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## NEW RECORDS OF CHIRONOMIDAE (INSECTA, DITERA) IN THE FAUNA OF THE LOWER DNIPRO, UKRAINE

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**New Records of Chironomidae (Insecta, Diptera) in the Fauna of the Lower Dnipro, Ukraine.** Shevchenko, I. V. — Based on the larval and pupal specimens 24 species / morphotypes of Chironomidae (Insecta, Diptera) are recorded for the first time in the Lower Dnipro region and Dnipro-Buh Estuary: *Xenopelopia falcigera* (Kieffer, 1911), *Corynoneura scutellata* Winnertz, 1846, *Cricotopus (Isocladius) intersectus* (Staeger, 1839), *Hydrobaenus lugubris* Fries, 1830, *Limnophyes* sp., *Orthocladius (Euorthocladius)* sp., *Psectrocladius (Psectrocladius)* sp. cf. *zetterstedti* Brundin, 1949, *Chironomus (Camptochironomus) pallidivittatus* Malloch, 1915, *Ch. (Ca.) tentans* (Fabricius, 1805), *Ch. (Chironomus) cingulatus* Meigen, 1830, *Ch. (Lobochironomus) dorsalis* Meigen, 1818, *Demeijerea rufipes* (Linnaeus, 1761), *Dicrotendipes lobiger* (Kieffer, 1921), *Kiefferulus tendipediformis* (Goetghebuer, 1921), *Polypedilum (Polypedilum) nubifer* (Skuse, 1889), *Zavreliella marmorata* (van der Wulp, 1858), *Paratanytarsus inopertus* (Walker, 1856), *Pa. quintuplex* Kieffer, 1922, *Tanytarsus medius* Reiss & Fittkau, 1971, *T. pallidicornis* (Walker, 1856), *T. usmaensis* Pagast, 1931, *T. sp. cf. excavatus / nemorosus*, *T. sp. cf. formosanus* Kieffer, 1912, *T. sp. cf. lugens / glabrescens*-type. Three species (*X. falcigera*, *T. pallidicornis*, *T. usmaensis*) and two morphotypes (*T. sp. cf. formosanus*, *T. sp. cf. lugens / glabrescens*-type) are recorded for the first time in the fauna of Ukraine.

Key words: chironomids, non-biting midges, entomofauna, larvae, benthos, Dnipro-Buh estuarine region.

### Introduction

Currently, the fauna of the family Chironomidae (Diptera), recorded for the territory of Ukraine, includes more than 300 species (Baranov, 2010, 2011 a, b, 2013, 2015; Baranov & Fer-

rington, 2013; Lietytska & Baranov, 2009; Moubayed-Breil & Baranov, 2018; Bitušik, Novikmec & Hamerlik, 2020; Bitušik & al., 2024). Despite that, state of knowledge of this group in Ukraine is far from complete (Shevchenko, 2020, Bitušik & al., 2024). As for the Dnipro-Buh estuarine region, number of Chironomidae species recorded does not exceed a hundred (Olivari, 1958; Pligin, 1989, Moroz, 1993; Demchenko, Shevchenko & Orlova-Hudim, 2024). Members of the family Chironomidae are an integral part of the benthic invertebrate communities, performing important ecosystem functions and services, such as energy transfer, decomposition of organic matter, recycling of nutrients and aeration of sediments. They are taking a prominent role in food chains as herbivores, predators and pray. Represented at the larval and pupal stages, Chironomidae are play a significant role in the formation of qualitative and quantitative indicators of the macrozoobenthos of the Lower Dnipro region (Shevchenko, 2018).

This study presents new records of species / morphotypes of the family Chironomidae in the fauna of the Lower Dnipro region, the Dnipro-Buh Estuary, and Ukraine in general.

## Material and Methods

The studies were conducted within the Dnipro-Buh estuarine region. The delta and pre-delta areas of the Lower Dnipro region and the Dnipro-Buh Estuary were covered by sampling. In the pre-delta area, the Dnipro River, the Kozak River and Lake Sabetskyi Liman were studied. In the delta area, following floodplain areas were studied: Kherson-Bilozerskyi floodplain area, Kardashynskyi floodplain area, Velykyi Potyomkinskyi floodplain area and Holoprystanskyi floodplain area (Kostyanitsyn, 1964). Most of the sampling sites were located in the territory of the Nyzhniodniprovskyi National Nature Park or in close proximity to its borders. Sampling campaign was carried out during 2012–2021. Sampling was repeated three times a year in the spring, summer and autumn seasons. Some samples were collected in the winter season. In some research years, monthly sampling was carried out.

Hydromorphological measurements were made according to generally accepted methods (Romanenko, 2006). Benthic samples were collected with the Petersen grab (small and medium models) and washed through nylon sieve (1000  $\mu\text{m}$  mesh). Plankton samples were collected by filtering 50 l of water through an Apstein net (139  $\mu\text{m}$  mesh). Samples were preserved in 4% formalin solution.

Specimen picking and species / morphotypes identification were carried out in a laboratory. Specimens were mounted on microscopic slides using glycerine and identified using Pankratova (1970, 1977, 1983), Sæther (1976), Simpson, Bode & Albu (1983), Ekrem (2004), Andersen, Cranston & Epler (2013).

The nomenclature of species is consistent with Fauna Europaea (de Jong, 2016), Spies & Sæther (2004) and Martin (2000). The distribution of species follows de Jong (2016) and Pankratova (1970, 1977, 1983).

## Results

A total of 2836 larvae and 62 pupae were identified to 24 species / morphotypes, 15 genera and 3 subfamilies: Tanypodinae were represented by 1 species, Orthocladiinae — by 6 species / morphotypes, Chironominae — by 17 species / morphotypes.

Below detailed description of the records is provided. The material is presented according to the following scheme: country: region: sampling site [coordinates], bottom sediments\*, macrophytes\*\*, date, specimens' quantity and life stage (collector / identifier).

\* Absent for plankton samples.

\*\* If notified.

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**Subfamily Tanypodinae****Tribe Pentaneurini*****Xenopelopia falcigera* (Kieffer, 1911)**

Material. **Ukraine:** Kherson Reg.: temporary ponds [46.6177 N 32.5755 E], detritus, 13.05.2015, 1 larva (Shevchenko).

