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## The aculeate Hymenoptera in the collection of the Institute of Zoology of the National Academy of Science of Azerbaijan, Baku: Wasps of the family Sphecidae (Hymenoptera, Aculeata)

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**Abstract.** The collection of the Institute of Zoology of the National Academy of Sciences of Azerbaijan (Baku) features wasps of the family Sphecidae represented by 34 species from 9 genera. Of these, 11 species were first recorded in the fauna of Azerbaijan: *Chalybion flebile* Lepeletier de Saint Fargeau, 1845; *Sceliphron madraspatanum* (Fabricius, 1781); *Prionyx lividocinctus* (A. Costa, 1858); *P. haberhaueri* (Radoszkowski, 1871); *P. subfuscatus* (Dahlbom, 1845); *Podalonia caucasica* (Mocsary, 1883); *P. tydei* Le Guillou 1841; *Ammophila terminata* (F. Smith, 1856); *A. campestris* (Latreille, 1809); *A. occipitalis* (F. Moravitz, 1880); and *A. gracillima* Taschenberg, 1869. In total, the collection contains 34 wasp species, of which 34 are from Azerbaijan, 15 from Iran and 1 from Russia. Data on the general geographic distribution are given for each species.

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**Keywords:** Sphecidae, Azerbaijan, fauna, distribution, species

## Жалящие перепончатокрылые в коллекции Института зоологии Национальной академии наук Азербайджана, Баку. Осы семейства Sphecidae (Hymenoptera, Aculeata)

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**Аннотация.** Осы семейства Sphecidae в коллекции Института зоологии НАН Азербайджана представлены 34 видами из 9 семейств. Из них 11 видов — *Chalybion flebile* Lepeletier de Saint Fargeau, 1845, *Sceliphron madraspatanum* (Fabricius, 1781), *Prionyx lividocinctus* (A. Costa, 1858), *P. haberhaueri* (Radoszkowski, 1871), *P. subfuscatus* (Dahlbom, 1845), *Podalonia caucasica* (Mocsary, 1883), *P. tydei* Le Guillou 1841, *Ammophila terminata* (F. Smith, 1856), *A. campestris* (Latreille, 1809), *A. occipitalis* (F. Moravitz, 1880), *A. gracillima* Taschenberg, 1869 отмечаются впервые для фауны Азербайджана. В целом коллекция содержит 34 вида ос-сфецид, из которых 34 отмечаются с территории Азербайджана, 15 из Ирана и 1 вид с территории России. Для каждого вида приводятся данные по распространению.

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**Ключевые слова:** Sphecidae, Азербайджан, фауна, распространение, виды

## Introduction

Thread-waisted wasps, or sphecid wasps, are the biggest family of stinging hymenoptera comprising of approximately 8,000 species across the globe. As entomophages, thread-waisted wasps hold an important role in nature, helping regulate numbers of many species of insects and spiders, often noticeably lowering the number of agricultural and wood pests, or even insects holding a negative veterinary or medical status. Only a handful of species of sphecid wasps cause harm, targeting useful insects and spiders: pollinators and entomophages (Kazenas 1998).

The number of taxa in the family Sphecidae: 19 genera and 779 species in the world (Antropov et al. 2017), 13 (260) in the Palaearctic (Antropov et al. 2017), and 9 (27) in Azerbaijan (Mahharamov et al. 2020).

This paper presents an annotated list of the species of Sphecidae present in the collection of the Institute of Zoology of the National Academy of Sciences of Azerbaijan, Baku. The material comes from the entire territory of Azerbaijan, as well as Russia and Iran. The species newly reported from Azerbaijan are marked with an asterisk (\*).

## Results

### Family Sphecidae

#### Subfamily SCALIPHURINAE

##### Genus *Chalybion* Dahlbom, 1843

##### 1. *Chalybion femoratum* (Fabricius, 1781)

*Chalybion (Hemichalybion) femoratum* (Fabricius, 1781): Maharramov, Mokrousov, Proshchalykin 2020: 45

**Material:** 8♂, Lenkoran, 13.05, 13.06, 16.06, 13.07, 16.07.1929, E. Selivanichik; 1♀, Yevlakh, 2.06.1938, E. Hauser; 1♀, Yevlakh, 10.07.1939, A. Bogachev; 2♀, Ganja, 19.07.1933, on dill flowers, M. Vinovsky; 1♀, 1♂, Yevlakh, Malbinasi Distr., 10.08.1931, A. Bogachev; 1♀, Goradiz fl. Arazis, 22.07.1941, N. Yakovleva; 1♀, Mil's Sovkhoz No. 4, 15.09.1937, A. Bogachev; 1♂, 5.08.1932, in the steppe, M. Vinovsky; 2♀, 5-6.08.2016, Garyagdy, A. Mammadov; 1♂, 5.05.2017, Baku, Botanical Garden, A. Mammadov; 1♂, 19.04.2017,

Baku, Botanical Garden, M. Rubtsova; 1♂, 2♀, 25.04.2017, Zoology Institute, M. Rubtsova.

