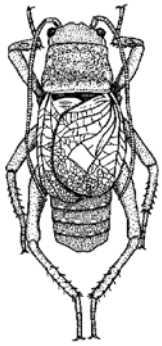

Far Eastern Entomologist

Дальневосточный энтомолог

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

Number 143: 1-17 ISSN 1026-051X December 2004

A CHECK LIST OF THE BEES (HYMENOPTERA, APOIDEA) OF THE SOUTHERN PART OF THE RUSSIAN FAR EAST

M. Yu. Proshchalykin

Institute of Biology and Soil Science, Vladivostok-22, 690022, Russia

The list of three hundred and twenty three species in forty-four genera of six families from the southern part of the Russian Far East is given. Six species are newly recorded from the Russia and eight species are newly receded from the Russian Far East. The distribution of the bees within the regions of the southern part of the Russian Far East is analyzed.

KEY WORDS. Hymenoptera, Apoidea, Colletidae, Halictidae, Andrenidae, Melittidae, Megachilidae, Apidae, bees, Russian Far East.

М. Ю. Прощалыкин. Список пчёл (Hymenoptera, Apoidea) юга Дальнего Востока России // Дальневосточный энтомолог. 2004. № 143. С. 1-17.

Приведен список 323 видов пчёл из 44 родов и 6 семейств юга Дальнего Востока России. Впервые указаны 6 видов для фауны России и 8 видов для фауны Дальнего Востока России. Проанализировано распределение пчел по регионам юга Дальнего Востока России.

Биолого-почвенный институт, ДВО РАН, Владивосток-22, 690022, Россия

INTRODUCTION

This paper treats the distribution of the bees in the mainland of the southern part of the Russian Far East [SRFE] (Amurskaya oblast, Khabarovskii krai, and Primorskii krai) as its island part (Sakhalin, and Kuril Islands) (Table 1). *Halictoides inermis* Nylander, 1848 (currently belongs to genus *Dufourea* Lepeletier, 1841) was the first

bee species, which have been recorded to the Russian Far East (Khabarovskii krai) (Nylander, 1848). One hundred and thirty-four species and subspecies have been described from the SRFE but fifty-three species and eleven subspecies are valid now.

The descriptions of new species and subspecies from SRFE can be found in follow papers: Nylander, 1848; Radoszkowski, 1860, 1876, 1877, 1887; 1888, 1891a, b; Morawitz, 1883; Vachal, 1902; Matsumura, 1911; Vogt, 1911; Skorikov, 1910, 1914, 1915; Blüthgen, 1923; Cockerell, 1924a, b, c, d, 1925a, b; Gussakovskij, 1932; Popov, 1936, 1941, 1958; Yasumatsu, 1939a, b; Panfilov, 1951, 1956; Sakagami, 1954; Krüger, 1956; Sakagami & Ishikawa, 1969; Ito & Sakagami, 1980; Osytshnjuk, 1982, 1984, 1986, 1995; Romankova, 1983, 1985a, b, 1988, 2003; Pesenko, 1986; Osytshnjuk & Romankova, 1995; Ebmer, 1995, 1996; Proshchalykin & Lelej, 2004a, b.

The distribution data on bee species from SRFE have been published in next papers. T**he Russian Far East as a whole**: Romankova, 1983a (*Megachile*), 1984 (*Osmia*), 1994 (Megachilidae), 1995a (Melittidae), 1995b (Ctenoplectridae), 1995c (Megachilidae), 1995d (Anthophoridae); Kupianskaya, 1992 (*Bombus*), 1995 (*Bombus*); Osytshnjuk, 1995 (Andrenidae).

Amurskaya oblast: Motschulsky, 1860 (*Bombus*); Wnukowsky, 1929 (*Bombus*); Pesenko, 1998 (*Dufourea*); Romankova, 2003 (Megachilidae); Proshchalykin & Lelej, 2004a (Apidae); Ignatenko, 2004 (Colletidae).

Khabarovskii krai: Wnukowsky, 1929 (*Bombus*); Pesenko, 1986 (*Lasioglossum*), 1998 (*Dufourea*); Ebmer, 1996 (Halictidae, excluding *Sphecodes*); Proshchalykin, 2002 (Apoidea, excluding Halictidae and *Nomada*); Proshchalykin & Lelej, 2004a (*Hylaeus*), 2004b (*Coelioxys*).

Primorskii krai: Skorikov, 1915, 1933 (*Bombus*); Cockerell, 1924a (*Anthidium*, *Stelis*), 1924b (*Andrena*), 1924c (*Hylaeus*), 1924d (*Colletes*, *Halictus*), 1925a, b (*Halictus*); Wnukowsky, 1929 (*Bombus*); Gussakovskij, 1932 (Apoidea); Yasumatsu, 1941 (*Andrena*); Hirashima, 1957 (*Halictus*); Osytshnjuk et al., 1980 (Apoidea); Pesenko, 1986 (*Lasioglossum*), 1998 (*Dufourea*); Ebmer, 1996 (Halictidae, excluding *Sphecodes*); Tadauchi & Xu, 1999 (*Andrena*); Proshchalykin & Lelej, 2004a (Apidae), 2004b (*Coelioxys*).

Sakhalin: Matsumura, 1911 (*Hylaeus*, *Megachile*, *Bombus*); Kôno & Tamanuki, 1928 (*Bombus*); Skorikov, 1933 (*Bombus*); Yasumatsu, 1938 (*Megachile*), 1939a (*Hylaeus*, *Andrena*), 1939b (*Nomada*); Pesenko, 1986 (*Lasioglossum*); Klitin, 1989 (*Bombus*); Hirashima, 1989 (Apoidea); Romankova, 2003 (*Osmia*); Proshchalykin, 2003 (Apoidea); Proshchalykin et al., 2004 (Apoidea).

Kuril Islands: Yasumatsu, 1939b (*Nomada*); Sakagami, 1950, 1954 (*Bombus*); Konakov, 1956 (*Halictus*, *Bombus*); Kuwayama, 1967 (Apoidea); Krivolutskaya, 1973 (*Bombus*); Ito & Sakagami, 1980 (*Bombus*); Pesenko, 1986 (*Lasioglossum*); Lelej & Kupianskaya, 2000 (*Bombus*); Ito & Kuranishi, 2000 (*Bombus*); Lelej et al., 2002 (*Bombus*); Pietsch et al., 2003 (*Bombus*); Proshchalykin, 2003 (Apoidea).

This study is based on material (total more than 15000 specimens) from the collections deposited in the Institute of Biology and Soil Sciences, Russian Academy of Sciences, Vladivostok, Zoological Institute, Russian Academy of Sciences, St. Petersburg, and Zoological Museum of the Moscow State University. The classification

of bees follows C. Michener (2000), the classification of family Halictidae follows Yu. A. Pesenko (1986; Pesenko et al., 2000), the classifications of tribe Melectini follows M. Rightmyer and M. Engel (2003).

The work described here was supported in part by the grants of Far Eastern Branch of Russian Academy of Sciences (N 04-3-Г-06-050, 04-3-A-06-034).

