

SCIENTIFIC NAME: *Lytta insperata*
COMMON NAME: Mojave Desert blister beetle
CLASS, FAMILY: Insecta, Meloidae

ORIGINAL DESCRIPTION: Horn, G.H. 1874. Descriptions of new species of United States Coleoptera. Transactions of the American Entomological Society 5:39 (as *Cantharis insperata*).

TYPE MATERIAL: *Lectotype:* Male – CALIFORNIA: (No other data; probably Mojave Desert.) 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 #7986, it does not appear to be formally designated in his revision.

RANKING/STATUS: G1G2S1S2 (NatureServe – CNDDDB).

GENERAL DESCRIPTION: Meloids are elongate beetles with soft elytra. The pronotum is narrower than the head and elytra. *Lytta insperata* is entirely black and measures 18-23 mm long. The pubescence is silvery under the thorax, black elsewhere.

DIAGNOSTIC CHARACTERS: From Selander (1960): "*Insperata* differs from *moerens* and *navajo* mainly in its incrassate male antennae, distinctly spined male hind trochanters, and elongate male sixth abdominal sternum and genitalia." [taken verbatim? or a summary of discussion in Selander?] The species is also similar to *L. nigrocyanea*, but only *L. moerens* is sympatric. The male antennae of *insperata* are more elongate-filiform than those of *L. moerens*. The females have the margin of the sixth abdominal segment entire, and the pale frontal spot is at most one-fourth as wide as the frontal area between the eyes.

OTHER ILLUSTRATIONS: Selander (1960), figs. 53 (geographic distribution), 111 (male antenna), 149 (female antenna), 162 (male hind trochanters), 218 (emargination of male fifth abdominal sternum), 266 (male sixth sternum), 197 (outer hind tibial spur), and 343 (male genitalia). According to Selander, Essig's 1926 "Insects of North America" illustration of *Lytta insperata* actually refers to *Linsleya sphaericollis*. 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: Known only from "Mojave Desert" (the type locality), San Diego, and Ventura County. There are no records in the California Natural Diversity Database for this species because the above records are too general to map, and are over a century old. Selander (1960) considered the species rare at the time of his revision.

HABITAT: Adult meloids are often found on flowers. There is no published information on habitat or floral visitation records for *Lytta insperata*. Selander (1960) considered Essig's 1926 record of *insperata* as a pest of beets erroneous, given the rarity of the species.

LIFE HISTORY/BEHAVIOR: Very little is known about the life history or behavior of this species. Selander (1960) examined three specimens, collected in April and May. 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:

Selander, R.B. 1960. Bionomics, systematics, and phylogeny of *Lytta*, a genus of blister beetles (Coleoptera, Meloidae). Illinois Biological Monographs 28:1-295.

Written by Sandra Shanks, California Department of Fish and Game, Natural Diversity Database

Reviewed by John Pinto, University of California, Riverside.