A review of the family Dryomyzidae (Diptera) of Russia

Обзор двукрылых семейства Dryomyzidae (Diptera) фауны России

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KEYWORDS: Diptera, Dryomyzidae, Russia, fauna, new records.

ABSTRACT. Flies of the family Dryomyzidae of Russia, which includes 10 species from five genera, are reviewed. Generic and species diagnosis and key for determination of genera and species are given, and data on distributions are summarized.

Dryomyza badia Kurahashi, 1981 is excluded from the list of species registered on the territory of Russia.

Introduction

The Dryomyzidae is a small family of acalyptate flies. It is restricted to the Holarctic and Oriental Regions and comprises about 23 known species in six genera: Dryomyza Fallén, 1820, Dryope Robineau-Desvoidy, 1830, Oedoparena Curran, 1934, Paradryomyza Ozerov, 1987, Pseudoneuroctena Ozerov, 1987, and Steyskalomyza Kurahashi, 1982 (Mathis, Sueyoshi, 2011; Ozerov, 2017).

The fauna of Russia includes 10 species from five genera: Dryomyza (4 species), Dryope (2 species), Paradryomyza (2 species), Pseudoneuroctena (1 species), and Oedoparena (1 species) [Ozerov, 1987, 1999; Ozerov, Krivosheina, 2021].

During the preparation of this article the material from the collections of the Zoological Institute, St.-Petersburg (ZISP) and Zoological Museum, Moscow Lomonosov State University (ZMUM) was redetermined. It was discovered that the male specimen from Sakhalin Island, previously determined as Neuroctena badia (Kurahashi, 1981) [Ozerov, 1987: 40] is conspecific with Dryomyza anilis (Fallén, 1820). Thus we exclude Dryomyza badia Kurahashi, 1981 from the list of species registered on the territory of Russia.

Adult Dryomyzidae are common in wooded areas and are collected mainly in humide habitats on different decaying substrates such as carrion, human excrements, fungi, algae, dung, and exuded tree sap. Dryomyzidae larvae are mainly saprophagous and females usually lay eggs on the rotting food source [Ferrar, 1987; Ozerov, 1999; Iwasa, 2002; Mathis, Sueyoshi, 2011].

The terminology used in the generic and species descriptions follows McAlpine [1981], Cumming & Wood [2009], and Stuckenberg [1999].

Taxonomic part

Family Dryomyzidae

Dryomyzinae Schiner, 1862: 148 [as the subfamily Dryomyzinae, family Muscidae]. Type genus: Dryomyza Fallén, 1820.

Medium-sized to large flies (Fig. 1), body 4–18 mm in length, strong bristled to quite hairy, and yellow to brown or dark grey in colour.

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**Fig. 1. Dryomyza anilis** Fallén, ♀.

**Pnc. 1. Dryomyza anilis** Fallén, ♀.

*Head* slightly higher than long (Figs 2, 3); eyes roundish or oval, moderately large, separated by broad frontal vitta in both sexes. Gena high (ca. 1/2–2/3 eye height to equal height of eye). Face uniformly sclerotized, without fascial carina developed, shallowly convex in profile. Antenna of moderate size, oriented ventrally; scape and pedicel small; postpedicel circular to elongated oval, with bare to plumose arista (Figs 2–5). Clypeus conspicuous, sometimes protruding (Figs 2, 3). Palpus and proboscis well-developed, but neither very large nor long. Chaetotaxy: 1 inner and 0–1 outer vertical, 1–3 laterocline fronto-orbital, 1 ocellar, and 1 postocellar setae present, the latter parallel or slightly divergent; no vibrissae.

*Thorax* somewhat longer than wide. Scutum moderately convex, with postpronotal lobes distinct. Chaetotaxy: 1 proepisternal (usually long), 0 proepimeral, usually several dorsal katepisternal (in *Oedoparena* Curran katepisternum with long fine hairs only), 0 anepisternal, 0–1 postpronotal, 1–2 notopleural, 1+1 supra-alar, 1–7 dorsocentral, 2 postalar setae present; acrostichal setae either absent or with a prescutellar pair; scutellum with 2–3 pairs of scutellar setae (Figs 8, 9). Lower margin of posterior spiracle without setae. Postmetacoxal bridge absent.

*Legs* slender to rather robust, not differ in both sexes; all tibiae with preapical dorsal seta; in *Paradryomyza* hind femur bearing two rows of spinules apically on ventral surface (Figs 10, 11).

*Wing* extending beyond apex of abdomen, hyaline to lightly infuscate or tawny; crossveins sometimes clouded (Fig. 6). Costal vein unbroken; subcostal vein complete; vein R, bare dorsally or setose along all length or at least on basal half; vein A1+CuA2 evident to wing margin; crossvein bm-cu always present and distinctly apical of vein CuA2.

