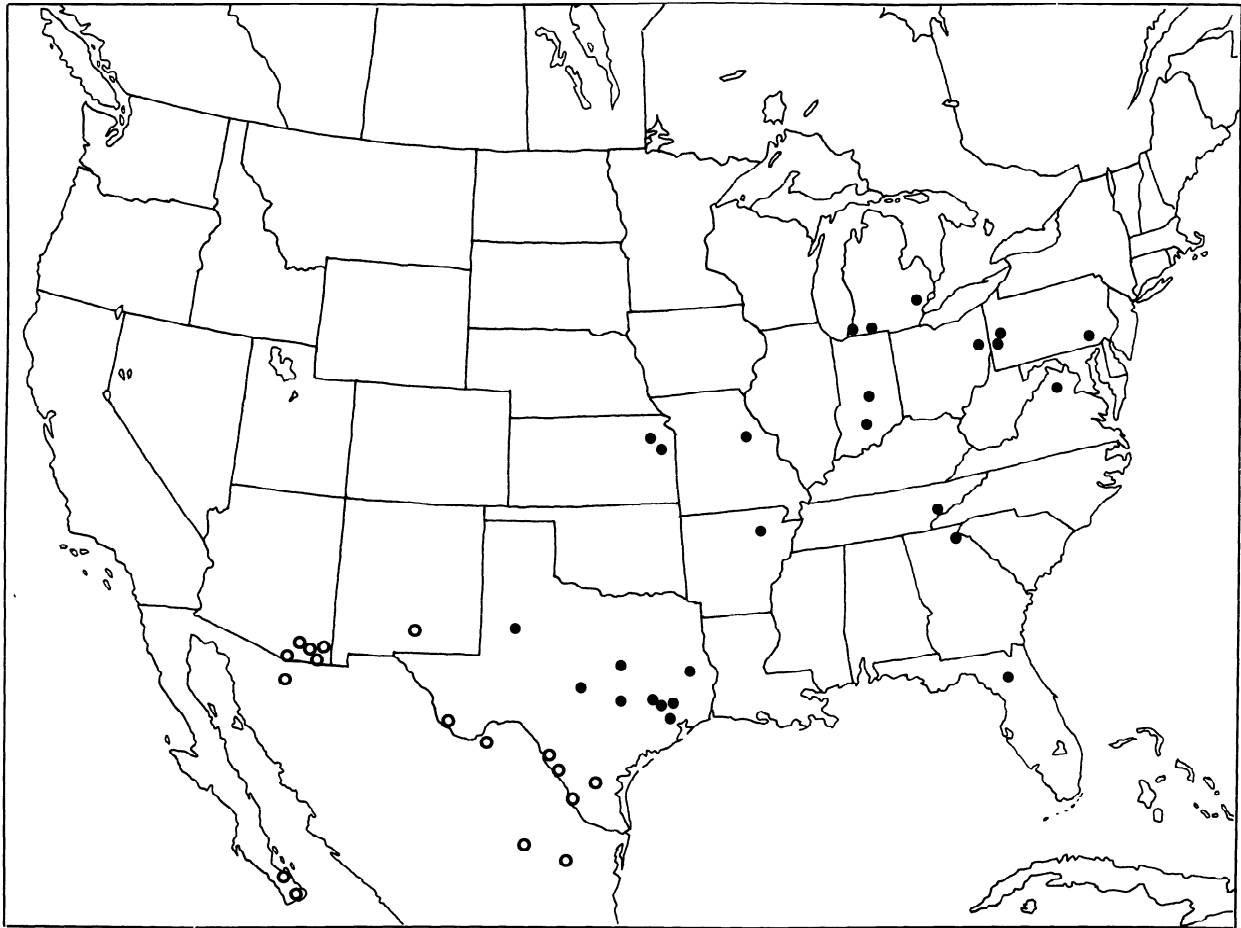
**FEMALE:** Similar to male. Antennae at most barely surpassing elytral apices. Prosternum lacking oval granular patches. Metafemora barely surpassing elytral apices. Length 6-9mm.

**RANGE:** Eastern North America to central Texas. (See fig. 4)



**Figure 3.** *Rhopalophora longipes* (Say), male.

**REMARKS:** *Rhopalophora longipes* is the northernmost component in a complex of closely related and superficially similar species. It is sometimes difficult to distinguish structurally, but is the only member of the genus found in the midwestern and eastern regions of the United States. This species may most readily be separated from other members of this group of species by the form of the pronotum, which is subangulately widened behind the middle. In addition, *R. longipes* may be separated from *R. punctatipennis* and *R. miniatocollis* by the indistinct pronotal punctation, and by the shorter legs and shorter terminal antennal segment; from *R. bicolorella* by the entirely red integument and narrow pubescent vittae of the pronotum, and by the somewhat longer legs and antennae; from *R. rugicollis* by the lack of pronotal rugosities; from *R. meeskei* by the more



**Figure 4.** Known geographic distribution of *Rhopalophora longipes* (Say) [solid circles]; and *R. bicolorella* Knull [open circles].

elongate form of the pronotum, and pale, not golden pubescence; from *R. serripennis* by the less coarse elytral punctures, and non-asperate epipleural margins; and from *R. angustata* by the large, round prosternal granular patches of the male.

Specimens have been reared from *Cercis* and *Cornus* [Linsley, 1964].

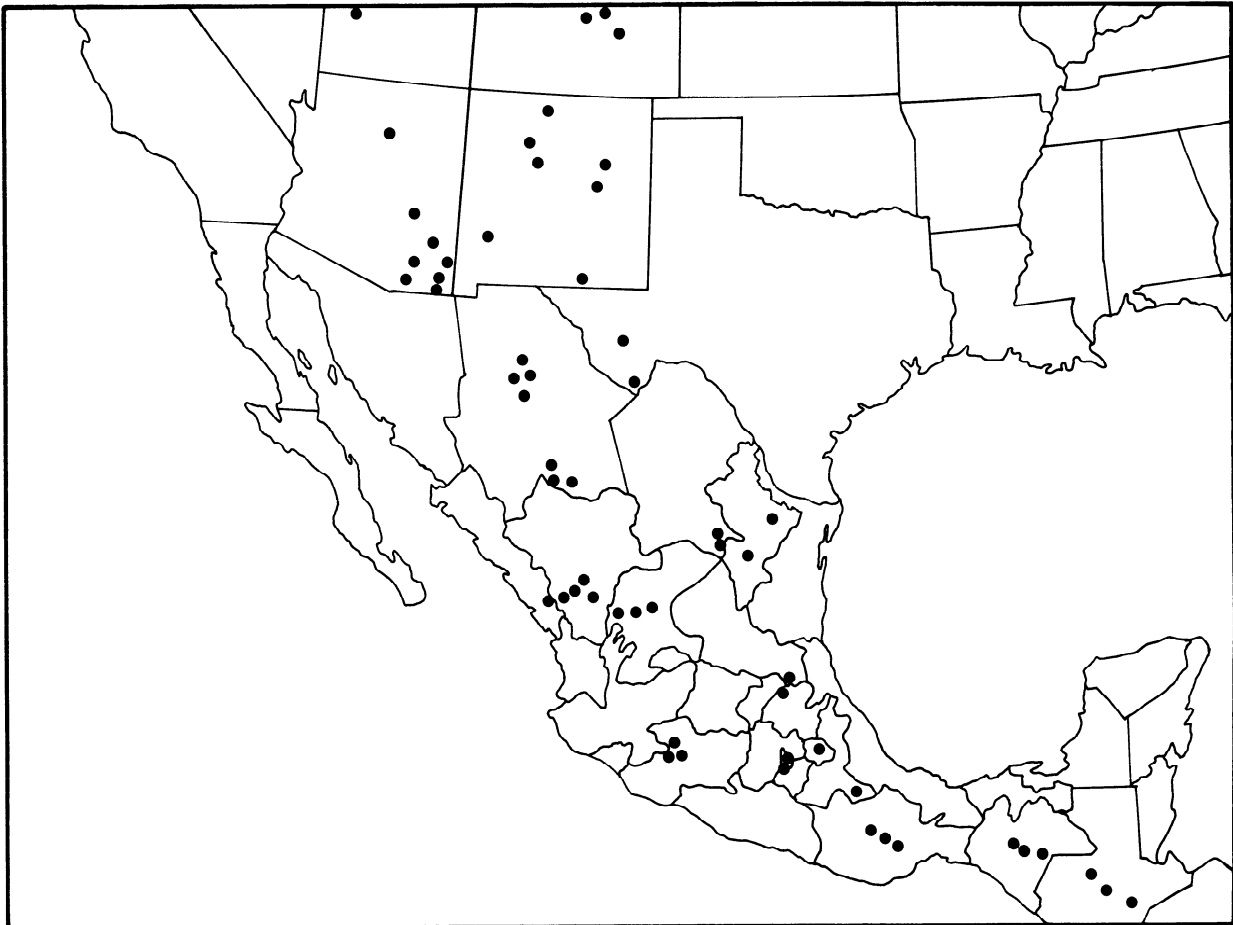
#### *Rhopalophora meeskei* Casey (Fig. 5)

*Rhopalophora meeskei* Casey, 1891:30 (TYPELOCALITY: Las Vegas, New Mexico); Hamilton, 1892:159; Leng and Hamilton, 1896:168.

*Rhopalophora longipes meeskei*; Linsley, Knull, and Statham, 1961:19, fig. 12 (habits); Linsley, 1964:192; Rice, Turnbow & Hovore, 1985:20.

*Rhopalophora (Rhopalophora) longipes* var. *Meeskei*; Aurivillius, 1912:431.

**DESCRIPTION: MALE:** Form moderately small, slender, elongate; integument black, prothorax red with base and apex narrowly infuscated. Head moderately coarsely punctate, moderately sparsely pale pubescent; antennae exceeding elytral apices by about 2 to 3 segments, scape scabrous-punctate, with base distinctly impressed, eleventh segment curved, slightly shorter than tenth. Pronotum subquadrate or very slightly longer than wide, sides broadly, unevenly rounded, widest behind middle, nearly as wide as



**Figure 5.** Known geographic distribution of *Rhopalophora meeskei* Casey.

elytral humeri, narrowed at base and apex; disk with surface slightly uneven, with a small, obtuse tubercle on each side near base; punctures round, moderately coarse, moderately dense; each side with a more or less indistinct vitta composed of short, fine, pale orange or golden, appressed pubescence; prosternum with a large, round, slightly swollen, granulate patch of moderately fine punctures on each side in front of coxae; meso- and metasternum clothed with very short, fine, whitish pubescence. Elytra 3 times as long as width across humeri, sides subparallel, margins feebly serrate; apices sinuate-truncate, with hind angles dentate; disk convex, with an indistinct costa at the middle of each side from humerus to about middle; punctures dense, moderately coarse, irregu-

lar; pubescence fine, short, indistinct. Abdomen clothed with short, fine, pale pubescence. Legs with metafemora exceeding elytral apices by at most half length of club. Length 6-10mm.

**FEMALE:** Form similar to male. Antennae barely exceeding elytral apices. Prosternum lacking large, round punctate patches. Metafemora barely reaching elytral apices. Length 6-10mm.

**RANGE:** South Dakota and Colorado to western Texas and Arizona, south to Guatemala (See fig. 5)

**REMARKS:** This species may be distinguished from others in this study by the broader form of the

pronotum, which is about as wide as long with broadly rounded sides and indistinct pubescent vittae comprised of short orange pubescence; by the large prosternal punctate patches of the males; and by the densely punctate, black elytra. Individuals from the southern part of the range generally appear to have slightly longer legs and antennae.

Adults have been collected on a wide variety of blossoms. No larval hosts have been recorded.

*Rhopalophora miniatocollis* Chevrolat  
(Fig. 6)

*Rhopalophora miniatocollis* Chevrolat, 1859:61 (TYPE LOCALITY: "Mexico"); Bates, 1880:62; Bates 1885:310. *Rhopalophora (Rhopalophora) miniatocollis*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form moderately small, slender, elongate; integument piceous, with head piceous to red, prothorax red to dark red, elytra dull castaneous red-brown to piceous. Head coarsely, densely punctate; pubescence variable, sometimes partially obscuring punctures; antennae exceeding elytral apices by about 4 1/2 segments, scape feebly grooved at base, scabrously punctate, third segment often flattened or feebly grooved, eleventh segment subequal to tenth. Pronotum about 1 2/5 as long as wide, sides feebly rounded, widest behind middle; disk with surface moderately densely, moderately coarsely, irregularly punctate, punctures round, deep; each side usually with a distinct, moderately wide pubescent vitta composed of short, pale pubescence, erect setae very sparse, if present; prosternum clothed with fine, pale recumbent pubescence, interrupted in front of each coxa by an indistinct, oblong, subtriangular, glabrous patch of fine punctures; meso- and metasternum clothed with fine, pale pubescence. Elytra slightly more than 3 times as long as width across humeri, sides subparallel, sometimes slightly tapering, or slightly narrowed in middle, epipleural margins moderately asperate; apices truncate, with apical angles dentate; disk slightly depressed on each side at base, surface moderately densely, moderately coarsely punctate, pubescence very fine, short, appressed, partially obscuring surface, but not obscuring punctures. Abdomen clothed with fine, pale pubescence. Legs long; metafemora exceeding elytral apices by at least length of club. Length 6-10mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 3 segments. Prosternum lacking distinct punctate patches. Metafemora exceeding

elytral apices by about 1/2 length of club. Length 6-10mm.

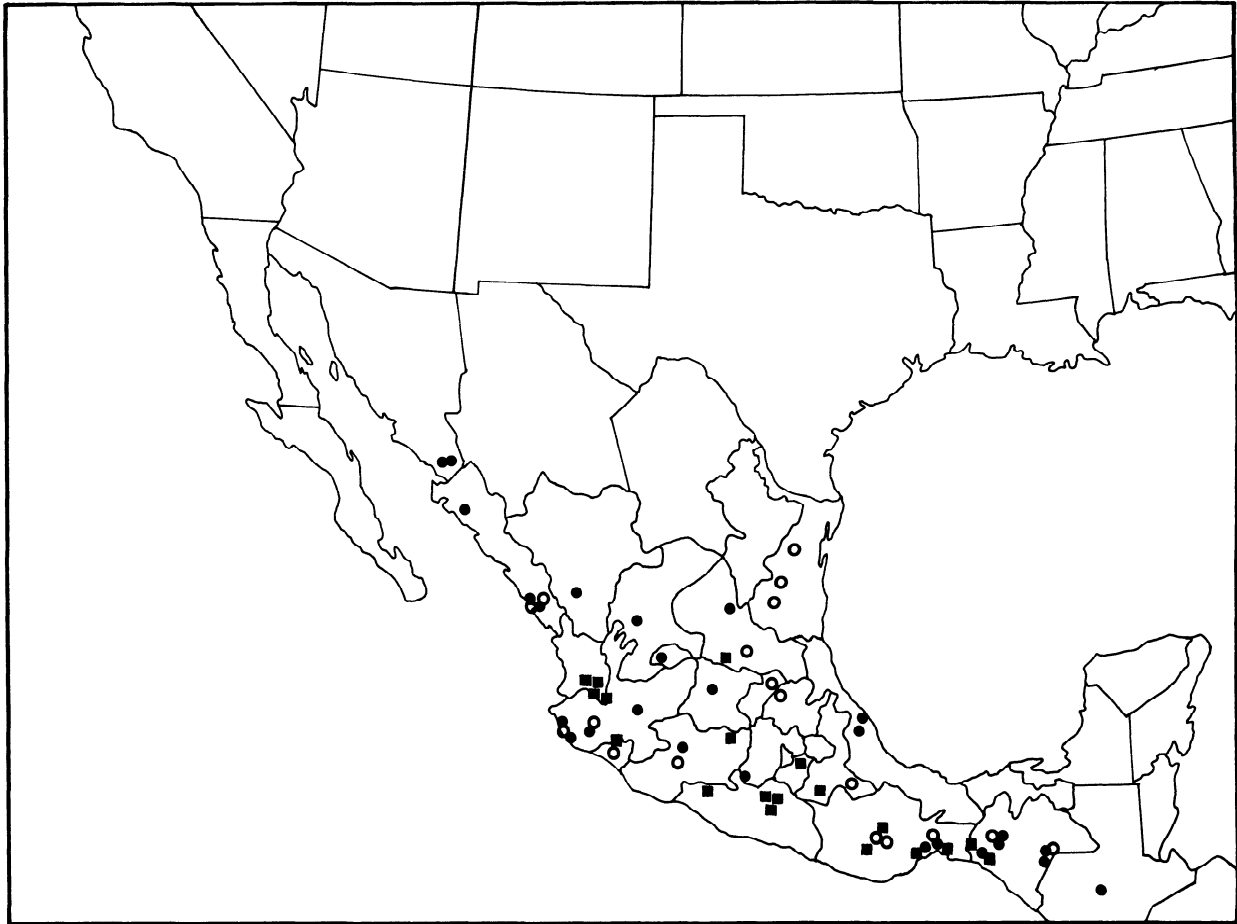
RANGE: Pacific slope and West coast of Mexico. (See fig. 6).