Distribution. Palaearctic Region. Widespread in Europe.

Comments. Depth: 0.5 m. First record from Ukraine.

**Subfamily Orthoclaadiinae*****Corynoneura scutellata* Winnertz, 1846**

Material. **Ukraine:** Kherson Reg.: the strait into Lake Bezmen [46.6179 N 32.4877 E], *Phragmites australis* (Cav.) Trin. ex Steud., 23.04.2015, 1 larva (Shevchenko); the Viryovchina River [46.6284 N 32.5499 E], *P. australis*, *Salvinia natans* (L.) All., 20.10.2015, 3 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], *Ceratophyllum demersum* L., *Nuphar lutea* (L.) Sm., 19.10.2015, 2 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], mud, detritus, *C. demersum*, *Lemna trisulca* L., *N. lutea*, *S. natans*, *Spirodela polyrrhiza* (L.) Schleid, *Vallisneria spiralis* L., 23.10.2015, 28.04.2015, 23.10.2015, 07.05.2018, 13 larvae, 1 pupa (Shevchenko); the Dnipro River, Isle Malyi Potyomkinskyi [46.5990 N 32.5778 E], muddy sand, 25.08.2021, 1 larva (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], *N. lutea*, 22.10.2015, 2 larvae (Shevchenko); the Kozak River [46.7825 N 33.2606 E], mud, *V. spiralis*, *Myriophyllum spicatum* L., 25.05.2020, 4 larvae (Shevchenko).

Distribution. Holarctics (widespread), Afrotropical and Australasian regions. Widespread in North America and Europe.

Comments. Depth: 0.5–1.1 m (avg 0.9 m), water temperature: 10.3–24.9 °C (avg 14.9 °C). First record from the Lower Dnipro region.

***Cricotopus (Isocladius) intersectus* (Staeger, 1839)**

Material. **Ukraine:** Kherson Reg.: the Koshova River [46.6269 N 32.5685 E], mud, shell hash, 17.04.2014, 1 larva (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, detritus, *C. demersum*, *Elodea canadensis* Michx., 19.10.2015, 1 larva (Shevchenko); the Dnipro River, northwestward of Isle Malyi Potyomkinskyi [46.6019 N 32.5836 E], mud, macrophytes, 23.04.2013, 1 larva (Shevchenko).

Distribution. Holarctics. North America, Europe (widespread) and Western Asia.

Comments. Depth: 0.6–3.5 m (avg 2.4 m), water temperature: 8.5–13.0 °C (avg 10.3 °C). First record from the Lower Dnipro region.

***Hydrobaenus lugubris* Fries, 1830**

Material. **Ukraine:** Kherson Reg.: the Dnipro-Buh Estuary, southward of Shyroka Balka [46.5687 N 32.2081 E], sand, shell hash, 30.10.2013, 1 larva (Shevchenko); Lake Liahushache [46.5215 N 32.3959 E], detritus, 20.08.2013, 2 larvae (Shevchenko); the strait into Lake Bezmen [46.6179 N 32.4877 E], *P. australis*, 23.04.2015, 5 larvae (Shevchenko); the Viryovchina River [46.6284 N 32.5499 E], *P. australis*, 17.04.2014, 1 larva (Shevchenko); the Koshova River [46.6269 N 32.5685 E], mud, shell hash, *C. demersum*, *N. lutea*, *M. spicatum*, *P. australis*, 17.04.2014, 24.04.2015, 8 larvae, 1 pupa (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], detritus, 20.08.2013, 1 larva (Shevchenko); the Koshova River tributary [46.6224 N 32.6124 E], mud, 25.04.2013, 2 larvae (Shevchenko); the Dnipro River, northwest-

ward of Isle Malyi Potyomkinskyi [46.6019 N 32.5836 E], mud, 22.04.2014, 1 larva (Shevchenko); the Dnipro River, westward of Isle Malyi Potyomkinskyi [46.5933 N 32.5900 E], sand, *E. canadensis*, 22.04.2014, 6 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, sand, 04.05.2012, 30.04.2013, 27.04.2015, 9 larvae (Shevchenko); the Hadiuchka Strait [46.5842 N 32.6014 E], sand, shell hash, 22.10.2015, 2 larvae (Shevchenko); Lake Kardashynskyi Liman [46.5905 N 32.6381 E], muddy sand, shell hash, 20.09.2012, 1 larva (Shevchenko); Lake Kardashynskyi Liman [46.5915 N 32.6388 E], mud, muddy sand, shell hash, *C. demersum*, *M. spicatum*, *Potamogeton crispus* L., *Potamogeton pusillus* L., 20.09.2012, 30.04.2013, 22.04.2014, 9 larvae (Shevchenko); Lake Kardashynskyi Liman [46.5924 N 32.6392 E], mud, muddy sand, shell hash, 20.09.2012, 30.04.2013, 12 larvae (Shevchenko); the Chaika River [46.5945 N 32.6414 E], muddy sand, shell hash, detritus, mud, 07.08.2013, 05.08.2014, 2 larvae (Shevchenko); the Chaika River [46.5952 N 32.6395 E], sand, shell hash, 30.04.2013, 11 larvae (Shevchenko); the Dnipro River [46.6584 N 32.6631 E], detritus, muddy sand, 27.03.2012, 1 larva (Shevchenko); the Kozak River [46.7825 N 33.2606 E], muddy sand, shell hash, *V. spiralis*, 07.11.2018, 22.10.2021, 16 larvae, 3 pupae (Shevchenko).

Distribution. Holarctics. Widespread in Northern and Central Europe.

Comments. Depth: 0.6–4.8 m (avg 1.7 m), water temperature: 8.0–27.0 °C (avg 15.4 °C). First record from the Lower Dnipro region.

### ***Limnophyes* sp.**

Material. **Ukraine:** Kherson Reg.: artificial water micro-reservoir at the bank of the Dnipro River [46.6027 N 32.5827 E], 02.10.2016, 1 larva (Shevchenko).

Distribution. Holarctics. Widespread in North America and Europe.

Comments. Depth: 0.1 m. First record of genus from the Lower Dnipro region.