**Distribution:** Italy, France, Hungary, Spain, Croatia, Kazakhstan, Greece, Albania, Switzerland, Romania, Slovakia, Yugoslavia, Bulgaria, Turkmenistan, Turkey, Afghanistan, Uzbekistan, Austria, Portugal, Iran, Azerbaijan (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov, Mokrousov, Proshchalykin 2020).

##### 2. *Chalybion flebile* (Lepelletier de Saint Fargeau, 1845)

**Material:** 1♀, 19.06.2016, Mingechevir, Bozgirlar, A. Mammadov.

**Distribution:** Iraq, \*Azerbaijan, Turkey, Greece, Italy, Egypt, Saudi Arabia, Iran, France, UAE, Jordan, Morocco, Oman, Spain, Syria, Tunisia, Algeria, Libya, Cyprus, Kazakhstan, and Portugal (Augul 2019).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

##### 3. *Chalybion walteri* (Kohl, 1889)

*Chalybion walteri*: Hensen 1988: 60

*Chalybion (Chalybion) walteri* (Kohl, 1889): Maharramov et al. 2020: 45

**Material:** 7♀, Ganja, 24.06, 24.05, 12.06, 19.06, 29.06.1033, on dill flowers, M. Vinovsky, 9♀, 2♂, Ganja, 8-9.06.1932, M. Vinovsky; 1♀, Ganja, 25.06.1926, Bocharnikov.

**Distribution:** Russia, Turkmenistan, Tajikistan, Iran, Turkey, Kazakhstan, Uzbekistan, Syria, Greece, Egypt, Jordan, Kyrgyzstan, Azerbaijan\* (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhichevan (Hensen 1988; Maharramov et al. 2020).

##### Genus *Sceliphron* Klug, 1801

##### 4. *Sceliphron arabs* (Lepelletier de Saint Fargeau, 1845)

*Sceliphron arabs*: van der Vecht, van Breugel 1968: 233

*Sceliphron (Sceliphron) arabs* (Lepelletier de Saint Fargeau 1845): Maharramov et al. 2020: 46

**Material:** 5♀, Ganja, 26.06, 15–29.07, M. Vinovsky; ♀, Vartashen (now Oguz), 27.07.1935, A. Bogachev; 1♀, Ganja, Goy-Gol, 7.08.1939, A. Bogachev.

**Distribution:** Iran, Iraq, Turkey, Azerbaijan, Syria (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Jewlakh and Nakhchivan (van der Vecht, van Breugel 1968; Maharramov et al. 2020).

##### **5. *Sceliphron destillatorium*** (Illiger, 1807)

*Sceliphron destillatorium*: Alieva, Humbatov 2007: 77

*Sceliphron (Sceliphron) destillatorium* (Illiger, 1807): Maharramov et al. 2020: 46

**Material:** 1♀, Lenkoran, 10, 16.06.1929, M. Vinovsky; 6♀, Ganja, 11, 12.06, 4.07.1933, on Euphorbia, in the garden, M. Vinovsky; 4♀, Ganja, 23.06, 1.07.1932, M. Vinovsky; 3♀, Mas-saly Distr., Yeddy Bulag, 9, 21.07, 6.08.1936, M. Vinovsky; 1♂, Goygol Distr., Khanlar (now Goygol), 12.08.1955, A. Bogachev; 2♀, Samukh, Karaagachly, 31.05.1935, on Euphorbia, A. Bogachev; 1♀, Vartashen (now Oguz), 24.07.1935, A. Bogachev; 1♀, Kurd Mahmudly Distr., Karyagino (now Fuzuli), 3.05.1929; 1♀, Gaurarkh Persia, Mugan, 19.06.1927, Bocharnikov; 1♀, Lenkoran Distr., Astrakhan-ka, 17.06.1927, Bocharnikov; 1♀, Absheron, Baku, Shuvelyan, 5.08.1945, D. Bibally; 2♀, Lenkoran, 10, 16.06.1929; 1♂, 7.06.2014, Absheron, Merdekan, A. Mammadov.

**Distribution:** Russia, Croatia, Germany, Austria, Czech Republic, Slovakia, Poland, Italy, Ukraine, Austria, France, Romania, Hungary, Switzerland, Spain, Croatia, Slovenia, Macedonia, Serbia, Albania, Montenegro, Bulgaria, Portugal, Greece, Malta, Azerbaijan, Georgia, Turkey, Syria, Israel, Iran, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, China, Jordan, Tunisia, Morocco, Algeria, Israel (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Absheron and Nakhchivan (Alieva, Humbatov 2007; Maharramov et al. 2020).

