

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 65: 1-9

ISSN 1026-051X

November 1998

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

V. A. Mutin

*Department of Zoology, Komsomolsk-na-Amure State Pedagogical Institute,
Komsomolsk-na-Amure, 681000, Russia*

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

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.

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

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 Institute of Biology and Pedology (Vladivostok). Paratypes: 1 ♀, with the same data as holotype; Primorskii krai: 3 ♂, 4 ♀, Kamenushka, 30.V - 4.VI 1989 (A. Shatakin); 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).

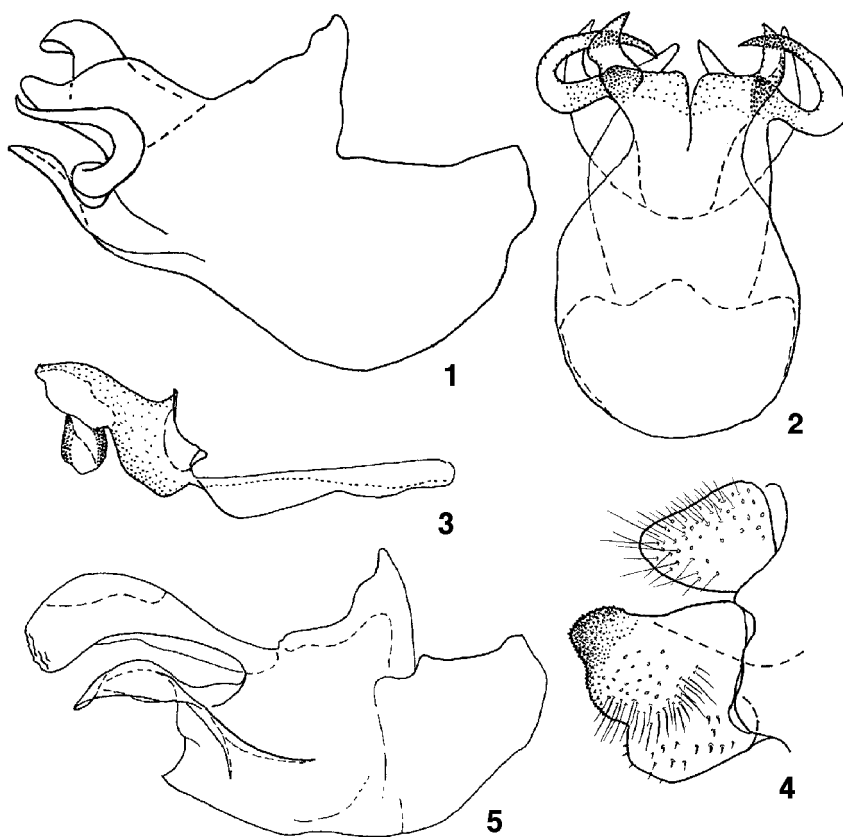
DESCRIPTION. Male. Length: body - 7-8 mm, wing - 7-8 mm. Face yellow, pollinose, with bare more or less large shining spots under antennae. Gena shining yellow or brownish, with white pile. Frons yellow, bare, pollinose along eyes, with medial depression. Vertex pollinose in anterior half and black around 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 shining 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 diameter 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 shining 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.

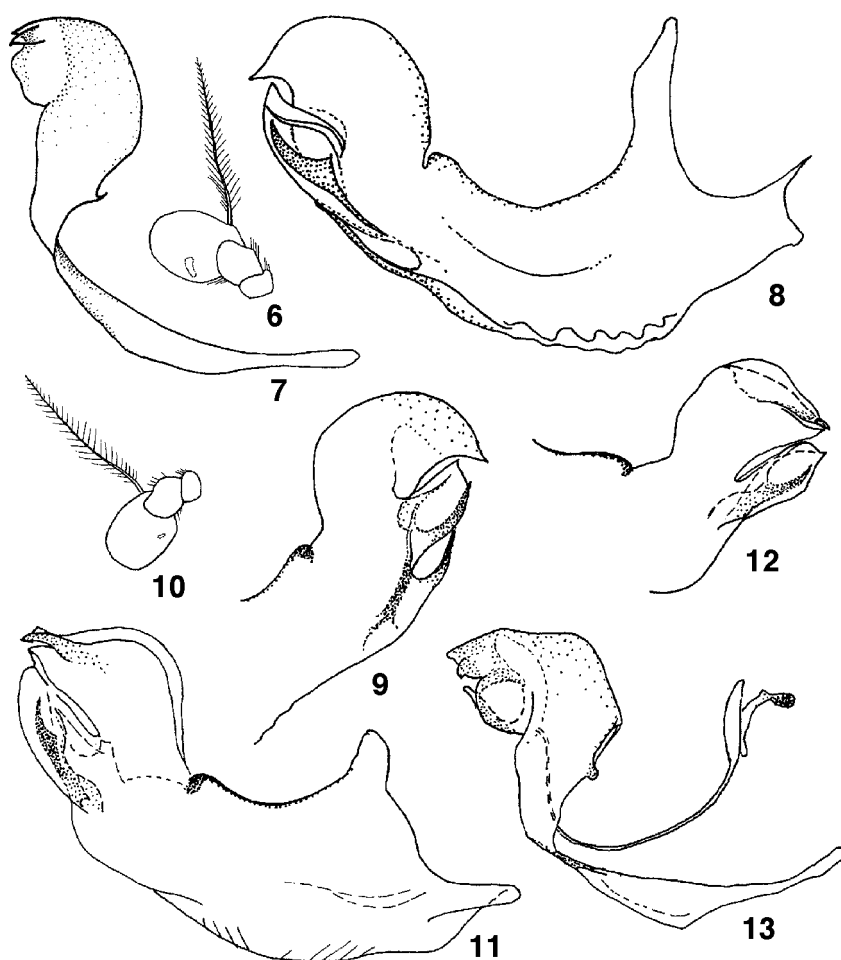
Wing clean. Femora yellow or brownish; tibia slightly darker than femora; tarsus brown dorsally, with darker apical tarsomeres.