*Abdomen* ovoid, usually quite densely hairy, especially in male. Abdominal spiracles 2 to 5 located in tergites or membrane (*Oedoparena minor* Suwa, 1981). Female abdominal tergites 6 and 7 of *Paradryomyza* spinulose (Fig. 12). Male genitalia: surstylus simple; epandrium with a pair of usually long projections (ventromedial processes) (Figs 13–33); distiphallus of aedeagus angular, dorsal or ventral surface usually conspicuously setulose (Figs 34–43). Female with 3 small spermathecae.

**KEY TO GENERA OF DRYOMYZIDAE**

1. Proepisternum, except seta near lower margin, densely setose, setae fine. Head with outer vertical setae absent or reduced. Scutum with 5–7 dorsocentral setae, presutural dorsocentral setae present; postpronotal setae lacking. Dark grey in ground color of body .........................

   1. *Oedoparena* Curran

   — Proepisternum with one seta near lower margin only. Head with outer vertical setae present, well developed. Scutum with 2–3 dorsocentral setae, presutural dorsocentral setae absent; 1 strong postpronotal seta present. Yellow to brown in ground color of body ......................... 2
Figs 2–5. Dryomyza caucasica (Ozerov) (2), Oedoparena minor (3), Dryomyza formosa (Wiedemann) (4), Paradryomyza setosa (Bigot) (5): 2, 3 — head, lateral view; 4, 5 — postpedicel and arista, lateral view. 5 — after Ozerov, 2017, fig. 3.

2. Scutum with prescutellar acrostical setae absent. Hind femur bearing two rows of spinules apically on ventral surface (Figs 10, 11). Female abdominal tergites 6 and 7 spinulose (Fig. 12) ................... Paradryomyza Ozerov

— Scutum with prescutellar acrostical setae present. Hind femur and female abdominal tergites 6 and 7 lacking spinules .................................................. 3

3. Vein R1 setose dorsally completely (Fig. 6) .................... Dryomyza Fallén

— At least basal half or all of vein R1 without distinct row of setae .......................................................... 4

4. Postcranium covered with light hairs and black setulae. 2 pairs of dorsocentral setae present ........................................ Pseudoneuroctena Ozerov

— Postcranium without light hairs, covered with black setulae only. 3 pairs of dorsocentral setae present ......................................................... Stenodryomyza Hendel, 1924 (as subgenus of Neuroctena). Gender: feminine. Type species: Scatophaga formosa Wiedemann, by original designation.

DIAGNOSIS. Head with a pair of well developed outer vertical setae. Arista bare on apical part and short haired or plumose in basal 1/4 or 1/2 (Figs 2, 4). Scutum with 2 pairs of dorsocentral setae; acrostical setae present. Vein R1 setose on dorsal surface on whole length. Scutellum with two pairs of setae (Fig. 8). Surstylus and ventromedial process rod-shaped (Figs 13–16, 23–26).

Four species of this genus are recorded in Russia [Stackelberg, 1958, 1970; Petrova, 1968; Ozerov, 1987, 1999].

KEY TO THE SPECIES OF THE GENUS Dryomyza

1. Crossveins r-m and dm-cu with dark rims (Fig. 6)...... 2

— Wing hyaline and slightly tinged with pale brown, lacking dark markings ...................................................... 3

2. Postcranium covered with black and yellow setulae. Ane-pisternum bare, shining. Genitalia as in Figs 16, 26, 37; ventromedial process shorter than surstylus (Figs 16, 26) ........................ D. formosa Wiedemann

Genus Dryomyza Fallén, 1820

Dryomyza Fallén, 1820: 15. Gender: feminine. Type species: Dryomyza anilis Fallén, by designation of Zetterstedt, 1846.

Neuroctena Rondani, 1868: 56. Gender: feminine. Type species: Dryomyza anilis Fallén, by monotypy.
Figs 6–7. Wing of *Dryomyza anilis* Fallén (6) and *Oedoparena minor* Suwa (7). 7 — after Ozerov & Krivosheina, 2021, fig. 8.

