

**CATALOGUE OF THE HETEROCERAN MOTHS (INSECTA, LEPIDOPTERA,
METAHETEROCERA) OF ODESA REGION OF UKRAINE.
PART 1. SATURNIIDAE, SPHINGIDAE, BRAHMAEIDAE, LASIOCAMPIDAE,
THYRIDIDAE & DREPANIDAE**

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Khalaim, Ye. V. Catalogue of the heteroceran moths (Insecta, Lepidoptera, Metaheterocera) of Odesa Region of Ukraine. Part 1. Saturniidae, Sphingidae, Brahmaeidae, Lasiocampidae, Thyrididae & Drepanidae. — On the basis of the long-term research and analysis of literary sources, an annotated catalogue of Heteroceran moths of Odesa Region of Ukraine is given. The catalogue contains data on 50 species from 6 families: Thyrididae (1), Drepanidae (11), Lasiocampidae (13), Brahmaeidae (1), Saturniidae (3), and Sphingidae (21). There are 15 species recorded for the first time in Odesa Region: *Habrosyne pyritoides* (Hufnagel, 1766), *Tethea ocularis* (Linnaeus, 1767), *Ochropacha duplaris* (Linnaeus, 1761), *Polyplocia ridens* (Fabricius, 1787), *Asphalia ruficollis* (Denis & Schiffermüller, 1775), *Watsonalla binaria* (Hufnagel, 1767), *Sabra harpagula* (Esper, 1786), *Cilix glaucata* (Scopoli, 1763), *Trichiura crataegi* (Linnaeus, 1758), *Malacosoma castrensis* (Linnaeus, 1758), *Eriogaster lanestris* (Linnaeus, 1758), *Gastropacha quercifolia* (Linnaeus, 1758), *Phylloidesma tremulifolia* (Hübner, 1810), *Euthrix potatoria* (Linnaeus, 1758) and *Lemonia dumi* (Linnaeus, 1761). Maps of collecting sites are provided for each species.

Key words. Lepidoptera, Heterocera, Thyrididae, Drepanidae, Lasiocampidae, Brahmaeidae, Saturniidae, Sphingidae, Odesa Region, Ukraine.

Халаїм, Є. В. Каталог різновусих лускокрилих (Insecta, Lepidoptera, Metaheterocera) Одеської області України. Частина 1. Saturniidae, Sphingidae, Brahmaeidae, Lasiocampidae, Thyrididae та Drepanidae. — На основі матеріалів багаторічних досліджень та аналізу літературних джерел укладено анотований каталог різновусих лускокрилих Одеської області України. У каталозі подано відомості про 50 видів з 6 родин: Thyrididae (1), Drepanidae (11), Lasiocampidae (13), Brahmaeidae (1), Saturniidae (3) та Sphingidae (21). Вперше для фауни Одеської області наведено 15 видів: *Habrosyne pyritoides* (Hufnagel, 1766), *Tethea ocularis* (Linnaeus, 1767), *Ochropacha duplaris* (Linnaeus, 1761), *Polyplocia ridens* (Fabricius, 1787), *Asphalia ruficollis* (Denis & Schiffermüller, 1775), *Watsonalla binaria* (Hufnagel, 1767), *Sabra harpagula* (Esper, 1786), *Cilix glaucata* (Scopoli, 1763), *Trichiura crataegi* (Linnaeus, 1758), *Malacosoma castrensis* (Linnaeus, 1758), *Eriogaster lanestris* (Linnaeus, 1758), *Gastropacha quercifolia* (Linnaeus, 1758), *Phylloidesma tremulifolia* (Hübner, 1810), *Euthrix potatoria* (Linnaeus, 1758) та *Lemonia dumi* (Linnaeus, 1761). Для кожного виду подано карти знаходок.

Ключові слова. Lepidoptera, Heterocera, Thyrididae, Drepanidae, Lasiocampidae, Brahmaeidae, Saturniidae, Sphingidae, Одеська область, Україна.

Introduction

Odesa Region is the administrative region of Ukraine, located in the southwest of the country. In the north it borders on the Vinnytsia and Kirovohrad Regions, in the east on the Mykolaiv Region, in the west on Moldova, in the south on Romania. Most of the area belongs to the Black Sea lowland. In the north there are spurs of the Podolian Upland, cut by gullies and ravines. The territory is located in two natural zones: wood-and-steppe (northern part) and steppe (central and southern parts). Along the

Black Sea coast, there are numerous estuaries and lagoons. The largest rivers in the Region, the Danube and Dniester, form an extensive system of deltas at their lower reaches.

The considered families of Lepidoptera are the most famous and studied heteroceran moths. Some of them, such as hawk moths (Sphingidae) and saturniids (Saturniidae) are popular objects among amateur collectors and simply nature lovers. However, a complete list of these families in Odesa Region of Ukraine has not yet been created. The last generalizing works were carried out in the first half of the 20th century and concerned the former Kherson Governorate (Shugurov, 1905, 1907) and the Dniro-Bug Steppe (Obraztsov, 1928–1929). The subsequent publications had fragmentary character, considering local territory or separate group of species (Eversmann, 1855; Romaniszyn, 1920; Nikolaev & Pljushch, 1994; Ermolenko, 1999; Arkhipov, 2003;

Klyuchko & Severov, 2006; Duz', 2007; Tishchenkov, 2010; Khalaim, 2015; Khalaim & Novitskiy, 2016; Kavurka et al., 2018; Suchkov, 2018; Kavurka et al., 2019). Thus, we are faced with the task of summarizing the literature data on Odesa Region and supplement them with modern collections and observations.

Material and methods

The observations and collections of the author from 2002 to 2022 within Odesa Region, as well as numerous data received from colleagues, served as materials for this publication. Moths were collected in various ways. The method of night collection by attracting to artificial light sources was the main one. Catching on the flowers and aromatic baits, in addition to route collection in the daytime, were used less frequently. Some of the species were recorded and/or collected at the preimaginal stages with subsequent breeding of adults in the laboratory. In many cases, moths were noted without being caught in their natural habitat, and data on relative abundance were recorded in field diaries (more than 100 spec. per day of observation or for one light trap per night — mass, 31–100 spec. — numerous, 11–30 spec. — common, 5–10 spec. — rare, less than 5 spec. — the exact number of specimens was recorded). The determination was carried out according to current reference books and guides (Zolotuhin, 2015; Zolotuhin & Yevdoshenko, 2019). Most materials are in private collections of entomologists. Also, observations from the open online databases UkrBIN (2022) and iNaturalist (2022) were transferred to the maps; the authors of observations are given in the references; otherwise they are cited as “Anonymous” along with nicknames.

Since 2020, the administrative-territorial structure of the Region includes 7 districts: Podilsk, Rozdilna, Berezivka, Odesa, Bilhorod-Dnistrovskiy, Bolhrad and Izmail. The collection and observation points given in the article are indicated according to this division.

Geographical coordinates of the collecting sites (Fig. 1) are as follows:

Podilsk District:

1. Kodyma — SW vicinity of Kodyma, 48°04'20"N 29°06'39"E
2. Kotovci — NW vicinity of Serhiivka vill. former Kotovci, 48°00'19"N 29°03'45"E
3. Oleksandrivka — NE vicinity of Oleksandrivka vill., 48°00'42"N 29°14'54"E
4. Kharytynivka — S vicinity of Kharytynivka vill., 47°51'05"N 29°35'28"E
5. Balta — SW vicinity of Balta, 47°55'13"N 29°36'39"E
6. Kozats'ke — W vicinity of Kozats'ke vill., 48°00'19"N 29°34'21"E
7. Pishchana — Pishchana vill., 48°07'49"N 29°42'09"E
8. Lisnychivka — 4 km W of Lisnychivka vill., 48°00'02"N 29°27'55"E
9. Kishhevo — NW vicinity of Savrans'ke vill., 48°10'38"N 29°49'19"E
10. Savran' — NW vicinity of Savran', 48°09'59"N 30°02'04"E
11. Savran' forest — 2 km E of Kovbasova Polyana vill., 48°05'30"N 30°05'24"E
12. Dubynove — NE vicinity of Dubynove vill., 48°08'25"N 30°17'58"E
13. Podilsk — Podilsk city (formerly Kotovs'k), 47°45'25"N 29°31'08"E

14. N Podilsk — N vicinity of Podilsk, 47°46'41"N 29°30'48"E
15. Borshchi — W vicinity of Borshchi vill., 47°49'59.1"N 29°28'44.7"E
16. Frasino — W vicinity of Lyubomyrka vill., 47°46'11"N 29°27'20"E
17. Borodavs'kyi gully — 3 km E of Borshchi, 47°50'04"N 29°31'36"E
18. Lyubomyrka — SE vicinity of Lyubomyrka vill., 47°44'58"N 29°28'29"E
19. Murovana — E vicinity of Murovana vill., 47°46'29"N 29°26'05"E
20. Valekruch-Negai — NE vicinity of Podilsk, 47°46'50"N 29°33'44"E
21. Nestoita — E vicinity of Nestoita vill., 47°45'41"N 29°22'36"E
22. Novoivanivka — S vicinity of Novoivanivka vill., 47°33'03"N 30°00'14"E
23. Strutyinka — Strutyinka vill., 47°51'24"N 29°48'39"E
24. Dolyns'ke — N vicinity of Dolyns'ke vill, 5 km W of Novoivanivka vill., 47°34'13"N 29°56'25"E
25. Chabanivka — 2 km W of Chabanivka vill., 47°48'45"N 30°01'23"E

Rozdilna District:

26. Zakhariivka — 5 km W of Zakhariivka city former Frunzivka, 47°20'07"N 29°40'41"E
27. Pershe Travnnya — 2 km NW of Pershe Travnnya vill., 47°29'53"N 29°45'04"E
28. Druzhelyubivka — 2 km SE of Druzhelyubivka vill., 47°15'27"N 29°56'27"E
29. Butsynivka — 4 km NW of Butsynivka vill., 46°47'15"N 30°10'52"E
30. Kardamycheve — W vicinity of Kardamycheve vill., 46°57'18"N 29°53'59"E
31. Trudomyrivka — SE vicinity of Trudomyrivka vill., 46°58'09"N 29°52'04"E
32. Vasylivka — vicinity of Vasylivka vill., 47°21'35"N 29°37'15"E

Berezivka District:

33. Berezivka forest — S vicinity of Berezivka, 47°10'30"N 30°55'11"E
34. Radialka — Radialka railway station, 47°03'56"N 30°46'01"E
35. Zavodivka — 2,5 km N of Zavodivka vill., 47°15'09"N 30°48'34"E
36. Krasnovolodymyrivka — Mykhailivka vill. former Krasnovolodymyrivka, 47°18'43"N 30°47'17"E
37. Viktorivka — Viktorivka vill., 47°09'53"N 30°57'22"E
38. Kurisove — S vicinity of Kurisove vill., 46°57'50"N 30°57'48"E
39. Kairy — 3 km SE of Kairy vill., 46°54'35"N 30°58'37"E
40. Severynivka — NW vicinity of Severynivka vill., 46°50'38"N 30°34'34"E
41. Rus'ka Slobidka — SE vicinity of Rus'ka Slobidka vill., 46°48'29"N 30°36'35"E
42. Adamivka — 3 km SE of Adamivka vill., 46°51'35"N 30°31'46"E
43. Shemetove — vicinity of Shemetove vill., 46°50'23"N 30°27'21"E
44. Malynivka — vicinity of Malynivka vill., 46°56'24"N 30°22'43"E

Odesa District:

45. Odesa — Odesa city, 46°28'15"N 30°43'51"E
46. Kotovskogo — Odesa city, Poselok Kotovskogo, 46°34'45"N 30°47'25"E
47. Park 411 battery — Odesa city, park of Odesa 411th Battery, 46°22'21"N 30°43'20"E
48. Novokubanka — 2,5 km W of Novokubanka vill., 46°43'42"N 30°37'39"E
49. Korsunsi — NW vicinity of Korsunsi vill., 46°35'43"N 30°45'02"E
50. Kubanka — 2 km SW of Kubanka vill., 46°41'10"N 30°42'51"E
51. Fontanka — S vicinity of Fontanka vill., 46°33'29"N 30°51'33"E
52. Lativka — NE vicinity of Lativka vill. former Kotovka, 46°34'30"N 30°43'16"E
53. Lisky — Lisky vill., 46°33'39"N 30°48'59"E
54. Koshary — Koshary vill., 46°40'35"N 31°09'12"E
55. Bilyaivka — Bilyaivka city, 46°29'08"N 30°12'28"E
56. Hradenytsi — Hradenytsi vill., 46°35'41"N 29°59'42"E
57. Avhustivka — 3,5 km E of Avhustivka vill., 46°39'13"N 30°41'30"E
58. Stara Emetivka — N vicinity of Stara Emetivka vill., 46°44'40"N, 30°35'35"E

59. Kovalivka — NW Vicinity of Kovalivka vill., 46°42'43"N 30°35'39"E
 60. Velykyi Dal'nyk — 4,5 km W of Velykyi Dal'nyk vill., 46°27'35"N 30°30'14"E
 61. Troits'ke — SW vicinity of Troits'ke vill., 46°30'44"N 29°59'33"E
 62. Mayaky — 7 km W of Mayaky vill., 46°26'01"N 30°10'24"E
 63. Yas'ky — 6 km SW of Yas'ky vill., 46°28'49"N 29°59'49"E
 64. Roxolany — NW vicinity of Roxolany vill., 46°11'32"N 30°25'53"E

Bilhorod-Dnistrovskiy District:

65. Karolino-Buhaz — Karolino-Buhaz vill., vicinity of Students'ka railway station, 46°09'37"N 30°33'16"E
 66. Zatoka — Zatoka vill., sandbar of Dniester Estuary, 46°05'49"N 30°29'24"E
 67. Pivdenne — E vicinity of Pivdenne vill., 46°16'20"N 30°09'50"E
 68. Budaki Lagoon — SW vicinity of Zatoka vill., sandbar of Budaki Lagoon, 46°01'05"N 30°23'45"E
 69. Semenivka — E vicinity of Semenivka vill., 46°17'04"N 30°08'24"E
 70. Tatarbunary — Tatarbunary city, 45°50'14"N 29°37'13"E
 71. Dyviziya — Dyviziya vill., 45°56'41"N 29°58'49"E
 72. SDyviziya — S vicinity of Dyviziya vill., 45°55'35"N 29°58'44"E
 73. Lebedivka forest — NE vicinity of Lebedivka vill., 45°49'59"N 30°09'19"E
 74. Burnas — 2 km N of Lebedivka vill., 45°51'18"N 30°08'24"E
 75. Khadzhyder — 2 km E of Zhovtyi Yar, 45°52'25"N 29°57'35"E
 76. Tuzly — vicinity of Tuzly vill., 45°51'21"N 30°04'35"E
 77. Tuzly Amazonia — 6 km SE of Prymors'ke vill., 45°40'32"N 29°52'08"E
 78. Lebedivka sandbar — SW vicinity of Lebedivka vill., 45°49'05"N 30°07'52"E

Bolhrad District:

79. Vesela Dolyna — 7 km NE of Vesela Dolyna vill., 46°17'21"N 29°22'14"E
 80. Vesela Dolyna 2 — 8 km E of Vesela Dolyna vill., 46°14'59"N 29°26'11"E
 81. Pasichne — 14 km NW of Pasichne vill., 46°15'16"N 29°27'45"E

Izmail District:

82. Vylkove — Vylkove city, 45°23'42"N 29°36'10"E
 83. Zhebriansky ridge — NW vicinity of Vylkove city, 45°25'28"N 29°34'37"E
 84. Nahirne — 2 km S of Nahirne vill., 45°23'16"N 28°26'36"E

Results and Discussion

Based on the results of the work, an annotated checklist of 50 species of macroheterocerous Lepidoptera recorded in Odesa Region was compiled. (Saturniidae — 3, Sphingidae — 21, Brahmaeidae — 1, Lasiocampidae — 13, Thyrididae — 1, Drepanidae — 11 species). Moreover, 15 species marked on this list with asterisk (*) are reported for the first time for the studied region. Bibliographic references to all publications (databases), where the species is indicated for Odesa Region, or to the studied and previously unpublished material for each species, are given. These data are supplemented with brief descriptions of phenology and distribution details in Odesa Region. In case of a lack of phenological observations, data were added from publications (Efetov & Budashkin, 1990; Goloborod'ko, Pljushtch & Pakhomov, 2010; Zolotuhin, 2015; Zolotuhin & Yevdoshenko, 2019; Tugulea & Tugulea, 2020). The maps of collecting sites are drawn up for all species. The following designations are used on the

maps: “○” — ancient (more than 100 years old) literary reports that are not confirmed by modern records, “●” — modern reports and records.

Superfamily Thyridoidea

Family Thyrididae

Subfamily Thyridinae

Thyris fenestrella (Scopoli, 1763)

Tishchenkov, 2010.

Material. Oleksandrivka, 15.05.2010, 1 spec. (Khalaim).

The species is known by several records of adults in May in the wood-and-steppe zone of the Region (Fig. 2). In Ukraine it develops in one or two generations per year. Moths fly from May to August.

Superfamily Drepanoidea

Family Drepanidae

Subfamily Thyatirinae

Tribe Thyatirini

Thyatira batis (Linnaeus, 1758)

Eversmann, 1855; Shugurov, 1905; Tishchenkov, 2010.

