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New species of *Cymatodera* Gray (Coleoptera: Cleridae: Tillinae) from México and Central America, with notes on others

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Abstract

Nineteen new species of *Cymatodera* Gray are described: *C. mexicana*, *C. cicatricula*, *C. matehualacaligoides*, *C. brailovskyi*, *C. durangoensis*, *C. monticola*, *C. paucipunctata*, *C. anulata*, *C. christina*, *C. copei*, *C. oxchuc*, *C. merickeli*, *C. romeroi*, *C. cellulosa*, and *C. acutipennis* from México; *C. doda* from México, Nicaragua and **Costa Rica**; *C. carinipennis* from México and Guatemala; *C. rileyi* from México, Honduras, and Belize, and *C. wilsoni* from **Costa Rica**. These species are figured, along with the type of *C. kolbei* Schenkling, and a lectotype is designated for the latter. I include a brief discussion on the prevalence and evolution of brachyptery in *Cymatodera*.

Key words: Clerid fauna, taxonomy, Sierra Sur de Oaxaca, Isthmus of Tehuantepec, Chiapas, Honduras, Nicaragua, **Costa Rica**, endemism, brachyptery, aptery, tropical deciduous forest, pine-oak forest

Introduction

As I previously noted (Rifkind 2014), *Cymatodera* is one of the most speciose of the clerid genera in México and Central America (approximately 83 described species), but also among the most poorly studied. Recent descriptions of species belonging to this fauna appear in Rifkind 1993, Rifkind, Toledo & Corona 2010, Burke 2013, Burke & Zolnerowich 2014, and Rifkind 2014, but many more species remain undescribed in collections. The area encompassing the southwest U.S. southward through Isthmian Panamá is a locus of *Cymatodera* evolution. As is the case for many other arthropod genera (e.g. within Curculionidae (Anderson & O'Brien 1996) and Buprestidae (Hespenheide 1996)), *Cymatodera* diversity is particularly high in southern México, and certain subregions, such as the Sierra Sur of Oaxaca and the Chiapan highlands, appear to be hotspots of both speciation and endemism. *Cymatodera* species have adapted to a remarkably broad range of habitats, including desert, thorn forest, tropical deciduous forest, pine-oak forest, tropical wet forest, rain forest, and cloud forest. Though members of the genus are primarily nocturnal, and attracted to lights, many species are also encountered by beating vegetation, tree limbs, and slash during the day. Aptery and brachyptery are particularly common in the genus, and the association of flightless species with isolated mountain ranges provides a potential model for studies of biogeography, vicariance, and the mechanisms of speciation. The present paper proposes nineteen new species of *Cymatodera* from México and Central America, and is intended to take us a step closer toward a more comprehensive understanding of the genus, with the ultimate goal of revision and practical keys for species identification.

Brachyptery in *Cymatodera*. Flightlessness is remarkably common in *Cymatodera*, and brachyptery (*sensu lato*, including aptery) is evident in approximately fourteen previously described species: *C. mitchelli* Chapin, *C. vandykei* Schaeffer, *C. angustata* Spinola, *C. balteata* LeConte, and *C. punctata* LeConte (the last two exhibiting both macropterous and brachypterous phenotypes) from the United States; *C. intermedia* Barr, *C. cephalica* Schaeffer, and *C. purpuricollis* Horn from Baja California, México; *C. maculifera* Barr, *C. depauperata* Gorham, *C. barri* Rifkind, *C. pueblae* Burke, *C. lineata* Burke, and *C. valida* Gorham from mainland México and/or northern Central America. This list however, grossly underrepresents the richness of the flightless *Cymatodera* fauna. Several are

described herein, but many more besides await description, and collecting will doubtless produce further novelties. The selection pressures favoring brachyptery in *Cymatodera* are probably multiple. Several of these species appear to have limited distributions on high mountains or mountain ridges, and would seem to be the products of allopatric speciation through biogeographical isolation. Many of these mountain ranges (e.g. the Sierra Madre Sur of Oaxaca), are well known centers of diversity for many genera and species across several orders (see Ramamoorthy *et al.* 1993). Brachyptery is presumably favored by the presence of barriers to dispersal, which for insects adapted to upland habitats, may be a factor of temperature, humidity, phytogeography or a combination thereof. On the other hand, several other brachypterous *Cymatodera* species (e.g. *C. angustata* and *C. balteata*), have rather broad geographic distributions, and inhabit a correspondingly wide range of habitats and elevations. For these species, brachyptery may have originated in isolated montane populations, but subsequently presented no inhibition to dispersal. Complicating the situation is the existence of several species that possess the obovate elytral form (elytra narrowed anteriorly) typical of brachyptery, while retaining fully developed metathoracic wings. The flight muscles in these species may be so reduced as to prevent flight, but this is so far merely conjectural. A more thorough knowledge of the biology and distribution of these species would no doubt advance our understanding of the evolution of brachyptery in Coleoptera, as well as of the processes of insect speciation generally.

Abbreviations

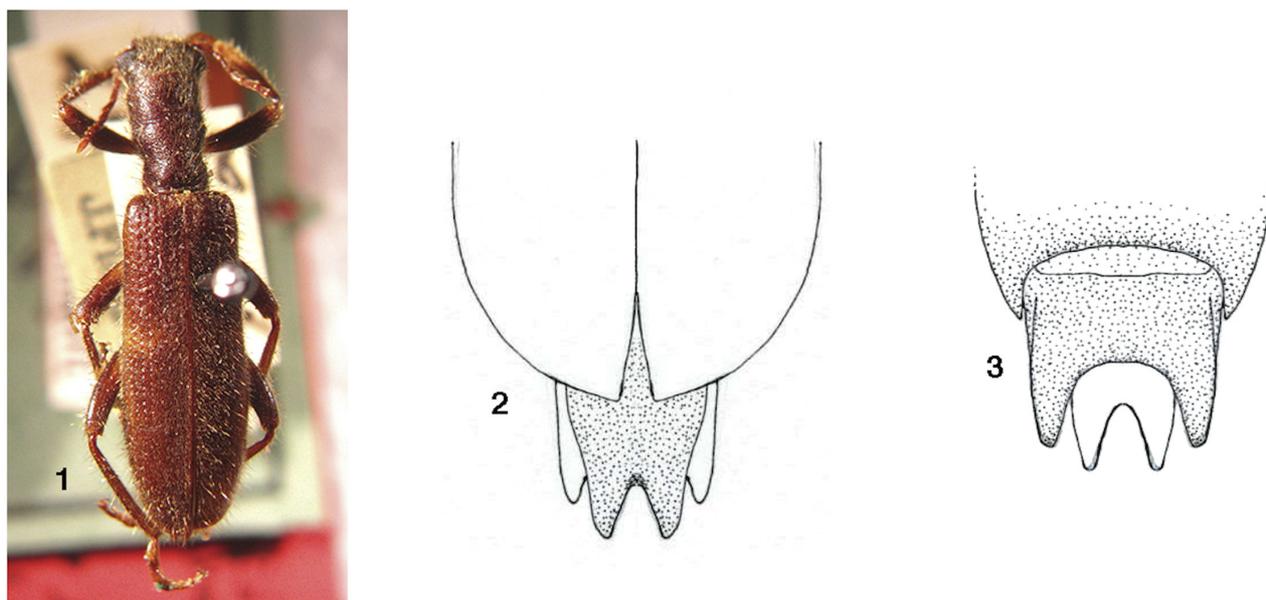
ARC	Albert J. Cook Arthropod Research Collection, Michigan State University, East Lansing, Michigan, U. S. A.
CASC	California Academy of Sciences Collection, San Francisco, California, U.S.A.
CIUM	Collección de Insectos de la Universidad Autónoma del Estado de Morelos, México
CJSC	James S. Cope Collection, Ennis, Montana, U.S.A.
CMNC	Canadian Museum of Nature, Ottawa, Ontario, Canada
CNCI	Canadian National Collection, Ottawa, Ontario, Canada
CNIN	Colección Nacional de Insectos, Instituto de Biología, UNAM, México
CSCA	California State Collection of Arthropods, Sacramento, California, U.S.A.
CURLA	Centro Universitario Regional del Litoral Atlántico, Atlantida, Honduras
DJHC	Daniel J. Heffern Collection, Houston, Texas, U.S.A.
EGRC	Edward G. Riley Collection, College Station, Texas, U.S.A.
EMEC	University of California, Essig Museum of Entomology, Berkeley, California, U.S.A.
FMNH	Field Museum of Natural History, Chicago, Illinois, U.S.A.
JEWC	James E. Wappes Collection, San Antonio, Texas, U.S.A.
JNRC	Collection of Jacques Rifkind, Valley Village, California, U.S.A.
KSUC	Kansas State University Museum of Entomological and Prairie Arthropod Research, Manhattan, Kansas, U.S.A.
MTEC	Montana Entomology Collection, Montana State University, Bozeman, Montana, U.S.A.
RHTC	Robert H. Turnbow, Jr. Collection, Ft. Rucker, Alabama, U.S.A.
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
SEMC	Snow Entomological Museum Collection, University of Kansas, Lawrence, Kansas, U.S.A.
TAMU	Texas A & M University, College Station, Texas, U.S.A.
UCRC	University of California, Riverside, California, U.S.A.
UGCA	University of Georgia Collection of Arthropods, Athens, Georgia, U.S.A.
WFBM	William F. Barr Entomological Museum, University of Idaho, Moscow, Idaho, U.S.A.
ZMBH	Zoologisches Museum Berlin, Germany

Systematics

Cymatodera kolbei Schenkling, 1907:303

(Figs. 1–3)

Schenkling established this species on the basis of three specimens, two male and one female, collected by Flohr in “Mexiko (Tepic, Navarete).” The specimens were housed in the Berlin Königlichen Museums, although Schenkling states that one of the three was given to him. It appears that eventually all three were deposited together in the collection of the ZMBH, which loaned them for study to William F. Barr in 1972 (Bernd Jaeger personal communication). Through the courtesy of Frank Merickel, I have been able to examine these specimens, and hereby designate one male as the lectotype of the species (Fig. 1). It bears labels as follows (single slash indicates line break within a label; double slash indicates a separate label): Tepic [white; handwritten] // Mexico / J. Flohr G. [green; machine printed] // 24 [white; handwritten] // male symbol [white; handwritten] // S. Schenkling determinavit [white; machine printed] // Type [red; machine printed] // kolbei Schklg. / Mexico [green; handwritten] // LECTOTYPE / *Cymatodera kolbei* / Schenkling 1907 / det. J. Rifkind 2014 [red; handwritten]. I assign the two other specimens, both bearing red “Type” labels, as paralectotypes: 1 male specimen bearing labels as follows: Mexico / J. Flohr G. [green; machine printed] // Nayarete / 30 [white; machine printed] // 24 [white; handwritten] // male symbol [white; handwritten] // Type [red; machine printed] // S. Schenkling determinavit [white; machine printed] // Paralectotype / *Cymatodera kolbei* / Schenkling 1907 / det. J. Rifkind 2014 [yellow; handwritten]; 1 female specimen bearing labels as follows: Tepic [white; handwritten] // Mexico / J. Flohr G. [green; machine printed] // 24 [white; handwritten] // female symbol [white; handwritten] // S. Schenkling determinavit [white; machine printed] // Type [red; machine printed] // Paralectotype / *Cymatodera kolbei* / Schenkling 1907 / det. J. Rifkind 2014 [yellow; handwritten]. Because Schenkling’s original description did not include figures, I provide here a habitus illustration of the male lectotype (Fig. 1) and a sketch of its pygidium (Figs. 2–3), which is diagnostic. The female specimen, described by Schenkling as having the last abdominal segment “simply rounded,” in fact has its sixth ventrite and tergite narrowly excavated at their apex. A second female specimen, housed in the SDEI (depository of Schenkling’s personal collection), was also collected by J. Flohr in Tepic, Mexico; it bears a red “Syntype” label, and a label indicating it was determined by Schenkling as this species. However, based on its coloration, pronotal sculpturing and the shape of its pygidium, it does not appear to be conspecific with *C. kolbei* and, in fact, more likely represents a specimen of the species described directly below; I therefore exclude it from the type series. *Cymatodera kolbei* is apparently quite rare, and so I take the opportunity to present here a **new state record** for the species: 1 male, México, Jalisco, Hwy. 80, Bellavista, vic. Acatlan de Juarez, 1300 m, July 3, 1993, J. & E. Beierl, colls.



FIGURES 1–3. 1. Habitus of *Cymatodera kolbei* Schenkling, lectotype male. 2. Pygidium (dorsal view) of *Cymatodera kolbei*. 3. Pygidium (ventral view) of *Cymatodera kolbei*.

***Cymatodera mexicana* Rifkind, n. sp.**

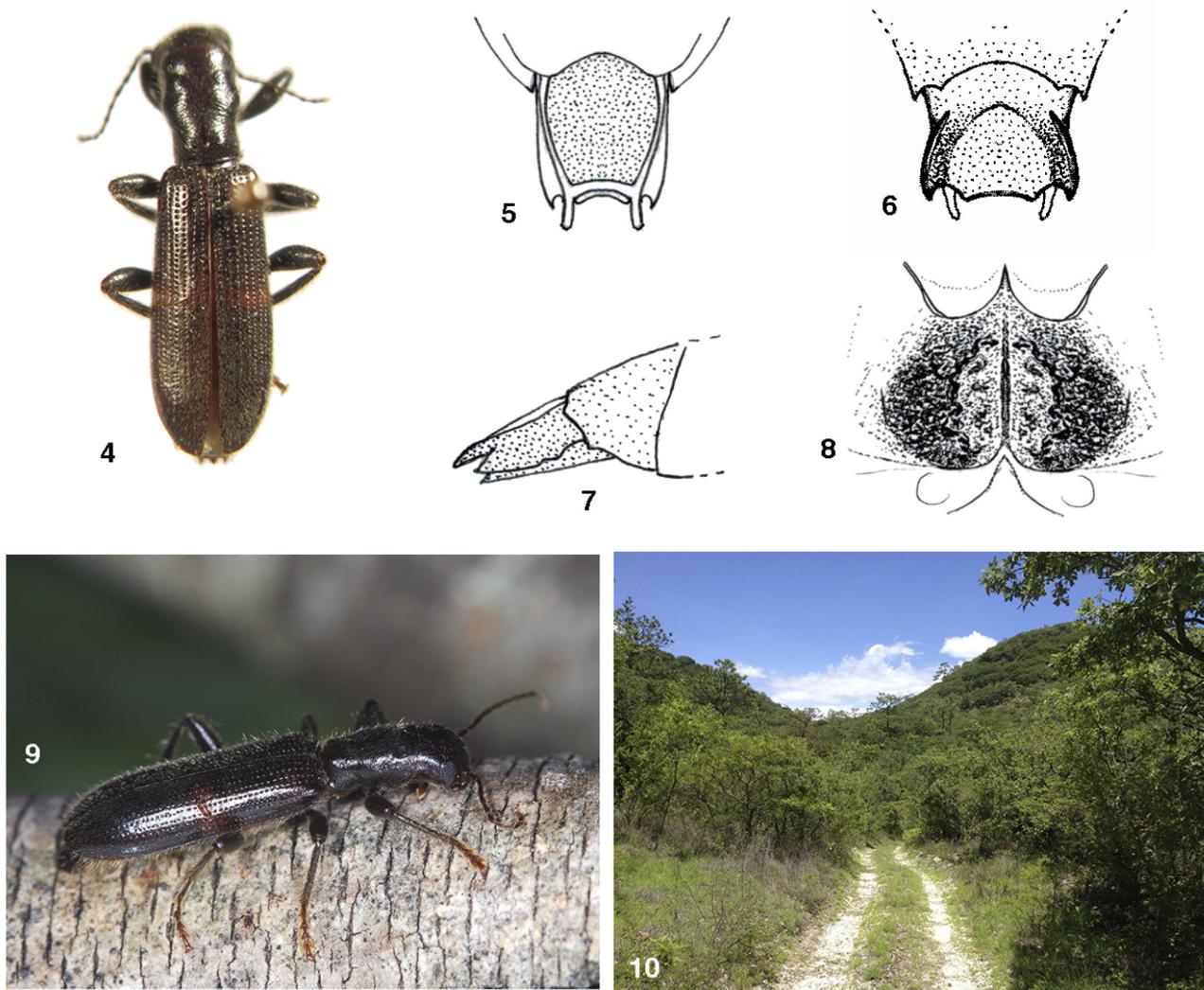
(Figs. 4–10)