REMARKS: This species may be distinguished from *R. longipes*, *R. punctatipennis*, and *R. serripennis* by the combination of round, moderately dense pronotal punctures, oblong prosternal punctate patches of the male, and by the longer legs and antennae. The specimen identified as the type [BMNH] exhibits somewhat less dense than average pronotal punctation. Further variation within the species appears in the color and pubescence of the pronotum, which is darker and with wider pubescent vittae in the coastal Jalisco specimens

*Rhopalophora nigriventris* Bates

*Rhopalophora nigriventris* Bates, 1885:310 (TYPE LOCALITY: "Purula", Guatemala. [Purulhá, Baja Verapaz]). *Rhopalophora (Rhopalophora) nigriventris*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form moderate-sized, elongate, slender; integument black with vertex and occiput of head, entire prothorax, mesosternum, pro- and mesocoxae reddish-orange, elytra slightly tinged with reddish at base. Head with frons and vertex nearly impunctate, pubescence very fine, obscure; antennae exceeding elytral apices by about 3 segments, scape flattened dorsally, eleventh segment subequal to tenth. Pronotum longer than wide, sides unevenly rounded, slightly swollen on each side behind middle, shallowly impressed in middle before base, base slightly wider than apex; disk with surface opaque, impunctate, obscurely clothed with very fine, short, recumbent, pale reddish pubescence; prosternum with a moderately small, oval, punctate patch on each side in front of coxa; meso- and metasternum very finely, densely micropunctate, with scattering of slightly larger punctures on metasternum, pubescence very fine, short, silky, not obscuring surface. Elytra about 3 times as long as width across humeri, sides slightly incurved in middle; apices subtruncate, with inner angle feebly dentate; disk flattened, subdepressed, with moderately densely scattered, moderate-sized punctures, becoming slightly smaller toward apices; pubescence indistinct, very fine, short, not obscuring surface. Abdomen moderately clothed with fine, short, silky



**Figure 6.** Known geographic distribution of *Rhopalophora serripennis*, new species [solid squares]; *R. punctatipennis* Linsley [solid circles]; and *R. miniatocollis* Chevrolat [open circles].

pubescence. Legs moderately long; metafemora exceeding elytral apices by about length of club. Length 10-12mm.

**FEMALE:** Form similar to male. Antennae at most barely surpassing elytral apices. Prosternum lacking small punctate patches. Metafemora at most barely exceeding elytral apices. Length 10.5mm.

**RANGE:** Guatemala.

**MATERIAL EXAMINED:** GUATEMALA: 1 male, 1 female, Baja Verapaz, 6-9km E Purulhá, 15-24 IV, 1990 (E. Giesbert)[EG].

**REMARKS:** This species may be easily separated from other *Rhopalophora* by the obscure dorsal and ventral pubescence, which allows the integument to appear brightly and distinctly black and red-orange. The species is quite rare in collections.

### *Rhopalophora prorubra* Knull

*Rhopalophora prorubra* Knull, 1944:91, pl. 1, fig. 7 (TYPE LOCALITY: Sabino Canyon, Santa Catalina Mts., Arizona); Linsley, 1964:189, fig. 59; Hovore and Giesbert, 1976:357 (habits).

**DESCRIPTION: MALE:** Form moderately small, elongate; integument black with head, prothorax, mesosternum, procoxae and mesocoxae red. Head with frons slightly concave, densely punctate; vertex transversely rugose, pubescence inconspicuous; antennae extending 3 segments at most beyond elytral apices, eleventh segment subequal to tenth. Pronotum longer than wide, widest behind middle, sides moderately rounded; base wider than apex; disk feebly, obtusely tuberculate on each side of middle and near base; surface sparsely, moderately finely punctate; pubescence almost entirely absent; prosternum finely rugose and punctate behind apical third, with a small, indistinct patch of coarser punctures on each side in front of coxae. Elytra about 3 times as long as width across humeri, widest at humeri, subparallel to apical 1/6, then broadly rounded to apex, margins feebly asperate; apices truncate, sometimes feebly spiculate, with hind angles usually dentate; disk with surface moderately shining, coarsely, densely, punctate, punctures vaguely subseriate; pubescence inconspicuous, slightly more distinct near scutellum. Abdomen finely punctate; pubescence short, dense, not obscuring surface. Legs slender; metafemora exceeding elytral apices by about 1/2 length of club. Length 5-7mm.

**FEMALE:** Form similar to male. Antennae and metafemora at most barely attaining elytral apices. Prosternum lacking small punctate patches. Length 5.5-8mm.

**RANGE:** Southern Arizona to northwestern Mexico (Sonora).

**MATERIAL EXAMINED:** ARIZONA: 1 male, 1 female, Pima Co., Madera Canyon, 6 VIII, 1971 (E. Giesbert)[EG]; 1 male, 8 females, Pima Co., 5 mi. W Box Canyon, 14 VII, 1975 (Giesbert)[EG]; 1 male, Box Canyon, Santa Rita Mts., 19-24 VII, 1973 (A.E. Lewis)[JW]; 1 male, Pima Co., Sabino Canyon, 25 VII, 1974 (N. Rulien)[JW]; 1 female, Santa Cruz Co., Patagonia, 10 VIII, 1958 (F.G. Werner) [UA]; 1 female, Santa Cruz Co., 3 mi. NE Nogales, 22 VII, 1959 (Radford, Patterson & Samuelson)[UA]. NEW MEXICO: 2 females, Hidalgo Co., Guadalupe Canyon, 7 VIII, 1967 (J.W. Smith)[TAM]. MEXICO: 32 males, 35 females, Sonora, Minas Nuevas, 7 VIII, 1952 (C.&P. Vaurie)[AMNH]; 1 male, 1 female, Sonora, Guirocoba, 11-19 VII, 1933 [LACM]; 1 female, Sonora, 10 mi. W Alamos, 21 VII, 1954 (M. Cazier, W. Gertsch, Bradts)[UCB]; 1 female, Sonora, 7 mi. W Alamos, 8 VIII, 1964 (J.A. Chemsak & J. Powell)[UCB]; 1 fe-

male, Sonora, Alamos, 15-20 VII, 1958 (R.L. Westcott)[LACM].

**REMARKS:** This species may be separated by the combination of the red head, prothorax, and mesosternum, the nearly glabrous pronotal disk, and reduced elytral pubescence. Adults have been taken on flowers of *Condalia*, *Baccharis*, and *Mimosa*. Larval host associations have not been recorded.

### *Rhopalophora punctatipennis* Linsley (Fig. 6)

*Rhopalophora punctatipennis* Linsley, 1935:92 (TYPE LOCALITY: Bejucos, Temescaltepec, Mexico. [State of México]).

**DESCRIPTION: MALE:** Form moderately small, slender, elongate; integument piceous black, with prothorax red. Head moderately coarsely, moderately densely punctate, pubescence short, fine, moderately dense; antennae usually 11-segmented, exceeding elytral apices by about 4 1/2 segments, eleventh segment longer than tenth, feebly appendiculate, rarely divided to form a short twelfth segment. Pronotum slightly longer than wide, sides rounded, tapering slightly to apex, widest behind middle, nearly as wide as elytral humeri; disk even, surface with moderately sparse, often transverse, shallow punctures; pubescence sparse, fine, suberect, pale, with a narrow vitta of short, appressed, pale pubescence on each side; prosternum with a large, suboval, granular, glabrous punctate patch on each side in front of coxae; meso- and metasternum clothed with fine, appressed, silvery pubescence. Elytra about 3 times as long as width across humeri, sides subparallel, epipleural margins at most feebly asperate; apices truncate, with hind margins dentate; disk with surface shining; punctures moderately coarse, moderately dense; pubescence very fine, short, appressed, not obscuring surface. Legs with metafemora exceeding elytral apices by nearly length of club. Abdomen clothed with fine, short, appressed, silvery pubescence. Length 6-9mm.

**FEMALE:** Form similar to male. Antennae 11 segmented, exceeding elytral apices by about 2 segments, terminal segment subequal to tenth. Prosternum lacking glabrous pubescent patches. Metatibiae barely exceeding elytral apices. Length 6-8.5mm.

**RANGE:** Mexico to Guatemala. (See fig. 6)

REMARKS: This species is very similar to *R. miniatocollis* and *R. longipes*. It may be separated from the former by the slightly shorter and wider pronotum with sparser, shallower, usually transverse punctures, and the larger, suboval prosternal punctate patches and longer terminal antennal segments of the males. From *R. longipes* it differs by the slightly tapering, subcylindrical form of the pronotum, the longer appendages, the elongate, appendiculate eleventh segment of male antennae (except in those cases where the appendiculation has formed a twelfth segment), and the male metafemora surpassing the elytral apices by about the full club length. Occasional specimens are found with the pronotal disk slightly rugose. These may be separated from *R. rugicollis* by the absence of shallow longitudinal grooves on the third and fourth antennal segments, by having the terminal segment of the male antennae acute, feebly appendiculate, and longer than the tenth, and by the slightly longer metafemora. In a small percentage of the males examined the antennal appendiculation is developed as a short but distinct twelfth segment. No other differences are apparent, and in our opinion this peculiarity does not warrant taxonomic status.

### *Rhopalophora rubecula* Bates

*Rhopalophora rubecula* Bates, 1880:62 (TYPE LOCALITY: Capetillo, Sacatepequez, Guatemala); Chemsak, 1967:79 (lectotype).

*Rhopalophora (Rhopalophora) rubecula*; Aurivillius, 1912:431.

*Rhopalophora venezuelensis* Bates (not Chevrolat, 1859) 1874:224.

DESCRIPTION: MALE: Form moderate-sized, elongate, slender; integument piceous, with elytra dull brownish piceous, a moderately wide band across apex of prosternum orange, and sometimes extreme base and apex of pronotum tinged with orange. Head with frons moderately densely punctate, densely to moderately densely clothed on frons and vertex with appressed golden pubescence; antennae long, exceeding elytral apices by 4 to 4 1/2 segments, scape canaliculate, segments 3-5 feebly flattened dorsally, eleventh segment slightly shorter than tenth. Pronotum longer than wide, sides unevenly rounded, often slightly swollen behind middle, base slightly wider than apex; disk with an obtuse tubercle on each side near base, and a shallow, median, longitudinal depression near base; surface sparsely punctate, clothed on each side of a wide, median, glabrous vitta with dense, appressed, golden pubescence; prosternum

with small, round granulate patches of distinct punctures in front of coxae, basal 2/3 clothed with appressed, silky, pale pubescence; meso- and metasternum clothed with fine, appressed, whitish pubescence. Elytra slightly more than 3 times as long as width across humeri, sides nearly straight, slightly tapering; apices subtruncate, with hind angles feebly dentate; disk subdepressed, punctures moderate-sized, slightly finer toward apices, moderately dense; pubescence short, dense, appressed, dull golden, somewhat obscuring surface. Abdomen clothed with fine, appressed, whitish pubescence. Legs moderately long; metafemora exceeding elytral apices by about length of club. Length 8-13.5 mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by less than 3 segments. Prosternum lacking small punctate patches. Metafemora exceeding elytral apices by about half length of club. Length 8-12mm.

RANGE: Southern Mexico (Chiapas) to Costa Rica.

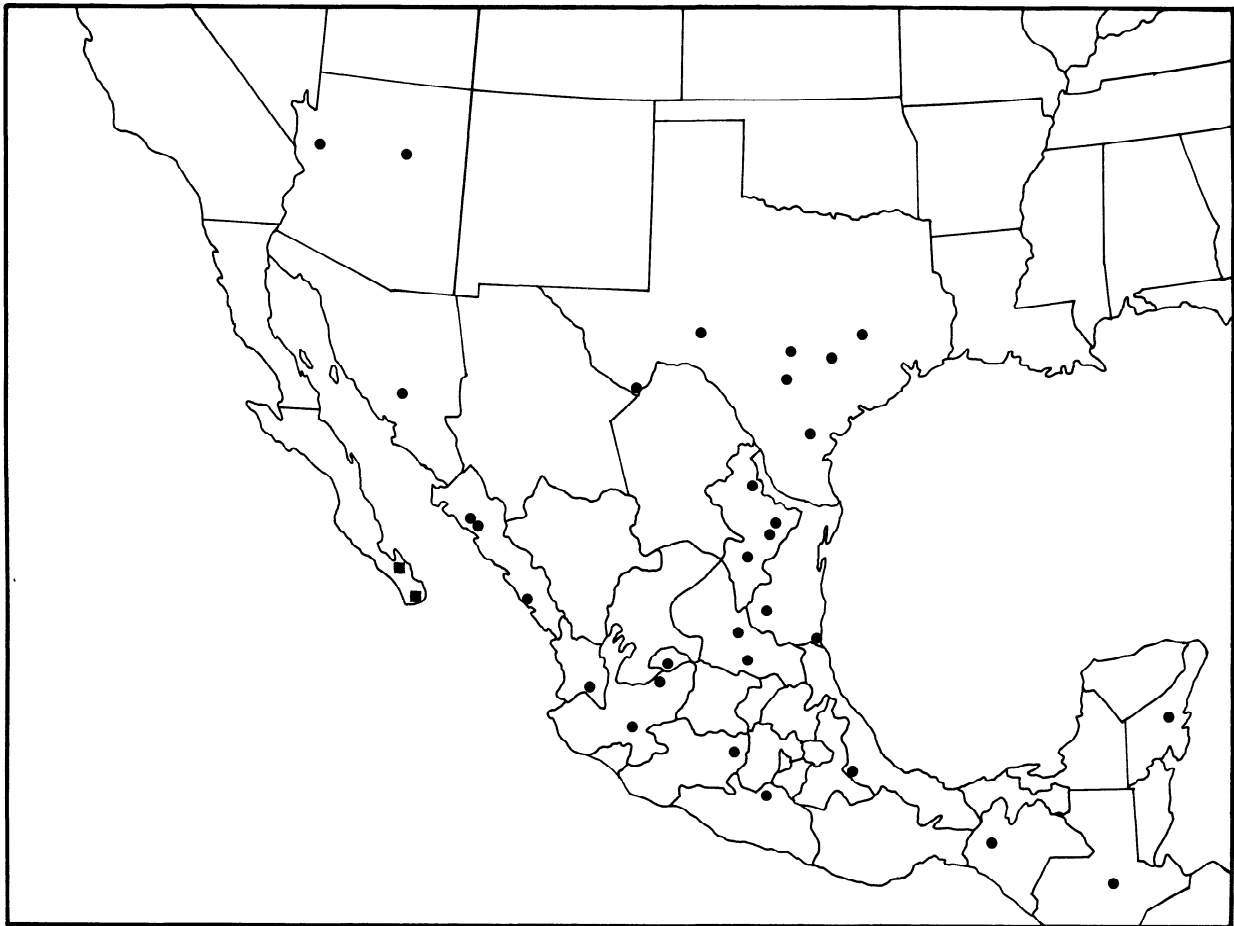
MATERIAL EXAMINED: MEXICO: 2 males, 1 female, Chiapas, Sumidero Canyon, near Tuxtla Gutierrez 4000', 6-8 VII, 1986 (J. Wappes)[JW]; 1 female, same locality, 14 VI, 1987 (E. Giesbert)[EG]; 11 females, Chiapas, 17km W Tuxtla Gutierrez, 3300', 27 VI-8 VII, 1986 (Wappes, Giesbert)[JW, EG]; 3 males, 8 females, same locality, 21-25 VI, 1987 (Wappes, Giesbert)[JW, EG]. GUATEMALA: 1 female, Baja Verapaz, 19-24km N Salamá 4500', 25-31 V, 1989 (Giesbert)[EG].

