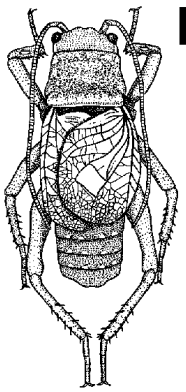

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NEW DATA ON THE GENUS *BRACHYOPA* MEIGEN, 1822 (DIPTERA, SYRPHIDAE) FROM RUSSIAN FAR EAST

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Review of 12 species of the genus *Brachyopa* from Russian Far East is given. *Brachyopa primorica* **sp. n.** and *B. zhelochovtsevi* **sp. n.** are descibed.

KEY WORDS. Syrphidae, hover-flies, taxonomy, distribution, new species.

В.А. Мутин. Новые данные о дальневосточных видах рода *Brachyopa* Meigen, 1822 (Diptera, Syrphidae) // Дальневосточный энтомолог. 1998. N 65. С. 1-5.

Дан обзор 12 видов сирфид рода *Brachyopa* фауны Дальнего Востока. Описаны два новых вида: *Brachyopa primorica* **sp. n**. и *B. zhelochovtsevi* **sp. n.**

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INTRODUCTION

The genus *Brachyopa* (sensu Stackelberg, 1970) is distributed in Holarctic region. There are three centers of species diversity: European, Nearctic and Russian

Far East. The known larvae of this genus either occur in sap runs or in the accumulations of decaying sap under bark of leaf-bearing trees mostly. Twelve species of the genus *Brachyopa* including two new ones are reviewed from Russian Far East below.

LIST OF THE SPECIES

***Brachyopa primorica* Mutin, sp. n.**
Figs 1-4

MATERIAL. Holotype - ♂, Primorskii krai: 30 km N Ternei, 3.VI 1982 (V. Mutin), deposited in the Institurte of Biology and Pedology (Vladivostok). Paratypes: 1♀, with the same data as holotype; Primorskii krai: 3♂, 4♀, Kamenushka, 30.V - 4.VI 1989 (A. Shatalkin); Khabarovskii krai: 3♂, Komsomolsk-na-Amure, 9.VI 1996 (D. Gritskevich); 2♂, 1♀, the same locality, 8.VI 1998 (V. Mutin); 1♂, the same locality, from larvae on bark of *Ulmus pumila*, IX 1996 (V. Mutin); 1♀, the same locality, IX 1997 (D. Gritskevich); 5♂, the same locality, 30.IX. 1997 (A. Sivova).

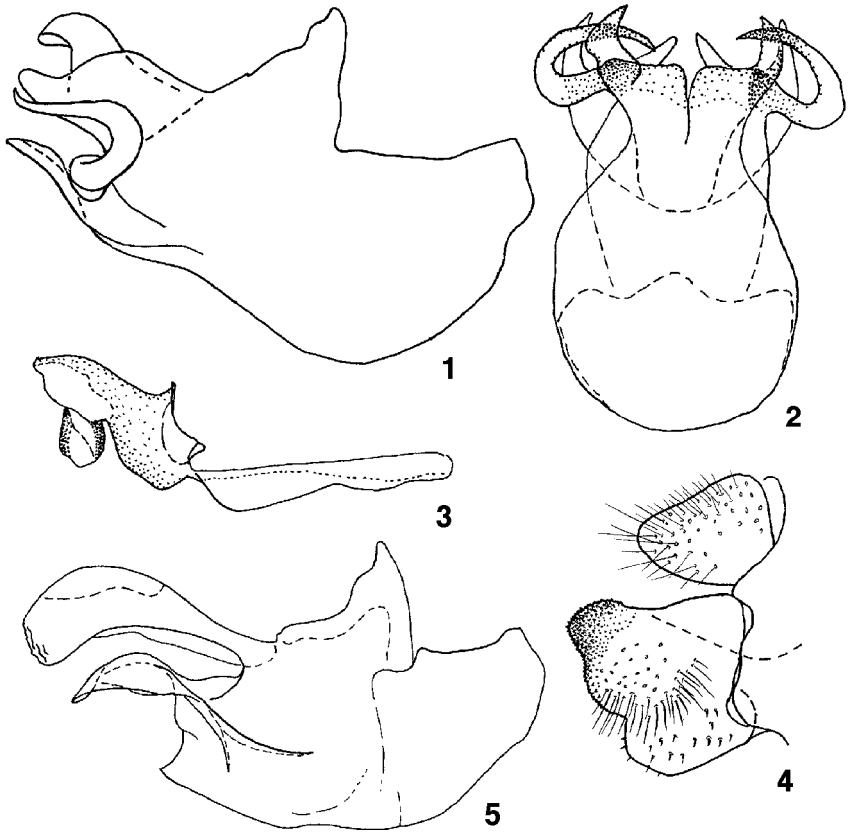
DESCRIPTION. Male. Length: body - 7-8 mm, wing - 7-8 mm. Face yellow, pollinose, with bare more or less large shining spots under antennae. Gena shining yellow or brownish, with white pile. Frons yellow, bare, pollinose along eyes, with medial depression. Vertex pollinose in anterior half and black around ocelli, with short pale pile. Occiput mostly grey pollinose, with white pile. Antennae orange-yellow; flagellomere with very small and indistinct sensory pit; arista brownish, bare.

