"Short communication"

A New Record of *Blastodacna libanotica* Diakonoff, 1939 (Lepidoptera, Agonoxenidae) on Pear Trees in Latakia Governorate, Syria

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Abstract

One year old pear shoots showing galls symptoms had been collected during December 2019, Kasab, Latakia, Syria Collected material was kept under lab. conditions till the emerging of the adult insect from each gall at the end of April. Adult insect species that belong to microlepidoptera was identified to be *Blastodacna libanotica* Diakonoff. This is a new record of this species from Syria.

Keywords: Gall, microlepidoptera, Pear, Kasab.

Introduction:

Pear is one of the most economic trees and widely distributed in different altitudes in Syria from 200 m in the coastal region to 1800 m at the mountains (Muzher and Sharaf, 2014). The caterpillar of *B. libanotica* is a borer in the younger twigs of pear (*Pyrus* sp.) and hawthorn (*Crataegus* sp.) at the same time Talhouk (1948). It produces peculiar double galls. It was reported for the first time from Alay, Lebanon (Type locality). It was known only from Lebanon till 2003. This species reported from Turkey by (Koster and Sinev, 2003) based on adult female specimens collected by Glaser in 1969. Some authors cited Syria as a type locality as Lebanon because Lebanon was a part of Syria those days (Koster *et al*., 2004). The biology of this species is well studied as well as the characters of adult moth, male and female genitalia and immature stages were illustrated by Koster *et al*. (2004). Koster and Sinev (2003) gave detailed descriptions of the adults and male and female genitalia of *Blastodacna* species from the western Palearctic region. This study was conducted to confirm reporting of this species from Kasab, Latakia, Syria using the suitable literature for identification of this species (Diakonoff, 1939**,** Koster *et al*., 2003; Koster *et al*., 2004).

Materials and method:

Newly emerged adult males and one female were examined under Optika® stereo binocular to select the males for further studies. Male genitalia of the moth was extracted, dissected and kept in KOH 10% under lab. temperature overnight and stained with eosin 2% for few minutes. Male genitalia were mounted in the Hoyer's medium for permanent preservation. Mounted slides were preserved at Latakia Centre for Scientific Agricultural Research collection. Images of the symptoms, adult female, pupae and male genitalia are given in this study.

Material examined:

Two males and one female emerged from galls in 29th April 2020 ex. *Pyrus* sp. "Coscia variety" (Rosaceae), Kasab, Latakia, Syria (35°54'16.3"N: 35°59'28.7"E: elevation 516 m), infested twigs collected in 18th December 2019, Leg. B. Muzher and O. Al-Halabi. Pear shoots of "California

variety" showed gall symptoms was collected from Drikish, Tartous, elevation 800 m, 15.06.2020, so, more studies have to be conducted to confirm distribution of this species in Tartous Governorate.

Results:

Gall induced insect to pear trees was identified as *Blastodacna libanotica* Diakonoff.

Taxonomy

Family: Agonoxenidae

Genus: Blastodacna

Blastodacna libanotica Diakonoff, 1939

Blastodacna libanotica

Diagnosis:

Adult, forewings have two scale tufts, the first one on the middle of its dorsal margin which is pointed, thus its shape being somewhat spindle-like, and the second scale tuft located on the terminal third of wings and it is dark brown. The forewings, has white costal streak and a white outlined triangular mark beyond the middle of the wings (Fig.1). Male genitalia, valva narrow, elongate somewhat dilated towards apex, apex ovate (Fig.2A and C). Male Aedeagus slightly curved, gradually widened towards base (Fig.2 B).

