The Odonata fauna of the basin of the river Severskyi Donets in its middle current (Eastern Ukraine)

Alexander V. Martynov

Entomology Department, Schmalhausen Institute of Zoology NAS of Ukraine, Kyiv, Ukraine. Email: martynov_av@ukr.net, centroptilum@gmail.com

Abstract

A list of 57 Odonata species from 108 localities recorded in the basin of the river Severskyi Donets in its middle range (Eastern Ukraine) is provided. This compilation includes literature and museum data as well as results from field surveys realized between 2001 and 2009. Annotations to the history of regional odonate research are made. Brief descriptions of typical dragonfly habitats in the floodplain of Severskyi Donets are presented. Locality wise notes on the reproductive status for most of the species are made.

Introduction

Odonata from the territory of Ukraine were first mentioned in the '70s of the 18th century. Pallas (1771) lists Onychogomphus forcipatus from the rivers Don and Dnieper, and Lestes barbarus from the Crimean peninsula. Eichwald (1830) reports Leucorrhinia rubicunda from the Volhynia. Selys-Longchamps & Hagen (1850) note for the Crimea Calopteryx splendens and L. barbarus.

The investigation of Severskyi Donets' Odonata fauna in its middle range started in the 19th century. First odonatological studies in this region were realized by Ivanov (1876), Yaroshevsky (1881), and Rodzyanko (1889, 1895). Solodovnikov (1929) and Zakharenko (1974) are the only papers for a period of nearly 80 years that list any information about Odonata fauna of the region. However, these are fragmentary data sets about the basin of Severskyi Donets that do not add new species for Ukraine. About the same time Oliger (1975a, 1975b, 1980, 1985) provides significant data on the Odonata fauna of Severskyi Donets within Donets'ka oblast ("Oblast" is an administrative division in the sense of a region or federal state).

In recent years research on the regional Odonata fauna was reinforced (Martynov & Martynov, 2003, 2004; Martynov & Martynov, 2005, 2007a, 2007b, 2007(2008), 2008, 2009; Ridei et al., 2007).

General characteristics of the basin of the river Severskyi Donets on the territory of Ukraine

The river Severskyi Donets with a total length in Russia and Ukraine of 1,053 km ranks the fourth largest river in Ukraine. Its catchment area is about 98,900 km2 and includes about 3,100 tributaries of various sizes.

Figure 1: Don-Donets-river system in the Ukrainian-Russian borderline region (For details see Figures 12-14)

The headwaters of the Severskyi Donets are located in the Belgorodskaya oblast (Russian Federation), but for over 740 km, the river runs within the eastern part of Ukraine through the Kharkivs'ka, Donets'ka and Lugans'ka oblasts (Fig. 1).

The Severskyi Donets River is highly variable in width and depth of riverbed, bottom sediment, state of development of water vegetation, in sum factors which reflect the many scaling processes in its floodplain. Near the headwaters the width of the Severskyi Donets's valley varies between 8-12 km, in the middle - up to 60 km -, in the south of its range from 4 to 26 km. In the middle range, the stream bed width oscillates between 80-100 m, and the width of its floodplain between 3 and 4 km. Water depths fluctuates within a range from 0,5-0,8 m to 5-7 m. There are a lot of lakes and former riverbeds (oxbows) in the floodplain, which is mainly forest-covered. Downstream the city Kamens'k (for a distance of 60 km) the river cut through the region of Donetskyi Kryazh.

Fig. 2: Severskyi Donets River near the village of Haidary.

Fig. 3: River Severskyi Donets north of the village Bohorodychne, representing a stretch meandering between Pasika and Bohorodychne. (for more details have a look with Google Earth)

Fig. 4: River Severskyi Donets near the village Bohorodychne.

Most typical for the river are stretches with a width of 40-70 m, a depth of 2-3 m and with a well expressed current (Fig. 2). Fig. 3 represents a stretch of the river meandering between high, rocky slopes along the narrow valley. At some sections the riverbed extends to a width of 200-400 m. The water depth in these parts along the riffle-pool continuum reaches up to 5-12 m. They are also characterized by a – compared with other stretches of the river – delayed current (Fig. 4).These stretches are followed by riffles with gritty bottom especially in river sections with very narrow riverbed. Run-sections are characterized by potholes – places of fish concentration during the winter season.

Most important tributaries with high discharge and notably length in the basin of the Severskyi Donets are Udi, Bereka, Oskol, Kazenyi Torec', Krasna, Ajdar, Lugan', Derkul, Kalitva, and Kundruchia (Fig. 5).

The right tributaries of Severskyi Donets are predominantly short and flow downhill of the Donetskyi Kryazh between well developed valleys with high (up to 60-100 m),

Fig. 5 River Derkul near village Tretyakovka.

steep, sometimes vertical slopes. Their riverbeds are moderately meandering, with prevailing bed widths up to 20 m, and water depths – up to 1.5 m. Figure 6 presents a typical river view for Donetskyi Kryazh region.

Fig. 6: River Verhne Provallia near village Provallia.

The left tributaries are usually quite long and mostly flow in wide (up to 2-6 km) valleys. However, some little tributaries of Severskyi Donets River from the lower stretch flow through much smaller valleys where numerous oxbows are formed (Fig. 7). These riverbeds are moderately meandering. Due to the low current and small depth, in the summer they are overgrown with water vegetation. During periods with low water levels, the river's width fluctuate from 2 to 60 m, the water depth between 0,2-1,0 m, and the current velocity between 0,1-0,3 m/s. In some regions, many rivers dry up following flood and freshet periods (Greze et al., 1987).

The river Severskyi Donets is interconnected with many other habitats as bays, straits, branches, floodplain lakes, ponds and pools. Many of these habitats are triggered by spring flood events. In this period, the water level in floodplain lakes oscillates considerably, spring floods are forming new habitats by altering the river bed. After retrogression of freshet in early summer, the lakes are separated from the river channel, become shallow, and some of them get dry. However, many lakes remain interconnected with each other and with the river by narrow, greatly over-growing ditches/feeders (eriks) during all the year (Greze et al. 1987).

Fig. 7: Former riverbed of river Severskyi Donets near village Bohorodychne.

Large and deep natural lakes are lacking in the basin of the river Severskyi Donets, but there are a lot of small shallow lakes with the water surface area from one to several dozens of hectares. In the basin of Severskyi Donets 774 lakes are accounted with the total area of 59.9 km2. The water surface area of 91% of these lakes ranges between 0.1 – 1.0 km2. An interconnection between the lakes and the river almost vanish during the period of low water levels (which is observed in the end of the summer). Many lakes dry out or turn into swampy bogs. In spring, the hollows of the lakes are filled up with water from melted snow. Lakes freeze earlier than rivers, and defreeze later in year. Freeze-up remains on the average up to 110-130 days. Thickness of ice reaches 40-60 cm. Shallow lakes sometimes freeze down up to the bottom.

Fig. 8: Temporary salt water body in the territory of Slovians'k (Typical habitat of *Lestes macrostigma*).

Salt lakes are situated at salt mines on the territory of the city Slovians'k (Fig. 8). They belong to the few continental karstic lakes in Ukraine, which were formed from the collapse of exhausted mining for table salt extraction (sinkhole-effect; turloughs)

(Greze et al., 1987). They are perhaps of minor importance for odonates as the water salinity reaches up to 60.7‰ (some parts of lake Solone), which by far exceeds the maximum concentration of 19.3‰ tolerated by the dragonfly larvae within the surveyed area of Slovians'k (Martynov & Martynov, 2007b).

Fig. 9: Black alder bog near village Tors'ke.

In some parts of the floodplains of Severskyi Donets's black alder bogs are found (Fig. 9 & 11). These alluvial forests (Fig. 10) are characterized by high ground-water table around the year, periodical flooding by spring freshets lasting until summer, no accumulation of inorganic sediments and a several centimetre thick layer of organic material (peat).

Artificial water bodies in Donets'ka and Luhans'ka oblasts account to 2,475 ponds and 29 water storage basins. They take up an area of 41,624 hectares with a storage volume of 1,496 million m3 water. Water bodies in the basins of rivers Kazenyi Torec' and Lugan' are characterized by high rates of mineralization; their water chemistry is formed under the impact of saliferous rocks of the highly mineralized underground waters.

Fig. 10: River Zherebec' near village Tors'ke.

Fig. 11: Lake on the black alder bog near village Tors'ke.

Artificial water bodies also include two canals - “Severskyi Donets – Donbass” and “Dnieper – Donbass”. Water from the canal “Severskyi Donets – Donbass” is used to supply small rivers with water and for irrigation purposes. Canals are up to 20-30 m wide and 3-4 m deep. Average current velocity is measured as high as 0.4 m/s, section wise reaching values of 0.8 m/s (Greze et al., 1987).

Within the boundaries of the studied region, nine localities/areas are legally protected:

- Donets’ka oblast: National nature park (hereinafter referred to as NNP) “Svyati Gory”, Ukrainian steppe reserve (“Kreidova Flora” Branch), Regional landscape park (hereinafter referred to as RLP) “Kramators’kyi”, RLP “Slovians’ky soloni ozera”, RLP “Kleban-Byk”;

- Luhans’ka oblast: Luhans’k natural reserve (“Pridoncovska Poima” Branch, “Provalskyi Steppe” Branch, “Striletskyi Steppe” Branch, “Tr’okhizbenka”);

- Kharkivs’ka oblast: NNP “Homolschansky Lisy”.

These areas are considered of special importance for regional species and habitat diversity, and in general they reduce the extent of regional habitat destruction.

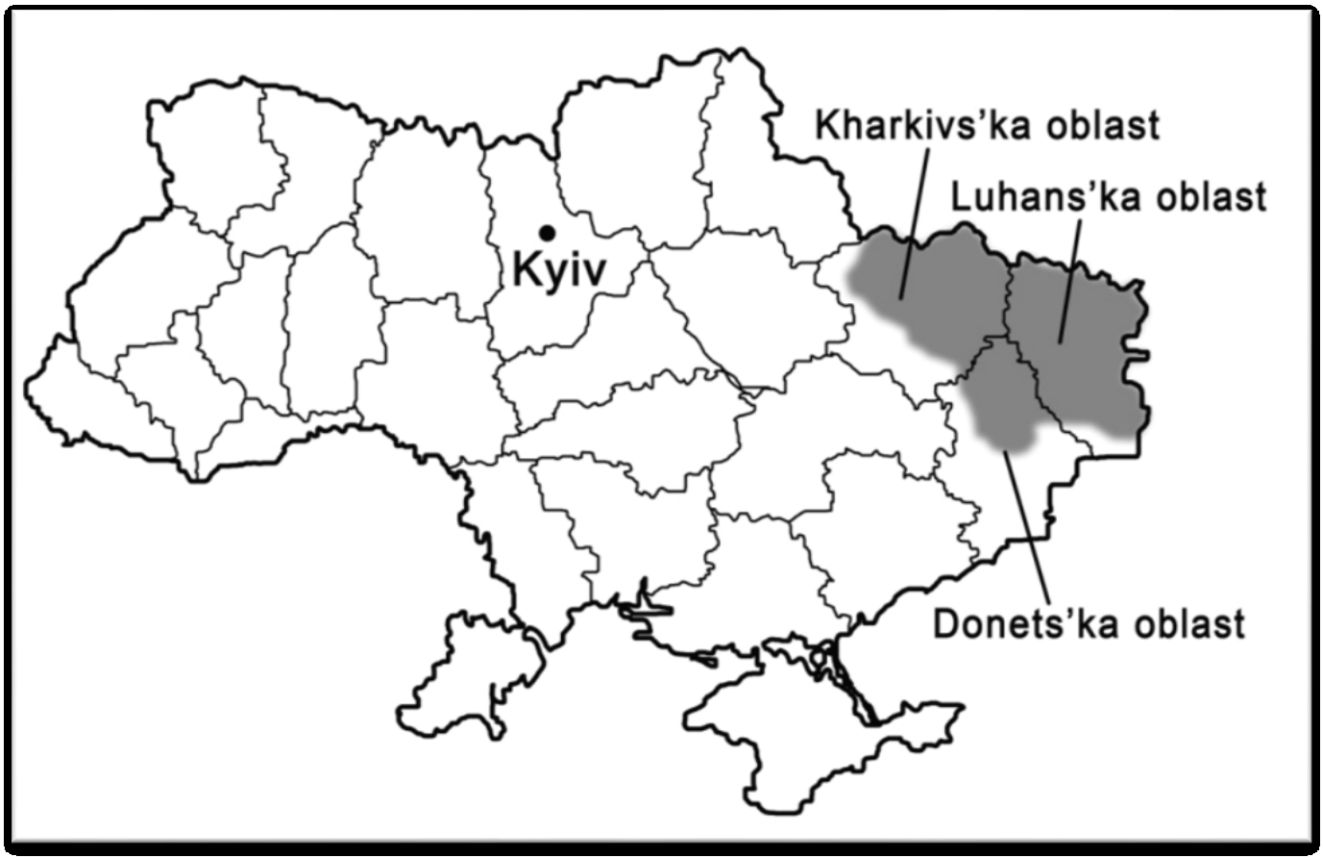

Fig. 12: General research area within territory of Ukraine.

