

Far Eastern Entomologist

Дальневосточный энтомолог

Journal published by
Far East Branch of the
Russian Entomological Society
and Laboratory of Entomology
Institute of Biology and Pedology,
Vladivostok

Number 80: 1-8

ISSN 1026-051X

November 1999

HOVER-FLIES (DIPTERA, SYRPHIDAE) COLLECTED IN KURIL ISLANDS IN 1998, WITH THE DESCRIPTION OF A NEW SPECIES

V. A. Mutin

*Department of Zoology, Komsomolsk-on-Amur State Pedagogical University,
Komsomolsk-on-Amur, 681000, Russia*

The list of 64 species of syrphids collected by participants of IKIP-98 in Kuril Islands is given. *Criorhina kurilensis* sp. n. from Iturup I. is described. *Syrphus admirandus*, *Eupeodes (Lapposyrphus) lapponicus*, *Xanthandrus comtus*, *Melanostoma orientale* are newly recorded for the Kuril Islands. The hover-flies are firstly recorded for the Anuchina, Tanfil'eva, Polonskogo islands. Fourteen species are new for Iturup, ten for Shikotan, five for Yury and at one for Kunashir and Zeleny.

KEY WORDS. Syrphidae, hover-flies, new species, new records, Kuril Islands.

В. А. Мутин. Мухи-журчалки (Diptera, Syrphidae), собранные на Курильских островах в 1998 г., с описанием нового вида // Дальневосточный энтомолог. 1999. N 80. С. 1-8.

Приводится список из 64 видов сирфид, собранных участниками Международного Курильского проекта 1998 г. Описывается *Criorhina kurilensis* sp. n. *Syrphus admirandus*, *Eupeodes (Lapposyrphus) lapponicus*, *Xanthandrus comtus* и *Melanostoma orientale* впервые указаны для Курильских островов. Сирфиды

впервые отмечены для островов Анучина (7 видов), Танфильева (6 видов) и Полонского (9 видов). Четырнадцать видов впервые указываются для Итурупа, 10 - для Шикотана, 5 - для Юрия и по одному для Кунашира и Зеленого.

Комсомольский-на-Амуре педагогический университет, кафедра зоологии, Комсомольск-на-Амуре, 681000, Россия.

INTRODUCTION

According to recent papers (Mutin & Barkalov, 1997; 1999; Mutin, 1997; 1998a; 1998b) and study of the additional material in the collection of Zoological Institute, St. Petersburg and Institute of Biology and Pedology, Vladivostok and collected by A. Lelej and S. Storozhenko, participants of International Kuril Island Project (IKIP) in 1998, there are 197 syrphid species in Kuril Islands [in my paper (Mutin, 1998b) the number of syrphids species (141) is wrong].

Among the syrphids collected in 1998 mainly in Southern Kurils one new species and four species newly recorded for the Kurils are discovered. Syrphids are firstly recorded for Anuchina, Tanfil'eva and Polonskogo Islands; for many species the distribution is enlarged. The holotype of new species is deposited in the Institute of Biology and Pedology (Vladivostok).

LIST OF SYRPHIDAE COLLECTED IN KURIL ISLANDS IN 1998

The list of 64 species of Syrphidae is given below (Table 1). Total 295 specimens have been collected in 1998 from Iturup (29.VII-10.VIII), Kunashir (26-28.VII, 11, 22.VIII), Shikotan (12-18.VIII), Zeliony (20.VIII), Yury (20.VIII), Anuchina (19.VIII), Tanfil'eva (19.VIII) and Polonskogo (21.VIII).

Total number of species known from islands: Iturup – 73 (14 of them are firstly recorded in present paper), Kunashir - 177 (1), Shikotan – 58 (10), Zeliony – 13 (1), Yury – 14 (5), Anuchina – 7 (7), Tanfil'eva – 6 (6), Polonskogo – 9 (9).

The follow abbreviations are used: Islands: IT – Iturup, KU – Kunashir, SHI – Shikotan, ZEL – Zeliony, YUR – Yury, AN – Anuchina, TA – Tanfil'eva, POL – Polonskogo, asterisk (*) – new records.

TAXONOMY

Criorhina kurilensis Mutin, sp. n.

