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NEW RECORDS OF LEPIDOPTERA (INSECTA) OF TONELNA GULCH (DNIPRO CITY, UKRAINE)

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Тонельна балка — один з осередків природної рослинності, що збереглися у місті з високим рівнем антропогенної навантаженості. Упродовж травня–жовтня 2022–2023 років проводили польові спостереження з метою з'ясування видового складу лускокрилих Тонельної балки міста Дніпро. За результатами наведено анований список знахідок, який містить 182 види, 181 з яких наводяться для балки вперше. 30 рис., 1 табл., 6 назв.

Ключові слова: Lepidoptera, лускокрилі, фауна, Тонельна балка, Дніпро, Україна.

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The Tonelna gulch is one of the centers of natural vegetation that have been preserved in the city with the high level of anthropogenic load. From May to October 2022–2023 field observations were provided with a purpose to clarify species complex of Lepidoptera of the Tonelna gulch of Dnipro City. As a result an annotated list of new records of butterflies and moths of the Tonelna gulch (Dnipro City, Ukraine) is provided. The list includes 182 species, 181 of them are registered in the research area for the first time. 30 figs, 1 tab., 6 refs.

Keywords: Lepidoptera, butterflies and moths, fauna, Tonelna gulch, Dnipro City, Ukraine.

Introduction. Dnipro City is one of the largest cities and industrial centers in Ukraine, with a developed metallurgical and mechanical engineering complex. Very few large areas with at least partially preserved remnants of natural vegetation are left in the city. One of these is Tonelna gulch, located on the right bank of the Dnipro in the southern part of the city and representing heavily forested (mainly oaks with maples, scumpia, elms) steppe areas on rugged terrain. Lepidoptera of these places are almost unexplored: only one species of Nepticulidae (Orlovskytė, Dobrynina, Stonis, 2023) was published prior to this work.

The **purpose** of this research was to supplement knowledge on Lepidoptera fauna of center of natural vegetation that have been preserved in urbanized localities.

Materials and methods. This paper is based on the material observed by the author in Tonelna gulch (48.413–48.419, 35.027–35.051) of Dnipro City in 2022–2023. The material was observed and photographed during short daytime excursions only.

The determination of the material was carried out by the author. The identification by photographs was made only for species with distinct differences in habitus. Ellis (2022) and Lepiforum (2024) were used for identification of mines. Plant names follow 'Plants of the World Online' (POWO, 2024).

Results and discussions. Table 1 below presents the list of species from Tonelna gulch of Dnipro City. The higher system of Lepidoptera follows Nieuwerkerken *et al.* (2011) with corrections from Heikkilä *et al.* (2014).

Table 1. Species of Lepidoptera from Tonelna gulch

Species	Records
Superfamily NEPTICULOIDEA Stainon, 1854	
Family NEPTICULIDAE Stainton, 1854	
<i>Simplimorpha promissa</i> (Staudinger, 1871)	(Orlovskytė, Dobrynina, Stonis, 2023); 16.06.2023 — 2 empty mines on <i>Cotinus coggygia</i>
<i>Stigmella prunetorum</i> (Stainton, 1855) (Fig. 1)	17.07.2022 — 1 empty mine on <i>Prunus cerasus</i>
<i>Stigmella aceris</i> (Frey, 1857) (Fig. 2)	12.06.2022, 17.07.2022, 24.08.2022 and 07.10.2022 — a lot of empty mines on <i>Acer platanoides</i> , 17.07.2022 — single empty mines on <i>Acer tataricum</i>
<i>Stigmella catharticella</i> (Stainton, 1853) (Fig. 3)	17.06.2022 — 1 mine with larva on <i>Rhamnus cathartica</i>
<i>Stigmella paradoxa</i> (Frey, 1858) (Fig. 4)	02.07.2022 — 1 mine, 09.06.2023 — 1 mine, all on <i>Crataegus</i>