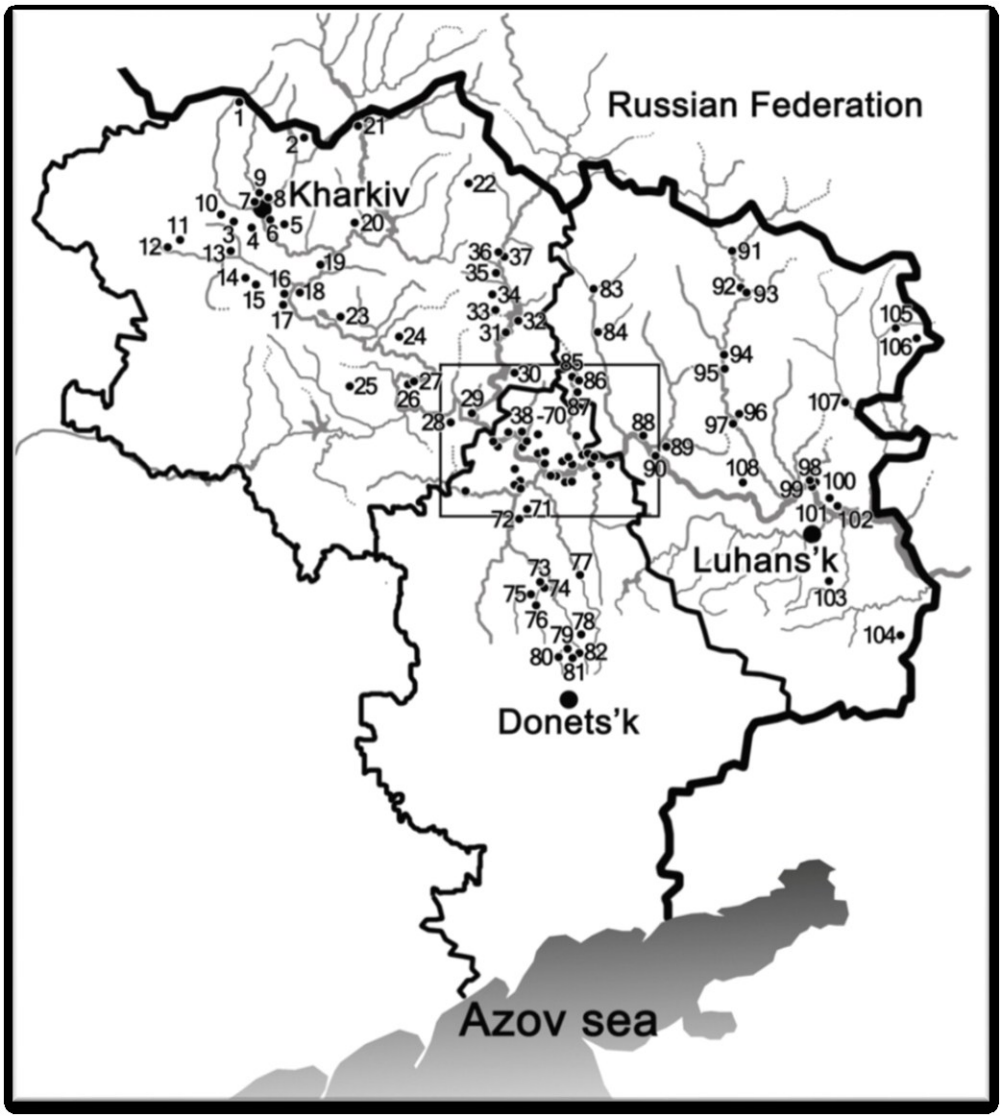

Fig. 13: Eastern Ukraine with localities.

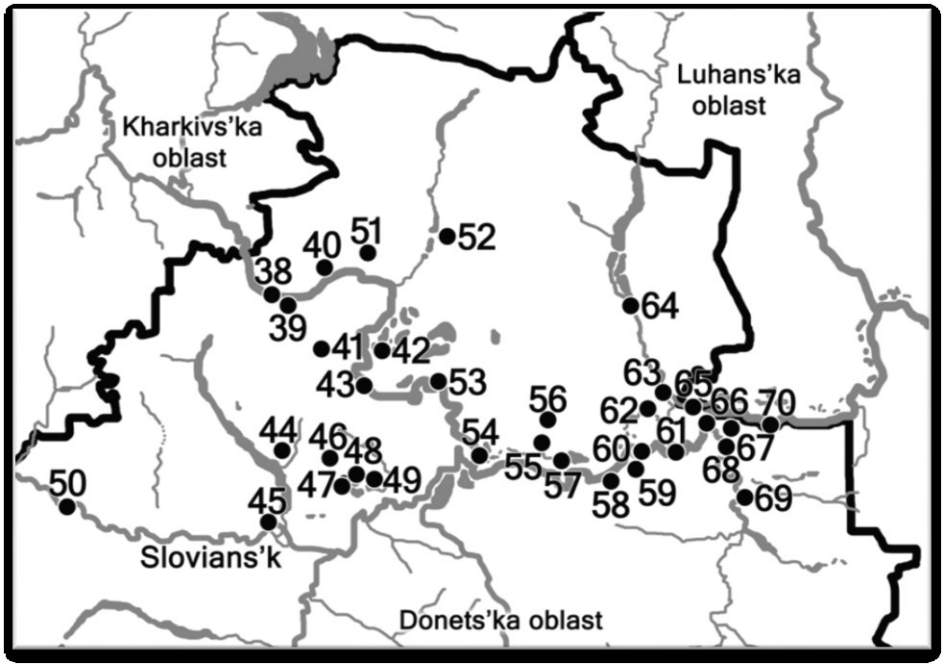

Fig. 14: Northern part of Donets'ka oblast with localities from 38 to 70.

List of localities

Table 1 represents all 108 known Odonata localities within the Severskyi Donets River catchment area in its Ukrainian part. They come from literature, museum and field data. All localities are situated in the region outlined in grey on figure 12 and mapped on figures 13-14.

Table 1. List of Odonata sampling sites derived from literature and original records in the basin of the river Severskyi Donets in its middle range. Locality names and geographic coordinates are taken from "Google Earth" (http://earth.google.com).

Locality #	Administrative area (district)	Localities	Coordinates
		Kharkivs'ka oblast	
1.	Zolochivs'kyi	Okip	50°25'11''N 36°08'51''E
2.	Kharkivs'kyi	Krasne, ponds	50°17'05''N 35°27'36''E
3.	Kharkivs'kyi	Bystre, ponds	49°52'45''N 35°56'49''E
4.	Kharkivs'kyi	Pokotylivka	49°55'26''N 36°11'23''E
5.	Kharkivs'kyi	Bezlyudivka	49°53'27''N 36°14'53''E
6.	Kharkivs'kyi	Zhihor, river Udi	49°51'18''N 36°15'43''E
7.		Kharkiv, Aleksiivka	50°02'11''N 36°11'28''E
8.		Kharkiv, Pyatihatky	50°05'26''N 36°15'33''E
9.	Derhachivs'kyi	Lozoven'ka	50°04'00''N 36°09'42''E
10.		Liubotin, pond on the river Merepha	49°57'20''N 35°55'29''E
11.	Valkyvs'kyi	Cheremushna, lake Byle	49°52'27''N 35°47'55''E
12.	Valkyvs'kyi	Valky	49°50'16''N 35°36'23''E
13.	Novovodolaz'kyi	Rakytne, ponds	49°48'27''N 35°57'31''E
14.	Zmiivskyi	Birky	49°43'20''N 36°03'53''E
15.	Zmiivskyi	Pershotravneve	49°40'N 36°07'E
16.	Zmiivskyi	Haidary, river Severskyi Donets	49°37'53''N 36°20'21''E
17.	Zmiivskyi	Haidary, former riverbed of the river Severskyi Donets	49°36'45''N 36°20'03''E
18.	Zmiivskyi	Zadonets'ke, floodplain of the river Severskyi Donets	49°39'05''N 36°22'17''E
19.	Zmiivskyi	Mokhnach	49°44'N 36°31'E
20.	Chuhuivs'kyi	Kochetok	49°52'21''N 36°44'05''E
21.	Vovchans'kyi	Ohirtseve	50°17'58''N 36°51'09''E
22.	Velykoburluts'kyi	Katerynivka	55°00'N 37°28'E
23.	Balakliis'kyi	Andriivka, floodplain of the river Severskyi Donets	49°31'N 36°36'E
24.	Balakliis'kyi	Pine forest between Balakliia and Savyntsi	49°24'N 36°59'E
25.	Balakliis'kyi	Zavhorodnie	49°12'04''N 36°55'09''E
26.	Iziums'kyi	Ivanivka, bog	49°17'17''N 37°06'28''E
27.	Iziums'kyi	Ivanivka, former riverbed of the river Severskyi Donets	49°17'17''N 37°05'13''E
28.	Iziums'kyi	Mala Kamyshuvakha	49°05'N 37°13'E
29.	Iziums'kyi	Bukyne, floodplains of the rivers Severskyi Donets and Oskol	49°07'08''N 37°23'50''E
30.	Borivs'kyi	Nyzhche Solone, river	49°18'21''N 37°38'44''E
31.	Borivs'kyi	Novoplatonivka, Krasnyi Oskol water storage basin	49°25'08''N 37°34'36''E
32.	Borivs'kyi	Bohuslavka	49°28'33''N 37°41'17''E
33.	Kupians'kyi	Synykha, river Synykha	49°31'13''N 37°34'36''E
34.	Kupians'kyi	Sen'ok, pond	49°35'12''N 37°31'36''E
35.	Kupians'kyi	Blahodativka	49°40'41''N 37°32'19''E
36.	Kupians'kyi	Kupians'k, former riverbed of the river Oskol	49°44'10''N 37°37'20''E
37.	Kupians'kyi	Kupians'k, river Oskol	49°43'41''N 37°36'52''E
		Donets'ka oblast	
38.	Slovians'kyi	Bohorodychne, river Severskyi Donets	49°02'03''N 37°29'22''E
39.	Slovians'kyi	Bohorodychne, former riverbed of the river Severskyi Donets	49°02'50''N 37°29'33''E
40.	Slovians'kyi	Sviatohirs'k, former riverbed of the river Severskyi Donets	49°02'06''N 37°34'18''E
41.	Slovians'kyi	Sydorove	48°59'36''N 37°37'15''E
42.	Slovians'kyi	Maiaky, former riverbed of the river Severskyi Donets	48°57'27''N 37°38'33''E
43.	Slovians'kyi	Maiaky, river Severskyi Donets	48°57'27''N 37°37'15''E
44.	Slovians'kyi	Hlyboka Makatykha, pond	48°54'16''N 37°32'52''E
45.	Slovians'kyi	Slovians'k, river Suhyi Torec'	48°50'15''N 37°31'38''E
46.	Slovians'kyi	Sobolivka, stream	48°53'27''N 37°35'56''E
47.	Slovians'kyi	Slovians'k, temporary water body	48°52'20''N 37°36'44''E
48.	Slovians'kyi	Slovians'k, lake Solone (main part)	48°52'27''N 37°37'20''E