A CHECK LIST OF THE BEES OF THE SOUTHERN PART OF THE RUSSIAN FAR EAST

Table 1

Tabular check list of the bees of the southern part of the Russian Far East

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Family Colletidae							
Colletes collaris Dours, 1872	○	●	●	●	–	–	–
Colletes cunicularius (Linnaeus, 1761)	–	–	●	–	–	–	–
Colletes floralis Eversmann, 1852	○	●	●	●	–	●	–
Colletes impunctatus Nylander, 1852	●	●	●	●	–	●	–
Colletes jankowskyi Radoszkowski, 1891	○	–	●	–	–	–	–
Colletes perforator Smith, 1869	○	–	●	–	–	●	–
Colletes seitzi Alfken, 1900	–	–	●	–	–	–	–
Colletes sidemii Radoszkowski, 1891	●	–	●	–	–	–	–
Colletes succinctus (Linnaeus, 1758)	–	●	●	●	●	–	–
Hylaeus annulatus (Linnaeus, 1758)	○	●	●	●	●	●	–
Hylaeus chasanensis (Romankova, 1995)	●	●	●	●	–	●	–
Hylaeus confusus Nylander, 1852	●	●	●	●	●	●	–
Hylaeus floralis (Smith, 1873)	–	–	–	●	–	●	–
Hylaeus gracilicornis (Morawitz, 1867)	●	●	●	●	●	●	–
***Hylaeus globulus* (Vachal, 1903)	–	–	●	–	–	–	–
**Hylaeus leptocephalus* (Morawitz, 1871)	–	●	–	–	–	–	–
Hylaeus miyakei (Matsumura, 1911)	●	●	●	●	●	–	–
Hylaeus monticola Bridwell, 1919	–	–	–	–	–	○	–
Hylaeus niger Bridwell, 1919	–	–	●	–	–	●	–
Hylaeus noomen Hirashima, 1977	–	●	–	–	–	–	–
Hylaeus paradifformis Ikudome, 1989	●	●	●	●	●	–	–
Hylaeus paulus Bridwell, 1919	○	●	●	●	–	●	–
Hylaeus pectoralis Förster, 1871	○	–	–	●	●	●	–
Hylaeus pfankuchi (Alfken, 1919)	○	●	●	●	–	●	–
Hylaeus rinki (Gorski, 1852)	●	●	●	●	●	●	–
Hylaeus sinuatus (Schenck, 1853)	○	–	●	–	–	–	–
Hylaeus stentoriscapus Dathe, 1986	●	●	●	–	–	–	–
Hylaeus transversalis (Gussakovskij, 1932)	○	●	●	–	–	●	–
Hylaeus variegatus (Fabricius, 1798)	●	●	●	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Family Andrenidae							
Andrena aino Tadauchi, Hirashima et Matsumura, 1987	○	●	●	●	●	–	–
Andrena albicaudata Hirashima, 1966	–	–	●	–	–	–	–
Andrena argentata Smith, 1844	–	–	○	–	–	–	–
Andrena amurensis Friese, 1922	●	●	●	–	–	–	–
Andrena angarensis Cockerell, 1929	○	–	○	–	–	–	–
Andrena barbilabris (Kirby, 1802)	–	–	○	–	–	–	–
Andrena benefica Hirashima, 1962	–	●	●	–	–	–	–
Andrena bonivuri Osytshnjuk, 1984	–	–	●	–	–	–	–
Andrena brevihirtiscopa Hirashima, 1962	–	●	●	–	–	–	–
Andrena cineraria (Linnaeus, 1758)	–	○	–	–	–	–	–
Andrena clarkella (Kirby, 1802)	●	●	–	●	–	–	–
Andrena coitana (Kirby, 1802)	●	–	●	●	●	●	●
Andrena comta Eversmann, 1852	○	–	●	–	–	–	–
Andrena dentata Smith, 1879	●	●	●	–	–	●	–
Andrena denticulata (Kirby, 1802)	●	●	●	●	●	●	–
Andrena dzynnanica Popov, 1949	–	●	○	–	–	–	–
Andrena ehnbergi Morawitz, 1888	○	–	○	–	–	–	–
Andrena ezoensis Hirashima, 1965	–	–	–	●	●	●	–
Andrena falsificissima Hirashima, 1966	–	○	●	–	–	–	–
Andrena fukuokensis Hirashima, 1952	–	–	●	–	–	–	–
Andrena fulvida Schenck, 1853	●	●	●	●	●	–	–
Andrena gelriae van der Vecht, 1927	○	○	○	–	–	–	–
Andrena haemorrhoa (Fabricius, 1781)	●	●	●	○	–	–	–
Andrena halictoides Smith, 1869	–	–	●	–	–	–	–
Andrena hikosana Hirashima, 1957	–	–	○	–	–	–	–
Andrena hondoica Hirashima, 1962	–	●	●	●	–	–	–
Andrena ishiharai Hirashima, 1953	–	–	○	–	–	–	–
Andrena kamikochiana Hirashima, 1963	–	–	○	–	–	–	–
Andrena kerriae Hirashima, 1965	○	–	●	–	–	–	–
Andrena khabarovi Osytshnjuk, 1986	●	●	●	–	–	–	–
Andrena khankensis Osytshnjuk, 1995	–	–	●	–	–	–	–
Andrena khasania Osytshnjuk, 1995	–	–	●	–	–	–	–
Andrena kudiana Cockerell, 1924	–	–	○	–	–	–	–
Andrena lapponica Zetterstedt, 1838	–	–	○	○	–	○	–
Andrena lathyri Alfken, 1899	–	○	○	–	–	–	–
Andrena lazoiana Osytshnjuk, 1995	–	–	●	–	–	–	–
Andrena maetai Hirashima, 1964	–	–	●	–	–	–	–
Andrena marginata Fabricius, 1776	○	–	○	–	–	–	–
Andrena maukensis Matsumura, 1911	–	●	●	○	–	●	–
Andrena minutissima Osytshnjuk, 1995	○	●	●	●	–	–	–
Andrena mitakensis Hirashima, 1963	–	–	–	●	–	●	–
Andrena miyamotoi Hirashima, 1964	–	–	●	–	–	●	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Andrena mutini Osytshnjuk, 1986	–	●	●	–	–	–	–
Andrena nanula Nylander, 1848	–	–	●	–	–	–	–
Andrena nawai Cockerell, 1913	–	●	●	–	–	–	–
Andrena nippon Tadauchi et Hirashima, 1983	–	–	●	–	–	–	–
Andrena nitidiuscula Schenck, 1853	–	○	–	–	–	–	–
Andrena nova Popov, 1940	–	–	●	–	–	–	–
Andrena opacifovea Hirashima, 1952	–	–	–	–	–	●	–
Andrena orientaliella Osytshnjuk, 1986	○	●	●	–	–	–	–
Andrena ovatula (Kirby, 1802)	○	○	●	–	–	–	–
Andrena parathoracica Hirashima, 1957	–	–	○	–	–	●	–
Andrena pilipes Fabricius, 1781	●	–	●	–	–	–	–
Andrena romankovae Osytshnjuk, 1995	–	–	●	–	–	–	–
Andrena rosae Panzer, 1801	●	–	●	●	●	●	–
Andrena ruficrus Nylander, 1838	○	●	●	○	–	–	–
Andrena sakagamii Tadauchi, Hirashima et Matsumura, 1987	●	○	○	○	–	–	–
Andrena semirugosa Cockerell, 1924	–	●	●	●	–	●	–
Andrena sibirica Morawitz, 1888	○	●	○	–	–	–	–
Andrena subopaca Nylander, 1848	–	●	●	●	–	●	–
Andrena tatjanae Osytshnjuk, 1995	–	–	●	–	–	–	–
Andrena taraxaci Giraud, 1861	–	–	○	–	–	–	–
Andrena thoracica (Fabricius, 1775)	○	○	○	○	–	–	–
Andrena tibialis (Kirby, 1802)	–	–	○	–	–	–	–
Andrena transbaicalica Popov, 1949	●	●	●	–	–	–	–
Andrena tsukubana Hirashima, 1957	●	●	●	–	–	–	–
Andrena valeriana Hirashima, 1957	●	●	●	–	–	–	–
**Andrena vulpecula* Kriechbaumer, 1873	●	–	●	–	–	–	–
Andrena watasei Cockerell, 1913	–	–	●	○	–	–	–
Andrena wilkella (Kirby, 1802)	–	–	●	–	–	–	–
Melitturga mongolica Alfken, 1936	●	–	●	–	–	–	–
Panurginus crawfordi Cockerell, 1914	–	–	●	–	–	–	–
Panurginus dubius Osytshnjuk, 1995	●	–	○	–	–	–	–
Panurginus romani Aurivillius, 1914	●	●	●	●	–	–	–
Family Halictidae							
Dufourea carinata (Popov, 1959)	●	–	●	–	–	–	–
Dufourea inermis (Nylander, 1848)	●	●	●	–	–	–	–
Evylaeus affinis (Smith, 1853)	–	–	○	–	–	–	–
Evylaeus albipes albipes (Fabricius, 1781)	–	–	○	○	–	○	–
Evylaeus albipes villosus (Ebmer, 1995)	–	–	○	–	–	–	–
Evylaeus allodalus (Ebmer et Sakagami, 1985)	–	–	○	–	–	–	–