Material. Savran', 06.08.2005, 1 spec. (Khalaim); Pishchana, 20.08.2010, 1 spec. (Khalaim); Podilsk, 01.08.2004, 1 spec., 17.05.2006, 1 spec. (Khalaim); Mayaky, 09–10.07.2009, 2 spec., 07.05.2012, 1 spec. (Khalaim); Hradenytsi, 7.07.2011, 1 spec., 30.04.2012, 1 spec. (Novitskiy); Troits'ke, 6.07.2018, 1 spec. (Novitskiy); Vesela Dolyna 2, 25.08.2011, 1 spec. (Kostjuk, Plyushch); Vylkove, 17–22.04.2014, 2 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, 1 spec. (Khalaim, Novitskiy).

Widespread and common throughout the Region (Fig. 3). Bivoltine. Adults fly from mid-April to late August.

Habrosyne pyritoides (Hufnagel, 1766)*

Material. Kodyma, 08.08.2010, 2 spec. (Khalaim); Podilsk, 28.05.2005, 1 spec., 15.08.2010, 1 spec. (Khalaim); Murovana, 22.07.2006, 1 spec. (Khalaim); Mayaky, 07.05.2012, 1 spec. (Khalaim); Hradenytsi, 12.05.2012, 1 spec., 1.08.2015, 1 spec. (Novitskiy); Yas'ky, 16.08.2020, 1 spec. (Khalaim, Novitskiy, Mushinskiy); Vylkove, 19.08.2013, 1 spec., 07–10.05.2014, 1 spec. (Khalaim).

Widespread and common throughout the Region (Fig. 4). Bivoltine. Adults can be found from May to late August.

Tethea ocularis (Linnaeus, 1767)*

Material. Savran', 05–06.08.2005, 3 spec. (Khalaim); Kardamycheve, 02.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin); Hradenytsi, 21.05.2011, 1 spec., 01.05.2012, 1 spec., 14.05.2015, 1 spec. (Novitskiy); Mayaky, 07.05.2012, 1 spec. (Khalaim); Yas'ky, 16.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Odesa, 26.07.2004, 1 spec. (Khalaim); Karolino-Buhaz, 09.06.2020, 1 spec. (Kolomeychuk); Pivdenne, 08.05.2016, 1 spec. (Khalaim); Vylkove, 04.05.2013, 2 spec.,

07–10.05.2014, 1 spec. (Khalaim); Zhebriansky ridge, 12.07.2019, 1 spec. (Tsikal), 11.07.2020, rare (Khalaim, Novitskiy).

Widespread and common throughout the Region (Fig. 5). Bivoltine. Adults are on the wing from May to August.

Tethea or (Denis & Schiffermüller, 1775)

Romaniszyn, 1920.

Material. Troits'ke, 19.07.2017, 1 spec., 5.06.2018, 1 spec., 29.04.2019, 1 spec. (Novitskiy).

The species is currently reliably known only from the Dniester Delta (Fig. 6). In Ukraine it is bivoltine. Adults occur from May to August.

Ochropacha duplaris (Linnaeus, 1761)*

Material. Podilsk, 23.06.2004, 1 spec. (Khalaim).

The species is known from a single record in the north of the Region (Fig. 7).. In Ukraine it is bivoltine. Adults have been observed from May to August.

Tribe Polyplocini

Polyplocia ridens (Fabricius, 1787)*

Material. Kodyma, 14.04.2012, 1 spec., 08.04.2014, 2 spec., 29.04.2021, 2 spec. (Khalaim); Kischevo, 15.04.2006, 3 spec. (Khalaim); Murovana, 20–29.04.2006, 2 spec. (Khalaim); Borshchi, 05.04.2010, 3 spec. (Khalaim).

The species distributed in the northern wood-and-steppe areas of the Region (Fig. 8). Univoltine. Moths flight in April.

Триба Demopsestini

Asphalia ruficollis (Denis & Schiffermüller, 1775)*

Material. Severynivka, 01.04.2016, numerous (Kostjuk, Sergienko).

The species is known from a single locality in the woodlands in the upper reaches of the Kuyalnitsky Estuary (Fig. 9). Univoltine species, flight in March and April.

Subfamily Drepaninae

Watsonalla binaria (Hufnagel, 1767)*

Material. Savran' forest, 18.07.2020, rare (Khalaim, Novitskiy); Kodyma, 17.06.2012, 2 spec. (Khalaim); Oleksandrivka, 22–23.05.2009, 6 spec. (Khalaim); Pishchana, 16.08.2008, 2 spec. (Khalaim); Frasino, 22.07.2009, 1 spec., 22.08.2009, 2 spec. (Khalaim); Murovana, 08.08.2020, common (Khalaim, Novitskiy), 06.09.2020, rare (Khalaim); Kardamycheve, 02.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin); Troits'ke, 25.07.2016, 1 spec. (Novitskiy); Yas'ky, 16.08.2020, 1 spec. (Khalaim, Novitskiy, Mushinskiy).

The species is common in wood-and-steppe areas and the Dniester Delta (Fig. 10). Bivoltine. The flight of moths was recorded from early May to early September.

Sabra harpagula (Esper, 1786)*

Material. Oleksandrivka, 23.05.2009, 1 spec. (Khalaim); Podilsk, 28.05.2005, 1 spec. (Khalaim).

A rare and local species, known from the north of the Region (Fig. 11). In Ukraine it is bivoltine. Moths fly from April to August.

Cilix glaucata (Scopoli, 1763)*

Balashov, 2022.

Material. Podilsk, 03.05.2006, 1 spec., 22.07.2008, 1 spec., 28.07.2008, 1 spec., 02.05.2010, 1 spec., 29.07.2010, 1 spec., 30.07.2012, 1 spec. (Khalaim); Murovana, 29.04.2006, 1 spec. (Khalaim); Pershe Travnya, 30.07.2010, 1 spec. (Khalaim); Kardamycheve, 02.05.2020, rare (Khalaim, Novitskiy, Lapin); Trudomyrivka, 21.08.2021, rare (Khalaim, Novitskiy); Shemetove, 09.05.2015, 1 spec. (Gerasimov, Trotsenko, Tsikal); Rus'ka Slobidka, 01.05.2016, rare (Zhakov, Mushinskiy, Trotsenko, Sergienko), 04.06.2016, 1 spec. (Sergienko, Bidzilya), 24.07.2016, common (Kostjuk, Sergienko), 13.05.2019, rare (Mushinskiy, Sergienko, Novitskiy), 18.04.2020, rare (Khalaim, Novitskiy); Severynivka, 30.04.2016, rare (Zhakov, Mushinskiy, Trotsenko, Sergienko), 23.08.2018, 1 spec. (Novitskiy, Sergienko, Trotsenko), 12.05.2019, rare (Mushinskiy, Sergienko), 02.08.2019, rare, 29.08.2019, rare (Novitskiy), 12.09.2020, rare (Yepishin, Sergienko, Khalaim), 21.04.2021, 1 spec. (Novitskiy, Sergienko); Butsynivka, 17.08.2010, 1 spec. (Khalaim); Velykyi Dal'nyk, 09–10.05.2016, 1 spec. (Leshchenko); Hradenytsi, 24.07.2006, 1 spec., 15.06.2017, 1 spec. (Novitskiy); Roxolany, 20.04.2021, rare, 30.08.2021, 2 spec. (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 1 spec. (Kolomeychuk); Semenivka, 10.09.2016, 2 spec. (Kostjuk, Sergienko); Lebedivka forest, 18.06.2014, 1 spec. (Khalaim); Burnas, 1 spec. (Khalaim, Novitskiy, Lapin); Zhebriansky ridge, 23.05.2021, 1 spec. (Khalaim, Novitskiy, Sergienko).

Widespread and common throughout the Region (Fig. 12). Two or three generations develop in a year. Adults occur from mid-April to mid-September.

Cilix asiatica A. Bang-Haas, 1907

Khalaim & Novitskiy, 2016.

Material. Savran' forest, 18.07.2020, rare (Khalaim, Novitskiy); 16.08.2020, 1 spec. (Kostjuk, Sergienko, Bidzilya); Nestoita, 17.08.2017, mass (Khalaim, Novitskiy); Murovana, 08.08.2020, rare (Khalaim, Novitskiy); Trudomyrivka, 21.08.2021, common (Khalaim, Novitskiy); Radialka, 23.06.2019, 1 spec., 21.06.2020, 1 spec. (Lapin); Zavodivka, 15.06.2018, 1 spec. (Gerasimov, Tsikal, Trotsenko), 07.07.2018, 1 spec. (Tsikal), 10.08.2018, 2 spec. (Gerasimov, Tsikal, Trotsenko), 19.05.2020, 1 spec. (Leshchenko, Gera); Rus'ka Slobidka, 05.05.2018, 4 spec. (Tsikal), 10.05.2018, 1 spec. (Gerasimov, Trotsenko, Tsikal), 14.07.2018, 1 spec. (Andrianov), 11.08.2018, 1 spec. (Gerasimov, Tsikal, Trotsenko); Adamivka, 03.09.2018, common (Novitskiy, Sergienko); Severynivka, 08.07.2018, 2 spec. (Tsikal), 23.08.2018, 2 spec. (Novitskiy, Sergienko, Trotsenko), 04.09.2018, rare (Novitskiy, Sergienko), 12.05.2019, common (Mushinskiy, Sergienko), 11.07.2019, 1 spec. (Tsikal), 02.08.2019, rare (Novitskiy), 18.05.2020, 1 spec. (Leshchenko, Gera), 31.08.2021, common (Sergienko); Kovalivka, 07.07.2020, 1 spec. (Leshchenko, Gera); Roxolany, 29.07.2020, 1 spec. (Khalaim, Novitskiy); Zhebriansky ridge, 14.09.2021, rare (Yepishin, Novitskiy, Sergienko).

A Pontic-Mediterranean xerothermophilous species recently cited for the first time for the mainland of Ukraine (Khalaim & Novitskiy, 2016). Apparently, in the last few years there has been a rapid expansion of the species in a

northerly direction, as evidenced by many new records made over the past years in a number of new localities, almost throughout the entire territory of the Region (Fig. 13). Moths were recorded from early May to mid-September. Two or three generations develop in neighboring Romania (Székely, 2010).

Superfamily Lasiocampoidea

Family Lasiocampidae

Subfamily Poecilampinae

Trichiura crataegi (Linnaeus, 1758)*

Material. Oleksandrivka, 27.08.2009, 1 spec. (Khalaim); Lisnychivka, 26.08.2011, rare (Kostjuk, Plyushch).

The species was found in the wood-and-steppe habitats in the northern part of the Region (Fig. 14). It's univoltine. Adults are on the wing in August-September.

Subfamily Melacosominae Tutt, 1902

Malacosoma neustria (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Duz', 2007; Tishchenkov, 2010.

Material. Tuzly Amazonia, 22.06.2019, rare (Sergienko, Novitskiy); Zhebriansky ridge, 11.07.2020, common (Khalaim, Novitskiy).

Widespread throughout the Region (Fig. 15), but its abundance is currently low. Univoltine. Adults occur from June to August.

Malacosoma castrensis (Linnaeus, 1758)*

Anonymous, 2022 a.

Material. Kairy, 08.06.2020, 1 spec. (Bidychak); Karolino-Buhaz, ??.06.2017, 1 spec. (Kolomeychuk).

The species is known from a few localities in the steppe zone of the Region (Fig. 16). Moths are univoltine and fly in June-July.

Subfamily Lasiocampinae

Tribe Eriogasterini

Eriogaster lanestris (Linnaeus, 1758)*

Parkhomenko, 2022.

Material. Dolyns'ke, 17.05.2010, caterpillar nest on *Prunus* sp. (ex pupa in March 2011 — 1 spec.) (Khalaim); Zavodivka, 22.05.2019, caterpillar nest (Tsikal); Malynivka, 23.03.2012, 1 spec. (Tsikal).

Rare and local species in the Region (Fig. 17). Univoltine. Adults fly in early spring, from March to April.

Tribe Lasiocampini Harris, 1841

Lasiocampa trifolii (Denis & Schiffermüller, 1775)

Tishchenkov, 2010.

It is known from a single record (Fig. 18). Distribution in the Region is not entirely clear. The species is univoltine in Ukraine. Adults occur between July and September.

Lasiocampa quercus (Linnaeus, 1758)

Shugurov, 1905; Tishchenkov, 2010.

Distribution of the species in the Region is not clear. It is probably local in the northern wood-and-steppe areas (Fig. 19). In Ukraine, one generation develops with the flight of adults in June–August.

Tribe Macrothylaciini

Macrothylacia rubi (Linnaeus, 1758)

Romaniszyn, 1920; Tishchenkov, 2010.

Material. Kodyma, 26.05.2011, 1 spec. (Khalaim); Kotovci, 13–14.05.2013, 2 spec. (Leshchenko); Borshchi, 28.05.2011, 1 spec. (Khalaim); Dolyns'ke, 17.05.2010, 1 spec. (Khalaim); Pershe Travnya, 02.05.2010, 2 spec. (Khalaim); Druzhelyubivka, 06.05.2010, 1 spec. (Khalaim); Kardamycheve, 02.05.2020, 3 spec. (Khalaim, Novitskiy, Lapin); Vasylivka, 24–25.05.2011, 2 spec. (Demidovy); Kairy, 23.05.2020, 1 spec. (Khalaim, Novitskiy).

Common in northern wood-and-steppe biotops (Fig. 20). Univoltine, with a flight of moths in May.

Subfamily Pinarinae

Tribe Gastropachini

Gastropacha quercifolia (Linnaeus, 1758)*

Material. Kodyma, 17.06.2012, 1 spec. (Khalaim); Kotovci, 18–19.07.2011, 1 spec. (Leshchenko); Kharytynivka, 02.08.2005, 1 spec. (Khalaim); Podilsk, 19.07.2004, 1 spec. (Khalaim); Valekruch-Negai, 29.07.2006, 3 spec. (Khalaim); Murovana, 22.07.2006, 1 spec. (Khalaim); Frasin, 26–27.07.2014, 3 spec. (Leshchenko), 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Dolyns'ke, 09–10.07.2016, 1 spec. (Leshchenko, Kravchenko, Khalaim); Burnas, 31.07.2021, 1 spec. (Khalaim, Kanarsky); Vylkove, 19.07.2012, 1 spec., 03–07.08.2014, 1 spec., 08.08.2016, 1 spec. (Khalaim); Zhebriansky ridge, 14.09.2021, 1 spec. (Yepishin, Novitskiy, Sergienko).

Common in the wood-and-steppe areas of the Region and in the Danube Delta. However, it has not yet been found in the Dniester Delta. Besides, it is rarely and locally found in the steppe zone (Fig. 21). Moths are usually univoltine and fly from mid-June to mid-August. Apparently, a partial second generation may develop in some years, as evidenced by the registrations of adults in mid-September.

Gastropacha populifolia (Denis & Schiffermüller, 1775)

Shugurov, 1905; Romaniszyn, 1920; Ermolenko, 1999; Duz', 2007; Novitskiy, 2022 a.

Material. Troits'ke, 03.08.2016, 1 spec. (Novitskiy); Vylkove, 21.07.2012, 1 spec., 03–15.08.2014, 4 spec., 09–13.08.2015, 2 spec. (Khalaim); Zhebriansky ridge, 29.08.2020, 1 spec. (Khalaim, Novitskiy).

Locally common species in the floodplain forests of the Danube and Dniester deltas (Fig. 22). Probably univoltine. Adults are found in July–August.

Phyllodesma tremulifolia* (Hübner, 1810)

Material. Dubynove, 12.07.2020, 2 spec. (Demidovy).

The species is known from a single record in the north of the Region (Fig. 23). Two generations are developing in the south of Ukraine, where adults occur in April–May and again in July–August.

Tribe Selenepherini Tutt, 1902

Euthrix potatoria* (Linnaeus, 1758)

Material. Dubynove, 12.07.2020, 1 spec. (Demidovy).

The species is known from one specimen caught in the north of the Region (Fig. 24). In Ukraine it is univoltine with a flight period extending from June to August.

Tribe Pinarini

***Dendrolimus pini* (Linnaeus, 1758)**

Shugurov, 1905.

Known from the old literature data from the village of Alexandrovka, Odesa County (currently Sychavka village) (Fig. 25). The presence of the species in the northern wood-and-steppe areas of the Region is beyond doubt. In Ukraine it is univoltine with a long flight period extending from May to August.

Tribe Odonestini

***Odonestis pruni* (Linnaeus, 1758)**

Duz', 2007; Novitskiy, 2022 b.

Material. Kodyma, 17.06.2012, 1 spec. (Khalaim); Kotovci, 07.07.2010, 1 spec., 18–19.07.2011, 1 spec. (Leshchenko); Savran' forest, 18.07.2020, rare (Khalaim, Novitskiy); Pishchana, 20.08.2010, 2 spec. (Khalaim); Podilsk, 15.08–06.09.2010, 3 spec. (Khalaim); Murovana, 20–22.07.2006, 3 spec. (Khalaim, Skupyi), 08.08.2020, 1 spec. (Khalaim, Novitskiy); Frasin, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Trudomyrivka, 21.08.2021, 1 spec. (Khalaim, Novitskiy); Butsynivka, 17.08.2010, 1 spec. (Khalaim); Hradenytsi, 16.07.2008, 1 spec. (Novitskiy); Troits'ke, 19.06.2018, 1 spec. (Novitskiy); Yas'ky, 20–21.08.2011, 4 spec. (Demidovy).