Locality #	Administrative area (district)	Localities	Coordinates
49.	Slovians'kyi	Slovians'k, lake Ripne	48°52'14''N 37°38'11''E
50.	Slovians'kyi	Maidan	48°51'16''N 37°14'11''E
51.	Krasnolymans'kyi	Yarova, stream	49°02'54''N 37°38'42''E
52.	Krasnolymans'kyi	Derylove, ponds	49°04'11''N 37°43'12''E
53.	Krasnolymans'kyi	Schurove	48°57'33''N 37°42'59''E
54.	Krasnolymans'kyi	Brusivka, river Severskyi Donets	48°54'16''N 37°45'58''E
55.	Krasnolymans'kyi	Dibrova, floodplain of the river Severskyi Donets	48°53'36''N 37°50'25''E
56.	Krasnolymans'kyi	Dibrova, lake Pidpisichne	48°54'14''N 37°48'55''E
57.	Krasnolymans'kyi	Illichivka, lake Chernec'ke	48°53'38''N 37°52'12''E
58.	Krasnolymans'kyi	Illichivka, former riverbed of the river Severskyi Donets	48°53'28''N 37°55'06''E
59.	Krasnolymans'kyi	Zakitne, former riverbeds of the river Severskyi Donets	48°54'59''N 37°59'46''E
60.	Krasnolymans'kyi	Zakitne, river Severskyi Donets	48°53'33''N 37°55'53''E
61.	Krasnolymans'kyi	Yampil, river Severskyi Donets	48°54'37''N 37°56'45''E
62.	Krasnolymans'kyi	Yampil, former riverbed of the river Severskyi Donets	48°55'14''N 37°56'30''E
63.	Krasnolymans'kyi	Yampil, river Zherebec'	48°57'06''N 37°59'43''E
64.	Krasnolymans'kyi	Tors'ke	48°58'20''N 37°58'41''E
65.	Artemivs'kyi	Dronivka, river Zherebec'	48°56'15''N 38°02'30''E
66.	Artemivs'kyi	Dronivka, river Severskyi Donets	48°55'48''N 38°02'33''E
67.	Artemivs'kyi	Dronivka, former riverbed of the river Severskyi Donets	48°55'40''N 38°01'51''E
68.	Artemivs'kyi	Dronivka, river Bahmutka	48°55'20''N 38°03'25''E
69.	Artemivs'kyi	Sivers'k	48°52'41''N 38°04'54''E
70.	Artemivs'kyi	Serebrianka, river Severskyi Donets	48°55'25''N 38°07'56''E
71.	Konstiantynivs'kyi	Kramatorsk, river Bilen'ka 2	48°45'36''N 37°38'34''E
72.	Konstiantynivs'kyi	Semenivka, river Bilen'ka	48°39'20''N 37°40'20''E
73.	Konstiantynivs'kyi	Kleban-Byk, stagnant reservoir	48°26'09''N 37°46'16''E
74.	Konstiantynivs'kyi	Kleban-Byk, Kleban-Byk water storage basin	48°26'43''N 37°43'44''E
75.	Konstiantynivs'kyi	Kleban-Byk, river Bychok	48°26'04''N 37°46'42''E
76.	Konstiantynivs'kyi	Kleban-Byk, river Krivyi Torec	48°25'50''N 37°47'00''E
77.	Konstiantynivs'kyi	Kurdiumivka	48°28'05''N 37°57'26''E
78.	Yasynuvats'kyi	Panteleimonivka	48°12'35''N 37°56'33''E
79.	Yasynuvats'kyi	Vasylivka, forest	48°10'46''N 37°58'42''E
80.	Yasynuvats'kyi	Avdiivka, stream	48°08'10''N 37°47'23''E
81.	Yasynuvats'kyi	Yasynuvata, pond	48°07'56''N 37°49'01''E
82.	Yasynuvats'kyi	Yasynuvata, stream	48°07'33''N 37°49'15''E
Luhans'ka oblast			
83.	Svativs'kyi	Nizhnia Duvanka, river Krasna	49°35'31''N 38°11'23''E
84.	Svativs'kyi	Svatove, river Horina	49°26'03''N 38°10'10''E
85.	Kremins'kyi	Serebryansk forestry, river Zherebec'	48°56'44''N 38°00'24''E
86.	Kremins'kyi	Serebryansk forestry, black alder swamp	48°56'34''N 38°01'19''E
87.	Kremins'kyi	"Prilipki" forestry, black alder swamp	48°57'09''N 38°02'49''E
88.		Rubezhno	49°00'35''N 38°20'14''E
89.		Severodonetsk	48°55'40''N 38°30'21''E
90.		Lisicansk, river Severskyi Donets	48°55'29''N 38°26'07''E
91.	Novopskovs'kyi	Biloluts'k, river Bila	49°41'22''N 39°02'44''E
92.	Novopskovs'kyi	Ikove, river Ajdar	49°31'25''N 39°06'39''E
93.	Novopskovs'kyi	Ikove, former riverbed of the river Ajdar	49°31'40''N 39°06'11''E
94.	Starobils'kyi	Starobil's'k, river Ajdar	49°16'47''N 38°52'45''E
95.	Starobils'kyi	Polovynkyne, stream	49°12'33''N 38°54'11''E
96.	Novoaidars'kyi	Spivakivka, river Ajdar	49°03'14''N 38°54'45''E
97.	Novoaidars'kyi	Malovendelivka, river Ajdar	49°01'00''N 38°55'53''E
98.	Stanychno-Luhans'kyi	"Pridoncovska Poima" reserve, lake Krasnenke	48°40'59''N 39°24'29''E
99.	Stanychno-Luhans'kyi	"Pridoncovska Poima" reserve, river Severskyi Donets	48°40'31''N 39°24'03''E
100.	Stanychno-Luhans'kyi	"Pridoncovska Poima" reserve, former riverbed of the river Severskyi Donets	48°40'17''N 39°25'58''E
101.	Stanychno-Luhans'kyi	Stanychno-Luhans'ke	48°39'08''N 39°29'53''E
102.	Stanychno-Luhans'kyi	Kondrashevs'ka nova, river Severskyi Donets	48°39'31''N 39°25'06''E
103.	Lutuhyns'kyi	Piatyhorivka, floodplain of the river Luhanchik	48°20'55''N 39°23'05''E
104	Sverdlovs'kyi	Provallia, "Provalskyi Steppe" reserve, river Verhne Provallia	48°07'35''N 39°48'33''E
105.	Milovs'kyi	Novostril'tsivka, river Krejdyana	49°19'06''N 39°55'05''E
106.	Milovs'kyi	"Striletskyi Steppe" reserve, river Cherepaha	49°18'16''N 40°05'14''E
107.	Bilovods'kyi	Horodysche, river Derkul	49°02'37''N 39°39'41''E
108.	Slovianoserbs'kyi	Tr'okhizbenka	48°45'36''N 38°57'36''E

Annotated list of species

The localities given in squared brackets refer to those listed in Table 1.

Calopteryx virgo (Linnaeus, 1758)

Literature data: **[104]**: 1908 (Zograf, 1909).

- Original data: **[80]**: 14.06.2003 (Pisarenko leg.); - **[104]**: 4.08.1997 (Martynov V. leg.).

Calopteryx splendens (Harris, 1782)

Literature data: **[12]**: (Yaroshevsky, 1881). - **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [rivers Udi, Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929). - **[37]**: (Ivanov, 1876). - **[99]**: 16.09.2001; copulation, 9.06.2003; 25.06.2004 (Martynov & Martynov, 2004); - **[85]**: 7., 10.07.2002 (Martynov & Martynov, 2004); - **[102]**: wet meadow, 19.06.2002 (Martynov & Martynov, 2004); - **[106]**: 5.06.1996 (Martynov V. leg.); 11.05.2003 (Martynov V. leg.) (Martynov & Martynov, 2004); - **[104]**: 22.08.1996 (Martynov V. leg.) (Martynov & Martynov, 2004); 20.06.2003 (Martynov V. leg.) (Martynov & Martynov, 2004). - **[38]**: (Gorb et al., 2000). - **[10]**: (Sinitsa, 1929). - **[104]**: 1908 (Zograf, 1909). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[16]**: 5.07.1977 (Proskurin leg.).

- Original data: **[16]**: larvae, 16.,18.08.2009; - **[29]**: 28.05.2007 (Malceva leg.); - **[38]**: 9-13.08.2002; 22.06.2007; emergence, 25.06.2008; emergence, copulation, oviposition, 27.06.2008; copulation, 28.06.2008; - **[43]**: copulation, emergence, 26-27.05.2007; emergence, 8.06.2008; - **[45]**: 3.06.2006; - **[54]**: immature and mature specimens, 15., 26-30.05.2005 (Sova leg.); 12.07.2007; - **[60]**: 14.07.2002; 29.05.2005; - **[63]**: 5., 21.07.2002; - **[64]**: copulation, 16.07.2007; - **[65]**: oviposition 22.07.2002; - **[66]**: emergence, exuvia, 2-3.07.2002; 6.07.2002; oviposition 11., 22.07.2002; 13., 27., 30.07.2002; emergence, 9.07.2003; 21.07.2003; 22-23.07.2005; copulation, emergence, 17.07.2007; - **[68]**: copulation, 4.07.2002; 18.07.2002; emergence, 4.07.2003; 22-23.07.2005; 17.07.2007; - **[70]**: oviposition 23., 25.07.2002; - **[76]**: emergence, oviposition, 4.06.2009; - **[80]**: 21.06.2005; - **[82]**: 26.05.2002; emergence, 28.07.2003; emergence, 16.05.2004; 20.07.2004; 4.07.2005; 3.07.2007; - **[85]**: oviposition 7.07.2002; - **[91]**: emergence, 18.05.2009; - **[94]**: larvae, 19.04.2009; - **[96]**: larva, 19.04.2009; - **[99]**: 26.08.2002 (Phoroschuk leg.); 10-11.,13.,18.06.2003; oviposition, 24.06.2004; 27.06.2004; - **[104]**: 20.06.2003 (Martynov V. leg.).

Coenagrion puella (Linnaeus, 1758)

Literature data: **[12]**: (Yaroshevsky, 1881). - **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - [rivers Udi, Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929). - **[49]**: (Martynov & Martynov, 2007b). - **[98]**: 25.07.2001 (Martynov V. leg.) (Martynov & Martynov, 2004); - **[85]**: 19.07.2002 (Martynov & Martynov, 2004); - **[100]**: copulation, 9.06.2003; copulation, 27.06.2004 (Martynov & Martynov, 2004); - **[104]**: 22.06.2002 (Martynov V. leg.) (Martynov & Martynov, 2004). - **[13]**: (Zakharenko, 1956). - **[10]**: (Sinitsa, 1929). - **[104]**: 1908 (Zograf, 1909); (Ridei et al., 2007). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [Kharkiv]: June 1878; 15., 19.06.1886.

- Original data: **[30]**: immature specimen, 22.05.2009; - **[38]**: emergence, copulation, 25.06.2008; 27., 28.06.2008; - **[39]**: 9.08.2002; 1., 6.07.2006 (Martynov V. leg.); oviposition on *Potomageton pectinatus* L., 20.07.2003; copulation, 25.06.2007; 27.06.2007; 25.06.2008; copulation, 28.06.2008; - **[40]**: copulation, 26.06.2008; - **[42]**: copulation, 27.05.2007; copulation, 6., 7.06.2008; - **[43]**: wet meadow, copulation, 27.05.2007; copulation, 8.06.2008; - **[47]**:, 28.06.2006; - **[49]**: mass emergence, 5.05.2005; abundant, oviposition, emergence, 25.05.2005; copulation, mass emergence, 27.06.2005; emergence, copulation, 29.08.2005; emergence, 3.06.2006; - **[62]**: copulation, oviposition, 10., 21.07.2003; - **[64]**: 16.07.2007; - **[65]**: oviposition, 22.07.2002; - **[66]**: oviposition, 3., 22.07.2002; - **[67]**: copulation, oviposition, 5., 6., 9., 11.07.2002; 4., 7., 17.07.2003; - **[73]**: small stagnant reservoir, 31.05.03; - **[74]**: oviposition, 8.06.2005; - **[75]**: copulation, 4.06.2009; - **[78]**: 6.06.2004; - **[80]**: 21.06.2005; - **[81]**: emergence, 12.05.2002; oviposition, emergence, 26.05.2002; 16.05.2004; 26.09.2004; 4.07.2005; - **[82]**: 1.06.2003; - **[84]**: larva, 19.05.2009; - **[85]**: 10.07.2002; - **[90]**: larvae, 18.04.2009; - **[92]**: immature specimen, 17.05.2009; - **[93]**: mass emergence, 17.05.2009; - **[95]**: larvae, 19.04.2009; - **[100]**: oviposition, 10., 11.06.2003; oviposition, 25., 26.05.2004; - **[106]**: 16.05.2009.

Coenagrion pulchellum (Vander Linden, 1825)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[37]**: (Ivanov, 1876). - [rivers Udi and Severskyi Donets]: larvae (Solodovnikov, 1929). - **[85]**: 10.07.2002 (Martynov & Martynov, 2004); - **[100]**: copulation, 25, 27.06.2004; pools formed after Severskyi Donets's overflow, 9.06.2003 (Martynov & Martynov, 2004). - [vicinity of Kharkiv]: (Rodzyanko, 1889). - **[104]**: 1908 (Zograf, 1909). - **[60, 99]**: (Ridei et al., 2007). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[14]**:

07.1962.

- Original data: **[21]**: emergence, 2.05.2005; - **[27]**: immature and mature specimens, 6.07.2004; - **[31]**: 22.05.2009; - **[34]**: copulation, 22.05.2009; - **[36]**: emergence and copulation, 20.05.2009; - **[37]**: emergence and copulation, 20.05.2009; immature and mature specimens, 20.05.2009; - **[38]**: 1., 2.07.2006; 25.06.2008; 27.06.2008; - **[39]**: oviposition, 20.07.2003; copulation, 25.06.2007; 28.06.2008; 27.06.2007; - **[42]**: wet meadow, copulation, 27.05.2007; temporary water body, emergence, 6.06.2008; lakes almost completely overgrown with vegetation, 6.06.2008; - **[49]**: copulation, mass emergence, 27.06.2005; - **[54]**: 8., 15.05.2005 (Sova leg.); - **[60]**: 28.05.2005; - **[61]**: boggy areas, 21.07.2002.; - [66, 68]: 3.07.2002; - **[67]**: 17.07.2003; 4.07.2003; 7.07.2003; water meadow, abundant, copulation and oviposition, 5.07.2002.; - **[74]**: oviposition, 8.06.2005; 23-25.05.2008; - **[75]**: 31.05.2003; copulation, 4.06.2009; 7.06.2009; - **[78]**: small stagnant reservoirs up to 100 m^2, copulation, 6.06.2004; - **[81]**: copulation, 4.07.2005; copulation, 4.07.2005; - **[82]**: 26.05.2002; - **[83]**: teneral, 19.05.2009; - **[92]**: glades in the flood plain forest, immature specimen, 17.05.2009; - **[93]**: mass emergence, 17.05.2009; - **[99]**: 10.06.2003; copulation, 11.06.2003; - **[100]**: oviposition, 25., 26.05.2004.