Figs 1-3

TYPE MATERIAL. Holotype - ♂, Iturup, Medvezhiy Bay, 5.VIII 1998 (Lelej, Storozhenko). Paratype - ♂, with the same data as holotype.

DESCRIPTION. MALE. Body length 14 mm, wing length 11 mm. Eyes weakly dichoptic; distance between eyes is smaller than the one between basis of antennae. Face black, mainly pollinose, well concave under antennae and conical

Table 1

Syrphidae collected in Kuril Islands in 1998

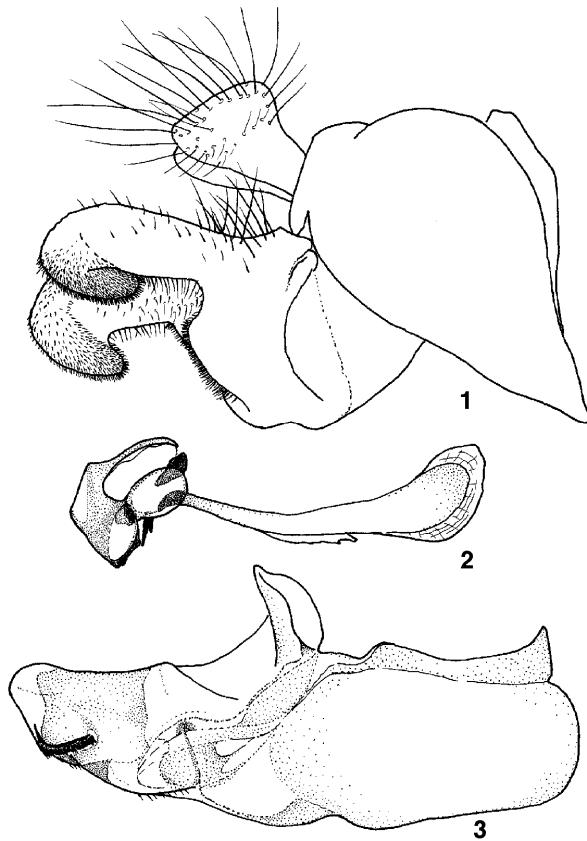
N	Species	IT	KU	SHI	ZEL	YUR	TA	AN	POL
1	<i>Anasimyia tumulata</i> Mg.	2♂ 5♀	1♂ 1♀	-	2♂ 1♀	-	-	-	*10♂
2	<i>Asiodidea nikkoensis</i> Mats.	-	-	1♂ 1♀	-	-	-	-	-
3	<i>Cheilosia aotii</i> Shir.	-	1♀	-	-	-	-	-	-
4	<i>Ch. impressa</i> Lw.	-	1♀	-	-	-	-	-	-
5	<i>Ch. japonica</i> H.-B.	-	2♀	3♂ 3♀	-	-	-	-	-
6	<i>Ch. longiptera</i> Shir.	*1♂	-	1♂	-	*1♂	-	*11♂ 1♀	-
7	<i>Ch. longula</i> Ztt.	1♂	-	-	-	-	-	*1♂ 1♀	-
8	<i>Ch. motodomariensis</i> Mats.	4♂ 10♀	1♂	*2♂ 1♀	-	-	*1♀	*2♂	*1♂
9	<i>Ch. nuda</i> Shir.	-	-	*1♀	-	-	-	-	-
10	<i>Ch. pallipes</i> L.	-	1♀	-	-	-	-	-	-
11	<i>Ch. iwawakiensis</i> Shir.	*1♂ 2♀	1♂ 1♀	1♀	-	-	-	-	*1♀
12	<i>Ch. gigantea</i> Ztt.	*8♂ 9♀	-	-	-	-	-	-	-
13	<i>Ch. urakawensis</i> Shir.	-	1♂ 1♀	-	-	-	-	-	-
14	<i>Chrysotoxum biguttatum</i> Mats.	-	1♀	-	-	-	-	-	-
15	<i>Criorhina kurilensis</i> Mutin, sp.n.	*2♂	-	-	-	-	-	-	-
16	<i>Didea alneti</i> Fl.	-	1♂	-	-	-	-	-	-
17	<i>Epistrophe shibakawae</i> Mats.	-	-	*1♂ 3♀	-	*1♀	-	-	-
18	<i>Episyrphus balteatus</i> De Geer	7♀	1♂	1♀	-	-	-	*1♀	-
19	<i>Eriozona syrphoides</i> Fl.	*1♀	-	-	-	-	-	-	-