Scutum dark grey, with pale grey pollinose vittae and maculae, submedial vittae are widest and connected posteriorly with large macula before scutellum. Scutum pile subpressed short mainly black, except pale pile of postpronotum and anterior part of scutum. Postalar callus brownish, with black setae. Scutellum yellow or brownish, with short subpressed mainly black pile and a few long black setae on posterior margin. Pleuron pale pilose, dull grey, except katatergum (pleurotergite) yellow or brownish; posterior anepisternum (hind part of mesopleuron) with a few long posterodorsal black setae.

Wing mostly clean, with dark apex; pterostigma yellowish. Legs brownish yellow, two apical tarsomeres black.

Abdomen shining black, subpressed white pilose; tergum 1 partly dull brownish; tergum 2 pollinose basally. Sterna 1-4 dull brownish-grey. Sterna 6-8 shining reddish-yellow, pale pilose. Genitalia - Figs 1-4.

Female. Length: body - 7.8-8 mm, wing - 7,8 mm. Similar to male except of sexual characters. Face and gena shining yellow or reddish, narrow pollinose along eyes, with short pollinose fascia under antennae. Frons shining yellow or reddish, with triangular pillose maculae in posterior part. Vertex rather dull reddish,



Figs 1-5. Male of *Brachyopa*. 1-4) *B. primorica* sp. n.: 1) theca of hypandrium, lateral aspect, 2) theca of hypandrium, ventral aspect, 3) aedeagus, lateral aspect, 4) surstylus and cercus, lateral aspect, 5) *B. cinerea*, theca of hypandrium, lateral aspect.

with short subpressed yellow pile. Apical half of tergum 2 and terga 3-5 entirely shinning dark brown.

DIAGNOSIS. The new species resembles *B. cinerea* but differs by dark apex of the wing, by yellow katatergum, by shining outside part of postpronotum as well as by totally yellow frons of female and especially by shape of male hypandrium (Fig. 1 vs. Fig. 5).

DISTRIBUTION. Russia: southern part of Khabarovskii krai, Primorskii krai.

***Brachyopa zhelochovtsevi* Mutin, sp. n.**
Figs 6-9

MATERIAL. Holotype - ♂, Magadanskaya oblast': Ust'-Omchug, 23.VI 1963 (Zhelochovtsev), deposited in the Zoological Museum of Moscow State University. Paratypes: 3♀, the same locality, 24-30.VI 1963 (Zhelochovtsev); 2♂, Khabarovskii krai: Myaochan Range, Gornyi, 8.VI 1988, 6.VII 1991 (V. Mutin); 1♀, Myaochan Range, Chalba River, 2.VII 1979 (V. Mutin); 3♀, 20 km N Komsomolsk-na-Amure, 10,13.VI 1983 (V. Mutin); 1♀, NW Amurskaya oblast': Nyukzha River, 3.VII 1976 (R. Soboleva).

DESCRIPTION. Male. Length: body - 6-7.5 mm, wing - 6-7 mm. Face yellow, pale pollinose, with narrow shining medial stripe in lower part. Gena shining yellow, usually restricted by darken stripe anteriorly. Frons bare, rather shining yellow, with indistinct furrows. Vertex pale pollinose anteriorly, brownish or reddish around ocelli. Occiput dense pale pollinose and pale pilose. Antenna orange yellow; flagellomere with large ventrolateral roundish sensory pit; its diametr usually larger than distance between its margin and lower margin of antenna; arista long pilose, brown, yellow basally (Fig 6).

Thorax reddish-yellow or brownish. Scutum mainly dark brown pilose, with a touch of pale pile in anterior part and black rather short setae laterally, with wide submedial vittae of pale polline, indistinct lateral ones and very narrow medial one, which curved to large macula before scutellum. Postpronotum paler, more or less shinning outside. Pleuron mostly pollinose, rare pale pilose, with 5-7 black setae on posterodorsal part of posterior anepisternum (posterior part of mesopleuron). Katepisternum (sternopleuron) and meron (hypopleuron) sometimes partly dark brown. Scutellum large, trapezoid, with short subpressed coarse black pile and apical rather short black setae.