##### **6. *Sceliphron madraspatanum*** (Fabricius, 1781)

**Material:** Azerbaijan, 1♀, Mil' s steppe, 9.06.1934, A. Bogachev; 2♀, Mugan, Djafarkhan, 2.10.1927, Bocharnikov; 1♀, Mugan, Djafarkhan, 18.08.1940, A. Bogachev; 1♀, Mil's Sovkhoz No. 4, 15.09.1937, A. Bogachev; 2♀, Yevlakh Distr., Malbinasi, 29.07.1931, A. Bogachev; 3♀, 2♂, Ganja, 4–26.07.1933, in a ditch, M. Vinovsky; 1♀, Mingeaur,

22.08.1933, in the gallery, B. Lototsky; 1♂, Yevlakh, 2.06.1938, E. Hauser; 1♀, 1♂, Lenkoran Distr., Yeddi Qimag, 6–21.07.1936, M. Vinovsky; 2♀, Yevlakh distr., Malbinasi, 26, 29.08.1931, A. Bogachev; 1♂, Yevlakh, 20.06.1938, on the Tamarix, A. Bogachev; 1♀, Mugan, Djafarkhan, 2.10.1927, Bocharnikov.

**Distribution:** Russia, Turkey, Syria, Israel, Iraq, Iran, \*Azerbaijan, Afghanistan, Pakistan, Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, China, Korean Peninsula, Japan, SE Asia, India, Indonesia, Malaysia, Philippines, Thailand, Vietnam, Sri Lanka, Laos, Bangladesh, Saudi Arabia, United Arab Emirates, Oman, Cameron, Tibet, Nepal, Taiwan, Pakistan, France, Greece, Ukraine, Bulgaria, Croatia, Italy, Montenegro (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

#### **Subfamily SPHECINAE**

##### **Genus *Sphex*** Linnaeus, 1758

##### **7. *Sphex atropilosus*** Kohl, 1885

*Sphex atropilosus* Kohl, 1885: Maharramov et al. 2020: 46

**Material:** 1♀, Absheron, Baku, on the road to Balakhany, 17.07.1933, while flying, M. Vinovsky; 4♀, Ganja, 28, 29.05., 9, 21.06.1933, M. Vinovsky; Samukh, 1♂, Eldar Poily, 30.04.1935, A. Bogachev; 2♀, Persia, Ungut-Mugan, 19, 21.06.1927, Bocharnikov.

**Distribution:** Russia, Romania, France, Spain, Greece, Portugal, Hungary, Czech Republic, Slovakia, Turkey, Azerbaijan, Turkmenistan, Tajikistan, Kazakhstan (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

##### **8. *Sphex flavipennis*** Fabricius, 1793

*Sphex flavipennis* Fabricius, 1793: Maharramov et al. 2020: 46

**Material:** 1♀, Persia, Altan, Ungut-Mugan, 21.06.1927, Bocharnikov; 1♂, 4♀, Ganja, 19, 21, 25.06., 3, 9.07.1933, M. Vinovsky; Agdash, Turian-Chay Reserve, 6.08.1984, H. Aliev.

**Distribution:** Russia, Italy, Croatia, France, UK, Hungary, Spain, Bulgaria, Macedonia, Romania, Ukraine, Portugal, Georgia, Turkey, Syria, Israel, Iran, Azerbaijan, Afghanistan, Tajikistan, Kazakhstan, Turkmenistan,

Uzbekistan, China, Arabian Peninsula, Algeria, Tunisia, Egypt, Libya, Morocco (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

### 9. *Sphex funerarius* Gussakovskij, 1934

*Sphex funerarius* Gussakovskij, 1934: Maharramov et al.: 46

**Material:** 6♀, Ganja, 28, 30.06, 19.08.1933, Ganja, M. Vinovsky; 2♀, Lerik, Gilidara, 27.07.1976, H. Aliev; 1♀, Lerik, Kalakhan, 24.07.1976, H. Aliev; 1♀, Persia, Taza-kend, 17.08.1927, Bocharnikov; 1♀, Absheron, Mardakyan, 14.08.2016, A. Mammadov; 1♀, Nakhchivan, Agdere, 21.07.2017, N. Snegovaya.

**Distribution:** Russia, Germany, Italy, Croatia, Austria, Ukraine, Hungary, Switzerland, Spain, Slovenia, France, Greece, Albania, Bulgaria, Romania, Portugal, Poland, Czech Republic, Slovakia, Slovenia, Georgia, Turkey, Syria, Israel, Iran, Azerbaijan, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, China, Algeria, Tunisia, Libya (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

### 10. *Sphex leuconotus* Brullé, 1833

*Sphex pachysoma* Kohl 1890: 436

*Sphex leuconotus*: Dollfuss 2008: 1427

*Sphex leuconotus* Brullé, 1833: Maharramov et al. 2020: 46

**Material:** 1♂, 2♀, Ganja, 8.06, 6, 19.08.1933, M. Vinovsky; 4♀, 10♂, Mil's steppe, 9–14.06.1934, A. Bogachev; 9♀, Mingachaur, 22–31.08.1933, B. Lototsky; 1♂, Lerik, Chokara, 27.07.1976, H. Aliev; 1♀, Goradiz, Araxetu, 14.07.1941, N. Yakovleva; 5♂, 2♀, 7–21.06., 21.07, 17.08, 21.10.1927, Bocharnikov; 1♂, Kirovabad (now Ganja), 15.06.1932, M. Vinovsky; 1♀, Masally, seed's sowing, 10.05.1949, Same-dov; 2♀, Nakhchivan, 29.04, 4.05.1933; 1♀, Zakataly, Sylumant, 6.07.1933, A. Bogachev; 1♀, Kurd- Mahmudly village, Karyagyn Distr. (now Fuzuli), 12.04.1929, E. Yelistratova.