**Material Examined.** Altai: Lake Teletskeoe, (51.796°N, 87.274°E), 21–22.VII.1970, V. Sychevskaya (1 ♀, 4 ♀♂, ZMUM); Ust-Sema env., (51.6°N 85.8°E), 21–26.VI.2016, N. Vikhrev (1 ♀, ZMUM); Amur Oblast: 5–6 km above of Ekinchan (53.085°N 132.974°E), 31.VIII.2006, A.B. Ryvkin (2 ♂♂, 1 ♀, ZMUM); Zeya Town (53.748°N 127.261°E), 10–19.VI and 19.VII.1978, A. Shatalkin (2 ♂♂, 5 ♀♀, ZMUM); Zeysky Nature Reserve, cordon “34 km” (53.989°N 127.073°E) and cordon “52 km” (54.087°N 126.871°E), 20, 24 and 29.VI., 8 and 24.VII., 1, 6 and 19.VIII, 2006, A. Ozerov, O. Gorbunov (6 ♂♂, 8 ♀♀, ZMUM); Arkhangelsk Oblast: Arkhangelsk (64.547°N 40.600°E), 4.VIII.2011, D. Gavryushin (1 ♂, ZMUM); Naz’yan-Mar (67.631°N, 52.985°E), 7 and 8.VII.2008, A.L. Ozerov (1 ♂, 2 ♂♂, ZMUM); Solvychegovsk (61.342°N 46.913°E), 12–13.VIII.2010, D. Gavryushin (4 ♂♂, ZMUM); Buryatia: Kyren (51.7°N 102.1°E), 16–19.VII.2021, N. Vikhrev (1 ♀, ZMUM); Chelyabinsk Oblast: Taganay (55.277°N 59.795°E), 18–24.VII.2008, K. Tomkovich (2 ♂♂, ZMUM); Jewish Autonomous Oblast: Malyy Khingan ridge, River Dichun (48.545°N 130.760°E), 2 and 9.VIII.1980, A. Ozerov (1 ♂, 1 ♀, ZMUM); Pakshiko (48.889°N 130.651°E), 23.VI.1980, A. Ozerov (2 ♂♂, ZMUM); Kaluga Oblast: Tarusa (54.725°N 37.176°E), 10.IX.1981, L. Zimina (1 ♀, ZMUM); Kamchatka Krai: Khabarovsk env. (48.545°N 130.760°E), 2 and 9.VIII.1980, A. Ozerov (1 ♂, 1 ♀, ZMUM); Pashkovo (48.889°N 130.651°E), 23.VI.1980, A. Ozerov (2 ♂♂, ZMUM); Khabarovsk Krai: Khabarovsk env. (48.6°N 135.1°E), 2–6 and 13.VI.2014, N. Vikhrev (2 ♂♂, ZMUM); River Bureika (52.2°N
Figs 8–12. Dryomyza anilis Fallén (8), Oedoparena minor Suwa (9), Paradryomyza spinigera Ozerov (10) and Paradryomyza setosa (Bigot) (11, 12): 8, 9 — scutellum, dorsally; 10, 11 — apical part of hind femur, posteroventrally; 12 — end of female abdomen.

Fig. 8–12. Dryomyza anilis Fallén (8), Oedoparena minor Suwa (9), Paradryomyza spinigera Ozerov (10) and Paradryomyza setosa (Bigot) (11, 12): 8, 9 — щиток, сверху; 10, 11 — апикальная часть заднего бедра, постеровентрально; 12 — конец брюшка самки.
Dryomyza caucasica (Ozerov, 1987)

Figs 2, 14, 24, 35.
Figs 13–18. Genitalia of Dryomyzidae, lateral view: 13 — Dryomyza anilis Fallén; 14 — Dryomyza caucasica (Ozerov); 15 — Dryomyza ecalcarata Kurahashi; 16 — Dryomyza formosa (Wiedemann); 17 — Dryope decrepita (Zetterstedt); 18 — Dryope flaveola (Fabricius).

Рис. 13–18. Гениталии Dryomyzidae, сбоку: 13 — Dryomyza anilis Fallén; 14 — Dryomyza caucasica (Ozerov); 15 — Dryomyza ecalcarata Kurahashi; 16 — Dryomyza formosa (Wiedemann); 17 — Dryope decrepita (Zetterstedt); 18 — Dryope flaveola (Fabricius).
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Figs 19–22. Genitalia of Dryomyzidae, lateral view: 19 — Oedoparena minor Suwa; 20 — Paradryomyza setosa (Bigot); 21 — Paradryomyza spinigera Ozerov; 22 — Pseudoneuroctena senilis (Zetterstedt). 19 — after Ozerov & Krivosheina, 2021, fig. 7.

Рис. 19–22. Гениталии Dryomyzidae, сбоку: 19 — Oedoparena minor Suwa; 20 — Paradryomyza setosa (Bigot); 21 — Paradryomyza spinigera Ozerov; 22 — Pseudoneuroctena senilis (Zetterstedt). 19 — по Ozerov & Krivosheina, 2021, fig. 7.

ish. Genitalia as in Figs 14, 24, 35; ventromedial process shorter than surstylus.

DISTRIBUTION. Foothills and hills of Caucasus.

BIOLOGY. Adults of Dryomyza caucasica are common on human excrements. Larvae develop in this substrate.

Dryomyza caucasica Kurahashi, 1981

Figs 15, 25, 36.

eccalcarata Kurahashi, 1981: 442 (Dryomyza). Type-locality: Gokayama (Honshu Island, Japan).

