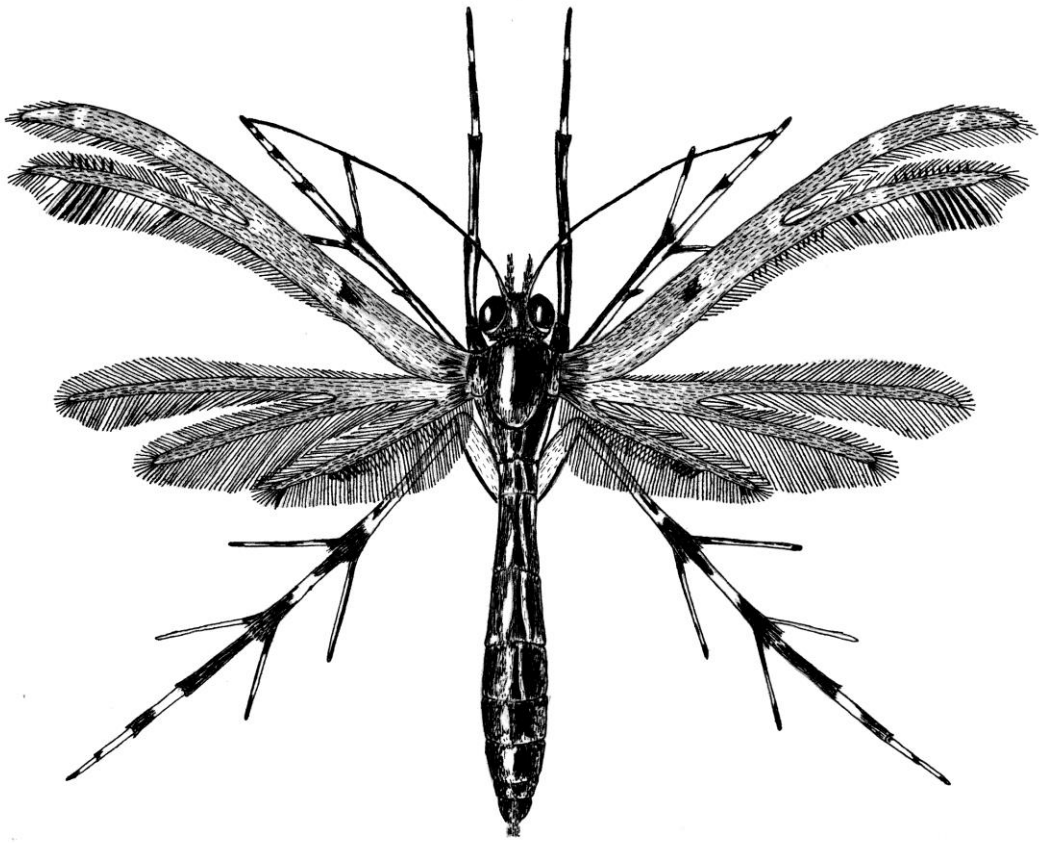
ISSN 1726-8028
e-ISSN 2707-420X

ВІСТІ
ХАРКІВСЬКОГО ЕНТОМОЛОГІЧНОГО ТОВАРИСТВА
ТОМ XXXI ВИПУСК 2

THE KHARKOV ENTOMOLOGICAL SOCIETY GAZETTE
VOLUME XXXI ISSUE 2



ХАРКІВ 2023 KHARKIV

ISSN 1726-8028
e-ISSN 2707-420X

В І С Т І
ХАРКІВСЬКОГО ЕНТОМОЛОГІЧНОГО ТОВАРИСТВА

2023 Том XXXI Випуск 2
Видається з 1993 року

THE KHARKOV ENTOMOLOGICAL SOCIETY GAZETTE

2023 Volume XXXI Issue 2
Published since 1993

И З В Е С Т И Я
ХАРЬКОВСКОГО ЭНТОМОЛОГИЧЕСКОГО ОБЩЕСТВА

2023 Том XXXI Выпуск 2
Издаётся с 1993 года

Засновник:
Харківське ентомологічне товариство

Спільне видання
Харківського ентомологічного товариства та
Державного біотехнологічного університету

Вісті Харківського ентомологічного товариства включено до «Переліку наукових фахових видань» України (категорія «Б», спеціальності: 091 — Біологія, 101 — Екологія, 162 — Біотехнології та біоінженерія, 202 — Захист і карантин рослин, 211 — Ветеринарна медицина) і в ньому можуть публікуватися результати дисертаційних робіт на здобуття вчених ступенів доктора та кандидата біологічних і сільськогосподарських наук (накази МОН України № 241 від 09.03.2016 р. і № 515 від 16.05.2016 р.), а також доктора наук і доктора філософії (наказ МОН України № 409 від 17.03.2020 р.)

Журнал включено в Web of Science Master Journal List, реферується в Zoological Record, цитується в Google Scholar, індексується в CrossRef

Архів номерів журналу у форматі PDF доступний на сайті журналу (entomology.kharkiv.ua) та Національної бібліотеки України ім. В. І. Вернадського (nbuv.gov.ua/j-tit/Vkhet)

Журнал підписано до друку за рекомендації Вченої ради Державного біотехнологічного університету (протокол № 6 від 14.12.2023 г.)

Контакти редакції:
Харківське ентомологічне товариство
Тел.: +380973719458; +380503022290
E-mail: kharkentomolsocgazet@gmail.com

Статті публікуються мовою оригіналів — українською або англійською

Свідоцтво про державну реєстрацію серія КВ № 17114-5884ПР від 25.10.2010 р.

На обкладинці: рисунок Ю. О. Гуглі *Oxyptilus* sp.

The founder:
the Kharkiv Entomological Society

Joint publication of
the Kharkiv Entomological Society and
the State Biotechnological University

The Kharkov Entomological Society Gazette included in the 'List of Scientific Professional Editions' of Ukraine (category 'B', specialities: 091 — Biology, 101 — Ecology, 162 — Biotechnology and Bioengineering, 202 — Plant Protection and Quarantine, 211 — Veterinary Medicine) that can publish the results of dissertations for obtaining the academic degrees of doctor and candidate of biological and agricultural sciences (orders of the Ministry of Education and Science of Ukraine: No. 241, March 9, 2016; No. 515, May 16, 2016), as well as doctor of science and doctor of philosophy (order of the Ministry of Education and Science of Ukraine No. 409, March 17, 2020)

The journal is included in the Web of Science Master Journal List, referenced in Zoological Record, cited in Google Scholar, indexed in CrossRef

An archive of journal issues in PDF format is available on the journal website (entomology.kharkiv.ua) and the Vernadsky National Library of Ukraine (nbuv.gov.ua/j-tit/Vkhet)

The issue of the journal approved for publication by the Scientific Council of the State Biotechnological University (protocol No. 6, December 14, 2023)

Editorial contacts:
The Kharkiv Entomological Society
Tel.: +380973719458; +380503022290
E-mail: kharkentomolsocgazet@gmail.com

Articles are published in the original language — Ukrainian or English

Certificate of state registration
KB No. 17114-5884ПР of October 25, 2010

On the cover: drawing by Yu. O. Guglya *Oxyptilus* sp.

Підписано до друку 28.12.2023

Формат 60×84 ⅛. Гарнітура Times NR. Друк офсетний. Папір офсетний
Умов. друк. арк. 7,2. Об.-вид. арк. 5,4. Наклад 300 прим. Замовлення № 066-24
Надруковано з макета замовника ПП «Стиль-Іздат» (св. ХК 240 від 02.09.2009 р.)
Україна, 61022, Харків, вул. Тринклера, 2, корп. 1, к. 19, тел. 057-758-01-08, 066-822-71-30

ЗМІСТ

CONTENTS

UDC 595.768.23(477.46) DOI: 10.36016/KhESG-2023-31-2-1

© 2023 V. Yu. NAZARENKO

FIRST RECORD OF *POLYDRUSUS VIRIDICINCTUS* (GYLLENHAL, 1834) (COLEOPTERA: CURCULIONIDAE: ENTIMINAE) IN CHERKASY REGION (UKRAINE)

Назаренко, В. Ю. Перша знахідка жука-довгоносика *Polydrusus viridicinctus* (Gyllenhal, 1834) (Coleoptera: Curculionidae: Entiminae) в Черкаській області України. *Вісті Харківського ентомологічного товариства*. 2023. Т. XXXI, вип. 2. С. 5–9. DOI: 10.36016/KhESG-2023-31-2-1.
Наведено відомості про першу знахідку *Polydrusus viridicinctus* у Черкаській області України. Раніше цей вид був достеменно відомий лише з заходу України та Одеської області й помилково вказаний з Дніпропетровської області. 4 рис., 45 назв.
Ключові слова: Polydrusini, жуки, довгоносики, річка Рось, фауна, розповсюдження.

Nazarenko, V. Yu. First record of *Polydrusus viridicinctus* (Gyllenhal, 1834) (Coleoptera: Curculionidae: Entiminae) in Cherkasy Region (Ukraine). *The Kharkov Entomological Society Gazette*. 2023. Vol. XXXI, iss. 2. P. 5–9. DOI: 10.36016/KhESG-2023-31-2-1.
Information about the first record of *Polydrusus viridicinctus* in Cherkasy Region of Ukraine is provided. Previously, the species was known to exist in the western part of Ukraine and in Odesa Region, and erroneously recorded from Dnipropetrovsk Region. 4 figs, 45 refs.
Keywords: Polydrusini, beetles, weevils, the Ros River, fauna, distribution.

Назаренко, В. Ю. Первая находка *Polydrusus viridicinctus* (Gyllenhal, 1834) (Coleoptera: Curculionidae: Entiminae) в Черкасской области Украины. *Известия Харьковского энтомологического общества*. 2023. Т. XXXI, вып. 2. С. 5–9. DOI: 10.36016/KhESG-2023-31-2-1.
Приводится информация о первой находке *Polydrusus viridicinctus* в Черкасской области Украины. Ранее этот вид достоверно был известен только с запада Украины и Одесской области и ошибочно указан из Днепропетровской области. 4 рис., 45 назв.
Ключевые слова: Polydrusini, жуки, долгоносики, река Рось, фауна, распространение.

Introduction. The genus *Polydrusus* Germar, 1817 comprises 217 species, with 194 that are distributed in the Palaearctic Region. The Nearctic Region harbors 12 native species, while the Neotropcal Region includes 9 species. Two species are distributed in Namibia, South Africa, and Zimbabwe (Yunakov *et al*. 2023). Three Palaearctic species, *Polydrusus formosus* (Mayer, 1779), *P. impressifrons* Gyllenhal, 1834, and *P. cervinus* (Linnaeus, 1758), have been introduced to Canada and the United States (Bright, Bouchard, 2008). In Ukraine, 21 species are known (Yunakov *et al.*, 2018).

Polydrusus weevils are well-known and abundant in various habitats, including forests, shrublands, grasslands, parks, gardens, lawns, and ruderal vegetation. While some species are considered pests (Petrukha, Globova, Stovbchatyy, 1988; Velázquez-de-Castro, Gharali, Korotyaev, 2014; Rodstrom, Skoczylas, Waters, 2015; Mehrnejad, Meleshko, Korotyaev, 2017; BCMA, 2019; Fiala, Holusa, 2022; Kamusiime, Nantongo, Wacal, 2023), others have no economic impact, and there are even poorly known and rare taxa among them (Gurney, 2018; Yunakov *et al.*, 2018). One such species is *P.* (*Poecilodrusus*) *viridicinctus*, previously recorded in the western part of Ukraine, as well as in Dnipropetrovsk and Odesa regions (Sumarokov, Nazarenko, 2015; Yunakov *et al.*, 2018).

Materials and methods. Two female specimens of *P. viridicinctus* were collected in the Korsun-Shevchenkivskyi District near Stebliv in Cherkasy Region. They were captured by net-sweeping on deciduous trees such as *Quercus robur* and *Alnus glutinosa* near water reservoir of Stebliv.

Taxonomy follows Alonso-Zarazaga *et al.* (2023). Habitat image and GPS coordinates were obtained using ZTE Blade A7 smartphone with Geo-Tracker software v. 5.2.4.3219. Photographs of the specimen were taken using Leica Z16 APO stereo-microscope equipped with a Leica DFC 450 camera and processed with LAS v. 3.8 software. Image editing was done with GIMP v. 2.8.4 (https://download.gimp.org/gimp/v2.8) and Inkscape v. 0.48.4 r9939 (https://inkscape.org/release/inkscape-0.48.4).

Mapping was performed using a modified relief map of Ukraine (https://www.mapsland.com/europe/ukraine/large-relief-map-of-ukraine) and Google Maps (https://www.google.com.ua/maps). The general distribution mapping data were obtained from Medvedev, Shapiro (1957); Tóth (1968); Dieckmann (1980); Osella, Magnano (1986); Podlussány, Kocs (1997); Lachowska, Holecová, Rozek (1998); Pešić (1998, 2003),

Nazarenko V. Yu. I. I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine,
15, Bohdana Khmelnytskoho St., Kyiv, 01030, UKRAINE; e-mail: nazarenko@izan.kiev.ua; ORCID: 0000-0003-4245-5049

Received 29.08.2023 **Accepted 29.11.2023 by Dr. N. N. Yunakov** **Published 28.12.2023**

Mazur (2002) Lompe (2018); Arzanov (2015); Merkl, Németh, Podlussány 2016; Gurney (2018); Pástor, Kollár, Bakay (2019); Yunakov (2019); Germann, Braunert, Schütte (2022); BMLU (2023); Germann *et al*. (2023); Alonso-Zarazaga *et al.* (2023); Yunakov *et al*. (2023). National distribution mapping data used are from Tveritina (1956), Kubisz, Mazur, Pawłowski (1998), Mazur (2002), Yunakov *et al.* (2018). Information on the national distribution at region level follows the adopted standard of 3-letter codes established in Yunakov *et al.* (2018), where asterisk (*) marks a new record, and square brackets ([]) represent doubtful data.

Abbreviation: SIZK — I. I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine.

Results and discussions.

Family CURCULIONIDAE

Subfamily ENTIMINAE Schoenherr, 1823

Tribe POLYDRUSINI Schoenherr, 1823

Genus *Polydrusus* Germar, 1817

Subgenus *Poecilodrusus* Korotyaev et Meleshko, 1997

Polydrusus viridicinctus Gyllenhal, 1834

References. Germar, 1817; Schoenherr, 1823; Kuntze, 1926(1925); Roubal, 1941; Tveritina, 1956; Medvedev, Shapiro, 1957; Lazorko, 1963; Smreczyński, 1966; Tóth, 1968; Angelov, 1978; Dieckmann, 1980; Osella, Magnano, 1986; Korotyaev, Meleshko, 1997; Podlussány, Kocs, 1997; Kubisz, Mazur, Pawłowski, 1998; Lachowska, Holecová, Rozek, 1998; Pešić, 1998, 2003; Poiras, 1998; Mazur, 2002; Meleshko, 2003; Lompe, 2018; Arzanov, 2015; Sumarokov, Nazarenko, 2015; Gurney, 2018; Yunakov *et al.*, 2018; Pástor, Kollár, Bakay, 2019; Yunakov, 2019; Germann, Braunert, Schütte, 2022; Alonso-Zarazaga *et al.*, 2023;. BMLU, 2023; Germann *et al*., 2023; Yunakov *et al*., 2023.

Material. Ukraine: Cherkasy Region, Korsun-Shevchenkivskyi District, right bank of the Ros River, forest belts boarding Stebliv Reservoir, in front of Vygraivski Dachi natural boundary, ~ 5 km NNW Stebliv, N49.449312, E31.059976 — N49.449062, E31.059942, net-sweeping on *Alnus, Sambucus* etc., 29.07.2023 (V. Nazarenko) — 1 ♀ (SIZK); idem, ~ 3 km NNW Stebliv, N49.431940, E31.077813 — N49.431581, E31.0781586, net-sweeping on *Quercus, Populus, Betula, Ulmus* etc., 30.07.2023 (V. Nazarenko) — 1 ♀ (SIZK), (Figs. 1–3).

Distribution. Central, South and South-Eastern Europe, Balkans, Turkey and Cyprus (Yunakov, 2019; Alonso-Zarazaga *et al.*, 2023; Yunakov *et al*., 2023) (Fig. 4). Ukraine: ČER ČRK* [DNI] IFR KHM LWI ODE TER VIN ZAK (Kuntze, 1926(1925); Roubal, 1941; Lazorko, 1963; Kubisz, Mazur, Pawłowski, 1998; Mazur, 2002; Sumarokov, Nazarenko, 2015; Yunakov *et al.*, 2018, Yunakov, 2019) (Fig. 3).

Records from Chernivtsi, Lviv, Vinnytsia (Mazur, 2002), Kherson, Kirovohrad, Mykolaiv, and Poltava (Meleshko, 2003) regions need confirmation. The presence of *P. viridicinctus* in Crimea, as stated by Meleshko (2003), was refuted by recent survey (Yunakov, 2018). Finding the species in Dnipropetrovsk Region (Sumarokov, Nazarenko, 2015**)** is doubtful, possibly resulting from misidentification of an unusually small specimen of *P. picus* (Fabricius, 1792).

The general distribution of this species (Fig. 4) largely coincides with the South-Eastern European montane forests in the Carpathians and the Balkans, where it occurs in lower forest belt (Tveritina, 1956), and neighboring territories of temperate broad-leaved forest biomes (Koistinen, 2007), where the maximal number of finds were recorded (Yunakov, 2019; Yunakov *et al*., 2023). Single sites were mapped out of mentioned area in the similar plant associations, usually intrazonal floodplain forests (Yunakov, 2019 and original study). Obviously, the line from south-eastern Czech Republic to central Ukraine represents the north-eastern limit of the species range (Fig. 4), approximately corresponding to north latitude of 50 degrees. The easternmost records along the Siverskyi Donets River and upper the Don River (Arzanov, 2015) are indeed based on the misidentification of *Polydrusus picus* (Yuri Arzanov, pers. comm. to Nikolai Yunakov in 2015).

Differential diagnosis. *P. viridicinctus* differs from the similar *P. picus* by its elongated body shape, the presence of erect piliform setae on elytral interstriae, reddish legs, femora edentate, and antennal scrobes not reaching ventral side of the rostrum.

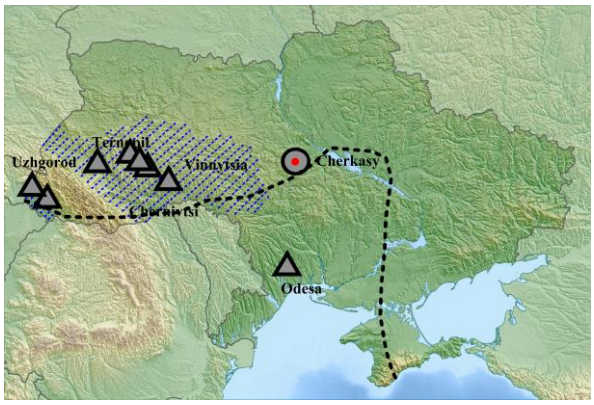
Biology. The species occurs in broad-leaved and mixed forests from May to July. The adults feed on the foliage of various deciduous trees, usually on *Quercus* and rarely on *Betula* (Tveritina, 1956). It is important to note a discrepancy the information on host plants in the text (oak, p. 97) compared to the pivot table (birch, p. 102), with the latter appearing to be erroneous. *P. viridicinctus* is known to feed on *Quercus* in dry habitats (Medvedev, Shapiro, 1957; Smreczyński, 1966; Angelov, 1978; Dieckmann, 1980). Subsequent studies have expanded its host range to include *Quercus petraea*, *Q. cerris* (Lachowska, Holecová, Rozek, 1998), *Q. petraea*,

Q. pubescens, *Q. robur* (Poiras, 1998), indicating oligophagy on oaks (Mazur, 2002). Additionally, it has been observed on *Carpinus* (Smreczyński, 1981; Lompe, 2018) and *Castanea sativa* (Pástor, Kollár, Bakay, 2019).

During the current study in Cherkasy Region, one specimen was swept on *Quercus* planting and one on mainly *Alnus* forest, but feeding on both oak and alder was not observed. Females captured on July 29–30 died within a week without feeding. Subsequent collections in August to September yielded no specimens in the same study area, aligning with known data on its phenology (Dieckmann, 1980; Yunakov *et al*., 2018).

F i g . 1 . ***P. viridicinctus,*** **♀, dorsal view.**

F i g . 2 . ***P. viridicinctus*****, natural habitat.**



F i g . 3 . The occurrences of *P. viridicinctus* in Ukraine: dot — new record, triangle — previously known record, hatched area — provisional distribution in Ukraine (by Mazur, 2002), dashed line — north-eastern distribution limit of *Poecilodrusus* (by Meleshko, 2003). Doubtful record from Dnipropetrovsk Region is not shown.

F i g . 4 . Distribution of *P. viridicinctus*: dot — previously known record, starred dot — new record, polygon — uncertain data.

Conclusions. The discovery of *P. viridicinctus* in Cherkasy Region significantly expands the known range of the species to the east, confirming its presence in the broad-leaved forests of the Dnipro River zone in the central part of Ukraine. Likely, the species may also be found in other, especially neighboring, southern and southeastern regions of Ukraine.

Acknowledgements. I would like to express my deep gratitude to Dr. Yu. Dubrovsky for organizational and transport assistance which made this research possible. I am also thankful to Dr. N. Yunakov and the two reviewers for their valuable recommendations, improvements, and corrections to the text.

REFERENCES

Alonso-Zarazaga, M. A., Barrios, H., Borovec, R., Bouchard, P., Caldara, R., Colonnelli, E., Gültekin, L., Hlaváč, P., Korotyaev, B., Lyal, C. H. C., Machado, A., Meregalli, M., Pierotti, H., Ren, L., Sánchez-Ruiz, M., Sforzi, A., Silfverberg, H., Skuhrovec, J., Trýzna, M., Velázquez de Castro, A. J., Yunakov, N. N. 2023. *Cooperative Catalogue of Palaearctic Coleoptera Curculionoidea*. 2nd ed. Monografías Electrónicas SEA, vol. 14. Sociedad Entomológica Aragonesa, Zaragoza, 1–780. URL: http://sea-entomologia.org/monoelec.html. LSID: urn:lsid:zoobank.org:pub:DC36DC23-14D6-417D-85AB-E8DCD373F223.

Angelov, P. A. 1978. *Fauna of Bulgaria. Volume 7. Coleoptera, Curculionidae. Part 2. Brachyderinae, Brachycerinae, Tanymecinae, Cleoninae, Curculioninae, Myorrininae [Фауна на България. Том 7. Coleoptera, Curculionidae, II част. Brachyderinae, Brachycerinae, Tanymecinae, Cleoninae, Curculioninae, Myorhininae]*. Bulgarian Academy of Sciences, Sofia, 1–234. [in Bulgarian].

Arzanov, Yu. G. 2015. A revised checklist species of the Curculionoidea (Coleoptera, excluding Scolytinae) of Rostov Oblast and Kalmykia, the southern part of European Russia. *Journal of Insect Biodiversity*, **3**(12), 1–32. DOI: https://doi.org/10.12976/jib/2015.3.12.

BCMA (British Columbia Ministry of Agriculture). 2019. Root and vine weevils. *In:* Jesperson, G., ed. *Home & Garden Pest Management Guide for British Columbia*. British Columbia Ministry of Agriculture, Victoria, B. C., Canada, 11-6. URL: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/animal-and-crops/plant-health/gardenguide-11-berries.pdf.

BMLU (Biological Museum, Lund University). 2023. *Polydrusus viridicinctus* Gyllenhal, 1834. *Biological Museum, Lund University — Search the Entomological Collections*. URL: https://ento.biomus.lu.se/search.php?taxa=Polydrusus%20viridicinctus. [Accessed 10.11.2023].

Bright, D. E., Bouchard, P. 2008. *Weevils of Canada and Alaska. Volume 2. Coleoptera, Curculionidae, Entiminae*. The Insects and Arachnids of Canada. Part 25. National Research Council Research Press, Ottawa, Ontario, Canada, 1–327. ISBN 9780660194004. DOI: https://doi.org/10.1139/9780660194004.

Dieckmann, L. 1980. Beiträge zur Insektenfauna der DDR: (Coleoptera - Curculionidae Brachycerinae, Otiorhynchinae). *Beiträge zur Entomologie*, **30**(1), 145–310. DOI: https://doi.org/10.21248/contrib.entomol.30.1.145-310.

Fiala, T., Holusa, J. 2022. *Polydrusus aeratus* (Coleoptera: Curculionidae: Entiminae): a potential pest of young coniferous stands. *Central European Forestry Journal*, **68**(1), 36–42. DOI: https://doi.org/10.2478/forj-2021-0014.

Germann, Ch., Braunert, C., Schütte, A. 2022. Contribution to the weevil fauna of Montenegro with the description of a new *Echinodera* Wollaston, 1863 species, and lectotype designations in the genus *Sciaphobus* K. Daniel, 1904 (Coleoptera, Curculionoidea). *Contributions to Entomology*, **72**(2), 179–211. DOI: https://doi.org/10.3897/contrib.entomol.72.e97253.

Germann, Ch., Bahr, F., Braunert, C., Link, A. 2023. Die Rüsselkäfer Griechenlands. Katalog der Curculionoidea Griechenlands (Coleoptera). *Le Charançon. Catalogues & Keys*, **3**. Curculio-Institute, Mönchengladbach. [Information recalled on 10.11.2023]. URL: https://curci.site.at/en/taxons/611.

Germar, E. F. 1817. Miscellen und Correspondenz-Nachrichten. *Magazin der Entomologie*, **2**, 339–341.

Gurney, M. 2018. *Polydrusus* and *Phyllobius*. *In:* Mathieu, M., Mathieu, F., eds. *La Galerie de Quel Est cet Animal. Photos et clés de détermination des Insectes et Arachnides de France*, 1–16. URL: https://quelestcetanimal-lagalerie.com/wp-content/uploads/2018/11/Polydrusus-and-Phyllobius.pdf.

Gyllenhal, L. 1834. *Polydrosus viridicinctus*. *In:* **Schoenherr, C. J.** *Genera et species Curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman, et entomologis aliis illustratae*, **2**(1), Parisiis, Roret, Lipsiae, Fleischer, 138. URL: https://www.biodiversitylibrary.org/page/4112147. DOI: https://doi.org/10.5962/bhl.title.8952.

Kamusiime, E., Nantongo, J. S., Wacal, C. 2023. Insect pests in apple (*Malus domestca* Borkh) gardens: Review. *GSC Advanced Research and Reviews*, **15**(1), 030–053. DOI: https://doi.org/10.30574/gscarr.2023.15.1.0109.

Koistinen, V. 2007. A map of a classification of the world's vegetation into biomes. *In: Plant*: Wikipedia article. [Last modified September, 18, 2023].URL: https://en.wikipedia.org/wiki/Plant, https://commons.wikimedia.org/wiki/File:Vegetation.png.

Korotyaev, B. A., Meleshko, J. Ye. 1997. On the systematics of the weevil genus *Polydrusus* (Coleoptera: Curculionidae). *Zoosystematica Rossica*, **6**(1/2), 275–286. URL: https://www.zin.ru/journals/zsr/publication.asp?id=245.

Kubisz, D., Mazur, M., Pawłowski, J. 1998. Chrząszcze Miodoborów (Zachodnia Ukraina). Część II. Aktualny stan poznania (Insecta, Coleoptera). *Studia Ośrodka Dokumentacji Fizjograficznej*, **25**, 217–293.

Kuntze, R., 1926(1925). Nowe stanowiska kilku rzadszych chrząszczy w południowo-wschodniej Polsce. *Polskie Pismo Entomologiczne*, **4**(4), 237–244.

Lachowska, D., Holecová, M., Rozek, M. 1998. Chromosome number in nine beetle species (Coleoptera: Bruchidae, Apionidae, Curculionidae). *Folia Biologica*, **46**(1–2), 41–46.

Lazorko, V. 1963. *Materials to Systematics and Faunistics of Beetles of Ukraine [Матеріали до систематики і фавністики жуків України*]. The Shevchenko Scientific Society, Vancouver, Canada, 1–123. [in Ukrainian].

Lompe, A. 2018. Gattung *Polydrusus* Germ. *Die Käfer Europas. Ein Bestimmungswerk im Internet* [created 05.08.2009, last modified 25.08.2018 at 16:41:40]. URL: https://coleonet.de/coleo/texte/polydrusus.htm#viridicinctus.

Mazur, M. 2002. The distribution and ecology of weevils (Coleoptera: Nemonychidae, Attelabidae, Apionidae, Curculionidae) in western Ukraine. *Acta Zoologica Cracoviensia*, **45**(3), 213–244. URL: http://www.isez.pan.krakow.pl/journals/azc/pdf/azc_i/45(3)/05.pdf.

Medvedev, S. I., Shapiro, D. S. 1957. Towards knowledge of the beetle fauna (Coleoptera) of the Moldavian SSR and adjacent regions of Ukraine [К познанию фауны жуков (Coleoptera) Молдавской ССР и сопредельных районов Украины]. *Scientific Notes of Kharkov University [Учёные записки Харьковского университета]*, **90**, 173–206. [in Russian].

Mehrnejad, M. R., Meleshko, Ju. Ye., Korotyaev, B. A. 2017. Morphological description and observations on the biology of *Polydrusus davatchii* (Coleoptera: Curculionidae: Entiminae), a pest of pistachio trees in Iran. *Biologia* **72**, 1067–1074. DOI: https://doi.org/10.1515/biolog-2017-0116.

Meleshko, J. Ye. 2003. Supplemented description of the subgenus *Poecilodrusus* Korotyaev et Meleshko, genus *Polydrusus* Germ. (Coleoptera, Curculionidae) [Уточнение характеристики подрода *Poecilodrusus* Korotyaev et Meleshko рода *Polydrusus* Germar (Coleoptera, Curculionidae)]. *Entomological Review [Энтомологическое обозрение]*, **82**(2), 444–448. URL: https://www.elibrary.ru/item.asp?id=9291292. [in Russian].

Merkl, O., Németh, T., Podlussány, A. 2016. Beetles from Sălaj county, Romania (Coleoptera, excluding Carabidae). *Studia Universitatis Vasile Goldis, Seria Stiintele Vietii*, **26**(s1), 5–85. URL: http://www.studiauniversitatis.ro/2014/11/17/beetles-from-slaj-county-romania-coleoptera-excluding-carabidae.

Osella, G., Magnano, L. 1986. I coleotteri attelabidi e curculionidi a diffusione transadriatica. *Biogeographia*, **10**, 701–792. DOI: https://doi.org/10.21426/B610110254.

Pástor, M., Kollár, J., Bakay, L. 2019. Insect species composition on European chestnut (*Castanea sativa* Mill.) during flowering in selected localities in Slovakia. *South Western Journal of Horticulture, Biology and Environment*, **10**(2), 95–104. URL: https://biozoojournals.ro/swjhbe/v10n2/swjhbe_e19107_Pastor.pdf.

Pešić, S. 1998. The fauna of weevils (Coleoptera: Attelabidae, Apionidae, Curculionidae, Rhynchophoridae) in Kragujevac Basin (Serbia). *In:* Colonnelli, E, Louw, S, Osella, G, eds. *Taxonomy, Ecology and Distribution of Curculionoidea (Coleoptera: Polyphaga):* proceedings of the XX International Congress of Entomology (28 August 1996, Florence, Italy). Museo Regionale di Scienze Naturali, Turin, Italy, 163–182.

Pešić, S. 2003. Balkan weevils (Curculionoidea) in the Natural History Museum London (world part). *Kragujevac Journal of Science*, **25,** 139–162. URL: https://www.pmf.kg.ac.rs/KJS/en/volumes/kjs25/kjs25pesic139.pdf.

Petrukha, O. I., Globova, N. D., Stovbchatyy, V. N. 1988. Family weevils — Curculionidae [Семейство долгоносики — Curculionidae]. *In:* Vasil'ev, V. P., ed. *Pests of Agricultural Crops and Forest Plantations. Volume 2: Harmful Arthropods, Vertebrates [Вредители сельскохозяйственных культур и лесных насаждений. Том 2: Вредные членистоногие, позвоночные]*. 2nd ed. Urozhay, Kiev, 88. ISBN 5337001604. [in Russian].

Podlussány, A., Kocs, I. 1997. Hargita megye Curculionoidea faunájának alapvetése. *Acta (Csíki Székely Múzeum, Csíkszereda) a Csíki Székely Múzeum és a Székely Nemzeti Múzeum évkönyve*, **1**, 65–80. URL: https://epa.oszk.hu/03200/03277/00004/pdf/EPA03277_acta_1997_1_065_080.pdf.

Poiras, A. A. 1998. *Catalogue of the Weevils and Their Host Plants in the Republic of Moldova*, Pensoft Publishers, Sofia, Moscow, 1–156. ISBN 9789546420428.

Rodstrom, R. A., Skoczylas, J. C, Waters, T. D. 2015. Soak or spray: Control of *Polydrusus impressifrons* on un-rooted hybrid poplar cuttings. *Proceedings of the 74th Annual Pacific Northwest Insect Management Conference, January 12–13, 2015, Portland, Oregon*, 41–43. URI: http://hdl.handle.net/1957/60925.

Roubal, J. 1941. Rhynchophora. *In: Katalog Coleopter (Brouku) Slovenska a Vychodnich Karpat na zaklade bionomickem a zoogeografickem a spolu systematicky dopnek Ganglbauerovych 'Die Käfer von Mitteleuropa' a Reitterovy 'Fauna Germanica'. Dil 3*. Vydal Slovansky Ustav v Nakladatelstvi Orbis, Praha, 99–252.

Schoenherr, C. J. 1823. Curculionides. [Tabula synoptica familiae Curculionidum]. *Isis von Oken*, **10**, 1132–1146**.**

Smreczyński, S. 1966. *Klucze do oznaczania owadów Polski. Część XIX. Chrząszcze — Coleoptera. Zeszyt 98b. Ryjkowce — Curculionidae. Podrodziny Otiorhynchinae, Brachyderinae*. Państwowe Wydawnictwo Naukowe, Warszawa, 1–130. URL: https://baza.biomap.pl/pl/getpdf/KdOOP_Coleoptera_Curculionidae_Otiorhynchinae_Brachyderinae_cz_XIX_zesz_98b_nr_51.pdf.

Smreczyński, S. 1981. Unterfamilie Brachyderinae. *In*: Freude, H., Harde, K. W., Lohse, G. A., eds. *Die Käfer Mitteleuropas. Band 10. Bruchidae, Anthribidae, Scolytidae, Platypodidae, Curculionidae*. Goecke & Evers, Krefeld, 240–273.

Sumarokov, A. M., Nazarenko, V. Yu. 2015. The beetles of the superfamily Curculionoidea (Coleoptera) of agrocenoses in Dnepropetrovsk Region [Жёсткокрылые надсемейства Curculionoidea (Coleoptera) агроценозов Днепропетровской области]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **23**(1), 16–19. URL: http://nbuv.gov.ua/UJRN/Vkhet_2015_23_1_5. [in Russian].

Tóth, L. 1968. Adatok a Balaton-felvidék bogár (Coleoptera) faunájához. *A Veszprém Megyei Múzeumok Közleményei*, **7**, 351–365, URL: http://epa.oszk.hu/01600/01610/00007/pdf/vmm_07_1968_26_toth.pdf.

Tveritina, T. A. 1956. Weevils associated with wild woody vegetation of Transcarpathia [Долгоносики, связанные с дикой древесной растительностью Закарпатья]. *Scientific Notes of the Uzhgorod University [Научные записки Ужгородского университета]*, **16**, 93–108. URI: https://dspace.uzhnu.edu.ua/jspui/handle/lib/39933. [in Russian].

Velázquez-de-Castro, A. J., Gharali, B., Korotyaev, B. A. 2014. *Polydrusus nadaii* Meleshko & Korotyaev, a possible new pest for Pistachio trees in Iran (Coleoptera, Curculionidae, Entiminae). *Bulletin de la Société Entomologique de France*, **119**(3), 315–318. DOI: https://doi.org/10.3406/bsef.2014.2447.

Yunakov, N. 2019. *Polydrusus* (*Poecilodrusus*) *viridicinctus* Gyllenhal, 1834. *In:* Dmitriev, D. A. *3I Interactive Keys and Taxonomic Databases* [Last updated: February 28, 2019]. URL: http://dmitriev.speciesfile.org/taxahelp.asp?hc=31&key=Curculio&lng=En.

Yunakov, N., Nazarenko, V., Filimonov, R., Volovnik, S. 2018. A survey of the weevils of Ukraine (Coleoptera: Curculionoidea). *Zootaxa*, **4404**(1), 1–494. DOI: https://doi.org/10.11646/zootaxa.4404.1.1.

Yunakov, N., Girón Duque, J. C., Brown, S., del Río, M. G., Rincón, J., Cortés-Hernández, K. 2023. World Entiminae Database. *In:* Bánki, O. *et al. Catalogue of Life Checklist (Oct 2023)*. DOI: https://doi.org/10.48580/df7lv-3f8.

I. I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine

Вісті Харківського ентомологічного товариства **2023, том XXXI, випуск 2** **ISSN 1726-8028**
The Kharkov Entomological Society Gazette **2023, volume XXXI, issue 2** **e-ISSN 2707-420X**
Известия Харьковского энтомологического общества **2023, том XXXI, выпуск 2** **entomology.kharkiv.ua**

UDC 595.786/787(477) DOI: 10.36016/KhESG-2023-31-2-2

© 2023 Yu. M. GERYAK, S. K. BEZUGLYI, A. A. GERA, V. M. GLEBA, S. V. IVANIY, Yu. V. KANARSKYI, V. V. KAVURKA, Ye. V. KHALAIM, D. O. KOVALCHUK, M. V. LESHCHENKO, V. M. SERGIENKO, S. I. SUCHKOV, S. M. TROTSENKO, S. V. TSYKAL, V. K. VORONOV

CONTRIBUTION TO KNOWLEDGE OF THE DISTRIBUTION OF NOCTUOIDEA (INSECTA: LEPIDOPTERA) IN UKRAINE

Геряк, Ю. М., Безуглий, С. К., Гера, А. А., Глеба, В. М., Іваній, С. В., Канарський, Ю. В., Кавурка, В. В., Халаїм, Є. В., Ковальчук, Д. О., Лещенко, М. В., Сергієнко, В. М., Сучков, С. І., Троценко, С. М., Цикал, С. В., Воронов, В. К. Доповнення до вивчення поширення Noctuoidea (Insecta: Lepidoptera) в Україні. *Вісті Харківського ентомологічного товариства*. 2023. Т. XXXI, вип. 2. С. 10–25. DOI: 10.36016/KhESG-2023-31-2-2.

Наведено нові знахідки 180 видів Noctuoidea з України. Серед них один вид, *Hypenodes pannonica*, уперше зареєстровано в Україні, а низку інших видів уперше виявлено в окремих областях: 92 — у Кіровоградській, 13 — у Хмельницькій, по 3 — у Харківській і Полтавській, по 2 — у Чернігівській, Львівській і Рівненській, та по 1 — у Черкаській, Київській, Миколаївській і Вінницькій. Крім того, наведено нові знахідки низки локальних, рідкісних і маловідомих видів, з недостатньо вивченим поширенням в Україні.
1 рис., 18 назв.

Ключові слова: совкоподібні, таксономічний склад, нові знахідки, фауна.

Geryak, Yu. M., Bezuglyi, S. K., Gera, A. A., Gleba, V. M., Ivaniy, S. V., Kanarskyi, Yu. V., Kavurka, V. V., Khalaim, Ye. V., Kovalchuk, D. O., Leshchenko, M. V., Sergienko, V. M., Suchkov, S. I., Trotsenko, S. M., Tsykal, S. V., Voronov, V. K. Contribution to knowledge of the distribution of Noctuoidea (Insecta: Lepidoptera) in Ukraine. *The Kharkov Entomological Society Gazette*. 2023. Vol. XXXI, iss. 2. P. 10–25. DOI: 10.36016/KhESG-2023-31-2-2.

New records of 180 species of Noctuoidea from Ukraine are provided. Among them, one species, *Hypenodes pannonica*, is reported for the first time for Ukraine, and many species are recorded for the first time in certain regions: 92 — in Kirovograd Region, 13 — in Khmelnytskyi Region, 3 each — in Kharkiv and Poltava regions, 2 each — in Chernihiv, Lviv, and Rivne regions, and 1 each — in Cherkasy, Kyiv, Mykolaiv and Vinnytsia regions. In addition, new records for several local, rare and little-known species, with a distribution still insufficiently studied in Ukraine are presented. 1 fig., 18 refs.

Keywords: noctuoid moths, taxonomic composition, new records, fauna.

