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An annotated checklist of the Muscidae (Diptera) of Chukotka (Russia), with new records

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Summary. An annotated checklist is given of the species of Muscidae (Diptera) of the Chukotka Autonomous Okrug, including 153 species in 22 genera; 57 species are newly recorded from this territory. Twelve species are newly recorded for the Palaearctic region [*Drymeia cantabrigensis* Huckett 1965, *Phaonia tenebriona* Huckett, 1965, *Mydaea otiosa* Stein, 1920, *Spilogona arcticola* Huckett, 1965, *S. hurdiana* Huckett, 1965, *S. incauta* (Huckett, 1932), *S. murina* Huckett, 1965, *S. nigerrima* Huckett, 1965, *S. padlei* Huckett, 1965, *S. pulvicrura* (Huckett, 1932), *S. turbidipennis* Huckett, 1965, *Coenosia morrisoni* (Malloch, 1924)]. *Coenosia atritibia* Ringdahl, 1926 is newly recorded from Russia. The species list includes all regional references to each species, the material examined, the distribution, images of selected species and additional remarks where appropriate.

Résumé. Liste commentée des Muscidae (Diptera) de Tchoukotka (Russie), avec de nouvelles citations. Une liste annotée des espèces de Muscidae (Diptera) du district autonome de Tchoukotka est fournie, comprenant 153 espèces réparties en 22 genres ; 57 espèces sont nouvellement répertoriées sur ce territoire. Douze espèces sont nouvellement répertoriées pour la région Paléarctique [*Drymeia cantabrigensis* Huckett 1965, *Phaonia tenebriona* Huckett, 1965, *Mydaea otiosa* Stein, 1920, *Spilogona arcticola* Huckett, 1965, *S. hurdiana* Huckett, 1965, *S. incauta* (Huckett, 1932), *S. murina* Huckett, 1965, *S. nigerrima* Huckett, 1965, *S. padlei* Huckett, 1965, *S. pulvicrura* (Huckett, 1932), *S. turbidipennis* Huckett, 1965, *Coenosia morrisoni* (Malloch, 1924)]. *Coenosia atritibia* Ringdahl, 1926 est nouvellement citée de Russie. La liste comprend toutes les références bibliographiques régionales relatives à chaque espèce, le matériel examiné, la répartition, des illustrations des espèces sélectionnées et des remarques supplémentaires le cas échéant.

Keywords: fauna; distribution; Wrangel Island; Chukotka Autonomous Okrug; Russian Far East

Chukotka or the Chukotka Autonomous Okrug is located geographically in the extreme north-east of Russia. It encompasses the entire Chukotka Peninsula, part of the mainland and a number of islands (Wrangel, Herald, Ayon, Ratmanova, etc.). It is the only region in Russia with a part that is located in the Western Hemisphere. Most of Chukotka is located north of the Arctic Circle which is why the climatic conditions are so extreme, making the study of insects especially interesting and important. In addition, the Chukotka Peninsula borders with the Alaska Peninsula through the Bering Strait, which makes Chukotka a "bridge" between the Palaearctic and Nearctic faunas.

Two-thirds of the Chukotka territory consists of mountains and highlands and the remaining third of lowlands. Different types of tundra, taiga and elfin woodland cover the territory of Chukotka, with extensive poplar and chozenia forests in the river valleys. All these features including the extreme climate and geographical location suggest the presence of a peculiar and characteristic muscid fauna.

The study of the fauna of the Muscidae of the north-east of Russia began relatively recently. Only the Magadan region has been studied in detail (Sorokina et al. 2018; Tridrikh & Sorokina 2020). Currently 108 species of Muscidae belonging to 25 genera have been found in this region, including seven species which were newly recorded from Russia and the Palaearctic region [*Spilogona aenea* Huckett, 1965, *S. anthrax* (Bigot, 1885), *S. bifimbriata* Huckett, 1965, *S. fulvibasis* Huckett, 1965, *S. incerta* Huckett, 1965, *S. separata* Huckett, 1965, *S. trigonifera* (Zetterstedt, 1838)].

There have been few studies of the muscid fauna of Chukotka (Sorokina & Khruleva 2012; Sorokina 2012a, 2012b, 2017), whereas the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, contains an enormous material of Muscidae collected from the late 1950s by the celebrated Soviet dipterologist K.B. Gorodkov in different part of the Chukotka Autonomous Okrug (Wrangel Island, Pevek, Bilibino, Egvekinot, Markovo, etc.). Recent

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material of Muscidae from this territory was collected by Dr A.V. Barkalov, Dr V.K. Zinchenko (Institute of Systematics and Ecology of Animals of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk) and Dr V.A. Mutin (Amur State University of Humanities and Pedagogy, Komsomolsk-na-Amure) in the valley of Anadyr′ River, Dr O.A. Khruleva (A.N. Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences, Moscow) on Wrangel Island and Pevek, and Dr P. Tomkovich (Moscow) in the environs of Meynypil′gyno.

Only a part of this muscid material has been identified and published (Sorokina & Khruleva 2012; Sorokina 2012a, 2012b, 2017, 2019; Sorokina & Pont 2013, 2015). A total of 99 species of Muscidae belonging to 22 genera has previously been recorded from the Chukotka Autonomous Okrug (including 35 species from Wrangel Island). Despite the incomplete study of the muscid fauna of this region, 13 species were recorded for the first time from Russia and the Palaearctic region: *Drymeia groenlandica* (Lundbeck, 1901), *D. pribilofensis* (Malloch, 1921), *D. neoborealis* (Snyder, 1949), *D. quadrisetosa* (Malloch, 1919), *Phaonia alticola* Malloch, 1923, *P. imitatrix* Malloch, 1919, *Spilogona aestuarium* Huckett, 1965, *S. flavinervis* Huckett, 1965, *S. melanosoma* (Huckett, 1932), *S. projecta* Huckett, 1965, *S. subnotata* Huckett, 1965, *Coenosia tendipes* Huckett, 1965, and *Schoenomyza chrysostoma* Loew, 1869. Moreover, based on Chukotka material, four species were described as new to science (Sorokina 2012a; Sorokina & Pont 2015), and one new synonym (Sorokina & Pont 2015) and one new combination were proposed (Sorokina 2019).

Most of the Chukotka material in the Zoological Institute (St. Petersburg) and the Institute of Systematics and Ecology of Animals (Novosibirsk) has now been sorted and identified. The results of this work and the previously known faunistic data for the Chukotka Autonomous Okrug have been combined and are reported in this paper, including new distribution data for the species.

Material and methods

The material used in this study is deposited in the Siberian Zoological Museum of the Institute of Systematics and Ecology of Animals, Russian Academy of Sciences, Siberian Branch, Novosibirsk (SZMN), the Zoological Institute, St. Petersburg (ZISP) and the Zoological Museum of the Moscow State University, Moscow (ZMUM).

Specimens were examined using an Altami PSO745-T microscope for external morphological features. Images were taken with a Canon EOS 600D camera mounted on the Zeiss Stemi 2000-C stereomicroscope.

The classification follows that in *An annotated catalogue of the Muscidae (Diptera) of Siberia* (Sorokina & Pont 2010).

The species noted for the first time in the Palaearctic region are marked with a triple asterisk (***), those for the first time in Russia are marked with double asterisk (**) and for the first time in the Far East are marked with a single asterisk (*).

The localities where Muscidae have been collected in the Chukotka Autonomous Okrug (AO) are shown on the map (Figure 1).

Results

We now recognise 153 species of Muscidae belonging to 22 genera from the Chukotka AO. The species list includes only described species. Two unnamed species (*Phaonia* sp. 1, *Coenosia* sp. 1), previously published in

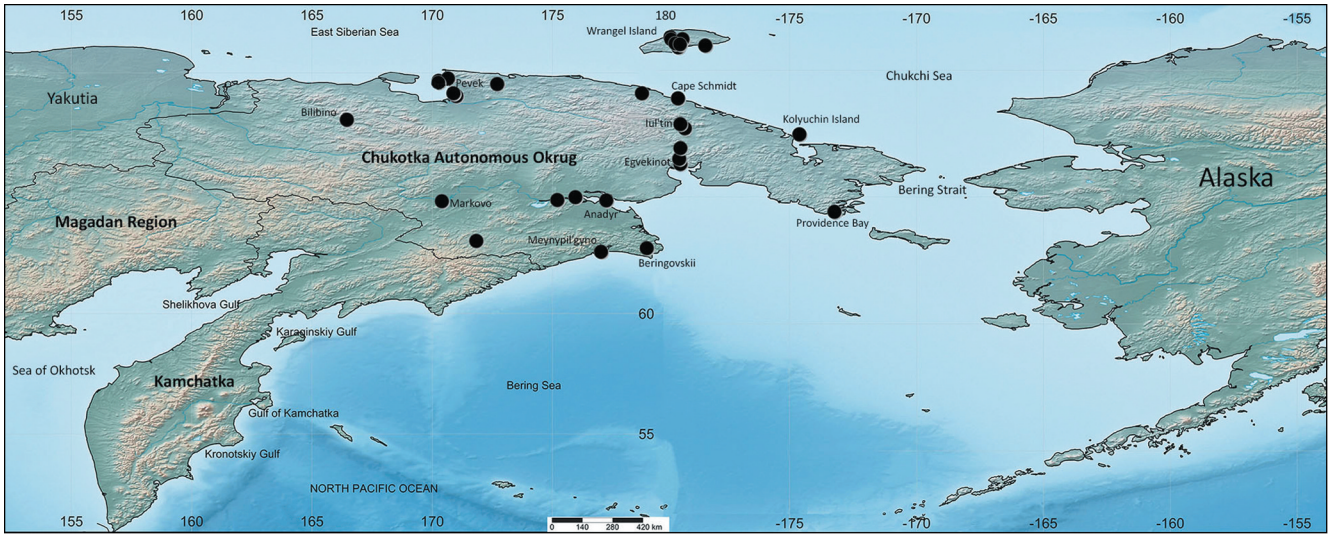


Figure 1. Map showing collection locations in the Chukotka Autonomous Okrug.

Sorokina & Khruleva (2012), have not been included in the list. *Spilogona tendipes* (Malloch, 1920) and *Coenosia conflicta* (Huckett, 1965) have also not been included in the list because they were incorrectly recorded from Wrangel Island. Specimens of both these species were in bad condition, and additional material has made it possible to diagnose these species as new to science.

The list includes 40 species previously unknown from the Russian Far East, including one species previously unknown from Russia and 12 species previously unknown from the Palaearctic region. The species list includes all known regional references to each species, the material examined, the distribution, images of selected species and additional remarks where appropriate.

List of Muscidae species known from Chukotka

Azeliinae

Reinwardtiini

Muscina Robineau-Desvoidy, 1830

Muscina levida (Harris, 1780)

Material examined. Anadyr′ district: Markovo village [64°40′N 170°24′E], 6.VII.1896, 2♀, leg. Gondatti, 17. VIII.1966, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC, Hawai′i and Midway Atoll.

Muscina stabulans (Fallén, 1817)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt., 64°43′N 175° 12′E], 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN).

Distribution. Cosmopolitan.

Azeliini

Drymeia Meigen, 1826

Drymeia cantabrigensis (Huckett, 1965) ***

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on flowers of *Dryas integrifolia*, 19.VII.1966, 1♂ 4♀; valley of Somnitel′naya River, Mineeva Mts [71°00′N 179°25′W], on flowers of *Potentilla emarginata*, 22. VII.1966, 1♂; 4 km N Somnitel′naya Bay [70°58′N 179°29′W], on flowers of *Papaver* sp., 23.VII.1972, 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (Wrangel Island). NEARCTIC: Canada (Northwest Territories). Previously known only from Canada. New record for the Palaearctic and Russia.

Drymeia cristata Sorokina & Pont, 2015

Drymeia sp. 1; Sorokina & Khruleva 2012: 556 (Wrangel Island).
Drymeia cristata; Sorokina & Pont 2015: 165 (Wrangel Island).

Distribution. PALAEARCTIC: Northern Russia (Taymyr Peninsula, Wrangel Island).

Drymeia groenlandica (Lundbeck, 1901)

Drymeia groenlandica; Sorokina & Pont 2015: 179 (Krasnoarmeyskii, Pevek, Egvekinot); Sorokina 2017: 50 (Krasnoarmeyskii, Pevek, Egvekinot).

Material examined. Chaunsky district: 1 km S Pevek, 69°40′N 170°16′E, 29.VI.2011, 1♀, leg. O. Khruleva; lower part of Apapel′gin River, 69°48′N 170°39′E, 5. VII.2011, 1♂, leg. O. Khruleva (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, known only from Northern Russia (Chukotka, Taymyr Peninsula, Sakha Republik).

Drymeia neoborealis (Snyder, 1949)

Drymeia sp. 2; Sorokina & Khruleva 2012: 556 (Wrangel Island).
Drymeia neoborealis; Sorokina & Pont 2015: 183 (Wrangel Island).

Material examined. Chaunsky district: environs of Pevek, 1 km S Pevek, 69°40′N 170°16′E, 19–29. VI.2011, 1♀, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, known only from the Russian Far East (Wrangel Island, Chukotka).

Drymeia pribilofensis (Malloch, 1921)

Drymeia pribilofensis; Sorokina & Khruleva 2012: 555 (Wrangel Island); Sorokina & Pont 2015: 187 (Wrangel Island, Krasnoarmeyskii, Apapel′gin, Egvekinot); Sorokina 2017: 50 (Krasnoarmeyskii, Apapel′gin, Egvekinot).

Material examined. Anadyr′ district: environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19. VII.2014, 1♀, leg. V. Zinchenko (SZMN). **Chaunsky district**: environs of Pevek, 1 km S Pevek, 69°40′N 170° 16′E, 29.VI.2011, 1♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°42′N 170°20′E, 4.VII.2019, 1♂ 3♀, leg. O. Khruleva (SZMN). **Wrangel Island**: environs of Tundrovaya Mt., tundra [71°18′N 179°48′W], 18. VII.1972, 1♀, leg. K. Gorodkov (ZISP); south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on flowers of *Dryas integrifolia*, 19.VII.1966, 1♀, leg. K. Gorodkov (ZISP); 4 km N Somnitel′-naya Bay, bank of Somnitel′naya River [70°58′N 179°29′W], 28.VII.1972, 3♀, leg. K. Gorodkov (ZISP); valley of Somnitel′naya

River, Mineeva Mts [71°00′N 179°25′W], on *Potentilla* flowers, pass, 550 m, 10.VII.1966, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, known only from Northern Russia.

Drymeia quadrisetosa (Malloch, 1919)

Drymeia quadrisetosa; Sorokina & Pont 2015: 190 (Pevek, Anadyr′ River); Sorokina 2017: 50 (Pevek, Anadyr′ River).

