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NEW RECORDS OF RARE ODONATA IN UKRAINE (INSECTA)

Нові знахідки рідкісних бабок України (Insecta). Матушкіна Н. – Наведено нові знахідки 16 рідкісних для України видів бабок, у томі числі двох червонокнижних (*Cercion lindenii*, *Calopteryx splendens taurica*). Для всіх видів зазначено ареали та наведено відомості щодо сучасного поширення на терені України, а для деяких видів також спостереження щодо їх екології та поведінки. *Leucorrhinia albifrons* та *Orthetrum coerulescens* вперше наведено для Криму, а *Calopteryx virgo* – для Чернігівської області; *Leucorrhinia rubicunda* вперше відмічено в Україні в післявоєнний період. Показано просування на північ афротропічного виду *Crocothemis erythraea*. Описано екземпляри з проміжними фенотипами *Chalcolestes parvidens/Ch. viridis* і *Calopteryx ancilla/C. intermedia*.

Новые находки редких стрекоз Украины (Insecta). Матушкина Н. – Приведены новые находки 16 редких для Украины видов стрекоз, в том числе двух краснокнижных (*Cercion lindenii*, *Calopteryx splendens taurica*). Для всех видов указаны ареалы и приведены данные о современном распространении на территории Украины, а для некоторых также экологические и поведенческие наблюдения; *Leucorrhinia albifrons* и *Orthetrum coerulescens* впервые указаны для Крыма, а *Calopteryx virgo* – для Черниговской области; *Leucorrhinia rubicunda* впервые отмечен на территории Украины в послевоенный период. Показано продвижение на север афротропического вида *Crocothemis erythraea*. Описаны экземпляры с промежуточными фенотипами *Chalcolestes parvidens/Ch. viridis* и *Calopteryx ancilla/C. intermedia*.

Current distribution of Odonata in Ukraine is documented insufficiently, regardless of the large body size and relatively low species diversity in this insect group. However, the mapping of dragonflies localities and their long-term monitoring are required for determination of threatened species of dragonflies and for planning the suitable protecting in the several region.

In all 71 species are listed in dragonfly fauna of Ukraine. The presence of another two species is doubtful [3]. The six species are included in the Red Data List of Ukraine now: *Cercion lindenii* (Selys, 1840) and *Coenagrion mercuriale* (Charpentier, 1840) with the status of 1st category of conservation, and *Calopteryx virgo* (Linnaeus, 1758), *C. splendens taurica* Selys, 1853, *Anax imperator* Leach, 1815, and *Cordulegaster annulatus* (Latrielle, 1805), with the status of 3rd category of conservation [11]. The one dragonfly species, *Aeshna viridis* Eversmann, 1836, is listed in the IUCN

Red List of threatened species with LR/nt (lower risk: near threatened) status of category of conservation, and another three species, *Leucorrhinia albifrons* (Burmeister, 1839), *Leucorrhinia caudalis* (Charpentier, 1840), *Ophiogomphus cecilia* (Geoffroy, 1785), – with LR/lc status (lower risk: least concern) [4]. The 29 species are noted as rare for particular regions according to faunistic review of Gorb and all. [3], that comprised more than one third of all registered in Ukraine odonata species. It is possible, that such "rareness" of some species is caused by deficiency of current observations of the dragonflies in some territories in fact.

Distribution of the dragonflies was studied predominately in some north-eastern, eastern and southern regions of Ukraine lately [6; 9; 1; 2 and others]. New unpublished records of sixteen rare species of dragonflies, based on 278 specimens, collected by author and colleagues in North, Central and South Ukraine during 1996–2005 are presented here. Some records contain a notes about ecology and behaviour, that were observed by author. Notes on the biogeographic affinities and distribution on the territory of Ukraine were added for all species. The imagines were captured by standard entomological net, the exuvium of *Crocothemis erythraea* was collected from hydrophytic plant (*Carex* sp.), and larvae and exuviae of *Stylurus flavipes* were picked up on the clay river bank. The materials are deposited in the entomological collection at zoological department of Kiev National Taras Shevchenko University.