Геряк, Ю. Н., Безуглый, С. К., Гера, А. А., Глеба, В. М., Иваний, С. В., Канарский, Ю. В., Кавурка, В. В., Халаим, Е. В., Ковальчук, Д. А., Лещенко, М. В., Сергиенко, В. М., Сучков, С. И., Троценко, С. Н., Цикал, С. В., Воронов, В. К. Дополнение к изучению распространения Noctuoidea (Insecta: Lepidoptera) в Украине. *Известия Харьковского энтомологического общества*. 2023. Т. XXXI, вып. 2. С. 10–25. DOI: 10.36016/KhESG-2023-31-2-2.

Приведены новые находки 180 видов Noctuoidea из Украины. Среди них один вид, *Hypenodes pannonica*, впервые зарегистрирован в Украине, а ряд видов впервые обнаружены в отдельных областях: 92 — в Кировоградской, 13 — в Хмельницкой, по 3 — в Харьковской и Полтавской, по 2 — в Черниговской, Львовской и Ровенской и по 1 — в Черкасской, Киевской, Николаевской и Винницкой. Кроме того, приведены новые находки ряда локальных, редких и малоизвестных видов с недостаточно известным распространением в Украине. 1 рис., 18 назв.

Ключові слова: совкообразные, таксономический состав, новые находки, фауна.

Geryak Yu. M. Institute of Ecology of the Carpathians of the National Academy of Sciences of Ukraine, 4, Kozelnytska St., Lviv, 79026, UKRAINE; National Nature Park ‘Boikivshchyna’, Voiakiv UPA St., Borynia, Sambir District, Lviv Region, 82547, UKRAINE; e-mail: yu.ger@ukr.net; ORCID: 0000-0002-4446-403X
Bezuglyi S. K. Independent researcher, Hadiach, Myrhorod District, Poltava Region, UKRAINE; e-mail: bezyglui777@gmail.com
Gera A. A. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: gerich8325@gmail.com
Gleba V. M. Independent researcher, Korolevo, Berehove District, Zakarpattia Region, UKRAINE; e–mail: basileus_5@i.ua
Ivaniy S. V. Independent researcher, Lviv, UKRAINE; e–mail: si_v@i.ua
Kanarskyi Yu. V. Institute of Ecology of the Carpathians of the National Academy of Sciences of Ukraine, 4, Kozelnytska St., Lviv, 79026, UKRAINE; e-mail: ykanarsky@gmail.com; ORCID: 0000-0002-8426-3072
Kavurka V. V. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine, 15, Khmelnytskoho St., Kyiv, 01601, UKRAINE; e–mail: tortrix1984@gmail.com; ORCID: 0000-0002-2447-3588
Khalaim Ye. V. National Nature Park ‘Tuzlovski Lymany’, 2, Partyzanska St. Tatarbunary, Bilhorod-Dnistrovskyi District, Odesa Region, 68100, UKRAINE; e-mail: 3029376@gmail.com; ORCID: 0000-0003-4102-4861
Kovalchuk D. O. Kharkiv Entomological Society, Kharkiv, UKRAINE; e-mail: dmytrokovalchuk1@gmail.com
Leshchenko M. V. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: leshchenko.max@gmail.com
Sergienko V. M. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: zbio@ukr.net
Suchkov S. I. National Nature Park ‘Pryazovskyi’, 1, Ivana Aleksieieva St., Melitopol, Zaporizhzhia Region, 72300, UKRAINE; Zaporizhzhia Regional Museum of Local Lore, 29, Troitska St., Zaporizhzhia, 69063 UKRAINE; e-mail: serhii.suchkov@gmail.com
Trotsenko S. M. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: damone@ukr.net
Tsykal S. V. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: tsykalsv@ukr.net
Voronov V. K. Ukrainian Entomological Society, Kyiv, UKRAINE; e-mail: voronovvitalii1990@gmail.com

Received 15.11.2023 **Accepted 12.12.2023 by Dr. Yu. O. Guglya** **Published 28.12.2023**

Introduction. This paper continues the cycle of works devoted to the inventory of taxonomic composition and distribution of noctuoid moths (Lepidoptera: Noctuoidea) of Ukraine, especially of little-known, rare, and local species.

Materials and methods. This paper is based on the materials collected and observed mainly by the authors in various regions of Ukraine, mostly in 2023, but also includes some unreported data from previous years. Furthermore, the paper contains some data kindly provided by colleagues, as well as data from the collection of the State Museum of Natural History of the National Academy of Sciences of Ukraine in Lviv (SMNH).

During field research, the material was observed, collected and prepared according to generally accepted methods for this group and using standard equipment (Niesiolowski, 1955; Kostrowicki, 1956; Falkovich, 1978; Frantsevich, Klyuchko, 1962; Söderman, 1994; Fry, Waring, 2001; Gibb, Oseto, 2006). The main methods of Noctuoidea detection were attracting imagoes at night to artificial light (using sheets with 125W, 160W, 250W, and 400W mercury-vapour lamps and portable light-traps with 15W and 26W 'black-light' UV LED and fluorescent lamps), and baiting them with fermented fruits and red wine with sugar syrup. At the same time, several other methods were used, in particular: collecting adults with an entomological net on flowers, tree sap and plants covered with 'honeydew', searching for imago and pre-imaginal stages in various hiding places, as well as the collection of pre-imaginal stages, with subsequent hatching in laboratory conditions, *etc*.

Most of the examined material is stored in the authors' collections.

Abbreviations used in this paper: E — east, eastern; N — north, northern; S — south, southern; W — west, western; distr. — district; spm. — specimen(s); vic. — vicinity(ies).

Results and discussions.

Order LEPIDOPTERA Linnaeus, 1758

Superfamily NOCTUOIDEA Latreille 1809

Family NOTODONTIDAE Stephens, 1829

Subfamily PYGAERINAE Duponchel, [1845]

***Clostera pigra* (Hufnagel, 1766)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Clostera anastomosis* (Linnaeus, 1758)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Subfamily NOTODONTINAE Stephens, 1829

***Cerura erminea* (Esper, 1783)**

Material. Kirovohrad Region, Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 1 spm.

***Furcula bifida* (Brahm, 1787)**

Material. Kirovohrad Region, Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 1 spm.

***Ptilodon cucullina* ([Denis et Schiffermüller], 1775)**

Material. Vinnytsia Region, Haisyn distr., Brytavka vic., 22.06.2016 (S. Suchkov) — 1 spm.

Family EREBIDAE Leach, 1815

Subfamily RIVULINAE Grote, 1895

***Rivula sericealis* (Scopoli, 1763)**

Material. Kirovohrad Region: Kropyvnytskyi distr.: Dolynska vic., 31.07.2023 (V. Sergienko) — few spm.; Molodizhne vic., 30.07.2023 (V. Sergienko) — few spm.; Novoukrainsk distr.: Haivka vic., 20–22.08.2023 (Yu. Geryak) — 3 spm.

Subfamily HYPENINAE Herrich-Schäffer, [1851]

***Zekelita antiqualis* (Hübner, 1809)**

Material. Kherson Region, Beryslav distr., 0,7 km W Novokairy, 29.04.2018 (S. Trotsenko) — 1 spm.; Luhansk Region, Starobilsk distr.: Novomykilske vic., 18.07.2021 (S. Trotsenko, S. Tsykal) — 1 spm.; Odesa Region: Berezivka distr.: 3 km S-E of Kairy, 23.05.2020 (Ye. Khalaim, S. Novytskyi) — 5 spm.; Odesa distr.: 2 km S-W of Kubanka, 25.07.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; N-W Roksolany vic., 17.06.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; ibidem, 29.07.2020 (Ye. Khalaim, S. Novytskyi) — 5 spm.

Subfamily LYMANTRIINAE Hampson, 1893

***Laelia coenosa* (Hübner, 1808)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm..

***Calliteara pudibunda* (Linnaeus, 1758)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 26.10.2023 (Yu. Geryak) — 1 full-grown larva.

***Ocneria detrita* (Esper, 1785)**

Material. Kyiv Region, Bucha distr., Blystavytsia vic., 13.07.2023 (V. Sergienko) — 1 spm.

Subfamily ARCTIINAE Leach, 1815

***Chelis maculosa* ([Denis et Schiffermüller], 1775)**

Material. Donetsk Region, Mariupol distr., Boiove vic., 09.06.2020 (S. Suchkov) — 2 spm.; Khmelnytskyi Region: Kamianets-Podilskyi distr.: Subich vic., 29.07.2023 (S. Tsykal) — 5 spm.; ibidem, 19.08.2023 (S. Tsykal) — 1 spm.; 1,7 km SE Yaruha, 22.05.2021 & 19.08.2023 (S. Trotsenko) — 2 spm.; Luhansk Region: Starobilsk distr.: Novomykilske vic., 23.08.2021 (S. Trotsenko, S. Tsykal) — about 10 spm.; Trembacheve vic., 11.06.2021 (S. Trotsenko, S. Tsykal) — about 10 spm.; ibidem, 19.07.2021 (S. Trotsenko, S. Tsykal) — about 10 spm.; ibidem, 22.08.2021 (S. Trotsenko, S. Tsykal) — 2 spm.

***Diacrisia metelkana* (Lederer, 1861)**

Material. Chernihiv Region, Nizhyn distr., Nizhyn, 13.07.2023 (V. Kavurka) — 1 spm.; Volyn Region, Kamin-Kashyrskyi distr., Zarika vic., 22.07.2023 (Yu. Kanarskyi) — 1 spm.

***Diacrisia sannio* (Linnaeus, 1758)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Arctia matronula* (Linnaeus, 1758)**

Material. Ivano-Frankivsk Region: Ivano-Frankivsk distr., Maniava vic., Maniavskyi Skyt tract, 01.07.2023 (V. Gleba) — 1 spm.; Verkhovyna distr., Bukovets vic., 15.07.2023 (D. Kovalchuk) — 1 spm.; Khmelnytskyi Region, Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 3 spm.; Lviv Region: Stryi distr.: Hrebeniv vic., Zelemianka tract, 14.07.2022 (Yu. Kanarskyi) — 1 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 2 larvae.

***Watsonarctia deserta* (Bartel, 1902)**

Material. Cherkasy Region, Cherkasy distr., Hryhorivka vic., 04.05.2019 (V. Voronov) — 1 spm.; Kharkiv Region, Kupiansk distr., 3 km N-E Novomlynsk, 07.06.2020 (S. Trotsenko) — 1 spm.; Khmelnytskyi Region: Kamianets-Podilskyi distr.: Subich vic., 29.07.2023 (S. Tsykal) — 3 spm.; 1,7 km S-E Yaruha, 22.05.2021 (S. Trotsenko) — over 10 spm.; Kyiv Region: Obukhiv distr.: Velyki Dmytrovychi vic., 11.06.2020 & 11.05.2021 (V. Voronov) — 2 spm.; Voronivka vic., 28.04 & 06.05.2017 (V. Voronov) — 2 spm.; Pidhirtsi vic., 07.07.2017 (V. Voronov) — 1 spm.; Luhansk Region: Starobilsk distr.: Novomykilske vic., 18.07.2021 (S. Trotsenko, S. Tsykal) — common; Trembacheve vic., 19.07.2021 (S. Trotsenko, S. Tsykal) — common.

Note. A very local stenotopic meadow-steppe species reliably recorded for the first time in Kharkiv Region since it has been known until now only according to one doubtful historical report (Sladkovskyi, 1915).

***Pelosia muscerda* (Hufnagel, 1766)**

Material. Khmelnytskyi Region: Shepetivka distr.: Polonne vic.: 01.07.2023 (S. Trotsenko) — 1 spm., 16.07.2023 (S. Trotsenko) — common, 24.07.2023 (S. Trotsenko, S. Tsykal) — common, 15.08.2023 (S. Trotsenko) — 1 spm.

Note. Until now, the species has been known from Khmelnytskyi Region only from the photograph of imago from the Slavuta vic. (https://ukrbin.com/show_image.php?imageid=118249).

***Pelosia obtusa* (Herrich-Schäffer, [1852])**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Lithosia quadra* (Linnaeus, 1758)**

Material. Kirovohrad Region: Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 1000 spm. every night.; Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — numerous.

Note. In 2023, mass reproduction of the species was noted in the north of the Steppe zone and south of the Forest-steppe zone of Ukraine, in particular in Cherkasy, Dnipropetrovsk, Kharkiv, Kirovohrad, Poltava and the northern half of Odesa regions, where in the peak of the flight, many hundreds or even thousands of imagoes could be observed at light during one night.

***Eilema pseudocomplana* (Daniel, 1939)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 6 spm.

***Eilema pygmaeola* (Doubleday, 1847)**

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — over 10 spm.; Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Eilema griseola* (Hübner, [1803])**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Amata marjana* (Stauder, 1913)**

Material. Chernivtsi Region, Dnistrovsk distr., 3 km W of Nahoriany, 24.05.2022 (V. Kavurka) — common; Khmelnytskyi Region: Kamianets-Podilskyi distr.: 1.5 km SW of Demshyn, 18.07.2020 (S. Trotsenko, S. Tsykal) — common; Subich vic., 18.07.2020 (O. Bidzilya, I. Kostyuk, V. Sergienko), 13.07.2021 (S. Tsykal); ibidem, 17–18.07.2021 (V. Sergienko, V. Yepishin) — common; 1,7 km SE of Yaruha, 23.05.2021 (S. Trotsenko, S. Tsykal) — common; Odesa Region: Odesa distr., NW Roksolany vic., 09.05 & 17.06.2020 (Ye. Khalaim, K. Lapin, S. Novytskyi) — numerous; ibidem, 24.06.2021 (S. Novytskyi, V. Sergienko) — 5 spm.

Subfamily HERMINIINAE Leach, [1815]

***Idia calvaria* ([Denis et Schiffermüller], 1775)**

Material. Ivano-Frankivsk Region, Ivano-Frankivsk distr., Pidpechery, 05.06.2023 (I. Khomenets) — 1 spm.; Khmelnytskyi Region: Kamianets-Podilskyi distr.: Subich vic., 29.07.2023 (S. Tsykal) — 1 spm.; Vrublivtsi vic., 26.08.2023 (S. Trotsenko) — 3 spm.

***Macrochilo cribrumalis* (Hübner, 1793)**

Material. Lviv Region, Stryi distr., Bilche-Volytsia vic., Biletskyi Lis tract, 24.06.2023 (S. Tsykal) — 3 spm.; Poltava Region, Lubny distr., SW Kriachkivka vic., 07.06.2023 (S. Bezuglyi) — 1 spm.; Zakarpattia Region, Berehove distr., Korolevo, 15.08.2021 & 20.08.2023 (V. Gleba) — 2 spm.

***Herminia tarsicrinalis* (Knoch, 1782)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 5 spm.

***Herminia tenuialis* (Rebel, 1899)**

Material. Lviv Region: Stryi distr.: Bilche-Volytsia vic., Biletskyi Lis tract, 24.06.2023 (S. Tsykal) — 1 spm.; Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 9 spm.

Note. A little-known and very local nemoral species that until now in Ukraine was known from only 5 localities within Lviv and Zakarpattia regions (Geryak, 2009, 2016; Szanyi, 2012, 2015; Szanyi, Nagy, Varga, 2016; Geryak *et al.*, 2018).

Subfamily TOXOCAMPINAE Guenée, 1852

***Lygephila craccae* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Subfamily HYPENODINAE Forbes, 1954

***Hypenodes humidalis* Doubleday, 1850**

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 16.06.2023 (S. Tsykal) — 1 spm.

***Hypenodes pannonica* Fibiger, Pekarsky et Ronkay, 2010**

Material. Zakarpattia Region, Berehove distr., Korolevo, 17.07.2023 (V. Gleba) — 1 spm. (Fig. 1).

Note. Pannonian endemic species, known until recently only from several localities in Hungary and Romania (Mészáros, Sulyán, Tóth, 2022). Recorded for the first time in Ukraine.

Fig. 1. ***Hypenodes pannonica*, adult:** Korolevo, 17.07.2023, photo by V. Gleba.

***Schrankia costaestrigalis* (Stephens, 1834)**

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 3 spm.; ibidem, 23.09.2023 (S. Trotsenko, S. Tsykal) — 1 spm.; Lviv Region, Stryi distr., Matkiv vic., "Matkivske Bahno" tract, 23.09.2023 (Yu. Geryak) — 1 spm.; Zakarpattia Region, Berehove distr., Korolevo, 18.05.2020 (V. Gleba) — 1 spm.

***Schrankia taenialis* (Hübner, [1809])**

Material. Lviv Region, Stryi distr., Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Subfamily BOLETOBIINAE Guenée, [1858]

***Phytometra viridaria* (Clerck, 1759)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Colobochyla salicalis* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 4 spm.

***Calymma communimacula* ([Denis et Schiffermüller], 1775)**

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 29.07.2023 (S. Tsykal) — 3 spm.; Kirovohrad Region, Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Luhansk Region, Starobilsk distr., Trembacheve vic., 19.07.2021 (S. Trotsenko, S. Tsykal) — 1 spm.; Poltava Region, Myrhorod distr., Hadiach, 14.07.2023 (S. Bezuglyi) — 1 spm.

***Eublemma amoena* (Hübner, [1803])**

Material. Chernihiv Region, Nizhyn distr., Nizhyn, 30.06.2023 (V. Kavurka) — 1 spm.

***Eublemma polygramma* (Duponchel, [1842])**

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., 1.7 km SE Yaruha, 19.08.2023 (S. Trotsenko) — 5 spm.

Subfamily EREBINAE Leach, 1815

***Catocala hymenaea* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.

***Arytrura musculus* (Ménétriés, 1859)**

Material. Poltava Region, Myrhorod distr., Hadiach, 06.07.2023 (S. Bezuglyi) — 1 spm.

***Grammodes stolida* (Fabricius, 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Family EUTELIIDAE Grote, 1882

Subfamily EUTELIINAE Grote, 1882

***Eutelia adulatrix* (Hübner, [1813])**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Family NOLIDAE Bruand, 1847

Subfamily NOLINAE Bruand, 1847

***Meganola strigula* ([Denis et Schiffermüller], 1775)**

Material. Kharkiv Region, Chuhuiv distr., Haidary vic., biostation, 03.06.2011 (Yu. Guglya) — 1 spm.

***Meganola togatulalis* (Hübner, 1798)**

Material. Kharkiv Region, Zachepilivka distr., SW Zarichne vic., Ruskyi Orchyk Reserve, 25.05.2013 (Yu. Guglya) — 1 spm.

***Meganola albula* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Nola aerugula* (Hübner, 1793)**

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 3 spm.; Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 2 spm.

***Nola cristatula* (Hübner, 1793)**

Material. Lviv Region: Sambir distr., Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Skole vic., 17.07.2021 (O. Andrianov) — 3 spm., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Zakarpattia Region, Mukachevo distr., Latorka vic., 05.05 & 20.07.2023 (V. Kavurka) — 2 spm.

***Nola chlamitulalis* (Hübner, [1813])**

Material. Mykolaiv Region, Mykolaiv distr., Pokrovka vic., Kinburn Spit, 30.07.2021 (V. Kavurka) — 1 spm.

Subfamily CHLOEPHORINAE Stainton, 1859

***Nycteola degenerana* (Hübner, [1799])**

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 1 spm.

Note. Until now, this species has been known from Khmelnytskyi Region only from photographs of imago from the Slavuta vic. (https://ukrbin.com/index.php?id=351090).

Nycteola asiatica (Krulikovsky, 1904)

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Garella musculana (Ershov, 1874)

Material. Odesa Region: Berezivka distr., Severynivka vic., 23.08.2018 (S. Novytskyi, V. Sergienko, S. Trotsenko) — common; Izmail distr., Vylkove, 03–05.04.2014 (Ye. Khalaim) — 1 spm.; ibidem, 17–22.04.2014 (Ye. Khalaim) — 6 spm.; ibidem, 07–10.05.2014 (Ye. Khalaim) — 2 spm.; ibidem, 03–07.08.2014 (Ye. Khalaim) — 2 spm.; ibidem, 10–15.08.2014 (Ye. Khalaim) — 1 spm.; Odesa distr.: W Korsuntsi vic., 29.07.2016 (Ye. Khalaim) — 2 spm.; N-W Roksolany vic., 13.09.2020 (V. Sergienko, V. Yepishin) — 1 spm.; ibidem, 30.08.2021 (Ye. Khalaim, S. Novytskyi, V. Sergienko) — 2 spm.; Podilsk distr., SE Murovana vic., 08.08.2020 (Ye. Khalaim, S. Novytskyi) — 2 spm.; Zaporizhzhia Region: Berdiansk distr.: Berdianska Spit, 04.09.2019 (Yu. Geryak, S. Suchkov) — 1 spm.; ibidem, 07.09.2021 (S. Suchkov) — 1 spm.

Note. An invasive pest species, intensively expanding westwards and northwards in recent decades.

Family NOCTUIDAE Latreille, 1809

Subfamily PLUSIINAE Boisduval, 1829

Euchalcia variabilis (Piller et Mitterpacher, 1783)

Material. Ivano-Frankivsk Region: Verkhovyna distr., Bukovets vic., 15.07.2023 (D. Kovalchuk) — 1 spm.; Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 2 spm.; Lviv Region: Sambir distr.: Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 3 spm.; Verkhnie Husne vic., 12.07.2023 (S. Tsykal) — 1 spm.; Stryi distr., Matkiv vic., "Matkivske Bahno" tract, 20–21.06.2023 (Yu. Geryak) — 1 spm.; ibidem, 14.07.2023 (S. Tsykal) — 3 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Euchalcia modestoides Poole, 1989

Material. Kyiv Region, Brovary distr., Hryhorivka vic., Starytskyi Lis tract, 30.06.2017 (V. Voronov) — 1 spm.; Lviv Region, Sambir distr., Lopushno vic., 18.06.2023 (Yu. Geryak) — 1 imago, 1 full-grown larva and many larval feeding traces on *Pulmonaria mollis* Hornem.

Lamprotes c-aureum (Knoch, 1781)

Material. Chernihiv Region, Nizhyn distr., Nizhyn, 06.07.2021 (V. Kavurka) — 1 spm.; Dnipropetrovsk Region, Kamianske distr., Ivashkove vic., Paskove tract, 19.06.2017 (V. Voronov) — 1 spm.; Khmelnytskyi Region, Shepetivka distr., Polonne vic., 01.07 & 15.08.2023 (S. Trotsenko) — 2 spm.; Lviv Region, Stryi distr., Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Autographa buraetica (Staudinger, 1892)

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 3 spm.; 01.07.2023 (S. Trotsenko) — 2 spm.

Plusia festucae (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Subfamily EUSTROTIINAE Grote, 1882

Deltote pygarga (Hufnagel, 1766)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–21.08.2023 (Yu. Geryak) — 2 spm.

Deltote uncula (Clerck, 1759)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Deltote bankiana (Fabricius, 1775)

Material. Kirovohrad Region: Kropyvnytskyi distr.: Dolynska vic., 31.07.2023 (V. Sergienko) — few spm.; Molodizhne vic., 30.07.2023 (V. Sergienko) — over 10 spm.; Novoukrainsk distr., Haivka vic., 20–21.08.2023 (Yu. Geryak) — 2 spm.

Subfamily ACONTIINAE Guenée, 1841

Acontia candefacta (Hübner, [1831])

Material. Kirovohrad Region: Kropyvnytskyi distr.: Dolynska, 30.07.2023 (V. Sergienko) — numerous; Molodizhne vic., 31.07.2023 (V. Sergienko) — few spm.; Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 30 spm.; Lviv Region, Sambir distr., Mezhyhiria vic., 18.08.2023 (A. Gera, Yu. Geryak) — 1 spm.; Zakarpattia Region: Berehove distr., Korolevo, 20.08.2022 (V. Gleba) — 1 spm.; Khust distr., Shaian, 20–27.08.2021 (M. Leshchenko) — 1 spm.

Note: A North American species introduced for bio-control of ragweed (*Ambrosia artemisifolia* L.), but in recent decades intensively expanding northwards.

Subfamily DILOBINAE Aurivillius, 1889

Diloba caeruleocephala (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25.10.2023 (Yu. Geryak) — 1 spm.

Subfamily ACRONICTINAE Heinemann, 1859

Eogena contaminei (Eversmann, 1847)

Material. Mykolaiv Region, Mykolaiv distr., Pokrovka vic., Kinburn Spit, 30.07.2021 (V. Kavurka) — 4 spm.

Simyra albovenosa (Goeze, 1781)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Acronicta menyanthidis (Esper, 1789)

Material. Chernihiv Region, Chernihiv distr., Lovyn vic., Zamhlai bog, 08–09.07.2011 & 09.07.2021 (S. Trotsenko, S. Tsykal) — few spm.; Zhytomyr Region: Korosten distr.: Mykhailivka vic., 22.05 & 08.07.2014, 21.05.2015 (R. Gerasimov, V. Sergienko) — few spm.; Pavliukivka vic., 09.05.2009 & 21.05.2015 (R. Gerasimov, V. Sergienko) — few spm.; ibidem, 27–29.07.2016 (O. Andrianov) — 6 spm.; Zhytomyr distr., Rudnia vic., 20.07.2020 (V. Sergienko) — 1 spm.

Subfamily CUCULLIINAE Herrich-Schäffer, 1850

Cucullia argentea (Hufnagel, 1766)

Material. Kyiv Region: Bucha distr., Blystavytsia vic., 05.08.2023 (V. Sergienko) — 5 spm.; ibidem, 10.08.2023 (V. Sergienko) — 1 spm.

Cucullia lactucae ([Denis et Schiffermüller], 1775)

Material. Chernihiv Region, Nizhyn distr., Nizhyn, 09.06.2023 (V. Kavurka) — 1 spm.; Kyiv Region, Boryspil distr., Kyiliv vic., 20.06.2020 (V. Voronov) — 1 spm.; Poltava Region, Myrhorod distr., Hadiach, 17.06.2023 (S. Bezuglyi) — 1 spm.; Zhytomyr Region, Olevsk distr., Koroshchyne vic., 25.06.2020 (V. Voronov) — 1 spm.

Cucullia lucifuga ([Denis et Schiffermüller], 1775)

Material. Lviv Region: Sambir distr.: Matkiv vic., "Matkivske Bahno" tract, 20-21.06.2023 (Yu. Geryak) — 1 spm.; Mezhyhiria vic., 18.08.2023 (A. Gera, Yu. Geryak) — 2 spm.; Yavoriv distr., Palanky vic., 30.04.2019 (S. Ivaniy) — 1 spm.

Cucullia chamomillae ([Denis et Schiffermüller], 1775)

Material. Kyiv Region: Bucha distr., Kopyliv vic., 13.04.2023 (V. Sergienko) — 1 spm.; ibidem, 18.04.2023 (V. Sergienko) — 7 spm.; Zakarpattia Region, Berehove distr., Bene vic., 11.06.2022 (Yu. Geryak, S. Tsykal) — 1 spm.

Cucullia dracunculi (Hübner, [1813])

Material. Donetsk Region: Donetsk distr., Amvrosiivka vic., 30.07.2009 (O. Dronov, D. Kovalchuk) — 1 spm.; Mariupol distr., Bilosarai Spit, 05.08.2020 (S. Suchkov) — 1 spm.; Luhansk Region: Starobilsk distr.: Novomykilske vic., 08.08.2020 (S. Tsykal) — 4 spm.; ibidem, 18.07.2021 (S. Trotsenko, S. Tsykal) — about 10 spm.; Trembacheve vic., 19.07.2021 (S. Trotsenko, S. Tsykal) — 1 spm.

Cucullia asteris ([Denis et Schiffermüller], 1775)

Material. Luhansk Region: Starobilsk distr.: Novomykilske vic., 10.06.2021 (S. Trotsenko, S. Tsykal) — 1 spm.; Trembacheve vic., 11.06.2021 (S. Trotsenko, S. Tsykal) — 1 spm.; Lviv Region: Sambir distr., Beniova vic., Lisky tract, 21–22.08.2021 (Yu. Geryak) — numerous mid- and full-grown larvae on *Solidago virgaureae*. The emergence of the vast majority of imagoes took place during July 2022, but a pair of pupae overwintered twice; in particular, 1 ♂ emerged from the pupa on 07.07.2023, and 1 ♀ on 07.13.2023; Stryi distr., Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Zakarpattia Region, Mukachevo distr., Latorka vic., 27.08.2023 (V. Kavurka) — 1 larva on *Solidago virgaureae*.

Cucullia thapsiphaga Treitschke, 1826

Material. Donetsk Region, Kramatorsk distr., Torske vic., 19–23.06.2019 (O. Zhakov)— 1 spm.; Kyiv Region, Obukhiv distr., Tulyntsi vic., 11 & 16.06.2018 (S. Tsykal) — 2 spm.

Cucullia lychnitis Rambur, 1833

Material. Rivne Region, Varash distr., Nobel Lake shore, 08.07.2019 (Yu. Geryak) — few half-grown larvae on *Verbascum nigrum* L.

Subfamily ONCOCNEMIDINAE Forbes et Franclemont, 1954

Calophasia platyptera (Esper, 1788)

Material. Zakarpattia Region, Berehove distr., Korolevo, 31.05.2023 (V. Gleba) — 1 spm.

Note. A little-known xerophilous species that until now in Ukraine has been known from only two localities within Zakarpattia Region (Geryak, 2012; Nowacki, Wąsala, Zydlik, 2018).

Calliergis ramosa (Esper, [1786])

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.

Subfamily AMPHIPYRINAE Guenée, 1838

Amphipyra perflua (Fabricius, 1787)

Material. Chernihiv Region: Chernihiv distr., Lovyn vic., Zamhlai bog, 26.07 & 14.08.2021 (S. Trotsenko, S. Tsykal) — 2 spm.; Novhorod-Siversk distr., Rozlioty vic., 31.07.2021 (M. Leshchenko, V. Voronov) — 1 spm.; Ivano-Frankivsk Region; Verkhovyna distr.; Dzembronia, 06–08.08.2022 (D. Kovalchuk) — 8 spm.; Kyiv Region, Boryspil distr., Kyiliv vic., 02.07.2019 (V. Voronov) — 1 spm.; Kyiv, Darnytskyi forest, 20.07.2017 (V. Voronov) — 1 spm.; Lviv Region: Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Yavoriv distr., Palanky vic., 05.07.2018 (S. Ivaniy) — 1 spm.

Subfamily PSAPHIDINAE Grote, 1896

Asteroscopus sphinx (Hufnagel, 1766)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — 6 spm.

Allophyes oxyacanthae (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — about 50 spm.; Rivne Region, Dubno distr., Ilpyboky vic., 25.10.2022 (Yu. Geryak, Yu. Kanarskyi) — 1 spm.

Subfamily HELIOTHINAE Boisduval, 1828

Heliothis adaucta Butler, 1878

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Subfamily NOCTUINAE Latreille, 1809

Caradrina terrea Freyer, [1839]

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Caradrina kadenii Freyer, [1836]

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Hoplodrina respersa ([Denis et Schiffermüller], 1775)

Material. Kyiv Region, Boryspil distr., Kyiliv vic., 10–11.06.2023 (V. Voronov) — 2 spm.

Hoplodrina ambigua ([Denis et Schiffermüller], 1775)

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 4 spm.; ibidem, 25–26.10.2023 (Yu. Geryak) — 2 spm.

Chilodes maritima (Tauscher, 1806)

Material. Kyiv Region, Obukhiv distr., Velyki Dmytrovychi vic., 26.06.2021 (V. Voronov) — 1 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.; Lviv Region, Stryi distr., Bilche-Volytsia vic., Biletskyi Lis tract, 24.06.2023 (S. Tsykal) — 2 spm.; Zaporizhzhia Region, Melitopol distr., Sadove vic., 19.06.2020 (S. Suchkov) — 1 spm.

Athetis lepigone (Möschler, 1860)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Mormo maura (Linnaeus, 1758)

Material. Lviv Region: Stryi distr., Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 15 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Thalpophila matura (Hufnagel, 1766)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 20 spm.

Chloantha hyperici ([Denis et Schiffermüller], 1775)

Material. Kirovohrad Region: Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.; Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 1 spm.

Phlogophora scita (Hübner, 1790)

Material. Ivano-Frankivsk Region, Verkhovyna distr., Bukovets vic., 15.07.2023 (D. Kovalchuk) — 1 spm.; Lviv Region: Sambir distr., Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Stryi distr., Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.

Phlogophora meticulosa (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 4 spm.

Euplexia lucipara (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Ipimorpha retusa* (Linnaeus, 1761)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 2 spm.

***Cosmia affinis* (Linnaeus, 1767)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Atethmia ambusta* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Cirrhia icteritia* (Hufnagel, 1766)**

Material. Kirovohrad Region: Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.; ibidem, 25–26.10.2023 (Yu. Geryak) — 3 spm.

***Sunira circellaris* (Hufnagel, 1766)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — about 50 spm.

***Agrochola litura* (Linnaeus, 1758)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25.10.2023 (Yu. Geryak) — 1 spm.

***Agrochola helvola* (Linnaeus, 1758)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 26.10.2023 (Yu. Geryak) — 1 spm.

***Agrochola lota* (Clerck, 1759)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 26.10.2023 (Yu. Geryak) — 1 spm.

***Agrochola macilenta* (Hübner, [1809])**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — 5 spm.

***Conistra vaccinii* (Linnaeus, 1761)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — 3 spm.

***Conistra ligula* (Esper, 1791)**

Material. Kyiv Region: Boryspil distr., Kyiliv vic., 07.04.2019 (V. Voronov) — 1 spm.; Kyiv, Venetian Island (hydro park), 18.10.2017 (V. Voronov) — 1 spm.

***Conistra rubiginosa* (Scopoli, 1763)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — about 50 spm.

***Conistra rubiginea* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 26.10.2023 (Yu. Geryak) — 1 spm.

***Conistra erythrocephala* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — 9 spm.

***Xylena vetusta* (Hübner, [1813])**

Material. Kyiv Region, Bucha distr., Kopyliv vic., 13 & 18.04.2023 (V. Sergienko) — 2 spm.

***Eupsilia transversa* (Hufnagel, 1766)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — about 10 spm.

***Apterogenum ypsillon* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 4 spm.

***Dasypolia templi* (Thunberg, 1792)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — over 30 spm.; Mykolaiv Region, Voznesensk distr., Trykraty vic., 14.10.2020 (S. Tsykal) — 2 spm.; Odesa Region: Odesa, seaport, 18.11.2014 (Ye. Khalaim) — 1 ♀; Podilsk distr.: Kodyma, 22.10.2010 (Ye. Khalaim) — 5 spm.; SW Kodyma vic., 24–27.10.2011 (Ye. Khalaim) — 6 spm.; Podilsk, 23.10.2009 (Ye. Khalaim) — 1 spm.; Rozdilna distr., Kardamycheve vic., 05.11.2021 (S. Novytskyi, V. Sergienko, S. Trotsenko) — numerous; Poltava Region: Myrhorod distr.: Hadiach, ??.10–11.2022 (S. Bezuglyi) — about 10 spm.; ibidem, ??.03.2023 (S. Bezuglyi) — 2 ♀♀; ibidem, ??.10.2023 (S. Bezuglyi) — few spm.

***Polymixis polymita* (Linnaeus, 1761)**

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 26.08.2023 (S. Tsykal) — 1 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21–22.08.2023 (Yu. Geryak) — 3 spm.

***Mniotype satura* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 22.08.2023 (Yu. Geryak) — 1 spm.

Staurophora celsia (Linnaeus, 1758)

Material. Kyiv Region, Bucha distr., Blystavytsia vic., 12 & 19.09.2023 (V. Sergienko) — 2 spm.

Helotropha leucostigma (Hübner, [1808])

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Cervyna cervago Eversmann, 1844

Material. Dnipropetrovsk Region, Dnipro distr., Shyroke vic., 24.08.2012 (V. Voronov) — 1 spm.; Donetsk Region, Mariupol distr., Yuriivka vic., 19.09.2020 (S. Suchkov) — 2 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 3 spm.; Odesa Region: Berezivka distr.: Severynivka vic., 23.08.2018 (S. Novytskyi, V. Sergienko, S. Trotsenko) — 1 spm.; ibidem, 04.09.2018 (S. Novytskyi, V. Sergienko) — 1 spm.; ibidem, 14.09.2018 (S. Novytskyi, V. Sergienko, S. Trotsenko) — numerous; ibidem, 29.08.2019 (S. Novytskyi) — 1 spm.; Odesa, Kotovskyi vic., 13.10.2016 (Ye. Khalaim) — 1 spm.; Odesa distr.: N-W Roksolany vic., 13.09.2020 (V. Sergienko, V. Yepishin) — 2 spm.; ibidem, 11.10.2020 (S. Novytskyi, V. Sergienko, V. Yepishin) — 3 spm.; ibidem, 15.09.2021 (S. Tsykal) — 4 spm.; ibidem, 02.10.2021 (Ye. Khalaim, V. Mushynskyi, S. Novytskyi, V. Sergienko, V. Yepishin) — few spm.; Zaporizhzhia Region: Berdiansk distr.: Berdianska Spit, 28.09.2018 (S. Suchkov) — 1 spm.; Obytichna Spit, 15.09.2020 (S. Suchkov) — few spm.; Melitopol distr.: Chkalove vic., 05.10.2017 (S. Suchkov) — 6 spm.; ibidem, 20.09.2018 (S. Suchkov) — 10 spm.; Polianivka vic., 02.10.2017 (S. Suchkov) — 1 spm.; Stepanivka Persha vic., Stepanivska Spit, 18.09.2018 (S. Suchkov) — 5 spm.; ibidem, 10–11.09.2019 (Yu. Geryak, S. Kozlov, S. Suchkov) — about 20 spm.

Hydraecia micacea (Esper, 1789)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 10 spm.

Hydraecia ultima Holst, 1965

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., 1.7 km SE Yaruha, 19.08.2023 (S. Trotsenko) — 1 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 1 spm.

Amphipoea lucens (Freyer, 1845)

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 1 spm.

Luperina testacea ([Denis et Schiffermüller], 1775)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 10 spm.

Rhizedra lutosa (Hübner, [1803])

Material. Cherkasy Region, Uman distr., Uman, 25.10.2023 (Yu. Geryak) — 1 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 25–26.10.2023 (Yu. Geryak) — 5 spm.

Sedina buettneri (Hering, 1858)

Material. Khmelnytskyi Region: Shepetivka distr., Polonne vic., 23.09.2023 (S. Trotsenko, S. Tsykal) — 3 spm.; ibidem, 14.10.2023 (S. Trotsenko, S. Tsykal) — 1 spm.; Kyiv Region: Bucha distr., Blystavytsia vic., 19 & 22.09.2023 (V. Sergienko) — 2 spm.; Lviv Region, Yavoriv distr., Palanky vic., 24.09.2017 (S. Ivaniy) — 1 spm.

Nonagria typhae (Thunberg, 1784)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Arenostola phragmitidis (Hübner, [1803])

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 1 spm.; Kyiv Region: Bucha distr.: Blystavytsia vic., 13.07.2023 (V. Sergienko) — 4 spm.; ibidem, 18.07.2023 (V. Sergienko) — 1 spm.; Kopyliv vic., 25.07.2023 (V. Sergienko) — 1 spm.; Volyn Region, Kamin-Kashyrskyi distr., Zarika vic., 22.07.2023 (Yu. Kanarskyi)– 1 spm.

Lenisa geminipuncta (Haworth, 1809)

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Archanara dissoluta (Treitschke, 1825)

Material. Khmelnytskyi Region: Shepetivka distr., Polonne vic., 16.07.2023 (S. Trotsenko) — 3 spm.; ibidem, 24.07.2023 (S. Trotsenko, S. Tsykal) — 5 spm.; ibidem, 15.08.2023 (S. Trotsenko) — 1 spm.

Photedes morrisii (Dale, 1837)

Material. Kharkiv Region, Chuhuiv distr., Haidary vic., biostation, 25.06.2009 (Yu. Guglya) — 1 spm.

Photedes extrema (Hübner, [1809])

Material. Zakarpattia Region, Berehove distr., Korolevo, 30.06.2021, 13 & 14.06.2022, & 11.06.2023 (V. Gleba) — 4 spm.

Globia sparganii (Esper, 1790)

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 3 spm.

Pabulatrix pabulatricula (Brahm, 1791)

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 1 spm.; Poltava Region, Myrhorod distr., Hadiach, 15.07.2023 (S. Bezuglyi) — 1 spm.

Apamea epomidion (Haworth, 1809)

Material. Kyiv Region, Boryspil distr., Kyiliv vic., 20.06.2020 & 17.06.2023 (V. Voronov) — 2 spm.; Lviv Region: Sambir distr., Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 3 spm.; Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Zakarpattia Region, Khust distr., Shaian, 01.06.2022 (V. Voronov) — 1 spm.

Apamea unanimis (Hübner, [1813])

Material. Lviv Region: Sambir distr., Matkiv vic., "Matkivske Bahno" tract, 20–21.06.2023 (Yu. Geryak) — 3 spm.; Yavoriv distr., Palanky vic., 07.06.2019 (S. Ivaniy) — 1 spm.