**Distribution:** Russia, Greece, Bulgaria, Italy, Spain, Ukraine, Romania, Azerbaijan, Turkey, Syria, Jordan, Israel, Iraq, Iran, Afghanistan, Central Asia, Kazakhstan, Kyrgyzstan, Tajiki-

stan, Turkmenistan, Uzbekistan (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Kilyazi, Kuba, Acinohur and Nakhchivan (Kohl 1890; Dollfuss 2008; Maharramov et al. 2020).

### 11. *Sphex pruinosus* Germar, 1817

*Sphex pruinosus* Germar, 1817: Maharramov et al. 2020: 46

**Material:** 1♂, Persia (now Iran), Tezekend, Ungut-Mugan, 17.08.1927, Bocharnikov; 1♀, Ganja, 4.06.1934, in the garden on flowers, M. Vinovsky; 2♀, Ganja, 17, 19.08.1933, on the *Eryngium* sp., M. Vinovsky; 1♂, Persia (now Iran), Altan, Ungut-Mugan, 21.06.1927, Bocharnikov; 7♂, 27.06, 1.08–19.08.1933, M. Vinovsky; 1♂, Ganja, 1.08.1932, in the garden, M. Vinovsky; 1♂, Zakataly Distr., Chekan, 13.08.1929; 1♀, Mingechevir, 29.08.2014, H. Aliev.

**Distribution:** Russia, Croatia, France, Greece, Spain, Malta, Italy, Portugal, Albania, Bulgaria, Turkey, Syria, Lebanon, Israel, Yemen, Iran, Azerbaijan, Afghanistan, Pakistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, India, Oman, United Arab Emirates, Libya, Algeria, Egypt, Tunisia, Morocco, Ethiopia (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

### Genus *Palmodes* Kohl, 1890

#### 12. *Palmodes melanarius* (Mocsary, 1883)

**Material:** 2♂, Mil's steppe, 12.06.1934, A. Bogachev; 1♂, Saljany Distr., Chormandaly, 07.1930; 1♂, Barda, Malbinasy Distr., 2.09.1931.

**Distribution:** Russia, Spain, Greece, Portugal, Ukraine, Georgia, Azerbaijan, Turkey, Syria, Iraq, Iran, Kazakhstan, Turkmenistan, Tajikistan, Kyrgyzstan, Uzbekistan, China, Algeria, Morocco, Libya India (Pulawski 2022).

#### 13. *Palmodes occitanicus* (Lepeletier de Saint Fargeau and Audinet-Serville, 1828)

*Palmodes occitanicus* (Lepeletier de Saint Fargeau et Serville 1828): Maharramov et al. 2020: 46

**Material:** 1♀, environs of Lenkoran, 22.06.1929, in the garden, E. Selivanchik; 2♀, Ganja, 21.06, 1.07.1932, in the garden, M. Vinovsky; 1♂, Altan, Persia (now Iran), Ungut-

Mugan, 21.06.1927, Bocharnikov; 1♀, Lerik, Galabin, 21.07.1976, H. Aliev; 2♀, Barda, Malbinasy, 24, 28.08.1931, A. Bogachev.

**Distribution:** Russia, France, Hungary, Italy, Romania, Greece, Albania, Portugal, Macedonia, Slovakia, Ukraine, Spain, Bulgaria, Croatia, Slovenia, Turkey, Syria, Israel, Iran, Azerbaijan, Central Asia, Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan, Mongolia, China, Croatia, Korean Peninsula, Algeria, Morocco, Egypt (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**14. *Palmodes strigulosus*** (A. Costa, 1861)

*Palmodes strigulosus* (A. Costa, 1861): Maharramov et al. 2020: 46

**Material:** 1♀, Mil's steppe, 12.06.1934, A. Bogachev.

**Distribution:** Russia, Ukraine, Georgia, Armenia, Azerbaijan, Turkey, Syria, Israel, Iran, Iraq, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, Spain, Portugal, Greece, Algeria, Morocco, Libya (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**Genus *Prionyx*** Vander Linden 1827

**15. *Prionyx haberhaueri*** (Radoszkowski, 1871)

**Material:** 1♂, Kirovabad (now Ganja), 17.07.1933, M. Vinovsky.

**Distribution:** Turkey, Israel, Iran, \*Azerbaijan, Turkmenistan, Uzbekistan, Afghanistan, Tajikistan, Kyrgyzstan, Kazakhstan (Danilov 2012).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**16. *Prionyx subfuscatus*** (Dahlbom, 1845)

**Material:** 3♂, 1♀, Persia (now Iran), Altan, Ungut-Mugan, 30.05, 1, 12.06.1927, Bocharnikov; 1♀, Samukh, Eldar-Poily, 13.05.1935, on the Euphorbia, A. Bogachev; 1♀, Agdjabedy, 7.06.1934, A. Bogachev.