Table 1 (continued)

N	Species	IT	KU	SHI	ZEL	YUR	TA	AN	POL
20	<i>Eristalis cerialis</i> F.	1♀	1♀	1♀	-	-	-	-	-
21	<i>E. interrupta</i> Poda	2♂	1♂	-	-	-	-	-	-
22	<i>E. rossica</i> Stack.	-	1♂	-	-	-	-	-	-
23	<i>Eumerus japonicus</i> Mats.	-	1♂ 1♀	-	-	-	-	-	-
24	<i>Eupeodes (Lapposyrphus) lapponicus</i> Ztt.	*1♀	*1♀	-	-	-	-	-	-
25	<i>E. corollae</i> F.	2♀	-	-	-	-	-	-	-
26	<i>E. lundbecki</i> Soot-Ryen	*2♀	-	-	-	-	-	-	-
27	<i>Helophilus virgatus</i> Cq.	1♂	-	-	-	-	-	-	-
28	<i>Leucozona (Ischyrosyrphus) glauca</i> Lw.	-	1♂ 1♀	-	-	-	-	-	-
29	<i>L. (L.) laterarius</i> Müller	-	-	*4♀	-	-	-	-	-
30	<i>L. (Leucozona) lucorum</i> L.	-	1♀	-	-	-	-	-	-
31	<i>Matsumyia jesoensis</i> Mats.	-	1♀	-	-	-	-	-	-
32	<i>M. nigrofacies</i> Shir.	1♀	8♀	-	-	-	-	-	-
33	<i>Melangyna basarukini</i> Mutin	*1♂	-	-	-	-	-	-	-
34	<i>M. motodomariensis</i> Mats.	1♂	-	1♀	-	-	-	-	-
35	<i>Melanostoma interruptum</i> Mats.	-	1♂	*1♀	-	-	-	-	-
36	<i>M. mellinum</i> L.	8♀	-	*1♂ 1♀	*1♂	*1♀	*4♂ 4♀	-	-
37	<i>M. orientale</i> Wied.	-	-	-	-	-	*1♂	-	-
38	<i>M. scalare</i> F.	1♀	1♀	1♂ 1♀	-	-	-	-	-
39	<i>Meliscaeva cinctella</i> Ztt.	3♀	-	2♀	-	-	*1♀	-	-
40	<i>Neoscia tenur</i> Harris	4♂ 4♀	-	-	-	-	-	-	*1♂
41	<i>Paragus haemorrhous</i> Mg.	1♂	-	*5♂ 6♀	-	*1♀	*1♀	-	*2♂ 1♀
42	<i>Parasyrphus lineolus</i> Ztt.	-	1♂	-	-	-	-	-	-

Table 1 (continued)

N	Species	IT	KU	SHI	ZEL	YUR	TA	AN	POL
43	<i>Pipiza ? lugubris</i> F.	-	-	1♀	-	*1♀	-	*2♂ 1♀	-
44	<i>P. ? bimaculata</i> Mg.	*2♀	-	-	-	-	-	-	-
45	<i>Platycheirus angustatus</i> Ztt.	2♂ 4♀	-	-	-	-	-	-	*2♀
46	<i>P. clypeatus</i> Mg.	-	-	-	-	-	-	*1♂	*2♂
47	<i>P. perpallidus</i> Verrall	-	-	-	-	-	*1♂	*2♂ 3♀	*3♂ 2♀
48	<i>P. scutatus</i> Mg.	*1♀	-	-	-	-	-	-	-
49	<i>P. urakawensis</i> Mats.	1♂ 2♀	1♀	-	-	-	-	-	-
50	<i>Pterallastes unicolor</i> Shir.	-	1♀	-	-	-	-	-	-
51	<i>Sericomyia sachalinica</i> Stack.	-	2♂ 1♀	1♂ 1♀	-	-	-	-	-
52	<i>Sphaerophoria philanthus</i> Mg.	-	-	6♂ 5♀	-	-	-	-	-
53	<i>Syrphus admirandus</i> Goeldlin	*1♀	-	-	-	-	-	-	-
54	<i>S. dubius</i> Mats.	*1♀	-	-	-	-	-	-	-
55	<i>S. ribesii</i> L.	2♀	1♂	-	-	-	-	-	-
56	<i>S. torvus</i> O.-S.	13♂ 3♀	1♂ 1♀	1♂	-	-	-	-	-
57	<i>S. vitripennis</i> Mg.	1♀	-	-	-	-	-	-	-
58	<i>Temnostoma apiforme</i> F.	*1♂	1♂	-	-	-	-	-	-
59	<i>T. vespiforme</i> L.	-	1♂ 1♀	-	-	-	-	-	-
60	<i>Triglyphus primus</i> Lw.	-	-	*1♂ 4♀	-	-	-	-	*1♀
61	<i>Volucella jeddona</i> Bigot	-	1♀	-	-	-	-	-	-
62	<i>V. pelucens</i> L.	-	3♀	-	-	-	-	-	-
63	<i>Xanthandrus comitus</i> Harris	-	-	*1♂	-	-	-	-	-
64	<i>Xylota coeruleiventris</i> Ztt.	*1♀	-	*2♀	-	-	-	-	-
	Total specimens	121	51	66	4	5	13	26	26