Evylaeus amurensis (Vachal, 1902)	○	–	○	–	–	–	–
Evylaeus baleicus (Cockerell, 1937)	–	–	○	○	–	–	–
Evylaeus brachycephalus (Cockerell, 1925)	–	–	○	–	–	–	–
Evylaeus calceatus (Scopoli, 1763)	–	–	○	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Evylaeus dybowskii (Radoszkowski, 1876)	○	–	○	○	–	○	–
Evylaeus ellipticeps (Blüthgen, 1923)	○	–	○	–	–	–	–
Evylaeus eriphylus (Ebmer, 1996)	–	–	○	–	–	–	–
Evylaeus fratellus betulae (Ebmer, 1978)	–	–	○	–	–	–	–
Evylaeus hoffmanni (Strand, 1915)	–	–	○	–	–	–	–
***Evylaeus kankaucharis* (Strand, 1914)	–	–	●	–	–	–	–
**Evylaeus kiautschouensis* (Strand, 1910)	–	–	●	–	–	–	–
Evylaeus nipponensis (Hirashima, 1953)	–	–	○	–	–	–	–
Evylaeus nupricola (Sakagami, 1988)	–	–	–	○	–	○	–
Evylaeus pallilomus (Strand, 1914)	–	–	●	–	–	–	–
**Evylaeus parvulus* (Schenck, 1853)	–	–	●	–	–	–	–
Evylaeus perplexans (Cockerell, 1925)	–	–	○	–	–	–	–
Evylaeus problematicus (Blüthgen, 1923)	–	–	●	●	–	○	–
Evylaeus rufitarsis (Zetterstedt, 1838)	–	–	○	–	–	○	–
Evylaeus semilaevis (Blüthgen, 1923)	–	–	●	–	–	–	–
Evylaeus sibiriacus (Blüthgen, 1923)	–	–	●	–	–	–	–
Evylaeus simplicior (Cockerell, 1931)	–	–	○	–	–	–	–
Evylaeus speculinus (Cockerell, 1925)	–	–	○	–	–	–	–
Evylaeus subfulvicornis (Blüthgen, 1934)	–	–	○	–	–	–	–
Evylaeus sulcatulus (Cockerell, 1925)	–	–	●	–	–	–	–
Evylaeus transpositus (Cockerell, 1925)	●	–	●	–	–	–	–
Evylaeus trichorhinus (Cockerell, 1925)	–	–	○	–	–	–	–
Evylaeus trispinis (Vachal, 1903)	–	–	●	–	–	–	–
Evylaeus villosulus trichopsis (Strand, 1914)	–	–	○	–	–	–	–
Evylaeus viridellus (Cockerell, 1931)	–	○	○	–	–	–	–
Evylaeus vulsus (Vachal, 1903)	–	●	○	–	–	–	–
Halictus hedini Blüthgen, 1934	●	●	●	●	–	●	–
Halictus rubicundus mongolensis Blüthgen, 1936	●	●	●	○	●	●	–
Halictus tsingtouensis Strand, 1910	–	○	●	●	–	●	–
Lasioglossum agelastum Fan et Ebmer, 1992	–	–	●	–	–	●	–
Lasioglossum alinense (Cockerell, 1924)	●	●	●	–	–	–	–
Lasioglossum denticolle (Morawitz, 1891)	●	●	●	–	–	●	–
Lasioglossum eos Ebmer, 1978	–	–	●	–	–	–	–
Lasioglossum exiliceps (Vachal, 1903)	–	●	●	–	–	–	–
Lasioglossum kansuense (Blüthgen, 1934)	●	●	●	–	–	●	–
Lasioglossum laeviventre (Pérez, 1905)	–	–	○	–	–	●	–
Lasioglossum nipponicola Sakagami et Tadauchi, 1995	–	–	○	–	–	–	–
Lasioglossum occidens (Smith, 1873)	–	–	○	○	–	–	–
Lasioglossum proximatum (Smith, 1879)	–	–	●	–	–	●	–
Lasioglossum satschauense (Blüthgen, 1934)	●	●	●	–	–	–	–
Lasioglossum scitulum (Smith, 1873)	–	●	●	●	●	●	–
Lasioglossum sutshanicum Pesenko, 1986	–	–	●	–	–	–	–
Lasioglossum upinense (Morawitz, 1890)	●	●	●	–	–	–	–
Lasioglossum zeyanense Pesenko, 1986	●	●	–	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
****Lipotriches fruhstorferi** (Pérez, 1905)	●	●	●	–	–	–	–
****Nomiapis mandschurica** (Hedicke, 1940)	●	–	●	–	–	–	–
Seladonia aeraria (Smith, 1873)	–	●	●	–	–	–	–
Seladonia confusa pelagia (Ebmer, 1996)	●	●	●	–	–	●	–
Seladonia leucahenea (Ebmer, 1972)	●	●	●	–	–	–	–
Seladonia tumulorum higashi (Sakagami et Ebmer,1979)	●	●	●	●	–	●	–
Sphecodes gibbus (Linnaeus, 1758)	–	–	○	–	–	–	–
Family Melittidae							
***Dasypoda altercator** (Harris, 1780)	–	–	●	–	–	–	–
Dasypoda japonica Cockerell, 1911	–	●	●	–	–	–	–
Macropis fulvipes amurensis Popov, 1958	●	●	●	–	–	–	–
Macropis ussuriana (Popov, 1936)	–	●	●	–	–	–	–
Melitta dimidiata Morawitz, 1876	–	–	●	–	–	–	–
Melitta ezoana Yasumatsu et Hirashima, 1956	–	–	●	–	–	–	–
****Melitta japonica** Yasumatsu et Hirashima, 1956	–	–	●	–	–	–	–
Melitta sibirica (Morawitz, 1888)	–	–	●	–	–	–	–
Melitta tricincta Kirby, 1802	–	●	–	–	–	–	–
Family Megachilidae							
Aglaoapis tridentatus (Nylander, 1848)	–	●	●	–	–	–	–
Anthidiellum strigatum (Panzer, 1805)	●	●	●	–	–	–	–
Anthidium comatum Morawitz, 1896	●	●	●	–	–	–	–
Anthidium punctatum Latreille, 1809	●	●	●	–	–	–	–
Anthidium septemspinosum Lepeletier, 1841	●	●	●	–	–	–	–
Bathanthidium malaisei (Popov, 1941)	–	–	○	–	–	–	–
Bathanthidium sibiricum (Eversmann, 1852)	●	●	●	–	–	–	–
***Chelostoma foveolatum** (Morawitz, 1868)	●	–	–	–	–	–	–
Chelostoma proximum Schletterer, 1889	●	–	–	–	–	–	–
Chelostoma rapunculi (Lepeletier, 1841)	●	●	–	–	●	–	–
Coelioxys afra Lepeletier, 1841	–	●	–	–	–	–	–
Coelioxys alata Förster, 1853	●	●	●	–	–	–	–
Coelioxys conoidea (Illiger, 1806)	●	●	●	–	–	–	–
Coelioxys elongata Lepeletier, 1841	●	●	●	●	●	–	–
Coelioxys emarginata Förster, 1853	●	–	●	–	–	–	–
Coelioxys inermis (Kirby, 1802)	●	●	●	●	–	–	–
Coelioxys lanceolata Nylander, 1852	○	–	–	–	–	–	–
Coelioxys manchurica Proshchalykin et Lelej, 2004	–	–	●	–	–	–	–
Coelioxys mandibularis Nylander, 1848	●	●	●	●	–	●	–
Coelioxys obtusispina Thomson, 1872	–	–	●	–	–	–	–
Coelioxys quadridentata (Linnaeus, 1758)	●	●	●	●	–	–	–
Coelioxys pieliana Friese, 1935	○	–	●	–	–	–	–
Coelioxys rufescens Lepeletier et Serville, 1852	●	●	●	–	–	●	–
Coelioxys ruficincta Cockerell, 1931	–	●	●	–	–	–	–
Heriades truncorum (Linnaeus, 1758)	–	–	●	–	–	–	–
Hoplitis leucomelana (Kirby, 1802)	●	●	●	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Hoplitis maritima Romankova, 1985	–	–	●	–	–	–	–
Hoplitis robusta (Nylander, 1848)	●	–	–	–	–	–	–
Hoplitis scita (Eversmann, 1852)	●	●	●	–	–	–	–
Hoplitis tuberculata (Nylander, 1848)	●	●	–	–	–	–	–
Megachile alpicola Alfken, 1924	●	●	●	●	–	–	–
Megachile analis Nylander, 1852	○	●	●	–	●	–	–
Megachile argentata (Fabricius, 1793)	●	●	●	–	–	–	–
Megachile bombycina Radoszkowski, 1874	●	●	–	–	–	–	–
Megachile centuncularis (Linnaeus, 1758)	●	●	●	–	–	–	–
Megachile circumcincta (Kirby, 1802)	●	●	●	●	●	●	–
Megachile fulvimana Eversmann, 1852	●	●	●	●	●	–	–
Megachile genalis Morawitz, 1880	○	–	○	–	●	–	–
Megachile lagopoda (Linnaeus, 1761)	●	●	●	–	–	–	–
Megachile lapponica Thomson, 1872	●	●	●	●	●	●	–
Megachile ligniseca (Kirby, 1802)	●	●	●	●	●	●	–
Megachile maackii Radoszkowski, 1874	○	●	●	–	–	–	–
