

<https://doi.org/10.25221/fee.337.2>

<http://urn:lsid:zoobank.org:pub:22E183B4-2E79-4DEA-921E-41131CDA4873>

**NEW RECORDS TO THE BEE FAUNA OF RUSSIA (HYMENOPTERA,
APIFORMES)**

**M. Yu. Proshchalykin¹⁾, Yu. A. Astafurova²⁾, M. Schwarz³⁾,
T. V. Levchenko⁴⁾, A. M. Byvaltsev⁵⁾**

1) Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia. E-mail: proshchalykin@biosoil.ru

2) Zoological Institute, Russian Academy of Sciences, St. Petersburg, 199034, Russia. E-mail: Yulia.Astafurova@zin.ru

3) A-4052, Ansfelden, Austria. E-mail: maximilian.schwarz@liwest.at

4) State Darwin Museum, Moscow, 117292, Russia. E-mail: antimofa1@yandex.ru

5) Novosibirsk State University, Novosibirsk, 630090, Russia. E-mail: ByvAM@yandex.ru

Summary. An annotated list of 20 bee species from seven genera of four families is given. All of them are newly recorded from Russia.

Key words: Colletidae, Halictidae, Andrenidae, Apidae, biodiversity, fauna, Palaearctic Region.

М. Ю. Прощалькин, Ю. В. Астафурова, М. Шварц, Т. В. Левченко, А. М. Бывальцев. Новые для фауны России находки пчел (Hymenoptera, Apiformes) // Дальневосточный энтомолог. 2017. N 337. С. 17-24.

Резюме. Приведен аннотированный список новых для фауны России 20 видов пчел из 7 родов и 4 семейств.

INTRODUCTION

Russia is a country that stretches over a vast expanse of Eurasia between the Baltic Sea in the west and the Pacific Ocean in the east. Russia comprises 85 administrative units covering 17.1 million km². About 1200 species of bees from 65 genera and six families are known from Russia (Proshchalykin & Astafurova, 2017).

This paper is based on the vast material collected in 2015 in the southeast of the European part of Russia and on the collections of the Zoological Institute (St. Petersburg), Novosibirsk State University (Novosibirsk) and Crimean Federal University (Simferopol).

Acronyms for the collections where specimens are deposited as follows: CFUS – Taurida Academy of the V.I. Vernadsky Crimean Federal University, Simferopol, Russia; FSCV – Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok, Russia; HNHM – Hungarian Natural History Museum, Budapest, Hungary; MCSN – Museo Civico di Storia Naturale, Genova, Italy; MNHU – Museum für Naturkunde Berlin, Leibniz-Institut für Evolutions- und Biodiversitätsforschung, Berlin, Germany; NHML – Natural History Museum, London, UK; NMW – Naturhistorisches Museum, Vienna, Austria; NSU – Novosibirsk State

University, Novosibirsk, Russia; OOLM – Oberösterreichisches Landesmuseum, Linz, Austria; PCMS – private collection of M. Schwarz, Ansfelden, Austria; SDEI – Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany; SMF – Senckenberg Museum für Naturkunde, Frankfurt on Main, Germany; ZISP – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia. New records are asterisked (*).

LIST OF SPECIES

Family Colletidae

Colletes hederæ Schmidt et Westrich, 1993

Colletes hederæ Schmidt & Westrich, 1993: 91–92, ♀, ♂ (holotype: ♀, Croatia, Rovinj, Istrien, 16.IX.1977, leg. Schmidt, SMF).

MATERIAL EXAMINED. **Russia:** Crimea Republic, Tarkhankut Peninsula., Dzhangul' 2.X.2016 (S. Ivanov, A. Fateryga), 3♀, 5♂ [CFUS].

DISTRIBUTION. *Russia (Crimea Republic); Europe (Spain, Great Britain, France, Belgium, Nederland, Germany, Austria, Italy, Serbia, Croatia, Greece, Bosnia, Montenegro, Serbia, Slovenia) (Proshchalykin, 2017).

Hylaeus (Hylaeus) scutellaris Morawitz, 1874

Hylaeus scutellaris Morawitz, 1874: 176, ♀ (syntypes: ♀♀, Azerbaijan, Bacu, ZISP, probably lost, see Dathe & Proshchalykin, 2017: 38).

