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# New records of the vespid wasps (Hymenoptera: Vespidae) from Russia

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**ABSTRACT.** New records of 29 species of vespid wasps (Hymenoptera: Vespidae) from Russia are reported. Four species are newly recorded from Russia: *Ancistrocerus terekensis* (Kostylev, 1940), *Eustenancistrocerus tegularis* (Morawitz, 1885), *Symmorphus cliens* Giordani Soika, 1975, and *Polistes foederatus* Kohl, 1898. For the remaining 24 species, new records from various regions of Russia are reported. Nest records are documented for *Allodynerus mandschuricus* Blüthgen, 1953, *Eumenes transbaicalicus* Kurzenko, 1984, *Symmorphus apiciornatus* (Cameron, 1911), as well as *P. foederatus*. The number of vespid wasps known from Russia has increased to 39 genera and 215 species across five subfamilies: Masarinae (one genus, four species), Eumeninae *s. str.* (33 genera, 170 species), Zethinae (one genus, three species), Polistinae (one genus, 15 species), and Vespinae (three genera, 23 species).

**Keywords:** fauna, nesting, Palaearctic region, social wasps, solitary wasps.

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## INTRODUCTION

Vespidae is one of the largest and most diverse families of the order Hymenoptera, encompassing over 5000 species worldwide (Rahmani et al., 2020). In the Palaearctic region, this family is represented by the solitary eumenine wasps (subfamily Eumeninae *s. l.*), the pollen wasps (subfamily Masarinae), and the social wasps (subfamilies Polistinae and Vespinae). Eumenine wasps constitute the most diverse group among vespid wasps, with over 200 genera and more than 3900 described species globally (Luo et al., 2022). According to the modern taxonomic treatments, they should be subdivided into three subfamilies: Eumeninae *s. str.*, Raphiglossinae, and Zethinae (Bank et al., 2017; Piekarski et al., 2018; Mauss et al., 2019). The subfamily Masarinae is considerably less diverse, with 14 genera and 374 species described to date (Rahmani et al., 2020). Social wasps are also not highly species-rich, with 25 genera and 1024 species in the subfamily Polistinae and four genera and 69 species in the subfamily Vespinae (Rahmani et al., 2020).

A catalogue of vespid wasps known from Russia was published by Antropov & Fateryga (2017), including 38 genera and 197 species of the family Vespidae across four subfamilies (Masarinae, Eumeninae *s. l.*, Polistinae, and Vespinae). This publication was not the definitive outcome of the study of this family in Russia. Subsequently, several taxonomic and faunistic papers have been published, including those describing new species from Russia (Kim, 2017; Fateryga & Mokrousov, 2019; Fateryga et al., 2020; Fateryga, 2022, 2024; Mauss et al., 2022; Fateryga & Buyanjargal, 2023) or reporting new national (Fateryga, 2020; Dubatolov, 2024) and regional records (Ruchin & Antropov, 2019; Kochetkov, 2020; Paukkunen & Kozlov, 2020; Fateryga et al., 2022; Antropov et al., 2024; Kochetkov & Kuberskaya,

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2024). Examination of new material collected by A. Fateryga in Dagestan and by D. Kochetkov in the Zabaykalskiy Territory and the Amurskaya Province, as well as the material housed in the collection of the Institute of Systematics and Ecology of Animals of the Siberian Branch of the Russian Academy of Sciences (Novosibirsk, Russia), has revealed further national and regional records of the family Vespidae from Russia. The purpose of the present contribution is to supplement the known fauna of Russia with these records and to estimate the number of species of vespid wasps known from this country.

## MATERIAL AND METHODS

The acronyms for the institutions where the studied specimens are deposited are as follows:

**CAFK**—Research collection of A.V. Fateryga, Feodosiya, Russia;
**CDKT**—Research collection of D.N. Kochetkov, Nizhniy Tsasuchey, Russia;
**IBUM**—Institute of Biology of the Mongolian Academy of Sciences, Ulaanbaatar, Mongolia;
**ISEN**—Institute of Systematics and Ecology of Animals of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia;
**ZISP**—Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia.

Data on the general distribution of the species were taken from Gusenleitner (1972), Amolin (2009), Oehlke (2012), Antropov & Fateryga (2017), Kim (2017), Schmid-Egger et al. (2017), Fateryga (2018, 2022), Fateryga et al. (2019, 2020, 2021, 2025), Fateryga & Mokrousov (2019), Kochetkov (2020), Rahmani et al. (2020), Antropov et al. (2024), Fateryga & Proshchalykin (2024a), and Selis et al. (2025). New distributional records are marked with an asterisk (*); confirmations of previously reported doubtful records are marked with an exclamation mark (!).

## RESULTS

### *Taxonomic hierarchy*

**Class Insecta Linnaeus, 1785**

**Order Hymenoptera Linnaeus, 1758**

**Family Vespidae Laicharting, 1781**

**Subfamily Eumeninae Leach, 1815**

**Genus *Allodynerus* Blüthgen, 1938**

***Allodynerus delphinalis* (Giraud, 1866)**

***Material examined.*** RUSSIA. *Nizhniy Novgorod Province*: Borskoye District, vicinity of Elesino, 17.VIII.2006, 1 ♀, leg. M. Mokrousov [CAFK]. *Novosibirsk Province*: Iskitim District, vicinity of Yevsino, 9.VI.2017, 1 ♂, leg. Yu. Danilov [ISEN]. *Khabarovsk Territory*: Bolshekhekhtsirskiy Reserve, vicinity of Bychikha, 48°17'N–48°18'N, 134°49'E–134°50'E, 17.VIII.2017, 1 ♂, leg. V. Dubatolov [ISEN].

