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**HOVERFLY (*SYRPHIDAE*) PODILSKI TOVTRY NATIONAL NATURE
PARK (CENTRAL PODOLIA, UKRAINE)**

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МУХИ СИРФІДИ (*SYRPHIDAE*) НПП «ПОДІЛЬСЬКІ ТОВТРИ»

Мухи-сирфіди відіграють важливу роль у функціонуванні як природних так і антропогенно трансформованих біотопів НПП «Подільські Товтри». Особливістю території національного парку є те, що в його межах поєднуються унікальні природні ландшафти важливі для збереження та антропогенно трансформовані території, що переважно задіяні сільським господарством. Таким чином еколого-фауністичні дослідження спрямовані на вивчення можливостей збереження біорізноманіття в межах парку є важливими і актуальними.

Матеріали до даного дослідження мух-сирфід території НПП «Подільські Товтри» отримано впродовж 2005-2012 рр. Зборами було охоплено лісові біотопи і їх узлісся; лучно-степові біотопи і чагарникові ксеротермічні ділянки; мезофітні луки. Загалом за період дослідження зібрано 1521 екз. мух-дзюрчалок.

Список сирфід національного природного парку «Подільські Товтри» нараховує 109 видів з 28 родів. Найрізноманітніше представлені роди *Cheilosia* 27 видів (24,7%), *Syrphus* 16 видів (14,67%), *Eristalis* 13 видів (11,9%). Найчисельнішими видами сирфід є: у лісових біотопах – *Sphaerophoria scripta* (Linnaeus, 1758) (17,13%), *Episyrphus balteatus* (De Geer, 1776) (10,37%), *Chrysotoxum arcuatum* (Linnaeus, 1758) (10,06%); у лучно-степових і чагарниково ксеротермічних біотопах – *Sphaerophoria scripta* (Linnaeus, 1758) (53,24%), *Episyrphus balteatus* (De Geer, 1776) (19,79%); на мезофітних луках — *Sphaerophoria scripta* (Linnaeus, 1758) (15,70%), *Eristalis tenax* (Linnaeus, 1753) (14,52%), *Myathropa florea* (Linnaeus, 1758) (6,75%). За трофічною спеціалізацією личинок у досліджуваних біотопах домінують афідофаги надземні (20,18%) та сапрофаги водні (17,43%), субдомінанти – фітофаги (13,76%).

Ключові слова: фауна, сирфіди, трофіка, чисельність, біотопічний розподіл.

МУХИ СИРФИДЫ (*SYRPHIDAE*) НПП «ПОДОЛЬСКИЕ ТОВТРИ»

Мухи-сирфиды имеют большое значение в функционировании как природных так и антропогенно измененных биотопов НПП «Подольские Товтры». Особенность национального парка заключается в том, что на его территории есть уникальные природные ландшафты, для которых важна охрана, а также антропогенно измененные территории, которые, в основ-

ном, используются для сельскохозяйственных работ. Таким образом, эколого-фаунистические исследования, направленные на изучение возможностей охраны биологического разнообразия на территории парка, важны и актуальны.

Материалы данного исследования мух-сирфид НПП «Подольские Товтры» получены на протяжении 2005-2012 гг. Сборами были изучены лесные биотопы и их опушки, лугово-степные биотопы, кустарниковые ксеротермические участки и мезофитные луга. Всего за период исследования было собрано 1521 экз. мух-сирфид.

Список сирфид национального природного парка «Подольские Товтры» насчитывает 109 видов из 28 родов. Наиболее разнообразно представлены роды *Cheilisia* 27 видов (24,7%), *Syrphus* 16 видов (14,67%), *Eristalis* 13 видов (11,9%). Самыми многочисленными видами сирфид есть: в лесных биотопах – *Sphaerophoria scripta* (Linnaeus, 1758) (17,13%), *Episyrphus balteatus* (De Geer, 1776) (10,37%), *Chrysotoxum arcuatum* (Linnaeus, 1758) (10,06%); в лугово-степных и кустарниковых ксеротермических биотопах – *Sphaerophoria scripta* (Linnaeus, 1758) (53,24%), *Episyrphus balteatus* (De Geer, 1776) (19,79%); на мезофитных лугах – *Sphaerophoria scripta* (Linnaeus, 1758) (15,70%), *Eristalis tenax* (Linnaeus, 1753) (14,52%), *Myathropa florea* (Linnaeus, 1758) (6,75%). Согласно трофической специализации личинок в исследуемых биотопах доминируют афидофаги наземные (20,18%) и сапрофаги водные (17,43%), субдоминанты – фитофаги (13,76%).