Apamea scolopacina (Esper, 1788)

Material. Cherkasy Region, Smila distr., Smila vic., 09.07.1981 (V. Sergienko) — 1 spm.; Ivano-Frankivsk Region: Nadvirna distr., Polianytsia vic., 31.07–03.08.2021 (S. Ivaniy) — 3 spm.; Verkhovyna distr., Bukovets vic., 15.07.2023 (D. Kovalchuk) — 1 spm.; Khmelnytskyi Region, Shepetivka distr., Polonne vic., 16.07.2023 (S. Trotsenko) — 1 spm.; Kyiv Region: Boryspil distr., Kyiliv vic., 16.06.2019 (V. Voronov) — 1 spm.; Obukhiv distr., Velyki Dmytrovychi vic., 01.07.2016 (V. Sergienko) — 1 spm.; Lviv Region: Sambir distr.: Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Mezhyhiria vic., 05.08.2023 (Yu. Geryak) — 1 spm.; Verkhnie Husne vic., 20 & 22.07.2022 (Yu. Geryak, S. Ivaniy) — 2 spm.; Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Skole vic., 17.07.2021 (O. Andrianov) — about 10 spm.; ibidem, 18.07.2023 (Yu. Geryak, S. Tsykal) — 3 spm.; Yavoriv distr., Palanky vic., 26.06.2019 (S. Ivaniy) — 2 spm.; Poltava Region, Myrhorod distr., Hadiach, 28.06.2023 (S. Bezuglyi) — 1 spm.; Zakarpattia Region, Berehove distr., Korolevo, 07.07.2020 (V. Gleba) — 1 spm.

Apamea syriaca (Osthelder, 1933)

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 1 spm.; Kyiv Region: Bucha distr., Blystavytsia vic., 25.06.2023 (V. Sergienko) — 1 spm.; Kopyliv vic., 10.06.2023 (V. Sergienko) — 2 spm.; Lviv Region: Stryi distr., Bilche-Volytsia vic., Biletskyi Lis tract, 24.06.2023 (S. Tsykal) — 1 spm.; Chervonohrad distr., Stoianiv vic., 10.07.2023 (Yu. Geryak) — 1 spm.; Zakarpattia Region: Berehove distr.: Korolevo, 18 & 21.06.2020, 13.06.2022, 10 & 11.06, 07 & 08.07.2023 (V. Gleba) — few spm.; Mukachevo distr., Latorka vic., 19.06.2023 (V. Kavurka) — 1 spm.; Uzhhorod distr., Uzhok vic., Uzhok Pass, 25.05.2018 (S. Trotsenko, S. Tsykal) — 1 spm.; Zhytomyr Region: Ovruch distr., 1 km SW of Horodets, 04.06.2016 (S. Trotsenko) — 1 spm.; Zhytomyr distr., Koziivka vic., 03.06.2016 (V. Voronov) — 1 spm.

Apamea lateritia (Hufnagel, 1766)

Material. Cherkasy Region, Cherkasy distr., Irdyn vic., 03.07.2021 (S. Tsykal) — 1 spm.; Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.; Kyiv Region: Boryspil distr., Kyiliv vic., 17.06.2023 (V. Voronov) — 1 spm.; Bucha distr.: Blystavytsia vic., 13.07.2023 (V. Sergienko) — 2 spm.; Myrcha vic., 16.07.2021 (V. Voronov) — 1 spm.; Lviv Region: Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Apamea rubrirena (Treitschke, 1825)

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.; Lviv Region, Sambir distr., Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

Lateroligia ophiogramma (Esper, 1794)

Material. Chernihiv Region: Chernihiv distr., Lovyn vic., Zamhlai bog, 09.07.2021 (S. Trotsenko, S. Tsykal) — few spm.; Nizhyn distr., Nizhyn, 14.07.2021 (V. Kavurka) — 1 spm.; Khmelnytskyi Region: Kamianets-Podilskyi distr.: Subich vic., 13.07.2021 (S. Tsykal) — 1 spm.; 1,7 km SE Yaruha, 19.08.2021 (S. Trotsenko) — 1 spm.; Kyiv Region: Brovary distr., Zavorychi vic., 03.07.2021 (M. Leshchenko, V. Voronov) — 4 spm.; Bucha distr., Kopyliv vic., 01.07.2023 (V. Sergienko) — 1 spm.; Vyshhorod distr., Voropaiv, 11.07.2009 (V. Sergienko) — 1 spm.; Lviv Region: Sambir distr., Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 2 spm.; Yavoriv distr., Palanky vic., 07.07.2018 (S. Ivaniy) — 1 spm.

Mesapamea secalis (Linnaeus, 1758)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 3 spm.

Mesapamea secalella Remm, 1983

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 11 spm.

Xylomoia graminea (Graeser, 1889)

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 4 spm.; Lviv Region, Yavoriv distr., Palanky vic., 30.05.2019 (S. Ivaniy) — 1 spm.

Note. A little-known and local stenotopic hygrophilous species, which until now has been known from the Khmelnytskyi Region only by a photograph of an imago (https://ukrbin.com/show_image.php?imageid=113961).

Egira anatolica (Hering, 1933)

Material. Luhansk Region, Shchastia Distr., Trokhizbenka vic., 11.05.2011 (S. Konovalov) — 1 spm.; Odesa Region, Bilhorod-Dnistrovskyi vic., 05, 07 & 10.05.1987 I. Severov) — 3 spm.; Podilsk vic., 04.04.2010 (Ye. Khalaim) — 1 spm..

Tholera decimalis (Poda, 1761)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 2 spm.

Polia hepatica (Clerck, 1759)

Material. Chernivtsi Region, Putyla distr., Perkalab vic., 05.08.2015 (Yu. Geryak, Yu. Kanarskyi) — 1 spm.; Ivano-Frankivsk Region: Kosiv distr., Sokolivka, 29.06.2009 (Yu. Geryak) — 1 spm.; Nadvirna distr.: Chornohora Ridge, Mount Pozhyzhevska, 1430 m a. s. l., 20–31.07.2009, 25–26.07.2013 & 02.08.2013 (Yu. Geryak, Yu. Kanarskyi, Yu. Karmyshev) — few spm.; ibidem, 20–27.07.2014 (Yu. Geryak, Yu. Kanarskyi, Yu. Karmyshev) — 6 spm.; ibidem, 30.07–06.08.2014 (Yu. Geryak, O. Zhakov) — 1 spm.; ibidem, 24–26.07.2015 (V. Mushinskyi, V. Sergienko, S. Tsykal) — 5 spm.; ibidem, 28–31.07.2017 (A. Bachynskyi, Yu. Geryak) — 3 spm.; ibidem, 25.06.2022 (R. Bidychak, Yu. Geryak) — 1 spm.; Mykulychyn vic., 18.06.1903 — 1 spm., 20.06.1903 — 4 spm., 22.06.1903 — 2 spm. and undated — 3 spm. (col. A. Stöckl, SMNH NASU); Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.; Vorokhta vic., 30.06.2012 (O. Andrianov) — 2 spm.; ibidem, 11.06.2015 (Yu. Geryak) — 1 spm.; Zarosliak tract, 1250 m a.s.l., 03.08.2013 (Yu. Geryak, Yu. Kanarskyi) — 1 spm., 09–10.06.2015 (Yu. Geryak) — 1 spm.; ibidem, 25–27.07.2017 (A. Bachynskyi, Yu. Geryak) — 2 spm.; Verkhovyna distr.: Burkut, 28.07.2013 (Yu. Geryak, Yu. Kanarskyi, V. Mushynskyi) — 3 spm.; Chyvchyny Ridge, Mount Rogy, 1560 m a.s.l., 29.07.2013 (Yu. Geryak, Yu. Kanarskyi, V. Mushynskyi) — 3 spm.; Yavirnyk vic., Shybene tract, 27.07.2013 (Yu. Geryak, Yu. Kanarskyi, V. Mushynskyi) — 3 spm.; Pohorilets tract, 30.07–01.08.2013 (Yu. Geryak, Yu. Kanarskyi, V. Mushynskyi) — 5 spm.; Lviv Region: Sambir distr.: Matkiv vic., 'Matkivske Bahno' tract, 20–21.06.2023 (Yu. Geryak) — over 100 spm.; Verkhnia Yablunka vic., 19–20.06.2013 — 2 spm.; Yavoriv vic., Uzhok Pass, 21–22.06.2013 (Yu. Geryak) — 1 spm.; ibidem, 14–17.07.2014 (Yu. Geryak) — 2 spm.; ibidem, 23.07.2017 (Yu. Geryak) — 1 spm.; Stryi distr., Oryava vic., 04–05.07.2014 (O. Andrianov) — about 10 spm.; Zakarpattia Region: Mukachevo distr., Mount Pikuy, 1350 m a.s.l., 21.07.2022 (Yu. Geryak, S. Ivaniy) — 5 spm.; Rakhiv distr.: Kvasy vic., 29.06 & 01.07.2002, & 29.07.2005 (Yu. Geryak) — few spm.; Rakhiv vic., 12–14.08.2009 (Yu. Geryak, Ye. Liashenko) — 1 spm.; Ust Hoverla vic., 04–27.07.2008 (Yu. Geryak) — 1 spm.; Chorna Tysa vic., 18.07.2009 & 09–13.07.2011 (Yu. Geryak, Yu. Kanarskyi, S. Tsykal) — few spm.; Svydovets Ridge, Mount Drahobrat, 1400 m a.s.l., 08–09.08.2007 (Yu. Geryak, Yu. Kanarskyi) — 2 spm.; Tyachiv distr., 10 km S of Brustury, Shasa Ridge, ~1500 m a. s. l., 23–27.07.2015 (T. Chornyi) — 3 spm.; Khust distr: Synevyrska Poliana, Mount Kanch, 16.07.2022 (R. Bidychak) — 1 spm.; Shaian vic., 08.07.2022 (M. Leshchenko) — 1 spm.; Zhytomyr Region, Olevsk distr., Koroshchyne vic., 25.06.2020 (V. Voronov) — 1 spm.

Lacanobia thalassina (Hufnagel, 1766)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21–22.08.2023 (Yu. Geryak) — 2 spm.

Lacanobia contigua ([Denis et Schiffermüller], 1775)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Lacanobia blenna (Hübner, [1824])

Material. Kyiv Region, Obukhiv distr., Velyki Dmytrovychi vic., 31.05.2019 (V. Voronov) — 2 spm.; Odesa Region: Berezivka distr.: S-E Ruska Slobidka vic., 08.06.2020 (Ye. Khalaim, V. Mushynskyi, S. Novitskyi, V. Sergienko, V. Yepishin) — 2 spm.; ibidem, 25.07.2021 (Ye. Khalaim, S. Novitskyi) — numerous; Severynivka vic., 18.05.2020 (A. Gera, M. Leshchenko) — 1 spm.; ibidem, 31.08.2021 (V. Sergienko) — numerous; 2,5 km N of Zavodivka, 18.06.2020 (A. Gera, M. Leshchenko) — 1 spm.; Bilhorod-Dnistrovskyi distr., 3 km N of Lebedivka, 09.05.2020 (Ye. Khalaim, K. Lapin, S. Novytskyi) — 1 spm.; S-E Prymorske vic., Tuzly Amazonia tract, 22.06.2020 (S. Tsykal) — 2 spm.; ibidem, 19.09.2020, 05–06 & 25.06.2021 (Ye. Khalaim, V. Sergienko) — numerous; Zhovtyi Yar vic., 08.08.2021 (S. Novytskyi, V. Sergienko) — 1 spm.; Bolhrad distr., 7 km N-E of Vesela Dolyna, 14.08.2021 (V. Kavurka, Ye. Khalaim, S. Novytskyi) — 1 spm.; Izmail distr.: Vylkove vic., Zhebriansk Ridge, 11.07.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; ibidem, 23.05.2021 (Ye. Khalaim, S. Novytskyi, V. Sergienko) — 2 spm.; Odesa distr.: 2 km S-W of Kubanka, 25.07.2020 (Ye. Khalaim, S. Novytskyi) — few spm.; N-W Roksolany vic., 17.06.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; ibidem, 11.10.2020 (S. Novytskyi, Sergienko V., Yepishin V.) — 1 spm.; 30.08.2021 (Ye. Khalaim, S. Novytskyi, V. Sergienko) — numerous; ibidem, 15.09.2021 (S. Tsykal) — 1 spm.; Poltava Region: Kremenchuk distr., Hlobyne, 05–25.06.2019 (Yu. Geryak) — about 15 spm.; ibidem, 14.07–22.08.2019 (Yu. Geryak) — over 30 spm.; Zaporizhzhia Region, Berdiansk distr., Obytichna Spit, 15.09.2020 (S. Suchkov) — 2 spm.; A. R. Crimea, Sevastopol, Kozacha Bay, 06.08.2003 (I. Turbanov, coll. S. Suchkov) — 1 spm.

Sideridis rivularis (Fabricius, 1775)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–21.08.2023 (Yu. Geryak) — 2 spm.

Sideridis implexa (Hübner, [1809])

Material. Odesa Region: Odesa distr., N-W Roksolany vic., 17.06.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; ibidem, 24.06.2021 (S. Novytskyi, V. Sergienko) — 1 spm.

Hadena compta ([Denis et Schiffermüller], 1775)

Material. Poltava Region, Myrhorod distr., Hadiach, 13.07.2023 (S. Bezuglyi) — 1 spm.

Hadena filograna (Esper, 1788)

Material. Kyiv Region, Boryspil distr., Kyiliv vic., 17.06.2023 (V. Voronov) — 1 spm.

Hadena syriaca (Osthelder, 1933)

Material. Cherkasy Region, Cherkasy distr., Balakleia vic., 04.07.2009 (V. Sergienko) — 1 spm.; Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 26.08.2023 (S. Tsykal) — 1 spm.; Kirovohrad Region, Kropyvnytskyi distr., Dolynska vic., 31.07.2023 (V. Sergienko) — 1 spm.; Odesa Region, Berezivka distr., Severynivka vic., 08.06.2015 (V. Sergienko) — 1 spm.; Poltava Region, Poltava distr., Prydniprianske vic., 06.08.2023 (S. Bezuglyi) — 1 spm.; Zaporizhzhia Region, Melitopol distr., Bohatyr vic., 21.07.2000 (S. Suchkov) — 1 spm.

Mythimna impura (Hübner, [1808])

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

Mythimna vitellina (Hübner, [1808])

Material. Kirovohrad Region: Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 10 spm.; ibidem, 25–26.10.2023 (Yu. Geryak) — 3 spm.; Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 2 spm.

Mythimna unipuncta (Haworth, 1809)

Material. Lviv Region, Sambir distr., Mezhyhiria vic., 18.08.2023 (A. Gera, Yu. Geryak) — 1 spm.; Odesa Region: Berezivka distr., 3 km S-E of Kairy, 07.06 & 10.10.2020 (Ye. Khalaim, V. Mushynskyi, S. Novitskyi, V. Sergienko, V. Yepishin) — 2 spm.; Bilhorod-Dnistrovskyi distr., S-E Prymorske vic., Tuzly Amazonia tract, 19.09.2020 (Ye. Khalaim) — numerous; Izmail distr.: Vylkove vic., Zhebriansk Ridge, 12.07.2019 (S. Tsykal) — 1 spm.; ibidem, 11.07.2020 (Ye. Khalaim, S. Novytskyi) — 1 spm.; ibidem, 29.08.2020 (Ye. Khalaim, S. Novytskyi) — few spm.; ibidem, 14.09.2021 (Novitskyi S., Sergienko V., Yepishin V.) — 1 spm.; Odesa distr.: Novokubanka, 03.10.2015 (V. Sergienko, S. Tsykal, S. Trotsenko) — 2 spm.; Odesa, 08.08.2004 (V. Grybov) — 1 spm.; Odesa, Prymorskyi, 09.08.2013 (Ye. Khalaim) — 1 spm.; N-W Roksolany vic., 17 & 23.06, 29.07.2020 (Ye. Khalaim, V. Mushynskyi, S. Novitskyi, V. Sergienko, V. Yepishin) — 3 spm.; ibidem, 13.09 & 11.10.2020 (Ye. Khalaim, V. Mushynskyi, S. Novitskyi, V. Sergienko, V. Yepishin) — numerous; ibidem, 30.08 & 02.10.2021 (Ye. Khalaim, V. Mushynskyi, S. Novitskyi, V. Sergienko, V. Yepishin) — few spm.; ibidem, 15.09.2021 (S. Tsykal) — 4 spm.; Podilsk distr.: S-E Murovana vic., 06.09.2020 (Ye. Khalaim) — 1 spm.; Rozdilna distr.: Kardamycheve vic., 22.10.2021 (S. Novytskyi) — 1 spm.

Leucania loreyi (Duponchel, 1827)

Material. Zaporizhzhia Region, Berdiansk distr., Berdianska Spit, 07.09.2021 (S. Suchkov) — 1 spm.

Eriopygodes imbecilla (Fabricius, 1794)

Material. Lviv Region: Sambir distr.: Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — 3 spm.; Verkhnie Husne vic., 12.07.2023 (S. Tsykal) — 1 spm.; Matkiv vic., "Matkivske Bahno" tract, 20–21.06.2023 (Yu. Geryak) — 6 spm.; Yavoriv distr.: Palanky vic., 06, 10 & 18.06.2018 (S. Ivaniy) — 3 spm.; ibidem, 16.06.2019 (S. Ivaniy) — 2 spm.; Zakarpattia Region, Mukachevo distr., Latorka vic., 19.06.2023 (V. Kavurka) — 1 spm.

Euxoa birivia ([Denis et Schiffermüller], 1775)

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.

Euxoa eruta (Hübner, [1817])

Material. Chernihiv Region, Nizhyn distr., Nizhyn, 13.07.2023 (V. Kavurka) — 1 spm.

Euxoa aquilina ([Denis et Schiffermüller], 1775)

Material. Kirovohrad Region: Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 3 spm.; Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

Agrotis bigramma (Esper, 1790)

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 20 spm.

Agrotis desertorum Boisduval, 1840

Material. Kherson Region: Henichesk distr., Chonhar Peninsula, 24.05.2009 (S. Suchkov) — 1 spm.; Oleshky distr., Chelburda vic., 25.08.2011 (R. Gerasimov, V. Sergienko) — 1 spm.; Kyiv Region, Kyiv, Koncha-Zaspa, 25.07.2011 (S. Tsykal) — 1 spm.; Poltava Region, Myrhorod distr., Hadiach, 24.07.2023 (S. Bezuglyi) — 1 spm.; Zaporizhzhia Region: Berdiansk distr.: Berdianska Spit, 07.09.2021 (S. Suchkov) — 1 spm.; Obytichna Spit, 14.08.2017 (S. Suchkov) — 1 spm.; Melitopol distr., Stepanivka Persha vic., Stepanivska Spit, 23.05.2000, 02.06.2006, 30.05.2010, 12.07.2017, 09.06 & 30.07.2018 (S. Suchkov) — 7 spm.

Dichagyris nigrescens (Höfner, 1887)

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 13.07.2021 (S. Tsykal) — 1 spm.

Dichagyris signifera ([Denis et Schiffermüller], 1775)

Material. Cherkasy Region: Cherkasy distr.: Chubiivka, 28.06.1997 (V. Sergienko) — 1 spm.; Hryhorivka vic., 14.06.2019 (V. Voronov) — 1 spm.; Chernihiv Region, Nizhyn distr., Nizhyn, 30.06.2023 (V. Kavurka) — 1 spm.; Kharkiv Region, Kharkiv, 16–18.06.2023 (D. Kovalchuk) — 1 spm.; Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 13.07.2021 (S. Tsykal) — about 10 spm.; Kirovohrad Region, Kropyvnytskyi distr., Molodizhne vic., 30.07.2023 (V. Sergienko) — 1 spm.; Kyiv Region: Boryspil distr.: Kyiliv vic., 17–18.06.2023 (V. Voronov) — 6 spm.; Brovary distr., Zavorychi vic., 03.07.2021 (M. Leshchenko, V. Voronov) — 1 spm.; Kyiv: Darnytskyi forest, 11.06.2017 (V. Voronov) — 1 spm.; Obukhiv distr., Velykyi Bukryn vic., 29.06.2003, 14 & 27.06.2009 (V. Sergienko) — 3 spm.

Axylia putris (Linnaeus, 1761)

Material. Kirovohrad Region: Kropyvnytskyi distr.: Dolynska vic., 31.07.2023 (V. Sergienko) — 1 spm.; Molodizhne vic., 30.07.2023 (V. Sergienko) — few spm.; Novoukrainsk distr.: Haivka vic., 20–22.08.2023 (Yu. Geryak) — 5 spm.; Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 2 spm.

Ochropleura plecta (Linnaeus, 1761)

Material. Kirovohrad Region: Novoukrainsk distr., Haivka vic., 20–21.08.2023 (Yu. Geryak) — 2 spm.; Oleksandriia distr., Svitlovodsk vic., 19–22.06.2023 (D. Kovalchuk) — 1 spm.

***Rhyacia simulans* (Hufnagel, 1766)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Chersotis margaritacea* (de Villers, 1789)**

Material. Khmelnytskyi Region: Kamianets-Podilskyi distr.: Subich vic., 26.08.2023 (S. Tsykal) — 10 spm.; Vrublivtsi vic., 26.08.2023 (S. Trotsenko) — 3 spm.

***Noctua orbona* (Hufnagel, 1766)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21.08.2023 (Yu. Geryak) — 1 spm.

***Noctua comes* Hübner, [1813]**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Noctua interjecta* Hübner, [1803]**

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.; Khmelnytskyi Region, Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — 1 spm.; Kyiv Region, Fastiv distr., Kozychanka vic., 25.08.2023 (V. Voronov) — 1 spm.; Lviv Region: Sambir distr.: Bahnuvate vic., 15–17.07.2023 (Yu. Geryak, S. Tsykal) — over 50 spm.; Verkhnie Husne vic., 12–13.07.2023 (S. Tsykal) — about 10 spm.; Stryi distr.: Krushelnytsia vic., 19.07.2023 (Yu. Geryak, S. Tsykal) — about 10 spm.; Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — about 10 spm.; Chervonohrad distr., Stoianiv vic., 10–12.07.2023 (Yu. Geryak) — 1 spm.; Zakarpattia Region, Berehove distr., Korolevo, 14.07.2020, 18.07.2021, 06, 07 & 25.07.2023 (V. Gleba) — 5 spm.

***Noctua janthe* (Borkhausen, 1792)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 4 spm.

***Paradiarsia punicea* (Hübner, [1803])**

Material. Khmelnytskyi Region: Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 1 spm.; ibidem, 01.07.2023 (S. Trotsenko) — 3 spm.; ibidem, 16.07.2023 (S. Trotsenko) — 1 spm.; Lviv Region: Stryi distr.: Bilche-Volytsia vic., Biletskyi Lis tract, 24.06.2023 (S. Tsykal) — 2 spm.; Matkiv vic., "Matkivske Bahno" tract, 20–21.06.2023 (Yu. Geryak) — 2 spm.; Yavoriv distr.: Palanky vic., 24.05.2019 (S. Ivaniy) — 1 spm.

***Diarsia dahlii* (Hübner, [1813])**

Material. Khmelnytskyi Region: Shepetivka distr., Polonne vic., 24.07.2023 (S. Trotsenko, S. Tsykal) — over 20 spm.; ibidem, 15.08.2023 (S. Trotsenko) — 3 spm.; Lviv Region, Stryi distr., Skole vic., 18.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.

***Diarsia brunnea* ([Denis et Schiffermüller], 1775)**

Material. Khmelnytskyi Region: Shepetivka distr., Polonne vic., 17.06.2023 (S. Tsykal) — 2 spm.; ibidem, 01.07.2023 (S. Trotsenko) — 3 spm.

***Diarsia rubi* (Vieweg, 1790)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 2 spm.

***Eugnorisma depuncta* (Linnaeus, 1761)**

Material. Khmelnytskyi Region, Kamianets-Podilskyi distr., Subich vic., 26.08.2023 (S. Tsykal) — 1 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Xestia baja* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — 4 spm.

***Xestia stigmatica* (Hübner, [1813])**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 21–22.08.2023 (Yu. Geryak) — 2 spm.

***Xestia collina* (Boisduval, 1840)**

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 3 spm.

***Xestia xanthographa* ([Denis et Schiffermüller], 1775)**

Material. Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20–22.08.2023 (Yu. Geryak) — about 10 spm.

***Xestia sexstrigata* (Haworth, 1809)**

Material. Khmelnytskyi Region, Shepetivka distr., Polonne vic., 15.08.2023 (S. Trotsenko) — about 10 spm.; Kirovohrad Region, Novoukrainsk distr., Haivka vic., 20.08.2023 (Yu. Geryak) — 1 spm.

***Eurois occulta* (Linnaeus, 1758)**

Material. Poltava Region, Myrhorod distr., Hadiach, 15.07.2023 (S. Bezuglyi) — 1 spm.

Note. The species is common in the Carpathians and Polissia but occurs rarely and singly in the rest of Ukraine's territory.

***Naenia typica* (Linnaeus, 1758)**

Material. Ivano-Frankivsk Region, Nadvirna distr., Polianytsia vic., 03–10.07.2023 (V. Voronov) — 1 spm.; Lviv Region: Sambir distr.: Bahnuvate vic., 16–17.07.2023 (Yu. Geryak, S. Tsykal) — 1 spm.; Verkhnie Husne, 20 & 22.07.2022 (Yu. Geryak, S. Ivaniy) — over 20 spm.; ibidem, 12–13.07.2023 (S. Tsykal) — 1 spm.; Zakarpattia Region, Mukachevo distr., Pashkivtsi vic., 10–11.07.2022 (Yu. Geryak) — about 10 spm.

As a result of the research, new records of 180 species of noctuoid moths are presented, including one species, *Hypenodes pannonica*, recorded for the first time in Ukraine, and many species appeared to be new for certain regions of Ukraine. In particular, 92 species are recorded for the first time in a still understudied Kirovohrad Region (*Clostera pigra, C. anastomosis, Cerura erminea, Furcula bifida, Rivula sericealis, Laelia coenosa, Calliteara pudibunda, Diacrisia sannio, Pelosia obtusa, Lithosia quadra, Eilema griseola, E. pseudocomplana, E. pygmaeola, Herminia tarsicrinalis, Lygephila craccae, Phytometra viridaria, Colobochyla salicalis, Calymma communimacula, Catocala hymenaea, Grammodes stolida, Eutelia adulatrix, Meganola albula, Nola aerugula, Nycteola asiatica, Plusia festucae, Deltote pygarga, D. uncula, D. bankiana, Acontia candefacta, Diloba caeruleocephala, Simyra albovenosa, Asteroscopus sphinx, Allophyes oxyacanthae, Heliothis adaucta, Caradrina terrea, C. kadenii, Hoplodrina ambigua, Athetis lepigone, Thalpophila matura, Chloantha hyperici, Phlogophora meticulosa, Euplexia lucipara, Ipimorpha retusa, Cosmia affinis, Atethmia ambusta, Cirrhia icteritia, Sunira circellaris, Agrochola litura, A. helvola, A. lota, A. macilenta, Conistra vaccinii, C. rubiginosa, C. rubiginea, C. erythrocephala, Eupsilia transversa, Apterogenum ypsillon, Dasypolia templi, Mniotype satura, Helotropha leucostigma, Cervyna cervago, Hydraecia micacea, H. ultima, Luperina testacea, Rhizedra lutosa, Nonagria typhae, Lenisa geminipuncta, Globia sparganii, Mesapamea secalis M. secalella, Tholera decimalis, Lacanobia thalassina, L. contigua, Sideridis rivularis, Hadena syriaca, Mythimna impura, M. vitellina, Dichagyris signifera, Euxoa aquilina, Agrotis bigramma, Axylia putris, Ochropleura plecta, Rhyacia simulans, Noctua orbona, N. comes, N. janthe, Diarsia rubi, Eugnorisma depuncta, Xestia baja, X. stigmatica, X. xanthographa, X. sexstrigata*); 13 species — in Khmelnytskyi Region (*Hypenodes humidalis, Schrankia costaestrigalis, Autographa buraetica, Hydraecia ultima, Amphipoea lucens, Sedina buettneri, Arenostola phragmitidis, Archanara dissoluta, Paradiarsia punicea, Diarsia dahlii, D. brunnea, Eugnorisma depuncta* and *Xestia sexstrigata*); 3 species each — in Kharkiv (*Meganola strigula, M. togatulalis, Watsonarctia deserta*) and Poltava (*Apamea scolopacina, Hadena compta* and *H. syriaca*) regions; 2 species each — in Chernihiv (*Eublemma amoena, Euxoa eruta*), Lviv (*Acontia candefacta, Mythimna unipuncta*), and Rivne (*Cucullia lychnitis, Allophyes oxyacanthae*) regions; and 1 species each — in Cherkasy (*Rhizedra lutosa*), Kyiv (*Noctua interjecta*), Mykolaiv (*Nola chlamitulalis*), and Vinnytsia (*Ptilodon cucullina*) regions. Moreover, new records of some local, rare, and little-known species, with a distribution still insufficiently studied in Ukraine, are presented. Among them are 10 species listed in the Red Data Book of Ukraine (List …, 2021): *Chelis maculosa, Diacrisia metelkana, Arctia matronula, Watsonarctia deserta, Arytrura musculus, Euchalcia variabilis, Cucullia argentea, Mormo maura, Phlogophora scita, Staurophora celsia*, as well as some other local and usually rare species without conservation status. Among the last ones, this applies to specialized sthenotopic species, such as steppe and meadow-steppe habitants (*Zekelita antiqualis, Amata marjana, Eublemma polygramma, Cucullia chamomillae, C. dracunculi, C. asteris, C. thapsiphaga, Calophasia platyptera, Hoplodrina respersa, Dasypolia templi, Hadena filograna, Hadena syriaca, Leucania loreyi, Dichagyris nigrescens, Dichagyris signifera, Agrotis desertorum, Chersotis margaritacea*); halophilous (*Eogena contaminei, Lacanobia blenna, Sideridis implexa*); hygrophilous wetland habitants (*Macrochilo cribrumalis, Herminia tenuialis, Schrankia costaestrigalis, Schrankia costaestrigalis, Nola cristatula, Euchalcia modestoides, Lamprotes c-aureum, Acronicta menyanthidis, Chilodes maritima, Xylena vetusta, Cervyna cervago, Sedina buettneri, Apamea unanimis, Lateroligia ophiogramma, Xylomoia graminea, Polia hepatica, Eriopygodes imbecilla, Paradiarsia punicea, Naenia typica*); xero-mesophilous forest and forest-steppe habitants, primarily associated with dry light oak forests and shrubs (*Ocneria detrita, Calymma communimacula, Idia calvaria, Polymixis polymita, Pabulatrix pabulatricula, Egira anatolica*), mesophilous forest habitants (*Cucullia lactucae, Amphipyra perflua, Apamea epomidion, A. scolopacina, A. lateritia, Diarsia dahlii*), and typical montane species (*Cucullia lucifuga, Calliergis ramosa, Apamea rubrirena, Euxoa birivia, Xestia collina*), *etc*.

Conclusions. The presented data significantly supplement the information on the distribution of Noctuoidea species in Ukraine. *Hypenodes pannonica* is reported for the first time in Ukraine.

Acknowledgments. The authors are sincerely grateful to colleagues: O. Andrianov (Lviv), R. Bidychak (Ivano-Frankivsk), R. Gerasimov (Kyiv), V. Grybov (Odesa), Yu. Guglya (Museum of Nature of the V. N. Karazin Kharkiv National University), † Yu. Karmyshev (Melitopol State Pedagogical University, Zaporizhzhia Region), I. Khomenets (Pidpechery, Ivano-Frankivsk Region), † S. Konovalov (Luhansk Nature

Reserve, Triokhizbenka, Luhansk Region), S. Kozlov (Terpinnia, Zaporizhzhia Region), K. Lapin (Odesa), V. Mushynskyi (Zaporizhzhia), S. Novitskyi (Hradenytsi, Odesa Region), and O. Zhakov (Zaporizhzhia), for providing their materials and information, as well as assistance with fieldwork.

REFERENCES

Falkovich, M. I. 1978. Technique for collecting and dissecting Lepidoptera [Техника собирания и препарирования чешуекрылых]. *In:* Medvedev, G. S., ed. *Key to the Insects of European Part of USSR. Volume IV. Lepidoptera. Part 1 [Определитель насекомых европейской части СССР. Том IV. Чешуекрылые. Первая часть]*. Nauka, Leningrad, 25–26. [in Russian].

Frantsevich, L. I., Klyuchko, Z. F. 1962. Collecting insects on light traps [Сбор насекомых на световые ловушки]. *Ecology Issues [Вопросы экологии]*, **4**, 115–118. [in Russian].

Fry, R., Waring, P. 2001. *A Guide to Moth Traps and their Use*. 2nd ed. The Amateur Entomologists' Society, London, 1–68. ISBN: 9780900054679.

Geryak, Yu. M. 2009. Contribution to the knowledge of the owlet-moth fauna (Lepidoptera, Noctuoidea) of the Biletskyi forest tract (Ukraine, Lviv Region) [До вивчення фауни совок (Noctuoidea, Lepidoptera, Insecta) урочища Білецький ліс (Україна, Львівська область)]. *Scientific Bulletin of the Uzhhorod University. Series Biology. [Науковий вісник Ужгородського університету. Серія Біологія]*, **25**, 176–185. [in Ukrainian].

Geryak, Yu. M. 2012. New and little-known species of the Noctuoidea (Lepidoptera, Insecta) for Ukrainian Carpathians [Нові та маловідомі види Noctuoidea (Lepidoptera, Insecta) Українських Карпат]. *Scientific Bulletin of the Uzhhorod University. Series Biology [Науковий вісник Ужгородського університету. Серія Біологія]*, **33**, 105–119. URL: http://nbuv.gov.ua/UJRN/Nvuu_2012_33_18. [in Ukrainian].

Geryak, Yu. M. 2016. New data on the species composition and distribution of Noctuoidea (Insecta: Lepidoptera) in the Ukrainian Carpathians [Нові дані про видовий склад та поширення Noctuoidea (Insecta: Lepidoptera) в Українських Карпатах]. *Scientific Principles of Biodiversity Conservation [Наукові основи збереження біотичної різноманітності]*, **7**(2), 53–60. [in Ukrainian].

Geryak, Yu., Khalaim, E., Sergienko, V., Andrianov, O., Bezugly, S., Konovalov, S., Karmyshev, Yu., Zhakov, O., Mushynsky, V., Gerasimov, R., Tsykal, S., Trotsenko, S., Parkhomenko, V., Sheshurak, P., Bidychak, R., Demyanenko, S., Kavurka, V., Kanarsky, Yu., Kozlov, S., Kovaliov, I. 2018. New data on the species composition and distribution of Noctuoidea (Lepidoptera) of Ukraine [Нові дані про видовий склад та поширення ноктуоїдних лускокрилих (Lepidoptera: Noctuoidea) в Україні]. *Ukrainska Entomofaunistyka [Українська ентомофауністика]*, **9**(3), 1–61. URL: https://drive.google.com/file/d/1ZCWddIX7D4RdgsY3JB1Qh-_aAIpojWzo. [in Ukrainian].

Gibb, T. J., Oseto, C. Y. 2006. *Arthropod Collection and Identification. Field and Laboratory Techniques*. Academic Press, Amsterdam; Boston, 1–311. ISBN: 9780123695451.

Kostrowicki, A. S. 1956. Klucze do oznaczania owadów Polski. Część XXVII. Motyle — Lepidoptera. Zeszyt 53a. Sówki — Noctuidae. Wstęp i podrodzina Cuculliinae. Państwowe Wydawnictwo Naukowe, Warszawa, 1–124. URL: https://baza.biomap.pl/pl/getpdf/KdOOP_Lepidoptera_Noctuidae_Wstep_i_podrodzina_Cuculliinae_cz_XXVII_zesz_53a_nr_15.pdf.

***List of Animal Species Included in the Red Data Book of Ukraine (Animals) [Перелік видів тварин, що заносяться до Червоної книги України (тваринний світ)]*. 2021**. Order of the Ministry of Environmental Protection and Natural Resources of Ukraine [Наказ Міністерства захисту довкілля та природних ресурсів України], No 29 from January, 19, 2021. URL: https://zakon.rada.gov.ua/laws/z0260-21. [in Ukrainian].

Mészáros, K., Sulyán, P., Tóth, B. 2022. Negyven év után: a *Hypenodes pannonica* Fibiger, Pekarsky and Ronkay, 2010 új megfigyelései (Lepidoptera: Erebidae, Hypenodinae). *Állattani Közlemények*, **107**(1–2), 71–84. DOI: https://doi.org/10.20331/AllKoz.2022.107.1-2.3.

Niesiołowski, W. 1955. *Praktyczne wskazówki dla zbieraczy motyli*. Państwowe Wydawnictwo Naukowe, Warszawa, 1–41.

Nowacki, J., Wąsala, R., Zydlik, P. 2018. Noctuid moths of xerothermic habitats in the Chorna Hora Botanical Reserve in Transcarpathia (Ukraine) (Lepidoptera: Nolidae, Erebidae, Noctuidae). *SHILAP Revista de Lepidopterología*, **46**(184), 593–614. DOI: https://doi.org/10.57065/shilap.752.

Sladkovskyi, I. V. 1915. *The Nature of the Region as an Arena for Agriculture [Природа края, как арена сельского хозяйства]*. Adolf Darre, Kharkov, 37–91. [in Russian].

Söderman, G., ed. **1994.** *Moth Monitoring Scheme. A Handbook for Field Work and Data Reporting*. Environment Data Center; National Board of Water and the Environment, Helsinki, 1–63. URL: http://hdl.handle.net/10138/169535.

Szanyi, S. 2012. A Nagydobronyi Vadvédelmi Rezervátum és környéke nagylepkefaunája (Macrolepidoptera). *Állattani Közlemények*, **97**(2), 171–180. URL: https://www.mbt-biologia.hu/index.php?c_entry=c_entry_pdf_viewer&s_guid=6415e9f4-0c28-5194-800c-30d084c4e759.

Szanyi, S. 2015. Egy kárpátaljai erdőrezervátum jellemzése az éjjeli nagylepkefauna alapján. Characterisation of a Transcarpathian forest reserve based on the night-active Macrolepidoptera assemblage (Lepidoptera). *e-Acta Naturalia Pannonica*, **8**, 91–110. URL: https://epa.oszk.hu/01900/01957/00011/pdf/EPA01957_eactanat_2015_8_091-110.pdf.

Szanyi, S., Nagy, A., Varga, Z. 2016. Comparison of Macroheterocera assemblages of four forests in the Bereg Plain (Hungary, Ukraine). *Biologia (Section Zoology)*, **71**, 1281–1291. DOI: https://doi.org/10.1515/biolog-2016-0154.

Institute of Ecology of the Carpathians of the National Academy of Sciences of Ukraine,
National Nature Park 'Boikivshchyna',
Ukrainian Entomological Society,
Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine,
National Nature Park 'Tuzlovski Lymany',
Kharkiv Entomological Society,
National Nature Park 'Pryazovskyi',
Zaporizhzhia Regional Museum of Local Lore

Вісті Харківського ентомологічного товариства **2023, том XXXI, випуск 2** **ISSN 1726-8028**
The Kharkov Entomological Society Gazette **2023, volume XXXI, issue 2** **e-ISSN 2707-420X**
Известия Харьковского энтомологического общества **2023, том XXXI, выпуск 2** **entomology.kharkiv.ua**

UDC 595.44(292.486:477.72) DOI: 10.36016/KhESG-2023-31-2-3

MATERIALS TO THE SPIDER FAUNA (ARANEAE) OF THE STEPPE GULLIES OF THE LOWER DNIPRO VALLEY

Іосипчук, А. М. Матеріали до фауни павуків (Araneae) степових балок долини нижнього Дніпра. ***Вісті Харківського ентомологічного товариства*****. 2023. Т. XXXI, вип. 2. С. 26–38. DOI: 10.36016/KhESG-2023-31-2-3.**
На сьогодні, через значне сільськогосподарське використання земель півдня України, справжні степи збереглися тільки на охоронюваних територіях або у балкових екосистемах, зокрема на правому березі Дніпра. У статті наданий анотований список видів павуків степових балок долини нижнього Дніпра, який складається з 126 видів з 23 родин. Уперше для Херсонської області наведено три види: *Attulus inopinabilis* (Logunov, 1992), *Harpactea alexandrae* Lazarov, 2006 та *Ero koreana* Paik, 1967. *Steatoda paykulliana* (Walckenaer, 1806) підтверджена у списку павуків Херсонської області. Виділено шість видів, що потребують охорони. Порівняння фауни павуків досліджених балок і балкових систем інших регіонів виявило відносну ізольованість локальної фауни. Її нинішня збереженість викликає сумніви через бойові дії й окупацію території російськими військами у 2022 р. 1 табл., 24 назв.
Ключові слова: Херсонська область, Україна, охоронювані природні території.