MATERIAL EXAMINED. **Russia:** Dagestan Republic, 9 km SSE Kochubei, 21-22.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 2♀, 1♂ [FSCV/SDEI]; 12 km SSW Kizlyar, 22-23.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 1♂ [FSCV]; Astrakhan Province, 13 km S Liman, 24-26.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 2♂ [FSCV]; Kalmykia Republic, 17 km SWW Artezian, Kuma River, 18-21.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 2♂ [FSCV].

DISTRIBUTION. *Russia (Dagestan Republic, Astrakhan Province, Kalmykia Republic); Azerbaijan, Afghanistan, Turkmenistan, Uzbekistan (Dathe & Proshchalykin, 2017).

Hylaeus (Prosopis) hyrcanius Dathe, 1980

Hylaeus hyrcanius Dathe, 1980: 79–80, ♀, ♂ (holotype: ♂, Iran, Kaspi-See-Niederung, Sari, 130 m, 14.VII.1977, leg. A.W. Ebmer, MNHU).

MATERIAL EXAMINED. **Russia:** Dagestan Republic, 12 km SSW Kizlyar, 22-23.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 3♀, 5♂ [FSCV/ZISP/SDEI]; Astrakhan Province, 13 km S Liman, 24-26.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 1♂ [FSCV]; Kalmykia Republic, 17 km SWW Artezian, Kuma River, 18-21.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 1♂ [FSCV]; Krasnodar Territory, 3 km S Lazorevskoe, 20.VIII.1952 (V. Rudolf), 2♀ [ZISP].

DISTRIBUTION. *Russia (Dagestan Republic, Astrakhan Province, Kalmykia Republic, Krasnodar Territory); Azerbaijan, Iran (Dathe, 1980).

Family Andrenidae

***Andrena (Nobandrena) fratercula* Warncke, 1975**

Andrena fratercula Warncke, 1975: 94, ♀ (holotype: ♀, Turkey, Horasan/Arastalm, 14.VI.1973, leg. K. Warncke, OOLM).

MATERIAL EXAMINED. **Russia**: Dagestan Republic, Sergokala, 31.V.1972 (A. Osytshnjuk), 3♀ [ZISP].

DISTRIBUTION. *Russia (Dagestan Republic), Turkey (Warncke, 1975).

Family Halictidae

***Lasioglossum (Evyllaes) pallidum* (Radoszkowski, 1888)**

Nomioides pallida Radoszkowski, 1888: 341, ♀ (syntypes: ♀♀, Turkmenistan, Ashkhabad, IZKP).

MATERIAL EXAMINED. **Russia**: Volgograd Province, 18 km NNE Kalach on Don, 10-13.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 1♀ [ZISP].

DISTRIBUTION. *Russia (Volgograd Province); Turkmenistan, Afghanistan (Ebmer, 2008).

***Pseudapis anatolica* (Warncke, 1976)**

Nomia anatolica Warncke, 1976: 95, 97, 99, 114, ♀, ♂ (holotype: ♂, Turkey, Igdyr, OOLM).

MATERIAL EXAMINED. **Russia**: Dagestan Republic, 9 km SSE Kochubei, 21-22.VII.2015 (M. Proshchalykin, V. Loktionov, M. Mokrousov, S. Belokobylskij), 2♂ [ZISP].

DISTRIBUTION. *Russia (Dagestan Republic); Armenia, Turkey (Astafurova, 2014).

Family Apidae

***Bombus (Megabombus) gerstaeckeri* Morawitz, 1881**

Bombus opulentus Gerstaecker, 1869: 319–320, ♀ (syntypes: ♀♀, Austria, Engadin), nom. praeocc., nec Smith, 1861: 153.

Bombus gerstaeckeri Morawitz, 1881: 242, ♂, replacement name for *B. opulentus* Gerstaecker, 1869.

MATERIAL EXAMINED. **Russia**: Karachaevo-Cherkesk Republic, Teberda, VII.[19]15 (Bogdanov-Kat'kov), 1♂ [ZISP].

DISTRIBUTION. *Russia (Karachaevo-Cherkesk Republic); Spain, Andorra, France, Germany, Switzerland, Italy, Austria, Slovenia, Romania, Poland, Ukraine, Georgia (Ras-mont & Iserbyt, 2013).

***Bombus (Pyrobombus) biroi* Vogt, 1911**

Bombus biroi Vogt, 1911: 49, 51–52, ♀, ♂ (lectotype: ♀, designated by Tkalců, 1968: 195, “Alai mont. 1905 Korb”, Kazakhstan, HNHM).