MATERIAL EXAMINED. Sakhalin Oblast: Kuril Islands, Kunashir I., Reserve Kurilskiy, caldera of the Golovnin volcano (43.841°N 145.509°E), 3–5.VII.2014, A. Gomyranov (2 ♂♂, ZMUM); Kuril Islands, Shikotan I., Tserkovnaya Bay (43.75°N 146.70°E), 27–31.VIII. 2012, Yu. Sundukov (1 ♂, 7 ♀♀, ZMUM); Kuril Islands, Kunashir I., Tretyakovo (43.991°N 145.655°E), 13–22.IX.2009, I. Melnik (1 ♂, 7 ♀♀, ZMUM); Kuril Islands, Kunashir I., Tretyakovo (43.991°N 145.655°E), 12–24.VII.2008, I. Melnik (2 ♀ ♀, ZMUM); Kuril Islands, Shikotan I., Malokuril’sk (43.869°N 146.829°E), 24.IX.1968, Gorodkov (7 ♂♂, 6 ♀♀, ZISP and ZMUM).

ADDITIONAL MATERIAL EXAMINED. Japan: Honshu, Mt. Iozen, Kaga Ishikawa, 14 and 16.V.1969, coll. H. Kurahashi (1 paratype ♂, 1 paratype ♀, ZMUM); Honshu, Mt. Tateyama, 1500 m, 16.XI.1986, coll. H. Kurahashi (6 ♂♂, 3 ♀♀, ZMUM).

DIAGNOSTIC DESCRIPTION. Body-length 6.8–8.9 mm. Body yellow or reddish-yellow. Scutum usually with brown stripes along acrostichal rows and less distinct stripes distally from dorsocentral rows. Aepisternum microtomentose in posterior half and shining anteriorly, covered with rare black setulae. Antenna from reddish-yellow to almost blackish. Arista bare on apical part and short haired on basal 1/4. Palps yellow. Legs yellow, all tarsi usually blackish. Wings conspicuously brownish tinged; crossveins r-m and dm-cu without dark rims. Abdominal tergites usually mostly blackish. Genitalia as in Figs 15, 25, 36; ventromedial process shorter than surstylus.

DISTRIBUTION. Russia: Sakhalin Oblast; Japan.

Dryomyza formosa (Wiedemann, 1830)

Figs 4, 16, 26, 37.

formosa Wiedemann, 1830: 447 (Scatophaga). Type-locality: Japan.
gigas Snellen von Vollenhoven, 1863: 18 (Dryomyza). Type-locality: Japan.

MATERIAL EXAMINED. Khabarovsk Krai: Khabarovsk (48.426°N 135.118°E), 4.VII.1931, V. Pereleshina (1 ♀, ZUM); Primorsky Krai: 40 km S of Lissary (≈ Kamenshikha) (43.634°N 132.222°E), 27.VII., 1, 10 and 26.VIII. 1983, 8.IX.1984, 4.VIII.1987, A. Ozerov (8 ♂♂, 4 ♀♀, ZUM); same place, 1.I.1990, A. Antropov (1 ♂, ZUM); same place, 23.VII.1983, A. Shatalkin (1 ♂, ZUM); same place, 22–24.VI.2014, N. Vikhrev (1 ♂, ZUM); Anisimovka (43.13°N 132.80°E), 21–24.VI.2018, N. Vikhrev (1 ♂, ZUM); Iman [= Dal’nerechinsk] (45.930°N 133.734°E), 1947, Grochovskaya (1 ♀, ZUM); Fedrovaia Pad’ Nature Reserve (43.104°N 131.512°E), 1.IX.1987, D. Shecherbakov (1 ♀, ZUM); Sikkote-Altin Nature Reserve, 11–20.VI.1929, N. Filipov (3 ♂♂, ZUM); same place, 22.VIII.1978, D. Shecherbakov (2 ♂♂, ZUM); Sudzahkinsky [= Lazovsky] Nature Reserve, Tachigun (43.023°N 134.136°E), 18–25.IX., 1–9.V.1948, Gussakovskiy (10 ♂♂, 7 ♀♀, ZUM); Sakhalin Oblast: Kunashir I., Tret’yakovo (43.989°N 145.644°E), 12.VII.2014, T.V. Galinskaya (1 ♀, ZUM); Kuril Islands: Kunashir I., cordon Filatovsky (44.193°N 134.194°E), 31.VIII.–2.IX.2009, I. Melnik (1 ♂, ZUM);

DIAGNOSTIC DESCRIPTION. Body-length 11.8–20.0 mm. Body reddish-yellow in ground colour. Antenna from yellow to reddish-yellow. Arista bare on apical part and plumose in basal 1/2 (Fig. 2). Palpus yellow or reddish-yellow. Scutum with brown stripe between acrostical rows and less distinct stripes distally from dorsocentral rows. Fore leg reddish-yellow, tarsus usually brownish. Hind and hind legs bicolored: coxae, trochanters, femora in basal half, apex of tibiae and usually tarsi brownish, the rest parts yellow. Wings conspicuously brownish tinged; with dark brown or blackish spot around crossveins r-m and dm-cu and in cell sc, also with dark rims near apex of veins R1+3, R1, and M. Abdomen from yellow to black. Genitalia as in Figs 16, 26, 37; ventromedial process shorter than surstylus. Distribution. South of Russian Far East; China, Japan, Korea, Vietnam [Mathis & Sueyoshi, 2011].

