



Notes on rare and little known species of Oecophoridae (Lepidoptera); *Eratophytes amasiella* and *Dasycera imitatrix* from Turkey

Yafes YILDIZ^{1*}, Hamit AYBERK²

¹ Bartın University, Faculty of Forestry, Forest Entomology and Protection Department, Bartın, TURKEY

² İstanbul University, Faculty of Forestry, Forest Entomology and Protection Department, İstanbul, TURKEY

Abstract

Koçak has reported *Eratophytes amasiella* (Herrich-Schaffer, 1854) as the first record from Turkey in 1986. Up till now there is no record of the related species in Turkey from the first record. In a similar way; there is also limited information about our other species, *Dasycera imitatrix* Zeller, 1847 in Turkey. In this study, new distribution areas for these two species and a new host for *Eratophytes amasiella* were given.

Keywords: *Eratophytes amasiella*, *Dasycera imitatrix*, new distribution area, new host

Türkiye'den nadir ve az bilinen Oecophoridae (Lepidoptera) türleri *Eratophytes amasiella* ve *Dasycera imitatrix* üzerine notlar

Öz

Koçak 1986 yılında *Eratophytes amasiella* (Herrich-Schaffer, 1854) türünü ilk kayıt olarak bildirmiştir. Türle ilgili ilk tespitinden bu yana bir veri bulunmamaktadır. Aynı şekilde *Dasycera imitatrix* Zeller, 1847 türü ile ilgili Türkiye’de sınırlı bilgi bulunmaktadır. Bu çalışmada 2 tür ile ilgili yeni yayılış alanları ve *Eratophytes amasiella* için yeni bir konukçu türü verilmiştir.

Anahtar Kelimeler: *Eratophytes amasiella*, *Dasycera imitatrix*, yeni yayılış alanı, yeni konukçu

*Sorumlu Yazar (Corresponding Author):

Yafes YILDIZ (Dr.); Bartın Üniversitesi, Orman Fakültesi, Orman Mühendisliği
Bölümü, 74100, Bartın-Türkiye. Tel: +90 (378) 223 5166, Fax: +90 (378) 223 5062,
E-mail: yildiz@bartin.edu.tr

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1. Introduction

Oecophoridae is a huge moth family of the Super family Gelechioidea having more than 139 species (Url-1, 2017). They are common in Australia but not desperately in the other parts of the world. Adult of moths are from small to medium size with wingspans from 0.3 to 3 cm. Some of them are more colorful. The head is usually covered with smooth hairy-looking scales. While they are resting, they usually hold the antenna backwards along the outside edge of wing. Some of those species hold wings roof-like and some of them hold wing flat back over body. They, who are not all active fliers, usually found resting among and on the plants during the daytime. As it differentiates from other moths, they are active at night. Occasionally, Larvae feeds hide in web or in rolled leaves of the host tree or the plant and some species goes on living on dead leaves, decomposing animals, or decaying fungi. Pupation occurs on different places like larval shelters, on the ground, or below its surface [Url-2, URL-3].

Many moths feed on dead plant and play a useful part in nutrient recycling. On the other hand, the family includes the *Endrosis sarcitrella*, a widely distributed species whose caterpillars infest stored grain, and *Hofmannophila pseudospretella*, which feeds on textiles and carpets as well as stored foodstuffs. Other pest species include the larvae of *Opisina arenosella* on coconut palms (*Cocos nucifera*) in India, and *Peleopoda arcanella* on *Elaeifera* oil palms in Central America (Url-4, 2017).

Eratophyes is a genus of moths in the Oecophoridae that contains only one species, *Eratophyes amasiella*, which is found in Asia Minor, the Netherlands, Germany, Denmark and Sweden. It was first recorded in Belgium in 2004. The species was probably accidentally introduced in Western Europe, presumably as a larvae or pupa, with logs and larvae feed on decaying birch logs. The wingspan of adults is 12.5–16 mm and they are active from late April to June. (Url-5, 2017).