Ключевые слова: фауна, сирфиды, трофика, численность, биотопическое распределение.

HOVERFLY (SYRPHIDAE) PODILSKI TOVTRY NATIONAL NATURE PARK (CENTRAL PODOLIA, UKRAINE)

List of Hoverfly Podilski Tovtry national nature park includes 109 species from 28 genera. Variety of families are *Cheilisia* 27 species (24,7%), *Syrphus* 16 species (14,67%), *Eristalis* 13 species (11.9%). The most numerous species are: the forest habitats – *Sphaerophoria scripta* (Linnaeus, 1758) (17,13%), *Episyrphus balteatus* (DeGeer, 1776) (10,37%), *Chrysotoxum arcuatum* (Linnaeus, 1758) (10.06%); in the meadow and steppe habitats, shrubbery habitats – *Sphaerophoria scripta* (53,24%), *Episyrphus balteatus* (19.79%); on mesophytic meadows habitats – *Sphaerophoria scripta* (15,70%), *Eristalis tenax* (Linnaeus, 1753) (14,52%), *Myathropa florea* (Linnaeus, 1758) (6.75%). For trophic specialization of larvae in the studied habitats dominated aphidophagous elevated (zoophagous) (20.18%) and saprophagous water (saprophagous) (17.43%), subdominant – phytophagous (13.76%).

Keywords: Hoverfly, trophic specialization, ecological group, Podilski Tovtry.

Introduction. Territory of National Park «Podilski Tovtry» is located on the verge of European deciduous forests and the Eurasian steppe areas. Prevailing territories are reclamation of land. The insignificant areas of natural and seminatural landscapes are covered by a plant cover (forest, meadows, meadows- steppe, steppe, lime-stones, bogs, water-fringe and water communities) [6], including Hoverfly. Hoverfly fauna (*Diptera*, *Syrphidae*) in the Podilski Tovtry NNP is unexplored [4]. Investigation of species composition, biotopical distribution and seasonal dynamics is certainly relevant in terms of program inventory invertebrate fauna of the national park and deepen the study of entomofauna skirts general [1]. Hoverfly play an important role in the functioning of both natural and anthropogenically transformed biomes national park and representing virtually all types of habitats. The feature of the national park is that within it combines unique natural landscapes are important for conservation and anthropogenically transformed areas that mostly involved in agriculture. Only 5% of the park - conservation area, and almost 75% of the accounts for the economic zone. Thus ecological and faunal studies aimed at exploring the possibilities of biodiversity within the park are important and relevant.

Study area. The study area covers Central Podolia (48.95°–48.10° N and 27.55°–29.35° E), which is located in the southern part of the Vinnytsia Oblast of Ukraine, bordering in the south to Moldova. It forms the central, lower lying part of the Podolian Upland, ranging only from 73 to 251 m a.s.l., compared to 471 m a.s.l. in the western part. Specifically, we studied the dry grassland vegetation in the interfluvium of the Dniester and South Bug rivers, in their valleys in the middle course, and in the valleys of Dniester tributaries.

The predominant grounds Podilski Tovtry is the development of land (70% of the area). Minor areas of natural and semi-natural landscapes covered with vegetation, which is represented by forest, meadow, meadow-steppe, steppe, petrophyte, marsh, coastal water and water groups. The distribution of land Podilski Tovtry for lands under agricultural land is - 74, 95%, forests and other wooded areas - 14.7% built-up land, only 4.23%, open wetlands - 0.16%, open cuhi land with special vegetation - 0,001% open land without vegetation or with little vegetation - 2.91%, water - 3.01% [6].

