First Record of Five Additional Blackflies Genus and Species in Iraq

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Abstract

In this study we report the identification of five additional blakefly genus and species from Iraq which can be summarized as follows : *Aleurolobus marlatti* (Quaintance) was found to be infesting *Ziziphus spina christi* ,*Ficus corica* ,*Olea europaea*, *Phoenix dactylifera*, *P.canariensis* ,*Vicia faba* ,*Vigna unguiculata* , *Morus alba* , *Rubus spp*, *Populus sp*, *Lycium shawi* , *Trachelospermum jasminoides*, *Ficus spp*, *Dodonaea viscosa* , *Cestrum nocturnum* , *Clerodendrum splendens* , *Iresine herbstii* , *Cassia spp* in Iraq . *Acaudaleyrodes rachipora* (Singh) was found to be infesting *Punica gramatum* ,*Citrus sp*, *Ziziphus spaina Christi* at Abo-Noaas Streat along with Dejlla Rever on September 14 , 2012. Three new speciese of *Aleurolobus sp* was found infesting *Ziziphus spaina Christi* at the Agriculture Collage , Abo-Graib , Baghdad , specimens were collected on September 14, 2012 and February 11, 2013 . This is the first record for the geographical region .literature reveald that this genera has not been record from Iraq so far.

KEYWORDS: *Aleurolobus marlatti*, *Acaudaleyrodes rachipora*, blakefly

Introduction

The varied topographic features and the variable climatic condition of Iraq are among the major factors effecting the diversification of insect Fauna , There are many species of insect were recorded in the latest survy by Aziz Al-Ali in 1977 and followed recordes (1) , but still relatively little is Known .More than 1500 species of whiteflies have been identified worldwide ,but only the sixteen species of whiteflies have been recorded from Iraq *Bemisia tabaci* (Gennadius)(2), *Acaudalerodes citri* (Priesner& Hosny) ,*Trialeurodes sp* (3), *T.ricini* ,*T. rara* (maound & Priesner ,1978). *Bemisia afer, Siphoninus phillyeae* Haliday (Priesner& Hosny) , *Aleyrodes prolotella* (Linnaeus) , *Trialeurodes porosus* (Priesner& Hosny) (2) .

Twelve species of Aleyrodidae representing six genera were studied from collection carried out during 1987and 1988 in different localities in the middle of Iraq . the two species are described as a new species *Bemisia jasminia* sp.n. , *Trialeurodes irakensis sp.n. and another four* species are recorded for the first time in Iraq.

Dialeurodis citri (Ashmead), *D. kirkaldy* (Kotinsky) , *Neomaskellia andropogonis* Corbett,*T.vapovariorum*(westwood) (2) , *Aleuroclava jasmina* Tahakashi(4).

Materials &Methods:

Pupae and adult specimens were collected on September 11, 2012, specimens were found and sent by Dr. Anmar Al-Hussainy to Natural History Museum in London (5).To identify whiteflies to the generic or specific level, Fera Reference :21218546,21222484-5) in (10/10/2012) and Fera References :21302807-21302809)in (11/02/2013.one must (A) have the puparial stage present (currently,

other forms are usually not identifiable to the species level), (B) be able to detect the pupal cases (sometimes they are hidden, or clear and camouflaged), (C) be able to see the characters that are needed to differentiate it from other genera and species, including having a properly slide-mounted specimen and microscopic equipment, (D) understand the morphology and characters used to distinguish each genus and species (6), and (E) have keys and/or other identification aids available to compare and contrast with other species. Slide Mounting Protocol (modified from Wilkey ,1962): Place specimens in 10% potassium hydroxide(KOH), allow to remain in solution for 12-24 h. Remove specimens from KOH and place in distilled water. Allow to sit for 10-15 min. Add two drop of double-stain or triple-stain to distilled water. Allow specimens to soak in this for 15 min. Remove specimens from stain and place in75% ethyl alcohol (EtOH). Allow to sit for 10-15 min. This should de-stain all non-sclerotized areas. Remove specimens from 75% EtOH and place them in 95% EtOH. Allow to sit for 10-15 min. This should complete the de-staining process. Remove specimens from 95% EtOH and place them in clove oil. Allow them to sit in clove oil for 30 min or longer. Remove specimens from clove oil and place in Canada balsam on slide. Drop cover slip on specimen and label slides. Place slides in dryer oven for three weeks at 35°C.