***Distribution.*** Russia: European part (*Central, East, South, North Caucasus, Crimea), Urals, Western Siberia (*Novosibirsk Province, Altai), Far East (Amurskaya Province, *Khabarovsk Territory, Primorskiy Territory).—Western, Northern, Southern, and Eastern Europe, North Africa, Armenia, Azerbaijan, Türkiye, Lebanon, Iran, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China (North-East, North, Central), Korean Peninsula, Japan.

***Allodynerus mandschuricus* Blüthgen, 1953**

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 35 km NWW Borzya, Adon-Chelon Mts., Lokha, 50°28'41"N, 116°03'10"E, 10–14.VII.2024, 1 ♀, leg. D. Kochetkov [CAFK]. *Amurskaya Province*: Arkhara, 49°25'34"N, 130°05'42"E, 14–16.VIII.2020, 1 ♀, leg. D. Kochetkov [ZISP]; ibid., from nest, 1.VI–28.IX.2021, 3 ♀♀, 3 ♂♂, leg. D. Kochetkov [ZISP].

***Distribution.*** Russia: Eastern Siberia (Buryatia, *Zabaykalskiy Territory), Far East (*Amurskaya Province, Primorskiy Territory).—Mongolia, China (North-East), Korean Peninsula, Japan.

***Biological observations.*** A nest of this species, found in a reed stalk used as a trap nest, was studied. The length of the nest cavity was 15.5 cm, and the inner diameter was 4.5 mm. The partitions were made of clay. There was a preliminary plug, leaving a rear space of 25 mm in length. The nest contained six brood cells: the first three housed female progeny (measuring 27, 19, and 12 mm in length), and the remaining three contained male progeny (14, 10, and 9 mm in length). There was no closing plug, suggesting that the female wasp probably had not yet finished the nest. The only previous report on the biology of this species appears to be that of Yamane (1990), who noted that *A. mandschuricus* nests in bamboo stalks with a small inner diameter, based on an unpublished observation by Y. Nakatani.

### Genus *Ancistrocerus* Wesmael, 1836

#### *Ancistrocerus hangaicus* Kurzenko, 1977

***Material examined.*** RUSSIA. *Khakassia*: Askiz River, Kazanovka, 26.VI.2021, 1 ♀, leg. E. Volf [ISEN].

***Distribution.*** Russia: Western Siberia (Altai), Eastern Siberia (*Khakassia, Irkutsk Province, Buryatia, Zabaykalskiy Territory), Far East (Magadan Province).—Kazakhstan, Mongolia.

#### *Ancistrocerus ichneumonideus* (Ratzeburg, 1844)

***Material examined.*** RUSSIA. *Mari El*: Morki District, Krasnyy Steklovar, 56°13'31.38"N, 48°46'51.06", 8.IX.2009, 1 ♂, leg. M. Mokrousov [CAFK].

***Distribution.*** Russia: European part (North-West, Central, *East, North Caucasus), Urals, Western Siberia (Altai), Eastern Siberia (Krasnoyarsk Territory, Irkutsk Province, Buryatia).—Western, Northern, Southern, and Eastern Europe, Türkiye, Kazakhstan, Mongolia.

#### *Ancistrocerus japonicus* (von Schulthess, 1908)

***Material examined.*** RUSSIA. *Khabarovsk Territory*: Bolshekhekhtsirskiy Reserve, vicinity of Bychikha, 48°18'N, 134°49'E, in a house, 27.VI.2020, 1 ♀, leg. V. Dubatolov [ISEN].

***Distribution.*** Russia: Far East (Jewish Autonomous Region, *Khabarovsk Territory, Primorskiy Territory).—Korean Peninsula, Japan.

#### *Ancistrocerus mongolicus* (Kostylev, 1940)

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: Mogoytuy District, vicinity of Dogoy, 51°21'00"N, 114°36'03"E, 14.VIII.2002, 1 ♂, leg. O. Korsun [CDKT]; 35 km NWW Borzya, Adon-Chelon Mts., 50°28'25"N, 116°03'21"E, 11.IX.2021, 2 ♀♀, leg. D. Kochetkov [CDKT]; ibid., 5.VII.2022, 1 ♀, leg. D. Kochetkov [CAFK].

***Distribution.*** Russia: Western Siberia (Altai), Eastern Siberia (Krasnoyarsk Territory, Irkutsk Province, *Zabaykalskiy Territory), Far East (Amurskaya Province, Khabarovsk Territory, Primorskiy Territory).—Mongolia, Korean Peninsula.

#### *Ancistrocerus nigricornis* (Curtis, 1826)

***Material examined.*** RUSSIA. *Chuvashia*: Trans-Volga Region, flood meadows opposite to Nizhne-Cheboksarsk, 18.VII.1986, 2 ♂♂, leg. Berezin [CAFK]; ibid., 19–20.VII.1986, 2 ♂♂, leg. Berezin [CAFK]. *Mari El*: Kilemary District, Vizimyary, 56°25'54.24"N, 46°55'3.18"E, 5.IX.2009, 2 ♂♂, leg. M. Mokrousov [CAFK]; Mari-Turek District, vicinity of Ruyka, 56°35'38.64"N, 49°53'32.04"E, 5.IX.2009, 1 ♀, leg. M. Mokrousov [CAFK]. *Amurskaya Province*: 18 km SW Arkhara, vicinity of Volnoye, 49°16'58"N, 129°56'30"E, 16–17.VIII.2023, 1 ♀, leg. D. Kochetkov [ZISP].