**Distribution:** Russia, Croatia, Italy, Spain, France, Portugal, Czech Republic, Albania, Romania, Ukraine, Hungary, Germany, Georgia, \*Azerbaijan, Turkey, Israel, Iran, Kazakhstan, Turkmenistan, Tajikistan, Uzbekistan, Mongolia, China, Oman, United Arab Emir-

ates, Korean Peninsula, India, Algeria, Ethiopia, Libya, Morocco, Egypt (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**17. *Prionyx kirbii*** (Vander Linden, 1827)

*Prionyx kirbii* (Vander Linden, 1827): Maharramov et al. 2020: 46

**Material:** 1♂, Mil's steppe, 14.06.1934, A. Bogachev; 2♂, Ungut-Mugan, Persia (now Iran), 21, 28.06.1927, Bocharnikov; 1♂, Mugan, Gjafarkhan, 22.09.1927, Bocharnikov; 3♂, 1♀, Ganja, Ganja-river, 10.06., 8.08.1933, M. Vinovsky; 1♂, a steppe road to Bolchaly village, 17.07.1933, M. Vinovsky; 1♀, Baku, 6.07.1935, Tertyshnikov; 1♂, Karaagachly, 1.06.1935, A. Bogachev; 2♂, Ganja, 30, 31.07.1932, in the garden, M. Vinovsky; 1♂, Zakataly, Muganly, 26.06.1939, A. Bogachev; 1♂, Baku, Mardakan, 30.06.1939, A. Bogachev; 1♀, Kara-Yeri, Ganja Distr., 3.06.1922, on flowers, M. Vinovsky; 1♀, 5.09.2016, Absheron, Mardakan, A. Mammadov; 1♀, 19.07.2016, Zyk, A. Mammadov; 6♀, 3♂, 14.08.2016, Mardakan, A. Mammadov.

**Distribution:** Russia, France, Spain, Romania, Greece, Malta, Italy, Hungary, Portugal, Bulgaria, Czech Republic, Ukraine, Austria, Belarus, Croatia, Slovakia, Georgia, Azerbaijan, Turkey, Syria, Israel, Iran, Iraq, Kazakhstan, Tajikistan, Kyrgyzstan, Turkmenistan, China, Egypt, Syria, Algeria, United Arab Emirates, Congo (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**18. *Prionyx lividocinctus*** (A. Costa, 1858)

**Material:** 4♀, 1♂, Mil's steppe, 12, 14, 15.06.1934, A. Bogachev; 1♂, Persia (now Iran), Altan, Ungut-Mugan, 21.06.1927, Bocharnikov.

**Distribution:** Russia, Italy, Spain, France, Greece, Bulgaria, Morocco, Libya, Egypt, Turkey, \*Azerbaijan, Tajikistan, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, Mongolia, China, Iran (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**19. *Prionyx macula lugens*** Kohl, 1889

**Material:** 1♀, Kurd-Mahmudly, 17.06.1927, Bocharnikov; 1♀, Persia (now Iran), Altan, Un-

gut-Mugan, 21.06.1927, Bocharnikov; 1♀, Yevlakh, 15.06.1940, A. Bocharnikov; 1♀, Ganja, a steppe road to Bolchaly village, 20.07.1933, M. Vinovsky; 2♀, Samukh, Karaagachly, Alazan river, 4, 13.06.1935, A. Bogachev; 1♀, Lerik, Lalakeran, 19.07.1985, H. Aliev.

**Distribution:** Israel, Saudi Arabia, Iraq, Iran, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Afghanistan, Tajikistan, Kazakhstan, Egypt, Libya, Algeria, Kenya (Danilov 2012).

#### 20. *Prionyx viduatus* (Christ, 1791)

*Prionyx viduatus mocsaryi* (Kohl, 1885): Maharramov et al. 2020: 46

**Material:** 3♀, Persia (now Iran), Ungut-Mugan, Gaurarkh, 1, 21, 29.06.1927, Bocharnikov; 1♀, steppe Turut, 12.06.1940, A. Bogachev.

**Distribution:** Russia, France, Spain, Portugal, Greece, Turkey, Israel, Iran, Azerbaijan, Afghanistan, Kazakhstan, Turkmenistan, Tajikistan, China, Mongolia, Japan, India, Sri Lanka, Yemen, Taiwan, Cameroon, Morocco, Egypt, Ethiopia, Tunisia, Zaire, Somalia, Algeria, Libya, Saudi Arabia, United Arab Emirates (Pulawski 2022).