Continuation of Table 1

Species	Records
<i>Stigmella lemmiscella</i> (Zeller, 1839) (Fig. 5)	14.08.2022 — 1 empty mine on <i>Ulmus</i>
<i>Stigmella plagicolella</i> (Stainton, 1854) (Fig. 6)	17.07.2022 — 1 empty mine on <i>Prunus cerasus</i>
<i>Stigmella basiguttella</i> (Heinemann, 1862) (Fig. 7)	14.08.2022 — 1 empty mine on <i>Quercus</i>
Superfamily ADELOIDEA Bruand, 1850	
Family ADELIDAE Bruand, 1850	
<i>Nemophora degeerella</i> (Linnaeus, 1758) s. l.	17.06.2022 — 1 ♀, 21.06.2022 — 1 ♂, 07.06.2023 — 1 ♂, 1 ♀
<i>Nemophora cupriacella</i> (Hübner, [1819])	21.06.2022 — 1 sp.
<i>Nemophora fasciella</i> (Fabricius, 1775)	17.06.2022 — 1 ♂, 1 ♀, 02.07.2022 — 1 ♂, 19.07.2022 — 1 ♀
Superfamily TISCHERIOIDEA Spuler, 1898	
Family TISCHERIIDAE Spuler, 1898	
<i>Tischeria ekebladella</i> (Bjerkander, 1795) (Fig. 8)	17.06.2022 — tens of young mines with larvae, 24.08.2022 and 18.09.2022 — tens of mines, all on <i>Quercus robur</i>
<i>Tischeria dodonaea</i> Stainton, 1858 (Fig. 9)	17.06.2022 — 1 mine on <i>Quercus robur</i>
<i>Tischeria decidua</i> Wocke, 1876 (Fig. 10)	12.06.2022 — tens of mines, 18.09.2022 — single mines, all on <i>Quercus robur</i>
Superfamily TINEOIDEA Latreille, 1810	
Family TINEIDAE Latreille, 1810	
<i>Euplocamus anthracinalis</i> (Scopoli, 1763)	17.05.2023 — 1 sp., 02.06.2023 — 1 sp.
<i>Triaxomera parasitella</i> (Hübner, 1796)	02.06.2023 — 3 sp.
<i>Archinemapogon yildizae</i> Koçak, 1981	17.07.2022 — 1 sp., 16.06.2023 — 1 sp.
<i>Nemaxera betulinella</i> (Paykull, 1785)	02.06.2023 — 1 sp., 16.06.2023 — 1 sp.
<i>Neurothaumasia ankerella</i> (Mann, 1867)	16.06.2023 — 2 sp.
Superfamily GRACILLARIOIDEA Stainton, 1854	
Family BUCCULATRICIDAE Fracker, 1915	
<i>Bucculatrix albedinella</i> (Zeller, 1839) (Fig. 11)	14.08.2022 — 2 old mines on <i>Ulmus</i>
<i>Bucculatrix ulmella</i> Zeller, 1848 (Fig. 12)	14.08.2022 — 1 mine on <i>Quercus robur</i>
Family GRACILLARIIDAE Stainton, 1854	
<i>Parectopa ononidis</i> (Zeller, 1839) (Fig. 13)	17.06.2022 — 1 mine, 21.06.2022 — several mines, all on <i>Trifolium</i>
<i>Parectopa robinella</i> Clemens, 1863 (Fig. 14)	26.06.2022 — tens of young mines, 01.07.2022 — tens of mines, 17.07.2022 — hundreds of mines, 14.08.2022 — tens of mines, 24.08.2022 — tens of mines, 07.06.2023 — 1 imago, 16.06.2023 — 3 mines, all mines on <i>Robinia pseudoacacia</i>
<i>Phyllonorycter joannisi</i> (Le Marchand, 1936) (Fig. 15)	12.06.2022, 17.07.2022, 24.08.2022 and 07.10.2022 — mines on <i>Acer platanoides</i>
Superfamily YPONOMEUTOIDEA Stephens, 1829	
Family YPONOMEUTIDAE Stephens, 1829	
<i>Yponomeuta cagnagella</i> (Hübner, [1813]) (Fig. 16)	21.06.2022 — 1 sp., 26.06.2022 — 5 sp., 17.07.2022 — 1 sp., 29.07.2022 — 5 sp., 22.08.2022 — 1 sp., 17.05.2023 — several tens of silk nests with larvae, 02.06.2023 — several tens of silk nests but few larvae, all nests on <i>Euonymus</i>
<i>Yponomeuta irrorella</i> (Hübner, 1796)	16.06.2023 — 1 sp.
<i>Yponomeuta plumbella</i> (Denis et Schiffermüller, 1775)	21.06.2022 — 6 sp., 26.06.2022 — 5 sp., 01–02.07.2022 — 30 sp., 17.07.2022 — 10 sp., 19.07.2022 — 3 sp., 29.07.2022 — 2 sp., 16.06.2023 — 1 sp.
Family PLUTELLIDAE Guenée, 1845	
<i>Plutella xylostella</i> (Linnaeus, 1758)	17.06.2022 — 1 sp., 17.07.2022 — 3 sp., 19.07.2022 — 3 sp., 14.08.2022 — 1 sp., 02.06.2023 — 2 sp., 07.06.2023 — 12 sp., 09.06.2023 — 6 sp.
Family YPSOLOPHIDAE Guenée, 1845	
<i>Ypsolopha dentella</i> (Fabricius, 1775)	21.06.2022 — 1 sp.
<i>Ypsolopha lucella</i> (Fabricius, 1775)	17.06.2022 — 1 sp., 26.06.2022 — 1 sp., 16.06.2023 — 1 sp.
<i>Ypsolopha chazariella</i> (Mann, 1866)	14.06.2022 — 1 sp.
Superfamily TORTRICOIDEA Latreille, 1803	
Family TORTRICIDAE Latreille, 1803	
<i>Aleimma loeflingiana</i> (Linnaeus, 1758)	14.06.2022 — 2 sp., 21.06.2022 — 3 sp., 26.06.2022 — 2 sp., 02.06.2023 — 1 sp., 07.06.2023 — 6 sp., 09.06.2023 — 5 sp., 16.06.2023 — 2 sp.
<i>Acleris rhombana</i> ([Denis et Schiffermüller], 1775)	22.08.2022 — 1 sp., 18.09.2022 — 1 sp.
<i>Aethes hartmanniana</i> (Clerck, 1759)	17.06.2022 — 5 sp., 26.06.2022 — 1 sp., 04.05.2023 — 3 sp., 17.05.2023 — 2 sp., 02.06.2023 — 6 sp., 07.06.2023 — 1 sp., 09.06.2023 — 2 sp.
<i>Aethes margarotana</i> (Duponchel, [1836])	17.07.2022 — 1 sp.
<i>Aethes williana</i> (Brahm, 1791)	17.05.2023 — 1 sp., 07.06.2023 — 1 sp.
<i>Archips podana</i> (Scopoli, 1763)	16.06.2023 — 1 ♂
<i>Archips xylosteana</i> (Linnaeus, 1758)	12.06.2022 — 10 sp., 14.06.2022 — 50 sp., 17.06.2022 — 15 sp., 21.06.2022 — 10 sp., 26.06.2022 — 5 sp., 01.07.2022 — 1 sp., 07.06.2023 — 2 sp., 09.06.2023 — 2 sp., 16.06.2023 — 4 sp.
<i>Archips rosana</i> (Linnaeus, 1758)	16.06.2023 — 1 ♂
<i>Ptycholoma lechearia</i> (Linnaeus, 1758)	17.05.2023 — 1 sp., 09.06.2023 — 1 sp.
<i>Pandemis cerasana</i> (Hübner, 1786)	17.06.2022 — 1 sp., 09.06.2023 — 1 sp.
<i>Clepsis pallidana</i> (Fabricius, [1777])	17.06.2022 — 1 sp., 26.06.2022 — 1 sp., 02.07.2022 — 1 sp.
<i>Eudemis profundana</i> ([Denis et Schiffermüller], 1775)	21.06.2022 — 1 sp., 01.07.2022 — 1 sp.

