

Notas / Notes

First records of three species of Clytini (Coleoptera: Cerambycidae: Cerambycinae) to the Mexican States of Oaxaca and Chiapas

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ABSTRACT

New distribution records of four species of Clytini in the Mexican States of Oaxaca and Chiapas are presented. The presence of *Dexithea klugii* (Castelnau & Gory, 1841) and *Placosternus crinicornis* (Chevrolat, 1860) is recorded for the first time in the State of Oaxaca, and *Placosternus guttatus* (Chevrolat, 1860) is reported for the first time from Chiapas. Additionally, new locality records of *Placosternus erythropus* (Chevrolat, 1835) in Oaxaca are provided. Images of adults and their distribution maps are included.

Keywords: Longicorn beetles, new state records, distribution, *Dexithea*, *Placosternus*.

RESUMEN

Primeros registros de tres especies de Clytini (Coleoptera: Cerambycidae: Cerambycinae) para los estados mexicanos de Oaxaca y Chiapas

Se presentan nuevos registros de distribución para cuatro especies de Clytini en los estados mexicanos de Oaxaca y Chiapas. Se registra por primera vez la presencia de *Dexithea klugii* (Castelnau & Gory, 1841) y *Placosternus crinicornis* (Chevrolat, 1860) en Oaxaca, y *Placosternus guttatus* (Chevrolat, 1860) en Chiapas. Además, se proporcionan nuevos registros de localidades para *Placosternus erythropus* (Chevrolat, 1835) en Oaxaca. Se incluyen imágenes de los adultos y sus mapas de distribución.

Palabras clave: Escarabajos longicornios, nuevos registros estatales, distribución, *Dexithea*, *Placosternus*.

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The Cerambycidae are one of the best known and studied families of the order Coleoptera. Worldwide, almost 40,000 species have been described, included in about 5,500 genera, grouped into eight subfamilies: Cerambycinae, Dorcasominae, Lamiinae, Lepturinae, Necydalinae, Parandrinae, Prioninae and Spondylidinae (Švácha & Lawrence, 2014; Botero, 2018). The genera *Dexithea* Thomson, 1864 and *Placosternus* Hopping, 1937 (tribe Clytini) are included in the subfamily Cerambycinae. The genus *Dexithea* is composed of three species: *D. fabricii* (Chevrolat, 1860), *D. humeralis* Chemsak

& Noguera, 2001 and *D. klugii* (Castelnau & Gory, 1841). The genus *Placosternus* is composed of four species: *P. crinicornis* (Chevrolat, 1860), *P. difficilis* (Chevrolat, 1862), *P. erythropus* (Chevrolat, 1835) and *P. guttatus* (Chevrolat, 1860). Species of both genera are distributed in Mexico. Records of *D. humeralis*, *P. difficilis* (Monné, 2022) and *P. erythropus* (MacRae *et al.*, 2012) are known for the state of Oaxaca. In the case of Chiapas, there is only record of *P. difficilis* (Toledo *et al.* 2002). Therefore, the aim of this note is to provide new distributional records of four species of Clytini (Cerambycidae: Cerambycinae), three

species (*D. klugii*, *P. crinicornis* and *P. erythropus*) for the State of Oaxaca and one (*P. guttatus*) for Chiapas, Mexico.

Occasional manual and fruit trap collections were conducted between 2016 and 2022 in the municipalities of Villa de Zaachila, San Bernardo Mixtepec and San Pedro Mártir, Oaxaca. From June 2021 to May 2022, fruit trap collections were carried out in the municipalities of Villa de Zaachila, San Pedro Apóstol and Tlacoahuaya, Oaxaca (more details in the label data below). In each of these three municipalities, eight traps were placed monthly (for 12 months) and left to act for 96 hours. The traps were baited with a fermented mixture of banana (*Musa* sp.) or mango (*Mangifera indica*) with beer and sugar. In 2016, a single specimen of *Placosternus guttatus* was collected by hand in the locality of Monte Verde, municipality of Amatenango de la Frontera, Chiapas. The collected material was preserved in 70% alcohol and only a few specimens of each species were mounted. The specimens were deposited in the author's reference collection and some specimens of *P. erythropus* will be deposited in the collection of the Centro Interdisciplinario de Investigación para el Desarrollo Regional Unidad Oaxaca belonging to the Instituto Politécnico Nacional (CIIDIR-IPN). Taxonomic determination was made with specialized literature (Bates, 1885; Linsley, 1935; Hopping, 1937). Field photographs were taken with an iPhone X cell phone (Apple iOS 10.13). Laboratory photographs were taken with a Canon Rebel T6 camera mounted on a Zeiss Stemi 508 stereomicroscope. Maps were created with ArcGis 10.0. and the final plates were created with Photoshop CC 2020.

