

A new genus and a new species for the Fauna of Turkey with description of the genitalia (Lepidoptera: Crambidae)

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Abstract

Lepidoneura grisealis Hampson, 1900 is reported as new to the fauna of Turkey. The adult is illustrated and both male and female genitalia are described and illustrated for the first time.

KEY WORDS: Lepidoptera, Crambidae, *Lepidoneura grisealis*, genitalia, fauna, Turkey.

Un nuevo género y una nueva especie para la fauna de Turquía con la descripción de la genitalia (Lepidoptera: Crambidae)

Resumen

Lepidoneura grisealis Hampson, 1900 es registrada como nueva para la fauna de Turquía. Se ilustra el adulto y la genitalia de ambos, macho y hembra, se describe e ilustra por primera vez.

PALABRAS CLAVE: Lepidoptera, Crambidae, *Lepidoneura grisealis*, genitalia, fauna, Turquía.

Introduction

The genus *Lepidoneura* was established by HAMPSON in 1896 with the type-species *Antigastra longipalpis* Swinhoe, 1894. It includes 3 species, namely *L. longipalpis* (Swinhoe, 1894), *L. africalis* Hampson, 1899 and *L. grisealis* Hampson, 1900 (NUSS *et al.*, 2003-2015). *L. grisealis* was described from Kuldja (China). However, HAMPSON (1900) based his morphological description on the male only, stating that the type specimen was in Staudinger collection. We therefore asked, Dr. Wolfram Mey (Museum Für Naturkunde Berlin) to compare the type specimen with our Turkish examples but he responded that: "The type specimen of *L. grisealis* was formerly to be deposited in the Staudinger collection. However, the type was destroyed by burning together with other material on the ship that should return the loan from the Staudinger collection (see AMSEL, 1952). We do not have additional material of this species in our collection".

The capture of three examples of *L. grisealis* (2 ♂♂ and 1 ♀) during 2015 in south-east Turkey, during the course of a longer term examination of the Pyraloidea fauna of that country, allows us to recognize the female and to describe and illustrate the genitalia of both sexes for the first time.

Material and methods

Adult moths, comprising 2 males and 1 female, were collected from Siirt Province (south-eastern Turkey) using light traps. These specimens were assessed against Hampson's original description and then were compared with examples in Vienna Museum (NHMW), which were stated by ZERNY

(1914), in terms of both morphology and genitalia, to belong to this species. As a result, it was concluded that the Turkish moths belong, with certainty, to Hampson's *L. grisealis*. Genitalia were prepared using standard procedures according to ROBINSON (1976).

Results

Lepidoneura grisealis Hampson, 1900

Material examined: Turkey, 2 ♂♂, 1 ♀, Siirt Prov., 1 ♀, Botan valley, 700 m, 9-VII-2015 (G.P. 2015-56 E.S.); 1 ♂, Şirvan, Tangoli, 900 m, 25-VIII-2015; 1 ♂, Şirvan, Nergizli, 650 m, 4-VII-2015 (G.P. 2015-26 E. S.) leg. E. Seven. 1 ♂, "Asia centr. Jill-Gebiet, Umg. Djarkent, Coll. Wagner" (GP. 1653 Slamka, coll. NHM Vienna); 1 ♀, ("Issyk-Kul, Zentral Asien, v. Stummer, '00") (G.P. 1742 Slamka, coll. NHM Vienna).

Adult (Figs. 1-4): We have been unable to discern any differences in the external characters of the two sexes of *L. grisealis* and conclude that the sexes are identical in this regard. In the original description of HAMPSON (1900), is mentioned only a single male and is not known if Hampson had to disposal another specimen.

Male genitalia (Figs. 5-6): Uncus elliptical with dense hairs. Tegumen narrow. Tuba analis prominent. Valvae well developed, costa slightly concave, with sclerotized line up to about 2/3 of costa, apex rounded but costal side slightly inclined, fibula (clasper) well developed covered by short scales. Juxta V to U-shaped, apex of lateral components spined. Saccus developed, almost V-shaped. Aedeagus slightly curved, with numbers of short cornuti.

Female genitalia (Figs. 7-8): Papillae anales cylindrical triangular. Apophyses posteriores about half the length of apophyses anteriores. Antrum hemispherical, partly sclerotized, colliculum broad, strongly sclerotized. Ductus bursae narrow, membranous, approximately as long as the bursa copulatrix. Bursa copulatrix nearly elliptical, membranous, signum rhomboid and thin from junction points towards apex. Appendix bursae membranous, well developed.

Discussion

So far, *L. grisealis* is known from Kuldja (China) (HAMPSON, 1900) and Issyk-Kul (Kyrgyzstan) and Ili territory ("Djarkend") (ZERNY, 1914) and so its discovery in Turkey constitutes an interesting record in terms of its global distribution.

The possibility that it might be a new species, or perhaps a new subspecies, was clearly a consideration. However, overall morphology remains constant across the three regions. Detailed examination of the genitalia of three male specimens specified in the study, suggests that there may be variation in terms of numbers, shape and position of cornuti within the aedeagus, in female from Central Asia is colliculum longer than in female from Turkey. This is an area that clearly requires further examination before the precise taxonomic relationship among the populations in each of the three relatively disjunct areas of occurrence can be determined. More specimens are required.

