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RESEARCH ARTICLE

Hoverflies (Diptera, Syrphidae) of the Hissar mountain range (Central Asia)

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Abstract

The fauna and ecological features of the hoverflies of the Hissar Range have been studied. 127 species have been identified in the studied area, 45 of which have been discovered for the first time in the entire or part of the studied area. The Eristalinae subfamily is the most abundant, with 19 genera and 75 species. The genus *Eumerus* is the most numerous, with 23 species. It appears that the mountains of Central Asia are one of the centers of species diversity for this genus.

Keywords

Syrphidae, new findings, Central Asia, Uzbekistan, Tajikistan, Hissar mountain range

Introduction

The southernmost spur of the Hissar-Alay mountain system – the Hissar Range, is located on the interfluve of the basins of the Zeravshan and Amu Darya rivers

(Fig. 1). The length of the range is about 200 km. It runs south of the Zeravshan Range and north of the city of Dushanbe, through the Hissar District in Tajikistan and the northern part of the Surkhandarya Region and the southeastern part of the Kashkadarya Region in Uzbekistan. The range enters Uzbekistan at its southwestern end. It forms numerous spurs, giving it the character of a powerful, highly branched mountain system. Hissar and its spurs serve as a watershed for the Zeravshan, Kashkadarya and right tributaries of the Amu Darya (Kafirnigan, Surkhan, Sherabad, etc.) basins (Zhandosova 2005).

According to R.V. Kamelin (1973), in botanical and geographical terms, the Hissar range is part of the Hissar-Darvaz district (Sangardak and Tupalangdarya valleys), of the West Hissar district (excluding Babatag) and Pripyandzh (Babatag) district of the Central Asian Mountain Province.

Western Hissar has a rich flora. According to Vasilchenko and Vasilyeva (1985), there are 2,100 plant species in the region and 203 of them are endemic. The region features landscapes of foothills, arid lowlands and highly dissected midlands, as well as semi-arid highlands. In the lowest belt, xerophytic grasses such as *Carex pachystylis* and *Poa bulbosa* play a dominant role and other plants such as *Cousinia* and *Phlomis* are also noticeable. It should be noted that this belt is occupied by arable rain-fed lands and the vegetation of virgin areas is represented by ephemeral-ephemeroid, zopyne-ephemeroid and wormwood-ephemeroid communities that have been degraded due to intensive grazing. Above this is a wide belt of ephemeroid coarse grasses, where the main dominants are *Inula grandis*, *Agropyron trichophorum*, *Hordeum bulbosum* and *Artemisia tenuisecta*. There are also frequent thickets of prickly almonds (*Prunus spinosissima*) and Bukhara, red-fruited cherries (*Cerasus erythrocarpa*) and pistachios (*Pistacia vera*). Individual deciduous trees and shrubs (species *Lonicera*, *Rosa*, *Cotoneaster*, *Acer*, *Crataegus*) and *Juniperus seravschanica* appear higher in the vegetation cover. The watershed ridges and dry gravelly slopes of the subalpine belt (from 2400–2500 to 3000 m above sea level) are occupied by upland xerophytes (*Astragalus*, *Oxytropis*, *Acantholimon*, *Cousinia*). The alpine belt is represented mainly by xerophytic low-growing grasses such as *Lagotis korolkowii*, *Carex melanantha* and *Kobresia persica*.

Hoverflies, or Syrphidae, are a worldwide family of Diptera and are one of the five most species-rich families (Nartshuk 2003). The beginning of the purposeful study of the syrphids of the Hissar Range can be considered to be the series of works by A.A. Stackelberg, in which he began to summarize the results of V.V. Gussakovsky's long-term collections and his own, conducted in the late 1940s and early 1950s (Stackelberg 1949, 1951, 1952). Later, Stackelberg used unpublished materials in conducting revisions and writing reviews on individual genera of Syrphidae (1953, 1955, 1958, 1961, etc.). The studies by S. Gafarov on southern Tajikistan should also be noted (1979, 1987, 1990, 1991). Within Uzbekistan, syrphid research was conducted in other mountain systems. In the 1990s–2000s, D.B. Daminova investigated the fauna of the Nurata and Chatkal ranges (1997; 2001; 2004; 2011), while more recently M. Rakhimov studied the Syrphidae of the Zarafshan Range (2023; Khali-

mov et al. 2023). These works considerably enriched the knowledge of Syrphidae diversity in adjacent mountain systems of Central Asia.

However, despite the above-mentioned contributions, a comprehensive synthesis addressing the Syrphidae of the Hissar Range as an integrated biogeographical system covering its full geographic extent has not yet been produced. Existing data remain scattered, geographically fragmented and published within broader regional or taxonomic frameworks. A unified synthesis covering the entire Hissar mountain system has not been produced to date.

The present study aims to fill this gap by providing a consolidated and updated account of the Syrphidae of the Hissar Range in its entirety, thereby contributing to a more complete understanding of species diversity, distribution patterns and faunistic composition within this important mountain system of Central Asia.

Materials and methods

The expeditions undertaken by the authors in recent years in order to collect syrphids in the territories of Uzbekistan and Tajikistan have allowed us to collect extensive material that forms the basis of this article. In Tajikistan, the expeditions were organized in collaboration with the Pavlovsky Institute of Zoology and Parasitology of the Academy of Sciences of Tajikistan. In addition, the materials of the Zoological Institute of the Russian Academy of Sciences (Saint Petersburg), which contain the type specimens of the species described by A.A. Stackelberg, have been studied.

The insects were collected using Malise traps, yellow pan traps and a net – individual capture and entomological mowing. The insects collected with a net were pinned on pins on the day of capture and the alcohol materials were processed in a laboratory setting. The material was identified using the keys to the Palearctic Syrphidae (Violovich 1983; Mutin and Barkalov 1999), as well as the original key to the Syrphidae of Tajikistan (Barkalov in press). When species identification was difficult, they were compared with the determinant collection of the Institute of Systematics and Ecology of Animals of the Siberian Branch of the Russian Academy of Sciences (SZMN, Novosibirsk). The materials are stored at the SZMN and at the Entomological Collection of Samarkand State University.

In the column "Material examined" lists only specimens from collections made in Uzbekistan and Tajikistan. When specifying the collection points, abbreviations are used, the meanings of which are listed below.

I. Republic of Uzbekistan

1. Qaratag – Hissar Reserve, Karatag mountain, 39.0278° N 67.4701° E, 3000 m a.s.l.
2. Gilon – Hissar Reserve, cordon of Gilan Part, 39.0328° N 67.4839° E, 2300 m a.s.l.
3. Naushur – Hissar Reserve, Gilan Part, Naushur tract, 39.0268° N, 67.4801° E, 2600 m a.s.l.

4. Khodjagulvars – Hissar Reserve, Khodzhagul'vas Mountains, Aktash gorge 39.00° N, 67.48° E, 3550-4000 m a.s.l.
5. Miraki – Hissar Reserve, Mirakinskij Part, Tamshush, near cordon, 38.9894° N, 67.3673°E, 1850 m a.s.l.
6. Quqoshsoy – Hissar Reserve, Mirakinsky Part, Kukoshsoy tract 38.9985° N, 67.3940° E, 2400 m a.s.l.
7. Oqtoshsoy – Hissar Reserve, Mirakinskij Part, Aktash tract, 38.9671° N 67.3891° E, 2600 m a.s.l.
8. Tamshush – Hissar Reserve, Mirakinsky Part, Tamshush River 38.9652° N, 67.4050° E, 2800 m a.s.l.
9. Qorachashma – Hissar Reserve, Tankhazdarya Part, Karachashma tract, 38.8906° N, 67.3046° E, 1800 m a.s.l.
10. Chopik – Hissar Reserve, Tankhazdarya Part, near former Chopik settlement 38.8562° N, 67.3358° E, 1800 m a.s.l.
11. Mirkurak – Hissar Reserve, Tankhazdarya Part, Mikurak tract, 38.8500° N, 67.2750° E, 2800 m a.s.l.
12. Qizildaryo – Kyzildarya river valley, near the village of Suvlisai, 38.8196° N, 67.1047° E, rocky shibyak with cliffs, 1200 m a.s.l.
13. Xodja Karaul – Chimbaj mountain – Khodzha Karaul, 38.69° N, 67.32° E, 3600-3800 m a.s.l.
14. Tupalangdaryo – Surkhandarya region, Tupalandarya river valley, 7 km N from the village of Hisarak, 38.63° N, 67.83° E, rocky shiblyak with cliffs, 1000–1300 m a.s.l
15. Chimboy – Dukankhana settlement, Chimbaj tract, 38.69° N, 67.28° E, 2500-2700 m a.s.l.
16. Khoja Gur-gur – Surkhandarya region, Baysuntau ridge, upper Machaidarya River, 10 km from Kyzylnavr village, 38.3973° N, 67.2726° E, 3100–3600 m a.s.l.
17. Dukonxona – Dukankhana settlement, 38.6823° N, 67.2553° E, 2000 m a.s.l.
18. Machaydarya – Surkhandarya region, Baysuntau ridge, Machaydarya river valley, 5 km N of the Derbent village, 38.2652° N, 67.0219° E, rocky shibyak with cliffs, 1100–1400 m a.s.l.
19. Shalkan – Surkhandarya region, Kugitang range, Surkhan reserve, Shalkan section, 37.86° N, 66.63° E, rocky juniper woodland, 1700–2000 m a.s.l.
20. Laylik – Surkhandarya region, Sherabad district, near Loylik village 37.7233° N, 66.9465° E, 550 m a.s.l.

II. Republic of Tajikistan

21. Khazorchashma – lake Khazorchashma, 39.0965° N, 67.8535° E, 2400 m a.s.l., a fenced-in meadow on a dry slope.
22. Sarytag – Iskanderkul lake, Sarytag village, 39.0500° N, 68.3167° E, 2374 m a.s.l.
23. Iskanderkul – Iskanderkul lake, surroundings of Lake Zmeinoe, 39.0877° N, 68.3713° E, 2212 m a.s.l.

24. Anzob – Anzob Pass, 39.0833° N, 68.8667° E, 3372 m a.s.l.
25. Kalon – 3 km northeast of Kalon village, Siyokuh, 39.05° N, 68.87° E, 2433 m a.s.l.
26. Safed-Dara – 2 km from Safed Dara village 38.85° N, 69.00° E, 2400 m a.s.l.
27. Khodzha-Obi-Garm – Khodja-Obigarm Gorge, 38.8833°N, 68.7833° E, 1728 m a.s.l.
28. Kondara – Kondara Gorge, 38.80° N, 68.80° E, 1185-1225 m a.s.l.
29. Takob – Vardzob District, near Takob village, 38.83° N, 68.91° E.
30. Dushanbe – Dushanbe, Institute of Zoology and Parasitology, 38.5313° N, 68.8236° E, 754 m a.s.l.

All of these points are shown in Figure 1.

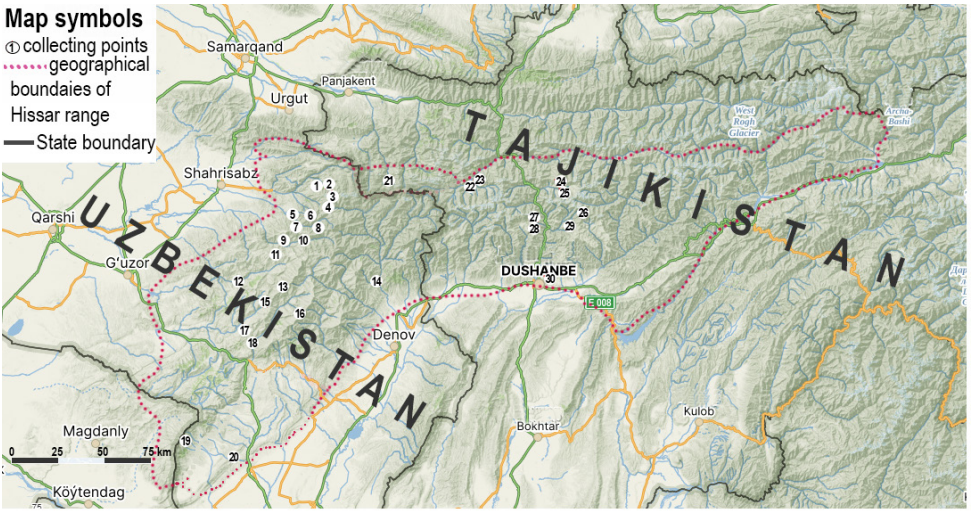

Figure 1. Collection points.

In the annotated list below, each species is accompanied by references to literature sources that provide information about its occurrence in the Hissar Range. The "Distribution" section provides information about the species overall geographical distribution. Species that were first discovered in Uzbekistan and/or Tajikistan are marked with an asterisk (*).

The "Notes on ecology" section provides information about the biotopes, plants on which the flies were caught, as well as some information about the biology and economic importance of the species. In “The flight period” we have included our information, taking into account literary sources. The taxonomy is based on the key to Russian Far Eastern Syrphidae (Mutin and Barkalov 1999). The validity of the Latin names of the species is based on the latest publications, which are most fully represented in the work by M. Speight (2024).

The surnames of the collectors are abbreviated as follows: B. – A.V. Barkalov, Z. – V.K. Zinchenko and R. – M.R. Rakhimov.

Results

An annotated list of hoverflies from the Hissar Range

Family Syrphidae – hoverflies

Subfamily Syrphinae

Tribe Paragini

***Paragus* Latreille, 1804**

1. Paragus (s. str.) *albifrons* (Fallén, 1817)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 2♂♂, Miraki, 09.05.2021 (R.); 1♀, Sangardak, 19–20.06.2023 (R.).

Notes on ecology. It is not common, preferring mountainous areas, forest biotopes along river banks. The imago is usually found between the grass stems. Visits to Apiaceae have been recorded. Flight period: from April to June.

Distribution. All Palaearctic, except Northern Africa.

2. Paragus (s. str.) *bicolor* (Fabricius, 1794)

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♂, Naushur, 24.06.2021 (R.); 1♂, 3♀♀, Gilon, 25.06.2021 (R.); 1♀, Khojagulvars, 15.07.2022 (R.); 1♂, Miraki, 09.05.2021 (R.); 1♂, Tamshush, 02.06.2021 (R.); 1♂, Quqoshsoy, 11.07.2021 (R.); 1♂, 1♀, Chopik, 13.06.2021 (R.); 1♂, 2♀♀, Mirkurak, 12.06.2021 (R.); 1♂, Qizildaryo, 09.05.2022 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 1♀, Chimboy, 12.07.2022 (R.); 1♂, Tulangdaryo, 02.05.2022 (R.); 1♂, Shalkan, 30.05.2023 (R.). **Tajikistan** 2♀♀, Sarytag, 16 and 19.06.2022 (B.); 6♂♂, 1♀, Iskandarkul, 13–17.06.2018 (B.); 1♀, same locality, 17.06.2022 (B.); 3♂♂, 1♀, Kondara, 1–3.06.2018 (B.); 1♂, same locality, 25.05.2021 (Z.); 4♀♀, same locality, 26–31.05.2022 (B.); 79♂♂, 30♀♀, Kalon, 8.06–12.07.2017and2018 (B.); 3♂♂ same locality, 10–13.06.2022 (B.).

Notes on ecology. It is found everywhere, from the tugay forests of lowland rivers to the middle mountains (500-2800 m), in large numbers, in various agrocenoses, in wheat fields, in orchards under trees, on the flowers of weeds, *Lepidium draba*, *Sisymbrium loeselii*, *Mentha*, *Heracleum lehmannianum*, *Ferula kuhistanica*

and *Prunus cerasus*. The flight period is from May to September, with peaks in May, July and September.

Distribution. Western and Central Palaearctic, including Siberia.

