

Genera *Paraswammerdamia* Friese and *Eidophasia* Stephens recorded in Israel

(Lepidoptera: Yponomeutidae, Plutellidae)

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Abstract: Two species of moths belonging to the families Yponomeutidae and Plutellidae were newly recorded in Israel: *Paraswammerdamia conspersella* (Tengström) and *Eidophasia messingiella* (Fischer v. Röslerstamm). The first species was believed to be present in central and northern Europe only, whereas the second one is known also from Europe, the Caucasus, the Trans-Caucasus, and Asia Minor.

Zusammenfassung: Zwei Schmetterlingsarten, die den Familien Yponomeutidae und Plutellidae angehören, wurden erstmals in Israel festgestellt: *Paraswammerdamia conspersella* (Tengström) und *Eidophasia messingiella* (Fischer v. Röslerstamm). Von der ersten Art wurde angenommen, dass sie nur in Zentral- und Nord-Europa vorkomme, während die zweite auch von Europa, dem Kaukasus, dem Transkaukasus und Kleinasien bekannt ist.

Key words: Lepidoptera, Yponomeutidae, Plutellidae, *Paraswammerdamia*, *Eidophasia*, Israel

Introduction

Yponomeutoid moths represent a worldwide distributed phytophagous group which occurs in very different landscapes such as forests, steppes, mountains, lowlands, deserts, and agricultural coenoses and which is trophically connected to 23 plant families (GERSHENSON & ULENBERG 1998). In spite of the ecological significance of this group, the fauna of the superfamily Yponomeutoidea of Israel has been insufficiently known until recent time. Motivated by the importance of this

group in evolutionary and phylogenetic studies (e.g. MENKEN et al. 1992; MENKEN 1996), Prof. E. NEVO, the head of the Institute of Evolution, University of Haifa, Israel, initiated the recent studies of the taxonomic richness of the mentioned moths. So far, 22 species belonging to three families (Yponomeutidae, Plutellidae, and Argylethiidae) were newly recorded in Israel (GERSHENSON et al. 2001, GERSHENSON et al. 2002, GERSHENSON & PAVLÍČEK 2002) and one species new to science, *Ypsolopha nevoi*, was described (GERSHENSON & PAVLÍČEK 2002).

The moths dealt with in this work were collected by means of netting. The classification used in this work is according to HEPPNER (1998) and synonyms are given according to LERAUT (1997).

Results

Yponomeutidae Stephens, 1829 – Small Ermine Moths

Paraswammerdamia Friese, 1960

Paraswammerdamia conspersella (Tengström, 1848)

Material: 2 ♂ and 1 ♀, Mt. Gilboa, altitude: 800 m asl., May 20. 2004, Israel.

Comments: So far this rare species was believed to occur only in northern and central Europe (FRIESE 1960; GERSHENSON 1974, 1990; AGASSIZ & FRIESE 1996). According to FRIESE (1960), the larval food-plant is *Empetrum nigrum* (Empetraceae). However, plant genus *Empetrum* is not present in Israel but the genus *Paraswammerdamia* Friese is trophically connected with host plants belonging to different plant families (e.g., FRIESE 1960, KUTENKOVA 1980).

Plutellidae Guenée, 1845 – Diamondback Moths

Eidophasia Stephens, 1842

= *Parasemia* Stephens, 1841 nec Hübner [1820]

= *Spania* Guenée, 1845

= *Eudophasia* Herrich-Schäffer, 1853

= *Hufnagelia* Reuti, 1853

Eidophasia messingiella (Fischer von Röslerstamm 1840)

= *transversella* Stephens, 1841

= *mullerella* Rougemont, 1903

= *aereolella* Lhomme, 1949

Material: 2 ♂, 1 ♀, Negev Desert, park near of Mitzpe Ramon, 17.08.2002, Israel.

Comments: This species is widespread in Europe, the Caucasus, the Trans-Caucasus, and Asia Minor. Larvae are trophically connected with plants of family Brassicaceae – *Cardamine amara* L., *C. impatiens* L. (ZAGULAJEV 1990). In Israel from the genus *Cardamine* only *C. hirsuta* L. is present.

Discussion

The newly recorded genera, *Eidophasia* Stephens and *Paraswammerdamia* Friese occur in the Holarctic region, particularly in the western Palearctic, eastern Palearctic and Nearctic (KYRKI 1990). The above mentioned species (*E. messingiella* and *P. conspersella*) are easily recognizable by their forewing pattern and genital structure (FRIESE 1960, GERSHENSON 1974; ZAGULAJEV 1990). The presence of examined genera in Israel can be considered as an illustration of the evident taxonomic diversity of yponomeutoid moths that inhabit temperate regions (*Paraswammerdamia conspersella* (Tngstr.) as well as arid ones (*Eidophasia messingiella* (F.-R.)). So far, in Israel, 8 species of the family Yponomeutidae (genus *Yponomeuta* – 5 species, genera *Ocnerostoma*, *Kessleria* and *Paraswammerdamia* – 1 species each) have been recorded as well as 19 species of the family Plutellidae (genus *Ypsolopha* – 15 species, genera *Prays* and *Plutella* – 2 species each) (GERSHENSON et al. 2001). All species of the families Yponomeutidae and Plutellidae in Israel are Palearctic elements with no known extension in Sub-Saharan Africa.

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