The species is common in the north of the Region and in the Dniester delta, but has not yet been found in the Danube delta (Fig. 26). Apparently, two generations are developing in the Region. Adults fly from mid-June to early September.

Superfamily Bombycoidea

Family Brahmaeidea

Subfamily Lemoniinae

Lemonia dumi* (Linnaeus, 1761)

Material. Dolyns'ke, 17.05.2010, 1 larva (ex pupa in October 2010) (Khalaim).

This species was found in the Region only once (Fig. 27). The flight of adults takes place in autumn in September–October (one generation).

Family Saturniidae

Subfamily Saturniinae

***Saturnia pyri* (Denis & Schiffermüller, 1775)**

Shugurov, 1905; Romaniszyn, 1920; Ermolenko, 1999; Duz', 2007; Tishchenkov, 2010; Suchkov, 2018.

Material. Kotovci, 13–14.05.2013, 1 spec. (Leshchenko); Podilsk, 26.04.2002, 1 spec., 04.05–03.06.2004, 2 spec., 03.05–19.05.2005, 6 spec. (Khalaim); Borshchi, 28.05.2011, 1 spec. (Khalaim); Radialka, 07.05.2021, 1 spec. (Lapin); Kardamycheve, 02.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin); Severynivka, 12.05.2019, 1 spec. (Mushinskiy, Sergienko); Rus'ka Slobidka, 13.05.19, 1 spec. (Sergienko, Mushinskiy, Novitskiy); Hradenytsi, 30.04.2007, 1 spec. (Novitskiy); Avhustivka, 07–08.05.2016, 1 spec. (Leshchenko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Pivdenne, 08.05.2016, common (Khalaim); Tatarbunary, 09.05.2020, 1 spec. (Goncharenko O.); Dyviziya, 19.05.2021, 1 spec. (Staroverova O.); Lebedivka forest, 10.07.2021, 1 larva (Bovda K.); Tuzly, 22.07.2021, 1 larva (Mironova K.); Vylkove, 02–04.05.2013, common (Khalaim).

Widespread and more or less common throughout the Region. It is found quite often in urban and rural areas (Fig. 28). Univoltine. Moths are on the wing from late April to early June.

***Saturnia pavonia* (Linnaeus, 1758)**

Shugurov, 1905.

It is known only from old report for the north of the Region, there are no modern finds (Fig. 29). It is possible that this report refers to the closely related species *Saturnia pavoniella* (Scopoli, 1763), which until recently was considered as a junior synonym of *S. pavonia*. In the Ukrainian Transcarpathia and in the neighboring regions of Romania it is univoltine, and the flight of adults takes place in the spring in April–May.

***Saturnia spini* (Denis & Schiffermüller, 1775)**

Shugurov, 1905.

There are no modern records of the species in the Region (Fig. 30). Probably the populations in Odesa Region became extinct. In recent decades, there has been a widespread reduction in the range of this species. Like

the previous species, it is univoltine, with an adult flight in April-May.

Family Sphingidae

Subfamily Smerinthinae

Tribe Smerinthini

Laothoe populi (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Ermolenko, 1999; Duz', 2007; Anonymous, 2022 b, c; Mykytynets, 2022 a; Yakovliev, 2022 a.

Material. Savran', 04.08.2004, 1 spec. (Khalaim); Podilsk, 19.07.2004, 1 spec., 13–15.08.2010, 2 spec. (Khalaim); Borshchi, 28.05.2011, 1 spec. (Khalaim); Trudomyrivka, 21.08.2021, 1 spec. (Khalaim, Novitskiy); Severynivka, 23.08.2018, 1 spec. (Novitskiy, Sergienko, Troits'ke, 23.07.2010, 1 spec., 03.08.2016, 1 spec. (Novitskiy); Hradenytsi, 22.05.2011, 1 spec., 29.04.2012, 1 spec. (Novitskiy); Mayaky, 09.07.2009, 1 spec. (Khalaim); Yas'ky, 16.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Kotovskogo, e.l., 24.07.2004, 1 spec. (Skupyi); Odesa, 19.08.2014, 1 spec. (Khalaim); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Budaki Lagoon, 04.07.2010, 1 spec. (Khalaim); Vesela Dolyna, 14.08.2021, 1 spec. (Khalaim, Novitskiy, Kavurka); Vylkove, 19.07.2012, 1 spec., 19.08.2013, 2 spec., 03–15.08.2014, 5 spec., 04–09.08.2015, 1 spec., 11–13.08.2015, 1 spec., 08.08.2016, 1 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, rare, 29.08.2020, rare (Khalaim, Novitskiy).

It is widespread throughout the Region and one of the most common sphinx moth species in the Dniester and Danube deltas (Fig. 31). Bivoltine. Imagoes occur from late April to late August.

Smerinthus ocellatus (Linnaeus, 1758)

Shugurov, 1905; Ermolenko, 1999; Duz', 2007.

Material. Savran' forest, 18.07.2020, 1 spec. (Khalaim, Novitskiy); Kotovci, 18–19.07.2011, 1 spec. (Leshchenko); Borshchi, 28.05.2011, 2 spec. (Khalaim); Mayaky, 23.06.2009, 2 spec., 09–10.07.2009, 4 spec. (Khalaim); Troits'ke, 11.06.2012, 1 spec. (Novitskiy); Yas'ky, 16.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Pivdenne, 08.05.2016, 1 spec., (Khalaim); Vylkove, 19.08.2013, 2 spec., 17–22.04.2014, 1 spec., 03–15.08.2014, 9 spec., 04–13.08.2015, 5 spec., 08.08.2016, 1 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, 1 spec. (Khalaim, Novitskiy), 23.05.2021, 1 spec. (Khalaim, Novitskiy, Sergienko).

Widespread and common throughout the Region, and in the Dniester and Danube deltas is quite numerous (Fig. 32). Two generations develop in a year. Moths fly from mid-April to mid or late August.

Marumba quercus (Denis & Schiffermüller, 1775)

Shugurov, 1905; Arkhipov, 2003; Klyuchko, Severov, 2006; Tishchenkov, 2010; Kavurka et al., 2018, 2019.

Material. Savran' forest, 18.07.2020, rare (Khalaim, Novitskiy); Murovana, 20–22.07.2006, common (Khalaim, Skupyi), Frasino, 22.07.2009, 2 spec. (Khalaim), 18–27.07.2014, 8 spec., 10–12.07.2015, 1 spec. (Leshchenko), 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko), 05–06.07.2020, 4 spec. (Leshchenko, Gera); Dolyns'ke, 09–10.07.2016, 1 spec. (Leshchenko, Kravchenko, Khalaim); Strutynka, 29.06.2019, 1 spec. (Trach); Radialka, 03.07.2019, 1 spec., 22.06.2020, 1 spec. (Lapin); Severynivka, 05.06.2016, 1 spec. (Sergienko, Bidzilya), 25.07.2016, 1 spec. (Kostjuk, Sergienko), 17.07.2018, 1 spec. (Andrianov), 11.07.2019, 1 spec. (Tsikal); Karolino-Buhaz, without date, 4 spec. (Kolomeychuk);

Park 411 battery, ??06.1987, 2 spec. (Kolomeychuk); SDyvizyia, 12.06.2020, 1 spec. (Khalaim); Lebedivka forest, 30.07.2021, common (Khalaim, Kanarsky).

Throughout the Region, but occurs more locally and rarely in the steppe regions (Fig. 33). Usually a univoltine species. The flight of adults is from the beginning of June to the end of July. However, in some years, apparently, a partial second generation may develop, as evidenced by fresh specimens of adults in late July.

Mimas tiliae (Linnaeus, 1758)

Shugurov, 1905; Duz', 2007; Tishchenkov, 2010; Anonymous, 2022 d; Yakovliev 2022 b.

Material. Oleksandrivka, 22–23.05.2009, common (Khalaim); Podilsk, 23.04–20.05.2004, 3 spec., 19.05.2005, 1 spec., 07.05–17.05.2006, 3 spec., 05.05.2010, 1 spec. (Khalaim), 31.06.2006, 1 spec. (Skupyi); Borodavs'kyi gully, 25.07.2009, 1 spec. (Khalaim); Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Lyubomyrka, 27.07.2009, 1 spec. (Khalaim); Murovana, 22.07.2006, 1 spec. (Khalaim); Dolyns'ke, 09–10.07.2016, 1 spec. (Leshchenko, Kravchenko, Khalaim); Zakhariivka, 31.05.2020, 4 spec. (Khalaim, Novitskiy, Lapin); Radialka, 08.07.2019, 1 spec. (Lapin); Kardamycheve, 02.05.2020, 2 spec. (Khalaim, Novitskiy, Lapin); Trudomyrivka, 21.08.2021, 1 spec. (Khalaim, Novitskiy); Severynivka, 11.05.2018, common (Zhakov, Mushinskiy, Novitskiy, Sergienko), 12.05.2019, common (Mushinskiy, Sergienko); Hradenytsi, 14.06.2008, 1 spec., 15.07.2011, 1 spec., 29.04.2012, 1 spec. (Novitskiy); Mayaky, 26.06.2009, 1 spec. (Khalaim); 20.07.2018, 1 spec. (Andrianov); Yas'ky, 16.08.2020, 1 spec. (Khalaim, Novitskiy, Mushinskiy); Odesa, 01.05.2011, 1 spec. (Leshchenko); 20.05.2014, 1 spec. (Khalaim); Roxolany, 17.06.2020, 2 spec., 23.06.2020, 1 spec., 29.07.2020, 1 spec. (Khalaim, Novitskiy); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Vesela Dolyna, 07.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko).

Widespread throughout the Region (Fig. 34). In the northern areas in the forests it is quite numerous. In addition, it is often found in city parks. Two generations develop in a year. Adults are observed on the wing from late April to mid-August.

Tribe Sphingulini

Dolbina elegans A. Bang-Haas, 1912

Nikolaev & Pljushtch, 1994; Arkhipov, 2003; Duz', 2007; Khalaim, 2015.

Material. Frasino, 05–06.07.2020, 2 spec. (Leshchenko, Gera); Murovana 08.08.2020, rare (Khalaim, Novitskiy), 04.08.2021, 2 spec. (Kiselyov); Radialka, 22.06.2020, 1 spec. (Lapin); Rus'ka Slobidka, 24.07.2016, 2 spec. (Kostjuk, Sergienko); Severynivka, 25.07.2016, 2 spec. (Kostjuk, Sergienko), 17–18.07.2018, 2 spec. (Andrianov), 02.08.2019, 2 spec. (Novitskiy); Kubanka, 25.07.2020, 1 spec. (Khalaim, Novitskiy); Troits'ke, 02.08.2017, 1 spec. (Novitskiy); Kovalivka, 07.07.2020, 2 spec. (Leshchenko, Gera); Karolino-Buhaz, 27.07.2021, 1 spec. (Kolomeychuk).

Locally in the central and northern areas of the Region (Fig. 35). The biology of the species within Odesa Region is not completely clear. Apparently, the species is univoltine. The flight of moths was recorded from the end of June or the beginning of July to the end of August. However, for the Balkan populations, 2–3 generations are given from April to September (Székely, 2010).

Some researchers consider Balkan populations from Bulgaria, Romania and Moldova in the rank of ssp. *steffensi* Popescu-Gorj, 1971. From the northern part of Odesa Region (near the city of Podilsk), the ssp. *kiselyovi* Eitschberger & Gurko, 2017 has been described. However, a study of moths from different parts of the range shows the genetic homogeneity of this species, therefore, it seems inexpedient to distinguish subspecies (Zolotuhin & Yevdoshenko, 2019).

Subfamily Sphinginae

Tribe Sphingini

Sphinx ligustri Linnaeus, 1758

Shugurov, 1905; Shugurov, 1907; Romaniszyn, 1920; Obratsov, 1928–1929; Ermolenko, 1999; Rodionova, 2022.

Material. Kotovci, 05–06.08.2008, 1 spec., 18–19.07.2011, 3 spec. (Leshchenko); Savran' forest, 18.07.2020, 1 spec. (Khalaim, Novitskiy); Podilsk, 17–22.07.2004, 2 spec., (Khalaim); Frasino, 22.07.2009, 1 spec. (Khalaim); 18–19.07.2014, 3 spec., 26–27.07.2014, 1 spec. (Leshchenko), 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko), 05–06.07.2020, 2 spec. (Leshchenko, Gera); Murovana, 28.07.2019, 2 spec. (Khalaim); 08.08.2020, 2 spec. (Khalaim, Novitskiy); Borshchi, 30.07.2011, 1 spec. (Khalaim); Radialka, 23.06.2019, 2 spec., 11.06.2020, 1 spec. (Lapin); Zavodivka, 18.06.2020, 2 spec. (Leshchenko, Gera); Trudomyrivka, 21.08.2021, rare (Khalaim, Novitskiy); Severynivka, 08.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko), 05.06.2016, 2 spec. (Sergienko, Bidzilya), 25.07.2016, rare (Kostjuk, Sergienko), 11.05.2018, common (Zhakov, Mushinskiy, Novitskiy, Sergienko), 23.08.2018, 1 spec. (Novitskiy, Sergienko, Trotsenko), 12.05.2019, common (Mushinskiy, Sergienko), 02.08.2019, 1 spec. (Novitskiy), 24.04.2020, 1 spec. (Leshchenko, Gera); Adamivka, 03.09.2018, 2 spec. (Novitskiy, Sergienko); Rus'ka Slobidka, 24.07.2016, rare (Kostjuk, Sergienko), 18.04.2020, 1 spec. (Khalaim, Novitskiy), 08.06.2020, rare (Yepishin, Mushinskiy, Novitskiy, Sergienko, Khalaim), 25.07.2021, rare (Khalaim, Novitskiy); Kairy, 16.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin), 23.05.2020, rare (Khalaim, Novitskiy), 07.06.2020, common (Yepishin, Mushinskiy, Novitskiy, Sergienko), Kubanka, 25.07.2020, rare (Khalaim, Novitskiy); Hradnytsi, 15.07.2011, 1 spec. (Novitskiy); Mayaky, 20.07.2018, 1 spec. (Andrianov); Yas'ky, 16.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Roxolany, 17.06.2020, rare, 23.06.2020, rare (Khalaim, Novitskiy), 15.08.2020, rare (Bidzilya, Kostjuk, Sergienko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Vesela Dolyna, 14.08.2021, rare (Khalaim, Novitskiy, Kavurka); Vylkove, 11.05.2014, 1 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, 1 spec. (Khalaim, Novitskiy).

Widespread and more or less common throughout the Region (Fig. 36). Flight recorded from late April to early September in two generations.

Sphinx pinastri Linnaeus, 1758

Shugurov, 1905; Ermolenko, 1999.

Material. Frasino, 22.07.2009, 1 spec. (Khalaim); Lyubomyrka, 02.08.2009, 1 spec. (Khalaim); Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Borshchi, 30.07.2011, 1 spec. (Khalaim); Severynivka, 05.06.2016, 1 spec. (Sergienko, Bidzilya), 25.07.2016, rare (Kostjuk, Sergienko), 21.07.2018, 1 spec. (Novitskiy, Mushinskiy), 12.05.2019, common (Mushinskiy, Sergienko); Karolino-Buhaz, ??-08.2019, 1 spec. (Kolomeychuk).

The species is often found in the northern wood-and-steppe areas, but rarely and locally in the steppe (Fig. 37). It flies in two generations from mid-May to September.

Tribe Acherontiini

Agrius convolvuli (Linnaeus, 1758)

Shugurov, 1905; Ermolenko, 1999; Duz', 2007; Tishchenkov, 2010; Pylypiuk, 2022; Balashov, 2022 b; Luchko, 2022; Nechai, 2022; Anonymous, 2022 e, f.

Material. Balta, 15.09.2004, 1 spec. (Khalaim); Pishchana, 16.08.2006, 1 spec. (Khalaim); Podilsk, 20.09.2004, 1 spec. (Khalaim); Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Murovana, 08.08.2020, 1 spec. (Khalaim, Novitskiy); Radialka, 22.06.2020, 1 spec., 24.08.2020, 1 spec. (Lapin); Rus'ka Slobidka, 02.10.2015, 1 spec. (Sergienko, Tsikal, Trotsenko), 22.07.2017, 1 spec. (Sergienko, Khalaim, Novitskiy, Trotsenko), 15.09.2018, rare (Sergienko, Trotsenko), 25.07.2021, rare (Khalaim, Novitskiy); Severynivka, 23.08.2018, 2 spec. (Novitskiy, Sergienko, Trotsenko), 14.09.2018, common (Sergienko, Trotsenko), 31.08.2021, common (Sergienko); Adamivka, 03.09.2018, 4 spec. (Novitskiy, Sergienko); Butsynivka, 17.08.2010, 2 spec. (Khalaim); Novokubanka, 03.10.2015, 1 spec. (Sergienko, Tsikal, Trotsenko); Hradnytsi, 27.08.2009, 1 spec. (Novitskiy); Odesa, 03.08.2013, 1 spec. (Leshchenko); Kotovskogo, 10.08.2003, 2 spec. (Skupyi); Roxolany, 17.06.2020, rare, 23.06.2020, 1 spec. (Khalaim, Novitskiy), 15.08.2020, rare (Bidzilya, Kostjuk, Sergienko), 30.08.2021, rare (Khalaim, Novitskiy, Sergienko), 02.10.2021, rare (Khalaim, Novitskiy, Yepishin, Sergienko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Vesela Dolyna 2, 25.08.2011, 1 spec. (Kostjuk, Plyushch); Pasichne, 09.09.2016, 1 spec. (Kostjuk, Sergienko); Vesela Dolyna, 14.08.2021, rare (Khalaim, Novitskiy, Kavurka); Burnas, 29.09.2019, 1 spec. (Khalaim, Novitskiy); SDyvizyia, 15.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Tuzly Amazonia, 19.09.2020, 1 spec. (Khalaim); Khadzhyder, 08.08.2021, common (Novitskiy, Sergienko); Zhebriansky ridge, 29.08.2020, 1 spec. (Khalaim, Novitskiy), 01.10.2021, rare (Khalaim, Novitskiy, Yepishin, Sergienko).