Megachile manipula Romankova, 1983	–	●	●	–	–	–	–
Megachile maritima (Kirby, 1802)	●	●	●	–	–	–	–
**Megachile nigriventris* Schenck, 1870	●	–	–	–	–	–	–
Megachile nipponica Cockerell, 1914	●	○	●	–	–	–	–
Megachile remota Smith, 1879	–	●	●	–	–	–	–
Megachile rotundata (Fabricius, 1787)	●	●	●	–	–	–	–
Megachile rubrimana Morawitz, 1893	–	–	○	–	–	–	–
Megachile versicolor Smith, 1844	●	●	●	–	–	–	–
Megachile willoughbiella (Kirby, 1802)	●	●	●	●	●	●	–
Osmia cornifrons (Radoszkowski, 1887)	–	●	●	–	–	–	–
Osmia leaiana (Kirby, 1802)	–	●	–	–	●	–	–
Osmia maritima Friese, 1885	–	●	○	–	●	–	–
Osmia nigriventris (Zetterstedt, 1838)	●	●	●	–	●	–	–
Osmia opima Romankova, 1985	–	●	●	–	–	–	–
Osmia orientalis Benoist, 1929	●	●	●	–	–	–	–
Osmia pedicornis Cockerell, 1920	–	●	●	–	–	–	–
Osmia taurus Smith, 1873	–	●	●	–	–	–	–
Osmia uncinata Gerstaecker, 1869	●	●	○	–	–	–	–
Stelis melanura Cockerell, 1924	–	–	●	–	–	–	–
Stelis ornatula (Klug, 1807)	–	●	●	–	–	–	–
Trachusa byssina (Panzer, 1798)	●	●	–	–	–	–	–
Family Apidae							
Amegilla guadrifasciata (Villers, 1789)	–	–	○	–	–	–	–
Amegilla florea (Smith, 1879)	–	–	○	–	–	–	–
Ammobatoides melectoides Radoszkowski, 1885	–	–	●	–	–	–	–
**Anthophora aeneiventris* Hedicke, 1931	–	–	●	–	–	–	–
Anthophora arctica Morawitz, 1883	●	–	–	–	–	–	–
Anthophora borealis Morawitz, 1864	●	●	–	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Anthophora plumipes (Pallas, 1772)	–	–	●	–	–	–	–
Anthophora retusa baicalensis Hedicke, 1929	●	–	–	–	–	–	–
Anthophora rudolphae Romankova, 2003	–	–	○	–	–	–	–
Anthophora terminalis Cresson, 1869	●	●	●	●	●	–	–
Apis cerana cerana Fabricius, 1793	○	○	●	–	–	–	–
Apis mellifera Linnaeus, 1758	●	●	●	●	●	○	○
Biastes popovi Proshchalykin et Lelej, 2004	●	●	–	–	–	–	–
Biastes truncatus (Nylander, 1848)	–	–	●	–	–	–	–
Bombus anachoreta (Skorikov, 1914)	–	–	●	–	–	–	–
Bombus ardens sakagamii (Tkalců, 1962)	–	–	–	●	–	●	–
Bombus balteatus Dalhbom, 1832	–	○	–	–	–	–	●
Bombus barbutellus richardsi (Popov, 1931)	–	–	●	–	–	–	–
Bombus beaticola moshkarareppus Sakagami et Ishikawa, 1969	–	–	–	●	–	●	–
Bombus beaticola shikotanensis Ito et Sakagami, 1980	–	–	–	–	–	●	–
Bombus bohemicus Seidl, 1837	●	●	○	●	●	●	●
Bombus campestris (Panzer, 1801)	●	–	●	–	–	–	–
Bombus chinensis (Morawitz, 1890)	–	–	○	–	–	–	–
Bombus cingulatus pseudocalidus Reinig, 1936	–	●	●	–	●	–	–
Bombus consobrinus wittenburgi Vogt, 1911	●	●	●	●	●	–	–
Bombus czerskii Skorikov, 1910	–	–	○	–	–	–	–
Bombus deuteronymus Schulz, 1906	●	–	●	○	–	–	–
Bombus distinguendus Morawitz, 1869	–	–	–	●	●	–	–
Bombus diversus Smith, 1869	–	–	–	●	●	●	–
Bombus flavidus frisoni (Popov, 1931)	–	–	–	–	●	–	●
Bombus florilegus Panfilov, 1956	–	–	–	–	–	●	●
Bombus hortorum (Linnaeus, 1761)	–	–	○	–	–	–	–
Bombus humilis subbaicalensis Vogt, 1911	●	●	●	–	–	–	–
Bombus hypnorum calidus Erichson, 1851	●	●	●	–	●	–	●
Bombus hypnorum koropokkrus Sakagami et Ishikawa, 1969	–	–	–	●	–	●	–
Bombus hypocrita sapporoensis Cockerell, 1911	–	●	●	●	–	●	–
Bombus jonellus (Kirby, 1802)	–	●	–	–	●	–	–
Bombus ignitus Smith, 1869	–	–	●	○	–	–	–
Bombus lapponicus (Fabricius, 1793)	–	●	–	–	–	–	–
Bombus lucorum albocinctus Smith, 1854	●	●	●	●	●	●	●
Bombus modestus Eversmann, 1852	●	●	●	●	●	–	–
Bombus muscorum (Linnaeus, 1758)	–	○	●	–	–	–	–
Bombus norvegicus (Sparre-Schneider, 1918)	●	○	○	●	●	–	–
Bombus oceanicus Friese, 1909	–	–	–	–	–	●	●
Bombus pascuorum flavobarbatus Morawitz, 1883	●	●	●	–	●	–	–
Bombus patagiatus Nylander, 1848	●	●	●	●	●	–	–
Bombus praemarinus Panfilov, 1951	–	–	○	–	–	–	–
Bombus pseudobaicalensis Vogt, 1911	●	●	●	●	●	●	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Bombus pseudoligusticus Skorikov, 1926	–	–	–	–	–	–	●
Bombus rupestris buyssoni (Vogt, 1911)	●	○	○	–	–	–	–
Bombus schrencki schrencki Morawitz, 1881	–	–	○	–	–	–	–
Bombus schrencki albidopleuralis Skorikov, 1915	–	–	○	–	–	–	–
Bombus schrencki konakovi Panfilov, 1956	–	–	–	–	–	●	●
Bombus schrencki kuwayamai Sakagami et Ishikawa, 1969	–	–	–	–	–	●	–
Bombus schrencki mironowianus Vogt, 1911	–	–	–	●	●	–	–
Bombus sichelii Radoszkowski, 1860	●	●	●	–	●	–	●
Bombus sidemii Radoszkowski, 1888	–	–	●	–	–	–	–
Bombus sporadicus czerskianus Vogt, 1911	–	●	–	●	●	–	–
Bombus sylvestris (Lepeletier, 1832)	●	●	●	–	●	–	–
Bombus tricornis Radoszkowski, 1888	●	–	●	–	–	–	–
Bombus unicus Morawitz, 1883	●	○	●	–	–	–	–
Bombus ussurensis Radoszkowski, 1877	●	●	●	–	–	–	–
Bombus yezoensis Matsumura, 1932	–	–	–	–	–	●	–
Ceratina flavipes Smith, 1879	–	●	●	●	–	–	–
Ceratina satoi Yasumatsu, 1936	●	–	●	–	–	–	–
Ctenoplectra davidi Vachal, 1903	●	–	●	–	–	–	–
Doeringiella tristis (Smith, 1854)	○	○	●	–	–	–	–
Doeringiella ventralis (Meade-Waldo, 1913)	–	–	○	–	–	–	–
Epeolus coreanus Yasumatsu, 1933	–	–	–	○	–	–	–
Epeolus cruciger (Panzer, 1799)	–	–	–	–	●	–	–
Epeolus melectiformis Yasumatsu, 1938	–	–	●	–	–	–	–
Epeolus tarsalis Morawitz, 1873	●	●	●	–	–	–	–
Eucera longicornis (Linnaeus, 1758)	●	●	●	–	–	–	–
Melecta luctuosa (Scopoli, 1770)	●	–	–	–	–	–	–
Nomada amurensis Radoszkowski, 1876	–	–	○	–	–	–	–
Nomada comparata Cockerell, 1911	–	–	●	–	–	–	–
Nomada furva Panzer, 1798	–	–	●	–	–	–	–
Nomada issikii Yasumatsu, 1939	–	–	–	●	–	●	–
Nomada leucophthalma (Kirby, 1802)	–	–	○	–	–	–	–
Nomada maculifrons Smith, 1869	–	–	–	●	–	●	–
Nomada panzeri Lepeletier, 1841	–	–	–	●	–	●	–
Nomada roberjeotiana Panzer, 1799	●	–	●	–	–	–	–
Nomada ruficornis (Linnaeus, 1758)	–	–	–	●	●	●	–
Nomada sexfasciata Panzer, 1799	–	●	●	–	–	–	–
Nomada succincta Panzer, 1798	–	–	●	–	–	–	–
Pasites maculatus Jurine, 1807	○	–	–	–	–	–	–
Pasites esakii Popov et Yasumatsu, 1935	–	–	●	–	–	–	–
***Tetralonia chinensis* Smith, 1854	–	–	●	–	–	–	–
Tetralonia mitsukurii Cockerell, 1911	●	●	●	–	–	–	–
Thyreomelecta propinqua (Lieftinck, 1968)	–	–	●	–	–	–	–

