Lytta mirifica (Anthony Blister Beetle)

Mike Quinn, 2015

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Taxonomy

- **Class**: INSECTA
- **Order**: COLEOPTERA
- **Family**: MELOIDAE
- **Genus**: Lytta
- **Scientific Name**: *Lytta mirifica* Werner, 1951
- **Common Name**: Anthony Blister Beetle
- **Synonyms**:
- **Taxonomic Name Source**:Poole, R. W., and P. Gentili (eds.). 1996. Nomina Insecta Nearctica: a checklist of the insects of North America. Volume 1 (Coleoptera, Strepsiptera). Entomological Information Services, Rockville, MD. Available online: http://www.nearctica.com/nomina/nomina.htm

Agency Status

- **NMDGF**:
- **Federal Status**:
- **BLM Sensitive**:
- **USFS**:
- **IUCN Red List**: Not Evaluated
- **Nature Serve Global**: G2
- **NHNM State**: S1
- **NM Endemic**:NO

Description

This is a striking species of blister beetle. With *Lytta arizonica*, it is one of only two species of *Lytta* that have a black head, brick-red pronotum, and reticulate elytra (Selander 1960). The elytra are coarsely reticulate with most cells at least 0.5 mm in diameter. The body length is 16-25 mm (Werner 1951).

Habitat and Ecology

Little is known about the ecology of this species, though it is known only from sand dunes within a small area of the Chihuahuan Desert. Adults have been collected from May through September (Selander 1960, Heuther and Huether 2015). Especially in August and September, adults have been collected from flowers of Broom Dalea (*Psorothamnus scoparius*), which is a perennial shrub in the Pea family (Fabacae) (Huether and Huether 2015). While the specific

ecology of this species is unknown, other species in the genus feed on foliage, flowers, pollen, and fruit as adults and the larvae are parasites of bees or grasshoppers. Some species in closely related genera are known to be phoretic, encountering hosts at a flower and hitching a ride back to the host nests, where they will feed on developing larvae or eggs (Selander 1960).

Geographic Range:

Lytta mirifica is known only from Chihuahuan Desert sand dune habitats near El Paso, in southern New Mexico and Texas in the United States (Werner 1951, Huether and Huether 2015), and from the Samalayuca Dune Fields, in Chihuahua, Mexico (GarcÃa-ParÃs and Ruiz 2009, GBIF.org 2024). It is unlikely the species is found elsewhere in the region, as it is quite distinct and likely would have been recorded already, if it occurred elsewhere (Werner 1951). So far, it has only been recorded in Anthony and Santa Teresa, in DoÃ±a Ana County, New Mexico as well as in El Paso, Clint/ San Elizorio, in several sites near Fabens, in El Paso County, Texas (Werner 1950, Huether and Huether 2015), and at several sites in an around the Samalayuca Dune Fields in Chihuahua.

Based on known collection records, this species has an estimated extent of occurrence (EOO) of 1,033 km2 and an area of occupancy (AOO) as little as 12 km2. The species is considered to be found in three locations, representing each of three known occurrence localities.

Conservation Considerations:

There are no conservation measures in place for this species, though it was petitioned for listing as an endangered species under the United State's Endangered Species Act in the 1990s (USFWS 2024). However, it was never granted the necessary protections. Protection of remaining habitat from off-road use may be necessary. Research on current distribution, population size and trend, habitats and ecology, and threats is needed for this rare, poorly understood species.

Threats:

Threats to this species are not well understood, though inferences can be made, based on threats to the restricted habitat. Sand-dominated ecosystems in the southwest are threatened by motility, especially as a result of drought conditions (Bogle *et al*. 2015), which are expected to become more severe, prolonged and frequent under climate change (USGCRP 2018). Sand dunes are also popular sites for off-roading, especially where this species is found near El Paso, Texas (Luna 2022). Off road vehicles haven been shown to alter habitat structure and function in many systems by disturbing soil, creating loss of vegetative cover, and changing plant community structure and function (Reviewed in Plouge and Fraser 2022).

Population:

The population size and trend are not known for this species. A the time of description, more than 100 specimens were collected at the type locality in 1941 by R.H. Crandall (Selander 1960). It has been collected very few times in the last 20 years, with the last known records from 2012, at San Felipe Park, in Texas (Huether and Huether 2015) and 2017, at several sites near the Samalayuca Dune Fields, in Chihuahua (GBIF.org 2024). However, this may be due to lack of surveys. Additionally, Meloid beetles can be cyclic in their occurrence; some years they can be very abundant and absent entirely in other years (Stuart and Barlow-Irick n.d.). This can make them difficult to find.

References:

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More Information