Of interest is that there is an image of an alleged example of *L. grisealis*, labelled "Cotype, Stgr." on the website of The "Grigore Antipa" National Museum of Natural History Bucharest (STAN, 2016). The second Author was able to examine this specimen and determined that it is a species of *Eudonia* Billberg, 1820 (Scopariinae).

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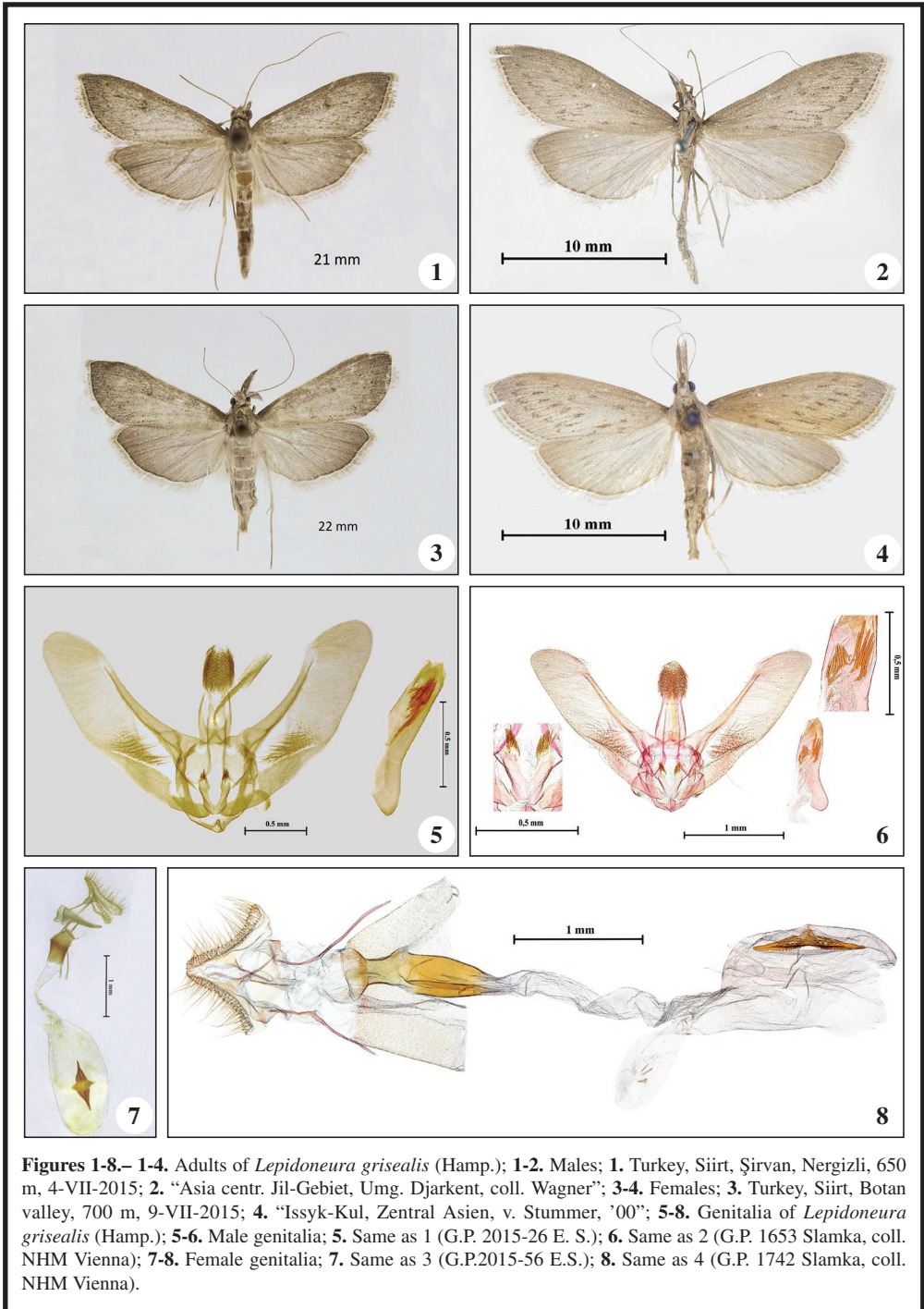
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Figures 1-8.– 1-4. Adults of *Lepidoneura grisealis* (Hamp.); 1-2. Males; 1. Turkey, Siirt, Şirvan, Nergizli, 650 m, 4-VII-2015; 2. “Asia centr. Jil-Gebiet, Umg. DjarKent, coll. Wagner”; 3-4. Females; 3. Turkey, Siirt, Botan valley, 700 m, 9-VII-2015; 4. “Issyk-Kul, Zentral Asien, v. Stummer, '00”; 5-8. Genitalia of *Lepidoneura grisealis* (Hamp.); 5-6. Male genitalia; 5. Same as 1 (G.P. 2015-26 E. S.); 6. Same as 2 (G.P. 1653 Slamka, coll. NHM Vienna); 7-8. Female genitalia; 7. Same as 3 (G.P.2015-56 E.S.); 8. Same as 4 (G.P. 1742 Slamka, coll. NHM Vienna).