Methods. Materials for this study Hoverfly Podilski Tovtry obtained during 2005-2012rr. Hoverfly collected using entomological nets and by hand-picking [2, 8, 9]. Meeting covered the following types of habitats National Park, forest habitats and their edge; meadow steppe habitats and shrub xerothermic area; mesophytic meadows. Overall, the study collected during 1521 ex. Hoverfly.

Determination was carried out by insects determinants. Assembled materials stored in the collection of A. Lischuk.

Results. Among the species diversity of Hoverfly study area is dominated by species adapted to man-made landscapes, whose larvae develop in organic waste, mainly economic activity. It is worth noting that the National Park is characterized by a high degree of anthropogenic transformation of environment [6]. A large proportion of adults, feed in the gardens speaking is one of the major insect pollinators, and without exception in all habitats, which include umbrella plant. The growing intense human pressure on the negative impact of natural habitats, and therefore threatens the species that inhabit them.

To territory Podilski Tovtry hoverfly studied 109 species, from 28 families (Tabl. 1). The greatest number of species characteristic of families *Cheilosia* 27 species (24,7%), *Syrphus* 16 species (14,67%), *Eristalis* 13 species (11,9%), *Chrysotoxum* 7 species (6.4%) *Helophilus* 6 types (5.5 %), other families comprise 5 species. Among the environmental groups prevail afidophagous elevated (24.77%), saprophagous water (23.85%), phytophagous (20.18%) were less represented afidophagous underground (11.00%).

The dominant view among syrfid is *Sphaerophoria scripta* (23,07%), the larvae of which belong to afidofahiv above ground, the other species are fewer individuals in the meeting *Episyrphus balteatus* (10,19%), *Eristalis tenax* (8,61%), *Chrysotoxum arcuatum* (6,44%), *Myathropa florea* (4,60%), *Eristalis arbustorum* (4,47%), *Melanostoma mellinum* (3,81%). The latest saprophages water are three types *Eristalis tenax*, *E. arbustorum*, *Myathropa florea*, and one type zoofahy and afidofahy underground *Melanostoma mellinum*, *Chrysotoxum arcuatum* (respectively).

Table 1 – Habitats distribution Hoverflies (Diptera, Syrphidae) national park “Podilski Tovtry”

№	Species	The types of habitats				
		Forestry		Are open habitats		Mesophytes
		Fresh and wet oak	Skirt fresh and moist oak	Xerothermic Meadow steppe	Shrub land	
1	<i>Baccha elongata</i> (Fabricius, 1775)	-	9	-	-	5
2	<i>Brachypalpoides lenta</i> (Meigen, 1822)	1	1	-	-	5
3	<i>Ceriana conopsoides</i> * Linnaeus, 1758	-	-	-	-	-
4	<i>Cheilosia albitarsis</i> (Meigen, 1822)	-	9	-	-	5
5	<i>Cheilosia albipila</i> Meigen, 1838	-	3	-	-	-
6	<i>Cheilosia chrysocoma</i> (Meigen, 1822)	-	-	-	-	3
7	<i>Cheilosia conops</i> (Becker, 1894)	1	1	-	-	-
8	<i>Cheilosia cynocephala</i> Loew, 1840	-	-	-	-	1
9	<i>Cheilosia illustrata</i> Harris, (1780)	-	1	-	-	-
10	<i>Cheilosia impressa</i> Loew, 1840	1	1	-	-	-
11	<i>Cheilosia flavipes</i> (Panzer, 1798)	1	4	-	-	-
12	<i>Cheilosia frontalis</i> Loew, 1857	-	2	-	-	7
13	<i>Cheilosia gigantea</i> (Zetterstedt, 1843)	2	-	-	-	-
14	<i>Cheilosia grossa</i> Fallen, 1817	-	-	-	-	3