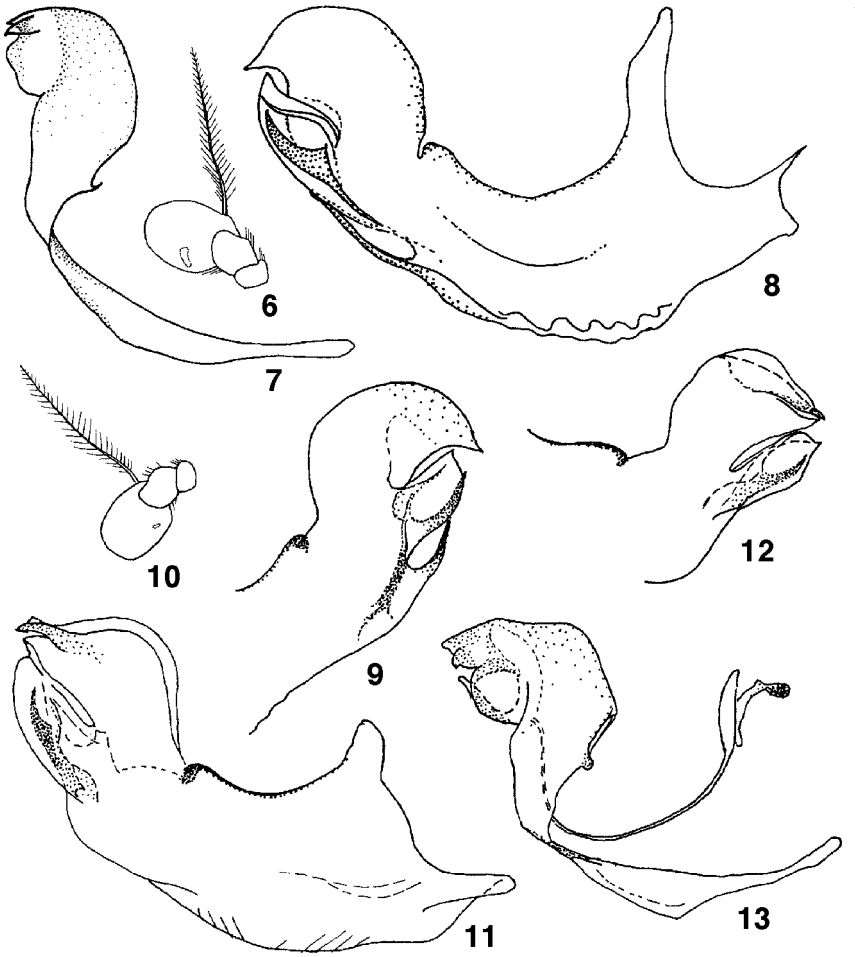
Wing clean. Femora yellow or brownish; tibia slightly darker than femora; tarsus brown dorsally, with darker apical tarsomeres.

Terga 2,3 and 4 yellow, mainly short pale pilose, usually with dark medial vitta and posterior margin of terga. Sterna 7 and 8 yellow, pale pilose. Genitalia - Figs 7-9.

Female. Length: body - 6.5-7.5 mm, wing - 6.5-8 mm. Similar to male except sexual characters. Face pollinose only under antennae, shining in lower projected part. Frons over antennae bare, shining yellow; posterior part of frons and vertex dense pollinose, with short pale pile. Sensory pit of flagellomere very large, reniform or triangular (Fig 6). Abdomen sometimes totally yellow or with darkish posterior margin of terga only.

DISTRIBUTION. Russia: Magadanskaya oblast', Khabarovskii krai, Amurskaya oblast'.

DIAGNOSIS. The new species is similar to *B. testacea*, but differs by larger trapezoid scutellum, by large sensory pit (Fig. 6 vs. Fig. 10) and by form of hypandrium tecka (Figs 8, 9 vs. Figs 11, 12). The same characters differ new species from other similar species, *B. obscura* Thompson et Tore, 1982.



Figs 6-13. Hover-flies. 6-9) *Brachyopa zhelochovtsevi*, sp. n.; 10-13) *B. testacea*; 6, 10) antenna, female; 7, 13) aedeagus, lateral aspect; 8, 11) theca of hypandrium, right lateral aspect; 9, 12) apical part of theca of hypandrium, left lateral aspect.

***Brachyopa cineria* Wahlberg, 1844**

Fig. 5

Zimina, 1981b: 31; Violovitsh, 1983: 100; Peck, 1988: 132.

MATERIAL. Khabarovskii krai: 2♂, 3♀, Komsomolsk-na-Amure, Silinskiy Park, 20,21.V 1986, 18.V 1993 (V. Mutin); Amurskaya oblast': 1♀, Zeya city, 24.VI 1982 (A. Ozerov); Primorskii krai: 1♂, 30 km N Ternei, 1.VI 1982 (V.

Mutin); 2♂, Vladivostok, Sedanka, 14.V 1983 (V. Mutin); 1♂, Luk'yanovka, 15.V 1981 (V. Mutin); 2♂, Anisimovka, 23.V 1986 (V. Makarkin).

DISTRIBUTION. Russia: Amurskaya oblast', Khabarovskii krai, Primorskii krai; Siberia, European part. - Europe.

***Brachyopa dorsata* Zetterstedt, 1837**

Zimina, 1968: 67; 1981b: 31; Stackelberg, 1970: 39; Violovitsh, 1983: 99; Mutin, 1983a: 89; Peck, 1988: 132.