A total of 64 specimens (37 males and 27 females) of four species were studied: *Dexitheia klugi* (N=3, 4.7 %), *Placosternus erythropus* (N=59, 92.2 %), *P. guttatus* (N=1, 1.6 %) and *P. crinicornis* (N=1, 1.6 %). Of the total number of specimens, 53 were collected with fruit traps and 11 manually. In San Pedro Apóstol 23 specimens were collected (2 of *D. klugii*, 1 of *P. crinicornis* and 20 of *P. erythropus*); in Villa de Zaachila 22 (1 of *D. klugii* and 21 of *P. erythropus*); in San Bernardo 9 (*P. erythropus*); in Tlacoahuaya 6 (*P. erythropus*); and in San Pedro Mártir 3 (*P. erythropus*). In Amatenango only 1 male of *P. guttatus* was collected.

Dexitheia klugii (Castelnau & Gory, 1841)

It is recorded for the first time in the State of Oaxaca, Mexico. This species is closely resembling *D. fabricii* but is easily differentiated from it by a fine line on the third anterior of the elytra, between the two first black bands (Fig. 1a–b), which is absent in *D. fabricii*. *Dexitheia klugii* is distributed in Mexico, Guatemala, Honduras, Nicaragua, and Costa Rica (Maes, 2010;

Monné, 2022). In Mexico, it has been previously recorded in the states of Chiapas, Guerrero, Hidalgo, Jalisco, Morelos, Nuevo Leon, Queretaro and Tlaxcala (Monné, 2022; Pérez-Flores, 2022) (Fig. 2a). The new state record is based on the study of three specimens with the following data: **MEXICO, OAXACA: Villa de Zaachila.** 20-IX-2021. 16°56'52.30"N, 96°48'21.70"W. 1606 m. On grass, likely of the genus *Paspalum* (Fig. 1b). Leg. H. M. Guzmán-Vásquez (1 ♂); **San Pedro Apóstol.** 16-X-2021. 16°44'13"N, 96°44'05"W. 1496 m. Fruit trap (*Musa* sp.). Leg. H. M. Guzmán-Vásquez & B. Guzmán (2 ♀♀) (Fig. 2a, e).

Placosternus crinicornis (Chevrolat, 1860)

It is recorded for the first time in Oaxaca, Mexico. This species differs from congeners by the presence of four transverse yellow stripes on the pronotum and a slender longitudinal fringe-shaped spot on the apex of the pygidium (Fig. 1c). It is distributed in Mexico, Guatemala, Nicaragua, Costa Rica, Panama, Venezuela, and Colombia (Monné, 2022). In Mexico, it has been previously recorded in Guerrero, Nuevo Leon, Puebla, Quintana Roo, Tabasco, Tamaulipas, and Veracruz (Álvarez-Ramón, 2021; Monné, 2022) (Fig. 2b). The new state record is based on the study of one specimen with the following data: **MEXICO, OAXACA: San Pedro Apóstol.** 13-XI-2021. 16°44'13"N, 96°44'05"W. 1496 m. Fruit trap (*Musa* sp.). Leg. H. M. Guzmán-Vásquez & B. Guzmán (1 ♂) (Fig. 2 b, e).

