

First report of the microlepidopteran *Caloreas cydrot* (Meyrick, 1915) (Lepidoptera: Choreutidae) in Brazil

O. C. Bortolotto^{a*}, G. V. Silva^a and A. F. Bueno^b

^aPrograma de Pós-graduação em Entomologia, Departamento de Zoologia, Universidade Federal do Paraná – UFPR, Setor de Ciências Biológicas, CEP 81531-980, Curitiba, PR, Brazil

^bLaboratório de Parasitoides, Embrapa Soja, CEP 86001-970, Londrina, PR, Brazil

*e-mail: bortolotto.ocial@gmail.com

Received: December 22, 2014 – Accepted: March 31, 2015 – Distributed: November 30, 2015

The microlepidopteran *Caloreas cydrot* (Lepidoptera: Choreutidae) was first time recorded in Colômbia in 1915 (Meyrick, 1915), but after it has not been documented in other regions of the world. Among the host plants of Choreutidae belong to the families of Lamiaceae and Boraginaceae, and, to a lesser extent, the families of Umbelliferae, Scrophulariaceae and Moracea (Heppner, 1977; Rota and Miller, 2013). However, this family has been poorly studied, with limited information being available about this group of insects (Alipannah, 2008). Therefore, this work presents the first documentation of *C. cydrot* in Brazil, and is the first to report its association with argentina fleabeane *Conyza bonariensis* (Linnaeus) (Asteracea).

Individual insects were collected from damaged *C. bonariensis* plants cultivated in a greenhouse at the Embrapa Soybean Research Institution, Londrina, Paraná, Brazil. The specimens were collected with the branches during the larval and pupal stages, to avoid any disturbance to the normal development of the insects. After collection, the material was kept in BOD chambers under controlled environmental conditions (25 ± 2 °C temperature, 60 ± 20% humidity, and a 12 h photophase). After the moths emerged, they were killed by freezing (–5 °C) in a freezer for 24 h. Subsequently the material was sent to a specialist at the Uiraçu Institute to confirm their identification. The moths were subsequently kept at the entomological museum of the Uiraçu Institute.

This study presents the first record of the natural occurrence of *C. cydrot* in Brazil, and in addition, also confirms that *C. bonariensis* is a host plant of *C. cydrot*. It is an important report, because until the present, the literature no reports information about plant hosts of this insect. In greenhouse was possible observe that the larvae cause characteristic foliar “folding” in argentine fleabane which then serves as a shelter, damaging the midvein region of the leaf and weave a web. According Aiello and Solis (2003), this behavior represents a camouflage strategy for protection against natural enemies. In addition, *C. cydrot* larvae caused a superficial damage in the plants by “scraping” the leaf tissue, resulting in a typical brownish appearance of leaves.

This injury caused by *C. cydrot* in argentine fleabeane is important due increase the knowledgement about this insect behavior, and we believe that this report can allow identified this microlepidopteran in other regions. Finally, this study indicates that this insect species might be widespread in other parts of the South America, as *C. bonariensis* is also common in Uruguay, Paraguay, and Argentina (Vargas et al., 2007).

Acknowledgements

We thank Capes and CNPq agencies for the scholarships, and Prof. Dr. Vitor Osmar Becker for his assistance with species identification.

References

- AIELLO, A. and SOLIS, M.A., 2003. Defense mechanisms in Pyralidae and Choreutidae: fecal stalactites and escape holes, with remarks about cocoons, camouflage and aposematism. *Journal of the Lepidopterists Society*, vol. 57, no. 4, pp. 168-175.
- ALIPANAH, H., 2008. New record of a choreutid species (Lepidoptera: Choreutidae) from Iran. *Zoology in the Middle East*, vol. 45, no. 1, pp. 114-114. <http://dx.doi.org/10.1080/09397140.2008.10638317>.
- HEPPNER, J.B., 1977. The status of the Glyphipterigidae and a reassessment of relationships in yponomeutoidae families and ditrysian superfamilies. *Journal of the Lepidopterists Society*, vol. 31, no. 2, pp. 124-134.
- MEYRICK, E., 1915. Descriptions of South American micro-lepidoptera. *The Transactions of the Entomological Society of London*, vol. 63, no. 2, pp. 201-256. <http://dx.doi.org/10.1111/j.1365-2311.1915.tb02527.x>.
- ROTA, J. and MILLER, S.E., 2013. A new genus of metalmark moths (Lepidoptera, Choreutidae) with Afrotropical and Australasian distribution. *ZooKeys*, vol. 355, pp. 29-47. <http://dx.doi.org/10.3897/zookeys.355.6158>. PMID:24363568.
- VARGAS, L., BIANCHI, M.A., RIZZARDI, M.A., AGOSTINETTO, D. and DAL MAGRO, T.L., 2007. Buva (*Conyza bonariensis*) resistente ao glyphosate na região Sul do Brasil. *Planta Daninha*, vol. 25, no. 3, pp. 573-578. <http://dx.doi.org/10.1590/S0100-83582007000300017>.