Biology. Adults of Dryomyza formosa were common in August-September on human excrements; larvae developed in this substrate [Petrova, 1968]. Besides larvae were found in decaying corpse of large vertebrate animal [Ozerov, 1987].

Genus Dryopec Robineau-Desvoidy, 1830

Dryopec Robineau-Desvoidy, 1830: 618. Gender: feminine. Type species: Dryopec communis Robineau-Desvoidy [= Masca flavocele Fabricius, 1794], by designation of Coquillett, 1910.

DIAGNOSIS. Head with a pair of well developed outer vertical setae. Scutum with 2 pairs of dorsocentral setae; acrostical setae present. Vein R bare on whole length on dorsal surface. Scutellum with two pairs of setae. Surstylus triangular: strongly broadened at base and tapering to apex, covered with hairs; ventromedial process thin, usually curved (Figs 17, 18, 27, 28).

Two species of this genus are recorded in Russia [Stackelberg, 1958, 1970; Ozerov, 1987, 1999].

KEY TO THE SPECIES OF THE GENUS Dryopec

1. Crossveins r-m and dm-cu with dark rims. Genitalia as in Figs 17, 27, 38 ............... Dryopec decrcepta Zetterstedt

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Wing hyaline or slightly tinged with pale brown, lacking dark markings. Genitalia as in Figs 18, 28, 39 .............. Dryopec flavocele (Fabricius, 1794)

Figs 17, 27, 28.

Dryomyza decrcepta Zetterstedt, 1838: 737. Type-localities: “Lapponia–Scania rar.”

MATERIAL EXAMINED. Amur Oblast: Zeya River Nature Reserve, cordon “52 km” (54.087°N 126.871°E), 25.VII.1979, 13–14.VIII. and 8.IX.1981, A. Ozerov, A. Shatalkin (3 ♂♂, 2 ♀♀, ZUM); Chukotka: River Anadyr (64.833°N 175.950°E), XVII.2013, O.A. Khruleva (2 ♂♂, 2 ♀♀, ZUM); Karelia: Kartesh (66.33°N 33.64°E), 20.VII.1975, Gorodkov (1 ♂, ZISP); Primorsky env. (66.552°N 33.100°E), 4.VII.2010, A. Ozerov (2 ♂♂, ZUM); Komi: Seida (67.064°N 63.086°E), 2–4.VIII.2011, K. Tomkovich (1 ♂, ZUM); Murmansk Oblast: Murmansk env. (68.95°N 33.13°E), 9–13.VIII.2010, N. Vikhrev (1 ♂, ZUM); Monchegorsk (69.37°N 32.89°E), 8–16.VII.2009, M. Kozlov (1 ♂, ZUM); River Kola (68.684°N 33.052°E), 20.VII.2011, A. Ozerov (1 ♂, ZUM); North Ossetia – Alania: Boron env. (42.79°N 43.92°E), 4 and 6.VII.1990, A. Ozerov (2 ♂♂, 4 ♀♀, ZUM); Tyumen’ Oblast: (63.19°N 72.22°E, 63.20°N 72.26°E), 27–28.VII.2010, K. Tomkovich (2 ♂♂, ZUM); River Khulga (65.15°N 62.11°E), 14–16.VII.2018, K. Tomkovich (1 ♂, 1 ♀, ZUM); Salekhard (66.6°N 66.8°E), 16–19.VII.2019, N. Vikhrev (2 ♂♂, ZUM).

REMARK. Previously this species was also recorded in Russia from Bashkirtia, Leningrad Oblast, Moscow Oblast, Kamchatka Krai, and Zabaikalsky Krai [Ozerov, 1987].

DIAGNOSTIC DESCRIPTION. Body-length 5.0–8.0 mm. Body yellow or reddish-yellow; scutum with narrow brown stripes along acrostical rows and less distinct stripes distally from dorsocentral rows behind transverse suture. Wings weakly greyish tinged; crossveins r-m and dm-cu with weakly brownish rims. In male black katepisternal setae along upper margin weak, not different from katepisternal hairs. Genitalia as in Figs 17, 27, 38.

DISTRIBUTION. Throughout Europe and Asia from Great Britain east to Khabarovsky Krai of Russia; North America.

