

New records of the Neotropical handsome fungus beetle genus *Ephebus* Gerstaecker (Endomychidae: Epipocinae) from Mexico and Costa Rica

The endomychid subfamily Epipocinae Gorham is exclusive to the New World. Three of its four genera (*Anidrytus* Gerstaecker, *Ephebus* Gerstaecker and *Epopteris* Chevrolat) are restricted to the Neotropics; while some species of *Epipocus* Germar occur in the Nearctic region (Tomaszewska, 2005).

Ephebus is the most homogeneous and poorly studied genus of Epipocinae, and it is consequently the least diverse, with only nine species distributed from southern Mexico to Brazil. In the recent world checklist of Endomychidae (Shockley *et al.*, 2009a), ten species were listed. However, *Ephebus chontalesianus* Gorham, which was synonymized under *E. piceus* Gorham by Strohecker (1975), was erroneously listed as valid.

Although a larva tentatively identified as *Ephebus* was described by McHugh & Pakaluk (1997), almost nothing is known about the habits of members of this genus. Presumably, they feed on spores and/or hyphae of fungi, as do most other endomychids (Shockley *et al.*, 2009b).

Species and specimens of *Ephebus* are poorly represented in entomological collections. As a result, the knowledge of its distribution is highly uninformative, with species reported only from scarce and disjunct localities. Therefore, any verifiable specimen records of *Ephebus* contribute to a better understanding of the distribution patterns and habits of these beetles.

In this note, we record for the first time the occurrence of *E. piceus* in Mexico and *E. sulcatus* Strohecker in Costa Rica and Chiapas, Mexico. Specimens were identified using the key and figures provided by Strohecker (1975). Acronyms for the entomological collections cited in the text are: INBIO: Instituto Nacional de Biodiversidad, Heredia, Costa Rica. CNIN: Colección Nacional de Insectos, Instituto de Biología, UNAM, Distrito Federal, Mexico.

The distribution maps were produced using Google Earth (Google, Inc.) and include the new records, as well as localities given by Gorham (1889), Strohecker (1975) and Arriaga-Varela *et al.* (2007). Photographs were generated using a Leica Z16 APO A microscope. Composite images were generated using the automontage software Leica application suite 2.8.1.

SPECIES ACCOUNTS

Ephebus piceus Gorham, 1889: 131.

Ephebus chontalesianus Gorham, 1889: 132.

This species exhibits a wide distribution, having previously been recorded from Costa Rica, Guatemala, Nicaragua, Panama and Colombia. It is here reported for the first time from Mexico, based on a single male specimen collected in Chiapas.

Material examined: MEXICO: *Chiapas:* Ocosingo, Chajul, Reserva Montes Azules, 10 al 16-VII-87, Col. F. Arias, R. Barba, L. Cervantes (1 specimen in CNIN).

Ephebus sulcatus Strohecker, 1975: 336.

This species was described originally based on specimens from Mexico, El Salvador and Colombia (Strohecker, 1975), so its occurrence in Costa Rica is not surprising. Based on a series of 13 specimens collected in the Costa Rican provinces of Guanacaste, San José and Puntarenas, *E. sulcatus* is recorded here for the first time from this country. Of these 13 specimens, four were collected in April and May, respectively, two in June, one in October and one in August. One specimen lacked a more precise date of collection beyond the year. Specimens with elevation data (12 specimens) were all collected at relatively low elevations, between 50-800 m. This pattern is consistent with the specimen listed by Arriaga-Varela *et al.* (2007); however, Strohecker (1975) listed 20 paratypes of this species from Colombia collected between 1200-1800 m, suggesting that it also occurs at mid-elevations. In terms of methods, specimens were collected on three separate occasions using Malaise traps and once attracted to artificial lights.

The previous known distribution of this species in Mexico was restricted to the type locality, Catemaco in Veracruz, and Landa de Matamoros in Queretaro (Arriaga-Varela *et al.*, 2007). To these localities, Chajul in Chiapas should be added, representing the first record of this species in the state. This specimen was collected in July.