### ***Orthocladius* (*Euorthocladius*) sp.**

Material. **Ukraine:** Kherson Reg.: the Viryovchina River [46.6284 N 32.5499 E], mud, detritus, 17.04.2014, 1 larva (Shevchenko).

Distribution. Holarctics.

Comments. Depth: 1.0 m, water temperature: 14.5 °C. First record of subgenus from the Lower Dnipro region.

### ***Psectrocladius* (*Psectrocladius*) sp. cf. *zetterstedti* Brundin, 1949**

Material. **Ukraine:** Kherson Reg.: Lake Kruhle [46.5961 N 32.6017 E], sand, 04.05.2012, 1 larva (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], muddy sand, *C. demersum*, 27.04.2015, 8 larvae (Shevchenko); Lake Kruhle [46.5859 N 32.6012 E], sand, 04.05.2012, 6 larvae (Shevchenko).

Distribution. Palaearctic Region. Northern and Central Europe.

Comments. Depth: 1.0–1.3 m (avg 1.1 m), water temperature: 16.9 °C. First record from the Lower Dnipro region.

## **Subfamily Chironominae**

### **Tribe Chironomini**

### ***Chironomus* (*Camptochironomus*) *pallidivittatus* Malloch, 1915**

Material. **Ukraine:** Kherson Reg.: the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, *C. demersum*, 10.05.2017, 1 larva (Shevchenko); the eastern Lake Stablin [46.6088 N 32.5655 E], mud, detritus, 11.11.2014, 1 larva (Shevchenko); Lake Zakitne [46.6088 N 32.5655 E], mud, detritus, 11.11.2014, 1 larva (Shevchenko); Lake Zakitne [46.6088 N 32.5655 E], mud, detritus, 11.11.2014, 1 larva (Shevchenko).

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[46.5888 N 32.5733 E], mud, detritus, *L. trisulca*, *N. lutea*, 12.05.2016, 1 larva (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, 22.04.2014, 1 larva (Shevchenko).

Distribution. Holarctics. Europe (widespread), North and Central Asia.

Comments. Depth: 0.7–3.5 m (avg 1.5 m), water temperature: 8.2–21.0 °C (avg 15.6 °C). First record from the Lower Dnipro region.

### ***Chironomus (Camptochironomus) tentans* Fabricius, 1805**

Material. **Ukraine:** Kherson Reg.: the strait into Lake Bobrove [46.5470 N 32.5610 E], muddy sand, 16.06.2021, 4 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], mud, detritus, *C. demersum*, 03.05.2018, 3 larvae (Shevchenko), the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], detritus, mud, *C. demersum*, *N. lutea*, 28.04.2015, 10.05.2017, 3 larvae (Shevchenko); the western Lake Stebliivskiy Liman [46.6097 N 32.5330 E], mud, *C. demersum*, 10.05.2017, 31.07.2017, 17.10.2017, 11 larvae (Shevchenko); the eastern Lake Stebliivskiy Liman [46.6063 N 32.5581 E], muddy sand, shell hash, detritus, 04.08.2016, 2 larvae (Shevchenko); Lake Nazarove-Pohorile [46.5662 N 32.5463 E], detritus, *C. demersum*, *N. lutea*, 03.05.2017, 2 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, *C. demersum*, *N. lutea*, 14.05.2019, 16.10.2019, 4 larvae (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, muddy sand, detritus, *C. demersum*, 27.04.2015, 17.10.2018, 15.07.2019, 19.10.2020, 11.10.2021, 56 larvae (Shevchenko).

Distribution. Holarctics and Afrotropical Region. Europe (widespread), North, Central and East Asia.

Comments. Depth: 0.3–1.9 m (avg 1.2 m), water temperature: 9.9–25.0 °C (avg 17.8 °C). First record from the Lower Dnipro region.

### ***Chironomus (Chironomus) cingulatus* Meigen, 1830**

Material. **Ukraine:** Kherson Reg.: the Viryovchina River [46.6337 N 32.5502 E], mud, *C. demersum*, 11.05.2017, 5 larvae (Shevchenko); the Viryovchina River [46.6284 N 32.5499 E], mud, detritus, 25.04.2013, 18.08.2015, 20.10.2015, 10 larvae (Shevchenko); the Viryovchina River tributary [46.6215 N 32.5521 E], mud, shell hash, 20.10.2015, 6 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile, eastern [46.6038 N 32.5155 E], mud, *C. demersum*, 17.10.2017, 1 larva (Shevchenko); Lake Sabetskiy Liman [46.7709 N 33.2510 E], mud, detritus, shell hash, *C. demersum*, 25.05.2017, 23.05.2018, 3 larvae (Shevchenko).

Distribution. Palaearctic Region. Azores, Europe (widespread), North and Central Asia.

Comments. Depth: 0.5–2.5 m (avg 1.2 m), water temperature: 12.0–24.2 °C (avg 16.6 °C). First record from the Lower Dnipro region.

### ***Chironomus (Lobochironomus) dorsalis* Meigen, 1818**

Material. **Ukraine:** Kherson Reg.: the strait into Lake Bobrove [46.5470 N 32.5610 E], mud, 21.12.2020, 2 larvae (Shevchenko); the Viryovchina River tributary [46.6215 N 32.5521 E], mud, detritus, 09.10.2013, 1 larva (Shevchenko); the Koshova River [46.6269 N 32.5685 E], mud, *C. demersum*, *M. spicatum*, *N. lutea*, 24.04.2015, 2 larvae (Shevchenko); Lake Nazarove-Pohorile [46.5662 N 32.5463 E], detritus, *C. demersum*, *N. lutea*, 03.05.2017, 10 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, muddy sand, shell hash, *C. demersum*, *L. trisulca*, *N. lutea*, *S. natans*, *S. polyrhiza*, 28.04.2015, 17.08.2015, 12.05.2016, 31.07.2017, 11.10.2017, 07.05.2018, 21.08.2018, 16.10.2018, 14.05.2019, 12.06.2019, 14.08.2019, 16.10.2019, 14.09.2020, 19.10.2020, 41 larvae, 1 pupa (Shevchenko); the strait into Lake Kruhle [46.5978 N 32.6004 E], mud, shell hash, 22.10.2015, 6 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], mud,

shell hash, detritus, 08.10.2013, 22.10.2015, 7 larvae (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, detritus, *C. demersum*, 19.05.2020, 3 larvae (Shevchenko).