Coenagrion ornatum (Selys, 1850)

Literature data: **[39]**: (Oliger, 1985). - **[37]**: (Ivanov, 1876). - **[104]**: 22.06.2002 (Martynov V. leg.); (Ridei et al., 2007).

- Original data: **[104]**: 15.05.2002 (Martynov V. leg.).

Coenagrion hastulatum (Charpentier, 1825)

Literature data: **[37]**: (Ivanov, 1876). - **[13]**: (Zakharenko, 1956). - [Kupians'k]: (Yaroshevsky, 1881).

- Original data: none.

Enallagma cyathigerum (Charpentier, 1840)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - [rivers Udi, Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929). - **[47]**: immature specimen (Martynov & Martynov, 2007 (2008)). - **[98]**: 25., 27.07.2001 (Martynov & Martynov, 2004); - **[99]**: 27.06.2004 (Ridei et al., 2007), (Martynov & Martynov, 2004). - [vicinity of Kharkiv]: (Rodzyanko, 1889). - **[13]**: (Zakharenko, 1956). - **[104]**: 1908 (Zograf, 1909). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[49]**: 5.07.1886. - **[37]**: (Ivanov leg.). - [Kharkiv]: july 1786.

- Original data: **[27]**: immature specimen, 8.07.2004; - **[39]**: 9., 10.08.2002; - **[41]**: Severskyi Donets's tributaries, emergence, 2.05.2005; - **[48]**: 27.06.2005; 28.06.2006; - **[49]**: emergence, 5.05.2005; abundant, oviposition, emergence, 25.05.2005; - emergence, 29.08.2005; emergence, 3.06.2006; - **[58]**: 12.07.2003; emergence, 22.07.2003; - **[59]**: copulation, 23.07.2003; - **[67]**: temporary water body overgrown with vegetation, copulation, emergence, 24.07.2003; boggy meadow, 18.07.2003; emergence, 6.07.2003; steppe area, copulation, 17.07.2003; - **[78]**: small stagnant reserviors up to 100 m^2, emergence, 6.06.2004; - **[81]**: emergence, 28.05.2002; immature specimen, 03.05.2002; wet meadow, emergence, 16.05.2004; - **[99]**: 30.06.2005 (Malceva leg.); - **[100]**: 25.05.2004.

Erythromma najas (Hansemann, 1823)

Literature data: **[38]**: (Oliger, 1985). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - [rivers Udi, Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929); - **[17]**: lakes Bile and Snit'kove, 1931 (Solodovnikov, 1940). - **[100]**: emergence, oviposition, 25.05.2004; emergence, copulation, oviposition, 27.06.2004 (Martynov & Martynov, 2004); - **[104]**: 1908 (Zograf, 1909); 19-20.06.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007). - [vicinity of Kharkiv]: (Rodzyanko, 1889). - **[9]**: (Zakharenko, 1951); - **[13]**: (Zakharenko, 1956). - **[10]**: (Sinitsa, 1929). - **[99]**: (Ridei et al., 2007). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [Kharkiv]: July 1876.

- Original data: **[27]**: 8.07.2004; boggy former riverbed, 6.07.2004 (Martynov V. leg.); - **[36,37]**: immature and mature specimens, 20.05.2009; - **[40]**: 18.05.2003; - **[42]**: wet meadows and lakes, 27.05.2007; - **[45]**: larva, 3.04.2010 (Styblecov leg.); - **[57]**: emergence, 29.04.2008; emergence, 2.05.2008; - **[57]**: 12.07.2004; - **[74]**: emergence, 31.05.2003; immature specimen, 18.05.2003; emergence, 23-25.05.2008; - **[81]**: emergence, big aggregations on the glades, 16.05.2004; boggy water body, emergence, 16.05.2004; - **[92]**: river and glades in the alluvial forest, immature specimen, 17.05.2009; larva, 17.05.2009; - **[93]**: mass emergence, 17.05.2009; - **[104]**: 19-20.06.2003.

Erythromma viridulum (Charpentier, 1840)

Literature data: **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[35]**: (Ivanov, 1876). - **[98]**: 25., 27.07.2001; - **[99]**: (Ridei et al., 2007). - **[100]**: emergence, copulation, oviposition, 27.06.2004; copulation, 9.06.2003 (Martynov & Martynov, 2004); - **[104]**: 1908 (Zograf, 1909); (Ridei et al., 2007); 19-20.06.2003 (Martynov & Martynov, 2004). - **[85]**: oviposition 10., 19.07.2002, 21.07.2003 (Martynov & Martynov, 2004). -

[vicinity of Kharkiv]: (Rodzyanko, 1889). - [Kupians'k]: (Yaroshevsky, 1881).

- Original data: **[16]**: 16-17.08.2008 (Nikulina leg.); floodplain, 16-19.08.2009; - **[38]**: 09.08.2002; oviposition 12.08.2002; emergence, copulation and oviposition, 27.06.2008; - **[39]**: oviposition 11.08.2002; 9-11.08.2002, 20.07.2003; - **[57]**: oviposition in *Ceratophyllum demersum* L., 12.07.2004; - **[61]**: boggy sections, oviposition 21.07.2002.; - **[62]**: glades overgrown with *Phragmites australis* (Cav.) Trin. ex Steud., 20.07.2002; - **[63]**: 5., 7.07.2002; - **[66]**: 25.07.2002; oviposition 27., 30.07.2002.; 17.07.2007; 22-23.07.2005; oviposition 11.07.2002; 5.07.2003; 17.07.2007; - **[67]**: 28.07.2002; 7.07.2003; oviposition on *P. pectinatus* L., 17., 19.07.2003; oviposition, 6.07.2003; oviposition 9.07.2002; - **[68]**: confluence with Severky Donets, oviposition, immature specimen, 2.07.2002; oviposition, 3.07.2002; - **[74]**: emergence, copulation, 4-5.07.2007; emergence, 31.05.2003; 23-25.05.2008; - **[76]**: immature specimen, 8.06.2008 (Martynov V. leg.); - **[85]**: 21.07.2003; - **[87]**: 21.07.2003; - **[100]**: oviposition, 10.06.2003; 12.06.2003.

Ischnura elegans (Vander Linden, 1820)

Literature data: **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - [rivers Udi, Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929); - **[17]**: lakes Bile and Snit'kove, 1931 (Solodovnikov, 1940). - **[49]**: (Martynov & Martynov, 2007b). - **[100]**: 15.09.2001; 15.05.2003; 24.06.2004 (Martynov & Martynov, 2004); - **[99]**: emergence, 27.06.2004; floodplain, 9.06.2003; 10.06.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007); - [98: 25., 27.07.2001 (Martynov & Martynov, 2004); - **[85]**: in masses on the glades, oviposition, 7., 10., 19., 22.07.2002 (Martynov & Martynov, 2004); - **[102]**: 21.08.2002 (Martynov & Martynov, 2004); - **[104]**: 21.06.2002, 19.06.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007); - **[106]**: 11.05.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007); - **[13]**: (Zakharenko, 1956). - **[10]**: (Sinitsa, 1929). - **[104]**: 1908 (Zograf, 1909). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[14]**: 20.06.1962; - **[16]**: 13.07.1924 (Solodovnikov leg.); - **[49]**: 5.06.1881, 5.06.1886.

- Original data: **[16]**: 15., 17.08.2008 (Nikulina leg.); 16-19.08.2009; - **[17]**: larva, 16.08.2009; - **[29]**: 28.05.2007 (Malceva leg.); - **[34]**: 22.05.2009; - **[36]**: emergence, copulation, 20.05.2009; larva, 21.05.2009; - **[37]**: emergence, copulation, 20.05.2009; larva, 21.05.2009; - **[38]**: emergence, 9.08.2002; oviposition 11., 12.08.2002; 13.08.2002; 22.06.2007; emergence, 25., 28.06.2008; emergence, copulation, 27.06.2008; copulation, 28.06.2008; - **[39]**: 9-11.08.2002; 25.06.2007; - **[42]**: 30.04.2005; 27.05.2007; - **[43]**: wet meadow, 27.05.2007; copulation, 26-27.05.2007; 8.06.2008; - **[45]**: larvae, 3.04.2009 (Styblecov leg.); - **[47]**: 27.06.2005; 3., 28.06.2006; - **[48]**: 20.05.2006; - **[49]**: mass emergence, 5.05.2005; abundant, 25.05.2005;

27.06.2005; emergence, 29.08.2005; emergence, 3.06.2006; , emergence, copulation, 28.06.2006; - **[57]**: emergence, 29.04.2008; emergence, 29.04.2008; emergence, 2.05.2008; - **[57]**: emergence, the spider *Dolomedes fimbriotus* (Clerck, 1758) hunting for *I. elegans*, 12.07.2004; - **[58]**: emergence, copulation, 22.07.2003; - **[59]**: copulation, 23.07.2003; - **[60]**: 14.07.2002; boggy areas overgrown with *P. australis*, oviposition, emergence, 21.07.2002; - **[61]**: boggy areas overgrown with *P. australis* and *Scirpus lacustris* L., oviposition, emergence, 21.07.2002.; - **[62]**: 10.07.2003; bank of boggy water body, 24.07.2002; - **[64]**: 16.07.2007; - **[65]**: floodplain, oviposition 22.07.2002; - **[66]**: 2.07.2002; oviposition, emergence 3., 11.07.2002; 13.07.2002; oviposition, emergence, 25.07.2002; oviposition, 27., 30.07.2002; emergence, 5.07.2003; 22-23.07.2005; emergence, 17.07.2007; - **[67]**: temporary water body overgrown with *S. lacustris*, copulation, 24.07.2003; boggy meadow, 18.07.2003; glades, 3.07.2003; 18.07.2003; emergence, 6-7.07.2003; copulation, 17.07.2003; 28.07.2002; section without current, oviposition, 9., 22.07.2002; section overgrown with *P. australis*, oviposition, 6.07.2002; - **[68]**: 4.07.2003; oviposition, 4.07.2002; oviposition. 4.07.2002; abundant 2.07.2002; - **[70]**: oviposition, 23.07.2002; - **[74]**: copulation, 8.06.2005; emergence, copulation, 31.05.2003; copulation and emergence, 23-25.05.2008; - **[75]**: 16.06.2002; emergence, copulation, 4-5.07.2007; 3.06.2007 (Malceva leg.); emergence, copulation, 31.05.2003; copulation, 4.06.2009; - **[77]**: 15.08.2003 (Malceva leg.); - **[78]**: emergence, copulation, 6.06.2004; - **[79]**: (Sergeev leg.), 25.06.2004; - **[81]**: copulation, exuvia, 12.05.2002; 31.08.2002; emergence, copulation, 16.05.2004; 4.07.2005; - **[82]**: 26.05.2002; emergence, 1.06.2003; - **[84]**: larva, 9.05.2009; - **[94]**: larvae, 19.04.2009; - **[99]**: floodplain, 21.08.2001; - **[100]**: copulation, 9.06.2003; 10-12.06.2003; 27.06.2004; - **[104]**: immature and mature specimens, 19-20.06.2003 (Sergeev leg.); 25.10.2008; - **[106]**: 15.06.2004.

Ischnura pumilio (Charpentier, 1825)

Literature data: **[38]**: larvae (Oliger, 1975a), (Gorb et al., 2000). - **[35]**: (Ivanov, 1876). - **[98]**: 25., 27.07.2001 (Martynov & Martynov, 2004); - **[99]**: floodplain, 9.06.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[13]**: (Zakharenko, 1956). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[36]**: 24.06.1875 (Ivanov leg.).

- Original data: **[41]**: emergence, 1.05.2005; - **[42]**: 27.05.2007; - **[58]**: 22.07.2003; - **[67]**: copulation, emergence, 17.07.2003; 17.07.2007; - **[78]**: emergence, 6.06.2004; - **[80]**: 7.06.2008; - **[81]**: 3.05.2002; 31.08.2002; 16.05.2004; - **[100]**: 25.07.2001; 25.06.2004; immature specimen, 26.06.2005 (Malceva leg.).

Chalcolestes parvidens Artobolevsky, 1929

Literature data: **[99]**: 9.10.2004 (Martynov & Martynov, 2009).

