

First record of *Scythris sinensis* (FELDER & ROGENHOFER, 1875) (Lepidoptera, Scythrididae) in Romania

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Summary: *Scythris sinensis* (FELDER and ROGENHOFER, 1875) is reported for the first time from Romania. This species is present in four historical provinces of Romania: Transylvania, Banat, Oltenia and Muntenia.

Key words: Lepidoptera, Scythrididae, new record, distribution, Romania.

Introduction

The Lepidoptera fauna of Romania still holds many surprises. The large number of species and the reduced number of taxonomists compared to the surface of the country led to a serious lack of knowledge concerning many groups of insects, including Lepidoptera. According to the latest Romanian checklist (RÁKOSY and GOIA 2021) there are 36 scythridid moth species, which represent just about 0,9% of the entire lepidopteran fauna of Romania which counts 4102 species (RÁKOSY and GOIA 2021, KOVÁCS and KOVÁCS 2022).

In recent years, using the Facebook group “Insects of Romania and Europe”, important data was collected about the distribution of Lepidoptera in Romania. This new method is based on extracting data from photos and descriptions posted on this social network for identification. In this way, pictures of the species *Scythris sinensis* (FELDER and ROGENHOFER, 1875) from various regions of Romania were posted for identification or confirmation.

Methods

Between 2017 and 2020 photos of 5 individuals of *Scythris sinensis* (FELDER & ROGENHOFER, 1875) were posted on the Facebook group “Insects of Romania and Europe” for identification, additional data was provided by one of the authors from his iNaturalist account (Table 1). All specimens were only photographed, no specimen was preserved.

Results and Discussion

According to (LANDRY *et al.* 2013) the species originates from East Asia. It has been detected in Europe since the early 1970s and, so far, it was found

in many parts of Europe, but there are still numerous territories where its presence is uncertain; this may be due to the fact that just a few researchers study small Lepidoptera species. Until now, its presence has been recorded in Europe from Ukraine, Russia, Belarus, the Baltic countries and Moldova (BENGTSSON 2013), Hungary (FAZEKAS 2008), Poland (MALKIEWICZ & DOBRZAŃSKI 2011), Bulgaria (TSVETANOV and ZLATKOV 2019), Romania (this study), Germany (SUTTER 1994) and UK (DAVIS 2012), Portugal (CORLEY *et al.* 2020), Finland (VÄHÄTALO 2014). Lepiforum e.V. (2022) shows specimens from Slovakia, Austria, Italy, Spain and images of the species from Serbia can be found on Facebook and iNaturalist.

Thus, it seems that this species is widespread throughout Europe. The species was also introduced



Fig. 1. *Scythris sinensis* (FELDER and ROGENHOFER, 1875) adult of the second generation. Scale bar: 5 mm. Photo: Alexandru Aurel Ștefan-Fotin

Table 1: Examined material

No.	Location and coordinates	Date	Observed by	Identified by	Data source
1	Păușa, Vâlcea, 45°17'13.75"N, 24°19'57.1"E	14.07.2017	Alexandru Aurel Ștefan-Fotin	Ronni Antony Valencich	Facebook
2	București, Ilfov 44°26'09.4"N, 26°09'38.2"E	06.07.2018	Eugenia Petrescu	Eugenia Petrescu	Facebook
3	București, Ilfov 44°26'46.4"N, 26°03'28.6"E	08.07.2018	Mihai Zachi	Adorian Ardelean	Facebook
4	București, Ilfov 44°28'37.4"N, 26°05'47.7"E	05.07.2019	Mihai Zachi	Mihai Zachi	iNaturalist
5	Frumușani, Călărași 44°16'39.9"N, 26°20'10.5"E	01.09.2019	Tudor Lupu	Havier Odrzański	Facebook
6	București, Ilfov 44°28'41.1"N, 26°05'45.0"E	14.07.2020	Mihai Zachi	Mihai Zachi	iNaturalist
7	București, Ilfov 44°28'39.8"N, 26°05'47.5"E	03.08.2020	Mihai Zachi	Mihai Zachi	iNaturalist
8	Făgăraș, Brașov 45°50'23.1"N, 24°57'41.2"E	11.08.2020	Negrea Elena- Gabriela	Negrea Elena- Gabriela	Facebook
9	Dubova, Mehedinți 44°37'13.3"N, 22°15'39.1"E	02.08.2021	Mihai Zachi	Mihai Zachi	iNaturalist
10	Băile Herculane, Caraș-Severin 44°52'34.7"N, 22°24'44.0"E	05.08.2021	Mihai Zachi	Mihai Zachi	iNaturalist

in Eastern North America (LANDRY *et al.* 2013).