Type specimens. Holotype male: México, Michoacan, 18–20 mi. S. Capirio, VII (21–22) 1984, B. K. Dozier, coll. Holotype deposited in CSCA. Paratypes: 4, same data as holotype; MEXICO, MICHOACAN: 1, 7 mi. S. Papatzindan, 08 JUL 1982, M. A. Ivie, colr.; 4, 9 mi. S. Quatro Caminos, 13.VII-1972, collector G. H. Nelson; 1, 4 mi. N. Capirio, IX-18-1986, B. K. Dozier, coll.; 2, 12 mi. S. Capirio, VII-22-1984, B. K. Dozier, collector; 3, 9 mi. S. Cuatro Caminos, 11-VII-1972, collector G. H. Nelson; 7, 17 mi. S. Capirio, VI-17-1987, beating *Prosopis* sp., B. K. Dozier, collector; 1, 11 mi. E. Apatzingan, VIII-20-1954, E. G. Linsley, J. W. MacSwain, R. F. Smith, collectors; 1, 3 km N. Capirio, 12 July 1981, collector John D. Pinto; 2, km 167.5, Hwy 37, 32 km S. Cuatro Caminos, N 18°47.643' W 102°04.782', 230 m, 24-25-VII-2003, C. L. Bellamy, CLB 866, misc. beating; 5, MX 37, 98 km S. of Nueva Italia, 13/VII/2006, Skillman & Hildebrandt, black light; 2, same data as previous except 15-VII-2006; 2, MICH10, 4 km N. of Morelos de Infiernillo, 15-VII-2006, Skillman & Hildebrandt, beating acacia; GUERRERO: 7, Hwy. 95, 3.6 km S. Zumpango del Río, G. H. Nelson, 24-VII-[19]92, on *Acacia cochliacantha*; 1, 10.3 mi S. Iguala, July 23, 1981, Bogar, Schaffner, Friedlander; 1, 2.4 mi. N. Chilpancingo, VI-24-1983, B. K. Dozier, coll.; 11, Iguala, VII-23-[19]83, J. Chemsak, A. & M. Michelbacher; 3, Mexcala, VI-29-[19]51, at light, H. Evans; 1, 24 mil South Iguala, VII-18-1963, F. D. Parker, L. A. Stange, collectors; 1, 10 mi. North Zumpango, VII-22-1963, F. D. Parker, L. A. Stange, collectors; 2, Mexcala, VI-29-[19]51, P. D. Hurd, coll.; 4, Hwy. 95, 3.6 km S. Zumpango del Río, 23-VII-[19]92, G. H. Nelson, on *Acacia cochliacantha*; 2, Hwy. 95, 3.6 km S. Zumpango del Río, 7-VII-[19]92, G. H. Nelson, on *Acacia cochliacantha*; 1, Hwy. 95, 2 km S. Milpillas, G. H. Nelson, 6-VII-[19]92, on *Acacia cochliacantha*; 1, Hwy. 92, 5.9 km S. Río Mezcala, G. H. Nelson, 22-VII-[19]92, dead limb *Zizyphus amole*; 1, Hwy. 95, 3.6 km S. Zumpango del Río, G. H. Nelson, 25-VII-[19]92, on *Acacia cochliacantha*; 1, 16 km NW Iguala, IX-12-15-1982, elev. 1160 m, J. A. Powell, J. A. Chemsak, at light; 1, Iguala, VIII-17-[19]81, J. A. Chemsak, collector; 2, 23 km W. Iguala, 18 Sept. 1989, R. Turnbow; 1, Iguala, VIII-21-1981, J. Chemsak, A. & M. Michelbacher; 1, 12.4 km W. Tetelcingo, 1900', 21 Sept. 1989, R. Turnbow; 1, 25 km S. Taxco, 27 July 1987, R. Turnbow; 2, 59.4 km N Chilpancingo, 26 July 1987, R. Turnbow; 2, same data as previous except 24 July 1987; 2, 3 km S. Xalitla, Hwy 95, 610 m, N 18°001' W 98°24', July 17, 1992, C. L. Bellamy, coll.; 1, same data as previous except July 1, 1992; 1, 3 km N. Mezcala, 17°54, 99°35, 16-VII-1992, R. L. Westcott; 1, 5 km S. Mezcala, 595 m, 17°54', 99°35', 16-VII-1992, R. L. Westcott; 1, 10–12 km E Xochipala, 795–885 m, N 17°48', W 98°24–25', June 30, 1992, C. L. Bellamy, coll.; 2, 5 km S. Mezcala, Hwy. 95, 595 m, N 17°54' W 99°35', July 16, 1992, C. L. Bellamy, coll.; 1, 3.5 km S. Zumpango del Río, June 30, 1992, C. L. Bellamy, coll.; 1, 3 km S. Mezcala, 550 m, N 17°54' W 99°35', 16-VII-[19]92, R. L. Westcott; 1, Zopilote Cyn., 20-28-VI-[19]89, Jim Cope, coll.; 1, 6 km norte de Mexcala, 13/VI/2001, H. Brailovsky, E. Barrera; 1, Planta Nueva, Mezcala, trampa de luz, 10/VII/1969, H. Pérez; 1, 6 miles E. Xachipala, 3500', 5-6/VII/1987, Kovarik & Schaffner; COLIMA: 2, MX 120, 18 km W. of Tepalcatepec, 13-VII-2006, Skillman & Hildebrandt, slash pile, acacia, weeds; PUEBLA: 1, Puerto del Gato, 1220 m, 12 km NW Tehuiztzingo, July 4, 1992, C. L. Bellamy, coll.; 1, Tepexco, 28/VI/1996, 183985 N, 984347 O, H. Brailovsky, E. Barrera; 1, 14 mi. W. of I. de Matamoros, 3-VII-1992, B. K. Dozier, coll; ESTADO DE MEXICO: 5, Tejupilco, Temascaltepec, VII-[19]33, H. E. Hinton, R. L. Usinger, collectors, on mesquite, beating; 1, Tejupilco, VII-11-1932, alt. 3960 ft., H. E. Hinton, coll.; MORELOS: 1, Alpuyecá, 27 June, 1951, P. D. Hurd, coll.; 2, Yautepec, V-4-1962, F. D. Parker, L. A. Stange, collectors; 1, Tlaquiltenango, 4 km NW de Santiopa, 18.44630° N, 98.95906° W, Alt. 1211 m, Selva Baja Caducifolia, Trampa de Luz, 04-VI-2013, Col. Reyes, Hernández; 2, same data as previous, except Col. R. Reyes, J. A. Hernández; 2, same data as previous, except Col. V. Toledo, J. Martinez, I. Villanueva; 2, same data as previous, except 18.44170° N, 98.97671° W, Alt. 1094 m, 05-VI-2013, Col. V. Toledo, J. Martinez, I. Villanueva; 1, same data as previous, except 18.44115° N, 98.95642° W, Alt. 1096 m, Col. R. Reyes, J. A. Hernández; 2, same data as previous, except 3 km NW de Santiopa, 18.44292° N, 98.95771° W, Alt. 1166 m, 06-VI-2013, Col. Toledo, Martinez, Villanueva; 1, same data as previous, except 18.44239° N, 98.95800° W, Alt. 1150 m, Col. Reyes, Hernández; SAN LUIS POTOSI: 2, Tamazunchale, 21 June, 1963, D. Bixler; OAXACA: 1, 7 km SSE Tehuantepec, 13-VII-1992, R. L. Westcott; 1, 18.7 km W, 1.8 km SW Tehuantepec, 185 m, 13-VII-1992, R. L. Westcott; 4, 7.5 km SE Las Majadas, Km 195.5, Hwy. 190, N 16°25.003' W 95°40.189', 375 m, 17-VII-2003, C. L. Bellamy, CLB842, misc. beating; 2, 10.5 km N. Rincón Moreno, km 21, Hwy. 200 (new), N 16°18.34', W 95°16.876', 90 m, 15-vii-2003, C. L. Bellamy, CLB 835, misc. beating; 2, 16 km NE Tejuantepec, 12/13-VII-1992, R. L. Westcott, coll.; 1, Totolapan, 30/VI/1996, 3000 m, 16 39 50 N, 96 16 75 O,

H. Brailovsky, E. Barrera; 1, Hwy. 190, 8 km E. El Camarón, 3669', TDF/Oak, VI-24-2014, J. Rifkind, coll., beating *Acacia pennatula*; 1, 3 mi. W. of Tehuantepec, VII-9-1965, collector G. H. Nelson, on dead limbs pink flowered *Acacia*; 2, 3 mi. W of Tehuantepec, VII-19-1965, collector G. H. Nelson, on *Cercidium pleurifoliatum* Micheli [sic]; 3, 5 mi. W. El Camaron, 20-VI-1969, J. E. H. Martin; 1, 11.6 miles West of Jalapa de Marques, July 12, 1971, taken at light, Clark, Murray, Hart, Schaffner; 1, 2.7 mi nw. El Camaron, July 24, 1973, taken at light, Mastro & Schaffner; 3, 2.7 mi. nw. El Camaron, July 21-22, 1974, taken at light, Clark, Murray, Ashe, Schaffner; 1, 31 mi. S. Totolapan, 750 m elev., Code M-66, 21-VIII-1970, A. Hardy & B. Cheary; 1, 3 mi. W. of Tehuantepec, VII-20-1965, collector G. H. Nelson; 1, 5 mi. W. of Tehuantepec, VII-1-1972, collector G. H. Nelson; 1, Tehuantepec, VII-23-1964, Paul J. Spangler; 1, 7 mi. W. of Tehuantepec, 2-VII-1972, collector G. H. Nelson; 1, 3 mi. W. of Tehuantepec, VII-2-1965, collector G. H. Nelson, on dead limbs; 2, 2 mi. NW Totolapan, 3300 ft., VII-6-[19]53, Univ. Kans. Mex. Expedition; 1, 13 km west of Tehuantepec, Aug. 11, 1967, el. 100', H. R. Burke and J. Hafernik; 1, 2.7 mi. nw. El Camaron, July 13, 1971, taken at light, Clark, Murray, Hart, Schaffner; 1, 6 miles west of Jalapa del Marques, July 23, 1973, taken at light, Mastro & Schaffner; 1, Hwy 190, 10 km W. Tehuantepec, 11-vii-[19]92, G. H. Nelson, on dead limbs; 6, Hwy. 190, 55 km NW Tehuantepec, 16-vii-[19]92, G. H. Nelson, on *Acacia cochliacantha*; 4, Hwy 190, 16 km E Tehuantepec, 13-VII-[19]92, G. H. Nelson, on *Haematoxylon*; 2, same data as previous except 14-VII-[19]92. Paratypes are deposited in CASC, CIUM, CJSC, CNIN, CSCA, EMEC, FMNH, JNRC, KSUC, LACM, RHTC, SEMC, TAMU, UCRC, and WFBM.

Diagnosis. Specimens of *Cymatodera* from the southern half of México can be reliably assigned to this species if they possess the following combination of characters: integument dark brown, with at most a faintly indicated pale median elytral fascia; 8.0 mm or greater in length; pronotum transversely wrinkled; pubescence fine, short, silvery; elytral punctures serially arranged, obsolete before apices. In addition, the males have a uniquely shaped pygidium (Figs. 5–7) and a distinct pattern of scarlike metasternal carinae (Fig. 8). Females of *C. mexicana* and *C. kolbei* are superficially similar, but the latter are generally paler and have the pronotum coarsely, very densely punctate rather than shining and transversely wrinkled.

Description. (Holotype). Length: 13.0 mm. Form: elongate; elytra subparallel. Color: dark brown; umbones and an indistinct median elytral band, paler; apical 1/2 of antennomere 11 testaceous. Head: shining, densely, very finely punctate, sparsely setose; antennae moderately elongate; antennomeres as follows: 2 slightly shorter than 3; 3 and 4 subequal; 5 slightly longer than 4; 6 and 7 subequal, each slightly shorter than 5; 8 slightly shorter than 7; 9 and 10 subequal, each slightly shorter than 8; 11 elongate-ovate, as long as 10. Pronotum: elongate (ratio of length to width 26:17), subflattened on disk above; surface shining, rather inconspicuously vested with fine, mostly short, suberect silvery setae; integument distinctly transversely rugulose and very finely, moderately densely but inconspicuously punctate. Elytra: elongate (ratio of length to width 8:3); humeri weakly rounded; anterior margin broadly V-shaped; sides subparallel, arcuately convergent posteriorly to separately rounded, slightly dehiscent apices; dorsum rather broadly subflattened with a gradual apical slope; integument shining, moderately densely but inconspicuously set with short and slightly longer fine, suberect, silvery setae, these somewhat more densely arranged and conspicuous on posterior 1/2; punctures arranged in longitudinal rows, moderately coarse and cribrate anteriorly but progressively finer and more shallow posteriorly until becoming obsolete at posterior 1/5; diameter of striae punctures smaller than width of interstriae integument on disk; surface of interstriae area extremely finely punctate. Metaventricle: with a broad, flat, triangulate area at middle, its surface asperate, pustulate and bearing a distinct pattern of scarlike carinae, arranged as in Fig. 8. Abdomen: ventrites 1–4 with surface shallowly, coarsely punctate and wrinkled, posterior margins membranous at middle; ventrite 5 with surface more deeply, distinctly punctate and roughened, sides obliquely convergent, hind margin as in Fig. 6; ventrite 6 with surface very coarsely, irregularly asperate–punctate, bearing a short longitudinal carina at base; shape complex: sides deeply furrowed and flanged, with posterior angle of each flange produced to a short, sharp, triangular point below, and a longer, slightly decurved apically blunted point above (Figs. 5–6); hind margin arcuately emarginate; tergite 6 densely, shallowly, rather coarsely asperate; form elongate, with broadly arcuate sides, posterior margin feebly emarginate (Fig. 5). Aedeagus: apex of phallus upturned.



FIGURES 4–10. 4. Habitus of *Cymatodera mexicana* Rifkind, **n. sp.** (holotype male). 5. Pygidium (dorsal view) of male *Cymatodera mexicana*. 6. Pygidium (ventral view) of male *Cymatodera mexicana*. 7. Pygidium (lateral view) of male *Cymatodera mexicana*. 8. Detail showing metaventral carinae of male *Cymatodera mexicana*. 9. Paratype (live specimen) of *Cymatodera mexicana*. 10. Collection locality of previous specimen: the habitat, east of El Camarón, Oaxaca, México, is tropical deciduous forest transitioning to oak forest. The specimen was collected by beating *Acacia pennatula*.

Variation. Length of available specimens ranges from 8.0 mm to 13.75 mm. Some specimens are reddish brown rather than dark brown. The pale median elytral fascia is obsolete in a small minority of examples. The female metaventrite is rugulose, and lacks the asperate sculpturing and carinae of the male. The pygidium of the female appears as follows: ventrite 5 with sides oblique, hind margin rather deeply, semicircularly emarginate; ventrite 6 rather short, with sides feebly convergent, surface slightly tumid anterior to hind margin, hind angles rounded, hind margin feebly, triangularly incised at middle; tergite 6 with sides oblique, hind angles rounded, hind margin slightly inflexed, minutely notched at middle.

Etymology. I chose the specific epithet “mexicana” as an appropriate descriptor for this most widely distributed Mexican *Cymatodera* species.

Distribution. As the extensive paratype series attests, the new species has been collected in numbers throughout the southern half of México. It is known from the following Mexican states: Michoacán, Colima, Morelos, San Luis Potosí, Estado de México, Guerrero, Puebla and Oaxaca. It will doubtless be found in other Mexican states where there is appropriate habitat.

Biology. This species has been taken at light, and beaten from dead limbs and a variety of plants, including *Acacia pennatula* (Schltld. & Cham.) Benth., *Acacia cochliacantha* Humb. & Bonpl. ex Willd., *Haematoxylon* sp., and *Ziziphus amole* (Sessé & Moc.) M.C. Johnst. Based on location and other label data, it seems to be associated

with thorn forest, tropical deciduous forest and the tropical deciduous forest / oak forest ecotone, and ranges in elevation from near sea level to approximately 1100 m (Fig. 10). A male specimen I captured and photographed alive (Fig. 9) did not stridulate when held in the hand (see Rifkind 2006), but energetically and persistently attempted to “sting” with the downturned pygidium.

Remarks. Relationships of the new species are unclear. Like *Cymatodera cicatricula* (described below), *C. mexicana* males have a flattened, roughly sculpted metaventricle bearing scarlike carinae; unlike the former, they possess an essentially concolorous, undecorated elytral integument. The new species has a similar habitus to *C. tlahuica* Rifkind, Toledo & Corona from Morelos and Guerrero, but that species lacks modifications of the metaventricle in the male. Another superficially similar species is *C. kolbei*, discussed above, but here again the male of that species has the surface of the metaventricle mostly smooth, and quite different pygidial modifications (Figs 1–3). The female of *C. kolbei* has a more coarsely punctate pronotum than in *C. mexicana*, and its sixth abdominal ventrite is not tumid basally. The relative phylogenetic significance of these characters must await a more complete descriptive catalog of the genus.