**Remarks.** Previously subspecies *Prionyx viduatus mocsaryi* (Kohl, 1885) reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

#### Genus *Isodontia* Patton, 1880

##### 21. *Isodontia paludosa* (Rossi, 1790)

*Isodontia paludosa* (Rossi, 1790): Maharramov et al. 2020: 46

**Material:** 2♀, Geokchay Distr., Rushtan-Kend, 26.06.1930, V. Yelistratov; 1♀, Lerik, Galabyn, 21.07.1976, H. Aliev.

**Distribution:** Russia, Italy, France, Croatia, Spain, Greece, Bulgaria, Slovenia, Turkey, Jordan, Iran, Azerbaijan, Turkmenistan, Algeria, Morocco (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

#### Subfamily AMMOPHILINAE

##### Genus *Podalonia* Fernald, 1927

##### 22. *Podalonia caucasica* (Mocsary, 1883)

**Material:** 7♀, Mugan Pers. Kuruchay, Aslan-Duz, 24, 29.05, 1, 2, 21.06.1927, Bocharnikov; 1♀, Baku, Surakhany, on Eryngium, 7.07.1936,

A. Bogachev; 2♀, Mil's steppe, 20, 23.05.1934, A. Bogachev.

**Distribution:** Russia, Bulgaria, Georgia, \*Azerbaijan, Tajikistan, Uzbekistan, Kazakhstan, Kyrgyzstan, Mongolia, China, India (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

##### 23. *Podalonia ebenina* (Spinola, 1839)

*Podalonia ebenina* (Spinola, 1839): Maharramov et al. 2020: 45

**Material:** 1♀, Azerbaijan, Djulfa, Diza, 26.04.2012, H. Aliev.

**Distribution:** Russia, Azerbaijan, Turkey, Syria, Jordan, Lebanon, Israel, Iraq, Iran, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, Egypt, Arabian Peninsula (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

##### 24. *Podalonia fera* (Lepeletier de Saint Fargeau, 1845)

*Podalonia fera* (Lepeletier de Saint Fargeau, 1845): Maharramov et al. 2020: 45

**Material:** 1♂, Lenkoran, Kergelan, Kh. Aliev; 13.09.1971, 1♂, Absheron, Ramana, 8.09.2016, A. Mammadov.

**Distribution:** Russia, Bulgaria, Greece, Italy, Romania, Ukraine, Armenia, Azerbaijan, Turkey, Syria, Iran, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

##### 25. *Podalonia hirsuta* (Scopoli, 1763)

*Podalonia hirsuta* (Scopoli, 1763): Maharramov et al. 2020: 45

**Material:** 1♀, Shachdag, Sais., 2.500 m., 30.09.1933, A. Bogachev; 1♀, Baku, 14.10.1938, A. Karagdy; 1♀, Turut's steppe, 11.05.1941, A. Bogachev; 1♀, Lysogorsk, Karabakh, 26.08., A. Bogachev; 2♀, Everi-Zuvant, 21, 22.05.1936, A. Bogachev; 1♀, Yashma, 17.04.1924; 1♀, Eli-su (Ilisu), Kakh, 13.08.1934; 2♂, Ganja, 22, 24.05.1933, M. Vinovsky; 1♂, Kara-Yeri, 3.06.1932, M. Vinovsky; 1♂, 1♀, Ganja, 10, 12.06.1932, M. Vinovsky; 2♂, 2♀, Persia (now Iran), Kuru-Chay, Ungut-Mugan, 29.05., 1, 7.06, 1927, Bocharnikov; 1♀, Muradosan village, 6.06.1925, V. Nazarov; 1♀, Ganja,

5.07.1937, E. Hauser; 2♀, Lerik, Gilidara, 26.05.1976, H. Aliev; 1♀, Salyan, 5.07.1926, M. Kenig; 1♀, Kurd-Mahmudly, Karyagino village, 8.05.1928, Yelistratova; 1♂, Sibidor fruit garden, 12.09.1971, Kh. Aliev.

**Distribution:** Russia, Austria, Slovenia, Germany, UK, Greece, Ukraine, France, Croatia, Austria, Spain, Italy, Czech Republic, Hungary, Netherlands, Poland, Albania, Portugal, Switzerland, Romania, Latvia, Belgium, Lithuania, Denmark, Macedonia, Sweden, Finland, Bulgaria, Luxembourg, Slovakia, Poland, Belarus, Norway, Cyprus, Denmark, Estonia, Armenia, Azerbaijan, Turkey, Lebanon, Israel, Iran, Afghanistan, Pakistan, Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan, Kyrgyzstan, Mongolia, China, India, Algeria, Egypt, South Africa, Tunisia, Morocco, Libya (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

#### **26. *Podalonia tydei* (Le Guillou 1841)**

**Material:** 9♂, ♀, Ganja, 19.06., 5, 8, 17, 19.08.1933, M. Vinovsky; 1♂, Baku, July, Akhundova; 2♀, Samuch, Eldar Poily, 14.05.1935, M. Vinovsky; 1♂, Baku, 4.09.1934, ; 1♀, Baku botanical garden, 23.09.1937, Tertyshnikov; 3♂, 1♀, Baku, Surakhany, 7.07.1936, Tertyshnikov; 1♂, 21.05.2016, Ramana, A. Mammadov.