REMARKS: This species may be distinguished by the piceous integument with the apical margin of the prosternum widely orange, the golden pronotal pubescent vittae, and the dull brown elytra.

### *Rhopalophora rugicollis rugicollis* (LeConte)

*Rhopalophorus rugicollis* LeConte, 1858:83 (TYPE LOCALITY: "Texas"). *Rhopalophora rugicollis* Leng, 1886:31; Casey, 1891:30; Linsley and Martin, 1933:181 (habits); Linsley, 1964:190; Turnbow and Wappes, 1978:369 (habits); Hovore, Penrose, and Neck, 1987:308 (habits).

*Rhopalophora (Rhopalophora) rugicollis*; Aurivillius, 1912:431. *Rhopalophora rugulosus*; Knull, 1934:336 (error).



**Figure 7.** Known geographic distribution of *Rhopalophora rugicollis rugicollis* (LeConte) [solid circles]; and *R. rugicollis hovorei*, new subspecies [solid squares].

**DESCRIPTION: MALE:** Form moderately small, elongate, slender; integument piceous, prothorax often reddish. Head densely punctate, pubescence white; antennae exceeding clytral apices by about 4 segments, segments 3 to 5 with dorsal surface shallowly sulcate longitudinally. Pronotum longer than wide, slightly wider at base, sides feebly rounded; disk transversely plicate and rugose from base to apex at middle, punctures scattered, moderately coarse; pubescence on each side fine, appressed, pale, often forming more or less distinct, moderately wide vittae; prosternum with basal 3/4 clothed with pale pubescence except for a large, opaque, subquadrate or rounded, granulate patch on each side in front of coxae; meso- and metasternum densely white pubes-

cent. Elytra about 3 times as long as width across humeri, sides subparallel, feebly narrowed in middle, outer margins feebly serrate on apical 1/2; apices sinuate-truncate, hind angles dentiform; disk with surface moderately coarsely, moderately densely punctate; pubescence moderately dense, fine, short, appressed, pale. Abdomen densely white pubescent, with scattered suberect setae; fifth sternite rounded at apex. Legs elongate; metafemora exceeding elytral apices by at least half the length of club. Length 7-10mm.

**FEMALE:** Form similar to male. Antennae with basal segments at most slightly flattened, lacking distinct longitudinal sulci. Metafemora at most slightly ex-



ceeding elytral apices. Prosternum lacking opaque glabrous patches. Length 7-9.5mm.

RANGE: Southwestern United States (Texas, New Mexico and Arizona) to Mexico and Guatemala. (See fig. 7)

REMARKS: This species differs from others in this study except *R. eximia*, which has metallic integument, by the distinctly plicate or rugose pronotal disk. However, specimens have been seen of both *R. tenuis* and *R. punctatipennis* in which the pronotum is slightly rugose. From these individuals *R. rugicollis* may be separated by the shallowly grooved third and fourth antennal segments, and from *R. tenuis* by the large male prosternal patches.

Variation in elytral punctation and pronotal color in this species is notable. Individuals resembling *R. lineicollis*, with a piceous pronotum bearing golden pubescent vittae, occur frequently in the more southern populations. *R. rugicollis* may be separated from the latter by the broader, rugose pronotum, and in the males by the large, distinct, oval prosternal granulate patches, and more distinct grooves on the third and fourth antennal segments. A number of individuals seen from Arizona have somewhat finer elytral punctation. Adults have been reared from *Celtis* and *Pithecellobium* in the northern part of the range, and collected at blossoms, including those of *Mimosa*, *Acacia*, *Lupinus*, and *Ceanothus*.

*Rhopalophora rugicollis hovorei*, new subspecies  
(Figure 7)

*Rhopalophora rugicollis*; Horn, 1894:338; Linsley, 1942:58.

DESCRIPTION: MALE: Form similar to *R. rugicollis rugicollis*. Integument piceous throughout. Antennae exceeding elytral apices by 2 to 3 segments; third segment longitudinally sulcate. Pronotum transversely, irregularly rugose; disk with whitish pubescence narrowly interrupted in middle from base to apex; prosternum with opaque glabrous patches large, oval. Legs slender, short, with metafemora not or barely attaining elytral apices. Length 6-8mm.

FEMALE: Form similar to male. Antennae reaching to about apical 1/8 of elytra; basal segments lacking sulci. Prosternum lacking opaque glabrous patches.

Legs short, with metafemora reaching about apical 1/10 of elytra. Length 6-8mm.

RANGE: Southern Baja California, Mexico (See fig. 7).

TYPES: Holotype male, allotype [CAS], and 14 paratypes (8 males, 6 females) from MEXICO, Baja California Sur, 5 mi. N Santa Anita, 2-3 X, 1981 (F. Hovore, R. Penrose)[FH, RP]. 9 additional paratypes, all from Baja California Sur as follows: 1 male, 9 mi. N, 2-5 mi. W Santa Anita, 20 VIII, 1982 (Hovore)[FH]; 1 male, San Pedro, 5 VII, 1919 (G. F. Ferris)[SU]; 1 male, 1 female, San Pedro, 23 VIII, 1976 (E. Giesbert)[EG]; 1 female, 10 mi. N El Triunfo, on *Asclepias* sp., X, 1966; 10, 5km N El Triunfo, 24 VIII, 1976 (Giesbert)[EG]; 2 females, 6 mi. N San José del Cabo, 10 IX, 1967 (J. Chemsak, A. & M. Michelbacher) [UCB]; 1 male, 1 mi. SW Punta Palmilla, 13 IX, 1967 (Chemsak, Michelbacher)[UCB].

REMARKS: This isolated and subspecific population differs from *R. rugicollis rugicollis* by the shorter appendages and piceous pronotum, and is sympatric with *R. bicolorella* in the Cape Region of Baja California. It may be easily separated from that species by the rugose pronotum and sulcate third antennal segments of the male. In addition, the pronotum in the Cape populations of *R. bicolorella* is nearly always red, with the disk slightly impressed behind the middle and considerably less densely pubescent. We take pleasure in naming this subspecies for Frank T. Hovore, who first brought it to our attention.

*Rhopalophora serripennis*, new species  
(Figures 6, 8)

DESCRIPTION: MALE: (See fig. 8) Form small, elongate, slender; integument black, prothorax red, with base and apex often narrowly infuscated. Head with scattered, moderately coarse punctures; pubescence moderately sparse, pale, appressed; vertex finely, transversely rugose; antennae exceeding elytral apices by about 4 segments, scape moderately slender, canaliculate. Pronotum about 1 1/2 times as long as wide, subcylindrical, slightly tapering, or with sides slightly rounded, widest behind middle; disk with a pair of very feeble tubercles on each side near base; punctation moderately sparse; pubescence, if present, forming indistinct pale vittae; prosternum with pale, erect setae and fine, appressed pubescence on basal 2/3, punctate patches small, indistinct; meso - and

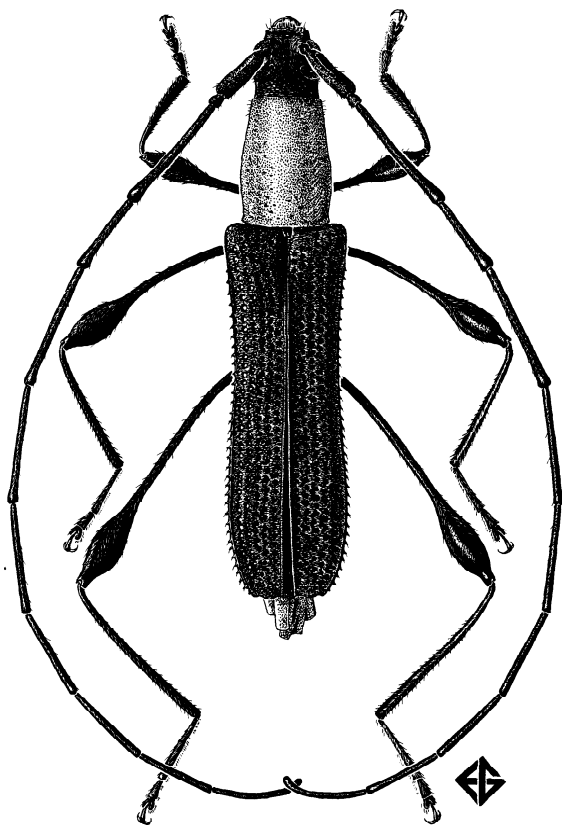


Figure 8. *Rhopalophora serripennis*, new species, male.

metasternum densely clothed with silky, white pubescence. Elytra 3 times as long as width across humeri, somewhat narrowed before middle, margins strongly asperate; apices sinuate-truncate, inner angles dentate; disk coarsely, densely cribrate-punctate, punctures usually subseriate; pubescence fine, short, appressed, not obscuring punctures. Abdomen clothed with silky, white pubescence. Legs with metafemora surpassing elytral apices by about length of club. Length 5-9mm.

**FEMALE:** Form similar to male. Antennae exceeding elytral apices by 2 segments at most, distal segments shorter, feebly serrate. Prosternum lacking punctate patches. Metafemora exceeding elytral apices by at least half length of club. Length 5-8mm.

**RANGE:** Central and southwestern Mexico from Morelos and Nayarit to Chiapas (See Fig. 6).

**TYPES:** Holotype male, allotype [CAS], and 9 paratypes (4 males, 5 females) [UCB] from Ahuacatlan, Nayarit, MEXICO (on flowers of *Donnellsmithia hintoni*), 18-22 VII, 1951 (P.D. Hurd, H.E. Evans). 29 additional paratypes from MEXICO as follows: 1 male, 1 female, Tejupilco, Temascaltepec, México, VII, 1933 (H.E. Hinton, R.L. Usinger) [CAS]; 2 females, Lake Chapala, VII, 1940 (L.W. Saylor) [CAS]; 1 male, 1 female, 3mi. NW Arroyo Santiago, nr. Jesus Maria, Nayarit, 5 VII, 1955 (B. Malkin) [UCB]; 1 female, Pichón, Nayarit, 5 VII, 1956 (R. & K. Dreisbach) [UCB]; 1 female, 10mi. SE Pitayo, Puebla, 27 VII, 1955 (R.B. & J.M. Selander) [FMNH]; 1 female, nr. El Marmol, Sinaloa, 4 VIII, 1983 (F. Hovore) [FH]; 1 female, 3mi. NW Santa Maria del Oro, Nayarit, 27 VI, 1963 (J. Doyen) [UCB]; 1 female, Yautepec, Morelos, 13 VII, 1963 (F.D. Parker, L.A. Stange) [UCD]; 1 male, 15mi. S Sola de Vega, 6000', Oaxaca, 30 V, 1971 (H. Howden) [NMNS]; 2 females, 6km N Chilpancingo, Guerrero, 16-18 VII, 1984 (K. Ribardo) [KR]; 1 male, 2 females, 25km NE Villa de Zaragoza, Guerrero, 16 VII, 1985 (J. Wappes) [JW]; 1 female, 41-43km. N Chilpancingo, Guerrero, 26 VII, 1987 (R. Turnbow) [RT]; 1 male, 18.2mi. S Iguala 3000', 5 VII, 1987 (Turnbow) [RT]; 1 male, 23km. W Iguala, Guerrero, 21 VII, 1987 (Turnbow) [RT]; 1 female, Zopilote Cyn., Guerrero, 20-23 VI, 1989 (J. Cope) [JC]; 2 males, 1 female, Zopilote Canyon, 59km S Iguala, 20-24 VI, 1989 (Ribardo) [KR]; 1 female, 5km. E La Ventosa, Oaxaca, 25 VI, 1989 (Cope) [JC]; 1 female, 3mi. W Tehuantepec, Oaxaca, on *Prosopis juliflora*, 20 VII, 1965 (G.H. Nelson) [GN].

**REMARKS:** This species may be separated from *R. punctatipennis* and *R. miniatocollis* by the strongly asperate epipleural margins of the elytra, the coarsely, subseriately cribrate-punctate elytral disk, and the small, indistinct prosternal punctate patches of the male. Variation occurs mainly in the form, pubescence and punctation of the pronotum.

A number of specimens have been seen from western Mexico which exhibit pronotal punctation typical of *R. miniatocollis*, and can be placed only doubtfully in the present species: 2 males, 2 females, Guerrero, Hwy 95, 6 mi. S Rio Mexcala, 5 VIII, 1965 (Nelson) [GN]; 4 males, Oaxaca, 3 mi. E Juchitan, July 8, 1988 (Cope) [JC]; 5 males, Chiapas, 9-12km N Arriaga, 26 VI, 1987 (Wappes, Giesbert) [JW, EG]; 1 male, Chiapas, microondas Villa Morelos, 26 VI, 1990 (Turnbow) [RT].

*Rhopalophora tenuis* (Chevrolat)  
(Figure 9)

*Listroptera tenuis* Chevrolat, 1855:181 (TYPELOCALITY: "Mexico"); White 1855:210.

*Rhopalophora tenuis*; Chevrolat, 1859:61; Bates, 1880:62; Bates, 1885:310.

*Rhopalophora* (*Rhopalophora*) *tenuis*; Aurivillius, 1912:431.

*Rhopalophora incrustata* Chevrolat, 1859:62 (TYPE LOCALITY: Oaxaca, Mexico); Bates, 1880:62; Bates, 1885:310; Linsley, 1935:91. NEW SYNONYMY

*Rhopalophora* (*Rhopalophora*) *incrustata*; Aurivillius, 1912:431.