Figs 1-3. Male genitalia of *Criorhina kurilensis* sp. n., lateral aspect: 1) epandrium, 2) theca of hypandrium, 3) aedeagus.

one. Coxae and trochanters black; hind coxa dense pale pollinose, with long whitish pile. Femora shining black, except yellow extreme apical part, mainly with long pale pile; hind femur with strong long black pile latero-ventrally. Front and mid tibiae mainly reddish, dark posteriorly. Hind tibia mainly black, with reddish dorsal keel and all basal fourth. Front tarsus black, with yellow basotarsomere. Mid and hind tarsi yellow, with two black apical tarsomeres. Posterior setulae row of hind basitarsomere mostly or all black.

Abdomen black, with pale suppressed and rather long pile. Tergum 1 and basal half of tergum 2 weakly grey pollinose; apical part of abdomen mainly dull brownish pollinose, except shining lateral and posterior margins. Tergum 4 with a pair of very narrow transversal whitish pollinose maculae; tergum 3 with such maculae or its tracks. Genitalia as in Figs 1-3.

FEMALE unknown.

DISTRIBUTION. Russia: Kuril Islands (Iturup).

projected forward at lower part, with rather distinct tubercle and with pale pile along eyes at upper part. Lower part of face laterally and epistome margin shining black, with rather distinct shining cruciform spot medially or its track under facial tubercle. Frons mainly shining black, pollinose laterally. Vertex black, with pale long pile anteriorly and black ones posteriorly. Basiflagellomere reddish-brown, rather reniform, with long dorsal arista.

Thorax whitish pilose, rather dense pale pollinose or with weak darkish vittae on scutum. Wing membrane mainly coated on dense microtrichia, with darkish diffused apical macula and more distinct medial

DIAGNOSIS. The new species is similar to *C. brevipila* Loew, 1871 and *C. takaoensis* (Shiraki, 1952) and does not differ from them by genitalia pattern, however these species have following discriminating characters: more dense pollinose face, rather short and erect pile of terga 2 and 3, distinct pale pollinose maculae of terga 2 and 3. *C. brevipila* differs from the new species also by partly black pile of scutum between wing bases, reddish posterior margin of tergum 4 and short ventral pile of hind femur and reddish postero-lateral setae of hind basitarsomere. *C. takaoensis* differs from *C. kurilensis* sp. n. also by yellow pile of thorax.

