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ON THE FAUNA OF LEPIDOPTERA (INSECTA) OF THE NATIONAL NATURE PARK ‘DVORICHANSKYI’ (KHARKIV REGION, UKRAINE) AND ITS ENVIRONS. CONTRIBUTION 6

Каролінський, С. О., Дем’яненко, С. О., Кавурка, В. В., Мушинський, В. Г. До фауни лускокрилих (Insecta: Lepidoptera) Національного природного парку «Дворічанський» (Харківська область, Україна) та його околиць. Повідомлення 6. *Вісті Харківського ентомологічного товариства*. 2022. Т. XXX, вип. 1–2. С. 8–13. DOI: 10.36016/KhESG-2022-30-1-2-2.

У статті наведено анотований список нових знахідок лускокрилих Національного природного парку «Дворічанський». Список містить 50 видів лускокрилих, з яких 34 види вперше наводяться для території парку, а 16 видів — уперше для Харківської області. Загалом у НПП «Дворічанський» відмічено 1 398 видів Lepidoptera. 7 назв.

Ключові слова: Lepidoptera, лускокрилі, фауна, Національний природний парк «Дворічанський».

Karolinskiy, E. A., Demyanenko, S. O., Kavurka, V. V., Mushinskiy, V. G. On the fauna of Lepidoptera (Insecta) of the National Nature Park ‘Dvorichanskyi’ (Kharkiv Region, Ukraine) and its environs. Contribution 6. *The Kharkov Entomological Society Gazette*. 2022. Vol. XXX, iss. 1-2. P. 8–13. DOI: 10.36016/KhESG-2022-30-1-2-2.

An annotated list of new records of butterflies and moths of the National Nature Park ‘Dvorichanskyi’ is provided. The list includes 50 species, of which 34 are registered in the park for the first time, and 16 are first records for Kharkiv Region. Totally, there are 1,398 species of Lepidoptera registered in the National Nature Park ‘Dvorichanskyi’. 7 refs.

Keywords: Lepidoptera, butterflies and moths, fauna, National Nature Park ‘Dvorichanskyi’.

Каролінський, Е. А., Дем’яненко, С. А., Кавурка, В. В., Мушинський, В. Г. К фауне чешуекрылых (Insecta: Lepidoptera) Национального природного парка «Дворечанский» (Харьковская область, Украина) и его окрестностей. Сообщение 6. *Известия Харьковського ентомологічного товариства*. 2022. Т. XXX, вып. 1-2. С. 8–13. DOI: 10.36016/KhESG-2022-30-1-2-2.

В статье приведён аннотированный список новых находок чешуекрылых Национального природного парка «Дворечанский». Список включает в себя 50 видов чешуекрылых, из которых 34 вида впервые приводятся для территории парка, а 16 видов — впервые для Харьковской области. Всего в НПП «Дворечанский» отмечены 1 398 видов Lepidoptera. 7 назв.

Ключевые слова: Lepidoptera, чешуекрылые, фауна, Национальный природный парк «Дворечанский».

Introduction. This paper is the sixth contribution towards the inventory of Lepidoptera of the National Nature Park (NNP) ‘Dvorichanskyi’ and its close environs. In our fifth paper (Karolinskiy *et al.*, 2021), 1,364 species of Lepidoptera were reported for the park. However, these data are preliminary, and the species diversity of the study area is higher. The examination of new material collected by us resulted in the discovery of 34 additional species, 16 of which are recorded for Kharkiv region for the first time. Currently, the list of Lepidoptera of NNP ‘Dvorichanskyi’ and its environs consists of 1,398 species.

Materials and methods. This paper is based on the material collected and observed by the authors and D. Davydov, V. Kletenkin, M. Parhomenko, S. Trotsenko, S. Tsykal, and V. Terekhova during the following period: April and July 2016, June 2017, June 2018, June 2020, and from May to October 2021.

The material was observed and collected via daytime catching by a net, attracting by light (125W, 160W, and 250W mercury-vapor lamps, 8W and 26W fluorescent UV lamps), and photographing.

The material was identified by the authors. The determination by photographs was carried out only for species with distinct differences in habitus. In difficult cases, specimens were dissected for identification. Genitalia were macerated in 8–12% potassium hydroxide solution, then washed in faint acetic acid solution and then in distilled water. After that, genitalia were examined in glycerol and stored in microvials placed on the pins of the specimens; in some cases, genitalia were embedded in euparal and slide-mounted.