DESCRIPTION: MALE: Form small, slender, elongate; integument piceous black, with pronotum rarely dark red at sides. Head moderately densely, coarsely punctate, vertex moderately finely, transversely rugoso-punctate; antennae exceeding elytral apices by about 4 segments, scape moderately finely scarious-punctate, fourth segment half as long as fifth, terminal segment longer than fourth. Pronotum less than 1 1/2 times as long as wide, sides slightly rounded, widest behind middle; disk often narrowly, longitudinally impressed at middle of basal half, with inconspicuous obtuse tubercles on each side near base; surface opaque, moderately densely, distinctly, moderately coarsely punctate except for a narrow, median, irregular, glabrous area; pubescence whitish to golden~ forming a pair of moderately wide vittae which vary from dense and distinct to nearly absent or indistinct; prosternum with punctate patches indistinct, pubescence short, moderately dense, appressed, whitish, with short, erect, pale setae evident; meso- and metasternum moderately densely whitish pubescent. Elytra slightly more than 3 times as long as width across humeri, sides subparallel, epipleural margins slightly asperate; apices sinuate-truncate, hind angles dentate; disk moderately densely punctate; pubescence fine, short, appressed, pale golden, varying from sparse to dense. Abdomen clothed with moderately dense, whitish, appressed pubescence. Metafemora exceeding elytral apices by at least 1/3 length of club. Length 6-9mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 3 segments, eleventh segment subequal to fourth. Metafemora shorter, at most barely exceeding elytral apices. Length 6-9mm.

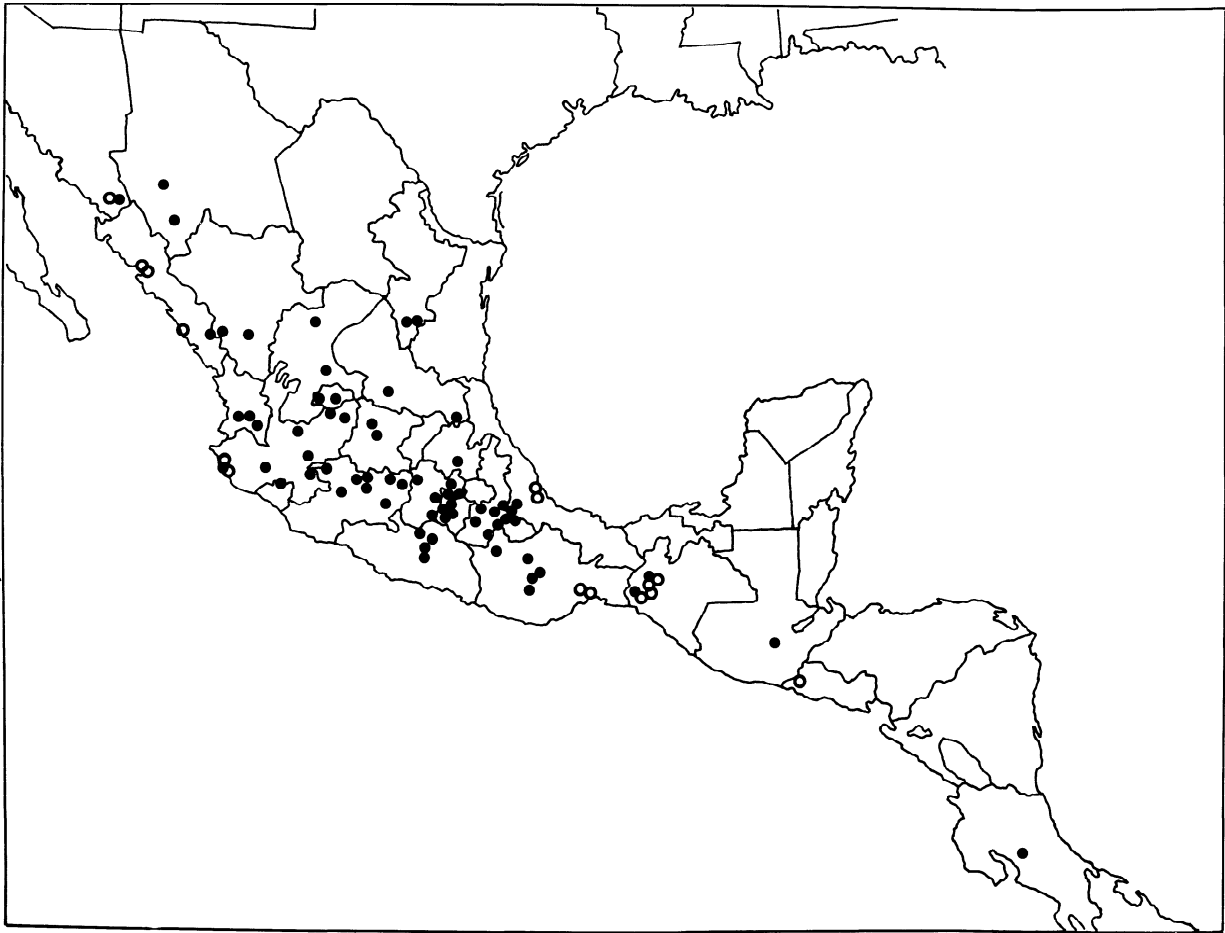
RANGE: Mexico (widespread) and Costa Rica. (See fig. 9)

REMARKS: This small, slender species, rather commonly collected in the Mexican central plateau and western highlands, may be recognized by the narrow elytra, opaque and distinctly, deeply punctate pronotum, erect setae on the prosternum, the lack of distinct punctate patches on the male prosternum, and throughout most of its range, by the all black integumental color, often with more-or-less golden pubescent pronotal vittae.

Some confusion exists regarding the identity of *Rhopalophora tenuis*, since Chevrolat's original description was of an individual with a red pronotum. Subsequently the same author in 1859(b), keys the species as having the pronotum the same color as the body: that is, black. Bates (1885) calls the species "doubtful", assuming the original description to have been based on a specimen of *R. miniatocollis*. The problem is compounded by the fact that this single specimen from the Mniszech collection has been impossible to locate, but later specimens labeled as *R. tenuis*, presently in the BMNH and MCZ collections, and which appear to have passed through Chevrolat's hands, are black throughout and agree well with that author's later treatment. We are following Chevrolat's subsequent characterization of this species based on available material.

The name *incrustata* was given by Chevrolat to a distinct phenotype of *R. tenuis* with longer legs, more golden pubescence, and somewhat coarser punctuation and appears to have been based on a highly pubescent individual, superficially similar to *R. lineicollis*. Only about 10% of the Mexican material examined exhibits this distinct golden pubescence of the pronotal vittae and elytra, while Central American specimens are uniformly more pubescent. Although typical examples of this phenotype would appear to be distinct from *R. tenuis*, in large series of specimens taken at several locations in Mexico both phenotypes occur, along with numerous examples of several degrees of intergradation. In the material examined from throughout the Mexican highlands, intergrade populations appear to be abundant, and a great deal of structural variation is found.

Variations in integumental color apparently occur only at the northwestern extreme of the range, with about half the individuals seen from the Mexican state of Sonora having the pronotum partially dark red at the sides. These Sonoran individuals are superficially similar to *R. bicolorella*, but the males may be easily separated from males of that species by the indistinct prosternal punctate patches. Occasional specimens have been seen with a slightly rugose pronotal disk, but these are easily distinguished from



**Figure 9.** Known geographic distribution of *Rhopalophora tenuis* (Chevrolat) [solid circles], and *R. lineicollis* Chevrolat [open circles].

*R. rugicollis* by the more slender form, and by the lack of large, rounded granulate punctate patches on the male prosternum.

*Rhopalophora yucatanana*, new species

**DESCRIPTION: MALE:** Form moderate-sized, slender, elongate; integument dark reddish, with frons, legs, and antennae piceous. Head with frons transversely impressed, densely whitish pubescent; antennae exceeding elytral apices by slightly more than 4 segments, scape shallowly, longitudinally impressed, segments 3 to 5 flattened or shallowly grooved dorsally. Pronotum longer than wide, sides feebly rounded,

widest behind middle; disk slightly uneven, with a shallow median impression near base; surface sparsely, indistinctly punctate, with transversely laid, fine, whitish pubescence forming an indistinct, wide vitta on each side of a wide, median, glabrous space, laterally with a wide, glabrous vitta above a narrow pubescent vitta on each side above procoxa; prosternum shallowly impressed, transversely plicate, with an indistinct, round, granulate patch of punctures on each side before coxae; base and middle between granulate patches whitish pubescent; meso- and metasternum moderately densely clothed with fine, short, appressed, pale pubescence. Elytra about 3 times as long as width across humeri, widest at humeri, tapering slightly; apices slightly sinuately

truncate, with hind angles dentate; disk broadly subdepressed in middle, slightly elevated and subcostate near sides; surface moderately coarsely, irregularly punctate; pubescence short, moderately dense, appressed, not obscuring punctures. Abdomen moderately densely clothed with short, pale pubescence. Legs elongate; metafemora exceeding elytral apices by about length of club. Length 8-10.5mm.

**FEMALE:** Form similar to male. Antennae exceeding elytral apices by slightly more than 2 segments. Prosternum lacking punctate patches. Metafemora exceeding elytral apices by slightly less than length of club. Length 8-10mm.

**TYPES:** *Holotype* male [CAS] from Pisté, Yucatán, MEXICO, 12 VIII, 1967 (E.C. Welling). 24 *paratypes* from MEXICO as follows: 1 female, Chichón-Itzá, Yucatán, 18 VIII, 1965 (N.J. Dickey)[RW]; 1 male, 20km N Carillo Puerto, Quintana Roo, 12-14 VI, 1983 (J. Wappes) [JW]; 1 male, same locality and dates (F. Giesbert)[EG]; 1 female, 18km N Carillo Puerto, Quintana Roo, 28 V, 1984 (R. Turnbow)[RT]; 1 female, 17km NW Felipe Carillo Puerto, Quintana Roo, 18 VI, 1990 (Turnbow)[RT]; 4 males, 6 females, same locality, 1 VI, 1992 (F. Hovore)[FH]; 1 male, Leona Vicario, Quintana Roo, 26 V, 1992 (Hovore)[FH]; 1 female, 15km S Morocoy, Quintana Roo, 19 VI, 1990 (Turnbow)[RT]; 1 male, Paarul, Quintana Roo, 27 X, 1991 (Turnbow)[RT]; 3 males, 3 females, 1km S Tikul, Yucatán, 21 X, 1991 (Turnbow)[RT].

**REMARKS:** This species differs from *R. cupricollis* by the dark reddish integumental color, and the somewhat more even discal surface and less distinct pubescence of the pronotum.

### Genus *Rhopalophorella* Linsley

*Rhopalophorella* Linsley, 1942:57.

**DESCRIPTION:** Form small, slender, somewhat depressed. Elytra with pubescent fasciae. Head with frons oblique; vertex evenly convex; antennae filiform, eleven-segmented, lacking setae, female with outer segments flattened, subserrate; scape robust, clavate. Pronotum unarmed, elongate, constricted at base and apex. Elytra widest near apex; disk flat, without lateral carina; apices obtuse. Underside with metepisterna longitudinally carinate. Abdomen normally segmented. Legs with first segment of metatarsi nearly 3 times as long as second segment.

**TYPE SPECIES:** *Rhopalophora bicincta* Hom (original designation).

*Rhopalophorella* differs from *Rhopalophora* by the fasciate elytra, carinate metepisterna, and distally flattened, subserrate female antennae. The single species known also differs by having pale appendages, and is apparently limited in distribution.

### *Rhopalophorella fasciata* (LeConte)

*Gracilia fasciata* Leconte 1873:171 (TYPE LOCALITY: "Lower California" [Baja California]); Leng, 1884:119; Linsley, 1942:50.

*Rhopalophorella fasciata*; Chemsak and Linsley, 1982:48; Hovore, 1988:16.

*Rhopalophora bicincta* Hom, 1895:245 (TYPE LOCALITY: San Jose del Cabo, Mexico); Leng and Hamilton, 1896:168.

*Rhopalophora (Rhopalophora) bicincta*; Aurivillius, 1912:431.

*Rhopalophorella bicincta*; Linsley, 1942:58 (pl. 4, fig. 6).

**DESCRIPTION: MALE:** Form small, elongate, slender, sides subparallel; integument dull black, antennae and legs testaceous, femora dark testaceous. Head narrower than pronotum; antennae about 1 1/4 times as long as body, third segment longer than scape, nearly twice as long as fourth segment, slightly longer than fifth, segments 5 to 11 subequal; eyes small, lower lobe wider than long, upper lobe small, narrow. Pronotum with sides rounded, widest behind middle; disk finely, moderately punctate, without pubescence; prosternum elongate, with a large granulate patch on each side in front of coxae; meso- and metasternum with patches of silvery white pubescence laterally, metasternum moderately convex, metepisterna narrow, slightly arcuate, with a longitudinal carina over about 2/3 of the length. Elytra widest near apex; disk flat, without lateral carinae; apices obtuse, tri- or quadridentate; disk densely cribrate-punctate, with fasciae of silvery white pubescence across base and obliquely behind middle. Abdomen with a silvery white lateral pubescent patch on each side of first sternite; fifth sternite shorter than fourth. Legs with metafemora surpassing elytral apices. Length 3.5-5mm.

**FEMALE:** Form similar to male. Antennae shorter, about 2/3 as long as body, with distal segments flattened, subserrate, eleventh segment longer than tenth. Metafemora not reaching elytral apices. Abdomen with fifth sternite longer than fourth. Length 4-5mm.

RANGE: Southern Baja California, Mexico.

MATERIAL EXAMINED: MEXICO, BAJA CALIFORNIA SUR: 2 males, 1 female, Triunfo, 7 VII, 1938 (Michelbacher & Ross) [CAS]; 2 males, 11 females, 6 km N El Triunfo, 21 VIII, 1976 (E. Giesbert) [EG]; 1 female, same locality, 15 VII, 1938 (Michelbacher & Ross) [UCB]; 1 male, 25 mi. W La Paz, 4 IX, 1959 (K. W. Radford & F. G. Werner) [UCB]; 1 male, 8 mi. NW La Paz, 18 IX, 1967 (J. Chemsak, A. & M. Michelbacher) [UCB].

REMARKS: This species may be easily recognized by the small size, black integument with pale appendages, and the distinct silvery white fasciae of the elytra. Specimens have been taken on flowers, including those of *Bursera* and *Acacia*, in July and August.

### Genus *Cycnoderus* Audinet-Serville

*Cycnoderus* Audinet-Serville, 1834:101; White, 1855:213; Thomson, 1860:202; Thomson, 1864:213; Lacordaire, 1869:112; Gounelle, 1911:99; Martins and Napp, 1989:65.

DESCRIPTION: Form moderately small, subdepressed, elongate, sides subparallel; integument shining, often with metallic reflections. Antennae 12-segmented in males, 11-segmented in females, occasionally with tufts of hair-like setae. Pronotum unarmed, elongate, disk somewhat flattened, lightly sculptured. Elytra somewhat flattened, apices acuminate. Abdomen normally segmented. Legs slender; femora pedunculate-clavate, posterior femora and tarsi occasionally tufted.

TYPE SPECIES: *Cycnoderus tenuatus* Audinet-Serville (monobasic). *Cycnoderus* was listed by Blackwelder (1946) as including six species. Martins & Napp (1989) reassigned an additional species from *Rhopalophora*. These seven species are reported from Colombia, Brasil, and Argentina. Five new species from Mexico and Guatemala, and a northward range extension to Costa Rica of a South American species are recorded here.

### Key to Mexican and Central American Species of *Cycnoderus*

1. Antennal segments 5 (males) or 6 (females), metatibiae, and metatarsi bearing distinct brushes of long hair-like setae. Length 7-10.5mm. Costa

Rica to Brasil. (subgenus *Ulododerus*) .....  
 ..... *C. (U.) barbatus* Gounelle  
 Antennae and legs without setal brushes (subgenus *Cycnoderus*) ..... 2.