Species	Regions						
	AM	KH	PR	SS	NS	SK	NK
Thyreomelecta sibirica (Radoszkowski, 1893)	●	–	–	–	–	–	–
Thyreus altaicus (Radoszkowski, 1893)	–	–	○	–	–	–	–
Thyreus decorus (Smith, 1852)	–	–	○	–	–	–	–
Thyreus scutellaris (Fabricius, 1781)	●	–	○	–	–	–	–

Remarks. Regions: AM – Amurskaya oblast, KH – Khabarovskii krai, NK – northern Kuril Islands (northwards island Urup), NS – northern Sakhalin (northwards 48° N), PR – Primorskii krai, SK – southern Kuril Islands (Habomai, Shikotan, Kunashir, Iturup, Urup), SS – southern Sakhalin (southwards 48° N). Symbols: (●) – recorded by examined material, (○) – recorded by reference data, (–) – absent, (*) – new record from the Russian Far East, (**) – new record from the Russia.

T a b l e 2

Number of the bee species in the regions of the southern part of the Russian Far East (SRFE)

Family	Regions							SRFE	
	AM	KH	PR	SS	NS	SK	NK	species	%
Colletidae	20	18	24	15	8	15	–	29	9.0
Andrenidae	31	33	68	20	5	13	1	74	23.0
Halictidae	19	19	58	11	2	16	–	60	18.5
Melittidae	1	4	8	–	–	–	–	9	2.8
Megachilidae	44	48	52	10	12	6	–	63	19.5
Apidae	37	34	62	26	22	17	11	88	27.2
Total:	151	155	271	81	48	67	12	323	100

Remarks. Abbreviations of the regions as in Table 1.

DISCUSSION

The bee fauna of the southern part of the Russian Far East (SRFE) includes three hundred and twenty three species in forty-four genera of six families (Table 2). The fauna of Primorskii krai consists of two hundred and seventy-one species in forty-one genera, which is 84 % of species number and 93 % of genera number distributed in the SRFE (Table 1, Fig. 1). The bee fauna of Amurskaya oblast and Khabarovskii krai represented by one hundred and fifty-one species in thirty-six genera and one hundred and fifty-five species in thirty-four genera correspondingly (Table 1, Fig. 1). The bee fauna of Sakhalin and Kuril Islands) consists of one hundred and fourteen species in nineteen genera. The distribution of most species in the islands is limited by the southern part: sixty-seven species in thirteen genera in the Southern Kurils and eighty-one species in nineteen genera in the Southern Sakhalin. The bee fauna of Northern Kurils and Northern Sakhalin is poorest and represented by twelve species in three genera and forty-eight species in fifteen genera correspondingly.

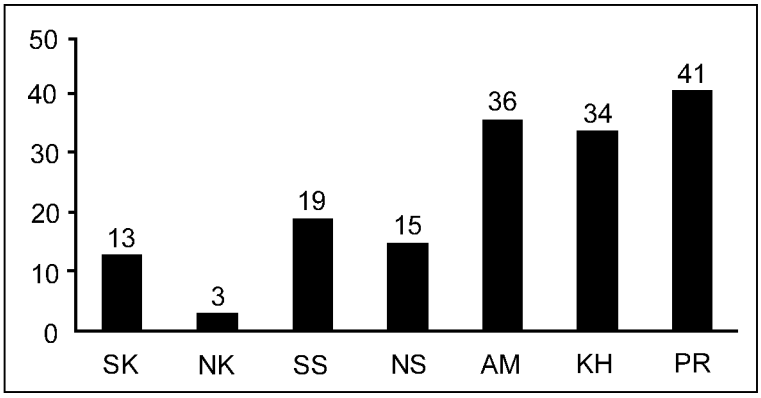

Fig. 1. Number of bee genera distributed in the southern part of the Russian Far East. Abbreviations of the regions as in Table 1.

ACKNOWLEDGEMENTS

My great thanks are due to Dr. Yu.A. Pesenko, and Yu.V. Astafurova (Zoological Institute, St. Petersburg) for the identification of Halictidae species, Dr. A.N. Kupianskaya (Institute of Biology and Soil Science, Vladivostok) for the identification of *Bombus* species. Dr. A.V. Antropov (Zoological Museum of the Moscow State University) and Dr. Yu.A. Pesenko, both are curators of bee collections, kindly loaned me by the material. Dr. S. Ikudome (Kagoshima Women's Junior College, Kagoshima, Japan), provided me by valuable exchange material on Japanese Colletidae species. Dr. S.A. Belokobylskij (Zoological Institute, St. Petersburg) kindly helped me during field survey and loaned specimens. My special thanks are due to Dr. A.S. Lelej, scientific adviser.

REFERENCES

Blüthgen, P. 1923. Beiträge zur Kenntnis der Bienengattung *Halictus* Latr. – Archiv für Naturschutz, ser. A, 17(5): 232-332.

Cockerell, T.D.A. 1924a. Descriptions and records of bees. XCIX. – The Annals and Magazine of Natural History, ser. 9, 13(77): 523-530.

Cockerell, T.D.A. 1924b. Descriptions and records of bees. CI. – The Annals and Magazine of Natural History, ser. 9, 14(79): 179-185.

Cockerell, T.D.A. 1924c. Descriptions and records of bees. CII. – The Annals and Magazine of Natural History, ser. 9, 14(81): 273-283.

Cockerell, T.D.A. 1924d. Descriptions and records of bees. CIII. – The Annals and Magazine of Natural History, ser. 9, 14(84): 577-585.

Cockerell, T.D.A. 1925a. Tertiary insects from Kudia, Maritime Province, Siberia. – Proceedings of the United States National Museum, 68(2605): 1-16.