Continuation of Table 1

Species	Records
<i>Hedya nubiferana</i> (Haworth, 1811)	14.06.2022 — 1 sp., 02.06.2023 — 1 sp., 09.06.2023 — 10 sp., 16.06.2023 — 1 sp.
<i>Hedya pruniana</i> (Hübner, [1799])	07.06.2023 — 1 sp.
<i>Olethreutes arcuella</i> (Clerck, 1759)	17.05.2023 — 2 sp., 09.06.2023 — 2 sp.
<i>Celypha striana</i> ([Denis et Schiffmüller], 1775)	17.06.2022 — 1 sp., 01.07.2022 — 1 sp., 02.07.2022 — 1 sp.
<i>Celypha cespitana</i> (Hübner, [1817])	17.06.2022 — 4 sp., 01.07.2022 — 1 sp., 02.07.2022 — 1 sp., 14.08.2022 — 1 sp., 09.06.2023 — 1 sp.
<i>Syricoris lacunana</i> ([Denis et Schiffmüller], 1775)	07.06.2023 — 1 sp.
<i>Ancylis mitterbacheriana</i> ([Denis et Schiffmüller], 1775)	17.05.2023 — 1 sp., 09.06.2023 — 1 sp.
<i>Spilonota ocellana</i> ([Denis et Schiffmüller], 1775)	17.06.2022 — 3 sp., 09.06.2023 — 1 sp., 16.06.2023 — 1 sp.
<i>Zeiraphera isertana</i> (Fabricius, 1794)	12.06.2022 — common, 14.06.2022 — 30 sp., 17.06.2022 — 100 sp., 21.06.2022 — 200 sp., 26.06.2022 — 70 sp., 01.07.2022 — 50 sp., 17.07.2022 — 5 sp., 19.07.2022 — 10 sp., 07.06.2023 — 1 sp., 09.06.2023 — 4 sp., 16.06.2023 — 70 sp.
<i>Eucosma albidulana</i> (Herrich-Schäffer, [1851])	26.06.2022 — 1 sp., 02.07.2022 — 2 sp.
<i>Eucosma metzneriana</i> (Treitschke, 1830)	17.06.2022 — 1 sp., 21.06.2022 — 1 sp.
<i>Epiblema hepaticana</i> (Treitschke, 1835)	02.06.2023 — 1 sp., 07.06.2023 — 1 sp.
<i>Cydia nigricana</i> (Fabricius, 1794)	26.06.2022 — 1 sp., 17.05.2023 — 1 sp.
<i>Grapholita compositella</i> (Fabricius, 1775)	12.06.2022 — 1 sp., 01.07.2022 — 1 sp., 29.07.2022 — 1 sp., 02.06.2023 — 4 sp., 09.06.2023 — 1 sp.
<i>Grapholita pallifrontana</i> (Lienig et Zeller, 1846) (Fig. 17)	17.06.2022 — 1 sp., 09.06.2023 — 1 sp.
<i>Grapholita coronillana</i> (Lienig et Zeller, 1846)	17.05.2023 — 1 sp.
<i>Grapholita janthinana</i> (Duponchel, [1835])	09.06.2023 — 1 sp. on <i>Crataegus</i>
<i>Dichrorampha sequana</i> (Hübner, [1799])	07.06.2023 — 7 sp. on <i>Tanacetum vulgare</i> , 09.06.2023 — 2 sp. on <i>Tanacetum vulgare</i>
<i>Dichrorampha petiverella</i> (Linnaeus, 1758)	02.06.2023 — 1 sp., 07.06.2023 — 1 sp.
Superfamily GELECHIOIDEA Stainton, 1854	
Family OECOPHORIDAE Bruand, 1850	
<i>Crassa unitella</i> (Hübner, 1796)	26.06.2022 — 1 sp., 01–02.07.2022 — 1 sp., 17.07.2022 — 3 sp., 07.06.2023 — 1 sp.
<i>Dasycera oliiviella</i> (Fabricius, 1794) (Fig. 18)	17.06.2022 — 1 sp., 26.06.2022 — 1 sp., 16.06.2023 — 3 sp.
Family COSMOPTERIGIDAE Heinemann et Wocke, 1876	
<i>Pancalia leuwenhoekella</i> (Linnaeus, 1761)	12.06.2022 — 1 sp., 09.06.2023 — 1 sp.
<i>Cosmopterix zieglerella</i> (Hübner, [1810]) (Fig. 19)	01.07.2022 — 12 mines, 16.10.2022 — 1 mine, all on <i>Humulus lupulus</i>
Family GELECHIIDAE Stainton, 1854	
<i>Sophronia sicariellus</i> (Zeller, 1839)	12.06.2022 — 1 sp.
<i>Anarsia innoxia</i> Gregersen et Karsholt, 2017 (Fig. 20)	21.06.2022 — 1 sp.
<i>Chrysoesthia drurella</i> (Fabricius, 1775)	17.06.2022 — 1 sp., 01.07.2022 — 1 sp.
<i>Chrysoesthia sexguttella</i> (Thunberg, 1794) (Fig. 21)	21.06.2022 — 8 mines, 24.08.2022 — single mines, 16.06.2023 — 1 sp. and 6 mines, all mines on <i>Chenopodium album</i>
<i>Isophrictis striatella</i> ([Denis et Schiffmüller], 1775)	17.07.2022 — 1 sp. on <i>Tanacetum vulgare</i>
<i>Teletodes luculella</i> (Hübner, [1813])	17.06.2022 — 1 sp., 07.06.2023 — 1 sp.
<i>Carpatolechia fugacella</i> (Zeller, 1839)	29.07.2022 — 1 sp.
<i>Recurvaria nanella</i> ([Denis et Schiffmüller], 1775)	02.07.2022 — 1 sp.
<i>Recurvaria leucatella</i> (Clerck, 1759)	12.06.2022 — 1 sp., 14.06.2022 — 1 sp.
Family COLEOPHORIDAE Bruand, 1850	
<i>Cepurga hemerobiella</i> (Scopoli, 1763) (Fig. 22)	12.06.2022 — 1 larval case on <i>Pyrus</i> , 17.06.2022 — 1 larval case and mines on <i>Pyrus</i>
<i>Coleophora anatipennella</i> (Hübner, [1796]) (Fig. 23)	09.06.2023 — 1 larval case on <i>Crataegus</i>
Family SCYTHRIDIDAE Rebel, 1901	
<i>Scythris sinensis</i> (Felder & Rogenhofer, 1875) (Fig. 24)	12.06.2022 — 1 sp.
Superfamily PTEROPHOROIDEA Latreille, 1802	
Family PTEROPHORIDAE Latreille, 1802	
<i>Emmelina monodactyla</i> (Linnaeus, 1758)	29.10.2022 — 1 sp.
Superfamily ZYGAENOIDEA Latreille, 1809	
Family ZYGAENIDAE Latreille, 1809	
<i>Zygaena loti</i> ([Denis et Schiffmüller], 1775)	14.06.2022 — 3 sp., 17.06.2022 — 10 sp., 26.06.2022 — 4 sp., 01.07.2022 — 1 sp., 07.06.2023 — 1 sp.
Superfamily COSSOIDEA Leach, 1815	
Family SESSIIDAE Boisduval, 1828	
<i>Synanthedon tipuliformis</i> (Clerck, 1759)	07.06.2023 — 1 sp.
<i>Chamaesphexia masariformis</i> (Ochsenheimer, 1808)	17.07.2022 — 1 sp.