The larval host plants *Chenopodium album* L. and *Atriplex patula* L. (LANDRY *et al.* 2013) are common ruderal weeds in Europe. This moth is frequently seen in city centers due to its ecological requirements and the thermophilic, synanthropic nature of the host plants (MALKIEWICZ and DOBRZAŃSKI 2011).

The first generation has black wings, but can be identified by the yellow abdomen; the second generation of the species (Fig.1) has four yellow wing markings, one basal and one terminal on each forewing, that are characteristic for the species (TSVETANOV and ZLATKOV 2019). Other similar species are *Scythris flabella* (MANN, 1861) and *Parascythris muelleri* (MANN, 1871), but those are distinguished by more basally displaced terminal yellow spots on the forewings (TSVETANOV and ZLATKOV 2019).

Conclusions

Scythris sinensis (FELDER and ROGENHOFER, 1875) new record from Romania solves part of the puzzle regarding the distribution of this species in Europe. The species is known from Finland to the Iberian Peninsula, Southern Europe and the Balkans. It is only a matter of time before it is found in all Central European and Balkan countries.

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References

- BENGTSSON B. (2013) Fauna Europaea: *Scythrididae*. In: KARSHOLT O. & NIEUKERKEN E. J. van (Eds.), Fauna Europaea: Lepidoptera, Moths. Fauna Europaea version 2.4 [online 28 January 2011]. Available at: <https://fauna-eu.org>. (Accessed on 10 May 2022).
- DAVIS A. M. (2012) A Review of the Status of Microlepidoptera in Britain. Butterfly Conservation, Wareham. (Butterfly Conservation Report No. S12-02)
- FAZEKAS I. (2008) New record of the *Scythris sinensis* Felder & Rogenhofer, 1875 in Hungary (Microlepidoptera: *Scythrididae*). *Acta Naturalia Pannonica* 3, Suppl. 2: 169–172.
- KOVÁCS Z. & KOVÁCS S. (2022) An overview of the Romanian *Gelechiidae* (Lepidoptera) summarizing the current knowledge in an updated and annotated checklist. *Entomologica Romanica* 26: 1–76.
- LANDRY J.-F., NAZARI V., DEWAARD J. R., MUTANEN M., LOPEZ-VAAMONDE C., HUEMER P., HEBERT P. D. N. (2013) Shared but overlooked: 30 species of Holarctic Microlepidoptera revealed by DNA barcodes and morphology. *Zootaxa* 3749(1): 1–93.
- LEPIFORUM e.V. (2022) *Scythris sinensis* (Felder & Rogenhofer, 1875). In: Lepiforum e.V.: Bestimmungshilfe für die in Europa nachgewiesenen Schmetterlingsarten. Available at: https://lepiforum.org/wiki/page/Scythris_sinensis (Accessed on 10 May 2022) (in German).
- CORLEY M. F. V., NUNES J. & ROSETE J. (2021) New and interesting Portuguese Lepidoptera records from 2020 (*Insecta: Lepidoptera*). *SHILAP Revista de lepidopterología* 49 (196): 609–625
- MALKIEWICZ A. & DOBRZAŃSKI X. (2011) *Scythris sinensis* (Felder & Rogenhofer, 1775) - the first record in Poland, and some new regional records of *Scythrididae* (Lepidoptera). *Polish Journal of Entomology / Polskie*

Pismo Entomologiczne 80(3): 517–521.

- RÁKOSY L. & GOIA M. (2021) Lepidopterele din România: lista sistematică și distribuție / The Lepidoptera of Romania: a Distributional Checklist. Presa Universitară Clujeană, pp. 369.
- SUTTER R. (1994) Beiträge zur Insektenfauna Ostdeutschlands: *Lepidoptera – Scythrididae* [Contributions to the knowledge of the insect fauna of East Germany: *Lepidoptera - Scythrididae*]. *Beitrage zur Entomologie* 44: 261–318 (in German).
- TSVETANOV T. & ZLATKOV B. (2019) *Scythris sinensis* (Felder & Rogenhofer, 1875), a new species for Bulgaria and the Balkan Peninsula (*Insecta: Lepidoptera: Scythrididae*). *ZooNotes* 146: 1-2.
- VÄHÄTALO L. (2014) Finnish Biodiversity Information Facility. Suomen Lajitietokeskus [online 26 July 2014]. Available at: <https://bit.ly/3Sf1pSr> (Accessed on 10 May 2022).

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