***Cymatodera cicatricula* Rifkind, n. sp.**

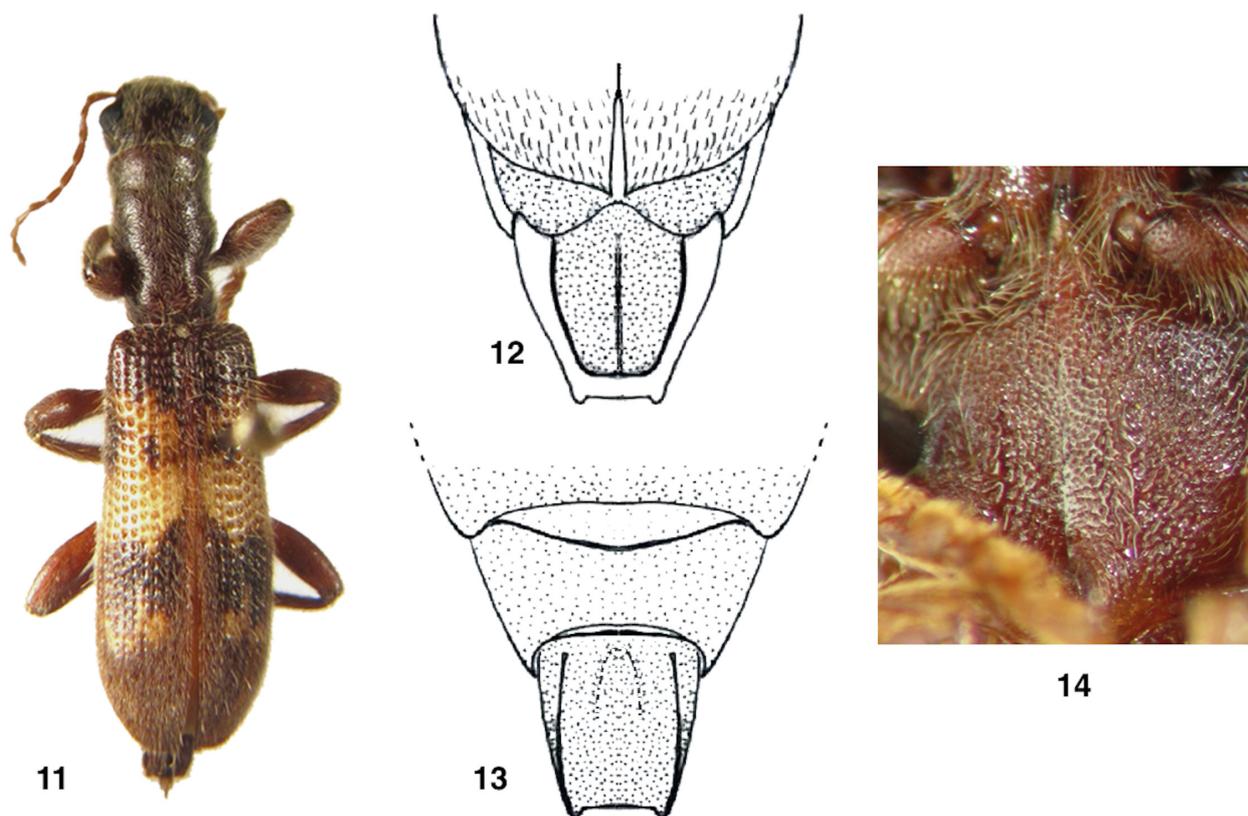
(Figs. 11–14)

Type specimens. Holotype male: México, Chiapas, 2.5 km W Cinco Cerros, at light, 15 Oct. 1988, R. Turnbow. Holotype deposited in CASC. Paratypes: MEXICO, CHIAPAS: 1, [label reads “Oaxaca”—doubtless a misprint] MX190. 2 km W Chiapas Hotel Paty, 20-X-2001, F. Skillman & J. Davidson, at light; 1, Hwy. 190, 7 km E Rizo de Oro, Hotel Paty, June 21, 1991, oak / pine forest, at UV light, J. & E. Beierl, colls.; 1, Hotel Paty, nr. Riso de Oro, X-26-1990, at light, F. Hovore; 1, Municipio de Cintalapa La Mina, 914 m, 14-IX-1981, D. E. & P. M. Breedlove and C. G. Whitefield; 1, 2 mi. SW La Cruces, VIII-8-[19]54, A. A. Alcorn; OAXACA: 1, Tequisistlán, IV-5-1962, F. D. Parker, L. A. Stange, collectors; 1, Tequisistlán, 4 Jan. 1956. Paratypes are deposited in JNRC, RFTB, SEMC, UCRC, and WFBM.

Diagnosis. No other *Cymatodera* species possesses the following combination of characteristics: a subtly unique variegated elytral patterning as in Fig. 11; the presence of elongate whitish setae on the pronotum and elytra; coarse, cribrate elytral punctures arranged in series; sinuate elytral apices. The male is further distinguished by the shape of its pygidium (Figs. 12–13), and its scabrous metaventricle (Fig. 14), which bears an elongate pair of shallow carinae. The new species’ affinities are unclear, but it probably belongs to a group (including *C. bellamyi*, for example) wherein the male metaventricle has become rather flattened and asperate or scabrous — presumably a modification for grasping the female during copulation.

Description. (Holotype). Length: 14.90 mm. Form: elongate; cylindrical. Color: integument reddish brown; mouthparts, antennae, and tarsi paler; elytral anterior 3/4 decorated with dark brown and pale testaceous, transverse, sinuate fasciae of variable breadth, definition and completeness (Fig. 11); posterior 1/4 uniformly reddish brown. Head: measured across eyes, wider than pronotum; surface finely, densely punctulate; frons conspicuously, if rather thinly, set with anteriorly directed, wavy, reclinate and suberect whitish setae of moderate length, forming a leaflike pattern with its apex toward the cranium; antennae of moderate length, overall rather subflattened; antennomere 2 subconical, shorter than 3; antennomeres 3–5 subserrate, subequal in length, each longer than antennomeres 6–10, which are slightly serrate; antennomere 11 rather short (not longer than antennomere 10), and slightly tapered apically. Pronotum: elongate (ratio of length to width 7:4); disk subflattened; surface closely, rather fine punctate and rugulose, moderately densely and conspicuously clothed with short, subrecumbent, white setae, interspersed with fewer longer, erect, white setae. Scutellum: densely setose. Elytra: subparallel, elongate (ratio of length to width 33:14), widest at approximately posterior 1/3; anterior margin transverse; sides slightly, gradually inflexed medially, broadly rounded posteriorly; apices individually sinuate, dehiscent; surface rather coarsely, cribrately and serially punctate, punctures growing smaller posterior to middle, obsolete on posterior 1/4 which is instead shallowly and finely roughened; vestiture on anterior 3/4 rather sparse, consisting of short, reclinate, pale setae, interspersed with fewer longer, erect pale setae; posterior 1/4 more densely set with fine, pale, reclinate setae, intermingled with fewer elongate, pale setae. Metaventricle: rather broadly subflattened; surface densely covered with fine, pale, suberect setae of moderate length; integument finely but distinctly asperate–rugulose, with a pair of shallow, elongate, longitudinal, scarlike carinae (Fig. 14). Abdomen: ventrites 1–4 with surface finely granulate–punctate, hind margins broadly truncate, rather deeply, arcuately

membranous; ventrite 5 (Fig. 13) with sides oblique, hind angles acute, posterior margin deeply, arcuately emarginate; ventrite 6 (Fig. 13) elongate, rectangular, surface distinctly granulate–rugulose; each side with a slightly arcuate carina extending from base to posterior margin; disk with an indistinct, wishbone-shaped ridge; hind angles extended into short projections; posterior margin otherwise transverse; tergite 5 with hind margin bisinuate laterally, and a broad V-shaped inflection at middle; tergite 6 (Fig. 12) narrower and shorter than ventrite 6, sides slightly, arcuately tapering posteriorly; hind margin subtruncate. Aedeagus: phallus slightly upcurved posteriorly, with apex bearing a slightly pointed knob; lateral lobes feebly incurved at apex.



FIGURES 11–14. 11. Habitus of *Cymatodera cicatricula* Rifkind, n. sp. (holotype male). 12. Pygidium (dorsal view) of male *Cymatodera cicatricula*. 13. Pygidium (ventral view) of male *Cymatodera cicatricula*. 14. Detail showing scarlike metaventral carinae of male *Cymatodera cicatricula*.

Variation. Females have the metaventrite shining, moderately setose and finely punctate, and without carinae. Ventrite 5 has the sides obliquely convergent, and the posterior margin shallowly, arcuately emarginate at middle. Ventrite 6 and tergite 6 are oblique laterally and rounded at the posterior margin, either conjointly or with the tergite slightly surpassing the ventrite. Specimens range from 11.0 mm — 14.9 mm in length. Some individuals are paler overall than the holotype.

Etymology. The specific name makes reference to the scarlike metasternal carinae of the male.

Distribution. Known from western Chiapas state and eastern Oaxaca state, México.

Biology. Beetles were attracted to light in oak / pine forest.

Cymatodera doda Rifkind, n. sp.

(Figs. 15–18)

Type specimens. Holotype male: México, Jalisco, Est. Biol. Chamela, VII-8/16-[19]85, at light, J. Chemsak, H. Katsura, A. & E. Michelbacher, collectors. Holotype deposited in EMEC. Paratypes: MEXICO, JALISCO: 1, Chamela, Vic. Est. UNAM, 9-19-VII-1993, J. Huether; 1, 8.6 km. N Chamela, mv + bl, 18 July, 1987, R. Turnbow; OAXACA: 1, 2.1 mi. NW Totolapan, August 7, 1980, Schaffner and Friedlander; 1, 23 mi. south Matias Romero,

IV-6-1962, F. D. Parker, L. A. Stange, collectors; NICARAGUA: 1, Granada, Res. Silv. Domitila, vi-2/5-2013, day collecting, 11.71° N, 85.95° W, el. abt. 60–100 m, B. Raber, D. Heffern & E. van den Berghe; 1, same data as previous except collected at “merc. vapor lite”; COSTA RICA, GUANACASTE PROVINCE: 2, La Pacifica, nr Cañas, VI-4-1989, F. Hovore, coll.; 1, Hacienda La Pacifica, 9 June, 1973, 75 meters, Ginter Ekis; 1, “La Pacifica,” nr Cañas, 20/21 May, 1985, F. T. Hovore, coll.; 1, La Pacifica, nr. Cañas, V-22-26-[19]84, E. Riley, D. Rider & D. LeDoux; 1, Est. Murciélago, 8 km Suroeste de Cuajiniquil, 100 m, 3 a 8 May 1993, F. A. Quesada [INBIO CODE:] L–N320300, 347200, INBIO CR1001, 194408. Paratypes are deposited in CNIN, WFBM, DJHC, EGRC, JNRC and RHTC.

Diagnosis. Males are unique among known congeners by virtue of their nipple-like metathoracic projections and the unusual shape of the sixth abdominal ventrite (Figs. 16–17). The nearly cristate condition of the elytral integument between the rows of punctures will serve to distinguish females of *C. doda* from other small, robust *Cymatodera* species possessing similar subserrate antennae (e. g. paler specimens of *C. sobara* Barr).

Description (Holotype). Length: 5.20 mm. Form: small, stout, body rather deep in dorsoventral cross section (Fig 15). Color: reddish testaceous; head and pronotum reddish brown, sterna a little darker. Head: surface closely, rather shallowly punctate, moderately set with short, fine, mostly reclinate, pale setae; eyes large, coarsely faceted; antennae elongate (reaching beyond elytral humeri when laid alongside), antennomeres rather robust: antennomeres 2–10 subserrate; 2 much shorter than 3; 3 slightly shorter than 4; 11 longer than 10, ovate-elongate and gradually tapered apically. Pronotum: constricted before middle and more acutely inflected posterior to median lobe; surface rather rough, closely punctate and arenose; vestiture as on head but with an intermixture of a few longer, erect, more robust, brownish setae. Scutellum: densely setose. Elytra: subrectangulate, ratio of length to maximum width 39:20, rather broadly flattened above, slightly depressed at middle of disk, deep in cross section with a precipitous apical slope; surface cribrate–punctate; punctures large, closely arranged in longitudinal series (punctures somewhat smaller posteriorly, but attaining apices); area between punctures narrow, subcristate; vestiture sparse, composed of erect and suberect, rather stout, testaceous setae of moderate length. Metaventrite: uniquely shaped; surface shining, sparsely setose, set with rather large punctures laterally; posterior deeply sulcate at middle, each side produced posteriorly into an elongate, slightly divergent and slightly downturned nipple-like tubercle (Fig. 16). Abdomen: ventrite 5 deeply, subtriangularly emarginate posteriorly; ventrite 6 (Fig. 17) raised and flattened ventrally, campanulate (narrower anteriorly), with a darkly sclerotized “false” posterior margin deeply U-shaped, and paler true margin slightly, arcuately emarginate posteriorly; tergite 6 acutely deflected ventrally, oblique laterally, broadly arcuately emarginate posteriorly. Aedeagus with lateral lobes rather robust, subacute posteriorly; phallus lanceolate apically. Legs: each metatibia with a distinct sinuate carina internally at proximate end (Fig. 18).

Variation. Some specimens exhibit a slight darkening of the elytral dorsal integument ante- and postmedially; two specimens from Jalisco have the faint indication of a pale median elytra fascia. Females have abdominal ventrite 5 with sides oblique, hind margin rather broadly, shallowly emarginate posteriorly; ventrite 6 small, arcuate posteriorly, more or less conjointly rounded with tergite 6. Females lack tubercles on the metaventrite and the enlarged metatibial carinae of the males.

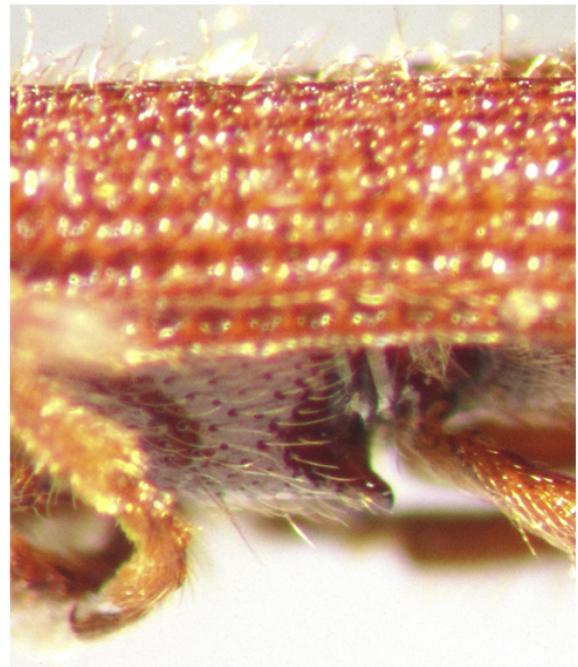
Etymology. The new species is named for Carol Ann Doda, America’s pioneering ecdysiast and 1960s cultural icon. The patronymic is treated as a noun in apposition for the sake of euphony.

Distribution. Known from the Pacific versant of México from Jalisco to the Isthmus of Tehuantepec, then south to western Nicaragua and northwestern Costa Rica.

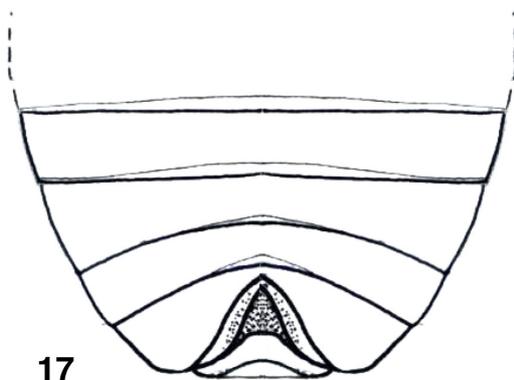
Biology. This species appears to be associated with tropical deciduous forest throughout its range. It has been collected at light.



15



16



17



18

FIGURES 15–18. 15. Habitus of *Cymatodera doda* Rifkind, n. sp. (holotype male). 16. *Cymatodera doda* (holotype male): detail of metaventrite, showing nipplelike projections. 17. Pygidium (ventral view) of male *Cymatodera doda*. 18. *Cymatodera doda*: detail of male metatibial carina.

***Cymatodera rileyi* Rifkind, n. sp.**

(Fig. 19)

Type specimens. Holotype male: Honduras, Atlántida, P[arque] N[acional] Pico Bonito, Esta. CURLA, mv + bl, 17 July 2001, B. Turnbow. Holotype deposited in CASC. Paratypes: 1, Honduras, Atlántida, base of Pico Bonito behind La Ceiba airport, 17 July 2001, black light + Hg vapor, Cl. L. Smith; 1, Belize, Cayo Dist., Las Cuevas Rsch. Sta., 580 m, N16°43.971' W8°59.196', 1-4-VI-2008, Ratcliffe, Cave, Jameson, Orozco; 1, México, Quintana Roo, 20 km N. Felipe Carillo Puerto, VI-12-14-1983, E. Riley. Paratypes are deposited in EGRC, JNRC and UGCA.

Diagnosis. Separable from other species of *Cymatodera* by virtue of its unique pattern of sixteen integumental spots (Fig. 19). It appears closest to *C. insignis* Schenkling from Guatemala and Costa Rica, but all specimens I have examined of that species lack markings on the anterior elytral disk, and have the posterior elytral marking in the form of a transverse fascia rather than a macula.



19

FIGURE 19. Habitus of *Cymatodera rileyi* Rifkind, n. sp. (holotype male).

Description. (Holotype). Length: 9.85 mm. Form: medium sized, moderately elongate, slightly explanate posteriorly. Color: testaceous, except eyes black; body decorated with 16 small piceous maculae as follows: a pair situated dorsolaterally at anterior margin of pronotum; a larger trapezoidal marking laterally on either side of pronotal posterior margin; a pair of small triangular spots at elytral base, either side of scutellum; a spot on each humerus; two pairs of maculae on each elytron: one pair at anterior 3/7, the other at posterior 5/12 (the laterally situated spot of each pair not attaining the epipleural margin; the interior spot situated at approximately mid-elytron). The posterior 1/3 of both the elytral suture and the the epipleura are narrowly darkened. Vestiture: head quite thinly set with mostly short, suberect, pale setae; pronotal pubescence substantially longer and more conspicuous, especially at sides; elytra rather sparsely arrayed with medium length, suberect and erect, pale setae; ventral surface sparsely setose. Punctuation: head rather finely, shallowly punctulate; pronotum punctulate anteriorly and finely, shallowly, transversely rugulose on posterior 2/3, lateral foveae distinct; elytra coarsely, serially punctate; punctations larger and deeper anteriorly, growing smaller and more shallow at middle, then indistinct posteriorly; borders of punctate “cells” forming longitudinal striae which are most distinct on elytral

anterior 1/2; metaventrite finely, indistinctly rugulose. Head: eyes moderately prominent, rather coarsely faceted; antennae moderate in length; antennomere 2 half as long as antennomere 3; antennomeres 3–10 elongate, weakly serrate, subequal in length; antennomere 11 elongate, narrowed at apex. Elytra: anterior margin rather conspicuously emarginate at middle; sides slightly deflexed posterior to humeri, then gradually, arcuately expanded to just beyond middle, from where they arcuately converge to broadly and separately rounded, dehiscent apices. Metaventrite: shining, carinae absent. Abdomen: ventrite 5 with hind angles broadly rounded, hind margin arcuately emarginate; ventrite 6 small, with sides oblique, hind angles acute, hind margin triangularly notched at middle; tergite 6 with sides oblique, hind margin subtruncate. Aedeagus with tegmenal lobes tumid, each covered with a spinous armature. Legs: rather short.

Variation. Length ranges from 8.60 mm–10.65 mm. The available specimens are otherwise quite similar. The female is unknown.

