SHILAP Revista de lepidopterología, 53 (211) septiembre 2025: 567-572 eISSN: 2340-4078 ISSN: 0300-5267
https://doi.org/10.57065/shilap.1089 https://shilap.org
https://zoobank.org/3F9E3F1C-A6FE-4B59-830B-1B8C15738BC5

Metzneria riadella Englert, 1974, a new record for the Türkiye Fauna (Lepidoptera: Gelechiidae)

Hanife Uçak & Muhabbet Kemal

Abstract

In this study, *Metzneria riadella* Englert, 1974 is presented as a new record for the Türkiye fauna. Morphological and ecological data on the Türkiye populations of the taxon are also included. The female external genital organ, the abdominal skin of male and female individuals is presented visually for the first time in this study. Additionally, some ecological data regarding the habitat of the species are also mentioned.
Keywords: Lepidoptera, Gelechiidae, *Metzneria riadella*, new record, Türkiye.

Metzneria riadella **Englert, 1974, un nuevo registro para la fauna de Turquía (Lepidoptera: Gelechiidae)**

Resumen

En este estudio se presenta *Metzneria riadella* Englert, 1974 como un nuevo registro para la fauna de Turquía. También se incluyen datos morfológicos y ecológicos sobre las poblaciones de Turquía del taxón. El órgano genital externo de la hembra, la piel abdominal de los individuos machos y hembras se presenta visualmente por primera vez en este estudio. Además, se mencionan algunos datos ecológicos relativos al hábitat de la especie.
Palabras clave: Lepidoptera, Gelechiidae, *Metzneria riadella*, nuevo registro, Turquía.

Introduction

The genus *Metzneria* Zeller, 1839, also lists 48 species in the world catalogue according to provisional data (Hobern et al. 2024). This genus is known by 24 species in Europe (Huemer & Karsholt, 2020) and 12 species in Türkiye (Koçak & Kemal, 2018). *Metzneria varennei* Nel, 1997, which is on the list of Koçak & Kemal (2018) and has only a Kahramanmaraş record in Türkiye, was synonymized with *Metzneria campicolelle* (Mann, 1857) (Nel & Varenne, 2017) and was later temporarily presented under the genus *Metzneria* in the European Gelechiide checklist (Huemer & Karsholt, 2020). The species, whose type locality is Fiume (Italia), was also presented under the genus *Metzneria* by Leraut (2023), in accordance with the above-mentioned source. Finally, Nel et al. (2022) transferred *M. campicolella* to the newly established genus *Huemeria* Nel, Varenne & Bassi, 2022 and the new name combination became *Huemeria campicolelle* (Mann, 1857). The species, whose original combination was *Gelechia campicolelle* Mann, 1857, was listed with the name combination *Ptocheuusa campicolella* (Mann, 1857) in the studies of Koçak & Kemal (2006, 2009, 2012, 2018), who took Karsholt & Razowski (1996) as a reference. For the above reasons, it is more appropriate that the genus *Metzneria* in Türkiye is represented by 11 species according to current data.

In the genus *Metzneria*, new species have been described in recent years, such as *M. transbaikalica*

Bidzilya, 2018; *M. fulva* Labonne, Huemer, Thibault & Nel, 2019; *M. freidbergi* Bidzilya, Karsholt, Kravchenko & Šumpich, 2019; *M. neli* Huemer, 2021 and *M. leae* Gastón & Huemer, 2022. Özaslan et al. (2016) added *Metzneria subflavella* Englert, 1974 to the Türkiye fauna together with its new larval food plant. The Türkiye fauna is also a group with high potential for the detection of new taxa in terms of *Metzneria* species. Some taxa in the Cesa collection, which are planned to be studied, are important in this respect.

While the Lepidoptera research initiated by Cesa in the Mediterranean region of Türkiye and the Taurus Mountains continues, *M. riadella* Englert, 1974 was recorded for the first time for the Türkiye fauna in the field studies in 2022 and 2024. Apart from the study by Englert (1974) in which the species was described, no other study containing morphological data for this species was found. This study includes morphological data on Türkiye populations of the taxon in question in the collection area.