A migrant species, found in the Region everywhere, but more often in the south (Fig. 38). The permanent residence of the species in the area is doubtful, due to the fact that pupae usually cannot withstand winter temperatures. Moths recorded from mid-June to early October.

Acherontia atropos (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Obratsov, 1928–1929; Ermolenko, 1999; Arkhipov, 2003; Klyuchko, Severov, 2006; Kavurka et al., 2018; Pylypiuk, 2022; Bevz, 2022; Anonymous, 2022 h.

Material. Podilsk, without date, e.l., 1 spec. (Skupyi); Bilyaivka, ??-11.2011, 1 spec. (Savko); Korsunsi, 12.09.2020, 5 larvae on *Lycium barbatum* (Khalaim, Novitskiy, Yepishin, Sergienko); Fontanka, 14.10.2020, more than 20 larvae on *Lycium barbatum* (Khalaim); Lativka, 27.10.2021, 1 larva (Semenova); Roxolany, 13.09.2020, 1 larva on *Ligustrum vulgare* (Novitskiy, Yepishin, Sergienko); 30.08.2021, 1 spec. (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 1 spec. (Kolomeychuk); Lebedivka forest, 06.10.2013, 1 larva on *Ligustrum vulgare* (Khalaim); Tuzly Amazonia, 08.09.2021, 1 spec. (Brusentsova, Plachkov); Vylkove, 17–19.08.2013, 1 spec. (Khalaim).

Migrating moth species are noted almost everywhere in Odesa Region, but mostly in the south (Fig. 39). Adults occur from late spring to late autumn with two waves of migrations (the first one is smaller). Caterpillars are common almost every year in August–October in thickets

of Wolfberry (*Lycium barbatum*) and European privet (*Ligustrum vulgare*) on coastal slopes and along the banks of estuaries and lagoons. The possibility of individual pupae successfully overwintering in warm winters is not ruled out.

Subfamily Macroglossinae

Tribe Dilophonotini

Hemaris fuciformis (Linnaeus, 1758)

Shugurov, 1905.

Material. Kharytynivka, 30.07.2003, 1 spec. (Skupyi); Dolyns'ke, 17.05.2010, 1 spec. (Khalaim); Kardamycheve, 02.05.2020, 2 spec. (Khalaim, Novitskiy, Lapin); Berezivka forest, 20.05.2004, 1 spec. (Skupyi); Kurisove, without date, rare (Vasylenko); Shemetove, 09.05.2015, 1 spec. (Gerasimov, Trotsenko, Tsikal); Severynivka, 24.04.2020, 1 spec. (Leshchenko, Gera).

The species is locally and rarely found in the central and northern areas, but still unknown in the Bessarabian part of the Region (Fig. 40). Bivoltine. Moths of the first generation were recorded from the end of April to mid-May, those of the second one — in July–August.

Hemaris tityus (Linnaeus, 1758)

Shugurov, 1907.

It is known only from an old report. However the probability of the species inhabiting the Region, in particular its northern part, is beyond doubt (Fig. 41). It is bivoltine in the most of the territory of Ukraine. Moths flight is observed from May to August.

Tribe Macroglossini

Proserpinus proserpina (Pallas, 1772)

Shugurov, 1905; Shugurov, 1907; Ermolenko, 1999; Klyuchko, Severov, 2006; Duz', 2007; Kavurka et al., 2018.

Material. Oleksandrivka, ???.06.2011, 1 spec. (Koval'chuk O., Stankova I.); Savran' forest, 18.07.2020, 1 spec. (Khalaim, Novitskiy); Kozats'ke, 03.06.2013, 1 spec. (Zhakov, Mushinskiy); Frasino, 08–09.07.2016, 1 larva (Leshchenko, Kravchenko); Severynivka, 12.05.2019, 4 spec. (Mushinskiy, Sergienko); Rus'ka Slobidka, 12.06.2020, 1 spec. (Bidychak); Lisky, 01.07.2005, 1 spec. (Skupyi); Zatoka, 02.05.1986, 1 spec. (Orlov); Karolino-Buhaz, without date, 7 spec. (Kolomeychuk); Vylkove, 02.05.2013, 1 spec. (Khalaim).

The species occurs locally throughout the Region, preferring moist or wet tall-herb fringes and meadow (Fig. 42). It is usually univoltine. Adults fly from late April to early or mid-July.

Daphnis nerii (Linnaeus, 1758)

Shugurov, 1905.

This species is known from old literary references in Odesa Region (Fig. 43). Being a non-resident, however, the likelihood of his finding, as an active migrant, is

beyond doubt. The species is multivoltine in its main range in southern countries. Probability of encountering immigrating adults in the Region is possible from late spring to late autumn.

Macroglossum stellatarum (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Obratsov, 1928–1929; Ermolenko, 1999; Duz', 2007; Zolotov, 2022; Smirnov, 2022; Sokolova-Yudina, 2022; Kalashnik, 2022 a; Prokhorov, 2022; Mykytynets, 2022 b.

Material. Podilsk, 27.08.2004, 1 spec. (Khalaim); Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Murovana, 08.08.2020, 1 spec. (Khalaim, Novitskiy); Trudomyrivka, 21.08.2021, common (Khalaim, Novitskiy); Severynivka, 19.10.2018, common (Novitskiy, Sergienko, Trotsenko), 12.09.2020, rare (Yepishin, Sergienko, Khalaim), 31.08.2021, rare (Sergienko), 22.10.2021, rare (Sergienko); Korsunsi, 21.09.2013, 1 spec. (Khalaim); Hradenytsi, 28.08.2008, 1 spec. (Novitskiy); Stara Emetivka, 20.09.2020, 1 spec. (Lapin); Odesa, 03.08.2013, 1 spec. (Leshchenko); Park 411 battery, 26.10.2020, 1 spec. (Lapin); Kotovskogo, 17.07.2003, 1 spec. (Skupyi); Roxolany, 17.06.2020, 2 spec. (Khalaim, Novitskiy); 20.04.2021, rare, 30.08.2021, rare (Khalaim, Novitskiy, Sergienko), 02.10.2021, rare (Khalaim, Novitskiy, Yepishin, Sergienko), Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Pasichne, 09.09.2016, 2 spec. (Kostjuk, Sergienko); Vesela Dolyna, 14.08.2021, rare (Khalaim, Novitskiy, Kavurka); Lebedivka forest, 18.06.2014, 1 spec. (Khalaim), 30.07.2021, common (Khalaim, Kanarsky); Burnas, 31.07.2021, rare (Khalaim, Kanarsky); Tuzly Amazonia, 19.09.2020, rare, 03–05.08.2021, common (Khalaim); Khadzhyder, 08.08.2021, common (Novitskiy, Sergienko); Zhebriansky ridge, 11.07.2020, rare, 29.08.2020, rare (Khalaim, Novitskiy), 09.08.2021, rare (Sergienko).

Widespread and one of the most common sphinx moth species in the Region, it is sometimes quite numerous (Fig. 44). Local populations are constantly replenished with migrating specimens from the south. A multivoltine overwintering adult with diurnal activity, occurs all year round. It is possible to observe flying moths during periods of winter thaws.

Hyles euphorbiae (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Ermolenko, 1999; Duz', 2007; Tishchenkov, 2010; Kolechka, 2022; Kalashnik, 2022 b; Zaderey, 2022 a; Tregubova, 2022; Anonymous, 2022 i, j; Yakovliev, 2022 c.

Material. Podilsk, ???.09.2002, 1 spec., 27.08.2004, 1 spec., 24–31.07.2008, 2 spec., 29.08.2011, 1 spec. (Khalaim); Frasino, 22.07.2009, numerous (Khalaim), 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Lyubomyrka, 27.07.2009, 1 spec. (Khalaim); Novoivanivka, 25–26.07.2015, 1 spec. (Kiselyov, Kravchenko, Leshchenko); Dolyns'ke, 09–10.07.2016, 1 spec. (Leshchenko, Kravchenko, Khalaim); Krasnovolodymyrivka, 11.08.2003, 1 spec. (Skupyi); Radialka, 03.07.2019, 1 spec., 06–11.06.2020, 2 spec. (Lapin); Trudomyrivka, 21.08.2021, common (Khalaim, Novitskiy); Severynivka, 08.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko), 05.06.2016, common (Sergienko, Bidzilya), 25.07.2016, common (Kostjuk, Sergienko), 11.05.2018, common (Zhakov, Mushinskiy, Novitskiy, Sergienko), 23.08.2018, 1 spec. (Novitskiy, Sergienko, Trotsenko), 04.09.2018, 1 spec. (Novitskiy, Sergienko), 12.05.2019, common (Mushinskiy, Sergienko), 29.08.2019, 1 spec. (Novitskiy), 12.09.2020, 1 spec. (Yepishin, Sergienko, Khalaim), 31.08.2021, common (Sergienko), 15.09.2021, rare (Yepishin, Sergienko); Adamivka, 03.09.2018, 1 spec. (Novitskiy, Sergienko); Rus'ka Slobidka, 10–11.05.2015, 2 spec. (Gerasimov, Trotsenko, Tsikal), 01.05.2016, common (Zhakov, Mushinskiy, Trotsenko, Sergienko), 04.06.2016, common (Sergienko, Bidzilya), 24.07.2016, common (Kostjuk, Sergienko), 13.05.2019, common (Mushinskiy, Sergienko,

Novitskiy), 08.06.2020, common (Yepishin, Mushinskiy, Novitskiy, Sergienko, Khalaim), 11.08.2018, 1 spec. (Gerasimov, Tsikal, Trotsenko), 25.07.2021, numerous (Khalaim, Novitskiy); Korsunsi, 29.07.2016, 1 spec. (Khalaim); Kairy, 07.06.2020, common (Yepishin, Mushinskiy, Novitskiy, Sergienko); Kubanka, 25.07.2020, rare (Khalaim, Novitskiy); Hradenytsi, 01.06.2009, 1 spec., 16.07.2010, 1 spec. (Novitskiy); Velykyi Dal'nyk, 09–10.05.2016, 1 spec. (Leshchenko); Yas'ky, 16.08.2020, 1 spec. (Khalaim, Novitskiy, Mushinskiy); Roxolany, 17.06.2020, rare, 23.06.2020, rare, 29.07.2020, rare (Khalaim, Novitskiy), 15.08.2020, common (Bidzilya, Kostjuk, Sergienko), 13.09.2020, 1 spec. (Yepishin, Sergienko), 24.06.2021, rare (Sergienko, Novitskiy), 30.08.2021, common (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 3 spec. (Kolomeychuk); Vesela Dolyna 2, 25.08.2011, rare (Kostjuk, Plyushch); Vesela Dolyna, 07.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko); 14.08.2021, numerous (Khalaim, Novitskiy, Kavurka); Pasichne, 09.09.2016, 3 spec. (Kostjuk, Sergienko); Burnas, 05.10.2014, 1 larva (Khalaim), 31.07.2021, rare (Khalaim, Kanarsky); Lebedivka forest, 04.10.2014, 1 larva (Khalaim), 30.07.2021, rare (Khalaim, Kanarsky); Lebedivka sandbar, 18.06.2014, 1 spec. (Khalaim); SDyvizyia, 12.06.2020, 1 spec. (Khalaim); Khadzhyder, 08.08.2021, numerous (Novitskiy, Sergienko); Tuzly Amazonia, 03–05.08.2021, rare (Khalaim); Vylkove, 05.05.2013, 1 spec., 11.05.2014, 1 spec. (Khalaim); Zhebriansky ridge, 13.10.2013, 1 larva (Khalaim), 11.07.2020, rare (Khalaim, Novitskiy), 23.05.2021, 2 spec. (Khalaim, Novitskiy, Sergienko), 09.08.2021, common (Sergienko), 14.09.2021, 1 spec. (Yepishin, Novitskiy, Sergienko).

One of the most common and widespread sphinx moth species in the Region. It can be found everywhere in open and semi-open biotopes, including anthropogenic ones (Fig. 45). Bivoltine. Moths fly from early May to mid-September.

Hyles gallii (Rottemburg, 1775)

Shugurov, 1907; Ermolenko, 1999; Duz', 2007; Tishchenkov, 2010; Zaderey, A. 2022 b.

Material. Savran' forest, 18.07.2020, 1 spec. (Khalaim, Novitskiy); Podilsk, 21.05.2004, 1 spec., 19.07.2004, 1 spec., 26.05.2005, 1 spec., 14.07.2005, 1 spec., 26.07.2008, 1 spec. (Khalaim); Frasino, 22.07.2009, 1 spec. (Khalaim), 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Kardamycheve, 02.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin); Trudomyrivka, 21.08.2021, rare (Khalaim, Novitskiy); Severynivka, 08.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko), 30.04.2016, rare (Zhakov, Mushinskiy, Trotsenko, Sergienko), 05.06.2016, rare (Sergienko, Bidzilya), 25.07.2016, common (Kostjuk, Sergienko), 11.05.2018, 1 spec. (Zhakov, Mushinskiy, Novitskiy, Sergienko), 31.08.2021, rare (Sergienko); Adamivka, 03.09.2018, 1 spec. (Novitskiy, Sergienko); Rus'ka Slobidka, 04.06.2016, rare (Sergienko, Bidzilya), 24.07.2016, common (Kostjuk, Sergienko), 14.07.2018, 1 spec. (Andrianov), 25.07.2021, rare (Khalaim, Novitskiy); Koshary, 20.07.2002, 1 spec. (Грибов); Hradenytsi, 13.07.2010, 1 spec., 15.07.2011, 1 spec. (Novitskiy); Roxolany, 29.07.2020, 1 spec. (Khalaim, Novitskiy), 24.06.2021, rare (Sergienko, Novitskiy), 30.08.2021, rare (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Budaki Lagoon, 04.07.2010, 1 spec. (Khalaim); Vesela Dolyna, 14.08.2021, rare (Khalaim, Novitskiy, Kavurka); SDyvizyia, 15.08.2020, 1 spec. (Khalaim, Novitskiy, Mushinskiy); Burnas, 31.07.2021, 1 spec. (Khalaim, Kanarsky); Tuzly Amazonia, 03–05.08.2021, 2 spec. (Khalaim); Khadzhyder, 08.08.2021, common (Novitskiy, Sergienko); Zhebriansky ridge, 09.08.2021, X (Sergienko), 01.10.2021, 1 spec. (Khalaim, Novitskiy, Yepishin, Sergienko).

A rather common species distributed throughout the Region (Fig. 46). Bivoltine. The flight of adults is registered from the end of April to the beginning of October.

? *Hyles nicaea* (de Prunner, 1798)

Tishchenkov, 2010.

In Odesa Region, it is known by a single report, based on the specimen from the collection of O. M. Arkhipov, bred from a pupa, 04.04.1992, in the village Kuchurgan, Rozdilna District (Tishchenkov, 2010) (Fig. 47). Based on the general range, the presence of the species in Odesa Region is doubtful. The nearest populations are known from the territory of the Balkan and Crimean peninsulas (Efetov & Budashkin, 1990; Zolotuhin & Yevdoshenko, 2019). Verification of the source material is necessary, since an error in the identification of a large and aberrative specimen of *H. euphorbiae* cannot be ruled out.

Hyles hippophaes (Esper, 1789)

Ermolenko, 1999; Duz', 2007; Arkhipov, 2022; Strenada, 2022 a.