The material collected by V. Mushinskiy, S. Trotsenko, and S. Tsykal is in their research collections; Tortricidae are in the collection of the I. I. Schmalhausen Institute of Zoology of the National Academy of

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Sciences of Ukraine; other 'microlepidoptera' except Pyraloidea and Pterophoroidea are in the collection of the Institute for Evolutionary Ecology of the National Academy of Sciences of Ukraine; the rest of the material is in the collection of Museum of Nature of the V. N. Karazin Kharkiv National University.

Places of observation, dates and collectors (for attracting by light): **Novomlynsk** (49.88°N, 37.73°E) — further in the text '**N.**' — 29.07.2016 (S. Demyanenko), 15.06.2021, 11.07.2021, and 18.07.2021 (E. Karolinskiy), 27–28.07.2021 (S. Demyanenko), 07.08.2021 (E. Karolinskiy); NNP 'Dvorichanskyi', 3 km NNE of Novomlynsk, '**Berezky**' (49.912°N, 37.756°E) — further in the text '**B.**' — 11.06.2021 (E. Karolinskiy, V. Mushinskiy), 05.08.2021 (E. Karolinskiy, V. Mushinskiy, M. Parhomenko); NNP 'Dvorichanskyi', 4.8 km NNE of Novomlynsk, gulch '**Shlagbaumna**' (49.930°N, 37.751°E) — further in the text '**Sh.**' — 09.06.2021 and 03–04.08.2021 (E. Karolinskiy, V. Mushinskiy); NNP 'Dvorichanskyi', 1.7 km NNE of Novomlynsk, gulch '**Sosnova**' (49.900°N, 37.750°E) — further in the text '**S.**' — 06–07.06.2020 (S. Trotsenko, S. Tsykal), 29.05.2021 (E. Karolinskiy, M. Parhomenko, S. Trotsenko, S. Tsykal); NNP 'Dvorichanskyi', 2 km NNE of Novomlynsk, gulch '**Mohyla the 1st**' (49.902°N, 37.751°E) — further in the text '**M.**' — 28.05.2021, 26.06.2021, 14.07.2021, and 16.08.2021 (E. Karolinskiy); NNP 'Dvorichanskyi', 2.5 km E of Krasnoe Pervoe, '**Mantypivka**' (49.944°N, 37.796°E) — further in the text '**Mn.**' — 01.07.2021 (E. Karolinskiy), 06.08.2021 (E. Karolinskiy, V. Mushinskiy, M. Parhomenko, V. Terekhova).

Daytime collecting and recording were conducted at the following locations: NNP 'Dvorichanskyi', right bank of Oskil River between **Novomlynsk** and **Krasne Pershe** (49.89–94°N, 37.74–78°E) — further in the text '**d-N.-Kr.**'; NNP 'Dvorichanskyi', left bank of Oskil River, environs of **Petrivka** (49.93–94°N, 37.78–80°E) — further in the text '**d-Petr.**'; NNP 'Dvorichanskyi', right bank of Oskil River near **Topoli** (50.01–02°N, 37.89–90°E) — further in the text '**d-T.**'

In the list below, an asterisk (*) indicates a species new for NNP 'Dvorichanskyi' and its environs, two asterisks (**) — a species new for Kharkiv Region as a whole. The species without asterisks were already registered in the environs of NNP 'Dvorichanskyi', i.e., in Novomlynsk and its northern surroundings (Karolinskiy *et al.*, 2017, 2018, 2019, 2020, 2021), and now we register these species strictly at the territory of the park.

The higher system of Lepidoptera follows Nieukerken *et al.* (2011) and Heikkilä *et al.* (2014).

Results.

Infraorder EXOPORIA Common, 1975

Superfamily HEPIALOIDEA Stephens, 1829

Family HEPIALIDAE Stephens, 1829

Korscheltellus lupulina (Linnaeus, 1758)

Material. S., 29.05.2021 — 3 sp.

Infraorder HETERONEURA Tillyard, 1918

Superfamily TINEOIDEA Latreille, 1810

Family PSYCHIDAE Boisduval, 1829

** *Taleporia tubulosa* (Retzius, 1783)

Material. N., 15.06.2021 — 1 ♂, 13.07.2021 — 1 case.

** *Ptilocephala plumifera* (Ochsenheimer, 1810)

Material. d-Petr., 19.04.2016 (V. Kletenkin) — 1 ♂.