***Distribution.*** Russia: European part (North-West, Central, !East, South, North Caucasus, Crimea), Urals, Western Siberia (Novosibirsk Province, Kemerovo Province, Altai), Eastern Siberia (Tyva, Krasnoyarsk Territory, Irkutsk Province, Buryatia, Yakutia, Zabaykalskiy Territory), Far East (*Amurskaya Province, Khabarovsk Territory, Primorskiy Territory, Sakhalin).—Western, Northern, Southern, and Eastern Europe, North Africa, Azerbaijan, Türkiye, Iran, Turkmenistan, Tajikistan, Kazakhstan, Mongolia, China (North-East), Japan, India.

### *Ancistrocerus scoticus* (Curtis, 1826)

***Material examined.*** RUSSIA. *Nizhniy Novgorod Province*: Nizhniy Novgorod, Avtozavod, 31.VII.2005, 1 ♂, leg. M. Mokrousov [CAFK]; Lyskovo District, vicinity of Belozerikha, 6.VII.2009, 1 ♂, leg. M. Mokrousov [CAFK].

***Distribution.*** Russia: European part (North, North-West, *Central, North Caucasus), Urals, Western Siberia (Tomsk Province, Novosibirsk Province, Altai), Eastern Siberia (Krasnoyarsk Territory, Irkutsk Province, Buryatia, Yakutia, Zabaykalskiy Territory), Far East (Amurskaya Province, Khabarovsk Territory, Primorskiy Territory, Sakhalin, Kamchatka Territory, Magadan Province).—Western, Northern, Southern, and Eastern Europe, North Africa, Georgia, Türkiye, Iran, Kazakhstan, Mongolia, China (North-East, North), Korean Peninsula.

### *Ancistrocerus terekensis* (Kostylev, 1940)

***Material examined.*** RUSSIA. *Dagestan*: Vicinity of Kurush, 41°17'48"N, 47°50'42"E, 27.VI.2023, 1 ♀, 1 ♂, leg. A. Fateryga [CAFK].

***Distribution.*** *Russia: European part (North Caucasus).—Georgia, Azerbaijan.

## Genus *Eumenes* Latreille, 1802

### Subgenus *Eumenes s. str.*

### *Eumenes* (*Eumenes*) *pomiformis* (Fabricius, 1781)

***Material examined.*** RUSSIA. *Altai Territory*: Mikhaylovskoye District, 5 km S Mikhaylovskoye, 5.VI.2009, 1 ♂, leg. D. Yakovlev [CAFK]; Klyuchevsky District, 3 km SE Severka, 52°06'05"N, 79°18'53"E, 21.VII.2018, 1 ♀, leg. Danilov [ISEN].

***Distribution.*** Russia: European part (South, North Caucasus, Crimea), Urals, *Western Siberia (Altai).—Western, Southern, and Eastern Europe, North Africa, Armenia, Azerbaijan, Türkiye, Lebanon, United Arab Emirates, Pakistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China (South-West), Korean Peninsula, ?India.

### *Eumenes* (*Eumenes*) *transbaicalicus* Kurzenko, 1984

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 70 km SE Nizhniy Tsasuchey, Torey Depression, Utochi Cordon, 50°00'15"N, 115°43'13"E, 7.VII.2004, 1 ♀, leg. O. Korsun [CDKT]; ibid., 9.VI.2016, 1 ♂, leg. O. Korsun [CAFK]; ibid., 20.VII.2023, 1 ♀, leg. D. Kochetkov [CAFK]; ibid., 17.VII.2024, 2 ♂♂, leg. D. Kochetkov [CAFK, CDKT]; 35 km NWW Borzya, Adon-Chelon Mts., 50°28'25"N, 116°03'21"E, 5.VI.2012, 1 ♂, leg. O. Korsun [ZISP]; ibid., 10.VII.2024, 1 ♂, leg. D. Kochetkov [CDKT]; 60 km SE Nizhniy Tsasuchey, Torey Depression, Teli Cordon, 50°06'25"N, 115°41'22"E, 7.IX.2021, 1 ♀, leg. D. Kochetkov [CDKT]; 67 km SE Nizhniy Tsasuchey, Mt. Kuku-Hadan, 50°09'14"N, 115°53'03"E, 20–21.VII.2024, 3 ♀♀, 1 ♂, leg. D. Kochetkov [CDKT]; ibid., from nest, 20–21.VII.2024, 1 ♀, leg. D. Kochetkov [CAFK].

***Distribution.*** Russia: Eastern Siberia (Buryatia, *Zabaykalskiy Territory).—Mongolia, China (North-East).

***Biological observations.*** A nest of this species is reported here for the first time. It was found in a shrubby steppe (Fig. 1A). The nest consisted of three brood cells, which were spherical to ellipsoidal in shape, made of mud, and attached to a dead branch of a living *Caragana pumila* Pojark. (Fabaceae). One cell was broken (Fig. 1B), while the other two contained prepupae within cocoons. One of these prepupae died, while an imago emerged from the remaining one, enabling identification of the species.