MATERIAL. Khabarovskii krai: 1♀, Gur River, larvae under bark of *Populus tremula*, 16.IX 1975 (Danilevskiy); 1♀, environs of Khabarovsk, larvae under bark of *Populus tremula*, 3.V 1975 (Zaitsev); 27♂, 14♀, Pivan village, 20.V 1979, 20.V 1988, 27.V 1990, 28-30.V 1991, 22.V, 7.VI 1992, 3.VI 1993, 25.VI 1994 (V. Mutin); 30♂, 5♀, Myaochan Range, Gornyi, 9.V 1983, 28.V, 8.VI 1988, 1.VI 1989, 31.V 1990, 6.VII 1991, 1.VII 1993 (V. Mutin); 13♂, 9♀, the mouth of Gorin River, 10,13.V 1984, 16.V 1985, 26,28.V 1986 (V. Mutin); 1♂, 45 km below Komsomolsk-na-Amure, 14.V 1986 (V. Mutin); 1♀, Komsomolsk-na-Amure, Silinskii Park, 14.V 1986 (V. Mutin); 2♂, environs of Komsomolsk-na-Amure, Snezhinka, 31.V 1989 (V. Mutin); 1♀; Amurskaya oblast': Zeya city, 20.VI. 1981 (A. Ozerov); Primorskii krai: 2♂, 30 km N Ternei, 31.V, 3.VI 1982 (V. Mutin); 4♂, Tigrovaya, 10-12.VI 1927 (Stackelberg).

NOTES. The specimens (1♂ and 3♀) recorded as *B. dorsata* by L.V. Zimina (1972) belong to *B. zhelochovtsevi* sp. n.

DISTRIBUTION. Russia: Primorskii krai, Khabarovskii krai, Amurskaya oblast', Siberia, European part. - Werstern Europe.

***Brachyopa maritima* Violovitsh, 1980**

Violovitsh, 1980: 125; 1983: 99; Mutin, 1984: 103; Peck, 1988: 132.

MATERIAL. Khabarovskii krai: 1♂, Gorin River, Zolotoy, 4.VI 1997 (V. Mutin); Primorskii krai: 4♂, Bol'shaya Ussurka River, Krutoi Yar, 17-20.VI 1995 (V. Mutin); 1♀, Kamenushka, 12,16.VI 1981 (V. Mutin); 5♂, 2♂, the same locality, 29.V - 3.VI 1989 (A. Shatalkin); 2♂, Vladivostok, Sedanka, 14.V. 1983 (V. Mutin); 1♂, Tigrovaya, 11.VI 1927 (Stackelberg); Sakhalinskaya oblast': 1♂ (holotype), Iturup I., Kurilsk, 27.VI 1957 (Violovitsh).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai, Sakhalinskaya oblast'(Kuril Islands: Iturup, Kunashir).

***Brachyopa ornamentosa* Violovitsh, 1977**

Violovitsh, 1977: 81, 1983: 100; Thompson, 1980: 211; Peck, 1988: 132.

MATERIAL. Primorskii krai: 1♂, Pos'et, 1.V 1978 (Barkalov); Khabarovskii krai: 15♂, 14♀, Komsomolsk-na-Amure, Silinskii Park, 8.V 1985, 20.V 1986,

17,23.V 1987, 17.V 1988, 5, 9.V 1990 (V. Mutin); 1♀, Myaochan Range, Gornyi, 28.V 1988 (V. Mutin).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai. - East China.

***Brachyopa panzeri* Goffe, 1945**

Mutin, 1983b: 101.

MATERIAL. Amurskaya oblast': 15♂, ♀, Klimoutsy, 30.V- 4.VI 1958 (Borisova, Zinov'ev); Primorskii krai: 3♂, 4♀, 30 km N Ternei, 30.V, 11,13.VI, 3,5.VII 1982 (V. Mutin); 1♂, Luk'yanovka, 15.V 1981 (V. Mutin); 1♂, Kamenushka, 13.VI 1981 (V. Mutin); 1♂, Anisimovka, 17.VII 1974 (Yu. Berezantsev); 1♂, Vinogradovka, 24.VI 1927 (Stackelberg); 1♀, the same locality, 10.VI 1929 (Filip'ev, D'yakonov).

DISTRIBUTION. Russia: Amurskaya oblast' (new record), Primorskii krai; European part. - Europe.

***Brachyopa pivanica* Mutin, 1984**

Mutin, 1984: 102.

MATERIAL. Khabarovskii krai: 4♂ (including the holotype and paratype), Pivan', 6.VI 1979, 27.V 1990, 7.VI 1995 (V. Mutin); 2♂, 1♀, Myaochan Range, Gornyi, 8.VI 1988, 1.VII 1993, 19.VI 1997 (V. Mutin); Amurskaya oblast': 3♂, 2♀, Zeya city, 9-30.VI. 1978; 11.VII 1981 (A. Ozerov, A. Shatalkin); Primorskii krai: 1♀, 25 km N Ternei, 10.VII 1982 (V. Mutin);

DISTRIBUTION. Russia: Primorskii krai (new record), Khabarovskii krai, Amurskaya oblast', Transbaicalia, Jakutia.

***Brachyopa testacea* (Fallén, 1817)**

Figs 10-13

Zimina, 1981a: 157; Violovitsh, 1983: 99; Peck, 1988: 113.

MATERIAL. Khabarovskii krai: 10♂, 2♀, Myaochan Range, Gornyi, 28.V 1988, 30.VI 1987, 6.VII 1991, 14-22.VII 1994 (V. Mutin); 1♂, the same locality, 13.VII 1996 (D. Gritskevich); 3♂, the mouth of Gorin River, Kholodnyi Stream, 30.V 1984, 10.VI 1985 (V. Mutin); Amurskaya oblast': 1♂, Zeya town, 4.VII 1981 (A. Shatalkin); Primorskii krai: 1♀, 30 km N Ternei, 3.V 1982 (V. Mutin);

DISTRIBUTION. Russia: ?Chukotka, Khabarovskii krai, Amurskaya oblast', Primorskii krai, Siberia, European part. - Mongolia, Europe.