3. **Paragus* (s. str.) *bradescui* Stănescu, 1981

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Qizildaryo, 09.05.2022 (R.); 1♂, Miraki, 14–15.06.2023 (R.); 1♂, Tulangdaryo, 27.05.2023 (R.). **Tajikistan** 1♂, 2♀♀, Kondara, 1–3.06.2018 (B.); 1♂, same locality, 29.05.2022 (Z.); 10♂♂, 2♀♀, Kalon 30.06–20.07. 2018 (B., Z.).

Notes on ecology. It is found in the middle mountains (1000-2500 m). Flies are most active flying on dry meadow between the grass stems in the afternoon. The flight period is from May to the end of July.

Distribution. Western and Central Palaearctic. The species discovered in the territories of Uzbekistan for the first time.

4. Paragus (s. str.) *quadrifasciatus* Meigen, 1822

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂ Gilon 25.06.2021 (R.); 1♀, Miraki, 09.05.2021 (R.); 1♂, Mirkurak, 13.06.2021 (R.); 1♀, same locality, 12.06.2021 (R.). **Tajikistan:** 1♂, Kondara, 31.05.2021 (B.); 1♂, Kalon, 6.06.2018 (B.).

Notes on ecology. The flies are collected in flight between the stems and on the inflorescences of small Compositaceae and jugan (*Prangos pabularia*). It is also found in agrocenoses, in oases on the plains, in the foothills and in the highlands. Flight period: May–October.

Distribution. All Palaearctic and Norther India.

5. **Paragus* (*Pandasyophthalmus*) *abrogans* Goeldlin, 1971

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Quqoshsoy, 11.06.2021 (R.); 1♂, same locality, 11.07.2021 (R.); 1♂, Chopik, 13.06.2021 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 1♀, Shalkan, 30.05.2023 (R.). **Tajikistan** 1♂, 1♀, Kondara, 1–3.06.2018 (B.); 1♂, same locality, 31.05.2022 (B.); 23♂♂, 1♀, Kalon, 24.06–12.07.2017 (B.); 3♂♂, 1♀, same locality, 24–25.06.2018 (B., Z.).

Notes on ecology. It is found everywhere from the floodplains of lowland rivers to the middle mountains (500-2500 m), in gardens under trees, on the flowers of weeds, *Sinapis arvensis*, *Lepidium draba*, *Achillea millefolium*, *Mentha*, *Heracleum lehmannianum* and *Ferula kuhistanica*. Flight period: end of April – June.

Distribution. From the eastern coasts of the Mediterranean Sea to Central Asia. The species discovered in the territories of Tajikistan for the first time.

6. Paragus (*Pandasyophthalmus*) *haemorrhous* Meigen, 1822

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, 2♀♀, Gilon, 25.06.2021; 1♀, Miraki, 14.07.2022 (R.); 1♂, Oqtoshsoy, 03.06.2021 (R.); 2♂♂, 1♀, same locality, 14–15.06.2023 (R.); 2♂♂, Mirkurak, 01.06.2023 (R.); 1♂, Qizildaryo, 09.05.2022 (R.); 1♀, Chimboy, 12.07.2022 (R.); 1♂, Shalkan, 30.05.2023 (R.). **Tajikistan** 31♂♂, 2♀♀, Kondara, 1–3, 24.07.2018 (B.); 37♂♂, 3♀♀, same locality, 26–31.05.2021 (B.); 5♂♂, same locality, 29.05–2.06.2022 (B., Z.); 4♂♂, Dushanbe, 19–29.06.1982 (Dubatolov); 37♂♂, 13♀♀, 3–5 км от Kalon, 23.06–12.07.2017, 2018 (B., Z.); 1♂, 1♀, same locality, 9.06 and 7–12.07.2021 (B., Z.).

Notes on ecology. It is found everywhere, from the tributaries of lowland rivers to the middle mountains (500–2800 m), in large numbers in various agrocenoses, in wheat fields, in gardens under trees and on the flowers of weeds, *Lepidium draba*, *Achillea millefolium*, *Mentha*, *Heracleum lehmannianum* and *Ferula kuhistanica*. The flight period is from April to October.

Distribution. All Palaearctic and Nearctic, from the North to subtropics.

7. Paragus (*Pandasyophthalmus*) *tibialis* (Fallén, 1871)

Stackelberg 1951: 137.

Material examined. Uzbekistan 2♂♂, Naushur, 24.06.2021 (R.); 3♂♂, Qoratog, 23.06.2021 (R.); 1♂, Gilon, 25.06.2021 (R.); 17♂♂, 21♀♀, same locality, 14.07.2022 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 1♀, same locality, 12.07.2022 (R.); 1♂, Machaydaryo, 05.05.2022 (R.); 3♂♂, Tulangdaryo, 02.05.2022 (R.); 1♀, same locality, 27.05.2023 (R.); 1♂, Shalkan, 30.05.2023 (R.). **Tajikistan** 2♂♂, 3♀♀, Sarytag, 13 and 17.06.2018 (B.); 1♂, Kondara, 19.09.1992 (Ustyuzhanin); 2♂♂, same locality, 2.06.2022 (B.).

Notes on ecology. It is found everywhere from deserts with halophytes to the forest zone of the highlands. From March to September, flies can be found flying between plants in various agrocenoses, pasture meadows and along the banks of small rivers. Often visits cumin blossoms (*Carum carvi*). Flight period: from March to October.

Distribution. Throughout the Palaearctic, Nearctic and Oriental Region.

Tribe Bacchini

***Melanostoma* Schiner, 1860**

8. Melanostoma mellinum Linnaeus, 1758

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♀, Gilon, 25.06.2021 (R.); 1♀, same locality, 14.07.2022 (R.); 6♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, Qizildaryo, 09.05.2022 (R.); 5♂♂, 4♀♀, Machaydaryo, 05.05.2022 (R.); 1♂, Shalkan, 07.05.2022 (R.). **Tajikistan** 3♀♀, Sarytag, 13 and 17.06.2018 (B.); 1♀, same locality, 19.06.2022 (B.); 11♀♀, Iskandarkul, 17–20.06.2022 (B., Z.); 12♀♀, Iskandarkul, 15–19.06.2018 (B., Z.); 3♂♂, 4♀♀, Kondara, 1–3.06.2018 (B., Z.); 7♂♂, 10♀♀, same locality, 29.05–2.06.2022 (B., Z.); 2♂♂, 3♀♀, Dushanbe, 31.05.2016 (Z.); 5♂♂, 8♀♀, Kalon, 30.06–12.07.2017 (B.); 5♂♂, 6♀♀, same locality, 24.06–5.07.2018 (B., Z.); 1♂, 6♀♀, same locality, 7–10.06.2022 (B., Z.).

Notes on ecology. One of the most widespread and frequently encountered species of Syrphidae. It is found everywhere, near rivers, in thickets, in gardens under trees, on the flowers of weeds, on the inflorescences of wild Poaceae; *Lepidium draba*, *Sisymbrium loeselii*, *Plantago major*, *Taraxacum* sp., various *Ranunculus*, *Potentilla* sp., *Heracleum lehmannianum*, on various species of *Ferula*, as well as on the flowers of fruit trees, including *Prunus cerasus*. It flies low among the grassy vegetation; it is often active even in cloudy conditions. Flight period: March–October.

Distribution. Throughout the Palaearctic and Nearctic regions, from the north to the subtropics.

Platycheirus Le Peletier et Serville, 1828

9. Platycheirus (*Pachysphyria*) *ambiguus* Fallén, 1817

Stackelberg 1951: 137 (*Melanostoma ambiguum*).

Material examined. Uzbekistan 1♂, Naushur, 24.06.2021 (R.); 1♂, Qoratog, 23.06.2021 (R.); 2♂♂, Gilon, 25.06.2021 (R.); 1♂, Khojagulvars, 15.07.2022 (R.); 2♂♂, Tulangdaryo, 02.05.2022 (R.).

Notes on ecology. The species is not common in tugay (willow and turanga forests) in mountain forests consisting of *Prunus mahaleb*, *Acer semenovii* and *Crataegus turkestanica*. Flight period: mid-April (in tugay) – end of July.

Distribution. All Palaearctic, except Nothern Africa.

10. **Platycheirus* (s. str.) *goeldlini* Nielsen, 2004

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♀, Sarytag, 13.06.2018 (B.); 1♀, Anzob, 14.06.2022 (B.); 1♂, 2♀♀, Kalon, 7 and 17.05.2016 (Z.); 1♂, 1♀, same locality, 24–25.06.2018 (B.).

Notes on ecology. Females feed on umbelliferous inflorescences – *Ferula* sp., *Prangos pabularia*, *Carum carvi* and on inflorescences of *Spiraea* sp. Males hover in the partial shade of trees. Both males and females fall into yellow pan plates. Flight period: from the first decade of May to the end of June.

Distribution. Europe (Alps, Finland); Tajikistan. The species discovered in the territory of Tajikistan for the first time.

11. **Platycheirus* (s. str.) *hyperboreus* (Staeger, 1845)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 2♂♂, Safed-Dara, 29.05.2021 (B.).

Notes on ecology. Two males of this species were caught on the inflorescences of *Prangos pabularia* on the height 2147 m a.s.l. in the end of May.

Distribution. North of Eurasia and North America. The species discovered in the territory of Tajikistan for the first time.

12. Platycheirus (s. str.) *pamiricus* Barkalov et Nielsen, 2009

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 3♀♀, Kalon, 9.06.2022 (B.).

Notes on ecology. Females of this species were caught on the inflorescences of *Prangos pabularia* on a meadow at a height 2927 m a.s.l.

Distribution. Tajikistan (Central and West Pamir).

***Rohdendorfia* Smirnov, 1924**

13. Rohdendorfia dimorpha Smirnov, 1924

Stackelberg 1951: 137; Violovich 1984: 91 (*Rohdendorfia bactriana*).

Material examined. Uzbekistan 2♀♀, Aksu, 12.07.2022 (R.); 2♂♂, 5♀♀, Khojagulvars, 15.07.2022 (R.); 1♂, 1♀, Chimboy, 12.07.2022 (R.); 21♂♂, 9♀♀, Khoja Karaul, 13.07.2022 (R.); 1♀, Khoja Gur-gur, 23.06.2025 (R.). **Tajikistan** 53♂♂, 4♀♀, Anzob, 6.07.2017 (B.); 3♂♂, 2♀♀, same locality, 6.07.2017 (Z.); 10♂♂, same locality, 7.06.2021; (Z.).

Notes on ecology. It is a typical alpine species that is found locally above the Juniperus belt in alpine meadows and along the banks of mountain streams with a more or less stable grass cover. It is found at altitudes ranging from 2,500 m (Alay Range) to 4,300 m (Eastern Pamir). We collected this species at altitudes ranging from 3,300 to 3,600 m a.s.l. in the western part of the Hissar Range. At the Anzob Pass, the flies were sitting on the rocks along the road at the highest point of the pass. Apparently, the passes are places where this species is concentrated. The males were not feeding much, although there were some flowering plants nearby. The flight period was from early June to mid-July.

Distribution. Mountains of Middle Asia, Altai, Afghanistan, China.

Tribe Syrphini (Chrysotoxini)

***Chrysotoxum* Meigen, 1803**

14. Chrysotoxum bactrianum Violovitsh, 1973

Violovitsh, 1973: 931.

Material examined. Uzbekistan 1♀, Miraki, 08.05.2021 (R.). **Tajikistan** 1♂, Dushanbe, Botanical garden, 20.06.1943 (Romadina); 1♀; Dushanbe, loess hills, 1944 (A. Stackelberg).

Notes on ecology. It is mainly found on plains, but in the mountains it rises to an altitude of 1800 m. It is found locally in tugay forests, various agrocenoses and in gardens under trees. It feeds on the flowers of weeds growing in gardens. The flight period is from early May to late June.

Distribution. Uzbekistan, Tajikistan, Kyrgyzstan, Northern Kazakhstan.

15. Chrysotoxum caucasicum Sack, 1930

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 3♂♂, 2♀♀, Naushur, 24.06.2021 (R.); 9♂♂, 7♀♀, Qoratog, 23.06.2021 (R.); 2♂♂, Khojagulvars, 15.07.2022 (R.); 4♂♂, 3♀♀, Chopik, 13.06.2021 (R.); 8♂♂, 3♀♀, Mirkurak, 12.06.2021 (R.). **Tajikistan** 3♂♂, 3♀♀, Iskandarkul, 18–20.06.2022 (B.); 2♂, Shakhriston pass, 20.06.2018 (B.); 17♂♂, 4♀♀, 12 km N Shakhriston pass, 22.06.2018 (B., Z.); 3♂♂, 1♀, Kondara, 31.07.1937 and 12–23.07.1956 (Grunin, Gussakovskij); 6♂♂, 4♀♀; 3–7 km Kalon; 23.06–5.07.2017 and 2018 (B., Z.); 5♂♂, 5♀♀, same locality, 6–9.05.2021 (B.); 1♂, Ziddy, 17.06.1944 (Stackelberg).

Notes on ecology. It is found in the middle mountain belt at an altitude of 2500–3200 m a.s.l. In some places, it visits en masse the inflorescences of *Heracleum lehmannianum*, *Ferula tadshikorum* and *Prangos pabularia*. The flight period is from mid-June to late July.

Distribution. Caucasus, all Middle Asia, Southern Kazakhstan, Afghanistan.

16. Chrysotoxum festivum (Linnaeus, 1758)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.); 3♀♀, Qoratog, 23.06.2021 (R.); 1♂, 3♀♀, Gilon, 25.06.2021 (R.); 3♂♂, 1♀; Miraki, 08.05.2021 (R.); 2♀♀, Tamshush, 02.06.2021 (R.); 1♂, same locality, 01.06.2021 (R.).

Notes on ecology. Found in woodlands, in the mountains, where males hover in the shade of trees, at an altitude of 2–4 m and females feed on the inflorescences of *Daucus carota*, *Rosa* sp., *Euphorbia* sp., *Potentilla* sp. and *Heracleum lehmannianum*. Flight period: from beginning of May to the end of June.

Distribution. All Palaearctic except the far North and South, Oriental Region.

17. Chrysotoxum intermedium Meigen, 1822

Stackelberg 1951: 137.

Material examined. Tajikistan 1♂, Iskandarkul, 19.06.2018 (B.).

Notes on ecology. According to the work of the author mentioned above, it is found in tugay, in gardens under trees, on the flowers of weeds, *Achillea* sp. and *Prunus cerasus*. In early spring, it was also observed feeding on *Juniper* sp. pollen. In the flooded poplar forest, this species was caught on the inflorescences of *Heracleum lehmannianum*. Flight period: from February to July.

Distribution. Europe, Northern Africa, Middle Asia, Kazakhstan, Afghanistan.

18. Chrysotoxum kirghizorum Peck, 1974

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♂, Kondara, 29.05.2022 (B.).

Notes on ecology. The only male was hovering on height of 1–1.5 m above in the forest path on altitude 1240 m a.s.l.. in the end of May.

Distribution. Turkmenistan, Tajikistan, Kyrgyzstan.

19. Chrysotoxum kozhevnikovi Smirnov, 1925

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♂, Oqtoshsoy, 03.06.2021 (R.); 2♂♂, 3♀♀, Dukonkhona, 21.06.2021 (R.). **Tajikistan** 1♂, Sarytag, 19.06.2022 (B.); 1♀, Iskandarkul, 18.06.2018 (B.); 2♂♂, same locality, 18–20.06.2022 (B., Z.); 1♀, Kondara, 31.05.2022 (Z.); 1♀, Kondara, Kvak tract, 2000 m, 23.09.1937 (Gussakovskij); 23♂♂, 24♀♀, Kalon, 23.06–12.07.2017 and 2018 (B., Z.).