Continuation of Table 1

Species	Records
Superfamily PAPILIONOIDEA Latreille, 1802	
Family PAPILIONIDAE Latreille, 1802	
<i>Iphiclides podalirius</i> (Linnaeus, 1758)	17.07.2022 — 1 sp., 29.07.2022 — 1 sp.
<i>Papilio machaon</i> Linnaeus, 1758	04.05.2023 — 1 sp., 17.05.2023 — 1 sp.
Family HESPERIIDAE Latreille, 1809	
<i>Erynnis tages</i> (Linnaeus, 1758)	17.07.2022 — 1 sp., 19.07.2022 — 3 sp., 29.07.2022 — 3 sp., 17.05.2023 — 2 sp.
<i>Thymelicus lineola</i> (Ochsenheimer, 1808)	17.06.2022 — 1 sp., 21.06.2022 — 1 sp., 01.07.2022 — 3 sp., 16.06.2023 — 1 sp.
<i>Ochlodes sylvanus</i> (Esper, [1777])	12.06.2022 — 5 sp., 17.06.2022 — 10 sp., 21.06.2022 — 1 sp., 26.06.2022 — 3 sp., 02.07.2022 — 3 sp., 14.08.2022 — 3 sp., 07.06.2023 — 1 sp.
Family PIERIDAE Swainson, 1820	
<i>Leptidea sinapis</i> -complex (Linnaeus, 1758)	01.07.2022 — 1 sp., 19.07.2022 — 2 ♀♀, 14.08.2022 — 1 sp.
<i>Anthocharis cardamines</i> (Linnaeus, 1758)	17.05.2023 — 1 ♂
<i>Pieris brassicae</i> (Linnaeus, 1758)	01–02.07.2022 — 1 sp.
<i>Pieris napi</i> (Linnaeus, 1758)	04.05.2023 — 1 sp., 17.05.2023 — 1 sp.
<i>Pontia edusa</i> (Fabricius, 1777)	29.07.2022 — 1 sp., 04.05.2023 — 1 sp.
<i>Colias croceus</i> (Geoffroy in Fourcroy, 1785)	17.07.2022 — 1 ♀
<i>Colias hyale</i> (Linnaeus, 1758) & <i>Colias alfacariensis</i> Ribble, 1905	02.07.2022 — 1 ♀
Family LYCAENIDAE Leach, 1815	
<i>Satyrium w-album</i> (Knoch, 1782)	01.07.2022 — 1 sp.
<i>Satyrium pruni</i> (Linnaeus, 1758)	12.06.2022 — 2 sp., 02.06.2023 — 1 sp., 07.06.2023 — 2 sp., 09.06.2023 — 3 sp.
<i>Satyrium spini</i> ([Denis et Schiffermüller], 1775)	21.06.2022 — 1 sp., 01–02.07.2022 — 2 sp.
<i>Thecla betulae</i> (Linnaeus, 1758)	29.07.2022 — 1 sp., 14.08.2022 — 1 sp.
<i>Favonius quercus</i> (Linnaeus, 1758)	29.07.2022 — 2 sp., 14.08.2022 — 1 sp., 22.08.2021 — 1 sp., 16.06.2023 — 1 sp.
<i>Lycaena tityrus</i> (Poda, 1761)	19.07.2022 — 1 sp.
<i>Lycaena thersamon</i> (Esper, [1784])	19.07.2022 — 1 sp.
<i>Cupido argiades</i> (Pallas, 1771)	01–02.07.2022 — 2 sp., 29.07.2022 — 3 sp., 14.08.2022 — 1 sp., 22.08.2022 — 1 sp.
<i>Celastrina argiolus</i> (Linnaeus, 1758)	17.06.2022 — 1 sp., 26.06.2022 — 5 sp., 01–02.07.2022 — 15 sp., 17.07.2022 — 2 sp., 19.07.2022 — 10 sp., 29.07.2022 — 1 sp., 04.05.2023 — 2 sp., 07.06.2023 — 1 sp.
<i>Glaucopsyche alexis</i> (Poda, 1761)	12.06.2022 — 1 sp., 14.06.2022 — 6 sp., 17.06.2022 — 7 sp., 21.06.2022 — 5 sp., 26.06.2022 — 7 sp., 01–02.07.2022 — 3 sp., 02.06.2023 — 2 sp., 07.06.2023 — 6 sp., 09.06.2023 — 3 sp., 16.06.2023 — 3 sp.