***Brachyopa violovitshi* Mutin, 1985**

Mutin, 1985: 85.

MATERIAL. Khabarovskii krai: 84♂♀, Komsomolsk-na-Amure, Silinskii Park, 8,11.V 1985, 20,22.V 1986, 17.V 1988, 9.V 1990, 23.V 1992, 18.V 1993, 25.V1994 (V. Mutin); 2♂, Pivan', 27.V 1990; 3♂, Myaochan Range, Gornyi, 28.V, 1.VI 1988 (V. Mutin); Primorskii krai: 1♂ (holotype), 30 km N Ternei, 27.V 1982 (V. Mutin); 1♂ (paratype), Kavalerovo, 22.V 1982 (V. Mutin); 1♂ (paratype), Vladivostok, Sedanka, 5.V 1982 (V. Mutin); 1♀ (paratype), Kamenushka, 14.VI 1981 (V. Mutin); 1♀, Vinogradovka, 18.V 1929 (Filip'ev, D'yakonov).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai.

***Brachyopa vittata* Zetterstedt, 1843**

Violovitsh, 1983: 99; Peck, 1988: 133.

MATERIAL. Khabarovskii krai: 16♂, 11♀, Myaochan Range, Gornyi, 25.VI 1982, 25.VI, 7.VII 1986, 30.VI 1987; 8.VI 1988; 1.VII 1993; 14-23.VII 1994 (V. Mutin); 1♂, the mouth of Gorin River, 16.VI 1984 (V. Mutin); Primorskii krai: 1♂, Livadiyskii Range, Mt. Krinichnaya, 1200 m, 19.VI 1982 (V. Mutin); 1♂, Mt. Ol'khovaya, 1600 m, 8.VIII 1986 (V. Makarkin).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai, ?Sakhalinskaya oblast' (Kuril Islands: Kunashir), South Siberia, European part. - Europe.

REMARKS. I did not find any specimens of *B. vittata* from Kuril Islands in the Russian collections.

***Brachyopa bicolor* (Fallén, 1817)**

Zimina, 1968: 66; Violovitsh, 1983: 99; Peck, 1988: 132.

DISRTIBUTION. Russia: ? Primorskii krai, south of European part. - Europe, Caucasus.

REMARKS. All above-mentioned authors don't listed specimens of *B. bicolor* from Primorskii krai or other parts of Russian Far East. In collections I did not find any specimens from this region. Probably *B. bicolor* not distributed in the Russian Far East.

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SHORT COMMUNICATION

D.I. Gritskevich. HOVER-FLIES (DIPTERA: SYRPHIDAE) IN ANTHOPHILOUS COMPLEXES OF PLANTS OF MYAOCHAN RANGE, KHABAROVSKII KRAI. - Far Eastern Entomologist. 1998. N 65: 10-14.

Д.И. Грицкевич. Мухи-журчалки (Diptera: Syrphidae) в антофильных комплексах растений хребта Мяочан, Хабаровский край. // Дальневосточный энтомолог. 1998. N 65. С. 10-14.

Two hundred four species in 52 genera of hover-flies are known from Myaochan Range (Khabarovskii krai) [5]. There are four phenological groups of syrphids in Lower Amur region [4]. There is a strict dependence of hover-flies species composition belonging to anthophilous complex of plants from their blossoming.

The material was collected during 1994-1996 using a standard entomological net. The degree of difference of anthophilous complexes was studied by means of the method of multidimensional scaling (degree of difference - euclidean distances) [6]. Multidimensional scaling allows to present a sharing of the objects in the coordinate space with the small quantity of dimensions graphically.

One hundred five species of hover-flies visit seven most abundant plants (Table 1). Anthophilous complexes of plants of Myaochan Range forms three well isolated groups (Fig. 1). The first one includes plants with peak of blossoming in the middle of June (*Rhododendron*

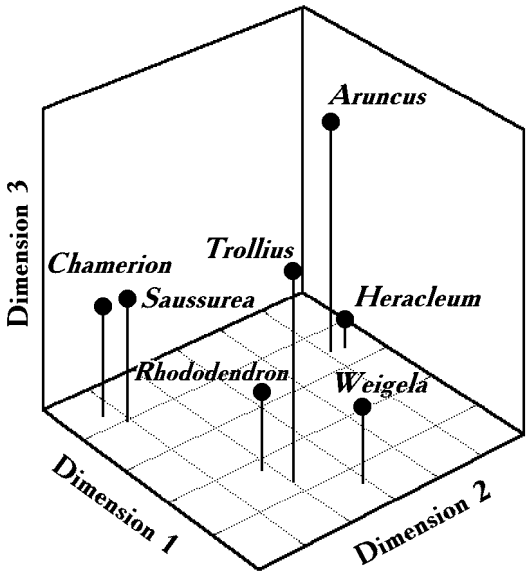

Fig.1. Position of the anthophilous complexes of plants in the reduced space of the three coordinates, based on the scaling of matrix euclidean distances.

