

Second USA Record for *Euphoria biguttata* (Gory and Percheron) (Coleoptera: Scarabaeidae: Cetoniinae) and Discussion of Its Distribution

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Source: The Coleopterists Bulletin, 71(2):364-365.

Published By: The Coleopterists Society

<https://doi.org/10.1649/0010-065X-71.2.364>

URL: <http://www.bioone.org/doi/full/10.1649/0010-065X-71.2.364>

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SCIENTIFIC NOTE

SECOND USA RECORD FOR *EUPHORIA BIGUTTATA* (GORY AND PERCHERON)
(COLEOPTERA: SCARABAEIDAE: CETONIINAE) AND DISCUSSION OF ITS DISTRIBUTION

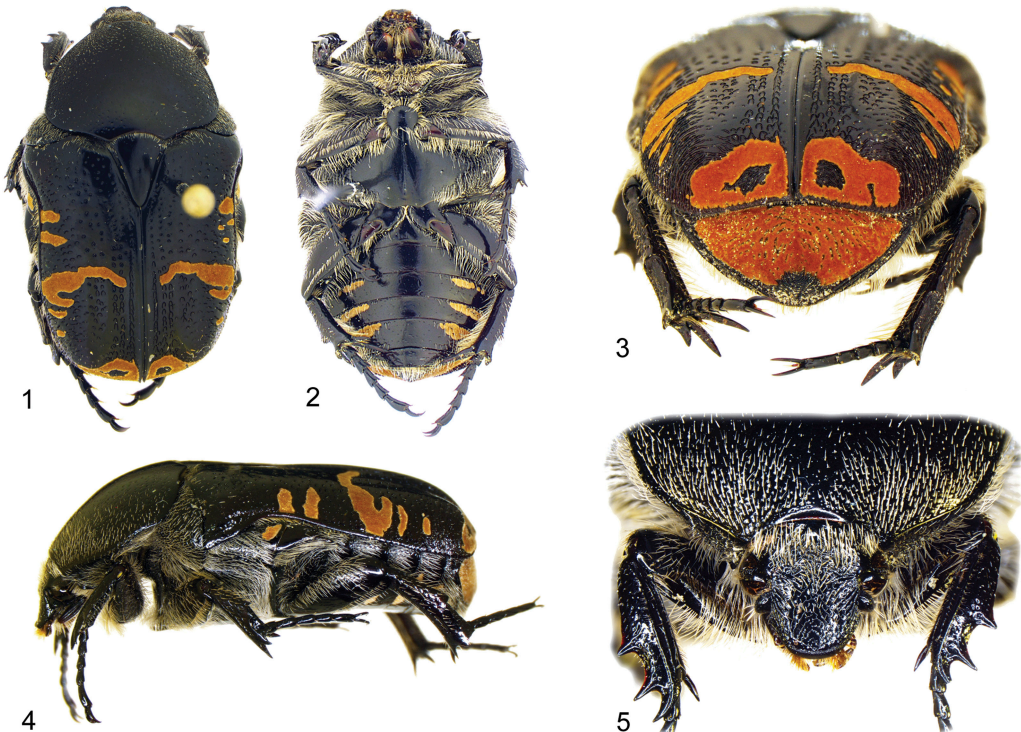
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DOI.org/10.1649/0010-065X-71.2.364

Euphoria biguttata (Gory and Percheron), a striking cetoniine scarab, is primarily Mexican in distribution, with the recently published geographical distribution of the species ranging from extreme southern Texas south to El Salvador and Honduras (Orozco 2012). Of the 463 specimens examined by Orozco (2012) during his revisionary study, 351 specimens were from Mexico.

According to Orozco (2012), only a single specimen was known from the USA, cited but not examined by him, from Hidalgo County, Texas

(Riley and Wolfe 2003; recorded as *Euphoria lineoligera* Blanchard, synonymized with *E. biguttata* by Orozco (2012)). We recently corresponded with Ed Riley to see if there was any further information on the reported specimen or to see if the collection at Texas A&M University contained any more recently collected specimens. Ed informed us that the recorded specimen bears a single, three-lined label: "Hidalgo Co. | VI-17, 1962 | G. Jackson". Because the specimen label contains no state information, Ed said he had some reservation about that specimen



Figs. 1–5. Photographs of Arizona specimen of *Euphoria biguttata*. 1) Dorsal habitus; 2) Ventral habitus; 3) Posterior view, showing markings on elytral apices and pygidium; 4) Left lateral habitus; 5) Anterior view showing head and anterior part of pronotum.