15	<i>Cheilosia honesta</i> Rondani, 1868	-	-	-	-	1
16	<i>Cheilosia latifascies</i> Loew, 1857	1	1	-	-	-
17	<i>Cheilosia latifrons</i> (Zetterstedt, 1857)	3	1	-	-	1
18	<i>Cheilosia longula</i> (Zetterstedt, 1838)	-	2	-	-	4
19	<i>Cheilosia morio</i> (Zetterstedt, 1838)	-	1	-	-	-
20	<i>Cheilosia nigripes</i> (Meigen, 1822)	-	-	-	-	6
21	<i>Cheilosia pagana</i> (Meigen, 1822)	-	4	-	-	9
22	<i>Cheilosia pubera</i> (Zetterstedt, 1838)	3	-	-	-	3
23	<i>Cheilosia rotundiventris</i> (Becker, 1894)	-	-	-	-	3
24	<i>Cheilosia rufipes</i> (Preysslner, 1793)	2	-	-	-	3
25	<i>Cheilosia scutellata</i> (Fallen, 1817)	-	-	-	-	2
26	<i>Cheilosia variabilis</i> (Panzer [1798])	2	2	-	-	1
27	<i>Cheilosia velutina</i> Loew, 1840	-	-	-	-	2
28	<i>Cheilosia vulpine</i> (Meigen, 1822)	-	2	-	-	4
29	<i>Cheilosia zetterstedti</i> (Becker, 1894)	1	2	-	-	3
30	<i>Chrysogaster solstitialis</i> (Fallen, 1817)	-	1	-	-	-
31	<i>Chrysogaster viduata</i> (Linnaeus, 1758)	-	1	-	-	-
32	<i>Chrysotoxum arcuatum</i> (Linnaeus, 1758)	58	6	3	12	26
33	<i>Chrysotoxum bicinctum</i> (Linnaeus, 1758)	-	-	-	-	2
34	<i>Chrysotoxum cautum</i> (Harris, [1776])	1	1	-	-	3
35	<i>Chrysotoxum fastiatum</i> (Muller, 1764)	-	3	-	-	1
36	<i>Chrysotoxum elegans</i> Loew, 1841	-	-	-	-	2
37	<i>Chrysotoxum fasciolatum</i> (De Geer, 1776)	-	3	-	-	1
38	<i>Chrysotoxum octomaculatum</i> Curtis, 1837	1	-	-	-	1
39	<i>Criorhina ranunculi</i> * (Panzer [1804])	-	-	-	-	-
40	<i>Episyrphus balteatus</i> (De Geer, 1776)	16	50	3	51	31
41	<i>Eristalis abusivus</i> Collin, 1931	-	5	1	-	20
42	<i>Eristalis aeneus</i> (Scopoli, 1763)	-	-	-	-	2
43	<i>Eristalis arbustorum</i> (Linnaeus, 1758)	-	26	1	5	36
44	<i>Eristalis cryptarum</i> * (Fabricius, 1794)	-	-	-	-	-
45	<i>Eristalis intricarius</i> (Linnaeus, 1758)	-	-	-	-	3
46	<i>Eristalis horticola</i> * (De Geer, 1776)	-	-	-	-	-
47	<i>Eristalis oestraceus</i> (Linnaeus, 1758)	1	-	-	-	-
48	<i>Eristalis nemorum</i> (Linnaeus, 1758)	3	9	2	1	29
49	<i>Eristalis nigrirtaris</i> * Macquart, 1834	-	-	-	-	-
50	<i>Eristalis pertinax</i> (Scopoli, 1753)	-	2	-	1	8
51	<i>Eristalis rupium</i> Fabricius, 1805	-	5	1	-	7
52	<i>Eristalis sepulcralis</i> (Linnaeus, 1758)	-	-	-	-	4
53	<i>Eristalis tenax</i> (Linnaeus, 1753)	6	28	2	9	86
54	<i>Ferdinandea cuprea</i> (Scopoli, 1763)	-	2	-	-	2
55	<i>Helophilus lapponicus</i> Wahlberg, 1844	-	-	-	-	1
56	<i>Helophilus lineatus</i> (Fabricius, 1787)	-	-	-	-	1
57	<i>Helophilus lunulatus</i> Meigen, 1822	-	-	-	-	1
58	<i>Helophilus pendulus</i> (Linnaeus, 1758)	-	-	-	-	2
59	<i>Helophilus trivittatus</i> (Fabricius, 1805)	-	5	3	2	4
60	<i>Helophilus versicolor</i> (Fabricius, 1805)	1	1	1	1	2
61	<i>Mallota fuciformis</i> (Fabricius, 1794)	3	-	-	-	3
62	<i>Melanostoma dubium</i> (Zetterstedt, 1858)	-	3	-	-	5
63	<i>Melanostoma mellinum</i> (Linnaeus, 1758)	1	37	3	-	15
64	<i>Melanostoma scalare</i> (Fabricius, 1791)	-	1	-	-	-
65	<i>Merodon ruficornis</i> Meigen, 1822	-	1	-	-	-
66	<i>Microdon devius</i> (Linnaeus, 1761)	1	-	-	-	-
67	<i>Myathropa florea</i> (Linnaeus, 1758)	2	14	-	10	40
68	<i>Neoascia podagrica</i> (Fabricius, 1775)	-	-	-	1	2
69	<i>Paragus albifrons</i> (Fallen, 1817)	2	-	-	1	2
70	<i>Paragus tibialis</i> (Fallen, 1817)	1	2	-	2	2
71	<i>Parapenium flavitarse</i> (Meigen, 1822)	-	-	-	-	4
72	<i>Pipiza nacteluza</i> (Linnaeus, 1758)	-	-	-	-	1