Material examined. Anadyr′ district: Anadyr, airport [64°44′N 177°31′E], 31.VII.1963, 1♂, leg. Gorodkov (ZISP); low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18.VII.2013, 1♂ 1♀, leg. V. Mutin (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, known only from arctic and montane Russia.

Drymeia segnis (Holmgren, 1883)

Drymeia segnis; Sorokina & Pont 2015: 192 (Wrangel Island).

Distribution. HOLARCTIC. In the Palaearctic, known only from arctic Russia.

Drymeia setibasis (Huckett, 1965)

Drymeia setibasis; Sorokina & Pont 2015: 195 (Wrangel Island).

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on flowers of *Dryas integrifolia*, 19, 24.VII.1966, 1♂ 1♀, tundra, 6.VII.1972, 1♂, leg. K. Gorodkov; bank of Somnitel′naya River [70°54′N 179°29′W], on flowers of *Potentilla emarginata*, 26.VII.1966, 7♂ 6♀, leg. K. Gorodkov; valley of Somnitel′naya River, Mineeva Mts [71°00′N 179°25′W], 150 m, 22.VII.1966, 5♂, leg. K. Gorodkov; upper part of Khishchnikov River, 7 km SE Sovetskaya Mt., 200 m [71°00′N 179°11′W], 12.VII.1972, 1♀, leg. K. Gorodkov; environs of Tundrovaya Mt. [71°18′N 179°48′W], 18.VII.1972, 1♀, leg. K. Gorodkov; 4 km N Somnitel′naya Bay, bank of Somnitel′naya River [70°58′N 179°29′W], 28.VII.1972, 1♂ 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, known from Armenia, Georgia, Kyrgyzstan and arctic and montane Russia.

Drymeia sibirica (Hennig, 1962) (Figure 2)

Material examined. Iultinsky district: 20 km SSE Iul′tin, valley of Amguema River [67°42′N 178°35′W], 22.VII.1963, 3♂, leg. K. Gorodkov (1♂ in SZMN, 2♂ in ZISP).

Figure 2. *Drymeia sibirica* (Hennig, 1962), male, lateral habitus. Scale bar: 1 mm.

Distribution. PALAEARCTIC: Mongolia, Russia (northern Yakutia, Chukotka, Altai Mts, Tyva Republic).

Remarks. Unusual among all known *Drymeia* species and rare, *Drymeia sibirica* was known only from the type locality (Verkhoyansk) in Northern Yakutia and from the mountains of the Southern Siberia and Mongolia (Sorokina & Pont 2015). Three males in good condition were found in Gorodkov′s material in the collection of the ZISP, collected in the northern territories of Russia. The species is close to species of the *Drymeia cinerea* group (the former genus *Bebryx* Gistl), which all have the anepimeron setulose and the tip of the abdomen with a dense brush of slender black setulae and bristles, caudally directed. Males of *Drymeia sibirica* have long and densely haired eyes, mid tarsomeres brownish-yellow, especially on ventral surface, and mid tarsomeres 2–4 dilated.

Drymeia taymirensis Sorokina & Pont, 2015

Drymeia taymirensis; Sorokina & Pont 2015: 196–197 (Val′kumei, Komsomol′skii, Krasnoarmeiskii, Iul′tin, Egvekinot, Pevek).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, 20–24.VI.2009, 1♂, 28.VI–27.VII.2009, 1♂, 6–10.VII.2009, 1♀, moraine lake, 7–13.VII.2011, 1♀, leg. P. Tomkovich (ZMUM). **Chaunsky district**: Chaunskaya Bay, Turyryv cape [69°09′N 170°53′E], 21.VI.1940, 2♂, leg. G. Semenov (ZISP); 18 km S Pevek, Val′kumei, 69°36′N 170°15′E, 23.VI.2011, 3♂ 1♀, leg. O. Khruleva (SZMN); 1 km N Pevek, 69°42′N 170°21′E, 27.VI.2011, 1♂, leg. O. Khruleva (SZMN).

Distribution. PALAEARCTIC: Russia (Taymyr Peninsula, Kamchatka, Chukotka).

Huckettomyia Pont & Shinonaga, 1970
Huckettomyia watanabei Pont & Shinonaga, 1970

Huckettomyia watanabei; Sorokina 2017: 51 (Anadyr′).

Distribution. PALAEARCTIC: Sweden, Russia (Siberia), North China, Japan.

Hydrotaea Robineau-Desvoidy, 1830
Hydrotaea anxia Sorokina, 2017

Hydrotaea anxia; Sorokina 2017: 50 (Anadyr′ River).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 22.VII.2013, 1♂, leg. V. Mutin (SZMN). **Chaunsky district**: Krasnoarmeiskii village [69°32′N 172°00′E], 8,9.VII.1963, 2♂ 1♀, leg. K. Gorodkov (ZISP); 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], 7.VII.1971, 1♂, leg. K. Gorodkov (ZISP). **Iultinsky district**: Egvekinot [66°19′N 179°07′W], 8.VII.1972, 1♂, leg. Molokoedova; environs Amguema River [68°49′N 177°24′W], 14.VII.1972, 1♂, leg. Molokoedova (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, known only from northern Fennoscandia, northern Russia and Mongolia.

Hydrotaea armipes (Fallén, 1823)

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 25.VII.2013, 1♀, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. ORIENTAL REGION (northern parts).

Hydrotaea dentipes (Fabricius, 1805)

Hydrotaea dentipes; Sorokina 2017: 50 (Anadyr′ River).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18.VII.2013, 1♀, leg. A. Barkalov; environs Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21.VI.2014, 1♂, leg. V. Mutin; 30 km to the Krasneno village on the Anadyr′ River [130 km W Anadyr′], 64°46′N 174°08′E, 23.VII–18.VII.2014, 1♂, leg. V. Mutin, 25.VI–19.VII.2014, 2♂ 1♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. ORIENTAL REGION (northern parts).

Hydrotaea diabolus (Harris, 1780)

Hydrotaea diabolus; Sorokina 2017: 50 (Anadyr′ River).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 22.VII.2013, 1♂, leg. V. Mutin (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to China.

Hydrotaea pilitibia Stein, 1916

Hydrotaea pilitibia; Sorokina 2017: 50 (Anadyr′ River).

Material examined. Chaunsky district: lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 1♂, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Russian East Siberia and Mongolia.

Thricops Rondani, 1856
Thricops cunctans (Meigen, 1826)

Thricops cunctans; Sorokina 2017: 50 (Anadyr′ River, Anadyr).

Material examined. Anadyr′ district: 20 km N Meynypil′gyno village [62°42′N 177°0′E], 22.VII.2012, 1♀, leg. P. Tomkovich (ZMUM); low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 29, 31.VII.2013, 1♂ 2♀, leg. O. Khruleva (SZMN).

Distribution. PALAEARCTIC: from Europe to Japan.

Thricops diaphanus (Wiedemann, 1817)

Thricops diaphanus; Sorokina 2017: 50 (Anadyr′).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂ 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. ORIENTAL REGION (northern parts).

Thricops furcatus (Stein, 1916)

Thricops furcatus; Sorokina 2012b: 329 (Beringovskii).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 29.VII.2013, 1♂, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC.

Thricops hirtulus (Zettershtedt, 1838)

Thricops hirtulus; Vikhrev & Sorokina 2009: 343 (Anadyr′ district); Sorokina 2012b: 329 (Beringovskii).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 27–30.VI.2011, 3♂ 1♀, 10–13.VII.2011, 2♂, leg. P. Tomkovich (1♂ in SZMN, rest in ZMUM). **Iultinsky district**: 5 km N Egvekinot [66°22′N 179°07′W], 24–26.VII.1963, 10♂ 1♀, tundra, 26.VII.1963, 2♂ 1♀, leg. K. Gorodkov (ZISP); 55 km N Egvekinot on the highway [66°49′N 178°58′W], 29.VII.1963, 2♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Scotland, northern Fennoscandia, northern Russia, Mongolia and Japan.

Thricops innocuus (Zetterstedt, 1838)

Thricops innocuus; Sorokina 2017: 50 (Anadyr′, Anadyr′ River).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe, Russia and Mongolia.

Thricops nigrifrons (Robineau-Desvoidy, 1830)

Thricops nigrifrons; Sorokina 2017: 50 (Anadyr′ River).

Distribution. PALAEARCTIC: from Europe east to West Siberia.

Thricops septentrionalis (Stein, 1898)

Thricops septentrionalis; Vikhrev & Sorokina 2009: 346 (Onemen Bay near Anadyr′); Sorokina 2017: 50 (Anadyr′ River).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 29.VII.2013, 1♂ 1♀, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, only in the Russian Far East.

Thricops spiniger (Stein, 1904)

Thricops spiniger; Sorokina 2012b: 329 (Beringovskii).

Distribution. HOLARCTIC. In the Palaearctic, only in the Russian Far East.

Muscinae
Muscini
Eudasyphora Townsend, 1911
Eudasyphora cyanicolor (Zetterstedt, 1845)

Eudasyphora cyanicolor; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. ORIENTAL REGION (northern parts).

Mesembrina Meigen, 1826
Mesembrina decipiens Loew, 1873

Mesembrina decipiens; Sorokina 2017: 51 (Anadyr′ River).

Distribution. HOLARCTIC. In the Palaearctic, from Russia east of the Urals, Mongolia, the Korean Peninsula and China.

Mesembrina resplendens Wahlberg, 1844

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18.VII.2013, 1♀, leg. V. Mutin; low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 28, 30.VII.2013, 2♀, leg. O. Khruleva; low part of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov; 30 km to Krasneno village on the Anadyr′ River [130 km W Anadyr′], 64°46′N 174°08′E, 12.VII.2014, 2♀, leg. A. Barkalov (all in SZMN).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East and China.

Musca Linnaeus, 1758
Musca domestica Linnaeus, 1758

Material examined. Anadyr′ district: Anadyr′, airport [64°44′N 177°31′E], 31.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. Cosmopolitan.

Phaoniinae
Phaoniini
Helina Robineau-Desvoidy, 1830
Helina bohemani (Ringdahl, 1916)

Helina bohemani; Sorokina & Khruleva 2012: 556 (Wrangel Island).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, 14–21.VI.2010, 1♂, leg. P. Tomkovich (ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: 7 km

S Pevek, near of the dam, 69°38′N 170°15′E, 13. VII.2011, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 20 km SSE Iul′tin, valley of Amguema River [67°42′N 178°35′W], 22.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern Scandinavia, Russia (north-west European Russia and West Siberia) and Tajikistan.

Helina cothurnata (Rondani, 1866)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN).

Distribution. PALAEARCTIC: from Europe to the Russian Far East and China.

Helina evecta (Harris, 1780)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC, AFROTROPICAL (Sokotra, Yemen), ORIENTAL (Pakistan, India, Sri Lanka) and NEOTROPICAL (Mexico, Venezuela).

Helina flavisquama (Zetterstedt, 1849)

Helina flavisquama; Sorokina 2012b: 330 (Beringovskii).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Helina fulvisquama (Zetterstedt, 1849)

Helina fulvisquama; Sorokina 2012b: 330 (Beringovskii).

Material examined. Anadyr′ district: 30 km to Krasneno village on the Anadyr′ River [130 km W Anadyr′], 64°46′N 174°08′E, 25.VI–20.VII.2014, 1♂ 4♀, leg. A. Barkalov and V. Zinchenko (SZMN), 23.VI–18.VII.2014, 1♀, leg. V. Mutin (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂ 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: 18 km S Pevek, Val′kumei village, 69°36′N 170°15′E, 23.VI.2011, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 20 km SSE Iul′tin, valley of Amguema River [67°42′N 178°35′W], 22.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe east to the Russian Far East.

Helina longicornis (Zetterstedt, 1838)

Helina longicornis; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 23–23.VI.2011, 1♂, 7–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21.VI.2014, 1♀, leg. V. Mutin (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂ 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from northern Europe to the Russian Far East.

Helina luteisquama (Zetterstedt, 1845)

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 2♂, 23–27.VI.2011, 1♂ 1♀, 7–13. VII.2011, 1♀, leg. P. Tomkovich (ZMUM). **Chaunsky district**: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′ E], 29.VI.1963, 1♀, leg. K. Gorodkov (ZISP); lower part of Apapel′gin River, 69°48′N 170°39′E, 24.VI.2011, 1♂, leg. O. Khruleva (SZMN). **Iultinsky district**: 20 km SSE Iul′tin, valley of Amguema River [67°42′N 178°35′W], 22. VII.1963, 1♂, leg. K. Gorodkov (ZISP); 5 km N Egvekinot [66°19′N 179°07′W], 23.VII.1963, 1♀, leg. K. Gorodkov (ZISP); 55 km N Egvekinot on the highway [66°49′N 178°58′W], 29.VII.1963, 2♂, leg. K. Gorodkov (ZISP); Mys Shmidta village [68°53′N 179°24′W], 11. VII.1971, 2♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Norway, Sweden, Finland and Russia (north-west European Russia, Siberia and Far East).

Helina reversio (Harris, 1780)

Helina reversio; Sorokina 2017: 52 (Anadyr′).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, abundant from Europe to Japan. Also Taiwan.

Helina squalens (Zetterstedt, 1838) * (Figures 3, 4)

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 27–30.VI.2011, 1♂, leg. P. Tomkovich (ZMUM).

Distribution. PALAEARCTIC: Finland, Norway, Russia (North of European Russia, Chukotka), Sweden. NEARCTIC: Canada (Manitoba, Northwest Territories, Quebec, Yukon Territory, Labrador); USA (Alaska).

Remarks. *Helina squalens* was previously recorded in Russia only from the Kola Peninsula (Tiensuu 1936; Hennig 1958). The species is also widespread in Fennoscandia and in the North of Canada and Alaska. *Helina squalens* can be assumed to be a rare species in Russia, with an arctic or subarctic distribution. This species has not yet been found in Siberia but there is a high probability that it will be found in the north of Siberia. The male of this species is very different from other *Helina* species because of the numerous and long anteroventral and posterodorsal setae on hind tibia which are much longer than the diameter of the tibia (Figure 3).

Helina subvittata (Sequy, 1923)

Helina subvittata; Sorokina 2017: 52 (Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Japan.

Helina veterana (Zetterstedt, 1838)

Helina veterana; Sorokina 2012b: 330 (Beringovskii).

Distribution. PALAEARCTIC: in montane and northern Europe, and Russia (West Siberia).

Lophosceles Ringdahl, 1922
Lophosceles frenatus (Holmgren, 1872)

Lophosceles frenatus; Sorokina 2017: 51 (Anadyr′, Pevek).