Iosypchuk, A. M. Materials to the spider fauna (Araneae) of the steppe gullies of the lower Dnipro valley. ***The Kharkov Entomological Society Gazette*****. 2023. Vol. XXXI, iss. 2. P. 26–38. DOI: 10.36016/KhESG-2023-31-2-3.**
Today, due to the significant agricultural use of the lands of southern Ukraine, true steppes have been preserved only in protected areas or in the gully ecosystems, especially on the right bank of the Dnipro. The paper presents an annotated list of spider species of the steppe gullies in the lower Dnipro valley. The list includes 126 species from 23 families. Three species are new to Kherson Region: *Attulus inopinabilis* (Logunov, 1992), *Harpactea alexandrae* Lazarov, 2006, and *Ero koreana* Paik, 1967. *Steatoda paykulliana* (Walckenaer, 1806) is confirmed in the Kherson regional list. Six species were identified as requiring protection. A comparison of the spider faunas of the studied gullies and the gully systems of other regions indicated the relative isolation of the local fauna. Its current preservation is a concern due to hostilities and the occupation of the territory by Russian troops in 2022. 1 tab., 24 refs.
Keywords: Kherson Region, Ukraine, protected nature areas.

Иосипчук, А. М. Материалы к фауне пауков (Araneae) степных балок долины Нижнего Днепра. ***Известия Харьковского энтомологического общества*****. 2023. Т. XXXI, вып. 2. С. 26–38. DOI: 10.36016/KhESG-2023-31-2-3.**
На сегодня, из-за значительного сельскохозяйственного использования земель юга Украины, настоящие степи сохранились только на охраняемых территориях или в балочных экосистемах, в частности — на правом берегу Днепра. В статье приводится аннотированный список видов пауков степных балок долины нижнего Днепра, который включает 126 видов из 23 семейств. Впервые для Херсонской области приведено три вида: *Attulus inopinabilis* (Logunov, 1992), *Harpactea alexandrae* Lazarov, 2006 и *Ero koreana* Paik, 1967. *Steatoda paykulliana* (Walckenaer, 1806) подтверждена в региональном списке Херсонской области. Выделены шесть видов, нуждающихся в охране. Сравнение фауны пауков исследованных балок и балочных экосистем других регионов показало относительную изолированность локальной фауны. Её нынешняя сохранность вызывает сомнения из-за военных действий и оккупации территории российскими войсками в 2022 г. 1 табл., 24 назв.
Ключевые слова: Херсонская область, Украина, охраняемые природные территории.

I n t r o d u c t i o n . The lower Dnipro area has long been used for intensive agriculture. In Kherson Region, the area of agricultural land is almost two million hectares, which is the largest area of arable land in Ukraine. This resulted in high transformation and insularization of natural habitats, which survived mainly in protected areas or places inconvenient for agricultural use, such as gullies, steep river banks, saline marshes, etc. (Moysiyenko, Kuns, Dayneko, 2019). The gullies are covered with steppe vegetation, but they also host natural shrub thickets in the bottoms and forest plantations on the tops and slopes.

Dry grasslands are one of the most transformed biomes on the planet although they harbor rich biodiversity and can provide a vast range of ecosystem services (Baumann *et al.*, 2020; Hobohm, Janišová, Vahle, 2021). Maintenance of their sustainable development requires comprehensive study and efficient conservation management. Spiders as a diverse and widespread component of the steppe biota (Polchaninova, 2021) can serve as bioindicators of natural and anthropogenic changes in temperate grasslands (Orlofske, Ohnesorg, Debinski, 2011; Solascasas *et al.*, 2022).

The spiders of the left-bank part of Kherson Region were studied from the 1980s to the early 2000s mainly in nature reserves. A total of 350 species were recorded (Polchaninova, Prokopenko, 2013, 2019). The author conducted research in national nature parks ‘Dzharylhatskyi’ and ‘Oleshkivski Pisky’ in 2017–2020 (Iosypchuk, Orlova, 2018; Iosypchuk, Polchaninova, Orlova-Hudim, 2020), which added one new species to the regional fauna (*Attulus ammophilus* (Thorell, 1875)). The data on spiders from the right bank of the lower Dnipro

Iosypcuk A. M. V. N. Karazin Kharkiv National University, Kherson State University,
27, Universytetska St., Kherson, 73003, UKRAINE; e-mail: iosipchuk.nastya@ukr.net; ORCID: 0000-0002-8242-002X

Received 15.11.2023 **Accepted 06.12.2023 by Dr. I. P. Lezhenina** **Published 28.12.2023**

valley are very poor. Forty-four species were found in a steppe gully near the village of Osokorivka (Prokopenko, Zhukov, 2018), interim results of the investigation of the Kamianska Sich National Nature Park (46 species) were published in conference materials (Iosypchuk, 2019, 2021), and one species was included in the list of new and rare spider records from Ukraine (Polchaninova *et al.*, 2021a).

The present paper **aims** to compile an annotated list of spiders inhabiting steppe gullies of the right-bank part of the lower Dnipro valley and to identify species of conservation concern.

Materials and methods. The lower Dnipro valley has an asymmetric structure. The right bank of the Dnipro is high and dissected by gullies. The topography is similar near the Dnipro estuary, but the terrace consists of loess loam, while the river bank has limestone deposits. At the same time, the left bank is flat and low, the gully system is not developed there (Bondarchuk, 1949). In terms of geobotanical zoning, the area in question lies in the bunchgrass steppe subzone of the steppe zone of Ukraine (Barbarych, 1977).

The material was collected in May–June 2019, June–July 2020, and April–September 2021. I investigated gullies in the Kherson Region near the villages of Sofiivka (Sofiivska Balka, Nyzhniodniprovskyi National Nature Park), Respublikanets, Novokairy and Sukhanove (Kamianska Sich National Nature Park), and Shyroka Balka (Shyroka Balka Local Importance Botanical Preserve). In Table 1 I give the abbreviations of the studied habitats, their geographical coordinates, the nearest villages, brief descriptions of the habitats, and the specialists who collected and identified the material.

Table 1. Collecting localities and brief habitat description

Abbreviation	Nearest village	Geographic coordinates		Habitat description	Collected by	Identified by
		Decimal latitude	Decimal longitude			
FORB-BUNCHGRASS and BUNCHGRASS STEPPES						
FBs1	Sofiivka	46.598434	32.237176	Low eastern slope, forb-bunchgrass vegetation	AI, NP	AI, NP
FBs2		46.597903	32.237523	Low eastern slope dominated by *Stipa* sp.	AI, NP	AI, NP
FBs3		46.597651	32.238118	Low western slope dominated by *Galatella* sp.	AI, NP	AI, NP
FBs4		46.597734	32.237518	Top of the gully, forb-bunchgrass steppe	AI	AI
FBs5	Respublikanets	47.014624	33.658492	High eastern slope, dominated by forbs	AI, NP	AI, NP
FBs6		47.014669	33.657265	High northern slope, forb-grass steppe	AI, NP	AI, NP
FBs7		46.999152	33.653065	Medium-height southeastern slope, forb steppe	AI, NP	AI, NP
FBs8		47.007131	33.642954	Secondary steppe of the top of a transformed gully	AI, NP	AI, NP
FBs9		47.015281	33.658512	High eastern slope dominated *by Galatella* sp.	AI, NP	AI, NP
FBs10		47.017128	33.657503	Low southern slope, bunchgrass steppe	AI, NP	AI, NP
FBs11		47.028093	33.654527	High southern slope, bunchgrass steppe	AI	AI
FBs12		47.028646	33.654058	High southern dominated by *Galatella* sp.	AI	AI
MESOPHILE / MEADOW STEPPE						
Ms1	Sofiivka	46.597681	32.237888	Gully bottom with high herbage	AI, NP	AI, NP
Ms2	Respublikanets	47.017441	33.657221	Mesic forb steppe in a shallow depression on the flat interfluves	AI, NP	AI, NP
Ms3		47.007118	33.642628	Glade in the forest plantation	AI, NP	AI, NP
Ms4		47.028278	33.654222	High northern slope with high forb-grass vegetation	AI	AI
Ms5	Sukhanove	47.111761	33.566095	Low northeastern slope with medium-height herbage	AI	AI
Ms6	Shyroka Balka	46.575067	32.180289	Gully bottom with high herbage	AI	AI, NP
LOESS OUTCROPS						
LO1	Shyroka Balka	46.575663	32.181927	Top of the gully with sparse herbage	AI	AI
LO2		46.576278	32.183611	Northern medium-high slope with sparse herbage	AI	AI
LIMESTONE OUTCROPS						
LS1	Novokairy	47.047500	33.581694	Southern medium-height slope with sparse herbage	AI	AI
LS2		47.050583	33.578444	Northeastern high slope with sparse herbage	AI	AI
STEPPE SCRUB COMMUNITIES						
SH1	Respublikanets	47.001983	33.645288	Border of shrubs and steppe pasture on the top of the gully	AI, NP	AI, NP
SH2		46.999508	33.653457	Edge of shrub thickets on the medium-height southeastern slope	AI, NP	AI, NP
SH3		47.027493	33.654298	Top of the gully, forb-grass steppe with sparse shrubs	AI	AI
SH4		47.014069	33.657605	Top of the gully, forb-grass steppe with dense shrubs	AI, NP	AI, NP
SH5		47.014724	33.658143	Shrubs and trees at the bottom of a narrow south-facing gully	AI, NP	AI, NP
PLANTATIONS OF DECIDUOUS TREES						
F1	Sofiivka	46.597777	32.237247	Forest shelterbelt	AI, NP	AI, NP
F2	Respublikanets	47.007118	33.642628	Forest plantation	AI, NP	AI, NP

Note. * abbreviations: AI — A. M. Iosypchuk; NP — N. Yu. Polchaninova.

Three standard methods were used for sampling:

(1) hand collecting — we used this method to find spiders in the litter, on and under tree bark, and under stones;

(2) sweep-netting — 60 sweeps with an entomological net with a diameter of 30 cm in areas with sufficiently high vegetation. Most of these samples were taken near the pitfall trap transections;

(3) pitfall trapping — we used 200 ml plastic cups with 3% formalin solution as a fixative. The traps were set in a line of 9 traps per habitat with an interval of approximately 10 m and an average exposure of 25 days.

In total, 1,687 adults were collected; the material is temporarily deposited in the private collections of A. M. Iosypchuk and N. Yu. Polchaninova.

Spiders are listed alphabetically by families and within the families according to the nomenclature of the World Spider Catalogue (2023). Each species is provided with the following information: abbreviation of the habitat (Table 1); number of male/female individuals or number of juveniles; abbreviation of the collection method (pt — pitfall trapping; sn — sweep-netting; hc — hand collecting) and date(s) of collection. New records from Kherson Region are marked with two asterisks (**), and new records from the study area with one asterisk (*).

Spider fauna of the steppe gullies of the lower Dnipro valley was compared with those of the gully systems northward and westward of the study area: three localities near Kryvyi Rih City, Dnipropetrovsk Region (Polchaninova *et al.*, 2021b) and two localities of the Yelanets Steppe Nature Reserve, Mykolaiv Region (Polchaninova, 2021). Both sites are located in the south of the forb-bunchgrass steppe subzone of the steppe zone, and the gullies harbor the same mosaic of steppe, meadow, and woody vegetation, as the gullies in the lower Dnipro valley. The comparison did not include forest plantations, shelterbelts, and/or arboreal and shrub vegetation in the gully bottoms. I used the Sørensen similarity index (Sørensen, 1948) as widely applied in ecological and faunistic studies.

Results and discussions. A total of 126 spider species from 23 families were found in the gullies of the study area. The family Gnaphosidae was the most species-rich (31 species, 24.4% of the fauna), Salticidae made up 16.5%, Thomisidae — 11.8%, while the share of other families did not exceed 10%. Of these, 10 families were represented by one species each (0.8%). The prevalence of Gnaphosidae is a characteristic feature of the spider fauna of the southern steppes (Prokopenko, Zhukov, 2018; Polchaninova, 2021). As a rule, Salticidae and Thomisidae are second-abundant, accompanied by Lycosidae or Araneidae (Polchaninova, 2021). A very low number of Linyphiidae species in the present list is explained by the absence of early spring and autumnal hand collecting required for Linyphiidae sampling, especially in dry habitats.

Family ARANEIDAE Clerck, 1757

* *Araneus diadematus* Clerck, 1757

Material. **F2**, 22–23.06.2019, hc — 7 juv.

Argiope bruennichi (Scopoli, 1772)

Material. **SH1**, 22.05.2019, sn — 7 juv; **FBs7**, 22.06.2019, sn — 7 juv; **FBs5**, 23.06.2019, sn — 5 juv; **SH5**, same date, sn — 2 juv; **Ms2**, same date, sn — 3 juv.

* *Argiope lobata* (Pallas, 1772)

Material. **Ms2**, 22–23.06.2019, hc — 1 juv; **Ms2**, 23.06.2019, sn — 1 juv.

* *Cyclosa oculata* (Walckenaer, 1802)

Material. **FBs10**, 22–24.05.2019, hc — 1 ♀.

* *Gibbaranea bituberculata* (Walckenaer, 1802)

Material. **F2**, 22–24.05.2019, hc — 1 ♀, 1 ♂.

* *Larinioides patagiatus* (Clerck, 1757)

Material. **FBs9**, 22–23.06.2019, hc — 1 ♀.

Larinioides suspicax (O. Pickard-Cambridge, 1876)

Material. **FBs6**, 22.05.2019, sn — 1 ♂; **FBs5**, 23.05–22.06.2019, pt — 1 ♀; **Ms4**, 17.06.2020, sn — 1 ♂; **Ms4**, same date, hc — 1 ♂; **Ms2**, 22–23.06.2019, hc — 1 ♀.

Mangora acalypha (Walckenaer, 1802)

Material. **FBs8**, 24.05.2019, sn — 1 juv; **Ms3**, same date, sn — 5 juv; **Ms2**, 22–24.05.2019, hc — 1 ♂.

Neoscona adianta (Walckenaer, 1802)

Material. **FBs7**, 23.05.2019, sn — 19 juv; **SH1**, 22.06.2019, sn — 1 ♀, 1 juv; **SH2**, same date, sn — 7 ♀♀, 4 ♂♂, 7 juv; **FBs7**, same date, sn — 8 ♀♀, 12 ♂♂, 17 juv; **FBs5**, 23.06.2019, sn — 5 juv; **SH5**, same date, sn — 4 juv; **Ms2**, same date, sn — 8 ♀♀, 10 ♂♂, 49 juv; **FBs5**, 22–23.06.2019, hc — 2 ♀♀, 2 ♂♂; **FBs1**, 25.06.2019, sn — 1 ♀; **Ms6**, 10.06.2020, sn — 1 ♀, 1 juv; **SH2**, 15.06.2020, sn — 4 ♀♀, 28 juv; **FBs9**, 17.06.2020, sn — 6 juv; **Ms4**, same date, sn — 14 ♀♀, 3 ♂♂, 14 juv; **FBs11**, same date, sn — 4 ♀♀, 15 juv; **FBs11**, same date, hc — 1 juv; **SH3**, same date, sn — 23 ♀♀, 2 ♂♂, 30 juv; **FBs12**, 18.06.2020, sn — 44 juv.

Family ATYPIDAE Thorell, 1870

Atypus muralis Bertkau, 1890

Material. **SH5**, 23.05–22.06.2019, pt — 9 ♂♂; **FBs1**, 08–25.06.2019, pt — 1 ♂; **F1**, same date, pt — 1 ♂.

Family CHEIRACANTHIIDAE Wagner, 1887

Cheiracanthium erraticum (Walckenaer, 1802)

Material. **SH5**, 21.05.2019, sn — 1 ♀, 2 ♂♂; **FBs6**, 22.05.2019, sn — 1 ♀; **SH4**, same date, sn — 2 ♂♂; **Ms2**, 23.06.2019, sn — 1 ♀.

* *Cheiracanthium mildei* L. Koch, 1864

Material. **SH4**, 22.05.2019, sn — 2 ♀.

Family DICTYNIDAE O. Pickard-Cambridge, 1871

* *Dictyna arundinacea* (Linnaeus, 1758)

Material. **Ms3**, 22–24.05.2019, hc — 1 ♀.

Family DYSDERIDAE C. L. Koch, 1837

** *Harpactea alexandrae* Lazarov, 2006

Material. **FBs1**, 25.05–08.06.2019, pt — 2 ♂♂; **FBs2**, same date, pt — 4 ♂♂; **FBs3**, same date, pt — 2 ♂♂; **F1**, same date, pt — 4 ♂♂; **LO1**, 10.06–03.07.2020, pt — 1 ♂; **FBs4**, 10.04–29.04.2021, pt — 1 ♂.

Harpactea azowensis Charitonov, 1956

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♂.

Harpactea rubicunda (C. L. Koch, 1838)

Material. **SH5**, 23.05–22.06.2019, pt — 1 ♂; **FBs7**, same date, pt — 2 ♀♀; **FBs9**, 15.06–03.07.2020, pt — 3 ♀♀.

Family ERESIDAE C. L. Koch, 1845

Eresus sp.

Material. **FBs9**, 23.05–22.06.2019, pt — 1 ♂.

Family GNAPHOSIDAE Banks, 1892

Aphantaulax trifasciata (O. Pickard-Cambridge, 1872)

Material. **SH2,** 22.06.2019, sn — 1 ♀; **F1,** 25.06.2019, sn — 1 ♂; **FBs11,** 17.06.2020, hc — 1 ♂.

Berlandina cinerea (Menge, 1872)

Material. **FBs5**, 23.05–22.06.2019, pt — 5 ♀♀, 5 ♂♂; **SH5**, same date, pt — 1 ♂; **FBs9**, same date, pt — 1 ♀, 3 ♂; **Ms2**, same date, pt — 3 ♂♂; **FBs10**, same date, pt — 3 ♀♀, 10 ♂♂; **SH2**, same date, pt — 2 ♀♀, 9 ♂♂; **FBs7**, same date, pt — 3 ♂♂; **FBs8**, same date, pt — 1 ♂; **FBs1**, 25.05–08.06.2019, pt — 1 ♀, 2 ♂♂; **FBs2**, same date, pt — 2 ♀♀, 7 ♂♂; **FBs3**, same date, pt — 2 ♀♀, 2 ♂♂; **FBs2**, 08–25.06.2019, pt — 1 ♀; **FBs5**, 15.06–03.07.2020, pt — 1 ♀; **FBs4**, 10.04–29.04.2021, pt — 2 ♂♂.

Civizelotes caucasius (L. Koch, 1866)

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀, 1 ♂; **Ms2**, same date, pt — 1 ♂; **SH1,** same date, pt — 1 ♂; **FBs2**, 25.05–08.06.2019, pt — 1 ♂; **FBs3**, same date, pt — 3 ♀♀, 1 ♂; **FBs1**, 08–25.06.2019, pt — 1 ♂; **FBs2**, same date, pt — 1 ♀; **F1**, same date, pt — 1 ♂; **LO1**, 10.06–03.07.2020, pt — 1 ♀.

Civizelotes gracilis (Canestrini, 1868)

Material. **SH1**, 23.05–22.06.2019, pt — 1 ♂; **FBs7**, same date, pt — 1 ♂; **Ms3**, same date, pt — 1 ♀; **Ms1**, 25.05–08.06.2019, pt — 9 ♂♂; **FBs7**, 15.06–03.07.2020, pt — 1 ♂.

Drassodes lapidosus (Walckenaer, 1802)

Material. **FBs5**, 23.05–22.06.2019, pt — 2 ♂♂; **SH5**, same date, pt — 1 ♀; **FBs9**, same date, pt — 1 ♂; **Ms2**, same date, pt — 2 ♀♀; **SH2**, same date, pt — 4 ♂♂; **FBs7**, same date, pt — 2 ♀♀, 9 ♂♂; **FBs1**, 25.05–08.06.2019, pt — 2 ♀♀, 3 ♂♂; **FBs2**, same date, pt — 5 ♂♂; **FBs3**, same date, pt — 5 ♂♂; **FBs3**, 08–25.06.2019, pt — 1 ♀; **SH2**, 15.06–03.07.2020, pt — 1 ♀, 2 ♂♂.

Drassodes pubescens (Thorell, 1856)

Material. **FBs1**, 25.05–08.06.2019, pt — 3 ♂♂; **FBs4**, 05.09–19.09.2021, pt — 2 ♀♀; **Ms1**, 21.07–5.09.2021, pt — 2 ♀♀.

Drassyllus praeficus (L. Koch, 1866)

Material. **SH5**, 23.05–22.06.2019, pt — 1 ♂; **Ms2**, same date, pt — 1 ♀; **SH2**, same date, pt — 2 ♂♂; **F2**, same date, pt — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♂; **Ms1**, same date, pt — 2 ♀♀, 8 ♂♂; **F1**, same date, pt — 1 ♀, 1 ♂; **F1**, 08–25.06.2019, pt — 5 ♀♀. **FBs7**, 15.06–03.07.2020, pt — 2 ♀♀.

* *Drassyllus vinealis* (Kulczyński, 1897)

Material. **Ms2**, 23.05–22.06.2019, pt — 1 ♀.

* *Gnaphosa dolosa* Herman, 1879

Material. **Ms1**, 25.05–08.06.2019, pt — 1 ♀.

Gnaphosa leporina (L. Koch, 1866)

Material. **Ms1**, 25.05–08.06.2019, pt — 1 ♂.

Gnaphosa lucifuga (Walckenaer, 1802)

Material. **FBs2**, 25.05–08.06.2019, pt — 1 ♂; **FBs2**, 08–25.06.2019, pt — 1 ♂.

* *Gnaphosa mongolica* Simon, 1895

Material. **SH2**, 23.05–22.06.2019, pt — 1 ♂; **FBs7**, same date, pt — 2 ♂♂.

Gnaphosa opaca Herman, 1879

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♂; **FBs9**, same date, pt — 1 ♀, 1 ♂; **LO2**, 10.06–03.07.2020, pt — 1 ♀; **LS1**, 15.06–03.07.2020, pt — 1 ♀, 2 ♂♂.

Gnaphosa taurica Thorell, 1875

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀; **SH5**, same date, pt — 3 ♂♂; **SH1**, same date, pt — 1 ♀, 2 ♂♂; **FBs8**, same date, pt — 1 ♀; **Ms1**, 25.05–08.06.2019, pt — 1 ♂; **LS1**, 15.06–03.07.2020, pt — 1 ♀.

Gnaphosa sp.

Material. **SH2**, 15.06–03.07.2020, pt — 1 ♀.

Haplodrassus bohemicus Miller et Buchar, 1977

Material. **FBs5**, 23.05–22.06.2019, pt — 2 ♀♀, 1 ♂; **SH5**, same date, pt — 2 ♂♂; **Ms2**, same date, pt — 3 ♀♀; **SH1**, same date, pt — 1 ♂; **SH2**, same date, pt — 1 ♀, 2 ♂♂; **F2**, same date, pt — 4 ♀♀; **FBs1**, 25.05–08.06.2019, pt — 4 ♀♀, 4 ♂♂; **FBs2**, same date, pt — 1 ♂; **FBs3**, same date, pt — 2 ♀♀; **Ms1**, same date, pt — 7 ♂♂; **F1**, same date, pt — 4 ♂♂; **Ms1**, 08–25.06.2019, pt — 2 ♀♀; **F1**, same date, pt — 2 ♀♀, 2 ♂♂; **FBs4**, 29.04–05.06.2021, pt — 1 ♀; **F1**, 29.04–05.06.2021, pt — 1 ♂.

Haplodrassus dalmatensis (L. Koch, 1866)

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀, 2 ♂♂; **FBs9**, same date, pt — 1 ♂; **FBs10**, same date, pt — 1 ♀; **SH2**, same date, pt — 1 ♂; **FBs7**, same date, pt — 2 ♂♂; **FBs3**, 25.05–08.06.2019, pt — 1 ♀; **LO1**, 10.06–03.07.2020, pt — 1 ♀; **LO2**, same date, pt — 1 ♀; **SH2**, 15.06–03.07.2020, pt — 1 ♀.

* *Haplodrassus kulczynskii* Lohmander, 1942

Material. **F1**, 08–25.06.2019, pt — 1 ♀.

Haplodrassus minor (O. Pickard-Cambridge, 1879)

Material. **FBs1**, 25.05–08.06.2019, pt — 2 ♀♀, 2 ♂♂; **FBs3**, same date, pt — 1 ♂; **Ms1**, same date, pt — 1 ♂; **F1**, same date, pt — 3 ♀♀, 1 ♂.

Haplodrassus signifer (C. L. Koch, 1839)

Material. **Ms1**, 25.05–08.06.2019, pt — 1 ♂; **F1**, same date, pt — 1 ♂; **FBs3**, 10.04–29.04.2021, pt — 1 ♂.

Marinarozelotes malkini (Platnick et Murphy, 1984)

Material. **SH2**, 23.05–22.06.2019, pt — 1 ♀, 4 ♂♂; **FBs7**, same date, pt — 1 ♂; **Ms3**, same date, pt — 1 ♂; **FBs1**, 25.05–08.06.2019, pt — 1 ♂; **FBs3**, same date, pt — 4 ♂♂; **F1**, same date, pt — 3 ♂♂; **FBs1**, 08–25.06.2019, pt — 1 ♂; **FBs2**, same date, pt — 1 ♂; **FBs3**, same date, pt — 1 ♂; **F1**, same date, pt — 5 ♂♂.

* *Micaria albovittata* (Lucas, 1846)

Material. **FBs3**, 25.05–08.06.2019, pt — 1 ♂; **Ms1**, same date, pt — 3 ♀♀; **Ms1**, 08.06.2019, sn — 1 ♀.

Micaria bosmansi Kovblyuk et Nadolny, 2008

Material. **FBs8**, 23.05–22.06.2019, pt — 1 ♀; **LS1**, 15.06–03.07.2020, pt — 1 ♀; **SH2**, same date, pt — 1 ♂; **FBs7**, same date, pt — 1 ♂.

* *Nomisia aussereri* (L. Koch, 1872)

Material. **FBs3**, 05.09–19.09.2021, pt — 1 ♂.

* *Trachyzelotes pedestris* (C. L. Koch, 1837)

Material. **Ms1**, 25.05–08.06.2019, pt — 1 ♂; **F1**, same date, pt — 7 ♀, 21 ♂♂; **FBs1**, 08–25.06.2019, pt — 1 ♀.

* *Zelotes electus* (C. L. Koch, 1839)

Material. **SH5**, 23.05–22.06.2019 pt — 1 ♀, 1 ♂; **F1**, 08–25.06.2019, pt — 3 ♀♀, 25 ♂♂.

Zelotes eugenei Kovblyuk, 2009

Material. **SH1**, 23.05–22.06.2019, pt — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♀; **FBs2**, same date, pt — 3 ♀♀; **FBs3**, same date, pt — 1 ♀; **Ms1**, same date, pt — 2 ♀♀; **F1**, same date, pt — 7 ♀♀; **F1**, 08–25.06.2019, pt — 5 ♀♀, 2 ♂♂; **Ms1**, 10.04–29.04.2021, pt — 1 ♀; **Ms1**, 21.07–05.09.2021, pt — 2 ♂♂; **Ms1**, 05.09–19.09.2021, pt — 1 ♂.

* *Zelotes fuscus* (Thorell, 1875)

Material. **Ms1**, 25.05–08.06.2019, pt — 1 ♀; **F1**, same date, pt — 1 ♂.

* *Zelotes longipes* (L. Koch, 1866)

Material. **Ms2,** 23.05–22.06.2019, pt — 1 ♀; **FBs10**, same date, pt — 1 ♀; **Ms1**, 05.09–19.09.2021, pt — 2 ♂.

* *Zelotes mundus* (Kulczyński, 1897)

Material. **FBs2**, 25.05–08.06.2019, pt — 2 ♂♂; **Ms1**, same date, pt — 1 ♂.

* *Zelotes segrex* (Simon, 1878)

Material. **FBs9**, 23.05–22.06.2019, pt — 2 ♂♂; **SH1,** same date, pt — 1 ♂; **SH2,** same date, pt — 1 ♂; **FBs7,** same date, pt — 1 ♀, 2 ♂♂; **FBs1**, 25.05–08.06.2019, pt — 1 ♂; **FBs2**, same date, pt — 1 ♂; **FBs3**, same date, pt — 2 ♂♂.

Family LINYPHIIDAE Blackwall, 1859

* *Agyneta rurestris* (C. L. Koch, 1836)

Material. **FBs7**, 23.05–22.06.2019, pt — 1 ♀.

* *Bathyphantes gracilis* (Blackwall, 1841)

Material. **Ms1**, 25.05–08.06.2019, pt — 2 ♂♂.

* *Linyphia* sp.

Material. **SH5**, 23.06.2019, sn — 1 juv.

Family LIOCRANIDAE Simon, 1897

* *Agroeca cuprea* Menge, 1873

Material. **FBs3**, 25.05–08.06.2019, pt — 3 ♀♀; **Ms1**, same date, pt — 1 ♀; **F1**, 08–25.06.2019, pt — 2 ♀♀; **F1**, 10.04–29.04.2021, pt — 1 ♂.

Family LYCOSIDAE Sundevall, 1833

Alopecosa cursor (Hahn, 1831)

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀, 1 ♂; **FBs9**, same date, pt — 1 ♂; **Ms2**, same date, pt — 3 ♀♀; **SH2**, same date, pt — 1 ♀; **FBs7**, same date, pt — 3 ♀♀; **FBs8**, same date, pt — 1 ♀; **FBs2**, 25.05–08.06.2019, pt — 5 ♀♀; **FBs3**, same date, pt — 3 ♀♀; **FBs3**, 08–25.06.2019, pt — 1 ♀; **LO1**, 10.06–03.07.2020, pt — 1 ♀; **FBs1**, 10.04–29.04.2021, pt — 6 ♂♂; **FBs4**, same date, pt — 3 ♂♂; **Ms1**, same date, pt — 1 ♀, 2 ♂♂; **FBs3**, same date, pt — 2 ♀♀, 8 ♂♂; **FBs1**, 29.04–05.06.2021, pt — 1 ♀, 2 ♂♂.

Alopecosa farinosa (Herman, 1879)

Material. **FBs1**, 25.05–08.06.2019, pt — 13 ♀; **Ms1**, same date, pt — 2 ♀. **FBs1**, 10.04–29.04.2021, pt — 6 ♀, 24 ♂; **FBs4**, same date, pt — 7 ♀, 35 ♂; **Ms1**, same date, pt — 1 ♀, 28 ♂; **FBs3**, same date, pt — 3 ♀, 38 ♂; **F1**, same date, pt — 1 ♂; **FBs1**, 29.04–05.06.2021, pt — 1 ♀, 1 ♂; **FBs4**, same date, pt — 2 ♀, 6 ♂; **FBs3**, same date, pt — 1 ♀, 8 ♂; **F1**, same date, pt — 1 ♂.

Alopecosa kovblyuki Nadolny et Ponomarev, 2012

Material. **FBs5**, 23.05–22.06.2019, pt — 2 ♀♀; **SH5**, same date, pt — 1 ♀; **Ms2**, same date, pt — 4 ♀♀; **FBs10**, same date, pt — 1 ♀; **FBs7**, same date, pt — 2 ♀♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♀; **FBs3**, same date, pt — 1 ♀; **FBs1**, 08–25.06.2019, pt — 2 ♀♀; **Ms1**, same date, pt — 1 ♀; **FBs7**, 15.06–03.07.2020, pt — 1 ♀; **FBs1**, 10.04–29.04.2021, pt — 7 ♂♂; **FBs4**, same date, pt — 7 ♂♂; **Ms1**, same date, pt — 4 ♂♂; **FBs3**, same date, pt — 9 ♂♂; **FBs3**, 05.06–21.07.2021, pt — 1 ♀; **Ms1**, 05.09–19.09.2021, pt — 4 ♂♂.

Alopecosa pulverulenta (Clerck, 1757)

Material. **Ms1**, 25.05–08.06.2019, pt — 11 ♀♀; **FBs1**, 10.04–29.04.2021, pt — 1 ♂; **Ms1**, same date, pt — 10 ♂♂; **FBs3**, same date, pt — 1 ♀; **F1**, same date, pt — 3 ♂♂; **F1**, 29.04–05.06.2021, pt — 1 ♂.

Alopecosa taeniopus (Kulczyński, 1895)

Material. **Ms2**, 15.06–03.07.2020, pt — 1 ♀.

* *Hogna radiata* (Latreille, 1817)

Material. **FBs3**, 25.05–08.06.2019, pt — 1 ♀; **FBs1**, 21.07–05.09.2021, pt — 2 ♂.

Pardosa agrestis (Westring, 1861)

Material. **FBs7**, 23.05–22.06.2019, pt — 1 ♀, 2 ♂; **Ms1**, 25.05–08.06.2019, pt — 1 ♂.

* *Pardosa pontica* (Thorell, 1875)

Material. **FBs4**, 05.09–19.09.2021, pt — 1 ♀.

Trochosa ruricola (De Geer, 1778)

Material. **Ms1**, 25.05–08.06.2019, pt — 3 ♂♂; **Ms1**, 08–25.06.2019, pt — 1 ♀.

Trochosa terricola Thorell, 1856

Material. **SH5**, 23.05–22.06.2019, pt — 1 ♂.

Family MIMETIDAE Simon, 1881

** *Ero koreana* Paik, 1967

Material. **FBs2**, 08–25.06.2019, pt — 1 ♀.

Family MITURGIDAE Simon, 1886

* *Zora pardalis* Simon, 1878

Material. **Ms3**, 23.05–22.06.2019, pt — 1 ♀.

Family OXYOPIDAE Thorell, 1869

* *Oxyopes heterophthalmus* (Latreille, 1804)

Material. **SH4**, 22.05.2019, sn — 1 ♂; **Ms3**, 24.05.2019, sn — 2 juv; **Ms1**, 08.06.2019, sn — 1 ♀; **FBs1**, same date, sn — 1 ♀, 1 ♂; **FBs1**, 25.06.2019, sn — 1 ♀; **FBs4**, 05.06.2021, hc — 1 ♂.

Oxyopes lineatus Latreille, 1806

Material. **SH5**, 21.05.2019, sn — 1 juv; **FBs6**, 22.05.2019, sn — 1 juv; **SH4**, same date, sn — 5 juv; **SH1**, same date, sn — 1 juv; **Ms3**, 24.05.2019, sn — 5 juv; **FBs8**, same date, sn — 4 juv; **Ms3**, same date, sn — 5 juv; **FBs1**, 08.06.2019, sn — 2 juv; **FBs7**, 22.06.2019, sn — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 juv; **FBs1**; 08–25.06.2019, pt — 1 ♀; **FBs2**, same date, pt — 1 ♀; **FBs12**, 18.06.2020, sn — 2 ♀♀; **Ms5**, same date, sn — 3 ♂♂; **FBs4**, 19.09.2021, sn — 2 juv; **Ms1**, same date, sn — 2 juv.

Family PHILODROMIDAE Thorell, 1869

* *Rhysodromus histrio* (Latreille, 1819)

Material. **FBs7**, 22–23.06.2019, hc — 1 ♀; **FBs1**, 25.06.2019, sn — 1 ♀.

Thanatus arenarius L. Koch, 1872

Material. **FBs5**, 23.05–22.06.2019, pt — 3 ♀♀, 7 ♂♂; **Ms2,** same date, pt — 1 ♀, 3 ♂♂; **FBs10,** same date, pt — 1 ♀, 7 ♂♂; **FBs7,** same date, pt — 6 ♂♂; **FBs2**, 25.05–08.06.2019, pt — 1 ♀, 2 ♂♂; **FBs3**, same date, pt — 1 ♂; **F1**, same date, pt — 1 ♀; **FBs1**, 08–

25.06.2019, pt — 2 ♂♂; **Ms1**, same date, pt — 1 ♂; **FBs1**, 10.04–29.04.2021, pt — 1 ♂; **Ms1**, same date, pt — 1 ♂; **FBs4**, 05.09–19.09.2021, pt — 3 ♂♂.

* *Thanatus atratus* Simon, 1875

Material. **FBs1**, 25.05–08.06.2019, pt — 1 ♀, 5 ♂; **Ms1**, same date, pt — 5 ♂♂; **FBs2**, 08–25.06.2019, pt — 1 ♀, 6 ♂♂; **FBs3**, same date, pt — 1 ♀, 3 ♂♂; **FBs3**, same date, pt — 4 ♂♂; **Ms6**, 10.06.2020, sn — 1 ♂; **LO1**, 10.06–03.07.2020, pt — 5 ♂♂; **Ms6**, same date, pt — 1 ♂**;** **FBs1**, 10.04–29.04.2021, pt — 1 ♀; **FBs1**, 21.07–05.09.2021, pt — 5 ♂♂; **Ms1**, same date, pt — 3 ♀♀; **FBs3**, 05.09–19.09.2021, pt — 1 ♀.

Thanatus oblongiusculus (Lucas, 1846)

Material. **SH1**, 22.06.2019, sn — 1 ♀; **Ms2**, 23.06.2019, sn — 6 ♀♀, 1 ♂, 2 juv.

* *Thanatus vulgaris* Simon, 1870

Material. **FBs2**, 25.05–08.06.2019, pt — 1 ♂; **FBs3**, same date, pt — 1 ♂; **FBs3**, 08–25.06.2019, pt — 2 ♂♂; **F1**, same date, pt — 1 ♀.

Family PHRUROLITHIDAE Banks, 1892

* *Phrurolithus festivus* (C. L. Koch, 1835)

Material. **Ms3**, 23.05–22.06.2019, pt — 1 ♀; **F1**, 25.05–08.06.2019, pt — 1 ♀, 3 ♂♂; **FBs1**, 08–25.06.2019, pt — 1 ♀.

Family PISAURIDAE Simon, 1890

* *Pisaura mirabilis* (Clerck, 1757)

Material. **SH5**, 22–24.05.2019, hc — 1 ♀; **SH5**, 23.05–22.06.2019, pt — 1 ♂; **SH5**, 22–23.06.2019, hc — 1 ♀.

Pisaura novicia (L. Koch, 1878)

Material. **F1**, 25.05–08.06.2019, pt — 1 ♂; **Ms1**, 08–25.06.2019, pt — 1 ♀.

Family SALTICIDAE Blackwall, 1841

Aelurillus m-nigrum Kulczyński, 1891

Material. **LO1**, 10.06–03.07.2020, pt — 1 ♂; **FBs9**, 15.06–03.07.2020, pt — 1 ♀.

Aelurillus v-insignitus (Clerck, 1757)

Material. **FBs4**, 10.04–29.04.2021, pt — 1 ♀; **FBs3**, same date, pt — 1 ♂; **FBs4**, 29.04–05.06.2021, pt — 2 ♀♀; **FBs3**, same date, pt — 1 ♂.

Asianellus festivus (C. L. Koch, 1834)

Material. **FBs5,** 23.05–22.06.2019, pt — 2 ♂♂; **Ms2**, same date, pt — 1 ♀; **SH1**, same date, pt — 1 ♀; **FBs7**, 15.06–03.07.2020 pt — 2 ♀♀; **F1**, 10.04–29.04.2021, pt — 1 ♀.

** *Attulus inopinabilis* (Logunov, 1992)

Material. **LS1**, 15.06–3.07.2020, pt — 1 ♂.

* *Attulus zimmermanni* (Simon, 1877)

Material. **SH1**, 23.05–22.06.2019, pt — 1 ♂; **Ms1**, 25.05–08.06.2019, pt — 1 ♂; **F1**, same date, pt — 2 ♀♀, 1 ♂; **F1**, 08–25.06.2019, pt — 1 ♂; **F1**, 29.04–05.06.2021, pt — 1 ♂.

* *Carrhotus xanthogramma* (Latreille, 1819)

Material. **FBs5**, 21.05.2019, sn — 1 ♀.

Euophrys frontalis (Walckenaer, 1802)

Material. **SH1**, 23.05–22.06.2019, pt — 1 ♂; **SH2**, 15.06–03.07.2020, pt — 1 ♀.

* *Evarcha arcuata* (Clerck, 1757)

Material. **FBs10**, 22–24.05.2019, hc — 1 ♂; **Ms1**, 19.09.2021, sn — 1 ♀.

* *Heliophanus cupres* (Walckenaer, 1802)

Material. **SH5**, 23.05–22.06.2019, pt — 2 ♂♂; **FBs8**, 24.05.2019, sn — 10 ♂♂; **FBs7**, 22.06.2019, sn — 1 ♂; **FBs7**; 23.06.2019, sn — 1 ♀; **Ms2**, same date, sn — 2 ♀♀.

***Heliophanus flavipes* (Hahn, 1832)**

Material. **FBs6**, 22.05.2019, sn — 1 ♀, 1 ♂; **Ms2**, 23.06.2019, sn — 4 ♀♀; **FBs1**, 25.06.2019, sn — 1 ♀; **SH3**, 17.06.2020, sn — 1 ♀.