Dryopec flavocele (Fabricius, 1794)

Figs 18, 28, 39.

flavocele Fabricius, 1794: 343 (Masca). Type-locality: Hafnia [= Copenhagen] (Denmark).

vetula Fallén, 1820: 16 (Dryomyza). Type-localities: Be-ck-askog, Esperöd (Sweden).

communis Robineau-Desvoidy, 1830: 619 (Dryopec). Type-locality: not given (France).

molitis Haliday, 1833: 167 (Dryopec). Type-locality: Holywood (Ireland).

zawadskii Schummel, 1834: 740 (Dryomyza). Type-locality: not given.

fuscicornis Meigen, 1838: 343 (Dryopec). Type-locality: “Baiern”.

MATERIAL EXAMINED. Adyghe: Lagonaki (44.107°N 40.020°E), 1450 m, 15–17.VI.2009, K. Tomkovich (1 ♂, ZUM); Amur Oblast: Zeya River Nature Reserve (54.087°N 126.871°E), 12.VIII.1979, A. Shatalkin (1 ♂, ZUM); Crimea: Achen-Sh (44.49°N 34.10°E), 30.IX.2015, N. Vikhrev (1 ♂, ZUM); Chatyr-Dag (44.766°N 34.291°E), 25.V.1963, Gorodkov (1 ♂, 1 ♀, ZISP); Road Alushta–Rybachie (44.7–8°N 34.4–6°E), 18–25.IV.2014, N. Vikhrev (1 ♂, 2 ♀♀, ZUM); Kaliningrad Oblast: Kurshskaya Kosa (55.154°N 20.857°E), without data, V. Kolyda

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Figs 23–28. Genitalia of Dryomyzidae, dorsal view: 23 — Dryomyza anilis Fallén; 24 — Dryomyza caucasica (Ozerov); 25 — Dryomyza ecalcarata Kurahashi; 26 — Dryomyza formosa (Wiedemann); 27 — Dryope decrepita (Zetterstedt); 28 — Dryope flaveola (Fabricius).

Рис. 23–28. Гениталии Dryomyzidae, сверху: 23 — Dryomyza anilis Fallén; 24 — Dryomyza caucasica (Ozerov); 25 — Dryomyza ecalcarata Kurahashi; 26 — Dryomyza formosa (Wiedemann); 27 — Dryope decrepita (Zetterstedt); 28 — Dryope flaveola (Fabricius).
Figs 29–33. Genitalia of Dryomyzidae, dorsal view (29, 30, 32, 33) and posterior view (31): 29 — Oedoparena minor Suwa; 30, 31 — Paradryomyza setosa (Bigot); 32 — Paradryomyza spinigera Ozerov; 33 — Pseudoneuroctena senilis (Zetterstedt). 29 — after Ozerov & Krivosheina, 2021, fig. 6.

Fig. 29–33. Гениталии Dryomyzidae, сверху (29, 30, 32, 33) и сзади (31): 29 — Oedoparena minor Suwa; 30, 31 — Paradryomyza setosa (Bigot); 32 — Paradryomyza spinigera Ozerov; 33 — Pseudoneuroctena senilis (Zetterstedt). 29 — по Ozerov & Krivosheina, 2021, fig. 6.
Genus *Oedoparena* Curran, 1934

*Oedoparena* Curran, 1934: 382. Gender: feminine. Type species: *Oedoparena glauca* Coquillett, by original designation.

**DIAGNOSIS.** Head (Fig. 3) with a pair of outer vertical setae lacking or reduced. Arista bare. Proepisternum, except seta near lower margin, densely setose, setae fine. Scutum with 5–7 pairs of dorsocentral setae, no postpronotals, acrostichals not differentiated from the other long hairs on scutum, and they don’t form rows. Scutellum with three pairs of setae. Wing tinged with brown, lacking dark markings; vein R₁, bare on dorsal surface. Surstylus subrectangular; ventromedial process not exposed in lateral view (Figs 19); distiphallus angulate, ventral surface conspicuously setulose (Fig. 40).

A single species — *Oedoparena minor* Suwa, 1981 is recorded in Russia [Ozerov, Krivosheina, 2021].

*Oedoparena minor* Suwa, 1981

Figs 3, 9, 19, 29, 40.

**minor** Suwa, 1981: 30 (*Oedoparena*). Type locality: Asari Beach, Otaru-shi, Hokkaido, Japan.

**MATERIAL EXAMINED.** Sakhalin Oblast: Kuril Islands, Shikotan island, cape Krai Svet (43.846ºN 146.913ºE), 22.VI.1968, 2 ♀♂, 2 ♂♂, E. Nartshuk (ZISP and ZMUM).