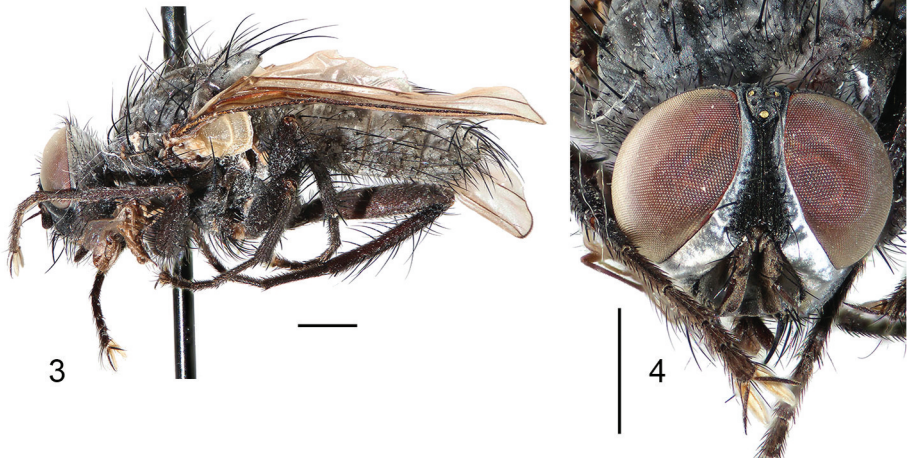
Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM). **Chaunsky district**: Komsomolskii village [69°08′N 172°45′E], 7.VII.1963, 1♂, leg. K. Gorodkov (ZISP); low part of Apapel′gin River, 69°48′N 170°39′E, 24. VI.2011, 1♂, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], 24. VII.1963, 1♂, leg. K. Gorodkov (ZISP); 55 km N Egvekinot [66°49′N 178°58′W], 29.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe, Russia (north-west European Russia, West Siberia) and China.

Lophosceles impar (Zetterstedt, 1846)

Lophosceles hians; Sorokina 2017: 51 (Markovo).

Distribution. HOLARCTIC: from northern Europe to the Russian Far East and Alaska.



Figures 3, 4. *Helina squalens* (Zetterstedt, 1838), male. **3**, Lateral habitus. **4**, Frons, frontal view. Scale bars: 1 mm.

Phaonia Robineau-Desvoidy, 1830
Phaonia alticola Malloch, 1923

Phaonia alticola; Sorokina 2012b: 330 (Beringovskii).

Material examined. Chaunsky district: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], at the entrance to the hole of *Urocitellus undulatus*, 15.VII.1963, 1♀, 7. VII.1971, 2♂ 3♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Alaska and Northern Canada.

Phaonia chalchica Zinoviev, 1980 * (Figures 5–9)

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, 5–14.VI.2010, 1♂ 4♀, 14–21.VI.2010, 3♂ 8♀ (2♀ in SZMN, rest in ZMUM), 21–30.VI.2010, 4♂ 12♀ (2♂ 2♀ in SZMN, rest in ZMUM), 16–23.VII.2010, 1♀, leg. P. Tomkovich (ZMUM).

Distribution. PALAEARCTIC: Kazakhstan, Mongolia, Russia (Altai Mts, Krasnoyarsk, Chukotka).

Remarks. *Phaonia chalchica* was described from Mongolia (Uver-Khangayskiy aimak) and was subsequently found in Kazakhstan and south-eastern Altay and Krasnoyarsk in Russia (Zinovjev 1990). One male from Ukraine was known but A. Zinovjev questioned the correctness of the labelling of this specimen (Zinovjev 1990). So *Phaonia chalchica* was previously known for certain only from the mountains of South Siberia and Middle Asia, and we now have data about the distribution of this species in North-East Asia. This type of distribution (arcto-alpine) is usual for many species of Muscidae including *Phaonia* species, and so it is possible that *Phaonia chalchica* may be found in other parts of Northern Russia and maybe in Scandinavia. The specimens of *Phaonia chalchica* from Chukotka correspond well with the type description, and the male terminalia (Figures 7, 8) agree with the figures in the original description (Zinovjev 1980).

The species is quite variable and its main characters are as follows: body completely black, mouthedge projecting well beyond the vibrissal seta base or not, fronto-orbital plates usually separated by a more or less broad frontal vitta (Figure 6), postpedicel 1.5–2.5 times as long as wide, arista pubescent, aristal hairs 1–3 times as long as diameter of aristal base, parafacial broad, 1.0–1.9 times as wide as postpedicel in males, 1.5–2.0 times in females (Figure 9), eyes with dense hairs, prosternum bare, 3 or 4 postsutural dorsocentral setae, prealar seta twice as long as second notopleural, strong presutural acrostichals absent, katepimeron haired, fore tibia with or without posterior setae, mid tibia with only one row of setae on posterior side, hind tibia without apical posteroventral seta, sternite 1 sometimes with single hairs, halteres and calypters yellow, radial node bare on lower wing surface.

Phaonia consobrina (Zetterstedt, 1838)

Phaonia consobrina; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21.VI.2014, 3♂ 1♀, leg. V. Mutin; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂ 1♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe east to the Russian Far East.

Phaonia errans (Meigen, 1826)

Phaonia errans; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′E], 16.VI.1971, 1♀, 3.VII.1971, 1♀, leg. B. Petrova (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to China and the Russian Far East.

Phaonia hybrida (Schnabl, 1888)

Phaonia hybrida; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 19.VII.2013, 1♂, leg. O. Khruleva; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂ 2♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe to China and the Russian Far East.

Phaonia imitatrix Malloch, 1919

Phaonia imitatrix; Sorokina & Khruleva 2012: 556 (Wrangel Island).

Material examined. Wrangel Island: Rodzhers Bay [70°58′N 178°25′W], 11.VII.1939, 1♀, leg. Portenko (ZISP); south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], 150 m, 19.VII.1966, 1 ♀, leg. K. Gorodkov (SZMN), the same data, on flowers of *Potentilla emarginata*, 22.VII.1966, 1♂, leg. K. Gorodkov (ZISP); middle part of Somnitel′naya River [70°54′N 179°29′W], 22.VII.1966, 1♀, on flowers

Figures 5–11. *Phaonia spp*. **5–9**, *Phaonia chalchica* Zinoviev, 1980: **5**, male, lateral habitus; **6**, male, frons, frontal view; **7**, male terminalia, lateral habitus; **8**, male cercal plate, dorsal view; **9**, female, lateral habitus. **10, 11,** *Phaonia tenebriona* Huckett, 1965, female. **10**, lateral habitus; **11**, frons, frontal view. Scale bars: 1 mm.

of *Dryas integrifolia*, 19.VII.1966, 4♀, leg. K. Gorodkov (ZISP); 5 km N Somnitel′naya Bay, valley of Somnitel′ naya River, 150 m [70°59′N 179°32′W], 7.VII.1972, 1 ♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Wrangel Island). NEARCTIC: Canada (Yukon Territory, Nunavut), USA (Alaska).

Phaonia lugubris (Meigen, 1826)

Phaonia lugubris; Sorokina 2012b: 330 (Beringovskii); Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♂ 2♀, 27–30.VI.2011, 1♀, leg. P. Tomkovich (ZMUM); low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18. VII.2013, 1♀, leg. V. Mutin (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 7♂ 3♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from montane and northern Europe to the Russian Far East.

Phaonia meigeni Pont, 1986

Phaonia meigeni; Sorokina 2012b: 330 (Beringovskii); Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 4♂ 3♀, leg. A. Barkalov (SZMN). **Chaunsky district**: lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 1♂, leg. O. Khruleva (SZMN).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East.

Phaonia pallidisquama (Zetterstedt, 1849) *

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 23–27.VI.2011, 2♂, 27–30.VI.2011, 4♂, 7–13.VII.2011, 1♂, 10–13.VII.2011, 1♀, leg. P. Tomkovich (ZMUM).

Distribution. PALAEARCTIC: Finland, Norway, Russia (north of Siberia and the Far East), Sweden. NEARCTIC: Canada (Baffin Island, Quebec), Greenland.

Phaonia serva (Meigen, 1826)

Phaonia serva; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Japan.

Phaonia sibirica Pont, 1981

Phaonia sibirica; Sorokina 2017: 51 (Anadyr′ River).

Material examined. Anadyr′ district: environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21.VI.2014, 1♀, leg. V. Mutin (SZMN).

Distribution. PALAEARCTIC: Russia (north of West Siberia and Far East).

Phaonia subfuscinervis (Zetterstedt, 1838) *

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18.VII.2013, 1♂ 2♀, leg. V. Mutin; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Phaonia tenebriona Huckett, 1965 *** (Figures 10, 11)

Material examined. Providensky district: Bering Sea, Providence Bay [64°25′N 173°14′W], 3–17.VII.1912, 1♀, leg. Starokad (SZMN), Emma Bay (Komsomolskaya Bay), 16–24.VII.1913, 1♀, leg. Starokad (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Yukon, Northwest Territories). Previously known only from Canada. New record for the Palaearctic and Russia.

Mydaeinae

Graphomya Robineau-Desvoidy, 1830

Graphomya minor Robineau-Desvoidy, 1830

Graphomya maculata; Sorokina 2012b: 330 (Beringovskii); Sorokina 2017: 52 (Anadyr′ River).

Material examined. Anadyr′ district: 74 km W Anadyr′, swamp, Anadyr′ River, the mouth of Omochi stream, 4 m, 64°50′N 175°57′E, 24.VII.2013, 1♀, leg. V. Zinchenko; environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21.VI.2014, 1♂, leg. V. Mutin (all in SZMN).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East.

Hebecnema Schnabl, 1889
Hebecnema umbratica (Meigen, 1826)

Hebecnema umbratica; Sorokina 2017: 52 (Markovo).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Japan. ORIENTAL REGION (India, Myanmar).

Mydaea Robineau-Desvoidy, 1830
Mydaea affinis Meade, 1891

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Japan.

Mydaea anicula (Zetterstedt, 1860)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 3♀, leg. A. Barkalov (SZMN).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East.

Mydaea deserta (Zetterstedt, 1845)

Mydaea obscurella; Sorokina 2017: 52. Bilibino, misidentification.

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 20–28.VII.2013, 1♀, O. Khruleva (SZMN).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East.

Remarks. In the published keys (Hennig 1956; Gregor et al. 2002, 2016), *Mydaea deserta* is identified as a species with yellow legs. However, dark-legged *Mydaea deserta* have been found by Adrian Pont in Abisko National Park, Sweden (pers. comm.). Such specimens with blackish legs have been found in the Altai Mts and Chukotka in Russia as well as in Abisko National Park. This variation often gives rise to misidentifications of this species. If *Mydaea deserta* has dark legs it could be identified as *Mydaea anicula* and can be differentiated from it by the following couplets.

Males

– Mid femora with anteroventral setae on basal third longer and stronger, equal to femoral depth. Hind femora with posteroventral setae in basal half-long, equal to femoral depth; basal few anteroventral setae as long as the other anteroventral setae. Hind tibiae with two anteroventral setae. Abdominal dust more yellowish-grey. Aristal hairs shorter, the ventral hairs only half as long as the dorsal ones, their combined length about 2/3 width of postpedicel .... ***M. deserta***

– Mid femora with anteroventral setae short, equal to half-femoral depth, and scarcely distinct from the long ground-setulae on this surface. Hind femora with posteroventral setae short and weak, hardly half of femoral depth; basal few anteroventral short, only half-femoral depth. Hind tibiae with 3–4 anteroventral setae. Abdominal dust more brownish-grey. Aristal hairs longer, the ventral and dorsal hairs subequal in length, their combined length almost equal to width of postpedicel ..... ***M. anicula***

Females

– Mid femora with short but distinct anteroventral setae in basal half, up to half femoral depth. Hind femora usually with several conspicuous posteroventral setae in basal half; anteroventral surface with a complete row of setae. Scutum and abdomen yellowish-grey dusted; abdominal dust dense. Combined dorsal and ventral hairs of arista more or less equal to half width of postpedicel .... ***M. deserta***

– Mid femora without trace of anteroventral setae. Hind femora without trace of posteroventral setae in basal half; anteroventral surface with setae only in apical half, basal half bare or with slightly longer setulae. Scutum and abdomen brownish-grey dusted; abdominal dust rather thin and shifting on tergites 3 and 4, especially when viewed from behind and slightly to the side. Combined dorsal and ventral hairs of arista equal to 2/3 width of postpedicel ..... ***M. anicula***

Mydaea obscurella (Malloch, 1921)

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 26–30.VII.2013, 2♀, leg. O. Khruleva, 31.VII–5.VIII.2013, 1♂, leg. A. Barkalov; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya

Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Mydaea otiosa Stein, 1920 *** (Figures 12, 13)

Mydaea deserta; Sorokina 2012b: 330 (Beringovskii, misidentification).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM), the same place, but 16–20.VI.2009, 1♀, 24–28.VI.2009, 1♂, leg. P. Tomkovich (SZMN). **Chaunsky district**: Krasnoarmeiskii village [69°32′N 172°00′E], 8.VII.1963, 1♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC. Previously known only from North America. New record for the Palaearctic and Russia.

Mydaea palpalis Stein, 1916

Mydaea palpalis; Sorokina 2017: 52 (Anadyr′).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 27–30.VI.2011, 1♂, 10–13.VII.2011, 1♀, leg. P. Tomkovich (ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], 15.VII.1963, 1♂, leg. K. Gorodkov (ZISP); 18 km S Pevek, Val′kumei village, 69°36′N 170°15′E, 29.VI.2011, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], 26.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Northern Europe east to the Russian Far East.

Myospila Rondani, 1856
Myospila meditabunda (Fabricius, 1781)

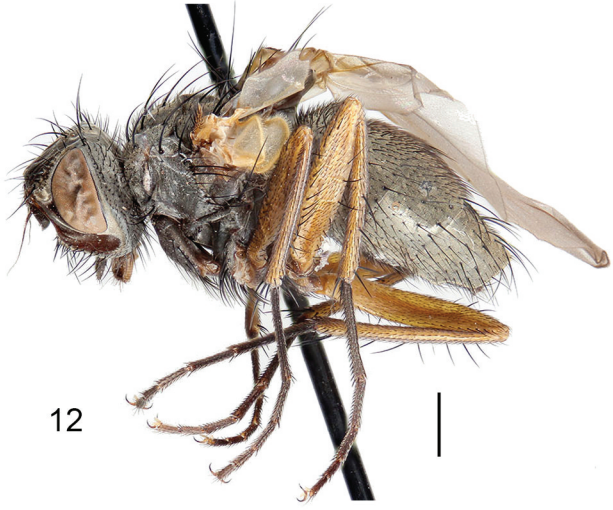
Myospila meditabunda; Sorokina 2017: 52 (Anadyr′ River).