I am very thankful to V.Gorobchishin, D.Lukashov, Yu.Procenko (Kiev National Taras Shevchenko University), and A.Gumovsky (Schmalhausen Institute of Zoology, Ukrainian National Academy of Sciences) for collecting of the some materials.

List of records

Calopteryx splendens taurica Selys, 1853

Material. ♂, ♀, Crimea Province, Phaeodosiya District, surroundings of village Prymors'ke, Otuska river, 26,27.07.2005 (Gumovsky).

Note. Crimean endemical subspecies, regarded by some authors as the distinct species *Calopteryx taurica*.

Calopteryx splendens var. *ancilla* Selys, 1853

Material. 3♂, Odessa Province, Ismail District, Tataru island, Danube Delta, 1–10.07.2003 (Procenko).

Note. Rare south-eastern variety of West-Eurasian species *Calopteryx splendens* with dark winged androchromatypic females. Some authors regard it as a distinct subspecies of *Calopteryx splendens* or as a separate species *Calopteryx ancilla*. On the territory of Ukraine was collected sporadically in the many regions before the thirties of the 20th century. Recent population is reliable recorded only in Danube Delta.

Calopteryx intermedia Selys, 1887 (?)

Material. ♂, Odessa Province, Ismail District, Tataru island, Danube Delta, 1–10.07.2003 (Procenko).

Note. Asiatic species with dark winged androchromatypic females. Some authors regard it as subspecies of *Calopteryx splendens*. On the territory of Ukraine was not recorded earlier. The only studied specimen possesses the intermediate *ancilla/intermedia* coloration of wings (fig. 1), therefore it may present the unusual phenotype of *Calopteryx splendens ancilla*.

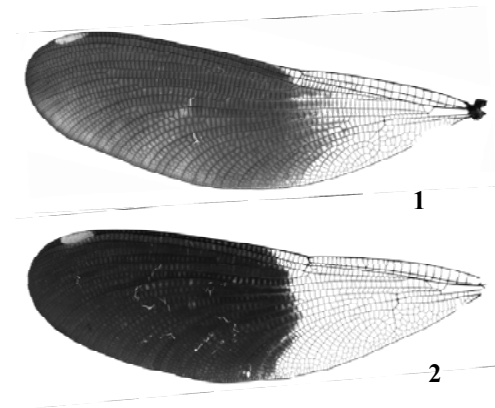


Fig.1. Hind wings of some *Calopteryx* female: 1) typical coloration for *Calopteryx splendens ancilla* ♀; 2) the coloration is similar to *C. intermedia*

Calopteryx virgo (Linnaeus, 1758)

Material. ♀, Chernyiv Province, surroundings of Nedanchichi, Dnieper river, 01.06.2005 (Lukashov).

Note. Palaearctic-Afrotropical-Oriental species with very mosaic distribution on the territory of Ukraine. Rare in Ukraine on the whole, and but common in the some localities [3]. This is a first finding of *C. virgo* in the Chernigov administrative district.

Chalcolestes (Lestes) parvidens Artobolevsky, 1929 (?)

Material. 3♂, Odessa Province, Ismail District, Tataru island, Danube Delta, 20–29.08.2005 (Procenko).

Note. East-Mediterranean species, regarded earlier as subspecies of *Chalcolestes viridis*. Recent established populations are recorded on the territory of Ukraine in Danube Delta and Middle Dnieper [7; 2]. Some of the studied specimens possess the intermediate *viridis/parvidens* features of the ovipositor (fig. 2).

Lestes macrostigma (Eversmann, 1836)

Material. 92♂, 86♀, mass hatching of imagines, oviposition, Kherson Province, Golopristsansky District, surroundings of village Rybal'che, saga, 15–29.06.2005, (Gumovsky).