Notes on ecology. In Uzbekistan it is rare, in the middle mountain belt at an altitude of 1700-2500 m., in valleys with floodplain with deciduous forests and meadow-steppe slopes, where the specimens of this species were collected on flowers of *Heracleum lehmannianum* and *Mentha* sp. The species is listed in the "Red Book of the Republic of Uzbekistan", in which it is indicated as a vulnerable, declining, mosaic-distributed endemic species. So far, it has been found in three locations in Uzbekistan: Chimgan, Chatkal Nature Reserve (Chatkal Range), Aktash (Karzhantau Range) and Khayat (Nuratau Range) (Daminova, 2004). In Tajikistan, the species is common in some locations. It can be found on *Euphorbia* sp., *Carum carvi* and *Prangos pabularia*. Additionally, males of this species have been captured flying between tall grass stems. Flight period: from May to September.

Distribution. Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan.

20. Chrysotoxum parmense Rondani, 1845

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♂, Tamshush, 02.06.2021 (R.); 1♂, Mirkurak, 12.06.2021 (R.); 1♀, Dukonkhona, 21.06.2021 (R.). **Tajikistan** 1♀, Kondara, 5.06.1943 (A. Stackelberg); 1♀, Dushanbe, 17.08.1937 (Gussakovskij).

Notes on ecology. It is rare, in the middle mountain belt and partially in the highlands at an altitude of 1800–2800 m a.s.l. Males hover in the shade of willows or other trees, females feed on the inflorescences of *Heracleum lehmannianum* and *Ferula tadshikorum*. Flight period: late May – late July.

Distribution. Europe, Caucasus, all Middle Asis, Iran.

21. Chrysotoxum stackelbergi Violovitsh, 1953

Violovitsh, 1953: 358; Violovitsh, 1974c: 198.

Material examined. Tajikistan 1♀, Dushanbe, Botanical Garden, 18.06.1943 (Popov).

Notes on ecology. No information.

Distribution. All Middle Asia.

22. Chrysotoxum vernale Loew, 1841

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, 1♀, Naushur, 24.06.2021 (R.); 1♂, 4♀♀, Qoratog, 23.06.2021 (R.); 6♂♂, 5♀♀, Gilon, 25.06.2021 (R.); 4♂♂, 5♀♀, Oqtosh-soy, 03.06.2021 (R.); 4♂♂, 4♀♀, Miraki, 08.05.2021 (R.); 5♂♂, 6♀♀, same locality, 01.06.2021 (R.). **Tajikistan** 2♂♂, 2♀♀, Sarytag, 13 and 17.06.2018 (B.); 2♂♂, 4♀♀, same locality, 16 and 19.06.2022 (B.); 4♂♂, 8♀♀, Iskandarkul, 19.06.2018 (B.); 3♀♀, same locality, 16–17.06.2022 (B.).

Notes on ecology. It is found everywhere, from the tributaries of lowland rivers to the mountains up to an altitude of 3200 m a.s.l. It is found in small numbers in various agrocenoses, in gardens under trees, on the flowers of weeds, *Lepidium draba*, *Sisymbrium loeselii*, *Heracleum lehmannianum*, *Ferula tadshikorum* and *F. kuhistanica*. In natural biocenoses it prefers moist meadows where *Carum carvi* and *Potentilla* sp. grow. Flight period: early May to late June.

Distribution. All Palaearctic, except Northern Africa and tundra zone.

***Dasysyrphus* Enderlein, 1938**

23. Dasysyrphus albostriatus (Fallen, 1817)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.); 1♀, Qoratog, 23.06.2021 (R.); 1♂, Mirkurak 12.06.2021 (R.). **Tajikistan** 1♂, Kondara, 2.06.2022 (B.).

Notes on ecology. Occurs locally on inflorescences of *Heracleum lehmannianum* and *Ferula tadshikorum*. Males flew in the semi-shade of trees. Flight period: June.

Distribution. The temperate zone of the Palaearctic.

24. Dasysyrphus eggeri (Schiner, 1862)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 2♂♂, 1♀, Qoratog, 23.06.2021 (R.). **Tajikistan** 1♂, Iskandarkul, 15.06.2018 (Z.); 1♂, Kalon, 30.06.2017 (Z.); 1♀, same locality, 7–8.06.2021 (Z.); 1♂, same locality, 13.06.2022 (Z.).

Notes on ecology. Occurs locally with a small number of specimens. Found on the inflorescences of *Ferula tadshikorum* and *Carum carvi*. Flight period: June.

Distribution. From Europe to Middle Asia, Mongolia.

25. Dasysyrphus sublunulatus (Peck, 1966)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 4♂♂, Naushur, 24.06.2021 (R.); 1♀, Qoratog, 23.06.2021 (R.); 1♂, 1♀, Gilon, 25.06.2021 (R.); 1♀, Oqtoshsoy, 03.06.2021 (R.). **Tajikistan** 2♀♀, Sarytag, 14 and 17.06.2018 (B.); 1♂, 12♀♀, same locality, 16–19.06.2022 (B., Z.); 24♂♂, 14♀♀, Iskandarkul, 15–19.06.2018 (B., Z.); 4♀♀, same locality, 17–20.06.2022 (B); 1♀; Kalon, 26.06–5.07.2018 (B.).

Notes on ecology. Specimens of this species common on a wet meadow along the river with dense growth of *Carum carvi*. This species was also collected in large numbers in a floodplain meadow in a poplar forest with *Heracleum lehmannianum*. Individual specimens were collected on inflorescences of *Ferula kuhistanica* and *F. tadshikorum*. Flight period: June - early July.

Distribution. All Middle Asia.

***Episyrphus* Matsumura et Adachi, 1917**

26. Episyrphus balteatus (De Geer, 1776)

Stackelberg 1951: 137 (*Epistrophe balteata*).

Material examined. Uzbekistan 1♂, 4♀♀, Naushur, 24.06.2021 (R.); 1♂, Gilon, 25.06.2021 (R.); 1♂, Tamshush, 02.06.2021 (R.); 1♀, Miraki, 01.06.2021 (R.); 1♂, 5♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, Mirkurak, 12.06.2021 (R.). **Tajikistan** 3♀♀, Sarytag, 13.06.2018 (B.); 11♂♂, same locality, 22.05.2021 (Z.); 1♂, 3♀♀, same locality, 16.06.2022 (B.); 5♀♀, Iskandarkul, 19.06.2018 (B.); 2♂♂, 8♀♀, same locality, 17–20.07.2022, (B., Z.); 1♂, Khoja-Obigarm, 30.05.2021 (Z.); 2♂♂, 1♀, Kondara,

1–3.06.2018 (B.); 4♂♂, 5♀♀, same locality, 26–27.05.2021 (B.); 1♀, same locality, 29.05.2022 (B.); 4♂♂, 4♀♀, Kalon, 18.06–7.07.2018 (B., Z.); 1♀, same locality, 6.06.2022 (B.); 1♀, Safed-Dara, 29.05.2022 (B.).

Notes on ecology. One of the background species of Syrphidae in the Palaearctic. It is widespread and common on flower beds in parks, gardens and orchards. It can be found both on flowering vegetation and hovering in the semi-shade of trees at a height of up to 2 meters from the ground; it is active in both sunny and cloudy weather. It visits a wide range of plants with white and yellow flowers, from trees to low-growing plants, including flowers without nectar. It has been recorded on the flowers of *Carum carvi*, *Prangos pabularia*, *Achillea millefolium*, *Ferula kuhistanica*, *F. tadshikorum* and *Heracleum lehmannianum*. In spring and autumn, it feeds on the secretions of aphids on willow trees. In early spring, it feeds on juniper pollen. Flight period: taking into account the literature sourcesis – from early March to late November.

Distribution. All Palaearctic except North, Oriental and Australian Regions.

Eupeodes Osten Sacken, 1877

27. Eupeodes asiaticus (Peck, 1972)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Miraki, 08.05.2021 (R.); 1♂, same locality, 09.05.2021 (R.); 1♂, Quqoshsoy, 01.06.2021 (R.); 1♂, Mirkurak, 11.07.2021 (R.); 1♂, same locality, 12.06.2021 (R.). **Tajikistan** 2♂♂, 1♀, Kalon, 30.06, 7–12.07.2017 (B., Z.).

Notes on ecology. The species occurs locally with small numbers, from deserts and tributary forests to highland forests, on the flowers of desert halophyte shrubs, as well as on *Heracleum lehmannianum*, *Prandos pabularia*, *Ferula kuhistanica* and *F. tadshikorum*. Males hover in the shade of trees and shrubs at an altitude of 1.5–2 m, females feed on the flowers of Umellifera plants. Flight period: from the beginning of May to the middle of July.

Distribution. Kyrgyzstan, Tajikistan.

28. Eupeodes corollae (Fabricius, 1794)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♂♂, Qoratog, 23.06.2021 (R.); 1♂, 1♀, Khojagulvars, 15.07.2022 (R.); 6♂♂, 6♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, Tamshush, 02.06.2021 (R.); 1♂, 1♀, Chopik, 13.06.2021 (R.); 7♂♂, 1♀, Mirkurak, 12.06.2021 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 9♂♂, 5♀♀, Machaydaryo, 05.05.2022 (R.); 9♂♂, 2♀♀, Shalkan, 01.05.2021 (R.); 7♂♂, 5♀♀, same locality, 07.05.2022 (R.); 5♂♂, 8♀♀, Laylik, 02.05.2021 (R.). **Tajikistan** 18♂♂, 10♀♀, Sarytag, 13, 17.06.2018 (B., Z.); 30♂♂, 17♀♀, same locality, 16 и 19.06.2022 (B.); 9♂♂, 10♀♀,

Iskandarkul, 13–15.06.2018 (B., Z.); 8♂♂, 13♀♀, same locality, 16–20.06.2022 (B., Z.); 1♂, Khoja-Obigarm, 30.05.2021 (Z.); 3♂♂, 4♀♀, Kondara, 1–3.06.2018, (B.) 2♂♂, 1♀, same locality, 26–27.05.2021 (B.); 1♂, same locality, 31.05.2022 (B.); 1♂, Dushanbe, 6.05.2016 (Z.); 2♀♀, same locality, 28.04.2023, (B.); 18♂♂, 4♀♀, Anzob, 8 and 14.06.2022 (B.); 40♂♂, 67♀♀, Kalon, 6.06–12.07.2017, 2018, (B., Z.); 6♂♂, 19♀♀, same locality, 6–14.06.2022, (B., Z.).

Notes on ecology. Widely distributed, frequently and ubiquitously found species. Found in high numbers in meadows, in most types of agricultural land – wheat fields, in gardens under trees, on hedges, along roadsides. Often it can be seen flying between the stems of grasses. It rises to the alpine belt. On the flowers of weeds, *Medicago sativa*, *Trifolium* sp., *Tanacetum* sp., *Salix alba*, *Convolvulus arvensis*, *Lepidium draba*, *Sisymbrium loeselii*, *Achillea millefolium*, *Verbascum songaricum*, *Prangos pabularia*, *Heracleum lehmannianum*, *Carum carvi*, *Ferula tadshikorum*, *F. kuhistanica*, *Prunus cerasus* and *Cerasus erythrocarpa*. In spring and autumn, it feeds on the secretions of aphids on Salix sp. In early spring, it feeds on juniper pollen. Flight period: from the end of March to November and in some year it can last flight until December.

Distribution. Throughout the Palaearctic region, extreme North.

29. **Eupeodes flaviceps* (Rondani, 1857)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, 1♀ Mirkurak 12.06.2021 (R.).

Notes on ecology. It is rarely found in the middle mountains in mixed forests with maple and almond trees. Its low flies in open areas and in semi-shade under trees, on the inflorescences of *Heracleum lehmannianum*, *Ferula kuhistanica* and *F. tadshikorum*. Flight period: June.

Distribution. From Southern and Central Europe to the Caucasus. On the territory of Uzbekistan, the species discovered for the first time.

30. Eupeodes latifasciatus (Macquart, 1829)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♂, Kondara, 25.05.2021 (B.).

Notes on ecology. It is found locally along the banks of mountain rivers and streams, flying low among the coastal vegetation. Male fly in semi-shadow on the level of 1.5–2.5 m. Flight period: May.

Distribution. Palaearctic, Nearctic and Oriental Regions.

31. Eupeodes luniger Meigen, 1822

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Naushur, 24.06.2021 (R.); 2♀♀, Qoratog, 23.06.2021 (R.); 6♂♂, Mirkurak, 12.06.2021 (R.). **Tajikistan** 1♀, Iskandarkul,

20.06.2022 (B.); 2♂♂, 1♀, Kalon, 20–26.05.2016 (B., Z.); 1♀, same locality, 28.06.2018 (B.); 1♂, 2♀♀, same locality, 7–11.06.2022 (B., Z.).

Notes on ecology. It is local, found on foothill plains in agrocenoses and in the middle mountains at an altitude below 2500 m a.s.l. on inflorescences of *Carum carvi*, *Prangos pabularia*, *Lepidium draba*, *Achillea millefolium*, *Ferula tadshikorum* and on *Juniper* branches. Flight period: end of May – June.

Distribution. Holarctic, Oriental Region.

32. Eupeodes nuba (Wiedemann, 1830)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, 1♀, Miraki, 01.06.2021 (R.); 3♂♂, 1♀, Tamshush, 02.06.2021 (R.); 2♂♂, 7♀♀, Mirkurak, 12.06.2021 (R.); 1♂, 1♀, Dukonkhona, 21.06.2021 (R.); 2♂♂, 2♀♀, Tulangdaryo, 02.05.2022 (R.); 1♂, 1♀, Machaydaryo, 05.05.2022 (R.); 1♂, 3♀♀, Shalkan, 07.05.2022 (R.). **Tajikistan** 20♂♂, 6♀♀, Sarytag, 14–17.06.2018 (B.); 1♀, same locality, 19.06.2022 (B.); 62♂♂, 14♀♀, Iskandarkul, 15–19.06.2018 (B., Z.); 59♂♂, 67♀♀, same locality, 17–20.06.2022 (B., Z.); 1♀, Khoja-Obigarm, 30.05.2021 (Z.); 8♂♂, Kondara, 1–3.06.2018 (B.); 41♂♂, 5♀♀, same locality, 25-31.05.2021 (B., Z.) 17♂♂, 1♀, same locality, 30.05–2.06.2022 (B., Z.); 3♂♂, 5♀♀, Anzob, 8, 14.06.2022 (B.); 2♂♂, 7♀♀, Kalon, 23.06–12.07.2017, 2018, (B., Z.); 1♂, Safed-Dara, 3.06.2022 (B.).

Notes on ecology. Common species, found from foothill plains and agrocenoses to mid-altitude and high-altitude areas. Found in meadows on inflorescences of *Lepidium draba*, *Achillea millefolium*, *Prangos pabularia*, *Heracleum lehmannianum*, *Carum carvi*, *Ferula kuhistanica* and *F. tadshikorum*. In the middle mountains males fly in semi-shadow at the height of 2–2.5 m. On the Anzob pass at an altitude of 3372 m, the flies sat on the asphalt and rarely flew from one place to another. Flight period: from early May to late July.

Distribution. Palaearctic – from Europe to Mongolia, Afrotropical Region.

33. **Eupeodes pseudonitens* Dušek et Láska, 1980

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 2♂♂, Kalon, 23.06.2018, (B.).

Notes on ecology. In the middle mountains males hover in the semi-shade of trees at height of 2.0–3.0 m. Flight period: end of June.

Distribution. Tajikistan, Afghanistan. The species is recorded from Tajikistan for the first time.

34. **Eupeodes verruciventris* (Peck, 1966)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 2♂, Kalon, 23–28.06.2018, (B.).