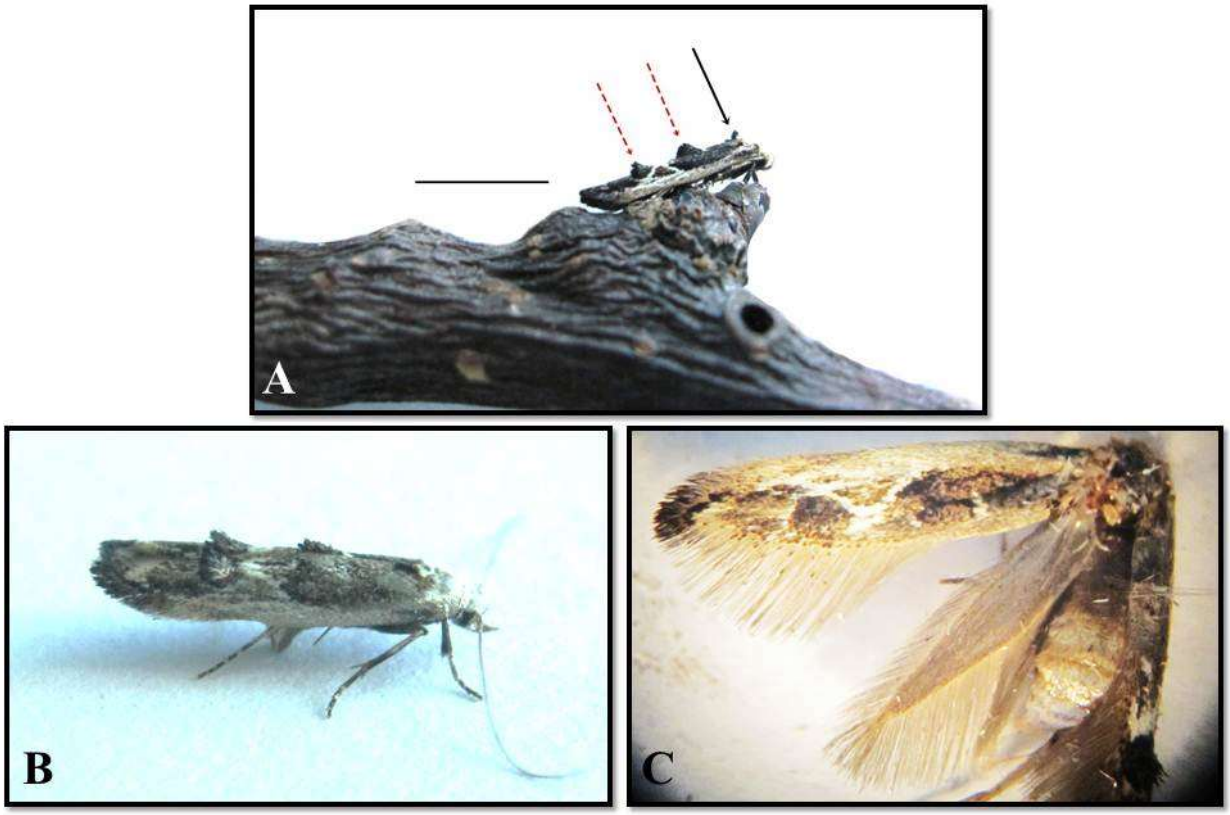

Figure 1. *Blastodacna libanotica*, (A) Adult female with galls and the exit-hole (scale bar=5 mm), (B and C) Adult insect.