***Heliophanus lineiventris* (Hahn, 1832)**

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀; **FBs5**, 23.06.2019, sn — 1 ♀; **FBs7**, same date, sn — 1 ♀; **FBs1**, 25.06.2019, sn — 3 ♀♀; **FBs7**, 17.06.2020, sn — 1 ♀.

*** *Heliophanus patagiatus* Thorell, 1875**

Material. **FBs8**, 24.05.2019, sn — 1 ♀, 1 ♂.

*** *Leptorchestes berolinensis* (C. L. Koch, 1846)**

Material. **SH1**, 23.05–22.06.2019, pt — 1 ♂.

*** *Macaroeris flavicomis* (Simon, 1885)**

Material. **F1**, 08–25.06.2019, pt — 1 ♂.

*** *Pellenes brevis* (Simon, 1868)**

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀, 1 ♂; **FBs7**, same date, pt — 1 ♀, 1 ♂; **FBs12**, 18.06.2020, sn — 1 ♀.

*** *Pellenes seriatus* (Thorell, 1875)**

Material. **SH2**, 23.05–22.06.2019, pt — 1 ♀; **FBs7**, 22.06.2019, sn — 2 ♀; **SH5**, 23.06.2019, sn — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♀; **FBs1**, 08–25.06.2019, pt — 1 ♀; **FBs4**, 29.04–05.06.2021, pt — 1 ♀; **FBs4**, 19.09.2021, sn — 1 juv.

*** *Philaeus chrysops* (Poda, 1761)**

Material. **F2**, 22–24.05.2019, hc — 2 ♂♂; **FBs1**, 25.05–08.06.2019, pt — 1 ♀; **Ms1**, 08–25.06.2019, pt — 1 ♀.

*** *Phlegra fasciata* (Hahn, 1826)**

Material. **FBs2**, 25.05–08.06.2019, pt — 1 ♂; **FBs2**, 08–25.06.2019, pt — 1 ♂.

*** *Pseudeuophrys obsoleta* (Simon, 1868)**

Material. **FBs3**, 25.05–08.06.2019, pt — 1 ♂; **Ms1**, same date, pt — 1 ♂; **F1**, same date, pt — 3 ♂♂.

***Salticus scenicus* (Clerck, 1757)**

Material. **Ms3**, 24.05.2019, sn — 2 juv; **FBs1**, 25.06.2019, sn — 1 ♀; **FBs7**, 15.06–03.07.2020, pt — 1 ♀.

*** *Talavera petrensis* (C. L. Koch, 1837)**

Material. **FBs8**, 23.05–22.06.2019, pt — 1 ♂.

Family TETRAGNATHIDAE Menge, 1866

***Tetragnatha nigrita* Lendl, 1886**

Material. **SH5**, 17.06.2020, hc — 1 ♂.

Family THERIDIIDAE Sundevall, 1833

***Asagena phalerata* (Panzer, 1801)**

Material. **FBs7**, 23.05–22.06.2019, pt — 2 ♂♂.

*** *Euryopis quinqueguttata* Thorell, 1875**

Material. **FBs7**, 23.05–22.06.2019, pt — 2 ♀♀.

*** *Euryopis saukea* Levi, 1951**

Material. **FBs9**, 23.05–22.06.2019, pt — 1 ♂.

*** *Latrodectus tredecimguttatus* (Rossi, 1790)**

Material. **Ms1,** 25.06.2019, sn — 1 ♂.

*** *Parasteatoda lunata* (Clerck, 1757)**

Material. **F2**, 22–23.06.2019, hc — 1 ♀; **F1**, 25.06.2019, sn — 1 ♀.

*** *Parasteatoda tepidariorum* (C. L. Koch, 1841)**

Material. **F2**, 22–23.06.2019, hc — 2 ♀♀; **Ms4**, near the forest plantation, 17.06.2020, sn — 1 ♂.

* *Steatoda albomaculata* (De Geer, 1778)

Material. **FBs3**, 08–25.06.2019, pt — 1 ♂.

* *Steatoda paykulliana* (Walckenaer, 1806)

Material. **FBs1**, 10.04–29.04.2021, pt — 2 ♂♂; **FBs3**, same date, pt — 1 ♂.

Family THOMISIDAE Sundevall, 1833

Bassaniodes robustus (Hahn, 1832)

Material. **SH5**, 23.05–22.06.2019, pt — 4 ♂♂.

* *Ebrechtella tricuspidata* (Fabricius, 1775)

Material. **SH1**, 22.05.2019, sn — 1 ♀; **SH1**, 22.06.2019, sn — 1 ♀, 4 ♂♂; **FBs7**, same date, sn — 1 ♀; **Ms2,** 23.06.2019, sn — 1 ♀.

Heriaeus horridus Tystshenko, 1965

Material. **LO1,** 10.06–03.07.2020, pt — 1 ♀, 48 ♂♂; **LO2**, same date, pt — 1 ♀, 7 ♂♂, 1 juv; **Ms6**, same date, pt — 2 ♂♂.

Heriaeus oblongus Simon, 1918

Material. **FBs5**, 23.06.2019, sn — 2 ♀♀.

Ozyptila praticola (C. L. Koch, 1837)

Material. **F1**, 25.05–08.06.2019, pt — 7 ♀♀; **F1**, 08–25.06.2019, pt — 12 ♂♂.

Ozyptila pullata (Thorell, 1875)

Material. **FBs3**, 05.09–19.09.2021, pt — 1 ♀.

Ozyptila scabricula (Westring, 1851)

Material. **FBs5**, 23.05–22.06.2019, pt — 2 ♀♀; **FBs10**, same date, pt — 2 ♀♀; **FBs1**, 08–25.06.2019, pt — 1 ♀; **Ms1**, same date, pt — 1 ♀; **FBs4**, 10.04–29.04.2021, pt — 1 ♂; **Ms1**, 21.07–05.09.2021, pt — 1 ♂.

Runcinia grammica (C. L. Koch, 1837)

Material. **FBs5,** 21.05.2019, sn — 3 juv; **SH5**, same date, sn — 12 juv; **FBs6**, 22.05.2019, sn — 45 juv; **SH4**, same date, sn — 16 juv; **SH1**, same date, sn — 15 juv; **FBs7**, 23.05.2019, sn — 25 juv; **FBs8**, 24.05.2019, sn — 12 juv; **Ms1**, 08.06.2019, sn — 5 ♀♀, 2 ♂♂, 4 juv; **FBs1**, same date, sn — 6 ♀♀, 6 ♂♂, 7 juv; **SH1**, 22.06.2019, sn — 1 ♀; **SH2**, same date, sn — 4 ♀♀, 3 ♂♂; **FBs7**, same date, sn — 2 ♀♀, 1 ♂, 2 juv; **FBs5**, 23.06.2019, sn — 1 ♀; **SH5**, same date, sn — 1 ♀, 3 ♂♂; **Ms2**, same date, sn — 7 ♀♀, 5 ♂♂, 3 juv; **FBs10**, 23.05–22.06.2019, pt — 1 ♀; **SH2**, same date, pt — 1 ♀; **FBs1**, 25.06.2019, sn — 1 ♀; **LO1**, 10.06.2020, sn — 1 ♀; **SH2**, 15.06.2020, sn — 4 ♀♀, 2 juv; **FBs9**, 17.06.2020, sn — 2 ♀♀, 6 juv; **LS1**, same date, sn — 2 ♀♀, 1 juv; **Ms4**, same date, hc — 1 ♂; **FBs11**, same date, sn — 5 ♀♀, 2 juv; **FBs11**, same date, hc — 1 juv; **SH3**, same date, sn — 3 ♀♀, 3 ♂♂; **FBs12**, 18.06.2020, sn — 18 ♀♀, 2 juv; **FBs12**, same date, hc — 1 ♀; **Ms5**, same date, sn — 6 juv; **FBs4**, 19.09.2021, sn — 2 juv.

* *Spiracme striatipes* (L. Koch, 1870)

Material. **FBs7**, 22–24.05.2019, hc — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 2 ♀♀; **FBs2**, same date, pt — 2 ♀♀; **FBs3**, same date, pt — 1 ♀; **FBs4**, 29.04–05.06.2021, pt — 1 ♀; **FBs4**, 05.09–19.09.2021, pt — 1 ♂; **FBs4**, 19.09.2021 sn — 1 ♀, 6 ♂♂.

Thomisus onustus Walckenaer, 1805

Material. **SH5**, 21.05.2019, sn — 2 ♀♀, 2 ♂♂, 5 juv; **FBs6**, 22.05.2019, sn — 5 ♀♀, 2 ♂♂, 3 juv; **SH4**, same date, sn — 2 ♀♀, 3 juv; **SH1**, same date, sn — 1 juv; **FBs7**, 23.05.2019, sn — 6 ♂♂, 1 juv; **FBs8**, 24.05.2019, sn — 1 ♀, 3 ♂♂, 5 juv; **Ms3**, same date, sn — 1 juv; **Ms1**, 08.06.2019, sn — 1 ♀, 2 ♂♂, 1 juv; **FBs1**, same date, sn — 3 ♂, 2 juv; **SH2**, 22.06.2019, sn — 1 ♀; **Ms2**, 23.06.2019, sn — 1 ♀, 1 ♂; **FBs1**, 25.06.2019, sn — 1 ♀; **SH2**, 15.06.2020, sn — 1 ♂; **Ms4**, 17.06.2020, hc — 1 ♀; **SH3**, same date, sn — 1 ♀; **FBs4**, 19.09.2021, sn — 2 juv; **Ms1**, same date, sn — 1 juv.

* *Xysticus acerbus* Thorell, 1872

Material. **FBs5**, 23.05–22.06.2019, pt — 1 ♀; **FBs7**, same date, pt — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♂; **FBs2**, same date, pt — 1 ♀; **FBs1**, 10.04–29.04.2021, pt — 1 ♀, 1 ♂; **FBs4**, same date, pt — 7 ♂♂; **Ms1**, same date, pt — 2 ♂♂; **FBs3**, same date, pt — 1 ♀, 6 ♂♂; **FBs1**, 29.04–05.06.2021, pt — 1 ♀, 2 ♂♂; **FBs4**, same date, pt — 1 ♀, 2 ♂♂; **FBs3**, same date, pt — 2 ♂♂.

Xysticus cristatus (Clerck, 1757)

Material. **FBs7**, 22–24.05.2019, hc — 1 ♀; **F1**, 25.05–08.06.2019, pt — 1 ♂.

Xysticus kochi Thorell, 1872

Material. **SH5**, 21.05.2019, sn — 1 ♂; **Ms1**, 08.06.2019, sn — 1 ♀; **FBs1**, same date, sn — 1 ♀; **FBs10**, 23.05–22.06.2019, pt — 1 ♂; **SH2**, same date, pt — 1 ♀; **F2**, same date, pt — 1 ♀; **FBs1**, 25.05–08.06.2019, pt — 1 ♀; **FBs2**, same date, pt — 1 ♀; **FBs3**, same date, pt — 1 ♀, 1 ♂; **Ms4**, 17.06.2020, hc — 1 ♀; **FBs1**, 10.04–29.04.2021, pt — 2 ♂♂; **Ms1**, same date, pt — 3 ♂♂; **FBs3**, same date, pt — 1 ♀, 5 ♂♂; **FBs4**, 29.04–05.06.2021, pt — 2 ♂♂; **FBs4**, 19.09.2021, sn — 5 juv.

***Xysticus laetus* Thorell, 1875**

Material. **FBs3**, 10.04–29.04.2021, pt — 1 ♂.

*** *Xysticus marmoratus* Thorell, 1875**

Material. **FBs9**, 23.05–22.06.2019, pt — 2 ♀.

Family TITANOECIDAE Lehtinen, 1967

*** *Nurscia albomaculata* (Lucas, 1846)**

Material. **FBs3**, 25.06.2019, sn — 1 juv.

*** *Nurscia albosignata* Simon, 1874**

Material. **FBs3**, 08–25.06.2019, pt — 1 ♂; **Ms1**, 21.07–05.09.2021, pt — 1 ♂.

***Titanoeca schineri* L. Koch, 1872**

Material. **FBs2,** 25.05–08.06.2019, pt — 1 ♂; **F1**, same date, pt — 1 ♂; **FBs1**, 08–25.06.2019, pt — 1 ♂; **F1**, same date, pt — 1 ♀, 13 ♂; **FBs9**, 15.06–03.07.2020, pt — 1 ♀, 1 ♂; **SH2**, same date, pt — 1 ♂; **FBs7**, same date, pt — 1 ♀.

***Titanoeca ukrainica* Guryanova, 1992**

Material. **FBs9**, 23.05–22.06.2019, pt — 2 ♂♂.

*** *Titanoeca veteranica* Herman, 1879**

Material. **FBs1**, 25.05–08.06.2019, pt — 1 ♂; **FBs2**, same date, pt — 2 ♂♂.

Family ULOBORIDAE Thorell, 1869

***Uloborus walckenaerius* Latreille, 1806**

Material. **FBs8**, 24.05.2019, sn — 1 juv; **Ms3**, same date, sn — 1 juv; **Ms2**, 23.06.2019, sn — 1 ♀; **SH2**, 15.06.2020, hc — 1 ♀; **Ms2**, same date, hc — 1 ♀; **LS1**, 17.06.2020, sn — 1 ♀; **LS2**, same date, hc — 1 ♀; **Ms4**, same date, hc — 2 ♀♀; **FBs11**, same date, sn — 1 ♀; **SH3**, same date, sn — 1 ♂; **FBs12**, 18.06.2020, sn — 1 ♀, 1 juv.

Family ZODARIIDAE Thorell, 1881

***Zodarion thoni* Nosek, 1905**

Material. **FBs5**, 23.05–22.06.2019, pt — 6 ♀♀, 7 ♂♂; **FBs9**, same date, pt — 3 ♀♀; **FBs10**, same date, pt — 1 ♀; **SH1**, same date, pt — 3 ♀♀, 1 ♂; **SH2**, same date, pt — 8 ♀♀, 5 ♂♂; **FBs7**, same date, pt — 17 ♀♀, 29 ♂♂; **FBs8**, same date, pt — 6 ♀♀; **FBs2**, 25.05–08.06.2019 pt — 4 ♀♀, 25 ♂♂; **FBs3**, same date, pt — 13 ♀♀, 37 ♂♂; **Ms1**, same date, pt — 3 ♂♂; **FBs1**, 08–25.06.2019, pt — 4 ♂♂; **FBs2**, same date, pt — 8 ♀♀, 18 ♂♂; **FBs3**, same date, pt — 6 ♀♀, 13 ♂♂; **F1**, same date, pt — 1 ♂; **SH2**, 15.06–03.07.2020, pt — 4 ♀♀; **FBs7**, same date, pt — 1 ♀.

Three spider species were recorded for the first time from Kherson Region. *Harpactea alexandrae* is known from Bulgaria, Romania (Nentwig *et al.*, 2023), and Krasnodar Krai of Russia (Ponomarev *et al.*, 2018). In Ukraine, it has been reported from Crimea (Kovblyuk, Kastrygina, 2013). Sofiivska Balka represents the northernmost limits of the species range. The range of *Attulus inopinabilis* stretches from southern Ukraine (Novokairy is the westernmost locality) to Kazakhstan and Kyrgyzstan and southward to northern Iran (Logunov, 2023). *Ero koreana* is widely distributed from Bulgaria and Ukraine to Korea and Japan (Nentwig *et al.*, 2023). We confirmed the finding of *Steatoda paykulliana* from Kherson Region, which was previously considered doubtful due to the lack of collecting material. The records of 62 species are new to the right-bank part of Kherson Region. The identifications of *Eresus kollari* Rossi, 1846 from Osokorivka (Prokopenko, Zhukov, 2018) and *Gnaphosa ukrainica* Ovtsharenko, Platnick, Song, 1992 from Kamianska Sich (Iosypchuk, 2019; Polchaninova *et al.*, 2021a) need to be verified.

Two other rare species for Ukraine should be noted. *Nurscia albosignata* was recorded from Kherson Region and Crimea (Polchaninova, Prokopenko, 2013, 2019; Kovblyuk *et al.*, 2016). Although it is spread widely and quite numerous in Crimea (Kovblyuk *et al.*, 2016), only two localities in mainland Ukraine are known, both in Kherson Region (Polchaninova, Prokopenko, 2013, present data). The species is spread from Greece to Kyrgyzstan and southward to Cyprus (Kovblyuk *et al.*, 2016); the northern border of its range runs through the south of Kherson Region. *Heriaeus horridus* was recorded by a single individual from Shyroka Balka in Kherson Region (Polchaninova *et al.*, 2021a). Later I collected 60 individuals from this locality, indicating that the species is abundant at the western edge of its range but has a patchy distribution.

I consider *Harpactea alexandrae* and *Nurscia albosignata* as the species of conservation concern, since their findings in Ukraine are limited to only two regions; *Attulus inopinabilis*, *Ero koreana*, *Heriaeus horridus*, and *Steatoda paykuliana* also require protection due to their mosaic distribution in threatened habitats.

I found 74 spider species in the grassland habitats near the Dnipro estuary (Sofiivska Balka and Shyroka Balka) and 77 species upstream along the Dnipro riverbed (Kamianska Sich). Only 37 species were common in both sites (Sørensen index = 0.49). Of these, *Thomisus onustus*, *Runcinia grammica*, and *Oxyopes lineatus* were widely spread and abundant in the herbage, while *Berlandina cinerea*, *Drassodes lapidosus*, *Haplodrassus bohemicus*, *Alopecosa cursos, A. kovblyuki*, *Thanatus arenarius*, *Xysticus kochi, and Zodarion thoni* occurred on the ground. *Neoscona adianta* was collected mainly in Kamianska Sich; *Thanatus atratus* and *Zelotes eugenei*, in contrast, were more abundant in Sofiivska Balka. *Civizelotes caucasius* occurred in more xerophytic conditions near the estuary, while *Xysticus acerbus* inhabited south-southwestern slopes dominated by forbs in Kamianska Sich and different habitats in Sofiivkska Balka. In this gully, the proximity of the Dnipro estuary explains the presence of a number of mesophilous species (*Agroeca cuprea*, *Alopecosa farinosa*, *A. pulverulenta*, *Drassodes pubescens*, *Haplodrassus signifer*, *Zelotes fuscus*), which are absent from Kamianska Sich, located on the high river bank and flat interfluves. Xerophilous species with southern distribution were also more abundant in Sofiivska Balka, which indicates a mixed character of its spider assemblages.

Comparison of the spider faunas of the studied gullies with those of the gully systems of Mykolaiv Region (Yelanets Steppe, 104 species) and Dnipropetrovsk Region (Kryvyi Rih vicinity, 95 species) showed significant differences. Forty-seven species out of 186 (25.2%) occurred at the three sites. Forty-five species (24.1%) were recorded from Kherson Region only. The large number of local species indicates a mosaic distribution of spiders in the steppe gullies, resulting from the relative isolation of their habitats. The spider faunas of Kryvyi Rih and Yelanets Steppe were the most similar (Sørensen index = 0.68), perhaps due to their more northerly location in the forb-bunchgrass steppe subzone, while that of the gullies near the Dnipro estuary was the most specific (Sørensen index is equal to 0.44–0.45 in comparison with the above faunas).

Conclusions. The spider fauna of the studied gullies consists of species widely spread in the steppes of Ukraine, as well as rare species occurring locally. The fauna is enriched by mesophilous species preferring gully bottoms, scrubs, and forest plantations. Insularization of the steppe habitats leads to the weakening of species exchange and faunistic specificity of each locality. Conservation of steppe biodiversity requires a net of protected areas. The area in question was occupied by the Russian troops for more than eight months. It is currently unknown how the consequences of hostilities (fires, flooding, destruction of soil and vegetation cover, toxic effects of substances from destroyed ammunition or military vehicles) have affected the biodiversity of the damaged areas and whether the above-mentioned species have survived their influence.

Acknowledgments. We are grateful to N. Yu. Polchaninova (V. N. Karazin Kharkiv National University) for her help in collecting and identifying the material, and also the staffs of Nyzhniodniprovskyi and Kamianska Sich national nature parks, I. I. Moysiyenko and K. S. Orlova-Hudim (Kherson State University) for their help in organizing the expeditions.

REFERENCES

Barbarych, A. I., ed. **1977.** *Geobotanical Zoning of the Ukrainian SSR [Геоботанічне районування Української РСР]*. Naukova dumka, Kyiv, 1–305. [in Ukrainian].

Baumann, M., Kamp, J., Pötzschner, F., Bleyhl, B., Dara, A., Hankerson, B., Prishchepov, A. V., Schierhorn, F., Müller, D., Hölzel, N., Krämer, R., Urazaliyev, R., Kuemmerle, T. 2020. Declining human pressure and opportunities for rewilding in the steppes of Eurasia. *Diversity and Distributions*, **26**(9), 1058–1070. DOI: https://doi.org/10.1111/ddi.13110.

Bondarchuk, V. G. 1949. *Geomorphology of the UkrSSR [Геоморфологія УРСР]*. Radianska shkola, Kyiv, 1–243. [in Ukrainian].

Hobohm, C., Janišová, M., Vahle, H-C. 2021. Development and future of grassland ecosystems: Do we need a paradigm shift? *In:* Hobohm, C., ed. *Environmental Challenges and Solutions*. Springer, Cham, 329–359. DOI: https://doi.org/10.1007/978-3-030-57710-0_14.

Iosypchuk, A. 2019. First data on the spider fauna (Araneae) of the National Nature Park 'Kamianska Sich' (South Ukraine). *Biology: From a Molecule Up to the Biosphere* (Kharkiv, November 27–29, 2019): proceedings of the 14th international young scientists' conference. V. N. Karazin Kharkiv Natonal University, Kharkiv, 169–171.

Iosypchuk, A. M. 2021. New data on the spider fauna (Araneae) of the National Nature Park 'Kamyanska Sich'. *Academic and Scientific Challenges of Diverse Fields of Knowledge in the 21st Century. Clil in Action* (Kharkiv, March 12, 2021): abstracts of X Ukrainian scientific conference with international participation. V. N. Karazin Kharkiv Natonal University, Kharkiv, 248–255. URL: https://drive.google.com/file/d/1M4XklBZ3emsrXaKz3ZgSFkgPyOM08eci/view.

Iosypchuk, A. M., Orlova, K. S. 2018. The role of arachnofauna in the ecosystem of the NNP 'Oleshkivski Pisky' (within the Burkut reserve) [Місце арахнофауни в екосистемі НПП «Олешківські піски» (в межах Буркутського урочища)]. *Materials of the Scientific and Practical Conference of the Ukrainian Competition of Student Research Papers in the Specialty 'Ecology'* (Poltava, March 28–30, 2018) [*Матеріали науково-практичної конференції всеукраїнського конкурсу студентських наукових робіт зі спеціальності «Екологія»* (Полтава, 28–30 березня 2018 р.)]. Poltava National Technical University, Poltava, 16. [in Ukrainian].

Iosypchuk, A. M., Polchaninova, N. Yu., Orlova-Hudim, K. S. 2020. New data on the spider (Araneae) species composition and habitat distribution of the National Nature Park 'Dzharylhatskyi' [Нові відомості про видовий склад та біотопічний розподіл павуків (Araneae) Національного природного парку «Джарилгацький»]. *Natural History Almanac. Series: Biological Sciences [Природничий альманах. Серія: Біологічні науки]*, **28**, 44–52. DOI: https://doi.org/10.32999/ksu2524-0838/2020-28-4. [in Ukrainian].

Kovblyuk, M. M., Gnelitsa, V. A., Nadolny, A. A., Kastrygina, Z. A., Kukushkin, O. V. 2016. Spiders (Arachnida: Aranei) of the Karadag Nature Reserve (Crimea) [Пауки (Arachnida: Aranei) Карадагского природного заповедника (Крым)]. *Ekosistemy [Экосистемы]*, **3**, 3–288. URL: https://elibrary.ru/item.asp?id=26607571. [in Russian].

Kovblyuk, M. M., Kastrygina, Z. A. 2013. Two interesting species of the genus *Harpactea* from Crimea (Aranei: Dysderidae). *Arthropoda Selecta*, **22**(3), 233–238. DOI: https://doi.org/10.15298/arthsel.22.3.06.

Logunov, D. V. 2023. On the jumping spiders (Araneae: Salticidae) from Iran collected by Antoine Senglet (1927–2015). *Arachnology*, **19**(4), 732–768. DOI: https://doi.org/10.13156/arac.2023.19.4.732.

Moysiyenko, I. I., Kuns, B., Dayneko, P. M. 2019. An projected botanical reserve 'Staroshvedsky' (Kherson Region, Ukraine) [Проектований ботанічний заказник «Старошведський» (Херсонська область, Україна)]. *Chornomorski Botanical Journal. [Чорноморський ботанічний журнал]*, **15**(1), 6–16. DOI: https://doi.org/10.32999/ksu1990-553X/2019-15-1-1. [in Ukrainian].

Nentwig, W., Blick, T., Bosmans, R., Gloor, D., Hänggi, A., Kropf, C. 2023. *Spiders of Europe.* Version 11.2023. URL: https://www.araneae.nmbe.ch. [Accessed: November 14, 2023]. DOI: https://doi.org/10.24436/1.

Orlofske, J. M., Ohnesorg, W. J., Debinski, D. M. 2011. A comparison of the arthropod communities in remnant, restored, and reconstructed Iowa tallgrass prairies. *Natural Areas Journal*, **31**(2), 148–155. DOI: https://doi.org/10.3375/043.031.0207.

Ponomarev, A. V., Shokhin, I. V., Terskov, E. N., Shmatko, V. Y. 2018. Preliminary data on the fauna of spiders (Aranei) of Taman Peninsula and Tuzla Island (Russia) [Предварительные данные о фауне пауков (Aranei) Таманского полуострова и острова Тузла (Россия)]. *Caucasian Entomological Bulletin [Кавказский энтомологический бюллетень]*, **14**(2), 121–129. DOI: https://doi.org/10.23885/181433262018142-121129. [in Russian].

Polchaninova, N. 2021. Spiders (Arachnida: Araneae) in dry grasslands of south Ukraine: a case study of Yelanetskyi Steppe Natural Reserve. *Arachnologische Mitteilungen*, **61**(1), 27–35. DOI: https://doi.org/10.30963/aramit6105.

Polchaninova, N. Yu., Prokopenko, E. V. 2013. Catalogue of the spiders (Arachnida, Aranei) of Left-Bank Ukraine. *Arthropoda Selecta*, Supplement, **2**, 1–268. URL: https://kmkjournals.com/journals/AS/AS_Index_Volumes/AS_Suppl/Add2_Polch_Prokop.

Polchaninova, N. Yu., Prokopenko, E. V. 2019. An updated checklist of spiders (Arachnida: Araneae) of Left-Bank Ukraine. *Arachnologische Mitteilungen*, **57**(1), 60–64. DOI: https://doi.org/10.30963/aramit5711.

Polchaninova, N., Gnelitsa, V., Terekhova, V., Iosypchuk, A. 2021a. New and rare spider species (Arachnida, Araneae) from Ukraine. *Zoodiversity*, **55**(2), 95–112. DOI: https://doi.org/10.15407/zoo2021.02.095.

Polchaninova, N., Krasova, O., Lysohor, L., Atemasova, T. 2021b. Assessment of the conservation value of dry grassland habitats in the Inhulets River basin (Central Ukraine) based on vegetation and spider research. *Hacquetia*, **20**(1), 225–242. DOI: https://doi.org/10.2478/hacq-2021-0003.

Prokopenko, E. V., Zhukov, A. V. 2018. Spider (Aranei) steppe community in a ravine with fescue-feather-grass petrophytic vegetation [Степное сообщество пауков (Aranei) в балке с типчаково-ковыльной петрофильной растительностью]. *Acta Biologica Sibirica*, **4**(1), 17–21. DOI: https://doi.org/10.14258/abs.v4i1.3922. [in Russian].

Solascasas, P., Francisco, M. Azcárate, F. M., Hevia, V. 2022. Edaphic arthropods as indicators of the ecological condition of temperate grassland ecosystems: A systematic review. *Ecological Indicators*, **142**, 109277. DOI: https://doi.org/10.1016/j.ecolind.2022.109277.

Sørensen, T. 1948. Method of establishing groups of equal amplitude in plant sociology based on similarity of species and its application to analyses of the vegetation on Danish commons. *Biologiske Skrifter / Kongelige Danske Videnskabernes Selskab*, **5**(4), 1–34.

World Spider Catalog. 2023. *World Spider Catalog*. Version 24.5. Natural History Museum, Bern. URL: http://wsc.nmbe.ch. [Accessed: November 14, 2023]. DOI: https://doi.org/10.24436/2.

V. N. Karazin Kharkiv National University,
Kherson State University

UDC 595.76:582.284(477) DOI: 10.36016/KhESG-2023-31-2-4

© 2023 O. M. DROGVALENKO

BEETLES (COLEOPTERA) ASSOCIATED WITH THE TINDER FUNGUS, *FOMES FOMENTARIUS* (L.) FR. (POLYPORALES: POLYPORACEAE) IN UKRAINE

Дрогваленко, О. М. Твердокрилі (Coleoptera), пов'язані з трутовиком справжнім *Fomes fomentarius* (L.) Fr. (Polyporales: Polyporaceae) в Україні. *Вісті Харківського ентомологічного товариства*. 2023. Т. XXXI, вип. 2. С. 39–48. DOI: 10.36016/KhESG-2023-31-2-4.
Трутовик *Fomes fomentarius* — один з найпоширеніших видів ксилотрофних грибів, трапляється як у природних біотопах, так і в антропогенних. Гриби мають багаторічні плодові тіла зі щільними, але не дуже твердими текстурами «тканин», вони є центром сталого комплексу міцетофільних комах, переважно жуків. Дослідження в Україні виявило на/в карпофорах 110 видів жуків із 26 родин, з яких 72 види виявилися міцетобіонтами. З'ясовано, що незалежно від місця дослідження специфічний комплекс видів залишається незмінним: Tenebrionidae — Ciidae (*Cis* spp. з групи *castaneus*) — Ciidae (*Ropalodontus* spp.) — Ptinidae (*Dorcatoma* spp.). 2 рис., 1 табл., 23 назв.
Ключові слова: міцетобіонти, міцетофаги, трутовикові гриби, плодове тіло.

Drogvalenko, O. M. Beetles (Coleoptera) associated with the tinder fungus, *Fomes fomentarius* (L.) Fr. (Polyporales: Polyporaceae) in Ukraine. *The Kharkov Entomological Society Gazette*. 2023. Vol. XXXI, iss. 2. P. 39–48. DOI: 10.36016/KhESG-2023-31-2-4.
The tinder fungus *Fomes fomentarius* is one of the most common species of xylotrophic fungi, found both in natural and anthropogenic biotopes. The fungi have perennial fruiting bodies with dense but not very hard textured 'tissues' and are the center of a stable complex of mycetophilous insects, mainly beetles. A study in Ukraine found 110 species of beetles from 26 families on/in carpophores, of which 72 species turned out to be mycetobionts. It was found that, regardless of the location of the study, the specialist species complex remains constant: Tenebrionidae — Ciidae (*Cis* spp. from the *castaneus* species group) — Ciidae (*Ropalodontus* spp.) — Ptinidae (*Dorcatoma* spp.). 2 figs, 1 tab., 23 refs.
Keywords: mycetobionts, mycetophages, bracket fungi, fruiting body.

Дрогваленко, А. Н. Жесткокрылые (Coleoptera), связанные с трутовиком настоящим *Fomes fomentarius* (L.) Fr. (Polyporales: Polyporaceae) в Украине. *Известия Харьковского энтомологического общества*. 2023. Т. XXXI, вып. 2. С. 39–48. DOI: 10.36016/KhESG-2023-31-2-4.
Трутовик *Fomes fomentarius* — один из самых распространённых видов ксилотрофных грибов, встречается как в природных биотопах, так и в антропогенных. Грибы имеют многолетние плодовые тела с плотными, но не очень жёсткими текстурами «тканей» и являются центром устойчивого комплекса мицетофильных насекомых, преимущественно жуков. Исследование в Украине выявило на/в карпофорах 110 видов жуков из 26 семейств, из которых 72 вида оказались мицетобионтами. Выяснено, что независимо от места исследования специфичный комплекс видов остаётся неизменным: Tenebrionidae — Ciidae (*Cis* spp. из группы *castaneus*) — Ciidae (*Ropalodontus* spp.) — Ptinidae (*Dorcatoma* spp.). 2 рис., 1 табл., 23 назв.
Ключевые слова: мицетобионты, мицетофаги, трутовые грибы, плодовое тело.

I n t r o d u c t i o n . Tinder fungi are an important and integral part of the forest biocenoses. In the natural forests, they play a primary role in the destruction of dead wood, returning the elements to the cycle. They can parasitize living trees, providing the habitat and food for many animals, mostly insects. Complexes of mycetobiont insects, found on carpophores of macromycetes, play an important role in the chain of reductants of forest ecosystems, mechanically destroying basidiomes and dispersing fungal spores. Most of the inhabitants of fruiting bodies are mycetophagous. The rest of the mycetobionts are predators. Random visitors — mycetoxenes, — also regularly occur on the fruiting bodies. Tinder fungi from the various systematic groups have different species compositions of mycetobiont complexes due to differences in the chemical composition of fruiting bodies, the density of 'tissues' of carpophores, the term of existence, etc. In several countries, many researchers have paid attention to these specific insects as well as to the insect complexes in general (Jonsell, Nordlander, 1995; Rukke, 2002; Schigel, 2002, 2009, 2011a, 2011b; Tatarinova, Nikitsky, Dolgin, 2008; Jonsell *et al.*, 2016; Andrési, Tuba, 2018; Sazhnev, Mironova, 2019). Some studies of these complexes were also conducted in Ukraine (Drogvalenko, 1997a, 1997b, 2007, 2016; Mateleshko, 2005; Mateleshko, Lovas, 2010; Diedus *et al.*, 2022). Our current study of Ukrainian mycetobionts has lasted since 1991.

One of the most common species of xylotrophic fungi in Ukraine is the tinder fungus, *Fomes fomentarius* (L.) Fr. This species of fungi belongs to the class Agaricomycetes, order Polyporales, and has a Holarctic distribution. Its fruiting bodies are perennial, sessile, first rounded and then characteristically hoof-

Drogvalenko O. M. Museum of Nature of the V. N. Karazin Kharkiv National University,
8, Trinkler St., Kharkiv, 61058, UKRAINE; e-mail: triplaxxx@ukr.net; ORCID: 0000-0001-9855-8421

Received 19.11.2023 **Accepted 10.12.2023 by Dr. N. N. Yunakov** **Published 28.12.2023**

shaped. The stipe is absent; the carpophore is attached to the tree trunk mainly by its upper central part. The tissues of the carpophore are dense, soft, resembling a cork, covered with a thick and very dense crust on the top. The presence of such a crust distinguishes this species from sometimes similar carpophores of tinders from the genera *Fomitopsis*, *Inonotus*, *Phellinus*, and *Ganoderma*. The tubes of hymenophore are quite narrow. Basidioms can be very large: up to 40 cm in diameter and 20 cm thick. It inhabits many deciduous tree species. The fungus is mainly a saprophyte but on the weakened trees it can also be a parasite at first.

Materials and methods. The data were obtained as part of a comprehensive of the mycetophilous fauna of Ukraine through original research and collaboration with colleagues. Over 10,000 specimens were predominantly collected in Ukraine in Kharkiv, Donetsk, Luhansk, Lviv, Zakarpattia, Ternopil, Chernihiv, Chernivtsi regions, and Autonomous Republic of Crimea in the period from 1992–2020 during field seasons from April to October (Fig. 1). The study did not involve the use of traps. Additional data on common species were gathered from UkrBIN (2023) and iNaturalist (2023) communities. For the Supplementary dataset see Drogvalenko (2023).

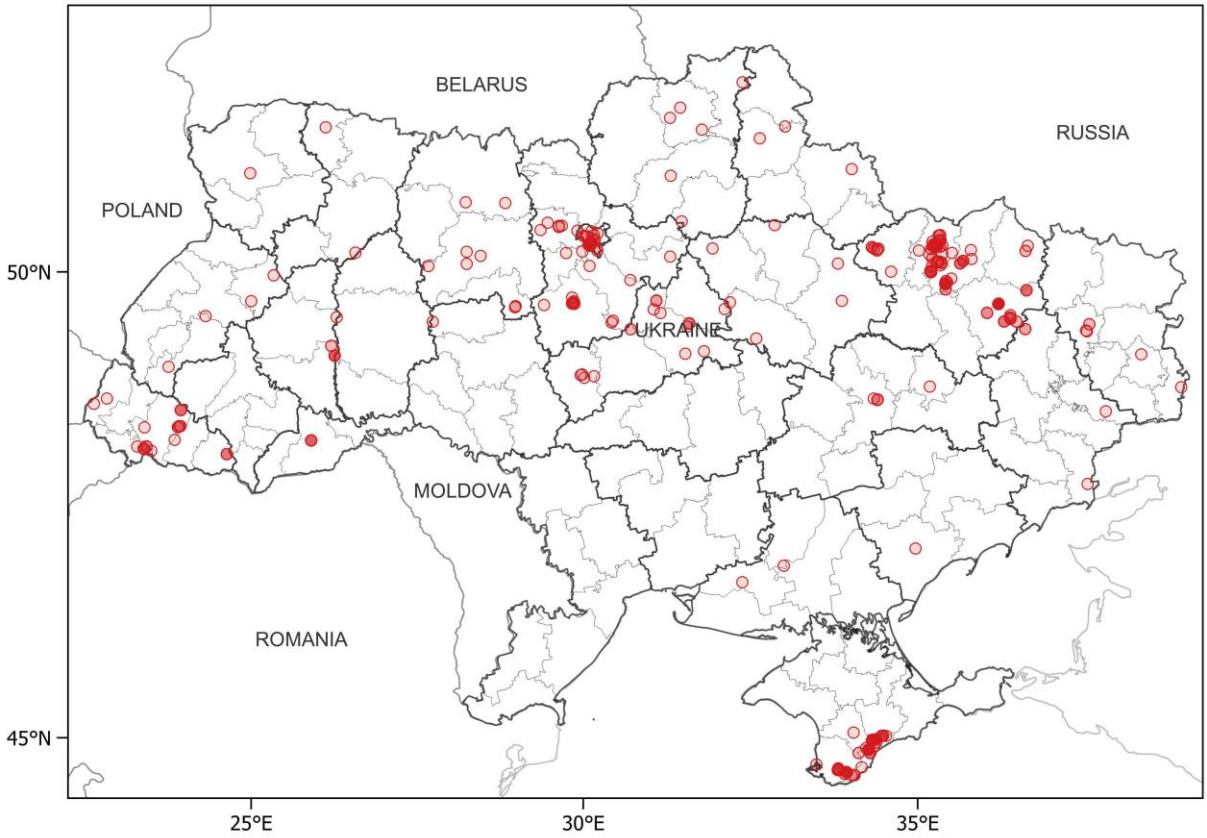


Fig. 1. Occurrences of beetles associated with *F. fomentarius* (data are based on specimen collections and photo observations from UkrBIN.com and iNaturalist.org): pink dots indicate location where beetles have been found; overlapping dots gives a brighter color — this means more finds in a given location.

The beetles and their larvae were collected both directly from fruiting bodies *in situ* and extracted from the inner tissues of carpophores after their destruction in the laboratory. The adults of some species were reared from larvae for secure identification. The vast majority of collected material is stored in the collection of the Museum of Nature of the V. N. Karazin Kharkiv National University (KUMN). The term ‘tissues’ of the fruiting body of the fungus refers to the non-genuine tissue of which the carpophores are composed, and this term will not be used in quotation marks hereafter.

Terminology and abbreviations: We delineated the following categories for this study regarding mycetobiont species based on their abundance and frequency:

Rare species: fewer than 10 specimens collected on tinder fungus per field season.

Common species: 10 to 20 specimens collected on tinder fungus per field season.

Dominant species: over 20 specimens collected on tinder fungus per field season.

Regarding the delimitation of specificity to the tinder fungus, the following categories were established:

Accidental visitor (AM): a species that lacks trophic relationships with both the tinder fungus and other mycetobionts. These insects do not utilize carpophores as a medium for larval development.

Facultative mycetobiont (FM): a species that lacks obligatory trophic relationships with both the tinder fungus and other mycetobionts. Their larvae often develop in alternative conditions.

Obligate mycetobiont (OM): a species that has obligatory trophic relationships with the tinder fungus or other mycetobionts and utilizes carpophores as a medium for larval development, *e. g.* under the bark of dead trees, in fermented tree sap, *etc*.