Notes on ecology. In the middle mountains males hover in the semi-shade of trees at height of 2.0–2.5 m. Flight period: end of June.

Distribution. Kyrgyzstan, Tajikistan, Mongolia. The species is recorded from Tajikistan for the first time.

Ischiodon Sack, 1913

35. Ischiodon scutellaris (Fabricius, 1805)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, 1♀, Mirkurak, 12.06.2021 (R.); 1♂, Machaydaryo, 05.05.2022 (R.); 8♂♂, 3♀♀, Laylik, 02.05.2021 (R.). **Tajikistan** 1♂, Sarytag, 17.06.2018 (Z.); 1♂, Kondara, 1–3.06.2018 (B.).

Notes on ecology. It is not common on plains in deserts (including sandy deserts), salt marshes, along the shores of salt lakes, canals and collectors, but it sometimes reaches an altitude of 2000 m a.s.l. It has been found on the inflorescences of *Calligonum* sp., *Tamarix* sp., *Carum carvi*, *Convolvulus arvensis*, *Prangos pabularia* and *Alhagi pseudalhagi*. Flight period: from May to June.

Distribution. Central and Eastern parts of Palaearctic. Oriental and Australian Regions.

Parasyrphus Matsumura, 1917

36. **Parasyrphus annulatus* (Zetterstedt, 1838)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♀, Mirkurak, 12.06.2021 (R.).

Notes on ecology. This species is found in the forests of the temperate zone of the Palaearctic. In Uzbekistan the only female was caught in mountain forest on inflorescences of *Heracleum lehmannianum*. Flight period: June.

Distribution. Palaearctic. On the territory of Uzbekistan the species discovered for the first time.

Scaeva Fabricius, 1805

37. Scaeva albomaculata (Macquart, 1842)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♂♂, 5♀♀, Qoratog, 23.06.2021 (R.); 6♂♂, Gilon, 25.06.2021 (R.); 1♂, 1♀, Miraki, 01.06.2021 (R.); 1♀, Mirkurak, 12.06.2021 (R.); 1♂, Qizildaryo, 09.05.2022 (R.); 1♂, Machaydaryo, 05.05.2022 (R.); 1♂, Khoja Karaul, 13.07.2022 (R.); 2♂♂, 2♀♀, Tulangdaryo, 02.05.2022 (R.); 2♂♂, Shalkan,

07.05.2022 (R.). **Tajikistan** 2♂♂, 9♀♀, Kalon, 23.06–7.07.2018 (B., Z.); 1♂, Safed-Dara 3.06.2022, (B.).

Notes on ecology. In the lowland part of distribution, it is found in deserts, tugay and agrocenoses. In the mountains, it rises to high altitudes (3800 m a.s.l.). It is found on the flowers of *Rosa* sp., *Acantholimon* sp., *Pseudosedum* sp., *Prangos pabularia*, *Heracleum lehmannianum*, *Ferula assa foetida*, *F. kuhistanica* and *F. tadshikorum*, *Salix alba*, *Cyperus* sp., *Calligonus* sp. and *Tamarix* sp. Flies were flying among the tall grasses. Flight period: from the beginning of May to the end of June.

Distribution. Palearctic, except tundra zone.

38. **Scaeva dignota* (Rondani, 1857)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 2♀♀ Qizildaryo 09.05.2022, (R.) 1♂, Tulangdaryo, 02.05.2022, (R.) 1♀, Shalkan, 07.05.2022, (R.). Tajikistan 1♂, 2♀♀, Kondara, 31.05–2.06.2022 (B.); 1♂, Anzob, 14.06.2022 (B.).

Notes on ecology. On the plains, the species was found in deserts near water bodies, in thickets, meadows and gardens under trees. Flies feed on the flowers of weeds, *Sisymbrium loeselii* and various *Apiaceae*. In the middle mountains, they feed on juniper pollen in early spring. Females fly among the grass stems, while males hover in the shade of shrubs. At the Anzob Pass (3372 m a.s.l.), a male was caught in flight at the height 1.5-2.0 m. Flight period: from March to July.

Distribution. Southwestern and Central Palaearctic excluding Siberia. The species is recorded from Tajikistan for the first time.

39. Scaeva latimaculata (Brunetti, 1923)

Violovitsh, 1974a: 173 (*Scaeva montana*); Peck, 1988: 40.

Material examined. Uzbekistan 6♂♂, 1♀, Qoratog, 23.06.2021 (R.); 1♂, 1♀, Gilon, 25.06.2021 (R.); 1♂, 5♀♀, Miraki, 01.06.2021 (R.); 6♂♂, 5♀♀, Tamshush, 02.06.2021 (R.); 8♂♂, 5♀♀, Mirkurak, 12.06.2021 (R.); 9♂♂, 7♀♀, Tulangdaryo, 02.05.2022 (R.); 2♀♀, Shalkan, 07.05.2022 (R.). **Tajikistan** 4♂♂, 8♀♀, Sarytag, 13–17.06.2018 (B., Z.); 3♀♀, same locality, 16.06.2022 (B.); 1♂, 5♀♀, Iskandarkul, 15–19.06.2018 (B., Z.); 21♂♂, 45♀♀, same locality, 18–20.06.2022 (B., Z.); 9♀♀, Kondara, 1–3.06.2018 (B.); 2♀♀, same locality, 26–28.05.2021 (B.); 1♂, 6♀♀, same locality, 31.05–2.06.2022 (B., Z.); 1♂, 13♀♀, Kalon, 26.06–12.07.2017, 2018, (B., Z.); 1♀, same locality, 9.06.2021 (Z.); 11♀♀, same locality, 7–14.06.2022 (B., Z.).

Notes on ecology. It is found frequently in almost all landscapes and biotopes, in deserts with thorns, various Solanaceae, under willows, Turanga sp. and other tugay trees. It is abundantly found on the inflorescences of *Sisymbrium loeselii*, *Heracleum lehmannianum*, *Carum carvi*, *Ferula tadshikorum* and *Ferula kuhistanic*a. Females are often seen flying between the grass, while males hover in semi-shade at a height of 1.5–2.0 m. The flight period is from March to July.

Distribution. Uzbekistan, Tajikistan.

40. Scaeva pyrastri (Linnaeus, 1758)

Stackelberg 1951: 137.

Material examined. Uzbekistan 4♂♂, 5♀♀, Qoratog, 23.06.2021, (R.) 4♂♂, 1♀, Gilon, 25.06.2021, (R.) 1♂, Oqtoshsoy, 03.06.2021, (R.) 1♂, 6♀♀, Mirkurak, 12.06.2021, (R.) 4♂♂, 1♀, Qizildaryo, 09.05.2022, (R.) 1♂, Machaydaryo, 05.05.2022, (R.) 1♀, Tulangdaryo, 02.05.2022, (R.) 1♂, Shalkan, 01.05.2021, (R.) 2♀♀, same locality, 07.05.2022, (R.). **Tajikistan** 4♂♂, 2♀♀, Sarytag, 16.06.2022, (B., Z.) 4♂♂, 2♀♀, Iskandarkul, 13–15.06.2018, (B.) 4♂♂, 2♀♀, same locality, 16-20.06.2022, (B., Z.) 1♂, Khoja-Obigarm, 30.05.2021, (B.) 1♂, 4♀♀, Anzob, 14.06.2022, (B.) 1♂, 12♀♀, Kalon, 25.06–12.07.2017, 2018, (B., Z.) 2♀♀, same locality, 9.06.2021, (Z.) 3♀♀, same locality, 7–13.06.2022, (B.) 2♂♂, 4♀♀, 12 км от Kalona, mineral spring 9.06.2022, (B., Z.) 1♀, Safed-Dara, 3.06.2022, (B.).

Notes on ecology. It is found frequently and everywhere, from deserts to highlands. Females feed on the inflorescences of the Asteraceae and Umbelliferae families, such as *Carum carvi*, *Lepidium draba*, *Sisymbrium loeselii*, *Prangos*, *Heracleum lehmannianum*, *Ferula tadshikorum* and *Cerasus erythrocarpa*. Males hover nearby. At two passes, males were observed hovering above the highest point (approximately 3400 m a.s.l.). Flight period: from beginning of April to middle July.

Distribution. Throughout the Palaearctic and the Nearctic.

Sphaerophoria Le Peletier et Serville, 1828

41. Sphaerophoria (s. str.) *philanthus* Meigen, 1822

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 2♂♂, Mirkurak, 12.06.2021 (R.); 1♂, Dukonkhona, 21.06.2021 (R.).

Notes on ecology. We have only caught this species at two locations on plains and mid-mountains. Males fly among grasses and visit inflorescences of *Carota silvestris* and *Tanacetum* sp. Flight period: from May to June.

Distribution. Holarctic.

42. Sphaerophoria (s. str.) *rueppellii* (Wiedemann, 1830)

Stackelberg 1951: 137.

Material examined. Uzbekistan 4♀♀, Oqtoshsoy, 03.06.2021 (R.). **Tajikistan** 1♂, Iskandarkul, 19.06.2018 (B.); 1♂, Khoja-Obigarm, 30.06.2021 (B.); 2♂♂, 1♀, Kondara, 27.05.2021 (B.); 1♂, Dushanbe, 31.05.2016 (Z.); 1♂, Safed-Dara, 29.05.2021 (B.).

Notes on ecology. It has been found on the flowers of weeds, *Convolvulus arvensis*, *Lepidium draba*, *Sisymbrium loeselii*, *Achillea millefolium*, *Verbascum songaricum*, *Heracleum lehmannianum*, *Ferula tadshikorum*. In spring it feeds on aphid secretions on willow trees. In early spring, it has also been observed feeding on juniper pollen. The fertility and duration of its development depend on the source of additional food. This species is considered a promising agent in the biological control of aphids in agrocenoses, especially in areas with high humidity. Flight period: end of May – June.

Distribution. Throughout the Palaearctic region.

43. Sphaerophoria (s. str.) *scripta* (Linnaeus, 1758)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♂♂, Qoratog, 23.06.2021 (R.); 1♂, Gilon, 14.07.2022 (R.); 1♂, Khojagulvars, 15.07.2022 , (R.); 1♂, Tamshush, 02.06.2021 (R.); 6♂♂, 6♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, 1♀, Chopik, 13.06.2021 (R.); 7♂♂, 1♀, Mirkurak, 12.06.2021 (R.); 10♂♂, Qizildaryo, 09.05.2022 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 2♂♂, Chimboy, 12.07.2022, (R.) 1♂, 1♀, Machaydaryo, 04–05.05.2022, (R.) 4♂♂, 1♀, Tulangdaryo, 02.05.2022 (R.); 9♂♂, 2♀♀, Shalkan, 01.05.2021 (R.); 3♂♂, 1♀, same locality, 07.05.2022 (R.); 5♂♂, 8♀♀, Laylik, 02.05.2021 (R.). **Tajikistan** 6♂♂, 2♀♀, Iskandarkul, 12–17.06.2018 (B., Z.); 8♂♂, 3♀♀, same locality, 16–20.06.2022 (B.); 1♂, Khoja-Obigarm, 30.05.2021 (B.); 1♂, same locality, 30.05.2021 (Z.); 1♂, 3♀♀, Kondara, 1–3.06.2018 (B.); 4♂♂, 4♀♀, same locality, 26.05.2021 (B.); 1♂, same locality, 26.05.2021 (Z.); 5♂♂, 1♀, same locality, 29.05-2.06.2022, (B., Z.) 6♂♂, Dushanbe, 28.04.2023, (B.) 1♀, Anzob, 14.06.2022 (B.); 33♂♂, 6♀♀, Kalon, 6.06–12.07.2017, 2018 (B., Z); 2♂♂, same locality, 8–9.06.2021 (Z.); 4♂♂, same locality, 7–9.06.2022 (B., Z.); 6♂♂, Safed-Dara, 29.05.2021, 3.06.2022 (B., Z.).

Notes on ecology. One of the most common and abundant species of hoverflies. Its specimens are common in all biocenoses we have surveyed, both natural and anthropogenic. It is found everywhere in tugays, in various agrocenoses and in gardens under trees. Both males and females visit all plants with easily accessible nectar and pollen. They common on the flowers of weeds, *Convolvulus arvensis*, *Lepidium draba*, *Sisymbrium loeselii*, *Achillea millefolium*, *Verbascum songaricum*, *Prangos pabularia*, *Heracleum lehmannianum*, *Carum carvi*, *Ferula tadshikorum*, *F. kuhistanica*, *Prunus cerasus*, *Spirea* sp., *Cerasus erythrocarpa* and others. In early spring, pollen from juniper was observed. In spring and autumn, it feeds on aphid secretions on willows. Flight period: it appears on the plains in April and continues to fly until October. In the mountains, depending on the altitude, its flight period is reduced and in the highlands, it lasts only one month - July.

Distribution. All Palaearctic and Nearctic.

44. **Sphaerophoria* (s. str.) *turkmenica* Bańkowska, 1964

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 14♂♂, Sarytag, 13–17.06.2018, (B.); 16♂♂, Iskandarkul, 12–19.06.2018, (B.); 12♂♂, 2♀♀, Kalon, 30.06–12.07.2017 (B., Z.).

Notes on ecology. In central Tajikistan, specimens of this species were captured in large numbers in the mid-mountain belt on meadows along rivers and streams. The flies were collected on *Carum carvi* and *Prangos pabularia*. Flight period: mid-June to mid-July.

Distribution. Turkmenistan, Tajikistan. The species is recorded from Tajikistan for the first time.

Syrphus Fabricius, 1775

45. **Syrphus admirandus* Goeldlin, 1996

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♀, Iskandarkul, 15.06.2018 (B.); 4♀♀, Kondara, 26–27.05.2021 (B.).

Notes on ecology. Single specimens of this species were caught in the middle mountains on inflorescences of *Heracleum lehmannianum* and *Rosa* sp. Flight period: the end of May – June.

Distribution. Northern Europe, Siberia, Far East. The species is recorded from Tajikistan for the first time.

46. **Syrphus rectus* Osten Sacken, 1875

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 3♀♀, Miraki, 01.06.2021 (R.); 1♀, Mirkurak, 12.06.2021 (R.). **Tajikistan** 1♂, Kondara, 1-3.06.2018 (B.); 4♀♀, same locality, 26–27.05.2021 (B.); 1♀, Kalon, 23.06.2018 (Z.).

Notes on ecology. It is found sporadically in various agrocenoses, such as wheat fields and gardens under trees. Some specimens have been caught on flowers of *Lepidium draba*, *Sisymbrium loeselii*, *Prangos*, *Heracleum lehmannianum*, *Ferula tadshikorum*, *Ferula kuhistanica* and *Prunus cerasus*. Flight period: from May to June.

Distribution. Holarctic. The species is recorded from Tajikistan for the first time.

47. Syrphus vitripennis Meigen, 1822

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♀, Miraki, 09.05.2021 (R.); 2♂♂, same locality, 01.06.2021 (R.); 1♀, same locality, 02.06.2021 (R.). **Tajikistan** 6♀♀, Sar-

ytag, 13–15.06.2018 (B.); 2♀♀, Iskandarkul, 15.06.2018 (B.); 1♂, Khoja-Obigarm, 30.05.2021 (B.); 4♂♂, 1♀, Kondara, 1–3.06.2018 (B.); 9♂♂, 1♀, same locality, 26–28.05.2021 (B.); 5♂♂, 5♀♀, same locality, 29.05–2.06.2022 (B., Z.); 7♂♂, 3♀♀, same locality, 29.05–2.06.2022 (B.); 1♀, Dushanbe, 28.04.2023 (B.); 4♀♀, Kalon, 28.06, 2.07.2018 (B.); 1♂, Safed-Dara, 29.05.2021 (B.).

