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**REVIEW OF THE DROSOPHILID FLIES (DIPTERA: DROSOPHILIDAE)
OF KAMCHATKA**

N. G. Gornostaev*¹⁾, A. M. Kulikov¹⁾, S. Yu. Sorokina¹⁾, V. I. Tyukmaeva²⁾

1) *N.K. Koltzov Institute of Developmental Biology, Russian Academy of Sciences, Vavilov Str. 26, Moscow 119991, Russia. *Corresponding author, E-mail: n_gornostaev@mail.ru*

2) *Department of Biological & Environmental Science, University of Jyväskylä Ambiotica, YAC424.1 Survantie 9, P.O.Box-35 Jyväskylä, FI-40014, Finland.*

Summary. An annotated list of 16 species in four genera of the drosophilid flies of the Kamchatka Peninsula is given. Among them six species are recorded from Kamchatka for the first time.

Key words: Diptera, Drosophilidae, fauna, new records, Kamchatka Peninsula, Russia.

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Резюме. Приведен аннотированный список 16 видов из 4 родов мух-дрозофилид полуострова Камчатка, из которых 6 видов впервые отмечаются для этого региона.

INTRODUCTION

The first regional list of the drosophilid flies (Diptera: Drosophilidae) of Kamchatka includes ten species in four genera collected by Dr N. Gornostaev in Maiskoe (56°15'N, 160°3'E) and by Dr N. Krivosheina in Kozyrevsk (56°3'N, 159°51'E) (Gornostaev, 1997). Here we present new additions to this list after examination of the materials collected by Dr V. Tyukmaeva and Dr S. Sorokina in the central part and by Dr A. Kulikov in the north and south parts of Kamchatka Peninsula.

MATERIAL AND METHODS

The most of drosophilid specimens were collected in vicinity of the “Raduga” Biological Station of the National Scientific Center of Marine Biology, Far Eastern Branch of the Russian Academy of Sciences. The daily temperatures in July 2013 fluctuated between +8 and +18°C. The baits were made from standard 0.5L plastic bottles with a hole cut in one side and contained mixture of pre-boiled semolina infused with brewed liquid mixture of yeast and raisin. The baits were placed along the river at several localities surrounded by deciduous trees, such as birch and willow. The baits were checked several times per day and were replaced in a case of damage. Other drosophilid specimens were collected in vicinity of Palana and Paratunka by the similar baits. All collected specimens were stored in 70% ethanol.

New records for Kamchatka are asterisked (*). Abbreviations of collectors are as follow: AK – A. Kulikov, VT – V. Tyukmaeva, SS – S. Sorokina. The flies were determined by the first author.

LIST OF THE SPECIES

Family Drosophilidae

Subfamily Steganinae

Stegana (Steganina) coleoprata (Scopoli, 1763)

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Kozyrevsk) by Gornostaev (1997).

Stegana (Steganina) hypoleuca Meigen, 1830

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Kozyrevsk) by Gornostaev (1997).

Subfamily Drosophilinae

Chymomyza costata (Zetterstedt, 1838)

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 2 ♂, 7 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 1 ♂, 2 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 1 ♂, 3 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

Chymomyza fuscimana (Zetterstedt, 1838)

MATERIAL. Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 2 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 1 ♂, 1 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic region (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

Drosophila (Drosophila) ezoana Takada et Okada, 1957

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 4 ♂, 2 ♀ (VT & SS); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 4 ♂, 6 ♀ (AK).

DISTRIBUTION. North Europe, Japan (Bächli & Rocha Pité, 1984), Russian Far East (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

****Drosophila (Drosophila) funebris* (Fabricius, 1787)**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 5 ♂, 9 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 3 ♂, 2 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 6 ♀ (AK).

DISTRIBUTION. Cosmopolitan (Bächli & Rocha Pité, 1984); widespread in Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. Here this species is recorded from Kamchatka for the first time.

***Drosophila (Drosophila) montana* Patterson et Wheeler, 1942**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 2 ♂, 3 ♀ (VT & SS).

DISTRIBUTION. North Europe (Bächli & Rocha Pité, 1984) and north part of Russia including Far East (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

****Drosophila (Drosophila) nigromaculata* Kikkawa et Peng, 1938**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 4 ♂, 4 ♀ (VT & SS).

DISTRIBUTION. Japan, China, Korea, Russia (Primorskii krai, Sakhalin and Kuril Islands) (Sidorenko, 2009).

NOTES. This new record from Kamchatka is the northernmost locality in the world.

***Drosophila (Drosophila) subarctica* Hackman, 1969**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 10 ♂, 16 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 1 ♂, 2 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 2 ♀ (AK).

DISTRIBUTION. North Europe (Bächli & Rocha Pité, 1984) and North Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe, Kozyrevsk) by Gornostaev (1997).

***Drosophila (Drosophila) testacea* von Roser, 1840**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 1 ♂, 7 ♀ (VT & SS); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 4 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic region (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

***Drosophila (Drosophila) transversa* Fallén, 1823**

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 14 ♂, 16 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 1 ♂, 2 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 5 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Maiskoe) by Gornostaev (1997).

****Scaptomyza (Hemiscapromyza) unipunctum (Zetterstedt, 1847)***

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 1 ♂, 2 ♀ (VT & SS).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. Here this species is recorded from Kamchatka for the first time.

****Scaptomyza (Parascapromyza) pallida (Zetterstedt, 1847)***

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 14 ♂, 18 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 1 ♂, 1 ♀ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 3 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. Here this species is recorded from Kamchatka for the first time.

Scaptomyza (Scaptomyza) consimilis Hackman, 1955

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. This species was recorded from Kamchatka (Klyuchevskoe) by Gornostaev (1997).

****Scaptomyza (Scaptomyza) flava (Fallén, 1823)***

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 1 ♂, 3 ♀ (VT & SS).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. Here this species is recorded from Kamchatka for the first time.

****Scaptomyza (Scaptomyza) graminum (Fallén, 1823)***

MATERIAL. **Russia:** Kamchatka, Raduga, 56°12'N, 161°59'E, 10–31.VII 2013, 2 ♂, 4 ♀ (VT & SS); Palana, 59°5'N, 159°57'E, 1–7.VIII 1989, 2 ♂ (AK); Paratunka, 52°57'N, 158°15'E, 8–15.VIII 1989, 2 ♂, 4 ♀ (AK).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001).

NOTES. Here this species is recorded from Kamchatka for the first time.

CONCLUSION

Now 16 species in four genera of Drosophilidae are known from Kamchatka Peninsula, six of which are recorded here from this region for the first time. Among them a new record

of *Drosophila nigromaculata* is very amazing for us because earlier this species was known from the south part of the Russian Far East and adjacent countries only. On contrary, *Scaptomyza* species firstly recorded from Kamchatka (*S. unipunctum*, *S. pallida*, *S. flava* and *S. graminum*) are widespread in the boreal zone of Palearctic region (Nartshuk, 2014) and *Drosophila funebris* is a cosmopolitan synanthropic species.

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Address: Federal Scientific Center of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Far East Branch of the Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

E-mail: storozhenko@biosoil.ru

web-site: <http://www.biosoil.ru/fee>