2. (1) Elytral disk with wide, shallow longitudinal depression near suture densely punctate and clothed with pale, transverse pubescence, punctation and pubescence sparser toward margins; metafemora abruptly clavate ..... 3.  
 Elytral disk lacking depression, punctation and pubescence nearly uniform; metafemora gradually, moderately clavate ..... 5.
3. (2) Antennae of females with third segment distinctly longer than fourth, densely fringed along inner side with black hair-like setae; length at most barely exceeding elytral apices. Length 8-9mm. Guatemala (male unknown) .....  
 ..... *C. (C.) guatemalicus* n.sp.  
 Antennae with third segment subequal to fourth, lightly fringed along inner side; length exceeding elytral apices by at least 3 segments ..... 4.
4. (3) Elytral punctation near base and suture very dense, fine; scutellum densely pubescent; pronotum of males bearing long, sinuate grooves at sides; femora with patches of fine, recumbent, silky pubescence. Length 9.5-14mm. (See fig. 10). Mexico (Chiapas) ..... *C. (C.) virginiae* n. sp.  
 Elytral punctation near base and suture moderately dense and fine; scutellum indistinctly pubescent; pronotum of males lacking sinuate grooves; femora without recumbent, silky pubescence. Length 7.5-11.5mm. Mexico (Jalisco, Guerrero) .....  
 ..... *C. (C.) copei* n.sp.
5. (2) Integument metallic blue-black; pronotum 1 1/2 times as long as wide; antennae with third segment fringed on underside only. Length 9.5-11 mm. Mexico (Guerrero) ..... *C. (C.) lividus* n.sp.  
 Integument metallic dark reddish-brown with legs and pronotum often reddish; pronotum about 1 1/3 times longer than wide; antennae with third segment fringed above and below. Length 8-9mm. Mexico (Jalisco) ..... *C. (C.) brevicolle* n. sp.

### Subgenus *Ulododerus* Gounelle

*Cycnoderus (Ulododerus)* Gounelle, 1911:101.

DESCRIPTION: Antennae with tufts of hair-like setae on fifth segment in males, sixth segment in females. Legs with metatibiae and metatarsi bearing dense tufts of long hair-like setae; metatarsi with first

segment 1 1/2 times longer than following segments together.

TYPE SPECIES: *Cynoderus (Ulododerus) barbatus* Gounelle (present designation).

This subgenus is distinguished primarily by the tufted antennae, metatibiae, and metatarsi. A single species extends its range northward into Costa Rica.

### *Cynoderus (Ulododerus) barbatus* Gounelle

*Cynoderus (Ulododerus) barbatus* Gounelle 1911:101 (TYPE LOCALITY: Jatahy, Goyaz, Brasil); Hovore 1989:252.

DESCRIPTION: MALE: Form moderately small, elongate, slender; integument shining, metallic blue-black, elytra somewhat more greenish metallic, bases of metafemora, and vague longitudinal discal markings on elytra sometimes testaceous. Head short, moderately densely punctate; antennae about 1 1/2 times as long as body, apical 1/2 of fifth segment bearing a brush of long black hair-like setae on inside, distal segments short. Pronotum more than 1 1/2 times as long as wide; disk glabrous, with a median longitudinal callus and 4 indistinct rounded calluses, 2 subapical and a less distinct subbasal pair; punctures irregular; prosternum moderately densely, coarsely punctate and rugose, pubescence moderately sparse, fine, erect; meso- and metasternum shining, pubescence moderately sparse, erect. Elytra about 3 times as long as width across humeri, apical third slightly dehiscent; apices with outer margins rounded, sutural angles acute; disk with moderately dense punctures near suture, becoming sparser and finer toward margins. Abdomen shining, pubescence moderately sparse, erect. Legs slender; femora abruptly clavate; metatibiae with a distinct brush of long black setae on each side of apical 1/2; metatarsi with first segment bearing a brush of long black setae for its entire length. Length 5.5-8.5mm.

FEMALE: Form similar to male. Antennae about 1 1/3 times as long as body, bearing a brush of black setae on inside of almost entire sixth segment; pronotum less distinctly sculptured. Length 7-10.5mm.

MATERIAL EXAMINED: 1 male, COSTA RICA, Cartago prov., CATIE, 3km SE Turrialba, 600m., 16 V, 1985 (J. Chemsak) [UCB]; 1 female, same locality, 9-14 VI, 1988 E. (Giesbert) [EG]; 1 female, PANAMA,

Panamá prov., Cerro Campana, 800m., 25 V, 1990 (F. Hovore) [FH].

REMARKS. This species is distinguished by the black tufts of hair-like setae on the antennae and hind legs. Field observations by the authors indicate that these distinctly tufted hind legs and antennae are extended laterally during flight.

### Subgenus *Cynoderus* Audinet-Serville

Antennae lacking tufts of setae. Legs with metatibiae and metatarsi lacking tufts of setae; metatarsi with first segment subequal to following segments together.

TYPE SPECIES: *Cynoderus tenuatus* Audinet-Serville, 1834 (monobasic).

Five new species of this subgenus are here recorded from Mexico and Guatemala.

### *Cynoderus (Cynoderus) brevicolle*, new species

DESCRIPTION: FEMALE: Form moderately small, moderately slender, depressed, parallel-sided; integument shining, piceous-black with violet-metallic reflections, legs usually reddish, pronotum and head often reddish-brown. Head short, with punctures moderately coarse and dense, irregular; antennae about 1 1/3 times as long as body, scape about half as long as third segment, which is slightly longer than fourth, third segment moderately densely fringed with dark hair-like setae above and below, scape and other basal segments fringed below. Pronotum about 1 1/3 times as long as wide, sides slightly rounded, tapering feebly to apex; disk feebly sculptured, with median longitudinal callus obscure, punctures moderately dense, impressed and coarse, long, erect setae numerous; pro-, meso- and metasternum shining, moderately densely and coarsely punctate, sparsely pubescent. Elytra slightly less than 3 times as long as width across humeri; apices rounded, sutural angles acute; disk flattened, moderately densely and coarsely, subuniformly punctate; pubescence transverse, dark, inconspicuous. Abdomen moderately coarsely punctate, sparsely pubescent. Legs with femora shining, moderately gradually clavate. Length 8-9mm.

MALE: Unknown.

TYPES: Holotype female [Instituto de Biología, UNAM] and 2 female paratypes from MEXICO, Jalisco, Est. Biol. Chamela, 1-8 XII, 1988 (J. Chemsak) [UCB].

REMARKS: This species, similar in punctuation to *C. lividus*, may be separated by the shorter pronotum, reddish legs, and the moderately densely fringed third antennal segment. The fringed third segment is also characteristic of *C. guatemalicus*, from which *C. brevicolle* differs by the somewhat more robust body and the style of elytral punctuation and pubescence. The small type series was taken from flowers.

*Cycnoderus (Cycnoderus) copei*,  
new species

DESCRIPTION: MALE: Form moderately small, elongate, nearly parallel-sided; integument shining, blackish with metallic reflections; pronotum sometimes partially reddish, elytral disk dark testaceous, heavily infuscated with metallic blackish near suture, margins, and apices, punctures darker. Head moderately short; punctures moderately coarse and sparse, denser and coarser on vertex and occiput; pubescence erect, moderately long, fine, sparse; antennae slender, more than 3 times as long as body, scape less than 1/2 as long as third segment, which is subequal to fourth, underside of segments 2 and 3 moderately fringed with long, black hair-like setae, distal segments long, slender, twelfth curved at tip. Pronotum nearly twice as long as wide, sides slightly rounded; base and apex widely, shallowly impressed and rugose; disk depressed near base, with a longitudinal, shining, glabrous, shallow callus at middle surrounded by coarse, deep punctures, sides slightly swollen, with punctures slightly more coarse, sparse, and irregular, and often with irregular lateral calluses defined by indistinct areas of finer punctures; pubescence erect, fine, pale, longer than second antennal segment, and angled slightly forward, sparse on sides; prosternum very finely, densely micropunctate with deep, moderately sparse punctures interspersed; meso- and metasternum alutaceous, moderately sparsely punctate; pubescence fine, pale, erect, with fine, recumbent, silky pubescence on prosternal process, mesosternum, and episterna. Scutellum transverse, sparsely pubescent. Elytra nearly 3 times as long as width across humeri, feebly tapering; apices rounded, sutural angles acute; disk flattened, slightly depressed near suture; base and sutural depression densely, distinctly punctate, bearing moderately sparse, fine, pale, obliquely trans-

verse, subrecumbent pubescence, outer portion of each elytron more sparsely punctate. Abdomen with terminal sternite subequal to fourth, apex subtruncate; pubescence fine, pale, erect, with fine, silky, recumbent pubescence at sides. Legs long, slender, shining; femora abruptly clavate, clavae nearly impunctate, pubescence sparse, pale, suberect. Length 7.5-11.5mm.

FEMALE: Form similar to male. Antennae less than twice as long as body. Pronotum with sides lacking defined calluses, erect pubescence evident laterally as well as dorsally. Prosternum lacking micropunctures. Abdomen with terminal sternite longer than fourth, apex rounded. Length 7.5-11mm.

TYPES: Holotype male, allotype female [CAS] and 8 paratypes (4 males, 4 females) [JC] from MEXICO, Guerrero, Zopilote Cyn., 20-23 VI, 1989 (J. Cope). 19 additional paratypes from MEXICO as follows: 2 males, 7 females, Guerrero, 6km N Chilpancingo, 15-19 VII, 1984 (Cope) [JC]; 2 males, 1 female, Guerrero, 23km S Iguala, 19 VII, 1984 (K. Ribardo) [KR]; 2 males, Guerrero, 6km N Chilpancingo, 16-18 VII, 1984 (Ribardo) [KR]; 2 females, 10km N Chilpancingo, 22 VII, 1987 (R. Turnbow) [RT]; 1 male, 1 female, Jalisco, 9km S Chamela, 15-19 VII, 1987 (Cope) [JC]; 1 female, Jalisco, 27.4km S Chamela, 16 VII, 1987 (Turnbow) [RT].

REMARKS: *Cycnoderus copei* appears to be structurally closely related to the South American *C. tenuatus* Audinet-Serville. We are pleased to dedicate this species to James Cope, who first brought it to our attention.

*Cycnoderus (Cycnoderus) guatemalicus*,  
new species

DESCRIPTION: FEMALE: Form small, slender, depressed, parallel-sided; integument shining, dark brown with strong aeneous reflections, head and antennae darker, legs reddish brown. Head moderately short, punctuation moderately dense, irregular, denser on vertex and occiput; pubescence sparse, antennae slender, about as long as body, scape less than 1/2 as long as third segment, which is distinctly longer than fourth, with underside of third segment distinctly fringed with black setae, fourth segment lightly fringed on underside, distal segments short, eleventh segment shorter than scape. Pronotum nearly 1 1/2 times as long as wide, sides slightly rounded;



base and apex widely, shallowly impressed and rugose; disk depressed near base, with an indistinct longitudinal callus; punctation moderately coarse and dense, irregular; pubescence sparse, fine, pale, erect to suberect; prosternum coarsely, moderately densely punctate; metasternum moderately punctate and feebly rugose at sides. Scutellum small, semicircular; pubescence short, pale, moderately dense. Elytra about 3 times as long as width across humeri, feebly tapering; apices rounded to acute sutural angles; disk flattened, slightly depressed near suture; sutural depression densely punctate, bearing moderately sparse, fine, pale, obliquely transverse, subrecumbent pubescence, each elytron more sparsely punctate toward margin. Abdomen with terminal sternite subtruncate at apex; surface nearly impunctate, with scattered fine, pale, short setae. Legs slender; femora abruptly clavate, clavae nearly impunctate, pubescence sparse, pale, suberect. Length 8-9mm.

MALE: Unknown.

TYPES: Holotype female [CAS] and 2 female paratypes from GUATEMALA, Tacatón, Lago Amatitlán, near Villa Canales, 10 I, 1989 (B.C. Kondratieff) [FH, EG].

REMARKS: This species shares characters with both *C. copei* and *C. brevicolle*, differing from the former principally by the antennal measurements and the distinct fringe on the third segment which gives it the appearance of being somewhat heavier than the fourth. From *C. brevicolle* it differs by the sculpture and punctation of the elytra, the somewhat more slender form, and the longer pronotum.

### *Cycnoderus (Cycnoderus) lividus*, new species

DESCRIPTION: MALE: Form moderately small, slender, depressed, parallel-sided; integument shining metallic blue-black, elytra less metallic, nearly black. Head moderately short, punctation moderately coarse, impressed, denser on vertex and occiput, pubescence sparse, erect; antennae nearly 3 times as long as body, scape less than 1/2 as long as third segment, which is subequal to fourth, twelfth segment curved at tip, underside of segments 2 and 3 fringed with long, black setae. Pronotum 1 1/2 times as long as wide, sides slightly rounded, widest before base, tapering slightly to apex; base and apex widely, shallowly impressed and transversely rugose; disk heavily sculptured,

with a median, longitudinal raised callus surrounded by coarse, close punctures, sides of disk sparsely punctate, with several raised swellings, a pair of which are more distinct on each side of apical 1/3; pubescence sparse, long, dark, erect, nearly absent laterally; prosternum with surface densely micropunctate and sparsely, coarsely, deeply punctate; meso- and metasternum moderately densely punctate; pubescence pale, fine, erect. Scutellum wider than long, indistinctly punctate and pubescent. Elytra slightly less than 3 times as long as width across humeri, feebly tapering; apices rounded, sutural angles acute; disk flattened, densely, cribrately punctate; pubescence dark, sparse, obscure. Abdomen with terminal sternite about as long as fourth, apex truncate. Legs with femora moderately gradually clavate; surface slightly opaque, pubescence sparse, suberect. Length 9.5-10.5mm.

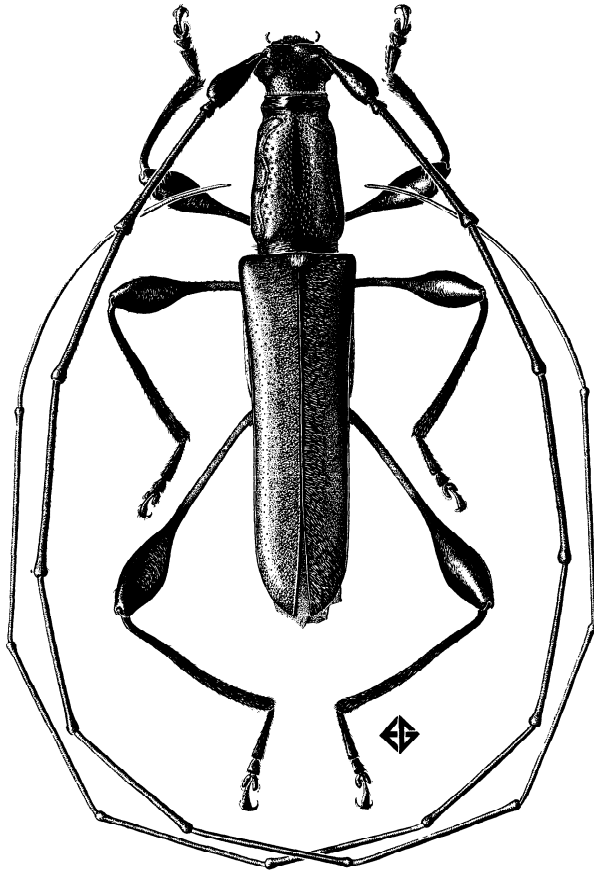
FEMALE: Form similar to male. Antennae shorter, about 1 1/3 times as long as body, third segment 1 1/2 times as long as fourth. Pronotum less distinctly sculptured, erect pubescence evident laterally. Prosternum lacking micropunctuation. Abdomen with terminal sternite slightly longer than fourth, apex rounded. Length 9.5-11mm.