Distribution. Palaearctic Region. Europe (widespread), North, South and East Asia.

Comments. Depth: 0.3–2.7 m (avg 0.9 m), water temperature: 2.0–25.0 °C (avg 16.9 °C). First record from the Lower Dnipro region.

### ***Demeijerea rufipes* (Linnaeus, 1761)**

Material. **Ukraine:** Kherson Reg.: the strait into Lake Bezmen [46.6179 N 32.4877 E], shell hash, 23.04.2015, 1 larva (Shevchenko); the Koshova River [46.6269 N 32.5685 E], mud, muddy sand, *E. canadensis*, *C. demersum*, *V. spiralis*, 18.08.2015, 14.05.2018, 4 larvae (Shevchenko).

Distribution. Palaearctic Region. Widespread in Northern, Western, Central and Eastern Europe, North and Central Asia.

Comments. Depth: 2.3–4.2 m (avg 3.1 m), water temperature: 10.1–25.6 °C (avg 17.6 °C). First record from the Lower Dnipro region.

### ***Dicrotendipes lobiger* (Kieffer, 1921)**

Material. **Ukraine:** Kherson Reg.: Lake Zakitne [46.5888 N 32.5733 E], detritus, *C. demersum*, *N. lutea*, *S. natans*, 21.08.2018, 1 larva (Shevchenko).

Distribution. Palaearctic Region. Widespread in Northern, Western, Central and Eastern Europe.

Comments. Depth: 0.5 m, water temperature: 23.0 °C. First record from the Lower Dnipro region.

### ***Kiefferulus tendipediformis* (Goetghebuer, 1921)**

Material. **Ukraine:** Kherson Reg.: the Viryovchina River [46.6284 N 32.5499 E], mud, detritus, *C. demersum*, *P. australis*, 24.04.2015, 20.10.2015, 6 larvae (Shevchenko); the Viryovchina River tributary [46.6215 N 32.5521 E], mud, shells, 20.10.2015, 4 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, 27.04.2015, 1 larva (Shevchenko).

Distribution. Palaearctic Region. Europe (widespread) and West Asia.

Comments. Depth: 0.5–2.5 m (avg 1.1 m), water temperature: 12.2–15.0 °C (avg 13.3 °C). First record from the Lower Dnipro region.

### ***Polypedilum (Polypedilum) nubifer* (Skuse, 1889)**

Material. **Ukraine:** Kherson Reg.: the Dnipro-Buh Estuary, northward of Rybalche [46.5180 N 32.2355 E], sand, 23.08.2012, 1 larva (Shevchenko); Lake Bile [46.6333 N 32.4657 E], sand, gravel, 16.08.2021, 12.10.2021, 186 larvae, 5 pupae (Shevchenko); Lake Rohozuvate [46.6249 N 32.5140 E], sand, shell hash, 19.10.2015, 7 larvae, 1 pupa (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5989 N 32.5190 E], sand, 19.10.2015, 2 larvae (Shevchenko); Lake Kardashynskyi Liman [46.5905 N 32.6381 E], muddy sand, shell hash, 20.09.2012, 1 larva (Shevchenko).

Distribution. Holarctics, Oriental and Australasian Regions (widespread). North America, Azores, widespread in Central and Southern Europe, West, Central and East Asia.

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Comments. Depth: 0.2–3.2 m (avg 1.3 m), water temperature: 9.4–25.5 °C (avg 17.4 °C). First record from the Lower Dnipro region.

***Zavreliella marmorata* (van der Wulp, 1858)**

Material. **Ukraine:** Kherson Reg.: Lake Kruhle [46.5961 N 32.6017 E], muddy sand, 27.04.2015, 1 larva (Shevchenko).

Distribution. Holarctics, Afrotropical and Australasian Regions. North America, Europe (widespread).

Comments. Depth: 1.0 m, water temperature: 15.0 °C. First record from the Lower Dnipro region.

**Tribe Tanytarsini**

***Paratanytarsus inopertus* (Walker, 1856)**

Material. **Ukraine:** Kherson Reg.: the Koshova River tributary [46.5717 N 32.4697 E], sand, macrophytes, 25.04.2013, 28 larvae (Shevchenko); the strait into Lake Bezmen [46.6179 N 32.4877 E], shell hash, 23.04.2015, 2 larvae (Shevchenko); the Viryovchina River [46.6284 N 32.5499 E], mud, *C. demersum*, *S. natans*, *S. polyrhiza*, 07.08.2014, 24.04.2015, 3 larvae (Shevchenko); the Viryovchina River tributary [46.6215 N, 32.5521 E], muddy sand, 25.04.2013, 2 larvae (Shevchenko); the Koshova River [46.6269 N 32.5685 E], mud, shell hash, detritus, *C. demersum*, *E. canadensis*, *M. spicatum*, *Najas marina* L., *N. lutea*, *V. spiralis*, 24.04.2015, 20.10.2015, 07.08.2017, 45 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], detritus, *C. demersum*, *N. lutea*, 28.04.2015, 10 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, detritus, muddy sand, *C. demersum*, *E. canadensis*, *N. lutea*, 29.04.2014, 06.08.2014, 28.04.2015, 19.10.2015, 8 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5989 N 32.5190 E], detritus, *C. demersum*, 17.08.2015, 1 larva (Shevchenko); the western Lake Stebliivskiy Liman [46.6097 N 32.5330 E], mud, *C. demersum*, 10.05.2017, 31.07.2017, 2 larvae (Shevchenko); the Koshova River distributary [46.6224 N 32.6124 E], mud, 25.04.2013, 4 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, *C. demersum*, *N. lutea*, 14.05.2019, 16.10.2019, 3 larvae (Shevchenko); the Dnipro River, northwestward of Isle Malyi Potyomkinskyi [46.6019 N 32.5836 E], mud, detritus, *C. demersum*, *E. canadensis*, 23.04.2013, 23.10.2015, 01.08.2017, 3 larvae (Shevchenko); the Dnipro River, westward of Isle Malyi Potyomkinskyi [46.5933 N 32.5900 E], sand, mud, detritus, *E. canadensis*, 22.04.2014, 27.04.2015, 10 larvae (Shevchenko); the strait into Lake Kruhle [46.5978 N 32.6004 E], muddy sand, shell hash, *V. spiralis*, 27.04.2015, 15 larvae, 1 pupa (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, muddy sand, *C. demersum*, 27.04.2015, 17.10.2018, 12.06.2019, 15.07.2019, 82 larvae, 6 pupae (Shevchenko); Lake Kruhle [46.5859 N 32.6012 E], shell hash, muddy sand, *C. demersum*, 27.04.2015, 4 larvae, 1 pupa (Shevchenko); the Hadiuchka Strait [46.5842 N 32.6014 E], shell hash, muddy sand, 27.04.2015, 6 larvae (Shevchenko); Lake Kardashynskiy Liman [46.5816 N 32.6280 E], mud, shell hash, 04.05.2017, 1 larva (Shevchenko); the Chaika River [46.5945 N 32.6414 E], shell hash, mud, *C. demersum*, 08.10.2013, 22.04.2014, 13 larvae (Shevchenko); the Chaika River [46.5952 N 32.6395 E], sand, shell hash, 30.04.2013, 1 larva (Shevchenko); the Kozak River [46.7825 N 33.2606 E], muddy sand, mud, shell hash, *M. spicatum*, *V. spiralis*, 07.11.2018, 22.10.2019, 25.05.2020, 14.07.2020, 5 larvae (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], muddy sand, mud, *C. demersum*, *M. spicatum*, *N. lutea*, *Nymphaea alba* L., 08.08.2017, 27.08.2018, 14.07.2020, 4 larvae (Shevchenko).