## Genus *Eustenancistrocerus* Blüthgen, 1938

### Subgenus *Eustenancistrocerus s. str.*

### *Eustenancistrocerus* (*Eustenancistrocerus*) *tegularis* (Morawitz, 1885)

***Material examined.*** RUSSIA. *Dagestan*: Buynakskiy District, E Talgi, Istisukaka Gorge, 42°52'34.8"N, 44°24'0"E, 300–600 m, 29.V.2019, 3 ♂♂, leg. M. Mokrousov [CAFK]; Kumtorkalinskiy District, Narat-

Tyube Range, 42°58'48"N, 47°13'48"E, 31.V.2019, 6 ♂♂, leg. M. Proshchalykin, V. Loktionov [CAFK]; Vicinity of Talgi, 42°52'36"N, 47°26'42"E, 13.VI.2021, 1 ♂, leg. A. Fateryga [CAFK]; Shura-Ozen River valley, 43°00'04"N, 47°14'29"E, 21.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; Narat-Tyube Range, 42°58'47"N, 47°14'40"E, 22.V.2022, 1 ♀, 1 ♂, leg. A. Fateryga [CAFK]; Tsudakhar, 42°19'40"N, 47°09'48"E, 28.V.2022, 1 ♂, leg. A. Fateryga [CAFK]; ibid., 28–29.V.2023, 1 ♂, leg. M. Proshchalykin [CAFK]; Tsudakhar, 42°20'15"N, 47°10'10"E, on *Cachrys microcarpos*, 16.VI.2023, 1 ♀, leg. A. Fateryga [CAFK].

***Distribution.*** *Russia: European part (North Caucasus).—?Southern (Greece) and Eastern Europe (Bulgaria), Armenia, Azerbaijan, Türkiye, Syria, Israel and Palestine, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan.

***Remarks.*** This species was previously reported from Dagestan in error (Fateryga et al., 2017), based on material that was later re-identified as *Eustenancistrocerus jerichoensis* (von Schulthess, 1928) by Fateryga & Mokrousov (2019). The latter species was subsequently synonymized with *E. askhabadensis* (Radoszkowski, 1886) by Fateryga et al. (2023). However, a true *E. tegularis* was also collected from Dagestan after the publication of Fateryga & Mokrousov (2019).

### Genus *Katamenes* Meade-Waldo, 1910

### *Katamenes tauricus* (de Saussure, 1855)

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 60 km SE Nizhniy Tsasuchey, Torey Depression, Teli Cordon, 50°06'25"N, 115°41'22"E, 29.VI.2020, 3 ♀♀, leg. O. Korsun [CAFK, CDKT, ZISP]; 70 km SE Nizhniy Tsasuchey, Torey Depression, Utochi Cordon, 50°00'15"N, 115°43'13"E, 29–30.VI.2022, 3 ♀♀, 3 ♂♂, leg. D. Kochetkov [1 ♀, 1 ♂, CAFK; 2 ♀♀, 2 ♂♂, CDKT]; 35 km NWW Borzya, Adon-Chelon Mts., Lokha, 50°28'41"N, 116°03'10"E, 21.VII.2023, 1 ♀, leg. D. Kochetkov [CDKT]; ibid., 9.VII 2024, 1 ♀, leg. D. Kochetkov [CDKT]; 65 km SE Nizhniy Tsasuchey, Daursky Reserve, Mt. Gydyrgun, 50°09'51"N, 115°51'43"E, 20–21.VII.2024, 1 ♂, leg. A. Timokhov [CDKT].

***Distribution.*** Russia: ?European part (Crimea), Western Siberia (Altai), Eastern Siberia (Tyva, Krasnoyarsk Territory, Irkutsk Province, Buryatia, *Zabaykalskiy Territory), Far East (Amurskaya Province).—?Iran, ?Afghanistan, Kyrgyzstan, Kazakhstan, Mongolia, China (North-East, North), ?India.

***Remarks.*** This species is taxonomically problematic; it is uncertain whether the name *Katamenes tauricus* is correctly applied to it. The distribution of this taxon also requires verification (Fateryga et al., 2017, 2020; Fateryga et al., in preparation).

### Genus *Microdynerus* Thomson, 1874

### Subgenus *Alastorynerus* Blüthgen, 1938

### *Microdynerus* (*Alastorynerus*) *microdynerus* (Dalla Torre, 1889)

***Material examined.*** RUSSIA. *Dagestan*: Maydanskoye, 42°36'07"N, 46°58'13"E, on *Heliotropium styligerum*, 14.VI.2021, 1 ♂, leg. A. Fateryga [CAFK].

***Distribution.*** Russia: European part (South, *North Caucasus, Crimea).—Southern (Greece) and Eastern Europe (Hungary), Georgia, Armenia, Azerbaijan, Türkiye, Jordan, Iran, Tajikistan, Kazakhstan.

### Genus *Paragymnomerus* Blüthgen, 1938

### *Paragymnomerus signaticollis tauricus* (Kostylev, 1940)

***Material examined.*** RUSSIA. *Dagestan*: Narat-Tyube Range, 42°56'20"N, 47°23'30"E, on *Anthemis ruthenica*, 11.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; ibid., on *Cachrys microcarpos*, 11.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; ibid., 17.VI.2021, 2 ♂♂, leg. A. Fateryga [CAFK].

***Distribution.*** Russia: European part (South, *North Caucasus, Crimea).— Türkiye.

***Remarks.*** This subspecies requires a revision; it is highly likely that it represents merely a colour form of the typical *Paragymnomerus signaticollis* (Morawitz, 1888), which is distributed in Azerbaijan, Turkmenistan, Tajikistan, and Uzbekistan (Fateryga, 2018).


**Figure 1.** Nesting of vespid wasps. **A–B.** Habitat and a nest of *Eumenes transbaicalicus* Kurzenko, 1984 from the Zabaykalskiy Territory; **C–D.** Habitat and a nest of *Polistes foederatus* Kohl, 1898 from Tsudakhar, Dagestan; **E–F.** Habitat and a nest of *P. foederatus* from the vicinity of Maydanskoye, Dagestan; **G.** Dissected nest of *Symmorphus apiciornatus* (Cameron, 1911) from the Amurskaya Province. Scale bars (B, G) = 1 cm.