Material and methods

The materials examined were collected from Anamur district of İçel (Mersin) (Türkiye) by night light trap in April, 2022 and 2024. The collected samples were prepared as required and Robinson (1976) was followed for permanent genital preparations for definitive identification. The specimens were photographed with a Canon EOS 60D, and the genitals were photographed with a stereomicroscope connected to a computer at a resolution of Leica S8APO, DFC290. The examined materials are preserved in the Cesa collection.

Results

Metzneria riadella Englert, 1974
Metzneria riadella Englert,1974, *Z. angew. Ent., 75*, 398, fig.
LT: [SAUDI] ARABIA, Riad, 700 m (LNK).

Material Examined: 2 ♂, 2 ♀, 07-IV-2022, 40 m; 2 ♂, 3 ♀, 06-IV-2024, 2 ♂, 4 ♀, 09-IV-2024, 40 m. Türkiye İçel Prov., Anamur district, Anemurium (33Al), M. Kemal & H. Uçak leg. (Cesa-coll.).

Biology: Unknown.

Distribution: Saudi Arabia (Englert, 1974), Cyprus (Gozmany, 2012), Girit (Gozmany, 2012; Karsholt & Huemer, 2017), Iran (Rajaei et al. 2023), Spain (Vives Moreno, 2014; Labonne et al. 2019; Gastón & Huemer, 2022). **New for Türkiye**.

Morphological features in Anamur population

External morphology (Figures 2-3a-b): The wingspan of individuals varies between 10-14 mm. Forewing covered with greyish-brown scales on a light cream ground colour. It has a distinct yellow line extending from the forewing base to the discal region parallel to the dorsum. A second similar line extends from the discal region to the apex, but does not reach the apex. There are brownish dot-like spots on the forewing. Similar spots are irregular, their number varies from three to five in individuals. Hindwing light cream (Figure 2b, Figures 3a-b). The head, palpi and thorax are covered with cream and brown scales. Palpus base segment cream-scaled, second and third segments usually have more brown scales. Antenna has predominant brown scales, first segment is thicker.

Male genitalia (Figure 4a, b1): The free end of the valve is oval, the anal part is spiny like a beak downwards. The valve is covered with dense and long hairs. Sacculus thumb-shaped, setae shorter than the hairs on the valve and relatively sparse. Sacculus V-shaped. Aedeagus cylindrical, caecum is slightly puffed and open. There is a distinct break in approximately 1/3 of the length. The number of triangular spines inside the aedeagus is 15 and above.

Abdomen skin (Figure 4b2): The sclerites that connect the sternum (S2) and tergum (T1) to the thorax have a strong chitinous structure. The ends of the sclerites connecting the tergum (T1) to the thorax are bent at 90 degrees to each other and have a strong chitinous. The last segment of the abdominal skin (T8) is rectangular stool-shaped.

Female genitalia (Figure 5): Anal papilla weakly sclerotized. Anterior and posterior apophysis are almost

the same length. The posterior apophysis base is wider and more sclerotized than the anterior apophysis base. Bursa copulatrix oval, very small, very weak and without signum. The length of the antrum is twice the width. Abdomen skin: The sclerites connecting the sternum (S2) and tergum (T1) to the thorax lie parallel to each other and have a strong chitinous.

Discussion

Except for some faunistic records, no detailed study has been found on the external morphological characteristics and genital structures of the species since its description. In terms of wing color and patterns and the structure of the phallus in the male genital organ, it is very similar to *Metzneria littorella* (Douglas, 1850), the most important distinguishing feature being the shape of the valve. Of the two male individuals collected from the same habitat on the same day, the other (GP3518) differs in that the aedeagus is relatively long and the caecum is slightly lobed. Additionally, the forewing coloration and spots of the other individual (GP3519) are darker and more contrasting. In the female external genital organ, the antrum is twice as long as it is wide. Englert (1974) stated that the antrum is three times as long as it is wide. This differences may be attributed to individual or geographical variation. The materials examined in this study are largely consistent with the structure of the male genitalia, as mentioned in Englert (1974). The female reproductive organ and the abdominal skin of male and female individuals are included in this study for the first time.