Material. Zavodivka, 18.06.2020, 3 spec. (Leshchenko, Gera); Radialka, 25.08.2020, 1 spec. (Lapin); Trudomyrivka, 21.08.2021, rare (Khalaim, Novitskiy); Severynivka, 05.06.2016, 1 spec. (Sergienko, Bidzilya), 23.08.2018, 1 spec. (Novitskiy, Sergienko, Trotsenko), 02.08.2019, 1 spec. (Novitskiy), 18.05.2020, 1 spec. (Leshchenko, Gera), 31.08.2021, rare (Sergienko), 15.09.2021, 1 spec. (Yepishin, Sergienko); Rus'ka Slobidka, 24.07.2016, common (Kostjuk, Sergienko), 05.05.2018, 3 spec. (Tsikal), 10.05.2018, 2 spec. (Gerasimov, Trotsenko, Tsikal), 14.07.2018, 3 spec. (Andrianov), 11.08.2018, 1 spec. (Gerasimov, Tsikal, Trotsenko), 25.07.2021, common (Khalaim, Novitskiy); Butsynivka, 17.08.2010, 3 spec. (Khalaim); Korsunsi, 29.07.2016, 5 spec. (Khalaim); Kubanka, 25.07.2020, common (Khalaim, Novitskiy); Kairy, 23.05.2020, 1 spec. (Khalaim, Novitskiy), 07.06.2020, 1 spec. (Yepishin, Mushinskiy, Novitskiy, Sergienko); Hradenytsi, 05.06.2011, 1 spec. (Novitskiy); Mayaky, 20.07.2018, 1 spec. (Andrianov); Kovalivka, 07.07.2020, 1 spec. (Leshchenko, Gera); Roxolany, 23.06.2020, 1 spec. (Khalaim, Novitskiy), 15.08.2020, 1 spec. (Bidzilya, Kostjuk, Sergienko), 30.08.2021, rare (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Vesela Dolyna 2, 25.08.2011, 1 spec. (Kostjuk, Plyushch); Vesela Dolyna, 14.08.2021, common (Khalaim, Novitskiy, Kavurka); Lebedivka sandbar, 18.06.2014, 1 spec. (Khalaim); SDyvizyia, 15.08.2020, rare (Khalaim, Novitskiy, Mushinskiy); Tuzly Amazonia, 03–05.08.2021, 2 spec. (Khalaim); Khadzhyder, 08.08.2021, 1 spec. (Novitskiy, Sergienko); Vylkove, 21–22.07.2012, 4 spec., 03–07.08.2014, 1 spec., 04–09.08.2015, 1 spec., 08.08.2016, 1 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, rare, 10.06.2020, 1 spec. (Bidychak); Nahirne, 26.06.2008, 1 larva on *Eleagnus angustifolia*, exit from the chrysalis 13.07.2008 (Khalaim).

Common in the steppe zone of the Region, and less common in the wood-and-steppe areas in the north (Fig. 48). Bivoltine. Moths fly from early May to mid-September. Caterpillars develop mainly on *Eleagnus angustifolia*.

The species recently appeared in the fauna of Ukraine. In 1954, it was first discovered in the Crimea (Derzhavets, 1984). Later, it expanded its range, first into the steppe zone of the mainland of Ukraine, and later into the wood-and-steppe (Pljushtch & Sheshurak, 1997; Goloborod'ko, Pljushtch & Pakhomov, 2010).

According to Zolotuhin & Yevdoshenko (2019), the nominative European subspecies is found in northern Spain, southern France, southern Switzerland, and northern Italy. The populations of the Balkans, Moldova, and Ukraine belong to the Asian ssp. *bienerti* Staudinger, 1874. In accordance with the morphological characters

given in this work (adults are more yellow with a reduced discal spot), the studied specimens from Odesa Region are closer to ssp. *bienerti*, but not in all details correspond to it (Fig. 52, 53). Because Patzold et al. (2021) indicate that the boundary between the nominative European subspecies and the Asian ssp. *bienerti* Staudinger, 1874 passes through the south-west of Ukraine; it is possible that with range expansion of the Asian subspecies, an “overlap” with the range of the nominal European subspecies just happened and now intermediate forms are found.

Hyles livornica (Esper, 1780)

Shugurov, 1905; Shugurov, 1907; Romaniszyn, 1920; Tishchenkov, 2010; Strenada, 2022 b.

Material. Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Radialka, 08.07.2019, 1 spec., 06–11.06.2020, 2 spec. (Lapin); Severynivka, 05.06.2016, 1 spec. (Sergienko, Bidzilya), 12.05.2019, 1 spec. (Mushinskiy, Sergienko); Rus’ka Slobidka, 10.05.2018, 1 spec. (Gerasimov, Trotsenko, Tsikal); Butsynivka, 17.08.2010, 6 spec. (Khalaim); Koshary, 20.06.2002, 1 spec. (Gribov); Hradenytsi, 21.07.2012, 1 spec. (Novitskiy); Odesa, 21.07.2003, 1 spec. (Skupyi); Zatoka, 12–15.07.2010, 1 spec. (Khalaim); Roxolany, 24.06.2021, rare (Sergienko, Novitskiy), 30.08.2021, common (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Vesela Dolyna, 14.08.2021, 1 spec. (Khalaim, Novitskiy, Kavurka); Tuzly Amazonia, 02.07.2019, 1 spec. (Khalaim); Burnas, 29.09.2019, 1 spec. (Khalaim, Novitskiy); Khadzhyder, 08.08.2021, rare (Novitskiy, Sergienko).

This migrant species is recorded throughout the Region, but primarily in the south along the sea coast (Fig. 49). The flight of moths occur from the beginning of May to the end of September.

Deilephila elpenor (Linnaeus, 1758)

Shugurov, 1905; Romaniszyn, 1920; Ermolenko, 1999; Duz’, 2007; Tishchenkov, 2010; Gerasymenko, 2022; Anonymous, 2022 k, l.

Material. Pishchana, 16.08.2006, 1 spec. (Khalaim); N Podilsk, 29.07.2011, 1 spec. (Khalaim); Valekruch-Negai, 29.07.2006, 2 spec. (Khalaim); Borshchi, 28.05.2011, 1 spec. (Khalaim); Zavodivka, 18.06.2020, 1 spec. (Leshchenko, Gera); Butsynivka, 17.08.2010, 1 spec. (Khalaim); Severynivka, 25.07.2016, 1 spec. (Kostjuk, Sergienko), 31.08.2021, rare (Sergienko), 15.09.2021, rare (Yepishin, Sergienko); Rus’ka Slobidka, 08.06.2020, 1 spec. (Yepishin, Mushinskiy, Novitskiy, Sergienko, Khalaim); Mayaky, 09–10.07.2009, 4 spec. (Khalaim); Hradenytsi, 15.07.2010, 1 spec. (Novitskiy); Roxolany, 17.06.2020, rare, 23.06.2020, rare (Khalaim, Novitskiy), 24.06.2021, 1 spec. (Sergienko, Novitskiy), 30.08.2021, rare (Khalaim, Novitskiy, Sergienko); Zatoka, 28.07.1984, 1 spec. (Orlov); Karolino-Buhaz, without date, 2 spec. (Kolomeychuk); Odesa, 22.07.2019, 1 spec. (Lapin); Burnas, 31.07.2021, 1 spec. (Khalaim, Kanarsky); Khadzhyder, 08.08.2021, rare (Novitskiy, Sergienko); Vylkove, 03–04.05.2013, 2 spec., 07–10.05.2014, 1 spec., 11–13.08.2015, 1 spec., 08.08.2016, 2 spec. (Khalaim); Zhebriansky ridge, 11.07.2020, common, 29.08.2020, common (Khalaim, Novitskiy), 23.05.2021, rare (Khalaim, Novitskiy, Sergienko), 09.08.2021, rare (Sergienko), 14.09.2021, 1 spec. (Yepishin, Novitskiy, Sergienko).

A fairly common species distributed throughout the Region (Fig. 50). Bivoltine. Imagoes fly from early May to mid-September.

Deilephila porcellus (Linnaeus, 1758)

Shugurov, 1905; Duz’, 2007; Tishchenkov, 2010;

Material. Kodyma, 26.05.2011, 1 spec. (Khalaim); Savran’ forest, 18.07.2020, rare (Khalaim, Novitskiy); Chabanivka, 21.08.2009, 1 spec. (Khalaim); Podilsk, 17–19.07.2004, 2 spec., 26.05–01.06.2005, 2 spec., 20–27.07.2010, 2 spec. (Khalaim); Borodavs’kyi gully, 25.07.2009, 2 spec. (Khalaim); Frasino, 08–09.07.2016, 1 spec. (Leshchenko, Kravchenko); Murovana, 08.08.2020, 2 spec. (Khalaim, Novitskiy); Dolyns’ke, 09–10.07.2016, 1 spec. (Leshchenko, Kravchenko, Khalaim); Pershe Travnaya, 30.07.2010, 24 spec. (Khalaim); Viktorivka, 21.06.2004, 1 spec. (Skupyi); Radialka, 23.06.2019, 1 spec. (Lapin); Kardamycheve, 02.05.2020, rare (Khalaim, Novitskiy, Lapin); Trudomyrivka, 21.08.2021, numerous (Khalaim, Novitskiy); Severynivka, 08.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko), 30.04.2016, rare (Zhakov, Mushinskiy, Trotsenko, Sergienko), 05.06.2016, common (Sergienko, Bidzilya), 25.07.2016, common (Kostjuk, Sergienko), 11.05.2018, common (Zhakov, Mushinskiy, Novitskiy, Sergienko), 23.08.2018, 1 spec. (Novitskiy, Sergienko, Trotsenko), 12.05.2019, common (Mushinskiy, Sergienko), 02.08.2019, common (Novitskiy), 29.08.2019, 1 spec. (Novitskiy), 31.08.2021, rare (Sergienko), 15.09.2021, rare (Yepishin, Sergienko); Rus’ka Slobidka, 10–11.05.2015, 1 spec. (Gerasimov, Trotsenko, Tsikal), 01.05.2016, common (Zhakov, Mushinskiy, Trotsenko, Sergienko), 04.06.2016, common (Sergienko, Bidzilya), 24.07.2016, common (Kostjuk, Sergienko), 13.05.2019, common (Mushinskiy, Sergienko, Novitskiy), 08.06.2020, common (Yepishin, Mushinskiy, Novitskiy, Sergienko, Khalaim), 25.07.2021, numerous (Khalaim, Novitskiy); Butsynivka, 04.06.2011, 4 spec. (Khalaim); Korsuntsi, 29.07.2016, 1 spec. (Khalaim); Kairy, 16.05.2020, 3 spec. (Khalaim, Novitskiy, Lapin), 23.05.2020, rare (Khalaim, Novitskiy); Kubanka, 25.07.2020, rare (Khalaim, Novitskiy); Mayaky, 10.07.2007, 1 spec., 10.07.2009, 2 spec. (Khalaim); Hradenytsi, 16.07.2010, 1 spec. (Novitskiy); Kotovskogo, 08–21.06.2003, 2 spec. (Skupyi); Roxolany, 17.06.2020, rare, 23.06.2020, rare, 29.07.2020, rare (Khalaim, Novitskiy), 24.06.2021, common (Sergienko, Novitskiy), 30.08.2021, rare (Khalaim, Novitskiy, Sergienko); Karolino-Buhaz, without date, 3 spec. (Kolomeychuk); Vesela Dolyna, 07.06.2015, 1 spec. (Bidzilya, Kostjuk, Sergienko); 14.08.2021, common (Khalaim, Novitskiy, Kavurka); Tuzly Amazonia, 02.07.2019, 1 spec. (Khalaim); Burnas, 09.05.2020, 1 spec. (Khalaim, Novitskiy, Lapin); 31.07.2021, common (Khalaim, Kanarsky); SDyviziya, 12.06.2020, rare (Khalaim); Lebedivka forest, 30.07.2021, rare (Khalaim, Kanarsky); Khadzhyder, 08.08.2021, rare (Novitskiy, Sergienko); Vylkove, 08.08.2016, 2 spec. (Khalaim); Zhebriansky ridge, 09.08.2021, rare (Sergienko).

One of the most common and widespread sphinx moth species in the Region. It is ubiquitous (Fig. 51). Bivoltine. Moths are on the wing from late April to mid-September.

Conclusions

In total, 21 species from the family Sphingidae, 13 species of Lasiocampidae, 11 Drepanidae, 3 Saturniidae, and 1 species each from the families Brahmaeidae and Thyrididae were recorded from Odesa Region.

15 species from the above families are recorded for the first time for the fauna of Odesa Region.

It should be noted that with further research, there is a high probability that this list will be replenished with a number of other species. In particular, such as: *Aglia tau* (Linnaeus, 1758), *Lemonia balcanica* (Herrich-Schäffer, 1847), *Malacosoma franconica* (Denis & Schiffermüller, 1775), *Poecilocampa populi* (Linnaeus, 1758), *Cymatophorina diluta* (Denis & Schiffermüller, 1775), which are known from the adjacent territories of Ukraine, Romania and/or Moldova, but have not yet been identified in Odesa Region. At the same time, the lepidoptera fauna

of the Southern Bessarabian part of the Region is still poorly studied. Therefore, new interesting surprises can be expected here.

The data presented in the paper significantly supplement the existing concepts on the distribution

and phenology of the Heterocera (Lepidoptera) species in Odesa Region. We would be satisfied if the published information could be used in compiling essays for the Red Book of Ukraine and species lists of protected areas.