### Genus *Pseudepipona* de Saussure, 1856

### Subgenus *Pseudepipona s. str.*

#### *Pseudepipona* (*Pseudepipona*) *augusta* (Morawitz, 1867)

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 70 km SE Nizhniy Tsasuchey, Torey Depression, Utochi Cordon, 50°00'15"N, 115°43'13"E, 20.VI.2004, 1 ♂, leg. O. Korsun [CAFK]; ibid., 10.VII.2023, 1 ♀, leg. D. Kochetkov [CAFK]; ibid., 17–18.VII.2024, 2 ♀♀, 1 ♂, leg. D. Kochetkov [1 ♀, CAFK; 1 ♀, 1 ♂, CDKT]; 60 km SE Nizhniy Tsasuchey, Torey Depression, Teli Cordon, 50°06'25"N, 115°41'22"E, 22.VI.2004, 1 ♀, 2 ♂♂, leg. O. Korsun [1 ♂, CAFK; 1 ♀, 1 ♂, CDKT]; 67 km SE Nizhniy Tsasuchey, Mt. Kuku-Hadan, 50°09'14"N, 115°53'03"E, 20–21.VII.2024, 2 ♀♀, 1 ♂, leg. D. Kochetkov [CDKT].

***Distribution.*** Russia: European part (?East, South, North Caucasus, Crimea), Urals, Western Siberia (Altai), Eastern Siberia (Krasnoyarsk Territory, *Zabaykalskiy Territory).—Eastern Europe, Türkiye, Kazakhstan, Mongolia, China (North).

#### *Pseudepipona* (*Pseudepipona*) *herrichii* (de Saussure, 1856)

***Material examined.*** RUSSIA. *Novosibirsk Province*: Karasuk District, 53°41'30"N, 77°42'27"E, forest steppe, 8.VI.2008, 1 ♂, leg. Yu. Danilov [ISEN].

***Distribution.*** Russia: European part (Central, East, South, North Caucasus, Crimea), Urals, Western Siberia (Omsk Province, !Novosibirsk Province).—Western, Southern, and Eastern Europe, North Africa, Georgia, Armenia, Azerbaijan, Türkiye, Uzbekistan, Kyrgyzstan, Kazakhstan.

### Genus *Pterocheilus* Klug, 1805

#### *Pterocheilus phaleratus* (Panzer, 1797)

***Material examined.*** RUSSIA. *Dagestan*: Tsudakhar, 42°19'40"N, 47°09'48"E, 16.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; Tsudakhar, 42°20'15"N, 47°10'10"E, 20.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; ibid., 29.V.2022, 2 ♂♂, leg. A. Fateryga [CAFK].

***Distribution.*** Russia: European part (Central, ?East, South, *North Caucasus, Crimea), Urals, Western Siberia (Novosibirsk Province, Altai), Eastern Siberia (Tyva, Krasnoyarsk Territory).—Western, Northern, Southern, and Eastern Europe, Georgia, Azerbaijan, Türkiye, Kazakhstan, Mongolia.

### Genus *Stenodynerus* de Saussure, 1863

#### *Stenodynerus funebris* (André, 1884)

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 35 km NWW Borzya, Adon-Chelon Mts., Lokha, 50°28'41"N, 116°03'10"E, 11.IX.2021, 1 ♀, leg. D. Kochetkov [CDKT]; ibid., 16–18.VII.2023, 2 ♀♀, leg. D. Kochetkov [CDKT]; ibid., 10–14.VII.2024, 1 ♀, 1 ♂, leg. D. Kochetkov [CAFK].

***Distribution.*** Russia: Eastern Siberia (Buryatia, Yakutia, *Zabaykalskiy Territory), Far East (Amurskaya Province, Khabarovsk Territory, Primorskiy Territory).—China (North-East, North), Korean Peninsula.

#### *Stenodynerus pullus* Gusenleitner, 1981

***Material examined.*** RUSSIA. *Chuvashia*: Alatyr District, Prisurskiy Reserve, 13–18.VII.2000, 1 ♂, leg. Yegorov [CAFK]. *Novosibirsk Province*: Mikhaylovskiy District, vicinity of Uchurmanka, dry grass meadow, 21.VI.1962, 1 ♀ [ISEN].

***Distribution.*** Russia: *European part (East), Western Siberia (*Novosibirsk Province, Altai), Eastern Siberia (Khakassia, Tyva, Irkutsk Province, Buryatia, Zabaykalskiy Territory), Far East (Amurskaya Province, Primorskiy Territory).—?Türkiye, Mongolia, China (North), Korean Peninsula.

#### *Stenodynerus rossicus* Fateryga & Kochetkov, 2020

***Material examined.*** RUSSIA. *Zabaykalskiy Territory*: 35 km NWW Borzya, Adon-Chelon Mts., 50°28'25"N, 116°03'21"E, meadow steppe, 5–7.VII.2022, 11 ♀, 2 ♂♂, leg. D. Kochetkov [2 ♀♀, 1 ♂, IBUM; 1 ♀, CAFK;

7 ♀♀, 1 ♂, CDKT]; ibid., 16–20.VII.2023, 2 ♀♀, leg. D. Kochetkov [CAFK]; ibid., 25–27.VI.2024, 1 ♀, leg. D. Kochetkov [CDKT]; ibid., 11–13.VII.2024, 3 ♀♀, leg. D. Kochetkov [CDKT].

***Distribution.*** Russia: Western Siberia (Altai), *Eastern Siberia (Zabaykalskiy Territory), Far East (Amurskaya Province).