Material examined: COSTA RICA: *Guanacaste:* Sector La Pailas, P.N. Guanacaste, A.C. Guanacaste, Prov. Guana, Costa Rica. 800 m 6-26 Jun 1994, K. Taylor, L N 309500_389500 #3063/ Costa Rica INBIO CRI001 909798; *San José:* Costa Rica. Prov. San José, Pérez Zeledón. Platanares, Naranjo, 700m N. m de la Escuela, 800m, 21 – 23 MAY 2002, R. González, Luces Ambiente, L S 350500 503300 #69650 / INB0003490967 Costa Rica INBIOCRI; *Puntarenas:* Send. A Río Claro, P.N. Corcovado, Prov. Punt., COSTA RICA. 1991. Tp Malaise. L-S-508300, 270500/ Costa Rica INBIO CRI001 325107; Rancho Quemado, 200m, Península de Osa, Prov. Puntarenas. Costa Rica, F. Quesada y G. Varela, May 1992. L-S 292500, 511000/ Costa Rica INBIO CRI000 408089; (same data except) / Costa Rica INBIO CRI000 408055; (same data except)/ Costa Rica INBIO CRI000 942451; Est. Quebrada Bonita, R.B. Carara, (Aguirre), Prov. Punta, COSTA RICA. 50-100m. ABR 1995. R. Guzmán., L N 195250 469850 #4725/ Costa Rica INBIO CRI000 170589; (same data except)/ Costa Rica INBIO CRI000 170590; (same data except)/ Costa Rica INBIO CRI000 170489; Costa Rica.

Prov. Puntarenas, Golfito, Estación Agujas, Sendero Zamia, Bque Primario. 380m. 05 OCT 2000. A. Azofeifa. Mantillo. L_S_526550_276750 #61438/ INB0003127772 Costa Rica INBIOCRI; Est. Queb. Bonita, 50m, Res. Biol. Carara. Prov – Puntarenas, Costa Rica. 10 a 28 ago 1992, R. Guzman L-N 194500, 469850 / Costa Rica INBIO CRI001 756920; Est. Carara, Res. Biol. Carara. Prov. Punta, Costa Rica. 200 m. Abril 1990, Malaise, L N 195250_478700 #3081/ INB0003497887 INBIOCRI Costa Rica; Costa Rica. Prov. Puntarenas, Osa, Bosque Esquinas. 200m. JUN 1994. Quesada, M. Segura. Malaise. L_S_302450_545100 #3087 /INB0003504924 INBIOCRI Costa Rica. (13 specimens in INBIO). **MEXICO:** Chiapas: Ocosingo, Chajul, Reserva Montes Azules, 10 al 16-VII-87, Col. F. Arias, R. Barba, L. Cervantes (1 specimen in CNIN).

The scarce localities known for these species suggest a possible sympatric distribution between them, together overlapping from southern Mexico to northern South America. This conclusion is further supported by both species having been collected in the same northernmost locality: Chajul in Chiapas, Mexico. However, additional collecting efforts to confirm these distributions are required.

ACKNOWLEDGEMENTS

We would like to thank Angel Solis for allowing us to study the specimens of *Ephebus* in the INBIO collection. Also, Susana Guzmán Gómez of the Unidad de Informática para la Biodiversidad (UNIBIO) of the Instituto de Biología, UNAM is acknowledged for providing technical assistance with the photographs. Beatriz Rodríguez Velez (Instituto de Biología, UNAM) read an early version of this manuscript and made valuable comments. The first author thanks the Posgrado en Ciencias Biológicas of the UNAM, and to CONACYT for the grant which partially funded this work. This work is dedicated to Dr Santiago Zaragoza-Caballero (Instituto de Biología, UNAM) for his tireless work with Malacodermata beetles, and especially for his willingness to share his experience and knowledge.