Family TINEIDAE Latreille, 1810

** *Archinemapogon yildizae* (Koçak, 1981)

Material. N., 07.08.2021 — 1 sp.

Nemaxera betulinnella (Paykull, 1785)

Material. Sh., 04.08.2021 — 1 sp.

Tinea trinotella Thunberg et Wenner, 1794

Material. Sh., 04.08.2021 — 1 sp.

Superfamily GRACILLARIOIDEA Stainton, 1854

Family GRACILLARIIDAE Stainton, 1854

* *Cameraria ohridella* Deschka et Dimić, 1886

Material. B., 05.08.2021 — 1 sp.

Superfamily GELECHIOIDEA Stainton, 1854

Family OECOPHORIDAE Bruand, 1850

Decantha borkhauseni (Zeller, 1839)

Material. M., 26.06.2021 — 1 sp.

Family DEPRESSARIIDAE Meyrick, 1883

Ethmia aurifluella (Hübner, [1810])

Material. d–T., 07.05.2021 — 1 sp. (M. Parhomenko).

Family GELECHIIDAE Stainton, 1854

Brachmia inornatella (Douglas, 1850)

Material. Mn., 01.07.2021 — 1 sp.

Superfamily TORTRICOIDEA Latreille, 1802

Family TORTRICIDAE Latreille, 1802

Subfamily TORTRICINAE Latreille, 1802

* *Gynnidomorpha alismana* (Ragonot, 1883)

Material. B., 05.08.2021 — 1 ♀; Mn., 06.08.2021 — 2 ♂♂; N., 11.07.2021 — 1 ♀.

* *Aethes moribundana* (Staudinger, 1859)

Material. Sh., 04.08.2021 — 1 ♂.

** *Propiomorpha rhodophana* (Herrich-Schäffer, [1851])

Material. S., 29.05.2021 — 1 ♀.

* *Epagoge grotiana* (Fabricius, 1781)

Material. B., 11.06.2021 — 1 ♀.

Subfamily OLETHREUTINAE Walsingham, 1895

* *Apotomis lineana* ([Denis et Schiffermüller], 1775)

Material. Mn., 06.08.2021 — 1 ♀.

* *Metendothenia atropunctana* (Zetterstedt, 1839)

Material. Sh., 03.08.2021 — 1 ♂.

* *Lobesia reliquana* (Hübner, 1825)

Material. B., 11.06.2021 — 1 ♂.

* *Epinotia immundana* (Fischer von Röslerstamm, 1839)

Material. S., 29.05.2021 — 1 ♀.

Epinotia nisella (Clerck, 1759)

Material. Sh., 03.08.2021 — 1 ♀.

** *Zeiraphera rufimitrana* (Herrich-Schäffer, [1851])

Material. Mn., 06.08.2021 — 1 ♂.

* *Epiblema junctana* (Herrich-Schäffer, [1856])

Material. N., 28.07.2021 — 1 sp.

***Eucosmomorpha albersana* (Hübner, [1813])**

Material. M., 28.05.2021 — 1 ♀.

* ***Ancylis selenana* (Guenée, 1845)**

Material. Mn., 06.08.2021 — 1 ♀.

** ***Grapholita delineana* Walker, 1863**

Material. d-Petr., 25.06.2021 (D. Davydov) — 1 sp.

** ***Grapholita gemmiferana* (Treitschke, 1835)**

Material. Sh., 09.06.2021 — 1 ♂.

* ***Cydia nigricana* (Fabricius, 1794)**

Material. B., 05.08.2021 — 1 ♂.

** ***Cydia leguminana* (Lienig et Zeller, 1846)**

Material. Mn., 06.08.2021 — 1 ♀.

Superfamily COSSOIDEA Leach, 1815

Family BRACHODIDAE Agenjo, 1966

** ***Brachodes appendiculata* (Esper, [1783])**

Material. d-Petr., 06.06.2017 (V. Kletenkin) — 1 ♂.

Superfamily ZYGAENOIDEA Latreille, 1809

Family ZYGAENIDAE Latreille, 1809

***Rhagades pruni* ([Denis et Schiffermüller], 1775)**

Material. d-Petr., 27.06.2018 (V. Kletenkin) — 1 ♂.

Superfamily PAPILIONOIDEA Latreille, 1802

Family LYCAENIDAE Leach, 1815

* ***Lycæna thersamon* (Esper, [1784])**

Material. d-N.-Kr., 15.07.2021 (E. Karolinskiy) — 1 ♀.