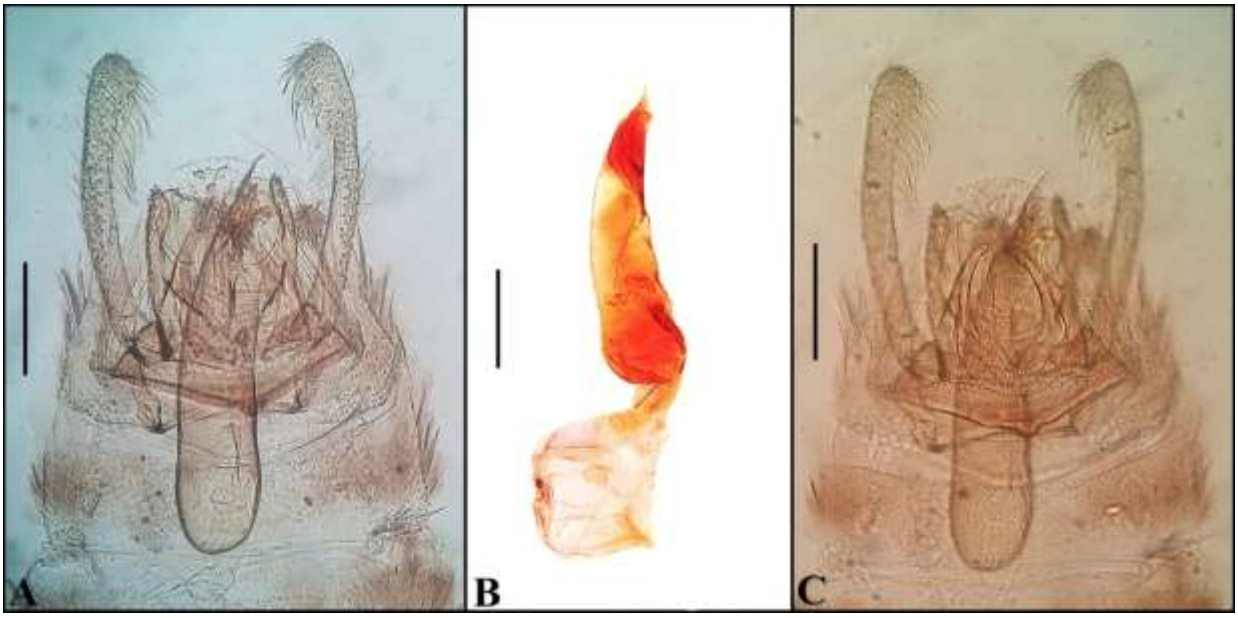

Figure 2. *Blastodacna libanotica*, (A and C) Male genitalia (scale bar=200 µm), (B) Male aedeagus (scale bar=200 µm).

Pupa: Pale brown, anterior and posterior parts darker (Fig.3A) length 5.5-6 mm. Wing sheaths rather short, reaching halfway along abdominal segment six. Ventrally on the combined ninth and tenth segment are two long leg-like protrusions at an angle of 30°-60° with the abdomen, anteriorly they are densely covered with hooked setae (Fig. 3B).

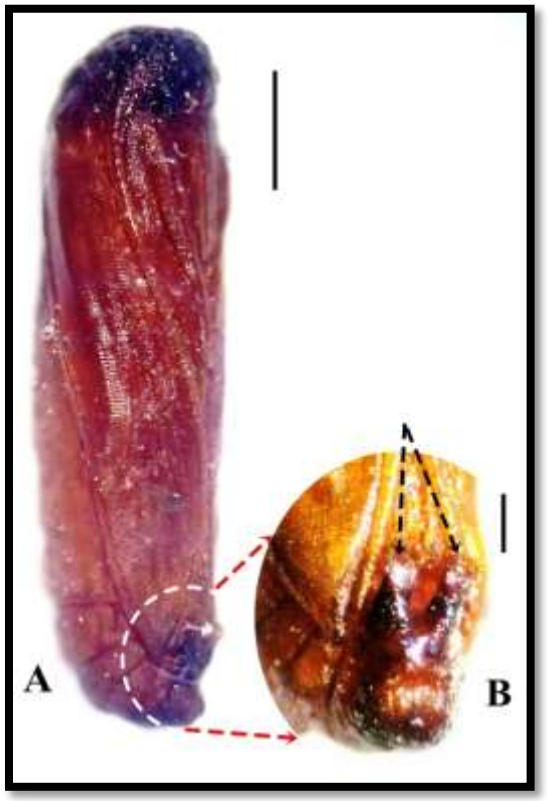

Figure 3. *Blastodacna libanotica,* (A) pupa in lateral view (Scale bar=1 mm), (B) leg-like protrusions at posterior part of the pupa (Scale bar=0.5 mm)

Damage and symptoms:

The galls are swelling the thin twigs; they are tied in the middle and have rounded exit-holes at the lower end with regular flattened and smooth (Fig.4). The damage caused by this insect is slight, except in varieties that produce fruit on their terminal growth. In this case of attacks on these varieties, the twigs break under the weight of the fruits (Talhouk, 1969).