Table 1.

Syrphids in anthophilous complexes of plants (I - *Weigela middendorffiana*; II - *Rhododendron aureum*; III - *Trollius riederanus*; IV - *Aruncus asiaticus*; V - *Heracleum moellendorffii*; VI - *Chamerion angustifolium*; VII - *Saussurea dubia*) in Myaochan Range

Species	Plants (share of syrphids, %)						
	I	II	III	IV	V	VI	VII
Blera eoa (Stack.)	-	0.26	-	-	-	-	-
B. judini Bark.	-	0.26	-	-	-	-	-
Brachyopa dorsata Ztt.	-	-	0.60	-	-	-	-
B. vittata Ztt.	-	-	-	0.64	-	-	-
Callicera aenea (F.)	-	0.26	-	-	-	-	-
Chalcosyrphus nitidus (Portsch.)	-	-	0.20	-	-	-	-
Ch. rufipes (Lw.)	-	-	-	0.64	-	-	-
Ch. tuberculifemur (Stack.)	-	0.26	0.20	-	-	-	-
Cheilosia impressa Lw.	-	-	-	2.55	5.45	-	-
Ch. longula (Ztt.)	-	1.32	0.99	-	0.71	8.33	2.56
Ch. motodomariensis Mats.	-	-	-	-	8.53	-	-
Ch. pagana (Mg.)	-	-	1.79	-	-	-	-
Ch. pallipes Lw.	3.82	11.61	10.12	1.91	0.95	-	-
Ch. primoriensis Bark.	-	-	0.79	-	-	-	-
Ch. reniformis (Hellen)	-	-	0.60	-	-	-	-
Ch. scutellata (Fallen)	-	-	0.20	-	0.47	-	-
Ch. sichotana (Stack.)	-	-	11.71	-	-	-	-
Ch. velutina Lw.	-	-	-	-	0.24	2.78	-
Chrysotoxum fasciatum (Mull.)	1.53	0.26	-	-	-	-	-
Ch. fasciolatum (DeGeeer)	-	0.26	-	-	-	-	-
Ch. sapporense Mats.	-	-	-	-	0.24	-	-
Criorhina aino (Stack.)	0.76	1.06	-	-	-	-	-
C. brevipila Lw.	3.82	0.26	-	-	0.24	-	-
C. ussuriana (Stack.)	-	0.53	-	-	-	-	-
Dasysyrphus bilineatus (Mats.)	-	-	0.20	-	-	5.56	2.56
D. lunulatus (Mg.)	0.76	0.26	0.20	-	-	-	-
D. nigricornis (Verr.)	0.76	-	-	-	-	-	-
D. tricinctus (Fallen)	-	0.53	-	-	-	-	-
D. venustus Mg.	-	0.79	-	-	-	-	-
D. zinchencoi Mut. et Bark.	0.76	1.06	0.20	-	-	-	-
Didea alneti (Fallen)	1.53	0.53	0.79	-	-	-	-
D. fasciata (Mcq.)	-	-	-	-	-	-	2.56
Epistrophe grossulariae (Mg.)	1.53	0.26	-	0.64	0.47	-	-
Episyrphus balteatus (DeGeer)	1.53	1.85	1.59	-	0.24	2.78	5.13
Eriozona (Megasyrphus) erratica (L.)	3.05	1.06	0.20	0.64	0.24	-	-
E. syrphoides (Fallen)	-	0.26	-	-	0.24	-	-
Eristalis alpina (Pz.)	-	-	0.40	0.64	0.95	-	-
E. cerialis F.	-	0.26	-	-	-	-	-

Table 1 (continued)