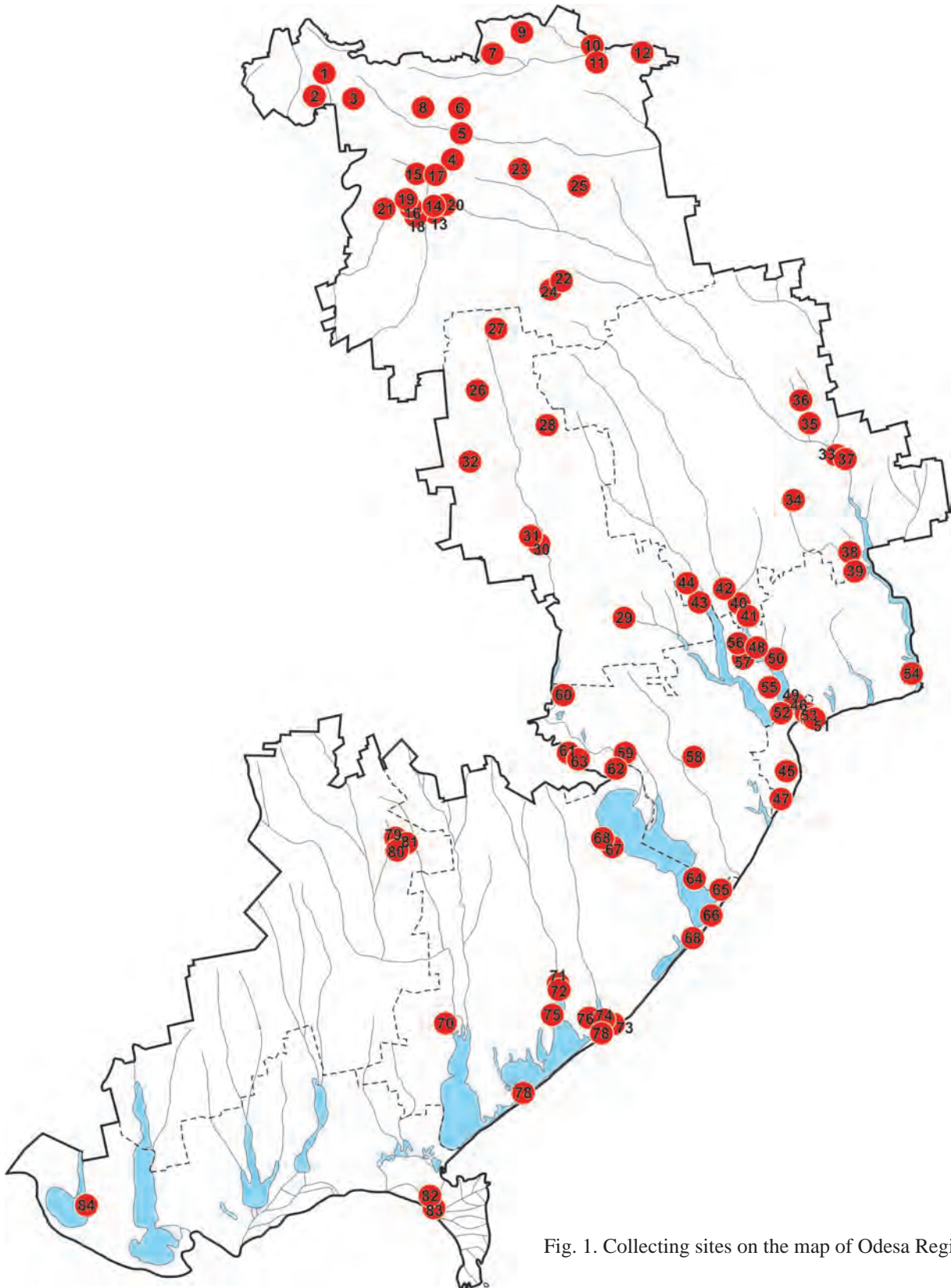
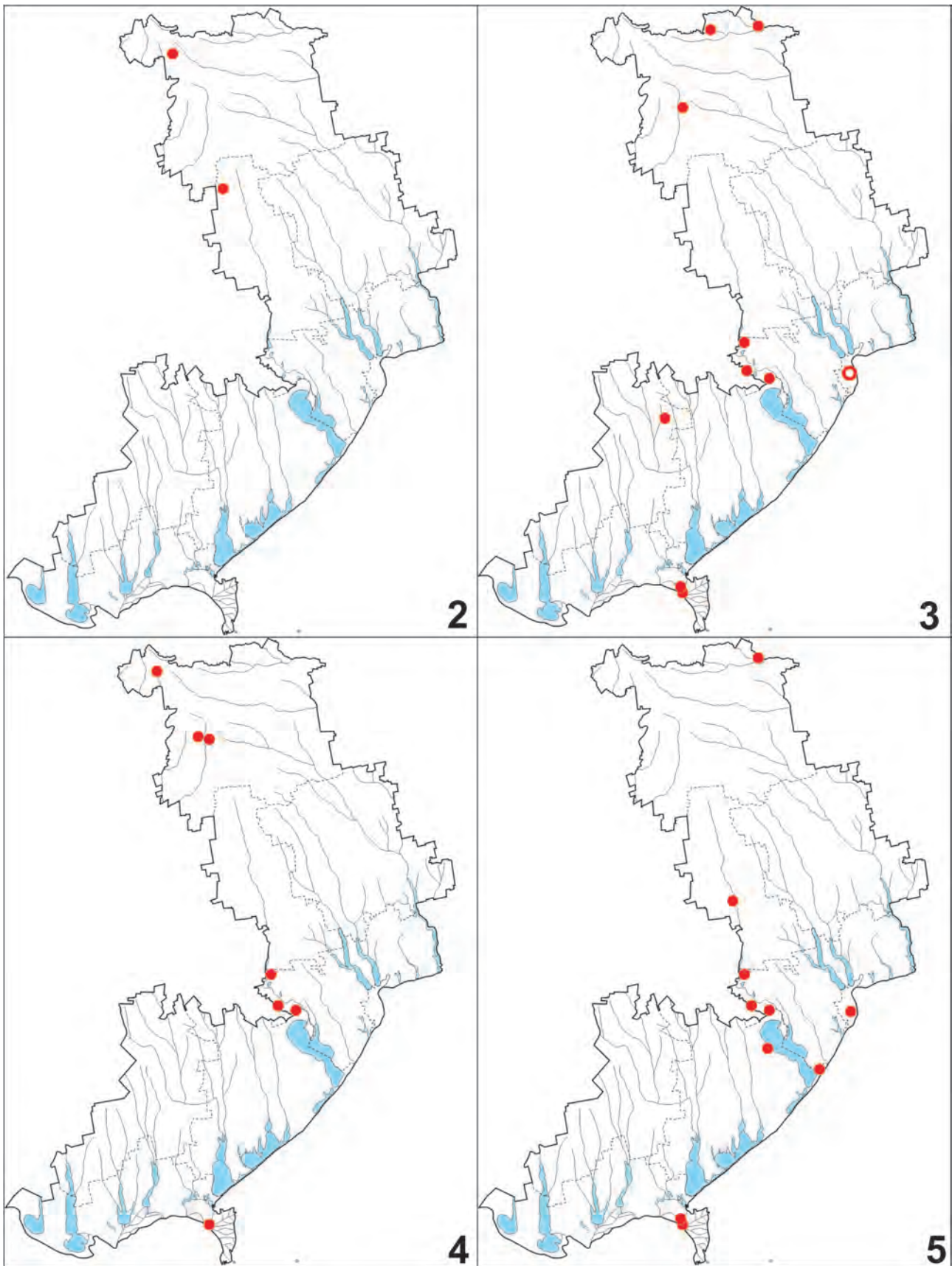
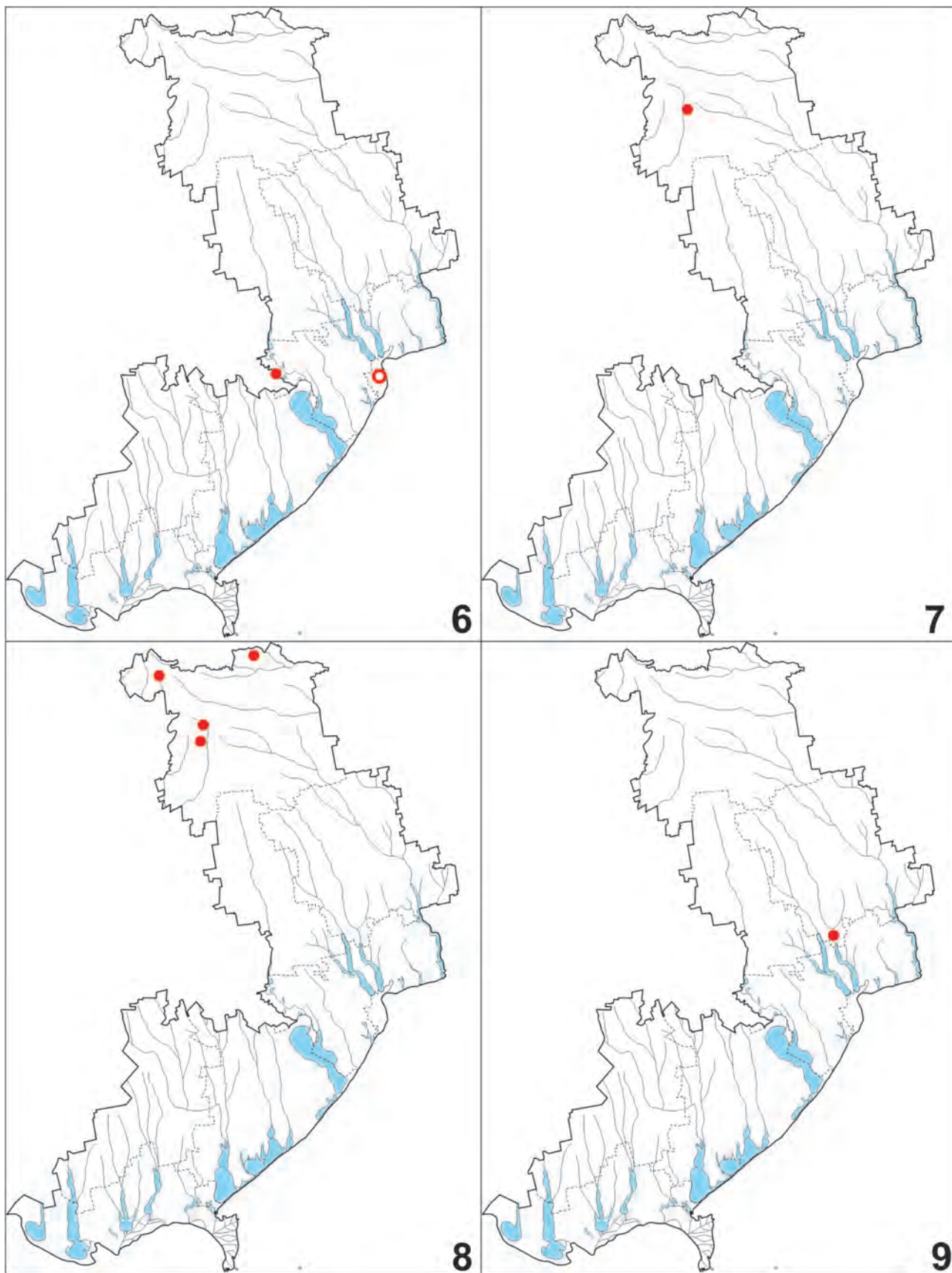


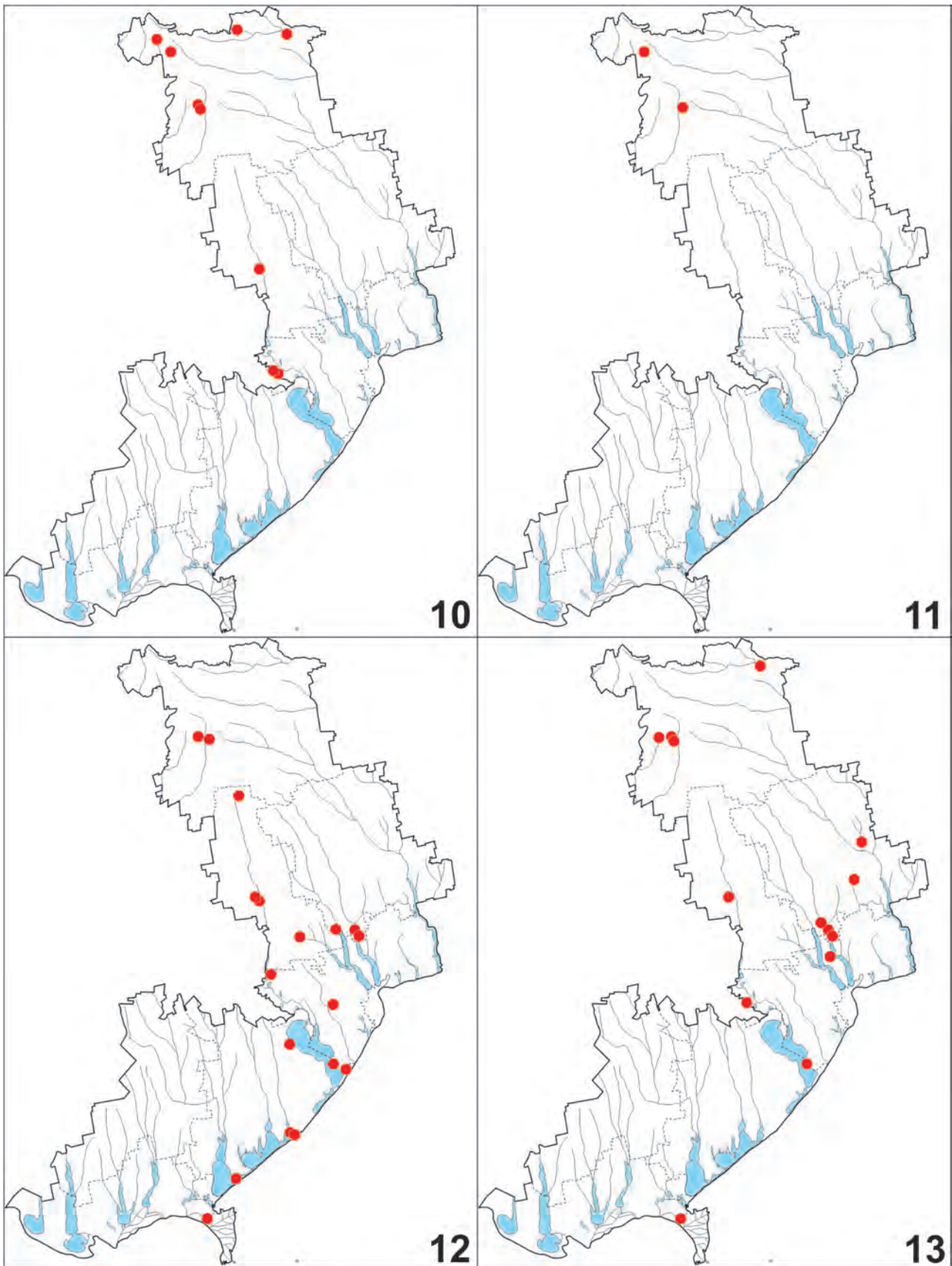
Fig. 1. Collecting sites on the map of Odesa Region.



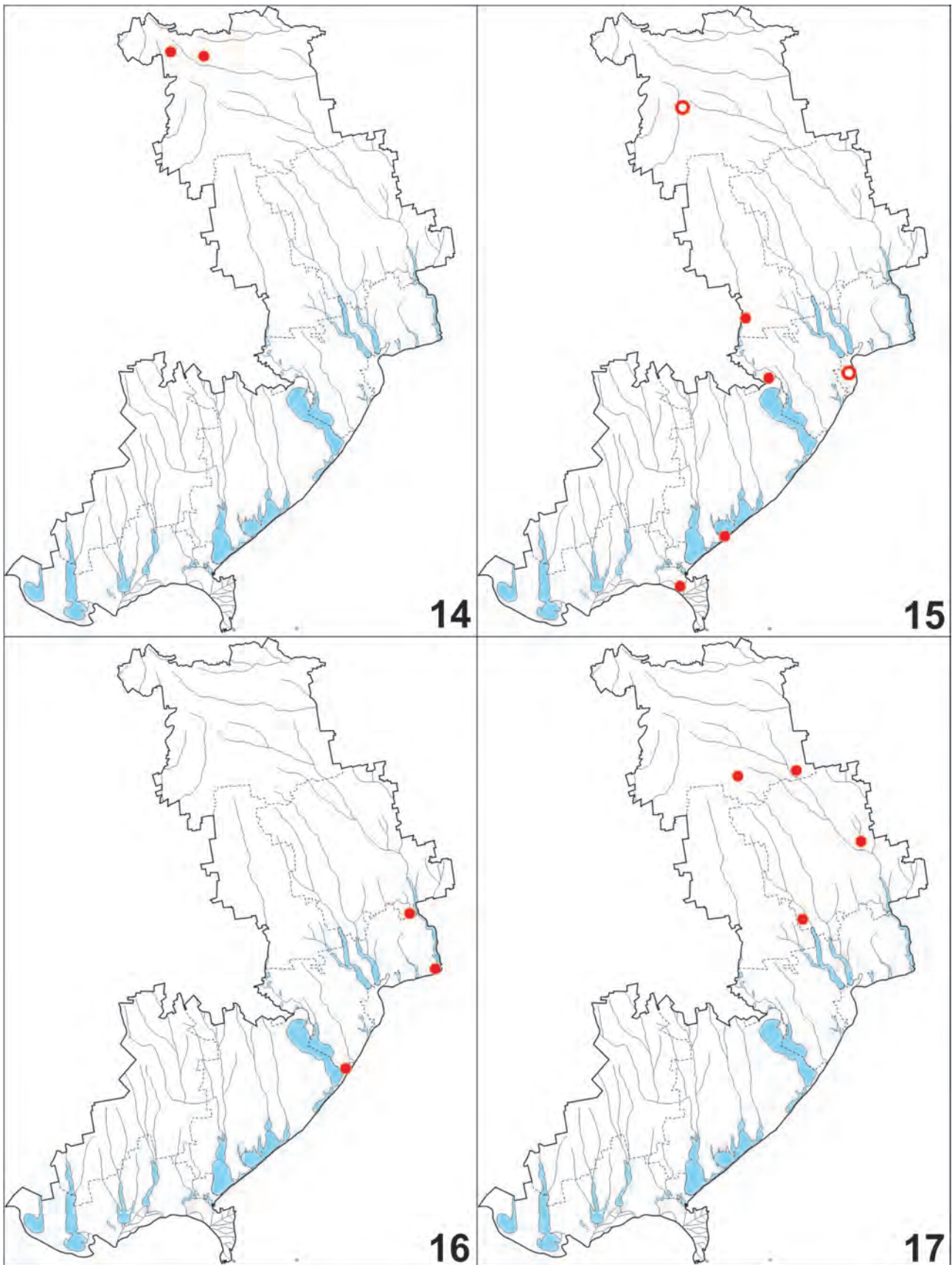
Figs 2–5. Collecting sites: 2 — *Thyris fenestrella*; 3 — *Thyatira batis*; 4 — *Habrosyne pyritoides*; 5 — *Tethea ocularis*.



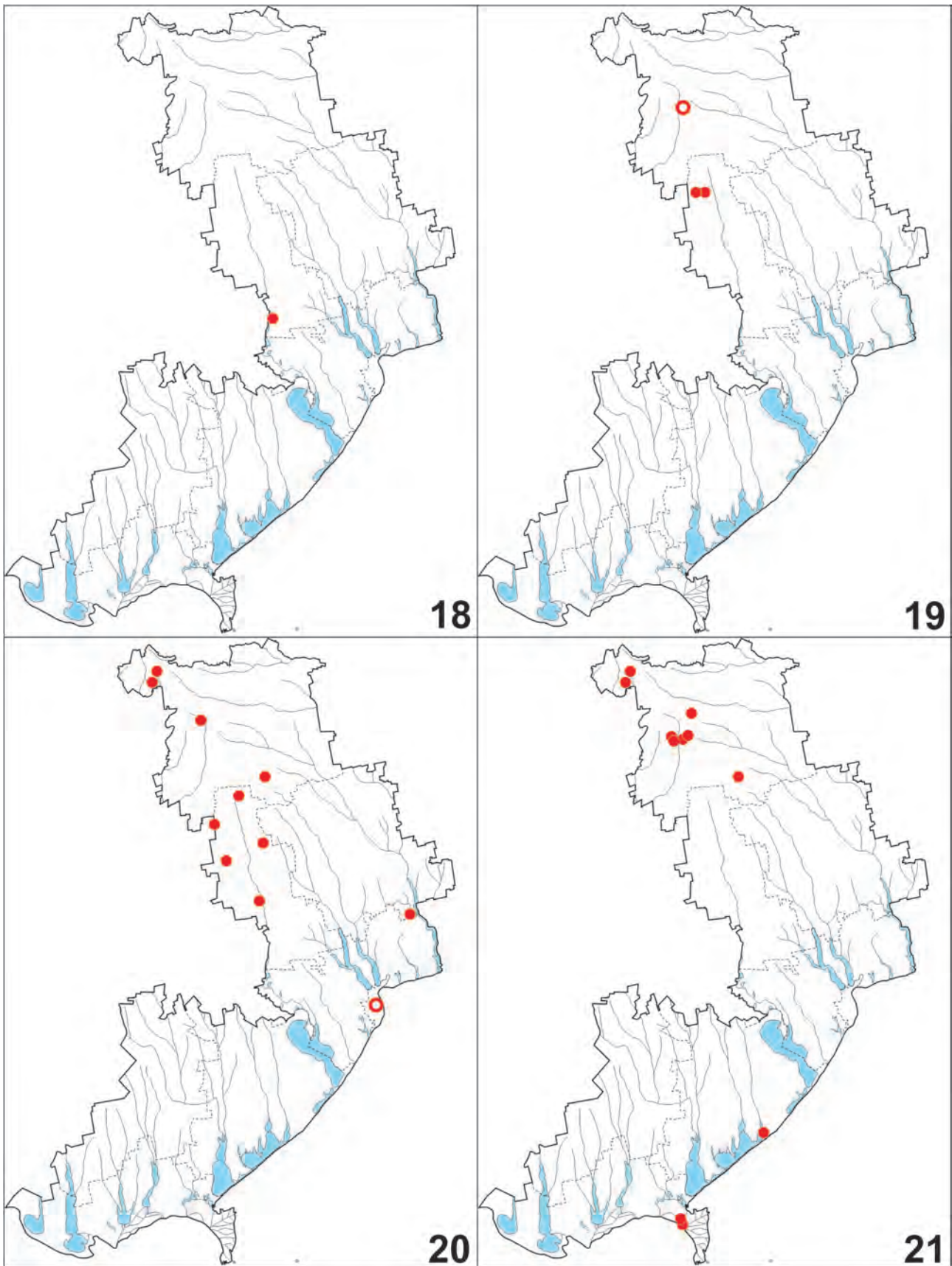
Figs 6–9. Collecting sites: 6 — *Tethea or*; 7 — *Ochropacha duplaris*; 8 — *Polyploca ridens*; 9 — *Asphalia ruficollis*.