Notes on ecology. It is found locally from the foothills to the middle mountains. In some biotopes, the flies reach high numbers. They visit the flowers of many plants with open corollas, such as *Lepidium draba*, *Sisymbrium loeselii*, *Achillea millefolium*, *Heracleum lehmannianum*, *Ferula kuhistanica* and *Prunus cerasus*. In early spring, they have been observed feeding on juniper pollen. Males soar in partial shade at an altitude of 1.5-2.0 m. Flight period: May – July.

Distribution. Holarctic.

Xanthogramma Schiner, 1860

48. **Xanthogramma hissaricum* Violovitsh, 1975

Violovitsh, 1975: 90: Peck, 1988: 51.

Material examined. Uzbekistan 1♂, Naushur, 24.06.2021, (R.) 1♀, Qoratog, 23.06.2021 (R.); 6♂♂, 6♀♀, Gilon, 25.06.2021 (R.); 4♂♂, 1♀, same locality, 14.07.2022 (R.); 2♂♂, 2♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, Quqoshsoy, 11.07.2021 (R.); 13♂♂, 1♀, Mirkurak, 12.06.2021 (R.); 11♂♂, 5♀♀, Qizildaryo, 09.05.2022 (R.); 9♂♂, 4♀♀, Machaydaryo, 05.05.2022 (R.). **Tajikistan** 1♂, Iskandarkul, 20.06.2022 (B.); 2♀♀, Khoja-Obigarm, 30.05.2021 (B.); 1♂, same locality, 30.05.2021 (Z.); 3♂♂, 1♀, Kalon, 6.06.2021 (Z.); 9♂♂, same locality, 7–13.06.2022, (B., Z.); 1♀, Safed-Dara, 29.05.2021 (B.); 1♂, same locality, 3.06.2022 (B.).

Notes on ecology. Found in the mid-mountain belt at altitudes of 2000–3200 m. on the flowers of *Rosa* sp., *Heracleum lehmannianum*, *Prangos pabularia*, *Ferula tadshikorum* and *Ferula kuhistanica*. Males actively fly among the meadow grasses in search of females. Flight period: from May to July.

Distribution. Uzbekistan, Tajikistan. The species is recorded from Tajikistan for the first time.

49. Xanthogramma pedissequum (Harris, 1776)

Stackelberg 1951: 137 (*Xanthogramma ornatum dives*).

Material examined. Tajikistan 9♂, Sarytag, 13–14.06.2018 (B.); 36♂♂, 21♀♀, Kalon, 5.06–12.07.2017 (B., Z.).

Notes on ecology. Occurs locally. In the middle mountains, males hover near a *Berberis vulgaris* bush and females feed on inflorescences of *Carum carvi* and *Prangos pabularia*. Flight period: June-July.

Distribution. The Western and Central parts of the Palaearctic.

Subfamily Pipizinae

Tribe Pipizini

***Pipizella* Rondani, 1856**

50. Pipizella mesasiatica Stackelberg, 1952

Stackelberg, 1952: 352; Violovich, 1985: 86 (*Pipizella sogdiana*); Peck, 1988: 90.

Material examined. Uzbekistan 17♂♂,13♀♀, Miraki, 08.05.2021 (R.); 2♂♂, Mirkurak, 12.06.2021 (R.); 1♀, Gilon, 25.06.2021 (R.); 1♀, same locality, 14.07.2022 (R.); 16♂♂, 5♀♀, Qizildaryo, 09.05.2022 (R.); 18♂♂, 16♀♀, Machaydaryo, 05.05.2022 (R.); 1♂, 1♀, Sangardak, 19-20.06.2023 (R.); 12♂♂, 17♀♀, Shalkan, 01.05.2021 (R.); 6♂♂, 12♀♀, Shalkan, 07.05.2022 (R.). **Tajikistan** 4♂♂, 5♀♀, Sarytag, 13, 17.06.2018 (B.); 1♀, same locality, 19.06.2022 (B.); 17♂♂, 13♀♀, Iskandarkul, 13–19.06.2018 (B., Z.); 8♂♂, 12♀♀, same locality, 16–20.06.2022 (B., Z.); 1♀, Kondara, 2.06.2022 (B.); 92♂♂, 120♀♀ 3–7 км NE Kalon, 08.06–12.07.2017, 2018 (B., Z.); 9♂♂, 13♀♀, same locality, 6–13.06.2022 (B., Z.); 3♂♂, 2♀♀, Safed-Dara, 29.05.2021 (B.); 2♂♂, 2♀♀, same locality, 3.06.2022 (B.).

Notes on ecology. The species is found in lowland and mid-mountain zone, often in high numbers. It is common in meadows along rivers and streams that have not been destroyed by domestic animals, at altitudes ranging from 1100 m to 2700 m a.s.l. It is common on the inflorescences of many Umbellifera, such as *Carum carvi*, *Pragos pabularia*, *Heraculum lehmannianum*, *Ferula tadshikorum*, *F. kuhistanica* and on representatives of some other families – *Rosa* sp., *Mentha* sp. Flight period: May – September.

Distribution. The Caucasus and Middle Asia, including Afghanistan.

***Pipiza* Fallén, 1810**

51. **Pipiza* sp.

Material examined. Tajikistan 4♀♀, Iskandarkul, 12–19.06.2018, (B., Z.).

Notes on ecology. Females of this species were caught in a meadow in flight between the stems of grass and on the inflorescences of *Carum carvi*. Flight period: mid-June.

Distribution. Central Tajikistan. Representatives of this genus were firstly discovered in Tajikistan.

***Trichopsomyia* Williston, 1888**

52. Trichopsomyia ochrozona (Stackelberg, 1952)

Stackelberg, 1952: 352 (as *Pipizella*); Peck, 1988: 92.

Distribution. Tajikistan, Kyrgyzstan.

Subfamily Eristalinae

Tribe Rhingini

***Cheilosia* Meigen, 1822**

53. **Cheilosia* (s. str.) *aerea* Dufour, 1848

Barkalov, 2020: 248.

Material examined. Uzbekistan 5♂♂, Miraki, 08-09.05.2021 (R.); 1♀, Gilon, 14.07.2022 (R.); 1♂, Dukonkhona, 21.06.2021 (R.). **Tajikistan** 2♀♀, Sarytag, 13, 17.06.2018 (B.); 3♂♂, 2♀♀, Dushanbe, 8.06.1934, 15.06.1943, 26.04.1945 (Gussakovskij, A. Stackelberg, Romadina);1♂, same locality, 28.04.1975 (Peck); 2♂, 20 km E to Dushanbe, 16.04.1975 (Peck).

Notes on ecology. Found in the middle mountains in mixed deciduous forests with maple, hawthorn, almond and willow, with rose bushes, at an altitude of 1500–2600 m a.s.l. and on the inflorescences of *Lepidium draba*, *Heracleum lehmannianum*, *Carum carvi*, *Crataegus* sp. and *Ferula kuhistanica*. It is sometimes found in tugay forest, where it descends to 700 m above sea level. It flies quickly; males hover up to 4 m in sunlit meadows; both sexes perch on the foliage of trees and shrubs, as well as on herbaceous plants. Flight period: April – September.

Distribution. From Europe to Middle Asia. The species is recorded from Tajikistan for the first time.

54. Cheilosia (*Convocheila*) *arkita* Zimina, 1970

Barkalov, 2020: 248.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021, (R.) 1♀, Miraki, 08.05.2021 (R.); 1♂, same locality, 09.05.2021 (R.). **Tajikistan** 2♂♂, 1♀, Iskandarkul, 15-19.06.2018 (B., Z.); 11♂♂, 4♀♀, Kalon, 30.06-12.07.2017 (B., Z.); 2♀♀, same locality, 8.06.2021 (Z.).

Notes on ecology. Occurs locally in the middle mountains at altitudes of 1700-2800 m a.s.l., on the inflorescences and leaves of *Heraculum lehmannianum*, on the inflorescences of *Carum carvi*, *Ferula tadshikorum* and *F. kuhistanica*. Flight period: May – July.

Distribution. Uzbekistan, Tajikistan, Kyrgyzstan, Southern Kazakhstan.

55. Cheilosia (*Montanocheila*) *erratica* Barkalov et Peck, 1997

Barkalov, 2020: 248.

Material examined. Tajikistan 2♂♂, 3♀♀ Kalon 21-29.05.2016 (B., Z.).

Notes on ecology. Specimens of this species were collected at one point in the middle mountains of the Hissar Range. The flies were caught on the leaves and flowers of barberry and on inflorescences of *Heraculum lehmannianum*. Flight period: middle–late May.

Distribution. Tajikistan.

56. Cheilosia (*Montanocheila*) *heptapotamica* Stackelberg, 1963

Barkalov, 2020: 249.

Material examined. Uzbekistan 2♀♀, Qoratog, 23.06.2021 (R.); 1♀, Miraki, 08.05.2021 (R.); 1♀, Tamshush, 02.06.2021 (R.); 1♂, 1♀, Khoja Karaul, 13.07.2022 (R.). **Tajikistan** 1♀, 3 km from Kalon, 28.06.2018 (B.).

Notes on ecology. It is found locally in the middle mountains at an altitude of 1700–3200 m a.s.l., on the inflorescences of large umbrella plants – *Heracleum lehmannianum*, *Ferula tadshikorum* and *F. kuhistanica*. Flight period: from May to July.

Distribution. Uzbekistan, Tajikistan, Kyrgyzstan, Southern Kazakhstan.

57. Cheilosia (s. str.) *impressa* (Loew, 1840)

Barkalov, 2020: 249.

Material examined. Tajikistan 1♀, Takob settlement., 1900 m a.s.l., 18.07.1972 (Levina).

Notes on ecology. No evidence.

Distribution. Palaearctic.

58. Cheilosia (*Taeniochilosia*) *latigena* Barkalov et Peck, 1994

Barkalov, 2020: 249.

Material examined. Tajikistan 1♂, Anzob pass, 6.07.2017 (B.); 1♀, 12 km N Shakhriston pass, 22.06.2018 (Z.).

Notes on ecology. Both specimens were caught on high mountain passes, at an altitude of 3340 and 3300 m a.s.l. Flies were sitting along the road on the rocks near the highest point of the pass. Flight period: at the end of June - beginning July.

Distribution. Southern Kazakhstan, Tajikistan.

59. Cheilosia (*Convocheila*) *lola* Zimina, 1970

Barkalov, 2020: 249.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.); 1♀, Gilon, 14.07.2022 (R.); 1♀, Chopik, 13.06.2021 (R.); 2♂♂, 1♀, Mirkurak, 12.06.2021 (R.); 1♂, Machaydaryo, 05.05.2022 (R.). **Tajikistan** 1♂, 1♀ Khadja-Obigarm, 30.05.2021

(B.); 1♂, 1♀, Safed-Dara, 29.05.2021 (B.); 2♂♂, 2♀♀, Kalon, 23.06–12.07.2018 (B.); 1♀, same locality, 9.06.2021 (Z.).

Notes on ecology. Locally occurring species in the middle and highlands at an altitude of 2200–3000 m, on the inflorescences of *Prangos pabularia*, *Heracleum lehmannianum* and *Ferula tadshikorum*. Flight period: May – July.

Distribution. Middle Asia.

60. **Cheilosia* (*Taeniochilosia*) *longistyla* Barkalov et Peck, 1994

Material examined. Uzbekistan 1♀, Mirkurak, 12.06.2021 (R.). **Tajikistan** 2♀♀, Kalon, 1–4.07.2017 (B.); 2♀♀, same locality, 5–7.06.2018 (B.); 1♀, Safed-Dara, 29.05.2021 (B.).

Notes on ecology. A locally occurring species, along the banks of high-mountain streams, in gorges at an altitude of 2600–3000 m a.s.l. Females feed on the inflorescences of umbelliferous – *Prangos pabularis* and others. Flight period: from May to August.

Distribution. Described from Kyrgyzstan, for Uzbekistan and Tajikistan the species is indicated in the first.

61. Cheilosia (*Taeniochilosia*) *nartshukae* Barkalov et Peck, 1977

Barkalov, Peck, 1997a: 1172; 1997b: 1371; Barkalov, 2020: 250.

Material examined. Tajikistan 2♀♀, Kondara, 2.06.2022 (B.); 6♀♀, Kalon, 1–4.07.2017, 2♀♀, same locality, 5 и 7.06.2018, (B.) 1♀, Safed-Dara, 3.06.2022, (B.).

Notes on ecology. The species lives in lowlands and midlands. Females feed on umbellifers with white inflorescences and they are not recorded anywhere else. It is possible that, like some other species of this genus, they are also associated with these plants in their larval phase. Flight period: June.

Distribution. Tajikistan.

62. Cheilosia (s. str.) *semenovi* Barkalov, 2005

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 4♂♂, Anzob, 7.06.2021 (Z.); 2♂♂, same locality, 8 and 14.06.2022 (B.).

Notes on ecology. A locally occurring species. We found specimens of this species only at the Anzob Pass, at an altitude of approximately 3370 m a.s.l. The flies were sitting on rocks on the leeward side or feeding on the inflorescences of *Euphorbia* sp. Flight period: mid-June.

Distribution. Tajikistan.

63. Cheilosia (*Taeniochilosia*) *stackelbergi stackelbergi* Barkalov et Peck, 1994

Barkalov, 2020: 249.

Material examined. Uzbekistan 7♂♂, 2♀♀, Naushur, 24.06.2021 (R.); 12♂♂, 11♀♀, Qoratog, 23.06.2021 (R.); 6♂♂, 4♀♀, Gilon, 25.06.2021 (R.); 17♂♂, 22♀♀, same locality, 14.07.2022 (R.); 2♂♂, 1♀, Khojagulvars, 15.07.2022 (R.); 43♂♂, 20♀♀, Miraki, 8–9.05.2021 (R.); 9♂♂, 18♀♀, Tamshush, 1–2.06.2021; (R.) 5♂♂, 18♀♀, Quqoshsoy, 11.07.2021 (R.); 2♂♂, 2♀♀, Chopik, 13.06.2021 (R.); 1♂, 4♀♀, Mirkurak, 12.06.2021 (R.); 2♂♂, 1♀, Dukonkhona, 21.06.2021 (R.). **Tajikistan** 6♂♂, 2♀♀, Sarytag, 13, 17.06.2018 (B.); 117♂♂, 140♀♀, Iskandarkul, 12–19.06.2018 (B., Z.); 58♂♂, 53♀♀, same locality, 18.06.2022 (B., Z.); 4♂♂, 4♀♀, Kondara, 25.05.2021 (Z.); 4♂♂, 5♀♀, same locality, 2.06.2022 (B.); 118♂♂, 128♀♀, Kalon, 5.06–12.07.2017, 2018 (B., Z.); 2♂♂, 1♀, same locality, 9.06.2021 (Z.); 4♂♂, 7♀♀, same locality, 6–20.06.2022 (B., Z.); 32♂♂, 32♀♀, Safed-Dara 29.05.2021 (B., Z.); 17♂♂, 6♀♀, same locality, 3.06.2022 (B., Z.).

Notes on ecology. One of the most common and numerous species of hoverflies in the studied area. It is common in the middle and high mountains at altitudes of 1700–3200 m, on the inflorescences of *Ferula tadshikorum*, *F. kuhistanica* and *Mentha* sp. It is particularly abundant on *Heracleum lehmannianum*. It is possible that the larval phase of this species occurs in the same plant. Females feed on inflorescences and males hover at a height of 1.0–1.5 m in the shade of trees and shrubs. Flight period: May-July.

Distribution. Described from Tajikistan and recorded from Uzbekistan.

64. Cheilosia (s. str.) *thalassica* Peck, 1971

Barkalov, Peck, 1997b: 1375.

Notes on ecology. No information.

Distribution. Talas and Hissar mountain ranges.