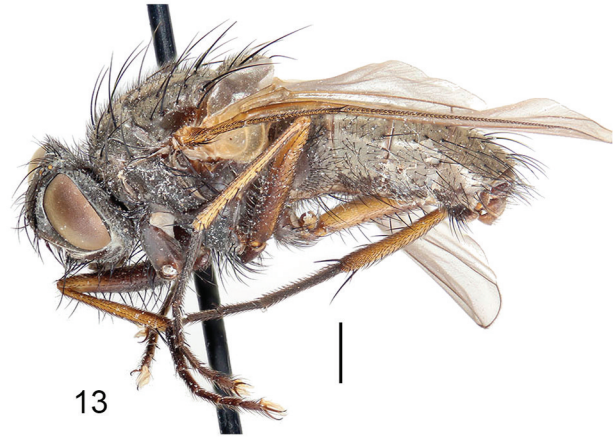
Distribution. Cosmopolitan.

Opsolasia Coquillett, 1910
Opsolasia orichalcea (Zetterstedt, 1849)

Opsolasia orichalcea; Sorokina 2012b: 330 (Beringovskii).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, 21–30.VI.2010, 1♀, leg. P. Tomkovich (ZMUM); low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 20–28.VII.2013, 3♀, leg. O. Khruleva (SZMN); 30 km to Krasneno village on the Anadyr′ River [130 km W Anadyr′], 64°46′N 174°08′E, 7.VII.2014, 1♂, leg. A. Barkalov (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 2♂ 1♀, leg. A. Barkalov (SZMN). **Iultinsky district**: 55 km N Egvekinot on the highway [66°49′N 178°58′W], 29.VII.1963, 1♂, leg. K. Gorodkov (ZISP).





Figures 12, 13. *Mydaea otiosa* Stein, 1920. **12**, Female, lateral habitus. **13**, Male, lateral habitus. Scale bars: 1 mm.

Distribution. HOLARCTIC. In the Palaearctic, from Norway, Sweden, Finland, montane and northern Russia to the Russian Far East.

Coenosiinae
Limnophorini
Limnophora Robineau-Desvoidy, 1830
Limnophora latevittata Schnabl, 1911

Limnophora latevittata; Sorokina 2017: 54 (Anadyr′ River).

Distribution. PALAEARCTIC: from Europe east to the Russian Far East.

Limnophora nigripes (Robineau-Desvoidy, 1830) *

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 2♂, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Limnophora rotundata (Collin, 1930)*

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, Austria, Finland, Norway, Sweden, Greenland (SE), Russia (West Siberia, Far East), China.

Lispe Latreille, 1796
Lispe frigida Erichson *in* Ménétriés, 1851

Lispe frigida; Vikhrev 2015: 232 (Anadyr′).

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′E], 6.VII.1971, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, rare in Europe, Russia (Siberia and Far East) and North China.

Lispe tentaculata (De Geer, 1776)

Lispe tentaculata; Sorokina 2017: 54 (Anadyr′).

Distribution. Cosmopolitan.

Spilogona Schnabl, 1911
Spilogona aenea Huckett, 1965

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 18, 29, 31.VII.2013, 2♂ 4♀, 6.VIII.2013, 1♀, leg. O. Khruleva; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 23–27.VII.2014, 1♀, 25.VI–19.VII.2014, 5♂, leg. A. Barkalov (all in SZMN).

Distribution. PALAEARCTIC: Russia (Magadan region, Chukotka). NEARCTIC: Alaska, Yukon, Northwest Territories, Manitoba, Quebec, Labrador.

Spilogona aestuarium Huckett, 1965

Spilogona aestuarium; Sorokina 2012b: 330 (Beringovskii).

Distribution. PALAEARCTIC: Russia (Taymyr Peninsula, Chukotka). NEARCTIC: Canada (Yukon, Northwest Territories, Nunavut, Labrador), USA (Alaska).

Spilogona almqvistii (Holmgren, 1880)

Spilogona almqvistii; Hennig 1959: 273 (Wrangel Island); Sorokina & Khruleva 2012: 556 (Wrangel Island).

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], 19–24.VII.1966, 5♂ 10♀, leg. K. Gorodkov (2♂ 1♀ in SZMN, rest in ZISP); 5 km N Somnitel′naya Bay [70°59′N 179°32′W], 27.VII.1966, 2♀, the same place, 26.VII.1972, 1♀, leg. K. Gorodkov (ZISP); valley Somnitel′naya River [70°54′N 179°29′W], on flowers, 4.VII.1971, 1♂, leg. K. Gorodkov (ZISP); Rodzhers Bay [70°58′N 178°25′W], 18.VII.1971, 4♂ 2♀, leg. K. Gorodkov (1♂ 1♀ in SZMN, rest in ZISP); SW of the island, Sovetskay Mt., upper part of Khrustal′naya River [71°05′N 179°21′W], 4.VIII.1971, 4♂ 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from North Sweden, Russia (Novaya Zemlya, Arctic Siberia, Wrangel Island), China.

Spilogona alpica (Zetterstedt, 1845)

Spilogona alpica; Sorokina 2012b: 330 (Beringovskii).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Spilogona alticola (Malloch, 1920)

Spilogona alticola; Sorokina 2017: 52 (Anadyr′ River); Sorokina & Shaikevich 2018: 9 (Anadyr′ River).

Material examined. Anadyr′ district: Anadyr′, airport [64° 44′N 177°31′E], 31.VII.1963, 1♂, leg. K. Gorodkov (ZISP); environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 7–13.VII.2011, 1♂ 1♀, 10–13.VII.2011, 1♂ 1♀, leg. P. Tomkovich (ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19. VII.2014, 1♂, leg. A. Barkalov (SZMN); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 1♂ 3♀, leg. A. Barkalov (SZMN). **Chaunsky district**: environs of Pevek, 69°42′N 170°20′E, 4.VII.2019, 1♂, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Southern Siberia to the north of the Russian Far East.

Spilogona arctica (Zetterstedt, 1838)

Spilogona contractifrons (Zetterstedt, 1838); Sorokina & Khruleva 2012: 556 (Wrangel Island, misidentification).
Spilogona arctica; Sorokina 2012b: 331 (Beringovskii); Sorokina 2017: 52 (Anadyr′ River); Sorokina & Shaikevich 2018: 9 (Beringovskii, Anadyr′ River).

Material examined. Anadyr′ district: Anadyr′, airport [64°44′N 177°31′E], 31.VII.1963, 6♂, leg. K. Gorodkov (ZISP); environs of Meynypil′gyno village, 62°34′N 177° 1′E, moraine lake, 27–30.VI.2011, 1♀, 7–13.VII.2011, 1♂ 4♀, 10–13.VII.2011, 4♂ 3♀, leg. P. Tomkovich (ZMUM); 20 km N Meynypil′gyno village [62°42′N 177°0′E], 22.VII.2012, 1♀, leg. P. Tomkovich (ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 20♂ 6♀, leg. A. Barkalov (SZMN); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VI.2014, 3♂, leg. A. Barkalov (SZMN). **Bilibinsky district**: Bilibino [68° 03′N 166°27′ E], larch woodland, 5.VII.1971, 1♂, leg. K. Gorodkov (ZISP). **Chaunsky district**: 1 km N Pevek, 69°42′N 170°21′E, 1.VI.2011, 1♂, leg. O. Khruleva (SZMN); environs of Pevek, 69°42′N 170°20′E, 3, 4. VII.2019, 4♂ 5♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°43′N 170°22′E, 170–240 m, 3.VII.2019, 3♀, leg. O. Khruleva (SZMN); lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 7♂ 6♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], 27.VII.1963, on *Dasiphora fruticosa*, 2♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern Europe to the Russian Far East.

Spilogona arcticola Huckett, 1965 *** (Figures 14, 15, 16)

Material examined. Wrangel Island: 4 km N Somnitel′-naya Bay [70°59′N 179°32′W], 28.VII.1972, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Wrangel Island). NEARCTIC: Canada (Nunavut), Greenland (N, NE). Previously known only from Northern Canada and Greenland. New record for the Palaearctic and Russia.

Spilogona arenosa (Ringdahl, 1918)

Spilogona arenosa; Sorokina & Khruleva 2012: 556 (Wrangel Island).

Distribution. PALAEARCTIC: Sweden, Norway, Russia (Wrangel Island). NEARCTIC: Canada (Nunavut, Quebec, Manitoba), USA (Alaska).

Spilogona bathurstiana Huckett, 1965 *

Material examined. Chaunsky district: Komsomolskii village [69°08′N172°45′E], valley of Iguviem River, 5. VII.1963, 4♂, leg. K. Gorodkov (ZISP); Krasnoarmeiskii village [69°32′N 172°00′E], 8, 9.VII.1963, 4♂ 1♀, leg. K. Gorodkov (2♂ 1♀ in SZMN, rest in ZISP).

Distribution. PALAEARCTIC: Russia (Taymyr Peninsula, Chukotka). NEARCTIC: Canada (Northwest Territories, Nunavut), USA (Alaska).

Remarks. The species was previously recorded for the first time for Russia and Palaearctic from the Taymyr Peninsula (Sorokina 2017).

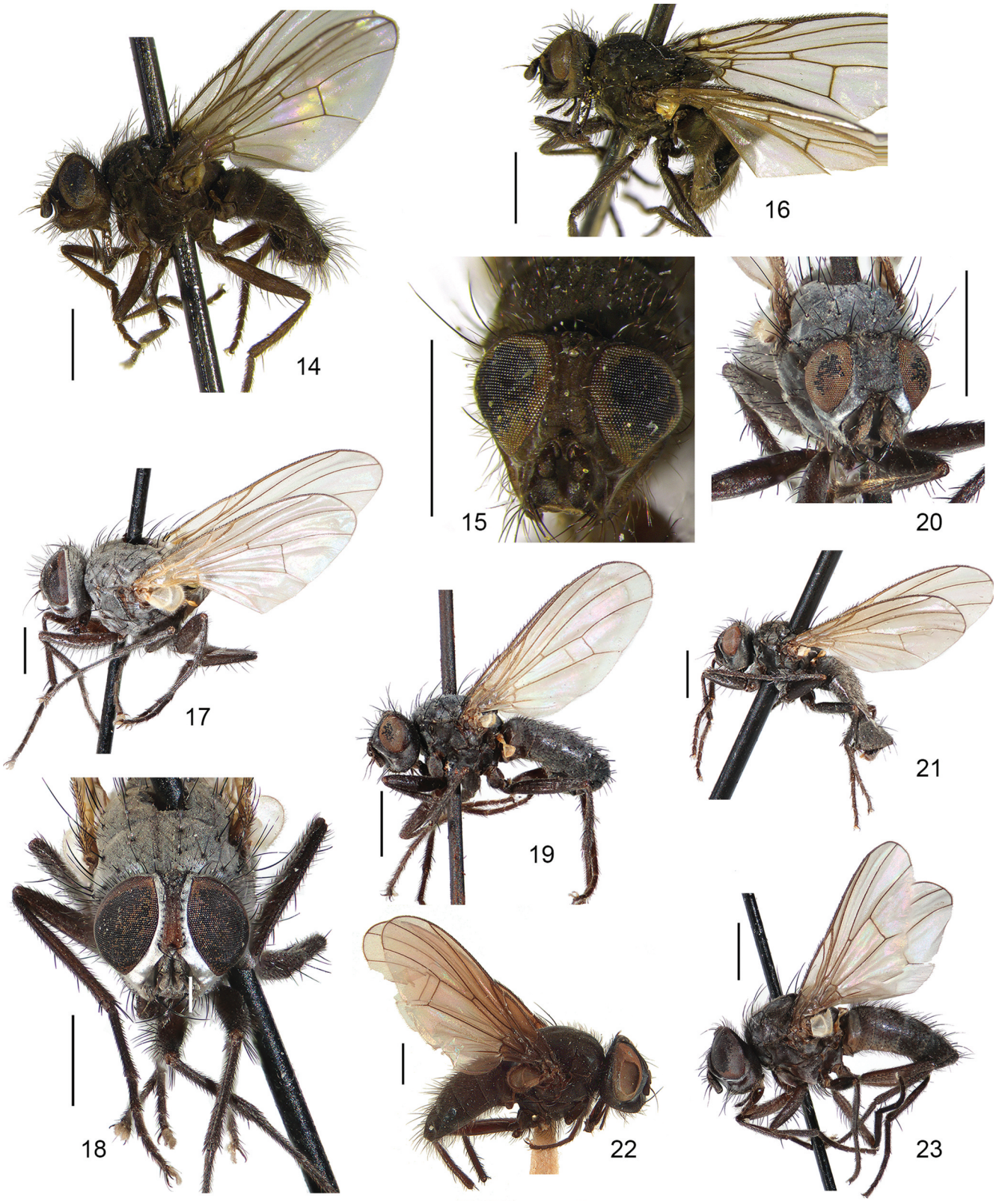
Spilogona ciliatocosta (Schnabl, 1915)*

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 7♂ 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], lake in the tundra, 15.VII.1963, 1♂, leg. K. Gorodkov (ZISP). **Wrangel Island**: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], on flowers of *Potentilla emarginata*, 22.VII.1966, 2♂, leg. K. Gorodkov; 5 km N Somnitel′naya Bay, swamp [70°58′N 179°29′W], 8.VII.1972, 1♂ 1♀, leg. K. Gorodkov; south of the island, upper reaches of Khishnikov River, swamp [71°00′N 179°11′W], 11.VII.1972, 2♂, leg. K. Gorodkov; 2 km N Somnitel′naya Bay, swamp [70°54′N 179°24′W], 21. VII.1972, 1♂, leg. K. Gorodkov; 4 km N Somnitel′naya Bay, swamp [70°58′N 179°29′W], 23.VII.1972, 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (north of Siberia and Far East).

Spilogona cordyluraeformis (Schnabl, 1915)

Spilogona sp. 1; Sorokina & Khruleva 2012: 557 (Wrangel Island).



Figures 14–23. *Spilogona spp*. **14–16**, *S. arcticola* Huckett, 1965: **14**, male holotype, lateral habitus; **15**, male holotype, frons, frontal view; **16**, female allotype, lateral habitus. **17, 18**, *S. incauta* Huckett, 1932, male: **17**, lateral habitus; **18**, frons, frontal view. **19–21**, *S. murina* Huckett, 1965: **19**, male, lateral habitus; **20**, male, frons, frontal view; **21**, female, lateral habitus. **22**, *S. nigerrima* Huckett, 1965, male holotype, lateral habitus. **23**, *S. padlei* Huckett, 1965, male, lateral habitus. Scale bar: 1 mm.

Spilogona cordyluraeformis; Sorokina & Pont 2013: 581 (Cape Shmidt village, Wrangel Island); Sorokina 2017: 53 (Wrangel Island).

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], lake in the tundra, 11, 17.VII.1971, 23♂ 19♀, 17.VII.1971, 2♂ 3♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (north of Siberia and Far East).

Spilogona deflorata (Holmgren, 1872) *

Material examined. Chaunsky district: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], lake in the tundra, 15.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Greenland (NE, SE), Russia (Altai Mts, Chukotka), China.

Remarks. The species was previously recorded for the first time for Russia from the Altai Mts (Sorokina 2018).

