

RESEARCH ARTICLE

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First data on Dolichopodidae (Diptera) of the West Kotlin Nature Reserve (Saint Petersburg, Russia)

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First data on Dolichopodidae from the West Kotlin Nature Reserve resulted from the short-term visit (June, 2017) are presented. All 25 collected species are firstly recorded for the Kotlin Island. *Lamprochromus semiflavus* (Strobl, 1880) and *Syntormon filiger* Verrall, 1912 are new species for the Leningrad Region and Saint Petersburg. The old records of *Lamprochromus bifasciatus* (Macquart, 1827) and *Syntormon pumilus* (Meigen, 1824) from the Region are doubted.

Key words: Diptera, Dolichopodidae, Palearctic Region, Russia, Saint Petersburg, new record, fauna.

Introduction

The fauna of dolichopodid flies of the Leningrad Region and environs of Saint Petersburg is one of the best studied in Russia with about 220 known species (Stackelberg, 1962; Grichanov, 2006). Nevertheless, none species of long-legged flies was known from the Kotlin Island, located near the head of the Gulf of Finland, 32 km west of the center of Saint Petersburg in the Baltic Sea. In general outline, the island forms an elongated triangle, equal to about 11 km length by about 2 km breadth, with its base directed towards St. Petersburg. The eastern or broad end is occupied by the town of Kronstadt (now a district of St. Petersburg).

The West Kotlin Nature Reserve of regional conservation significance was established in 2012 and occupies the area of 102 hectares on the westernmost tip of the Kotlin Island. The natural objects of special value on the territory of the Reserve are the psammophyte communities on the sandy coasts (Fig. 1) and the black alder forest. The terrain has natural elevations to 2–4 m above sea level, includes small-leaved forests, maritime marshes (Fig. 1), peat bogs, and 4 small ponds (Khramtsov et al., 2013).

This paper presents the new species records in detail. Records of 25 species listed below are arranged alphabetically by genus. All specimens listed below have the following label: Russia: Saint Petersburg, West Kotlin Nature Reserve, 16.VII.2017. The authors of this paper make the habitat photos and collect all the specimens (this information is omitted from the species list). Information of each listed species world distribution follows Grichanov (2017). Type localities are provided and country lists are arranged alphabetically. Material of the newly-recorded species is deposited at the Zoological Institute, St. Petersburg, Russia. All specimens are mounted on pins and placed in the museum drawers. Synonyms are provided in the species list, if only they were mentioned in references related to the Leningrad Region.



Fig. 1. Eroded sandy coast on the Kotlin Island, July 2017.



Fig. 2. Maritime marsh on the Kotlin Island, July 2017.

New records of Dolichopodidae***Campsicnemus curvipes* (Fallén, 1823)**

MATERIAL. 3♂♀.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, Abkhazia, Algeria, Armenia, Azerbaijan, Georgia, Morocco, Russia (Adygea, Alania, Belgorod, Chechnya, Crimea, Dagestan, Ivanovo, Kabardino-Balkaria, Kaluga, Karachay-Cherkessia, Karelia, Krasnodar, Krasnoyarsk, Kursk, Leningrad, Lipetsk, Moscow, Perm, Pskov, Ryazan, Stavropol, Vologda, Voronezh), Turkey (Antalya, Bolu).

***Campsicnemus lumbatus* Loew, 1857**

MATERIAL. 4♂♀.

DISTRIBUTION. Type locality: Poland: "aus hiesiger Gegend" [= Meseritz]. Palaearctic: Europe, Kazakhstan, Russia (Kaliningrad, Krasnodar, Krasnoyarsk, Leningrad, Mordovia, Moscow, Pskov, Ryazan, Rostov, S Ural).

***Campsicnemus pusillus* (Meigen, 1824)**

MATERIAL. 6♂♀.

DISTRIBUTION. Germany: Hamburg. Palaearctic: Europe, Russia (Ivanovo, Kabardino-Balkaria, Karelia, Leningrad, Pskov, Ryazan, Stavropol, Irkutsk, Kamchatka, Vladivostok).

***Campsicnemus scambus* (Fallén, 1823)**

MATERIAL. 3♂♀.

DISTRIBUTION. Type locality: Sweden: Esperod. Palaearctic: Europe, Russia (Arkhangelsk, Bashkortostan, Chelyabinsk, Ekaterinburg, Kaliningrad, Karelia, Komi, Krasnodar, Leningrad, Lipetsk, Mordovia, Moscow, Murmansk, Nenetsia, Novgorod, Pskov, Ryazan, Saratov, Tver, Vologda, Voronezh, Altai Rep., Irkutsk, Khantia-Mansia, Krasnoyarsk, Khabarovsk, Vladivostok, S Kamchatka, Yamal).