72	<i>Pipiza nacteluza</i> (Linnaeus, 1758)	-	-	-	-	1
73	<i>Pipizella varipes</i> (Meigen, 1822)	-	1	-	-	1
74	<i>Pipizella virens</i> (Fabricius, 1775)	1	1	-	-	-
75	<i>Psarus abdominalis</i> * Fabricius, 1794	-	-	-	-	-
76	<i>Rhingia campestris</i> Meigen, 1822	5	3	-	-	-
77	<i>Rhingia rostrata</i> (Linnaeus, 1758)	-	1	-	-	1
78	<i>Scaeva pyrastris</i> (Linnaeus, 1758)	-	13	4	3	3
79	<i>Sphaerophoria philanthus</i> (Meigen, 1822)	4	1	1	-	3
80	<i>Sphaerophoria menthastri</i> (Linnaeus, 1758)	2	-	-	-	3
81	<i>Sphaerophoria picta</i> Meigen, 1822	1	1	-	-	1
82	<i>Sphaerophoria scripta</i> (Linnaeus, 1758)	38	71	90	66	93
83	<i>Sphaerophoria ruppelli</i> (Wiedemann, 1830)	-	-	1	-	1
84	<i>Syrta pipiens</i> (Linnaeus, 1758)	-	21	1	1	18
85	<i>Syrphus albostriatus</i> (Fallen, 1817)	-	2	-	-	1
86	<i>Syrphus arcuatus</i> (Fallen, 1817)	-	3	-	-	1
87	<i>Syrphus auricollis</i> Meigen, 1822	1	-	-	-	1
88	<i>Syrphus bifasciatus</i> Fabricius, 1794	6	6	-	-	6
89	<i>Syrphus carpathicus</i> (Stys et Moucha, 1962)	-	2	-	-	-
90	<i>Syrphus corollae</i> Fabricius, 1794	-	-	-	-	2
91	<i>Syrphus diaphanous</i> (Zetterstedt, 1843)	1	-	-	-	-
92	<i>Syrphus grossulariae</i> Meigen, 1822	-	1	-	-	-
93	<i>Syrphus lapponicus</i> (Zetterstedt, 1838)	6	-	-	-	-
94	<i>Syrphus lasiophthalmus</i> (Zetterstedt, 1843)	1	-	-	-	-
95	<i>Syrphus luniger</i> Meigen, 1822	-	7	3	4	1
96	<i>Syrphus melanostoma</i> (Zetterstedt, 1843)	-	-	-	-	1
97	<i>Syrphus nigrirarsis</i> (Zetterstedt, 1843)	1	-	-	-	-
98	<i>Syrphus nitidicollis</i> Meigen, 1822	1	1	-	-	-
99	<i>Syrphus ribesii</i> (Linnaeus, 1758)	8	11	-	-	9
100	<i>Syrphus sexmaculatus</i> (Zetterstedt, 1838)	-	-	-	-	2
101	<i>Syrphus torvus</i> Osten-Sacken, 1875	1	-	-	-	-
102	<i>Syrphus vitripennis</i> Meigen, 1822	-	16	-	3	2
103	<i>Volucella bombilans</i> (Linnaeus, 1758)	1	2	-	-	4
104	<i>Volucella inanis</i> (Linnaeus, 1758)	-	2	-	-	1
105	<i>Volucella inflata</i> * (Fabricius, 1775)	-	-	-	-	-
106	<i>Volucella pellucens</i> (Linnaeus, 1758)	-	18	-	-	2
107	<i>Volucella zonaria</i> (Poda, 1761)	-	-	-	-	3
108	<i>Xanthogramma citrofasciatum</i> (De Geer, 1776)	4	-	-	-	2
109	<i>Xanthogramma pedisequum</i> (Harris [1776])	1	2	-	-	10
	Total copies	198	438	120	173	592
	Total species	43	61	16	17	78
	Total copies		636		293	592
	Total species		104		33	78