**DIAGNOSTIC DESCRIPTION.** Body-length 3.8–4.1 mm. Body blackish in ground colour, greyish and slightly brownish dusted. Head (Fig. 3) with outer vertical setae absent. Antenna blackish, grey dusted. Postpedicel round in lateral view. Arista bare (Fig. 3). Palpus blackish, grey dusted. Thorax with acrostichals not differentiated from the other long hairs on scutum, and they don’t form rows; dorsocentrales (1–2)+(4–5). Proepisternum covered with setulae and with seta near lower margin. Aneupisternum and katepisternum densely setose. Scutellum (Fig. 9) with three pairs of setae: basal scutellar, lateral scutellar and apical scutellar. Legs blackish, greyish or brownish dusted. Wing (Fig. 7) tinged with brown, lacking dark markings. Abdomen blackish, greyish and brownish dusted, with no strong setae. Surstylus subrectangular; ventromedial process not exposed in lateral view (Fig. 19); distiphallus angulate, ventral surface conspicuously setulose (Fig. 40).

**DISTRIBUTION.** Russia: Sakhalin Oblast; Japan.

**BIOLOGY.** *Oedoparena minor* were reared from puparia found in empty tests of a barnacle [Suwa, 1981].

Genus *Paradryomyza* Ozerov, 1987

**Paradryomyza** Ozerov, 1987: 38. Gender: feminine. Type species: *Odontomera setosa* Bigot, by original designation.

**DIAGNOSIS.** Head with a pair of well developed outer vertical setae. Arista short haired on whole length (Fig. 5). Scutum with 2 pairs of dorsocentral setae; acrostichal setae absent. Scutellum with two pairs of setae. Wing tinged with brownish, lacking dark markings. Vein R₁ setose in apical half dorsally and bare in basal half. Hind femur bearing two rows of spinules apically on ventral surface (Figs 10, 11). Female abdominal tergites 6 and 7 spinulose (Fig. 12). Surstylus triangular: strongly broaded at base and tapering to apex, covered with hairs; ventromedial process thin and curved (Figs 20, 21, 30–32).

Two species of this genus are recorded in Russia [Ozerov, 1987, 1999].

**KEY TO THE SPECIES OF THE GENUS PARADRYOMYZA**

1. Palpus yellow completely. Katepisternum covered with thick black hairs. Hind femur with thin spinules apically on ventral surface (Fig. 11). Female abdominal tergite 7 spinulose, spines thick and stout (Fig. 12). Genitalia as in Figs 20, 30, 31, 41 ................................. *P. setosa* Bigot

— Palpus almost completely dark brown or black. Katepisternum covered with rare light hairs. Hind femur with stout spinules apically on ventral surface (Fig. 10). Female abdominal tergite 7 spinulose, spines rare and thin. Genitalia as in Figs 21, 32, 42. *P. spinigera* Ozerov

**Paradryomyza setosa** (Bigot, 1886)

Figs 5, 11, 12, 20, 30, 31, 41.

**setosa** Bigot, 1886: 386 (*Odontomera*). Type-locality: Washington, USA.

**MATERIAL EXAMINED.** *Altaï*: Kamdyt (49º58.7–59.14ºN 86º33–34.9ºE), 2150–2514 m, 28.VI.–4.VII.2007, O. Kosterin (1 ♀, ZMUM); Seminsky pass (51.06ºN 85.59ºE), 1650 m, 27–30.VI.2016, N. Vikhrev (1 ♂, ZMUM); *Amur Oblast*: Zeya nature Reserve, cordon “52 km” (54.08ºN 126.87ºE), 24.VII.1981 and 28.VIII.1982, A. Ozerov, A. Shatalkin (1 ♀, 1 ♂, ZMUM); *Khabarovsk Krai*: Bureya nature Reserve, cordon “Strelka”, 13.IX.2006, A.B. Ryvkina (1 ♀, ZMUM); *Krasnoyarsk Krai*: Baykit (61.68ºN 96.38ºE), 26.VIII.1972, Gorodkov (1 ♀, ZISP); Buyba Station (52.719ºN 93.400ºE), 31.VII.1963, Grumia (1 ♀, 1 ♂, ZISP); *Magadan Oblast*: River Donyskshi (60.41ºN 151.52ºE), 17.VII.2014, N. Vikhrev (2 ♀♂, 1 ♂, ZMUM).

**DIAGNOSTIC DESCRIPTION.** Body-length 5.4–6.6 mm. Frons yellow. Scapus and pedicel yellow, postpedicel blackish. Palpus yellow completely. Katepisternum covered with thick black hairs. Thorax yellow. Scutum with patern of indistinct brown stripes. Legs yellow, only apexes of all femora usually brownish. Hind femur with thin spinules apically on ventral surface (Fig. 11). Female abdominal tergite 7 spinulose, spines thick and stout (Fig. 12). Genitalia as in Figs 20, 30, 31, 41.

**DISTRIBUTION.** Russia: Siberia and Far East; North America; everywhere is a rather rare species.

**Paradryomyza spinigera** Ozerov, 1987

Figs 10, 21, 32, 42.