Species	Plants (share of syrphids, %)						
	I	II	III	IV	V	VI	VII
E. interrupta (Poda)	-	0.53	0.79	-	0.47	-	-
E. rabida Viol.	-	-	-	0.64	1.66	-	-
E. rossica Stack.	1.53	0.53	0.40	1.27	1.66	-	-
E. rupium F.	-	-	-	-	0.71	-	-
E. vitripennis Strobl	-	0.26	0.40	2.55	0.71	-	-
Eupeodes(Lapposyrphus) lapponicus (Ztt.)	1.53	5.54	6.15	1.27	-	8.33	5.13
E. latilunulatus (Collin)	-	-	-	0.64	-	-	-
E. lundbecki (Soot-Ryen)	-	-	0.20	0.64	-	-	-
E. luniger (Mg.)	-	-	0.20	-	-	-	-
E. nitens (Ztt.)	-	-	0.20	-	-	-	-
Helophilus affinis Wahlb.	-	-	-	0.64	-	-	-
Lejota korsakovi (Stack.)	0.76	-	0.20	-	-	-	-
Leucozona (Ischyrosyrphus) glaucius (L.)	2.29	0.26	0.60	5.10	15.88	-	-
L. (I.) laternarius (Mull.)	-	-	-	-	1.42	-	-
L. lucorum (L.)	1.53	0.53	-	2.55	0.95	-	1.28
Melangyna barbifrons (Fallen)	-	0.26	-	-	-	-	-
M. coei Niel.	-	-	1.19	-	-	-	-
M. compositarum (Verr.)	4.58	0.79	0.60	20.38	40.05	-	-
M. lasiophthalma (Ztt.)	-	-	0.40	-	-	-	-
M. motodomariensis (Mats.)	-	1.06	3.57	-	-	5.56	8.97
M. quadrimaculata (Verr.)	-	0.26	-	-	-	-	-
Melanostoma boreomontanum Mut.	0.76	0.79	1.19	-	-	-	-
M. mellinum (L.)	0.76	2.11	2.78	-	-	-	-
M. scalare (F.)	1.53	0.79	1.19	-	0.24	2.78	-
Meliscaeva cinctella (Ztt.)	12.21	4.22	1.79	1.27	0.47	-	-
Neocnemodon vitripennis (Mg.)	6.11	0.53	1.19	2.55	0.24	-	-
Orthonevra stackelbergi Thomp.et T.-Ped.	-	-	-	0.64	0.24	-	-
Parasyrphus annulatus (Ztt.)	3.82	7.12	12.50	3.82	1.18	-	-
P. lineolus (Ztt.)	0.76	3.69	7.14	1.27	-	2.78	10.26
P. macularis (Ztt.)	3.05	2.64	-	-	-	-	-
P. malinellus (Collin)	0.76	0.26	-	-	-	-	-
P. nigritarsis (Ztt.)	-	0.53	-	-	-	-	-
P. punctulatus (Verr.)	-	0.79	0.60	-	-	-	-
P. tarsatus (Ztt.)	0.76	2.37	0.60	-	-	-	-
Pipiza bimaculata Mg.	2.29	0.53	0.60	-	-	-	-
P. quadrimaculata (Pz.)	3.82	1.32	0.99	1.27	-	-	-
P. signata Mg.	-	-	0.20	-	-	-	-
Platycheirus albimanus (F.)	-	0.26	1.39	-	-	-	-
P. angustatus (Ztt.)	-	1.06	-	-	-	2.78	-
P. clypeatus (Mg.)	-	-	0.60	-	-	-	-
P. coerulescens Will.	-	-	-	-	0.24	-	-
P. complicatus (Beck.)	-	0.53	0.20	-	-	-	-
P. europaeus Goeld.Maib.et Speig	-	-	0.20	-	-	-	-

Table 1 (continued)

Species	Plants (share of syrphids, %)						
	I	II	III	IV	V	VI	VII
P. peltatus (Mg.)	0.76	0.53	1.98	0.64	-	2.78	-
P. scutatus (Mg.)	-	-	-	0.64	-	-	-
P. urakawensis (Mats.)	-	-	-	0.64	-	5.56	-
Pseudopocota stackelbergi (Viol.)	2.29	0.26	-	-	-	-	-
Scaeva komabensis (Mats.)	-	0.26	-	-	-	-	-
Sericomyia lappona (L.)	0.76	-	0.20	1.91	0.95	2.78	-
Sphaerophoria chongjini Bank.	-	-	-	-	0.24	-	-
Sphegina (Asiosphegina) sibirica Stack.	-	-	0.20	31.85	3.79	2.78	1.28
Spheginoides obscurus Szil.	-	-	0.20	-	-	-	-
Syrphus ribesii (L.)	10.69	5.28	5.16	3.18	1.42	5.56	2.56
Syrphus sp.	-	-	0.20	-	-	-	-
S. torvus O.-S.	4.58	15.04	7.94	0.64	1.90	27.78	53.85
S. vitripennis Mg.	6.87	8.18	1.79	1.27	1.66	11.11	3.85
Temnostoma apiforme (F.)	0.76	0.26	-	1.27	2.37	-	-
T. vespiforme (L.)	-	0.53	0.20	1.27	0.95	-	-
Volucella bombylans (L.)	-	0.26	-	1.91	0.71	-	-
Xanthandrus comtus (Harr.)	0.76	-	-	-	-	-	-
Xylota atricoloris Mut.	-	1.58	0.20	-	-	-	-
X. coeruleiventris (Ztt.)	3.05	0.53	0.79	-	-	-	-
X. coquilletti H.-B.	-	-	0.20	-	-	-	-
X. ignava (Pz.)	-	4.49	1.98	-	0.24	-	-
X. pseudoignava Mut.	-	-	-	0.64	0.47	-	-
X. sibirica Lw.	0.76	-	-	-	0.24	-	-
X. silvicola Mut.	-	-	0.20	-	-	-	-
Nubmer of species	39	60	60	35	40	16	12

aureum, Trollius riederanus, Weigela middendorffiana), the second group - in July (*Heracleum moellendorffii, Aruncus asiaticus*), in the third one - in the middle and end of August (*Chamerion angustifolium, Saussurea dubia*).

