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from Baja California, Mexico

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A new species of *Cymatodera* Gray (Coleoptera: Cleridae: Tillinae) from Baja California, Mexico

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Abstract. *Cymatodera westcotti* (Coleoptera: Cleridae: Tillinae), **new species**, is described from Baja California, Mexico. The new species is compared to the extremely similar, sympatric species *C. minacis* Barr. The aedeagus of *C. minacis* is illustrated for the first time.

Key words. Checkered beetles, description, endemism, aedeagus, genitalia.

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Introduction

The *Cymatodera* Gray fauna of Baja California (the Mexican states of Baja California and Baja California Sur) comprises fifteen species, of which six (*C. minacis* Barr, *C. intermedia* Barr, *C. fascifera* LeConte, *C. santarosae* Schaeffer, *C. cephalica* Schaeffer, and *C. purpuricollis* Horn) are endemic to the peninsula. Three of these endemics (*C. intermedia*, *C. cephalica*, and *C. purpuricollis*) are apterous. The remaining nine species are more broadly distributed, with ranges that extend north into the U.S. border states. This paper describes a new species of fully winged, endemic Baja *Cymatodera*. The new species is identical in facies to *C. minacis* Barr, and the two can only be distinguished by differences in the male terminalia. Indeed, when I examined Barr's type series of *C. minacis*, I discovered that it was actually comprised of two species: among labeled paratypes of *C. minacis* were several examples of the new species described herein. Barr's original description of *C. minacis* (Barr 1950: 497) does not include a description of the aedeagus, which is not everted in the holotype male specimen. However, some of the male paratypes from the type locality (Triunfo, Baja California Sur) do have the terminalia visible, and all of these exhibit recurved parameres and tapered phalluses. The type series was collected at Triunfo on the same day in July, and there is no doubt the holotype has this form of aedeagus, which is illustrated here for the first time. The new species has distinctly different terminalia which are also illustrated.

Materials and Methods

Specimens were borrowed from and/or deposited in the following collections: California Academy of Sciences Collection, San Francisco, California, U.S.A. (CASC); Colección Nacional de Insectos, Instituto de Biología, UNAM, México (CNIN); California State Collection of Arthropods, Sacramento, California, U.S.A. (CSCA); William F. Barr Entomological Museum, Moscow, Idaho, U.S.A. (WFBM); Collection of Jacques Rifkind, Valley Village, California, U.S.A. (JNRC);

Photographs were taken with an Olympus TG–5 camera fitted with an Olympus LED Light Guide (LG–1) attachment. The images were captured and processed using the camera's onboard macro photo stacking software.

Taxonomy

Cymatodera westcotti Rifkind, new species

(Fig. 1–4)

Type specimens. *Holotype male.* Mexico, Baja California Sur, 1.5 mi. east of San Jorge, 25.VII.1971, H. G. Real & R. E. Main, U. V. light. The holotype is deposited in CASC.

Paratypes. 2 ♂, 1 ♀ (CASC), 2 ♂ (CNIN), same data as holotype; 1 ♂, 2 ♀ (CASC), 1 ♂, 1 ♀ (JNRC), same data as holotype except 24.VII.1971. MEXICO: BAJA CALIFORNIA SUR: 1 ♂ (CASC), 3 mi. N. of San Jose Viejo, 16.VII.1971, H. G. Real & R. E. Main, U. V. light; 1 ♂ (WFBM), San Carlos, IX-25-1981, D. Faulkner & F. Andrews, coll. at blacklight; 1 ♂ (JNRC), 13 mi. N Villa Constitucion, El. 450', IX-7-68, E. L. Sleeper & F. J. Moore, Collected at blacklight; 1 ♂ (WFBM), San Jorge, June 23, 1967, E. L. Sleeper, E. M. Fisher, collected at blacklight; BAJA CALIFORNIA: 1 ♂ (CSCA), 70 km S Rosarito, sand dunes, 114°W (km 123), R. L. Westcott, coll. [collection date absent]; 1 ♂ (WFBM), 1.8 km SE Miller's Ldg., 28114Cb, (Beachdune), V-27/28-73, 35 m, E. L. Sleeper; 1 ♂ (WFBM), 15 mi. N. El Refugio, VII-4-38; 1 ♂ (WFBM), dunes 6 mi. N Guerrero Negro, IX-12-1983, A. V. Evans, K. Smith; 1 ♂ (WFBM), 1.5 mi. W Rosarito, June 13–14, 1967, E. L. Sleeper, E. M. Fisher, collected at blacklight; 1 ♂, 1 ♀ (JNRC), San Domingo, VII-19-38, Michelbacher & Ross, collectors; 1 ♂ (WFBM), Rancho Mesquital, VI-14, 15-67, E. L. Sleeper & E. M. Fisher; 1 ♂ (WFBM), El Refugio, VII-4-38, [no collector name appended]; 1 ♂ (CSCA), Laguna Manuela, 23 June 1968, E. R. Tinkham.