Results and discussions. 110 species of Coleoptera from 26 families are registered on the fruiting bodies of *F. fomentarius*. A substantial part of them were accidental visitors. The association with carpophores was established for 92 species of mycetobiont beetles: 42 species of obligate mycetobionts (45.6%) and 50 facultative mycetobionts (54.3%). 80 of them were the obligate mycetophages (include myxomycetophages) (86.9%), 6 — facultative mycetophages (6.5%), 5 — predators (5.4%), and 1 were saprophages (1.1%). The data about species composition of Coleoptera complexes from the fruiting bodies of *F. fomentarius*, their trophic relationships, and finding frequencies are given in Table 1 and Fig. 2.

Table 1. Ecological and faunal characteristics of mycetobiont beetles from carpophores *F. fomentarius*

Species	Connection with carpophores *F. fomentarius*	Trophic specialization	Relative abundance
Biphyllidae			
Biphyllus lunatus (Fabricius, 1787)	facultative mycetobiont	mycetophage	+
Diplocoelus fagi (Chevrolat, 1837)	facultative mycetobiont	mycetophage	+
Bothrideridae			
Bothrideres bipunctatus (Gmelin, 1790)	accidental visitor	mycetophage?	+
Carabidae			
Agonum viridicupreum (Goeze, 1777)	accidental visitor	predator	+
Cerylonidae			
Cerylon histeroides (Fabricius, 1792)	facultative mycetobiont	myxomycetophage	+
Ciidae			
Cis bidentatus (Olivier, 1790)	obligate mycetobiont	mycetophage	+
Cis castaneus (Herbst, 1793)	obligate mycetobiont	mycetophage	+++
Cis comptus Gyllenhal, 1827	facultative mycetobiont	mycetophage	++
Cis fagi Waltl, 1839	facultative mycetobiont	mycetophage	+
Cis fusciclavis Nyholm, 1953	obligate mycetobiont	mycetophage	++
Cis glabratus Mellié, 1849	facultative mycetobiont	mycetophage	+
Cis jacquemartii Mellié, 1849	obligate mycetobiont	mycetophage	+++
Cis lineatocribratus Mellié, 1849	obligate mycetobiont	mycetophage	+
Cis matchanus Reitter, 1915	obligate mycetobiont	mycetophage	+
Cis micans (Fabricius, 1792)	facultative mycetobiont	mycetophage	+
Cis submicans Abeille de Perrin, 1874	facultative mycetobiont	mycetophage	+
Ennearthron cornutum (Gyllenhal, 1827)	obligate mycetobiont	mycetophage	+++
Ennearthron palmi Lohse, 1966	facultative mycetobiont	mycetophage	+
Octotemnus glabriculus (Gyllenhal, 1827)	facultative mycetobiont	mycetophage	+
Octotemnus rugosopunctatus Drogvalenko, 2002*	facultative mycetobiont	mycetophage	+
Orthocis alni (Gyllenhal, 1813)	accidental visitor	mycetophage	+
Ropalodontus baudueri (Abeille de Perrin, 1874)	obligate mycetobiont	mycetophage	+++
Ropalodontus perforatus (Gyllenhal, 1813)	obligate mycetobiont	mycetophage	+++
Ropalodontus strandi Lohse, 1969	obligate mycetobiont	mycetophage	+++
Sulcacis fronticornis (Panzer, 1805)	obligate mycetobiont	mycetophage	+
Xylographus bostrichoides (Dufour, 1843)	obligate mycetobiont	mycetophage	++
Coccinellidae			
Halyzia sedecimguttata (Linnaeus, 1758)	accidental visitor	predator, mycetophage	+
Corylophidae			
Arthrolips obscura (C. R. Sahlberg, 1833)	obligate mycetobiont	mycetophage	+++
Orthoperus corticalis (Redtenbacher, 1849)	facultative mycetobiont	mycetophage	++
Cryptophagidae			
Atomaria elongatula Erichson, 1846	facultative mycetobiont	mycetophage	+
Atomaria umbrina (Gyllenhal, 1827)	facultative mycetobiont	mycetophage	+
Cryptophagus labilis Erichson, 1846	facultative mycetobiont	mycetophage	+
Micrambe bimaculatus (Panzer, 1798)	facultative mycetobiont	mycetophage	+
Pteryngium crenatum (Fabricius, 1798)	facultative mycetobiont	mycetophage	+

Continuation of Table 1

Species	Connection with carpophores *F. fomentarius*	Trophic specialization	Relative abundance
Erotylidae			
Dacne bipustulata (Thunberg, 1781)	obligate mycetobiont	mycetophage	+++
Triplax russica (Linnaeus, 1758)	obligate mycetobiont	mycetophage	++
Geotrupidae			
Geotrupes stercorarius (Linnaeus, 1758)	accidental visitor	saprophage	+
Histeridae			
Acritus minutus (Herbst, 1791)	accidental visitor	predator, saprophage	+
Paromalus flavicornis (Herbst, 1791)	accidental visitor	predator, saprophage	+
Hydrophilidae			
Cercyon lateralis (Marsham, 1802)	accidental visitor	saprophage	+
Laemophloeidae			
Cryptolestes pusillus (Schoenherr, 1817)	accidental visitor	mycetophage	+
Placonotus testaceus (Fabricius, 1787)	accidental visitor	mycetophage	+
Latridiidae			
Corticaria lapponica (Zetterstedt, 1838)	facultative mycetobiont	mycetophage	++
Corticaria serrata (Paykull, 1798)	facultative mycetobiont	mycetophage	++
Corticarina minuta (Fabricius, 1792)	accidental visitor	mycetophage	+
Enicmus brevicornis (Mannerheim, 1844)	obligate mycetobiont	mycetophage	+++
Enicmus rugosus (Herbst, 1793)	obligate mycetobiont	mycetophage, myxomycetophage	+++
Enicmus varendorffi Reitter, 1903*	obligate mycetobiont	mycetophage	++
Latridius brevicollis (C. G. Thomson, 1868)	obligate mycetobiont	mycetophage	+++
Latridius consimilis (Mannerheim, 1844)	facultative mycetobiont	mycetophage	+
Latridius hirtus Gyllenhal, 1827	facultative mycetobiont	mycetophage	++
Latridius minutus (Linnaeus, 1767)	facultative mycetobiont	mycetophage	++
Latridius porcatus (Herbst, 1793)	facultative mycetobiont	mycetophage	+
Melanophthalma suturalis (Mannerheim, 1844)	accidental visitor	mycetophage	+
Stephostethus caucasicus (Mannerheim, 1844)	accidental visitor	mycetophage	+
Leiodidae			
Agathidium rotundatum (Gyllenhal, 1827)	facultative mycetobiont	myxomycetophage	+
Agathidium varians Beck, 1817	facultative mycetobiont	myxomycetophage	+
Anisotoma axillaris Gyllenhal, 1810	facultative mycetobiont	myxomycetophage	+
Anisotoma humeralis (Herbst, 1791)	obligate mycetobiont	mycetophage, myxomycetophage	++
Anisotoma orbicularis (Herbst, 1791)	facultative mycetobiont	myxomycetophage	+
Catops fuliginosus Erichson, 1837	accidental visitor	necrophage	+
Lophocateridae			
Grynocharis oblonga (Linnaeus, 1758)	facultative mycetobiont	facultative mycetophage	+
Grynocharis pubescens Erichson, 1844*	facultative mycetobiont	facultative mycetophage	+
Monotomidae			
Rhizophagus bipustulatus (Fabricius, 1792)	facultative mycetobiont	facultative mycetophage	+
Mycetaeidae			
Mycetaea subterranea (Fabricius, 1801)	facultative mycetobiont	mycetophage	+
Mycetophagidae			
Litargus balteatus LeConte, 1856	facultative mycetobiont	mycetophage	+
Litargus connexus (Geoffroy, 1785)	obligate mycetobiont	mycetophage	++
Mycetophagus ciscaucasicus (Semenov, 1899)*	obligate mycetobiont	mycetophage	++
Mycetophagus multipunctatus Fabricius, 1792	facultative mycetobiont	mycetophage	+
Mycetophagus piceus (Fabricius, 1777)	obligate mycetobiont	mycetophage	+++
Mycetophagus quadriguttatus Ph. W. Müller, 1821	facultative mycetobiont	mycetophage	+
Triphyllus bicolor (Fabricius, 1777)	facultative mycetobiont	mycetophage	+
Nitidulidae			
Epuraea biguttata (Thunberg, 1784)	facultative mycetobiont	facultative mycetophage	+
Epuraea terminalis (Mannerheim, 1843)	facultative mycetobiont	facultative mycetophage	+
Ptinidae			
Dorcatoma dresdensis Herbst, 1792	obligate mycetobiont	mycetophage	+++
Dorcatoma minor Zahradník, 1993	obligate mycetobiont	mycetophage	+
Dorcatoma robusta A. Strand, 1938	obligate mycetobiont	mycetophage	+++
Ptinomorphus imperialis (Linnaeus, 1767)	accidental visitor	xylophage	+
Salpingidae			
Salpingus planirostris (Fabricius, 1787)	facultative mycetobiont	mycetophage	+

Continuation of Table 1

Species	Connection with carpophores *F. fomentarius*	Trophic specialization	Relative abundance
Silvanidae			
Ahasverus advena (Waltl, 1834)	accidental visitor	mycetophage	+
Silvanus unidentatus (Olivier, 1790)	accidental visitor	mycetophage	+
Uleiota planatus (Linnaeus, 1761)	accidental visitor	mycetophage	+
Sphindidae			
Aspidiphorus lareyniei Jacquelin du Val, 1859	obligate mycetobiont	mycetophage, myxomycetophage	+++
Aspidiphorus orbiculatus (Gyllenhal, 1808)	obligate mycetobiont	mycetophage, myxomycetophage	+++
Staphylinidae			
Anthobium atrocephalum (Gyllenhal, 1827)	accidental visitor	predator	+
Atheta gagatina (Baudi di Selve, 1848)	facultative mycetobiont	predator	++
Atheta liturata (Stephens, 1832)	facultative mycetobiont	predator	+++
Bolitochara pulchra (Gravenhorst, 1806)	facultative mycetobiont	predator	+++
Dinaraea aequata (Erichson, 1837)	accidental visitor	predator	+
Gyrophaena affinis Mannerheim, 1830	obligate mycetobiont	mycetophage	+++
Gyrophaena joyi Wendeler, 1924	obligate mycetobiont	mycetophage	+++
Gyrophaena manca Erichson, 1839	obligate mycetobiont	mycetophage	+++
Gyrophaena strictula Erichson, 1839	obligate mycetobiont	mycetophage	+++
Lordithon thoracicus (Fabricius,1777)	obligate mycetobiont	predator	++
Scaphisoma agaricinum (Linnaeus, 1758)	obligate mycetobiont	mycetophage	+++
Scaphisoma balcanicum Tamanini, 1954	obligate mycetobiont	mycetophage	+
Scaphisoma boleti (Panzer, 1793)	obligate mycetobiont	mycetophage	+++
Scaphisoma boreale Lundblad, 1952	obligate mycetobiont	mycetophage	+
Scaphisoma inopinatum Löbl, 1967	obligate mycetobiont	mycetophage	++
Scaphisoma subalpinum Reitter, 1880	obligate mycetobiont	mycetophage	+
Sepedophilus bipustulatus (Gravenhorst, 1802)	obligate mycetobiont	predator	+
Sepedophilus immaculatus (Stephens, 1832)	accidental visitor	predator	+
Tenebrionidae			
Alphitophagus bifasciatus (Say, 1824)	facultative mycetobiont	saprophage, mycetophage	+
Bolitophagus reticulatus (Linnaeus, 1767)	obligate mycetobiont	mycetophage	+++
Corticeus bicolor (Olivier, 1790)	facultative mycetobiont	facultative mycetophage	+
Diaperis boleti (Linnaeus, 1758)	facultative mycetobiont	mycetophage	++
Neomida haemorrhoidalis (Fabricius, 1787)	obligate mycetobiont	mycetophage	+++
Platydema triste Laporte de Castelnau et Brullé, 1831*	facultative mycetobiont	mycetophage	+
Zopheridae			
Nosodomodes diabolicus (Schaufuss, 1862)*	facultative mycetobiont	mycetophage	+
Synchita humeralis (Fabricius, 1792)	facultative mycetobiont	mycetophage	+

Notes: +++ — dominant species; ++ — common species; + — rare species; * — species that is known in Ukraine only in Crimea.

The species composition of Coleoptera within the complex of inhabitants of the tinder fungus fruiting bodies depends on the age of basidiome. While young carpophores are wet, the diversity of Coleoptera is low consisting of almost exclusively *Scaphisoma* Leach, 1815 (Staphylinidae), and several species of Mycetophagidae including their larvae. They feed on the young tissues, tunneling them mainly from the surface of the hymenophore. Six *Scaphisoma* species are registered: *S. agaricinum* (Linnaeus, 1758), *S. balcanicum* Tamanini, 1954, *S. boleti* (Panzer, 1793), *S. boreale* Lundblad, 1952, *S. inopinatum* Löbl, 1967, and *S. subalpinum* Reitter, 1880. The most common and abundant were *S. agaricinum* and *S. boleti*. All these species are quite mobile. 7 species from the Mycetophagidae family were found on the tinder fungus basidiomes: on most of Ukraine, the *Litargus connexus* (Geoffroy, 1785) and *Mycetophagus piceus* (Fabricius, 1777) were the most abundant on the fungus fruiting bodies, and *Mycetophagus ciscaucasicus* (Semenov, 1899) was found in the mountain forests of Crimea.

As the fruit bodies ripen, its relative moisture decreases and during sporulation the tubes of the hymenophore open, from which ripe spores begin to pour out. They are spread by air but a sufficient amount of them settles on the upper part of the basidioms and near them on the tree bark. The number of beetle species in the complex is increasing significantly, with mycetosporophages making up a significant part. These are Corylophidae: *Arthrolips obscura* (C. R. Sahlberg, 1833) and *Orthoperus corticalis* (Redtenbacher, 1849). Both of these species are also found on other tinder fruiting bodies and under the bark of dead trees (especially *O. corticalis*).

Spore-feeding Sphindidae, *Aspidiphorus orbiculatus* (Gyllenhal, 1808) and *A. lareyniei* Jacquelin du Val, 1859, are also common on *F. fomentarius* carpophores during sporulation. They are also the most spread in sporophores of some myxomycetes, *e. g. Fuligo, Stemonitis, Lycogala* and others.

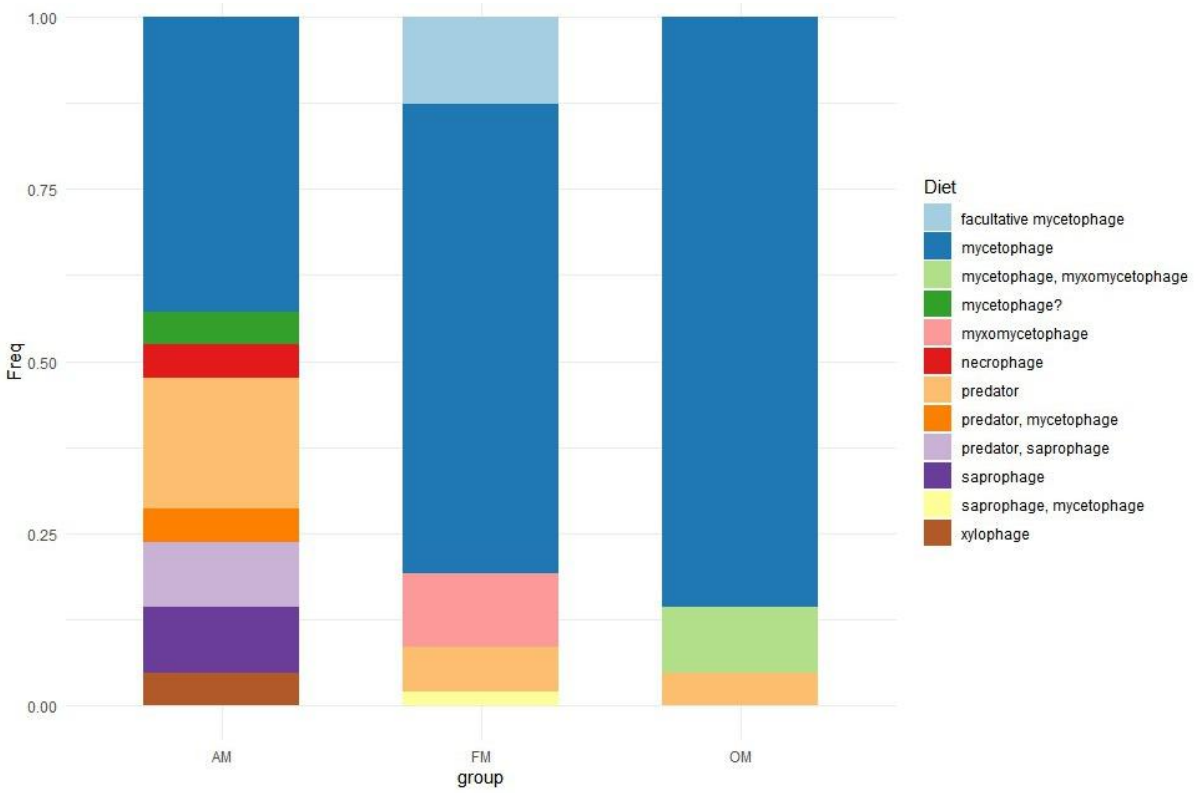


Fig. 2. Proportion of diets per group of mycetobionts: AM — accidental visitors, FM — facultative mycetobionts, OM — obligate mycetobionts.

Among mycetosporophagous Leiodidae registered on tinder fungus, *Agathidium varians* Beck, 1817, *A. rotundatum* (Gyllenhal, 1827), *Anisotoma axillaris* Gyllenhal, 1810 and *A. orbicularis* (Herbst, 1791) are quite rare and *Anisotoma humeralis* (Herbst, 1791) is abundant. Apart from tinder fungus, these leiodids are also associated mainly with slime molds.

Spore-feeders are also diverse among Latridiidae: *Corticaria lapponica* (Zetterstedt, 1838), *C. serrata* (Paykull, 1798), *Enicmus rugosus* (Herbst, 1793), *E. brevicornis* (Mannerheim, 1844), *E. varendorffi* Reitter, 1903, *Latridius brevicollis* (C.G. Thomson, 1868), *L consimilis* (Mannerheim, 1844), *L. hirtus* Gyllenhal, 1827, *L. minutus* (Linnaeus, 1767), and *L. porcatus* (Herbst, 1793). *E. varendorffi* is restricted to the mountain forests of Crimea. Latridiids are micromycetophages that feed on hyphae of many species, including microscopic fungi, and on spores of fungi and slime molds. They were found mainly under the bark of dead trees, and directly on host fungi or myxomycete sporophores, in leaf litter, and other decaying plant debris.

Some Staphylinidae are also sporophages, *e. g. Scaphisoma* species. Remarkably, *Gyrophaena affinis* Mannerheim, 1830, *G. joyi* Wendeler, 1924, *G. manca* Erichson, 1839, and *G. strictula* Erichson, 1839 are abundant in hymenophores. Adults of these rove beetles were found on fruiting bodies and the nearby bark coated with spores. Along with them, the larvae of *Arthrolips*, *Enicmus*, *Gyrophaena*, and *Scaphisoma* were spotted there.

In addition, on the hymenophore and near the basidioms, rather large and mobile larvae of dipterans of Keroplatidae family (Diptera) often developed, being also the sporophages and predators, and creating a web. Fungus gnats from Mycetophilidae family — *Sciophila rufa* Meigen, 1830, also developed on *F. fomentarius*. The appearance of predatory Staphylinidae family becomes frequent on the basidiomes of as a result of the abundant pray insects on the fruiting bodies, the, *e. g. Atheta gagatina* (Baudi di Selve, 1848) *A. liturata* (Stephens, 1832), *Bolitochara pulchra* (Gravenhorst, 1806), *Lordithon thoracicus* (Fabricius, 1777), and *Sepedophilus bipustulatus* (Gravenhorst, 1802).

After the end of sporulation, the spore-feeders gradually disappear from the fruiting bodies and migrate under bark towards other food sources. Simultaneously with the appearance of sporophages, the carpophores are gradually populated by species feeding and developing inside the fruiting bodies. These were the larvae of moths (Tineidae, Lepidopetra), flies (Heleomyzidae, Diptera), and beetles (Tenebrionidae, Ptinidae and Ciidae).

Throughout Ukraine the most typical inhabitants of the *F. fomentarius* carpophores are darkling beetles. *Bolitophagus reticulatus* (Linnaeus, 1767) and *Neomida haemorrhoidalis* (Fabricius, 1787) are most often. The fruit bodies are inhabited by at least one of these species, but sometimes both co-occur the same basidiome, although commonly one of them significantly predominates over another. The adults and larvae of these species can be abundant and continuously live in carpophore until it's completely decaying.

The perennial fruiting bodies of the fungus with dense tissues (*Phellinus*, *Fomitopsis*, *etc.*) or annual species that remain on trees for several years after dying (*Inonotus*, *etc.*, including tinder fungus), are the niche of development and residence of some deathwatch beetles (Ptinidae). We found *Dorcatoma dresdensis* Herbst, 1792, *D. minor* Zahradník, 1993, and *D. robusta* A. Strand, 1938 but other species are mentioned in the literature (Shchigel, 2002). The most common species are *D. dresdensis* and *D. robusta*, whose development lasts 2 years — their larvae inhabit the sterile part of the fruiting body (trama) in the upper part of the basidiome; they pupate near the bark, the exit hole is made on the upper side of the carpophore.

In the forest zone the adults of *Triplax russica* (Linnaeus, 1758) often feed on *F. fomentarius* basidioms. Sometimes their number can be quite significant, although the development occurs only in carpophores of *Inonotus*. Individuals of common *Dacne bipustulata* (Thunberg, 1781) are also noted on *F. fomentarius* fruiting bodies but they are most often and in large abundance found on the basidiomes of fungi with soft tissues, especially on Pleurotaceae.

Ciidae, the most species-reach group, live and develop in the middle of the fruiting bodies. Beetles and larvae inhabit mostly the trama. Ten species from genus *Cis* Latreille, 1796 are noted: *C. bidentatus* (Olivier, 1790), *C. castaneus* (Herbst, 1793), *C. comptus* Gyllenhal, 1827, *C. fagi* Waltl, 1839, *C. fusciclavis* Nyholm, 1953, *C. glabratus* Mellié, 1849, *C. jacquemartii* Mellié, 1849, *C. lineatocribratus* Mellié, 1849, *C. micans* (Fabricius, 1792), and *C. submicans* Abeille de Perrin, 1874. The most typical are *C. castaneus*, *C. jacquemartii*, and *C. lineatocribratus*. In the mainland of Ukraine *C. castaneus* and *C. jacquemartii* were found (sometimes together), and the latter dominated in *F. fomentarius*; in the western regions they co-occur with *C. lineatocribratus*. In Crimea, only *C. castaneus* is recorded.

The other Ciidae found on *F. fomentarius* are *Sulcacis fronticornis* (Panzer, 1805), *Ennearthron E. cornutum* (Gyllenhal, 1827), *E. palmi* Lohse, 1966, *Octotemnus glabriculus* (Gyllenhal, 1827), *O. rugosopunctatus* Drogvalenko, 2002, *Ropalodontus baudueri* (Abeille de Perrin, 1874), *R. perforatus* (Gyllenhal, 1813), *R. strandi* Lohse, 1969, and *Xylographus bostrichoides* (Dufour, 1843).

Most Ciidae species are oligophagous, feeding and developing on several close tinder species, but the species of genera *Ropalodontus* and *Xylographus* in Ukraine are monophagous and associated exclusively with the fruiting bodies of a tinder fungus and are typical inhabitants of such carpophores. *Ropalodontus perforatus* and *R. strandi* were distributed throughout Ukraine, except for the Crimea mountains; they are very close in biology and, according to our observations, they never occur together in the same biotope and the same carpophore. *Ropalodontus baudueri* replaced these two species in the Crimean Mountains, but all the three species together were common in the Carpathians. These species live and develop not only in the trama of fruiting bodies but also in the denser hymenophore. In the Crimean Mountains, *Octotemnus glabriculus*, common throughout Ukraine, was replaced by the close species *O. rugosopunctatus*. In general, these species were not quite typical on *F. fomentarius*, being more common on fungus having carpophores with soft tissues. The small gracile species of *Cis fagi* and *Ennearthron palmi* were not found directly in the carpophores but on the mycelial layer that formed under the bark of the tree next to the fruiting body.

The carpophores are destroyed mainly by the larvae of moths and darkling beetles. Woodpeckers, breaking the old and dry fruiting bodies while searching for insects, often contribute to the destruction. Although the inner tissure of the tinder fungus can be completely destroyed, due to the hard crust the carpophore most often keeps its shape unchanged. Such old basidiomes periodically fall to the soil, where they become available to epigeobiont saprotroph beetles from Geotrupidae and Hydrophilidae families. We noted the findings of *Geotrupes stercorarius* (Linnaeus, 1758) and *Cercyon lateralis* (Marsham, 1802), which, in general, are often found in rotten mushrooms, both cap and fallen tinder. The fallen carpophores are also inhabited by Ciidae, *e. g. Cis matchanus* Reitter, 1915. We registered this species only in western Ukraine, although it might be found in other regions as well. In addition, in such carpophores, if they do not become very wet, the Tenebrionidae adults and larvae continue to exist.

We noted, that size and number of fruiting bodies on the tree significantly impact the species richness and abundance of each taxon. Smaller basidiomes are prone to quicker destruction and produce fewer spores, resulting in a reduction in the number of specialist species.

Correlation is visible between species richness and abundance and the vertical location of carpophores on the tree, as well as the relative position of fruiting bodies to each other. This correlation may be explained by the

strong dependence of beetles on the humidity of dead carpophores, which, in turn, is influenced by the location of the fungus.

Facultative mycetobionts. Besides the obligate mycetobionts, other polyphagous fungivores, and facultative mycetobionts visiting *F. fomentarius* were found. They are living both under the bark of dead trees and associated with basidiomes of other fungi.

Biphyllidae. *Biphyllus lunatus* (Fabricius, 1787) and *Diplocoelus fagi* (Chevrolat, 1837) both are mycetophages. *B. lunatus* is associated with the stroma of Ascomycota, primarily *Daldinia concentrica*, where its larvae develop. *D. fagi* is a micromycetophagous, most often occurring under the bark of dead trees, where it feeds on the microscopic fungi.

Cerylonidae. Adults and larvae of *Cerylon histeroides* (Fabricius, 1792) feed on plasmodia of myxomycetes and are also mainly found under the bark of dead trees or on the rotten wood, but quite often penetrate from there into the old fruiting bodies.

Ciidae. *Orthocis alni* (Gyllenhal, 1813) is the obligate mycetophage, primarily associated with the fruiting bodies of *Exidia* and *Auricularia* on dead trees.

Monotomidae. *Rhizophagus bipustulatus* (Fabricius, 1792) is a micromycetophage that lives under the bark of dead trees, from where it often shifts to carpophores of fungi.

Cryptophagidae. *Atomaria elongatula* Erichson, 1846, *A. umbrina* (Gyllenhal, 1827), *Cryptophagus labilis* Erichson, 1846, *Micrambe bimaculatus* (Panzer, 1798), and *Pteryngium crenatum* (Fabricius, 1798). The vast majority of species of this family are micromycetophages and are not rare on the fruiting bodies, especially those covered with mold. Probably, other species from this family can be found on the basidiomes of *F. fomentarius*.

Laemophloeidae. *Cryptolestes pusillus* (Schoenherr, 1817) and *Placonotus testaceus* (Fabricius, 1787) both are subcortical micromycetophages living on moldy damage of living trees. *C. pusillus* is known as a pest of stored products, although the beetles appear in stocks when those are already infected with fungi.

Latridiidae. *Melanophthalma suturalis* (Mannerheim, 1844), *Corticarina minuta* (Fabricius, 1792), and *Stephostethus caucasicus* (Mannerheim, 1844) are micromycetophages living in litter, on dead tree branches, on dry grasses, in hay and straw. Like Cryptophagidae, they can be expected on the carpophores of *F. fomentarius*.

Lophocateridae. *Grynocharis oblonga* (Linnaeus, 1758) and *G. pubescens* Erichson, 1844 living under the bark, where those are associated with the microscopic fungi, occasionally visiting the fruiting bodies. *G. pubescens* in Ukraine was found only in Crimea.

Mycetaeidae. Micromycetophagous *Mycetaea subterranea* (Fabricius, 1801) is a common inhabitant of synanthropic habitats like cellars and basements, where it feeds on the mold. In natural habitats it lives on molded wood, occasionally under the bark, and in the nests of birds and rodents.

Mycetophagidae. *Litargus balteatus* LeConte, 1856, *Mycetophagus multipunctatus* Fabricius, 1792, *M. quadriguttatus* Ph.W. Müller, 1821, and *Triphyllus bicolor* (Fabricius, 1777) are the obligate mycetophages. Cosmopolitan *L. balteatus* lives in compost, hay, molded tinders, under the bark, on molded wood, and myxomycetes (Nikitsky, Bibin, 2010). It also occurs on the plant residues, noted as a minor pest of stocks (corn, dried fruits, *etc.*). The presence of Mycetophagidae in food stocks indicates poor storage conditions and molded products (Drogvalenko, 2019). *M. multipunctatus* and *T. bicolor* are most often found on the fruiting bodies of soft tinders, they are also common in the cap mushrooms. And *M. quadriguttatus* is rather associated with microscopic fungi, found on the molded tinders, in rodent nests, on plant remains, and even on the carrions.

Nitidulidae. *Epuraea biguttata* (Thunberg, 1784) and *E. terminalis* (Mannerheim, 1843) are micromycetophages associated with the molds and yeasts that develop in the sap that oozes from damaged bark of trees and old fruiting bodies of fungi with soft tissue. Although Nikitsky *et al.* (1996) noted that *E. biguttata* can develop on rotting spores of *F. fomentarius*, we did not observe that.

Salpingidae. *Salpingus planirostris* (Fabricius, 1787) is the obligate mycetophage and is developmentally associated with the various Ascomycota (*Diatrype*, *Hypoxylon*, *etc.*).

Silvanidae. *Ahasverus advena* (Waltl, 1834), *Silvanus unidentatus* (Olivier, 1790), and *Uleiota planatus* (Linnaeus, 1761). *A. advena* is mainly synanthropic and considered as a pest of stock. However, it develops in big abundance only on stocks already damaged by fungi. Two other species are micromycetophages, commonly living under the bark and occasionally shifting on the fruiting bodies.

Tenebrionidae. *Alphitophagus bifasciatus* (Say, 1824) is a cosmopolitan, in some cases injurious in food stocks. In natural habitats it is rare in tree hollows on the fungi. *Corticeus bicolor* (Olivier, 1790) is a common inhabitant of the space under the bark, sapromycetophagous, but we recorded a case when the beetles fed on soft tissues on the hymenophore of a young carpophore *F. fomentarius*. Two rare species are *Diaperis boleti* (Linnaeus, 1758), widely distributed and occurring fungi with low tissue density, and *Platydema triste* Laporte de Castelnau et Brullé, 1831, inhabiting carpophores of various fungi and rot wood in Crimean forests.

Zopheridae. *Nosodomodes diabolicus* (Schaufuss, 1862) is a representative of the Mediterranean fauna and is known in Ukraine only from mountainous Crimea, where it is quite common. It is found under the bark and on the trunks of the dead trees, especially at night, on the various tinders, in which the development of its larvae takes place. *Synchita humeralis* (Fabricius, 1792) is associated to the fungi from the class Ascomycota (*Daldinia*, *Diatrypella*, *Diatrype, Hypoxylon*, *etc.*) and is found on the dead trees damaged by these fungi.

The accidental visitors on fruiting bodies of *F. fomentarius* are also recorded.

Carabidae. The predatory species *Agonum viridicupreum* (Goeze, 1777) is the only ground beetle registered on the tinder fungus.

Histeridae. *Acritus minutus* (Herbst, 1791) and *Paromalus flavicornis* (Herbst, 1791) are predators and sapromycetophages living under the bark, especially if some layer of the bark is rotten.

Bothrideridae. The larvae of *Bothrideres bipunctatus* (Gmelin, 1790) parasitize on the larvae of various xylophagous Coleoptera and Hymenoptera, while the adults are possibly facultative mycetophages.

Coccinellidae. *Halyzia sedecimguttata* (Linnaeus, 1758), is a predatory or micromycetophagous ladybird consuming powdery mildews and frequently forming aggregations on tree trunks.

Leiodidae. Necrophagous *Catops fuliginosus* Erichson, 1837 was collected from a strongly decayed carpophore.

Ptinidae. *Ptinomorphus imperialis* (Linnaeus, 1767) is a xylophagous species developing in the dry wood of deciduous trees.

Staphylinidae. Yet another group of rove beetles occasionally visiting tinder fungus are three predatory species. *Dinaraea aequata* (Erichson, 1837) lives under the bark of dead trees, while *Anthobium atrocephalum* (Gyllenhal, 1827), and *Sepedophilus immaculatus* (Stephens, 1832) usually live in the leaf litter.

Conclusions. The species composition of the Coleoptera complexes in the *Fomes fomentarius* carpophores varies little depending on the geographical location of the study area. The core of species of the specialist complex remains constant and is represented by Tenebrionidae — Ciidae (*Cis* spp. from the *castaneus* species group) — Ciidae (*Ropalodontus* spp.) — Ptinidae (*Dorcatoma* spp.). The following coleopteran complexes may be delimited geographically.

Widespread complex. *Bolitophagus reticulatus* and/or *Neomida haemorrhoidalis* — *Cis jacquemartii* and/or *C. castaneus* — *Ropalodontus perforatus* or *R. strandi* — *Dorcatoma* spp.

Mountain Crimean complex. *Bolitophagus reticulatus* and/or *Neomida haemorrhoidalis* — *Cis castaneus* — *Ropalodontus baudueri* — *Dorcatoma* spp.

Carpathian complex. *Bolitophagus reticulatus* and/or *Neomida haemorrhoidalis* — *Cis jacquemartii* and/or *C. castaneus*, and/or *C. lineatocribratus* — *Ropalodontus perforatus* or *R. strandi* or *R. baudueri* — *Dorcatoma* spp.

These data generally coincide with the similar studies from other countries (Schigel, 2002; Jonsell *et al.*, 2016; Andrési, Tuba, 2018).

Acknowledgments. I express my gratitude to the colleagues who helped me in collecting the material: N. N. Yunakov, V. Yu. Gorbunov, K. S. Nadein, and Yu. O. Guglya. Special thanks to N. N. Yunakov for his assistance in improving this article.

REFERENCES

Andrési, R., Tuba, K. 2018. Comparative study of the *Fomes fomentarius* and *Trametes gibbosa* beetle communities in Hidegvíz Valley, Sopron Mts., Hungary. *Community Ecology,* **19**(2), 141–147. DOI: https://doi.org/10.1556/168.2018.19.2.6.

Diedus, V. I., Chumak, M. V., Chumak, V. O., Varyvoda, M. V., Serediuk, H. V., Hleb, R. Yu., Glotov, S. V. 2022. Mycetophilic beetles (Insecta, Coleoptera) of beech primeval forests of the Uholsky massif of the Carpathian Biosphere Reserve [Міцетофільні твердокрилі (Insecta, Coleoptera) Угольського масиву букових пралісів Карпатського біосферного заповідника]. *Ukrainian Entomological Journal [Український ентомологічний журнал],* **20**, 113–131. DOI: https://doi.org/10.15421/282205. [in Ukrainian].

Drogvalenko, A. N. 1997a. Review of Erotylidae (Coleoptera) fauna of Ukraine [Обзор фауны жуков-грибовиков (Coleoptera, Erotylidae) Украины]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества],* **5**(1), 74–78. URL: http://nbuv.gov.ua/UJRN/Vkhet_1997_5_1_5. [in Russian].

Drogvalenko, A. N. 1997b. Review of Mycetophagidae (Coleoptera) fauna of Ukraine [Обзор фауны жуков-грибоедов (Coleoptera, Mycetophagidae) Украины]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества],* **5**(2), 24–28. URL: http://nbuv.gov.ua/UJRN/Vkhet_1997_5_2_5. [in Russian].

Drogvalenko, A. N. 2007. The beetles of the family Ciidae (Insecta: Coleoptera) of the Ukrainian Carpathians [Жуки семейства Ciidae (Insecta: Coleoptera) Украинских Карпат. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества],* **15**(1–2), 101–104. URL: https://www.zin.ru/animalia/coleoptera/pdf/drogvalenko_2008_ciidae.pdf. [in Russian].

Drogvalenko, A. N. 2016. Mycetophilous darkling beetles (Coleoptera, Tenebrionidae) faunae of Ukraine [Мицетофильные чернотелки (Coleoptera, Tenebrionidae) фауны Украины]. *Ukrainian Entomological Journal [Український ентомологічний журнал]*, **11**(1–2), 77–84. URL: http://nbuv.gov.ua/UJRN/Uej_2016_1-2_11. [in Russian].

Drogvalenko, A. N. 2019. Mycetophagidae — hairy fungus beetles [Mycetophagidae — Грибоеды]. *In:* Orlova-Bienkowskaja, M. J.. ed. *Inventory on Alien Beetles of European Russia [Справочник по чужеродным жесткокрылым европейской части России]*. Mukhametov G. V., Livny, 388–396. URL: https://www.elibrary.ru/item.asp?id=39322086. [in Russian].

Drogvalenko, O. M. 2023. Supplementary data to Coleoptera associated with the tinder fungus (*Fomes fomentarius*) in Ukraine. Dataset ID #4682. *In: UkrBIN, Database on Biodiversity Information*. URL: https://ukrbin.com/literature.php?id=4682.

iNaturalist. 2023. URL: https://www.inaturalist.org (Accessed: November 19, 2023).

Jonsell, M., Nordlander, G. 1995. Field attraction of Coleoptera to odours of the wood-decaying polypores *Fomitopsis pinicola* and *Fomes fomentarius*. *Annales Zoologici Fennici*, **32**(4), 391–402. URL: https://www.sekj.org/PDF/anzf32/anz32-391-402.pdf.

Jonsell, M., González Alonso, C., Forshage M., van Achterberg, C., Komonen, A. 2016. Structure of insect community in the fungus *Inonotus radiatus* in riparian boreal forests. *Journal of Natural History*, **50**(25–26), 1613–1631. DOI: https://doi.org/10.1080/00222933.2016.1145273.

Mateleshko, A. 2005. Coleoptera (Insecta) — mycetobionts of fungi genus *Pleurotus* (Fr.) Kumm. of the Ukrainian Carpathians [Твердокрилі (Insecta, Coleoptera) — міцетобіонти грибів з роду *Pleurotus* (Fr.) Kumm. Українських Карпат]. *Scientific Bulletin of the Uzhhorod University. Series Biology [Науковий вісник Ужгородського університету. Серія Біологія]*, **17**, 127–130. URL: http://lucanus.org.ua/articles/visnyk17/23-mateleshko.pdf. [in Ukrainian].

Mateleshko, A., Lovas, P. 2010. Coleoptera (Insecta) — mycetobionts of the *Laetiporus sulphureus* (Bull. ex. Fr.) Bond et Sing. in the Ukrainian Carpathians [Твердокрилі (Insecta, Coleoptera) — мешканці сірчано-жовтого трутовика (*Laetiporus sulphureus* (Bull. ex. Fr.) Bond et Sing.) в умовах Українських Карпат]. *Scientific Bulletin of the Uzhhorod University. Series Biology [Науковий вісник Ужгородського університету. Серія Біологія]*, **29**, 177–179. URI: https://dspace.uzhnu.edu.ua/jspui/handle/lib/7701. [in Ukrainian].

Nikitsky, N. B., Bibin, A. R. 2010. Family Mycetophagidae — hairy fungus beetles [Семейство Mycetophagidae — Грибоеды]. *In:* Zamotajlov, A. S., Nikitsky, N. B., eds. *Coleopterous Insects (Insecta, Coleoptera) of Republic of Adygheya (Annotated Catalogue of Species) [Жесткокрылые насекомые (Insecta, Coleoptera) Республики Адыгея (аннотированный каталог видов)]*. Adyghei State University Publishers, Maykop, 207–210. URL: https://www.researchgate.net/publication/325556105. [in Russian].

Nikitsky, N. B., Osipov, I. N., Chemeris, M. V., Semenov, V. B., Gusakov, A. A. 1996. The beetles of the Prioksko-Terrasny Biosphere Reserve — xylobiontes, mycetobionts, and Scarabaeidae (with the review of the Moscow Region fauna of the groups) [Жесткокрылые-ксилобионты, мицетобионты и пластинчатоусые Приокско-Террасного биосферного заповедника (с обзором этих групп Московской области)]. *Archives of Zoological Museum Moscow State University [Сборник трудов Зоологического музея Московского государственного университета]*, **36**, 1–197. URL: https://istina.msu.ru/publications/book/2491361. [in Russian].

