

A new species of the genus *Cymatodera* Gray, 1832 from Peruvian seasonally dry forests (Coleoptera: Cleridae: Tillinae)

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Abstract. A new species of checkered beetles is described from Peru, *Cymatodera siccatus* sp. nov., based on one male specimen collected from the campus of the National University of Piura, an important area of seasonally dry forest in the Piura region, northwestern Peru.

INTRODUCTION

The subfamily Tillinae Leach, 1835 with approximately 700 described species classified in 70 genera, has a worldwide distribution and is well represented in the North America, the Neotropics, and the Paleotropical Region of Africa (Burke & Zolnerowich 2017). *Cymatodera* Gray, 1832 is the most numerous Tillinae genus in the New World with approximately 165 described species, having a distribution that extends from southern Canada to Bolivia, but is absent from the West Indies and the north of Mexico, however, the specific diversity gradually diminishes southward, with only four *Cymatodera* species found in South America from Colombia, Venezuela and Bolivia (Burke et al. 2019).

The genus is particularly species-rich in arid and semi-arid environments with xeric scrublands and thorny forests, temperate and sub-temperate, mid elevation and high-elevation mountainous environments with coniferous forests (Burke et al. 2020). *Cymatodera* species appear to have primarily nocturnal activity and are commonly attracted to light sources, and although little is known about their natural history are commonly associated with predatory habits (Burke et al. 2019, Rifkind 2020).

The National University of Piura, located in the urban area of Piura city, is one of the main and important areas of seasonally dry lowlands forest in the Piura region; this place is overwhelmingly dominated by *Prosopis pallida* (Humb. & Bonpl. ex. Wild.) Kunth, 1823 (Fabaceae) and is considered as important conservation area preserving several endemic species of flora and fauna (More et al. 2014). The genus *Cymatodera* was recorded for the first time from Peru by González-Coronado et al. (2017) based on an adult male specimen, during a beetles-collecting field trip in the campus National University of Piura. Direct comparisons and consultation of bibliographic resources revealed that it was an undescribed species. We describe herein this new species and represents an effort to listing with increasing the *Cymatodera* diversity of the Neotropics and South America.

MATERIAL AND METHODS

The specimen were examined using a Leica MZ6 (Germany) stereomicroscope, measurements in millimetres (mm) were taken using a micrometer ocular Hensoldt / Wetzlar - Mess 10 attached to the stereomicroscope. Photographs were taken with a Nikon Coolpix L320 camera of 16.1 mega pixels, while the software used for digital image processing was freeware CombineZM (Hadley 2006).

The following abbreviations are used in the description of the holotype: TL= Total body length, HL = Head length, HW = Maximum head width, PL = Pronotal length, PW = Maximum pronotal width, EL = Elytral length, EW = Maximum elytral width.

Type material is deposited in the MUSM - Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos, Lima, Peru. The holotype is provided with red and white printed labels, red for holotype name and white for collecting data.

TAXONOMY

Cymatodera siccatus sp. nov.

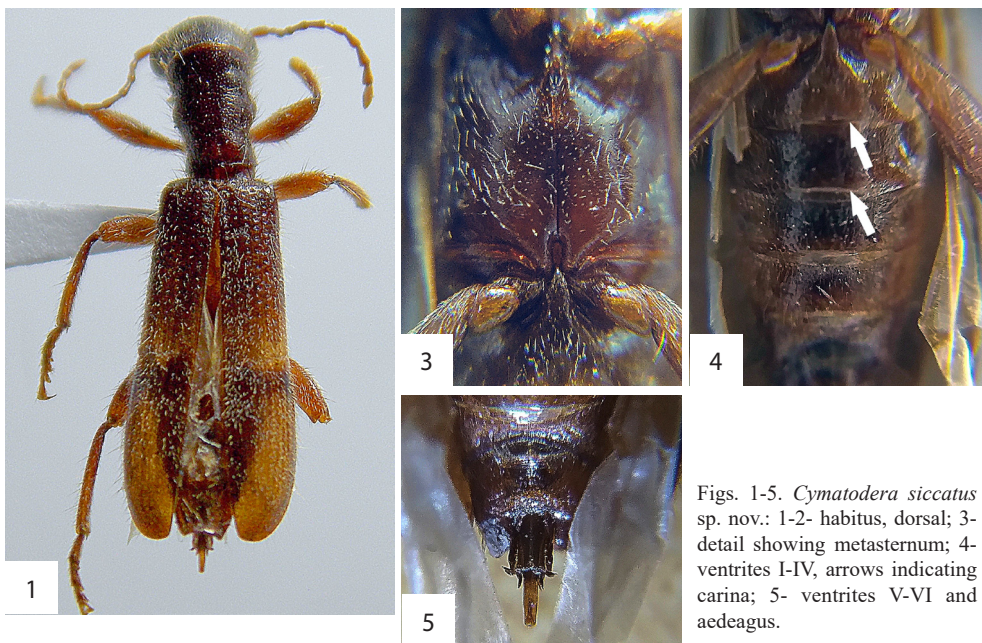
(Figs. 1-5)

Type material. Holotype (♂): PERU, Piura region, Castilla district, National University of Piura, 05°10'54''S, 80°37'14''O, 26 m, 03.VIII.2016, U. González & G. Juárez leg., (MUSM).