Spilogona denudata (Holmgren, 1869) *

Material examined. Iultinsky district: 84 km W Mys Shmidta village, Polyarny village [69°09′N 178°43′E], swamp on a river valley, 2.VII.1972, 2♂, leg. K. Gorodkov. **Wrangel Island**: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], 150 m, on flowers of *Potentilla emarginata*, 22.VII.1966, 1♂, tundra with *Dryas* sp., 30.VII.1971, 1♀, leg. K. Gorodkov; the mouth of Khrustal′naya River, N Perkatkun, willow thickets in the valley, 21.VII.1972, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Svalbard and the Russian Far East.

Spilogona dorsata (Zetterstedt, 1845)

Spilogona dorsata; Hennig 1959: 296 (Wrangel Island); Sorokina & Khruleva 2012: 556 (Wrangel Island).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 8♂, leg. A. Barkalov (SZMN). **Wrangel Island**: south of the island, Somnitel′naya Bay, valley Somnitel′naya River [70°54′N 179°24′W], 26.VII.1966, 1♀, leg. K. Gorodkov; Mineeva Mts [70°58′N 179°29′W], 150 m, 19.VII.1966, 3♂, leg. K. Gorodkov; south of the island, on flowers of *Dryas integrifolia*, 21.VII.1966, 1♂, leg. K. Gorodkov; Rodzhers Bay [70°58′N 178°25′W], 18.VII.1971, 1♂, leg. K. Gorodkov; the southwest of the island, Sovetskay Mt., upper reaches of Khishnikov River, snowfield [71°00′N 179°11′W], 4.VIII.1971, 3♂ 2♀, leg. K. Gorodkov, 1♂, leg. Chelnokov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from subarctic and arctic Europe and Russia.

Spilogona fimbriata (Schnabl, 1915)

Spilogona fimbriata; Sorokina 2017: 53 (Cape Otto Smidt).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], tundra, 11.VII.1971, 1♀ 2♀, 18–19.VII.1963, 2♂ 4♀, 9.VIII.1966, 1♂, 4♀, bank of lake in the tundra, 11.VII.1971, 1♀, 17.VII.1971, 3♂ 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, only from arctic Russia.

Spilogona flavinervis Huckett, 1965

Spilogona flavinervis; Sorokina 2017: 53 (Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂ 1♀, leg. A. Barkalov (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Sweden (Abisko National Park, **new record**, Adrian Pont, pers. comm.) and arctic and montane Russia (West Siberia and Far East).

Spilogona humeralis Huckett, 1965 *

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM).

Distribution. PALAEARCTIC: arctic and montane Russia (Siberia and Far East). NEARCTIC: Canada (Yukon, Northwest Territories, Nunavut, Manitoba, Quebec).

Spilogona hurdiana Huckett, 1965 ***

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], 20.VII.1963, 1♂, on snow, 9.VIII.1966, 2♂ 2♀, on snow, 19.VIII.1966, 11♂, leg. K. Gorodkov (2♂ 2♀ in SZMN, rest in ZISP); 84 km

W Mys Shmidta village, Polyarny village [69°09′N 178° 43′E], 2.VII.1972, 1♀, leg. K. Gorodkov (all in ZISP). **Chaunsky district**: Krasnoarmeiskii village [69°32′N 172°00′E], on flowers, 8.VII.1963, 1♂, leg. K. Gorodkov (ZISP); Pevek, 69°42′N 170°20′E, 11. VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: USA (Alaska). Previously known only from the types from Point Barrow (Alaska). New record for the Palaearctic and Russia.

Spilogona incauta (Huckett, 1932) *** (Figures 17, 18)

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′ E], swamp, 6.VII.1971, 1♂, leg. K. Gorodkov (SZMN).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Northwest Territories), USA (Alaska). Previously known only from Alaska and northern Canada. New record for the Palaearctic and Russia.

Spilogona khrulevae Sorokina, 2012

Spilogona khrulevae; Sorokina 2012a: 489 (Wrangel Island); Sorokina & Khruleva 2012: 556 (Wrangel Island).

Material examined. Wrangel Island: environs of Tundrovaya Mt. [71°18′N 179°48′W], tundra, 16.VII.1972, 2♂ 1♀, 18.VII.1972, 3♀, leg. K. Gorodkov; 6 km ESE Sovetskay Mt., north slope of Pik Berri Mt., 300 m, swamp [71°05′N 179°21′W], 12.VII.1972, 2♀, 15.VII.1972, 1♂, leg. K. Gorodkov; N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], swamp valley, 17.VII.1972, 2♂ 1♀, 29.VII.1972, 3♂, leg. K. Gorodkov; 5 km N Somnitel′naya Bay [70°58′N 179°29′W], 150 m, 25. VII.1972, 1♂ 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: arctic and montane Russia (Altai Mts, Wrangel Island).

Spilogona leucogaster (Zetterstedt, 1838) *

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 5.VIII.2013, 1♂ 1♀, leg. O. Khruleva; environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 1♂ 1♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East and Kyrgyzstan.

Spilogona malaisei (Ringdahl, 1920) *

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 5.VIII.2013, 1♀, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Greenland (NE, SE), Finland, Norway, Sweden and Russian Arctic to the Far East.

Spilogona megastoma Boheman, 1866 *

Material examined. Chaunsky district: Komsomolskii village [69°08′N 172°45′E], 7.VII.1963, 1♂, leg. K. Gorodkov (ZISP). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], lake in tundra, 17. VII.1971, 1♂, leg. K. Gorodkov; 5 km N Egvekinot [66°19′N 179°07′W], meadow, 26.VII.1963, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern Europe and Russian Arctic to the Far East.

Spilogona melanosoma (Huckett, 1932)

Spilogona melanosoma; Sorokina 2012b: 331 (Beringovskii).

Material examined. Anadyr′ district: Anadyr′ River, 64°38′N 176°55′E, 26.VII.2005, 1♀, leg. P. Adler (SZMN); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 2♀, leg. A. Barkalov (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN). **Chaunsky district**: 15 km NEE Pevek, Apapel′gin River [69°47′N 170°36′E], seashore, 15.VII.1963, 1♂, leg. K. Gorodkov (ZISP); Krasnoarmeiskii village [69°32′N 172°00′E], 8.VII.1963, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, only Greenland (NE) and Russia (Chukotka).

Spilogona micans (Ringdahl, 1918)

Spilogona micans; Sorokina & Khruleva 2012: 557 (Wrangel Island).

Distribution. HOLARCTIC. In the Palaearctic, Austria, Greenland (NE, SE), Iceland, Norway, Spitzbergen, Sweden and Russia (Altai Mts, Wrangel Island).

Spilogona monacantha (Collin, 1930)

Spilogona monacantha; Sorokina & Khruleva 2012: 557 (Wrangel Island).

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179° 29′W], 19, 22, 26.VII.1966, 6♂ (1♂ in SZMN, rest in ZISP), 23, 24.VII.1971, 2♂, 5.VIII.1971, 1♀, leg. K. Gorodkov (ZISP); 4 km N Somnitel′naya Bay [70° 58′N 179°29′W], 28.VII.1972, 4♂ 3♀, leg. K. Gorodkov (1♂ 1♀ in SZMN, rest in ZISP); upper part of Somnitel ′-naya River [70°54′N 179°29′W], 200 m, 4.VIII.1971, 1♀, leg. K. Gorodkov (ZISP); 5 km E Somnitel′naya Bay [70°59′N 179°32′W], 10.VII.1972, 1♂ 1♀, leg. K. Gorodkov (ZISP); 5 km N Somnitel′naya Bay, valley of Somnitel′naya River [70°58′N 179°29′W], 8.VII.1972, 1♂, leg. K. Gorodkov (ZISP); N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], 17.VII.1972, 1♂ 1♀, leg. K. Gorodkov (ZISP); environs Tundrovaya Mts [71°18′N 179°48′W], 18.VII.1972, 1♂ 2♀, leg. K. Gorodkov (ZISP); Rodzhers Bay [70°58′N 178°25′W], 18.VII.1971, 2♂ 4♀, leg. K. Gorodkov (1♂ 1♀ in SZMN, rest in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, only Greenland (NE, SE) and arctic and montane Russia (Altai Mts, Taymyr Peninsula, Wrangel Island).

Spilogona murina Huckett, 1965 *** (Figures 19–21)

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 31.VII.2013, 1♂ 1♀, leg. O. Khruleva; environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 1♂, leg. A. Barkalov (all in SZMN).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: USA (Alaska). Previously known only from the male holotype from King Salmon (Alaska). New record for the Palaearctic and Russia.

Spilogona nigerrima Huckett, 1965 *** (Figure 22)

Material examined. Wrangel Island: SW Sovetskay Mt., upper part of Khrustal′naya River [71°05′N 179°21′W], snowfield, 4.VIII.1971, 1♂, leg. Chelnokov (SZMN).

Distribution. PALAEARCTIC: Russia (Wrangel Island). NEARCTIC: USA (Alaska). Previously known only from the male holotype from Mount McKinley (Alaska). New record for the Palaearctic and Russia.

Spilogona nitidicauda (Schnabl, 1911)

Spilogona nitidicauda; Sorokina 2012b: 331 (Beringovskii); Sorokina & Shaikevich 2018: 4, 19 (Beringovskii, Anadyr′ River).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN). **Chaunsky district**: lower part of Apapel′gin River, 69°48′N 170°39′E, 5. VII.2011, 3♂, O. Khruleva; 1 km N Pevek, 69°42′N 170°21′E, 26. VI–7.VII.2011, 8♂ 8♀, O. Khruleva; 18 km S Pevek, Val′kumei village, 69°36′N 170°15′E, 23.VI.2011, 1♂, O. Khruleva; environs of Pevek, 69°42′N 170°20′E, 3, 4.VII.2019, 12♂ 6♀, O. Khruleva; environs of Pevek, 69°43′N 170°22′E, 170 m, 3. VII.2019, 4♀, leg. O. Khruleva (all in SZMN). **Iultinsky district**: environs of Iul′tin [67°52′N 178°43′W], 21.VII.1963, 2♂, leg. K. Gorodkov; 5 km N Egvekinot [66°19′N 179°07′W], meadow, 26.VII.1963, 1♂, leg. K. Gorodkov; 55 km N Egvekinot on the highway [66°49′N 178°58′W], 29.VII.1963, the river valley, 2♂, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from North Scandinavia, Russia and China.

Spilogona norvegica (Ringdahl, 1932)

Spilogona norvegica; Sorokina 2012b: 331 (Beringovskii).

Material examined. Anadyr′ district: 20 km N Meynypil′gyno village [62°42′N 177°0′E], 22. VII.2012, 1♂, leg. P. Tomkovich (ZMUM).

Distribution. HOLARCTIC. In the Palaearctic, from North Scandinavia and arctic Russia.

Spilogona novaesibiriae (Frey, 1915) *

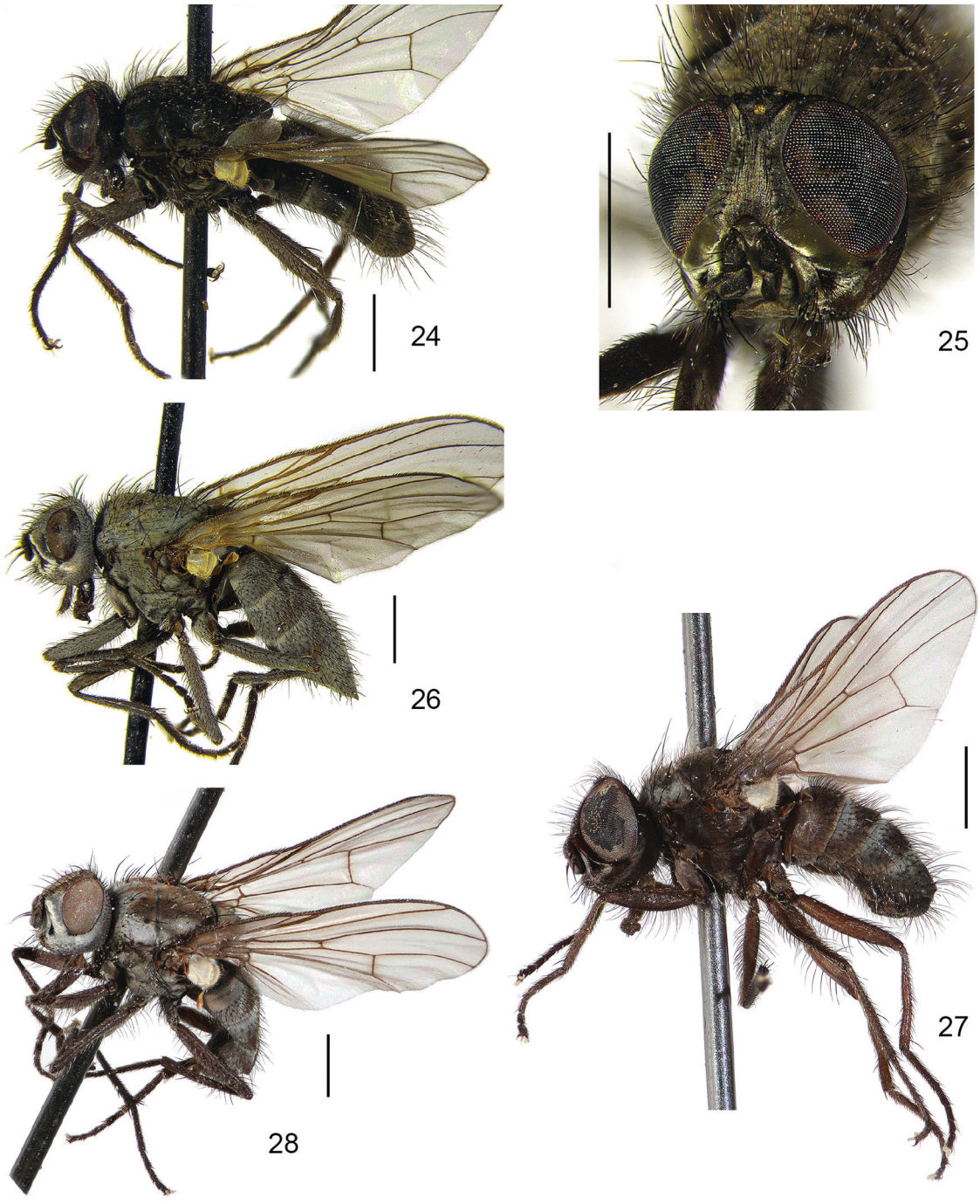
Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], 19.VIII.1966, 1♂, leg. K. Gorodkov (ZISP); 84 km W of the Mys Shmidta village, Polyarny village [69°09′N 178°43′E], swamp, 2. VII.1972, 1♀, leg. K. Gorodkov (ZISP). **Kolyuchin Island** [67°28′N 174°36′ W], 25–27.VII.1938, 1♀, leg. Druzhinin (ZISP). **Wrangel Island**: SW Sovetskay Mt., upper part of Khrustal′naya River [71°05′N 179°21′W], 4. VIII.1971, 2♂ 2♀, leg. K. Gorodkov (1♂ 1♀ in ZISP, 1♂ 1♀ in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, only Greenland (NE, SE) and the Russian Arctic.