Note. Eurasian species. In Ukraine is widespread only in the southern regions and Crimea. Single findings were recorded also in basins of rivers South Bug and Dniester as well as in Donetsk and Kharkov districts [3].

Cercion lindenii (Selys, 1840)

Material. 4♂, ♀, Kherson Province, Golopristsansky District, surroundings of village Rybal'che, saga, 15–29.06.2005 (Gumovsky).

Note. Holomediterranean species. Its distribution in Ukraine is restricted to the south-western and southern regions – Danube Delta, Lower Dniestr, and Lower Dniepr.

Coenagrion armatum (Charpentier, 1840)

Material. 3♀, Kyiv Province, Vyshgorod District, surroundings of village Osischina, 26.04.2000; 11, 17.05.1997 (Matushkina).

Note. North-European species. Rare on the territory of Ukraine on the whole, but common in the some central and western localities [3].

Stylurus flavipes (Charpentier, 1825)

Material. 4 adult larvae (F-0), 3 exuviae, mass hatching of imagines, Kyiv Province, Vyshgorod District, Khotyanivka village, bank of river Desna, 28.06.2003, (Matushkina). ♀, Odessa Province, Ismail District, Tataru island, Danube Delta, 1–10.07.2003 (Procenko).

Note. Eurosiberian species, which was regarded as frequent in many regions of Ukraine before the middle of 20th century. In the last decades was found sporadically in the central and south regions mainly, and noted as rare [3].

Crocothemis erythraea (Brullé, 1832)

Material. 19♂, 7♀(adult), Odessa Province, Ismail District, Tataru island, Danube Delta, 1–10.07.2003 (Procenko). ♂, 2♀ (teneral), Cherkassy Province, Kaniv District, Lipyavo forestry, Zmiini islands, Dnieper river, 11–12.06.2004

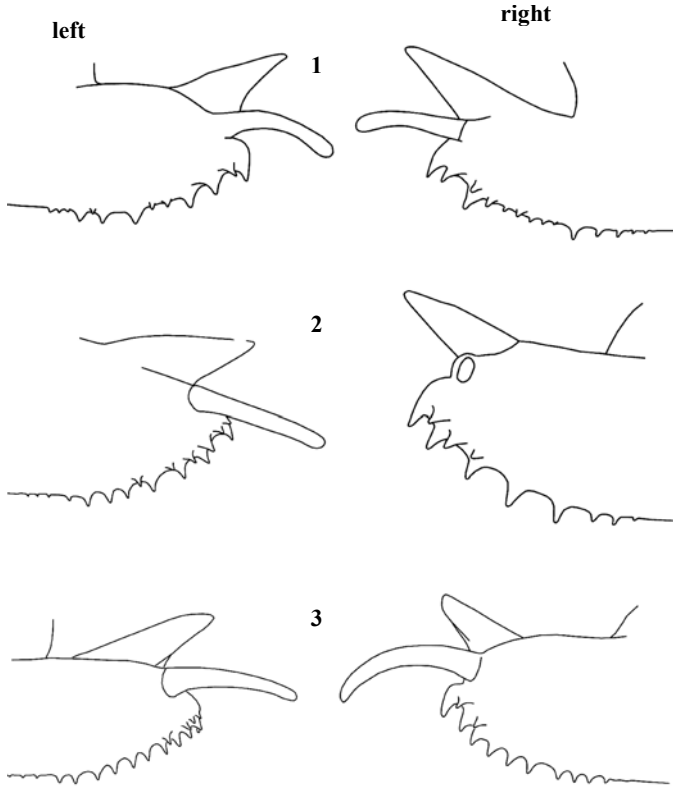


Fig.2. Lateral valves of ovipositor in three studied *Chalcolestes* females: with *Ch.parvidens*-phenotype (1), intermediate *Ch. parvidens/Ch. viridis*-phenotype (2), and *Ch. viridis*-phenotype (3).