Distribution. Palaearctic Region. Europe (widespread), West and East Asia.

Comments. Depth: 0.3–4.9 m (avg 1.6 m), water temperature: 8.0–26.3 °C (avg 16.5 °C). First record from the Lower Dnipro region.

***Paratanytarsus quintuplex* Kieffer, 1922 (nomen dubium)**

**Material. Ukraine:** Kherson Reg.: the Koshova River [46.6269 N 32.5685 E], mud, *C. demersum*, *E. canadensis*, *M. spicatum*, 24.04.2015, 4 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], detritus, *C. demersum*, *N. lutea*, 28.04.2015, 14 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], muddy sand, detritus, *C. demersum*, *N. lutea*, 06.08.2014, 28.04.2015, 5 larvae (Shevchenko); the western Lake Stebliivskyi Liman [46.6097 N 32.5330 E], mud, *C. demersum*, 10.05.2017, 31.07.2017, 17.10.2017, 11 larvae (Shevchenko); Lake Nazarove-Pohorile [46.5662 N 32.5463 E], detritus, *C. demersum*, *N. lutea*, 06.05.2015, 03.05.2017, 5 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, *C. demersum*, *L. trisulca*, *N. lutea*, *S. natans*, *S. polyrhiza*, *V. spiralis*, 28.04.2015, 23.10.2015, 11.10.2017, 07.05.2018, 21.08.2018, 61 larvae, 1 pupa (Shevchenko); the strait into Lake Kruhle [46.5978 N 32.6004 E], muddy sand, shell hash, *V. spiralis*, 27.04.2015, 2 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], sand, 04.05.2012, 1 larva (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, muddy sand, *C. demersum*, 04.05.2012, 05.08.2014, 27.04.2015, 14.05.2019, 18 larvae (Shevchenko); Lake Kruhle [46.5859 N 32.6012 E], shell hash, muddy sand, macrophytes, 04.05.2012, 7 larvae (Shevchenko); Lake Kardashynskyi Liman [46.5915 N 32.6388 E], mud, *C. demersum*, *M. spicatum*, *P. crispus*, *P. pusillus*, 22.04.2014, 1 larva (Shevchenko); Lake Kardashynskyi Liman [46.5924 N 32.6392 E], muddy sand, 30.04.2013, 2 larvae (Shevchenko); the Chaika River [46.5952 N 32.6395 E], sand, shell hash, 30.04.2013, 2 larvae (Shevchenko); the Kozak River [46.7825 N 33.2606 E], muddy sand, shell hash, mud, *M. spicatum*, *P. crispus*, *V. spiralis*, 23.05.2018, 27.08.2018, 25.05.2020, 14.07.2020, 13 larvae (Shevchenko); Lake Sabetskyi Liman [46.7710 N 33.2479 E], muddy sand, 12.08.2014, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], muddy sand, mud, *C. demersum*, *M. spicatum*, *N. lutea*, *N. alba*, 12.08.2014, 08.08.2017, 23.05.2018, 27.08.2018, 5 larvae (Shevchenko).

**Distribution.** Palaearctic Region. Central and Eastern Europe.

**Comments.** Depth: 0.4–2.7 m (avg 1.2 m), water temperature: 10.1–28.0 °C (avg 19.3 °C). First record from the Lower Dnipro region.

***Tanytarsus medius* Reiss & Fittkau, 1971**

**Material. Ukraine:** Kherson Reg.: Lake Kruhle [46.5961 N 32.6017 E], sand, muddy sand, 04.05.2012, 27.04.2015, 8 larvae (Shevchenko); the Chaika River [46.5952 N 32.6395 E], sand, shell hash, 30.04.2013, 1 larva (Shevchenko).

**Distribution.** Palaearctic Region. Widespread in Europe.

**Comments.** Depth: 1.0–2.1 m (avg 1.4 m), water temperature: 15.0–15.3 °C (avg 15.2 °C). First record from the Lower Dnipro region.

***Tanytarsus pallidicornis* (Walker, 1856)**

**Material. Ukraine:** Kherson Reg.: the Koshova River [46.6269 N 32.5685 E], mud, *C. demersum*, *M. spicatum*, *N. lutea*, 24.04.2015, 1 larva (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, 27.04.2015, 1 larva (Shevchenko).

**Distribution.** Holarctics. Europe (widespread) and Eastern Asia.

**Comments.** Depth: 1.0 m, water temperature: 10.1–15.0 °C (avg 12.6 °C). First record from Ukraine.

***Tanytarsus usmaensis* Pagast, 1931**

**Material. Ukraine:** Kherson Reg.: the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], detritus, *C. demersum*, *N. lutea*, 28.04.2015, 5 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, detritus, *C. demersum*, *N. lutea*, 06.08.2014, 28.04.2015, 5 larvae (Shevchenko).