Etymology: I am delighted to name this attractive species for Edward G. Riley, who has collected and kindly made available to me several interesting checkered beetles.

Distribution. The Yucatan Peninsula from Quintana Roo, México south to Belize, then east to northern Honduras. This species probably occurs as well in northeastern Guatemala.

Biology. Specimens were attracted to light.

Cymatodera carinipennis Rifkind, n. sp.

(Figs. 20–22)

Type specimens. Holotype male: Guatemala, Izab., Cerro San Gil, 8 km N Las Escobas, 13-VI-1993, 800 m, B. D. Gill. Holotype deposited in CNCI. Paratypes: 1, same data as holotype, except 12-VI-1993. GUATEMALA, IZABAL: 1, Montañas del Mico, Cerro San Gil, Microwave Station, June 9, 1993, MV & UV light, B. Warner, J. Monzón, J. Ryan, colls.; ZACAPA: 1, Road to San Lorenzo, X-8-9-2007, J. & M. Huether; BAJA VERAPAZ: 1, Finca Santa Rosa, 1600 m, 10/20-21/2006, J. & M. Huether; 5, CA 14, Ranchitos del Quetzal, 16-VII-2008, Skillman, C. & L. O'Brien, at light; 2, 1 km SE Purulhá, VI-17–19-2001, at lights, W. B. Warner; 1, 6–9 km E Purulhá, 15,16 April, 1990, J. E. Wappes; 1, Biotopo Quetzal, May 24-31, 1989, J. E. Wappes; MEXICO, CHIAPAS: 1, 11 m S Tapilula, 5500', V-10-1969, Campbell & Bright; 1, Montebello LK Area, June 15-16, 1987, J. E. Wappes; 1, Parque Laguna Belgica, Oct. 3, 1986, J. E. Wappes; 1, 7 km NE Huixtla, 304.8 m altitude, 7-X-1972, D. E. Breedlove. Paratypes are deposited in CASC, CNIN, CSCA, WFBM, JEW and JNRC.

Diagnosis. The new species' distinct longitudinal elytral carinae, narrow zigzag-shaped postmedian elytral fascia, relucet integument, the unique shape of the male pygidium and the male's densely punctate, concave metaventrite will serve to distinguish it from congeners.

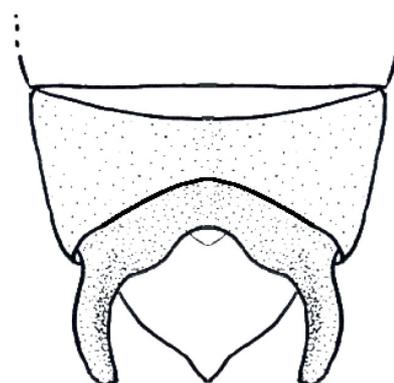
Description. (Holotype). Length 8.70 mm. Form: elongate; integument highly reflective. Color: brown; antennae, mouthparts, tarsi, terminal abdominal ventrite and tergite, and elytral sutural ridge, testaceous; elytra (Fig. 20) with a narrow, irregularly sawtoothed, transverse, cream-colored fascia just posterior to middle (complete internally to suture and laterally to epipleura), and a blotchier transverse anteapical band of the same color, incomplete internally and laterally. Head: measured across eyes, wider than pronotum; surface rugulose, sparsely, irregularly punctulate, very sparsely arrayed with mostly adpressed, pale setae; frontal umbo rather pronounced; antennae elongate: antennomere 2 approximately 2/3 the length of antennomere 3; antennomeres 3–10 elongate, subserrate; antennomere 11 expanded at middle, narrowed apically, slightly longer than antennomere 10. Pronotum: elongate (almost 2x as long as wide), surface shining, impunctate, clothed with a scattering of long, suberect, pale setae; transverse impression strongly indicated; antemedian tumescences distinct; posterior antemarginal tumescences pronounced. Elytra: elongate (ratio of length to maximum width 8:3); widest at about posterior 1/3; vestiture sparse, consisting of a few mostly suberect, pale setae of moderate length; surface coarsely, deeply, but not densely, punctate (punctures less pronounced at posterior 1/5); each elytron bearing a distinct longitudinal carina at middle (Fig. 21) originating behind anterior margin and extending to approximately posterior 1/6; elytral sutural margins also elevated, and elytral sides laterad to midelytral carinae subcarinate; apices separately rounded, dehiscent. Metaventrite: densely punctate-asperate, broadly, shallowly concave at middle, lacking carinae. Abdomen: ventrite 5 broadly, arcuately emarginate posteriorly; ventrite 6 (Fig. 22) elongate; deeply, arcuately emarginate at middle, posterior angles produced as subspatulate, slightly oblique, apically rounded lobes; tergite 6 elongate, sinuately converging posteriorly; apex produced to a short, triangular point.



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21



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FIGURES 20–22. 20. Habitus of *Cymatodera carinipennis* Rifkind, n. sp. (holotype male). 21. *Cymatodera carinipennis*: detail of elytral carina. 22. Pygidium (ventral view) of male *Cymatodera carinipennis*.

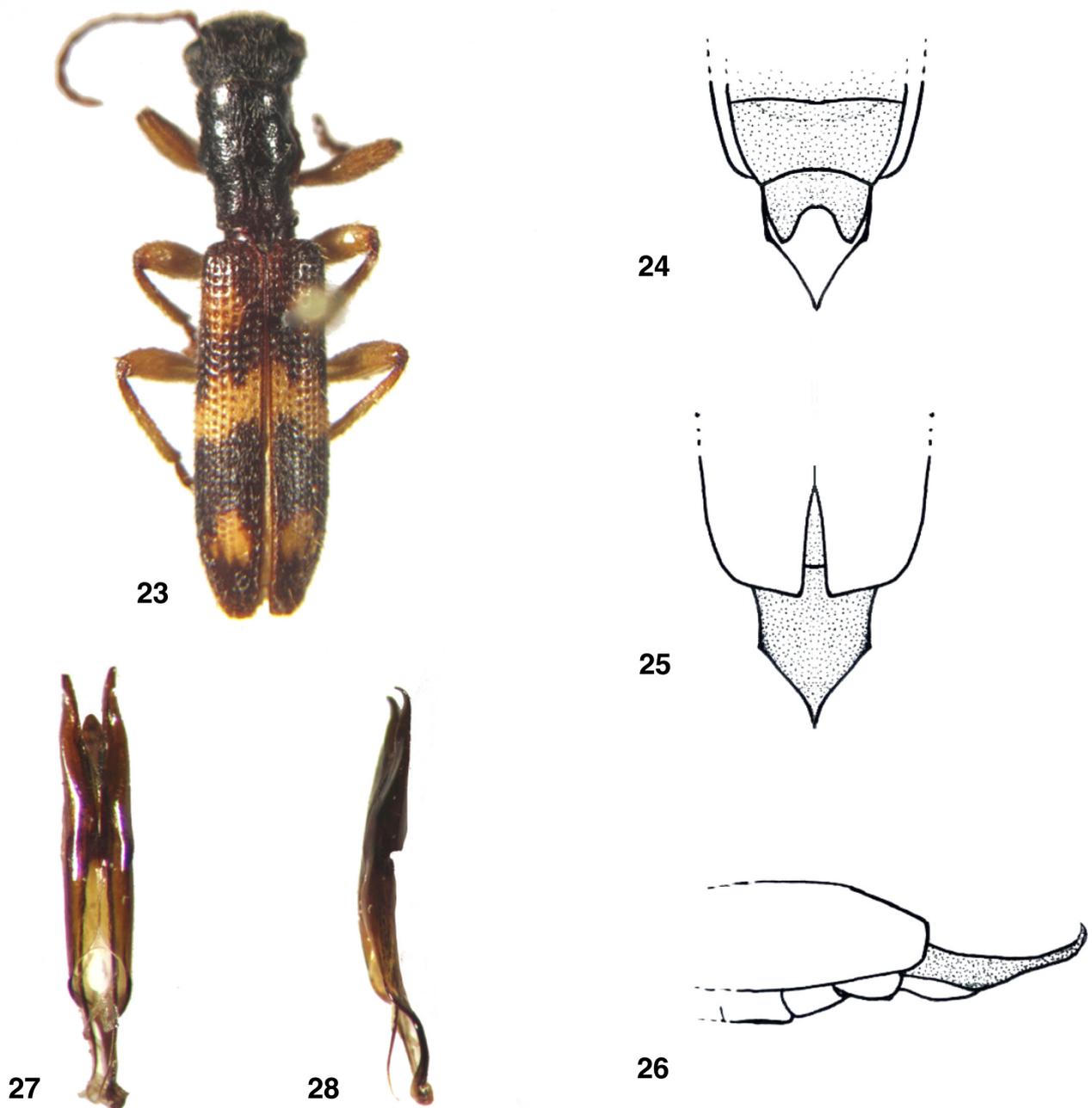
Variation. Length ranges from 8.70–10.65 mm. Some specimens are darker than the holotype. The female differs from the male in several respects: the metaventrite is convex and nearly glabrous; ventrite 6 and tergite 6 are gradually tapered laterally and broadly subtruncate at their posterior margins. A specimen from Oxchuc, Chiapas, México—omitted from the paratype series—appears similar, but with somewhat more shortened and posteriorly expanded elytra. Until additional specimens from this population become available, it is impossible to determine if these differences are within the range of variation of *C. carinipennis*, or indicative of a different species.

Etymology. The specific name refers to the new species' carinate elytra.

Distribution. Central and northeastern Guatemala and the Mexican state of Chiapas.

Biology. Specimens were attracted to light. The records noting elevation indicate these beetles were collected between 305 m and 1676 m.

***Cymatodera matehualacaligoides* Rifkind, n. sp.**
(Figs. 23–28)



FIGURES 23–28. 23. Habitus of *Cymatodera matehualacaligoides* Rifkind, **n. sp.** (holotype male). 24. Pygidium (ventral view) of male *Cymatodera matehualacaligoides*. 25. Pygidium (dorsal view) of male *Cymatodera matehualacaligoides*. 26. Pygidium (lateral view) of male *Cymatodera matehualacaligoides*. 27. Aedeagus (dorsal view) of *Cymatodera matehualacaligoides* (holotype male). 28. Aedeagus (lateral view) of *Cymatodera matehualacaligoides* (holotype male).

Type specimens. Holotype male: México, Quintana Roo, 12 km N F. Carillo Puerto, 19-x-1991, F. W. Skillman, Jr., beaten / slash. Holotype deposited in CSCA. Paratypes: MEXICO, QUINTANA ROO: 1, 22 km S.W. Cancun, 17-x-1991, F. W. Skillman, Jr., beaten / old slash; YUCATAN: 2, 3 mi. E. Chichen Itza, 23-x-1991, F. W. Skillman, Jr., beaten; 1, Uxmal at ruins, 22-x-1991, F. W. Skillman, Jr., on flowers; 1, 19 km S. W. Espita, 24-x-1991, F. W. Skillman, Jr., roadside veg.; 1, Libre Unión, 13 Oct., 1976, Cate & Clark; CAMPECHE: 1, 3.8 mi N Escarega [sic] [=Escárcega], 9 Oct., 1976, Cate & Clark. Paratypes are deposited in JNRC and TAMU.

Diagnosis. The male is readily separable from congeners by its uniquely shaped pygidium. Most similar in facies to *C. grossa* Gorham (known from the states of Oaxaca and Veracruz, México), *C. valida* Gorham (a Guatemalan species), *C. sinuosa* Burke (from Honduras and El Salvador), and the recently described *C. bellamyi*

Rifkind (from Oaxaca, México), *C. matehualacaligoides* is the only one among them with the 6th abdominal tergite elongated, pointed and upturned at its apex. Determination of females relies on association with male specimens, but unassociated female specimens from the Yucatan Peninsula with this facies are likely to be this species.

Description. (Holotype). Length: 11.90 mm. Form: elongate. Color: reddish brown; abdomen paler; antennae, mouthparts and legs testaceous; elytra with three sets of testaceous markings (Fig. 23), the sinuate median fascia complete to lateral margins. Head: measured across eyes wider than the elytra at humeri; antennae moderately elongate; antennomeres subserrate; antennomere 3 a little longer than antennomere 2; antennomere 11 a little longer than antennomere 10, tapered posteriorly, narrowly, obliquely subtruncate at apex; surface densely punctulate and shallowly rugulose, thinly set with subrecumbent and erect, fine, pale setae. Pronotum: subflattened on disk; surface shining, inconspicuously punctate at anterior margin; shallowly, transversely rugulose throughout; vestiture as on head. Elytra: elongate (almost 3x as long as wide), sides subparallel, very gradually, arcuately convergent apically beginning at about posterior 3/10, apices feebly sinuate, slightly dehiscent; surface with coarse, densely set, rather deep punctures arranged in striae; punctures shallower posterior to middle, nearly obsolete at posterior 1/5; vestiture thin, inconspicuous, composed of mostly fine, rather short, erect pale setae intermingled with fewer longer, erect and suberect pale setae. Metaventricle: shining, very finely punctulate, moderately densely but inconspicuously clothed with fine, pale erect setae. Abdomen: shining, rather sparsely punctulate and shallowly roughened, thinly setose; ventrite 5 rather deeply, transversely concave before hind margin, hind margin broadly, arcuately emarginate; ventrite 6 (Fig. 24) with sides weakly convergent to narrowly rounded, subacute hind angles, posterior margin rather deeply, arcuately emarginate at middle; tergite 6 (Fig. 25) elongate, concave ventrally, sides subparallel to just posterior of middle, then obliquely convergent, with apex produced into an acute upturned spine (Fig. 26). Aedeagus: lateral lobes produced apically into acute, upturned spines (Figs. 27-28). Legs: all femora rather strongly developed.

Etymology. the specific epithet makes reference to the shape of the male 6th abdominal tergite, which is reminiscent of the famous pointy-toed boots worn by men in the Mexican town of Matehuala, San Luis Potosí (matehuala + caligoides (Latin “like a boot”).

Variation. Length ranges from 9.80 to 14.75 mm. The female has the 6th abdominal ventrite with the hind margin broadly rounded, slightly surpassed by the slightly more narrowly arcuate hind margin of tergite 6.

Distribution. The Yucatan Peninsula of México.

Biology. This species has been taken beating slash and roadside vegetation, and on flowers. It appears to be active in fall (October).

***Cymatodera brailovskyi* Rifkind, n. sp.**

(Figs. 29–30)

Type specimens. Holotype male: México, Colima, Lago La Maria, 4100', July 22, 1995, beating, J. Rifkind, A. Reifschneider, colls. Holotype deposited in CSCA. Paratypes: 1, same data as holotype; 1, México, Colima, Confradía de Suchitlán, 4000', July 21, 1995, J. Rifkind, A. Reifschneider, colls., beating viny tangle. Paratypes deposited in CNIN and JNRC.

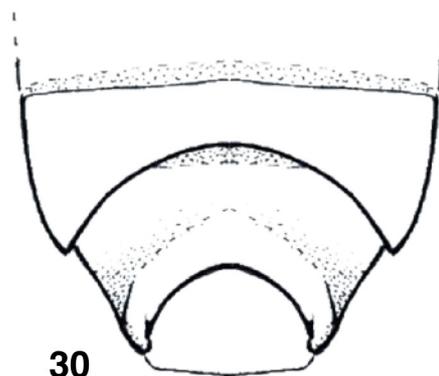
Diagnosis. The new species' large size (> 10 mm), rather massive head, dark integumental ground color, unique elytral patterning, and pygidial shape will in combination serve to distinguish it from its brachypterous and apterous congeners.

Description. (Holotype). Length: 12.40 mm. Apparently flightless. Color: piceus; mouthparts pale (in part); antennomeres 8–11 gradually shading to testaceous distally; elytra with two sets of testaceous markings as in Fig. 29. Head: large, broad (measured across eyes, wider than pronotum); surface closely, deeply punctate and scabrous, thinly vested with whitish setae; antennae elongate, antennomeres subserrate; antennomere 2 three-fourths as long as antennomere 3; antennomeres 10 and 11 subequal; antennomere 11 narrowed apically. Pronotum: elongate, not less than 1/4 the length of elytra; anterior margin arcuate; disk subflattened above at middle; surface shining, more finely and significantly less densely punctate than head, shallowly, transversely rugulose, inconspicuously and rather sparsely vested with short, reclinate and longer, erect, whitish setae. Elytra: elongate (more than 2x as long as broad), dorsoventrally compressed, subflattened above; humeri obsolete and

anterior margin no broader than posterior margin of pronotum (= typical brachypterous or apterous condition); sides expanded posteriorly, widest at approximately posterior 1/3, then arcuately convergent to separately rounded, dehiscent apices; surface shining, moderately densely but irregularly set on anterior 1/2 with rather deep punctures; punctures coarse but not uniform, growing intermittent posteriorly where the integument is shallowly roughened; vestiture as on pronotum. Metaventrite: shortened, deeply sulcate posteriorly at middle, subconical and subspinose laterally. Abdomen: shining; finely, shallowly punctulate and sparsely, inconspicuously pubescent; ventrite 5 with sides arcuate, hind margin semicircularly emarginate; ventrite 6 (Fig. 30) with sides slightly tapered, hind angles prolonged posteriorly, bevelled on their inner face and triangularly pointed at their apices, hind margin rather deeply, arcuately emarginate; tergite 5 with hind angles broadly rounded, posterior margin broadly, shallowly, subtriangularly emarginate; tergite 6 with sides tapering posteriorly, hind margin rather broadly subtruncate.



29



30

FIGURES 29–30. 29. Habitus of *Cymatodera brailovskyi* Rifkind, n. sp. (holotype male). 30. Pygidium (ventral view) of male *Cymatodera brailovskyi*.

Variation. The two paratypes, both males, are very similar to the holotype.

Etymology. I take pleasure in naming this distinctive beetle for Harry Urad Brailovsky Alperowitz, one of Mexico's most distinguished entomologists.