**Distribution:** Russia, Spain, Hungary, Greece, France, Italy, Ukraine, Portugal, Bulgaria, Macedonia, Romania, Germany, Austria, Malta, Zimbabwe, Turkey, Syria, Jordan, Israel, Iraq, Iran, Afghanistan, Pakistan, \*Azerbaijan, Kazakhstan, Turkmenistan, Tajikistan, Uzbekistan, Mongolia, China, India, Somalia, Algeria, Tunisia, Yemen, Tanzania, Libya, Cameroon, South Africa, Rwanda, Egypt, Morocco, Ethiopia, Uganda, Niger, Angola, Saudi Arabia, Kuwait, Australia (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

#### **Genus *Ammophila* W. Kirby 1798**

#### **27. *Ammophila campestris* Latreille, 1809**

**Material:** 1♀, Karayeri, Ganja, 3.06.1932, M. Vinovsky; 3♀, Eldar-Poily, 3, 13, 14.05.1935, on Euphorbia, M. Vinovsky; 2♀, Gaurarkh, Mugan Pers., 12.06., 17.08.1927,

Bocharnikov; 1♂, 1♀, Altan Pers., 28.06., 22.10.1927, Bocharnikov; 1♂, Az SSR Mugan, Sabirabad, 17.05.1928, Alexandrov; 1♀, Eldar-Poily, 30.04.1936, A. Bogachev.

**Distribution:** Russia, France, Germany, Ukraine, Austria, Italy, Switzerland, Spain, Croatia, Romania, Slovakia, UK, Czech Republic, Hungary, Netherlands, Poland, Belgium, Sweden, Portugal, Denmark, Finland, Belarus, Luxemburg, Bulgaria, Norway, Turkey, \*Azerbaijan, Kazakhstan, Turkmenistan, Tajikistan, Uzbekistan, Mongolia, China, Korean Peninsula, Algeria (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

#### **28. *Ammophila heydeni* Dahlbom, 1845**

*Ammophila heydeni* Dahlbom, 1845: Maharramov et al. 2020: 45

**Material:** 1♀, Zakataly, Talachay, 29.06.1933, A. Bogachev; 1♀, Baku, 7.09.1934, A. Bogachev; 1♀, Baku, 6.07.1935, A. Bogachev; 2♀, Absheron, Mashtagy, 2.09.1936, A. Bogachev; 1♀, Mugan, Djapharkhan, 18.08.1940, A. Bogachev; 1♀, Noraten, Nakhchivan, 9.06.1923, M. Vinovsky; 8♀, Ganja, 2, 3.06–25.07–4, 5.08.1932, in the steppe, M. Vinovsky; 2♀, Ganja, on the Eryngium, 8, 19.08.1933, M. Vinovsky; 1♀, along the road to Bolchaly village, 20.07.1933, M. Vinovsky; 1♀, Lerik, Kosmalyan, 24.07.1976, H. Aliev; 1♀, Lerik, Galabyn, 21.07.1976, H. Aliev; 1♀, Lerik, Kalakhan, 24.07.1976, H. Aliev; 2♀, Baku, Surakhany, 7.07.1936, on Eryngium, Tertyshnikov; 1♂, 1♀, Nakhch. ASSR, Akulisi, 1.06.1939, E. Hauser; 1♂, 1♀, st. Mingechevir, 22, 26.08.1933, B. Lotozky; 1♀, Baku, Mardakany, 6.06.1938, A. Bogachev; 1♀, Muganly, Zakataly Distr., 26.06.1938, A. Bogachev; 1♂, Baku, Shuvelyan, 11.07.1947, A. Bogachev; 1♀, environs of Lenkoran, 13.06.1929, in the meadow, E. Selivanichik; 1♀, Mugan, Djapharkhan steppe, 26.06.1925, Alexandrov; 1♂, Kuru-Chay, Pers. Ungut-Mugan, 1.06.1927, Bocharnikov; 1♀, Djapharabad, Nukhin, 16.07.1927, Bocharnikov; 1♀, Mil's Sovkhoz, 10.06.1934, V. Rusanova; 2♂, Baku, 18.08.2015, A. Mammadov.

**Distribution:** Russia, Italy, Croatia, Austria, France, Hungary, Romania, Ukraine, Spain, Greece, Albania, Czech Republic, Portugal,

Slovenia, Slovakia, Switzerland, Armenia, Azerbaijan, Turkey, Syria, Jordan, Israel, Iran, Yemen, Afghanistan, Kazakhstan, Tajikistan, Uzbekistan, Mongolia, China, Algeria, Libya, Morocco (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**29. *Ammophila hungarica*** Mocsáry, 1883  
*Ammophila hungarica* Mocsáry, 1883: Maharramov et al. 2020: 45

**Material:** 1♂, Nakhchivan, Ordubad, 15.08.1939, E. Hauser.

**Distribution:** Russia, Hungary, Spain, Belgium, Austria, France, Italy, Ukraine, Armenia, Azerbaijan, Turkey, Syria, Jordan, Iran, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, Algeria (Antropov et al. 2017; Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**30. *Ammophila gracillima*** Taschenberg, 1869

**Material:** 1♀, Baku, 3.08.2014, Shuvelyan, A. Mammadov; 1♀, 18.09.2015, A. Mammadov.

**Distribution:** Russia, Turkey, Syria, Jordan, Israel, Iran, \*Azerbaijan, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, Mongolia, China, India, Sudan, Algeria, Libya, Morocco, Niger, Ethiopia, Tunisia, Mauritania, Oman, Saudi Arabia, United Arab Emirates, Egypt (Antropov et al. 2017; Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**31. *Ammophila occipitalis*** F. Moravitz, 1890

