

## Research note

# Rediscovery of *Lytta corallifera* (Coleoptera: Meloidae) in central Mexico

## Redescubrimiento de *Lytta corallifera* (Coleoptera: Meloidae) en el centro de México

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**Abstract.** A population of *Lytta corallifera* Haag-Rutenberg, 1880 (Coleoptera: Meloidae), one of the less-studied and rarest species of its genus, was discovered near Charco Blanco, in the Guadalcázar Biological Preservation Area in San Luis Potosí, Mexico. The rarity of *L. corallifera* and its apparent sensitivity to changes in its habitat make the above region an important location for the survival of the species.

Key words: Coleoptera, Meloidae, *Lytta*, México, San Luis Potosí.

**Resumen.** Se descubrió una población de *Lytta corallifera* Haag-Rutenberg, 1880 (Coleoptera: Meloidae), una de las especies menos estudiadas y más raras de su género, cerca de Charco Blanco, en el área natural protegida de Guadalcázar, en el estado de San Luis Potosí, México. La rareza de *L. corallifera* y su aparente vulnerabilidad a cambios en su hábitat hace de la región antes mencionada un punto de suma importancia para la supervivencia de esta especie.

Palabras clave: Coleoptera, Meloidae, *Lytta*, México, San Luis Potosí.

Large, colorful species of Meloidae occasionally occur over the geographic area of the family. These conspicuous species are generally well known to local entomologists, and are generally present in regional entomological collections, making it relatively easy to evaluate their geographic range or population conservation status. All over North America, the genus *Lytta* includes some of these conspicuous species, and among them, *L. corallifera* Haag-Rutenberg, 1880 (“cantárida coralina” in Spanish), with its contrasting coral-red and black coloration pattern, is one of the most spectacular (Fig. 1). Despite its remarkable coloration, *L. corallifera* appears to be one of the least studied and rarest species of the genus. This species was described by Haag-Rutenberg (1880) from Mexico without any other precise locality data. Later, at the end of the 19th century it was reported from Sierra de San Miguelito, San Luis Potosí (Champion, 1892),

and subsequently from Jacala, Hidalgo (Selander, 1960). Those records represent the only geographic data known for the species (García-París et al., 2007), and all of them correspond to occasional findings of a single or very few specimens (Selander, 1960). The Colección Nacional de Insectos (CNIN-IBUNAM) of the Instituto de Biología (UNAM, Mexico), which houses a large collection of Mexican Meloidae, does not hold a single specimen of this species.

We recently discovered a population of *L. corallifera* near Charco Blanco, in the Guadalcázar Biological Preservation Area (Fig. 2) in the state of San Luis Potosí, Mexico. The 26 specimens were found at 15 h, on a sunny but partially cloudy day, in *Salvia melissodora* Lag. (Lamiaceae) and *Aloysia macrostachya* (Torr.) Moldenke (Verbenaceae) scrubs. Most of these specimens were actively feeding on flowers of *Salvia*, but some were also feeding on flowers of *Aloysia*. Moreover, 5 couples were found in courtship, or already copulating. The vegetation of the collecting site consists of xerophytic scrub, including



**Figure 1.** Specimen of *Lytta corallifera* photographed outside of its original collecting site.

*Yucca filifera* Chabaud, *Y. carnerosana* (Trel.) McKelvey, *Prosopis juliflora* (Sw.) D. C., *Senna wislizenii* (A. Gray) H. S. Irwin and Barneby, *Larrea divaricata* Cav., *Celtis pallida* Torr., *Agave lecheguilla* Torr., *Ferocactus pilosus* (Galeotti) Werderm. and *Echinocactus platyacanthus* Link and Otto. No other specimen was found during a short 2-day prospection of the Guadalcázar Biological Preservation Area. Morphological characteristics of the specimens observed fit well with the descriptions of Haag-Rutenberg (1880), Champion (1898), and Selander (1960).

Mexican rural landscapes are changing dramatically in recent years. Abandoning of traditional small cultivation areas as a consequence of changing economic conditions and frequent use of pesticides in the remaining cultivated areas might have a considerable effect on the insect fauna of rural areas. In fact, 4 out of the 6 blister beetle species

found along this survey, *L. eucera* Chevrolat, 1834, *Epicauta maculata* Say, 1824, *E. sericans* LeConte, 1866, and a possible new species of the *E. uniforma* species group, were found in or close to small cultivated fields (with corn, tomatillo, or pumpkin plants). At the same time, transformation of desert areas is also rapid, involving in many cases destruction of yucca forests, which may threaten species associated with desert environments, such as *L. corallifera*. Blister beetles of the family Meloidae are suffering population declines in many areas of the planet (García-París et al., 2006). Species of *Lytta* seem to be particularly sensitive to changes in the rural environment, and at least 2 species that have been proposed as “species of concern” by the U.S. Fish and Wildlife Service might have disappeared from the Central Valley in California (Halstead and Haines, 1992). If such is the case, the role of the Guadalcázar Biological Preservation Area, including its



**Figure 2.** Guadalcázar Biological Preservation Area in San Luis Potosí, Mexico.

low intensity agricultural patches, must be determinant for the survival of the rare and spectacular Mexican endemic *Lytta corallifera*.

#### Literature cited

- Champion, G. C. 1892. Family Meloidae. *In* *Biologia Centrali-Americana*. Coleoptera Heteromera, vol. 4, pt. 2, F. E. Godman and O. Salvin (eds.). London. p. 369-448, láms.: 17-21.
- García-París, M., D. Buckley and G. Parra-Olea. 2007. Catálogo taxonómico-geográfico de los coleópteros de la familia Meloidae de México. *Graellsia* 63:165-258.
- García-París, M., N. Trotta-Moreu and L. Capote. 2006. Estado de conocimiento actual y problemas de conservación de los Meloidae (Coleoptera) de la Comunidad de Madrid. *Graellsia* 62:333-370.
- Haag-Rutenberg, J. G. 1880. Beiträge zur Kenntniss der Canthariden. *Deutsche Entomologische Zeitschrift* 24:17-90.
- Halstead, J. A. and R. D. Haines. 1992. New distributional records for some candidate species of *Lytta* in California (Coleoptera: Meloidae). *Pan-Pacific Entomologist* 68:68-69.
- Selander, R. B. 1960. Bionomics, systematics and phylogeny of *Lytta*, a genus of blister beetles (Coleoptera: Meloidae). *Illinois Biological Monographs* 28:1-295.