Cockerell, T.D.A. 1925b. Some Halictine bees from the Maritime Province of Siberia. –Proceedings of the United States National Museum, 68(2607): 1-12.
Ebmer, A.W. 1995. Asiatische Halictidae, 3. Die Artengruppe de *Lasioglossum* carinate-*Evylaeus*. – Linzer biologische Beitrage, 27: 525-652.
Ebmer, A.W. 1996. Asiatische Halictidae, 5. Daten zur Aculeaten-Fauna der Ussuri-Region unter Berücksichtigung der angrenzenden Gebiete (Insecta: Hymenoptera: Apoidea: Halictidae: Halictinae). – Linzer biologische Beitrage, 28(1): 261-304.
Gussakovskij, V. 1932. Verzeichnis der von Herrn Dr. R. Malaise im Ussuri und Kamtschatka gesammelten aculeaten Hymenopteren. – Arkiv för Zoologi, 24A(10): 1-66.
Hirashima, Y. 1957. A tentative catalogue of the genus *Halictus* Latreille of Japan, and her adjacent territories (Hymenoptera, Halictidae). – Scientific Bulletin of the Faculty of Agriculture, Kyushu University, 16(1): 1-30.
Hirashima, Y. 1989. A check list of Japanese insects. Entomological Laboratory, Faculty of Agriculture, Kyushu University and Japan Wild Life Research Center, Fukuoka, xi + 1767 pp. [Apoidea – P. 679-691]. (In Japanese).
Ignatenko, E.V. 2004. [The fauna and biology of bees of the family Colletidae (Hymenoptera, Apoidea) in Amurskaya oblast]. – In: Storozhenko S.Yu., Lelej A.S., Kholin S.K. (eds.). A.I. Kurentsov's Annual Memorial Meetings. Fasc. 15. Vladivostok: Dalnauka. P. 108-115. (In Russian).
Ito, M. & Sakagami, S. 1980. The Bumblebee Fauna of the Kuril Islands (Hymenoptera: Apidae). – Low Temperature Science. Ser. B. N 38: 23-51.
Ito, M. & Kuranishi, R. 2000. Bumble Bees (Hymenoptera, Apidae) occurring in the Kamchatka Peninsula and the North Kuril Islands. – In: Komai, T. (ed.). Results of recent research on Northeast Asian Biota. Natural History Research. Special Issue, 7: 281-289.
Klitin, A.K. 1989. Redkie nasekomye Sakhalinskoi oblasti [Rare insects of the Sakhalin province]. – In: Amirkhanov, A.M. (ed.). [Rare and Conservation-Needing Animals. Contributions to the Red Data Book. A Collection of Scientific Papers]. Moscow: 134-137. (In Russian).
Konakov, N.N. 1956. Prifumoralnaya fauna yuzhnokurilskih vulkanov [The fauna around volcanoes in the southern Kuril Islands]. – Trudy Dalnevostochnogo Filiala Academii Nauk SSSR, Zool., Vladivostok, 3(6): 163-172. (In Russian).
Kôno, H. & Tamanuki, K. 1928. Insecten-Ausbeute aus Nord-Sachalin. – Insecta Matsumurana, 2: 128-129.
Krivolutskaya, G.O. 1973. [Entomofauna of the Kuril Islands. Principal features and origin]. Leningrad: Nauka, 315 p. (In Russian).
Krüger, E. 1956. Phaenoanalytische Studien an einigen Arten der Untergattung *Terrestribombus* O. Vogt (Hymenoptera, Bombidae). II Teil. – Tijdschrift voor entomologie, 99: 75-105.
Kupianskaya, A.N. 1992. [Family Apidae. Subfamily Bombinae]. – In: Chistyakov, Yu.A. (ed.). [Insects of the Khingan Nature Reserve. Pt 2]. Vladivostok: Dalnauka. P. 231-238. (In Russian).
Kupianskaya, A.N. 1995. [Family Apidae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 551-580. (In Russian).
Kuwayama, S. 1967. Insect fauna of the Southern Kurile Islands. Sapporo: Hoku-noukai. 225 p. (In Japanese).
Lelej, A.S. & Kupianskaya, A.N. 2000. The Bumble-bees (Hymenoptera, Apidae, Bombinae) of the Kuril Islands. – Far Eastern Entomologist, 95: 1-17.

Lelej, A.S., Storozhenko, S.Yu. & Kholin, S.K. 2002. [The insects (Insecta)]. – In: Storozhenko, S.Yu., Bogatov, V.V. & Lelej, A.S. (eds.). Flora and fauna of the Kuril Islands. Materials of the International Kuril Island Project. Vladivostok: Dalnauka. P. 96-108. (In Russian).

Matsumura, S. (1911)1912. Erster Beitrag zur Insekten-Fauna von Sachalin. – Journal of the College Agricultural of the Tohoku Imperial University, 4: 1-145 + 2 pls.

Michener, C. 2000. The Bees of the World. Baltimore, London: John Hopkins University Press. 913 p.

Morawitz, F. 1883. Neue russisch-asiatische *Bombus*-Arten. – Horae Societatis Entomologicae Rossicae, 17(3/4): 235-245.

Motschulsky, V. 1860 (1859). Catalogue des insectes rapportés des environs du fle. Amour, depius la Schilka jusqu'à Nikolaévsk, examinés et énumérés. – Bulletin de la Imperiale Society d'Naturalistes de Moscou, 32(4): 487-507.

Nylander, W. 1848. Adnotationes in expositionem monographicam apum borealium. – Notiser ur Sällskapets pro Fauna et Flora Fennica Förhandlingar, 1: 165-272.

Osytshnjuk, A.Z. 1982. Novyi vid roda *Andrena* F. (Hymenoptera, Apoidea, Andrenidae) iz Primorya [A new species of the genus *Andrena* F. (Hymenoptera, Apoidea, Andrenidae) from the Primorski territory]. – In: Lerh, P.A. (ed.). Hymenopterous Insects of the Far East. Vladivostok: 113-116. (In Russian).

Osytshnjuk, A.Z. 1984. Novyi palearkticheskii podrod i novyi vid roda *Andrena* (Hymenoptera, Andrenidae) [A new Palaearctic subgenus and a new species of the genus *Andrena* (Hymenoptera, Andrenidae)]. – Vestnik zoologii, 2: 23-30. (In Russian).

Osytshnjuk, A.Z. 1986. Novye dalnevostochnye vidy andren podroda *Euandrena* Hed. (Hymenoptera, Apoidea, Andrenidae) [New species of the subgenus *Euandrena* Hed. (Hymenoptera, Andrenidae, *Andrena* F.) from the Far East]. – In: Lerh, P.A. (ed.). Hymenopterous Insects of Eastern Siberia and Far East. Vladivostok: 111-116. (In Russian).

Osytshnjuk, A.Z. 1995. Family Andrenidae. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 489-527. (In Russian).

Osytshnjuk, A.Z., Marshakov, V.G., Romankova, T.G. & Levchinskaya, G.N. 1980. K izucheniyu pchelinyh (Apoidea) i royushchikh os (Shpecidae) v Lazovskom zapovednike [On the bees (Apoidea) and digger wasps (Sphecidae) in the Lazovskiy State Nature Reserve]. – Vestnik Kharkovskogo Universiteta, 1995: 76-78. (In Russian).

Osytshnjuk, A.Z. & Romankova T.G. 1995. [Family Colletidae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 480-489. (In Russian).

Panfilov, D.V. 1951. Schmeli podroda *Cullumanobombus* Vogt (Hymenoptera, Apidae) [Bumble bees of the subgenus *Cullumanobombus* Vogt (Hymenoptera, Apidae)]. – Trudy Vsesoyuznogo Entomologicheskogo Obshchestva, 43: 115-128. (In Russian).

Panfilov, D.V. 1956. Materialy po sistematike schmelei (Hymenoptera, Bombinae) s opisaniem novykh form [Contributions to the taxonomy of bumble bees (Hymenoptera, Bombinae) with description of new forms]. – Zoologicheskii zhurnal, 35(9): 1325-1334. (In Russian).

Pesenko, Yu.A. 1986. Annotirovannaya opredelitelnaya tablitsa Palearkticheskih vidov roda *Lasioglossum* sensu stricto (Hymenoptera, Halictidae) po samkam, s opisaniem novykh podrodov i vidov [An annotated key to females of the Palaearctic species of the genus *Lasioglossum* sensu stricto (Hymenoptera, Halictidae), with descriptions of new subgenera and species]. – Trudy Zoologicheskogo instituta AN SSSR, 159: 113-151. (In Russian).

Pesenko, Yu.A. 1998. Novye i maloizvestnye pchely roda *Dufourea* Lepeletier (Hymenoptera, Halictidae) iz Palearkticheskoi oblasti [New and little known bees of the genus *Dufourea* Lepeletier (Hymenoptera, Halictidae) from Palaearctic region]. – Entomologicheskoe obozrenie, 72(3): 670-686. (In Russian).

Pesenko, Yu.A., Banaszak, J., Radchenko, V.G. & Cierzniak, T. 2000. Bees of the family Halictidae (excluding *Sphecodes*) of Poland: taxonomy, ecology, bionomics. Bydgoszcz: Pedagogical University, IX + 348 p.

Pietsch, T.W., Bogatov, V.V., Amaoka, K., Zhuravlev, Yu.N., Barkalov, V.Yu., Gage, S., Takahashi, H., Lelej, A.S., Storozhenko, S.Yu., Minakawa, N., Bennet, D.J., Anderson, T.R., Ôhara, M., Prozorova, L.A., Kuwahara, Y., Kholin, S.K., Yabe, M, Stevenson, D.E. & MacDonald, E.L. 2003. Biodiversity and biogeography of the islands of the Kuril Archipelago. – Journal of Biogeography, 30: 1297-1310.

Popov, V.V. 1936. A new bee of the genus *Ctenoplectra* Sm. (Hymenoptera, Apoidea). – Proceedings of the Royal Entomological Society of London, 5(4): 78-80.

