



Egyptian Journal of Plant
Protection Research Institute

www.ejppri.eg.net



Aloencyrtus coelops (Hymenoptera: Encyrtidae) a new record of parasitoid associated with *Waxiella mimosae mimosae* (Hemiptera: Coccidae) in Egypt

Omnia, M.N. El-Sahn and Ahmed, M. Azazy

Plant Protection Research Institute, Agricultural Research Center, Dokki, Giza, Egypt.

ARTICLE INFO

Article History

Received: 21 / 10 / 2020

Accepted: 27 / 12 / 2020

Abstract

Aloencyrtus coelops (Waterston) (Hymenoptera: Encyrtidae) is an endoparasitoid was found for first time in Egypt associated with *Waxiella mimosae mimosae* (Signoret) (Hemiptera: Coccidae) infesting tamarix trees in Giza Governorate during 2020.

Keywords

Parasitoid, *Aloencyrtus coelops*, *Waxiella mimosae*, new record and Egypt.

Introduction

Wax scale insects (Hemiptera: Coccidae) are considered a serious insect pest infesting horticultural plants causing severe damages. It has a piercing sucking mouth parts which suck the plant sap causing plant weakness especially in the heavy infestation and it turns to yellow then brown, dry and fell. Also, wax scale insects secrete honey dew in large amounts where the black sooty mould fungi grows and it blocks the photosynthesis and respiration processes of the plant. These insects located in most plant parts (Leaves, stem, and branches) and infesting several plant species like shrubs and trees (Copland, 1984 and Abd-Rabou, 2003).

Waxiella mimosae mimosae (Signoret) (Hemiptera: Coccidae) is a wax scale insect distributed mainly in the Afrotropical region (De Lotto, 1969 and Ben-Dov, 1993 and 2008). There were many parasitoids related to Family Encyrtidae were recorded associated

with *W. mimosae* in Egypt and around the world. These are *Anicetus africanus* (Girault), *Bothriophryne acaciae* (Risbec), *Bothriophryne tenuicornis* (Mercet), *Metaphycus annecki* Guerrieri and Noyes, *Metaphycus lounsburyi* (Howard) and *Parechthrodryinus coccidiphagus* (Mercet) (Ben-Dov and Guerrieri, 2009 and Evans and Abd-Rabou, 2013).

The parasitoid *Aloencyrtus coelops* (Waterston) (Hymenoptera: Encyrtidae) is considered one of the most important parasitoids associated with *W. mimosae* (Trjapitzin, 2019). The aim of this study is to collect and identify the parasitoids associated with *W. mimosae* in different locations in Egypt.

Materials and methods

The infested leaves of tamarix trees, *Tamarix* sp. with *W. mimosae* were collected from Giza Governorate and were kept in polyethylene bags until transferred to the laboratory to be

examined by the aid of stereomicroscope binocular. The different stages of *W. mimosae* were separated and kept in a glass test tubes until emergence of adult parasitoid.

Results and discussion

The parasitoid *A.coelops* was collected for the first time as a new record in Egypt from Giza Governorate by the authors in 2020 and was found associated with *Waxiella mimosae mimosae* (Signoret) (Hemiptera:Coccoidea: Coccidae) infesting tamrix trees. The parasitoid *A. coelops* was found associated with coccids in several countries mainly in Afrotropical countries, *W. mimosae* in South Africa (Prinsloo 1983), Nigeria associated with *Ceroplastes vuilleti* Marchal, Republic of South-Africa from

Ceroplastes (Now *Waxiella*) *africana senegalensis* infesting *Acacia karroo* (Fabaceae), Eritrea from *C. africana* Green and from *Ceroplastes destructor* Newstead infesting *Melia azedarach* (Meliaceae) (Trjapitzin, 2019).

Acknowledgements

The authors are deeply Thank Prof. Dr. Shaaban Abd-Rabou (Scale Insects and Mealybugs Department, Plant Protection Research institute) for his great help and effort in the identifying the parasitoid species associated with the wax scale insect *Waxiella mimosae* (Signoret).

References

Abd-Rabou, S. (2003): Scale insects and their management in Egypt. Egyptian J. Agric. Res., Special Issue, 1-60.

BEN-DOV, Y. (1993): A systematic catalogue of the soft scale insects of the world (Homoptera: Coccoidea:Coccidae) with data on geographical distribution, host plants, biology and economic importance.Gainesville,

Florida: Sandhill Crane Press, p. 536

Ben-Dov, Y. (2008): Scale Net, Family Coccidae. December, 2008. www.sel.barc.usda.gov/catalogs/Coccidae.htm

Ben-Dov, Y. and Guerrieri, E. (2009): *Waxiella mimosae* (Signoret) (Hemiptera, Coccoidea, Coccidae) and its parasitoid *Anicetus africanus* (Girault) (Hymenoptera, Encyrtidae) newly recorded from Israel. Bulletin de la Société entomologique de France,114(1):89-90.

Copland, M. J. W. (1984): Scale insects on fruit trees . Leaflet, Ministry of Agriculture, Fisheries and Food, UK, No. 88: 8 .

De Lotto, G. (1969): A new genus of wax scales (Homoptera: Coccidae). Bolletino del Laboratorio di Entomologia Agraria "Filippo Silvestri" di Portici, 27: 210-218.

Evans, G.A. and Abd-Rabou, S. (2013): An annotated list of the Encyrtids of Egypt (Hymenoptera: Chalcidoidea: Encyrtidae). Acta Phytopathologica et Entomologica Hungarica, 48(1):107-128.

Prisloo, G.L.(1983): A parasitoid host index of afrotropical Encyrtidae (Hymenoptera: Chalcidoidea).National Collection of Insects, Plant Protection Research Institute, Pretoria, South Africa, Handbook, pp.37.

Trjapitzin, V. A. (2019): A Review of the Encyrtid Wasp Genus *Aloencyrtus* Prinsloo, 1978 (Hymenoptera, Chalcidoidea: Encyrtidae) of the World Fauna, Parasitoids of Wax and Soft Scales (Hemiptera, Coccidae),

with Separation of *Afrenocyrtus*
gen. n. Russian Entomological
Society, Entomological
Review, 99(8): 1222–1226.