29.04.2014, 28.04.2015, 3 larvae (Shevchenko); the Koshova River distributary [46.6224 N 32.6124 E], mud, 25.04.2013, 1 larva (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, muddy sand, *C. demersum*, *N. lutea*, 16.10.2018, 14.05.2019, 12.06.2019, 16.10.2019, 19.05.2020, 28 larvae, 1 pupa (Shevchenko); the Dniipro River, westward of Isle Malyi Potyomkinskyi [46.5933 N 32.5900 E], muddy sand, sand, *E. canadensis*, 22.04.2014, 2 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, 30.04.2013, 27.04.2015, 7 larvae (Shevchenko); the Chaika River [46.5952 N 32.6395 E], shell hash, 05.08.2014, 1 larva (Shevchenko); the Dniipro River, southward of Ivanivka [46.7379 N 33.0297 E], muddy sand, 16.04.2014, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], mud, shell hash, *M. spicatum*, 25.05.2020, 3 larvae, 1 pupa (Shevchenko).

**Distribution.** Holarctics. North America, Europe (widespread), West and East Asia.

**Comments.** Depth: 0.3–3.4 m (avg 1.1 m), water temperature: 7.8–24.8 °C (avg 15.1 °C). First record from Ukraine.

### *Tanytarsus* sp. cf. *excavatus* / *nemorosus*

**Material. Ukraine:** Kherson Reg.: the Koshova River tributary [46.5717 N 32.4697 E], muddy sand, clay, 29.04.2014, 1 larva (Shevchenko); the Koshova River [46.6166 N 32.4876 E], mud, shell hash, *N. lutea*, 24.04.2014, 5 larvae (Shevchenko); the Koshova River [46.6269 N 32.5685 E], mud, shell hash, detritus, *C. demersum*, *E. canadensis*, *M. spicatum*, *N. marina*, *N. lutea*, *V. spiralis*, 24.04.2015, 18.08.2015, 20.10.2015, 30 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], mud, detritus, *C. demersum*, *N. lutea*, 28.04.2015, 17.10.2017, 03.05.2018, 181 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, detritus, *C. demersum*, *N. lutea*, 29.04.2014, 28.04.2015, 13 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5989 N 32.5190 E], sand, *M. spicatum*, 28.04.2015, 3 larvae (Shevchenko); the western Lake Stebliivskyi Liman [46.6097 N 32.5330 E], mud, *C. demersum*, 31.07.2017, 1 larva (Shevchenko); the Koshova River distributary [46.6224 N 32.6124 E], mud, 25.04.2013, 1 larva (Shevchenko); Lake Nazarov-Pohorile [46.5662 N 32.5463 E], detritus, 06.05.2015, 4 larvae (Shevchenko); Lake Zakitne [46.5888 N 32.5733 E], detritus, mud, muddy sand, *C. demersum*, *L. trisulca*, *N. lutea*, *S. natans*, *S. polyrhiza*, *V. spiralis*, 28.04.2015, 23.10.2015, 03.05.2017, 31.07.2017, 11.10.2017, 21.08.2018, 16.10.2018, 12.06.2019, 16.10.2019, 15.06.2020, 17.08.2020, 140 larvae (Shevchenko); the Dniipro River, northwestward of Isle Malyi Potyomkinskyi [46.6019 N 32.5836 E], mud, *E. canadensis*, *V. spiralis*, 25.08.2015, 1 larva (Shevchenko); the Dniipro River, westward of Isle Malyi Potyomkinskyi [46.5994 N 32.5877 E], muddy sand, 17.10.2018, 1 larva (Shevchenko); the strait into Lake Kruhle [46.5978 N 32.6004 E], muddy sand, shell hash, *V. spiralis*, 27.04.2015, 4 larvae (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], muddy sand, mud, sand, *C. demersum*, *E. canadensis*, *N. marina*, *N. lutea*, *P. australis*, *V. spiralis*, 04.05.2012, 30.04.2013, 22.04.2014, 05.08.2014, 27.04.2015, 95 larvae (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, muddy sand, detritus, *C. demersum*, 27.04.2015, 17.10.2018, 12.06.2019, 15.07.2020, 11.10.2021, 83 larvae (Shevchenko); Lake Kruhle [46.5859 N 32.6012 E], shell hash, muddy sand, *C. demersum*, 04.05.2012, 27.04.2015, 7 larvae (Shevchenko); the Hadiuchka Strait [46.5842 N 32.6014 E], shell hash, muddy sand, 27.04.2015, 1 larva (Shevchenko); the Chaika River [46.5952 N 32.6395 E], sand, shell hash, 30.04.2013, 1 larva (Shevchenko); the Kozak River [46.7825 N 33.2606 E], muddy sand, mud, shell hash, *M. spicatum*, *P. crispus*, *V. spiralis*, 23.05.2018, 07.11.2018, 22.10.2019, 25.05.2020, 53 larvae (Shevchenko); Lake Sabetskyi Liman [46.7710 N 33.2479 E], sand, shell hash, detritus, 14.05.2016, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], mud, shell hash, muddy sand, *C. demersum*, *M. spicatum*, *N. lutea*, *N. alba*, 08.08.2017, 23.05.2018, 27.08.2018, 07.11.2018, 07.08.2019, 22.10.2019, 10 larvae (Shevchenko).

**Distribution.** Palaearctic Region. Europe and East Asia.

**Comments.** Depth: 0.3–8.5 m (avg 1.4 m), water temperature: 8.0–26.0 °C (avg 17.3 °C). First record from the Lower Dniipro region.