- Original data: none.

Chalcolestes viridis (Vander Linden, 1825)

Literature data: **[39]**: (Oliger, 1985).

- Original data:

[62]: 16.10.2004 (Martynov V. leg.).

Lestes virens (Charpentier, 1825)

Literature data: [vicinity of Kharkiv]: (Rodzyanko, 1889). - **[39]**: (Oliger, 1985). - **[37]**: (Ivanov, 1876). - **[47]**: immature specimen (Martynov & Martynov, 2007 (2008)). - **[85]**: 8.07.2003 (Martynov & Martynov, 2004); - **[86]**: 7., 27.07.2002 (Martynov & Martynov, 2004); - **[102]**: 21.08.2002 (Martynov & Martynov, 2004). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin:

[7]: 15.08.1977, Fajnschtein; [territory of Kharkiv]: June 1876;

- Original data: **[17]**: 18.08.2009; - **[26]**: Martynov V. leg., 9.07.2004; - **[38]**: wet meadow, 4.10.2009 (Martynov V. leg.); - **[39]**: 10., 11., 13.08.2002; copulation 13.08.2002; 22.09.2002; 1-2.07.2006 (Martynov V. leg.); 25.06.2007; emergence, 28.06.2008; immature specimen, 7.07.2008 (Nikulina leg.); - **[40]**: copulation, 22.09.2002; emergence, 26.06.2008; - **[47]**: 25.09.2005; - **[54]**: floodplain, 12.07.2007 (Sova leg.); - **[58]**: glades, 22.07.2003; 16.10.2004; - **[62]**: emergence, 10-11.07.2003; 21.07.2003; - **[63]**: 8.07.2003; - **[69]**: 9.07.2003 (Malceva leg.); - **[82]**: 23.09.2001; - **[85]**: 10.07.2002; - **[86]**: 10.07.2002; - **[88]**: 7.07.2002; - **[100]**: 13.07.2002; emergence, 4.07.2003; 17.07.2003.

Lestes sponsa (Hansemann, 1823)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - **[86]**: 7., 27.07.2002 (Martynov & Martynov, 2004); - **[88]**: flood plain forest, 7.07.2002 (Martynov & Martynov, 2004); - **[98]**: 25., 27.07.2001 (Martynov & Martynov, 2004); - **[99]**: (Ridei et al., 2007). - **[100]**: 27.06.2004; emergence, imago, 10.06.2003 (Martynov & Martynov, 2004). - [vicinity of Kharkiv]: 18.06.1886 (Rodzyanko, 1895); - **[20]**: (Rodzyanko, 1895). - **[13]**: (Zakharenko, 1956). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin:

[territory of Kharkiv]: June 1878; July 1876;

- Original data: **[26]**: 9.07.2004; - **[27]**: 6., 8.07.2004; - **[38]**: wet meadow, 25.06.2007; - **[39]**: 1., 6.07.2006 (Martynov V. leg.); 10.08.2002; 7.07.2008 (Nikulina leg.); 25.06.2008; emergence, 28.06.2008; 5.07.2009; - **[42]**: emergence, 7.06.2008; - **[53]**: 15.07.2003; - **[62]**: 21.07.2002; 10.07.2003; - **[67]**: 3., 4., 17., 24.07.2003; - **[69]**: 9.07.2003 (Malceva leg.); - **[78]**: emergence, 6.06.2004; - **[86]**: oviposition, 7., 10., 19., 27.07.2002; - **[87]**: 21.07.2003; - **[89]**: 8.07.2004 (Pak leg.); - **[98]**: 27.07.2001; - **[100]**: 25.06.2004.

Lestes barbarus (Fabricius, 1798)

Literature data: **[39]**: sandpit, (Oliger, 1985). - **[37]**: (Ivanov, 1876). - **[47]**: larvae, imago (Martynov & Martynov, 2007b), (Martynov & Martynov, 2007 (2008)). - **[85]**: 8.07.2003 (Martynov & Martynov, 2004). - **[99]**: 19.06.2002, 25.07.2001, 16.09.2001, 9.06.2003, 24.06.2004 (Martynov & Martynov, 2004); (Ridei et al., 2007); - **[13]**: (Zakharenko, 1956). - **[104]**: 1908 (Zograf, 1909). - [Kupians'k]: (Yaroshevsky, 1881). - [Kharkiv]: (Yaroshevsky, 1881).

- Original data: **[26]**: 9.07.2004 (Martynov V. leg.); - **[39]**: 10., 11.08.2002; 22.09.2002; 2.07.2006 (Martynov V. leg.); - **[40]**: 22.09.2002; - **[40]**: emergence, 26.06.2008; - **[42]**: emergence, 7.06.2008; - **[47]**: 25.05.2005; abundant, 27.06.2005; copulation, 29.08.2005; 25.09.2005; mass emergence, sex ratio 1 : 1 (106♂♂ : 119♀♀), 3.06.2006; copulation, 28.06.2006; - **[58]**: 20.07.2002; 22.07.2003; - **[59]**: 29.05.2005; - **[62]**: 22., 24.07.2002; - **[65]**: 22.07.2002; 16.07.2007; - **[67]**: abundant, 5.07.2002; immatures, oviposition 9.07.2002; 13., 18.07.2002; 3-8., 16-18., 24-26., 28.07.2003; 22-23.07.2005; - **[68]**: boggy meadow, 11.07.2002; boggy meadow, 17.07.2007; - **[80]**: temporary water body with area of 2 m^2, emergence, 21.06.2005; - **[81]**: 26.09.2004; - **[82]**: 20.07.2004; - **[89]**: 8.07.2004 (Pak leg.); - **[98]**: 25., 27.07.2001; - **[99]**: pools in floodplain, emergence, density up to 30 specimens per 5 m^2, 9.06.2003; **[100]**: 15., 16.09.2001; emergence, 9.,10.,12.06.2003; abundant, 24.06.2004; 27.06.2004; 26.06.2005 (Malceva leg.); - **[102]**: wet meadow, 19.06.2002.

Lestes dryas Kirby, 1890

Literature data: **[38]**: (Oliger, 1985). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - **[47]**: larvae, imago (Martynov & Martynov, 2007 (2008)). - **[99]**: 16.06.2002; 27.07.2001 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[100]**: glades along former riverbed, 11.06.2003 (Martynov & Martynov, 2004). - [Kupians'k]: (Yaroshevsky, 1881). - [Kharkiv]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin:

[territory of Kharkiv]: 1877, 1878;

- Original data: **[39]**: 25.06.2008; emergence, 28.06.2008; 5.07.2009; - **[42]**: temporary water body in the floodplain, 6.06.2008; emergence, 7.06.2008; - **[49]**: small stagnant reservoir near the lake, emergence, 3.06.2006; - **[59]**: 10.07.2003; copulation, oviposition, 21.07.2003; 29.05.2005; - **[67]**: emergence, 4.07.2003; 5., 7., 17., 24.07.2003; immature specimen, 27.05.2005.

Lestes macrostigma (Eversmann, 1836)

Literature data: [Kharkiv]: 06.1876 (Rodzyanko, 1895). - **[47]**: larvae, exuvia, imago, eggs (Martynov & Martynov, 2007a, b), (Martynov & Martynov, 2007 (2008));

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [territory of Kharkiv]: June 1876;

- Original data:
  [47] (Fig. 8): larvae, mass emergence, 25.05.2005; abundant, copulation, 27.06.2005; larvae, 23.03.2006; larvae, 25.04.2006; larvae, mass emergence, sex ratio 1 : 1 (64♂♂ : 60♀♀), 3.06.2006; copulation, 28.06.2006;

Sympecma fusca (Vander Linden, 1820)

Literature data: **[37]**: (Ivanov, 1876). - **[98]**: 27.07.2001, 9.06.2003 (Martynov & Martynov, 2004); - [Kharkiv province]: (Rodzyanko, 1895). - **[9]**: (Zakharenko, 1951). - **[99]**: (Ridei et al., 2007). - [Kupians'k]: (Yaroshevsky, 1881).

- Original data: **[39]**: 9.08.2002; - **[40]**: 22.09.2002; - **[44]**: 4.05.2005; - **[57]**: glades, 22.07.2003; - **[62]**: 10., 11.07.2003; - **[67]**: emergence, 17., 19.07.2003; - **[81]**: 31.08.2002; 4.04.2003; - **[82]**: 23.09.2001; - **[92]**: immature specimen, 17.05.2009;

Sympecma paedisca (Brauer, 1877)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[37]**: (Ivanov, 1876). - **[98]**: 27.07.01 (Martynov & Martynov, 2004); - **[99]**: floodplain, 9-10.06.2003; 4.10.2002 (Martynov & Martynov, 2004); (Ridei et al., 2007); - **[100]**: copulation, oviposition, mass oviposition, 15.05.2003; 16.09.2001 (Martynov & Martynov, 2004); - **[102]**: 21.08.2002 (Martynov & Martynov, 2004).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: 15.08.1977 (Fajnschtein leg.); - **[37]**: 28.08.1888; (Ivanov leg.).

- Original data: **[18]**: pine forest on the sands, 20.08.2009; - **[31]**: 22.05.2009; - **[36]**: 20.05.2009; - **[37]**: 20.05.2009; - **[39]**: 9.08.2002; 22.09.2002; - **[40]**: 22.09.2002; 18.05.2003; - **[41]**: abundant, oviposition, Severskyi Donets's feeder, 2.05.2005; - **[50]**: steppe area, 30.03.2008; - **[57]**: 2.05.2008; - **[57]**: abundant, 3.05.2008; - **[58]**: wet meadow near river, (Sergeev leg.), 6.05.2006; emergence, 22.07.2003; - **[67]**: 18.07.2002; emergence, 4., 17., 19.07.2003; 5., 6., 7.07.2003; - **[74]**: 18.05.2003; 13.05.2007 (Malceva leg.);

23-25.05.2008; - **[81]**: 2.04.2002; 3., 12.05.2002; 31.08.2002; - [92,93]: river Ajdar and glades in the alluvial forest, 17.05.2009.

Platycnemis pennipes (Pallas, 1771)

Literature data: **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - [rivers Severskyi Donets and Lopan']: larvae (Solodovnikov, 1929). - **[17]**: lake Snit'kove, 1931 (Solodovnikov, 1940). - **[98]**: 25.07.2001 (Martynov & Martynov, 2004); - **[85]**: oviposition 27, 7.07.2002 (Martynov & Martynov, 2004); - **[99]**: glades along former riverbed, oviposition, 11.06.2003; glades, 9.06.2003; emergence, 25.06.2004 (Martynov & Martynov, 2004); (Ridei et al., 2007); - **[102]**: 21.08.2002; flood plain forest, meadow, 19.06.2002 (Martynov & Martynov, 2004); - **[104]**: 19-20.06.2003; 22.06.2002 (Martynov & Martynov, 2004); - **[106]**: 11.05.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[9]**: (Zakharenko, 1951). - **[104]**: 1908 (Zograf, 1909); (Ridei et al., 2007). - **[60]**: (Ridei et al., 2007). - [Kharkiv]: var. *lactea* & var. *bilineata* (Yaroshevsky, 1881). - [Slovians'k]: var. *lactea* & var. *bilineata* (Yaroshevsky, 1881). - [Kupians'k]: var. *lactea* & var. *bilineata* (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [territory of Kharkiv]: 1873; 1878; - **[25]**: 1.08.1972.

- Original data: **[16]**: 17.08.2008 (Nikulina leg.); 16-17.08.2009; larvae, 16.08.2009; larvae, 19.08.2009; - **[29]**: immature specimen, 28.05.2007 (Malceva leg.); - **[38]**: 9., 10., 11., 13.08.2002; copulation, 22., 27.06.2007; larvae, 23.06.2007; 25.06.2008; emergence, copulation, oviposition, 27-28.06.2008; - **[39]**: 10-11., 13.08.2002; immature specimen, 20.07.2003; 25.06.2007; - **[40]**: 26.06.2008; - **[43]**: abundant, copulation, 26-27.05.2007; larvae, 26.05.2007; copulation, oviposition, 8.06.2008; - **[54]**: immature specimen, 15., 29.05.2005 (Sova leg.); - **[57]**: copulation, 12.07.2004; - **[60]**: oviposition, 14.07.2002; emergence, copulation, 23.07.2003; 29.05.2005; - **[60]**: oviposition, 21.07.2002; - **[62]**: 24.07.2002; copulation, 10.07.2003; - **[63]**: 20.07.2002; 8.07.2003; - **[64]**: copulation, 16.07.2007; - **[65]**: oviposition, 22.07.2002; - **[66]**: oviposition, 2., 5-6., 11.07.2002; emergence, oviposition, 9.07.2003; 16., 18.07.2002; emergence, oviposition, 25.07.2002; oviposition 27., 30.07.2002; copulation, oviposition, emergence, sex ratio = 1:1,2 (125♂♂ : 102♀♀) 3.07.2003; 19., 21.07.2003; sex ratio = 1:1 (56♂♂ : 54♀♀), oviposition into *Potamogeton lucens* L., 24.07.2003; abundant, 22-23.07.2005; copulation, emergence, 17.07.2007; - **[67]**: oviposition, 22.07.2002; - **[68]**: mass, emergence, copulation, oviposition, 4.07.2002; copulation, oviposition, 17.07.2007; - **[70]**: oviposition, 23.07.2002; - **[74]**: 4-5.07.2007; - **[75]**: oviposition, 31.05.2003; emergence, copulation, 4-5.07.2007; emergence, 4.06.2009; - **[76]**: emergence, 4.06.2009; - **[77]**: 15.08.2003 (Malceva leg.); - **[80]**: emergence, copulation, 21.06.2005; - **[82]**: 31.08.2002; - **[85]**: emergence, copulation, 10., 19., 27.07.2002; 8.07.2003; -

[91]: larva, 18.05.2009; - **[94]**: larvae, 19.04.2009; - **[96]**: larva, 19.04.2009; - **[98]**: 27.07.2001; - **[99]**: emergence, oviposition, 24., 27.06.2004; - **[100]**: 10.06.2003; 26.05.2004; - **[102]**: oviposition, emergence, 10.06.2003; - **[104]**: 22.07.2000 (Martynov V. leg.); 19-20.06.2003 (Sergeev leg.); - **[107]**: larvae, 14.05.2009.

