

FIRST RECORD OF THE PARASITOID, *METAPHYCUS LOUNSBURYI* (HOWARD) (HYMENOPTERA : ENCYRTIDAE) ON FIG PIT SCALE *RUSSELLASPIS PUSTULANS* (COCKERELL) (HOMOPTERA : ASTEROLECANIDAE) WITH A HOST LIST OF THIS PARASITOID IN EGYPT

SHAABAN ABD-RABOU

Plant Protection Research Institute, ARC, Dokki, Giza, Egypt

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Abstract

The present work deals with the survey of the host insect of the parasitoid *Metaphycus lounsburyi* (Howard) (Hymenoptera : Encyrtidae) in different locations in Egypt. The results indicated that this recorded parasitoid is associated with the fig pit scale, *Russellaspis pustulans* (Cockerell) (Homoptera : Asterolecanidae). This is the first record for this parasitoid on fig pit scale, *R. pustulans* as a new host in Egypt and available host insect world literature. Also, during the present work, 10 host soft scale insect species were recorded associated with this parasitoid. Nine of them are recorded here for the first time in Egypt. The parasitoid *M. lounsburyi* recorded here is distributed in Beni-Suef, Gharbiya, Giza, Ismailia, Marsa Matruh, North Sinai (El-Arish), Qalubiya, Qena and Sharqiya governorates.

INTRODUCTION

The parasitoid, *Metaphycus lounsburyi* (Howard) (Hymenoptera : Encyrtidae) is a gregarious endoparasitoid and prefers pre-ovipositing females, also it parasitizes other stages from the third instar larva to an ovipositing and is one of the most important parasitoids attacking different soft scale insects in different countries of the world (Panis, 1983). *M. lounsburyi* was recorded for the first time in Egypt by Abd-Rabou (1998). He recorded the hosts of this parasitoid and its distribution of Egypt and world. Later Guerrieri and Noyes (2000) recorded 7 soft scale insects associated with this parasitoid in Europe. Abd-Rabou (2004 a, b) studied the role of augmentative releases of this parasitoid in controlling the soft scale insect, *Saissetia oleae* (Oliver) (Homoptera : Coccidae). Recently, fig pit scale, *Russellaspis pustulans* (Cockerell) (Homoptera : Asterolecanidae) is one of the main pests on orchards. Also soft scale insects are dangerous pests on different economic crops for example citrus, guava mango, apricot, sugarcane, olive, respectively.

The present work includes the survey of the hosts of this parasitoid in different locations in Egypt as well as available in literature were considered.

MATERIALS AND METHODS

During October 2005 samples of the apple trees infested by fig pit scale, *R. pustulans* was collected from Sharqia. Another samples of soft scale insects were collected from different host plants and throughout the period from 2003 and 2005. Leaves, leaflets, stems and fruits from different hosts were stored in well-ventilated glass tubes for one week till emergence the adult parasitoid and for identification as well as available literature.

Identification started by the key of Guerrieri and Noyes (2000) followed by the Key of Egyptian species of *Metaphycus* species (Abd-Rabou ,1998). Also the specimens were compared by the identified specimens of the author collection.

RESULTS AND DISCUSSION

Results indicated that the species collected was the parasitoid, *Metaphycus lounsburyi* associated with fig pit scale, *Russellaspis pustulans*. This is the first record for this parasitoid on fig pit scale, *R. pustulans* as a new host in Egypt and in available host insect world literature. Further investigations will be conducted on this parasitoid and its relationship with this new host soon. Table (1) includes the soft scale insects associated with the parasitoid, *M. lounsburyi* During the present work, 10 soft scale insect species were recorded associated with this parasitoid. Nine of them are recorded here for the first time in Egypt. Soft scale insects parasitized by *M. lounsburyi* which infested citrus, *Psidium guava*, *Mangifera indica*, olive, sunt and grass are found in Beni-Suef, Gharbiya, Giza, Ismailia, Marsa Matruh, North Sinai (El-Arish), Qalubiya, Qena and Sharqiya governorates.

Table 1. The Host soft scale insects associated with the parasitoid, *Metaphycus lounsburyi* in Egypt

Host soft scale insects	Host plant	Distribution	Date
<i>Ceroplastes floridensis</i> Comstock	Citrus	Gharbiya	May, 2003
<i>Ceroplastes rusci</i> (Linnaeus)	Citrus	Beni-Suef	April 2004
<i>Coccus capparidis</i> (Green)	Grass	El-Minya	May, 2005
<i>Coccus hesperidum</i> L.	Guava	Giza	October, 2004
<i>Coccus longulus</i> (Douglas)	Grass	Ismailia	November, 2005
<i>Killifa acuminata</i> (Signoret)	Mango	Sharqiya	August, 2004
<i>Parasaissetia nigra</i> (Nietner)	<i>Ficus nitida</i>	Qalubiya	September, 2005
<i>Saissetia coffeae</i> (Walker)	Olive	North Sinai (El-Arish)	August, 2003
<i>Saissetia oleae</i> (Oliver)	Olive	Marsa Matruh	October, 2003
<i>Waxiella mimosae</i> (Signoret)	Sunt	Qena	NOVEMBER, 2004

Abd-Rabou (1998) recorded this species for the first time in Egypt on *Saissetia oleae* in El-Arish . Guerrieri and Noyes (2000) recorded his parasitoid associated with *Ceroplastes floridensis* Comstock, *Coccus capparidis* (Green) , *Coccus hesperidum* L. , *Coccus Pseudomagnoliarum* , *Saissetia coffeae* (Walker), *Saissetia oleae* (Oliver) and it is distributed in South Africa, USA, France, Spain, Italy, Greece and Cyprus.

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تسجيل جديد لطفييل ميتافيكس ليونزبري على حشرة التين الفنجانية كعائل حشري
مع قائمة بالعوائل الحشرية لهذا الطفيل في مصر

شعبان عديريه

معهد بحوث وقاية النباتات - مركز البحوث الزراعية - الدقي - جيزة

هذا البحث تضمن عمل حصر للعوائل الحشرية لطفييل ميتافيكس ليونزبري في أماكن عديدة في مصر. وأن النتائج اظهرت ان هذا الطفيل وجد مصاحب لحشرة التين الفنجانية ويعتبر هذا العمل تسجيلًا جديدًا لحشرة التين الفنجانية كعائل لهذا الطفيل في مصر و العالم من خلال المراجع العالمية المتاحة في هذا المجال . وقد تم من خلال هذا العمل أيضا تسجيل عشرة أنواع من الحشرات القشرية الرخوة مصاحبة لهذا الطفيل منهم تسعة أنواع مسجلين في هذا العمل لأول مرة في مصر. وقد سجل تواجد هذا الطفيل في محافظات بنى سويف و الغربية و الجيزة و والأسماعيلية و مرسى مطروح و شمال سيناء و القليوبية و قنا و الشرقية.