***Chrysotus cilipes* Meigen, 1824**

MATERIAL. 2♂♀.

DISTRIBUTION. Type locality: Germany: Hamburg. Palaearctic: Europe, Abkhazia, Armenia, Azerbaijan, China, Japan, Kazakhstan, Korea, Mongolia, Russia (Adygea, Altai Rep., Baikal, Blagoveshchensk, Chita, Kabardino-Balkaria, Krasnodar, Krasnoyarsk, Moscow, Leningrad, Novgorod, Pskov, Rostov, Tomsk, Vladivostok, Voronezh, Yakutia), Turkey.

***Chrysotus gramineus* (Fallén, 1823)**

MATERIAL. 1♂.

DISTRIBUTION. Type locality: not given [Sweden]. Palaearctic: Europe, Abkhazia, Armenia, Azerbaijan, China, Georgia, Korea, Kyrgyzstan, Russia (Adygea, Alania, Altai Rep., Arkhangelsk, Bashkortostan, Blagoveshchensk, Buryatia, Chelyabinsk, Chita, Chukotka, Irkutsk, Kabardino-Balkaria, Karachai-Cherkessia, Karelia, Khabarovsk, Kostroma, Krasnodar, Krasnoyarsk, Kursk, Leningrad, Lipetsk, Mordovia, Moscow, Murmansk, Novgorod, Orel, Orenburg, Pskov, Ryazan, Sakhalin, Tatarstan, Tomsk, ?Ural, Vologda, Voronezh, Yakutia, Yaroslavl), Tajikistan, Turkey (Hakkari, Erzurum, Kars), Turkmenistan.

***Dolichopus linearis* Meigen, 1824**

MATERIAL. 8♂♀.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, China (Heilongjiang, Jilin, Beijing, Inner Mongolia, Gansu, Xinjiang, Qinghai), Georgia, Kazakhstan, Mongolia, Russia (Adygea, Krasnodar, Leningrad, Novgorod, Pskov, Voronezh, Baikal, Khantia-Mansia, Vladivostok).

***Dolichopus nubilus* Meigen, 1824**

MATERIAL. 2♂♀.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, Armenia, Azerbaijan, China (Xinjiang), Iran, Kazakhstan, Kyrgyzstan, Russia (Altai Rep., Adygea, Kaliningrad, Karelia, Krasnodar, Kursk, Leningrad, Rostov, Saratov, Voronezh), Tajikistan, Turkey (Kirkklareli), Uzbekistan.

REMARKS. This rare in Leningrad Region species was formerly collected only on the Karelian Isthmus by Finnish entomologists (Frey, 1915; Krogerus, 1960).

***Dolichopus plumipes* (Scopoli, 1763)**

MATERIAL. 17♂♀.

DISTRIBUTION. Type locality: Slovenia: "Carnioliae indigena". Palaearctic, Nearctic, Neotropical and Oriental Regions.

***Dolichopus simplex* Meigen, 1824**

MATERIAL. 8♂♀.

DISTRIBUTION. Type locality: Germany: Hamburg, Kiel. Palaearctic: Europe, Armenia, Georgia, Iran, N Kazakhstan, Russia (Belgorod, Kaluga, Karachai-Cherkessia, Karelia, Kirov, Komi, Krasnodar, Kursk, Leningrad, Mordovia, Moscow, Murmansk, Nizhnii Novgorod, Novgorod, Orenburg, Pskov, Rostov, Ryazan, Saratov, Vologda, Voronezh, Yakutia), Turkey (Erzurum, Hakkari, Kars).

Gymnopternus aerosus* (Fallén, 1823)Hercostomus aerosus* (Fallén, 1823)

MATERIAL. 2♀.

DISTRIBUTION. Type locality: not given [Sweden]. Palaearctic: Europe, Abkhazia, Japan, Kazakhstan, Mongolia, Russia (Adygea, Alania, Arkhangelsk, Kaliningrad, Karelia, Karachai-Cherkessia, Krasnodar, Leningrad, Lipetsk, Mordovia, Moscow, Murmansk, Novgorod, Pskov, Voronezh, "Ural", Buryatia, Irkutsk, Khantia-Mansia, Vladivostok, Vologda), Tajikistan; Oriental: Taiwan.

Gymnopternus assimilis* (Staeger, 1842)Hercostomus assimilis* (Staeger, 1842)

MATERIAL. 1♀.