MATERIAL EXAMINED. **Russia:** Altai Republic, Kurai Ridge: S slope, 25.VI 1977, 1 ♀ (NSU); N slope, 25.VI 1977, 3 ♀ (NSU); steppe behind the Kuray Ridge, 27-28.VI 1977, 4 ♀ (NSU); Shebalino, 30.VI 1977, 2 ♀ (NSU).

DISTRIBUTION. *Russia (Altai Republic); Afghanistan, Pakistan, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, India (Williams, 1991).

***Nomada arrogans* Schmiedeknecht, 1882**

Nomada arrogans Schmiedeknecht, 1882: 95–96, ♀ (holotype: ♀, Greece, Attica, MNHU).

MATERIAL EXAMINED. **Russia:** Crimea Republic, Simferopol, 15.V 1903 (Kokuev), 1 ♀ [ZISP].

DISTRIBUTION. *Russia (Crimea Republic); Europe (Poland, Romania, Greece, Kherson Province of the Ukraine), Turkey, Israel, Tadjikistan (Schwarz & Gusenleitner, 2015).

***Nomada atroscutellaris* Strand, 1921**

Nomada atroscutellaris Strand, 1921: 300–301, ♀ (holotype: ♀, Germany, Hessen, Gross-Karben, MNHU).

MATERIAL EXAMINED. **Russia:** Kursk Province, Kursk, 8.V 1907 (S. Malyshev), 1 ♂ [ZISP]; Volgograd Province, Sarepta [=Volgograd] (A. Becker), 3 ♀ [ZISP]; Crimea Republic, Sevastopol, Mikenzevy Hills, 9.V 1908 (W. Pliginski), 1 ♀ [ZISP].

DISTRIBUTION. *Russia (Kursk and Volgograd Provinces, Crimea Republic); Europe (Italy, Switzerland, Germany, Austria, Hungary, Poland, Slovakia, Romania), Turkey (Celary, 1995).

***Nomada blepharipes* Schmiedeknecht, 1882.**

Nomada blepharipes Schmiedeknecht, 1882: 127–128, ♂ (lectotype: ♂, France, Bordeaux, NMW).

MATERIAL EXAMINED. **Russia:** Orenburg Province, Orenburg, 18.VII 1926 (P. Vorontsovsky), 1 ♀ [ZISP]; 28.VIII 1926 (P. Vorontsovsky), 1 ♂ [ZISP]; 9 VIII 1928 (P. Vorontsovsky), 1 ♂ [ZISP]; Irkutsk Province, Irkutsk (V. Yakovlev), 1 ♂ [ZISP].

DISTRIBUTION. *Russia (Orenburg and Irkutsk Provinces); Europe (Spain, Italy, France, Austria, Hungary, Romania, Greece), Turkey, Kazakhstan (Pagliano, 1994; Ban-Calefariu, 2006; Mitai & Tadauchi, 2008; Grace, 2010; Gusenleitner & Schwarz, 2015).

***Nomada diacantha* Schwarz, 1981**

Nomada diacantha Schwarz, 1981: 401, ♀ (holotype: ♀, Bulgaria, Arcutino, PCMS).

MATERIAL EXAMINED. **Russia:** Rostov Province, Proletarsky, 23.V 1967 (Yu. Pesenko), 1 ♂ [ZISP]; Zimovniki, 4.VI 1967 (Yu. Pesenko), 1 ♂ [ZISP]; Orlovsky, 1.VI 1967 (Yu. Pesenko), 1 ♂ [ZISP]; Dagestan Republic, Derbent, 1872 (Faust), 1 ♂ [ZISP]; Crimea Republic, Staryi Krym, 13.VII 1904 (D. Glasunov), 1 ♂ [ZISP].

DISTRIBUTION. *Russia (Rostov Province, Dagestan Republic, Crimea Republic), Europe (Bulgaria, Greece), Turkey, Syria (Schwarz, 1981).

***Nomada furvoides* Stoechert, 1944**

Nomada furvoides Stoechert, 1944: 119, ♀ (holotype: ♀, Austria, Vienna, NMW).

MATERIAL EXAMINED. **Russia:** Rostov Province, Rostov, 28.IV 1971 (Yu. Pesenko), 1♂ [ZISP]; Bagayievsky, 8.V 1970 (Yu. Pesenko), 1♀ [ZISP].