No information is known on the biology and larval foodplant of *Metzneria riadella*. However, data on the biology of the closest species, *M. littorella*, and on the larval foodplant *Plantago coronopus* L., were presented by Walsingham (1900) and Bankes (1901). The habitat where the examined samples were collected is a rocky area at an altitude of 40 meters above sea level, dominated by Mediterranean maquis vegetation (Figure1). According to the floristic study conducted here, *Plantago atrata* Hoppe., *P. afra* L., *P. cretica* L., and *P. lanceolata* L. species were identified from the stony and rocky area between 20-50 meters (Yıldıztugay & Küçüködük, 2010). The collection data for these four species are compatible with the period when vegetation was developing and *Metzneria riadella* adults were flying. Future research on the biology of the species will focus on this subject by following the information provided by Walsingham (1900) and Bankes (1901).

Conflict of Interest

The authors declare that there is no known financial interest or personal relationships that could have influenced the work presented in this article.

References

Bidzilya, O., Karsholt, O., Kravchenko, V., & Šumpich, J. (2019). An annotated checklist of Gelechiidae (Lepidoptera) of Israel with description of two new species. *Zootaxa*, *4677*(1), 1-68.

Bibzilya, O., & Nupponen, K. (2018). New species and new records of gelechiid moths (Lepidoptera, Gelechiidae) from southern Siberia. *Zootaxa, 4444*(4), 381-408. https://doi.org/10.11646/zootaxa.4444.4.2 PMid:30313913

Englert, W. D. (1974). Revision der Gattung *Metzneria* Zeller (Lepid., Gelechiidae) mit Beiträgen zur Biologie der Arten. *Zeitschrift für Angewandte Entomologie, 75,* 381-421. https://doi.org/10.1111/j.1439-0418.1974.tb01862.x

Hobern, D., & Sattler, K. (2024). *Catalogue of World Gelechiidae* (version 1.1.24.291(17 Oct 2024)). In D. Horbern & S. Lee (ed.). https://doi.org/10.48580/dgjc7-4th

Gastón, J., & Huemer, P. (2022). *Metzneria leae* Gastón & Huemer, sp. n., a new species from Spain (Lepidoptera: Gelechiidae). *SHILAP Revista de lepididopterología, 50*(198), 321-329. https://doi.org/10.57065/shilap.141

Gozmány, L. (2012). *Fauna Graeciae IX The Lepidoptera of Greece and Cyprus* (Vol. 1). Hellenic Zoological Society.

Huemer, P., & Karsholt, O. (2020). Commented checklist of European Gelechiidae (Lepidoptera). *ZooKeys, 921,* 65-140. https://doi.org/10.3897/zookeys.921.49197 PMid:32256151 PMCid:PMC7109147

Karsholt, O., & Razowski, J. (eds) (1996). *The Lepidoptera of Europe, A Distributional Checklist*. Apollo Books. https://doi.org/10.1163/9789004631717

Karsholt, O., & Huemer, P. (2017). Review of Gelechiidae (Lepidoptera) from Crete. *Linzer biologische Beiträge, 49* (1), 159-190.

Koçak, A. Ö., & Kemal, M. (2006). Checklist of the Lepidoptera of Turkey. *Centre for Entomological Studies Ankara*