Placosternus guttatus (Chevrolat, 1860)

It is recorded for the first time in the state of Chiapas, Mexico. This species is recognized by having three transverse yellow stripes on the pronotum and a rounded spot that completely or almost completely covers the apex of the pygidium (Fig. 1 d). It is distributed in Mexico, Guatemala, Belize, Nicaragua, Costa Rica, Panama, Venezuela, and Colombia (Monné, 2022). In Mexico, it has been previously recorded in the states of Tamaulipas, Veracruz, and Tabasco (Álvarez-Ramón, 2021; Monné, 2022) (Fig. 2 c). The new state record is based on the study of one specimen with the following data: **MEXICO, CHIAPAS: Amatenango de la Frontera,** Monte Verde. 30-XII-2016. 15°38'1.11"N, 92° 5'33.90"W. 860 m. Leg. G. Y. Rodríguez (1 ♂) (Fig. 2 c, e).

Placosternus erythropus (Chevrolat, 1835)

It is recognized by presenting three transverse yellow stripes on the pronotum and a slender longitudinal fringe-shaped spot on the apex of the pygidium (Fig. 1e–f). This species is distributed in United States (Texas), Mexico,

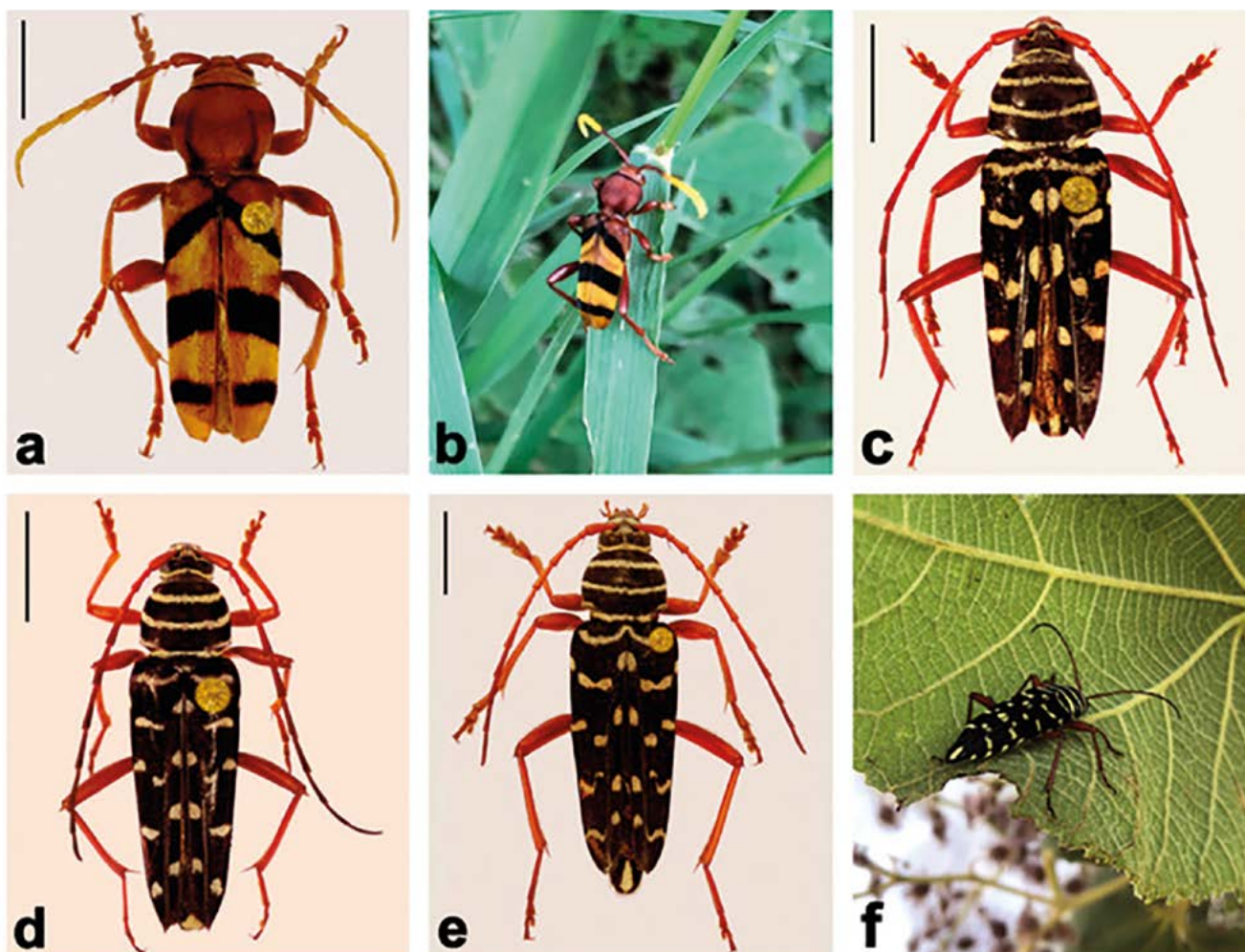


Fig. 1.– Species of Clytini from Oaxaca and Chiapas, Mexico. a) *Dexithea klugii* from Villa de Zaachila, Oaxaca; b) Adult on grass; c) *Placosternus crinicornis* from San Pedro Apostol, Oaxaca; d) *Placosternus guttatus* from Monte Verde, Amatenango, Chiapas; e) *Placosternus erythropus*, f) Adult on leaf (unidentified plant). Scale line = 5 mm.

Fig. 1.– Especies colectadas de Clytini en Oaxaca y Chiapas, México. a) *Dexithea klugii* de Villa de Zaachila, Oaxaca; b) Adulto sobre pasto; c) *Placosternus crinicornis* de San Pedro Apóstol, Oaxaca; d) *Placosternus guttatus* de Monte Verde, Amatenango, Chiapas; e) *Placosternus erythropus*, f) Adulto sobre hoja (planta no identificada). Escala = 5 mm.