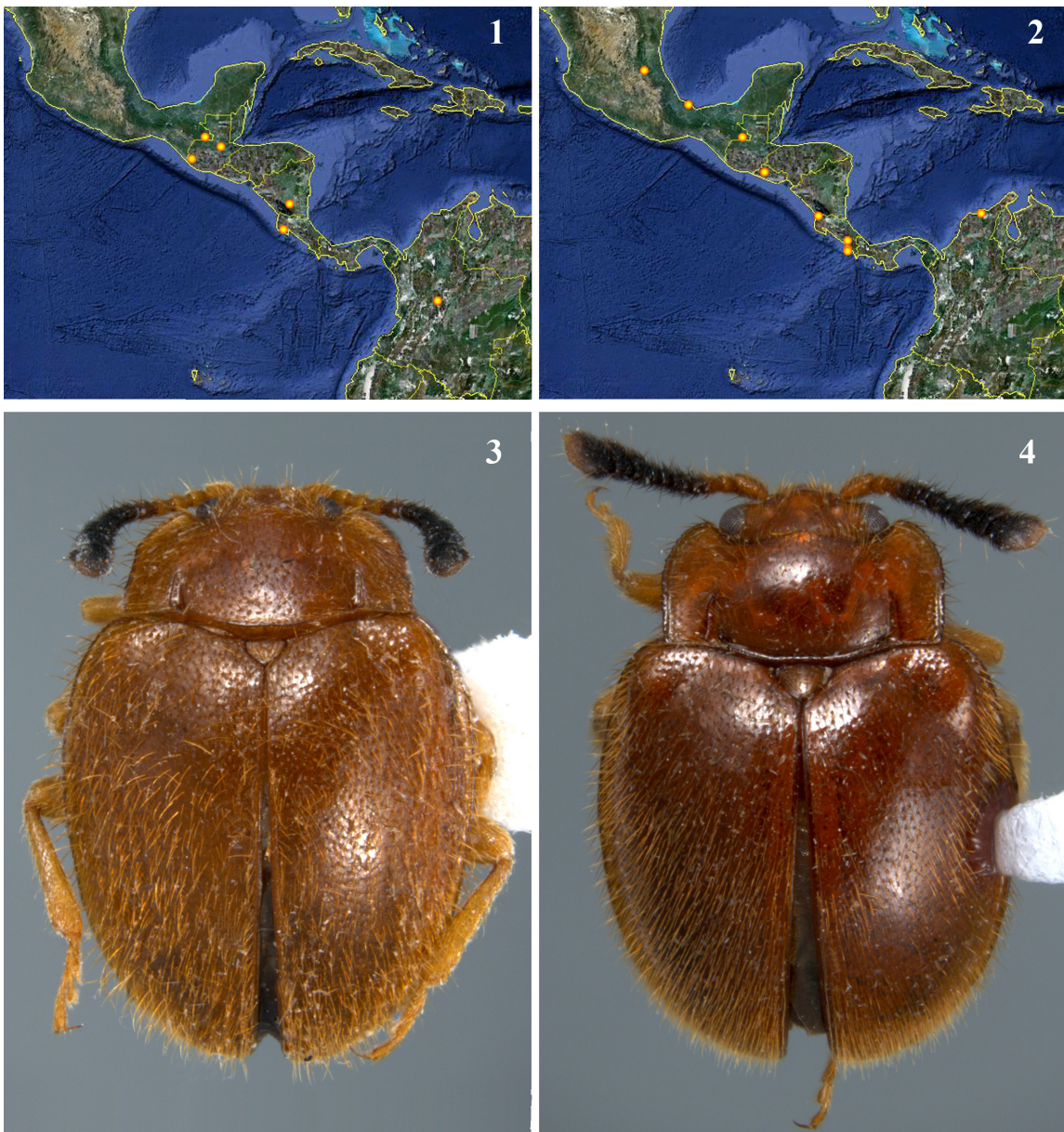
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Recibido: 15 de noviembre 2010

Aceptado: 13 de diciembre 2010



Figures 1-4. Fig. 1. Known localities for *Ephebus piceus*. Fig. 2. Known localities for *Ephebus sulcatus*. Fig. 3. *Ephebus piceus*, dorsal view; length = 3.40 mm. Fig. 4. *Ephebus sulcatus*, dorsal view; length = 3.55 mm.



Insectos. Fotografías: José Luis Navarrete-Heredia.