

New records of Dolichopodidae (Diptera) from Valaam Island (Russian Karelia)

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Original data on Dolichopodidae from the Valaam Island resulted from the short-term visits (2009, 2016, 2017) are presented. All 18 collected species are firstly recorded for the Valaam Island. *Campsicnemus lumbatus* Loew, 1857, *Medetera abstrusa* Thunberg, 1955 and *Medetera dichrocera* Kowarz, 1877 are new species for Karelia. *Rhaphium auctum* Loew, 1857 is collected for the second time in Russia. Photographs of habitats of dolichopodid species are included.

Key words: Diptera; Dolichopodidae; Palearctic Region; Russian Karelia; new record; fauna

Introduction

The fauna of dolichopodid flies of the Valaam Island is insufficiently studied. Until recently, nobody of Russian researchers has paid attention to this territory. The only work with original data, where we could find records from Valaam, is the review of the dipterofauna of the Karelian Republic (Grichanov & Polevoi, 2004). The trans-Palaeartic species *Chrysotus neglectus* (Wiedemann, 1817) and mainly European *Medetera senicula* Kowarz, 1877 were identified by I. Grichanov during his work in the Zoological Museum of Helsinki (now the Zoology Unit of the Finnish Museum of Natural History) in 2003. The specimens were collected on the Island by Finnish entomologists P. Suomalainen and J. Sahlberg more than 70 years ago.

The Valaam is the largest island in the northern portion of Lake Ladoga, together with numerous small islands along its shore forming the Valaam Archipelago, lying within the Republic of Karelia, Russian Federation. The total area of the Island is 27.8 km². It belongs to the middle-taiga subzone of taiga zone, being covered with mainly coniferous forests (about 65% of its territory are occupied by pine). The terrain has elevations in the range 5.1 to 58.3 m above sea level, includes some haylands and fields, two inner lakes, 9 ponds and net of reclamation ditches. Photographs of common habitats of dolichopodid species are provided below (Figs. 1–4).

This paper presents the new species records in detail. Records of 18 species listed below are arranged alphabetically by genus. The 2017 collection was made near the Main Monastery Road. The Fedorovskii, Dubrovskii and Nizkii islands visited in 2016 are located closely to the northern shore of the Valaam Island. Information on world distribution for each species listed follows Grichanov (2017). Type localities are provided and country lists are arranged alphabetically, as well as Russian regions and territories. Material of the newly-recorded species is deposited at the Zoological Institute, St. Petersburg, Russia, and the Forest Research Institute, Petrozavodsk, Russia. All specimens are mounted on pins and placed in the museum drawers.



Fig. 1. View of the Monastyrskaya Bay, June 2017



Fig. 2. View of the Malaya Nikonovskaya Bay, June 2017.



Fig. 3. A boggy reclamation ditch – typical habitat of *Dolichopus* species, June 2017



Fig. 4. A wooden bridge on the Main Monastery Road – a resting place for *Medetera* species, June 2017

New records of Dolichopodidae

Argyra diaphana (Fabricius, 1775)

MATERIAL. 1♂, 2♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Germany: Lipsiae [= Leipzig]. Palaearctic: Europe, Azerbaijan, Georgia, Iran, Russia (Karelia, Krasnodar, Kursk, Krasnoyarsk, Leningrad, Lipetsk, Mordovia, Moscow, Pskov, Ryazan, Voronezh), Turkey (Sultanice).

Campsicnemus curvipes (Fallén, 1823)

MATERIAL. 1♀, Valaam Is., 16.VI.2016, A. Polevoi; 1♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi; 1♂, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

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. 1♂. Valaam Is., Leshchevo Lake shore, 30.VII.2009, A. Polevoi.

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

Dolichopus discifer Stannius, 1831

MATERIAL. 1♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi.

DISTRIBUTION. Type locality: Germany. Palaearctic: Europe, Georgia, N Kazakhstan, Russia (Karelia, Komi, Leningrad, Moscow, Murmansk, Novgorod, Vologda, Altai Rep., Baikal, Khantia-Mansia, Khabarovsk, Sakhalin, Primorskii Terr.); Nearctic: Canada and USA.

Dolichopus lepidus Staeger, 1842

MATERIAL. 1♀, Valaam [Archipelago], Fedorovskii Is., 16.VI.2016, A. Polevoi; 1♂, 1♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi; 4♀, Valaam [Archipelago], Nizkii Is., 16.VI.2016, A. Polevoi; 1♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Denmark: Slutningen, ved Leersøen. Palaearctic: Europe, China, Georgia, Kazakhstan, Mongolia, Russia (Adygea, Karelia, Khabarovsk, Khantia-Mansia, Krasnodar, Krasnoyarsk, Leningrad, Magadan, Moscow, Murmansk, Novgorod, Pskov, Ryazan, Sayan Mountains, Vladivostok, Vologda, Voronezh), Turkey (Kars).

