

SCIENTIFIC NAME: *Lytta moesta*
COMMON NAME: Moestan blister beetle
CLASS, FAMILY: Insecta, Meloidae

ORIGINAL DESCRIPTION: Horn, G.H. 1878. Contributions to the Coleopterology of the United States, No. 2. Transactions of the American Entomological Society 7:59. (Described as *Calospasta moesta*.) Selander (1954) transferred *Calospasta moesta* and *C. morrisoni* to the genus *Lytta* based mostly on characters of the antennae.

TYPE MATERIAL: *Lectotype:* Female – CALIFORNIA (No other data.). Selander (1960) states that the type is in the Academy of Natural Sciences, Philadelphia, but Horn's type collection has since been moved to the Museum of Comparative Zoology, Harvard. Although Selander labeled a specimen as the lectotype in 1960, now MCZ type #34073, it does not appear to be formally designated in his revision.

RANKING/STATUS: G2S2 (NatureServe – CNDDDB).

GENERAL DESCRIPTION: Meloids are elongate beetles with soft elytra. The pronotum is narrower than the head and elytra. *Lytta moesta* ranges from 16-20 mm in length. The color is black, with the frontal spot elongate-oval, one-third or less as wide as the frontal area between the eyes.

DIAGNOSTIC CHARACTERS: Like *L. morrisoni*, *L. moesta* has the ventral blade of each tarsal claw fused basally to the dorsal blade, its shortened length making it appear as a ventral tooth. In *L. morrisoni* the elytra are moderately pubescent, but they are smooth in *L. moesta*. *L. morrisoni* also has distinctly curved tarsal claws, and the pronotum is often orange, while the tarsal claws of *moesta* are nearly straight and the pronotum is always black.

OTHER ILLUSTRATIONS: Selander (1960) illustrates the male pygidium (fig. 204), emargination of male sixth sternum (fig. 233), and male genitalia (fig. 292). The species' distribution at the time of his revision is shown in fig. 13. Four photographic images of the lectotype specimen are available from the MCZ online catalog, available on the web at: <http://mcz-28168.oeb.harvard.edu/mcztypedb.htm>.

DISTRIBUTION: Central California. The species was collected in Kern and Tulare counties in the 1930s. The historical distribution also includes Fresno, Madera, Santa Cruz, and Stanislaus counties (Halstead and Haines 1992).

HABITAT: Adult meloids are often found on flowers. There is no published information on habitat or floral visitation records for *Lytta moesta*.

LIFE HISTORY/BEHAVIOR: Very little is known about the life history or behavior of this species. It has been collected from March to September. There is some developmental information available for other species in the genus. Mating in *Lytta* species often continues for many hours. Selander (1960) observed a pair of mating *L.*

cyanipennis that lasted over 11 hours. Adults mate end-to-end; they continue feeding on flowers during mating, often pulling in opposite directions, but rarely become disengaged. Females excavate shallow burrows in which to oviposit. After oviposition is complete, the female brings soil down into the burrow and covers the egg mass. Some species in the genus are known to produce 80 to 250 eggs. *Lytta* larvae are nest parasites of solitary bees; the beetle larvae feed on the pollen stores that the female bee has provided for her own larvae. Some species require only the pollen contents of one bee's larval cell to complete their development, but others need more and attack several cells. In doing so, larvae of these species frequently kill and consume the immature stages of the host bee as well as consuming their pollen stores.

SELECTED REFERENCES:

- Halstead, J.A. and R.D. Haines. 1992. New distributional records for some candidate species of *Lytta* in California (Coleoptera: Meloidae). *Pan-Pacific Entomologist* 68(1):68-69.
- Selander, R.B. 1954. Notes on the tribe Calospastini, with description of a new subgenus and species of *Calospasta*. *The Coleopterists' Bulletin*.8(1):11-18.
- Selander, R.B. 1960. Bionomics, systematics, and phylogeny of *Lytta*, a genus of blister beetles (Coleoptera, Meloidae). *Illinois Biological Monographs* 28:1-295.

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