*Tanytarsus* sp. cf. *formosanus* Kieffer, 1912

**Material. Ukraine:** Mykolaiv Reg.: the Dnipro-Buh Estuary, westward of Lymany [46.7283 N 31.9268 E], sand, shell hash, 10.09.2014, 13 larvae (Shevchenko); the Dnipro-Buh Estuary, westward of Lymany [46.7425 N 31.9449 E], sand, shell hash, detritus, 31.08.2015, 11.08.2016, 3 larvae (Shevchenko); the Dnipro-Buh Estuary, southward of Ochakiv [46.6024 N 31.5563 E], gravel, shell hash, 24.08.2012, 34 larvae (Shevchenko); the Dnipro-Buh Estuary, southward of Ochakiv [46.5782 N 31.5150 E], muddy sand, shell hash, mud, 24.08.2012, 19.09.2013, 3 larvae (Shevchenko); the Dnipro-Buh Estuary, southward of Cape Adzhigol [46.6081 N 31.8023 E], sand, 24.08.2012, 3 larvae (Shevchenko); Kherson Reg.: the Dnipro-Buh Estuary, northeastward of Heroiske [46.5230 N 31.9299 E], sand, shell hash, 23.08.2012, 1 larva (Shevchenko); the Dnipro-Buh Estuary, southward of Oleksandrivka [46.5947 N 32.1130 E], muddy sand, shell hash, sand, 09.08.2017, 10.10.2017, 10.05.2018, 23.10.2018, 15.05.2019, 22.07.2019, 15.10.2019, 02.06.2020, 558 larvae, 29 pupae (Shevchenko); the Dnipro-Buh Estuary, southward of Stanislav [46.5469 N 32.1477 E], muddy sand, 09.08.2017, 22.07.2019, 15.10.2019, 02.06.2020, 33 larvae (Shevchenko); the Dnipro-Buh Estuary, northward of Rybalche [46.4876 N 32.2302 E], muddy sand, shell hash, 16.05.2016, 1 larva (Shevchenko); Lake Bobrove [46.5442 N 32.5490 E], mud, detritus, *N. lutea*, *N. alba*, 25.06.2020, 1 larva (Shevchenko); Lake Bobrove [46.5471 N 32.5537 E], mud, detritus, 25.06.2020, 1 larva (Shevchenko); Lake Bobrove [46.5500 N 32.5570 E], mud, detritus, 25.06.2020, 1 larva (Shevchenko); Lake Bile [46.6333 N 32.4657 E], sand, gravel, 16.08.2021, 12.10.2021, 59 larvae, 3 pupae (Shevchenko); Lake Rohozuvate [46.6249 N 32.5140 E], sand, shell hash, 19.10.2015, 38 larvae, 2 pupae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5148 E], mud, detritus, 06.08.2014, 2 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], detritus, mud, *C. demersum*, *E. canadensis*, *N. lutea*, 28.04.2015, 19.10.2015, 31 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5989 N 32.5190 E], detritus, sand, *C. demersum*, 17.08.2015, 19.10.2015, 5 larvae (Shevchenko); Lake Kardashynskiy Liman [46.5639 N 32.6078 E], muddy sand, shell hash, 04.05.2012, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7705 N 33.2444 E], shell hash, detritus, 17.08.2016, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7710 N 33.2479 E], sand, shell hash, detritus, 14.05.2016, 1 larva (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], shell hash, mud, muddy sand, sand, detritus, *C. demersum*, *M. spicatum*, *N. lutea*, *N. alba*, 12.08.2014, 25.05.2017, 08.08.2017, 07.11.2018, 07.08.2019, 22.10.2019, 25.05.2020, 14.07.2020, 24 larvae (Shevchenko).

**Distribution.** Palaearctic, Afrotropical and Oriental (widespread) regions. Southern Europe, West, South and East Asia.

**Comments.** Depth: 0.2–6.5 m (avg 2.0 m), water temperature: 9.4–28.0 °C (avg 20.1 °C). First record from Ukraine.

*Tanytarsus* sp. cf. *lugens* / *glabrescens*-type

**Material. Ukraine:** Kherson Reg.: the Koshova River tributary [46.5717 N 32.4697 E], sand, macrophytes, 25.04.2013, 2 larvae (Shevchenko); the northern Lake Skadovsk-Pohorile [46.6038 N 32.5155 E], detritus, mud, *C. demersum*, *N. lutea*, 28.04.2015, 03.05.2018, 58 larvae (Shevchenko); the southern Lake Skadovsk-Pohorile [46.5997 N 32.5172 E], mud, detritus, *C. demersum*, *E. canadensis*, *N. lutea*, 29.04.2014, 06.08.2014, 28.04.2015, 19.10.2015, 10 larvae (Shevchenko); the western Lake Stebliivskiy Liman [46.6097 N 32.5330 E], mud, detritus, shell hash, *C. demersum*, 10.05.2016, 10.05.2017, 31.07.2017, 6 larvae (Shevchenko); the Dnipro River, westward of Isle Malyi Potyomkinskyi [46.5933 N 32.5900 E], sand, *E. canadensis*, 22.04.2014, 1 larva (Shevchenko); Lake Kruhle [46.5961 N 32.6017 E], sand, muddy sand, 04.05.2012, 27.04.2015, 11 larvae (Shevchenko); Lake Kruhle [46.5912 N 32.6036 E], mud, muddy sand, *C. demersum*, 22.04.2014, 27.04.2015, 232 larvae, 5 pupae (Shevchenko); Lake Kruhle [46.5859 N 32.6012 E], shell hash, muddy sand, *C. demersum*, 04.05.2012, 27.04.2015, 8 larvae (Shevchenko); the Hadiuchka Strait [46.5842 N 32.6014 E], shell hash, muddy sand, 27.04.2015, 3 larvae (Shevchenko); the Kozak River [46.7825 N 33.2606 E], mud, *M. spicatum*, *V. spiralis*, 25.05.2020, 46 larvae (Shevchenko); Lake Sabetskyi Liman [46.7709 N 33.2510 E], sand, shell hash, muddy sand, 12.08.2014, 14.07.2020, 5 larvae (Shevchenko).

**Distribution.** Palaearctic Region.

**Comments.** Depth: 0.6–3.4 m (avg 1.3 m), water temperature: 10.5–28.0 °C (avg 17.2 °C). First record from Ukraine.

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## Discussion

All recorded species / morphotypes can be divided into three groups based on the reasons for them not being previously recorded from Lower Dnipro region. The first group includes unfrequent or rare species / subspecies, whose records during the research period were sporadic. Those were: *Cr. (I.) intersectus*, *O. (Euorthocladius) sp.*, *De. rufipes*, *Di. lobiger*, *Z. marmorata*, *T. medius* and *T. pallidicornis*. The second group includes species / genus that were discovered among biotopes that are almost not represented in traditional studies of macrozoobenthos in the Lower Dnipro region (ponds, micro-reservoirs, submerged macrophytes): *X. falcigera*, *Co. scutellata* and *Limnophyes sp.* The third and largest, group includes species / morphotypes whose identifications were complicated by the lack of or ignoring appropriate identification keys at the time of active research in the region. It includes members of the genera *Hydrobaenus*, *Psectrocladius*, *Chironomus*, *Paratanytarsus* and *Tanytarsus* (including species listed for the first group). The records of *K. tendipediformis* were not isolated, but restricted to 2015. *Polypedilum nubifer* was recorded in large quantity in the supralittoral zone only (a poorly studied biotope for the Lower Dnipro region), in other cases the records were sporadic.