## Genus *Symmorphus* Wesmael, 1836

### Subgenus *Symmorphus s. str.*

#### *Symmorphus* (*Symmorphus*) *allobrogus* (de Saussure, 1855)

***Material examined.*** RUSSIA. *Chuvashia*: Trans-Volga Region, flood meadows opposite to Nizhne-Cheboksarsk, 19–20.VII.1986, 1 ♀, leg. Berezin [CAFK]; Cheboksary, vicinity of Lesnoy, 3.VI.2013, 1 ♀, leg. A. Dmitriev [CAFK].

***Distribution.*** Russia: European part (North, North-West, Central, *East, North Caucasus), Urals, Western Siberia (Tomsk Province, Novosibirsk Province, Kemerovo Province, Altai), Eastern Siberia (Krasnoyarsk Territory, Buryatia, Yakutia, Zabaykalskiy Territory), Far East (Primorskiy Territory, Magadan Province).—Western, Northern, Southern, and Eastern Europe, Azerbaijan, Türkiye, Kyrgyzstan, Kazakhstan, China (North).

#### *Symmorphus* (*Symmorphus*) *angustatus* (Zetterstedt, 1838)

***Material examined.*** RUSSIA. *Chuvashia*: Trans-Volga Region, flood meadows opposite to Nizhne-Cheboksarsk, 18.VII.1986, 2 ♀♀, leg. Berezin [CAFK]; ibid., 19–20.VII.1986, 1 ♀, leg. Berezin [CAFK].

***Distribution.*** Russia: European part (North, North-West, Central, *East), Urals, Western Siberia (Tomsk Province, Altai), Eastern Siberia (Irkutsk Province, Buryatia, Yakutia, Zabaykalskiy Territory), Far East (Amurskaya Province, Khabarovsk Territory, Primorskiy Territory, Sakhalin, Kamchatka Territory, Magadan Province).—Western, Northern, Southern, and Eastern Europe, Kazakhstan, Mongolia, China (North-East), Korean Peninsula, Japan.

#### *Symmorphus* (*Symmorphus*) *apiciornatus* (Cameron, 1911)

***Material examined.*** RUSSIA. *Amurskaya Province*: Arkhara, 49°25'34″N, 130°05'42"E, from nests, 23.V–23.IX.2020, 11 ♀, 3 ♂♂, leg. D. Kochetkov [ZISP]; 3 km E Uril, Tarmanchukan River valley, 49°13'07"N, 130°31'48"E, from nest, 25.V–24.IX.2020, 6 ♀♀, 8 ♂♂, leg. D. Kochetkov [ZISP]; 16 km SW Kundur, Khingan Nature Reserve, Mt. Kamennaya, 49°04'54"N, 130°29'02"E, 21.VI.2021, 1 ♀, leg. D. Kochetkov [ZISP].

***Distribution.*** Russia: Far East (*Amurskaya Province, Primorskiy Territory).—China (North-East, North, Central, South-West, South-East), Korean Peninsula, Japan.

***Biological observations.*** Ten nests of this species, constructed in reed stalks used as trap nests, were studied. The main parameters of these nests are summarized in Table 1. The partitions were composed of clay, while the closing plugs, measuring 1.5–6 mm thick, consisted of clay and occasionally sand. A rear space was present in all nests; however, in one nest, an additional layer of mud was found at the bottom of the cavity, beyond a preliminary plug located 11 mm from it. In another nest, the rear space was divided into two parts by a partition. One nest lacked a vestibule, so the closing plug served as the plug of the last cell. In three other nests, the vestibule was divided into two parts by a partition. One nest was incomplete, with its vestibule left unsealed by a closing plug. The nests contained prepupae within cocoons (Fig. 1G). From a total of 46 brood cells, 28 females and 11 males emerged; the progeny in the remaining seven cells (15%) died for an unknown reason. Nesting of *S. apiciornatus* in trap nests has been previously studied by Itino (1997), Hisamatsu (1999), and Sato et al. (2022). Additionally, Yamane (1990) reported nesting of this species in stalks of the grass genus *Miscanthus* Andersson (Poaceae), based on an unpublished observation by Y. Nakatani. Observations attributed to *S. apiciornatus* by Iwata (1938) were later shown to be based on misidentified *S. decens* (Kostyev, 1940) (Yamane, 1990).

**Table 1.** Main parameters of the studied nests of *Symmorphus apiciornatus* (Cameron, 1911) in reed stalks of trap nests.

| Parameter | *n* | Minimum | Maximum | Median |
|---|---|---|---|---|
| Cavity diameter, mm | 10 | 3 | 4.5 | 3.5 |
| Cavity length, cm | 10 | 18 | 20.5 | 18.5 |
| Number of brood cells | 9 | 1 | 13 | 5 |
| Length of a rear space, mm | 20 | 2 | 147 | 54.5 |
| Length of cells with females, mm | 28 | 9 | 13 | 11.3 |
| Length of cells with males, mm | 11 | 8.5 | 11.5 | 10 |
| Length of a vestibule, mm | 9 | 0 | 122 | 26 |

### *Symmorphus* (*Symmorphus*) *cliens* Giordani Soika, 1975

***Material examined.*** RUSSIA. *Amurskaya Province*: 5 km E Ukrainka, Khingan Nature Reserve, Lesnoye Cordon, 49°28'26"N, 129°38'34"E, 9–10.VII.2013, 1 ♀, leg. D. Kochetkov [CAFK].