DISTRIBUTION. Type locality: not given [Denmark]. Palaearctic: Europe, Russia (Karachai-Cherkessia, Leningrad, Moscow, Ryazan, Voronezh), Turkey (Hakkari).

REMARKS. This rare in Leningrad Region species was formerly collected only in Luga district in 1934 by Stackelberg (1962).

Gymnopternus angustifrons* (Staeger, 1842)Hercostomus angustifrons* (Staeger, 1842)

MATERIAL. 1♀.

DISTRIBUTION. Type locality: Denmark: "Flere Hanner paa Valdplanter". Palaearctic: Europe, Kazakhstan, Russia (Adygea, Karelia, Karachay-Cherkessia, Krasnodar, Leningrad, Lipetsk, Moscow, Pskov, Ryazan, Voronezh, Ural, Siberia), Turkey (Kars).

Gymnopternus brevicornis* (Staeger, 1842)Hercostomus brevicornis* (Staeger, 1842)

MATERIAL. 2♂♀.

DISTRIBUTION. not given [Denmark]. Palaearctic: Europe, Russia (Karelia, Leningrad, Murmansk, Voronezh, Ural, Altai, Khantia-Mansia, Vladivostok).

Gymnopternus celer* (Meigen, 1824)Hercostomus celer* (Meigen, 1824)

MATERIAL. 6♂♀.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, Kazakhstan, Russia (Altai Rep., Buryatia, Krasnodar, Krasnoyarsk, Mordovia, Moscow, Novgorod, Ryazan, Ural, Voronezh), Turkey (Çanakkale).

Gymnopternus metallicus* (Stannius, 1831)Hercostomus metallicus* (Stannius, 1831)

MATERIAL. 14♂♀.

DISTRIBUTION. Type locality: Germany: "Umgegend von Hamburg". Palaearctic: Europe, Abkhazia, Azerbaijan, Iran, Kazakhstan, Russia (Alania, Altai, Karachai-Cherkessia, Krasnodar).

REMARKS. Rare species in Leningrad Region according to Stackelberg (1962).

Hydrophorus bipunctatus* (Lehmann, 1822)Medetera bipunctata* (Lehmann, 1822)

MATERIAL. 1♂.

DISTRIBUTION. Type locality: Germany: Hamburg. Palaearctic: Europe, Kirgizia, Russia (Buryatia, Karachai-Cherkessia, Karelia, Kursk, Leningrad, Mordovia, Moscow, Ryazan, S Ural, Voronezh, Yakutia).

***Lamprochromus semiflavus* (Strobl, 1880)**

MATERIAL. 1♂.

DISTRIBUTION. Type locality: Austria: Conventgarten. Palaearctic: Europe, Russia (Orel, Pskov, Voronezh), Turkey (Adiyaman).

REMARKS. First record of the species in Leningrad Region. It was reported formerly from the neighboring Finland and Pskov Region of Russia as *Lamprochromus strobli* Parent, 1925, now synonym of *L. semiflavus*. According to

Grichanov, Ahmadi (2017), *L. semiflavus* differs from other species of the genus in yellow at base abdomen, rounded at apex postpedicel, which distinctly longer than high, violet-green frons without red shine, silvery white face, well developed velvety black lateral spots on mesonotum, presence of strong spine on phallus. Until recently, some catalogs and checklists (including Grichanov, 2006) placed *L. semiflavus* in synonymy to *L. bifasciatus* (Macquart, 1827); therefore, old records of the latter species from the Leningrad Region (Stackelberg, 1962) must be confirmed, because they could belong to *L. semiflavus*.

***Medetera jacula* (Fallén, 1823)**

MATERIAL. 1♂.

DISTRIBUTION. Type locality: Sweden: Scania. Palaearctic: Europe, Armenia, Azerbaijan, Georgia, Iran, N Kazakhstan, Russia (Alania, Altai Rep., Buryatia, Irkutsk, Chechnya, Crimea, Kabardino-Balkaria, Kaluga, Krasnodar, Kursk, Leningrad, Mordovia, Moscow, Novgorod, Rostov, Ryazan, Sayan Mountains, Stavropol, Urals, Vologda, Voronezh, Yakutia), Tunisia, Turkey (Antalya).

***Rhaphium commune* (Meigen, 1824)**

Porphyrops communis Meigen, 1824

MATERIAL. 1♂.

DISTRIBUTION. Type locality: ?Germany: ?Aachen. Nearctic: Alaska; Palaearctic: Europe, Russia (European part, Kamchatka, Khabarovsk, Krasnoyarsk, Yakutia).