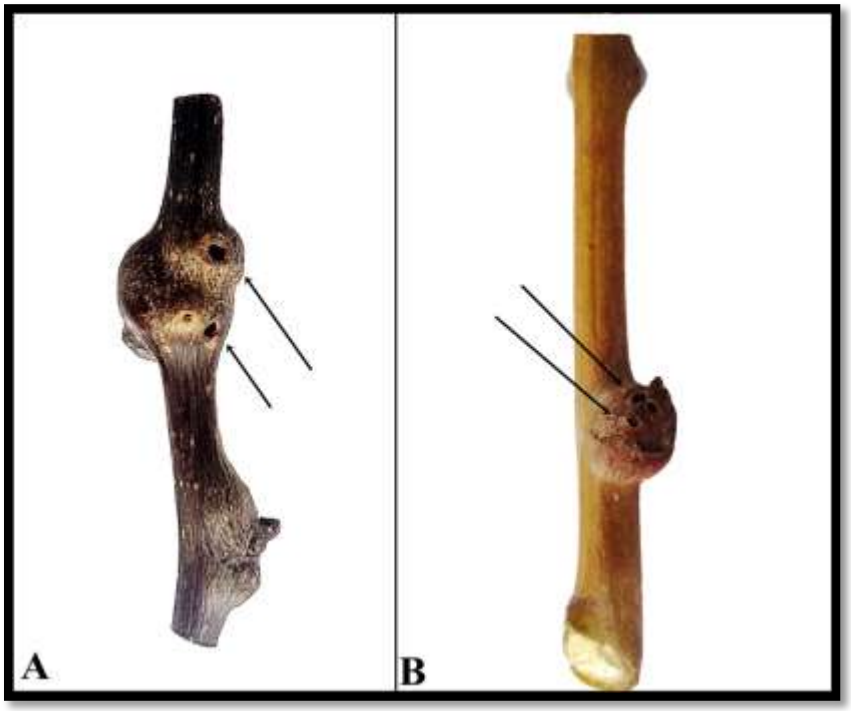

Figure 4. *Blastodacna libanotica,* Galls on pear twigs with the exit-holes

Distribution:

Lebanon (Diakonoff, 1939) and Turkey (Koster and Sinev, 2003; Koster *et al*., 2004). Some authors cited Syria refereeing to the original description of this species from Syria (Diakonoff, 1939), but those days Lebanon was a part of Syria (Koster *et al*., 2004).

Host plants:

This species was reported so far on *Pyrus* sp. and hawthorn (*Crataegus* sp.) (Rosaceae) Talhouk (1948).

Biology (Life cycle):

This species has one generation per year. The adult emerge at end of April copulate and the female scatters its eggs mostly in the one year old twigs. In few days, the eggs hatch and the tiny caterpillars bore into the twigs, pupation starts before January (Talhouk, 1948). The most practical way of controlling this pest by cutting of the galls during November and December and burn them. This will prevent the moths from infesting the trees during next season (Talhouk, 1969).

Acknowledgment:

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تسجيل جديد للعثة *Blastodacna libanotica* Diakonoff, 1939 (Lepidoptera, Agonoxenidae) المسببة للتدرن على الأجاص من محافظة اللاذقية، سورية

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الملخص

جُمعت فروع الأجاص بعمر سنة والتي تحمل أعراض التدرنات خلال شهر كانون الأول عام 2019 من كسب اللاذقية، سورية. تُركت العينات التي تم جمعها تحت ظروف المخبر حتى خروج الأفراد الكاملة من تلك التدرنات نهاية شهر نيسان. عُرف النوع الحشري على أنه *Blastodacna libanotica* Diakonoff التابع لمجموعة حرشفيات الأجنحة الصغيرة. يعتبر هذا التسجيل الأول لهذا النوع من سورية.

الكلمات المفتاحية: التدرنات، حرشفيات الأجنحة الصغيرة، إجاص، كسب.