65. **Cheilosia* (s. str.) *urbana ampla* Barkalov et Peck, 1994

Material examined. Tajikistan 2♀♀, Sarytag, 13–14.06.2018 (B.); 7♂♂, 14♀♀, Mullomir, 8–11.05.2023 (B.).

Notes on ecology. The species is found in the middle mountains. Specimens of this species were collected in flight near the leaves of large grasses and on the inflorescences of *Spirea* sp. Flight period: May–middle of June.

Distribution. Tajikistan, Kyrgyzstan. This is the first record of this subspecies in Tajikistan.

Tribe Volucellini

***Volucella* Geoffroy, 1762**

66. Volucella bella Barkalov, 2003

Material examined. Uzbekistan Qoratog, 2♀♀, 23.06.2021 (R.); 3♂♂, Gilon, 25.06.2021 (R.); 2♀♀, Miraki, 01.06.2021 (R.); 3♂♂, 2♀♀, Tamshush, 02.06.2021 (R.); 1♂, Quqoshsoy, 11.07.2021 (R.); 4♂♂, 1♀, Mirkurak, 12.06.2021 (R.). **Tajikistan** 2♂♂, 1♀, Iskandarkul, 15, 18.06.2018 (B., Z.); 2♂♂, same locality, 18, 20.06.2022 (Z.); 43♂♂, 5♀♀, Kalon, 22.06–7.07.2018 (B., Z.).

This species, described in 2003 based on material collected from the Hissar Range and Kazakhstan, was found in the course of our research to replace *Volucella zonaria* (Poda, 1761) in Central Asia. This is evidenced by all the material collected by us, as well as specimens preserved in the Museum of Nature of Uzbekistan, the Samarkand Museum of Local Lore and the entomological collection of Samarkand State University, all of which belong to *Volucella bella* Barkalov, 2003. Therefore, following G. V. Popov and O. V. Prokhorov (2016), we consider that only this species occurs in Uzbekistan and Tajikistan, while the presence of *V. zonaria* remains controversial.

Notes on ecology. Apparently, in Uzbekistan, the species has a long-term population dynamics, as during our research, specimens were found in a noticeable number only in 2021, in other years, the number did not exceed 1–2 encounters per season. In Tajikistan, in the floodplain poplar forest, males hovered in the shade at a height of 2–5 m, females fed on the inflorescences of *Heracleum lehmannianum*. The mass flight of this species was observed in late June and early July in the middle mountains at an altitude of 2140 m a.s.l. Males began to hover at seven o'clock in the morning, first on sunlit lawns and then flew to the shade of trees. Often, both males and females sat on the leaves of large grasses, shrubs and tree trunks. Flight period: from June to early July.

Distribution. All of Central Asia, including Afghanistan.

67. Volucella pellucens (Linnaeus, 1758)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♂, 4♀♀, 27.06.2019 (R.); 6♂♂, 1♀, Iskandarkul, 15, 19.06.2018 (B.); 11♂♂, 1♀, Kalon, 24–29.06.2018 (B., Z.).

Notes on ecology. Found in the middle mountains at altitudes of 220–2440 m a.s.l. In the floodplain poplar forest, the males hovered in the shade, while the females fed on the inflorescences of *Heracleum lehmannianum*. In another location, the males hovered in the early morning on a sunny meadow, quickly flying from one place to another, while the females were almost absent. Flight period: July.

Distribution. Throughout the Palearctic region. Oriental region.

68. Volucella inanis Linnaeus, 1758

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Gilon, 25.06.2021 (R.); 1♂, Tamshush, 11.07.2021 (R.); 5♂♂, Mirkurak, 12.06.2021 (R.).

Notes on ecology. It is found locally in the middle mountains at an altitude of 1700–2500 m a.s.l. on the inflorescences of *Heracleum lehmannianum* and *Ferula tadshikorum*. Flight period: June.

Distribution. All Palaearctic.

69. Volucella plumatoides Hervé–Bazin, 1923

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.); 1♂, Qoratog, 23.06.2021 (R.); 1♂, Gilon, 25.06.2021 (R.). **Tajikistan** 1♂, 1♀, Sarytag 14, 17.06.2018 (B., Z.); 1♂, 2♀♀, Iskandarkul, 16, 19.06.2018 (B.); 1♂, 1♀, same locality, 15, 20.06.2022 (B., Z.); 3♂♂, 3♀♀, 3 km to Kalon, 7.06–7.07.2017, 2018 (B.).

Notes on ecology. It is found locally, in the middle mountains at an altitude of 2200 –2500 m a.s.l. Males, like other species of the genus, hover in the shade of trees, while females feed on the inflorescences of *Carum carvi*, *Heracleum lehmannianum*, *Verbascum songaricum* and *Ferula tadshikorum*. Flight period: June – July.

Distribution. Siberia, Middle Asia and China (Sichuan).

Tribe Eristalini

***Eristalinus* Rondani, 1845**

70. Eristalinus (s. str.) *aeneus* (Scopoli, 1763)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 2♂♂, Dushanbe, 28.04.2023 (B.); 1♂, Safed-Dara, 29.05.2021 (Z.).

Notes on ecology. Single specimens were collected on the flowers of *Barbarea* sp.

Distribution. All Palaearctic, Nearctic and Australian Regions.

***Eristalis* Latreille, 1804**

71. Eristalis (*Eoseristalis*) *arbustorum* (Linnaeus, 1758)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♂♂, Miraki, 01.06.2021 (R.); 1♂, 1♀, Mirkurak, 12.06.2021 (R.); 2♂♂, 8♀♀, Qizildaryo, 09.05.2022 (R.); 2♀♀, Dukonk-

hona, 21.06.2021 (R.); 7♂♂, 1♀, Chimboy, 12.07.2022 (R.); 4♂♂, 1♀, Tulangdaryo, 02.05.2022 (R.); 5♂♂, 1♀, Shalkan, 07.05.2022 (R.). **Tajikistan** 2♂♂, 6♀♀, Sarytag, 13–17.06.2018 (B., Z.); 3♀♀, same locality, 16–19.06.2022 (B., Z.); 1♂, 2♀♀, Iskandarkul, 12–16.06.2018 (B., Z.); 2♂♂, 2♀♀, same locality, 17–18.06.2022 (B., Z.); 5♂♂, gorge Khoja-Obigarm, 30.05.2021 (B.); 1♀, same locality, 30.05.2021 (Z.); 7♂♂, 2♀♀, Kondara, 1–3.06.2018 (B.); 3♂♂, same locality, 26.05.2021 (B.); 3♂♂, 1♀, same locality, 29–31.05.2022 (B., Z.); 5♀♀, Dushanbe, 28.04.2023 (B.); 19♂♂, 12♀♀, Kalon, 23.05–7.07.2017, 2018 (B., Z.); 1♀, same locality, 8.06.2021 (Z.); 1♂, 1♀, same locality, 11–14.06.2022 (B.); 1♂, 1♀, 2 km to Safed-Dara, 29.05.2021 (B.).

Notes on ecology. Due to the fact that the larvae of this species develop in the excrement of domestic animals, in grain pits and in other stations rich in organic remains, the species is closely related to humans. It is found in almost all biotopes and in large numbers. Flies sow a wide range of plants, both wild and cultivated. Flies are widespread in agricultural lands, in urban parks and gardens; they are also found in tugay and in a wide range of wetlands.

Distribution. Throughout the Palearctic region, including North Africa; Nearctic.

72. Eristalis (s. str.) *tenax* (Linnaeus,1758)

Stackelberg 1951: 137.

Material examined. Uzbekistan 1♂, Qoratog, 23.06.2021 (R.); 1♂, Gilon, 25.06.2021 (R.); 8♂♂, 6♀♀, Miraki, 08.05.2021 (R.); 1♂, same locality, 01.06.2021 (R.); 1♂, 1♀, Shalkan, 01.05.2021 (R.). **Tajikistan** 2♀♀, Sarytag, 13.06.2018 (B.); 5♂♂, 2♀♀, Iskandarkul, 16–17.06.2018 (B., Z.); 4♂♂, same locality, 20.06.2022 (B.); 4♂♂, 1♀, Kondara, 1–3.06.2018 (B.); 1♂, same locality, 27.05.2021 (B.); 1♀, same locality, 27.05.2021 (Z.); 1♀, Safed-Dara 29.05.2021 (B.); 1♂, same locality, 3.06.2022 (B.); 1♂ Dushanbe 1.12.2025 (B.).

Notes on ecology. It is found in almost all biotopes and in large numbers. Like *E. arbustorum*, it feeds on organic remains. Its larvae can be seen in reservoirs near farms where waste is drained. An anthropophilic and almost ubiquitous species. Males flies at an altitude of up to 5 m from the ground; it spends considerable time resting on flowers; it also sits on leaves, starting from ground level and above and in the evening, it can be found sitting on the foliage of shrubs. Females visit flowers of practically all species of grasses and shrubs. On December 1, a specimen of this species was found on a flower bed in the city center.

Flight period: from February to December, the extremely long summer period is due to the fact that this species hibernates and some individuals become active in warm weather, under any conditions except extremely cold. Wintering adults can be found in old buildings, caves, under the bark of trees, etc.

Distribution. Highly migratory; cosmopolitan; the most widespread syrphid species in the world, known in all regions except Antarctica.

Helophilus Meigen, 1822

73. Helophilus (s. str.) *continuus* Loew, 1854

Stackelberg 1951: 137.

Material examined. Tajikistan 2♂, Sarytag, 13.06.2018 (B.,); 1♂, 3♀♀, Iskandarkul, 16, 18.06.2018 (B., Z.); 1♂, 1♀, Dushanbe, loess hills, 1–4.05.1943 (A. Stackelberg).

Notes on ecology. A locally occurring species. Single specimens were collected on barberry flowers, the females were sitting on the grass. Flight period: May – June.

Distribution. Central and East Palaearctic.

74. Helophilus (s. str.) *parallelus* (Harris, [1776])

Stackelberg 1951: 137.

Notes on ecology. No information.

Distribution. Transpalearctic without North Africa and South Asia

Myathropa Rondani, 1845

75. Myathropa florea (Linnaeus, 1758)

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 1♂, Kondara, (A. Stackelberg).

Notes on ecology. No information.

Distribution. All Palaearctic without extreme North.

76. Myathropa semenovi (Smirnov, 1925)

Stackelberg 1951: 137.

Material examined. Uzbekistan 3♂♂, 4♀♀, Miraki, 01.06.2021 (R.); 4♂♂, 4♀♀, Tamshush, 02.06.2021 (R.); 3♂♂, 7♀♀, Oqtoshsoy, 03.06.2021 (R.); 1♂, Mirkurak, 12.06.2021 (R.); 1♂, 4♀♀, Qizildaryo, 09.05.2022 (R.). **Tajikistan** 16♂♂, 2♀♀, Iskandarkul, 15–16.06.2018 (B.); 2♂♂, 1♀, same locality, 18.06.2022 (B., Z.).

Notes on ecology. It is found in almost all biotopes and in large numbers. An anthropophilic and almost ubiquitous species. It flies at an altitude of up to 3 m from the ground; spends considerable time resting on flowers; it also sits on leaves, starting from ground level and above and in the evenings, you can find flies sitting on leaves. The females feed on the inflorescences of *Heracleum lehmannianum*. The males quickly fly around the thickets of this plant, sometimes perching on the leaves. Flight period: end of March – September.

Distribution. Western Siberia, Middle Asia.

Mallota Meigen, 1822

77. Mallota sogdiana Stackelberg, 1950

Stackelberg, 1950: 291.

Notes on ecology. No information. Flight period: April.

Distribution. Uzbekistan.

78. Mallota sp.

Material examined. Uzbekistan 1♀, Tulangdaryo, 02.05.2022 (R.).

Remarks on taxonomy. The discovered single female was compared with all the species found in Central Asia according to the materials of the Siberian Zoological Museum. This specimen has two yellow spots with clear borders on the second tergite. This feature is not typical for any species inhabitant in Central Asia.

Notes on ecology. The specimen was caught on a rose, in a forest with poplar, at an altitude of 1300 m.

Distribution. Surkhondaryo region of Uzbekistan.

Tribe Brachiopini

Brachyopa Meigen, 1822

79. Brachyopa stackelbergi Krivosheina 2004

Krivosheina, 2004: 599.

Notes on ecology. Two larvae and two puparia of this species were collected in a deposit on *Populus* sp.

Distribution. Central Tajikistan.

Chrysogaster Meigen, 1803

80. Chrysogaster cemiteriorum (Linnaeus, 1758)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 4♀♀, Tamshush, 11.06.2021 (R.); 1♀, Mirkurak, 12.06.2021 (R.); 5♂♂, 6♀♀, Dukonkhona, 21.06.2021 (R.).

Notes on ecology. It is found along the shores of mountain rivers, lakes in wet meadows. Visits to inflorescences of *Heraculum lehmannianum*, wild carrots, *Ferula* sp. and *Lepidium draba*. Flight period: June – July.

Distribution. Palaearctic.

81. Chrysogaster musatovi Stackelberg, 1952

Stackelberg, 1952: 365; Peck, 1988: 134.

Material examined. Tajikistan 1♀, Iskandarkul, 19.06.2018, (B.) 2♂♂, 2♀♀, Kondara, 29.05–2.06.2022 (B., Z.); 2♂♂, 1♀, 3–5 km Kalon, 29.06–12.07.2017, 2018 (B.).

Notes on ecology. It is rare at altitudes from 1300 to 2450 m. Found on inflorescences of *Carum carvi*. Flight period: May – July.

Distribution. Caucasus, Middle Asia.

82. Chrysogaster tadzhikorum Stackelberg, 1952

Stackelberg, 1952: 364; Peck, 1988: 135.

Material examined. Uzbekistan 2♂♂, 14♀♀, Qizildaryo, 09.05.2022 (R.); 1♂, Machaydaryo, 05.05.2022 (R.). **Tajikistan** 1♀, Iskandarkul, 17.06.2022 (B.); 1♂, Kondara, 2.06.2022 (Z.); 1♂, same locality, 2.06.2022 (B.); 1♂, Dushanbe, 26.04.1945 (Gussakovslij); 11♂♂, 44♀♀, 3–7 km from Kalon, 7.06–12.07.2017, 2018 (B., Z.); 1♂, same locality, 11.06.2022 (Z.); 1♀, Kalon, 11.06.2022 (B.).

Notes on ecology. It is found locally along the banks of rivers, lakes and in wet meadows, at altitudes ranging from 700 to 2450 m. In some areas, it reaches peak abundance and becomes a dominant species. Specimens of this species have been collected from the inflorescences of *Prangos pabularis*, *Heracleum lehmannianum*, *Ferula kuhistanica*, *Tanacetum* sp., *Sisymbrium loeselii* and *Lepidium draba*. Flight period: April – May.

Distribution. The mountainous part of Middle Asia, including Afghanistan.

***Lejogaster* Rondani, 1857**

83. Lejogaster tarsata (Meigen, 1822)

Stackelberg 1951: 137.

Material examined. Uzbekistan 2♂♂, 3♀♀, Miraki 09.05.2021, (R.).

Notes on ecology. Not common, from plains to mid-altitudes at 500–1900 m. The flies are found on inflorescences, on wild carrot and other Umbelifera. Flight period: April – May.

Distribution. Entire Palaearctic except extreme North.

***Neoascia* Williston, 1886**

84. Neoascia (s. str.) *pavlovskii* Stackelberg, 1955

Stackelberg, 1955: 346; Peck, 1988: 144.