Distribution. Known from the western Mexican state of Colima.

Biology. Specimens were collected during daylight hours on vegetation, one by beating a viny tangle. The elevation at the type locality is approximately 1250 m.

***Cymatodera durangoensis* Rifkind, n. sp.**

(Figs. 31–33)

Type specimens. Holotype male: México, Durango, Hwy. 40, 11.1 km E La Ciudad, 8400', June 23, 1991, J. Rifkind, coll., beating dead pine needles, pine-oak-madroño forest. Holotype deposited in CSCA. Paratypes: MEXICO, DURANGO: 1, 20 km E Ciudad, 2800 m, pine/oak forest, Sept. 6, 1992, beating dead attached branch of living pine, J. Rifkind, A. Reifschneider, colls.; 1, 5 km W La Ciudad, Aug. 2, 1983, E. Giesbert, coll.; 1, 5 km W La Ciudad, 7 Aug., 1983, F. Hovore, coll., oak; SINALOA: 1, 8 mi. W. El Palmito, Aug. 7, 1983, E. Giesbert, coll.; 1, 9 km NE Loberas, 30 Sept. 1990, R. Turnbow. Paratypes are deposited in JNRC, RHTC and WFBM.

Diagnosis. Separable from congeners on the basis of body shape, unique elytral coloration and patterning, the broad dark banding of the meso- and metafemora, and the distinctive appearance of the male pygidium. Affinities are unclear: the new species bears a superficial resemblance to *C. vandykei* Schaeffer, a beetle of coastal California, but the latter species is unequivocally brachypterous, whereas *C. durangoensis* retains the second pair of wings.

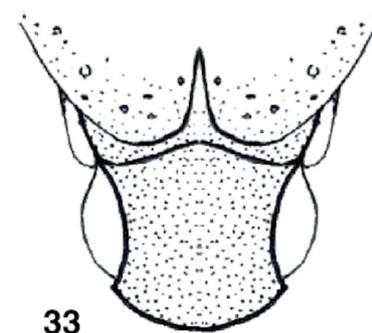
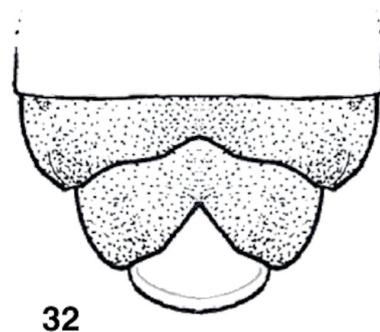
Description. (Holotype). Length: 10.0 mm. Alate. Color: head, antennae, and pronotum reddish brown (head a little darker); mouthparts, venter, legs (in part) testaceous; femora with a broad, indistinct, infuscate annula; elytra (Fig. 31) stramineous with darkened punctures, and dark brown markings as follows: a narrow rectangulate macula on each side extending from base to before elytral midpoint (interrupted by eplipleuron laterally); a broad, irregularly margined, anteapical, transverse fascia that is narrowly interrupted at suture. Head: measured across eyes, wider than pronotum; surface rugulose-punctate, inconspicuously vested with short, reclinate (and fewer longer erect) testaceous setae. Pronotum: moderately subflattened above; basal swellings reduced; lateral foveae distinct; surface shining, rather shallowly, transversely, rugulose-punctate; vestiture as on head. Elytra: teardrop shaped; metathoracic wings present; disk strongly subflattened; anterior margin arcuately emarginate; apices broadly, separately rounded and dehiscent; surface rather coarsely punctate, with punctures forming loose longitudinal striae; vestiture inconspicuous, composed as on pronotum. Metaventricle: shining, nearly glabrous, with a pair of short, sharp tubercles posteriorly. Abdomen (Figs. 32–33): surface very finely granulate, inconspicuously clothed with short, yellowish, very fine setae; ventrite 5 broad, hind angles swollen and rounded, posterior margin bisinuate, with a shallow, angulate inflection at middle; ventrite 6 broadly transverse, concave, sides rounded, not narrowed posteriorly, hind angles rounded, posterior margin with a rather deep V-shaped indentation at middle; tergite 5 with hind angles rounded, posterior margin broadly, arcuately emarginate; tergite 6 rather large, quadrate (surpassing ventrite 6 posteriorly), slightly tumid above, lateral margins broadly, arcuately emarginate, hind angles rounded, posterior margin broadly, arcuately rounded, ventral surface concave, with a rather broad tumid lip at posterior margin.

Variation. Length ranges from 8.5–10.0 mm. Females have ventrite 5 broadly, arcuately emarginate posteriorly (without tumid hind angles), ventrite 6 and tergite 6 rounded posteriorly, the latter slightly surpassing the former in ventral view.

Etymology. The specific epithet is a reference to the Mexican state of Durango, the location of the type locality.

Distribution. Known from the Sierra Madre Occidental of western México in the vicinity of La Ciudad, Durango and adjacent eastern Sinaloa state.

Biology. Specimens were collected from end-June to end-September on oak and dead pine in forests above 2500 m elevation.



FIGURES 31–33. 31. Habitus of *Cymatodera durangoensis* Rifkind, n. sp. (holotype male). 32. Pygidium (ventral view) of male *Cymatodera durangoensis*. 33. Pygidium (dorsal view) of male *Cymatodera durangoensis*.

***Cymatodera monticola* Rifkind, n. sp.**
(Figs. 34–36)

Type specimens. Holotype male: México, Oaxaca, 3 mi N. Suchixtepec, 9500', km 144, Rt. 175, S. Oaxaca, VI-4-6-[19]71, H. Howden. Holotype deposited in CMNC. Paratypes: MEXICO, OAXACA: 1, same data as holotype; 1, Hwy. 175, 3 mi. N. Suchixtepec, 9500', VI-4-[19]71, D. E. Bright, collector. Paratypes are deposited in JNRC and WFBM.

Diagnosis. Separable from other Mexican brachypterous *Cymatodera* species by virtue of a singular combination of relatively large size (>10 mm), elongate, subflattened, partially translucent elytra with a strongly bisinuate posterior margin (Fig. 34), and unique pygidial characteristics. *Cymatodera monticola* is similar to *C. barri* Rifkind, also a Oaxacan endemic, but in that species the elytral apices are rounded, with the male abdominal tergite 5 deeply incised at the posterior margin, and tergite 6 with the posterior margin usually transverse rather than emarginate.

Description. (Holotype). Length: 12.0 mm. Form: elongate, dorsoventrally compressed, brachypterous. Color: reddish brown; head and pronotum a little darker; elytra testaceous and partially translucent, with indistinct brown markings (Fig. 34) as follows: on each elytron a small, oblique macula posterior to base and a small, irregularly sinuate, transverse fascia posterior to middle. A random scattering of elytral punctations are similarly infuscate. Head: measured across eyes, wider than pronotum; surface rather finely punctate and roughened; vestiture inconspicuous, pale, and mostly reclinate; antennae of moderate length. Pronotum: widest at anterior margin; longer than broad (ratio of length to width 3:2); surface shining, finely, transversely rugulose, coarsely but shallowly punctate anteriorly; vested as on head. Elytra: typical brachypterous form; elongate (ratio of length to width 7:3); widest at posterior 4/7; disk subflattened above; anterior margin narrow, arcuately emarginate; humeri obsolete; posterior margin bisinuate, apices subacuminate; surface shining, with rather deep, moderately to significantly coarse punctures, subserially arranged but not regularly assorted by size; vestiture inconspicuous,

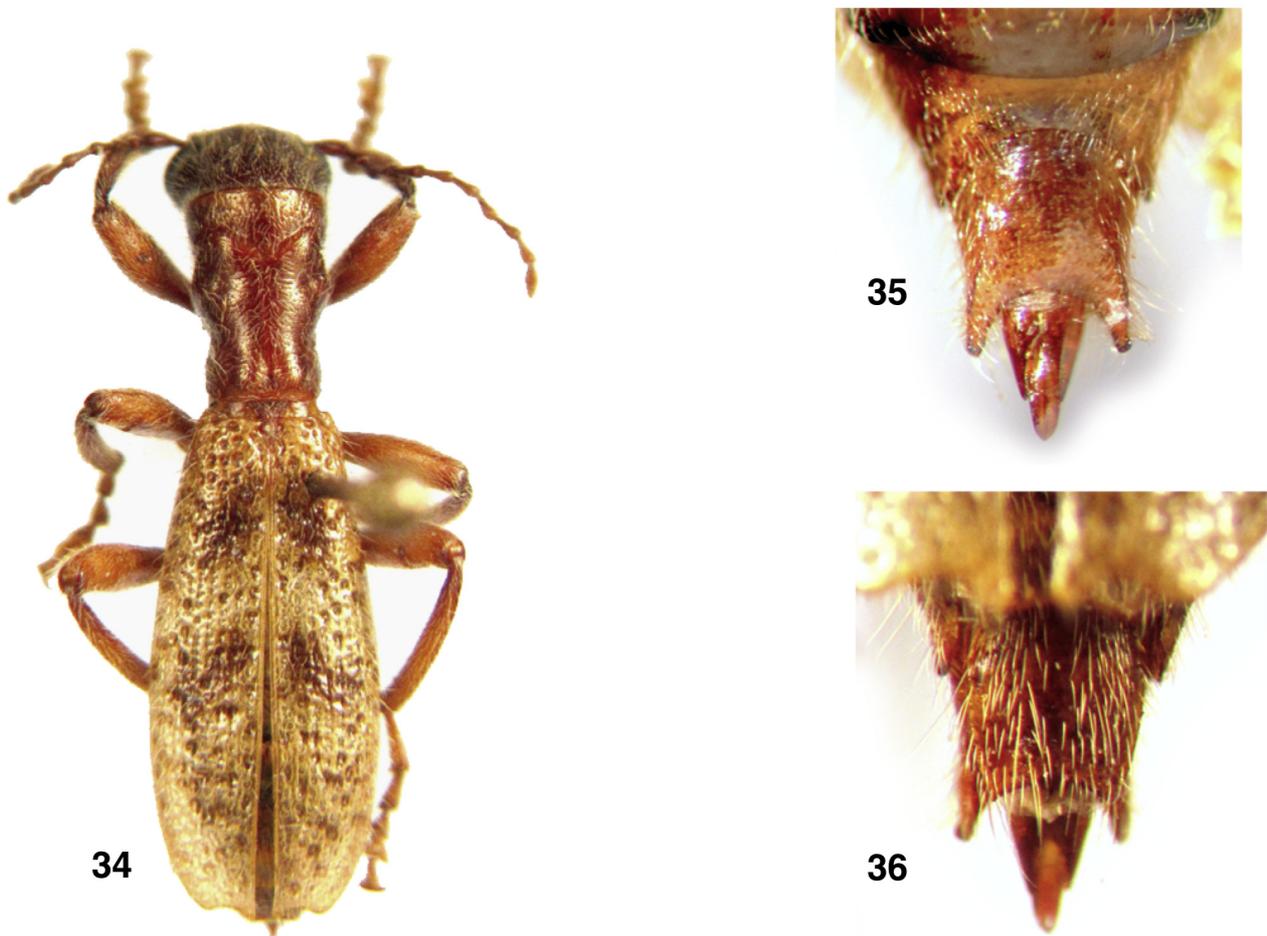
rather sparsely arrayed, composed of fine, pale, suberect and erect setae of moderate length. Metaventrite: short, sulcate posteriorly, subconical on either side; surface shining, finely, sparsely, punctulate. Abdomen: ventrite 5 (Fig. 35) with sides oblique; posterior margin deeply, arcuately emarginate; ventrite 6 (Fig. 35) with sides slightly inflected at middle, bowed outwardly posteriorly, each side with a sinuate, posteriorly divergent carina forming a flange distally that narrows to become part of a slightly downcurved, blunt tipped, lateral projection; surface rugose, without a longitudinal carina at middle; posterior margin rather broadly, arcuately emarginate at middle, extended laterally to form interior border of the lateral projections; tergite 5 (Fig. 36) with hind margin bisinuate, slightly, arcuately inflected at middle; tergite 6 (Fig. 36) with sides broadly arcuate, hind angles subacute, hind margin with a broadly V-shaped emargination. Aedeagus: apex of phallus rather sharply upturned.

Variation. The female has the abdominal sternites partially infuscate. Ventrite 5 has the posterior margin broadly, shallowly, arcuately emarginate; ventrite 6 has its sides slightly oblique, its hind margin shallowly, triangularly inflected, with a distinct depression at middle; tergite 6 is also shallowly, triangularly inflected at posterior margin, which appears to be folded downward along its length.

Etymology. The specific epithet refers to this species' montane habitat.

Distribution. Known only from the Sierra Sur of Oaxaca, México, in the vicinity of San Miguel Suchixtepec.

Biology. Specimens were collected at 9500' (2895 m) in early June.

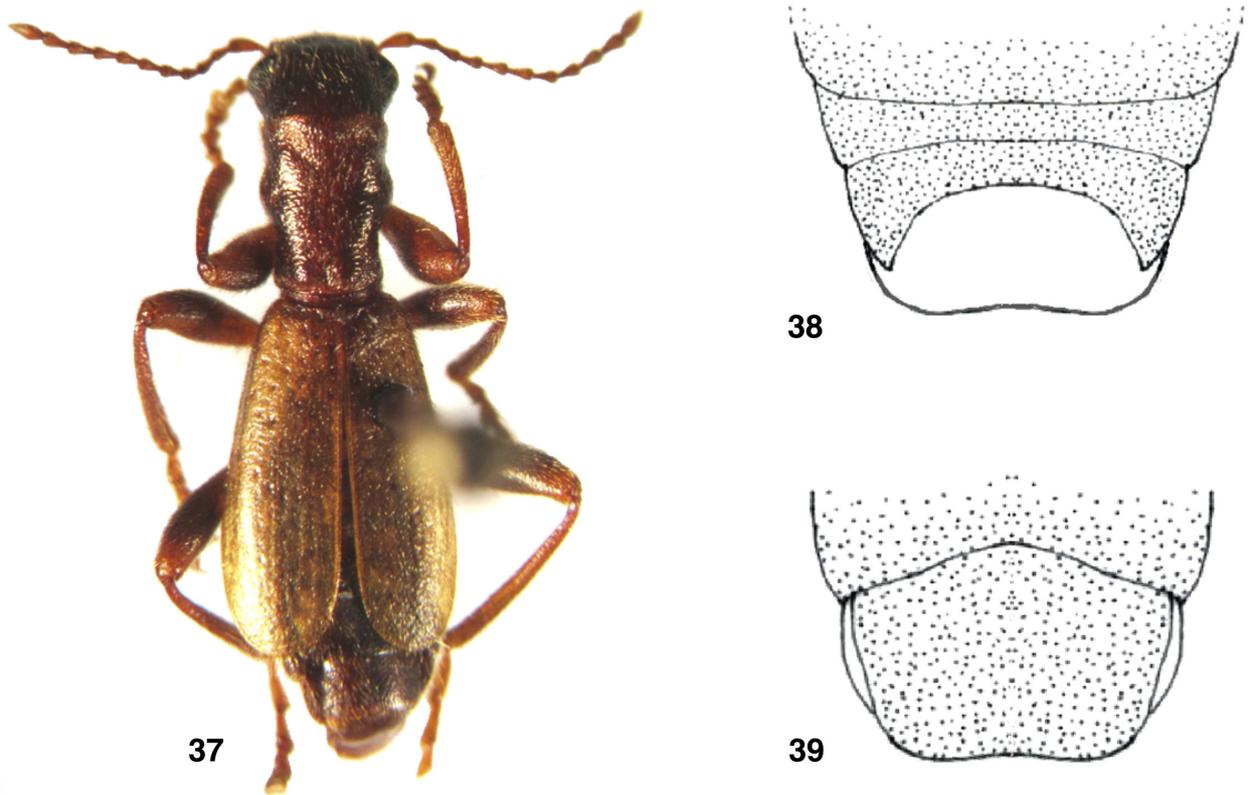


FIGURES 34–36. 34. Habitus of *Cymatodera monticola* Rifkind, **n. sp.** (holotype male). 35. Pygidium (ventral view) of male *Cymatodera monticola*. 36. Pygidium (dorsal view) of male *Cymatodera monticola*.

Cymatodera paucipunctata* Rifkind, **n. sp.*
(Figs. 37–39)

Type specimens. Holotype male: México, Méx[ico], Río Frío, 1-IX-[19]69, L. A. Kelton. Holotype deposited in

CNCI. Paratypes: 2, same data as holotype; MEXICO, MEXICO: 1, Parque Nacional Ixtapopo, 10,000', 31-V-[19]74, L. B O'Brien, beating *Pinus* at night; TLAXCALA: 1, Villareal, Pheromone trap seudonol, VII-19–VIII-3–1978, M. M. Furniss, collr., "Hopkins no. 61940"; 1, same data as previous, except "Pheromone trap ipsdienol"; PUEBLA: 1, El Recreo, Pheromone trap on *Pinus patula*, VII-3-1978, M. M. Furniss, collr., "Hopkins no. 61947A"; DISTRITO FEDERAL: 1, Monte Alegre, Cerro de Ajusco, 3150 m, Sept. 4, 1982, C. W. & L. B. O'Brien & J. Wibmer, colls. Paratypes are deposited in CNCI, CNIN, JNRC and WFBM.



FIGURES 37–39. 37. Habitus of *Cymatodera paucipunctata* Rifkind, n. sp. (holotype male). 38. Pygidium (ventral view) of male *Cymatodera paucipunctata*. 39. Pygidium (dorsal view) of male *Cymatodera paucipunctata*.

Diagnosis. This is the only known brachypterous Mexican *Cymatodera* species with short, unmarked, pale testaceous elytra.