In this study we report the identification of five additional blakefly genus and species from Iraq which can be summarized as follows :

1- *Aleurolobus marlatti* (Quaintance) was found to be infesting *Ziziphus spina christi* ,*Ficus corica* ,*Olea europaea*, *Phoenix dactylifera*, *P.canariensis* ,*Vicia faba* ,*Vigna unguiculata* , *Morus alba* , *Rubus spp*, *Populus sp*, *Lycium shawi* , *Trachelospermum jasminoides*, *Ficus spp*, *Dodonaea viscosa* , *Cestrum nocturnum* , *Clerodendrum splendens* , *Iresine herbstii* , *Cassia spp* in Iraq .

A. marlatti (Quaintance) was described for the first time in 1903 was collected by C.L.Marlatt on May 17,1901 at Kumomoto ,Japan an Orange also by Woglum on *Citrus sp* , *Ficus sp* in the Royal Botanic Gardens (7) .It is widely distributed in Japan , India , Canada , Flurida , Egypt , China , Tiwan , Israel , Iran , Africa and MiddlEast , Perusal of the literature revealed that this species is a highly polyphagous insect (8) , in Florida alone it has been found reproducing on 69 host plants representing 34 families (9). This is the first record for the geographical region .Literature revealed that this species has not been recorded from Iraq so far.

fig.1. Adult and pupae stages of *Aleurolobus marlatti* (Quaintance) by auther fayhaa, September 11, 2012 . ,(93 X)

2- *Acaudaleyrodes rachipora* (Singh) was found to be infesting *Punica gramatum* ,*Citrus sp*, *Ziziphus spaina Christi* at Abo-Noaas Streat along with Dejlla Rever on September 14 , 2012. *A.rachipora* was described for the first time in 1931 by Singh in India on *Cassia fistula*.It is widely distributed in India ,Pakistan ,Cyprus,Turkey,Africa,The MiddleEast and Iran , perusal of the litrature reveals that *A.rachipora* is a highly polyphagous insect (4).In India alone it has been found reproducing on 48 host plants , representing 16 families (2).

fig. 2. Adult and pupae stages of *Acaudaleyrodes rachipora* (Singh) by auther fayhaa , September 14 ,2012 . ,(93 X)

3- Three new speciese of *Aleurolobus sp* was found infesting *Ziziphus spaina Christi* at the Agriculture Collage , Abo-Graib , Baghdad , specimens were collected on September 14, 2012 and February 11, 2013 . This is the first record for the geographical region .literature reveald that this genera has not been record from Iraq so far.

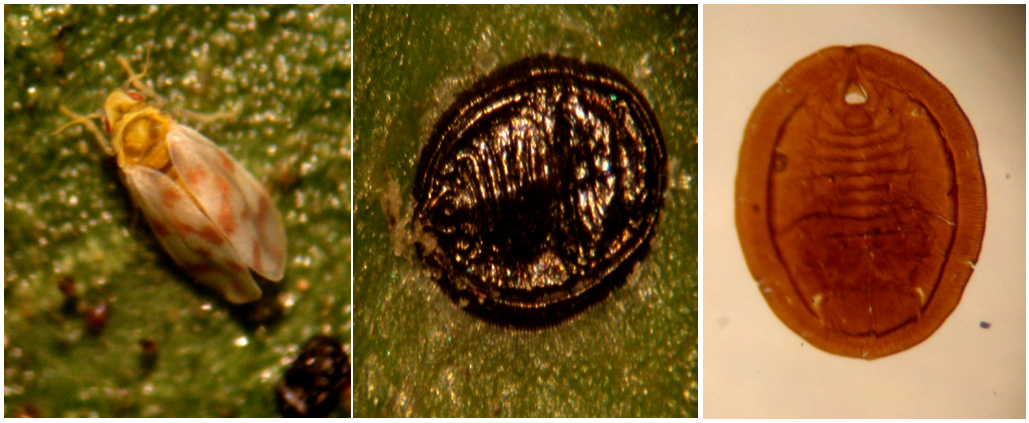
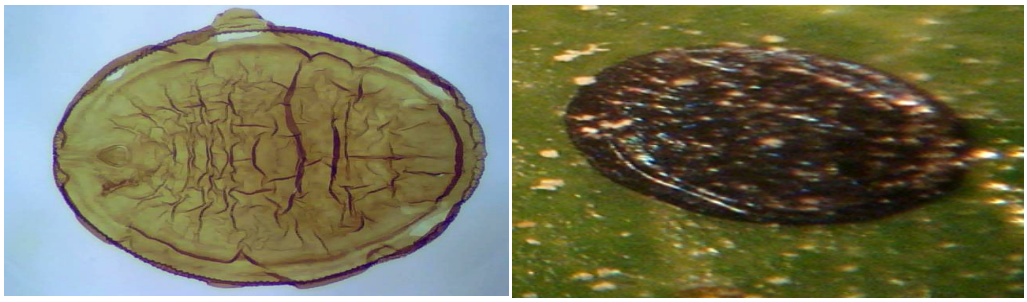