Material examined. Uzbekistan 1♀, Gilon, 25.06.2021 (R.); 1♂, Miraki, 08.05.2021 (R.); 1♂, 1♀, same locality, 01.06.2021 (R.); 2♂♂, 2♀♀, Tamshush,

02.06.2021 (R.); 2♀♀, Quqoshsoy, 11.07.2021 (R.); 1♂, 1♀, Chopik, 13.06.2021 (R.). **Tajikistan** 1♂, Takob 15.07.1972 (Levina); 1♂, Kondara, 25.05.2021 (Z.); 3♂♂, 2♀♀, same locality, 2.06.2022 (B.); 11♂, Kalon, 13.06.2022 (B.); 6♂♂, 2♀♀, Safed-Dara, 29.05.2021 (B.); 1♂, same locality, 3.06.2022 (B.).

Notes on ecology. It is not common in the middle mountains at an altitude of 1800–2600 m, on the inflorescences of *Achillea millefolium*, *Heracleum lehmannianum*, *Ferula kuhistanica* and *F. tadshikorum*. Flight period: from May to July.

Distribution. Caucasus and Middle Asia.

85. **Neoascia* (s. str.) *podagrica* (Fabricius, 1775)

For the studied territory, the species is indicated for the first time

Material examined. Tajikistan 4♂♂, 2♀♀, Iskandarkul, 15-19.06.2018 (B., Z.); 8♂♂, 6♀♀, Kalon, 25.06-12.07.2018 (B., Z.); 1♀, same locality 13.06.2022 (B.).

Notes on ecology. Locally found in the middle mountains at an altitude of 1800–2600 m. It is found in wet meadows on low grass and on currant leaves. Flight period: June – July.

Distribution. Western and Central Palaearctic.

86. **Neoascia* (s. str.) sp.

Material examined. Uzbekistan 2♂♂, 1♀, Gilon, 14.07.2022, (R.).

Notes on ecology. No information.

Distribution. Uzbekistan.

***Orthonevra* Macquart, 1829**

87. Orthonevra hissarica Stackelberg, 1952

Stackelberg, 1952: 358; Peck, 1988: 141.

Notes on ecology. No information. This species is not found in our materials.

Distribution. Middle Asia.

88. Orthonevra longicornis (Loew, 1843)

Stackelberg, 1953: 343.

Notes on ecology. No information. This species is not found in our materials.

Distribution. Western and Central Palaearctic.

89. Orthonevra nobilis (Fallen, 1817)

Stackelberg 1951: 137. 1953: 356.

Material examined. Uzbekistan 1♂, Miraki, 09.05.2021 (R.). **Tajikistan** 1♂, Khoja-Obigarm, 30.05.2021 (B.).

Notes on ecology. It is rarely found in the middle mountains at altitudes of 1800–2000 m along the banks of mountain rivers on the inflorescences of *Ferula kuhistanica* and *Prangos pabularis*. Flight period: May.

Distribution. Palaearctic except extreme North.

90. Orthonevra pilifacies Stackelberg, 1952

Stackelberg, 1952: 361; Peck, 1988: 141.

Material examined. Tajikistan 4♂♂, 3♀♀, Iskandarkul, 16–19.06.2018 (B., Z.); 2♂♂, 1♀, Kalon, 1.07.2017 (B., Z.); 1♂, same locality, 28–30.06.2018 (B., Z.); 22♂♂, 12 km NE Kalon, mineral spring, 9.06.2022 (B., Z.); 8♂♂, 6♀♀, Kalon, 25.06–12.07.2018 (B., Z.); 1♀, same locality 13.06.2022, (B.).

Notes on ecology. In Tajikistan, this species is common in some biotopes. It is found in the middle mountains at altitudes of 2200–2600 m. In the poplar forest, specimens of this species visited the flowers of *Capsella bursa-pastoris*, inflorescences of *Carum carvi* and *Prangos pabularis*. Flight period: June – July.

Distribution. South of Central Palaearctic.

***Sphegina* Meigen, 1822**

91. Sphegina (s. str.) *smirnovi* Violovitsh et Stackelberg, 1953

Stackelberg, 1953: 381; Peck, 1988: 148.

Material examined. Tajikistan 1♀, Kalon, 5.07.2018, (B.).

Notes on ecology. The only specimen of this species was caught on currant leaves in early July.

Distribution. The mountains of Middle Asia (the Hissar and Fergana mountain ranges).

Tribe Eumerini

***Eumerus* Meigen, 1822**

92. Eumerus amoenus Loew, 1848

Stackelberg, 1951: 137; 1961: 215.

Material examined. Uzbekistan 1♂, Qizildaryo, 09.05.2022 (R.). **Tajikistan** 1♂, Kondara, 31.05.2022 (B.); 20♂♂, 11♀♀, Kalon, 1–12.07.2017 (B., Z.); 18♂♂, 7♀♀, same locality, 5–25.06.2018 (B.).

Notes on ecology. Specimens were collected on the flowers of *Cichorium intybus* L. and *Prangos pabularia*. In some regions of the world, it has been recorded as a pest of Liliaceae, particularly of onion during storage (Mahmoud et al. 2007), as well as of the *Fritillaria imperialis* L., 1753 (Alaserhat et al. 2016).

Flight period: May to July.

Distribution. Western and Central Palaearctic.

93. Eumerus aristatus Peck, 1969

Material examined. Uzbekistan 1♂, Miraki, 01.06.2021 (R.); 1♂, Mirkurak, 12.06.2021 (R.); 4♂♂, Machaydaryo, 05.05.2022 (R.); 15♂♂, 2♀♀, Tupalangdaryo, 02.05.2022 (R.). **Tajikistan** 3♂♂, 1♀, Kalon, 6–28.06.2018 (B.); 1♀, same locality, 9.06.2021 (Z.); 35♂♂, 13♀♀, same locality, 6–11.06.2022, (B., Z.); 2♂♂, 1♀, 12 km NE Kalon, 9.06.2022 (B.); 6♂♂, 7♀♀, Takob, 1–2.07.1972 (L. Levina).

Notes on ecology. The species is locally distributed and reaches high numbers in some biotopes. It is commonly encountered in mid-mountain zone (at elevations of 1000–2500 m) and occasionally descends to foothill plains. It is frequent on rocky substrates along streams and small rivers, sometimes occurs on the inflorescences of *Heracleum lehmannianum* and *Ferula kuhistanica*. Males spend most of their time flying from place to place and do not feed. Females are mostly found on flowers. Flight period: May to July.

Distribution. Mountainous regions of Central Asia.

94. Eumerus bactrianus Stackelberg, 1952

Stackelberg, 1952: 390; 1961: 205; Grković et all. 2019: 26.

Material examined. Uzbekistan 2♂♂, Tamshush, 16.06.2023 (R.); 1♂, Oqtosh-soy, 03.06.2021 (R.); 15♂♂, 2♀♀, Tupalangdaryo, 02.05.2022 (R.); 2♂♂, Sangardak, 19–20.06.2023 (R.). **Tajikistan** 11♂♂, 4♀♀, 3–5 km from Kalon, 30.06–12.07.2017 (B.); 5♂♂, 3♀♀, same locality, 5.06–7.07.2018 (B.); 9♂♂, 5♀♀, same locality 6–13.06.2022 (B.).

Notes on ecology. The species is rarely encountered in mid-mountain habitats at elevations of 1800–2600 m, occurring on meadows with *Carum carvi* and on the inflorescences of *Lepidium draba* and *Heracleum lehmannianum*. Males spend most of their time sitting on wet ground covered with wet clay or on small stones along streams. Flight period: May to July.

Distribution. Central Asia.

95. **Eumerus bilobatus* Barkalov, Mutin, Daminova et Rakhimov, 2020

Barkalov, et all. 2020: 3.

Material examined. Uzbekistan 1♀ Darband, 10.05.2015 (M. Proshchalykin). **Tajikistan** 5♂♂ Dangara District, observatory Sanglokh 19.06.2025 (B.).

Notes on ecology. The ecology of the species remains insufficiently studied; however, current data indicate that it is characteristic of low subtropical mountains and occurs locally from steppe habitats to mid-mountain zone at elevations of 400–2310 m, on the inflorescences of *Lepidium draba*. In the middle mountains,

specimens of this species sat near and on the flowers of *Convolvulus arvensis* at the very top of the mountain. Flight period: early May to June.

Distribution. Uzbekistan, Turkmenistan, Tajikistan. For territory of Tajikistan the species is mentioned for the first time.

96. Eumerus coeruleus (Becker, 1913)

Stackelberg, 1951: 137; 1961: 191; Gilasian et al. 2020: 125.

Material examined. Uzbekistan 2♂♂, Naushur, 23.06.2021 (R.); 2♂♂, Tamshush, 16.06.2023 (R.); 1♂, Chaknak, 28.05.2023 (R.). **Tajikistan** 1♂, Kondara, 1–3.06.2018 (B.); 4♂♂, 12♀♀, Kalon, 27.06–12.07.2017 (B.) 14♂♂, 7♀♀, Kalon 24.06–6.07.2018 (B., Z.).

Notes on ecology. The species occurs locally infrequently encountered in mid-mountain habitats at elevations of 1800–2600 m, occurring on rocky substrates or on the inflorescences of *Ferula kuhistanica*, *Prangos pabularia*. Males sit on rocks along roads or fly between plants at a height of 15-20 cm in search of females. Flight period: May to July.

Distribution. Mountainous regions of Central Asia and Iran (Gilasian et al. 2020).

97. Eumerus gulyaevi Barkalov et Mutin, 2024

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Surxondaryo Region, Darband, 12–14.09.2017 (M. Proshchalykin). **Tajikistan** 5♂♂, 1♀, 3 km NW Kallon village, 04.07.2018 (B.); 5♂♂, 7 km NW Kallon village, 05.07.2018 (B.); 12♂♂, 8♀♀, 5 km NW Kallon village, 07–12.07.2017 (B.); 1♂, 1♀, 3.6 km NW Kallon village, 11, 12.06.2022 (Z.); 1♂, Varzob District, Gafilabad, the upper reaches of the Luchob River, 18.08.1940 (V. Gussakovskij); 1♂, 4♀♀, S slope Hissar mountain ridge, Khodzha-Obi-Garm, 02.11.08.1944 (Nikolskaya); 1♂ Kondara, 14.09.1945 (V. Gussakovskij).

Notes on ecology. The ecology of the species remains insufficiently studied. In meadows, protected from sheep and goats males fly low over the ground in search of females and often fall into yellow pan traps. Females often visit the inflorescences of *Prangos pabularia*, where males follow them. Flight period: June to September.

Distristribution. Tajikistan, Uzbekistan.

98. Eumerus gussakowskii Stackelberg, 1949

Stackelberg, 1949: 437; 1951: 137; 1961: 194; Peck, 1988: 157.

Material examined. Tajikistan 1♂ southern slope of Hissar mountain ridge, Kvak 18.09.1945 (V. Gussakovskij); 3♂♂, 2♀♀ Kalon, 7–12.07.2017 (B.).

Notes on ecology. The species locally found and is infrequently encountered in mid-mountain habitats at elevations of 1600–2600 m, occurring on rocky substrates or on the inflorescences of *Prangos pabularia* and *Ferula kuhistanica*. Flight period: July to September.

Distristribution. Kyrgyzstan, Uzbekistan, Tajikistan.

99. Eumerus hissaricus Stackelberg, 1949

Stackelberg, 1949: 438; 1961: 201; Peck, 1988: 157; Gilasian et al. 2020: 125.

Material examined. Tajikistan 1♂, Stalinabad (= Dushanbe), Botanical garden.

Notes on ecology. No information.

Distribution. Turkmenistan, Tajikistan, Iran.

100. Eumerus falsus Becker, 1921

Stackelberg, 1951: 137; 1961: 189; Gilasian et al. 2020: 124.

Notes on ecology. No information.

Distristribution. Turkmenistan, Tajikistan, Syria, Iran.

101. Eumerus kondarensis Stackelberg, 1952

Stackelberg, 1952: 383; 1961: 203; Peck, 1988: 158.

Material examined. Uzbekistan 1♂, 1♀, Qoratog, 23.06.2021 (R.); 1♂, Miraki, 14-15.06.2023 (R.); 2♂♂, Oqtoshsoy, 03.06.2021 (R.); 3♀♀, Tamshush, 16.06.2023 (R.); 1♂, Mirkurak, 12.06.2021 (R.); 4♂♂, Chimboy, 12.07.2022 (R.); 5♂♂, Tupalangdaryo, 02.05.2022 (R.); 1♂, Sangardak, 19-20.06.2023 (R.). **Tajikistan** 20♂♂, 14♀♀ Kondara, 1100 m a.s.l. 1.07–14.09.1937 (V. Gussakovskij); 1♂, same place 5.06.1943 (A. Stackelberg); 62♂♂, 43♀♀, 3-8 km to Kalon, 1.06–12.07.2017 (B.); 2♂♂, 2♀♀, same locality, 24.06–6.07.2018 (B., Z.); 13♂♂, 7♀♀, same locality, 15–23.06.2021 (B.); 1♀, same locality, 7.06.2022 (Z.); 2♂♂, Khodzha-Obi-Garm, 30.06.2021 (B.); 1♂, 1♀, Kondara, 1–3.06.2018 (B.) 62♂♂, 43♀♀, 3–8 km to Kalon, 1.06–12.07.2017 (B.); 2♂♂, 2♀♀, same locality, 24.06–6.07.2018 (B., Z.); 13♂♂, 7♀♀, same locality, 15–23.06.2021 (B.); 1♀, same locality, 7.06.2022 (Z.); 1♀, Takob 1.07.1972 (L. Levina).

Notes on ecology. The species is commonly encountered in mid-mountain zone (at elevations of 1000–2500 m) and occasionally descends to foothill plains. In some biotopes, the species is part of the dominant group of syrphid species. In meadows that are protected from domestic animals, its specimens are common on the leaves of grasses along roads and paths. They fly low above the ground, which is why they are often caught in yellow pan traps. It is frequent on rocky substrates and is sometimes found on the flowers of *Rosa* sp., inflorescences of *Prangos pabularia*, *Heracleum lehmannianum*, *Lepidium draba*, *Ferula kuhistanica* and *Ferula tadshikorum*. Flight period: May – September.

Distristribution. Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan.

102. Eumerus longitarsis Peck, 1979

Peck, 1979: 191; 1988: 158.

Notes on ecology. No information.

Distribution. Endemic to the Hissar Ridge.

103. Eumerus lucidus Loew, 1848

Stackelberg, 1961: 211.

Notes on ecology. No information.

Distribution. Former Yugoslavia, North Africa: Morocco.

104. Eumerus mesasiaticus Stackelberg, 1949

Stackelberg, 1949: 427; 1961: 192.

Distribution. Tajikistan, Mongolia.

105. Eumerus pamirorum Stackelberg, 1949

Stackelberg, 1949: 427; 1951: 137.

Material examined. Uzbekistan 1♀, Oqtoshsoy, 03.06.2021 (R.). **Tajikistan** 2♂♂, 1♀, Kalon, 23–25.06.2018 (B., Z.).

Notes on ecology. The species is infrequently encountered in mid-mountain zone (at elevations of 1000–2500 m) and occasionally descends to foothill plains. It has been recorded on the flowers of *Rosa*, influrescens of *Heracleum lehmannianum*, *Lepidium draba*, *Ferula kuhistanica* and *F. tadshikorum*. Flight period: June.

Distribution. Pamir–Alai Mountain system.

106. Eumerus reichardti Stackelberg, 1952

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 4♂♂, Takob 2–15.07.1972 (L. Levina).

Notes on ecology. No information. Flight period: July.

Distribution. Tajikistan, Kyrgyzstan, Afganistan.

107. Eumerus ryzhik Barkalov et Mutin 2022

Barkalov, Mutin, 2022: 26.

Material examined. Uzbekistan 2♂♂, 1♀ Derbent, 12.09.2017 (M. Proshchalykin).

Notes on ecology. No information. Flight period: September.

Distribution. Uzbekistan.