Description. (Holotype). Length: 7.20 mm. Form: brachypterous; rather squat; elytra distinctly shorter than abdomen (Fig. 37). Color: reddish brown; elytra pale testaceous above, sides infuscate on anterior 1/2, elytral disk bearing a few scattered darkened punctures; pronotum darker longitudinally on either side of midline; head and femora with vague infuscations; mouthparts and venter testaceous except posterior margins of ventrites darkened. Head: antennae rather elongate (extending past elytral base when laid alongside); surface shining, shallowly rugulose–punctate, inconspicuously clothed with very fine, mostly short, suberect, pale setae, interspersed with a few longer, erect, pale setae. Pronotum: longer than broad, broadest across middle; disk subflattened; surface transversely rugulose–punctate, vested as on head. Elytra: rather short (ratio of length to width 35:24); form typically brachypterous; anterior margin arcuately emarginate; sides expanded posteriorly; apices broadly, arcuately, separately rounded and dehiscent; disk flattened above; sides rather deep and precipitous anteriorly, becoming shallow and explanate posteriorly; surface shallowly, irregularly dimpled, with faint striae; anterior 1/2 bearing a few scattered punctations of moderate size; vestiture as on pronotum. Metaventricle: broadly sulcate posteriorly, armed with a shallow, infuscate tubercle on either side. Abdomen: shining, moderately densely punctulate, moderately densely but inconspicuously set with short, fine, suberect, pale setae; ventrite 4 depressed posteriorly at middle; ventrite 5 (Fig. 38) broad, rather short, with posterior angles tumid, slightly oblique, posterior margin broadly, shallowly emarginate; ventrite 6 (Fig. 38) with hind angles moderately produced,

subacute, posterior margin rather deeply, arcuately emarginate; tergite 5 with hind margin shallowly emarginate; tergite 6 (Fig. 39) subquadrate, feebly sinuate laterally, posterior margin broad, broadly rounded, feebly inflexed at middle.

Variation. The female has ventrite 5 with posterior margin truncate, and ventrite 6 with posterior margin broadly rounded.

Etymology. The specific name refers to this species' distinctively reduced elytral punctation.

Distribution. Known from the Transmexican Volcanic Belt Province (Morrone et al. 2002), in the Mexican states of México, Tlaxcala, Puebla and the Distrito Federal.

Biology. *Cymatodera paucipunctata* appears to be a high altitude species: specimens were taken at locations over 3,000 m elevation. Two specimens were collected in pheromone baited traps set in pine forest; one was beaten from pine at night.

***Cymatodera anulata* Rifkind, n. sp.**

(Figs. 40–42)

Type specimen. Holotype male: México, Oaxaca, Hwy. 175 at km 154 [Sierra Sur], 2254 m, VII-25- 28-2005, beating slash, J. Rifkind, C. L. Bellamy, B. Streit, T. MacRae, colls. Holotype deposited in CSCA.

Diagnosis. Superficially similar to the widely distributed species *C. depauperata* Gorham, with which it is sympatric in Oaxaca. *Cymatodera anulata* can be distinguished from the latter based on the following: elytral punctation more densely arrayed; punctures more coarse individually, not growing obsolete toward apices; postmedian elytral fascia absent. The shape of the male pygidium is also diagnostic: in *C. depauperata*, abdominal tergite 6 and ventrite 6 are never more than narrowly, shallowly emarginate at the posterior margin.

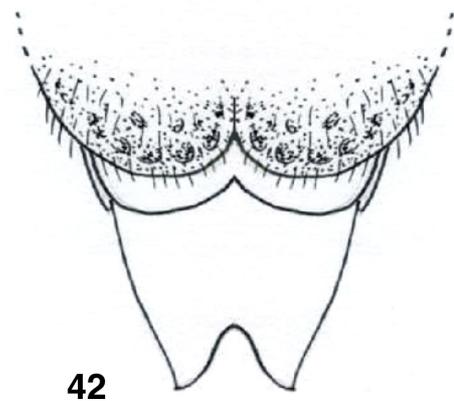
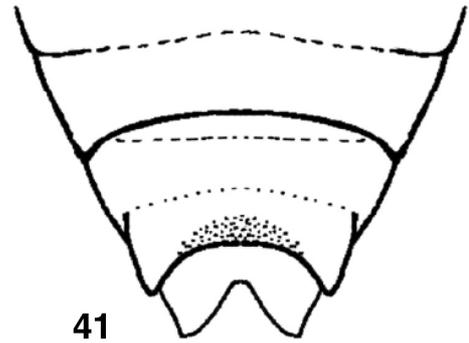
Description. (Holotype). Length: 9.50 mm. Form: elongate; apparently brachypterous. Color: testaceous; head (including antennae) and pronotum, reddish brown, except frons broadly piceous; pronotum longitudinally and rather broadly piceous at sides; elytra narrowly infusate posterior to scutellum, each elytron with an elongate, brown macula laterally, extending from humerus to before middle, and a smaller, slightly oblique, irregularly shaped antepical brown macula; elytral punctations irregularly infusate; all femora with a rather broad infusate band distally that does not attain the femoral margin; tarsi infusate on proximal 1/2; mesoventrite and abdominal sternites partially infusate. Head: measured across eyes, broader than pronotum; eyes small, coarsely faceted; surface roughened, rather finely, sparsely, setose; antennae of moderate length. Pronotum: shining; surface finely, shallowly rugulose and finely, sparsely punctulate, set inconspicuously with very fine, pale, suberect and erect setae of mostly moderate length. Elytra (Fig. 40): elongate (ratio of length to width 2:1); of typical brachypterous shape; anterior margin arcuately emarginate; humeral angles oblique but umbos distinct; sides broadly rounded, widest at approximately posterior 1/3; apices rather broadly, separately rounded, with dehiscent apices; integument shining, arrayed with striae composed of rectangulate, semi-transparent cells, some but not all set with rather coarse punctations, these being most profound and densely arranged at base, surface otherwise finely, densely punctulate; vestiture inconspicuous, rather fine, consisting of suberect, testaceous setae of moderate length. Metaventrite: short, sulcate posteriorly, subconical and crested with a small, obscure tubercle on either side. Abdomen: shining, surface finely, shallowly punctate and roughened, inconspicuously set with fine, pale testaceous setae; ventrite 5 (Fig. 41) arcuately convergent laterally, posterior angles subacute, hind margin broadly, arcuately emarginate; ventrite 6 (Fig. 41) subquadrate, surface transversely depressed at middle, lateral margins slightly oblique, faintly sinuate, posterior angles produced, acute at apices, posterior margin arcuately emarginate; tergite 5 (Fig. 42) with posterior angles subquadrate, posterior margin with a broad V-shaped inflection; tergite 6 (Fig. 42) elongate, surpassing ventrite 6 posteriorly, weakly oblique laterally, hind angles subacute laterally, feebly wedge-shaped internally, posterior margin rather narrowly, deeply emarginate at middle.

Variation. Known from the holotype only.

Etymology. The specific name refers to this species' dark, ring-like femoral bands.

Distribution. The holotype was collected along the Oaxaca City—Puerto Ángel highway (Mexican Federal Highway 175) in the Sierra Sur of Oaxaca state, México.

Biology. The single known specimen was collected beating slash at 2254 m elevation in late July. Three specimens of *C. depauperata* were collected concurrently from the same slash pile.



FIGURES 40–42. 40. Habitus of *Cymatodera anulata* Rifkind, n. sp. (holotype male). 41. Pygidium (ventral view) of male *Cymatodera anulata*. 42. Pygidium (dorsal view) of male *Cymatodera anulata*.

***Cymatodera christina* Rifkind, n. sp.**
(Figs. 43–48)

Type specimens. Holotype male: México, Nayarit, Vol. Ceboruca [sic], Jala, 15-16-VII-1993, Morris, Huether, Wappes. Holotype deposited in CSCA. Paratypes: MEXICO, NAYARIT: 4, Volcan Ceboruco, 8-12 km W Jala, 4 OCT. 1990, J. E. Wappes; 2, same data as previous, except R. Turnbow, coll.; 1, Volcan Ceboruco, 8-14 km NW Jala, 4600-5800', July 24, 1993, Trop. Decid. Forest trans. to Oak/Pine Forest, beating oak, Rifkind, Bellamy, Reifschneider, colls.; 1, Jesús María, VI-26-1955, R. Malkin, coll.; JALISCO: 1, Tequila, 55mi. W, VI-28-[19]63, J. Doyen, coll.; 1, 10 mi N Guadalajara, Hwy. 54, 9-VII-1987, C. L. Bellamy; ZACATECAS: 4, 10 mi S Jalpa, Hwy. 54, 9-VII-1987, C. L. Bellamy; 1, 10-14 km N La Ceja, 3 Oct. 1990, R. Turnbow. Paratypes are deposited in CIUM, EMEC, JEWG, JNRC, RWTC and WFBM.

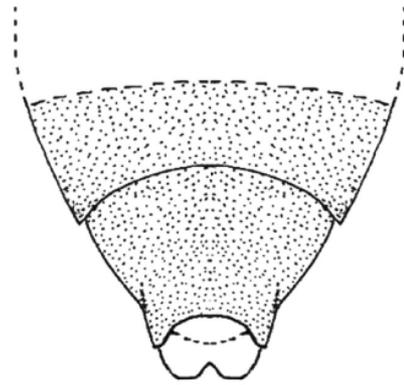
Diagnosis. Distinguishable from its congeners by a combination of characteristics: particularly elongate form (Fig. 43), unique elytral sculpturing, shape of the pygidium and, in the males, the presence on the metaventrite of distinct, acute, closely paired tubercles (Fig. 44). Affinities of the new species are not obvious.



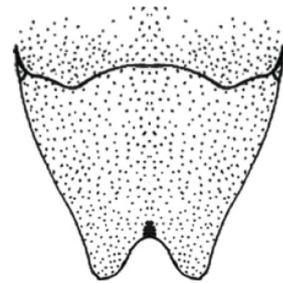
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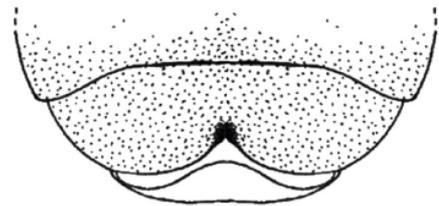
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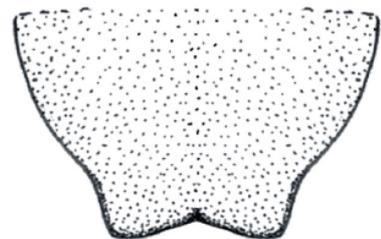
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FIGURES 43–48. 43. Habitus of *Cymatodera christina* Rifkind, n. sp. (holotype male). 44. Metasternal tubercles of *Cymatodera christina* (holotype male). 45. Pygidium (ventral view) of male *Cymatodera christina*. 46. Pygidium (dorsal view) of male *Cymatodera christina*. 47. Pygidium (ventral view) of female *Cymatodera christina*. 48. Pygidium (dorsal view) of female *Cymatodera christina*.

Description. (Holotype). Length: 11.70 mm. Form: elongate, subcylindrical. Color: brown to reddish brown; distal margins of antennomeres, palpi and tarsi paler; venter somewhat darker; elytra with a faintly indicated pale, irregularly margined fascia at middle. Head: measured across eyes, wider than pronotum; eyes finely faceted; surface moderately densely punctate and feebly roughened; vestiture inconspicuous, composed of short, fine, pale, anteriorly directed, reclinate setae, interspersed with longer, more robust, erect setae. Pronotum: elongate, slightly broader at middle than at anterior margin; post-anterior transverse impression distinct, V-shaped; surface rather densely granulate–punctate, transversely rugulose on disk; vestiture more conspicuous than on head. Elytra much

longer than broad (ratio of length to width 59:21); sides subparallel, gradually, arcuately convergent posteriorly from about posterior 1/3; posterior margin subsinuate; apices dehiscent; disk subflattened; surface shining; punctures moderate, arranged in striae, deeper anteriorly, virtually absent from disk posterior to basal 1/3 but extending laterally to posterior 1/3 after which they grow obsolete; impunctate surface of disk irregularly rugulose; vestiture inconspicuous, rather sparsely arrayed, consisting of mostly short to moderately long, suberect, pale setae, with an intermingling of longer, erect, more robust, pale setae. Mesoventrite: coarsely punctate. Metaventrite: shining, rugulose laterally, sparsely punctulate otherwise; posterior 1/2 deeply, narrowly, sulcate; margins of sulcus produced into a pair of distinct triangulate tubercles, bearing acute, cristate apices (Fig. 44). Abdomen: shining; surface moderately densely, but shallowly punctulate; vestiture fine, pale, reclinate; ventrite 5 (Fig. 45) with sides tapered, posterior margin semicircularly emarginate; ventrite 6 (Fig. 45) with sides oblique, posterior angles subacute, posterior margin rather deeply, arcuately emarginate, surpassed by tergite 6; tergite 6 (Fig. 46) with a longitudinal median furrow, sides convergent, slightly inflected, posterior angles narrowly rounded, posterior margin with a rather deep V-shaped emargination at middle.

Variation. Length of available specimens ranges from 11.0 mm to 14.60 mm. Females have the posterior margin of ventrite 5 (Fig. 47) sinuate at sides, subtruncate at middle; ventrite 6 (Fig. 47) broader than long, moderately swollen, sides arcuate, hind angles broadly rounded, posterior margin with a broad, shallow, V-shaped emargination at middle, notched at center; surface punctulate, rather conspicuously set with fine, testaceous, posteriorly directed, reclinate setae, interspersed with a few much longer, more robust, testaceous setae; tergite 6 (Figs. 47-48) with sides oblique, apex sharply crimped ventrally, posterior margin rounded, but appearing weakly, arcuately emarginate in dorsal aspect. Females lack the metasternal tubercles of the male.

Etymology. The specific name honors Christy Canyon, American actor and radio personality. The patronymic is treated as a noun in apposition for the sake of euphony.

Distribution. Known from the Mexican states of Zacatecas, Jalisco and Nayarit.

Biology. Specimens have been collected from the end of June to the beginning of October. One specimen was beaten from oak.

Cymatodera copei Rifkind, n. sp.

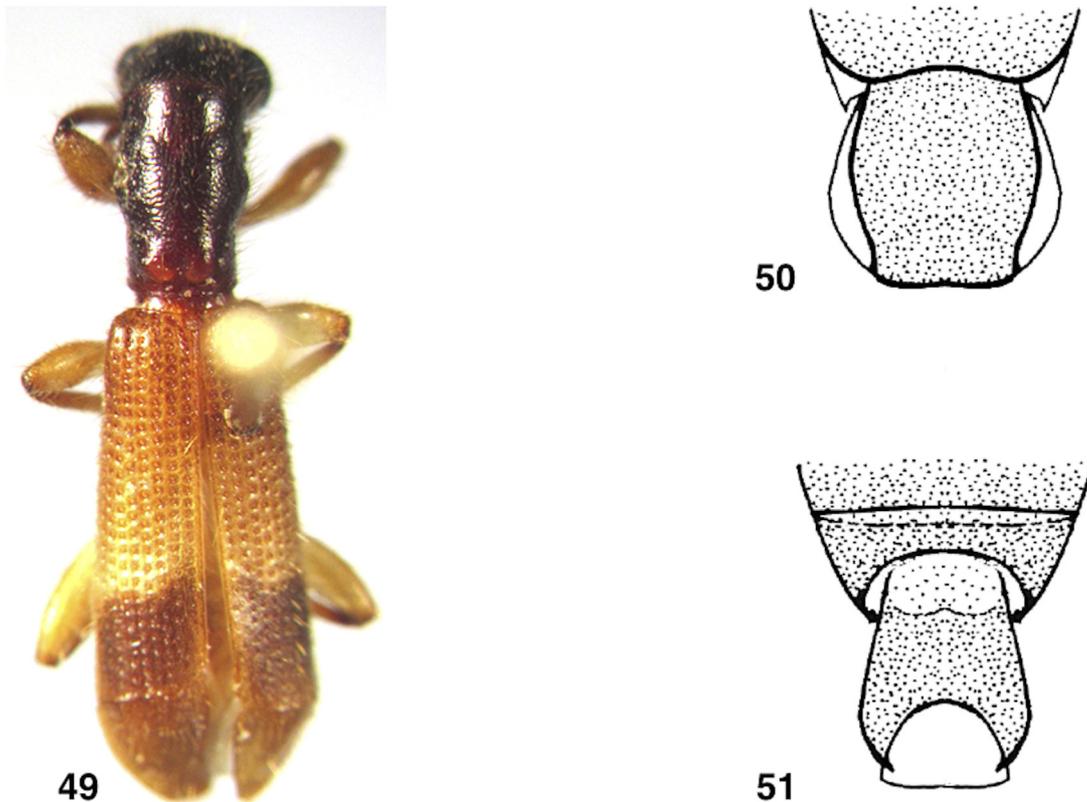
(Figs. 49–51)

Type specimens. Holotype male: México, Q[uintana] Roo, 23 km SW Cancún, 2-vi-2001, Cope collection. Holotype deposited in CASC. Paratype: MEXICO: Quintana Roo: 1, 22 km SW Cancún, 17-X-1991, F. W. Skillman, Jr., beaten / old slash. Paratype deposited in JNRC.

Diagnosis. The new species appears most similar to *Cymatodera prolixa* (Klug), sharing its general elongate form, shining integument and serially punctured elytra. *Cymatodera copei* differs from its congener, however, by having the anterior half of the elytra pale testaceous (Fig. 49) (brown or reddish brown in *C. prolixa*), the pronotal disk distinctly roughened (feebly rugulose in *C. prolixa*), and by the shape of the male pygidium, most notably tergite 6, which is saddle-shaped with the posterior margin rather broad (tapered in *C. prolixa*, with the posterior margin rather narrow). No other species of *Cymatodera* exhibits this combination of characteristics.