<i>Plebejus argus</i> (Linnaeus, 1758)	12.06.2022 — 1 ♂, 02.07.2022 — 1 ♂, 02.06.2023 — 1 ♂, 3 ♀♀, 07.06.2023 — 3 ♂♂, 1 ♀, 09.06.2023 — 1 ♂, 2 ♀♀, 16.06.2023 — 3 sp.
<i>Plebejus argyrognomon</i> (Bergsträsser, 1779)	14.06.2022 — 2 ♂♂, 17.06.2022 — 3 ♂♂, 2 ♀♀, 21.06.2022 — 7 sp., 26.06.2022 — 2 ♂♂, 1 ♀, 17.07.2022 — 5 sp.
<i>Polyommatus icarus</i> (Rottemburg, 1775)	12.06.2022 — 1 sp., 17.06.2022 — 2 ♂♂, 17.07.2022 — 2 sp., 29.07.2022 — 2 sp., 14.08.2022 — 1 ♂, 22.08.2022 — 1 sp., 16.06.2023 — 1 ♀ oviposited on <i>Melilotus officinalis</i>
Family NYMPHALIDAE Rafinesque, 1815	
<i>Issoria lathonia</i> (Linnaeus, 1758)	19.07.2022 — 1 sp.
<i>Boloria dia</i> (Linnaeus, 1767)	26.06.2022 — 3 sp., 02.07.2022 — 1 sp.
<i>Vanessa atalanta</i> (Linnaeus, 1758)	22.08.2022 — 1 sp.
<i>Vanessa cardui</i> (Linnaeus, 1758)	17.06.2022 — 1 sp., 02.07.2022 — 1 sp., 17.07.2022 — 20 sp., 29.07.2022 — 6 sp., 22.08.2022 — 1 sp., 09.06.2023 — 3 sp.
<i>Aglais io</i> (Linnaeus, 1758)	19.07.2022 — 1 sp.
<i>Polygonia c-album</i> (Linnaeus, 1758)	17.06.2022 — 2 sp.
<i>Coenonympha pamphilus</i> (Linnaeus, 1758)	26.06.2022 — 2 sp., 01–02.07.2022 — 6 sp., 14.08.2022 — 1 sp., 22.08.2022 — 1 sp., 18.09.2022 — 1 sp., 07.06.2023 — 1 sp., 09.06.2023 — 2 sp., 16.06.2023 — 2 sp.
<i>Coenonympha arcania</i> (Linnaeus, 1761)	12.06.2022 — 30 sp., 17.06.2022 — 20 sp., 21.06.2022 — 20 sp., 26.06.2022 — 5 sp., 02.07.2022 — 10 sp., 17.07.2022 — 2 sp., 02.06.2023 — 30 sp., 07.06.2023 — 20 sp., 09.06.2023 — 10 sp., 16.06.2023 — 20 sp.
<i>Pararge aegeria</i> (Linnaeus, 1758)	17.06.2022 — 1 sp., 01–02.07.2022 — 4 sp., 04.05.2023 — 6 sp., 17.05.2023 — 1 sp.
<i>Lasiommata maera</i> (Linnaeus, 1758)	17.06.2022 — 3 sp., 17.07.2022 — 1 sp., 29.07.2022 — 2 sp., 14.08.2022 — 2 sp., 02.06.2023 — 3 sp., 07.06.2023 — 5 sp., 09.06.2023 — 5 sp., 16.06.2023 — 2 sp.
<i>Maniola jurtina</i> (Linnaeus, 1758)	12.06.2022 — 1 sp., 14.06.2022 — 1 sp., 17.06.2022 — 3 sp., 01.07.2022 — 2 sp., 17.07.2022 — 1 sp., 29.07.2022 — 2 sp., 14.08.2022 — 2 sp., 22.08.2022 — 1 sp., 02.06.2023 — 3 sp., 07.06.2023 — 5 sp., 09.06.2023 — 5 sp., 16.06.2023 — 2 sp.
<i>Melanargia galathea</i> (Linnaeus, 1758)	17.06.2022 — 5 sp., 21.06.2022 — 5 sp., 26.06.2022 — 8 sp., 01–02.07.2022 — 15 sp., 17.07.2022 — 8 sp., 29.07.2022 — 7 sp.