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. - Western 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, Yakutia.

***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.V 1994 (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), Kavaleroovo, 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.

DISTRIBUTION. 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.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr A.L. Ozerov and Dr. A.I. Shatalkin for opportunity to study collections of the Zoological Museum of Moscow State University. I thank Dr. A.V. Barkalov (Institute of Systematics and Animal Ecology, Novosibirsk) and Dr. S.Yu. Kuznetsov (Zoological Institute, St.Petersburg) for their help as curators of syrphid collections in those institutions.

REFERENCES

- Mutin, V.A. 1983a. [Fauna and ecology of hover flies (Diptera, Syrphidae) as pollinators of some Angiosperms of the Lower Amurland]. - In: Soboleva, R.G. (Ed.). *Obzor otchel'nykh otryadov nasekomykh Dal'nego Vostoka*. Vladivostok: 86-99. (In Russian).
- Mutin, V.A. 1983b. [Hover-flies (Diptera, Syrphidae) of anthophilous complexes of the Southern Primorskii krai]. - In: Soboleva, R.G. (Ed.). *Obzor otchel'nykh otryadov nasekomykh Dal'nego Vostoka*. Vladivostok: 100-109. (In Russian).
- Mutin, V.A. 1984. [New and little-known species of hover-flies (Diptera, Syrphidae) from the South of the Far-East]. - In: Tsherepanov, A.I. (Ed.) *Novye i maloizvestnye vidy fauny Sibiri*. Vyp. 17. *Chlenistonogie i gel'minty*. Novosibirsk: 100-106. (In Russian, with English summary).
- Mutin, V.A. 1985. [New data on hover-flies (Diptera, Syrphidae) of Far East]. - In: *Taxonomiya i ekologiya chlenistonogikh Dal'nego Vostoka*. Vladivostok: 85-99. (In Russian).
- Peck, L.V. 1988. Family Syrphidae. In: Soos, A. (Ed.). *Catalogue of Palaearctic Diptera*. Budapest. Pp. 11-230.
- Stackelberg, A.A. 1970. [Fam. Syrphidae]. - In: *Opredelitel' nasekomykh evropeiskoi chasti SSSR*. Tom. V. Vyp. 2. Moscow-Leningrad: 11-96. (In Russian).
- Thompson, Ch. 1980. The problem of old names as illustrated by *Brachyopa "conica" Panzer* with a synopsis of Palaearctic *Brachyopa* Meigen (Diptera: Syrphidae). - *Ent. scand.*, 11: 209-216.
- Violovitsh, N.A. 1977. [Some new Palaearctic species of hover flies (Diptera, Syrphidae)]. - In: Cherepanov, A.I. (Ed.). *Novye i maloizvestnye vidy fauny Sibiri*. Vyp. 11. *Taksony fauny Sibiri*. Novosibirsk: 68-84. (In Russian, with English summary).
- Violovitsh, N.A. 1980. [New species of flower flies (Diptera, Syrphidae) of the Palaearctic fauna]. - In: Cherepanov, A.I. (Ed.). *Novye i maloizvestnye vidy fauny Sibiri*. Vyp. 14. *Sistematika i ekologiya zhivotnykh*. Novosibirsk: 124-131. (In Russian, with English summary).
- Violovitsh, N.A. 1983. *Syrphidy Sibiri* (Diptera, Syrphidae). *Opredelitel*. Novosibirsk: 241 pp. (In Russian).
- Zimina, L.V. 1968. [To dipterofauna of Eastern Siberia, Syrphidae and Conopidae]. - In: Zhelokhovtsev, A.N. (Ed.). - In: *Trudy Zoologicheskogo muzeya Moskovskogo universiteta*. Tom 11. *Issledovaniya po faune Sovetskogo Soyuza* (nasekomye). Moscow: 57-78. (In Russian).
- Zimina, L.V. 1972. [Syrphids (Diptera, Syrphidae) of Magadanskaya oblast']. - *Bulleten' Moskovskogo obshchestva ispytatelei prirody* 77 (1): 37-45. (In Russian, with English summary).
- Zimina, L.V. 1981a. [Rare and interesting Syrphidae (Diptera) in the collection of the Zoological Museum of MSU]. - In: *Trudy Zoologicheskogo muzeya Moskovskogo universiteta*. Tom 19. *Nasekomye* (Issledovaniya po faune Sovetskogo Soyuza). Moscow: 150-170. (In Russian).
- Zimina, L.V. 1981b. [Syrphids (Diptera, Syrphidae) of north Amur district]. - In: *Ekologo-faunisticheskie issledovaniya. Biologicheskie resursy territorii stroitel'stva zony BAM*. Moscow: 27-38. (In Russian).