Spilogona novemmaculata (Zetterstedt, 1860) *

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN).

Distribution. PALAEARCTIC: Finland, Norway, Russia (Europe, Far East), Sweden. NEARCTIC: Canada



Figures 24–28. *Spilogona spp*. **24–26**. *S. pulvicrura* Huckett, 1932: **24**, male, lateral habitus; **25**, male, frons, frontal view; **26**, female, lateral habitus. **27, 28**. *S. turbidipennis* Huckett, 1965: **27**, male, lateral habitus; **28**, female, lateral habitus. Scale bars: 1 mm.

(Northwest Territories, Nunavut, Manitoba, Quebec, Labrador), USA (Alaska).

Spilogona nudiseta (Becker, 1907)

Spilogona nudiseta; Sorokina 2019: 341 (Apapal′gin, Wrangel Island).

Distribution. PALAEARCTIC: arctic Russia (Chukotka, Wrangel Island, Taymyr Peninsula, ? New Siberian Islands).

Spilogona nutaka Huckett, 1965 *

Material examined. Anadyr′ district: environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E,

20.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: environs of Pevek, 69°42′N 170°20′E, 4. VII.2019, 2♂, leg. O. Khruleva (SZMN).

Distribution. PALAEARCTIC: arctic and montane Russia (Altai Mts, Chukotka). NEARCTIC (Nunavut, Manitoba, Quebec, Labrador).

Spilogona obscura (Malloch, 1919)

Spilogona obscura; Sorokina 2019: 343 (Apapel′gin, Wrangel Island).
Syn. *Spilogona vikhrevi*; Sorokina & Michelsen 2014: 519 (Wrangel Island).

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], lake in the tundra, 17. VII.1971, 1♀ 1♂ (in copula), leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: arctic Russia. NEARCTIC: Canada (Yukon, Northwest Territories, Manitoba, Victoria Island), USA (Alaska).

Spilogona opaca (Schnabl, 1915)

Spilogona opaca; Sorokina 2012b: 331 (Beringovskii).

Material examined. Iultinsky district: environs of Iul′tin [67°52′N 178°43′W], tundra, 21.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Iceland, northern Scandinavia, and arctic and montane Russia (West Siberia, Far East).

Spilogona pacifica (Meigen, 1926)

Material examined. Chaunsky district: lower part of Apapel′gin River, 69°48′N 170°39′E, 22.VII.2011, 2♀, leg. O. Khruleva (SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to China.

Spilogona padlei Huckett, 1965 *** (Figure 23)

Material examined. Chaunsky district: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], 1.VII.1972, 1♂, leg. K. Gorodkov (ZISP); Pevek [69°42′N 170°19′E], tundra, 11. VII.1963, 1♂, leg. K. Gorodkov (ZISP). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], meadow, 26. VII.1963, 6♂, leg. K. Gorodkov (2♂ in SZMN, rest in ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Nunavut). Previously known only from Padlei (Canada). New record for the Palaearctic and Russia.

Spilogona platyfrons Sorokina, 2018*

Material examined. Anadyr district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM). **Chaunsky district**: environs of Pevek, 69°42′N 170°20′E, 4.VII.2019, 2♂ 3♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], on *Dasiphora fruticosa*, meadow, tundra, 24, 26, 27.VII.1963, 7♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: arctic and montane Russia (Altai Mts, Chukotka).

Spilogona projecta Huckett, 1965

Spilogona projecta; Sorokina & Khruleva 2012: 557 (Wrangel Island).

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], 9.VIII.1966, 1♀, leg. K. Gorodkov (ZISP). **Wrangel Island**: Mineeva Mts [70°58′N 179°29′W], 400 m, S Somnitel′naya Mts, 20, 21.VII.1966, 6♀, leg. K. Gorodkov; south of the island, Somnitel′naya Bay, Somnitel′naya River, Mineeva Mts [70°58′N 179°29′W], 250 m, 19, 22.VII.1966, 2♀, on flowers of *Potentilla emarginata* and *Dryas integrifolia*, 150 m, 19, 22.VII.1966, 4♂ 2♀, leg. K. Gorodkov; 2 km NW Somnitel′naya Bay, swamp [70°54′N 179°24′W], 21. VIII.1972, 1♀, leg. K. Gorodkov; 4 km N Somnitel′naya Bay [70°58′N 179°29′W], swamp, 9.VII.1972, 1♀, leg. K. Gorodkov; NW Sovetskay Mt., upper part of Khrustal′-naya River [71°05′N 179°21′W], snowfield, 4.VIII.1971, 1♂, leg. K. Gorodkov; 6 km ESE Sovetskay Mt., Pik Berri Mt., northern slope, 300 m, swamp [71°03′N 179°36′W], 12.VII.1972, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: arctic Russia (Wrangel Island, Chukotka). NEARCTIC: Canada (Yukon Territory, Northwest Territories, Nunavut).

Spilogona pseudodispar Frey, 1915

Spilogona pseudodispar; Sorokina 2012b: 331 (Beringovskii).

Material examined. Anadyr′ district: environs of Meynypil′ gyno village, 62°34′N 177°1′E, 20–24.VI.2009, 1♂, 24–28. VI.2009, 1♂, moraine lake, 27–30.VI.2011, 2♂, 7–13.VII.2011, 3♂ 1♀, 10–13.VII.2011, 1♀, leg. P. Tomkovich (all in ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VII–19.VII.2014, 4♂ 1♀, leg. A. Barkalov

(SZMN). **Chaunsky district**: Krasnoarmeiskii village [69°32′N 172°00′E], 8.VII.1963, meadow, 1♂, leg. K. Gorodkov (ZISP); Valkumey village [69°36′N 170°11′E], 9.VII.1963, 1♂, 12. VII.1963, 1♀, leg. K. Gorodkov (ZISP); environs of Pevek [69° 42′N 170°19′E], tundra, 28, 29.VI.1963, 9♂ 7♀, leg. K. Gorodkov (ZISP); 1 km N Pevek, 69°42′N 170°21′E, 27.VI.2011, 3♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°42′N 170°20′E, 3. VII.2019, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], tundra, 18–19.VII.1963, 14♂ 6♀, on snowfield, 16.VII.1966, 1♀, on snow, 9.VIII.1966, 1♀, tundra, 11.VII.1971, 2♂ 4♀, leg. K. Gorodkov (ZISP); Polyarny village [69°09′N 178°43′E], tundra, 2.VII.1972, 1♀, leg. K. Gorodkov (ZISP). **Wrangel Island**: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], on flowers of *Potentilla emarginata*, 150 m, 22.VII.1966, 1♂, the same place, but 250 m, 22.VII.1966, 1♂, leg. K. Gorodkov (ZISP); 4 km N Rodzhers Bay [71°01′N 178°24′W], 23. VII.1972, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from North Scandinavia and arctic Russia.

Spilogona pulvicrura (Huckett, 1932) *** (Figures 24–26)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂ 1♀, leg. A. Barkalov (SZMN).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Nunavut, Quebec), USA (Alaska). New record for the Palaearctic and Russia.

Spilogona quinquelineata (Zetterstedt, 1838)

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♂ 1♀, leg. A. Barkalov (SZMN); 30 km to Krasneno village on the Anadyr′ River [130 km W Anadyr′], 64°46′N 174°08′E, 23.VI–18. VII.2014, 2♂, leg. V. Mutin (SZMN). **Bilibinsky district**: Bilibino [68°03′N 166°27′ E], forest, 5. VII.1971, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, only from North Europe and the Russian Far East.

Spilogona quinquesetosa (Schnabl, 1915) *

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], tundra, 18.VII.1963, 1♂ 5♀, 11.VII.1971, 1♀, tundra, 11.VII.1971, 2♂, leg. K. Gorodkov (ZISP); 5 km SW Mys Shmidta village, tundra with willow [68°51′N 179°33′W], 11.VII.1971, 8♂ 3♀ (2♂ 2♀ in SZMN, rest in ZISP). **Wrangel Island**: south of the island, lower part of Khishnikov River, foothills of Mineeva Mts [70°58′N 179°09′W], 11.VII.1972, 1♂ 1♀, leg. K. Gorodkov (1 ♂ in SZMN, rest in ZISP); 2 km N Somnitel′naya Bay, swamp [70°54′N 179°24′W], 21. VII.1972, 1♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: only from arctic Russia (Siberia and Far East).

Spilogona sanctipauli (Malloch, 1921)

Spilogona sanctipauli; Hennig 1959: 332 (Wrangel Island); Sorokina & Khruleva 2012: 557 (Wrangel Island); Sorokina 2017: 53 (Cape Otto Smidt).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 7–13.VII.2011, 1♂, leg. P. Tomkovich (ZMUM); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 2♂ 2♀, leg. A. Barkalov (SZMN). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], 19.VII.1963, 2♂, airport, 15.VII.1966, 2♂ 3♀, on flowers of *Senecio atropurpureus*, 16.VII.1966, 2♂ 3♀, on snowfield, 16. VII.1966, 1♀, 17.VII.971, 2♂ 2♀, leg. K. Gorodkov (all in ZISP). **Kolyuchin Island** [67°28′N 174°36′W], 25–27. VII.1938, 1♀, leg. Druzhinin (ZISP). **Wrangel Island**: south of the island, Somnitel′naya Bay, Mineeva Mts [70°58′N 179°29′W], 22.VII.1966, 17♂ 8♀, on flowers of *Potentilla emarginata*, 19.VII.1996, 3♂ 3♀, 5.VIII.1966, 1♂, leg. K. Gorodkov; Mineeva Mts [70°58′N 179°29′W], 550 m, the pass, 10.VII.1966, 1♂ 3♀, leg. K. Gorodkov; Mineeva Mts, S Sovetskay Mt. [71°05′N 179°21′W], 400 m, 20.VII.1966, 6♂ 8♀, leg. K. Gorodkov; south of the island, Somnitel′naya Bay, tundra [70°54′N 179°29′W], 19, 25.VII.1966, 7♂, 9.VII.1972, 5♂, on flowers of *Dryas integrifolia*, tundra, 19.VII.1966, 23♂ 13♀, 21.VII.1966, 13♂ 7♀, leg. K. Gorodkov; south of the island, Somnitel′naya Bay, bank of Somnitel′naya River [70° 54′N 179°29′W], on flowers of *Potentilla emarginata*, 26. VII.1966, 21♂ 8♀, leg. K. Gorodkov; upper part of Somnitel′ naya River [70°58′N 179°29′W], 200 m, on flowers, 4. VIII.1971, 2♂ 13♀, leg. K. Gorodkov; 2–4 km W Somnitel′ naya Bay [70°58′N 178°25′W], tundra, 9.VII.1972, 1♂ 1♀, leg. K. Gorodkov; 5 km E Somnitel′naya Bay, tundra, stream [70° 59′N 179°32′W], 10.VII.1972, 1♂, leg. K. Gorodkov; 4 km N Somnitel′naya Bay [70°54′N 179°24′W], bank of Somnitel′ naya River, on flowers of *Potentilla emarginata*, 28.VII.1972, 1♂ 1♀, the same place, foothills, 150 m, 25.VII.1972, 2♂, leg. K. Gorodkov; 5 km N Somnitel′naya Bay, foothills, 150 m [70° 58′N 178°25′W], 7.VII.1972, 1♂ 1♀, leg. K. Gorodkov; south of the island, Somnitel′naya Bay, Vysokay Mt. [71°01′N 179° 25′W], 400–500 m, on flowers of *Saxifraga hirculus*, 7–9. VIII.1971, 4♀, leg. K. Gorodkov; 7 km SE Sovetskay Mt., upper part of Khishnikov River [71°00′N 179°11′W], 200 m,

tundra near the river, 11.VII.1972, 5♂ 4♀, 15.VII.1972, 2♂ 1♀, leg. K. Gorodkov; 8 km SE Sovetskay Mt. [71°00′N 179°11′W], 250 m, stream, 13.VII.1972, 2♂, leg. K. Gorodkov; 6 km ESE Sovetskay Mt., north slope of Pik Berri Mt. [71°03′N 179°36′W], 300 m, swamp, 12.VII.1972, 1♀, leg. K. Gorodkov; NW Sovetskay Mt., upper part of Khrustal′naya River [71°00′N 179°11′W], snowfield, 4. VIII.1971, 4♂ 7♀, leg. K. Gorodkov; 4 km N Rodzhers Bay [71°01′N 178°24′W], 29.VII.1966, 1♂, leg. K. Gorodkov; Rodzhers Bay [70°58′N 178°25′W], 18.VII.1971, 1♂ 1♀, leg. K. Gorodkov; N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], willow thicket, 17. VII.1972, 1♂ 3♀, 29.VII.1972, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern Scandinavia and Russian Arctic.

Spilogona semiglobosa (Ringdahl, 1916)

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], tundra, 18.VII.1963, 1♀, leg. K. Gorodkov. **Wrangel Island**: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on flowers of *Dryas integrifolia*, 19.VII.1966, 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern Scandinavia, north Russia and China.

Spilogona seticosta (Schnabl, 1915) *

Material examined. Chaunsky district: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], tundra, 28. VI.1963, 1♂, leg. K. Gorodkov; environs of Pevek [69° 42′N 170°19′E], tundra, 1.VII.1963, 1♀, 11.VII.1963, 1♂, leg. K. Gorodkov. **Wrangel Island**: environs of Tundrovaya Mt [71°18′N 179°48′W], tundra, 18. VII.1972, 1♂, near stream, 18.VII.1972, 1♂ 2♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: known only from arctic Russia (Polar Urals, Wrangel Island, Pevek).

Spilogona sordidipennis (Holmgren, 1883)

Spilogona sordidipennis; Hennig 1959: 339 (Wrangel Island); Sorokina & Khruleva 2012: 557 (Wrangel Island); Sorokina 2012b: 331 (Beringovskii).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, 25.VI–19.VII.2014, 1♂, leg. A. Barkalov (SZMN). **Chaunsky district**: environs of Pevek [69°42′N 170°19′E], 200–300 m, tundra, 29.VI.1963, 1♂ 1♀, leg. K. Gorodkov (ZISP). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], on snow, 9.VIII.1966, 2♀, leg. K. Gorodkov; 5 km SW Mys Shmidta village, tundra with willow [68°51′N 179°33′W], 11.VII.1971, 1♂, leg. K. Gorodkov (ZISP). **Kolyuchin Island** [67°28′N 174°36′W], 25–27.VII.1938, 1♀, leg. Gekker (ZISP). **Wrangel Island**: south of the island, Somnitel′naya Bay, valley of Somnitel′naya River, Mineeva Mts [71°00′N 179°25′W], 150 m, on flowers of *Potentilla emarginata*, 22.VII.1966, 1♂ 5♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: in arctic and montane Russia (Altai Mts, Novaya Zemlya Island, Taymyr Peninsula, Wrangel Island, Kolyuchin Island, Chukotka).