Aeshna affinis Vander Linden, 1820

Literature data: **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [river Udi]: larvae (Solodovnikov, 1929). - [vicinity of Kharkiv]: imago (Solodovnikov, 1929). - **[86]**: 7.07.2002; 27.07.2002 (Martynov & Martynov, 2004); - **[99]**: 26.06.2004 (Martynov & Martynov, 2004); - (Ridei et al., 2007). – **[104]**: 1908 (Zograf, 1909). - [vicinity of Kharkiv]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [vicinity of the Kharkiv]: 7.07.1876, in copule. - **[9]**: 10.08.1933.

- Original data: **[39]**: 9-13.08.2002; 10-13.08.2002; 8.07.2008; - **[49]**: 29.08.2005; - **[62]**:, glades overgrown with *P. australis*, near the water, 20., 21.07.2002; bank of the boggy water body, 24.07.02.; - **[65]**: 22.07.02; - **[66]**: 22.07.2002; - **[67]**: 19.07.03; 25.07.2003; - **[79]**: (Sergeev leg.), 25., 26.06.2004; - **[82]**: 1.07.2009 (Martynov V. leg.); - **[85]**: 19.07.2002; 10.07.2002; 27.07.2002.

Aeshna mixta Latreille, 1805

Literature data: **[39]**: larva (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[37]**: (Ivanov, 1876). - **[99]**: 16.09.2001 (Martynov & Martynov, 2004). - **[13]**: pond № 4 (Zakharenko, 1956). - **[10]**: (Sinitsa, 1929). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: 19.08.1977, 4♀♀, 2♂♂ (Fajnschtein leg.); 21.08.1977, 2♀♀, 2♂♂ (Fajnschtein leg.). - **[9]**: 10.08.1939. - **[14]**: 4.09.1962. - [Kharkiv]: 23.07.1974; 2.07.1970 (Zolotarev leg.). - [vicinity of Kharkiv]: 30.08.1881; 19.07.2009 (Redikovtcev leg.). - **[1]**: 31.08.1987 (Boronnikova leg.).

- Original data: **[38]**: 22.09.2002; - **[39]**: glades in the floodplain of the river Severskyi Donets, pine forest, 9-11.08.2002; 10-12.08.2002; - **[40]**: 22.09.2002; - **[48]**: 25.09.2005; - **[49]**: 29.08.2005; - **[61]**: 21.07.2003; - **[62]**: border between psammophyte steppe and pine forest, 20.07.2002; - **[81]**: 26.09.2004; - **[82]**: mass aggregation in a glade, 28.07.2003; - **[87]**:

21.07.2003; - **[99]**: 16.09.2002; - **[16]**: 16., 18.08.2009; - **[17]**: larva, 16.08.2009.

Aeshna juncea (Linnaeus, 1758)

Literature data: **[39]**: sandpit, (Oliger, 1985). - **[37]**: (Ivanov, 1876). - [Kupians'k]: (Yaroshevsky, 1881).

- Original data: none.
  A. juncea must be considered as accidental immigrant from neighbour territories into the salt marshes. Its true status within those areas needs further verification as larvae reported by Oliger (1975b) are not longer available for reviewing.

Aeshna serrata Hagen, 1856

Literature data: [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[39]**: (Oliger, 1985).

- Original data: none.
  We assess the occurrence of A. serrata in the river Severskyi Donets region as quite unlikely as well as an occurrence within the boundaries of Ukraine. Voucher specimens are urgently required.

Aeshna viridis Eversmann, 1836

Literature data: [Kupians'k]: (Yaroshevsky, 1881). **[37]**: (Ivanov, 1876).

- Original data: none.

Aeshna grandis (Linnaeus, 1758)

Literature data: [Kupians'k]: (Yaroshevsky, 1881), (Rodzyanko, 1895). **[37]**: (Ivanov, 1876). (Rodzyanko, 1895).

- Original data: none.

Anaciaeschna isoceles (Müller, 1767)

Literature data: **[37]**: (Ivanov, 1876). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881). - **[39]**: larva (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Udi, river Severskyi Donets]: larvae (Solodovnikov, 1929). - **[16]**: – imago (Solodovnikov, 1929). - **[100]**: 25., 27.06.2004; 9.06.2003 (Martynov & Martynov, 2004). - **[99]**: (Ridei et al., 2007).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[2]**: 30.05.2005, 1♂ (Guglya leg.). - **[16]**: 23.05.1925; 3.07.1924 (Solodovnikov leg.).- **[14]**: 27.05.1961; 27.05.1963.

- Original data: **[16]**: section without visible current, 1 larva, 19.08.2009; - **[30]**: immature specimen, 22.05.2009; - **[38]**: 22.06.2007; 27.06.2008; - **[40]**: glades in the floodplain of the river Severskyi Donets, 26.06.2008; - **[42]**:

emergence 6.06.2008; 7.06.2008; - **[43]**: wet meadow, 27.05.2007; lakes, 6.06.2008; 7.06.2008; - **[43]**: copulation, 26.05.2007; 8.06.2008; - **[49]**: few specimens, 25.05.2005; - **[54]**: 15.05.2005 (Sova leg.); - **[60]**: 29.05.2005; - **[68]**: abundant, oviposition, 4.07.2002.; - **[73]**: copulation 31.05.2003; - **[74]**: hunting, abundant, 8.06.2005; emergence, 23-25.05.2008; immature, 23-25.05.2008; - **[75]**: 4-5.07.2007, emergence, copulation, 4.06.2009; 7.06.2009; - **[80]**: glades in the forest, 14.06.2003; - **[81]**: 26.05.2002; 30.05.2004; - **[94]**: larvae, 19.04.2009; - **[100]**: 26.05.2004.

Anax imperator Leach, 1815

Literature data: **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [rivers Severskyi Donets, Lopan', Udi]: larvae (Solodovnikov, 1929). - **[17]**: 1931 (Solodovnikov, 1940). - **[9]**: (Zakharenko, 1951). - **[37]**: (Ivanov, 1876). - **[38]**: (Oliger, 1975). - **[85]**: copulation 10.07.2002; glades, 27.07.02. (Martynov & Martynov, 2004). - **[99]**: 16.09.2001; 25.06.2004; 9.06.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[104]**: 1908 (Zograf, 1909). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[49]**: 10.06.1886.

- Original data: **[16]**: larva, 17-18.08.2009; - **[27]**: 6.07.2004; - **[38]**: 22.06.2007; oviposition, 25.06.2007; emergence, oviposition, 25.06.2008; oviposition, 27.06.2008; larvae, 26.05.2007; - **[39]**: 13.08.2002; 20.07.2003; - **[42]**: 28.05.2007; wet meadow and lakes, 27.05.2007; 6.06.2008; hunting, 8.06.2008; - **[43]**: oviposition, 26.05.2007; oviposition, 8.06.2008; - **[48]**: common, 25.05.2005; - **[49]**: larvae 17.02.2007, emergence in the laboratory 15.05.2007; - **[57]**: 12.07.2004; - **[58]**: 22.07.2003; - **[60]**: 14.07.2002; - **[61]**: boggy sections, oviposition, 21.07.2002; - **[66]**: 5.07.2003; oviposition 22., 30.07.2002; oviposition, 2.07.2002; oviposition 6.07.2002; - **[67]**: emergence, 17.07.2003; oviposition, 6.07.2003; oviposition 9.07.2002; wet meadow, oviposition, 5.07.2002; - **[70]**: oviposition 23.07.2002; - **[74]**: copulation, 4-5.07.2007; hunting, abundant, 8.06.2005; 3.06.2007 (Malceva leg.); abundant far from water, hunting for immature *A. isoceles*, 31.05.2003; - **[75]**: copulation, 4.06.2009; - **[80]**: abundant in glades, preying on a deformed *Orthetrum coerulescens* and honey bee, 14.06.2003; mass aggregation above the glades 2-3.06.2003; 03.06.2003 (Pisarenko leg.); - **[81]**: 26.05.2002; - **[90]**:1 larva, 18.04.2009; - **[94]**: 1 larva, 19.04.2009; - **[94]**: 2 larvae, 19.04.2009; - **[99]**: 11.06.2003; 27.06.2004; - **[100]**: 10.06.2003; hunting low above the grass, 25., 26.05.2004; 27.06.2004; oviposition, males patrol areas in 50-60 m^2 and chase other big Odonata. Female preyed mature *Gomphus vulgatissimus* and devoured his head and thorax, 9.06.2003.

Anax parthenope (Selys, 1839)

Literature data: **[38]**: larvae (Oliger, 1975a). - **[99]**: 24-25.06.2004 (Martynov & Martynov, 2004), (Ridei et al., 2007).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[5]**: 06.1969 (Zolotarev leg.).

- Original data: **[38]**: 25., 27.06.2008; oviposition, 27.06.2008; 1.07.2007; - **[49]**: 25.05.2005; emergence in the *P. australis*, 3.06.2006; - **[74]**: steppe areas, hunting, abundant, 8.06.2005; emergence, 23-25.05.2008; immature specimen, 23-25.05.2008; - **[75]**: 31.05.2003; oviposition, 4.06.2009;- **[80]**: abundant in glades, 14.06.2003; 21.06.2005; - **[99]**: abundant, males patrol along banks, oviposition, 24.06.2004; 27.06.2004; - **[100]**: hunting low above the grass vegetation, 25., 26.05.2004; 27.06.2004.

Brachytron pratense (Müller, 1764)

Literature data: **[37]**: (Ivanov, 1876). - [Kupians'k]: (Yaroshevsky, 1881). - **[39]**: (Oliger, 1985). - [16, rivers Udi and Severskyi Donets]: larvae (Solodovnikov, 1929). - **[10]**: (Sinitsa, 1929).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[2]**: near the pond, 30.05.2005 (Guglya leg.). - **[37]**. – **[16]**: 10.05.1925 (Solodovnikov leg.); 3.06.1974.

- Original data: **[42]**: 27.05.2007; lakes, 27.05.2007; - **[43]**: immature specimen, 1.05.2005; 2.05.2005; - **[54]**: 15.05.2005 (Sova leg.); - **[57]**: 29.04.2008; - **[57]**: glades and meadows, exuvia on the vegetation above the water suface, 3.05.2008; - **[93]**:17.05.2009.

Cordulia aenea (Linnaeus, 1758)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [rivers Udi and Severskyi Donets, small ponds]: larvae (Solodovnikov, 1929). - **[17]**: (Solodovnikov, 1940). - **[37]**: (Ivanov, 1876). - **[100]**: 11.06.2003 (Martynov & Martynov, 2004). - **[14]**: (Rodzyanko, 1889). - **[9]**: (Zakharenko, 1951). - **[10]**: (Sinitsa, 1929). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[3]**: 15.05.2005 (Kryvolapov leg.). - **[32]**: 28.05.2007 (Guglya leg.). - [territory of the Kharkiv]: 15.05.1874. - **[17]**: 10.05.1925 (Solodovnikov leg.) - [territory of the Kharkiv]: 11.06.1886. - **[14]**: 27.05.1963. - **[16]**: 7.05.1925.