Predominant group of species on the edges is elevated afidofahy 15 species (24.59%), among them the most numerous – *Sphaerophoria scripta* (16,21%), *Episyrphus balteatus* (11,41%). Subdominants saprophages water are 14 species (22.95%) and phytophages 13 species (21.31%), the most numerous among them are *Eristalis tenax* (6,39%) *Cheilosia albitarsis* (2,05%), respectively. There were isolated instances: *Brachypa lpoideslenta*, *Cheilosia conops*, *Ch. impressa*, *Ch. latifascies*, *Chrysotoxum cautum*, and others.

In the oak-dominated forest fresh aerial afidofahy 15 species (34.88%), the most numerous species – *Sphaerophoria scripta* (19,19%). Subdominants phytophages are 10 species (23.25%), but they are not numerous, occurring singly.

Overall, trophic specialization of larvae in the studied forest habitats found – afidofahy elevated 22 species (21.15%), 15 species of phytophagous (14,42%), water saprophages 15 species (14,42%), underground afidofahy 8 species (7,69%), wide zoofahy 5 species (4.80%).

In the meadow steppe and shrub areas xerothermic found 33 species. Dominated water saprophages 11 species (33.33%), the most numerous species – *Eristalis tenax* (3,75 %) and *Myathropa florum* (3,41%). Subdominants afidofahy are elevated - 8 species (24.24%), the most numerous species – *Sphaerophoria scripta* (53,24%). The two species comprise zoofahy wide (6.06%) and afidofahy underground (3.03%). In these habitats were found herbivores.

Mesophytic meadows in river valleys comprise 78 species, mostly aboveground afidofahy 20 species (25.64%) and water saprophages 19 species (24.35%), among them the most numerous – *Sphaerophoria scripta* (15,70%) and *Eristalis tenax* (14,52 %) respectively. Subdominants act phytophages 13 species (16.66%) and underground afidofahy 10 species (12.82%). The most numerous among herbivores – *Cheilosia pagana* (1,52%) and *Cheilosia frontalis* (1.18%). There were isolated instances: *Cheilosia cynocephali*, *Ch. honesta*, *Chrysotoxum moctomaculatum*, *Helophilus lapponicus*, *H. lineatus*, *Pipiza nacteluzi*, *Syrphus auricollis*, *Syrphus melanostoma*.

Discussion. The high degree of transformation of landscapes Podilski Tovtry National Nature Park and habitat diversity is reflected in the species composition Hoverfly, most of whom prefer dominant anthropogenically transformed habitat.

Of the 109 species of Hoverfly were not found of rarity. Species *Psarus abdominalis* (Fabricius, 1794) marked around Kamianets-Podilsky Gustav Belke [3]. Other rare species *Sphiximorpha subsessilis* (Illiger in Rossi, 1807) were collected in the territory adjacent to the Podilski Tovtry Valley Pivdenyi Bug (p. Pasichna, Khmelnytsky district, Khmelnytsky region.) [7].