Description (holotype, male). Length: 10.5 mm. **Form.** Alate; elongate; elytra subparallel (Fig. 1–2). **Color.** Dark brown; antennae, mouthparts, metasternum, and tibiae, reddish brown; each elytron with a rather narrow, sinuate, oblique testaceous fascia at middle, narrowly interrupted internally before suture.

Head. Surface shining, rather finely, densely but shallowly punctate, moderately densely set with fine, whitish, anteriorly directed, reclinate setae of moderate length, interspersed with more robust, suberect and erect whitish setae; antennae of moderate length, loosely composed, antennomeres 2–3 subconical; antennomere 2 shorter than antennomere 3, antennomeres 3–10 subequal, subserrate, antennomere 11 elongate, $\frac{1}{3}$ longer than 10, narrowly rounded distally.

Prothorax. Longer than broad, broadest at middle, subflattened on disk above; integument shallowly, transversely rugulose, shallowly granulate–punctate laterally; surface shining, vestiture moderately dense, adpressed whitish setae rather long, arranged as in Fig. 1, erect setae fewer in number. Scutellum: very densely setose.

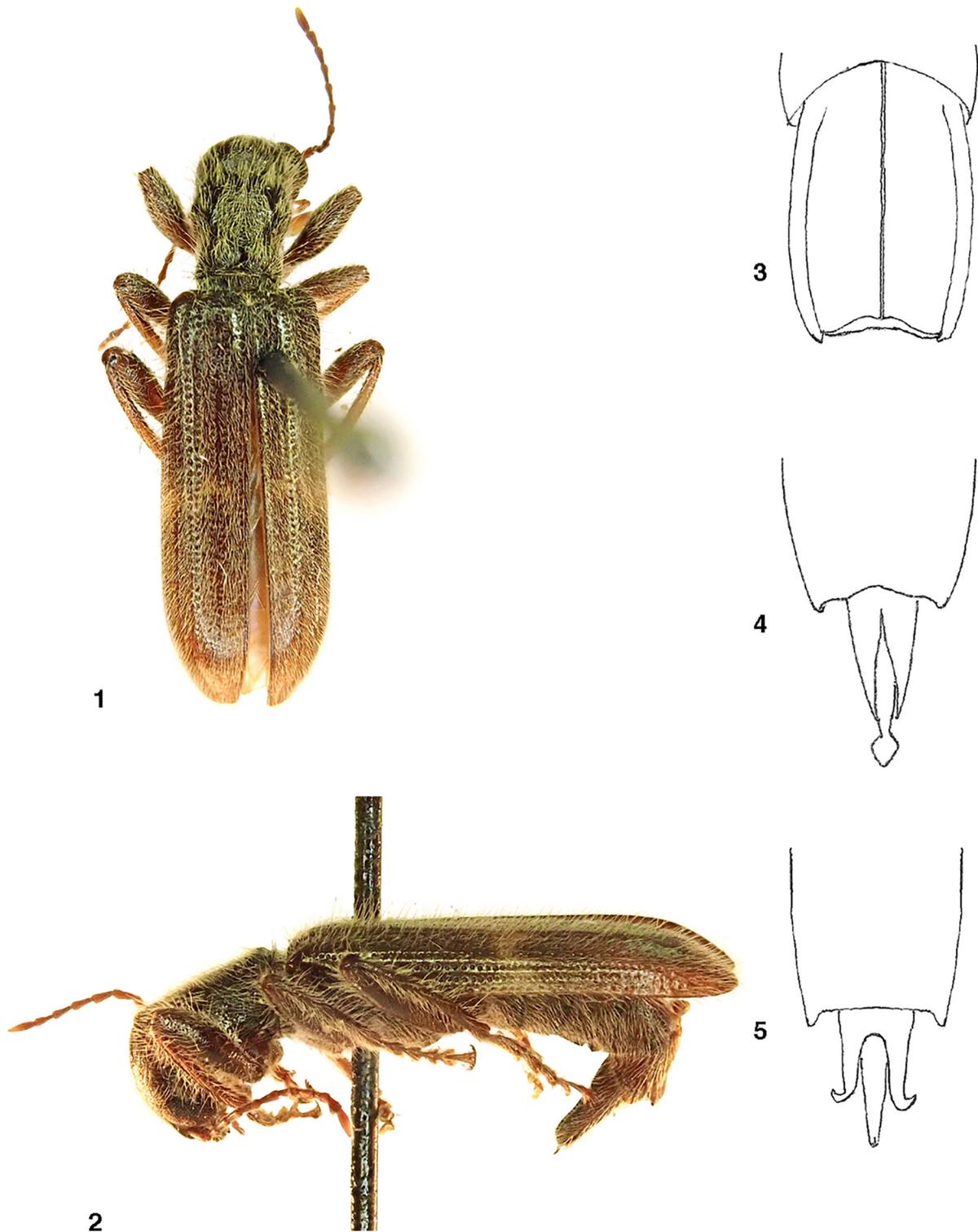
Elytra. Elongate (ratio of length to width 3:1); sides subparallel, arcuately convergent posteriorly to subsinuate, narrowly rounded and slightly dehiscent apices; dorsum subflattened; integument shining, punctures course and deep, diminished at posterior $\frac{1}{4}$; vestiture conspicuous, rather dense, directed posteriorly, and arrayed in longitudinal rows, comprising a mix of short, fine, reclinate pale setae with longer and more robust, erect testaceous setae.