fig. 3. Adult and pupae stages of *Aleurolobus sp* by auther fayhaa , September 14, 2012 ,(93 X)

)115 X(fig. 4. Adult and pupae stages of *Aleurolobus sp* by auther fayhaa , February 11, 2013 ,(115 X)



) 115 X(fig. 5. Adult and pupae stages of *Aleurolobus sp* by auther fayhaa , February 11, 2013,(115 X)

In conclusion ,the above five species recorded for the different hosts in different areas in the country .It is well known that *Ziziphus spaina Christi* form an important part of the flora of Iraq . *Acaudalerodes rachipora* is known to damage *Citrus sp*,*Punica grenatum* and *Ziziphus spaina Christi* trees(10)(2) .Similarly the importance of this pest should be considered on *Citrus sp* and *Punica grenatum* trees, which are widely distributed in the country and a host for this pest (11) (12).

References

1-Al-Ali,A.S.1977.Phytophagous and entomophagous insect and mites in Iraq.Pupl.No.33,Nat.Hist.Res.Center,Univ.Baghdad,142pp.

2- Al-Malo,I.M.1988. Taxonomic studies on white flies (Homoptera:Alerodidae)in the middle of Iraq.M.SC.thesis,Collage of Agriculture , Baghdad University,With English summary ,75pp.

3- Derwesh,A,I.1965.Aprelminarly list of identified insect and some arachnids of Iraq.Bull.No.121,Direct Gen.Agric.Res.and Proj.

4- Al-Temimi,A.A.H.2006.Some Integrated Pest Management Techniques Of The Exotic Jasmine Whitefly Aleuroclava jasmini Takahashi (Aleyrodidae:Homoptera) on Citrus. M.SC.thesis,Collage of Agriculture , Baghdad University,With English summary ,124pp.

5- Bink,F.A.1979.Methods for mounting Aleyrodidae specmens .Entomol.Ber.(Amst.) 39(10):158-160.

6- GILL, R. 1990. The morphology of whiteflies, pp. 13-46 *In* D. Gerling [ed.], Whiteflies: Their Bionomics, Pest Status and Management. Intercept LTD, United Kingdom, 348 pp.

7- Quaintance ,A.L.and A.C. Backer.1913. Classification of the Aleurodidae Part 1. Tech.Ser.Bur .Ent.U.S.27.93pp.

8- Nair,S.S.2001.Pest Outbreak In Tropical Forest Plantations:Is ther a greater risk for exotic tree species?.Center For International Forest Research.82pp.

9- Mound, LA and SH Halsey. (1978). Whitefly of the World: A systematic catalogue of the Aleyrodidae (Homoptera) with host plant and natural enemy data. British Museum (Natural History): Chichester. 329p.

10- Quaintance ,A.L.1903. New oriental Aleurodidae.Canadian Entomologist 35: 61-64 [61].

11- Sundararaj,R.2001.Host leaf trichomes and the population of the babul whitefly , *Acaudaleyrodes rachipora* (Singh) (Aleyrodidae:Homoptera).Journal of Applied Zoological Researches ,12:93-95.

12- Gaur M.,R. Sundararaj and S.Murugesan.1999. Host rang and distribution of the babul whitefly , *Acaudaleyrodes rachipora* (Singh) (Aleyrodidae:Homoptera) in Indian and zone.pages 397-400.In:Recent-advances in management of arid ecosystem A.S. Faroda,N.I.Joshi,S.Kathju and A. Kar A. (eds.).Arid Zone Research Association of India ,Jodhpur,India.