TYPES: Holotype male, allotype [CAS] and 12 paratypes (3 males, 9 females) from MEXICO, Guerrero, 10.5km. N Iguala, 4000ft., 19-21 IX, 1989 (J. Wappes, R. Turnbow & E. Giesbert) [JW, RT, EG]. 2 additional paratypes, 1 male, 1 female, from MEXICO, Colima, El Terrero rd. 4500ft. (vicinity of El Sauz), 30 IX-4 X, 1991 (J. Wappes, R. Morris, E. Giesbert) [JW, EG].

REMARKS: This species is distinguished by its metallic bluish-black integumental color. It differs from the two preceding species by the more or less uniform elytral punctation. Several specimens in the type series were found clinging to narrow leaves of grass.

### *Cycnoderus (Cycnoderus) virginiae*, new species (Figure 10)

DESCRIPTION: MALE: (See fig. 10) Form moderate sized, elongate, nearly parallel-sided; integument shining metallic greenish-black, prothorax reddish at sides and beneath, bases of femora testaceous, elytra dark testaceous, heavily infuscated with metallic



**Figure 10.** *Cynoderus (Cynoderus) virginiae*, new species, male.

greenish-black. Head moderately short, punctation moderately coarse, dense on vertex and occiput, pubescence fine, erect, scattered; antennae slender, more than 3 times as long as body, scape less than 1/3 as long as third segment, which is subequal to or slightly shorter than fourth, underside of segments 2 and 3 moderately fringed with dark hair-like setae, twelfth segment curved. Pronotum nearly twice as long as wide, sides slightly rounded, widest before base, tapering somewhat to apex; base and apex widely, shallowly impressed; disk transversely rugose, depressed near base, with a longitudinal raised callus at middle surrounded by moderately coarsely, densely punctate, shallow impressions, sides moderately swollen and coarsely, irregularly punctate, with a fine, sinuate, internally pubescent groove on each side curving upward from procoxal cavity, then forward to apical 1/6; pubescence fine, pale, erect, shorter than second antennal segment, sparse on lateral surface;

prosternum alutaceous, with moderately sparse, irregular, impressed punctures; pubescence fine, pale, erect, with fine, short silky, recumbent pubescence on prosternal process, mesosternum, and episterna. Scutellum wider than long, clothed with moderately dense, pale, recumbent pubescence. Elytra about 3 times as long as width across humeri, feebly tapering; apices rounded, sutural angles acute; disk flattened, widely, shallowly depressed near suture, with base and sutural depression finely, very densely punctate, bearing fine, pale, obliquely transverse, subrecumbent pubescence; outer portion of each elytron sparsely punctate and pubescent. Legs long, slender, femora abruptly clavate, shining, clavus nearly impunctate, each with an indistinct, often small patch of very fine, silky, recumbent pubescence in addition to sparse, coarse, erect, pale setae. Abdomen with pubescence fine, pale, erect, with fine, short, recumbent pubescence at sides; terminal sternite subequal to fourth, apex subtruncate. Length 9-14mm.

**FEMALE:** Form similar to male. Antennae about 1 1/2 times as long as body. Pronotum with sides of disk lacking sinuate groove, erect pubescence evident laterally as well as dorsally. Abdomen with terminal sternite longer than fourth, apex subtruncate. Length 11-12mm.

**TYPES:** Holotype male, allotype [CAS], and 1 male paratype [EG] from MEXICO, Chiapas, 17km W Tuxtla Gutierrez, 3300ft., 27 VI-8 VII, 1986 (E.Giesbert). 8 additional paratypes from MEXICO as follows: 1 male, 3 females, Chiapas, Sumidero Canyon, 6-8 VII, 1986 (J.Wappes, Giesbert) [JW, EG]; 1 male, 1 female, Chiapas, El Sumidero Parque, 23-24 VI, 1990 (J. Huether)[JH]; 1 male, Chiapas, El Sumidero, Mirador la Coyota, 24 VI, 1990 (R.Turnbow) [RT]; 1 male, Oaxaca, 39.1km SE Teotitlán del Camino, 518m, 21 VII, 1987 (R. Anderson) [TAM].

**REMARKS:** *Cynoderus virginiae* appears to be closely related to the Brazilian *C. tenuatus*, and although differing in integumental color, shares with that species the distinctive grooved pronotal disk of the male. This species is similar to *C. copei*, but may be easily separated by details of the male pronotal disk such as the sinuate grooves and distinctly shorter pubescence, and by the silky recumbent pubescence on the femora, the distinct pubescence on the scutellum, and the somewhat finer, less distinct elytral punctation. In addition, the integumental color is somewhat different, with the basic color more strongly metallic, and the femoral bases pale.

Adults of this and *C. copei* fly in the summer months in southwestern Mexico. Specimens were encountered by beating living foliage in an area of recently cut brush.

It is a pleasure to dedicate this species to Virginia Giesbert in appreciation for her many years of support and patience.

### Genus *Cosmisoma* Audinet-Serville

*Cosmisoma* Audinet-Serville, 1834:19; Castelnau, 1840:434; White, 1855:214; Thomson, 1860:177; Thomson, 1864:169, 418; Burmeister, 1865:170; Lacordaire, 1869:112; Bates, 1870:404; Bates, 1880:63; Zajciw, 1962:285; Monné & Magno, 1988: 1.  
*Cosmosoma* Gemminger & Harold, 1872:2984; Gounelle, 1911:103 (emend.)

**DESCRIPTION:** Form small to moderate-sized, subparallel or slightly tapering. Antennae 11-segmented, with tufts of long hair-like setae on the fifth, and sometimes other segments. Scutellum rounded at apex, not notched. Pronotum unarmed, slightly longer than wide, sides rounded. Elytra subparallel or slightly tapering, apices acuminate or rounded. Abdomen normally segmented. Legs slender, clavate, with meso- and metafemora pedunculate clavate.

**TYPE SPECIES:** *Saperda scopulicornis* Kirby (subsequent designation by Castelnau, 1840).

*Cosmisoma* is primarily South American with a total of over 40 species, six of which occur in the area of this study. The South American components of the genus have been reviewed and added to by Zajciw (1962) and Monné & Magno (1988).

Specimens of *Cosmisoma* have been taken diurnally at flowers and on recently dead trunks and branches of trees.

### Key to the Mexican and Central American species of *Cosmisoma*

1. Elytra, pronotum, and antennal tufts partly orange pubescent ..... 2.  
Elytra, pronotum, and antennal tufts without orange pubescence ..... 3.
- 2.(1) Elytra with apical area black and with a single pair of pale oblique lines. Length 8-9.5mm. Nicaragua to Panama ..... *C. titania* Bates

Elytra with black area behind middle, not apical, with 2 pairs of pale oblique lines. Length 11-15mm. Honduras to Colombia .....  
..... *C. plumicornis* (Drury)

- 3.(1) Integument metallic blue-green. Pronotal disk sculptured. Length 14-17mm. Guatemala to Panama .....  
..... *C. martyr* Thomson
- Integument blackish, or mostly blackish. Pronotal disk convex ..... 4.
- 4.(3) Elytra black, with humeral area orange. Costa Rica, Panama ..... *C. militaris* n. sp.
- Elytra black, or with white fasciae; humeral area never orange ..... 5.
- 5.(4) Elytra with a pair of short, oblique fasciae behind middle consisting of whitish pubescence. Pronotum cribrate-punctate, dull. Length 8-10mm. Panama and Colombia .....  
..... *C. rhapsos* n. sp.
- Elytra without fasciae. Pronotum reticulate-punctate, somewhat shining. Length 6-9mm. Mexico to Panama ..... *C. reticulata* Bates

### *Cosmisoma martyr* Thomson

*Cosmisoma martyr* Thomson 1860:180 (TYPE LOCALITY: Costa Rica). *Cosmisoma martyra* Bates 1872:189; Bates, 1880:63 (pl. 5, fig. 16); Bates, 1885:311.  
*Cosmisoma nudicorne* Bates 1892:166 (pl. 7, fig. 2) (TYPE LOCALITY: Chiriquí, Panama) NEW SYNONYMY.

**DESCRIPTION: MALE:** Form moderate-sized, elongate, slightly tapering; integument shining dark metallic green, appendages metallic blue-black, each elytron with a moderately broad longitudinal vitta of golden pubescence. Head moderately elongate, shining, moderately sparsely, distinctly punctate, pubescence fine, sparse, suberect; frons narrow with a distinct longitudinal median groove; antennae 2 to 2 1/2 times as long as body, scape subcylindrical, finely scabrose-punctate, base with a small, distinct impression, segments 3 to 5 feebly grooved, fringed on inner side, fifth segment longest, bearing a thick brush of black hair-like setae on outside at apical 2/5, fifth and sixth segments with a distinct, curved, apical spine on underside, terminal segment long, subequal to third. Pronotum longer than wide, sides unevenly rounded; subapical and subbasal impressions moderately deep; disk uneven, with a pair of large, feeble, sparsely punctate swellings on each side; surface shining, very finely, densely punctate, with a narrow, impunctate,

median vitta; pubescence appressed, fine, short, indistinct, intermixed with longer, coarser, erect setae; prosternum broadly impressed, moderately plicate behind apex; meso- and metasternum moderately clothed with fine, pale pubescence. Elytra less than 3 times as long as width across humeri, sides somewhat tapering; apices subacuminate; disk slightly, longitudinally depressed on each side of middle, surface finely, densely punctate; pubescence moderately dense, fine, appressed, golden in depressions, not obscuring surface. Abdomen with terminal sternite short, slightly shorter than fourth; moderately clothed with fine, pale pubescence. Legs moderately elongate; femora moderately gradually clavate; metatarsi clothed with coarse, white hair-like setae. Length 14-17mm.

**FEMALE:** Form similar to male. Antennae about 1 1/3 times as long as body, segments 6 to 11 shorter, terminal segment much shorter than third. Abdomen somewhat more robust, terminal segment slightly longer than fourth. Length 15-16mm.

**RANGE:** Guatemala to Panama.

**MATERIAL EXAMINED:** COSTA RICA: 1 female, Cartago prov., CATIE grounds, Turrialba, 28-31 V, 1987 [EG]; 1 male, same locality, 14 V, 1985, (J.A.Chemsak) [UCB]; 1 female, same locality, 6 VI, 1986 (Chemsak, Katsura, A. & M. Michelbacher) [UCB]; PANAMA: 1 male, 1 female, Canal Zone, Barro Colorado I., 20-23 VII, 1977 (R.B. & L.S. Kimsey) [UCB]; 1 male, 1 female, Bayano dist., vicinity Ipeti, 16 V, 1982 (E.Giesbert) [EG]; 1 male, Bayano dist., 55km E Chepo, 20 V, 1981 (Giesbert) [EG]; 1 male, 56km E Chepo, 20 V, 1981 (J. Wappes) [JW]; 2 males, 4 females, Panamá Prov., 10km NE El Llano 1400', 16-20 V, 1984 (Giesbert) [EG]; 2 males, Panamá prov., Cerro Campana 2200', 18-19 V, 1984 (Giesbert) [EG].

**REMARKS:** This species differs from others in Central America by the metallic green integument. Bates, in his original description of *C. nudicornis*, pointed out that he was describing the species from a single individual, possibly a specimen of *C. martyr*, from which the antennal tufts had been abraded, since he observed no other differences. We have examined a photograph of the type, and this appears to have been the case. No other examples matching the description of *C. nudicornis* have been seen.

### *Cosmisoma militaris*, new species

**DESCRIPTION: MALE:** Form small, moderately slender; integument piceous to black, basal 1/4 of elytra at humeri, first 2 pairs of legs, and bases of metafemora orange; tibiae and segments 3 to 5 of antennae sometimes reddish-brown. Head coarsely, closely reticulate-punctate on vertex; antennae about 1 1/3 times as long as body, fifth segment curved, bearing a brush of black hair-like setae on apical half, segments 6 to 11 short, moderately strongly serrate. Pronotum slightly longer than wide, sides broadly rounded at middle; disk moderately opaque, lacking pubescence, shallowly, coarsely reticulate-punctate, with an impunctate band across base and apex; pro-, meso- and metasternum clothed with silky white pubescence which is more dense laterally on mesepisternum and apical half of metepisternum. Scutellum clothed with subrecumbent white pubescence. Elytra about 2 1/2 times as long as width across humeri; apices narrowly, separately rounded; disk lacking pubescence, densely microsculptured, scabrous, punctures obscure. Abdomen with terminal sternite subequal to fourth; pubescence silky, white, denser laterally on first sternite. Legs with femora abruptly clavate; metafemora slightly exceeding elytral apices. Length 5.5 -7.5mm.

**FEMALE:** Form somewhat more robust than male. Antennae slightly longer than body. Abdomen more strongly convex, with terminal sternite longer than fourth. Metafemora not attaining elytral apices. Length 6-7.5mm.

**TYPES:** Holotype male, allotype, [CAS] and 16 paratypes (7 males, 9 females) [EG] from PANAMA, Panamá prov., Cerro Campana, 2200ft., 18-19 V, 1984 (E.Giesbert). 45 additional paratypes as follows: PANAMA: 1 male, Coclé prov., El Valle de Anton 2500ft., 5 VI, 1945 (C.D. Michener) [UK]; 2 males, 1 female, Coclé prov., 4km S El Valle, 2200ft., 16 V-2 VI, 1981 (Giesbert) [EG]; 1 male, Cerro Campana, 2700ft., 5 V, 1981 (Giesbert) [EG]; 2 males, 1 female, same locality, on flowers of *Clethra sp.*, 18 V, 1984 (H. Stockwell) [HS]; 1 male, 3 females, same locality, 13-14 V, 1985 (F. Hovore) [FH]; 1 female, same locality, 17-19 V, 1987 (Giesbert) [EG]; 1 female, same locality, 2100ft., 29IV, 1992 (Giesbert) [EG]; 1 female, Panamá prov., Cerro Azul, 2200ft., 9 V, 1984 (Giesbert) [EG]; 3 males, 3 females, same locality, 24 V, 1985 (Hovore) [FH]; 3 males, same locality, 25 V, 1986 (Giesbert) [EG]; 4 males, 2 females, same locality, 17-18 V, 1987 (Hovore) [FH]; 1 male, 1 female, Panamá prov., 8-

10km N El Llano, 1200ft., 26 IV-4 V, 1992 (Giesbert)[EG]; 1 female, Colón prov., Santa Rita Ridge, 12VI, 1976 (D. Engleman) [JW]. COSTA RICA: 1 male, 1 female, Guanacaste prov., Hacienda Comelco, 24km NW Cañas, 50m., on blossoms of *Allophyllus* sp., 20 V, 1971 (E.R. Heithaus) [UCB]; 1 male, 1 female, Guanacaste prov., "La Pacifica" 3.5km NW Cañas, on blossoms of *Forsteronia spicata* 9-12 VI, 1978 (Giesbert) [EG]; 2 males, same locality, 7-8 VI, 1986 (Hovore) [FH]; 1 female, same locality, 4-5 VI, 1987 (Hovore) [FH]; 4 males, Puntarenas prov., 6km. S Santa Elena, on blossoms of *Croton* sp., 24-28 V, 1987 (Giesbert) [EG].

REMARKS: This little species is close to *C. reticulata*, differing by the integumental color of the elytral humeri and legs, the more widely rounded, somewhat opaque pronotum, and the shorter, more strongly serrate distal antennal segments.

### *Cosmisoma plumicornis* (Drury)

*Leptura plumicornis* Drury 1782:74, pl. 49, fig 3. (TYPE LOCALITY: Mosquito Coast, near Honduras Bay)  
*Cosmisoma plumicornis*; Pascoe 1866:291; Bates, 1880:63; Bates, 1885:311.

