



## First record of *Eremionycha bahiana* (Boheman) infesting *Tabebuia* sp.

S. M. França<sup>a</sup>\*, P. R. R. Silva<sup>a</sup>, J. D. C. Silva<sup>a</sup>, A. A. R. Araújo<sup>b</sup> and S. I. Moreira<sup>c</sup>

<sup>a</sup>Laboratório de Entomologia, Programa de Pós-graduação em Agronomia-Agricultura Tropical, Departamento de Fitotecnia, Centro de Ciências Agrárias, Universidade Federal do Piauí – UFPI, CEP 64049-550, Teresina, PI, Brasil

<sup>b</sup>Programa de Pós-graduação em Agroecologia, Universidade Estadual do Maranhão – UEMA, Av. Lourenço Vieira da Silva, s/n, Cidade Universitária Paulo VI, CEP 65054-970, São Luís, MA, Brasil

<sup>c</sup>Departamento de Fitopatologia, Universidade Federal de Lavras – UFLA, Campus Universitário, CEP 37200-000, Lavras, MG, Brasil

\*e-mail: solangeufrpe@yahoo.com.br

Received: March 27, 2017 – Accepted: July 25, 2017 – Distributed: February 28, 2019

(With 1 figure)

The Chrysomelidae is the second largest family regarding the number of species within the order Coleoptera. It consists of 37,000 species grouped into 19 subfamilies. Among these subfamilies, most presents species considered agricultural pests (Chaboo, 2007; Laumann et al., 2004; Stolar and Bidau, 1997). The subfamily Cassidinae has about 6,000 species distributed into 324 genera. They can be found worldwide, with a higher diversity in the tropics, especially in South America and less frequently in North America and Australia (Chaboo, 2007).

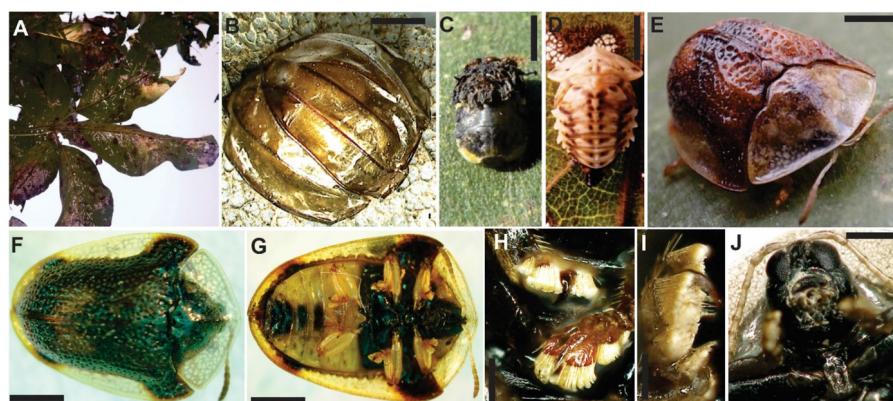
According to Barney et al. (2007), the subfamily Cassidinae currently includes two previously recognized subfamilies: Hispinae ("hispines" or leaf-mining beetles) and Cassidinae (tortoise beetles). The species of this subfamily feed on leaves and are associated with the Boraginaceae, Bignoniaceae, Asteraceae, Convolvulaceae and Solanaceae families, and also associated with other no host plants (Boldt and Staines, 1993; Buzzi, 1988; Virkki et al., 1992).

Coleoptera specimens of all developmental stages were collected manually in plants of the genus *Tabebuia* sp. (Bignoniaceae) at the Agricultural Sciences Center, Socopo campus, Teresina, Piauí state, located in the campus of the Federal University of Piauí (UFPI). They were housed in small cages (transparent plastic pots, 500 mL capacity) and their development was observed at laboratorial conditions.

Samples of these insects were sent to a taxonomist for species identification. Images of specimens were obtained using the stereo microscope Hirox at the São Paulo University (Esalq/USP, Piracicaba, SP) Electron Microscopy Laboratory and the Nikon SMZ1500 at the Federal University of Lavras (UFLA, Lavras, MG) Electron Microscopy Laboratory.

The species was then identified as *Eremionycha bahiana* (Boheman), Coleoptera order, Chrysomelidae family, Cassidinae subfamily and Cassidini tribe. *Eremionycha* is a monospecific genus, occurring exclusively in Brazil in the states of Bahia, Espírito Santo and Santa Catarina. This genus differs from other Cassidini tribe genera recorded in the New World because it presents only one tarsal claw in each foot. This claw is plain, non-pectinate or non-pedicellate (Borowiec and Świętojańska, 2014). Initially, this species was named *Coptocyclus bahiana* (Boheman, 1855), then *Eremionycha bahiana* (Spaeth, 1931) (Borowiec, 1999), *Eremionycha miraculous* (Spaeth, 1931) and finally *Microctenochira difficilis* (Teixeira and Casari, 2003).

