

short note

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NEW RECORDS AND SOME NOTES

ON THE BROAD BEAN ROOT APHIDS AND THEIR NATURAL

ENEMIES IN HAMMAM AL-ALIL

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In May 20th, 1985 two species of aphids were found on the roots of *Vicia faba* L. in Hammam Al-Alil region 30 Kilometer south of Mosul. Samples of these aphids were sent to the Commonwealth Institute of Entomology, London (No. 17002/9804 Asia) and identified as being *Smynthuroides betae* westwood; and *Dysaphis crataegi* (Kaltenbach) (Aphididae : Homoptera). The first species was dominant. The latter species was also noticed on the roots of the common bishop's weed (*Ammi majus* L.) and on the wide carrot (*Daucus carota* L.) of the family Umbelliferae (Bodenheimer & Swirski, 1957).

Surveys for three successive years revealed that the infestation by the root aphids was common in most fields growing broad bean plants in Hammam Al-Alil region. The aphids cluster on the main root of the plant mostly near its basal parts, but later in season they attack new developing shoots at their basal parts near the soil causing injury by removing the plant sap, stunting of growth, and reduce the yield.

The affected plants became pale green, wilt, and often death occur. Three pathogenic fungi were found, in our preliminary work, to associate with the root aphids infestation of these plants. These fungi were identified in our laboratory as being *Fusarium sclani* (Mart.) Sacc.; *Rhizoctonia solani* Kuhn.; and *Macrophomina phaseolina* (Tassi.) Gold.

The wingless aphids appear on the roots during March-April each year and tended by velvety tree ants (identified by the author as being *Liometopum* spp.). The adult female of *Smynthuroides betae* is white creamy in color with lark legs and cauda, covered with waxy powder, fringed with pale yellow

Broad bean root aphids

hairs, cornicles absent, and body size 3.5—4 mm that gives birth occasionally to few winged individuals at the end of the spring season (May) which fly to unknown areas. The body and legs of winged individuals are yellowish-black in color with yellow abdomen. While the adult female of *Dysaphis crataegi* is yellow, cornicles absent, and body size 1-1.5 mm.

These aphids were found to be preyed upon mostly by the larvae of syrphid fly (*Syrphus* sp.) in nature as tentatively identified according to the available keys (Colyer & Hammond, 1968), and to less extent by the larvae of the lacewing in the root region. Other arthropods found in the root region of the infected broad bean plants were the velvety tree ants, silverfish, wire worms, different species of Diptera, sowbugs, predatory mites, and small spiders. However, Encyrtid wasp, a gregarious parasite (*syrphophagus nigrocyaneus* as identified by Mahmoud, 1979) was isolated from a puparium of the *Syrphus* sp.

Several trials were made for rearing the broad bean root aphids (in planted pots) and to propagate their main predator (*Syrphus* sp.) in rearing cages (40x/40x60 cm) under laboratory conditions in which composition sites and different sources of food for the syrphid flies nourishment were provided for a period over 20— days, but these efforts were unsuccessful.

This is believed to be the first record of the broad bean root aphid and their natural enemies in Iraq; and may also on the roots of *Vicia faba* plants in the world. Therefore more work is needed to investigate this problem.

LITERATURE CITED

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تسجيل جديد وبعض الملاحظات عن مَن جذور نبات

الباقلاء واهم اعدائه الطبيعيين في منطقة

حمام العليل - نينوى

ابراهيم عبدالرسول الجابري

مركز السيطرة على الامراض الانتقالية - بغداد - العلوية - ص.ب. ١١٧٨

الخلاصة

تم تسجيل نوعين من حشرات المَن على جذور نبات الباقلاء *Vicia faba* في منطقة حمام العليل - محافظة نينوى في اواخر الموسم الزراعي الربيعي (ايار ١٩٨٥) وقد شخّصا من قبل متحف التاريخ الطبيعي - قسم الحشرات في لندن فظهر ان النوع السائد يدعى *Smynthurdes betae* Westwood

بينما النوع الآخر قليل الكثافة
(Aphididae : Homoptera) *Dysaphis crataegi* (Kaltenbach)

اوضحت نتائج الدراسة الاولية في الحقل والمختبر بان مَن جذور الباقلاء يظهر عادة بكثافة قليلة في اواخر شهر آذار عندما تتحسن الظروف المناخية وتميل درجة حرارة الجو الى الاعتدال وان هنالك علاقة تعايش وثيقة بين ظهور من جذور الباقلاء وبين النمل البني - المسود المسمى بنمل الاشجار المخملي *Liometopum* spp. وان الافراد المجنحة نل من *S. betae*

تظهر عادة قبيل شهر ايار من كل عام والتي تهاجر الى جهة مجهولة ولا يعرف عائلها لثانوي لحد الآن .

لقد وجدت بعض المفترسات المهمة تتغذى بصورة طبيعية على مَن جذور الباقلاء في التربة اهمها يرقات ذبابة السرفس غير المشخصة *Syrphus* sp.

تحت إشراف وزارة الزراعة
 في مدينة الإسكندرية
 في سنة 1911
 من قبل
 أ. ر. الجبary

المقدمة

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 في مدينة الإسكندرية
 في سنة 1911
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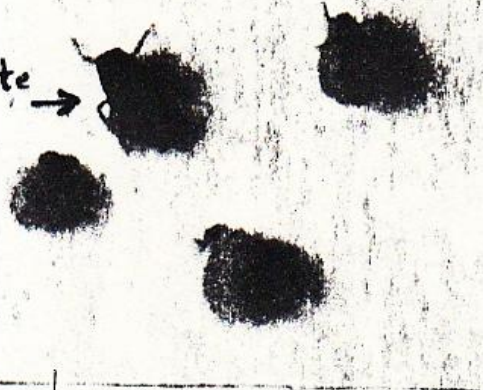


Fig. 1 - The root aphids feeding on the Vicia faba plant .

Fig. 2 - The wingless and winged aphid , Smynturodes betae .



(B) B



(A) A

Fig. 3 - A , Ventral view of the Syrphid Fly (Syrphus sp .) ;

B , the dorsal view .



Fig. 1 - The root nodules feeding on the

Vicia faba plant.

Fig. 2 - The wingless and winged spores

Synthlipsis fabae



(A)

(B)

Fig. 3 - A - Ventral view of the spore

Synthlipsis fabae sp. n.

B - The dorsal view