

SCIENTIFIC NOTE

New Host Plant Records for *Oenomaus ortygnus* (Cramer) (Lepidoptera: Lycaenidae) in Mexico

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Abstract

This is the first record of *Oenomaus ortygnus* (Cramer) damaging fruits of ilama (*Annona diversifolia*) and extends the butterfly distribution for three states in Mexico.

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Peña & Bennett (1995) reported 296 species of Neotropical insects associated with *Annona* (Annonaceae), among them, the borers, such as *Bephratelloides cubensis* (Ashmead) (Hymenoptera: Eurytomidae), *Cerconota anonella* (Sepp) (Lepidoptera: Elachistidae), and *Oenomaus ortygnus* (Cramer) (Lepidoptera: Lycaenidae), are the main pests causing economically important damages to the crops.

Oenomaus ortygnus is a relatively large hairstreak butterfly found in wet and dry lowland forests from southern Texas throughout Central America to Southern Brazil (Godman & Salvin 1887-1901, Fennah 1937, Clench 1964, Domínguez-Gil 1978, Coto & Saunders 2001, Faynel 2006). This species may be readily distinguished from other *Oenomaus* included in the *O. atena* group (Faynel 2006, 2008) by genitalic characters and by an iridescent

aquamarine color above and a pinkish-gray or bluish-gray ventral pattern with a distinctive black basal spot and extensive blue along lower margin (Fig 1d), which may vary geographically. Despite its widespread distribution, the species is uncommon in some localities, but occurs throughout the year, and since some species of *Annona* produce fruits throughout the year (Janick & Paull 2008), *O. ortygnus* may be found most of the year (January to November in Mexico, see Opler *et al* 2010).

Oenomaus ortygnus has been found in 12 states of Mexico (Fig 2) (Godman & Salvin 1887-1901, Kendall 1975, Raguso & Llorente-Bousquets 1990). The report of Kendall (1975) of females ovipositing and larvae feeding on the fruits of *Annona globiflora* Schltdl. (Annonaceae) in Ciudad Mante, Tamaulipas, is the only information

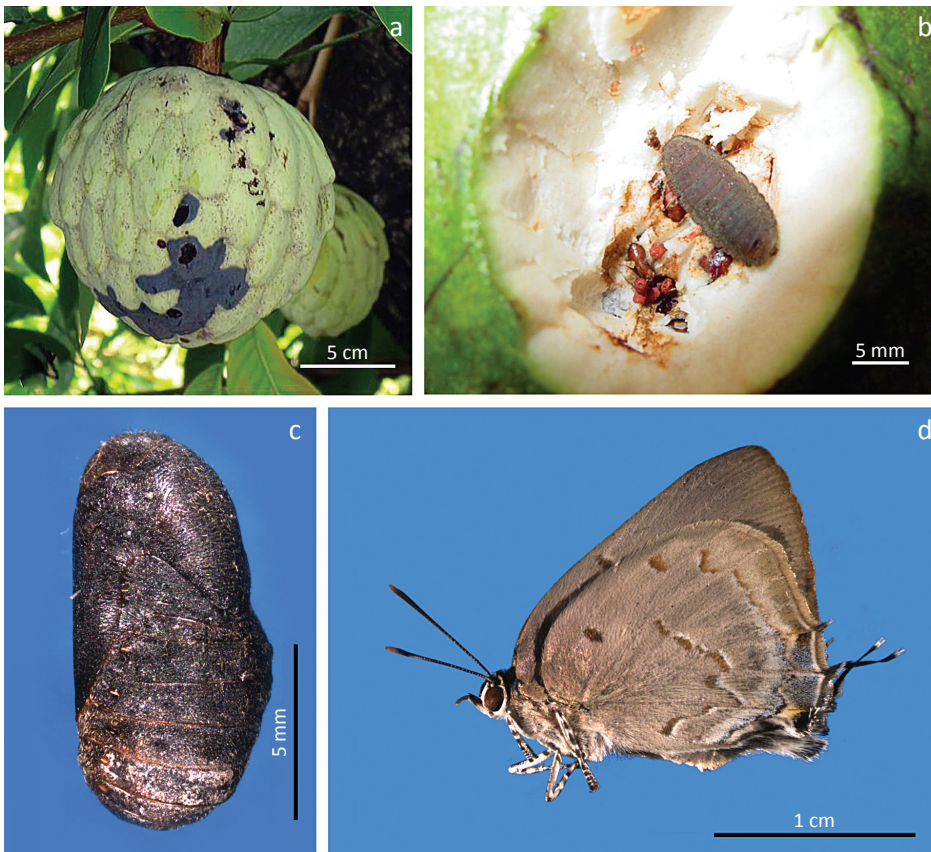


Fig 1 *Oenomaus ortygnus*. a) Llama fruits (*A. diversifolia* Safford) showing typical necrosis induced by the larvae of *O. ortygnus*; b) Necrosis removal facilitates detection of larva that fed on fruit pulp and immature seeds; c) Obtecta pupae that was formed on the fruit surface and inside dried fruits; d) Adult of *O. ortygnus* in lateral view.