*Eremionycha bahiana* is associated with the host *Handroanthus impetiginosus* (Mart. Ex DC.), a plant from the Bignoniaceae family, at the state of Bahia (Marques et al., 2008). In the state of Piauí, it is the first report of *E. bahiana* (Figure 1) associated with *Tabebuia* sp. as its host for food and oviposition. The damage caused



**Figure 1.** *Eremionycha bahiana*. (A) Damage on *Tabebuia* sp. leaves caused by *Eremionycha bahiana*; (B) Eggs; (C) Larvae; (D) Pupae; (E) Adults; (F) Dorsal view of the adult; (G) Ventral view of the adult; (H, I) Details of the last tarsal; (J) Detail of the head. B: 1000µm; F: 2000µm; C, D, E and G: 2000µm; H and I: 200µm; J: 1000µm.

was due to feeding, especially in the larval phase, in young and old leaves, where they feed on all layers of the leaf, leaving only one layer of transparent tissue, that is, during feeding, the larvae scrape the leaf limb, and the veins and rib stay intact, lace-like (Figure 1A). Larvae support the exuvio-fecal anex on forked dorsal process of segment 8 (Figure 1C). This is being a new location and new host plant record for *E. bahiana*. This pest can be a threat to this ornamental plant.

## Acknowledgements

The authors would like to thank Dr. Fernando A. Friciro-Costa (University Center of Lavras - Unilavras) for the identification of the species *Eremionycha bahiana*, to Dr. Elliot Watanabe Kitajima (Esalq/USP) by obtaining images. To the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) for granting the scholarship.

## References

- BARNEY, R.J., CLARK, S.M. and RILEY, E.G., 2007. Annotated list o the leaf beetles (Coleoptera: Chrysomelidae) of Kentucky: Subfamily Cassidinae. *Journal of the Kentucky Academy of Science*, vol. 68, no. 2, pp. 132-144. [http://dx.doi.org/10.3101/1098-7096\(2007\)68\[132:ALOTLB\]2.0.CO;2](http://dx.doi.org/10.3101/1098-7096(2007)68[132:ALOTLB]2.0.CO;2).
- BOLDT, P.E. and STAINES, C.L., 1993 [viewed 14 April 2016]. Biology and description of immature stages of *Pentispa suturalis* (Baly) (Coleoptera: Chrysomelidae) on *Baccharis bigelovii* (Asteraceae). *Coleopterists Bulletin* [online], vol. 47, no. 2, pp. 215-220. Available from: <http://www.jstor.org/stable/4008874>
- BOROWIEC, L. and ŚWIĘTOJAŃSKA, J., 2014 [viewed 14 April 2016]. *World Catalog of Cassidinae* [online]. Wrocław: Uniwersytetu Wrocławskiego. Available from: <http://www.biol.uni.wroc.pl/cassidae/katalog%20internetowy/eremionychabahiana.htm>
- BUZZI, Z.J., 1988. Biology of neotropical Cassidinae. In: Z.J. BUZZI. *Biology of Chrysomelidae*. Netherlands: Springer, pp. 559-580. [http://dx.doi.org/10.1007/978-94-009-3105-3\\_32](http://dx.doi.org/10.1007/978-94-009-3105-3_32).
- CHABOO, C.S., 2007. Biology and phylogeny of the Cassidinae Gyllenhal sensu lato (tortoise and leaf-mining beetles) (Coleoptera: Chrysomelidae). *Bulletin of the American Museum of Natural History*, vol. 305, pp. 1. [http://dx.doi.org/10.1206/0003-0090\(2007\)305\[1:BAPOTC\]2.0.CO;2](http://dx.doi.org/10.1206/0003-0090(2007)305[1:BAPOTC]2.0.CO;2).
- LAUMANN, R., RIBEIRO, P.H., PIRES, C.S., SCHMIDT, F.G., BORGES, M., MORAES, M.C.B. and SUJII, E.R., 2004. *Diversidade de crisomelídeos-praga (Coleoptera: Chrysomelidae) no Distrito Federal*. Brasília: Embrapa Recursos Genéticos e Biotecnologia, 22 p. Boletim de Pesquisa e Desenvolvimento, no. 76.
- MARQUES, O.M., COUTINHO, M.L., GIL-SANTANA, H.R. and SANTANA, M.J.S., 2008. *Handroanthus impetiginosus* (Bignoniaceae), o primeiro vegetal hospedeiro de *Eremionycha bahiana* (Coleoptera: Chrysomelidae). *Textura*, vol. 1, pp. 101-104.
- STOLAR, C.E. and BIDAU, C.J., 1997. Chromosomal multiformity in *Botanochara bonariensis* (Coleoptera, Chrysomelidae, Cassidinae). *Brazilian Journal of Genetics*, vol. 20, pp. 193-196.
- TEIXEIRA, E.P. and CASARI, S.A., 2003. Descriptions and biological notes of immatures of *Microctenochira difficilis* (Coleoptera, Chrysomelidae, Hispinae, Cassidini). *Iheringia. Série Zoologia*, vol. 93, no. 1, pp. 23-30. <http://dx.doi.org/10.1590/S0073-47212003000100002>.
- VIRKKI, N., SANTIAGO-BLAY, J.A. and RILEY, E.G., 1992 [viewed 14 April 2016]. Chromosomes of Puerto Rican Hispinae and Cassidinae (Coleoptera: Chrysomelidae). *Coleopterists Bulletin* [online], vol. 46, no. 1, pp. 29-42. Available from: <http://www.jstor.org/stable/4008933>