Early-summer phenological group of hover-flies mainly visit the plants which are blossoming in June [4]. Anthophilous complexes of *Rhododendron aureum* and *Trollius riederanus* are most similar because of abundance of pollinophagous hover-flies from genera *Syrphus*, *Parasyrphus*, *Platycheirus*, *Cheilosia* [3]. Syrphids of these genera visit an opened actinomorphous, rich of pollen flowers. A complex of *Weigela middendorffiana* has more differences from previous ones. There are many large nectarophagous syrphids (*Criorhina, Pseudopocota, Eriozona, Didea*) among visitors of *Weigela* flowers with tubular corolla. The larvae of some nectarophagous dendrobionts syrphids are saproxylophagous [2], for example *Criorhina, Mallota, Temnostoma, Chalcosyrphus*.

There are a lot of species of hover-flies from the late-summer phenological group (*Cheilosia motodomariensis*, *Ch. impressa*, *Ch. velutina*, *Melangyna compositarum*, *M. motodomariensis*) in anthophilous complexes of flowering in July plants (*Heracleum moellendorffii, Aruncus asiaticus*). *Cheilosia motodomariensis*, *Ch. impressa* and *Leucozona glaucius* are feeding mainly on *H. moellendorffii* [1]. These syrphids are rare on *A.*

asiaticus. The dominant species on *A. asiaticus* is *Sphegina sibirica* (31,8%). Therefore distinct differences in anthophilous complexes of *H. moellendorffii* and *A. asiaticus* are observed (Fig. 1).

In anthophilous complexes of flowering in August plants the hover-flies are not numerous. Almost all these syrphids are dominants on the Myaochan Range during the summer season (*Syrphus torvus*, *Eupeodes lapponicus*, *Parasyrphus lineolus*, *P. annulatus*, *Platycheirus albimanus*, *Cheilosia longula*). Therefore the similarity of anthophilous complexes of *Chamerion* and *Saussurea* is the highest (Fig. 1).

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SHORT COMMUNICATION

D.S. Aristov. A NEW SPECIES OF THE PERMIAN GENUS *KUNGURMICA* (GRYLLOBLATTIDA: PERMEMBIIDAE). - Far Eastern Entomologist. 1998. N 65 : 15-16.

Д.С. Аристов. Новый вид пермского рода *Kungurmica* (Grylloblattida: Permembiidae). // Дальневосточный энтомолог. 1998. N 65. С. 15-16.

In 1928 R.J. Tillyard described a very small insect *Permembia delicatula* from Lower Permian of North America in the family Delopteridae [3]. Later a new family Permembiidae was erected in order Psocoptera [4]. Now Permembiidae is included in the order Grylloblattida [2]. *Kungurmica tchekardensis* was described recently from Lower Permian of Ural [1]. New species of *Kungurmica* is found in the Upper Permian of North Russia. I am grateful to Dr. V.G. Novokshonov for support in preparation of manuscript.

Family Permembiidae Tillyard, 1937
Genus *Kungurmica* Novokshonov, 1998

***Kungurmica sojanensis* Aristov, sp. n.**
Fig. 1

MATERIAL. Holotype: imprint and counter-imprint of body, specimen N 3353/233; Russia, Arkhangelsk region, right bank of Sojana River about 57 km from its mouth, Iva-Gora; Upper Permian, Kazanian Stage; in collection of Paleontological Institute, Moscow.

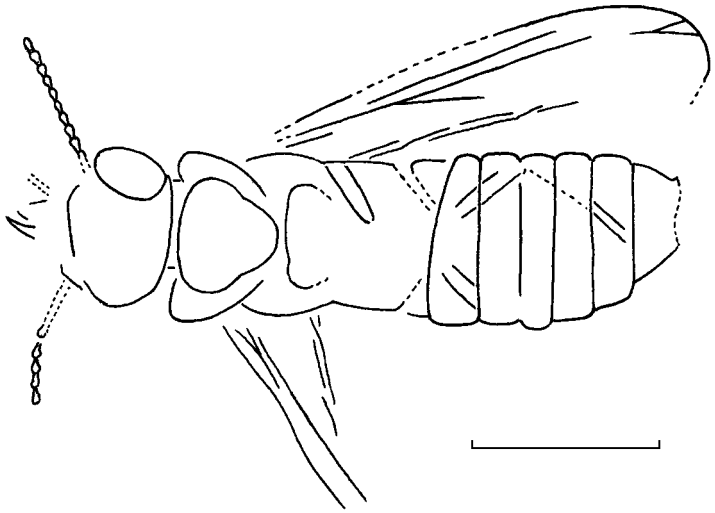

Fig. 1. *Kungurmica sojanensis* sp. n., holotype, spec. N 3353/233. Scale bar – 1 mm.

DIAGNOSIS. New species due to bed preservation of insect is formaly included to the genus *Kungurmica* based on the small size, the shape of head and antennae. However *K. sojanensis* is distinguished from single speciment of *K. tchekardensis* by short pronotum and more longer legs. But the main reason for erecting of new species is the difference in age of both species.

DESCRIPTION. Small insect, lengh of body 3.5 mm. Body elongate. Head prognathous, robust, with acute mandibles projecting far forwards. Antennae moniliform, with 10 pear-like segments. Eyes large. Pronotum very short, mesonotum trapezoidal, larger than metanotum. Legs probably long, hind legs reaching to wing apex. Wings are quitely not keeping, lengh of forewing about 2.6 mm. Abdomen with 7 visible segments, reaching to wing apex or slightly shorter.

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