Dolichopus plumipes (Scopoli, 1763)

MATERIAL. 1♂, Valaam, Melnichnaya bay, 31.VII.2009, A.Polevoi; 1♂, 1♀, Valaam Is., 16.VI.2016, A. Polevoi; 2♂, 1♀, Valaam [Archipelago], Fedorovskii Is., 16.VI.2016, A. Polevoi; 6♂, 4♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi; 1♂, 1♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Slovenia: "Carnioliae indigena". Palaearctic: Europe, Afghanistan, China (Heilongjiang, Hebei, Henan, Shanxi, Inner Mongolia, Xinjiang, Qinghai, Xizang), Georgia, Kazakhstan, Mongolia, Russia (Adygea, Arkhangelsk, Baikal, Belgorod, Chukotka, Kabardino-Balkaria, Kamchatka, Karelia, Karachai-Cherkessia, Khabarovsk, Koryakia, Krasnodar, Kirov, Komi, Leningrad, Lipetsk, Mari El, Moscow, Murmansk, Nenetsia, Nizhnii Novgorod, N Ossetia, Novgorod, Perm, Pskov, Rostov, Tomsk, Tyumen, Vladivostok, Vologda, Voronezh), Turkey (Tur Lake, Kackar Mountains, Rize), Uzbekistan; Nearctic, Neotropical and Oriental Regions.

Dolichopus simplex Meigen, 1824

MATERIAL. 1♂, Valaam Is., Melnichnaya Bay, Lake shore, 31.VII.2009, A. Polevoi; 1♂, 2♀, Valaam [Archipelago], Fedorovskii Is., 16.VI.2016, A. Polevoi; 2♂, 3♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi; 2♂, 7♀, Valaam [Archipelago], Nizkii Is., 16.VI.2016, A. Polevoi. 2♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

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).

Dolichopus ungulatus (Linnaeus, 1758)

MATERIAL. 1♂, Valaam, Leschevo lake, 30.VII.2009, A.Polevoi.

DISTRIBUTION. Type locality: Europe. Palaearctic: Europe, China (Xinjiang), Georgia, Iran, Kazakhstan, Russia (Adygea, Alania, Altai Rep., Altai Terr., Chechnya, Irkutsk, Kabardino-Balkaria, Karachai-Cherkessia, Karelia, Khabarovsk, Khantia-Mansia, Krasnodar, Krasnoyarsk, Kursk, Leningrad, Lipetsk, Mordovia, Moscow, Novgorod, Orenburg, Perm, Pskov, Ryazan, Tatarstan, Vladivostok, Vologda, Voronezh).

REMARKS. A specimen studied was destroyed by dermestids.

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

MATERIAL. 1♂, Valaam [Archipelago], Fedorovskii Is., 16.VI.2016, A. Polevoi; 13♂, 6♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

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 metallicus* (Stannius, 1831)**

MATERIAL. 1♂, Valaam Is., 16.VI.2016, A. Polevoi.

DISTRIBUTION. Type locality: Germany: "Umgegend von Hamburg". Palaearctic: Europe, Abkhazia, Azerbaijan, Iran, Kazakhstan, Russia (Alania, Altai Rep., Kabardino-Balkaria, Kamchatka, Karelia, Khabarovsk, Krasnodar, Krasnoyarsk, Leningrad, Lipetsk, Novgorod, Orel, Pskov, Ryazan, Vladivostok, Vologda), Turkey.

***Medetera abstrusa* Thunberg, 1955**

MATERIAL. 4♂, 2♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Finland: Outakoski; England: Wordlitton Wood. Palaearctic: Europe, Russia (Irkutsk, Karachai-Cherkessia, Krasnodar, Leningrad, Novosibirsk, Buryatia). New species for Karelia.

***Medetera dichrocera* Kowarz, 1877**

MATERIAL. 2♂, 2♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: "Osterreich, Ungarn, Deutschland, Dänemark, Sweden, Moskau". Palaearctic: Europe, Japan, Russia (Arkhangelsk, Buryatia, Irkutsk, Leningrad, Perm). New species for Karelia.

***Medetera tristis* (Zetterstedt, 1838)**

MATERIAL. 5♂, 6♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Sweden: Lycksele, Lapponia Umensi Umenaes, Stoettingsfellet. Palaearctic: Europe, Russia (Karelia, Leningrad, Novgorod, Pskov, "Ural", Vladivostok).