NOTES. Probably *C. brevipila*, *C. takaoensis* and *C. kurilensis* sp. n. are allopatric species. *C. brevipila* is distributed in the mainland of Southern Far East and southern taiga zone of Siberia, North China and Mongolia; *C. takaoensis* is ranged in Sakhalin and Japan; *C. kurilensis* is discovered in the South Kurils. These three species forms the group of *Criorhina brevipila* Lw. Absence of some visible differences in genitalia shape with essential differences of pile coloration and pollinose pattern are the evidences of a recent origin of these species from ancestor. This event probably dated from the end of Pleistocene, when the geographic isolation of Iturup, Sakhalin-Japan and mainland populations of the ancestor took place. In due time pointed process preceded a composition of the sister-group *C. asilica* (Fallén, 1817) and *C. brevipila* as result of the disjunction of ancestral area, that probably there was in Central and Northern Asia owing to a disappearance of continuous forest zone in Pliocene or later. Older age of this event is indicated by the fact that *C. asilica* differs distinctly enough from mentioned Far Eastern species by genitalia characters. Species status of *C. brevipila*, *C. takaoensis* and *C. kurilensis* sp. n. are confirmed indirectly by the existence of sympatric sibling-species, *C. sichotana* (Stackelberg, 1955) and *C. alexandri* Mutin, 1999, which do not differ, either, by genitalia characters, however have different pattern of head, besides the differences of coloration and pollinose pattern.

***Melanostoma orientale* (Wiedemann, 1824)**

Melanostoma mellinum: Mutin & Barkalov, 1997: 198 (part.).

MATERIAL. Tanfilieva Is.: 1 ♂, 19.VIII 1998 (Lelej, Storozhenko); Kunashir Is.: Kislaya River, 3 ♀, 16.VIII 1983 (Basarukin); same place, 2 ♀, 27.VII, 13.VIII 1989 (Lelej); Yuzhno-Kurilsk, Lesnaya River, 1 ♀, 18.VIII 1989 (Lelej); Golovnina Volcano, 1 ♀, 3.VIII 1989 (Lelej).

REMARKS. The species of the genus *Melanostoma* are characterized by high degree of polymorphism, impeding their identification, especially the Far Eastern specimens. Trustworthy differences between *M. mellinum* (Linnaeus, 1758) and *M. orientale* will be found, perhaps, after comparison of the types. The Oriental material of *M. orientale*, examined by me in the British Museum, contains a lot of various forms or species similar to *M. mellinum*, that would not allow to find good characters for *M. orientale*. I believe that specimens with large pale maculae on tergum 2 extending broadly to lateral margin belong to *M. orientale*.

***Melanostoma interruptum* Matsumura, 1919**

Melanostoma orientale: Mutin & Barkalov, 1997: 199 (misidentification).

REMARKS. According to the original description and figures of *M. interruptum* differs from other species by trapezoidal transverse pale spots on terga 2-4. I believe that specimens mentioned by Mutin & Barkalov (1997) as *M. orientale* belong to *M. interruptum*.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Drs A.S. Lelej and S.Yu. Storozhenko for possibility to study the interesting syrphids from Kuril Islands. The work was supported in part by the International Programs Division and Biological Sciences Directorate (Biotic Surveys and Inventories Program) of the U.S. National Science Foundation, Grant Nos. DEB-9400821 and DEB-9505031, Theodore W. Pietsch, principal investigator.

REFERENCES

- Mutin, V. A. 1997. Hover-flies (Diptera, Syrphidae) collected in Kuril Islands in 1996. – Far Eastern Entomologist 41: 1-4.
- Mutin, V. A. 1998a. New exotic species and new synonyms of hover-flies (Diptera, Syrphidae) from the Russian Far East. – International Journal of Dipterological Research 9(1): 9-12.
- Mutin, V. A. 1998b. Hover-flies (Diptera, Syrphidae) collected in Kuril Islands in 1997. – Far Eastern Entomologist 61: 1-8.
- Mutin, V. A. & Barkalov, A. V. 1997. A review of the hover-flies (Diptera: Syrphidae) of Sakhalin and the Kuril Islands, with descriptions of two new species. – Species Diversity 2(2): 179–230.
- Mutin, V. A. & Barkalov, A. V. 1999. Family Syrphidae. - In: Key to the insects of Russian Far East. Vol. VI. Diptera and Siphonaptera. Pt 1. Vladivostok: Dal'nauka: 342-500. (In Russian)

© **Far Eastern entomologist (Far East. entomol.)**

Editor-in-Chief: S.Yu.Storozhenko

Editorial Board: A.S.Lelej, Yu.A.Tshistjakov, N.V.Kurzenko

Address: Institute of Biology and Pedology, Far East Branch of Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

FAX: (4232) 310 193

E-mail: entomol@online.marine.su