Guatemala, and Costa Rica (Monné, 2022). In Mexico, it has been previously recorded in Ciudad de Mexico, Coahuila, Durango, Estado de Mexico, Guanajuato, Hidalgo, Jalisco, Morelos, Oaxaca (only one record from San Francisco Huapanapan), Puebla, Sonora, Tabasco, Tamaulipas, Tlaxcala and Veracruz (MacRae *et al.*, 2012; Pérez-Flores & Toledo-Hernández, 2020; Monné, 2022; Pérez-Flores, 2022) (Fig. 2d). Herein, new locality records for the state of Oaxaca, Mexico are provided. A total of 59 specimens were studied with the following data: **MEXICO, OAXACA: Villa de Zaachila**, Barrio San Sebastián. 03-VI-2016. 16°56'37.68"N, 96°44'49.35"W. 1508 m. Fruit trap (*Mangifera indica*). Leg. H. M. Guzmán-Vásquez (1 ♂); same data except: 17-VI-2016 (1 ♂); 28-VI-2016 (1 ♂); 11-X-2016 (3 ♂♂, 2 ♀♀); **Villa de Zaachila**. 12-IX-2016. 16°57'31.29"N, 96°44'47.33"W. 1516 m. Fruit trap (*Musa sp.*). Leg. H. M. Guzmán-Vásquez (2 ♂♂, 1 ♀); **Villa de Zaachila**. 25-VIII-2017.

16°57'33.31"N, 96°44'57.15"W. 1520 m. On Nogal (*Carya illinoensis* W.). Leg. G. Pacheco (4 ♂♂, 4 ♀♀); **Villa de Zaachila**. 26-V-2020. 16°56'48.60"N, 96°48'52.36"W. 1634 m. Fruit trap (*Mangifera indica*). Leg. H. M. Guzmán-Vásquez (1 ♂); **Villa de Zaachila**, Tlanichico. 14-XI-2021. 16°56'38.53"N, 96°48'8.69"W. 1648 m. manual collection on leaf of an unidentified plant. Leg. H. M. Guzmán-Vásquez (1 ♀); **San Bernardo Mixtepec**. Bosque de encino (*Quercus* sp.). 08-XI-2020. 16°48'39.76"N, 96°53'37.69"W. 1725 m. Fruit trap (*Musa sp.*). Leg. P. Amaya (5 ♂♂, 4 ♀♀); **San Pedro Apóstol**. 10-VII-2021. 16°44'13"N, 96°44'05"W. 1496 m. Fruit trap (*Musa sp.*). Leg. H. M. Guzmán-Vásquez & B. Guzmán (2 ♀♀); same data except: 18-IX-2021 (2 ♂♂, 1 ♀); 16-X-2021 (1 ♂); 13-XI-2021 (5 ♂♂, 3 ♀♀); 15-I-2022 (3 ♂♂, 3 ♀♀); **Tlacoahuaya**. 09-VII-2021. 16°58'45.03"N, 96°32'4.26"W. 1600 m. Fruit trap (*Musa sp.*). Leg. H. M. Guzmán-Vásquez & B. Guzmán (1 ♂, 2 ♀♀);