- Original data: **[29]**: 28.05.2007 (Malceva leg.); - **[31]**: copulation, 22.05.2009; - **[36]**: immature and mature specimens, 20.05.2009; - **[37]**: immature specimen, 20.05.2009; - **[38]**: 27.06.2006; 22.06.2007; 1.07.2006; - **[38]**: 27.06.2008; 27.06.2008; - **[39]**: hunting along the forest edges and in glades, 28.06.2008; - **[40]**: glades, 26.06.2008; - **[42]**: 27.05.2007; 6.06.2008;

patrolling above water surface along bushes, 6.06.2008; hunting in the shadows of trees above the meadows, 7-8.06.2008; - **[43]**: 8.06.2008; - **[54]**: 15.05.2005 (Sova leg.); immature specimen, 10.05.2007 (Sova leg.); - **[55]**: glades, abundant, 29.04.2008; - **[57]**: mass emergence up to 1,5 m high above the water, 29.04.2008; mass emergence, 2.05.2008; - **[57]**: mass emergence, 3.05.2008; - **[64]**: dead specimen in the water, 3.05.2007; - **[64]**: larva, lakes on the black alder bogs; - **[67]**: meadows, 2.05.2005 (Sergeev leg.); - **[74]**: 23-25.05.2008; - **[92]**: immature and mature specimens, 17.05.2009; - **[93]**: imago and exuvia, 17.05.2009.

Somatochlora metallica (Vander Linden, 1825)

Literature data: [river Lopan', 10]: larvae (Solodovnikov, 1929). - **[37]**: (Ivanov, 1876). - **[10]**: (Sinitsa, 1929). - **[42]**: only one specimen, 27.05.2007 (Martynov & Martynov, 2009). - [vicinity of Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [vicinity of the Kharkiv] 06.1874.

- Original data: none.

Somatochlora flavomaculata (Vander Linden, 1825)

Literature data: **[37]**: (Ivanov, 1876). - [Donbass]: (Oliger, 1975b). - [Kupians'k]: (Yaroshevsky, 1881).

- Original data: none.

Epitheca bimaculata (Charpentier, 1825)

Literature data: [rivers Udi and Severskyi Donets, 16]: larvae and imago (Solodovnikov, 1929). - **[17]**: 1931 (Solodovnikov, 1940).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[3]**: 15.05.2005 (Kryvolapov leg.).

- Original data: **[57]** (Fig. 15): immature specimen, larvae, exuvia, 29.04.2008; mass emergence above the water and on the banks, sex ratio at emergence 1 : 1, larvae, exuvia, 2.05.2008.

Gomphus vulgatissimus (Linnaeus, 1758)

Literature data: **[12]**: (Yaroshevsky, 1881). - **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [rivers Udi and Severskyi Donets, 16]: larvae and imago (Solodovnikov, 1929). - **[37]**: (Ivanov, 1876). - **[102]**: flood plain forest, 11.05.2002 (Martynov & Martynov, 2004). - **[99]**: young imago hunt in the canopy of trees, 15.05.2003; glades and alluvial forest, 10.06.2003 (Martynov & Martynov, 2004). - **[38]**: (Rodzyanko, 1889). - [60, 99]: (Ridei et al., 2007). - [vicinity of Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Fig. 15: Typical habitat of Epitheca bimaculata (lake Pidpisochne near village Dibrova).

- Original data:
  [29]: 28.05.2007 (Malceva leg.); - **[37]**: exuvia, 20.05.2009; - **[38]**: section along the bank overgrown with water vegetation, larvae 23.06.2007; 27-28.06.2008; - **[40]**: 26.06.2008; - **[43]**: copulation, larvae, 26.05.2007; glades, abundant, 27., 28.05.2007; emergence, copulation, 8.06.2008; - **[49]**: glades, 25.05.2005; - **[54]**: mass emergence, 30.04.2008; - **[54]**: floodplain 15.05.2005 (Sova leg.); 12.07.2007; - **[60]**: 29.05.2005; - **[64]**: larvae, 30.04.2007; larvae, 5.05.2007; - **[66]**: emergence, 5.07.2003; mass emergence, 9.05.2007 (Sergeev leg.); glades, immature and mature specimens, 18.05.2007 (Amolin leg.); - **[82]**: 30.05.2004; - **[91]**: exuvia, 18.05.2009; - **[92]**: glades in flood plain forest, immature and mature specimens, mass overnight stay on the trees and bushes in the floodplain, 17.05.2009; - **[94]**: larvae, 19.04.2009; - **[96]**: larvae, 19.04.2009; - **[97]**: larvae, 19.04.2009; - **[99]**: glades in alluvial forest, 9.06.2003; glades, along the roads, abundant, copulation, 10.06.2003; emergence, 11.06.2003; 13.06.2003; 11.08.2002 (Phoroschuk leg.); alluvial forest, 18.06.2003; - **[102]**: 13.05.2009; - **[107]**: 14.05.2009.

Gomphus flavipes (Charpentier, 1825)

Literature data: **[38]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [river Severskyi Donets]: imago and exuvia (Solodovnikov, 1929). - **[37]**: (Ivanov, 1876); 22.05.1888 (Rodzyanko, 1895). - **[99]**: 11.06.2003; mass emergence, larvae, 15.05.2003; emergence, 27.06.2004 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[104]**: 1908 (Zograf, 1909). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[37]**: 17.06.1867 (Ivanov leg.).

- Original data: **[27]**: floodplain meadows, immature specimen, 6.07.2004; - **[38]**: copulation, 22.06.2007; floodplain meadow, 25.06.2007; emergence, exuvia, 27., 28.06.2008; - **[43]**: emergence, 8.06.2008; - **[99]**: larvae, 26.06.2004.

Onychogomphus forcipatus (Linnaeus, 1758)

Literature data: **[104]**: common, 20.06.2002 (Martynov & Martynov, 2003, 2004); (Ridei et al., 2007).

- Original data: none.

Crocothemis erythraea (Brulle, 1832)

Literature data: **[67]**: 27.07.2002 (Martynov & Martynov, 2003);

- Original data: **[17]**: larvae, 16.08.2009; 20.08.2009; - **[57]**: 12.07.2003; - **[67]**: 6.07.2003; 17.07.2003; wet meadow 24.07.2003; - **[74]**: 4-5.07.2007; - **[75]**: 4-5.07.2007.

Leucorrhinia caudalis (Charpentier, 1840)

Literature data: **[39]**: (Oliger, 1985). - **[37]**: 2.03.1876 (Rodzyanko, 1889).

- Original data: none.

Leucorrhinia dubia (Vander Linden, 1825)

Literature data: **[39]**: (Oliger, 1985).

- Original data: none.

Leucorrhinia pectoralis (Charpentier, 1825)

Literature data: **[37]**: (Ivanov, 1876), (Gorb et al., 2000). - **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[17]**: 15.06.1924; 23.05(04).1925; - **[36]**: (Ivanov leg.); - [territory of Kharkiv]: 26.06.1874;

- Original data: **[39]**: 5.07.2009; - **[42]** (Fig. 16): copulation, 27.05.2007; 6.06.2008.

Fig. 16: Typical habitat of Leucorrhinia pectoralis (village Mayaki, former riverbed of the river Severskyi Donets).

Libellula depressa Linnaeus, 1758

Literature data: [rivers Lopan' and Udi, vicinity of Kharkiv, 6]: larvae (Solodovnikov, 1929). - **[35]**: (Ivanov, 1876). - **[99]**: (Ridei et al., 2007). - **[100]**: 18.06.2002; 9.06.2003; 25.06.2004 (Martynov & Martynov, 2004). - **[104]**: 21.06.2002 (Martynov & Martynov, 2004). - **[106]**: 11.05.2003 (Martynov & Martynov, 2004); (Ridei et al., 2007). - **[104]**: 1908 (Zograf, 1909); (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[4]**: 2.06.1959 (Paschenko leg.); - **[9]**: 20.05.1925 (Solodovnikov leg.); - **[32]**: glades in pine forest, 28.05.2007 (Guglya leg.); - [territory of Kharkiv]: 08.1910 (Zolotarev leg.);

- Original data: **[42]**: 28.05.2007; - **[74]**: oviposition, 31.05.2003; - **[78]**: 6.06.2004; - **[81]**: 26.05.2002; immature specimen, 16.05.2004; - **[82]**: 1.06.2003; immature specimen, exuvia, 30.05.2004; 3.06.2007; - **[100]**: 9., 10.06.2003; 25.05.2004; 24.06.2004.

Libellula fulva Müller, 1764

Literature data: [rivers Severskyi Donets and Udi, 16]: larvae and imago (Solodovnikov, 1929). - **[85]**: 19., 10.07.2002 (Martynov & Martynov, 2004). - **[37]**: 8.06.1887 (Rodzyanko, 1889). - **[60]**: (Ridei et al., 2007).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[2]**: 30.05.2005 (Guglya leg.); - **[17]**: 21.06.1924; 23.05.1925 (Solodovnikov leg.); - **[32]**: glades in pine forest 28.05.2007 (Guglya leg.).

- Original data: **[29]**: 28.05.2007 (Malceva leg.); - **[38]**: copulation, 27.06.2008; - **[40]**: 26.06.2008; - **[42]**: 28.05.2007; 8.06.2008; - **[49]**: abundant, 25.05.2005; - **[54]**: floodplain of the river Severskyi Donets 12.07.2007 (Sova leg.); - **[62]**: glades overgrown with *P. australis*, 20.07.2002; 21.07.2002; - **[74]**: abundant, 8.06.2005; emergence, 23-25.05.2008; - **[75]**: 31.05.2003; copulation, 4.06.2009; 7.06.2009; - **[80]**: 28.05.2007 (Nikulina leg.); - **[81]**: exuvia, 2.05.2004; 3.07.2007; 28.03.2010; - **[82]**: immature specimen, 30.05.2004; 11.06.2006 (Sergeev leg.); - **[83]**: immature specimen. 19.05.2009; - **[92]**: larvae 17.05.2009.

Libellula quadrimaculata Linnaeus, 1758

Literature data: **[12]**: (Yaroshevsky, 1881). - **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [river Udi, 10, 16]: larvae and imago (Solodovnikov, 1929). - **[37]**: (Ivanov, 1876); (Rodzyanko, 1889). – **[88]**: alluvial forest 7.07.2002 (Martynov & Martynov, 2004); - **[100]**: 25.06.2004 (Martynov & Martynov, 2004). - **[10]**: (Sinitsa, 1929). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[4]**: 2.06.1959 (Paschenko leg.); - [vicinity of Kharkiv]: 05.1994; - [Kharkiv]: 3.05.1925; 7.05.1925.

- Original data: **[41]**: 2.05.2005; - **[42]**: 28.05.2007; 6.06.2008; - **[49]**: glades, 25.05.2005; - **[74]**: 23-25.05.2008; - **[81]**: immatures, 12., 26.05.2002; - **[93]**: 17.05.2009; - **[100]**: 25.05.2004.

Orthetrum cancellatum (Linnaeus, 1758)

Literature data: **[39]**: (Oliger, 1985). - [rivers Lopan', Udi, Severskyi Donets]: larvae and imago (Solodovnikov, 1929). - **[100]**: abundant, 9.06.2003; 12.06.2003; 27.06.2004 (Martynov & Martynov, 2004); - **[86]**: 27.07.2002 (Martynov & Martynov, 2004); - **[102]**: wet meadow, 1.06.2002 (Martynov & Martynov, 2004). - [vicinity of the Kharkiv]: (Rodzyanko, 1889). - **[99]**: (Ridei et al., 2007). - [vicinity of Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[14]**: 20.06.1962.

- Original data: **[38]**: wet meadow, 25.06.2007; - **[48]**: 25.05.2005; - **[49]**: 25.05.2005; emergence, copulation, 3.06.2006; 28.06.2006; - **[57]**: emergence, 12.07.2004; - **[58]**: 22.07.2003; - **[63]**: 5.07.2002; - **[67]**: 6.07.2003; steppe area, immatures, 17.07.2003; - **[74]**: emergence, 31.05.2003; 8.06.2005; immatures, 3.06.2007 (Malceva leg.); 4-5.07.2007; 23-25.05.2008; - **[75]**: emergence, 4.06.2009; - **[78]**: small stagnant reservoir, immatures, 6.06.2004; - **[82]**: 1-2.06.2003; 4.07.2005; - **[99]**: glades, 10.06.2003; copulation, 11.06.2003; larvae, 14.05.2009; - **[100]**: 26-27.05.2004; copulation, 24.06.2004; - **[104]**: 10., 12.08.2002 (Phoroschuk leg.).

Orthetrum brunneum (Fonscolombe, 1837)

Literature data: **[85]**: 10.07.2002 (Martynov & Martynov, 2004). - **[104]**: 1908 (Zograf, 1909).

- Original data: **[63]**: 21.07.2002; - **[71]**: 15-16.06.2008; - **[82]**: 21.07.2007 (Malceva leg.); immature specimen, 26.05.2002.

Orthetrum coerulescens anceps (Schneider, 1845)

Literature data: **[86]**: 7.07.2002 (Martynov & Martynov, 2004).