Rukke, B. 2002. Fungivorous beetles in basidiocarps of *Fomes fomentarius* respond differently to microhabitat variables. *European Journal of Entomology*, **99**(1), 43–52. DOI: https://doi.org/10.14411/eje.2002.010.

Sazhnev, A. S., Mironova, A. A. 2019. Coleopterans (Insecta: Coleoptera) in myco-consortiums of Basidiomycetes (Fungi) in the Saratov Region (Russia) [Жесткокрылые (Insecta: Coleoptera) в составе микоконсорций разных видов базидиомицетов (Fungi) на территории Саратовской области]. *Proceedings of the Mordovia State Nature Reserve [Труды Мордовского государственного природного заповедника]*, **23**, 135–144. URL: https://www.elibrary.ru/item.asp?id=41142249. [in Russian].

Schigel, D. S. 2002. Beetle complexes in polypore fungi in Eastern European Plain and Crimea [Комплексы жесткокрылых-обитателей трутовых грибов Восточно-Европейской равнины и Крыма]. *Bulletin of Moscow Society of Naturalists. Biological Series [Бюллетень Московского общества испытателей природы. Отдел биологический]*, **107**(1), 8–21. URL: https://moip-bio.msu.ru/wp-content/uploads/moip_2002_107_1.pdf. [in Russian].

Schigel, D. S. 2009. *Polypore Assemblages in Boreal Old-Growth Forests, and Associated Coleoptera*. Academic Dissertation. University of Helsinki, Helsinki, 1–50. URL: http://hdl.handle.net/10138/22097.

Schigel, D. S. 2011a. Fungus-beetle food web patterns in boreal forests. *Russian Entomological Journal*, **20**(2), 141–150. DOI: https://doi.org/10.15298/rusentj.20.2.05.

Schigel, D. S. 2011b. Polypore-beetle associations in Finland. *Annales Zoologici Fennici*, **48**(6), 319–348. DOI: https://doi.org/10.5735/086.048.0601.

Tatarinova, A. F., Nikitsky, N. B., Dolgin, M. M. 2008. Fauna and ecology of beetles related with wood-inhabiting fungi and myxomycetes in the European north-east of Russia [Фауна и экология жесткокрылых, связанных с ксилотрофными грибами и миксомицетами, европейского северо-востока России]. *Bulletin of Moscow Society of Naturalists. Biological Series [Бюллетень Московского общества испытателей природы. Отдел биологический]*, **113**(1), 57–60. URL: https://moip-bio.msu.ru/wp-content/uploads/moip_2008_113_1.pdf. [in Russian].

UkrBIN. 2023. UkrBIN, Database on Biodiversity Information. URL: https://www.ukrbin.com (Accessed: November 19, 2023).

Museum of Nature of the V. N. Karazin Kharkiv National University

UDC 595.44(477.54) DOI: 10.36016/KhESG-2023-31-2-5

© 2023 N. Yu. POLCHANINOVA, R. I. HONCHAROV

SPIDERS (ARANEAE) OF THE OAK FORESTS OF KHARKIV REGION (NORTHEASTERN UKRAINE)

Полчанінова, Н. Ю., Гончаров, Р. І. Павуки (Araneae) нагірних дібров Харківської області (Північно-Східна Україна). *Вісті Харківського ентомологічного товариства*. 2023. Т. XXXI, вип. 2. С. 49–60. DOI: 10.36016/KhESG-2023-31-2-5.
У нагірних дібровах Харківської області у 10 локалітетах було зареєстровано 210 видів павуків з 24 родин. Найбагатшою за видовим складом є родина Linyphiidae (25 % фауни); Gnaphodsidae, Araneidae та Theridiidae становлять по 10 %. Під наметом лісу частка Linyphiidae збільшується до 30 %, Gnaphodsidae зменшується до 6 %, а Araneidae та Theridiidae суттєво не змінюється. У трьох локалітетах, де проведені стаціонарні дослідження, 28 видів павуків (14 % фауни) траплялися в усіх типах дібров (суха, свіжа, волога), а також на узліссях і зрубах, 46 видів (24 %) були відсутні під пологом лісу, 12 видів (6 %) уникали вологої діброви, а 4 види (2 %) знайдені тільки у вологій та свіжій дібровах. Видове багатство павуків було найнижчим (43–49 видів) і найбільш подібним у вологих дібровах, а найбагатшим (71–99 видів) і найрізноманітнішим на зрубах і в сухій діброві. Угруповання павуків Старицького лісництва проаналізовано вперше. Аналіз підтвердив загальні риси аранеокомплексів нагірних дібров — домінування *Linyphia triangularis* (Clerck, 1757), *Helophora insignis* (Blackwall, 1841), *Metellina segmentate* (Clerck, 1757) й *Enoplognatha ovata* (Clerck, 1757) у хортобії, *Abacoproeces saltuum* (L. Koch, 1872), *Trochosa terricola* Thorell, 1856 й *Ozyptila praticola* (C. L. Koch, 1837) — у герпетобії, особливо у зволожених затінених місцях, а також наддомінування *Pardosa alacris* (C. L. Koch, 1833) і *P. lugubris* (Walckenaer, 1802) у сухій діброві та на узліссях і зрубах. Співвідношення домінуючих видів, видове та кількісне багатство угруповань павуків залежить від типу діброви. 3 рис., 3 табл., 33 назв.
Ключові слова: фауна, структура угруповань, біотопічний розподіл, лісостеп.

Polchaninova, N. Yu., Honcharov, R. I. Spiders (Araneae) of the oak forests of Kharkiv Region (Northeastern Ukraine). *The Kharkov Entomological Society Gazette*. 2023. Vol. XXXI, iss. 2. P. 49–60. DOI: 10.36016/KhESG-2023-31-2-5.
A total of 210 spider species of 24 families were recorded from 10 localities in the oak forests of Kharkiv Region. The richest is the family Linyphiidae (25% of the fauna), while Gnaphodsidae, Araneidae, and Theridiidae make up 10% each. Under the forest canopy, the share of Linyphiidae increases to 30%, Gnaphodsidae decreases to 6%, and those of Araneidae and Theridiidae do not change significantly. In three sites of stationary research, 28 spider species (14% of the fauna) were found in all types of oak forests (dry, mesic, moist), as well as on the edges and clearings, 46 species (24%) were absent under the forest canopy, 12 species (6%) avoided moist forests, 4 species (2%) were found only in moist and mesic forests. Spider species richness was the lowest (43–49 species) and most similar in the moist oak forests, and the richest (71–99 species) and most diverse in clearings and dry oak forests. Spider assemblages of the Stariytskyi forest were analyzed for the first time. The analysis confirmed general features of the spider assemblages of oak forests: dominance of *Linyphia triangularis* (Clerck, 1757), *Helophora insignis* (Blackwall, 1841), *Metellina segmentate* (Clerck, 1757), and *Enoplognatha ovata* (Clerck, 1757) in the herbage, *Abacoproeces saltuum* (L. Koch, 1872), *Trochosa terricola* Thorell, 1856, and *Ozyptila praticola* (C. L. Koch, 1837) in the litter, especially in mesic and moist forests, and overdominance of *Pardosa alacris* (C. L. Koch, 1833) and *P. lugubris* (Walckenaer, 1802) in the dry oak forest, clearings, and on the edges. The ratio of dominant species, spider species richness and individual abundance are dependent on the type of oak forest. 3 figs, 3 tabs, 33 refs
Keywords: fauna, assemblage structure, habitat distribution, forest-steppe.

Полчанинова, Н. Ю., Гончаров, Р. И. Пауки (Araneae) нагорных дубрав Харьковской области (Северо-Восточная Украина). *Известия Харьковского энтомологического общества*. 2023. Т. XXXI, вып. 2. С. 49–60. DOI: 10.36016/KhESG-2023-31-2-5.
В нагорных дубравах Харьковской области в 10 локалитетах было зарегистрировано 210 видов пауков из 24 семейств. Самым богатым является семейство Linyphiidae (25 % фауны); Gnaphodsidae, Araneidae, Theridiidae составляют по 10 %. Под пологом леса доля Linyphiidae увеличивается до 30 %, Gnaphodsidae уменьшается до 6 %, а Araneidae и Theridiidae существенно не меняется. В трёх локалитетах, где проведены стационарные исследования, 28 видов пауков (14 % фауны) встречались во всех типах дубрав (сухая, свежая, влажная), а также на опушках и вырубках, 46 видов (24 %) отсутствовали под пологом леса, 12 видов (6 %) избегали влажной дубравы, 4 вида (2 %) найдены только во влажной и свежей дубравах. Видовое богатство пауков было самым низким (43–49 видов) и наиболее схожим во влажных дубравах, а самым богатым (71–99 видов) и самыми разнообразным на вырубках, опушках и в сухой дубраве. Изучение пауков Старицкого лесничества было проведено впервые. Анализ подтвердил общие черты аранеокомплексов нагорных дубрав — доминирование *Linyphia triangularis* (Clerck, 1757), *Helophora insignis* (Blackwall, 1841), *Metellina segmentate* (Clerck, 1757) и *Enoplognatha ovata* (Clerck, 1757) в хортобии, *Abacoproeces saltuum* (L. Koch, 1872), *Trochosa terricola* Thorell, 1856 и *Ozyptila praticola* (C. L. Koch, 1837) — в герпетобии, особенно в увлажнённых затенённых биотопах, а также сверхдоминирование *Pardosa alacris* (C. L. Koch, 1833) и *P. lugubris* (Walckenaer, 1802) в сухой дубраве, на опушках и вырубках. Соотношение доминантов, видовое богатство и численность видов зависят от типа дубравы. 3 рис., 3 табл., 33 назв.
Ключевые слова: фауна, структура сообществ, биотопическое распределение, лесостепь.

I n t r o d u c t i o n . The southern broadleaved forests that extend from the foothills of the Carpathians to the western slopes of the Urals support a rich flora and fauna, including a number of rare species with

Polchaninova N.Yu. V.N. Karazin Kharkiv National University,
4, Svobody Sq., Kharkiv, 61022, UKRAINE; e-mail: n.polchaninova@karazin.ua; ORCID: 0000-0003-4605-8788
Honcharov R. I. V.N. Karazin Kharkiv National University,
4, Svobody Sq., Kharkiv, 61022, UKRAINE; e-mail: rohoncharov@gmail.com; ORCID: 0009-0009-9402-5877

Received 14.11.2023 **Accepted 13.12.2023 by Dr. A. G. Shatrovskiy** **Published 28.12.2023**

discontinuous ranges. In the East European Plain, *Quercus robur* Linnaeus, 1753 forms the climax communities, corresponding to the macroclimate of the regional nemoral biome. In the south of the forest-steppe, zonal oak forests cover flat interfluves, while their intrazonal variants occupy ravines and high, right river banks. Despite long-term commercial use and continuous deforestation, large forests have remained in the north-east of Ukraine, some of which are protected in national nature parks (Hetmanskyi, Slobozhanskyi, Dvorichanskyi, Homilshanski Lisy). The study of different taxonomic groups of the forest biota contributes to the understanding of the general processes of its formation and the specificity of local faunas.

We chose spiders as a model group for investigation because they are widespread and abundant in all layers of the forest and are sensitive to changes in microclimatic conditions and prey availability, arising under natural or anthropogenic disturbances. Thus, spiders can be used as a model group to study the dependence of animal communities on the forest type and stand complexity (Buddle, Spence, Langor, 2000; Willet, 2001; Pearce, Venier, 2006; Magura, Horváth, Tóthmérész, 2010).

The first spiders in the forests of Kharkiv Region were collected by O. V. Astakhova at the Biological Station of V. N. Karazin Kharkiv National University (further — KhNU) near the village of Haidary. Most of the collection has been lost, and only four species from this locality are preserved in the funds of the Museum of Nature of KhNU. Further studies in the same locality were carried out by A. V. Prisniy (Prisniy, 1993), five species from his collection were found in the oakery near the biological station (Polchaninova, Prokopenko, 2013). Spiders of the oak forests of the East European Plain were studied by S. Yu. Esjunin (Esjunin, Golovatch, Penev, 1993), who recorded 18 species from the vicinity of Haidary. A study of the diet of white-necked flycatcher nestlings in five oakeries of the region revealed 23 spider species (Polchaninova, Prisada, 1994; Lezhenina *et al.*, 2011). Collection material from the National Nature Park 'Homilshaski Lisy' was included in the analysis of *Zelotes aszheganovae* (Gnaphosidae) distribution in the East European Plain (Evtushenko, Polchaninova, Esyunin, 2015).

Targeted research on the spider fauna and assemblages in the oak forests of the region was started in 1996 at the biological station of KhNU. Since 2004, this area has been included in the National Natural Park 'Homilshanski Lisy'. The research goal was to determine the structure and seasonal dynamics of spider assemblages in the oakeries of different types (Polchaninova, 2003). A retrospective analysis of the summer aspect of spider assemblages in moist and dry oak forests (Khudich, Chvikov, 2018) revealed the stability of dominant complexes despite significant fluctuations in the total number of individuals in different years. In total, 133 spider species were recorded from the oak forests near the biological station.

Another forest massif of Kharkiv Region was investigated in 2001 and 2002 in the Starytskyi forest of Kupiansk District. Spider assemblages of this oakery have not been analyzed, although the species were included in the checklist of spiders of Kharkiv Region (Polchaninova, 2009a) and the catalog of spiders of Left-Bank Ukraine (Polchaninova, Prokopenko, 2013). This forest is located near the border with Russia and currently suffers from constant shelling. The available data on the spider assemblages can be used in the future to assess the impact of hostilities on the forest biota.

In 2021, we investigated the territory in the southwest of the Kharkiv City aiming at creating the Regional Landscape Park 'Smarahdove Dzherelo'. This area represents the typical landscape of Sloboda Ukraine, and hosts oak forests, floodplain forests and meadows, pine plantations, and dry grasslands. Eighty-six species of spiders were recorded from oak forests, and their habitat distribution, occurrence of rare species, and dominant structure were discussed in the publication (Atemasova *et al.*, 2021).

In the neighboring areas, spiders of oak forests were studied in Sumy (Gnelitsa, 1998; Polchaninova, 2013; Polchaninova, Prokopenko, 2017) and Donetsk (Polchaninova, Prokopenko, 2007(2008)) regions of Ukraine and in Belgorod Region of Russia (Ponomarev, Polchaninova, 2006; Polchaninova, 2011).

The present paper aims to compile a list of spider species known from the oak forests of Kharkiv region, to analyze the assemblage structure of the spiders of the Starytskyi forest, which have not been considered so far, and to characterize general patterns of species distribution within the oak forests of the area in question.

Materials and methods. Study area and sampling sites. Kharkiv Region is situated in the north-east of Ukraine within the forest-steppe and steppe natural zones. Its total area is 31,400 km^2. Zonal oak forests are widespread in the forest-steppe part of the region, where they cover the southwestern foothills of the Central Russian Upland. According to the biogeographical zoning, the study area is located in the East European province of the Forest-Steppe zone of the European-Ob sub-region of the European-Siberian region of the Palearctic (Udra, 1997). In forest classification, oak forests belong to category D and are divided into four types: dry, mesic, moist, and wet depending on the hydration conditions (Oleksiiv-Pohrebniak Grid, Pogrebniak, 1955). The first three types are presented in the study area.

The material was collected in ten localities (geographical coordinates show the approximate center of the study site):

(1) Okhrymivka village, Kupiansk distr., 50.3361 N 37.2075 E, May 1986.
(2) Buhrovatka village, Kupiansk distr., 50.2681 N 36.8424 E, May–September 2001, May–August 2002. Starytskyi forest.
(3) Krasne Pershe village, Kupiansk distr., 49.9156 N, 37.7541 E, June–September 2021. National Nature Park 'Dvorichanskyi'.
(4) Haidary village, Biological Station, Chuhuiv distr., 49.6224 N 36.3242 E, May–July 1977, 1978; May–September 1996–1998; July 2003, 2006; June–July 2018. National Nature Park 'Homilshanski Lisy'.
(5) West outskirts of the Kharkiv City, 50.0356 N 36.1567 E, May, 1981, 1982.
(6) Pokotylivka village, Kharkiv distr., 49.9063 N 36.1780 E, May, 1976.
(7) Berezivka village, Kharkiv distr. 49.9056 N, 36.0622 E, May–July 2004.
(8) Verkhnia and Nyzhnia Ozeriana villages, Kharkiv distr., 49.8633 N, 36.0197 E, May–July, 2021.
(9) Yakovlivka village, Kharkiv distr., 49.8250 N, 36.0992 E, May–July, 2021.
(10) Chornyi Lis, Kharkiv distr., 49.8347 N, 36.1881 E, May–July 2021. 8–10 — projected Regional Landscape Park 'Smarahdove Dzherelo'.

Stationary research was carried out in the Starytskyi forest (further Starytsia), National Nature Park 'Homilshanski Lisy' near Haidary village (further Haidary), and Regional Landscape Park 'Smarahdove Dzherelo' (further Sm. Dzh.). The study habitats were as follows:

(1) Moist oakery in the ravine bottom dominated by the ground elder (*Aegopodium podagraria* Linnaeus, 1753) (Starytsia, further in the diagram — 1S, Haidary — 1H).
(2) Mesic oakery:
  (2a) on the flat interfluves dominated by the ground elder and/or ground elder + hairy sedge (*Carex pilosa* Scopolli, 1772) (Starytsia — 2aS);
  (2b) on the flat interfluve dominated by the hairy sedge (Haidary — 2bH);
  (2c) without grass layer or with sparse herbaceous vegetation on the flat interfluve and ravine slopes (Sm. Dzh. — 2cD, Haidary — 2cH).
(3) Dry oakery on the south-facing slope dominated by the hairy sedge and forbs (Starytsia — 3S).
(4) Open dry oakery on the flat interfluves dominated by mesophilic forbs and grasses (Haidary — 4H).
(5) Forest edges, glades, and clear cuttings (Starytsia — 5S, Sm. Dzh. — 5D).

In each habitat, a plot that reflected its most typical characteristics was selected for quantitative samples. Spiders were collected using a standard procedure of sweep netting, pitfall trapping, quadrate sampling, and hand collecting. At the sites of stationary monitoring, we took samples in each habitat once a month from May to September. Herb-dwelling spiders were counted by sweep netting, five samples of 100 sweeps each month. Ground-dwelling spiders were collected with pitfall traps: we set a line of 10 traps at a 10 m distance with 4% formalin for preservation. The traps were checked three times during the sampling period. In the quadrate method, we sieved the litter from 25×25 cm plots, 4 plots — near the tree stems, and 12 — between the trees and among the shrubs. Thus, 16 plots made up one sample in each studied habitat each month. Over 14,000 individuals of spiders were collected; the material is deposited in N. Polchaninova's private collection.

D a t a a n a l y s i s . The species list follows the nomenclature of the World Spider Catalog (WSC, 2023) and is based mainly on adult individuals. When estimating spider abundance in each habitat/month, we counted both adults and juveniles. Species dominance rating was defined using the Tischler scale (Tischler, 1949); we consider eudominants ($n \geq 10\%$ of collected individuals) + dominants ($5 \leq n < 10\%$) as a dominant complex.

A comparison of the spider species composition of different forest types/sites was performed in the program PAST (Hammer, Harper, Ryan, 2001), using the procedure of non-metric multidimensional scaling (NMDS) and Euclidian distance as a similarity measure. We used data on the two-year collection in Haidary (1997, 1998) and Starytsia (2001, 2002), and, in addition, the one-year sampling in Smarahdove Dzherelo. Spiders' alpha diversity was estimated by Shannon, Margalef, and evenness indices that are widely used in ecological studies, thus, enabling comparison of the results. To characterize spider assemblages of the oakeries of Kharkiv Region, we took into account the results of previous studies in Ukraine: Sumy Region, National Nature Park 'Hetmanskyi', Trostianetskyi forest (Polchaninova, 2013); and Russia: Kursk Region, Tsentralno-Chermozemnyi Nature Reserve, Dubroshino forest (Polchaninova, 2009b), Belgorod Region, Belogorye Nature Reserve, 'Les na Vorskle' segment (Polchaninova, 2011), and Voronezh Region, Shypov forest (Polchaninova, 2014).

R e s u l t s a n d d i s c u s s i o n s . S p i d e r f a u n a . According to literature and personal data, 210 spider species of 24 families were recorded in the oak forests of Kharkiv Region (Table 1). Five species are

known only from literature (*Brigittea vicina*, *Walckenaeria antica*, *Paidiscura pallens* — Esjunin, Golovatch, Penev, 1993; *Nuctenea umbratica*, *Salticus zebraneus* — Lezhenina *et al.*, 2011); the others are presented in our collection. Seven main families comprise 77% of the fauna. Their species richness is ranked as follows: Linyphiidae (53 species, 24.6% of the fauna), Gnaphosidae, Araneidae, Theridiidae (22 species, 10.4% each), Lycosidae (16 species, 7.6%), Salticidae (15 species, 7.1%), and Thomisidae (13 species, 6.2%) (Fig. 1A). Linyphiidae, the richest spider family of the Palearctic fauna, dominates in all deciduous forests, except their driest variants (cf. Esjunin, Golovatch, Penev, 1993; Polchaninova, 2014). A relatively high number of Gnaphosidae and Lycosidae is explained by investigation of the open parts of the forests, namely glades, edges, and clearings. Under the canopy, the share of these families decreased significantly, while that of Linyphiidae increases; the shares of other families increases by 1% or did not change (Fig. 1B).

Table 1. List of spider species and their distribution in the oak forests of Kharkiv Region (for abbreviations, see Material and Methods)

No	Species	Sites/habitats:										
		Starytsia				Haidary				Sm. Dzh.		Others
		1	2a	3	5	1	2b	2c	4	2c	5	
	Agelenidae											
1	*Agelena labyrinthica* (Clerck, 1757)	–	–	–	+	–	–	–	+	–	–	+
2	*Allagelena gracilens* (C. L. Koch, 1841)	–	–	–	+	–	–	–	–	–	–	–
3	*Agelenopsis potteri* (Blackwall, 1846)	–	–	–	–	–	–	–	–	–	–	+
4	*Eratigena agestis* (Walckenaer, 1802	–	–	–	–	–	–	–	–	–	–	+
5	*Tegenaria lapicidinarum* Spassky, 1934	–	–	–	+	–	+	–	–	–	–	+
	Anyphaenidae											
6	*Anyphaena accentuata* (Walckenaer, 1802)	+	+	+	+	+	+	+	+	–	+	+
	Araneidae											
7	*Agalenatea redii* (Scopoli, 1763)	–	–	–	+	–	–	–	–	–	–	–
8	*Araneus alsine* (Walckenaer, 1802)	–	–	–	+	–	–	–	–	–	–	–
9	*A. angulatus* Clerck, 1757	–	–	+	–	–	–	+	+	+	+	+
10	*A. diadematus* Clerck, 1757	+	+	+	+	+	+	+	+	+	+	+
11	*A. marmoreus* Clerck 1757	+	–	+	–	–	–	–	–	–	–	–
12	*A. quadratus* Clerck, 1757	–	–	–	+	–	–	–	–	–	+	–
13	*A. sturmi* (Hahn, 1831)	–	–	–	–	–	–	–	–	–	–	+
14	*A. triguttatus* (Fabricius, 1793)	–	–	–	–	–	–	–	–	–	–	+
15	*Araniella cucurbitina* (Clerck, 1757	+	+	+	+	+	+	+	+	–	–	+
16	*A. displicata* (Hentz, 1847	–	–	–	–	–	–	–	–	–	–	–
17	*Argiope bruennichi* (Scopoli, 1772)	–	–	–	+	–	–	–	–	–	+	–
18	*Cercidia prominans* (Westring, 1851)	–	–	+	+	–	–	–	–	–	–	+
19	*Cyclosa conica* (Pallas, 1772)	+	+	+	+	+	+	+	+	+	+	+
20	*Gibbaranea bituberculata* (Walckenaer, 1802)	–	–	–	+	–	+	+	+		+	+
21	*Hypsosinga sanguinea* (C. L. Koch, 1841)	–	–	–	+	–	–	–	–	–	+	+
22	*Larinioides ixobolus* (Thorell, 1873)	–	+	–	–	–	–	–	–	–	–	–
23	*L. patagiatus* (Clerck, 1757)	–	–	–	+	–	–	–	–	–	–	–
24	*Mangora acalypha* (Walckenaer, 1802)	–	–	+	+	–	+	+	+	+	+	+
25	*Neoscona adianta* (Walckenaer, 1802)	–	–	–	–	–	–	–	–	–	+	–
26	*Nuctenea umbratica* (Clerck, 1757)	–	–	–	–	–	–	–	–	–	–	+
27	*Singa hamata* (Clerck, 1757)	–	–	+	+	–	–	–	–	–	–	–
28	*Zilla diodia* (Walckenaer, 1802)	–	–	+	–	+	+	–	–	+	+	+
	Atypidae											
29	*Atypus muralis* Bertkau, 1890	–	–	–	–	–	–	–	–	–	–	+
30	*A. piceus* (Sulzer, 1776)	–	–	+	–	–	–	–	+	+	+	–
	Cheiracanthidae											
31	*Cheiracanthium elegans* Thorell, 1875	–	–	–	–	–	+	+	–	–	–	+
32	*Ch. erraticum* (Walckenaer, 1802)	–	–	–	+	–	–	–	–	–	–	–
	Clubionidae											
33	*Clubiona caerulescens* L. Koch, 1867	+	+	+	+	+	+	+	+	+	+	+
34	*C. marmorata* L. Koch, 1866	–	+	–	–	–	–	–	–	–	–	+
35	*C. pallidula* (Clerck, 1757)	–	–	–	–	+	+	–	–	–	–	+
	Dictynidae											
36	*Brigittea vicina* (Simon, 1873)	–	–	–	–	–	–	–	–	–	–	+
37	*Dictyna arundinacea* (Linnaeus, 1758)	–	–	+	+	–	+	+	+	+	+	+
38	*D. pusilla* Thorell, 1856	–	–	–	–	–	–	–	–	–	–	+
39	*D. uncinata* Thorell, 1856	+	+	+	+	+	+	+	+	+	–	+
40	*Lathys humilis* (Blackwall, 1855)	–	+	–	–	–	–	+	–	–	–	–

Continuation of Table 1

No	Species	Sites/habitats:										
		Starytsia				Haidary				Sm. Dzh.		Others
		1	2a	3	5	1	2b	2c	4	2c	5	
41	*Nigma flavescens* (Walckenaer, 1830)	–	+	+	+	–	–	–	–	–	–	–
	Dysderidae											
42	*Harpactea rubicunda* (C. L. Koch, 1838)	–	–	–	–	–	+	+	–	+	–	–
	Gnaphosidae											
43	*Callilepis nocturna* (Linnaeus, 1758)	–	–	–	–	–	–	–	–	–	+	+
44	*Drassodes pubescens* (Thorell, 1856)	–	–	–	+	–	–	–	–	–	+	+
45	*Drassyllus lutetianus* (L. Koch, 1866)	–	–	–	–	–	–	–	–	–	+	–
46	*D. praeficus* (L. Koch, 1866	–	–	–	–	–	–	–	–	–	+	–
47	*D. pusillus* (C. L. Koch, 1833)	–	–	+	+	–	+	–	+	–	+	+
48	*D. villicus* (Thorell, 1975)	–	–	–	–	–	–	–	–	+	+	–
49	*Gnaphosa licenti* Schenkel, 1953	–	–	–	–	–	–	–	–	–	+	–
50	*Haplodrassus cognatus* (Westring, 1861)	–	–	–	+	–	–	–	–	–	–	–
51	*H. signifer* (C. L. Koch, 1839)	–	–	+	+	–	–	–	+	+	+	+
52	*H. silvestris* (Blackwall, 1833)	–	+	+	+	–	+	–	+	+	–	+
53	*H. soerenseni* (Strand, 1900)	–	–	–	+	–	–	–	–	–	–	–
54	*H. umbratilis* (L. Koch, 1866)	–	–	–	–	–	–	–	–	+	+	–
55	*Marinarozelotes malkini* Platnik et Murphy, 1984	–	–	–	–	–	–	–	–	–	+	–
56	*Micaria formicaria* (Sundevall, 1831)	–	–	–	+	–	–	–	–	–	–	–
57	*M. fulgens* (Walckenaer, 1802)	–	–	–	+	–	–	–	–	–	+	–
58	*M. pulicaria* (Sundevall, 1831)	–	–	–	–	–	–	–	–	–	+	–
59	*Scotophaeus quadripunctatus* (Linnaeus, 1758)	–	–	–	–	–	–	–	–	+	–	+
60	*Trachyzelotes pedestris* (C. L. Koch, 1837)	–	–	–	–	–	–	–	–	–	+	–
61	*Zelotes azsheganovae* Esyunin, Efimik, 1992	–	–	–	–	–	+	–	+	–	–	+
62	*Z. electus* (C. L. Koch, 1839)	–	–	–	–	–	–	–	–	–	+	+
63	*Z. fuscus* (Thoresll, 1975)	–	+	+	+	–	+	+	+	+	+	+
64	*Z. latreillei* (Simon, 1878)	–	+	+	+	–	+	–	–	–	+	–
	Hahniidae											
65	*Hahnia ononidum* Simon, 1875	+	+	+	+	–	+	+	+	+	–	+
	Linyphiidae											
66	*Abacoproeces saltuum* (L. Koch, 1872)	+	+	+	+	+	+	+	+	+	–	+
67	*Agyneta conigera* (O. Pickard-Cambridge, 1863)	–	–	–	–	–	–	–	–	–	–	+
68	*A. rurestris* (C. L. Koch, 1836)	–	–	+	+	–	–	+	+	–	–	+
69	*Anguliphantes angulipalpis* (Westring, 1851)	+	+	+	–	+	+	+	+	–	–	+
70	*Bathyphantes nigrinus* (Westring, 1851)	+	+	–	–	–	–	–	–	–	–	–
71	*Bolyphantes alticeps* (Sundevall, 1833)	+	+	+	–	–	–	+	–	–	–	–
72	*Centromerus sylvaticus* (Blackwall, 1841)	–	–	–	–	+	+	+	–	–	–	–
73	*Ceratinella brevis* (Wider, 1834)	–	–	+	–	–	+	+	–	–	+	+
74	*C. scabrosa* (O. Pickard-Cambridge, 1871)	+	+	+	+	–	+	+	–	–	+	–
75	*Dicymbium nigrum* (Blackwall, 1834)	–	–	–	+	–	+	+	–	–	–	+
76	*Diplocephalus picinus* (Blackwall, 1841)	+	+	+	+	+	+	+	+	–	–	–
77	*Diplostyla concolor* (Wider, 1834)	+	+	–	–	+	+	–	–	–	–	–
78	*Drapetisca socialis* (Sundewall, 1833)	–	–	–	–	+	–	–	–	–	–	–
79	*Entelecara acuminata* (Wider, 1834)	+	+	+	+	+	+	+	–	–	–	–
80	*E. erythropus* (Westring, 1851)	+	–	–	–	–	–	–	–	–	–	+
81	*Erigone atra* Blackwall, 1833	–	+	–	–	–	–	–	–	–	–	+
82	*Floronia bucculenta* (Wider, 1834)	–	+	+	–	+	+	+	+	–	–	–
83	*Gnathonarium dentatum* (Wider, 1834)	–	–	–	–	–	+	+	–	–	–	–
84	*Gonatium paradoxum* (L. Koch, 1869)	–	–	–	+	–	–	–	–	–	–	–
85	*Gongylidiellum latebricola* (O. Pickard-Cambridge, 1871)	–	–	–	+	–	–	–	–	–	–	–
86	*Gongylidium rufipes* (Linnaeus, 1758)	+	+	+	–	–	–	–	–	–	–	+
87	*Helophora insignis* (Blackwall, 1841)	+	+	+	–	+	+	+	–	+	–	–
88	*Hylyphantes nigritus* (Simon, 1881)	–	–	+	+	–	–	–	–	–	–	–
89	*Hypomma bituberculatum* (Wider, 1834)	–	–	–	–	–	–	+	–	–	–	–
90	*Lepthyphantes minutus* (Blackwall, 1833)	–	–	–	–	–	+	–	–	–	+	–
91	*Linyphia hortensis* Sundevall, 1830	+	+	+	+	+	+	+	+	+	+	+
92	*L. tenuipalpis* Simon, 1884	–	+	+	–	–	–	–	–	–	–	–
93	*L. triangularis* (Clerck, 1757)	+	+	+	+	+	+	+	+	+	+	–
94	*Macrargus rufus* (Wider, 1834)	–	+	–	–	–	+	+	+	–	–	+
95	*Maso sundevalli* (Westring, 1851)	–	+	+	–	+	+	+	+	–	–	–
96	*Megalepthyphantes pseudocollinus* Saaristo, 1997	–	+	–	–	+	+			–	–	+

Continuation of Table 1

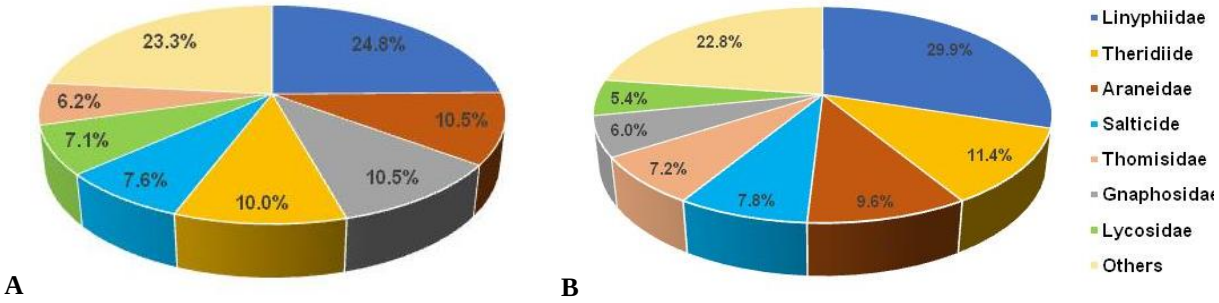
No	Species	Sites/habitats:										
		Starytsia				Haidary				Sm. Dzh.		Others
		1	2a	3	5	1	2b	2c	4	2c	5	
97	*Microctenonyx subitaneus* (O. Pickard-Cambridge, 1875)	–	+	–	–	–	–	–	–	–	–	–
98	*Microneta viaria* (Blackwall, 1841)	+	+	+	–	+	+	+	+	–	–	+
99	*Neriene clathrata* (Sundevall, 1830)	–	+	+	+		+	+	+	+	+	+
100	*N. montana* (Clerk, 1757)	+	+	–	–	+	–	–	–	–	–	+
101	*N. radiata* (Walckenaer, 1842)	+	+	+	+	+	+	+	+	–	–	+
102	*Oedothorax gibbosus* (Blackwall, 1841)	–	–	+	–	–	–	–	–	–	–	–
103	*Pelecopsis mengei* (Simon, 1884)	–	+	+	–	–	+	+	+	–	–	+
104	*Pocadicnemis pumila* (Blackwall, 1841)	–	–	+	–	–	–	–	–	–	–	–
105	*Stemonyphantes lineatus* (Linnaeus, 1758)	–	–	–	–	–	–	–	+	–	–	–
106	*Tapinocyba insecta* (L. Koch, 1869)	–	+	–	–	–	–	–	+	–	–	–
107	*Tapinopa longidens* (Wider, 1834)	–	–	–	–	–	–	+	–	–	–	–
108	*Tenuiphantes flavipes* (Blackwall, 1854)	+	+	+	–	+	+	+	+	+	–	+
109	*Thyreostenius parasiticus* (Westring, 1851)	–	+	–	–	–	–	–	–	–	–	+
110	*Trematocephalus cristatus* (Wider, 1834)	+	+	+	+	+	–	–	–	–	–	–
111	*Trichoncus affinis* Kulczyn'ski 1894	–	–	+	–	–	–	–	–	–	+	–
112	*Walckenaeria alticeps* (Denis, 1952)	+	+	+	+	+	+	+	+	–	–	+
113	*W. antica* (Wider, 1834)	–	–	–	–	–	–	–	–	–	–	+
114	*W. atrotibialis* (O. Pickard-Cambridge, 1878)	+	+	+	+	–	–	+	–	–	–	–
115	*W. nudipalpis* (Westring, 1851)	–	–	–	–	–	+	–	–	–	–	–
116	*W. obtusa* Blackwall, 1836	–	–	+	–	–	–	–	–	–	–	–
117	*W. vigilax* (Blackwall, 1853)	–	+	–	–	–	–	–	–	–	–	–
	Liocranidae											
118	*Agroeca brunnea* (Blackwall, 1833)	+	+	+	+	+	+	+	+	+	+	+
119	*A. cuprea* Menge, 1873	–	–	–	–	–	–	–	–	+	+	+
120	*A. lusatica* (L. Koch, 1875)	–	+	–	–	–	–	–	–	–	–	–
	Lycosidae											
121	*Alopecosa farinosa* (Herman, 1879)	–	–	–	+	–	–	–	–	–	+	–
122	*A. pulverulenta* (Clerck, 1757)	–	+	+	+	–	–	–	+	–	+	+
123	*A. trabalis* (Clerck, 1757)	–	–	+	+	–	–	+	+	–	+	+
124	*Arctosa lutetiana* (Simon, 1876)	–	–	–	+	–	–	+	+	+	–	+
125	*Pardosa agrestis* (Westring, 1861)	–	–	–	+	–	–	–	–	–	–	–
126	*P. alacris* (C. L. Koch, 1833)	+	+	+	+	+	+	+	+	+	+	+
127	*P. fulvipes* (Collet, 1876)	–	–	–	+	–	–	–	–	–	–	–
128	*P. lugubris* (Walckenaer, 1802)	–	–	+	+	–	–	+	+	–	+	+
129	*P. paludicola* (Clerck, 1757)	–	–	–	+	–	–	–	–	–	–	+
130	*P. palustris* (Linnaeus, 1758)	–	–	–	+	–	+	–	–	–	–	–
131	*Piratula hygrophila* (Thorell, 1872)	–	–	–	–	+	–	+	–	–	–	+
132	*Trochosa robusta* (Simon, 1876)	–	–	–	–	–	–	–	–	–	+	–
133	*T. ruricola* (De Geer, 1778)	–	–	+	+	–	–	–	+	–	–	+
134	*T. terricola* Thorell, 1856	+	+	+	+	+	+	+	+	+	+	+
135	*Xerolycosa miniata* (C. L. Koch, 1834)	–	–	–	+	–	–	–	–	–	+	–
	Mimetidae											
136	*Ero aphana* (Walckenaer, 1802)	–	–	–	–	–	–	–	–	–	+	–
137	*E. furcata* (Villers, 1789)	+	+	+	+	–	+	+	–	–	–	–
	Miturgidae											
138	*Zora nemoralis* (Blackwall, 1861)	–	+	+	+	–	+	+	+	+	+	+
139	*Z. silvestris* Kulczyn'ski, 1897	–	–	+	–	–	–	–	+	–	–	+
140	*Z. spinimana* (Sundevall, 1833)	+	+	+	+	–	+	+	+	+	+	+
	Philodrimidae											
141	*Philodromus cespitum* (Walckenaer, 1802)	–	–	–	–	–	+	–	–	–	–	–
142	*Ph. dispar Walckenaer, 1826*	–	+	+	+	–	+	+	+	+	+	+
143	*Ph. rufus* Walckenaer, 1826	+	–	+	–	–	+	–	–	–	–	–
144	*Thanatus formicinus* (Clerck, 1757)	–	–	–	–	–	–	–	+	–	+	–
145	*Th. sabulosus* (Menge, 1875)	–	–	–	–	–	–	–	–	–	+	–
146	*Tibellus oblongus* (Walckenaer, 1802)	–	+	+	+	–	+	+	+	–	–	+
	Phrurolothidae											
147	*Phrurolithus festivus* (C. L. Koch, 1835)	+	+	+	+	+	+	+	–	–	+	+
148	*Ph. minimus* C.L. Koch, 1839	–	1	1	1	–	–	–	–	–	–	–
	Pisauridae											
149	*Pisaura novicia* (L. Koch, 1878)	–	–	+	+	–	+	+	+	+	+	+