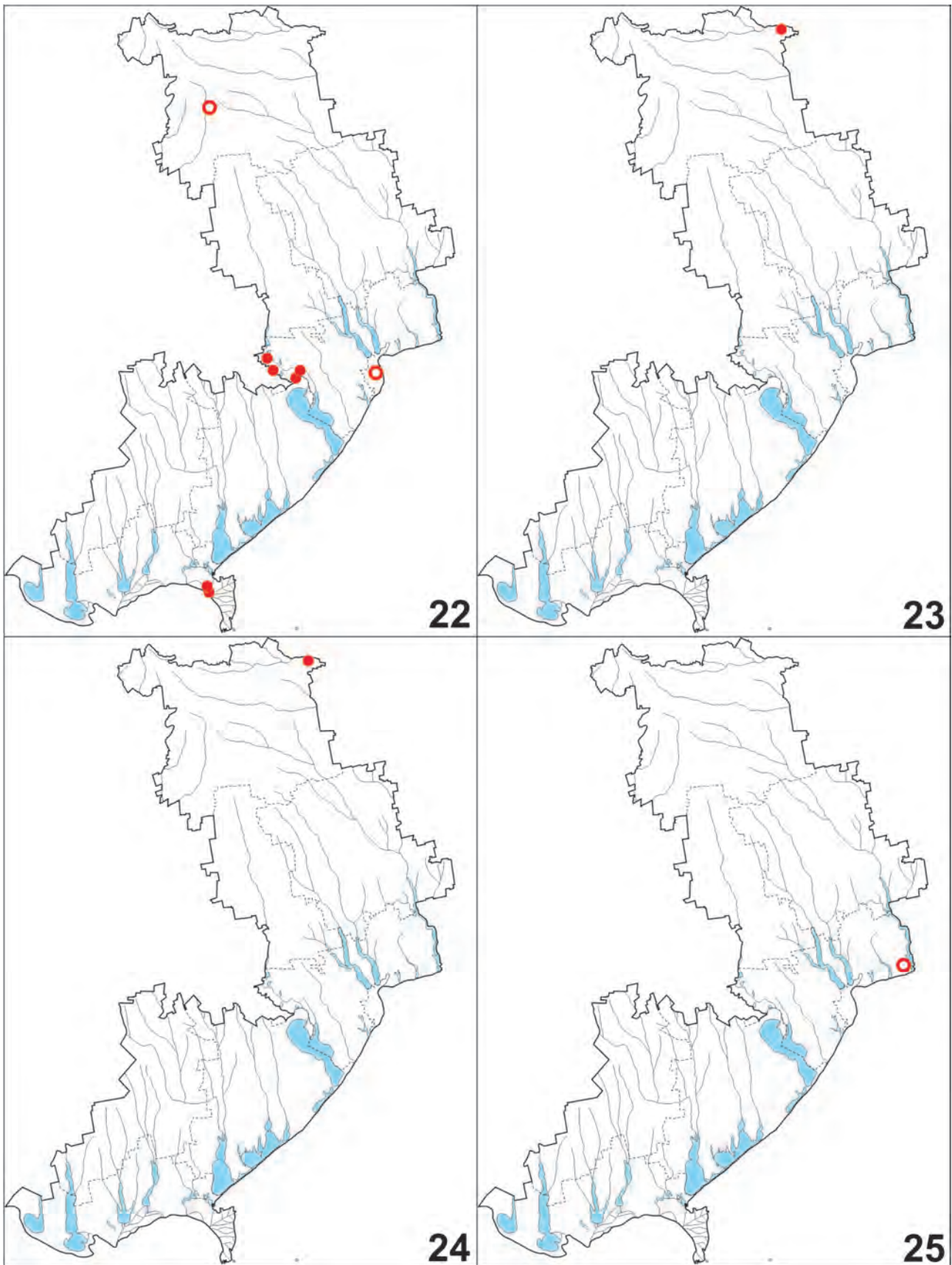
Figs 10–13. Collecting sites: 10 — *Watsonalla binaria*; 11 — *Sabra harpagula*; 12 — *Cilix glaucata*; 13 — *C. asiatica*.



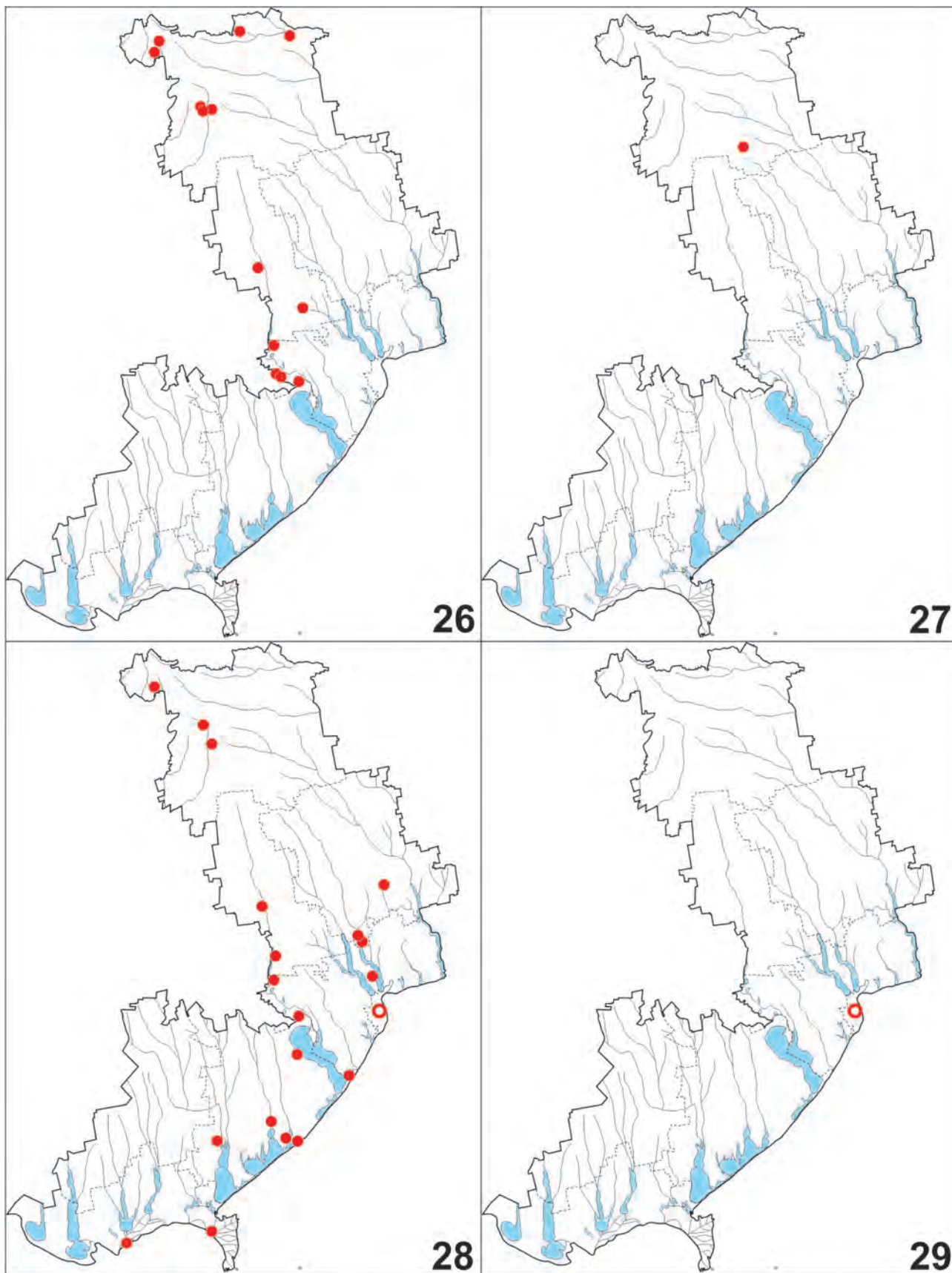
Figs 14–17. Collecting sites: 14 — *Trichiura crataegi*; 15 — *Malacosoma neustria*; 16 — *Malacosoma castrensis*; 17 — *Eriogaster lanestris*.



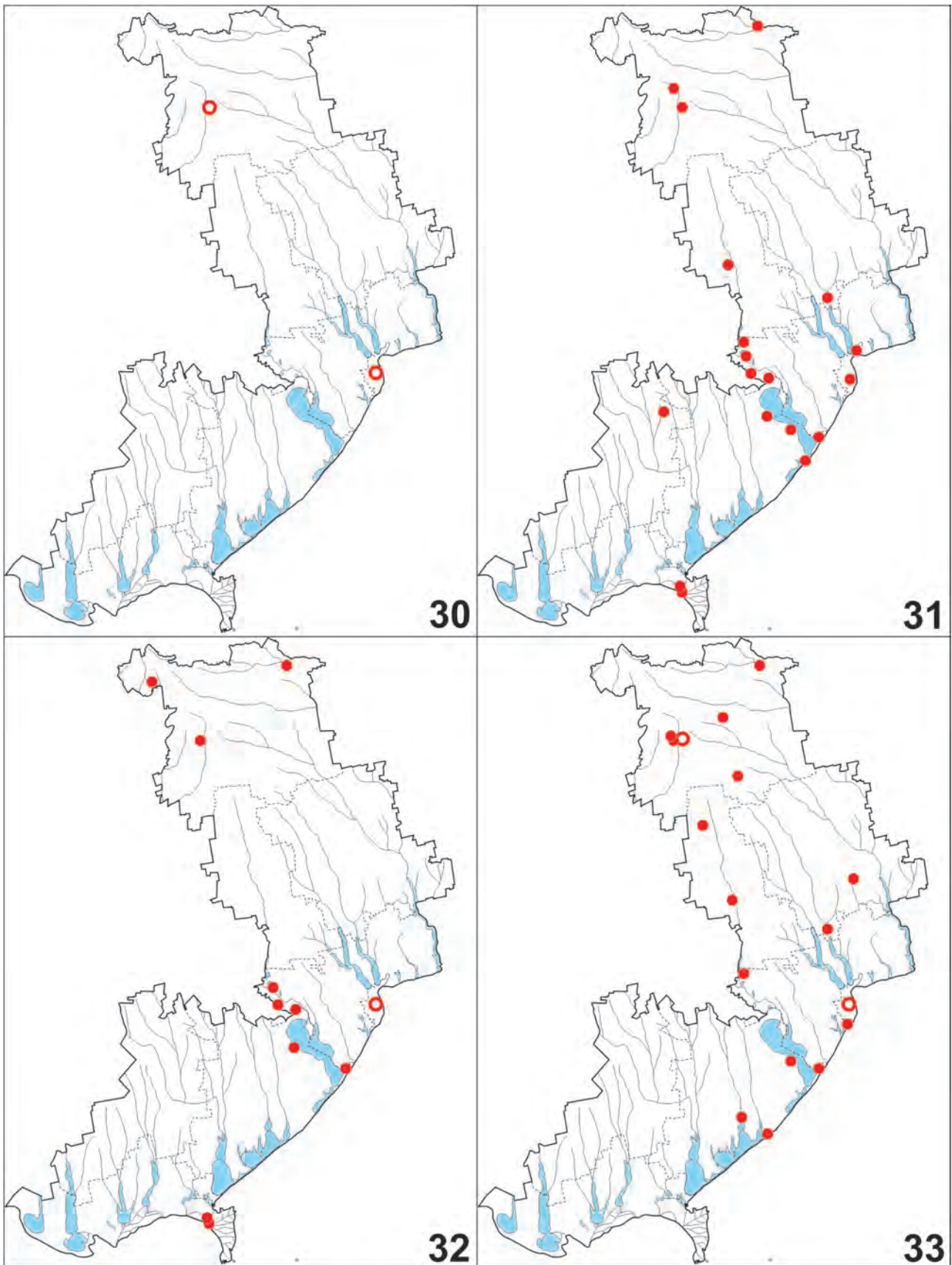
Figs 18–21. Collecting sites: 18 — *Lasiocampa trifolii*; 19 — *Lasiocampa quercus*; 20 — *Macrothylacia rubi*; 21 — *Gastropacha quercifolia*.



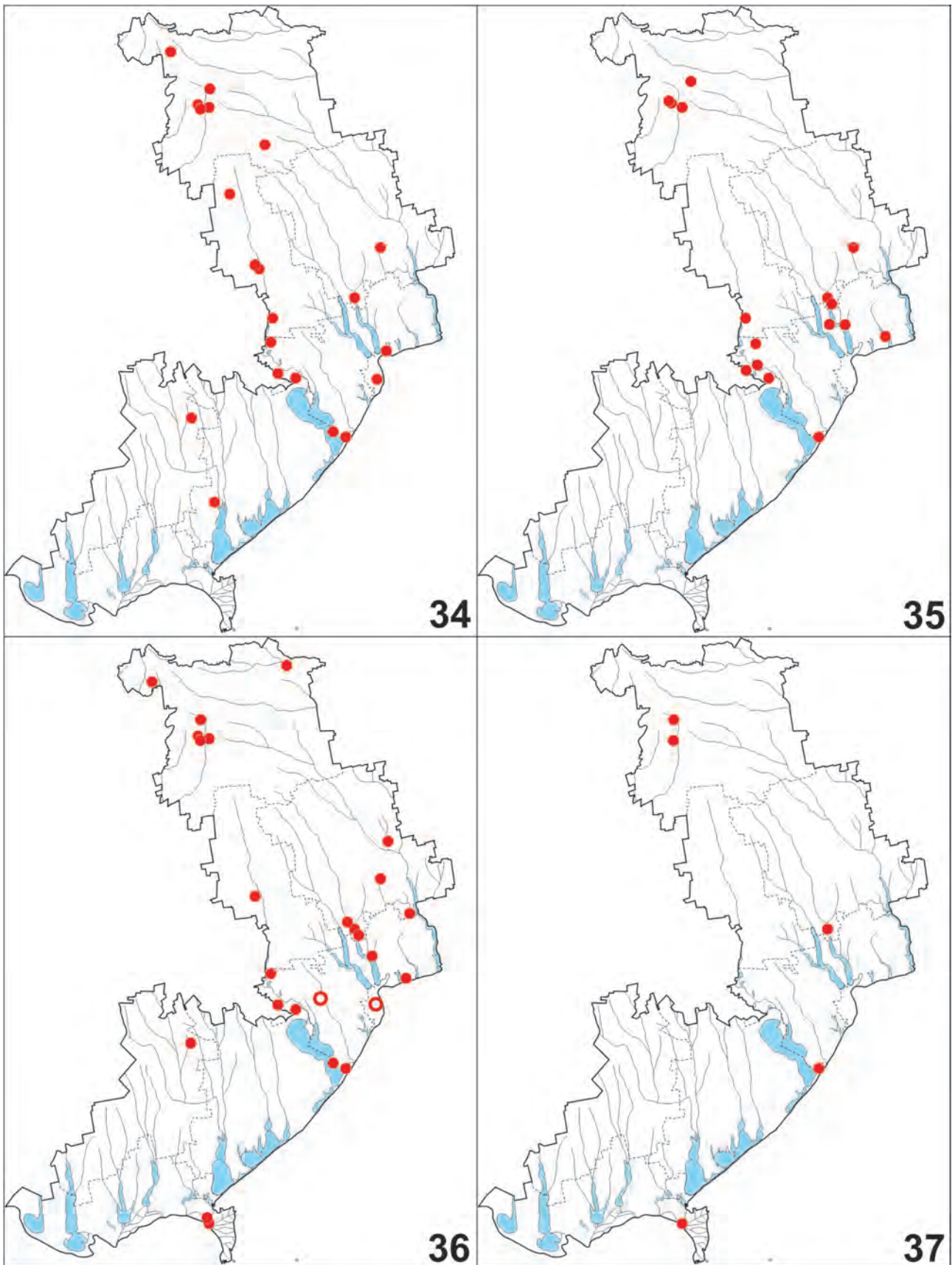
Figs 22–25. Collecting sites: 22 — *Gastropacha populifolia*; 23 — *Phyllodesma tremulifolia*; 24 — *Euthrix potatoria*; 25 — *Dendrolimus pini*.