***Distribution.*** *Russia: Far East (Amurskaya Province).—Japan.

### *Symmorphus* (*Symmorphus*) *kurzenkoi* Kim, 2017

***Material examined.*** RUSSIA. *Amurskaya Province*: 10 km SEE Arkhara, Arkhara River, 49°23'30"N, 130°11'10"E, pine sparse forest, 3–4.VI.2021, 1 ♀, leg. D. Kochetkov [CAFK].

***Distribution.*** Russia: Far East (*Amurskaya Province, Primorskiy Territory, Magadan Province).—Kazakhstan, Korean Peninsula.

### *Symmorphus* (*Symmorphus*) *murarius* (Linnaeus, 1758)

***Material examined.*** RUSSIA. *Chuvashia*: Shemursha District, Chavash Varmane National Park, 7 km W Baskaki, Kirillstan Place, 16.VII.2011, 1 ♀, leg. A. Yakovlev [CAFK].

***Distribution.*** Russia: European part (North-West, Central, *East, South, North Caucasus, Crimea), Urals, Western Siberia (Tyumen Province, Altai), Eastern Siberia (Tyva, Krasnoyarsk Territory, Irkutsk Province, Buryatia, Zabaykalskiy Territory), Far East (Amurskaya Province, Primorskiy Territory).—Western, Northern, Southern, and Eastern Europe, North Africa, Armenia, Azerbaijan, Türkiye, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, Korean Peninsula.

## Subfamily Polistinae Lepeletier, 1836

## Genus *Polistes* Latreille, 1802

### Subgenus *Polistes s. str.*

### *Polistes* (*Polistes*) *foederatus* Kohl, 1898

***Material examined.*** RUSSIA. *Dagestan*: Tsudakhar, 42°19'40"N, 47°09'48"E, on *Cachrys microcarpos*, 16.VI.2021, 1 ♀, leg. A. Fateryga [CAFK]; ibid., on nest, 20.VI.2023, 1 ♀, leg. A. Fateryga [CAFK]; Vicinity of Maydanskoye, 42°35'39"N, 46°58'17"E, on nest, 19.VI.2023, 1 ♀, leg. A. Fateryga [CAFK].

***Distribution.*** *Russia: European part (North Caucasus).—Southern Europe, Azerbaijan, Cyprus, ?Iraq, ?Iran.

***Biological observations.*** Two nests of this species were observed. One was located on a limestone slope (Fig. 1C) and was attached to a branch of *Satureja intermedia* C.A. Mey. (Lamiaceae) close to the ground surface (Fig. 1D). The other nest was found on a shale scree (Fig. 1E), attached to the lower surface of a medium-sized stone (Fig. 1F). *Polistes foederatus* and the similar *P. mongolicus* du Buysson, 1911 were excluded from the synonymy with *P. gallicus* (Linnaeus, 1767) by Schmid-Egger et al. (2017). These species are often confused. However, nests of *P. foederatus* observed in Dagestan were more similar to those of the unrelated *P. dominula* (Christ, 1791), in that they were attached to plants close to the ground surface or to stones, whereas nests of *P. mongolicus* are always attached to plants at a considerable height

above the ground (Litvinyuk et al., 2022). Numerous nests of *P. mongolicus* on plants were also observed in Dagestan by the first author.

### Subfamily Vespinae Laicharting, 1781

### Genus *Dolichovespula* Rohwer, 1916

### *Dolichovespula pacifica* (Birula, 1930)

***Material examined.*** RUSSIA. *Chukotka Autonomous Area*: Chaun Lowland, Chaun-Palyavaam River delta, Ayopechan Island, 27.VI.2019, 1 ♀, leg. D. Solovyeva [ZISP].

***Distribution.*** Russia: European part (North, North-West, Central), Urals, Western Siberia (Tyumen Province, Omsk Province, Tomsk Province, Novosibirsk Province, Altai), Eastern Siberia (Tyva, Krasnoyarsk Territory, Irkutsk Province, Buryatia, Yakutia, Zabaikalskiy Territory), Far East (Amurskaya Provice, Khabarovsk Territory, Primorskiy Territory, Sakhalin, Kamchatka Territory, Magadan Province, *Chukotka Autonomous Area).—Northern Europe, Kazakhstan, Korean Peninsula, Japan.