DESCRIPTION: MALE: Form moderate-sized, elongate; integument piceous, with basal and apical thirds of elytra, apex of fifth and basal 4/5 of sixth antennal segments, and terminal abdominal segments dull orange; pubescence of pronotum and elytra shining, orange, the latter bearing a common, broad, post-median black area which encloses a pair of oblique, slightly curved white lines on each side just inside the borders. Head moderately elongate; surface densely clothed with dark pubescence and scattered erect setae; antennae about 1 1/2 times as long as body, scape gradually clavate with basal half longitudinally grooved, segments 3-5 long, carinate, fifth segment longest, curved, remaining segments shorter, third segment bearing a moderately large brush of long black hair-like setae, fifth segment bearing a large brush over apical 4/5, the basal 1/2 of which is black and the apical 1/2 orange, scape with a brush on inner surface, and segments 2 and 4 bearing smaller pencils of long black setae. Pronotum longer than wide, sides moderately broadly rounded at middle; base and apex narrowed, broadly impressed; disk with middle convex, moderately inflated, surface densely clothed with moderately long, appressed pubescence, with scattered long, erect setae; prosternum broadly impressed

and transversely plicate behind apex, base bearing orange pubescence; mesosternum finely silvery pubescent; metasternum mostly orange pubescent. Elytra less than 3 times as long as width across humeri, sides subparallel, feebly tapering; apices jointly rounded, sutural angles obtuse; disk subdepressed, surface obscured by dense, appressed pubescence. Abdomen finely silvery pubescent. Legs pedunculate-clavate; metafemora slightly exceeding elytral apices; tibiae sparsely clothed with long black setae. Length 11.5-15mm.

FEMALE: Form similar to male. Antennae about 1 1/4 times as long as body. Abdomen slightly more robust. Legs slightly less robust with metafemora not exceeding elytral apices. Length 11-14mm.

RANGE: Honduras to Colombia.

MATERIAL EXAMINED: PANAMA: 1 male, Darien prov., Serrania del Darien Laguna, 820m, VII, 1963 (C.W. Myers) [UK]; 2 males, 1 female, Canal Zone, Ft. Kobbe, 28 V, 1972 (W.E. Bivin) [UCB]; 2 males, 1 female, same locality, 6 VI, 1985 (E.G. & M.A. Riley) [JW]; 5 males, 3 females, Colón prov., Ft. Sherman, 31 V-1 VI, 1981 (E. Giesbert) [EG]; 2 females, Panamá prov., Cerro Campana 2200ft., 18-19 V, 1984 (Giesbert) [EG]; 4 males, 1 female, Panamá prov., 10km N El Llano 1400ft., 16-20 V, 1984 (Giesbert) [EG]; 1 male, Coclé prov., 4km S El Valle 2200ft., 16 V-2 VI, 1981 (Giesbert) [EG].

### *Cosmisoma reticulata* Bates

*Cosmisoma reticulata* Bates 1885:311 (TYPE LOCALITY: Zacatepec, Mexico); Bates, 1892: 167.  
*Cosmisoma alboscuteolata* Linsley 1935:92 (TYPE LOCALITY: Bejucos, Temascaltepec, Mexico [State of México]). NEW SYNONYMY.

DESCRIPTION: MALE: Form moderately small, elongate, slightly tapering; integument blackish, often with basal segments of antennae, and bases of femora and tibiae dull orange. Head closely, coarsely reticulate-punctate on vertex, pubescence inconspicuous; antennae about 1 1/2 times as long as body, scape subcylindrical, finely scabrous-punctate, grooved longitudinally at base, segments 3 to 5 long, subequal, feebly grooved fifth segment bearing a brush of long hair-like setae on apical half, segments 6 to 11 short, subserrate. Pronotum about 1 1/3 times as long as wide, sides moderately rounded, widest near middle;

disk moderately shining, pubescence lacking, coarsely, shallowly reticulate-punctate, with an impunctate band across base and apex; prosternum unimpressed, somewhat rugose near apex, finely, densely punctate and moderately densely pale pubescent on basal 3/4; metasternum somewhat swollen; pubescence silky whitish at middle, concentrated laterally into distinct patches on mesepisternum and apical half of metepisternum. Scutellum densely clothed with subrecumbent whitish pubescence. Elytra about 2 1/2 times as long as width across humeri; sides slightly curved inward at middle; apices narrowly, separately rounded; disk lacking pubescence, densely microsculptured, scabrous, punctures obscure. Abdomen with terminal sternite subequal to fourth, apex broadly subtruncate; basal sternites bearing patches of silky whitish pubescence. Legs with femora abruptly clavate; metafemora slightly exceeding elytral apices. Length 6-9mm.

**FEMALE:** Form similar to male, but slightly more robust. Antennae about 1 1/4 times as long as body. Abdomen somewhat swollen; terminal sternite longer than fourth, apex narrowly rounded. Metafemora not attaining elytral apices. Length 6.5-8mm.

**RANGE:** Mexico to Panama.

**MATERIAL EXAMINED:** MEXICO: 1 female, Bejucos, Temascaltepec, 7 VII, 1933 (H.E. Hinton, R.L. Usinger) [Holotype of *C. alboscuteolata*, CAS]; 1 male, Guerrero, Acapulco, 10 VIII, 1936 (C.H. Seevers) [FMNH]; 1 male, 1 female, Guerrero, Mexcala, 29 VI, 1951 (P.D. Hurd) [UCB]; 2 males, Michoacán, 49 mi. SE Aquila, 13 VII, 1984 (Carroll, Schaffner, Friedlander) [TAM]; 2 females, Chiapas, Santo Domingo, 15 mi. SE Simojovel, 8-15 VII, 1958 (J.A. Chemsak) [UCB]; 1 female, Oaxaca, Temascal, 2 VI, 1964 (D.H. Janzen) [UCB]; 1 female, Jalisco, 6km NW Melaque, 14 VII, 1985 (E. Giesbert) [EG]; 1 male, Jalisco, 8km N Melaque, 13 VII, 1985 (Chemsak, H. Katsura, A. & E. Michelbacher) [UCB]; 4 males, 2 females, Jalisco, Est. Biología Chamela UNAM, 10-20 VII, 1985 (Giesbert) [EG]; 1 female, Jalisco, 21km N Melaque, Fiesta Americana sign, at light, 13 VII, 1987 (Chemsak, E.G. & J.M. Linsley) [UCB]; 4 males, 1 female, Chiapas, El Chorreodero 1800', 29 VI, 1986 (J. Wappes, Giesbert) [JW, EG]; 1 male, same locality, 13 VI, 1989 (R.K. Lago, S. Testa) [RT]; 1 male, Chiapas, Sumidero Cyn. 4000', 20 VI, 1987 (Giesbert) [EG]; 1 male, Chiapas, 16km W Ocozocoautla, 20 VI, 1987 (Giesbert) [EG]; 1 male, Chiapas, 17km W Tuxtla Gutierrez 3300', 21-25 VI, 1987 (Giesbert) [EG]. GUATEMALA: 3 males, 19-

24km N Salama 4500', 25-31 V, 1989 (Giesbert) [EG]; 1 male, same data (Wappes) [JW]. EL SALVADOR: 2 males, Dept. Ahuachapán, Bosque El Imposible, Cerro de Loma de Paja, 490m, on flowers of *Areliabarbiniarius*, 19 VI, 1979 (R.D. Cave) [UCB]. PANAMA: 1 male, Panamá prov., Cerro Azul Summit, 15-22 V, 1987 (Giesbert) [EG].

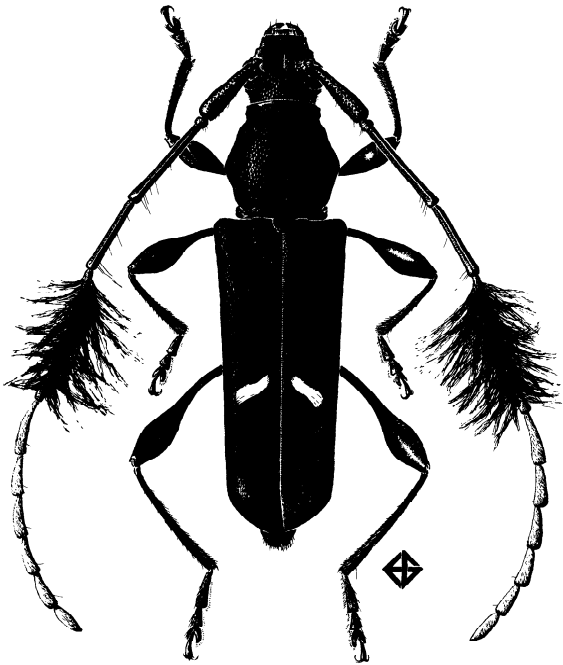
**REMARKS:** This small, obscure species is characterized by the all-black color with the scutellum densely white pubescent and parts of the antennae and legs often partially dull orange. Specimens with paler appendages occur throughout the range.

### *Cosmisoma rhapsos*, new species (Fig. 11)

**DESCRIPTION: FEMALE:** (See fig. 11) Form moderately small, parallel-sided; integument piceous to black, each elytron with a short, obliquely transverse, linear patch of white pubescence slightly behind middle. Head moderately narrow, finely, densely punctate; antennae slightly longer than body, scape densely punctate, fourth segment subequal to scape, shorter than third, fifth segment longest, curved, with apical 5/6 clothed with a thick brush of long, erect black hair-like setae, segments 6 to 11 short, clothed with fine silvery pubescence. Pronotum slightly longer than wide, sides unevenly rounded, widest behind middle; disk opaque, slightly depressed, middle near base with a short, longitudinal impunctate impression; surface lacking pubescence, moderately finely, very densely cribrate-punctate; basal half of pro-, meso- and metasternum clothed with fine, short, silvery pubescence. Elytra 2 1/2 times as long as width across humeri, sides nearly parallel; apex abruptly rounded, sutural angles subacuminate; disk opaque, lacking pubescence, finely, very densely punctate. Abdomen finely, densely punctate, pubescence whitish, subdepressed; terminal sternite rounded at apex. Legs with femora gradually clavate. Length 8-10mm.

**MALE:** Unknown.

**TYPES:** Holotype female [CAS] from PANAMA, Majé Station, 9° 9'N, 78° 47'W, 20 V, 1974 (Engelman & Ramirez). 2 additional paratypes as follows: 1 female, PANAMA, Bayano dist., Majé Island, 28-30 V, 1982 (Giesbert) [EG]; 1 female, COLOMBIA, Antioquia, Pto. Berrio, 5 VIII, 1938 (C.H. Seevers) [EMNH].



REMARKS: This species is easily separated by the black integument with an obliquely transverse, white, post-median pubescent mark on each elytron.

### *Cosmisoma titania* Bates

*Cosmisoma titania* Bates 1870:407 (TYPE LOCALITY: Chontales, Mearagua); Bates, 1880:63.

DESCRIPTION: MALE: Form moderately small, elongate; integument piceous black, with disk of pronotum (except base and apex), apical 1/3 of fifth and basal 4/5 of sixth antennal segments, and basal 3/5 of elytra orange with orange pubescence, the apical 2/5 black pubescent with an oblique, curved white pubescent line near middle of black area. Head slightly elongate, moderately sparsely pubescent, with numerous erect setae; antennae about 1 1/2 times as long as body, scape abruptly clavate, segments 3 to 5 long, carinate, fifth segment longest, curved, remaining segments shorter, third segment bearing a moderately large brush of long black hair-like setae, fifth segment bearing a large brush over apical 7/8, with basal half black, apical half composed of orange setae, scape with

club feebly tufted on inside, and segments 2 and 4 bearing smaller pencils of long black setae. Pronotum longer than wide, sides moderately rounded in middle; base and apex narrowed, broadly impressed; disk moderately densely clothed with appressed pubescence and long, erect setae; prosternum broadly impressed and feebly plicate behind apex; meso- and metasternum finely, moderately sparsely, pale pubescent. Abdomen finely, moderately sparsely, pale pubescent. Legs pedunculate-clavate; metafemora slightly exceeding elytral apices; tibiae with sparse, long, erect setae. Length 8-9.5mm.

FEMALE: Form similar to male. Antennae about 1 1/4 times as long as body. Abdomen slightly more robust. Legs slightly less robust; metafemora not exceeding elytral apices. Length 8-9mm.

RANGE: Nicaragua to Panama.

MATERIAL EXAMINED: PANAMA: 1 female, Bocas del Toro, 25km NE Fortuna Dam 1000', 23 V, 1984 (Giesbert) [EG]; COSTARICA: 1 male, Cartago prov., CATIE grounds, Turrialba, 28-31 V, 1987 (Giesbert) [EG].

REMARKS: This attractive little species is fairly close in color and structure to *C. plumicornis*, but differs by the smaller size, elytral pattern, and more clavate antennal scape.

### Genus *Ischionodonta* Chevrolat, new status

*Rhopalophora* (*Ischionodonta*) Chevrolat 1859:58; Gounelle, 1911:98.

*Brachyrhopala* Burmeister, 1865:171; Lacordaire, 1869:41; Berg, 1886:239 (Type species: *Brachyrhopala aenescens* Burmeister, 1865, present designation).

DESCRIPTION: Form moderately elongate, body subdepressed, sides nearly parallel; integument dark with metallic reflections. Head moderately short; antennal tubercles acute; antennae elongate, fourth segment more or less subequal to third. Pronotum nearly quadrate, sides moderately swollen, impressed at base and apex. Elytra with apices subacutely rounded, not truncate; disk with punctation fine, obscure. Abdomen normally segmented. Legs with meso- and metafemora abruptly clavate, metafemoral peduncles and metatibiae feebly to strongly asperate.

TYPE SPECIES: *Rhopalophora brasiliensis* Chevrolat, 1859 (by present designation).

A number of consistent structural characters separate *Ischionodonta* from *Rhopalophora* and appear to warrant full generic status. *Ischionodonta* is primarily South American in distribution with three species occurring in Mexico and Central America.

### Key to the Mexican and Central American species of *Ischionodonta*

1. Underside and femoral clubs black with metallic blue reflections; metatibiae with spinose asperities on posterior edge. Nicaragua to Panama ....  
..... *I. serripes* (Bates)  
Underside and femoral clubs piceous or dull metallic; metatibiae with asperities on posterior edge not prominent ..... 2.
- 2.(1) Head and pronotum immaculate reddish orange; elytra dark metallic greenish. Nicaragua to South America ..... *I. versicolor* (Chevrolat)  
Head black, pronotum reddish orange, often with a median black vitta; elytra dull blackish with metallic reflections. Mexico (Jalisco, Chiapas) ..  
..... *I. mexicana* n. sp.

### *Ischionodonta serripes* (Bates), new combination

*Rhopalophora serripes* Bates 1872:188 (TYPE LOCALITY: Chontales, Nicaragua); Bates, 1880:63.  
*Rhopalophora (Ischionodonta) serripes*; Aurivillius, 1912:452.

DESCRIPTION: MALE: Form moderately short, moderately slender; integument blackish, prothorax reddish orange with a wide, dorsal, median black vitta from base to apex, elytra blackish with dull metallic reflections, underside and femoral clubs dark metallic blue. Head finely, densely punctate; frons sparsely, finely pubescent; antennae elongate, exceeding elytral apices by about 6 segments, scape asperate-punctate, short, about twice as long as wide, third segment feebly asperate, slightly shorter than fourth, eleventh segment longer than third. Pronotum as wide as long, sides strongly rounded, widest near middle, transversely impressed near base and apex; disk with 4 feeble swellings; surface opaque, inconspicuously asperate-punctate; pubescence absent or very sparse; prosternum with apical 1/3 transversely rugose, basal 2/3 densely punctate, clothed with pale, appressed

pubescence; meso- and metasternum finely, densely punctate, pubescence pale. Elytra slightly more than twice as long as width across humeri; apices narrowly rounded; disk feebly granulate near base; punctures fine, very dense; pubescence golden, very fine and short, subrecumbent. Abdomen with terminal sternite subequal to fourth, apex widely subtruncate; pubescence pale. Legs with asperities on posterior edge of metatibiae well developed, spinose. Length 10-12mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 4 segments, eleventh segment shorter than third. Abdomen with terminal sternite longer than fourth, apex narrowly rounded. Length 12mm.