Continuation of Table 1

Species	Records
Superfamily PYRALOIDEA Latreille, 1809	
Family PYRALIDAE Latreille, 1809	
<i>Synaphe moldavica</i> (Esper, 1794)	12.06.2022 — 1 sp.
<i>Oncocera semirubella</i> (Scopoli, 1763)	14.06.2022 — 1 sp., 26.06.2022 — 4 sp., 02.07.2022 — 4 sp., 17.07.2022 — 2 sp.
<i>Etiella zinckenella</i> (Treitschke, 1832)	17.07.2022 — 1 sp., 19.07.2022 — 1 sp.
<i>Acrobasis repandana</i> (Fabricius, 1798)	07.06.2023 — 1 sp.
<i>Eurhodope rosella</i> (Scopoli, 1763)	17.07.2022 — 1 sp.
<i>Homoeosoma sinuella</i> (Fabricius, 1794)	01.07.2022 — 1 sp., 07.06.2023 — 1 sp.
<i>Homoeosoma nebulella</i> ([Denis et Schiffmüller], 1775)	09.06.2023 — 1 sp.
Family CRAMBIDAE Latreille, 1810	
<i>Scoparia pyralella</i> ([Denis et Schiffmüller], 1775)	02.06.2023 — 1 sp.
<i>Eudonia lacustrata</i> (Panzer, 1804)	07.06.2023 — 2 sp., 16.06.2023 — 4 sp.
<i>Chrysocrambus linetella</i> (Fabricius, 1781)	21.06.2023 — 1 sp., 26.06.2023 — 1 sp., 09.06.2023 — 3 sp., 16.06.2023 — 1 sp.
<i>Thisanotia chrysonuchella</i> (Scopoli, 1763)	14.06.2022 — 1 sp., 17.05.2023 — 1 sp., 02.06.2023 — 8 sp.
<i>Platytes cerussella</i> ([Denis et Schiffmüller], 1775)	16.06.2023 — 1 sp.
<i>Udea accolalis</i> (Zeller, 1867)	02.06.2023 — 1 sp.
<i>Loxostege sticticalis</i> (Linnaeus, 1761)	12.06.2022 — 1 sp., 26.06.2022 — 30 sp., 02.07.2022 — 20 sp., 17.07.2022 — 25 sp., 19.07.2022 — 15 sp., 14.08.2022 — 20 sp., 24.08.2022 — hundreds of sp., 18.09.2022 — 5 sp., 07.10.2022 — 2 sp., 17.05.2023 — 2 sp., 02.06.2023 — 1 sp., 07.06.2023 — 30 sp., 09.06.2023 — 10 sp., 16.06.2023 — 2 sp.
<i>Paratalanta hyalinalis</i> (Hübner, 1796)	26.06.2022 — 1 sp., 17.07.2022 — 1 sp.
<i>Pyrausta sanguinalis</i> (Linnaeus, 1767)	02.07.2022 — 1 sp.
<i>Pyrausta despicata</i> (Scopoli, 1763)	17.06.2022 — 1 sp.
<i>Pyrausta purpuralis</i> (Linnaeus, 1758) (Fig. 25)	26.06.2022 — 1 sp., 01.07.2022 — 1 sp.
<i>Pyrausta ostrinalis</i> (Hübner, 1796) (Fig. 26)	17.05.2023 — 2 sp.
<i>Sitochroa palealis</i> ([Denis et Schiffmüller], 1775)	17.07.2022 — 3 sp., 19.07.2022 — 5 sp., 29.07.2022 — 1 sp.
<i>Sitochroa verticalis</i> (Linnaeus, 1758)	14.06.2022 — 5 sp., 17.06.2022 — 4 sp., 21.06.2022 — 7 sp., 26.06.2022 — 4 sp., 02.07.2022 — 4 sp., 29.07.2022 — 2 sp., 02.06.2023 — 1 sp., 07.06.2023 — 2 sp., 09.06.2023 — 5 sp., 16.06.2023 — 8 sp.
<i>Ostrinia scapulalis</i> (Walker, 1859) (Fig. 27)	02.06.2023 — 1 ♂, 07.06.2023 — 2 ♂♂, 09.06.2023 — 2 ♂♂, 4 ♀♀
<i>Anania verbascalis</i> ([Denis et Schiffmüller], 1775)	07.06.2023 — 1 sp.
Superfamily GEOMETROIDEA Leach, 1815	
Family GEOMETRIDAE Leach, 1815	
<i>Idaea ochrata</i> (Scopoli, 1763)	26.06.2022 — 1 sp., 02.07.2022 — 1 sp., 17.07.2022 — 1 sp.
<i>Idaea humiliata</i> (Hufnagel, 1767)	16.06.2023 — 1 sp.
<i>Idaea mancipiata</i> (Staudinger, 1871)	26.06.2022 — 1 sp.
<i>Idaea degeneraria</i> (Hübner, [1799])	09.06.2023 — 1 sp.
<i>Idaea straminata</i> (Borkhausen, 1794)	16.06.2023 — 1 sp.
<i>Scopula nigropunctata</i> (Hufnagel, 1767)	17.06.2022 — 1 sp., 26.06.2022 — 2 sp., 01.07.2022 — 1 sp., 07.06.2023 — 1 sp., 16.06.2023 — 3 sp.
<i>Scopula virgulata</i> ([Denis et Schiffmüller], 1775)	17.06.2022 — 1 sp., 26.06.2022 — 2 sp., 16.06.2023 — 1 sp.
<i>Rhodostrophia vibicaria</i> (Clerck, 1759)	07.06.2023 — 1 sp.
<i>Timandra comae</i> Schmidt, 1931	29.07.2022 — 1 sp., 22.08.2022 — 1 sp., 07.06.2023 — 1 sp.
<i>Camptogramma bilineata</i> (Linnaeus, 1758)	17.06.2022 — 5 sp., 21.06.2022 — 5 sp., 26.06.2022 — 5 sp., 02.07.2022 — 2 sp., 29.07.2022 — 1 sp., 14.08.2022 — 1 sp., 18.09.2022 — 1 sp., 07.06.2023 — 1 sp., 09.06.2023 — 5 sp., 16.06.2023 — 10 sp.
<i>Epirrhoe alternata</i> (Müller, 1764)	14.06.2022 — 1 sp., 04.05.2023 — 3 sp., 17.05.2023 — 1 sp., 07.06.2023 — 1 sp.
<i>Asthena anseraria</i> (Herrich-Schäffer, [1855])	14.06.2022 — 1 sp.
<i>Philereme vetulata</i> ([Denis et Schiffmüller], 1775)	07.06.2023 — 8 sp., 09.06.2023 — 6 sp.
<i>Chlorissa viridata</i> (Linnaeus, 1758)	19.07.2022 — 1 sp., 02.06.2023 — 1 sp., 09.06.2023 — 1 sp.
<i>Heterolocha laminaria</i> (Herrich-Schäffer, [1852]) (Fig. 28)	02.06.2023 — 1 sp.
<i>Pseudopanthera macularia</i> (Linnaeus, 1758)	14.06.2022 — 1 sp., 17.06.2022 — 1 sp., 04.05.2023 — 2 sp., 17.05.2023 — 40 sp., 02.06.2023 — 10 sp., 07.06.2023 — 6 sp., 09.06.2023 — 5 sp., 16.06.2023 — 1 sp.
<i>Heliomata glarearia</i> ([Denis et Schiffmüller], 1775)	07.06.2023 — 1 sp.
<i>Chiasmia clathrata</i> (Linnaeus, 1758)	14.06.2022 — 1 sp., 17.07.2022 — 1 sp., 16.06.2023 — 1 sp.
<i>Narraga fasciolaria</i> (Hufnagel, 1767)	02.06.2023 — 1 ♀
<i>Siona lineata</i> (Scopoli, 1763)	02.06.2023 — 1 sp., 07.06.2023 — 1 sp., 09.06.2023 — 1 sp.
<i>Ematurga atomaria</i> (Linnaeus, 1758)	17.07.2022 — 1 sp., 29.07.2022 — 2 sp., 04.05.2023 — 1 sp.
<i>Peribatodes rhomboidaria</i> ([Denis et Schiffmüller], 1775)	12.06.2022 — 1 sp., 07.06.2023 — 2 sp., 09.06.2023 — 2 sp., 16.06.2023 — 2 sp.
<i>Hypomecis punctinalis</i> (Scopoli, 1763)	02.06.2023 — 2 sp.