According to Jödicke [5] the female of *Chalcolestes parvidens* has 6–8 big carinal teeth, and the female of *Ch.viridis* – 10–14 big carinal teeth on each lateral valve

(Matushkina). ♂ (teneral), ♀ (teneral), 1 tandem: flight in tandem during 10–15 sec, whereupon begins the oviposition by non-contact guarding of male at distance 0,5–1 m from female, Kyiv Province, Vyshgorod District, surroundings of village Osischina, still flowing pond; 3♀, 27.06.2004, 6.08.2004, territorial behaviour: flying around of territory from low seat at 10–15 cm over the water surface, very nervous; 3♀ (territorial behaviour), 2.07.2005; 2♂, ♀, 1 exuviae, 16.07.2005 (Matushkina). ♀, Kyiv Province, Boryspil' District, surroundings of village Devichki, target range, Dnieper river, 11–13.07.2005 (Procenko).

Note. Palaearctic-Afrotropical-Oriental species, which is distributed in the Europe predominately in the Mediterranean regions. In Ukraine it

was collected in South and Southwest in the beginning and middle of the 20th century. Recently *C. erythraea* demonstrates wide north expansion on the territory of Ukraine [8]. Such phenomenon have been recorded also in Europe during the last 10–15 years and considered by some authors as consequence of global climatic changes [10].

Leucorrhinia albifrons (Burmeister, 1839)

Material. ♂, Crimea, Province, Sevastopol' city, Strilets'ka Buhta, 17.08.2005 (Gorobchishin).

Note. European species, listed in IUCN Red List of threatened species with category LR/lc (lower risk/least concern). Very rare on the territory of Ukraine. A few established populations are recorded in Volyn' and Kyiv administrative districts [3]. This is a first finding of *L. albifrons* in Crimea.

Leucorrhinia rubicunda (Linnaeus, 1758)

Material. ♂, Kyiv Province, Kyiv city, Golosiivsky lakes, 04.06.1997, (Matushkina). 3♀, Cherkassy Province, Kaniv District, surroundings of village Keleberda, Dnieper river, 03.06.1999 (Matushkina).

Note. Eurasian species, which was noted by Gorb & al. [3] as very rare in Ukraine. These are a first findings after the twentieth of 20th century. Current distribution in Ukraine is unknown.

Libellula fulva Müller, 1764

Material. ♀, Kyiv Province, Vasyl'kiv District, surroundings of village Chabany, Vita river, 06.06.1997 (Matushkina). ♀, Crimea Province, Sevastopol' city, Uchkuevka, 24–27.06.1998 (Matushkina).

Note. Eurosiberian species, which was regarded as rare in some regions of Ukraine [3].

Orthetrum coerulescens (Fabricius, 1798)

Material. 3♀, Crimea, Province, Sevastopol' city, Uchkuevka, 29.06.1998, (Matushkina). ♂, 7♀, Crimea, Province, Feodosiya District, surroundings of village Prymors'ke, Otuska river, 26.07.2005 (Gumovsky).

Note. Eurasian species which distribution in Ukraine is restricted to some west- and southern regions [3]. These are the first findings of *O. coerulescens* in Crimea.

Sympetrum fonscolombii (Selys, 1840)

Material. ♀, Odessa Province, Ismail District, surroundings of Kyslycine, 20–26.08.2001 (Gorobchishin). 7♂, 2♀, Crimea Province, Sevastopol' city,

Strilets'ka Buhta, 16–20.08.2005 (Gorobchishin).

Note. Afrotropical-eurosiberian-oriental species, represented recently on the territory of Ukraine only by a few population in Odessa Province and Crimea.

Sympetrum pedemontanum (Allioni, 1766)

Material. ♀, Kyiv Province, Vasyl'kiv District, surroundings of village Chabany, Vita river, 17.08.1996 (Matushkina).

Note. Eurosiberian species. It was found sporadically in some locations of Ukraine [3].

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