- Original data: **[33]**: larvae, 22.05.2009; - **[46]**: larvae, 5.04.2009 (Styblecov leg.); - **[61]**: oviposition 21.07.2002; - **[63]**: 20.07.2002; - **[64]**: 16.07.2007; - **[74]**: 8.06.2005; - **[75]**: 7.09.2008; emergence, 4.06.2009; 7.06.2009; - **[79]**: 25.06.2004 (Sergeev leg.); - **[80]**: in glades, abundant, immature and mature specimens, 10., 14.06.2003; glades, immatures, 21.06.2005; - **[82]**: emergence, 28.07.2003; immatures, 9.06.2004; copulation, 20.07.2004; 20.08.2004; immature specimen, 4.07.2005; 26.08.2006; - **[85]**: glades, 27.07.2002.

Orthetrum albistylum (Selys, 1848)

Literature data: **[38]**: (Oliger, 1985). - [river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[85]**: oviposition, 7.07.2002; 19.07.02 (Martynov & Martynov, 2004); - **[86]**: 7.07.2002 (Martynov & Martynov, 2004); - **[100]**: 12.06.2003; emergence, 24., 27.06.2004 (Martynov & Martynov, 2004); - **[102]**: 21.08.2002 (Martynov & Martynov, 2004). - **[45]**: 6.06.1878 (Rodzyanko, 1895); - **[37]**: 20.06.1881 (Rodzyanko, 1889). - **[104]**: 1908 (Zograf, 1909). - **[99]**: (Ridei et al., 2007).

- Original data: **[38]**: glades, 9., 13.08.2002; 27.06.2008; - **[49]**: 29.08.2005; - **[54]**: 12.07.2007(Sova leg.); - **[57]**: emergence, 12.07.2004; - **[60]**: oviposition 14.07.2002; 29.05.2005; - **[61]**: oviposition, 21.07.2002; - **[63]**: glades, 20.07.2002; - **[65]**: 22.07.2002; - **[66]**: 2.07.2002; oviposition 6., 27., 30.07.2002; 17.07.2007; emergence, exuvia, 3.07.2002; 25.06.2009; - **[67]**: abundant, copulation and oviposition, 5.07.2002; oviposition, 9.07.2002; 22., 28.07.2002; - **[68]**: emergence, 2.07.2002; emergence, exuvia, 3.07.2002; -

[74]: copulation, 4-5.07.2007; - **[75]**: emergence, 4.06.2009; - **[79]**: immature specimen, 25.06.2004 (Sergeev leg.); - **[81]**: 3.07.2007; - **[82]**: 3.07.2007; - **[85]**: oviposition, 10.07.2002; - **[99]**: oviposition, 24.06.2004; - **[100]**: 26., 27.05.2004.

Sympetrum pedemontanum (Müller in Allioni, 1766)

Literature data: **[99]**: 06-08.2001 (Martynov & Martynov, 2004). - [vicinity of Kharkiv]: (Rodzyanko, 1895). - **[99]**: (Ridei et al., 2007).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: 15., 19., 21.08.1977 (Fajnschtein leg.); - **[8]**: 13.08.1977 (Zolotareva, Proskurin leg.); - **[16]**: floodplain, 9.07.1963.

- Original data: **[79]**: immatures, 25.07.2004 (Sergeev leg.); 8.08.2004 (Sergeev leg.); - **[82]**: 23.09.2001; 31.08.2002; emergence, copulation, exuvia, 20.07.2004; 20.08.2004, 26.09.2004; emergence, 4.07.2005; 3.07.2007; 3.08.2008 (Sergeev leg.); 5.10.2008 (Sergeev leg.); - **[99]**: floodplain, summer 2001 (Phoroschuk leg.);

Sympetrum vulgatum (Linnaeus, 1758)

Literature data: **[12]**: (Yaroshevsky, 1881). - **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[37]**: (Ivanov, 1876). - **[13]**: (Zakharenko, 1956). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: 15., 19., 21.08.1977 (Fajnschtein leg.); - [vicinity of Slovians'k]: 18.06.1878; - **[14]**: 4., 11., 19.09.1962;

- Original data: **[16]**: 15.08.2008 (Nikulina leg.); - **[18]**: pine forest, 20.08.2009; - **[39]**: glades, 9.08.2002; 22.09.2002; - **[40]**: glades, 22.09.2002; glades, 26.06.2008; - **[60]**: 14.07.2002; - **[62]**: 24.07.2002; - **[67]**: 18., 22.07.2002; immature specimen, 19.07.2003; - **[68]**: 13.07.2002; - **[71]**: 31.07.2006 (Malceva leg.); - **[74]**: immature specimen, 4-5.07.2007; - **[75]**: 7.09.2008; - **[81]**: 31.08.2002; oviposition, 26.09.2004; - **[100]**: 9.10.2004.

Sympetrum meridionale (Selys, 1841)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[37]**: (Ivanov, 1876). - **[47]**: larvae, imago (Martynov & Martynov, 2007 (2008)). - **[85]**: 27.07.2002 (Martynov & Martynov, 2004); - **[98]**: 27.07.2001 (Martynov & Martynov, 2004); - **[100]**: 15.09.2001; 15.09.2002 (Martynov & Martynov, 2004); - **[102]**: 29.08.2004 (Martynov & Martynov, 2004); - **[104]**: 22.07.2002 (Martynov & Martynov, 2004). - [vicinity of Kharkiv]: (Rodzyanko, 1889). - **[104]**: 1908 (Zograf, 1909); (Ridei et al., 2007). - **[99]**: (Ridei et al., 2007). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[14]**:

19.07.1962; - **[25]**: 5.08.1962; 1.08.1972.

- Original data: **[17]**: 16-17.08.2009; - **[18]**: pine forest, 20.08.2009; - **[39]**: glades, 9., 11.08.2002; 22.09.2002; glades, 8.07.2008; 6.07.2009; - **[40]**: glades, 22.09.2002; - **[47]**: emergence, 28.06.2006; - **[54]**: floodplain, 19.07.2005 (Sova leg.); - **[59]**: emergence, 23.07.2003; - **[62]**: 24.07.2002; 10., 11.07.2003; - **[67]**: abundant, emergence, 5., 9.07.2002; 6.07.2002; steppe area, 22.07.2002; 27.07.2002; immature specimen, 3.07.2003; emergence, big aggregations up to 55 specimens per 10 m^2, 4.07.2003; mass emergence, 6.07.2003; emergence, 9., 17.07.2003; boggy meadow, 18.07.2003; 19.07.2003; - **[70]**: 23.07.2002; - **[82]**: 23.09.2001; - **[86]**: 27.07.2002; - **[87]**: immature specimen, 21.07.2003; - **[100]**: 21.08.2001; - **[102]**: steppe area, 22.08.2008 (Amolin leg.); - **[104]**: 22.06.2002.

Sympetrum flaveolum (Linnaeus, 1758)

Literature data: **[39]**: (Oliger, 1985). - **[37]**: (Ivanov, 1876). - **[100]**: pools, formed after Severskyi Donets's overflow, emergence, 9.06.2003; emergence, 12.06.2003 (Martynov & Martynov, 2004). - **[13]**: (Zakharenko, 1956). - **[104]**: 1908 (Zograf, 1909). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: (Fajnschtein leg.), 15., 19., 21.08.1977.

- Original data: **[27]**: immature specimen, 6., 8.07.2004 (Martynov V. leg.); - **[39]**: 1.07.2006 (Martynov V. leg.); 7.07.2008 (Nikulina leg.); - **[40]**: glades, immature specimen, 26.06.2008; - **[42]**: immature specimen, 28.05.2007; emergence, 7.06.2008; temporary stagnant reservoir (Fig.17), emergence, 7.06.2008; - **[54]**: floodplain, 12.07.2007 (Sova leg.); - **[59]**: 29.05.2005; - **[64]**: lake on the black alder swamp, larvae, 3.05.2007; - **[67]**: water meadow, 22., 24-25.07.2003; steppe area, 24-26., 28.07.2003; - **[100]**: 26.06.2005 (Malceva leg.).

Sympetrum striolatum (Charpentier, 1840)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - **[100]**: 25.05.2004 (Martynov V. leg.) (Martynov & Martynov, 2009).
Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [territory of Kharkiv] 4.09.1977 (Proskurin leg.). - **[14]**: in the forest 09.1962; forest edge, 24., 27-28.09.1962.

- Original data: **[39]**: 22.09.2002; - **[40]**: glades, 22.09.2002; - **[49]**: emergence, 28.06.2006; - **[60]**: immature specimen, 14., 25.07.2002; - **[62]**: emergence, 24.07.2002; - **[64]**: pine forest, 19.09.2009 (Nikulina leg.); - **[75]**: 7.09.2008; - **[80]**: 21.06.2005; - **[81]**: 26.09.2004; - **[82]**: 23., 30.09.2001; 5.10.2008 (Sergeev leg.); - **[101]**: 4.10.2008 (Amolin leg.).

Fig. 17: Typical habitat of Sympetrum flaveolum (vicinity of village Mayaki, temporary stagnant reservoir in the floodplain of Severskyi Donets).

Sympetrum sanguineum (Müller, 1764)

Literature data: **[39]**: larvae (Oliger, 1975a), (Oliger, 1985), (Gorb et al., 2000). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - **[37]**: (Ivanov, 1876). - **[85]**: glades 10, 19.07.2002; pine forest, glades 27.07.2002 (Martynov & Martynov, 2004); - **[88]**: flood plain forest, 7.07.2002 (Martynov & Martynov, 2004); - **[86]**: oviposition, 7., 10., 17.07.2002 (Martynov & Martynov, 2004); - **[98]**: 25., 27.07.2001 (Martynov & Martynov, 2004); - **[14]**: (Rodzyanko, 1889). - **[104]**: 1908 (Zograf, 1909). - **[99]**: (Ridei et al., 2007). - [Kharkiv]: (Yaroshevsky, 1881). - [Slovians'k]: (Yaroshevsky, 1881). - [Kupians'k]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: **[7]**: (Fajnschtein leg.), 19.08.1977; - [territory of the Kharkiv]: 25.07.1874; 28.08.1977 (Proskurin leg.).

- Original data: **[62]**: 6., 20., 21., 24.07.2002; 10.07.2003; - **[67]**: boggy meadow, 8., 18., 26.07.2003; copulation, oviposition, 19.07.2003; - **[66]**: glades, 6.07.2003; - **[65]**: 22.07.2002; - **[70]**: 23.07.2002; - **[60]**: oviposition,

14.07.2002; - **[65]**: 8.07.2003; - **[52]**: 28.06.1995 (Martynov V. leg.); - **[39]**: 9.08.2002; oviposition, 11., 13.08.2002; 3.06.2006; emergence, 28.06.2008; - **[38]**: floodplain, 1., 3.07.2006 (Martynov V. leg.); immature specimen, 25.06.2007; - **[54]**: floodplain, 16., 18.07.2006 (Sova leg.); 12.07.2007; - **[49]**: glades, 29.08.2005; glades, copulation, 25.09.2005; - **[40]**: emergence, 26.06.2008; - **[42]**: larvae, 27.05.2007; - **[99]**: floodplain, 21.08.2001; - **[27]**: immature specimen, 6., 8., 10.07.2004 (Martynov V. leg.); - **[16]**: 15., 17.08.2008 (Nikulina leg.); - **[36]**: larva, 21.05.2009; - **[17]**: 16-17.08.2009; - **[18]**: pine forest, 20.08.2009.

Sympetrum fonscolombii (Selys, 1840)

Literature data: **[100]**: 15.09.2001 (Martynov & Martynov, 2003, 2004), (Ridei et al., 2007).

- Original data: none.

Sympetrum danae (Sulzer, 1776)

Literature data: **[39]**: (Oliger, 1985). - [lakes in the floodplain of river Severskyi Donets within Doneks'ka oblast]: (Oliger, 1975b). - [vicinity of Kharkiv]: 5., 12.08.1874 (Rodzyanko, 1895). - **[37]**: 10.08.1880, 31.08.1888 (Rodzyanko, 1889). - [Kharkiv]: (Yaroshevsky, 1881).

Materials from Museum of nature of the Kharkiv University by V.N. Karazin: [vicinity of the Kharkiv]: 12.08.1874; - **[7]**: Fajnschtein, 15., 21.08.1977.

- Original data: **[51]**: larva, 23.05.2009 – this identification is based on larval characters only and needs confirmation.

Conclusions

Based on Literature data and personal research between 2001 and 2009, Odonata species number occurring in the basin of the river Severskyi Donets totals to 57. This high biodiversity is a result of the high diversity of different water bodies. Habitats driven by the existence of the extended alluvial forests within the basin (e.g. boggy swamps) trigger the high diversity of species more regularly found in northern regions: *Brachytron pratense, Epitheca bimaculata, Cordulia aenea, Somatochlora flavomaculata, S. metallica, Leucorrhinia dubia, L. pectoralis* and *L. caudalis*. With the exception of *C. aenea*, all these listed species are restricted within the territory of eastern Ukraine to the Severskyi Donets basin. But it should be noted that most of them require confirmation by a more thorough investigation.

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