Description of holotype. Form elongate and slender; metathoracic wings present, fully developed; head dark brown; antennae, clypeus, mouthparts, legs and ventral side light brown; pronotum and elytra reddish-brown; each elytron with a pair post median oblique fasciae, the first fascia light brown and the second fascia black, these fasciae extends from elytral suture to epipleuron (Figs. 1-2). TL = 13.1 mm, HL = 2.8 mm, HW = 1.3 mm, PL = 3.3 mm, PW = 1.3 mm, EL = 7 mm, EW = 2.2 mm.

Head. Measured across eyes wider than pronotum; finely, rather punctate; surface shiny, vested with pale short recumbent setae intermixed with abundant long erect setae that become more numerous toward clypeus. Eyes large, somewhat rounded, slightly longer than wide, emarginate in front, bulging laterally, separated by approximately 2.5 eyes-widths. Antennae slender, extending beyond base of elytra; third antennomere about 1.5 times the length of second antennomere, fourth antennomere slightly longer than third antennomere, antennomeres 6-10 subequal in length, antennomeres 7-10 slightly serrate, last antennomere flattened apically with posterior margin acuminate, slightly longer than tenth antennomere.

Thorax. Pronotum elongate; widest at middle; sides constricted subapically, more strongly constricted behind middle; disc flat; surface shiny, moderately finely punctate, vested with pale short setae intermixed with long erect setae; subbasal tumescences pronounced. Prosternum wider than long, surface shiny and feebly punctate. Mesosternum shiny, feebly punctate, bulging anteriorly, vested with short pale setae. Metasternum strongly convex, feebly punctate, vested with fine and pale erect setae, medial longitudinal carina extending from anterior margin to posterior margin, apex of metaventral extensions slightly pointed (Fig. 3).



Figs. 1-5. *Cymatodera siccatus* sp. nov.: 1-2- habitus, dorsal; 3- detail showing metasternum; 4- ventrites I-IV, arrows indicating carina; 5- ventrites V-VI and aedeagus.



Elytra. Elongate and narrow, sides almost parallel, base wider than pronotum, humeri indicated and subquadrate, apices rounded, not dehiscent, covering almost completely sixth tergite, surface shiny, clothed with pale short semierect setae, that become more numerous toward apices, intermixed with long erect less densely arranged setae; sculpturing consisting of coarse and deep punctures arranged in longitudinal rows, that gradually decrease in size and depth from behind middle to apices.

Legs. Vested with pale short, recumbent setae intermixed with long, erect setae that become more densely arranged on femora and tibiae; femora and tibiae slightly, finely



Fig. 6. Habitat of *Cymatodera siccatus* sp. nov. at National University of Piura.

punctate; tarsomeres vested with pale short, recumbent setae, that become more densely arranged on ventral face.

Abdomen. Ventrites subquadrate, convex, shiny, sparsely punctate, punctuation denser toward middle part, somewhat clothed with short, fine, pale, semierect setae. Ventrite I with a longitudinal elevated carina, that do not reach posterolateral angles, and produces slight, shallow arcuate emargination (Fig. 4). Ventrites II-IV with longitudinal feebly elevated carina that does not reach posterolateral angles (Fig. 4). Ventrite V feebly convex, posterior margin broadly, rather deeply, semicircularly emarginate, ventrite VI with lateral margins subparallel, posterior margin broadly, deeply, semicircularly emarginate (Fig. 5). Tergite VI convex, almost completely covered by elytral apex, lateral margins oblique, posterior angles subacute, posterior margin broadly, semicircularly emarginate; tergite VI extending beyond apical margin of sixth ventrite covering completely sixth tergite in dorsal view.

Aedeagus. Parameres rectangular, side edges somewhat sinuous, posteriorly outwardly hooked, apex pointed. The phallus apically somewhat rounded (Fig. 5).

Female. Unknown.

Differential diagnosis. *Cymatodera siccatus* sp. nov. has a close affinity with *Cymatodera championi* Gorham, 1882. The males of both species can be separated by differences on the fasciae patterns on the elytra and the shape of the parameres. *C. siccatus* has two oblique fasciae from elytral suture to epipleuron and parameres rectangular posteriorly outwardly

hooked, whereas *C. championi* has one oblique fascia from elytral suture not reaching epipleuron and parameres elongate with spoon-shaped apex.

Bionomics. We collected the type material by white light trap in seasonally dry lowlands forest overwhelmingly dominated by *P. pallida* (Fig. 6).

Etymology. The specific name comes from Latin noun *siccatus* (dried), and refers to the survival of this species in dry, arid and semi-arid environments.

Remarks. The genus *Cymatodera* in South America is represented by four species: *Cymatodera conflagrata* (Klug, 1842) found in Colombia and Venezuela, *C. championi* distributed in Colombia and Bolivia, *Cymatodera prolixa* (Klug, 1842) from Venezuela (Burke et al. 2015) and *Cymatodera magdalena* Burke, 2019 found in Colombia (Burke et al. 2019). However, three of these species: *C. conflagrata*, *C. championi* and *C. prolixa* are not restricted to South America, but they can also be found in Central America and southern Mexico (Burke et al. 2015). *Cymatodera siccatus* represents a new species from South America and very likely the second restricted to this continent along with *C. magdalena*.

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