### The first records from Ukraine

Three species and two morphotypes recorded for the fauna of Ukraine for the first time considered in more detail with addition of figures for morphotype records.

*Xenopelopia falcigera*. The specimen was found in a temporary pond, located eastward of the Lake Stebliivskiy Liman. It is one of a group of shallow water bodies under the trees that fill up in spring. They have an average depth of 0.5 m and the bottoms covered with fallen leaves and other plant remains. *Xenopelopia falcigera* is widespread in Europe, but it is difficult ascertain its distribution in the Lower Dnipro region. This is due to an extremely limited study of the ponds where the larva was found (single specimen).

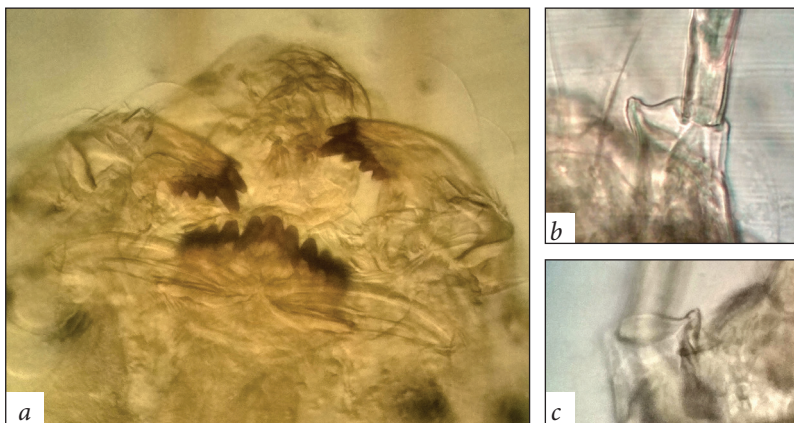
*Tanytarsus pallidicornis*. One of two members of the *pallidicornis* species group found in the Lower Dnipro region. Sporadic records of this species were confined to the Koshova River and Lake Kruhle. As it was the case of the *K. tendipediformis* species, *T. pallidicornis* was recorded only in 2015.

*Tanytarsus usmaensis*. Another member of the *pallidicornis* group, much more widespread in the Lower Dnipro region. The species was found both in standing and in flowing waters, but was not recorded in large numbers during the study period. Records from the watercourses were infrequent.

*Tanytarsus sp. cf. formosanus*. The morphotype, belonging to the *mendax* species group, is known primarily from the Oriental and Afrotropical regions, but has been reliably recorded from southern Spain and France (Ekrem, 2004). It is widely distributed in the Lower Dnipro region. It is the only member of the genus *Tanytarsus* in the studied region, most of which are found in brackish water areas (Dnipro-Buh Estuary). In freshwater areas, the records are localized in a limited number of lakes, including the supralittoral zone. Unlike most members of the tribe Tanytarsini in the Lower Dnipro, the larvae is not strongly phytophilic. Since the morphotype is not typical for Europe and was identified only at the larval stage, it was decided to stop at the designation of it as *Tanytarsus sp. cf. formosanus* until further corroboration (Fig. 1).



**Fig. 1.** *Tanytarsus* sp. cf. *formosanus*: *a* — antenna, mandibles, mentum, ventral view; *b* — antenna, ventral view



**Fig. 2.** *Tanytarsus* sp. cf. *lugens* / *glabrescens*-type: *a* — mandibles, mentum, ventral view; *b* — antennal pedestal, dorsal view; *c* — antennal pedestal, ventral view

*Tanytarsus* sp. cf. *lugens* / *glabrescens*-type. The morphotype is widespread in standing and flowing waters of the Lower Dnipro region, mass records are confined to the spring season. The name of the morphotype uses paleolimnological terminology (Brooks, Langdon & Heiri, 2007), since the recorded larvae are characterized by the presence of features inherent to both types, namely: additional dorsal teeth on the mandible, the middle three teeth which clearly off-set and placed ventral to the remaining teeth of the mentum (*lugens*-type) and antennal pedestal with medium pointed spur (in combination with 2+2 dorsal teeth on the mandible (*glabrescens*-type) (Fig. 2). Among the species with additional dorsal teeth on the mandible (so-called *lugens*-type mandible), listed in Stur & Ekrem (2011), the most similar in terms of the set of features to the recorded specimens is *Tanytarsus recurvatus* Brundin, 1947, however, according to Bendt, Cuppen & Tempelman (2018), the larva of this species does not have a spur on antennal pedestal. Since *T. recurvatus* and *T. glabrescens* are members of *recurvatus* species group, there is reason to consider the specimens I have recorded to belong to the *recurvatus* group.

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## Conclusions

After many decades of research the entomofauna of the Dnipro-Buh estuarine region was neglected and remained poorly studied due to lack of attention to Chironomidae identification and taxonomy. In this study, one genus, one subgenus, eighteen species and four morphotypes of chironomids are recorded for the first time in the region. This contribution can be considered a cornerstone for the further revision of Chironomidae fauna of the Lower Dnipro region and the Dnipro-Buh Estuary. The destruction of the Kakhovka Dam and Reservoir by the Russian military in June 2023 caused the irreversible changes in Dnipro-Buh estuarine ecosystem, especially for the delta and pre-delta areas of the Lower Dnipro. Because of this, the data collected before the catastrophe becomes even more important as a record of the pre-disturbance condition. Such records are essential for the further research in this field and for the monitoring of the ecological changes in the region.

**Data statement.** Dataset of the records is available through GBIF: <https://doi.org/10.15468/9g4wj7>.

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