***Rhaphium monotrichum* Loew, 1850**

Xiphandrium monotrichum (Loew, 1850)

MATERIAL. 2♂♀.

DISTRIBUTION. Type locality: Sweden: "Sueciam meridionalem et medium; in Scania ad Esperod, Ostrogothia ad Sudercopiam, ad Gusum, ad Walstena, ipsc. Etiam, Gottlandia, ad Holmiam". Palaearctic: Europe, Russia (Igarka, Irkutsk, Kabardino-Balkaria, Krasnoyarsk, Leningrad, Mordovia, Moscow, Murmansk, Novgorod, Voronezh).

***Sympycnus aeneicoxa* (Meigen, 1824)**

MATERIAL. 1♂.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, Russia (Leningrad, Moscow, Pskov).

***Sympycnus pulicarius* (Fallén)**

Sympycnus annulipes (Meigen, 1824)

MATERIAL. 14♂♀.

DISTRIBUTION. Type locality: not given [Sweden]. Palaearctic: Europe, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Mongolia, Russia (Alania, Altai Rep., Altai Terr., Buryatia, Chechnya, Chelyabinsk, Crimea, Kabardino-Balkaria, Kaliningrad, Karachai-Cherkessia, Karelia, Krasnodar, Krasnoyarsk, Leningrad, Lipetsk, Moscow, Murmansk, Novgorod, Pskov, Stavropol, Svedlovsk, Voronezh, Yakutia), Tajikistan, Turkey (Aydın, Bolu, Muğla, Van), Uzbekistan; Nearctic: California.

***Syntormon filiger* Verrall, 1912**

MATERIAL. 1♀.

DISTRIBUTION. Type locality: England: Walton-on Naze, Woolbridge, Aldeburgh. Palaearctic: Europe, Kazakhstan (Astana, Kostanay), Mongolia, Russia (Astrakhan, Crimea, Rostov, Novosibirsk).

REMARKS. First record of the species in Leningrad Region. According to Grichanov's key (2006), *S. filiger* females differ from those of close species of the genus in mainly dark fore coxa bearing mostly black hairs and setae; mid coxa with one black seta; fore tibia without serration; frons mat; lower calypter with black cilia. Until recently, some keys, catalogs and checklists (e.g., Negrobov, 1991; Grichanov, 2006) placed *S. rufipes* (Meigen, 1824) in synonymy to *S. pumilus* (Meigen, 1824) or considered it a valid species (now an unrecognized species of *Rhaphium*, see Grichanov, 2013), ignoring a new name *Syntormon filiger* Verrall, 1912 for *Syntormon rufipes* (Zetterstedt, 1849, et alii auct.), nec Meigen, 1824 (misidentification); therefore, old records of *S. rufipes* and *S. pumilus* from the Leningrad Region (Stackelberg, 1962) must be confirmed, because they could belong to *S. filiger*.

***Thrypticus cuneatus* (Becker, 1917)**

Submedeterus cuneatus Becker, 1917

MATERIAL. 1♀.

DISTRIBUTION. Type locality: Hungary: "Rakaschia". Palaearctic: Europe, N Kazakhstan, Russia (Karelia, Leningrad).

REMARKS. Rare species in Leningrad Region according to Stackelberg (1962).

Conclusion

The Kotlin Island was originally covered with many coniferous trees, which were entirely cut in the first half of 18th century (Khramtsov et al., 2013). Till the end of 20th century, the western part of the Island was an area of military activity of the Russian Navy and Army, and it had no access for professional botanists and zoologists. Consequently, the history of flora and fauna dynamics during that period is unknown. The latest trends in soil and flora dynamics on the territory of the West Kotlin Nature Reserve are described and mapped (Khramtsov et al., 2013). Generally, a large portion of the Reserve is covered with natural and semi-natural vegetation consisting of 360 vascular plant species, 53 species of bryophytic, and 154 lichen species.

Our short-term visit to the Kotlin Island has resulted in collection of 25 dolichopodid species. All they are new for the Island. It means that possible faunal composition of the family must be several times more diverse there. Most of the collected species are common and widespread across Europe or even across Palaearctic Region; nevertheless, *Dolichopus nubilus*, *Gymnopternus assimilis*, *G. metallicus* and *Thrypticus cuneatus* seem to be rare species in the Leningrad Region. *Lamprochromus semiflavus* and *Syntormon filiger* are new species for the Region. The Dolichopodidae fauna of the Leningrad Region and Saint Petersburg contains now 223 species (Grichanov, 2006; this paper).

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