Continuation of Table 1

Species	Records
Superfamily BOMBYCOIDEA Latreille, 1802	
Family SPHINGIDAE Latreille, 1802	
<i>Marumba quercus</i> ([Denis et Schiffermüller], 1775) (Fig. 29)	12.06.2022 — 1 ♀, 18.09.2022 — 1 pupal shell
Superfamily NOCTUOIDEA Latreille, 1809	
Family EREBIDAE Leach, 1815	
<i>Rivula sericealis</i> (Scopoli, 1763)	17.07.2022 — 1 sp.
<i>Hypena rostralis</i> (Linnaeus, 1758)	07.06.2023 — 1 sp.
<i>Lymantria dispar</i> (Linnaeus, 1758)	21.06.2022 — 2 larvae under bark.
<i>Eilema sororcula</i> (Hufnagel, 1766)	17.06.2022 — 2 sp., 21.06.2022 — 1 sp., 02.06.2023 — 1 sp.
<i>Phytometra viridaria</i> (Clerck, 1759)	26.06.2022 — 3 sp., 02.07.2022 — 2 sp., 19.07.2022 — 1 sp., 17.05.2023 — 2 sp., 02.06.2023 — 1 sp.
<i>Eublemma minutata</i> (Fabricius, 1794)	17.07.2022 — 1 sp.
<i>Euclidia glyphica</i> (Linnaeus, 1758)	12.06.2022 — 3 sp., 17.07.2022 — 1 sp., 19.07.2022 — 3 sp., 29.07.2022 — 1 sp., 17.05.2023 — 2 sp., 02.06.2023 — 8 sp., 07.06.2023 — 4 sp., 09.06.2023 — 2 sp.
Family NOCTUIDAE Latreille, 1809	
<i>Macdunnoughia confusa</i> (Stephens, 1850)	02.06.2023 — 1 sp.
<i>Autographa gamma</i> (Linnaeus, 1758)	21.06.2022 — 1 sp., 26.06.2022 — 2 sp., 17.07.2022 — 1 sp., 29.07.2022 — 1 sp., 17.05.2023 — 1 sp., 02.06.2023 — 3 sp.
<i>Acontia candefacta</i> (Hübner, [1831])	17.06.2022 — 1 sp., 22.08.2022 — 1 sp., 07.06.2023 — 1 sp., 09.06.2023 — 1 sp.
<i>Acontia trabealis</i> (Scopoli, 1763)	17.06.2022 — 1 sp., 26.06.2022 — 1 sp.
<i>Moma alpium</i> (Osbeck, 1778)	18.06.2022 — 1 sp., 09.06.2023 — 1 sp.
<i>Amphipyra berbera</i> Rungs, 1949 (Fig. 30)	26.06.2022 — 1 sp. under bark
<i>Amphipyra livida</i> ([Denis et Schiffermüller], 1775)	22.08.2022 — 1 sp. under bark
<i>Heliothis adauca</i> Butler, 1878	14.06.2022 — 1 sp., 29.07.2022 — 1 sp.
<i>Helicoverpa armigera</i> (Hübner, [1808])	19.07.2022 — 1 sp., 22.08.2022 — 1 sp., 18.09.2022 — 1 sp.

Conclusions. According to the results of our research, 182 species of Lepidoptera are found in Tonelna gulch of Dnipro City, 181 of which are given for the first time. Primarily due to daytime observations only and lack of research in spring (until May), the list represents only a small part of the real species diversity of Lepidoptera in this locality. The number of species of this area will be increased considerably if the light trapping is applied in future research. However, when compared with similar gulches located outside urbanized areas, one can notice the absence of some species of diurnal Lepidoptera that are quite common in these biotopes (some *Pyrgus*, *Carcharodus*, *Cupido*, *Polyommatus*, *Argynnis*, *Melitaea*, *Euphydryas*). The low biodiversity of Lepidoptera in Tonelna gulch is the result of significant anthropogenic impact.