## DISCUSSION

Several important updates were published after the catalogue of the vespid wasps of Russia (Antropov & Fateryga, 2017). Particularly, seven new species were described from Russia: *Celonites ivanovi* Mauss & Fateryga, 2022, *Leptochilus leleji* Fateryga, 2019; *L. puzanovi* Fateryga, 2024; *Pseudepipona valentinae* Fateryga, 2022, *Onychopterocheilus proshchalykini* Fateryga, 2023, *Stenodynerus rossicus* Fateryga & Kochetkov, 2020, and *Symmorphus kurzenkoi* Kim, 2017 (Kim, 2017; Fateryga & Mokrousov, 2019; Fateryga et al., 2020; Fateryga, 2022, 2024; Mauss et al., 2022; Fateryga & Buyanjargal, 2023). Two subspecies were treated as valid species: *Ancistrocerus shibuyai* (Yasumatsu, 1938) and *Pseudepipona aldrichi* (Fox, 1892) (Fateryga, 2022; Fateryga & Proshchalykin, 2024b). Eleven species were reported from Russia for the first time: *Celonites kozlovi* Kostylev, 1935, *Discoelius pictus* Kostylev, 1940, *Euodynerus curictensis* Blüthgen, 1940, *E. hellenicus* Blüthgen, 1942, *E. rufinus* Blüthgen, 1942, *Eustenancistrocerus askhabadensis* (= *E. jerichoensis*), *Onychopterocheilus kiritshenkoi* (Kostylev, 1940), *Oreumenes decoratus* (Smith, 1852), *Pterocheilus quaesitus* (Morawitz, 1895), *Stenodynerus chitgarensis* Giordani Soika, 1970, and *Tachyancistrocerus schmidti* (Kokujev, 1913) (Fateryga & Mokrousov, 2019; Fateryga, 2020; Fateryga et al., 2020; Dubatolov, 2024). At the same time, *Pseudepipona tricolor* Gusenleitner, 1976 was synonymized with *P. superba* (Morawitz, 1867) (Fateryga & Proshchalykin, 2022) and five species were excluded from the fauna of Russia: *Ancistrocerus dusmetiolus* (Strand, 1914), *Eustenancistrocerus tegularis*, *Odynerus tristis* (Blüthgen, 1939), *Stenodynerus aequisculptus* (Kostylev, 1940), and *Psiliglossa odyneroides* (S.S. Saunders, 1850) (Fateryga & Mokrousov, 2019; Fateryga et al., 2020; Fateryga & Proshchalykin, 2024a). Thus, the number of vespid wasps known from Russia has increased to 39 genera and 211 species. Besides this, *Polistes mongolicus* was excluded from synonymy with *P. gallicus* by Schmid-Egger et al. (2017) and *Stenodynerus difficilis* (Morawitz, 1867) from synonymy with *S. fastidiosissimus* (de Saussure, 1855) by Selis et al. (2024), although these changes did not affect the number of taxa of the Russian Vespidae. Numerous new regional records of the vespid wasps from Russia were also published (Fateryga & Mokrousov, 2019; Ruchin & Antropov, 2019; Fateryga et al., 2020, 2022; Kochetkov, 2020; Paukkunen & Kozlov, 2020; Fateryga & Buyanjargal, 2023; Fateryga, 2024; Antropov et al., 2024; Kochetkov & Kuberskaya, 2024).

The present contribution reports new records of 29 species of vespid wasps from Russia. Four species are newly recorded from Russia, while new records from various regions of Russia are reported for 25 remaining species. Besides this, nest records are documented for four species. Taking these data into account, the number of vespid wasps known from Russia is increased to 39 genera and 215 species in five subfamilies (Table 2). This is, however, not a final result, since several taxonomic problems still exist in some groups, such as the genus *Katamenes* (Fateryga et al., in preparation). Further taxonomic work will certainly reveal new interesting results, and we hope to prepare a new catalogue of the Russian Vespidae after that.

**Table 2.** Estimation of the vespid-wasp diversity in Russia according to Antropov & Fateryga (2017) and the present data.

| Subfamily | Number of genera / species | |
|---|---|---|
| | Antropov & Fateryga (2017) | Present data |
| Masarinae | 1 / 2 | 1 / 4 |
| Eumeninae *s. str.* | 31 / 155 | 33 / 170 |
| Raphiglossinae | 1 / 1 | 0 / 0 |
| Zethinae | 1 / 2 | 1 / 3 |
| Polistinae | 1 / 14 | 1 / 15 |
| Vespinae | 3 / 23 | 3 / 23 |
| Vespidae total | 38 / 197 | 39 / 215 |

## AUTHOR'S CONTRIBUTION

The authors confirm their contribution to the paper as follows: A. Fateryga: Fieldwork, collecting the specimens and their identification, writing the manuscript; D. Kochetkov: Fieldwork, collecting the specimens and their identification. The authors read and approved the final version of the manuscript.

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## AVAILABILITY OF DATA AND MATERIAL

The specimens listed in the study are deposited in the corresponding collections mentioned in the Materials and methods section and are available from the curators upon request.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study only included arthropod material, and all required ethical guidelines for the treatment and use of animals were strictly adhered to in accordance with international, national, and institutional regulations. No human participants were involved in any studies conducted by the authors for this article.

## CONSENT FOR PUBLICATION

Not applicable.

## CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

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# گزارش‌های جدید زنبورهای وِسپییِد (Hymenoptera: Vespidae) از روسیه

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**چکیـده:** گزارش‌های جدید از حضور ۲۹ گونه از زنبورهای وِسپییِد (Hymenoptera: Vespidae) در روسیه ثبت شد. چهار گونه از آنها برای اولین بار از روسیه گزارش می‌شوند: *Ancistrocerus terekensis* (Kostylev, 1940)، *Eustenancistrocerus tegularis* (Morawitz, 1885)، *Symmorphus cliens* Giordani Soika, 1975 و *Polistes foederatus* Kohl, 1898. اطلاعات جدید از پراکنش ۲۴ گونه دیگر در مناطق مختلف روسیه ارایه شد. مشخصات لانه برای *Allodynerus mandschuricus* Blüthgen, 1953، *Eumenes transbaicalicus* Kurzenko, 1984، *Symmorphus apiciornatus* (Cameron, 1911) و همچنین *P. foederatus* مستند شد. تعداد گونه‌های خانواده Vespidae از روسیه به ۳۹ جنس و ۲۱۵ گونه در پنج زیرخانواده (زیرخانواده Masarinae: یک جنس، چهار گونه، زیرخانواده Eumeninae *s. str.*: ۳۳ جنس، ۱۷۰ گونه، زیرخانواده Zethinae: یک جنس، سه گونه، زیرخانواده Polistinae: یک جنس، ۱۵ گونه و زیرخانواده Vespinae سه جنس، ۲۳ گونه) افزایش یافت.

**واژگـان کلیدی**: فون، لانه‌سازی، پالئارکتیک، زنبورهای اجتماعی، زنبورهای انفرادی