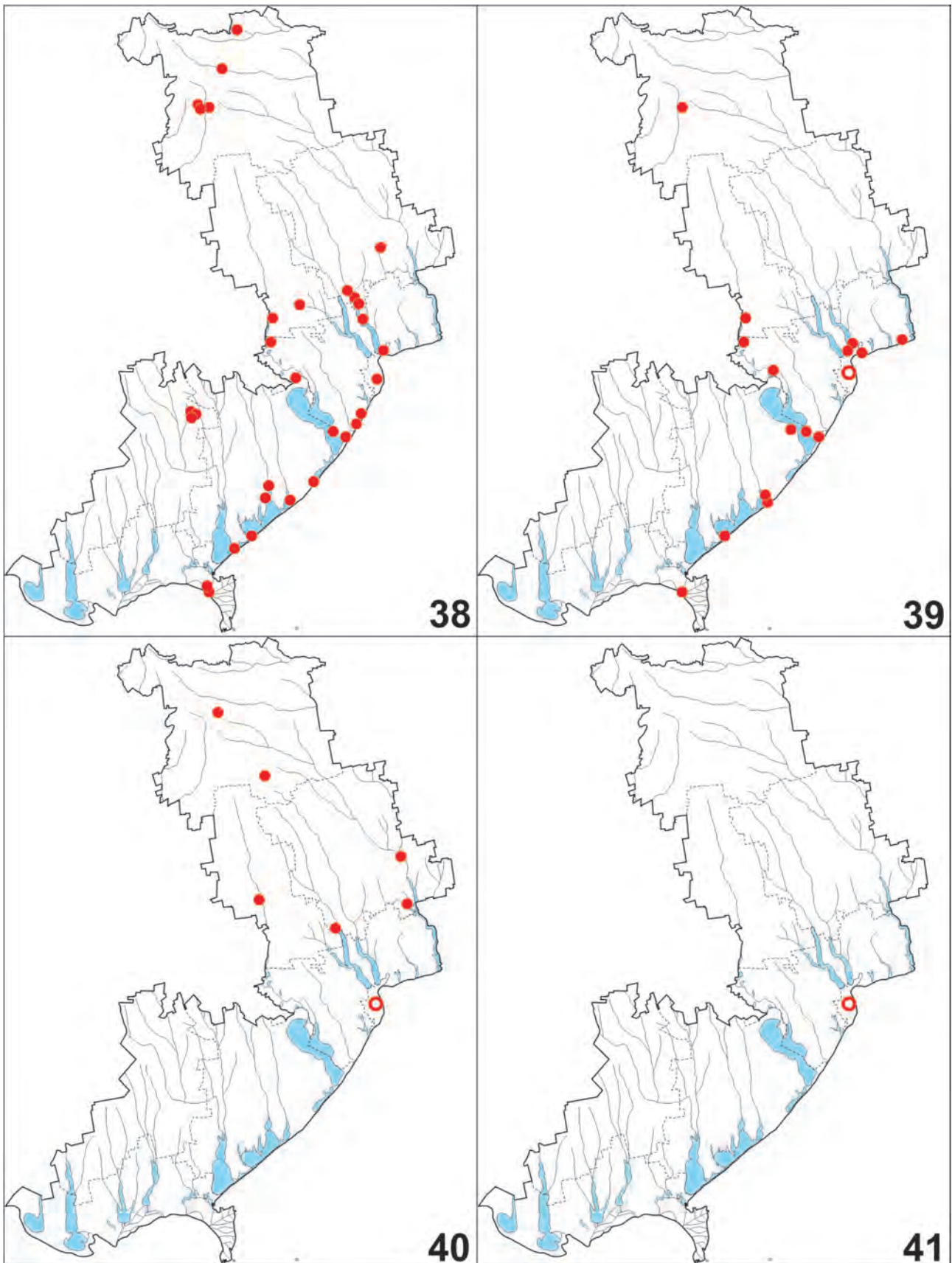
Figs 26–29. Collecting sites: 26 — *Odonestis pruni*; 27 — *Lemonia dumi*; 28 — *Saturnia pyri*; 29 — *S. pavonia*.



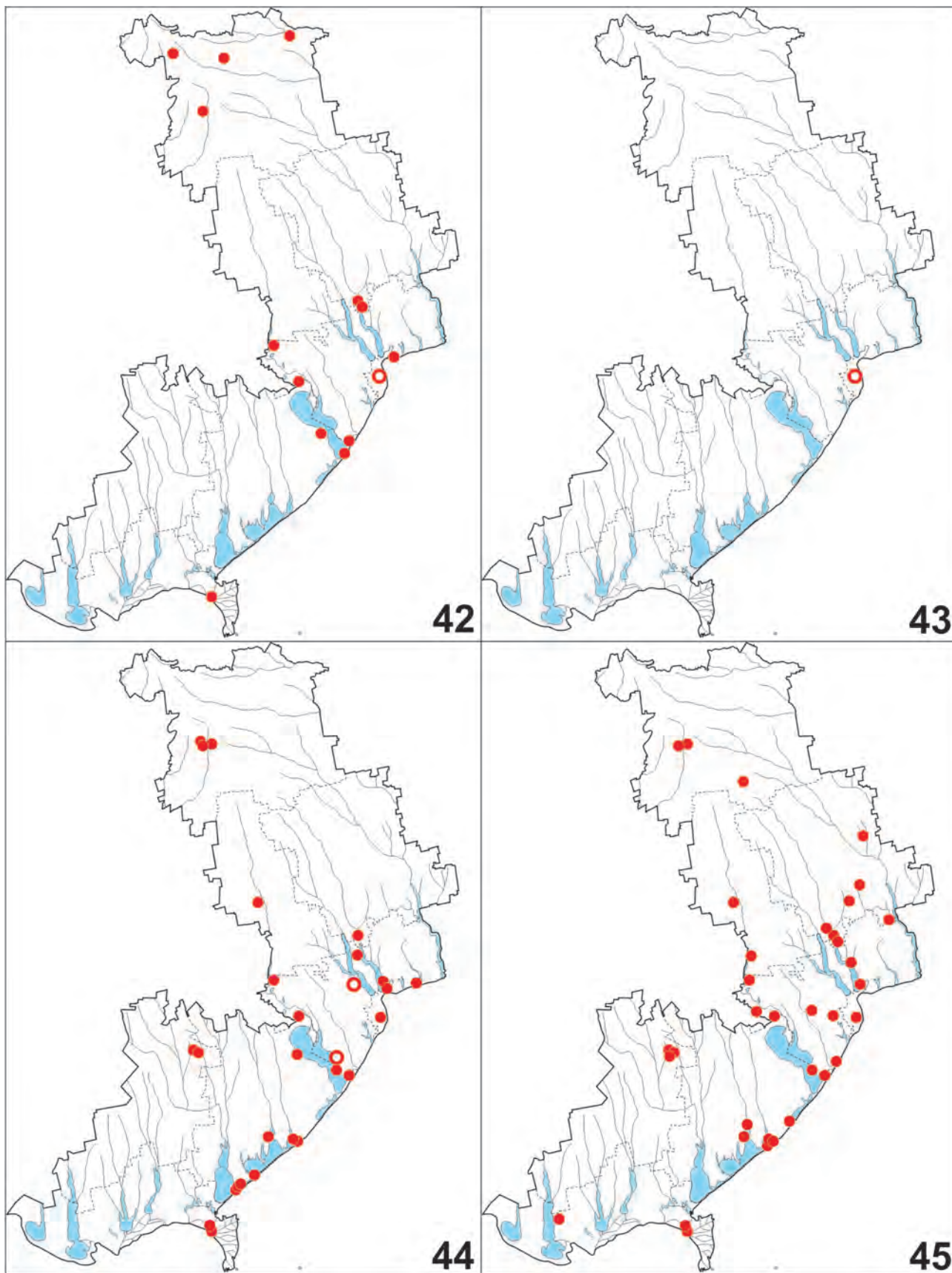
Figs 30–33. Collecting sites: 30 — *Saturnia spini*; 31 — *Laothoe populi*; 32 — *Smerinthus ocellatus*; 33 — *Marumba quercus*.



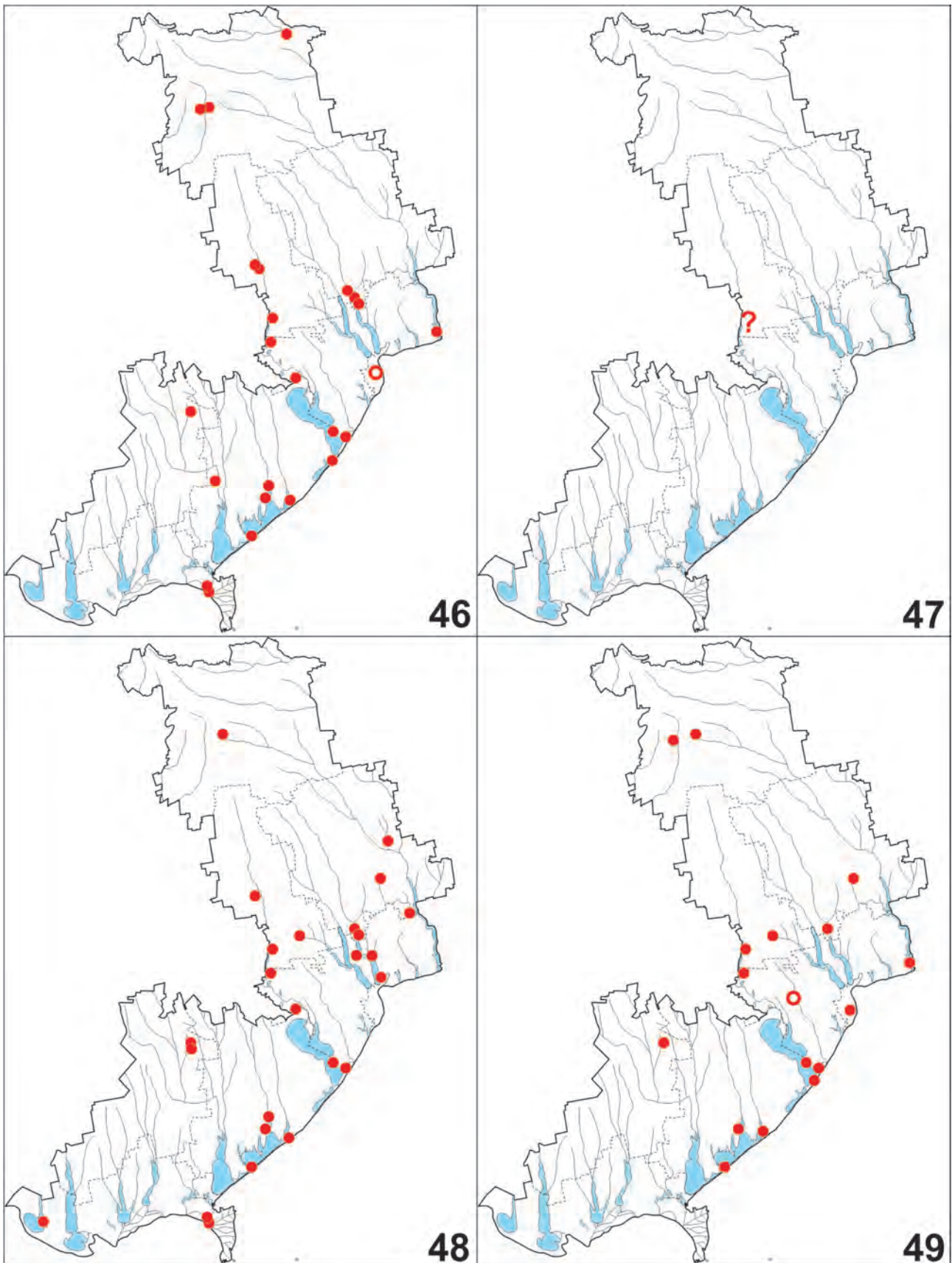
Figs 34–37. Collecting sites: 34 — *Mimas tiliae*; 35 — *Dolbina elegans*; 36 — *Sphinx ligustri*; 37 — *S. pinastri*.



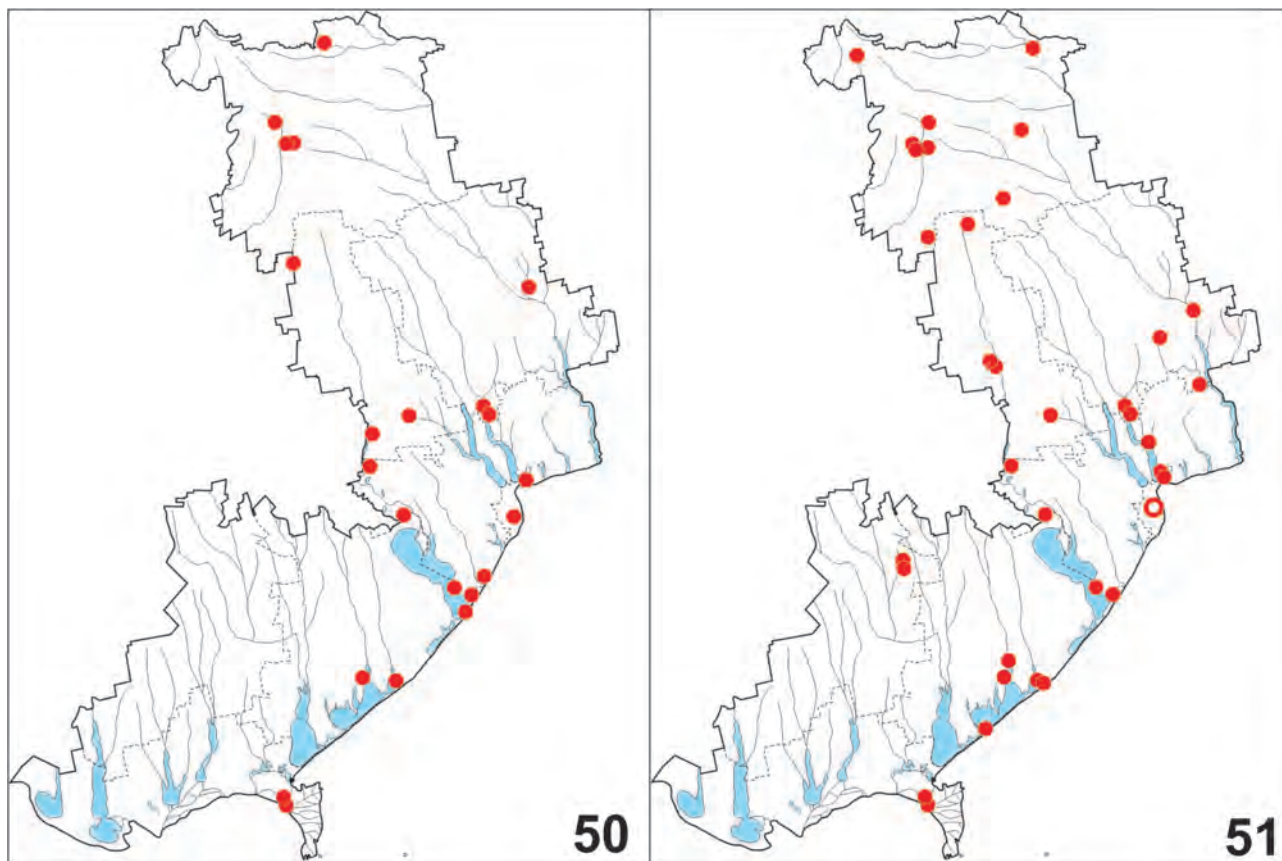
Figs 38–41. Collecting sites: 38 — *Agrius convolvuli*; 39 — *Acherontia atropos*; 40 — *Hemaris fuciformis*;
41 — *H. tityus*.



Figs 42–45. Collecting sites: 42 — *Proserpinus proserpina*; 43 — *Daphnis nerii*; 44 — *Macroglossum stellatarum*; 45 — *Hyles euphorbiae*.



Figs 46–49. Collecting sites: 46 — *Hyles gallii*; 47 — *H. nicaea*; 48 — *H. hippophaes*; 49 — *H. livornica*.



Figs 50–51. Collecting sites: 50 — *Deilephila elpenor*; 51 — *D. porcellus*.

Acknowledgments

The author is sincerely grateful to all colleagues who provided data from their collections and observations for this catalog: S. Novitsky, K. Lapin, S. Skupoy, V. Gribov, O. Kolomeychuk, G. Demidov and L. Demidova (Odesa), O. Zhakov, V. Mushinsky (Zaporizhzhia), V. Kavurka (Nizhyn), V. Sergienko, O. Bidzilya, I. Kostyuk, I. Plyushch, V. Yepishin, S. Trotsenko, S. Tsikal, M. Leshchenko, V. Kiselev (Kyiv), R. Bidychak (Ivano-Frankivsk), A. Andrianov, Yu. Kanarsky (Lviv), and especially to Yu. Geryak (Lviv) for valuable comments on the manuscript.

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Figs 52–53. *Hyles hippophaes* from Odesa Region: 52 — SDyvizyia, 15.08.2020; 53 — Vylkove, 21.07.2012.

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