Popov, V.V. 1941. Notes on *Dianthidium sibiricum* (Eversm.) and a new species of *Stelis* Panz. (Hym. Apoidea). – Entomologisk tidskrift, 62(3/4): 222-224.

Popov, V.V. 1958. Osobennosti sopryazhennoi evolyutsii *Macropis*, *Epeoloides* (Hymenoptera, Apoidea) i *Lysimachia* (Primulaceae) [On the co-evolution of *Macropis*, *Epeoloides* (Hymenoptera, Apoidea) and *Lysimachia* (Primulaceae)]. – Entomologicheskoe obozrenie, 37(3): 499-519. (In Russian).

Popov, V.V. 1959. Novye vostochnoaziatskie vidy rodov *Dufourea* i *Halictoides* (Hymenoptera, Halictidae) [New species of the genera *Dufourea* and Halictoides from Eastern Asia (Hymenoptera, Halictidae)]. – Entomologicheskoe obozrenie, 38(1): 225-237. (In Russian).

Proshchalykin, M.Yu. 2003. Fauna pchel (Hymenoptera, Apoidea) Srednego i Nizhnego Priamurya. [Bee fauna (Hymenoptera, Apoidea) of Middle and Lower Amur region]. – Euroasian Entomological Journal, 2(1): 25-29. (In Russian).

Proshchalykin, M.Yu. 2003. The bees (Hymenoptera, Apoidea) of the Kuril Islands. – Far Eastern Entomologist, 132: 1-21.

Proshchalykin, M.Yu. & Lelej, A.S. 2004a. New and little known bees (Hymenoptera: Colletidae, Apidae) from the Russian Far East. – Far Eastern Entomologist, 136: 1-10.

Proshchalykin, M.Yu. & Lelej, A.S. 2004b. Bees of the subgenus *Allocoelioxys* Tkalců of the genus *Coelioxys* Latreille (Hymenoptera: Apoidea: Megachilidae) from the Russian Far East. – Zootaxa, 517: 1-6.

Proshchalykin, M.Yu., Lelej, A.S. & Kupianskaya, A.N. Fauna pchel (Hymenoptera, Apoidea) ostrova Sakhalin [Bee fauna (Hymenoptera, Apoidea) of Sakhalin Island]. – In: Storozhenko, S.Yu., Bogatov, V.V., Lelej, A.S. & Makarchenko, E.A. (eds.). [Flora and fauna of Sakhalin Island. Materials of the International Sakhalin Island Project. Part 1]. Vladivostok: Dalnauka. P. 154-192. (In Russian).

Radoszkowski, O. (1859)1860. Sur quelques Hyménoptères nouveaux ou peu connus de la collection du Musée de l'Académie des sciences de St.-Pétersbourg. – Bulletin de la Imperiale Society d'Naturalistes de Moscou, 32(4): 479-486.

Radoszkowski, O. 1876. Matériaux pour servir à une faune hyménoptèrologique de la Russie. (Suite). – Horae Societatis Entomologicae Rossicae, 12(1): 82-110.

Radoszkowski, O. 1877. Essai d'une nouvelle méthode pour faciliter la détermination des espèces appartenant au genre *Bombus*. – Bulletin de la Imperiale Society d'Naturalistes de Moscou, 52(2/4): 169-219.

Radoszkowski, O. 1887. Révision des armures copulatrices de la famille *Epeolus*. – Horae Societatis Entomologicae Rossicae, 21(3/4): 294-296.

Radoszkowski, O. 1888. Études hyménoptèrologiques. I. Revision des armures copulatrices des mâles. II. Description de nouvelles espèces russes. – Horae Societatis Entomologicae Rossicae, 22(3/4): 315-337.

Radoszkowski, O. 1891a. Révision des armures copulatrices des mâles des genres *Cilissa* et *Pseudocilissa*. – Horae Societatis Entomologicae Rossicae, 25(1/2): 236-243.

Radoszkowski, O. 1891b. Révision des armures copulatrices des mâles des genre *Colletes*. – Horae Societatis Entomologicae Rossicae, 25(1/2): 249-260.

Rightmyer, M.G. & Engel, M.S. 2003. A new Palearctic genus of Melectine bees (Hymenoptera: Apidae). – American Museum Novitates, 3392: 1-22.

Romankova, T.G. 1983a. Pchelinye roda *Megachile* Latr. (Hymenoptera, Apoidea, Megachilidae) fauny Sibiri i Dalnego Vostoka SSSR [Bees of the genus *Megachile* Latr. (Hymenoptera, Apoidea, Megachilidae) from Siberia and the Far East of the USSR]. – In: Soboleva, R.G. (ed.). [Taxonomy and Ecological-Faunal Survey of Some Insect Orders in the Far East]. Vladivostok: 141-147. (In Russian).

Romankova, T.G. 1983b. Novyi vid pchely roda *Megachile* (Hymenoptera, Apoidea, Megachilidae) iz Primorskogo kraya [A new species of the genus *Megachile* (Hymenoptera, Apoidea, Megachilidae) from the Primorski territory]. – Zoologicheskii zhurnal, 62: 1272-1273. (In Russian).

Romankova, T.G. 1984. Pchelinye poda *Osmia* Panz. (Hymenoptera, Megachilidae) fauny Dalnego Vostoka [Bees of the genus *Osmia* Panz. (Hymenoptera, Megachilidae) in the fauna of the Far East]. – Entomologicheskoe obozrenie, 63(2): 538-364. (In Russian).

Romankova, T.G. 1985a. Novyi podvid pchely *Formicapis robusta* (Hymenoptera, Megachilidae) iz Primorskogo kraya [A new subspecies of *Formicapis robusta* (Hymenoptera, Megachilidae) from the Primorski territory]. – Vestnik zoologii, 6: 66-68. (In Russian).

Romankova, T.G. 1985b. Novyi vid pchely roda *Osmia* (Hymenoptera, Megachilidae) s Dalnego Vostoka [A new species of the bee genus *Osmia* (Hymenoptera, Megachilidae) from the Far East]. – Zoologicheskii zhurnal, 64(6): 942-944. (In Russian).

Romankova, T.G. 1988. Novyi rod pchelinykh triby Anthidiini (Hymenoptera, Apoidea, Megachilidae) s Dalnego Vostoka [A new genus of the tribe Anthidiini (Hymenoptera, Apoidea, Megachilidae) from the Far East]. – Vestnik zoologii, 4: 25-30. (In Russian).

Romankova, T.G. 1994. Novye dannye po faune pchelinykh Sibiri I Dalnego Vostoka (Hymenoptera, Apoidea, Megachilidae) [New data on the bee fauna of Siberia and the Far East (Hymenoptera, Apoidea, Megachilidae). – In: Kotenko, A. G. (ed.). [Hymenopterous Insects of Siberia and the Far East]. Kiev, 3: 119-128. (In Russian).

Romankova, T.G. 1995a. [Family Melittidae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 528-529. (In Russian).

Romankova, T.G. 1995b. [Family Ctenoplectridae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 529. (In Russian).

Romankova, T.G. 1995c. [Family Megachilidae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 530-547. (In Russian).

Romankova, T.G. 1995d. [Family Anthophoridae]. – In: Lelej, A.S., Kupianskaya, A.N., Kurzenko, N.V. & Nemkov, P.G. (eds.). Opredelitel nasekomyh Dalnego Vostoka Rossii [Key to the insects of Russian Far East]. Vol. 4. Neuropteroidea, Mecoptera, Hymenoptera. Pt. 1. St. Petersburg: Nauka. P. 547-551. (In Russian).

Romankova, T.G. 2003. Additional data on the bee fauna (Hymenoptera, Apoidea: Megachilidae, Apidae) of Siberia and the Russian Far East. – Far Eastern Entomologist, 129: 1-6.

Sakagami, S.F. 1950. Zwei Schmarotzer-Hummelarten von den Kurilen-Inseln. – Insecta Matsumurana, 17(2): 80.

Sakagami, S.F. 1954. Ueber ienige Hummelarten von Hokkaido und Kurilen Inseln (Systematische Studien der Hummeln IV). – Kontyû, 21: 84-92.

Sakagami, S.F. & Ishikawa, R. 1969. Note Preliminare sur la Repartition Geographiquedes Bourdons japonais, avec Description et Remarques Formes Nouvelles ou peu Connues. – Journal of the Faculty of Science, Hokkaido University, ser.6, 17: 152-196.