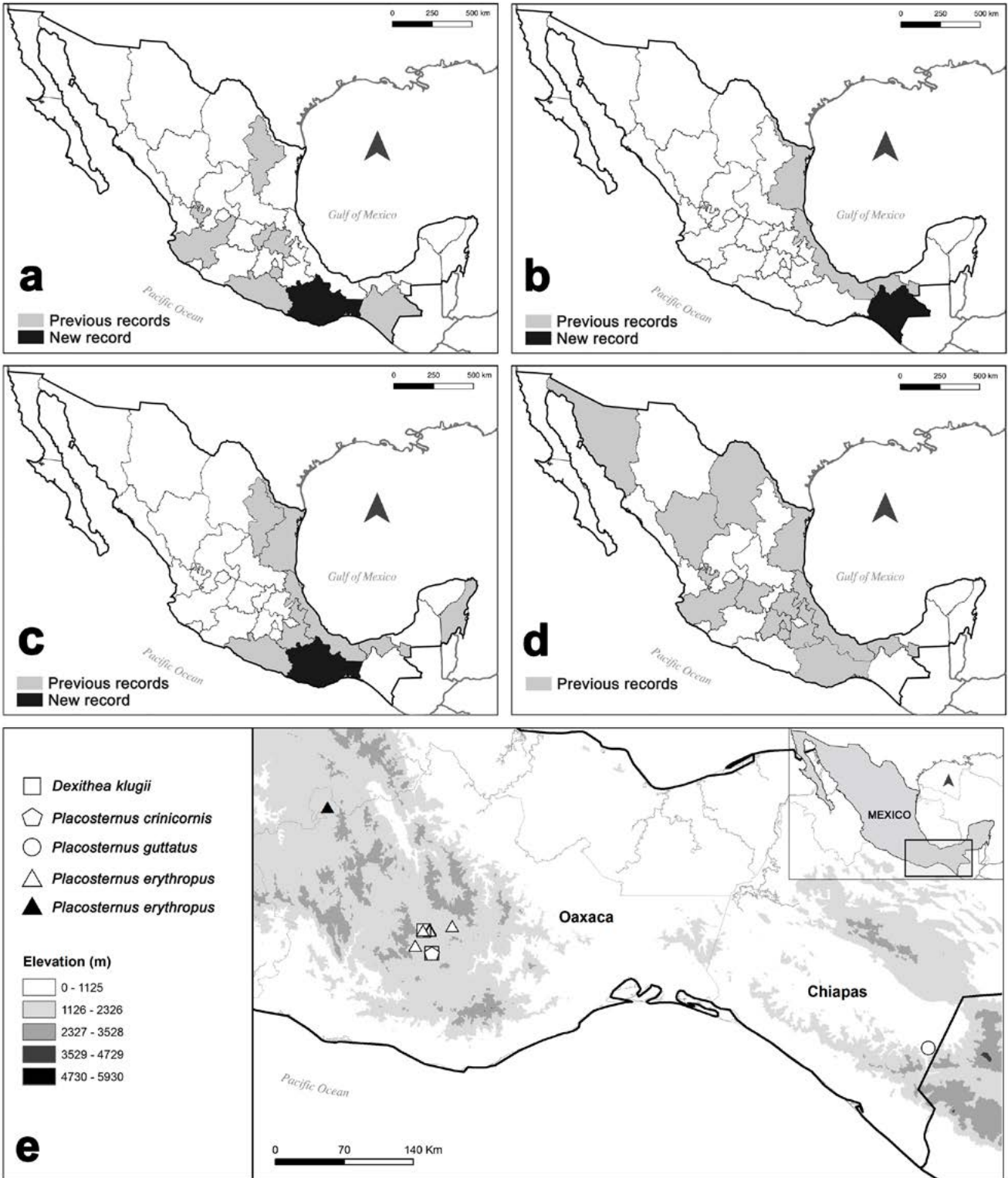


Fig. 2.- Distribution of four species of Clityni in Mexico. a) *Dexitheia kluggi*; b) *Placosternus crinicornis*; c) *Placosternus guttatus*; d) *Placosternus erythropus*; e) Distribution of the new records of Clityni from Oaxaca and Chiapas, Mexico (white symbols = new records; black symbol = record from MacRae et al., 2012).

Fig. 2.- Distribución de cuatro especies de Clityni en México. a) *Dexitheia kluggi*; b) *Placosternus crinicornis*; c) *Placosternus guttatus*; d) *Placosternus erythropus*; e) Distribución de los nuevos registros de Clityni de Oaxaca y Chiapas, México (símbolos blancos = nuevos registros; símbolo negro = registro de MacRae et al., 2012).

same data except: 20-VIII-2021 (1 ♂); 15-X-2021 (1 ♂); 20-V-2022 (1 ♀). **San Pedro Mártir**. 21-V-2022. 16°44'21.17"N, 96°41'39.29"W. 1514 m. Fruit trap (*Musa* sp.). Leg. H. M. Guzmán-Vásquez & B. Guzmán (2 ♂♂, 1 ♀) (Fig. 2d–e).

The species of *Placosternus* are associated with several species of different plant families, including Asteraceae, Mimosaceae, Poaceae, Fabaceae, Sapotaceae, Rosaceae, Rubiaceae and Euphorbiaceae (Monné, 2022). Adults feed on fruit and tender shoots, while larvae are borers of trunks and branches of both living and dying trees, reason why they can be considered species of agricultural importance (FIPRODEFO, 2020). However, in the collections carried out in this study (with fruit traps and manual collection) between 2016 and 2022 in five municipalities (Zaachila, San Bernardo Mixtepec, San Pedro Apóstol, San Pedro Mártir and Tlacoahuaya) of the Valles Centrales de Oaxaca region (VCO) only 60 specimens were captured (59 belonging to *P. erythropus* and 1 to *P. crinicornis*), which indicates that the populations are not very abundant and, therefore, do not represent an important pest in the region at this time. *Placosternus erythropus* is the most common species and is active from May to January in VCO, while for *P. crinicornis* only one specimen was collected in November. As for *Dexitheia klugii*, in September one male was collected manually, and two females were attracted to the fruit trap in October. The sites where *Placosternus crinicornis*, *P. erythropus* and *Dexitheia klugii* were collected are composed by xerophytic scrub (Tlacoahuaya), mezquital-huizachal (San Pedro Apóstol, San Pedro Mártir), grassland and secondary vegetation (Villa de Zaachila), located between 1,400 and 1,800 meters above sea level. In the case of *P. erythropus*, its association with *Carya illinoensis* (Juglandaceae) is recorded for the first time. In addition, this species was the only one collected in *Quercus* spp. forest of San Bernardo Mixtepec. The data presented here represent the southernmost distribution records in Mexico for *Placosternus crinicornis*, *P. erythropus* and *P. guttatus*. The data of *P. erythropus* represent new locality records in Oaxaca, since only one individual record was known in San Francisco Huapanapan (MacRae *et al.*, 2012). In addition to the new distribution records, this is the first time that *Placosternus* species collected with fruit traps are reported. Other Cerambycidae attracted to fruit traps in this study at VCO include *Trachyderes elegans elegans* Dupont, 1836; *Dendrobias mandibularis mandibularis* Dupont, 1834; and *Crioprosopus thoracicus* (White, 1853) (all Cerambycinae).

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