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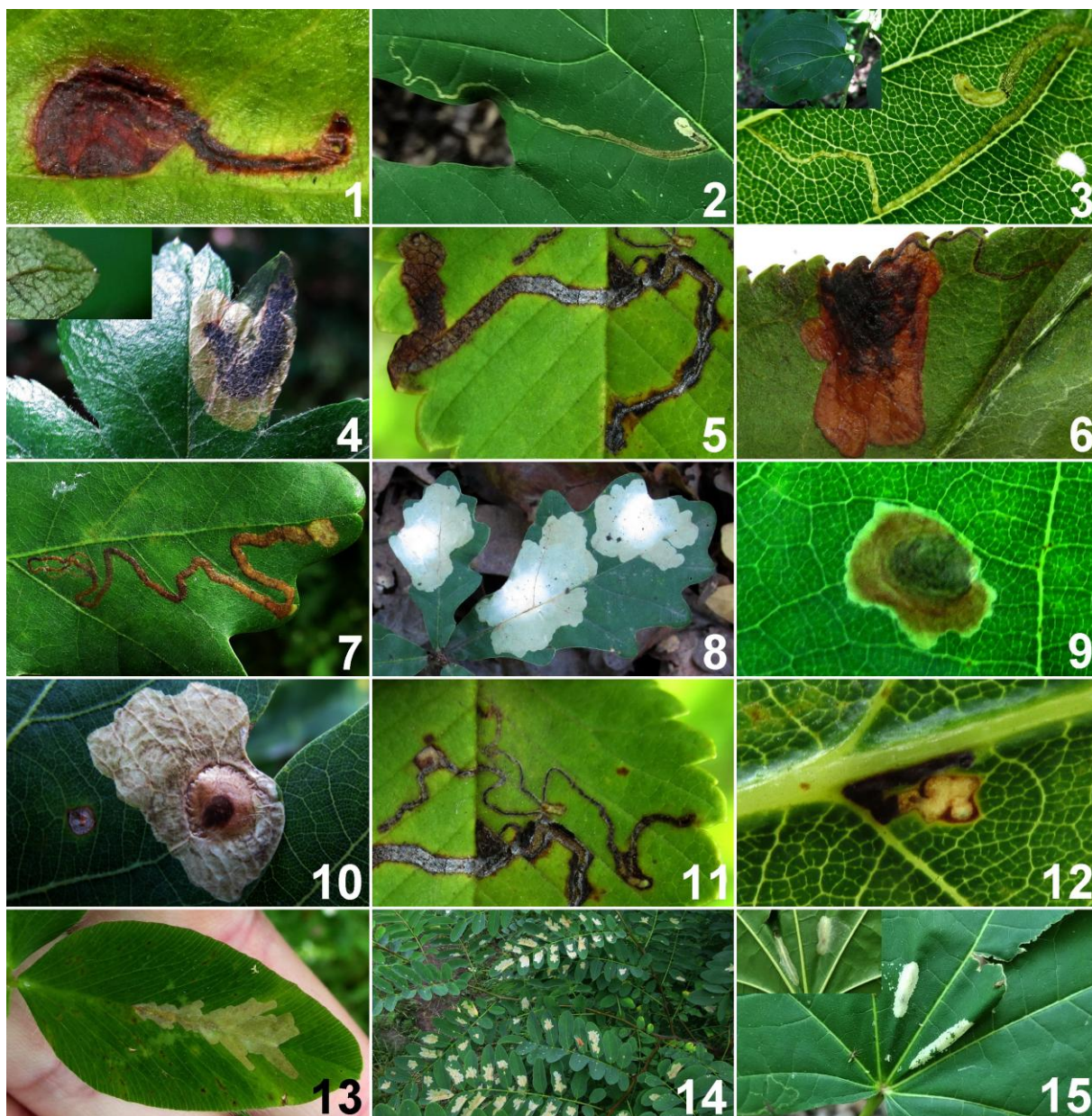


Fig. 1–15. New Lepidoptera from Tonelna gulch: 1 — *Stigmella prunetorum*, mine on *Prunus cerasus*, 17.07.2022; 2 — *Stigmella aceris*, mine on *Acer platanoides*, 12.06.2022; 3 — *Stigmella catharticella*, mine on *Rhamnus cathartica*, 17.06.2022; 4 — *Stigmella paradoxa*, mine on *Crataegus*, 09.06.2023; 5 — *Stigmella lemniscella*, old mine on *Ulmus*, 14.08.2022; 6 — *Stigmella plagicolella*, mine on *Prunus cerasus*, 17.07.2022; 7 — *Stigmella basiguttella*, mine on *Quercus*, 14.08.2022; 8 — *Tischeria ekebladella*, mines on *Quercus*, 18.09.2022; 9 — *Tischeria dodonaea*, mine on *Quercus*, 17.06.2022; 10 — *Tischeria decidua*, mine on *Quercus*, 18.09.2022; 11 — *Bucculatrix albedinella*, 2 old mines on *Ulmus*, 14.08.2021; 12 — *Bucculatrix ulmella*, mine on *Quercus*, 14.08.2021; 13 — *Parectopa ononidis*, mine on *Trifolium*, 17.06.2022; 14 — *Parectopa robiniella*, mines on *Robinia pseudoacacia*, 17.07.2022; 15 — *Phyllonorycter joannisi*, 2 mines on *Acer platanoides*, 12.06.2022.



Fig. 16–30. New Lepidoptera from Tonelna gulch: 16 — *Yponomeuta cagnagella*, nest with larvae on *Eonymus*, 17.05.2023; 17 — *Grapholita pallifrontana*, imago, 09.06.2023; 18 — *Dasycera oliviella*, imago, 17.06.2022; 19 — *Cosmopterix zieglertiella*, mines on *Humulus lupulus*, 01.07.2022; 20 — *Anarsia innoxia*, imago, 21.06.2022; 21 — *Chrysoesthia sexguttella*, mines on *Chenopodium album*, 21.06.2022; 22 — *Cepuga hemerobiella*, larval case on *Pyrus*, 17.06.2022; 23 — *Coleophora anatipennella*, larval case on *Crataegus*, 09.06.2023; 24 — *Scythris sinensis*, imago, 12.06.2022; 25 — *Pyrausta purpuralis*, imago, upperside, and underside of forewing, 26.06.2022; 26 — *Pyrausta ostrinalis*, imago, upperside, and underside of forewing, 17.05.2023; 27 — *Ostrinia scapularis*, ♂, 07.06.2023; 28 — *Heterolocha laminaria*, imago, 02.06.2023; 29 — *Marumba quercus*, imago, 12.06.2022; 30 — *Amphipyra berbera*, imago, upper and underside, 26.06.2022.