DISTRIBUTION. *Russia (Rostov Province); Europe (Austria, Slovenia, Romania, Greece), Turkey (Ban-Calefariu, 2006; Grace, 2010).

***Nomada laticrus* Mocsáry, 1883**

Nomada laticrus Mocsáry, 1883: 66, ♂ (holotype: Turkey, Marmara region, Brussam [=Bursa]), HNHM).

MATERIAL EXAMINED. **Russia:** Volgograd Province, Sarepta [=Volgograd] (A. Becker), 1♀ [ZISP].

DISTRIBUTION. *Russia (Volgograd Province); Turkey (Grace, 2010).

***Nomada mocsaryi* Schmiedeknecht, 1882**

Nomada mocsaryi Schmiedeknecht, 1882: 133–134, ♀ (lectotype: ♀, Rumania, Mehadia, NMW).

MATERIAL EXAMINED. **Russia:** Crimea Republic, Sevastopol, Delagard's farm, 4.VI 1912 (W. Pliginsky), 1♀ [ZISP].

DISTRIBUTION. *Russia (Crimea Republic); Europe (Hungary, Romania, Greece), Turkey, Iran (Grace, 2010; Gusenleitner & Schwarz, 2015).

***Nomada oculata* Friese, 1821**

Nomada oculata Friese, 1821: 257, ♀ (lectotype: ♀, Turkey, Ankara, MNHU).

MATERIAL EXAMINED. **Russia:** Dagestan Republic, Derbent, 30.VI 1930 (E. Pesotskaya), 1♂ [ZISP]; Crimea Republic, Sevastopol, 5.V 1913 (W. Pliginsky), 1♀ [ZISP].

DISTRIBUTION. *Russia (Dagestan Republic, Crimea Republic), Europe (Greece), Azerbaijan, Turkey, Syria, Israel (Grace, 2010; Aliyev, 2011).

***Nomada pygidialis* Schwarz, 1981**

Nomada pygidialis Schwarz, 1981: 362, ♀ (holotype: ♀, Greece, Achaia, Kalavrita, PCMS).

MATERIAL EXAMINED. **Russia:** Rostov Province, Persiyanovka, 29.V 1970 (Yu. Pesenko), 3♀ [ZISP]; idem, 9–13.VI 1971 (Yu. Pesenko), 2♀, 9♂ [ZISP]; Orlovsky, 31.V 1967 (Yu. Pesenko), 1♀ [ZISP]; Bagataevskiy, 20.V 1970 (Yu. Pesenko), 1♂ [ZISP].

DISTRIBUTION. *Russia (Rostov Province); Europe (Hungaria, Romania, Croatia, Bulgaria, Greece); Georgia, Turkey (Schwarz, 1981).

***Nomada stoeckherti* Pittioni, 1951**

Nomada stoeckherti Pittioni, 1951: 269, ♀ (holotype: ♀, Austria, Vienna, NHML).

MATERIAL EXAMINED. **Russia:** Rostov Province, Rostov, 3.VII 1967 (Yu. Pesenko), 3♂ [ZISP]; Persiyanovka, 19.VII 1971 (Yu. Pesenko), 1♂ [ZISP]; Crimea Republic, Staryi Krym, 8.VII 1904 (D. Glasunov), 1♀ [ZISP].

DISTRIBUTION. *Russia (Rostov Province, Crimea Republic); Europe (Austria, Slovakia), Afghanistan (Alexander & Schwarz, 1994; Scheuchl, 2008).

***Nomada tridentirostris* Dours, 1873**

Nomada tridentirostris Dours, 1873: 309–310, ♂ (lectotype: ♂, Algeria, MCSN).

MATERIAL EXAMINED. **Russia:** Krasnodar Territory, Lazarevskoe, 15.VII 19[?]? (Lisenko), 1♀ [ZISP].

DISTRIBUTION. *Russia (Krasnodar Territory); Europe (Italy, France, Austria, Hungary, Slovakia, Greece, N Africa (Algeria), Turkey, Israel (Alexander & Schwarz, 1994; Scheuchl, 2008; Grace, 2010).

***Nomada yarrowi* Schwarz, 1981**

Nomada yarrowi Schwarz, 1981: 389–395, ♀ (holotype: ♀, Turkey, Anatolia, Konya, PCMS).