Eratophyes amasiella was first detected by light traps in Sakarya Keltepe (600 m) in Turkey in June 1980 (Koçak, 1986). This record shows that the species does still occur in Anatolia, and probably is indigenous for that region (Diakonoff & Van Nieukerken, 1987). But after this first record, there is no other detection till this study.

There is no information with biology and ecology about *Dasycera imitatrix* only local records (Ankara, Hatay, Kayseri, Manisa, Kahramanmaraş, Muğla, Van) from Turkey but detailed studies are not done (Kemal and Koçak, 2016).

2. Material and Method

In this study specimens were collected from Safranbolu-Karabük and Silifke –Mersin provinces (Figure 1). Photographs of adults were taken with Samsung Pro-815 and some of them with Olympus SZX-7 microscope. Studied specimens are deposited in the laboratory of Bartın University, Forest Entomology.



Figure 1. Location of *Eratophyes amasiella* and *Dasycera imitatrix*

3. Results

3.1. *Eratophyes amasiella* (Herrich-Schäffer 1854)

3.1.1 Remarks

The species was found in fir forests located in Karabük-Safranbolu region on 28.04.2010, where the crown part of the dry fir tree had been broken and also the pupa was found in the part of the bark where the larvae feces were intense (Figure 2). The bark containing pupal stage was brought to the laboratory. On 03.05.2010, adult output was observed. The wingspan has been measured as 13.4 mm. *Abies bornmülleriana* subsp. *nordmanniana* was detected as new host of the related pest in this study.