Family NYMPHALIDAE Rafinesque, 1815

***Melitæa cinxia* (Linnaeus, 1758)**

Material. d-N.-Kr., 29.05.2021 (E. Karolinskiy) — 1 ♂.

Superfamily PYRALOIDEA Latreille, 1809

Family PYRALIDAE Latreille, 1809

** ***Achroia grisella* (Fabricius, 1794)**

Material. N., 11.07.2021 — 1 sp., 11.09.2021 — 1 sp.

Family CRAMBIDAE Latreille, 1810

***Acentria ephemerella* ([Denis et Schiffermüller], 1775)**

Material. Mn., 06.08.2021 — 10 sp.

** ***Evergestis forficælis* (Linnaeus, 1758)**

Material. Sh., 04.08.2021 — 1 sp.; N., 28.07.2021 — 1 sp.

** ***Pyrausta obfuscata* (Scopoli, 1763)**

Material. d-N.-Kr., 01.05.2021 (M. Parhomenko) — 1 sp.

***Udea exalbalis* (Caradja, 1916)**

Material. B., 11.06.2021 — 1 sp.

Superfamily GEOMETROIDEA Leach, 1815

Family GEOMETRIDAE Leach, 1815

Subfamily ENNOMINAE Duponchel, 1845

***Macaria liturata* (Clerck, 1759)**

Material. B., 05.08.2021 — 1 sp.; Mn., 06.08.2021 — 1 sp.

**** *Heterolocha laminaria* (Herrich-Schäffer, [1854])**

Material. N., 27.07.2021 — 1 sp.

Subfamily STERRHINAE Meyrick, 1892

*** *Cleta filacearia* (Herrich-Schäffer, 1847)**

Material. S., 06-07.06.2020 — 1 ♀.

**** *Cyclophora albipunctata* (Hufnagel, 1767)**

Material. N., 28.07.2021 — 1 sp.

Subfamily LARENTIINAE Duponchel, 1845

**** *Anticollix sparsata* (Treitschke, 1828)**

Material. N., 18.07.2021 — 1 sp.

Superfamily NOCTUOIDEA Latreille, 1809

Family EREBIDAE Leach, 1815

Subfamily ARCTIINAE Leach, [1815]

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

Material. B., 05.08.2021 — 1 sp.; Sh., 04.08.2021 — 5 sp.; N., 27.07.2021 — 1 sp.

***Eilema lurideola* ([Zincken], 1817)**

Material. M., 26.06.2021 — 1 sp.; Mn., 01.07.2021 — 1 sp.

Subfamily BOLETOBIINAE Guenée, 1837

**** *Eublemma parva* (Hübner, [1808])**

Material. M., 16.08.2021 — 1 sp.

Subfamily EREBINAE Leach, 1815

*** *Catephia alchymista* ([Denis et Schiffermüller], 1775)**

Material. Mn., 06.08.2021 — 1 sp.

*** *Catocala puerpera* (Giorna, 1791)**

Material. N., 28.07.2021 — 1 sp., 08-09.09.2021 — 1 sp., both indoors.

Family NOCTUIDAE Latreille, 1809

Subfamily PLUSIINAE Boisduval, [1828]

*** *Trichoplusia ni* (Hübner, [1803])**

Material. N., 29.07.2016 — 1 sp., 27.07.2021 — 1 sp.

Subfamily CUCULLIINAE Herrich-Schäffer, 1850

***Cucullia fraudatrix* Eversmann, 1837**

Material. M., 14.07.2021 — 1 sp.; Mn., 06.08.2021 — 1 sp.

Subfamily HELIOTHINAE Boisduval, 1828

***Heliothis peltigera* ([Denis et Schiffermüller], 1775)**

Material. B., 05.08.2020 — 2 sp.; Mn., 06.08.2020 — 1 sp.

Subfamily XYLENINAE Guenée, 1837

*** *Caradrina clavipalpis* (Scopoli, 1763)**

Material. N., 28.07.2021 — 1 sp.

Conclusions. According to the results of our research and the literature data, 1,398 species of Lepidoptera are registered in NNP 'Dvorichanskyi' and its environs, 34 of which are given for the park for the first time. The above data indicate a very high biodiversity and uniqueness of the fauna of Lepidoptera of NNP 'Dvorichanskyi'. At the same time, the list of Lepidoptera of the park is still not complete and further studies will certainly supplement it with new species.

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