Description (Holotype). Form: elongate, subcylindrical. Length: 9.0 mm. Color: testaceous; head, pronotum and bases of tibiae, reddish brown; elytra slightly paler just posterior to middle, then transversely infusate from posterior 3/10 to posterior 1/10, with apices testaceous. Head: measured across eyes, considerably wider than pronotum; eyes moderate; surface rather shallowly rugulose-punctate, inconspicuously and rather thinly vested with mostly short, mostly reclinate, fine, pale setae. Pronotum: elongate (ratio of length to width 14:9); post-anterior depression shallow; disk subflattened; posterior tumescences gibbous; integument shining, transversely rugulose and indistinctly punctured; vestiture as on head but with the addition of some longer, more robust, suberect and erect setae. Elytra: longer than broad (ratio of length to maximum width 16:7); anterior margin arcuately emarginate at middle; humeral angles oblique; umbones distinct; sides subparallel, converging posteriorly to separately, rather broadly rounded, dehiscent apices; integument shining, set with coarse, subciliate punctures arranged in distinct striae; punctures somewhat smaller posterior to middle, then rather abruptly terminating at posterior 1/5; vestiture consisting of a moderately dense but inconspicuous array of very short, fine, pale, suberect setae, intermingled with fewer, longer, more robust, erect and suberect setae of varying lengths. (It

should be noted here that the holotype specimen bears a transverse ridge across the elytra at posterior 1/5, corresponding with an inflection at the lateral and sutural margins of each elytron, and a downward crimping of the elytral apices. I believe this condition is the result of a trauma to the individual insect either in its pupal state or as a teneral imago, and is not a characteristic of the species (the female has the elytral apices unmodified). Unfortunately, the holotype is the only male specimen available for study.) Metaventricle: smooth, shining, very finely, inconspicuously setose; bearing a pair of small, acute but shallow tubercles. Abdomen: ventrites shining, shallowly punctate, vestiture rather sparse but setae long and erect; ventrite 5 (Fig. 51) with sides oblique, lateral posterior angles acute, posterior margin rather deeply, arcuately emarginate; ventrite 6 (Fig. 51) oblong, sides slightly divergent posteriorly; lateral posterior angles produced, slightly dorsally inflected, arcuate externally and subacute at apex; posterior margin with a deeply arcuate emargination; tergite 6 (Fig. 50) saddle shaped, broadest anteriorly, subsinuate laterally, expanded posteriorly, convex ventrally, hind margin broadly subtruncate.



FIGURES 49–51. 49. Habitus of *Cymatodera copei* Rifkind, **n. sp.** (holotype male). 50. Pygidium (dorsal view) of male *Cymatodera copei*. 51. Pygidium (ventral view) of male *Cymatodera copei*.

Variation. The female paratype measures 10.0 mm in length. Its venter is somewhat darker than that of the male, and it lacks tubercles on the metaventricle. Ventrite 5 has the lateral posterior angles subquadrate and the posterior margin weakly, arcuately emarginate; ventrite 6 (somewhat obscured by the everted ovipositor in the dried specimen) appears to have the hind margin arcuate; tergite 6 is elongate, with the sides feebly, arcuately convergent and the posterior margin subtruncate.

Etymology. The specific name honors James Cope, collector of the holotype and many other interesting Mexican checkered beetles.

Distribution. Known only from the Mexican state of Quintana Roo, southwest of Cancún.

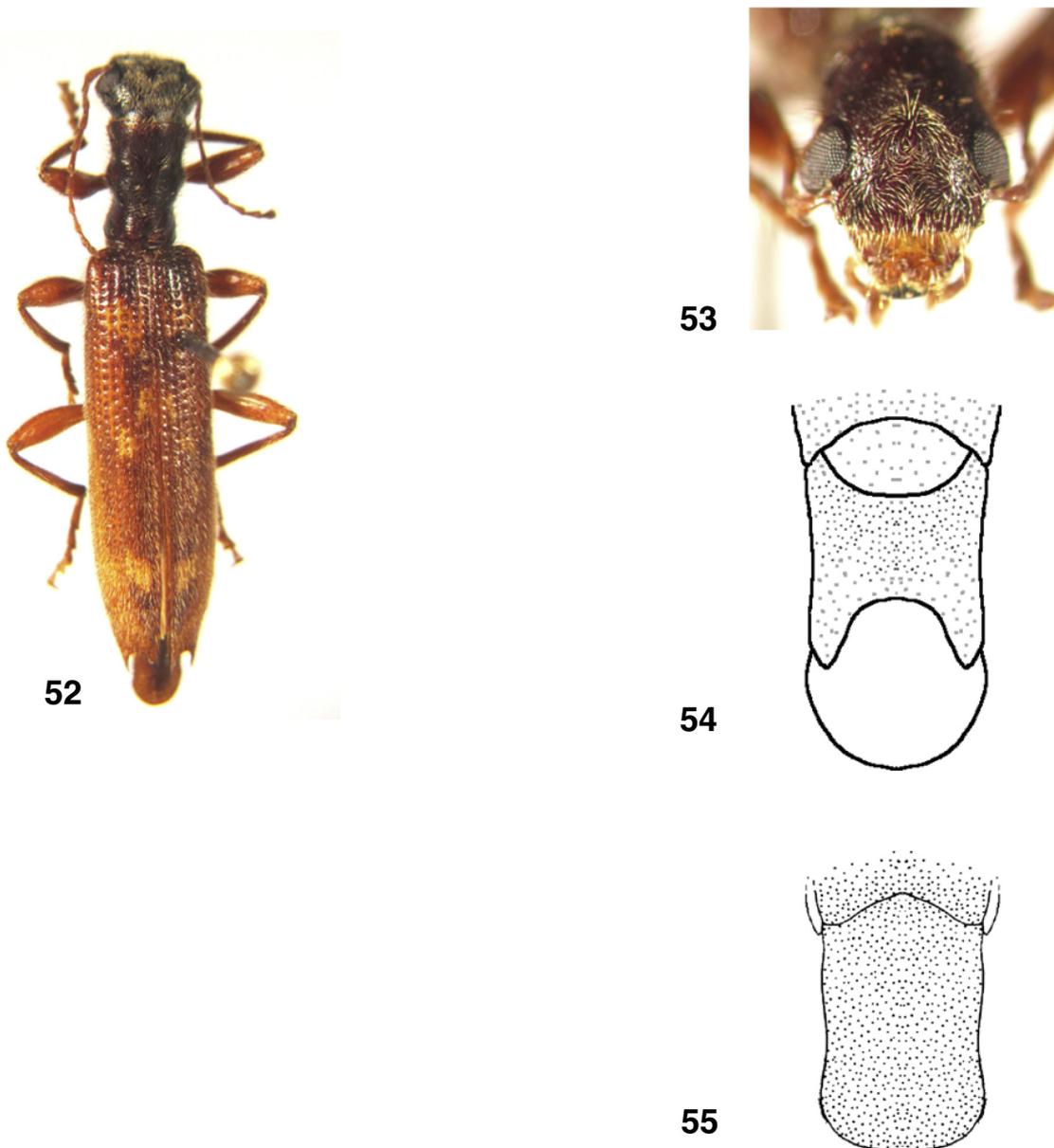
Biology. One specimen was collected by beating old slash. Based on its location, the habitat at the collecting site likely combines elements of tropical evergreen forest and tropical deciduous forest (Lee 2000). The new species is presumably nocturnal, like most of its congeners.

***Cymatodera oxchuc* Rifkind, n. sp.**

(Figs. 52–55)

Type specimens. Holotype male: México, Chiapas, Oxchuc, Cascadas Corralito, VII-21-2007, J. & A. Rifkind, colls., beating riparian vegetation. Holotype deposited in CSCA. Paratype: 1, same data as holotype. Paratype deposited in JNRC.

Diagnosis. Among described species of *Cymatodera*, only *C. sallei* Thomson has similarly emarginate elytral apices. In *C. oxchuc*, however, the emargination is deeper, and consequently both the internal and external angles of the elytral posterior margin are more prolonged and more acute. The two species also differ significantly in their elytral patterning, as well as in the shape of the male pygidia. Another similar species from southern México, described directly below, differs from *C. oxchuc* most conspicuously in the shape of the male pygidium (cf. Figs. 54–55 with Figs. 57–58). Several other undescribed species with similarly emarginated elytral apices are known from México and Honduras, but from female specimens only, so their description should await availability of associated males.



FIGURES 52–55. 52. Habitus of *Cymatodera oxchuc* Rifkind, n. sp. (holotype male). 53. *Cymatodera oxchuc* (holotype male): detail of head, showing swirling setal pattern. 54. Pygidium (ventral view) of male *Cymatodera oxchuc*. 55. Pygidium (dorsal view) of male *Cymatodera oxchuc*.

Description. (Holotype). Length: 17.10 mm. Form: elongate, subcylindrical; elytral apices deeply emarginate. Color: brownish testaceous; pronotum reddish brown; head and venter castaneous except ventrite 6, and posterior margins of ventrites 1–5, testaceous; elytra with a pale, irregular, rather indistinct X-shaped marking on anterior 1/2 (Fig. 52) and a subovate, oblique pale macula on either side of suture at posterior 1/4. Head: measured across eyes, significantly broader than pronotum; surface finely, densely punctate and rugulose; vestiture moderately dense but inconspicuous on cranium, composed of fine, pale, rather short, anteriorly directed, reclinate setae; frons, however, bearing a more conspicuous covering of more robust, reclinate and erect pale setae, arranged in a complex of swirling and converging patterns (Fig. 53). Pronotum: narrower than elytra at humeri; elongate; surface shining, shallowly punctulate, shallowly, transversely rugulose, moderately densely set with rather fine reclinate, and stouter erect, pale setae. Elytra: elongate (ratio of length to width 16:5), parallel sided; humeri distinct, subquadrate; lateral margins weakly convergent beginning at posterior 5/12, feebly subsinuate anteapically, with posterior angles produced and acuminate; posterior margin of each elytron deeply, arcuately, emarginate; internal angles acute, dehiscent; integument rather deeply set with coarse, serially arranged punctures, largest in diameter at anterior 1/4, somewhat smaller at middle, smaller still and less conspicuous on posterior 1/3 where they are notably obsolete on disk on either side of suture; vestiture consisting of short, fine, suberect, and slightly longer erect, pale setae, moderately densely arrayed, inconspicuous on anterior 1/2, somewhat more noticeable on posterior 1/2. Metaventricle: shining, rather densely set with very fine, shallow punctures; vestiture fine, pale, adpressed or suberect, inconspicuous; posterior rather deeply sulcate, provided with a pair of short, sharply crowned, conical tubercles. Abdomen: shining, integumental sculpturing as on metasternum; ventrite 5 with sides slightly obliquely convergent, posterior angles acute, posterior margin rather deeply, arcuately emarginate; ventrite 6 (Fig. 54) elongate (posterior margin far surpassing elytral posterior margin), membranous anteriorly, anterior sclerotized margin oblique at sides, transverse at middle, lateral margin subparallel (subsinuate anteriorly), posterior angles strongly produced, subacute apically, hind margin feebly subsinuate on internal edge of posterior angles, then rather shallowly, arcuately emarginate at middle; tergite 5 rather broadly, triangularly emarginate posteriorly; tergite 6 (Fig. 55) extremely elongate (more than 3X as long as broad), concave ventrally, anatorhynchoid, arcuate hind margin far surpassing both posterior margin of ventrite 6 and elytral posterior margin. Aedeagus: lateral lobes quite narrow, elongate, subacute apically.

Variation. The single paratype specimen, also a male, is very similar to the holotype.

Etymology. The specific name refers to the type locality, in the heart of the Tzeltal Mayan region of Chiapas.

Distribution. Known only from the Centro Ecoturístico El Corralito, in the vicinity of Oxchuc, Chiapas, México.

Biology. Specimens were collected in July by beating riparian vegetation in pine–oak–liquidambar forest.

***Cymatodera merickeli* Rifkind, n. sp.**

(Figs. 56–59)

Type specimen. Holotype male: México, Oaxaca, Rt. 131, 15 mi. S. Sola de Vega, 6000', V-30-1971, H. F. Howden. Holotype deposited in CASC.

Diagnosis. Separable from congeners based on the unique shape of the male pygidium. The new species shares a similar facies with *C. oxchuc*, including rather deeply, arcuately incised elytral apices, but their elytral patterning differs, and their terminal abdominal structures are entirely different (cf. Figs. 57–58 with Figs. 54–55).

Description. (Holotype). Length: 15.0 mm. Form: elongate, subcylindrical. Color: integument light brown; head and pronotum reddish brown; metasternum and abdominal ventrites (in part) dark brown; elytra with three sets of large, pale testaceous blotches (Fig. 56), the middle and posterior pairs attaining the lateral margins. Head: measured across eyes, wider than pronotum; surface rather finely, moderately densely punctulate and shallowly rugulose; vestiture fine, pale, subrecumbent, moderately long, arrayed in swirling patterns on vertex and laterally, converging anteriorly on frons. Pronotum: longer than broad, narrower than base of elytra; surface shallowly rugulose, inconspicuously punctulate; vestiture fine, pale, inconspicuous, consisting of erect and suberect setae of moderate length. Elytra: elongate (ratio of length to width 68:23), subparallel; anterior margin sinuate; humeral angles weakly oblique; umbones distinct, subgibbous; elytral apices (Fig. 57) deeply, arcuately emarginate, rendering external angles falciform and internal angles acute; apices dehiscent at posterior sutural margin; surface

with rather deep, primarily circular punctures arranged in striae, interstitial integument wider than diameter of punctures, which diminish in size posteriorly, becoming rather small and widely spaced at middle, and absent altogether from posterior 1/4; vestiture moderately dense but inconspicuous, composed of mostly suberect, rather short, fine, pale testaceous setae, intermingled with fewer longer, erect, pale testaceous setae. Metaventrite: surface finely, moderately densely punctulate, shallowly transversely and finely rugulose posteriorly; tubercles distinct but shallow, transverse, not acute at crown; vestiture moderately dense but pale and inconspicuous. Abdomen: ventrites shining, rather coarsely but shallowly punctate, rather thinly and inconspicuously setose; ventrite 5 with sides slightly, obliquely convergent, hind angles subacute, curved slightly inward, posterior margin broadly U-shaped; ventrite 6 (Fig. 58) elongate, with sides subparallel, hind angles arcuate externally, produced and subacute posteriorly, hind margin with a deep V-shaped emargination at middle, surface with a short, oblique carina on either side anterior to middle; tergite 6 (Figs. 57 & 59) elongate, concave (lateral margins raised), slightly expanded posteriorly, then constricted before broadly sagittate, upturned apex.

Variation. Known only from the holotype.

Etymology. The specific epithet honors Frank Merickel, tireless and able curator of the William F. Barr Entomological Museum, in recognition of many kindnesses.

Distribution. The type locality is in the Sierra Sur of Oaxaca, in upland pine–oak forest.



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57



59



58

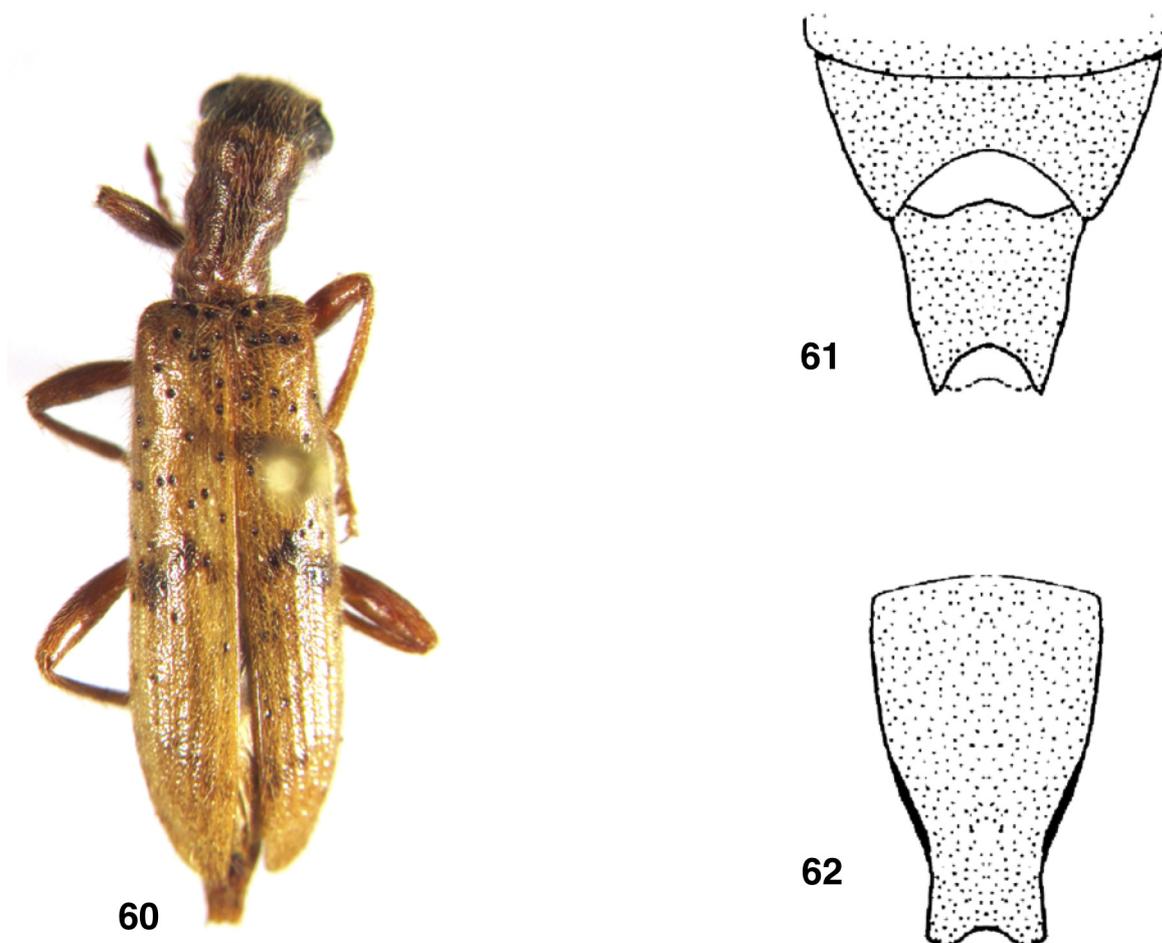
FIGURES 56–59. 56. Habitus of *Cymatodera merickeli* Rifkind, n. sp. (holotype male). 57. Dorsal view of pygidium and elytral apices, *Cymatodera merickeli* (holotype male). 58. Pygidium (ventral view) of *Cymatodera merickeli* (holotype male). 59. Pygidium (ventrolateral view) of *Cymatodera merickeli* (holotype male).