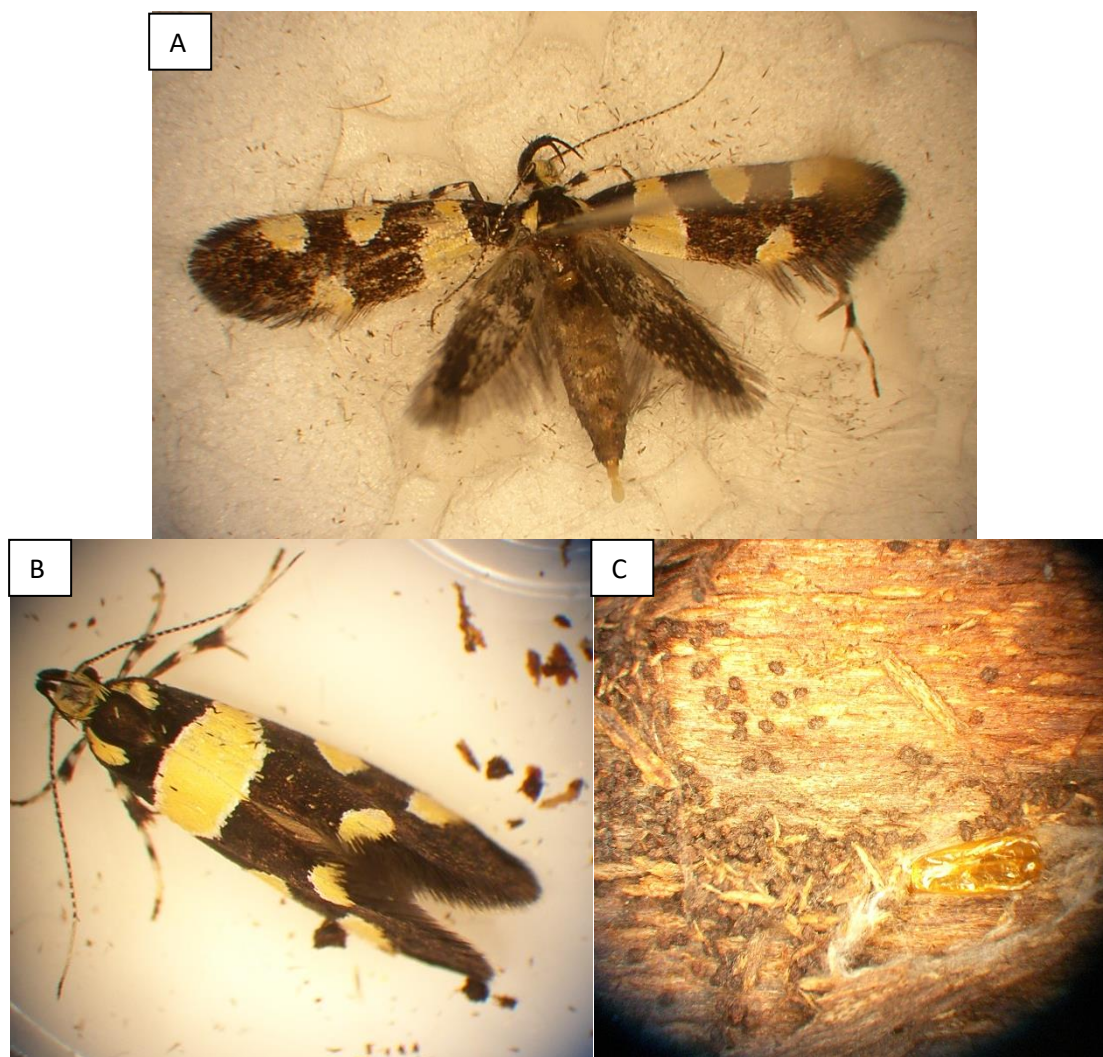


Figure 2. A. and B. Adult of *Eratophyes amasiella* C. Pupa with pellets of *Eratophyes amasiella*

3.1.2. Distribution

Denmark, Germany, Near East (Asian Turkey, Caucasian Russian republics, Georgia, Armenia, Azerbaidjan, Lebanon, Syria, Israel, Jordan, Sinai Peninsula (Egypt), Arabian peninsula, Iran, Iraq), Sweden, The Netherlands (Url-6, 2017).

3.2. *Dasycera imitatrix* Zeller, 1847

3.2.1. Remark

The adult individual was found to be resting in Silifke, Mersin Province on 21.04.2009 the stand where *Ceratonia siliqua* and *Citrus* sp. are exist commonly (Figure 3.).

3.2.2. Distribution

Dodekanisos (Dodecanese Island), Kriti (Crete) and Near East (Asian Turkey, Caucasian Russian republics, Georgia, Armenia, Azerbaidjan, Lebanon, Syria, Israel, Jordan, Sinai Peninsula (Egypt), Arabian peninsula, Iran, Iraq) (Url-6, 2017).



Figure 3. Adult of *Dasycera imitatrix* Zeller, 1847.

4. Discussion and Conclusion

Butterflies have a great importance among the group of insects since they supply significant ecological services like: pollination of wild flowers and they act as a aliment source for birds, reptiles and other species. Also they are perfect bio-indicators of habitat quality for sites. There are a number of different factors which threatens butterflies especially grassland butterflies, including the intensification of agriculture. These threats can be mentioned like these: the conversion of grasslands to crop fields, the drainage of wetlands and different grazing pressures. The abandoned lands and lack of grassland conduction on marginal lands also have an effect on butterflies' habitats, because they reduce the availability of proper places for the species to inhabit. Some of the other threats are climate changing, ineffective woodland direction (i.e. lack of free areas and clearings), habitat fragmentation and invasive alien species, and using pesticides and herbicide are also having a great effect. In reference to a recent report of the European Environment Agency (EEA), the number of European grassland butterflies has decreased approximately almost over 50% between 1990 and 2011. This work reports a worrying trend for butterflies and complements which are assessed by the European Red List of Butterflies conducted by IUCN (URL-7, 2017).

There is no evaluation of these species in the Red List, where threat categories for species are included. Biological and ecological data should be obtained by conducting necessary studies on the species and the situation in the protection status should be indicated.

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