Spilogona sororcula (Zetterstedt, 1845)

Spilogona sororcula; Sorokina 2017: 53 (Anadyr′ River).

Material examined. Anadyr′ district: Onemen Bay, the mouth of the Anadyr′ River, 64°42′N 177°14′E, 1.VIII.2005, 1♀, leg. P. Adler (SZMN). **Wrangel Island**: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on the window in a house, 16.VII.1972, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Europe and arctic and montane Russia (Altai Mts, Chukotka, Wrangel Island).

Spilogona sospita (Huckett, 1932)

Spilogona sospita; Sorokina 2017: 53 (Anadyr′ River, Anadyr′).

Material examined. Chaunsky district: environs of Pevek [69°42′N 170°19′E], 28.VI.1963, tundra, 1♂, leg. K. Gorodkov (ZISP); Krasnoarmeiskii village [69°32′N 172°00′E], 8, 9.VII.1963, 1♂ 1♀, leg. K. Gorodkov (ZISP); environs of Pevek, 69°43′N 170°22′E, 3. VII.2019, 170 m, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: Mys Shmidta village [68°53′N 179° 24′W], tundra, 28.VI.1963, 1♂ (ZISP), 18.VII.1963, 1♂ 1♀ (ZISP), 19.VII.1963, 1♂ (ZISP), airport, 9.VIII.1966, 1♂ 1♀ (SZMN), 9.VII.1971, 1♂ (ZISP), 11.VII.1971, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Northwest Territories), USA (Alaska).

Spilogona subnotata Huckett, 1965

Spilogona subnotata; Sorokina & Khruleva 2012: 557 (Wrangel Island).

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′E], forest, 4.VII.1971, 1♀, leg. K. Gorodkov. **Chaunsky district**: Krasnoarmeiskii village [69°32′N 172°00′E], willow

thickets, 8.VII.1963, 1♂, leg. K. Gorodkov. **Wrangel Island**: N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], willow thickets in the river valley, 17. VII.1972, 16♂ 5♀, 21.VII.1972, 6♂ 4♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (Taymyr Peninsula, Chukotka, Wrangel Island). NEARCTIC: Canada (Yukon Territory, Northwest Territories, Nunavut), USA (Alaska).

Spilogona tornensis (Ringdahl, 1926) *

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], 9–11.VII.1971, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, Finland, Greenland (NE, SE), Norway, Sweden and arctic Russia (Taymyr Peninsula, Chukotka).

Spilogona triangulifera (Zetterstedt, 1838) *

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], on flowers of *Dryas integrifolia*, tundra, 19.VII.1966, 1♂, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from northern and montane Europe, east to arctic and montane Russia.

Spilogona trianguligera (Zetterstedt, 1838)

Spilogona trianguligera; Sorokina 2017: 54 (Cape Otto Smidt).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 7–13.VII.2011, 1♂, 10–13.VII.2011, 2♀, leg. P. Tomkovich (ZMUM). **Chaunsky district**: Chaunskaya Bay, mouth of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 3.VII.1940, 1♂, leg. G. Semenov (ZISP); 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], 1.VII.1972, 1♂, lake in the tundra, 7.VII.1971, 6♂ 3♀, leg. K. Gorodkov (1♂ 1♀ in SZMN, rest in ZISP), the same place, 15.VII.1963, seashore, sweeping on *Elymus* sp., 1♀ 1♂, leg. K. Gorodkov (SZMN), the same place, lake in the tundra, sweeping on *Carex* sp., 15.VII.1963, 4♂ 2♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Spilogona trigonata (Zetterstedt, 1838)

Spilogona trigonata; Sorokina 2017: 54 (Anadyr′ River).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East.

Spilogona trigonifera (Zetterstedt, 1838)

Material examined. Anadyr′ district: environs Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 19–21. VI.2014, 1♂, leg. V. Mutin; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 2♀, leg. A. Barkalov (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, only from Greenland and the Russian Far East.

Spilogona tundrae (Schnabl, 1915)

Spilogona tundrae; Hennig 1959: 355 (Wrangel Island); Sorokina & Khruleva 2012: 557 (Wrangel Island); Sorokina 2017: 54 (Cape Otto Smidt, Ust′-Chaun).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, moraine lake, 10–13.VII.2011, 1♀, leg. P. Tomkovich (ZMUM); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 3♀, leg. A. Barkalov; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 6♂ 4♀, leg. A. Barkalov (SZMN). **Chaunsky district**: Chaunskaya Bay, mouth of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 3.VII.1940, 1♀, leg. G. Semenov (ZISP); lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], tundra, 19. VII.1963, 2♂ 4♀, leg. K. Gorodkov; 84 km W Mys Shmidta village, Polyarny village [69°09′N 178°43′E], on snow, 9.VIII.1966, 1♀, tundra, 9.VII.1971, 1♂ 1♀, 11. VI.1971, 1♂ 2♀, swamp valley of river, 2.VII.1972, 9♂ 5♀, leg. K. Gorodkov (ZISP). **Wrangel Island**: south of the island, lower part of Khishchnikov River, Mineeva Mts [70°58′N 179°09′W], tundra, 11.VII.1972, 1♀, leg. K. Gorodkov; N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], 17.VII.1972, 2♂ 2♀, 29.VII.1972, 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, in northern Scandinavia and across northern Russia to Wrangel Island.

Spilogona tundrica (Schnabl, 1911) *

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], tundra, 11.VII.1971, 1♂

1♀, lake in the tundra, 17.VII.1971, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: only in northern Scandinavia and northern Russia (Siberia and Far East).

Spilogona turbidipennis Huckett, 1965 *** (Figures 27, 28)

Material examined. Iultinsky district: Mys Shmidta village [68°53′N 179°24′W], 19.VII.1963, on flowers, 1♀, leg. K. Gorodkov. **Wrangel Island**: south of the island, Somnitel′naya Bay, valley of Somnitel′naya River [70° 54′N 179°29′W], 26.VII.1966, 1♂, leg. K. Gorodkov; environs of Somnitel′naya Bay, south of the island, "Leningradskii" stream, 6.VII.1972, 1♂, leg. K. Gorodkov; 5 km N Somnitel′ naya Bay, valley Somnitel′naya River, foothills, 150 m [70°59′N 179°32′W], 25.VII.1972, 1♂, leg. K. Gorodkov; environs of Tundrovaya Mt. [71°18′N 179°48′W], stream, 18.VII.1972, 1♀, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka, Wrangel Island). NEARCTIC: Canada (Yukon, Northwest Territories, Nunavut, Quebec), USA (Alaska). Previously known only from the north of North America. New record for the Palaearctic and Russia.

Spilogona wrangeli Hennig, 1959

Spilogona malaisei; Sorokina & Khruleva 2012: 556 (Wrangel Island, misidentification).

Material examined. Wrangel Island: south of the island, lower part of Khishchnikov River, Mineeva Mts [70°58′N 179° 09′W], tundra, 11.VII.1972, 3♀, leg. K. Gorodkov (ZISP); Rodzhers Bay [70°58′N 178°25′W], meadow, 13.VII.1971, 1♀, leg. K. Gorodkov (ZISP); south of the island, Somnitel′ naya Bay [70°54′N 179°29′W], 19.VII.1966, 1♂ (ZISP), 21. VII.1966, 1♀ (SZMN), leg. K. Gorodkov; 2 km NW Somnitel′ naya Bay [70°54′N 179°24′W], swamp, 21.VII.1972, 2♀, leg. K. Gorodkov (ZISP); 5 km N Somnitel′naya Bay, valley of Somnitel′naya River, foothills, 150 m [70°59′N 179°32′W], 25. VII.1972, 2♂ 3♀, leg. K. Gorodkov; 6 km ESE Sovetskay Mt., northern slope of Pik Berri Mt. [71°03′N 179°36′W], 300 m, swamp, 15.VII.1972, 1♂ 1♀ (♂ in SZMN, ♀ in ZISP), 12. VII.1972, 4♂ 4♀ (1♂ 2♀ in SZMN, rest in ZISP), leg. K. Gorodkov.

Distribution. PALAEARCTIC: Russia (Wrangel Island).

Spilogona zaitzevi (Schnabl, 1915)

Spilogona zaitzevi; Sorokina & Khruleva 2012: 557 (Wrangel Island).

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VII–19.VII.2014, 3♀, leg. A. Barkalov (SZMN). **Chaunsky district**: Turyryv Cape [69°09′N 170°53′E], 21.VI.1940, 1♀, leg. G. Semenov; valley of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 5. VII.1963, 1♀, leg. K. Gorodkov; Komsomolskii village [69°08′N 172°45′E], willow thickets in the valley, 7. VII.1963, 1♀, leg. K. Gorodkov; 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], lake in the tundra, 14. VII.1963, 1♀, 7.VII.1971, 4♀, leg. K. Gorodkov (all in ZISP). **Wrangel Island**: environs of Tundrovaya Mt. [71° 18′N 179°48′W], 18.VII.1972, 2♂ 2♀, leg. K. Gorodkov; N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], swamp bank of the river, 17. VII.1972, 2♂ 1♀, willow thickets in the valley, 17. VII.1972, 5♂ 4♀, leg. K. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, only known from Greenland (NE, SE) and arctic Russia.

Coenosiini

Coenosia Meigen, 1826

Coenosia alaskensis Huckett, 1965

Coenosia octopunctata; Sorokina 2017: 54 (Anadyr′ River, misidentification).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 22.VII.2013, 1♀, leg. O. Khruleva (SZMN); valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175° 12′E, yellow plates, 25.VI–19.VII.2014, 1♂ 1♀, leg. A. Barkalov (SZMN); environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: Val′- kumei village [69°36′N 170°11′E], 12.VII.1963, 1♂, leg. K. Gorodkov (ZISP); lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 8♀, 24.VI.2011, 1♂ 5♀, leg. O. Khruleva (SZMN); 7 km S Pevek, 69° 38′N 170°15′E, 13.VII.2011, 2♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°42′N 170°20′E, 3. VII.2019, 2♂ 3♀, leg. O. Khruleva (SZMN). **Wrangel Island**: 5 km NE Somnitel′naya Bay [70°59′N 179°32′W], 26.VII.1972, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Far East), Japan. NEARCTIC: Canada (Yukon, Northwest Territories), USA (Alaska).

Coenosia apukaensis Hennig, 1961

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi

stream], 64°50′N 175°57′E, 22.VII.2013, 3♀, 26.VII.2013, 1♀, 30.VII.2013, 1♀, leg. O. Khruleva (SZMN). **Chaunsky district**: 7 km S Pevek, the dam, 69°38′N 170°15′E, 13.VII.2011, 1♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 20 km SSE Iul′tin, valley of Amguema River [67°42′N 178°35′W], thickets of *Alnaster fruticosa*, 22.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: only known from arctic and montane Russia (Polar Ural, Altai Mts, Chukotka, Kamchatka).

Coenosia atritibia Ringdahl, 1926 **

Material examined. Chaunsky district: Pevek [69°42′N 170°19′E], tundra, 29.VI.1963, 1♂ (ZISP), 1.VII.1963, 4♂ (1♂ in SZMN, rest in ZISP), 3.VII.1963, 1♀ (ZISP), leg. K. Gorodkov. **Wrangel Island**: upper part of Khishchnikov River, 7 km SE Sovetskay Mt., 200 m [71°00′N 179°11′W], tundra with *Dryas* sp., 11.VII.1972, 2♂ 1♀, leg. K. Gorodkov (1♂ 1♀ in SZMN, 1♂ in ZISP).

Distribution. PALAEARCTIC: Sweden, Russia (Chukotka, Wrangel Island). NEARCTIC: Canada (Yukon, Northwest Territories, Manitoba, Quebec, Labrador), USA (Alaska). New record for Russia.

Coenosia baicalensis (Schnabl, 1926)

Coenosia baicalensis; Sorokina 2017: 54 (Anadyr′, Bilibino).

Distribution. PALAEARCTIC: Russia (Siberia, Far East).

Coenosia demoralis Huckett, 1965

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 28.VII.2013, 1♀, leg. O. Khruleva (SZMN).

Distribution. PALAEARCTIC: Russia (Altai Mts, Chukotka, Magadan region) and Sweden (Abisko National Park, **new record**, Adrian Pont, pers. comm.). NEARCTIC: Canada (Yukon, Manitoba, Quebec).

Coenosia luteipes Ringdahl, 1930

Coenosia luteipes; Sorokina 2017: 54 (Markovo).

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′E], 5.VII.1971, 1♂ 1 ♀, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (arctic Siberia, Far East) and China.

Coenosia morrisoni (Malloch, 1924) ***

Material examined. Anadyr′ district: valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 3♂ 1♀, leg. A. Barkalov (SZMN). **Bilibinsky district**: Bilibino [68°03′N 166°27′E], larch woodland and moss, 5.VII.1971, 1♂ 1♀, leg. K. Gorodkov (ZISP). **Chaunsky region**: Komsomol′skii village, 100 km SW Pevek [69°10′N 172°42′E], shrubby tundra, 5.VII.1963, 1♂, leg. K. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (Chukotka). NEARCTIC: Canada (Yukon, Northwest Territories, Quebec, Labrador), USA (Alaska). Previously known only from the north of North America. New record for the Palaearctic and Russia.

Remarks. The validity of this species will be discussed in a forthcoming revision of Russian *Coenosia* species.

Coenosia nigrotincta Hennig, 1961

Coenosia nigrotincta; Hennig 1961: 580 (Bol′shaya River); Sorokina 2012b: 332 (Beringovskii); Sorokina 2014: 634 (Velikaya River, Beringovskii); Sorokina 2017: 54 (Markovo, Pevek, Wrangel Island).