***Rhaphium auctum* Loew, 1857**

MATERIAL. 1♂, 2♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: Poland: Harz, Meseritz. Negrobov (1991) included the following countries in the distribution list: Belgium, Denmark, France, Great Britain, Italy, Netherlands, Poland, Romania, Sweden and Ukraine. Yang et al. (2006) added Afghanistan and Russia to that list; however, we have not traced original publications with records from the latter countries. This error was republished in some recent lists. Later, the species was reported from Austria, Czech Republic, Finland, Hungary, Ireland, Slovakia and Switzerland, as well as the "Near East" (Pollet, 2013). Kechev (2011) recorded *R. auctum* from Bulgaria, and Kazerani et al. (2013: Figs. 9–10) found it in North-Western Iran. It was reported also from South-Eastern Karelia (Humala, Polevoi, 2009). So, the present paper is the second reliable report of the species from Russia.

***Rhaphium elegantulum* (Meigen, 1824)**

MATERIAL. 3♀, Valaam [Archipelago], Fedorovskii Is., 16.VI.2016, A. Polevoi; 3♂, 9♀, Valaam [Archipelago], Nizkii Is., 16.VI.2016, A. Polevoi; 2♂, 1♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi.

DISTRIBUTION. Type locality: Germany: Hamburg. Palaearctic: Europe, Russia (Karelia, Krasnodar, Leningrad, Murmansk, Voronezh, "Polar Ural", "Ilgarka", Baikal, Kamchatka, Khantia-Mansia, Krasnoyarsk); Nearctic: USA and Canada.

***Rhaphium riparium* (Meigen, 1824)**

MATERIAL. 1♀, Valaam Is., 30.VI.2017, Grichanov, Ovsyannikova.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, China, Georgia, Kyrgyzstan, Mongolia, Russia (Karelia, Kamchatka, Karachay-Cherkessia, Krasnodar, Leningrad); Nearctic Region.

REMARKS. Females of closely related *Rhaphium* species can be hardly distinguished from each other. Nevertheless, the wing morphology of the female collected on Valaam is most close to that of *R. riparium* known from the neighboring territories of Finland and Leningrad Region of Russia. It was reported also from the Kizhi Archipelago (Polevoi et al., 2005).

***Syntormon* aff. *pumilus* (Meigen, 1824)**

1♀, Valaam [Archipelago], Nizkii Is., 16.VI.2016, A. Polevoi.

DISTRIBUTION. Type locality: not given. Palaearctic: Europe, Afghanistan, Armenia; Morocco, Russia (Astrakhan, Kabardino-Balkaria, Kaluga, Karelia, Krasnodar, Kursk, Leningrad, Lipetsk, Moscow, Murmansk, Novosibirsk, Pskov, Stavropol, Vologda, Voronezh, Yakutia), Tunisia, Turkey; "Middle Asia".

***Tachytrechus ammobates* (Haliday, 1851)**

MATERIAL. 1♂, 1♀, Valaam [Archipelago], Dubrovskii Is., 16.VI.2016, A. Polevoi.

DISTRIBUTION. Type locality: Sweden; Germany. Palaearctic: Europe, Russia (Karelia, Leningrad, Pskov, "Siberia").

Conclusion

Grichanov, Polevoi (2004) listed 122 species for the Karelian Republic. Later, *Dolichopus consimilis* Wahlberg, 1850 was placed in synonymy to *D. picipes* Meigen, 1824; *Dolichopus cruralis* Wahlberg, 1850 in synonymy to *D. lepidus* Staeger, 1842; and *Dolichopus micropygus* Wahlberg, 1850 in synonymy to *D. fraterculus* Zetterstedt, 1843 (Kahanpää, 2008); several new for Karelia species were found: *Rhaphium riparium* (Meigen, 1824) was reported from the Kizhi Archipelago (as *R. praerosum* Loew, 1850, with a question mark) (Polevoi et al., 2005); *Hydrophorus albiceps* Frey, 1915 (with a question mark) and *Rhaphium auctum* Loew, 1857 from South-Eastern Karelia (Humala, Polevoi, 2009); *Dolichopus wahlbergi* Zetterstedt, 1843, *Hercostomus nigrilamellatus* (Macquart, 1827) and *Syntormon bicolorellus* (Zetterstedt, 1843) from the Kizhskie Shkhery Nature Reserve (Humala, Polevoi, 2012); *Chrysotus cilipes* Meigen, 1824 from the Zaonezhye Peninsula (Jakovlev et al., 2014); *Dolichopus lancearius* Hedström, 1966 from the Ladozero Lake in the Belomorskii District, *Sciapus albifrons* (Meigen, 1830) from the Sortavala District, and *Sciapus maritimus* Becker, 1918 from the Kondostrov Island in the White Sea (Humala, Polevoi, 2015).

Our short-term visits to the Valaam Island have resulted in collection of 18 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 widespread across Europe or even across Palaearctic Region; nevertheless, *Rhaphium auctum* is collected for the second time in Russia; *Campsicnemus lumbatus*, *Medetera abstrusa* and *M. dichrocer* are new species for Karelia. The Dolichopodidae fauna of the Karelian Republic contains now 132 species, and the Valaam fauna includes 20 species.

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