Priamus Supplement, 1, 1-196.
Koçak, A. Ö., & Kemal, M. (2009). Revised Checklist of the Lepidoptera of Turkey. *Centre for Entomological Studies Ankara Priamus Supplement, 17*, 1-253.
Koçak, A. Ö., & Kemal, M. (2012). List of the hitherto recorded pterygot taxa of Turkey (*Insecta*) (Temporary report of the Entomofauna Project of Turkey-10). *Centre for Entomological Studies Ankara Priamus Memoirs, 6*, i-iv+1-1649, 1 fig.
Koçak A. Ö., & M. Kemal, 2018. A synonymous and distributional list of the species of the Lepidoptera of Turkey. *Centre for Entomological Studies Ankara Priamus Memoirs, 8*, 1-487.
Labonne, G., Hubner, P., Thibault, M., & Nel, J. (2019). Description de *Metzneria fulva* sp. nov.,découverte dans le sud de la France, proche de *M. torosulella* (Rebel, 1893)(Lepidoptera, Gelechiidae, Anomologinae). *Revue de l'Association Roussillonnaise d'Entomologie, 28*(1), 44-51.
Leraut, P. (2023). Microlepidoptera 2. Epipyropidae to Pterophoridae. *Moths of Europe* (Vol. 8). N.A.P. Editions.
Nel, J. (1997). Une nouvelle espèce de *Metzneria* Zeller, 1839, dans le Midi de la France(Lepidoptera, Gelechiidae). *Bulletin de la Société entomologique de France, 102*(2), 158. https://doi.org/10.3406/bsef.1997.17323
Nel, J., & Varenne, Th. (2017). *Pseudopostega cyrneochalcopepla* Nel & Varenne, 2012, bona species, stat. rest., et *Metzneria varennei* Nel, 1997, synonyme junior de *M. campicolella* (Mann, 1857). *Revue de l'Association Roussillonnaise d'Entomologie, 26* (2), 71-74.
Nel, J., Varenne, Th., & Bassi, G. (2022). *Huemeria* gen. nov. et description de *Huemeria campicolella tyrrhenica* ssp. nov. *Revue de l'Association Roussillonnaise d'Entomologie, 31*(2), 114-119.
Rajaei, H., & Karsholt, O. (eds.) (2023). Lepidoptera Iranica. *Integrative Systematics, 6* (Special Issue), 121-459. https://doi.org/10.18476/2023.997558.1
Robinson, G. S. (1976). The preparation of slides of Lepidoptera genitalia with special reference to the Microlepidoptera. *Entomologist's Gazette*, *27*, 127-132.
Özaslan, C., Bolu, H., & Akın, K. (2016). A new host [*Centaurea stapfiana* (Hand.-Mazz.)Wagenitz (Asteraceae)] record for the moth *Metzneria subflavella* Englert (Lepidoptera: Gelechiidae) from Turkey. *Oriental Insects, 51*(1), 1-5. http://dx.doi.org/10.1080/00305316.2016.1231637
Vives Moreno, A. (2014). *Catálogo sistemático y sinonímico de los Lepidoptera de la Península Ibérica, de Ceuta, de Melilla y de las Islas Azores, Baleares, Canarias, Madeira y Salvajes (Insecta: Lepidoptera)*. Improitalia.
Yıldıztugay, E., & Küçüködük, M. (2010). The flora of Anamur Antique City and its surroundings (Mersin/Turkey). *Biological Diversity and Conservation, 3*(3), 46-63.

*Hanife Uçak
Van Yüzüncü Yıl University
Institute of Science
TR-65100 Van
TURQUÍA / *TÜRKIYE*
E-mail: uck_hanife@hotmail.com
https://orcid.org/0000-0002-3148-6678

Muhabbet Kemal
Van Yüzüncü Yıl University
Faculty of Sciences
Department of Biology
TR-65100 Van
TURQUÍA / *TÜRKIYE*
E-mail: muhabbet_kemal@yahoo.com.tr
https://orcid.org/0000-0003-0183-4050

*Autor para la correspondencia / *Corresponden author*

(Recibido para publicación / *Received for publication* 23-XII-2024)
(Revisado y aceptado / *Revised and accepted* 10-II-2025)
(Publicado / *Published* 30-IX-2025)

Figure 1-3. 1. Habitat the *Metzneria riadella*. Türkiye, İçel Prov., Anamur Dist. Anemurium Antique City (33Al) (Photos: M. Kemal). **2**. *Metzneria riadella*. **a**. In its habitat (near the Ex PAIT, early morning). **b**. the same male individual (GP3518). Türkiye, İçel Prov., Anamur Dist. Anemurium Antique City (33Al) (Photos: M. Kemal). **3. a**. Adult male (GP3519). b. Adult female (GP3520). Türkiye, İçel Prov., Anamur Dist. Anemurium Antique City (33Al) (Photos: M. Kemal).

Figures 4-5. **4. a**. Male genitalia with aedeagus (GP3518). b. Male genitalia with aedeagus (GP3519). Türkiye, İçel Prov., Anamur Dist. Anemurium Antique City (33Al) (Photos: M. Kemal). **5**. Female genitalia with abdominal skin (GP3520). Türkiye, İçel Prov., Anamur Dist. Anemurium Antique City (33Al) (Photos: M. Kemal).