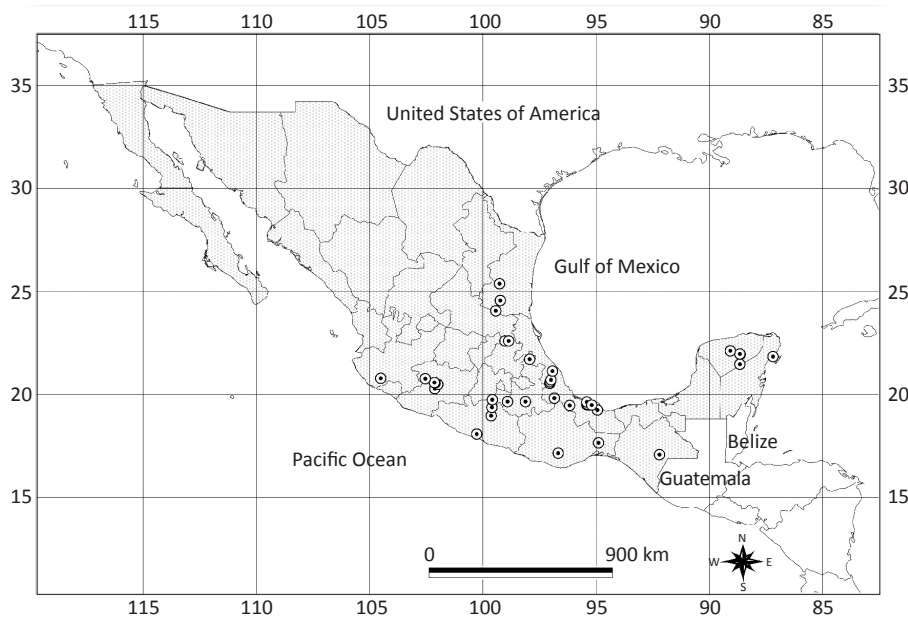


Fig 2 Map of distribution of *Oenomaus ortygnus* in Mexico.

available so far for Mexico. To update the status of this pest in Mexico, we inspected the most important *Annona* growing areas from March 2008 to February 2009.

Five fruits of *Annona reticulata* L. that showed damage by *O. ortygnus* were collected in March 2008 in Tepalcingo, Morelos (18°35'N, 98°50'W, elevation 1169 m). Six fruits

of *A. diversifolia* Safford with the same damages were found in September 2008 in Cacahuamilapa, Guerrero (18°40'N, 99°30'W, elevation 1163 m). Three fruits of *A. reticulata* were attacked by *O. ortygnus* in February 2009 in Zacapala, Puebla (18°35'N, 98°03'W, elevation 1254 m). Collected fruits were placed in plastic containers (40 x

21 x 12 cm) and covered with cheesecloth so that adults could not escape. The samples were incubated at $26 \pm 1^\circ\text{C}$ and relative humidity of 50%. Five adults of *O. ortygnus*, from larvae reared on these fruits, emerged in the lab.

Although the presence of *O. ortygnus* has been often noticed on bullock heart (*A. reticulata* L.), soursop (*A. muricata* L.) and cherimola (*A. cherimola* Mill.) (Domínguez-Gil 1978, Calvo 1998, Coto & Saunders 2001, Beccaloni *et al* 2008), we found no evidence that this butterfly damaged soursop and cherimola in our surveys. We visited orchards in Las Varas, Nayarit ($21^\circ 11' \text{N}$, $105^\circ 08' \text{W}$, elevation 40 m) and Coatepec Harinas, Estado de México ($18^\circ 45' \text{N}$, $99^\circ 45' \text{W}$, elevation 2119 m) in July, August, and November 2008, other insect pests were recorded attacking *A. muricata* as *B. cubensis* and *Talponia batesi* Heinrich (Lepidoptera: Tortricidae) on cherimola, respectively.

All fruits of *A. reticulata* and *A. diversifolia* attacked by *O. ortygnus* showed necrosis (Fig 1a). Larvae are usually found under the dead tissue (Fig 1b), feeding on the fruit pulp. One to five larvae may be found per fruit. In the laboratory pupation occurred on the external surface of the fruit (Fig 1c) as observed by Calvo (1998) with a population of *O. ortygnus* at the Estación Experimental Santa Lúcia, Barva, Heredia, Costa Rica.

The present report increases the knowledge about *O. ortygnus* in two ways: it adds a new record of *Annona* as larval host plant and extends the known distribution of the butterfly for the Morelos state in Mexico. Adults were deposited in the fruit pest collection at Fundación Salvador Sánchez Colín CICTAMEX, S.C., Coatepec Harinas, Estado de México, México.

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