RANGE: Nicaragua to Panama.

MATERIAL EXAMINED: PANAMA: 1 female, Canal Zone, Barro Colorado I., 20 VII, 1977 (R.B. & L.S. Kimsey) [UCB]; 1 male, Canal Zone, Ft. Kobbe, 30 V, 1983 (H. Stockwell) [EG]; 1 male, Panamá prov., Madden Forest, 20 V, 1987 (F. Hovore) [FH].

REMARKS: This species may be easily distinguished by the well developed asperities on the posterior edge of the metatibiae, by the quadrate reddish-orange pronotum with a wide black median vitta, the relatively short elytra, and the metallic blue reflections of the metasternum, metepisterna, abdomen, and femoral clubs.

### *Ischionodonta versicolor* (Chevrolat), new combination

*Rhopalophora versicolor* Chevrolat, 1859:62 (TYPE LOCALITY: "Nouvelle-Grenade" [Colombia]); Bates, 1872:188, Bates 1880:63; Bates, 1885:310.  
*Rhopalophora (Ischionodonta) versicolor*, Aurivillius, 1912:432.

DESCRIPTION: MALE: Form moderate sized; integument black with dull metallic reflections, head and prothorax bright reddish orange, elytra dark metallic greenish. Head moderately finely, densely punctate; frons with a fine, longitudinal, median impression, pubescence sparse, recumbent; antennae slender, elongate, exceeding elytral apices by about 5 1/2 to 6 segments, scape short, densely asperate-punctate, segments 3 to 5 subequal, eleventh segment subequal to third. Pronotum somewhat longer than wide, sides broadly rounded, widest behind middle;



base and apex broadly, shallowly impressed; disk with 4 feeble swellings; surface opaque, moderately, inconspicuously scabrose-punctate, very inconspicuously pubescent; meso- and metasternum finely, densely punctate and pubescent. Elytra about 2 1/2 times as long as width across humeri, slightly elevated at base; apices narrowly rounded; disk finely, densely punctate; pubescence fine, short, golden. Abdomen with terminal sternite subequal to fourth, apex slightly flexed downward, tufted, moderately widely subtruncate; finely, densely punctate and pubescent. Legs with metatibial asperities feebly developed. Length 10-12.5mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 4 segments, eleventh segment much shorter than third. Abdomen with terminal sternite longer than fourth, apex narrowly rounded. Length 10-12mm.

RANGE: Nicaragua to Colombia.

MATERIAL EXAMINED: COSTA RICA: 30 males, 21 females, Guanacaste prov., La Pacifica, 4 mi. NW Cañas, on *Forsteronia spicata*, 23-30 V, 1972 (P. Opler) [UCB]; 14 males, 25 females, same locality, on *Asclepis liana* and *Cordia panamensis*, 2-4 VI, 1973 (Opler) [UCB]; 3 females, same locality, 21-29 V, 1973 (F. Cordero) [UCB]; 1 male, same locality, 24 VII, 1973 (Cordero) [UCB]; 2 males, 3 females, Guanacaste prov., 2 mi. NW Cañas, 18-21 V, 1974 (E. Giesbert) [EG]; 17 males, 9 females, Guanacaste prov., 3.5km NW Cañas, 9-12 VI, 1978 (Giesbert) [EG]; 1 female, Guanacaste prov., Comelco 50m, 8km NW Bagaces, on *Casearia acculeata*, 1 VI, 1973 (Opler) [UCB]; 1 male, 3 females, Guanacaste prov., 15km SW Bagaces, 16 VI, 1970 (C. Frankie) [JW]; 1 female, Guanacaste prov., Santa Rosa National Pk, 18-20 V, 1979 (D.H. Janzen) [UCB]; 1 male, same locality, 12-14 V, 1980 (Janzen & W. Hallwachs) [UCB]; 1 male, Guanacaste, 14 VI, 1981 (J. Washburn) [UCB]; 1 male, Puntarenas prov., Gromaco, 34km SE Potrero Grande, 1000' on Rio Coto Brus, 21 VII, 1963 (C.D. Michener & W. Kerfoot) [UK]; 1 male, Alajuela prov., 10km W Atenas, 31 V, 1980 (J. Wappes) [JW]. PANAMA: 1 male, Panamá prov., Cerro Azul, 7 VI, 1958 (W.J. Hanson) [UU]; 2 males, 3 females, Canal Zone, Barro Colorado I., 29 VI-31 VII, 1977 (R.B. & L.S. Kimsey) [UCD]; 1 female, Rio Bayano, 46km E Chepo, 16-18 VI, 1980 (Giesbert) [EG]; 1 female, Panamá prov., Cerro Campana 2000', 10-20 V, 1981 (Wappes) [JW].

REMARKS: This species may be recognized by the immaculate bright red-orange head and prothorax, and dull metallic greenish elytra. It appears to be the most commonly collected species of *Ischionodonta* in Central America

Blackwelder (1946) listed *Rhopalophora aenescens* Burmeister, *R. semirubra* Burmeister and *R. platensis* Chevrolat as synonyms of *R. versicolor*. Subsequent work by Zajciw and Ruffinelli (1962) recognized *platensis* and *semirubra* as valid species with *aenescens* a synonym of *platensis*.

### *Ischionodonta mexicana*, new species

DESCRIPTION: MALE: Form moderate sized; integument black with dull metallic reflections, prothorax reddish-orange, usually marked at middle of dorsum with a longitudinal blackish vitta, and often with a large blackish plaga at middle of prosternum. Head with frons and genae clothed with recumbent pale pubescence; antennae elongate, exceeding elytral apices by about 6 segments, basal segments feebly asperate, third segment shorter than fourth, eleventh longer than third. Pronotum slightly longer than wide, sides moderately broadly rounded, widest behind middle; disk with 4 feeble swellings; surface opaque, moderately densely punctate, with a median, subbasal, impunctate, longitudinal area; pubescence at base and sides moderately sparse, short, pale, recumbent; prosternum with basal 2/3 densely punctate, pubescence pale, dense, short, erect; meso- and metasternum finely, densely punctate, clothed with moderately dense, fine, short, subrecumbent, pale pubescence. Elytra slightly more than 2 1/2 times as long as width across humeri, sides subparallel; apices narrowly rounded; disk densely punctate; pubescence moderately dense, fine, short, subrecumbent, golden. Abdomen with terminal sternite subequal to fourth, flexed downward and broadly subtruncate at apex; surface finely, densely punctate; pubescence subrecumbent, pale, fine, moderately dense. Legs with metafemoral pedunculi and metatibiae feebly asperate. Length 9.5-13mm.

FEMALE: Form similar to male. Antennae exceeding elytral apices by about 4 segments, eleventh segment shorter than third. Prosternum lacking dense, erect pubescence. Abdomen more strongly convex; terminal sternite tapering, narrowly rounded at apex. Length 9-11.5mm.

**TYPES:** Holotype male, allotype [CAS], and 1 female paratype [JW] from MEXICO, Chiapas, Sumidero Canyon, 4000ft., 14-26 VI, 1987 (E. Giesbert, J. Wappes). 12 additional paratypes from MEXICO as follows: 1 female, Chiapas, Sumidero Canyon, 4000ft., 6-8 VII, 1986 (Wappes) [JW]; 1 female, same locality, 23 VI, 1991 (J. Beierl) [JB]; 1 male, 1 female, Chiapas, Parque El Aguacero, 16km W Ocozocoautla, 21 VI, 1987 (Wappes, Giesbert) [JW, EG]; 1 male, same locality, 9 VI, 1989 (H. Howden) [JW]; 1 male, 1 female, Jalisco, 23.827.4km S Chamela, 16-19 VII, 1987 (R. Turnbow) [RT]; 2 males, 1 female, Jalisco, Est. Biología Chamela UNAM, on flowers of *Casearia*, 15-23 VII, 1987 (F. Hovore) [FH]; 1 male, 1 female, Jalisco, 5km S Playa Careyes, 16 VII, 1987 (Hovore) [FH]; 1 female, Jalisco, Careyes, on flowers of *Coccoloba* sp., 29 VII, 1988 (F. Noguera) [UNAM].

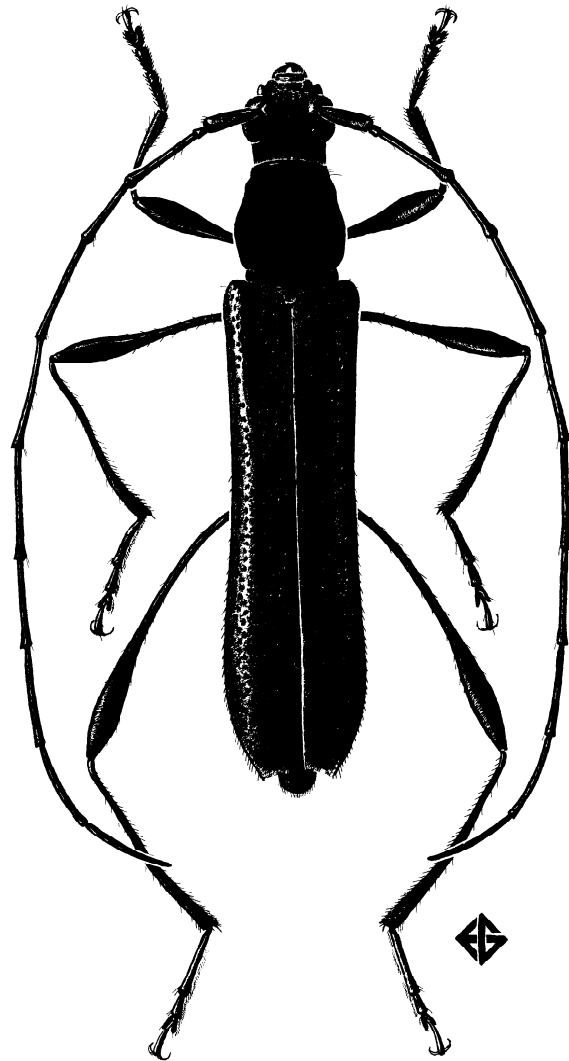
**REMARKS:** This species closely resembles *I. serripes*, but may be easily separated by the lack of well developed metatibial asperites, the absence of distinct blue metallic reflections on the underside and femora, the somewhat more elongate form of the pronotum and elytra, and by the presence of sparse, golden, subrecumbent pubescence on the pronotal base and sides. The latter character is more pronounced on specimens from the coast of Jalisco.

### *Muxbalia*, new genus

**DESCRIPTION:** Form linear, subdepressed, slender. Head moderately short; antennae filiform, 11 segmented, with fourth segment slightly shorter than third. Scutellum small, oblong, apically rounded. Pronotum unarmed, opaque, widest behind middle, with surface uneven. Elytra subdepressed, more than 3 1/2 times as long as basal width; apices obliquely emarginate-truncate. Abdomen normally segmented. Legs very slender, elongate, with meso- and metafemora gradually clavate.

**TYPE SPECIES:** *Muxbalia monzoni* Giesbert and Chemsak.

*Muxbalia* closely resembles *Rhopalophora* in size, form and color, but may be immediately separated by the gradually clavate meso- and metafemora, which in all *Rhopalophora* are abruptly pedunculate-clavate. Although the femoral form is anomalous, in all other morphological characteristics *Muxbalia* is typical of the tribe, and is therefore provisionally assigned to the Rhopalophorini. A single species is presently known.



**Figure 12.** *Muxbalia monzoni*, new species, male.

### *Muxbalia monzoni*, new species (Fig. 12)

**DESCRIPTION: MALE:** (See fig. 12) Form moderately small, subparallel, slender; integument black, with a vague metallic sheen on elytral margins and legs, elytra piceous, often with a vague metallic purple sheen, pronotum occasionally red with base and apex black. Head moderately short, nearly glabrous; frons wide, moderately punctate; vertex opaque; antennae slender, exceeding elytral apices by about 2 1/2 segments, basal segments very sparsely ciliate, scape subcylindrical, basal half shallowly, longitudinally canaliculate, third segment longer than fourth, shorter

than fifth, segments 10 and 11 each feebly arcuate, slightly longer than third. Pronotum longer than wide, sides moderately broadly rounded, widest behind middle; disk uneven, with broad, indistinct, shallow tubercles on each side, one near base and another before middle, median subbasal impression shallow; surface opaque, finely microalutaceous, velvety in appearance, punctures sparsely scattered; pubescence limited to small, indistinct patches near base; prosternum shallowly impressed, punctate patches large, indistinct; meso- and metasternum and abdomen very finely, densely punctate, clothed with fine, very short, golden pubescence not obscuring surface. Elytra nearly 4 times as long as width across humeri, sides feebly narrowed at middle; apices obliquely emarginate-truncate; disk planate, with discal margins feebly, broadly raised longitudinally; surface dull, microalutaceous, punctures moderately coarse, moderately denæ, irregular; very sparse pubescence near base and apex fine, pale, inconspicuous. Abdomen with first sternite longest, terminal sternite concave when viewed from the side with apex rounded; surface very finely, densely punctate; pubescence golden, fine, very short, not obscuring surface. Legs with meso- and metafemora elongate, slender, gradually clavate; metatarsi with first segment longer than second and third together. Length 9-12.5mm.

**FEMALE:** Form similar to male. Antennae nearly reaching elytral apices, segments 10 and 11 slightly shorter than third. Prosternum somewhat rugose, without punctate patches. Abdomen with terminal sternite convex when viewed from the side. Length 8-11.5mm.

**TYPES:** Holotype male, allotype [CASI, and 55 paratypes (30 males, 25 females) from GUATEMALA, Dept. de Guatemala, Santa Catarina de Pinula, San Jorge Muxbal, 3 X, 1990 (E. Giesbert) [UCB, EG]; 62 additional paratypes (34 males, 28 females), same locality, 1-8 XI, 1990 (J. Monzón) [JM, UDV].

**REMARKS:** This species has been collected from the flowers of several different Compositae at a single location. In the type series of 119 specimens, 10 males and 5 females are bicolored. It is a pleasure to name this species for José Monzón, a friend and enthusiastic student of entomology at the Universidad del Valle in Guatemala, in appreciation for his assistance in collecting the type series.

## Acknowledgements

We would like to thank the authorities of the British Museum (Natural History), London for the loan of types in their care. Additionally, the following institutions and individuals are gratefully acknowledged for making material available for study: American Museum of Natural History, New York; Bohart Museum, University of California, Davis; California Academy of Sciences, San Francisco; Canadian National Collection, Ottawa; Estación de Biología Chamela, Mexico; Cornell University, Ithaca; Essig Museum of Entomology, University of California, Berkeley; Field Museum of Natural History, Chicago; Los Angeles County Museum of Natural History; Museum of Comparative Zoology, Cambridge; National Museum of Natural Sciences, Ottawa; Stanford University, Palo Alto; Texas A&M University, College Station; United States Museum of Natural History; Snow Entomological Museum, Lawrence; Joseph Beierl, James Cope, Frank Hovore, Henry Howden, Jeff Huether, Gale Nelson, Richard Penrose, Keve Ribardo, Henry Stockwell, Robert Turnbow, and James Wappes.

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