Despite the high degree of transformation of landscapes Podilski Tovtry composition Hoverfly fauna its territory has significant similarity to the natural reserve “Medobory.” Unlike the national park, the proportion of protected area which is only 5%, in the zone software “Medobory” makes virtually all of its territory. The composition of forest habitats Hoverfly Podilski Tovtry (especially from among the dominant species) has significant similarity to the natural reserve “Medobory.” In particular, the reserve forest habitats dominated afidophagous elevated, among them the most numerous species - *Episyrphus balteatus* (25,6%), subdominant and are saprophagous and phytophagous *Eristalis tenax* (11,0%)

and *Cheilosia albitarsis* (8,4%). On the fringes dominated afidophagous aerial *Episyrphus balteatus* (36,0%), *Sphaerophoria scripta* (26,0%) and subdominant are saprophagous *Eristalis tenax* (9,0%) [5]. In forest habitats Podilski Tovtry this situation, overall trophic specialization afidophagous elevated larvae are 22 species (21.15%), 15 species of phytophagous (14,42%), water saprophagous 15 species (14,42%), afidophagous underground 8 species (7,69%), wide zoophagous 5 species (4.80%).

In mesophytic meadows Nature Reserve “Medobory” dominates afidophagous elevated - *Sph. scripta* (13,3%); subdom. afidophagous *Syrphus nitidicollis* are elevated (6.7%) and *Syrphus ribesii* (6.7%) and herbivores *Cheilosia sahbergi* (6,7%) [5]. *Species composition* mesophytic bow Podilski Tovtry differs only in that in addition *Sphaerophori ascripta* (15,70%), still dominates *Eristalis tenax* (14,52%); subdominants act phytophagous 13 species (16.66%) and underground afidophagous 10 species (12.82%).

Similar meadow and steppe areas Nature Reserve “Medobory” and Podilski Tovtry National Nature Park - namely, the lack of herbivores. But dominant in the NNP is saprophagous water 11 species (33.33%), the most numerous species – *Eristalis tenax* (3,75 %) and *Myathropa florum* (3,41%).

Conclusions. Composition Hoverfly Podilski Tovtry National Nature Park (Central Podolia) includes 109 species from 28 genera. The largest species richness are *Cheilosia* families (27 species), *Syrphus* (16 species) *Eristalis* (13 species), *Chrysotoxum* (7 types) *Helophilus* (6 species). Among the environmental groups prevail afidophagous elevated (24.77%), saprophagous water (23.85%); subdominants - phytophagous (20.18%), to a lesser extent - afidophagous underground (11.00%). In forest habitats dominated afidophagous elevated (24.59%), including the largest – *Sphaerophoria scripta* (16,21%), *Episyrphus balteatus* (11,41%); subdominant - saprophages water (22.95%) and phytophagous (21.31%), the most numerous among them – *Eristalis tenax* (6,39%) *Cheilosia albitarsis* (2,05%), respectively. In xerothermic areas dominated saprophages water (33.33%), the most numerous species – *Eristalis tenax* (3,75%) and *Myathropa florum* (3,41%); subdominant afidofahamy are elevated - (24.24%), the most numerous – *Sphaerophoria scripta* (53,24%). In mesophytic afidophagous meadows dominated by elevated (25.64%) and saprophages water (24.35%), among them the most numerous species – *Sphaerophoria scripta* (15,70%), *Eristalis tenax* (14,52%), respectively. Subdominants - phytophagous (16.66%) and afidofahy underground (12.82%). The most numerous among herbivores – *Cheilosia pagana* (1,52%) and *Cheilosia frontalis* (1.18%). The lowest species diversity and numbers marked xerothermic habitats (293 specimens of 33 species). Trophic specialization dominated afidofahy elevated (24.77%), saprophages water (23.85%), phytophagous (20.18%), to a lesser extent - afidofahy underground (11.00%).

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СУЧАСНІ НАПРЯМИ РОЗВИТКУ ЕКОБІОТЕХНОЛОГІЇ

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