Material examined. Anadyr′ district: environs of Meynypil′gyno village, 62°34′N 177°1′E, 21–30.VI.2010, 1♂ (SZMN), 16–23.VII.2010, 1♂ 2♀ (1♂ in SZMN, 2♀ in ZMUM), 6–14.VII.2010, 1♀ (SZMN), moraine lake, 27–30.VI.2011, 1♀ (ZMUM), 7–13.VII.2011, 1♀ (ZMUM), leg. P. Tomkovich; environs of Anadyr′, bank of Kazachka River, 64°43′N 177°30′E, 20.VII.2014, 1♀, leg. A. Barkalov (SZMN). **Chaunsky district**: Chaunskaya Bay, mouth of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 3.VII.1940, 1♂, leg. G. Semenov (ZISP); environs of Pevek [69°42′N 170°19′E], tundra, 28.VI.1963, 1♀, 1.VII.1963, 1♂, mountain slope, 4.VIII.1972, 1♂ 1♀, leg. K. Gorodkov (ZISP); Komsomolskii village [69°08′N 172°45′E], valley of Ichuveem River, at the entrance to the gopher hole, 5.VII.1963, 1♂, leg. K. Gorodkov (ZISP); Krasnoarmeiskii village [69°32′N 172°00′E], on flowers, 8.VII.1963, 1♂, leg. K. Gorodkov (ZISP); 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], lake in the tundra, 15.VII.1963, 1♀, leg. K. Gorodkov (ZISP); 1 km N Pevek, 69°42′N 170°21′E, 27.VI.2011, 1♀, 1.VII.2011, 1♀, 1–7.VII.2011, 1♂, leg. O. Khruleva (SZMN); 1 km S Pevek, 69°40′N 170°16′E, 26.VII.2011, 1♀, 11.VII.2011, 2♀, 20.VII–1.VIII.2011, 1♀, leg. O. Khruleva (SZMN); lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 1♂, leg.

O. Khruleva (SZMN); environs of Pevek, 69°42′N 170° 20′E, 3.VII.2019, 3♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°43′N 170°22′E, 3.VII.2019, 4♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], 26.VII.1963, 1♀ 1♂, leg. Gorodkov (ZISP).

Distribution. PALAEARCTIC: Russia (arctic Siberia and Far East).

Coenosia octopunctata (Zetterstedt, 1838)

Coenosia octopunctata; Sorokina 2017: 54 (Wrangel Island).

Material examined. Chaunsky district: Chaunskaya Bay, mouth of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 3.VII.1940, 1♀, leg. G. Semenov; Komsomolskii village [69°08′N 172°45′E], valley of Ichuveem River, tundra, 5.VII.1963, 1♀, willow thickets in the valley, 7.VII.1963, 1♂, leg. Gorodkov (all in ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Northern Europe, arctic and montane Russia and China.

Coenosia oralis Schnabl, 1915

Coenosia oralis; Sorokina & Khruleva 2012: 557 (Wrangel Island); Sorokina 2017: 54 (Cape Otto Smidt).

Material examined. Chaunsky district: Chaunskaya Bay, mouth of Inchun′ River [Ichuveem River, 69°02′N 171°00′E], 3.VII.1940, 1♀, leg. G. Semenov; 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], lake in the tundra, 15.VII.1963, 1♀, leg. K. Gorodkov (all in ZISP). **Iultinsky district**: Mys Shmidta village [68°53′N 179°24′W], tundra, 18.VII.1963, 2♂ 1♀, on snowfield, 16. VII.1966, 1♀, on snow, 9.VIII.1966, 1♀, leg. K. Gorodkov; 84 km W Mys Shmidta village [69°09′ N 178°43′E], tundra, 2. VII.1972, 1♀, leg. K. Gorodkov (all in ZISP). **Kolyuchin Island** [67°28′N 174°36′W], 25–27.VII.1938, 2♀, leg. Gekker (ZISP). **Wrangel Island**: tundra, 8.VIII.1931, 1♂, leg. A. Minev; Rodzhers Bay, 11.VII.1939, 1♀, leg. Potrenko; Rodzhers Bay [70°58′N 178°25′W], 18.VII.1971, 2♂ 5♀, leg. K. Gorodkov; Somnitel′naya Bay, valley of Somnitel′naya River, Mineeva Mts [71°00′N 179°25′W], 19, 22, 26.VII.1966, 1♂ 4♀, leg. K. Gorodkov; Somnitel′naya Bay [70°54′N 179°29′W], 9.VIII.1971, 3♀, leg. K. Gorodkov; 2 km NW Somnitel′naya Bay [70°54′N 179°24′W], 21.VII.1972, 3♀, leg. K. Gorodkov; 5 km N Somnitel′naya Bay [70°58′N 179°29′W], the river valley, foothills, 150 m, 25.VII.1972, 2♂ 1♀, swamp, 8.VII.1972, 1♀, leg. K. Gorodkov; 5 km NE Somnitel′naya Bay [70°54′N 179°24′W], 26.VII.1972, 1♀, leg. K. Gorodkov; south of the island, Somnitel′naya Bay, Mineeva Mts, S Sovetskay Mt. [71°05′N 179°21′W], 400 m, 20.VII.1966, 1♀, leg. K. Gorodkov; northern slope of Pik Berri Mt., 6–9 km SE Sovetskay Mt. [71°03′N 179°36′W], swamp, 12–15.VII.1972, 10♂ 9♀ (2♂ 2♀ in SZMN, all rest in ZISP).

Distribution. PALAEARCTIC: only known from arctic Russia.

Coenosia pilipyga Ringdahl, 1930

Material examined. Bilibinsky district: Bilibino [68°03′N 166°27′E], swampy wasteland, 6.VII.1971, 5♂ 3♀, leg. K. Gorodkov (2♂ 1♀ in SZMN, rest in ZISP).

Distribution. PALAEARCTIC: known only from the Russian Far East (Chukotka, Kamchatka).

Coenosia pulicaria (Zetterstedt, 1845)

Material examined. Chaunsky district: 15 km NEE Pevek, Apapel′gino [69°47′N 170°36′E], meadow, 7. VII.1971, 1♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to the Russian Far East and China.

Coenosia sibirica Hennig, 1961 *

Coenosia sibirica; Sorokina 2012a: 486 (Wrangel Island); Sorokina & Khruleva 2012: 558 (Wrangel Island).

Distribution. PALAEARCTIC: only known from Russian East Siberia and Far East.

Coenosia tangera Sorokina, 2009 *

Material examined. Chaunsky district: 1 km N Pevek, 69°42′N 170°21′E, 27.VI.2011, 3♀, 11.VII.2011, 1♀, leg. O. Khruleva; 7 km S Pevek, 69°38′N 170°15′E, 13. VII.2011, 1♀, leg. O. Khruleva; lower part of Apapel′gin River, 69°48′N 170°39′E, 22, 24.VII.2011, 2♀, leg. O. Khruleva; environs of Pevek, 69°42′N 170°20′E, 3, 4. VII.2019, 3♀, leg. O. Khruleva; environs of Pevek, 69°43′N 170°22′E, 3.VII.2019, 1♀, leg. O. Khruleva (all in SZMN).

Distribution. PALAEARCTIC: Russia (Siberia and Far East).

Coenosia tendipes Huckett, 1965

Coenosia tendipes; Sorokina & Khruleva 2012: 558 (Wrangel Island).

Distribution. PALAEARCTIC: Russia (Taymyr Peninsula, Wrangel Island). NEARCTIC: Canada (Yukon, Nunavut, Quebec, Labrador), USA (Alaska).

Coenosia verralli Collin, 1953

Coenosia verralli; Sorokina 2017: 55 (Egvekinot).

Material examined. Anadyr′ district: Anadyr′, airport [64°44′N 177°31′E], 31.VII.1963, 1♂, leg. K. Gorodkov (ZISP); low part of Anadyr′ River [90 km W Anadyr′, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 29, 31. VII.2013, 2♀, leg. O. Khruleva (SZMN). **Chaunsky district**: 1 km N Pevek, 69°42′N 170°21′E, 7.VII.2011, 4♀, leg. O. Khruleva (SZMN); lower part of Apapel′gin River, 69°48′N 170°39′E, 5.VII.2011, 1♂ 4♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°42′N 170° 20′E, 4.VII.2019, 1♀, leg. O. Khruleva (SZMN); environs of Pevek, 69°43′N 170°22′E, 170–236 m, 3.VII.2019, 8♀, leg. O. Khruleva (SZMN). **Iultinsky district**: 5 km N Egvekinot [66°19′N 179°07′W], meadow, 26–27. VII.1963, 7♂ 3♀, leg. K. Gorodkov (ZISP).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to China and the Russian Far East.

Coenosia wrangelensis Sorokina, 2012

Coenosia wrangelensis; Sorokina 2012a: 487 (Wrangel Island); Sorokina & Khruleva 2012: 558 (Wrangel Island).

Material examined. Wrangel Island: south of the island, Somnitel′naya Bay [70°54′N 179°29′W], 5. VII.1966, 2♀, leg. K. Gorodkov; 4 km N Somnitel′ naya Bay [70°58′N 179°29′W], on flowers of *Potentilla emarginata*, 28.VII.1972, 3♀, leg. K. Gorodkov; N Perkatkun village, middle part of Mamontovaya River [71°00′N 179°56′E], willow thickets in the valley, 17.VII.1972, 1♂, leg. K. Gorodkov (all in ZISP).

Distribution. PALAEARCTIC: Russia (Wrangel Island).

Lispocephala Pokorny, 1893
Lispocephala erythrocera (Robineau-Desvoidy, 1830)

Lispocephala erythrocera; Sorokina 2017: 54 (Markovo).

Material examined. Anadyr′ district: low part of Anadyr′ River [90 km W Anadyr′ city, Amochi Mt., Omochi stream], 64°50′N 175°57′E, 26.VII–9.VIII.2013, 11♂ 13♀, leg. O. Khruleva; valley of Anadyr′ River [130 km W Anadyr′, Medvezh′ya Mt.], 64°43′N 175°12′E, 25.VI–19.VII.2014, 1♀, leg. A. Barkalov. **Chaunsky district**: 18 km S Pevek, Val′kumei village, 69°36′N 170°15′E, 29.VII.2011, 1♀, leg. O. Khruleva (all in SZMN).

Distribution. HOLARCTIC. In the Palaearctic, from Europe east to Japan.

Schoenomyza Haliday, 1833
Schoenomyza chrysostoma Loew, 1869

Schoenomyza chrysostoma; Sorokina 2017: 54 (Markovo).

Distribution. HOLARCTIC. In the Palaearctic, known only from the Russian Far East (Chukotka).

Schoenomyza litorella (Fallén, 1823)

Schoenomyza litorella; Sorokina 2012a: 332 (Beringovskii); Sorokina 2017: 54 (Anadyr′ River).

Material examined. Anadyr′ district: Meynypil′gyno village, 62°56′N 177°033′E, 16.VII.2014, 1♂, leg. P. Tomkovich. **Chaunsky district**: 7 km S Pevek, the dam, 69°38′N 170°15′E, 13.VII.2011, 2♀, leg. O. Khruleva; lower part of Apapel′gin River, 69°48′N 170°39′E, 5, 22.VII.2011, 2♀, leg. O. Khruleva (all in SZMN).

Distribution. HOLARCTIC, AFROTROPICAL (Ethiopia, Kenya, South Africa) and ORIENTAL (Nepal, Pakistan) REGIONS. In the Palaearctic, from Europe east to the Russian Far East and the Korean Peninsula.

Discussion

At present Chukotka appears to be the most species-rich region in the entire north-east of Russia. A total of 153 species of Muscidae belonging to 22 genera have been found in Chukotka, while in the recently studied Magadan region 108 species belonging to 25 genera have been recorded (Sorokina et al. 2018; Tridrikh & Sorokina 2020). As a result of this work, the fauna of Russia as a whole has been enriched by 13 species of muscids: *Drymeia cantabrigensis* Huckett 1965, *Phaonia tenebriona* Huckett, 1965, *Mydaea otiosa* Stein, 1920, *Spilogona arcticola* Huckett, 1965, *S. hurdiana* Huckett, 1965, *S. incauta* (Huckett, 1932), *S. murina* Huckett, 1965, *S. nigerrima* Huckett, 1965, *S. padlei* Huckett, 1965, *S. pulvicrura* (Huckett, 1932), *S. turbidipennis* Huckett, 1965, *Coenosia atritibia* Ringdahl, 1926, and *C. morrisoni* (Malloch, 1924). All these species, except *Coenosia atritibia*, are new for the Palaearctic region.

The present list of species is certainly not the final result and it can be expected that the number of species will be significantly increased, especially in the species-rich genus *Spilogona* which is the dominant group among muscids in arctic and subarctic regions. Already the proportion of *Spilogona* in the muscid fauna of Chukotka is 40% of the total number of species so far known to occur there. Moreover, 14 of the 24 species (58%) that are here recorded for the first time in Chukotka for the Palaearctic region belong to the genus *Spilogona*. Taking into

account the arctic distribution of *Spilogona* species, we can expect that more species of this genus will be found in Chukotka that are currently known only from Alaska and Northern Canada. Of the 116 species of *Spilogona* known from the Nearctic region (Huckett 1965), 70 were thought to be only Nearctic, but now a further 27 have been found in the North-Eastern Palaearctic.

In addition to *Spilogona*, a rather high level of species richness in Chukotka was also found in the genera *Coenosia* (11%), *Phaonia* (8.6%), *Helina* (7%) and *Drymeia* (6.6%).

The ratio of these genera has changed when compared with the more southern Magadan region where the dominant genera were *Spilogona* (20%), *Coenosia* (12%), *Helina* (11%), *Phaonia* (8%), *Mydaea* (8%), *Hydrotaea* (8%) (Sorokina et al. 2018; Tridrikh & Sorokina 2020). Both in Chukotka and the Magadan region, *Spilogona* was the dominant group of muscids but the number of species tripled in the more northern Chukotka (from 22 to 61 species), and nine species were found only on Wrangel Island (*Spilogona almqvistii* (Holmgren, 1880), *S. arcticola* Huckett, 1965, *S. arenosa* (Ringdahl, 1918), *S. khrulevae* Sorokina, 2012, *S. micans* (Ringdahl, 1918), *S. monacantha* (Collin, 1930), *S. nigerrima* Huckett, 1965, *S. triangulifera* (Zetterstedt, 1838), and *S. wrangeli* Hennig, 1959). The genus *Drymeia* has become a notable element in the muscid fauna of Chukotka (10 species), a figure that has increased fivefold compared to the Magadan region (two species). Flies of this genus have a predominantly mountainous or arctic-montane distribution and so they occur as abundantly as *Spilogona* in the northern regions (Sorokina & Pont 2015). The number of *Coenosia* species increased slightly (from 13 to 17), but this difference is insignificant when compared with additional data from the Magadan region. On the other hand, the number of *Phaonia, Helina, Mydaea* and *Hydrotaea* species in the Chukotka fauna has noticeably decreased, which could be due to the reduced number of forest communities where representatives of these genera are mostly to be found.

In general, the study of the North-East of Russia is very important because the data obtained enlarge our knowledge of the distribution of species previously known only from the Nearctic. In total the data obtained in this and recent papers on this territory have made it possible to expand the known distribution from Nearctic to Palaearctic for 32 species. In addition, these data have enlarged our knowledge of the distribution of species previously known only from Europe or Siberia, and have made it possible to expand the known distribution as far as the Far East for 27 species. In addition to these data on species distribution, research in the North-East of Russia has helped to resolve some taxonomic issues and has also led to the discovery of species new for science (Sorokina 2012a, 2019; Sorokina & Pont 2015). Our collection contains further unnamed specimens from this region which will be studied and discussed in future works.

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