***Cymatodera romeroi* Rifkind, n. sp.**

(Figs. 60–62)

Type specimens. Holotype male: México, Oaxaca, 10 km N San Juan del Estado, 7-viii-1986, H. & A. Howden. Holotype deposited in CASC. Paratypes: MEXICO, OAXACA: 1, 14 km NW Diaz Ordaz, 2600 m, 15-VI-1979, H. & A. Howden; 1, Llano de [las] Flores, 7.6.2010, Benes & Secky, lgt. Paratypes deposited in CNIN and JNRC.

Diagnosis. Distinguishable from congeners based on unique elytral punctation, coloration and the shape of the male pygidium. From the similarly marked and possibly sympatric species *C. bipunctata* Gorham, the new species can be separated by virtue of its irregularly distributed, infuscate elytral punctures (punctures serially arranged and syncolorous with elytral integument in *C. bipunctata*). *Cymatodera romeroi* is also very similar in facies to some specimens of *C. liturata* Gorham, but the shape of the male pygidium is entirely different.



FIGURES 60–62. 60. Habitus of *Cymatodera romeroi* Rifkind, n. sp. (holotype male). 61. Pygidium (ventral view) of male *Cymatodera romeroi*. 62. Pygidium (dorsal view) of male *Cymatodera romeroi*.

Description. (Holotype). Length: 11.50 mm. Form: elongate, subcylindrical. Color: testaceous; head and pronotum reddish brown; venter castaneous to piceous, except ventrites 5 and 6; each elytron with a median, transverse, irregularly angulate, dark marking (Fig. 60), attaining neither lateral margin nor suture; disk also bearing a scattering of rather large infuscate punctures, concentrated on anterior 1/2. Head: measured across eyes, wider than pronotum; surface finely, densely rugulose–punctate, moderately clothed with subrecumbent testaceous setae. Pronotum: longer than broad; surface rugulose–punctate, transversely rugulose above, vested as on head, with the addition of a few robust, erect setae. Elytra: elongate (ratio of length to width 29:11), subparallel; anterior margin shallowly V-shaped at middle; apices separately, rather narrowly rounded, slightly dehiscent; surface rather finely, densely, shallowly punctate, with the exception of several irregularly scattered, larger, deeper, punctures, these concentrated on anterior 1/2; posterior 1/2 bearing shallowly raised, longitudinal, striae. Metaventricle:

shining; finely, shallowly, sparsely punctulate and set with a few whitish setae; surface without carinae. Abdomen: ventrite 5 with sides oblique, posterior angles subacute, posterior margin with a rather deep and broad arcuate emargination (Fig. 61); ventrite 6 elongate, anterior margin subtly bisinuate, sides gradually tapering posteriorly, slightly sinuate apically, angles produced, subacute, hind margin rather deeply, narrowly emarginate (Fig. 61); tergite 6 elongate (slightly surpassing ventrite 6), hind angles subtruncate, posterior margin with a shallow V-shaped inflection at middle (Fig. 62).

Variation. The female pygidium has ventrite 5 with a deep V-shaped emargination; ventrite 6 and sternite 6 with posterior margins rounded. Both paratype specimens have the median elytral dark marking more distinct than in the holotype; one bears in addition a pair of large, dark maculae subbasally.

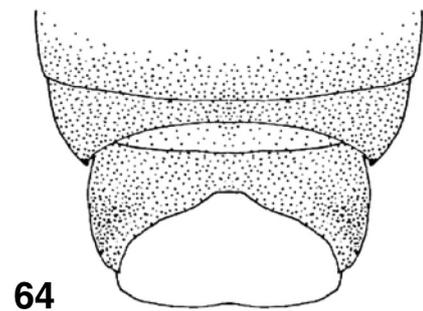
Etymology. The specific name is a patronymic honoring Jesús Romero Nápoles, authority on the Bruchidae.

Distribution. This apparently rare species is known only from the Sierra de Ixtlán of Oaxaca, México.

***Cymatodera cellulosa* Rifkind, n. sp.**

(Figs. 63–64)

Type specimens. Holotype male: México, Oaxaca, 32 mi. S. Valle Nacional, 7000', V-21–24-1971, H. Howden. Holotype deposited in CNCI. Paratypes: 4, same data as holotype; MEXICO, OAXACA: 1, 32 mi. S. Valle Nacional, 7000', V-21-[19]71, Bright; 1, Hwy. 131, 115 m. S. Oaxaca, 6000', V-27–30-[19]71, D. E. Bright, coll.; VERACRUZ: 1, Jalapa, 9/28–x/3/[19]61, R. & K. Dreisbach; 1, Escola, 1372 m, 1 August, 1975, T. W. Taylor, P. H. Sullivan; 1, 4 km SE Las Vigas, 2200 m, VIII-16-[19]87, J. Brown, J. Powell; 1, La Joya, 15 mi. W Jalapa, VIII-7-[19]60, H. F. Howden; 1, 22 rd. km W. Cd. Mendoza, 2150 m, VIII-13-[19]87, Brown & Powell, BL; 1, 7 mi. SE of Las Vigas, XII-18-1948, E. S. Ross, coll. Paratypes are deposited in ARC, CASC, CNCI, CNIN, EMEC and JNRC.



FIGURES 63–64. 63. Habitus of *Cymatodera cellulosa* Rifkind, n. sp. (holotype male). 64. Pygidium (ventral view) of male *Cymatodera cellulosa*.

Diagnosis. Most similar to *C. discoidalis* Chevrolat, with which it is probably sympatric, the new species can be distinguished as follows: it lacks a diamond-shaped postmedian elytral marking; male abdominal ventrite 5 less deeply emarginate by comparison; male abdominal tergite 6 with posterior margin feebly rounded rather than slightly inflexed; elytral apices nearly conjointly rounded (rather broadly dehiscent in *C. discoidalis*).

Description. (Holotype). Length: 10.80 mm. Form: elongate, subcylindrical. Color: testaceous; head, antennae, pronotum, legs and venter (except abdomen), reddish brown to piceous; abdomen mostly chocolate brown medially, lateral sensory depressions and pygidium pale testaceous; elytra (Fig. 63) with a pattern of irregular, rather disrupted, brownish markings, the most distinct of which is a broad, postmedian transverse band. Head: measured across eyes, wider than pronotum; surface deeply, finely punctate and rugulose, densely but inconspicuously clothed with short, fine, adpressed yellowish setae, arranged in whorls, interspersed with a few longer, suberect and erect setae. Pronotum: elongate (ratio of length to width 11:7); anterior transverse impression distinct, V-shaped at middle; antescutellar impression distinct; subbasal tumescences prominent; surface shining, sculpted as on head. Elytra: elongate (ratio of length to width 13:5); humeri distinct; sides nearly parallel; apices very slightly dehiscent, almost conjointly rounded; disk subflattened above; surface shining, striate, very densely covered with small, shallow punctures, and set rather sparsely and irregularly with larger, deeper, infusate punctures, the latter loosely arranged in longitudinal series. Metaventrite: surface shining, sparsely punctulate, inconspicuously clothed with very fine, pale, subrecumbent setae of moderate length; posterior margin armed with a pair of small, short, sharp, infusate tubercles at middle. Abdomen: shining; ventrites 1–5 with broad, shallow, rounded depressions laterally; ventrites 1–3 punctured as on metasternum; ventrites 4–6 very densely, finely, granulate–punctate; ventrite 5 (Fig. 64) short, hind angles subacute, tumid posterior margin rather broadly, arcuately emarginate; ventrite 6 (Fig. 64) with sides slightly curved, hind angles moderately produced, posterior margin deeply incised in an ogee shape; tergite 6 subrectangulate, arcuately inflexed laterally, posterior margin rather broadly, arcuately rounded, surpassing hind angles of ventrite 6 posteriorly.

Variation. The female lacks tubercles on the metaventrite; it has ventrite 6 and tergite 6 with the sides rounded and the posterior margin subtruncate, tergite 6 slightly surpassing ventrite 6 posteriorly. The extent of elytral infuscation is moderately variable among the specimens on hand.

Etymology. The specific epithet refers to the prevalence of cell-like shapes within the infusate elytral bands of the new species.

Distribution. Known from northeastern Oaxaca and the vicinity of Xalapa, Veracruz state, in México.

Biology. *Cymatodera cellulosa* appears to be a species of cool, humid forests at moderately high elevations. One specimen was taken at blacklight.

Cymatodera wilsoni Rifkind, n. sp.

(Fig. 65)

Type specimens. Holotype male (?): Costa Rica, Cartago Prov., 11–18 km N Pavones, I-14-[19]89, F. Hovore, coll. Holotype deposited in CASC. Paratype: 1, Costa Rica, Cartago Prov., 8 km N Pavones, 26 May 1985, F. T. Hovore, coll. Paratype deposited in WFBM.

Diagnosis. Readily separable from other small *Cymatodera* species exhibiting obovate “brachypterous type” elytra by its coarsely punctate elytra, with punctures arranged in striae and strial interstices elevated into longitudinal carinae. Of further diagnostic significance, the elytral pattern is distinct (Fig. 65) and the eyes are quite small.

Description. (Holotype). Length: 5.80 mm. Form: small, macropterous, but exhibiting typical obovate “brachypterous” shape. Color: yellow testaceous to reddish, elytra with a pair of oblique brownish antemedian maculae, and a dark brown postmedian elytral fascia (Fig. 65), the fascia broad, darker and more defined than the maculae, narrowing laterally but complete to lateral margins. Head: measured across eyes, wider than pronotum; eyes small, elongate, with coarse ommatidia; antennae attaining posterior margin of pronotum when laid alongside; surface densely but shallowly rugulose–punctate; vestiture dense but inconspicuous, comprised of testaceous, suberect setae of moderate length. Pronotum: elongate (ratio of length to width 14:9); anterior depression distinct, narrowly U-shaped at middle; subbasal tumescences prominent; surface shining, sparsely, shallowly, very finely punctulate; vestiture moderate, inconspicuous, mostly composed of suberect setae with an intermingling of

somewhat longer, erect setae. Elytra: obovate; humeri reduced; anterior margin only slightly broader than pronotum at posterior margin; sides expanded posteriorly; posterior 1/3 of each elytron broadly arcuately convergent to separately rounded, slightly dehiscent apices; surface very coarsely, serially punctate, with punctures lozenge-shaped, becoming shallow posteriorly; each elytron with a rather sharply crested interpunctual carina on disk, extending from near anterior margin longitudinally to posterior 1/3; adjacent interpunctual areas subcarinate. Metaventrite: shining, broadly sulcate posteriorly, without tubercles. Abdomen: surface shining, sparsely, finely punctulate, sparsely setose; ventrite 5 with posterior margin feebly, arcuately emarginate; ventrite 6 arcuate posteriorly, conjointly rounded with hind margin of tergite 6. Legs: all femora expanded distally.

Variation. The single paratype specimen has the antemedian elytral maculae darker than in the holotype.

Etymology: The specific epithet is a patronymic honoring Ryan Wilson, in recognition of his, and the Van de Kamp and Frank families' support for my studies in the taxonomy of New World Cleridae.

Distribution. Known only from the vicinity of Pavones, Cartago Province, **Costa Rica**.



65

FIGURE 65. Habitus of *Cymatodera wilsoni* Rifkind, n. sp. (holotype).

***Cymatodera acutipennis* Rifkind, n. sp.**

(Figs. 66–67)

Type specimens. Holotype male: México, Coahuila, Rd. to La Carbonera, SE Saltillo, 6300', 27-IV-1981, J. Liebherr. Holotype deposited in EMEC. Paratypes: MEXICO, COAHUILA: 2, 15 mi. N. Saltillo, V-24-1952, M. Cazier, W. Gertsch, R. Schrammel, collectors; 1, Hwy 40, 12 mi. N.E. Saltillo, 4300', 12 Sept. 1982, C. & L. O'Brien & G. Wibmer. Paratypes are deposited in WFBM and JNRC.

Diagnosis. *Cymatodera acutipennis* is most similar to *C. neomexicana* Knull, with which it shares similar coloration, elytral sculpturing, and pygidial structure, as well as the presence of elongate metaventral carinae in the

males. The new species' elongate, subacute apices will, however, serve to distinguish it from *C. neomexicana* and other congeners.

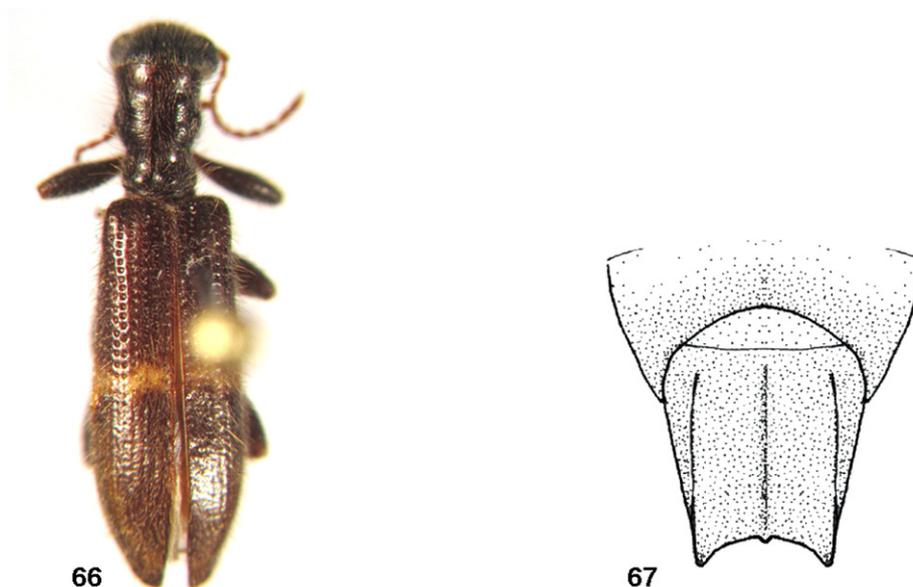
Description. (Holotype). Length: 8.50 mm. Form: elongate, subcylindrical. Color: brown; head, pronotum, and posterior margins of abdominal ventrites, castaneous; antennae, mouthparts, and tarsi testaceous; elytra with a pale, rather narrow, sinuate fascia posterior to middle (Fig. 66), fascia attaining lateral margins and only interrupted at midline by sutural margin. Head: measured across eyes, wider than pronotum; surface shallowly rugulose-punctate, moderately densely set with mostly short, suberect and reclinate silvery setae. Pronotum: shining, very shallowly, transversely rugulose and inconspicuously punctate; vestiture as on head but with the addition of some longer, suberect silvery setae. Elytra: elongate (ratio of length to width 33:13); umbones distinct; humeral angles subquadrate; disk somewhat depressed at anterior 1/4; sides subparallel to posterior 1/3, then gradually, obliquely convergent to prolonged, subacute, feebly downturned, dehiscent apices; surface rather coarsely, deeply, serially punctate; punctures shallower posterior to fascia, obsolete at apices, which are shallowly roughened; vestiture moderately dense, composed of fine, short, reclinate silvery setae, interspersed with more robust, erect, pale and testaceous setae, some of which are rather long. Metaventrite: conspicuously armed with a pair of narrow, very elongate, infusate carinae; surface shining, sparsely punctate laterally, set with a few fine, silvery setae. Abdomen: ventrites shining, sparsely setose; ventrite 5 with posterior margin rather deeply, arcuately emarginate; ventrite 6 (Fig. 67) elongate, subrectangulate, longitudinally carinate at middle and laterally, posterior angles produced to slightly downturned points, posterior margin lobate at middle; tergite 6 elongate, subsinuate posteriorly at sides, hind angles subquadrate, posterior margin notched at middle. Aedeagus: phallus kinked and downturned at apex.

Variation. The female lacks metasternal carinae and has abdominal ventrite 5 with the posterior margin only shallowly emarginate, and ventrite 6 and tergite 6 small and rounded posteriorly.

Etymology. The specific name refers to the prolongation of the elytral apices, diagnostic for this species.

Distribution. Known only from Coahuila state in México.

Biology. Specimens were collected at 4300' and 6300' elevation in April, May, and September.



FIGURES 66–67. 66. Habitus of *Cymatodera acutipennis* Rifkind, n. sp. (holotype male). 67. Pygidium (ventral view) of male *Cymatodera acutipennis*.

Acknowledgments

I thank Bernd Jaeger of the ZMB for valuable information on the location of some type specimens. Frank Merickel generously allowed me to study specimens in his care at the WFBM. Alan Burke provided helpful comments on the manuscript; I thank him too for making specimens available to me. I must acknowledge a debt to my late friend

and mentor, William F. Barr, for designating morphospecies of new taxa within his collection; these, along with his attached diagnostic notes, pencilled on card in his neat distinct hand, formed a basis for several of the descriptions contained herein. Jesús Romero Nápoles kindly facilitated my field studies in Oaxaca and Chiapas. My wife Patricia Gum helped prepare the illustrations.

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