MATERIAL EXAMINED. **Russia:** Rostov Province, Proletarsky, 24-25.V 1967 (Yu. Pesenko), 1♀, 1♂ [ZISP] [ZISP]; Persiyonovka, 3.V 1968 (Yu. Pesenko), 1♀ [ZISP]; idem, 11.V 1971 (Yu. Pesenko), 1♂ [ZISP].

DISTRIBUTION. *Russia (Rostov Province); Turkey (Grace, 2010).

ACKNOWLEDGMENTS

We thank S.P. Ivanov (CFUS), A.V. Fateryga (T.I. Vyazemsky Karadag Scientific Station – Nature Reserve of RAS, Russia) for loans of material and H.H. Dathe (SDEI), M. Kuhlmann (Zoological Museum of Kiel University, Kiel, Germany) for their help with identification of some specimens.

The present investigation was supported by the Russian Funds for Basic Research (No 15–29–02466 офи_м; 16–54–00041 Бел_а; 16–04–00197; 17–04–00259).

REFERENCES

- Alexander, B.A. & Schwarz, M. 1994. A Catalog of the species of *Nomada* (Hymenoptera: Apoidea) of the World. *The University of Kansas Science Bulletin*, 55(7): 239–270.
- Aliyev, Kh.A. 2011. The Aculeate Hymenoptera in the collection of the institute of Zoology of the Natural Academy of Sciences of Azerbaijan, Baku. Part. 3. Bees of the genus *Nomada* Scopoli, 1770 (Hymenoptera: Anthophoridae). *Caucasian entomological bulletin*, 7(2): 219–225.
- Astafurova, Yu.V. 2014. *Bees of the subfamilies Rophitinae and Nomiinae (Hymenoptera, Halictidae) of the Russia and adjacent territories*. St. Petersburg, Moscow: KMK Scientific Press Ltd. 383 p. [In Russian].
- Ban-Calefariu, C. 2006. The systematics and distribution of genus *Nomada* (Hymenoptera: Anthophoridae) in Romania. *Studii si Comunicari, Complexul Muzeal de Stiintele Naturii "Ion Borcea" Bacau*, 21: 360–368.
- Celary, W. 1995. Nomadini (Hymenoptera, Apoidea, Anthophoridae) of Poland. *Monografie Fauny Polski*, 20: 1–281.
- Dathe, H.H. 1980. Die *Hylaeus*-Arten einer apidologischen Sammelreise in den Iran (Hymenoptera, Apoidea). *Entomologische Abhandlungen*, 43(5): 77–97.
- Dathe, H.H. & Proshchalykin, M.Yu. 2017. Type revision of Asiatic bees of the genus *Hylaeus* F. described by Ferdinand Morawitz (Hymenoptera: Apoidea, Colletidae). *Zootaxa*, 4227(1): 1–48. DOI: <https://doi.org/10.11646/zootaxa.4227.1.1>