Metasternum. Convex, shining, finely, sparsely punctulate; vestiture suberect, fine, pale, rather long; posterior with a pair of obliquely arranged, elongate darkened carinae.

Abdomen. Surface shallowly rugose and inconspicuously setose; ventrite 5 with posterior lateral angles rounded, hind margin rather deeply, triangularly emarginate; ventrite 6 (Fig. 3) oblong–elongate, sides gently, obliquely convergent posteriorly; surface strongly tricarinate, median carina most prominent posteriorly, attaining hind margin of ventrite 5; posterior angles produced as short subacute projections without a downward curve; posterior margin very feebly arcuately emarginate; tergite 5 with posterior margin deeply, triangularly emarginate; tergite 6 with surface moderately densely set with fine, elongate, pale setae; form oblong, narrower than ventrite 6 in dorsal view, posterior angles rounded, posterior margin feebly triangularly inflected at middle.

Aedeagus (Fig. 4). Parameres not recurved posteriorly, their apices tapered to dull point; phallus strongly sagittate at apex.

Variation. Length of available specimens ranges from 8.5 mm to 11.5 mm. The female differs from the male as follows: metathorax without carinae; ventrite 5 with posterior angles broadly rounded, posterior margin broadly angulate–emarginate; ventrite 6 and tergite 6 small, posterior margins conjointly rounded.



Figures 1–5. Habitus and structures of *Cymatodera*. 1–4) *Cymatodera westcotti* (holotype). 1) Dorsal habitus. 2) Habitus, lateral aspect. 3) Abdominal sternite 6, ventral aspect. 4) Aedeagus. 5) *Cymatodera minacis*, detail of aedeagus.

Etymology. The specific name honors Richard Westcott in recognition of his many contributions to our knowledge of Mexican Coleoptera.

Distribution. The new species is endemic to Baja California (the Mexican states of Baja California and Baja California Sur). Collecting records indicate a broad distribution throughout the peninsula.

Natural history. *Cymatodera westcotti* has been collected at black light. Specimens were collected in June, July, and September.

Diagnosis. *Cymatodera westcotti* is extremely similar to and sympatric with *C. minacis* in Baja California Sur. Males may be separated by differences in the shape of the terminalia: *C. westcotti* has the parameres rectilinear and the phallus apically sagittate (Fig. 4), whereas *C. minacis* has the parameres divergent and outwardly hooked, and the phallus tapered distally (Fig. 5). Unfortunately, females cannot be distinguished from *C. minacis* based on external morphology and are practically identifiable only by association with males.

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