

NOTE

First report of *Cacotherapia angulalis* (Barnes and McDunnough) (Lepidoptera: Pyralidae) feeding on *Planococcus ficus* Ben-Dov (Hemiptera: Pseudococcidae), the vine mealybug, in Mexico

DOI: 10.4289/0013-8797.124.2.372

This is the first report of *Cacotherapia angulalis* (Barnes and McDunnough) (Pyralidae: Galleriinae) feeding on *Planococcus ficus* Ben-Dov (Pseudococcidae), the vine mealybug, in Mexico. A previous report (Powell and Opler 2009) found *C. angulalis* larvae feeding on tissue at the base of cones of Monterey cypress (Cupressaceae: *Hesperocyparis macrocarpa* (Hartw.) Bartel). There are two other species of *Cacotherapia* Dyar that have been found to be scavengers and/or to feed on scale insects and mealybugs. *Cacotherapia nigrocinerella* (Hulst) was reared on a scale insect (“*Leucanium* sp.”) (Dyar 1904), and *C. unipuncta* (Dyar), which was found under the bark of the domestic grape (*Vitis vinifera* L.), was described as:

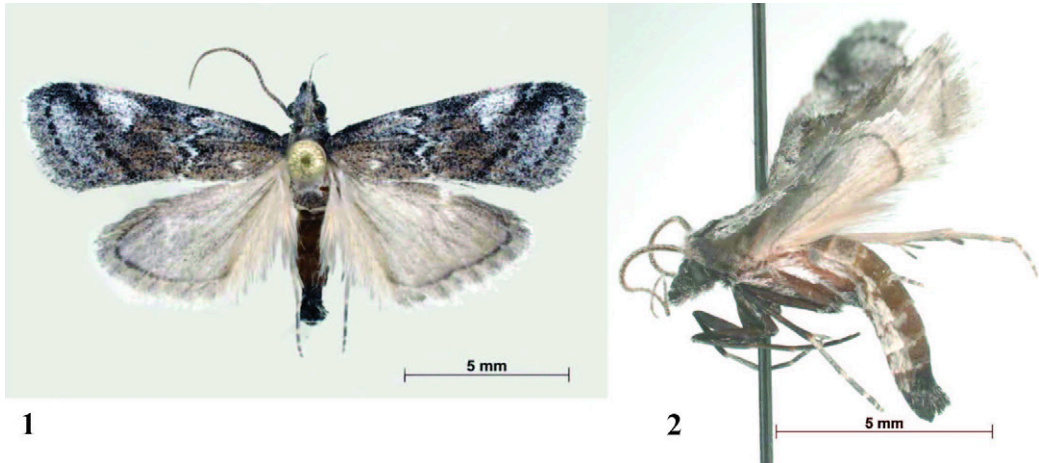
“... intimately associated with *Planococcus maritimus* (Ehrhorn), and undoubtedly [using] both live mealybugs and excess honeydew as food sources ...” (Liebherr 1977).

Additionally, a laboratory experiment in Liebherr’s (1977) study found that larvae of *C. unipuncta* also fed on *P. citri* (Risso), the citrus mealybug.

Field samples were acquired during the first week of December 2021 in three low-input agricultural vineyards (Cabernet Sauvignon, Merlot and Nebbiolo), located in Ensenada, Baja California, Mexico: Sandoval (32° 6' 44.316" N, 116° 31' 41.052" W), Nova (31° 58' 23. 412" N, 116° 39' 38.916" W), F-5 Lot D (32° 5' 46.968" N, 116° 36' 16.272" W), and Carrillo farm (31° 59' 29.436"

N, 116° 38' 34.152" W). Fifty-two lepidopteran larvae feeding on *P. ficus* were hand collected by the first author (RSM) using entomological forceps. Thirty large, slow-moving, full-grown larvae were placed in tightly sealed, 10 cm Petri dishes, and immediately transported by air to the Biological Control Department (DCB), in Tecoman, Colima, Mexico. After arrival, the Petri dishes were kept under laboratory conditions (25 ± 1°C; 50 ± 10% relative humidity and 12:12 photoperiod) within a secure rearing cage until adult emergence. After pupation and emergence, adults were pinned and mounted for photographic documentation with an AxionCam® ICc3 camera connected to a Carl Zeiss® Discovery V20 stereoscope. Specimens were deposited in the Collection of Entomophagous Insects (CEI) at the DCB, voucher numbers: CIE-LEP-001, CIE-LEP-002, CIE-LEP-003.

Images of the reared specimens (Figs. 1, 2) were identified as *C. angulalis* based on comparison to type specimens of *Cacotherapia* at the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM), and the illustration/painting in Ragonot (1891) of *C. interalbicalis* (Ragonot), the only species described from and previously known from Mexico (Sonora). Twelve species of *Cacotherapia* have been described (Munroe et al. 1995, Solis 2022), mostly from the United States. The reared specimen images were specifically compared to the following similar taxa: *C. angulalis* described from Arizona, *C. peocilostigma*



Figs. 1, 2. Adult male of *Cacotherapia angulalis*. 1, Dorsal view. 2, Lateral view.

(Dyar) from Panama, and *C. vulnifera* (Dyar) from Arizona, the junior synonym of *C. interalbicalis*. It is important to note that *Cacotherapia* species are often confused with Phycitinae (Pyrilidae) due to the similar wing pattern, but the male labial palpi of *Cacotherapia* are diagnostic for the genus (Figs. 1, 2). In phycitines, labial palpi are mostly upturned with a blunt apex of the third segment, but less often porrect and pointed. In *Cacotherapia*, the females have porrect palpi, but the males have highly modified labial palpi (Barnes and McDunnough 1912, see pl. 4, fig. 5) that externally appear short and bushy (Fig. 2).

We thank M. C. Roberto Roche Uribe and Ing. Silvino De Jesus Aguilar, both of the Comite Estatal de Sanidad Vegetal de Baja California, and Dr. Jose Irving Monjaras Barrera of the Facultad de Enologia y Gastronomía of the Universidad Autónoma de Baja California (UABC) for their support in the field. We would also like to thank Dr. Beatriz Rodriguez Velez of the Biological Control Department for her help in taking the photographs. Mention of trade names or commercial products in this publication is solely for the purpose of providing

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