- Ebmer, A.W. 2008. Neue taxa der gattungen *Halictus* Latreille 1804 und *Lasioglossum* Curtis 1833 (Hymenoptera, Apoidea, Halictidae) aus den vereinigten Arabischen Emiraten. *Linzer Biologische Beiträge*, 40(1): 551–580.
- Gerstaecker, A. 1869. Beiträge zur näheren Kenntniss einiger Bienen-Gattungen. *Stettiner entomologische Zeitung*, 30: 315–367.
- Grace, A. 2010. *Introductory Biogeography to Bees of the Eastern Mediterranean and Near East*. Bexhill Museum, Sussex. 284 pp.
- Mitai, K. & Tadauchi, O. 2008. The Genus *Nomada* (Hymenoptera, Apidae) from Kazakhstan and Kyrgyzstan collected by the Kyushu University Expedition (1). *Esakia*, 48: 25–35.
- Morawitz, F. 1874. Die Bienen Daghestans. *Horae Societatis Entomologicae Rossicae*, 10 (2-4): 129–189.
- Morawitz, F. 1881. Die russischen *Bombus*-Arten in der Sammlung der Kaiserlichen Academie der Wissenschaften. *Bulletin de l'Academie Impériale des Sciences de St. Pétersbourg*, 27(2): 213–265.
- Pagliano, G. 1994. Catalogo degli Imenotteri italiani. (IV Apoidea: Colletidae, Megachilidae, Anthophoridae, Apidae). *Memorie della Societ'a entomologica italiana, Genova*, 72: 331–467.
- Proshchalykin, M.Yu. 2017. The bees of the genus *Colletes* Latreille (Hymenoptera, Colletidae) of the Palaearctic Region: taxonomic diversity and distribution patterns. *Meetings in memory of N.A. Chodkovsky*, 68(2): 1–81. [In Russian].
- Proshchalykin, M.Yu. & Astafurova, Yu.V. 2017. The history of study of the Russian bees (Hymenoptera, Anthophila). *A.I. Kurentsov's Annual Memorial Meetings*, 28: 26–34. [In Russian].
- Radoszkowski, O. 1888. Faune hyménoptérologique transcaspienne. (Suite). *Horae Societatis Entomologicae Rossicae*, 22(3-4): 338–349
- Rasmont, P. & Iserbyt, I. 2013. Atlas of the European Bees: genus *Bombus*. 3d Edition. STEP Project, Atlas Hymenoptera, Mons, Gembloux. <http://www.atlashymenoptera.net/page.asp?ID=169> (accessed 2 May 2017)
- Scheuchl, E. 2008. *Illustrierte Bestimmungstabellen der Wildbienen Deutschlands und Österreichs. Bd. 1: Anthophoridae. 2. erweiterte Auflage*. Velden. 175 ss.
- Schwarz, M. 1965. Zwei neue *Nomada*-Arten aus Griechenland (Hymenoptera, Apoidea). *Nachrichtenblatt der Bayerischen Entomologen*, 14: 81–87.
- Schwarz, M. 1981. 1. Beitrag zur *Nomada*-Fauna der Türkei (Hymenoptera, Apoidea). *Entomofauna*, 2(28): 357–414.
- Schwarz, M. & Gusenleitner, F. 2015. Über den Verbleib der von Schmiedeknecht 1882 beschriebenen *Nomada*-Arten und Festlegung von Lectotypen der aufgefundenen Arten. Mit zusätzlichen Ergänzungen und Beschreibungen zu einigen Arten (Hymenoptera, Apidae, Nomadinae). *Linzer Biologische Beiträge*, 47(1): 1003–1044.
- Schmidt, K. & Westrich, P. 1993. *Colletes hederæ* n. sp., eine bisher unerkannte, auf Efeu (*Hedera*) spezialisierte Bienenart (Hymenoptera: Apoidea). *Entomologische Zeitschrift*, 103: 89–93.
- Smith, F. 1861. Descriptions of new genera and species of exotic Hymenoptera. *Journal of Entomology*, 1(3): 146–155.
- Tkalců, B. 1968. Beiträge zur Kenntnis der Fauna Afganistans (Sammelergebnisse von O. Jakeš 1963-64, D. Povolný 1965 & Fr. Tenora 1966, J. Šimek 1965-66, D. Povolný, J. Geisler, Z. Šebek & Fr. Tenora 1967). Bombinae, Apoidea, Hym. *Acta Musei Moraviae*, 53: 189–210.

- Vogt, O. 1911. Studien über das Artproblem. 2. Mitteilung. Über das Variieren der Hummeln. 2. Teil. (Schluss). *Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin*, 1911: 31–74.
- Warncke, K. 1975. Die Sandbienen der Türkei, Teil B. *Mitteilungen der Münchner Entomologischen Gesellschaft*, 65: 29–102.
- Warncke, K. 1976. Zur Systematik und Verbreitung der Bienengattung *Nomia* Latr. in der Westpaläarktis und dem turkestanischen Becken. *Reichenbachia*, 16(7): 93–120.
- Williams, P.H. 1991. The bumble bees of the Kashmir Himalaya (Hymenoptera: Apidae, Bombini). *Bulletin of the British Museum (Natural History) (Entomology)*, 60: 1–204.

© **Far Eastern entomologist (Far East. entomol.)** Journal published since October 1994.

Editor-in-Chief: S.Yu. Storozhenko

Editorial Board: A.S. Lelej, N.V. Kurzenko, M.G. Ponomarenko, E.A. Beljaev, V.A. Mutin,
E.A. Makarchenko, T.M. Tiunova, P.G. Nemkov, M.Yu. Proshchalykin, S.A. Shabalin

Address: Federal Scientific Center of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Far East Branch of the Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

E-mail: storozhenko@biosoil.ru

web-site: <http://www.biosoil.ru/fee>