Skorikov, A.S. (1909)1910. Novye formy schmelei (Hymenoptera, Bombidae). (Predvaritelnye diagnozy). III [New forms of bumble bees (Hymenoptera, Bombidae). (Preliminary diagnoses). III]. – Russkoe Entomologicheskoe Obozrenie, 9(4): 409-413. (In Russian).

Skorikov, A.S. 1914. Novye formy schmelei (Hymenoptera, Bombidae). VI [New forms of bumble bees (Hymenoptera, Bombidae). VI]. – Russkoe Entomologicheskoe Obozrenie, 14(1): 119-129. (In Russian).

Skorikov, A.S. (1914)1915. K faune schmelei yuzhnoi chasti Primorskoi oblasti [A contribution to the fauna of bumble bees in the southern part of the Primorski territory]. – Russkoe Entomologicheskoe Obozrenie, 14(4): 398-407. (In Russian).

Skorikov, A.S. 1933. Zur Hummelfauna Japans und seiner Nachbarländer. – Mushi, 6(2): 53-65.

Tadauchi, O. & Xu, H.-I. 1999. Subgeneric Positions and Redescriptions of Cockerell's Siberian *Andrena* Preserved in the British Museum (Natural History) (Hymenoptera, Andrenidae). – Esakia, 39: 13-30.

Vachal, M.J. 1902. *Halictus* nouveaux ou litigiex de la collection Radoszkovski (Hymenoptera, Apidae). – Revue d'Entomologie de l'Russie, 2(4): 225-231.

Vogt, O. 1911. Studien über das Artproblem. Mitt. 1. Über das Variiren der Hummeln. T. 2. – Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin: 31-74.

Wnukowsky, W. 1929. Einige faunistische Angaben über die Insecten Sibiriens und des Ussuri-Gebietes. – Zoologischer Anzeiger, 83(9/10): 212-220.

Yasumatsu, K. 1938a. On the genus *Megachile* of Saghalien. – Kontyû, 12(5): 161-162. (In Japanese).

Yasumatsu, K. 1939a. Three new or unrecorded Apoidea from Saghalien (Hymenoptera). – Insecta Matsumurana, 13(2-3): 66-70.

Yasumatsu, K. 1939b. Einige *Nomada*-Arten aus den Kurilen und Sachalin (Zweiter Beitrag zur Kenntnis der *Nomada*-Arten Japans) (Hym.: Nomadidae). – Transactions Kansai Entomological Society, 9(2): 5-7.

Yasumatsu, K.A. (1940)1941. List of the Far Eastern species of the genus *Andrena* (Hym., Apoidea). – Peking Natural History Bulletin, 15(4): 273-284.

FAR EASTERN ENTOMOLOGIST
2004

CONTENTS

	N of issue	Pages	Date of issue
E. V. Mikhaljova and Yu. M. Marusik. New data on taxonomy and fauna of the millipedes (Diplopoda) from the Russian Far East, Siberia and Mongolia	133	1-12	Jan.
Yu. G. Verves. A review of the «*Onesia*» generic group (Diptera: Calliphoridae). Part 1. The species of the genera *Polleniopsis* Townsend, *Tainanina* Villeneuve and *Tricycleopsis* Villeneuve	134	1-12	Feb.
Yu. G. Verves. A review of the «*Onesia*» generic group (Diptera: Calliphoridae). Part 2. The species of genus *Bellardia* Robineau-Desvoidy	135	1-23	Mar.
S. Yu. Storozhenko. *Zubovskya mongolica* Storozhenko, 1986 is newly recorded species of grasshoppers (Orthoptera, Acrididae) from Russia	135	24	Mar.
M. Yu. Proshchalykin and A. S. Lelej. New and little known bees (Hymenoptera: Colletidae, Apidae) from the Russian Far East	136	1-10	Apr.
V. E. Pilipenko and V. S. Sidorenko. International Biodiversity observation year (IBOY): crane flies (Diptera: Tipulidae, Cylindrotomidae) of the forest ecosystems of Primorye	136	11-12	Apr.
Z. A. Fedotova and V. S. Sidorenko. New species of gall midges of the genus *Karshomyia* Felt, 1908 (Diptera, Cecidomyidae) and related new genera from the Russian Far East	137	1-32	May
Yu. G. Verves. A review of the «*Onesia*» generic group (Diptera: Calliphoridae). Part 3. The species of genus *Onesia* Robineau-Desvoidy, 1830	138	1-19	June
V. S. Sidorenko. International Biodiversity observation year (IBOY): mosquitoes (Diptera, culicidae) of the forest ecosystems of Primorye	138	19-20	June
S. V. Triapitsyn and V. V. Berezovskiy. Review of the genus *Anargus* Haliday, 1833 (Hymenoptera: Mymaridae) in Russia, with notes on some extralimital species	139	1-36	July
V. A. Korneyev. A new species and new synonymy of fruit flies (Diptera, Tephritidae) from Palaearctic Region	140	1-16	Aug.
S. V. Triapitsyn and V. V. Berezovskiy. Review of the genus Litus Haliday, 1833 in the Holarctic and Oriental Regions, with notes on the Palaearctic species of Arescon Walker, 1846 (Hymenoptera: Mymaridae)	141	1-24	Sep.

	N of issue	Pages	Date of issue
S. Yu. Storozhenko. A new genus of the subfamily Orthacridinae (Orthoptera: Pyrgomorphidae) from Vietnam	142	1-4	Nov.
M. Yu. Proshchalykin. A check list of the bees (Hymenoptera, Apoidea) of the southern part of the Russian Far East	143	1-17	Dec.

INSTRUCTIONS FOR AUTHORS

Far Eastern Entomologist is journal publishing original papers on entomology, including taxonomy, systematic, morphology phylogeny, as well biology, ecology and biogeography. Reviews, comprehensive or revisionary studies of the insects thought other East Asia are especially welcome and will be given first priority for publication. Faunistic papers based on materials from the Russian Far East may be submitted also. Submission of a manuscript to Far Eastern Entomologist implies that the report is original, unpublished and is not being considered for publication elsewhere. Papers in languages other than English are not accepted. Articles should be concise and the number of tables and figures limited to what is strictly necessary. Manuscripts should not exceed 16 pages (including figures and tables); additional printed pages are at the expense of the author(s).

Manuscripts should be prepared in accordance with the style and format of recent issues. (Current issues of Far Eastern Entomologist should be checked for style and format). An abstract should be followed by Key Words (2-7) and include no more than 100 words totally. Cite the author and year of publication of genera and species on first mention. The names of genera and species should be underlined. New description must confirm with the current edition of the Code of Zoological Nomenclature. If a new taxon is described, the institution or museum where the type material is deposited must be indicated. The description of new taxa on types deposited in personal collection will not be accepted.

References in the text, as follows: “Bey-Bienko (1932) states...” or “Bey-Bienko (1932: 25) states...” when the author wishes to refer to a specific page, or “(Bey-Bienko, 1932)” as the author of a statement. Joint authors must be connected by “&” in both the text and the references. When there are more then two authors use “et al.,” (Bey-Bienko et al., 1932) in the text. If journal names are not spelled out completely they should follow a consistent and accepted format.

Illustration should be numbered in a single series throughout in Arabic numerals. Tables and legends must be typed on separate sheets and should be self-explanatory.

The following transliterations of Russian alphabet should be used:

А - a	Е - e	К - k	П - p	Ф - f	Щ - shch
Б - b	Ж - zh	Л - l	Р - r	Х - kh	Ы - y
В - v	З - z	М - m	С - s	Ц - ts	Э - e
Г - g	И - i	Н - n	Т - t	Ч - ch	Ю - yu
Д - d	Й - i	О - o	У - u	Ш - sh	Я - ya

The editors reserve the right to make minor textual corrections that do not alter the author's meaning. Twenty reprints of each article are provided free of charge to the first author. An order form and prices for additional reprints w ill be sent with the proofs.

Inquiries regarding content, subscription, manuscripts and copies should be sent to editor: S.Yu.Storozhenko, Institute of Biology and Soil Science, Vladivostok, 690022, Russia.

© **Far Eastern entomologist (Far East. entomol.)** Journal published since October 1994.
Editor-in-Chief: S.Yu. Storozhenko
Editorial Board: A.S. Lelej, V.S. Sidorenko, N.V. Kurzenko
Address: Institute of Biology and Soil Science, Far East Branch of Russian Academy of Sciences, 690022, Vladivostok-22, Russia.
E-mail: entomol@ibss.dvo.ru FAX: (4232) 310 193