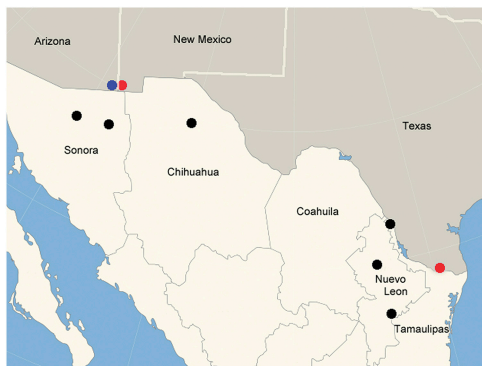


Fig. 6. Map of locality records for *Euphoria biguttata* from Mexican states bordering the USA. Black dots = locality records from Orozco (2012); red dots = locations of two Hidalgo Counties where *E. biguttata* could have been collected; blue dot = new USA locality in Arizona.

because it is possible that it originated from Hidalgo County, New Mexico. Ed further noted that he has collected extensively in the lower Rio Grande Valley in Texas for many years, including an intensive survey period of nearly two years utilizing several trapping methods, and never encountered another specimen of *E. biguttata*.

We collected a single specimen of *E. biguttata* (Figs. 1–5) with the following data: **Arizona:** Cochise County, Geronimo Trail 11.3 kilometers east of Douglas, 31°21.042'N, 109°23.920'W (31.350700°, -109.398661°), elevation 1,320 m, 16 October 2016, S. W. Lingafelter. This represents only the second specimen of the species collected in the USA, the first Arizona record, and the northernmost record for *E. biguttata*. The specimen is deposited in the Norman E. Woodley Collection, Hereford, Arizona.

We researched the localities where *E. biguttata* was collected that were reported by Orozco (2012) from Mexican states that border the USA. We searched on the locality place names using the GeoNames Search website of the National Geospatial-Intelligence Agency (2017). The enhanced locality data are included here, with the geographical coordinates. Some of the place names had multiple occurrences even when the search was restricted to a particular state. We have given the coordinates for what we consider the most likely locality first (or, when there was no obvious choice, the northernmost locality), but included the others as well. The localities are:

MEXICO: *Chihuahua:* Moctezuma (30.19767°, -106.4371°; also 29.879381°, -107.858769°; 29.88107°, -108.262133°). *Nuevo León:* Linares (24.859088°, -99.56551°); Mamulique (26.120033°, -100.228194°; also 26.138591°, -100.327321°; 26.086275°, -100.171695°). *Sonora:* Arizpe [Orozco used the variant name Arispe] (30.336902°, -110.166492°); Oputo (30.150000°, -109.316667°). *Tamaulipas:* El Veintidós (27.315651°, -99.594102°; also 26.003776°, -98.501054°).

The map in Fig. 6 shows where these localities are, as well as the two possible Hidalgo Counties and the Arizona locality where we collected a specimen. The northernmost Mexican locality reported by Orozco, Arizpe, Sonora, is 112.7 km south of our Arizona locality.

Orozco (2012) summarized collection dates for specimens of *E. biguttata* he examined as follows (number of specimens in parentheses): June (8), July (10), August (4), September (51), October (223), November (20), December (1). That the vast majority of specimens were collected in October indicates that *E. biguttata* is primarily active in the fall. This could explain the lack of previous collection events for this species in Arizona since most collectors, especially those visiting rather than living in the state, collect during July and August, the months with peak insect diversity.

ACKNOWLEDGMENTS

We are very grateful to Ed Riley for providing us with information on the Hidalgo County specimen at Texas A&M University and suggesting that we publish the clarification.

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(Received 12 January 2017; accepted 27 April 2017. Publication date 27 June 2017.)