**spinigera** Ozerov, 1987: 39 (*Paradryomyza*). Type-locality: Zeya Town (Amur Oblast, Russia).

**MATERIAL EXAMINED.** *Amur Oblast*: Zeyesky nature Reserve, cordon “52 km” (54.08ºN 126.87ºE) and cordon “34 km” (53.989ºN 127.073ºE), 29.VII.1979, 1, 4, 12 and 27.VIII.1979, 7–10, 21, 26 and 29.VII.1981, 18.VIII.1981, 7, 11 and 14.IX.1981, 16.VI.1982, 10.VII.1982, M. Krivosheina, A. Ozerov, A. Shatalkin (holotype ♀, 12 paratypes ♀♂, 15 paratypes ♀♂, ZMUM); same place, 24 and 27.VI., 3.VII. and 27.VIII.1978, A. Shatalkin (2 ♀♂, 2 ♀♂, 1 ♂, ZISP); Seminsky pass (51.06ºN 85.59ºE), 1650 m, 27–30.VI.2016, N. Vikhrev (1 ♀, ZMUM); *Altai*: Kamdyt (49º58.7–59.14ºN 86º33–34.9ºE), 2150–2514 m, 28.VI.–4.VII.2007, O. Kosterin (1 ♀, ZMUM); *Bureya Nature Reserve*: cordon “Strelka”, 13.IX.2006, A.B. Ryvkina (1 ♀, ZMUM); *Krasnoyarsk Krai*: Baykit (61.68ºN 96.38ºE), 26.VIII.1972, Gorodkov (1 ♀, ZISP); Buyba Station (52.719ºN 93.400ºE), 31.VII.1963, Grumia (1 ♀, 1 ♂, ZISP); *Magadan Oblast*: River Donyskshi (60.41ºN 151.52ºE), 17.VII.2014, N. Vikhrev (2 ♀♂, 1 ♂, ZMUM).
Figs 34–43. Aedeagus of Dryomyzidae, lateral view: 34 — Dryomyza anilis Fallén; 35 — Dryomyza caucasica (Ozerov); 36 — Dryomyza ecalcarata Kurahashi; 37 — Dryomyza formosa (Wiedemann); 38 — Dryope decrepita (Zetterstedt); 39 — Dryope flaveola (Fabricius); 40 — Oedoparena minor Suwa; 41 — Paradryomyza setosa (Bigot); 42 — Paradryomyza spinigera Ozerov; 43 — Pseudoneuroctena senilis (Zetterstedt). 40 — after Ozerov & Krivosheina, 2021, fig. 8.

Рис. 34–43. Эдеагус Dryomyzidae, сбоку: 34 — Dryomyza anilis Fallén; 35 — Dryomyza caucasica (Ozerov); 36 — Dryomyza ecalcarata Kurahashi; 37 — Dryomyza formosa (Wiedemann); 38 — Dryope decrepita (Zetterstedt); 39 — Dryope flaveola (Fabricius); 40 — Oedoparena minor Suwa; 41 — Paradryomyza setosa (Bigot); 42 — Paradryomyza spinigera Ozerov; 43 — Pseudoneuroctena senilis (Zetterstedt). 40 — по Ozerov & Krivosheina, 2021, fig. 8.
Genus *Pseudoneuroctena* Ozerov, 1987

Pseudoneuroctena *Ozerov, 1987: 41. Gender: feminine. Type species: *Dryomyza senilis* Zetterstedt, by original designation.

**DIAGNOSIS.** Head with a pair of well developed setae present. Vein R1 with several setulae on dorsal surface. Legs yellow in ground colour. Hind femur with stout spinules apically on ventral surface (Fig. 10).

**BIOLOGY.** Adults of *P. senilis* were collected near corpses of small rodents [Ozerov, 1987].

**DIAGNOSTIC DESCRIPTION.** Body-length 4.2–7.9 mm. Frons usually with black or blackish spot in front of orbital seta. Pale yellowish-tan. Abdomen yellow, but tergites 4 and 5 often darkened on basal half. Genitalia as in Figs 22, 33, 43.

**DISTRIBUTION.** Russia: forest zone from Lena region and Karelia east to Sakhalin Oblast; widely distributed, but is not a common species.

**ADDITIONAL MATERIAL EXAMINED.** Japan: Honshu, Mt. Tateyama, 1500 m, 16.XI.1986, coll. H. Kurahashi (1 ♂, ZMUM).

**DIAGNOSTIC DESCRIPTION.** Body-length 6.8–7.5 mm. Body yellow or reddish-yellow. Scapus and pedicel yellow, postpedicel from yellow to almost blackish. Palpus yellow. Legs yellow, all tarsi usually blackish. Wings conspicuously brownish tinged; crossveins r-m and dm-cu without dark rims. Abdomen yellow, but tergites 4 and 5 often darkened on basal half. Genitalia as in Figs 22, 33, 43.

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