Continuation of Table 1

No	Species	Sites/habitats:										
		Starytsia				Haidary				Sm. Dzh.		Others
		1	2a	3	5	1	2b	2c	4	2c	5	
	Salticidae											
150	*Attulus pubescens* (Fabricius, 1775)	–	–	–	–	–	–	–	+	–	–	–
151	*Ballus chalybeius* (Walckenaer, 1802)	+	+	+	–	–	+	+	+	+	–	+
152	*Euophrys frontalis* (Walckenaer, 1802)	–	–	–	–	–	–	–	–	+	+	–
153	*Evarcha arcuata* (Clerck, 1757)	–	+	+	+	–	–	–	–	–	+	–
154	*E. falcata* (Clerck, 1757)	–	+	+	+	–	+	+	+	–	–	+
155	*Heliophanus auratus* C. L. Koch, 1835	–	–	–	+	–	+	–	+	–	–	–
156	*H. cupreus* (Walckenaer, 1802)	+	+	+	+	–	+	+	+	+	+	+
157	*H. dubius* C. L. Koch, 1835	–	–	–	–	–	–	+	–	–	–	–
158	*Marpissa muscosa* (Clerck, 1757)	+	–	–	–	–	–	–	–	–	–	–
159	*Myrmarachne formicaria* (De Geer, 1778)	–	–	–	+	–	–	–	–	–	–	–
160	*Phlegra fasciata* (Hahn, 1826)	–	–	–	+	–	–	–	–	–	+	–
161	*Pseudeuophrys obsoleta* (Simon, 1868)	–	–	+	+	–	+	–	–	–	–	–
162	*Pseudicius encarpatus* (Walckenaer, 1802)	–	–	–	–	–	–	–	–	–	+	+
163	*Salticus scenicus* (Clerck, 1757)	–	–	–	–	–	–	–	+	–	–	–
164	*S. zebraneus* (C. L. Koch, 1837)	–	–	–	–	–	–	–	–	–	–	+
165	*Sibianor aurocinctus* (Ohlert, 1865)	–	–	–	–	–	–	–	–	–	–	+
	Segestriidae											
166	*Segestria senoculata* (Linnaeus, 1758)	–	–	–	–	+	+	–	–	–	–	–
	Sparassidae											
167	*Micrommata virescens* (Clerck, 1757)	–	+	+	+	–	+	+	+	–	–	+
	Tetragnathidae											
168	*Metellina mengei* (Blackwall, 1870)	–	–	–	–	–	–	–	–	–	–	+
169	*M. segmentata* (Clerck, 1757)	+	+	+	–	+	+	+	+	+	–	+
170	*Pachygnatha degeeri* Sundevall, 1830	–	–	–	+	–	–	+	+	–	+	+
171	*P. listeri* Sundevall, 1830	+	+	+	+	+	+	+	+	–	–	+
172	*Tetragnatha extensa* (Linnaeus, 1758)	–	–	–	–	–	–	–	–	–	–	+
173	*T. montana* Simon, 1874	–	+	+		+	+	+	+	–	–	–
174	*T. obtusa* C. L. Koch, 1837	–	+	–	–	–	–	–	–	–	–	–
175	*T. pinicola* L. Koch, 1870	+	+	+	+	+	+	+	+	+	–	+
	Theridiidae											
176	*Asagena meridionalis* (Kulczynski 1894)	–	–	–	–	–	–	–	+	–	–	–
177	*A. phalerata* (Panzer, 1801)	–	–	–	–	–	–	–	+	–	–	–
178	*Crustulina guttata* (Wider, 1834	–	–	–	–	–	–	+	–	–	–	–
179	*Dipoena erythoropus* (Simon, 1881)	–	+	–	–	–	–	+	–	–	–	–
180	*D. melanogaster* (C. L. Koch, 1837)	–	–	+	–	–	–	–	–	–	–	–
181	*Enoplognatha latimana* Hippa et Oksala, 1982	–	–	–	+	–	–	–	–	–	–	–
182	*E. ovata* (Clerck, 1757)	+	+	+	+	+	+	+	+	+	+	+
183	*Episinus angulatus* (Blackwall, 1836)	–	–	+	–	+	–	+	–	–	–	–
184	*Euryopis flavomaculata* (C. L. Koch, 1836)	–	+	–	–	–	+	+	–	–	–	–
185	*Neottiura bimaculata* (Linnaeus, 1767)	+	+	+	+	+	+	+	+	–	–	–
186	*Paidiscura pallens* (Blackwall, 1834)	–	–	–	–	–	–	–	–	–	–	+
187	*Parasteatoda lunata* (Clerck, 1757)	+	+	+	–	+	–	–	–	+	–	–
188	*P. simulans* (Thorell, 1875)	+	+	+	+	+	+	+	–	–	–	–
189	*Phylloneta impressa* (L. Koch, 1881)	–	–	–	+	–	–	–	–	–	–	–
190	*Platnickina tincta* (Walckenaer, 1802)	+	+	+	–	–	–	–	+	–	–	–
191	*Robertus arundineti* (O. Pickard-Cambridge, 1871)	–	–	+	–	–	–	–	+	–	–	–
192	*R. lividus* (Blackvall, 1836)	+	+	+	+	–	+	+	–	–	–	–
193	*Simitidion simile* (C. L. Koch, 1836)	–	–	–	+	–	–	–	–	–	–	–
194	*Steatoda bipunctata* (Linnaeus, 1758)	–	–	–	–	–	–	–	+	+	–	–
195	*Theridion pinastri* L. Koch, 1872	–	–	–	–	–	–	–	–	–	–	+
196	*Th. varians* Hahn, 1833	+	+	+	+	+	+	+	+	+	–	–
	Thomisidae											
197	*Cozyptila blackwalli* Simon, 1875	–	–	–	–	–	+	+	+	–	–	+
198	*Ebrechtella tricuspidata* (Fabricius, 1775)	–	+	+	+	–	+	+	+	+	+	+
199	*Misumena vatia* (Clerck, 1757)	–	–	+	+	–	+	+	+	–	+	+
200	*Ozyptila praticola* (C. L. Koch, 1837)	+	+	+	+	–	+	+	–	+	+	–
201	*Pistius truncatus* (Pallas, 1772)	–	+	–	–	–	+	+	–	–	+	+
202	*Synema globosum* (Fabricius, 1775)	–	–	–	–	–	–	–	+	–	–	+
203	*Tmarus piger* (Walckenaer, 1802)	–	+	+	+	–	+	+	+	+	+	+

Continuation of Table 1

No	Species	Sites/habitats:										
		Starytsia				Haidary				Sm. Dzh.		Others
		1	2a	3	5	1	2b	2c	4	2c	5	
204	*Xysticus cristatus* (Clerck, 1758)	–	–	–	+	–	–	–	–	+	+	–
205	*X. kochi* Thorell, 1872	–	–	–	+	–	–	–	–	–	–	–
206	*X. lanio* C. L. Koch, 1835	–	–	+	+	–	–	+	–	–	–	+
207	*X. luctator* L. Koch, 1870	–	–	+	+	–	+	+	+	+	+	–
208	*X. luctuosus* (Blackwall, 1836)	–	+	+	–	–	–	–	–	–	–	+
209	*X. ulmi* (Hahn, 1831)	–	+	+	+	–	+	+	–	–	–	+
	Titanoecidae											
210	*Titanoeca schineri* L. Koch, 1872	–	–	–	–	–	–	–	–	–	+	+
	Total species	49	82	94	99	43	83	83	76	46	70	101



A **B**

Fig. 1. Relative species richness of dominant spider families in the araneofauna of the oak forests of Kharkiv Region: A — total, B — under the canopy.

Most recorded species are widely distributed within the oak forests of the forest-steppe part of the Central Russian Upland (Esjunin, Golovatch, Penev, 1993; Ponomarev, Polchaninova, 2006; Polchaninova, 2009, 2011, 2014). Nevertheless, we can mention some remarkable records.

Agelenopsis potteri, an invasive species from North America, has recently been found in the east of Kharkiv Region (Polchaninova, 2023). Previously, it has been recorded from nine regions of Ukraine where it inhabited buildings, forests, and forest plantations.

Gnaphosa licenti is typical of dry steppe habitats. Finding it in the forest clearing is quite unexpected. This species was registered in Ukraine in Luhansk Region in 2009 (Polchaninova, Prokopenko, 2013, 2017), and, since then, we have observed its westward spread. Now, its westernmost known locality is Osokorivka village in Kherson Region (Prokopenko, Zhukov, 2018).

Marinarozelotes malckini is also a steppe species. Chornyi Lis in Kharkiv Region is its northernmost locality detached from the main area. It may have been introduced since the investigated forest edge was not far from the highway. The nearest find of this species is chalk grasslands in the north of Donetsk Region (Polchaninova, 2022).

Although *Ero aphana* has been reported from forests and forest edges in Right-Bank Ukraine (Syngayevsky, 2010; Fedoriak, 2015; Polchaninova *et al.*, 2017), this is the only find in the forest habitat of the left bank.

Drassylis villicus was one of the dominants among the ground-dwelling spiders in Smarahdove Dzerelo. Previously it was recorded in the oak forests and forest edges in the south of the forest-steppe zone, but never in high abundance (Polchaninova, 2009a, 2014). Further research will help determine the reason for this peak of abundance (climate change, site-specificity, or natural long-term fluctuations in individual abundance).

In the spider fauna of the three monitoring sites, 28 out of 196 species (14%) were found in most habitats, 46 species (24%) were absent under the canopy, 12 species (6%) avoided moist oakeries, and only 4 species (2%) preferred moist and mesic conditions. The spider species composition was the poorest (43–49 species) and most similar (Fig. 2) in the moist oakeries of the two sites. The low number of species (46) in the mesic forest of Smarahdove Dzherelo reflects the insufficiency of research. Spiders of open habitats are the richest in local faunas (from 71 to 98 species) and highly variable — they do not group in ordination (Fig. 2). Moreover, spiders of the dry oakery of Starytsia (94 species) are closer to those of the mesic forests of Haidary (83 species), but not to the spiders of the neighboring clearings.

The Haidary open oakery hosts fewer spider species (76) and occupies an intermediate position between open habitats and forests under the canopy. Spiders of Smarahdove Dzherelo were most specific both under the canopy and in open places. In general, the similarity of the spider species composition in different forest types depended on habitat characteristics and geographic proximity (Fig. 2). These conclusions are consistent with the results of our previous studies (Polchaninova, 2013, 2014).

Spider assemblages of the Starytskyi forest. The spider fauna of the Starytskyi forest is the richest among the studied oakeries of North-Eastern Ukraine (151 species, Table 1). The two-year studies showed that species richness peaks in June in all habitats. Still, the differences in the species number were highly pronounced in 2001 due to an increase in dry oakery but more uniform in 2002. In May, the number of species was higher in 2022, and then, except in the dry forest, it reached or exceeded the values of 2001. Despite the difference in seasonal dynamics, the spider species richness remained at the same level in both years (106 species in 2001 and 102 — in 2002), and their faunistic similarity was high (Jaccard coefficient: 77.3%).

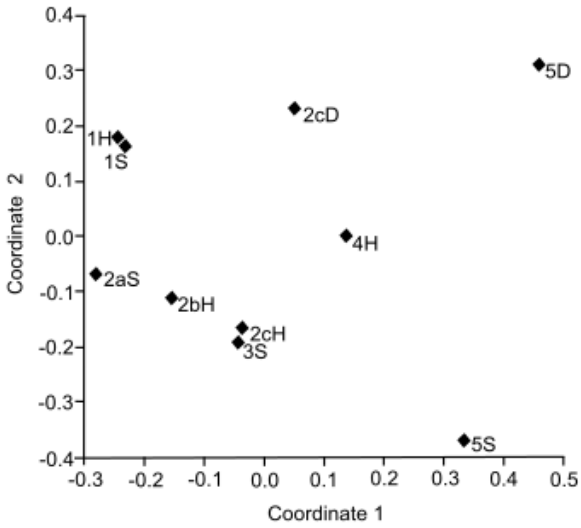


Fig. 2. Ordination of the studied habitats based on spider species composition. Euclidian distance, non-metric multidimensional scaling (NMDS), stress = 0.135 (for abbreviations, see Materials and Methods).

Thirty species (19.9%) occurred in all habitats of the Starytskyi forest. Interestingly, the proportion of local generalists is highly variable in different oakeries: 25.5% in Dubroshino forest (Kursk Region), 23% in 'Les na Vorskle' (Belgorod Region), 8% in Trostianets (Sumy Region), and 7% in Vorontsovka (Voronezh Region) (Polchaninova, 2003, 2009, 2011, 2014). In the latter two oakeries, the mesic and moist habitats had very sparse herbage or a cover of dog's mercury (*Mercurialis perennis* L.). According to our observations, this poisonous plant is rarely visited by insects, which leads to an impoverishment of their assemblages and, consequently, the assemblages of predators. The ground elder, in contrast, is very attractive to pollinators and other insects, and spiders often place their nets among its leaves and stems. As a rule, spider species richness in the moist oakeries is lower than in the other forest habitats, but in the absence of ground elder, it becomes particularly poor. A specific pattern of the Starytskyi forest is the absence of *Pirata hygrophila*, which dominates moist habitats in other oakeries, a relatively high abundance of *Bolyphantes alticeps* and *Neriene radiata*, rare or absent in the oak forests of northeastern Ukraine, and a high number of *Parasteatoda simulans* in the herb layer.

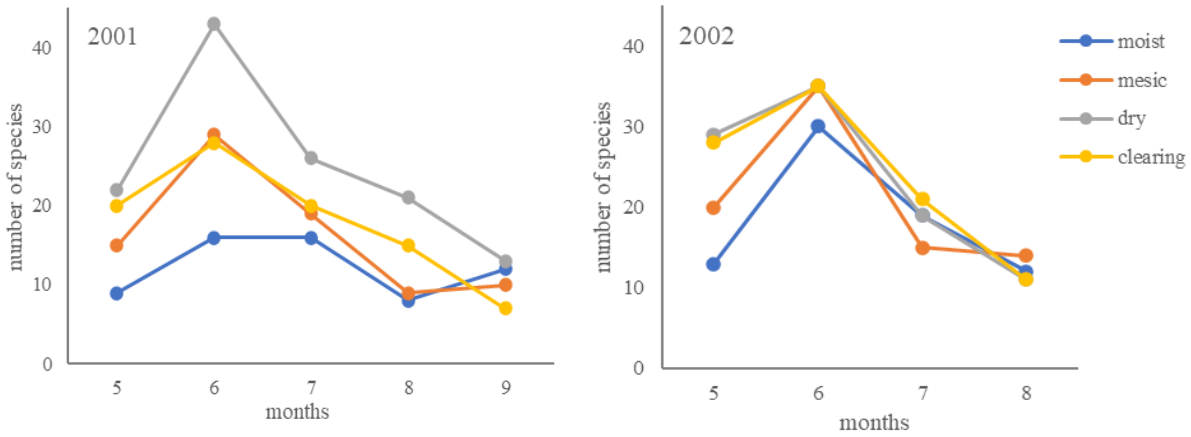


Fig. 3. Seasonal dynamics of the spider species richness in different habitats of the Starytskyi forest. Moist, mesic, and dry indicate the forest type.

We found 69 species of spiders in the herb layer, 60 of which were collected by sweep netting. Spiders were distributed unevenly within the habitats ranging from 30 species in the moist oakery to 42 species in the dry one (Table 2). Spider abundance was the highest in the mesic forest, the lowest in the clearings, and did not vary much under the canopy. Alpha diversity of the spider assemblages depended on humidity and shading: all three diversity indices were higher in the dry oakery and clearings (Table 2). The same patterns of spider assemblages were observed in 'Les na Vorskle' (Polchaninova, 2011).

Dominant complexes of spiders were formed by seven species in the dry oak forest, six species in the mesic forest, five species in the moist forest, and only three species in the clearings (Table 2). *Linyphia triangularis* was present in all complexes; otherwise, the complexes of the clearings differed from those of the forests. The dominant complex comprised half of the individual abundance in the clearings (52%), making up 72.7% to 85.3% under the canopy. Three main dominants of the forest herbage — *Linyphia triangularis*, *Helophora insignis*, and *Metellina segmantata* had the lowest proportions in the assemblage of the dry forest, the proportion of *Enoplognatha ovata* was equal in the dry and mesic forests, while that of *Araneus diadematus* and *Philodrimus dispar* increased in the dry forest (Table 2). The first four species are typical dominants in the herb layer of all the studied oak forests in the Central Russian Upland (Polchanonova, 2011, 2014).

Table 2. Dominant complexes and alpha diversity of the herb-dwelling spider assemblages in different habitats of the Starytskyi forest (sweep netting, % of total individuals in the habitat).

Species	Habitats:			
	forest under the canopy:			clearings
	moist	mesic	dry	
Number of species	30	35	42	37
Average seasonal number (ind./100 sweeps)	39.4	44	38	34
Shannon index	2.355	2.462	2.859	2.805
Evenness	0.351	0.335	0.415	0.447
Margalef index	4.456	4.651	5.985	5.948
Araneus diadematus	3.0	2.4	5.4	1.4
Mangora acalypha	0.0	0.1	2.9	27.8
Dictyna arundinacea	0.0	0.0	0.3	11.1
Bolyphantes alticeps	0.1	6.6	0.4	0.0
Helophora insignis	16.1	18.5	5.4	0.0
Linyphia hortensis	9.2	4.1	7.8	0.2
L. triangularis	14.5	15.0	10.5	7.3
Philodromus dispar	2.2	7.4	15.4	0.2
Metellina segmentata	14.3	12.5	6.1	0.0
Enoplognatha ovata	23.8	18.7	18.4	2.1
Total dominants	83.3	95.7	72.7	50.1

Active ground-dwelling spiders were represented by 77 species, most of which were concentrated in the clearings (Table 3). Seven species in single specimens were found only under the canopy, but they are not forest specialists. The spider assemblages of the moist oakery were the poorest in species and individuals, but they had the highest evenness and relatively high Shannon index. Conversely, in the dry forest, these indices were the lowest due to the extremely high abundance of *Pardosa alacris*. This is the most abundant ground-dwelling species in the studied oak forests, except 'Les na Vorskle', which rarely dominates moist habitats. It is accompanied by a close species, *Pardosa lugubris*, in the clearings and on forest edges. (Polchaninova, 2011, 2013). In the Starytskyi forest, *P. alacris* was presented in the dominant complex even in the moist oakery but in a smaller proportion than *Trochosa terricola* and *Ozyptila praticola* (Table 3). Under the forest canopy, the dominant species belonged to three families — Linyphiidae, Lycosidae, and Thomisidae, while on the clearings, only Lycosidae prevailed.

Hand collecting and quadrate sampling in the forest litter added nine species to the list, mainly Linyphiidae, while 17 species presented in both, quadrat and pitfall samples. Spider density in litter was nearly equal in dry, moist, and mesic oakeries with sedge (18–19 ind./m^2), and slightly higher in the mesic oakery with ground elder (21 ind./m^2). These figures are lower and vary in smaller limits than in 'Les na Vorskle' (17.6–27.5 ind./m^2) and Haidary (20–45 ind./m^2) forests. The number of adult specimens was not sufficient for quantitative analysis, but it can be noted that *Abacoproeces saltuum*, *Microneta viaria*, and *Tenuiphantes flavipes* were more common than other species.

Table 3. Dominant complexes and alpha diversity of the ground-dwelling spider assemblages in different habitats of the Starytskyi forest (pitfall trapping, % of total individuals in the habitat).

Species	Habitats			
	forest under the canopy			clearings
	moist	mesic	dry	
Number of species	17	25	43	68
Average seasonal number (ind./100 trap-days)	9.6	27.6	71.3	66.3
Shannon index	1.980	1.592	1.426	2.158
Evenness	0.426	0.196	0.097	0.127
Margalef index	3.397	4.066	5.946	8.591
Abacoproeces saltuum	6.3	6.0	3.3	1.1
Alopecosa pulverulenta	–	0.3	0.1	5.4
Pardosa alacris	12.6	64.2	71.5	41.8
P. lugubris	–	–	2.7	21.1
Trochosa terricola	37.8	6.0	6.1	6.2
Ozyptila praticola	21.6	5.5	2.3	4.6
Total dominants	78.3	82.0	86.0	80.2

Conclusions. The spider fauna of the oak forests of Kharkiv Region is rich (210 species of 24 families) and displays the typical features of the sylvatic araneofauna of the Central Russian Upland: the highest species richness of the family Linyphiidae (24,8% of the total fauna and 30% under the canopy), the lower species richness in the moist oak forests (43–49 species) compared to the mesic and dry ones (76–94 species), and a seasonal maximum of the number of species in June. In the three well-studied oak woodlands of the region, 62% of the species occurred only under the canopy, while 14% were generalists that also inhabited clearings and glades. The faunistic similarity of spider assemblages depended on the oakery type and geographic proximity. A case study of the spiders in the Starytskyi forest confirmed that the herb-dwelling spiders have the lowest alpha diversity in the moist oakeries and the highest in the dry forests and clearings. The ground-dwelling spiders are also the poorest in species and individuals in the moist oakeries but have there the most even assemblage structure. In the dry forests and clearings, the assemblages are more variable and have the lowest evenness due to the overdominance of *Pardosa alacris*. Spider species composition and dominant complexes depend on the forest type and change dramatically between the clearings and the habitats under the forest canopy.

REFERENCES

Atemasova, T. A., Atemasov, A. A., Viter, S. G., Gamulya, Yu. G., Drogvalenko, A. N., Polchaninova, N. Yu., Prylutskyi, O. V., Sinna, O. I., Terekhova, V. V. 2021. Materials to the creation of the Regional Landscape Park 'Smarahdove Dzherelo' (Kharkiv Region, Ukraine) [Матеріали до створення регіонального ландшафтного парку «Смарагдове джерело» (Харківська область, Україна)]. *The Journal of V. N. Karazin Kharkiv National University. Series 'Biology' [Вісник Харківського національного університету ім. В. Н. Каразіна. Серія «Біологія»]*, **37**, 95–130. DOI: https://doi.org/10.26565/2075-5457-2021-37-9. [in Ukrainian].

Buddle, C. M., Spence, J. R., Langor, D. W. 2000. Succession of boreal forest spider assemblages following wildfire and harvesting. *Ecography*, **23**(4), 424–436. DOI: https://doi.org/10.1111/j.1600-0587.2000.tb00299.x.

Esjunin, S. L., Golovatch, S. I., Penev, L. D. 1993. The fauna and zoogeography of spiders inhabiting oak forests of the East European Plain (Arachnida: Araneae). *Berichte des Naturwissenschaftlichen-Medizinischen Verein Innsbruck*, **80**, 175–249. URL: https://www.zobodat.at/pdf/BERI_80_0175-0249.pdf.

Evtushenko, K. V., Polchaninova, N. Yu., Esyunin, S. L. 2015. Distribution of the spider *Zelotes azsheganovae* (Aranei, Gnaphosidae) on the East European Plain. *Vestnik Zoologii*, **49**(4), 305–310. URL: http://mail.izan.kiev.ua/vz-pdf/2015/4/Evtushenko.pdf.

Fedoriak, M. M. 2015. *Scientific Heritage of Aleksandru Roshka as a Basis for Retrospective Analysis of Araneofauna of Bukowina*. *[Наукова спадщина Александру Рошки як основа для ретроспективного аналізу аранеофауни Буковини]*. Druk-Art, Chernivtsi. 1–175. [in Ukrainian].

Gnelitsa, V. A. 1998. Fauna and ecology of the spider family Linyphiidae in the environs of Vakalivshchyna village [Фауна та екологія павуків родини Linyphiidae околиць с. Вакалівщина]. *Vakalivshchyna: to the 30-year anniversary of the Sumy Pedagogical Institute [Вакалівщина: до 30-річчя біостаціонару Сумського педінституту]*. Sumy, 20–30. [in Ukrainian].

Hammer, Ø., Harper, D. A. T., Ryan, P. D. 2001. PAST: Paleontological statistics software package for education and data analysis. *Palaeontology Electronic*, **4**(1), 4. URL: https://palaeo-electronica.org/2001_1/past/past.pdf.

Khudich, A., Chvikov, V. 2018. Cursorial spiders (Aranei) of the oak forest of the National Park 'Homilshanski lisy' (Northeast Ukraine). *Biology: From a Molecule Up To the Biosphere*: abstracts of the XIII international young scientists' conference, Kharkiv, November 28th–30th, 2018. Kharkiv, 150–152. URL: https://drive.google.com/file/d/1AxsYnnU_GaB73FAO2RYXqG3F064DkvFn/view.

Lezhenina, I. P., Gramma, V. N., Savinskaya, N. A., Chaplygina, A. B. 2011. Food ration of nestlings of white-collared flycatcher (*Ficedula albicollis* (Temminck, 1815)) in the plain oak forests in Kharkiv Region [Пищевой рацион птенцов мухоловки-белошейки (*Ficedula albicollis* (Temminck, 1815)) в нагорной дубраве Харьковской области]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **19**(1), 39–46. [in Russian].

Magura, T, Horváth, R, Tóthmérész, B. 2010. Effects of urbanization on ground-dwelling spiders in forest patches, in Hungary. *Landscape Ecology*, **25**, 621–629. DOI: https://doi.org/10.1007/s10980-009-9445-6.

Pearce, J. L., Venier, L. A. 2006. The use of ground beetles (Coleoptera: Carabidae) and spiders (Araneae) as bioindicators of sustainable forest management: A review. *Ecological Indicators*, **6**(4), 780–793 DOI: https://doi.org/10.1016/j.ecolind.2005.03.005.

Pogrebniak, P. S. 1955. *Basic Forest Typology [Основы лесной типологии]*. 2nd ed. Publishing House of the Academy of Sciences of the Ukrainian SSR, Kiev, 1–456. [in Russian].

Polchaninova, N. Yu. 2003. Spiders (Araneae) inhabiting the oak forest of the Gomolshansky Nature Park. [Пауки (Aranei) нагорных дубрав Гомольшанского природного парка]. *Scientific Research in the Lands of the Natural Reserve Fund of the Kharkov Region [Научные исследования на территориях природно-заповедного фонда Харьковской области]*. Kharkov, 62–67. [in Russian].

Polchaninova, N. Yu. 2009a. A checklist of the spiders (Araneae) of the Kharkov Region (Ukraine). [Аннотированный список пауков (Araneae) Харьковской области (Украина)]. *The Journal of V. N. Karazin Kharkiv National University. Series 'Biology' [Вісник Харківського національного університету ім. В. Н. Каразіна. Серія «Біологія»]*, **856**(9), 121–135. URL: http://nbuv.gov.ua/UJRN/VKhb_2009_856_9_22. [in Russian].

Polchaninova, N. Yu. 2009b. Spiders (Araneae) of the Streletsky part of the Tsentralno-Chernozemny Nature Reserve (Kursk Region). [Пауки (Araneae) Стрелецкого участка Центрально-Черноземного заповедника (Курская область)]. *Caucasian Entomological Bulletin [Кавказский энтомологический бюллетень]*, **5**(1), 13–27. DOI: https://doi.org/10.23885/1814-3326-2009-5-1-13-27. [in Russian].

Polchaninova, N. Yu. 2011. To the study of spider (Araneae) complexes of the plain oak forests of the Central Russian Upland on the example of the Nature Reserve 'Les na Vorskle' [К изучению населения пауков (Araneae) нагорных дубрав Среднерусской возвышенности на примере заповедника «Лес на Ворскле»]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **19(**1), 67–76. [in Russian].

Polchaninova, N. Yu. 2013. To the study of araneofauna and spider communities (Aranei) of the Trostianets oak forests of Sumy Region, Ukraine [К изучению фауны и населения пауков (Aranei, Linyphiidae) Тростянецких дубрав Сумской области]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **21(**2), 38–44. URL: http://nbuv.gov.ua/UJRN/Vkhet_2013_21_2_9. [in Russian].

Polchaninova, N. Yu. 2014. Spiders (Aranei) of the Shipov Forest in the vicinity of Vorontsovka Village (Voronezh Area, Russia) [Пауки (Aranei) Шипова леса в окрестностях села Воронцовка (Воронежская область, Россия)]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **22**(1–2), 44–54. URL: http://nbuv.gov.ua/UJRN/Vkhet_2014_22_1-2_9. [in Russian].

Polchaninova, N. 2022. *Spiders of the Kreidova Flora Nature Reserve (Eastern Ukraine)*. Version 1.5. Dataset last modified August 29, 2022. DOI: https://doi.org/10.15468/dcczuv.

Polchaninova, N. 2023. *Spiders of the National Nature Park Dvorichanskyi (Northeastern Ukraine)*. Version 1.8. Dataset last modified January 23, 2023. DOI: https://doi.org/10.15468/vxq39h.

Polchaninova, N. Yu., Prisada, I. A. 1994. Spiders (Araneae) as a nutrient component of collared flycatcher (*Ficedula albicollis* Temm.) in oak forests of Kharkov Region, East Ukraine [Пауки в пищевом рационе птенцов мухоловки-белошейки (*Ficedula albicollis* Temm.) в нагорных дубравах Харьковской области]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **2**(1), 146–149. URL: http://nbuv.gov.ua/UJRN/Vkhet_1994_2_1_14. [in Russian].

Polchaninova, N. Yu., Prokopenko E. V. 2007(2008). A checklist of spider fauna (Araneae) of the «Svyati Gory» National Nature Park (Ukraine, Donetsk Region). *Arthropoda Selecta*, **16**(3), 177–189. URL: http://kmkjournals.com/journals/AS/AS_Index_Volumes/AS_16/AS_16_3_177_189_Polchaninova_Prokopenko.

Polchaninova, N. Yu., Prokopenko, E. V. 2013. Catalog of the spiders (Arachnida, Aranei) of Left-Bank Ukraine. KMK, Moscow, 1–268. URL: https://kmkjournals.com/journals/AS/AS_Index_Volumes/AS_Suppl/Add2_Polch_Prokop.

Polchaninova, N. Yu., Prokopenko, E. V. 2017. Catalogue of the spiders (Arachnida, Aranei) of Left-Bank Ukraine. Addendum 1. 2013–2016. KMK, Moscow, 1–115. URL: https://kmkjournals.com/journals/AS/AS_Index_Volumes/AS_Suppl/Add4_Polch_Prokop,

Polchaninova, N. Yu., Gnelitsa, V. A., Evtushenko, K. V., Singaevsky, E. N. 2017. An annotated checklist of spiders (Arachnida, Aranei) of the National Park 'Buzkyi Hard' (Mykolaiv Area, Ukraine). *Arthropoda Selecta*, **26**(3), 253–272. DOI: https://doi.org/10.15298/arthsel.26.3.08.

Ponomarev, A. V. Polchaninova, N. Yu. 2006. The materials on the fauna of spiders (Aranei) of Belgorod Region [Материалы по фауне пауков (Aranei) Белгородской области]. *Caucasian Entomological Bulletin [Кавказский энтомологический бюллетень]*, **2**(2), 143–156. DOI: https://doi.org/10.23885/1814-3326-2006-2-2-143-164. [in Russian].

Prisniy, A. V. 1993. The arahneocomplex structure in the south wood-steppe biocenosises and its bioindicated characteristics [Структура аранеокомплексов в биоценозах южной лесостепи и её биоиндикационные свойства]. *The Kharkov Entomological Society Gazette [Известия Харьковского энтомологического общества]*, **1**(2), 114–124. URL: http://nbuv.gov.ua/UJRN/Vkhet_1993_1_2_11. [in Russian].

Prokopenko, E. V., Zhukov, A. V. 2018. Spider (Aranei) steppe community in a ravine with fescue-feather-grass petrophytic vegetation [Степное сообщество пауков (Aranei) в балке с типчаково-ковыльной петрофильной растительностью]. *Acta Biologica Sibirica*, **4**(1), 17–21. DOI: https://doi.org/10.14258/abs.v4i1.3922. [in Russian].

Syngayevsky, E. 2010. New researches of fauna of spiders (Arachnida, Aranei) of Kaniv Nature Reserve [К изучению фауны пауков (Arachnida, Aranei) Каневского природного заповедника]. *Nature Reserves in Ukraine [Заповідна справа в Україні]*, **16**(2), 91–94. URL: http://aetos.kiev.ua/zsu/zsu16-2/zsu16-2-17.pdf. [in Russian].

Tischler, W. 1949. *Grundzüge der Terrestrischen Tierökologie*. Vieweg, Braunschweig, 1–219. DOI: https://doi.org/10.1007/978-3-663-02549-8.

Udra, I, F. 1997. Biogeographic regions of Ukraine [Біогеографічне районування України]. *Ukrainian Geographical Journal [Український географічний журнал]*, **4**, 14–18. [In Ukrainian].

Willett, T. R. 2001. Spiders and other arthropods as indicators in old-growth versus logged redwood stands. *Restoration Ecology*, **9**(4), 410–420. DOI: https://doi.org/10.1046/j.1526-100X.2001.94010.x.

WSC (World Spider Catalog). **2023.** *World Spider Catalog*. Version 24.5 [accessed on 10.11.2023]. Natural History Museum, Bern. DOI: https://doi.org/10.24436/2.

V. N. Karazin Kharkiv National University

ПРАВИЛА ДЛЯ АВТОРІВ

1. «Вісті Харківського ентомологічного товариства» публікують статті, які є результатом наукових досліджень з усіх галузей загальної та прикладної ентомології. Представлені роботи повинні містити нові дані, які раніше не публікувалися.

2. «Вісті Харківського ентомологічного товариства» входять до «Переліку наукових фахових видань» України (категорія «Б», спеціальності: 091 — Біологія, 101 — Екологія, 162 — Біотехнологія та біоінженерія, 202 — Захист та карантин рослин, 211 — Ветеринарна медицина), в яких можуть публікуватися результати дисертаційних робіт на здобуття наукових ступенів доктора та кандидата біологічних та сільськогосподарських наук (накази МОН України № 241 від 09.03.2016 р. та № 515 від 16.05.2016 р.), а також доктора наук та доктора філософії (наказ МОН України № 409 від 17.03.2020 р.).

3. У статтях мають бути чітко сформульовані: постановка завдання, мета досліджень, методика роботи, результати та основні висновки.

4. Статті публікуються українською та англійською мовами.

5. Рукописи мають бути набрані у тестових редакторах Microsoft Word for Windows або Open Office Writer та надіслані на електронну адресу kharkentomolsocgazet@gmail.com. Шрифт — Times New Roman, розмір шрифту — 10 пт (резюме, список літератури, вивчений матеріал, текст у таблицях — 8 пт), міжрядковий інтервал — одинарний.

6. Рисунки та графіки повинні бути вставлені в текст з можливістю їх редагування, а також подаватись у вигляді окремих графічних файлів або файлів баз даних загальноприйнятих форматів. Рисунки та фотографії повинні бути скановані з роздільною здатністю не менше 300 точок на дюйм. При оформленні графіків та схем слід використовувати лише чорно-білі заливання та штрихування.

7. При оформленні статті необхідно дотримуватись наступного порядку: індекс УДК (ліворуч); прізвища та ініціали авторів; назва; резюме українською та англійською мовами (містять прізвища та ініціали авторів, назву статті, текст не менше 500 символів та ключові слова); текст статті; список літератури; установу, де виконано роботу, або домашню адресу (ліворуч); адреса електронної пошти.

8. У супровідному листі додаються повна адреса, найменування установи, телефон, e-mail, прізвище, ім'я, по батькові автора(ів), його(їх) ORCID, а також для статей українською мовою — розширене (> 2000 символів) резюме англійською для розміщення на сайті видання.

9. Автор(и) повинні запропонувати трьох кваліфікованих рецензентів, що є експертами у науковій галузі за темою статті. Редколегія може вибрати рецензента(ів) не лише з цього списку.

10. У заголовку статті слід зазначати латинську назву комахи або таксона і в дужках — ряда та родини, до яких воно належить.

11. Назви всіх таксонів мають бути узгоджені з чинним на дату подання статті виданням «Міжнародного кодексу зоологічної номенклатури» (https://www.iczn.org/the-code/the-code-online/). Латинські назви таксонів родової та видової груп мають виділятися курсивом і при першій згадці наводитися повністю, включаючи автора та рік опису.

12. Допускається використання виключно метричної системи вимірів і лише загальноприйнятих скорочень (абревіатур) без їх розшифрування.

13. Посилання на літературні джерела в тексті та бібліографічний список повинні бути оформлені строго відповідно до стилю Harvard з переліком усіх авторів, повної назви журналу, DOI або прямого посилання на публікацію (якщо є).

14. Якщо стаття, що подається до журналу, написана українською — джерела літератури та посилання на них треба наводити мовами оригіналу, а якщо англійською, то джерела та посилання опубліковані кирилицею мають бути наведені за англійським резюме з назвами статей та видань мовами оригіналу у квадратних дужках. Наприклад: Osytshnjuk, A. Z. 1964. The bees (Apoidea) of the Ukrainian Polissya [Бджолині (Apoidea) Українського Полісся]. *Proceedings of the Institute of Zoology of the Academy of Sciences of the Ukrainian SSR [Праці Інституту зоології АН УРСР]*, 20, 120–149. [in Ukrainian].

15. Для оформлення статті рекомендується використовувати шаблон (https://entomology.kharkiv.ua/index.php/KhESG/libraryFiles/downloadPublic/5) і стилі в ньому, що починаються з IZ.

16. Редакційна колегія залишає за собою право вносити будь-які необхідні зміни до статей або просити зробити це автора, а також відхиляти рукописи, які не відповідають наведеним правилам.

Контакти: kharkentomolsocgazet@gmail.com; телефони: +38-097-371-94-58 (головний редактор — Мєшкова Валентина Львівна), +38-050-302-22-90 (відповідальний секретар — Гугля Юлія Олексіївна).

RULES FOR AUTHORS

1. The *Kharkov Entomological Society Gazette* publishes articles that are the result of research done in all fields of general and applied entomology. Articles being submitted should contain new data, never published before.

2. The *Kharkov Entomological Society Gazette* is included in the 'List of Scientific Special Serial Publications' of Ukraine (category 'B', specialities: 091 — Biology, 101 — Ecology, 162 — Biotechnologies and bioengineering, 202 — Plant protection and quarantine, 211 — Veterinary Medicine) that can publish the results of Ph.D. and Dr.Habil. theses in biological and agricultural sciences (orders of the Ministry of Education and Science of Ukraine: № 241, March 9, 2016; № 515, May 16, 2016; № 409, March 17, 2020).

3. Problem definition, aim of investigation, methods, results, and the main conclusions must be clearly formulated in the articles.

4. Articles are published in the Ukrainian and English languages.

5. Manuscripts must be typed in the text editor Microsoft Word for Windows or Open Office Writer and submitted to e-mail kharkentomolsocgazet@gmail.com. The font should be Times New Roman, font size — 10 pt (summary, references, studied material, text in tables — 8 pt), with a single line vertical spacing.

6. Figures and graphs should be inserted into a text by means of their editing, and submitted as separate standard format graphic or database files. Figures and photos should be scanned using a resolution of 300 dpi or higher. Only black and white lines or shading (hatching) must be used in graphs and schemes.

7. When working on the article layout, one should stick to the following arrangement: UDC index (on the left); authors' surnames and initials; the title; summaries in Ukrainian and English (must include authors' surnames and initials, the title of the article, a text no less than 500 characters, and keywords); body of the article; references; authors' affiliation or home addresses (on the left); e-mail.

8. The author(s)' detailed address, affiliation, telephone number, e-mail, last, middle and first name(s), ORCID are attached in the cover letter. The extended summary (≥ 2 000 characters) in English for articles in Ukrainian must be added for posting on the *Kharkov Entomological Society Gazette* website.

9. Author(s) must suggest three qualified reviewers who are expert in the article's scientific area. The Editorial Board may choose someone who is or is not on that list.

10. The title of the article should include the Latin name of an insect or a taxa and, in brackets, the order and family to which it belongs.

11. Names of all taxa must be in agreement with of the current on the article submission date edition of the *International Code of Zoological Nomenclature* (https://www.iczn.org/the-code/the-code-online/). The taxa' Latin names of genus and species groups should be italicized and presented in full, including author and the year of description, at the first mention.

12. Only metric systems and generally accepted abbreviations without expansion should be used.

13. References and citation must be formatted according to the Harvard style only with completed list of authors, the full name of the journal, and DOI or direct link to the publication (if available).

14. If the article submitted to the journal is written in Ukrainian, the literature sources and references to them should be given in the original languages, and if in English, then the sources and references published in Cyrillic should be given according to the English summary with articles' and sources titles in the original languages in square brackets. For example: Osytshnjuk, A. Z. 1964. The bees (Apoidea) of the Ukrainian Polissya [Бджолині (Apoidea) Українського Полісся]. *Proceedings of the Institute of Zoology of the Academy of Sciences of the Ukrainian SSR [Праці Інституту зоології АН УРСР]*, 20, 120–149. [in Ukrainian].

15. The template (https://entomology.kharkiv.ua/index.php/KhESG/libraryFiles/downloadPublic/5) and included styles (which begin with IZ) are recommended for using to ensure common layout and formatting of the article.

16. The Editorial Board reserves the right to make any necessary changes in the articles, or request the author to do so, or reject those manuscripts that do not comply with the rules.

Contacts: kharkentomolsocgazet@gmail.com; phone numbers: +38-097-371-94-58 (editor-in-chief — Meshkova Valentyna Lvivna), +38-050-302-22-90 (executive secretary — Guglya Yuliia Oleksiivna).