**Material:** 1♀, Mugan Persia, Kuru-chay, 21.06.1927, Bocharnikov; 1♀, Az SSR, Mugan Sabirabad, 17.05.1928, Alexandrov.

**Distribution:** Russia, Jordan, Iraq, Iran, \*Azerbaijan, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan (Antropov et al. 2017; Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**32. *Ammophila sabulosa*** (Linnaeus, 1758)

*Ammophila sabulosa* (Linnaeus, 1758): Maharramov et al. 2020: 45

**Material:** 1♂, 3♀, Ganja, 30.07, 5, 17.08.1933, on *Eryngium*, M. Vinovsky; 1♀, 1♂, Ganja,

3.06.1932, Karayeri, M. Vinovsky; 1♂, Eldar-Poily, 14.05.1935, on *Tamaryx*, M. Vinovsky; 1♀, Port Ilyicha, 2.07.1936, in the steppe, M. Vinovsky; 1♂, Mugan, bor. Djapharkhan, 23.06.1925, Alexandrov; 1♀, Zakataly Taly, 9.07.1938, A. Bogachev; 1♀, Agdjabedy, 5.06.1934, A. Bogachev; 1♀, Distr. Kakh, Sary-Bash, 17.08.1934, A. Bogachev; 1♀, Karaagachly, Samukh Distr., 1.06.1935, A. Bogachev; 1♀, Baydarka Distr., Kostroma, 8.09.1924, Gussakovsky; 1♀, Yevlakh, 12.05.1937, E. Hauser.

**Distribution:** Russia, Denmark, Sweden, Switzerland, Norway, Austria, Italy, Germany, Ukraine, UK, Ireland, Finland, Latvia, Lithuania, Poland, France, Austria, Croatia, Slovenia, Belgium, Hungary, Czech Republic, Netherlands, Albania, Montenegro, Macedonia, Romania, Bulgaria, Luxemburg, Belarus, Moldova, Serbia, Turkey, Syria, Iran, Azerbaijan, Kazakhstan, Uzbekistan, Tajikistan, Mongolia, China, Japan, Nepal, Korea, Algeria (Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020).

**33. *Ammophila terminata*** F. Smith, 1856

**Material:** 1♀, Russia, Stavropol, 4.06.1926, V. Belizin; 1♀, Yevlakh, 2.06.1938, E. Hauser; 1♀, Azerbaijan, Nakhichevan, Djulfa, Diza, 26.04.2012, H. Aliev.

**Distribution:** Russia, Canary Island, Austria, Spain, France, Ukraine, Italy, Slovakia, Belgium, Hungary, Czech Republic, Portugal, Bulgaria, Romania, Switzerland, Germany, Turkey, \*Azerbaijan, Kazakhstan, Kyrgyzstan, Mongolia, China, Tunisia, Algeria (Pulawski 2022).

**Remarks.** Recorded as new for the fauna of Azerbaijan.

**Genus *Eremochares*** Gribodo, 1883

**34. *Eremochares dives*** (Brullé, 1833)

*Eremochares dives* (Brullé, 1833): Dollfuss 2010: 537

*Eremochares dives* (Brullé, 1833): Maharramov et al. 2020: 45

**Material:** 1♀, Nakhchivan, Bash-Norashen, 9.06.1923, M. Vinovsky; 1♂, 1♀, Kuba, 15.06.1927, V. Gussakovsky.

**Distribution:** Russia, Greece, Ukraine, Azerbaijan, Turkey, Syria, Lebanon, Israel, Iraq,



Iran, Afghanistan, Pakistan, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, China, India, Tunisia, Algeria, Libya, Morocco, Egypt, Saudi Arabia (Antropov et al. 2017; Pulawski 2022).

**Remarks.** Previously reported in Azerbaijan from Nakhchivan (Maharramov et al. 2020) and Shirvan (Dollfuss 2010).

### Conclusion

To conclude, the collection of the Institute of Zoology of the National Academy of Sciences of Azerbaijan (Baku) features wasps of the family Sphecidae represented by 34 species

from 9 genera. Of these, 11 species were first recorded in the fauna of Azerbaijan: *Chalybion flebile* Lepeletier de Saint Fargeau, 1845; *Scepliphron madraspatanum* (Fabricius, 1781); *Prionyx lividocinctus* (A. Costa, 1858); *P. haberhaueri* (Radoszkowski, 1871); *P. subfuscatus* (Dahlbom, 1845); *Podalonia caucasica* (Mocsary, 1883); *P. tydei* Le Guillou 1841; *Ammophila terminata* (F. Smith, 1856); *A. campestris* (Latreille, 1809); *A. occipitalis* (F. Moravitz, 1880); and *A. gracillima* Taschenberg, 1869. In total, the collection contains 34 wasp species, of which 34 are from Azerbaijan, 15 from Iran and 1 from Russia.

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