108. Eumerus rushanicus Stackelberg, 1952

Stackelberg, 1952: 380; 1961: 203; Peck, 1988: 161.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.).

Notes on ecology. The species is infrequently encountered in mid-mountain zone (at elevations of 1800–2800 m). It has been found on the flowers of *Rosa*, *Verbascum songaricum* and *Ferula kuhistanica*. Flight period: June.

Distribution. Kyrgyzstan, Tajikistan.

109. Eumerus sogdianus Stackelberg, 1952

Stackelberg, 1952: 390; 1961: 207; Peck, 1988: 162.

Material examined. Uzbekistan 1♂, Chimboy, 12.07.2022 (R.). **Tajikistan** 59♂♂, 27♀♀ 3–5 km from Kalon, 1–12.07.2017 (B., Z.); 6♂♂, 5♀♀ same locality, 5.06–2.07.2018 (B., Z.).

Notes on ecology. The species is locally distributed. In some biotopes, it reaches high numbers. Specimens of this species concentrate along streams on vegetation, on dry ground and on small stones. Males hardly feed, flying from place to place in search of females. The fllight period: July.

Distribution. From Eastern Europe to Central Asia.

110. Eumerus tadzhikorum Stackelberg, 1949

Stackelberg, 1949: 427; 1951: 137; Peck, 1988: 163.

Material examined. Uzbekistan 1♂, Oqtoshsoy, 03.06.2021 (R.); 2♂♂ same locality, 16.06.2023 (R.); 3♂♂, Chaknak, 28.05.2023 (R.). **Tajikistan** 27♂♂, 31♀♀, 3–5 km to Kalon, 1–12.07.2017 (B., Z.); 16♂♂, 4♀♀, same locality, 14–19.06.2021 (B.).

Notes on ecology. The species occurs in the mid-mountain zone (at elevations of 1500–2800 m). Males prefer to sit in open areas of the southern exposure of the mountains, as well as on rocks along the streams. Females feed on Apiaceae – *Carum carvi*, *Prangos pabularia* and sit on the leaves of these same plants. Flight period: May to July.

Distribution. Mountainous regions of Central Asia.

111. Eumerus tugajorum Stackelberg, 1952

Stackelberg, 1952: 393; 1961: 213.

Material examined. Tajikistan 1♂, Kalon, 7-12.07.2017, (B.).

Notes on ecology. The species occurs primarily in the tugay forests of the Amudarya River basin, but also penetrates into nearby mountainous and desert areas. Flight period: June.

Distribution. Southern Tajikistan and Uzbekistan (Amudarya River basin).

112. Eumerus turanicola Stackelberg, 1952

Stackelberg, 1952: 396; 1961: 219; Peck, 1988: 164.

Material examined. Uzbekistan 2♂♂, Tupalangdaryo, 02.05.2022 (R.). **Tajikistan** 7♂♂, 6♀♀ Kondara 7–16.09.1937, 20.07–18.09.1939 (V. Gussakovskij), 1♀ Stalinobad (=Dushanbe) 18.07.1936 (V. Gussakovskij); 2♀♀ Darvaz 24–25.08.1943 (A. Stackelberg); 1♂ 16 km S Anzobskij Pass 2200 m 16.08.1962 (V. Zaitsev); 1♂ middle course of the Majkhura river, 2700 m 25.08.1962 (V. Zaitsev).

Notes on ecology. The species is infrequently encountered, occurring from foothills to mid-mountain zone (at elevations of 700–2700 m). Flight period: May to September.

Distribution. Turkmenistan, Uzbekistan, Tajikistan, Mongolia.

113. Eumerus turanicus Stackelberg, 1952

Stackelberg, 1952: 395; 1961: 218; Peck, 1988: 164.

Material examined. Uzbekistan 2♂♂, Mirkurak, 12.06.2021 (R.); 1♂, Machaydaryo, 05.05.2022 (R.). **Tajikistan** 1♀ Kondara 7.08.1938 (V. Gussakovskij); 1♂, 1♂, Iskanderkul, 18.06.2022 (Z.); 1♂, Khodzha-Obi-Garm, 30.05.2021 (B.); 1♀, Takob, 12.07.1972 (L. Levina).

Notes on ecology. The species is infrequently encountered in mid-mountain zone (at elevations of 1500–2800 m). In our collections, the species was found in individual specimens collected on dry, warm ground and on inflorescens of *Ferula* sp. Flight period: May to July.

Distribution. Uzbekistan. Tajikistan, Kyrgyzstan.

114. Eumerus ursiculus Stackelberg, 1949

Stackelberg, 1949: 427; 1951: 137; Peck, 1988: 164.

Material examined. Uzbekistan 2♂♂, 1♀, Naushur, 24.06.2021 (R.); 3♂♂, Qoratog, 23.06.2021 (R.); 1♂, Qorachashma, 14.06.2021 (R.). **Tajikistan** 1♀, Sarytag, 16.06.2022 (B.); 1♂, 5♀♀ Kalon 7–12.07.2017 (B.); 5♂♂ same locality, 24.06–5.07.2018 (B., Z.); 2♀♀ same locality, 11, 13.06.2022 (B.).

Notes on ecology. The species is infrequently encountered in mid-mountain and partly high-mountain zone (at elevations of 1500–3000 m). Individual specimens were collected in a wet meadow with abundant flowering *Carum carvi* and *Prangos pabularia*. The females were sitting on the leaves and inflorescences, while the males were flying along the streams with flowering plants. They often fall into yellow pan plates. Flight period: June to July.

Distribution. Uzbekistan, Tajikistan, Kyrgyzstan.

***Merodon* Meigen, 1803**

115. Merodon (s. str.) *eumerusi* Vujić, Radenković et Likov

Vujić et al. 2019: 189.

Material examined. Tajikistan 1♂, 1♀, Kvak, 6.07.1964 (V. Zaitsev); 1♂, Kondara, 31.05.2021 (B.); 2♂, same locality, 23.08.1962, 27.09.1964 (V. Zaitsev); 1♀, Dushanbe, 23.06.1935 (V. Gussakovskij).

Notes on ecology. The species is found singly in lowland and midland landscape zones. The males hover in the shade of trees, the females sit on the leaves of shrubs. Flight period: June – August.

Distribution. Uzbekitan, Tajikistan, Kyrgyzstan.

116. **Merodon* (s. str.) *nigrocapillatus* Vujić, Likov et Radenković, 2020

Vujić et al. 2020: 116.

Material examined. Uzbekistan 2♀♀, Mirkurak, 12.06.2021 (R.). **Tajikistan** 1♂ Sarytag, 14.06.2018 (B.); 1♀, same locality, 16.06.2018 (Z.); 3♂♂, 11♀♀, same locality, 16–19.06.2022 (B., Z.); 1♀, Iskandarkul, 15.06.2018 (B.); 1♂, 3♀♀, same locality, 17–19.06.2022 (B., Z.); 7♂, Kalon, 1–7.07.2017 (B.); 5♂♂, 18♀♀, same locality, 7–12.07.2017 (B.); 2♂♂, 10♀♀, same locality, 28.06–2.07.2018, (B.); 25♂♂, 5♀♀, same locality, 7–12.06.2022 (B., Z.); 8♀♀, same locality, 26.06–3.07.2018 (Z.).

Notes on ecology. The species is found in the mid-mountain belt, from 2300 to 2450 m above sea level. Males sit on dry ground in a meadow rich in flowering *Carum carvi*, *Heracleum lehmannianum* and *Prangos pabularia*. Females feed on the inflorescences of these plants. Males quickly fly from one inflorescence to another in search of females. Flight period: June-July.

Distribution. Endemic to the Hissar Ridge. For territory of Uzbekistan the species is mentioned for the first time.

117. Merodon (s. str.) *rufitarsis* Sack, 1913

For the studied territory, the species is indicated for the first time.

Material examined. Tajikistan 33♂♂, 6♀♀, Sarytag, 13–17.06.2018 (B., Z.); 21♂♂, 9♀♀, same locality, 16–20.06.2022 (B., Z.).

Notes on ecology. The species is found in the mid-mountain zone at an altitude of 2300 m above sea level. A locally occurring species. We found a large number of them at a single point. The flies were sitting on dry ground and plant leaves. The females were feeding on the inflorescences of *Carum carvi*. Flight period: June.

Distribution. All Middle Asia.

118. Merodon (s. str.) *pruni* (Rossi, 1790)

For the studied territory, the species is indicated for the first time

Material examined. Uzbekistan 4♂♂, Miraki, 14-15.06.2023 (R.); 2♂♂, Tamshush, 02.06.2021 (R.); 1♀, Qorachashma, 14.06.2021 (R.); 5♂♂, 1♀, Mirkurak, 12.06.2021 (R.).

Notes on ecology. It is encountered rather infrequently, inhabiting mainly mid-mountain and partly high-mountain areas at elevations of 1500–3000 m. Males typically rest on stones or on bare ground in open habitats. Females are usually collected near the banks of mountain rivers with very slow currents. Flight period: June.

Distribution. from the western Palaearctic to Central Asia.

119. Merodon (s. str.) *smirnovi* Paramonov, 1927

For the studied territory, the species is indicated for the first time

Material examined. Tajikistan 1♀, Sarytag, 17.08.2018 (B.); 2♂♂, 1♀, same locality, 19.06.2022 (B.); 11♂♂, 8♀♀, Kalon, 23.06–5.07.2018 (B., Z.).

Notes on ecology. A locally occurring species, was found in the mid-mountain zone at an altitude of 2300 – 2450 m above sea level. Flies flew low between the grass in the wet meadow or they sat on the leaves of large grasses, often getting caught in the yellow pan traps. Flight period: June-August.

Distribution. All Middle Asia.

120. Merodon (s. str.) *tarsatus* Sack, 1913

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 2♂♂, Qoratog, 23.06.2021 (R.); 2♂♂, Oqtoshsoy, 03.06.2021 (R.); 2♂♂, Mirkurak, 12.06.2021 (R.); 1♂, 1♀, Qizildaryo, 09.05.2022 (R.); 1♂, Dukonkhona, 21.06.2021 (R.); 13♂♂, 5♀♀, Chimboy, 12.07.2022 (R.); 5♂♂, Tupalangdaryo, 02.05.2022 (R.). **Tajikistan** 1♂, 1♀, Sarytag, 17.06.2018 (B.); 3♂♂, 1♀, same locality, 16-19.06.2022 (B.); 1♂, Iskandarkul, 16.06.2018 (Z.); 1♂, same locality, 20.06.2022 (B.); 5♂♂, Kondara, 25–27.05.2021 (B., Z.); 1♂, 1♀, Khoja-Obigarm, 30.05.2021 (Z.); 1♂, Anzob, 7.06.2021 (Z.); 99♂♂, 47♀♀, Kalon, 29.05–3.07.2018, (B., Z.); 17♂♂, 6♀♀, same locality, 7–9.06.2021 (Z.); 98♂♂, 38♀♀, same locality, 9–13.06.2022 (B., Z.); 1♂, 12 km to Kalon 9.06.2022, (B.).

Notes on ecology. The species occurs in the mid-mountain and partly high-mountain zone (at elevations of 1500–3000 m). The flies visit mainly Apiaceae growing in wet meadows where there is no grazing by domestic animals. In such places, they sometimes reach high numbers. Males concentrate on dry, well-heated elevations, while females feed on the inflorescences of *Ferula* sp., *Carum carvi*, *Prangos pabularia* and *Lepidium draba*. Flight period: May – July.

Distribution. Uzbekistan, Tajikistan.

121. Merodon (s. str.) *turkestanicus* Paramonov, 1927

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♂, Naushur, 24.06.2021 (R.); 2♂♂, Tamshush, 02.06.2021 (R.); 1♂, same locality, 16.06.2023 (R.); 1♀, Qorachashma, 14.06.2021 (R.); 4♂♂, Mirkurak, 12.06.2021 (R.); 2♂♂, 3♀♀, Dukonkhona, 21.06.2021 (R.); 5♂♂, same locality, 12.07.2022 (R.); 1♂, Gilon, 14.07.2022 (R.); 1♂, Tupalangdaryo, 02.05.2022 (R.).

Notes on ecology. The species occurs in the mid-mountain and partly high-mountain zone (at elevations of 1500–3000 m). It has been recorded on the flowers of *Ferula* and *Lepidium draba*. Flight period: May to July.

Distribution. Central Asia.

Tribe Ceriodini

***Ceriana* Rafinesque, 1815**

122. Ceriana brunettii (Shannon, 1927)

Stackelberg 1951: 138.

Notes on ecology. No information.

Distristribution. Turkmenistan, Tajikistan, Uzbekistan, Pakistan.

123. Ceriana sartorum Smirnov, 1924

Smirnov, 1924: 294; Stackelberg 1951: 137; Violovich, 1974b: 86.

Material examined. Uzbekistan 1♂, Oqtoshsoy, 03.06.2021 (R.); 1♀, Chopik, 13.06.2021 (R.).

Notes on ecology. The species occurs locally and is found sporadically in meadows and on flowering shrubs such as barberry. Flight period: June.

Distribution. Central Asia.

Tribe Milesini

***Spilomyia* Meigen, 1803**

124. Spilomyia sulphurea Sack, 1910

Stackelberg, 1958: 763.

Material examined. Uzbekistan 2♂♂, Mirkurak, 01.06.2023 (R.).

Notes on ecology. The species is rarely encountered in mid-mountain zone at elevations of 1000–2000 m. Its preferred habitats are mountainous broad-leaved forests (1300–1800 m a.s.l.), most commonly walnut–fruit forests with the pres-

ence of hollow and decaying trees. Adults feed on the inflorenscens of Apiaceae and Asteraceae. The species is listed in the Red Data Book of the Republic of Uzbekistan, where it is classified as vulnerable, naturally rare, locally distributed. Until now, it had been recorded in Uzbekistan only at two localities: Khayat (Nuratau Range) and the vicinity of Samarkand. Our findings represent new records and constitute the southernmost known occurrences of this species. Flight period: April to August.

Distribution. Throughout Central Asia, including Afghanistan.

125. Spilomyia gussakovskii Stackelberg, 1958

Stackelberg, 1958: 760; Peck, 1988: 213.

Notes on ecology. No information.

Distribution. Tajikistan (Varzob).

Syritta Le Peletier et Serville, 1828

126. Syritta pipiens (Linnaeus, 1758)

Smirnov, 1924: 292; Stackelberg 1951: 137.

Material examined. Uzbekistan 1♀, Naushur, 24.06.2021 (R.); 3♂♂, 2♀♀, Qoratog, 23.06.2021 (R.); 6♂♂, 1♀ Khojagulvars, 15.07.2022 (R.); 1♂, Miraki, 02.06.2021 (R.); 1♂, 2♀♀, Tamshush, 02.06.2021 (R.); 2♂♂, 1♀, Mirkurak, 12.06.2021 (R.); 7♂♂, 6♀♀, Qizildaryo, 09.05.2022 (R.); 3♂♂, 3♀♀, Machaydaryo, 05.05.2022 (R.); 5♂♂, 1♀, Laylik, 02.05.2021 (R.);. **Tajikistan** 1♀, Sarytag, 13.06.2018 (B.); 1♂, same locality, 19.06.2022 (B.); 2♂♂, 1♀ Iskandarkul, 15–16.06.2018 (B., Z.); 1♂, same locality, 14.07.2022 (B.); 3♂♂, 1♀, Khoja-Obigarm, 30.05.2021 (B.); 1♂, 4♀♀, Kondara, 1–3.06.2018 (B.); 1♂, 1♀, same locality, 27–28.05.2021 (B.); 1♀, same locality, 29.05.2022 (B.); 3♂♂, Dushanbe, 31.05.2016 (Z.); 26♂♂, 18♀♀, Kalon, 28.06–12.07.2017, 2018 (B., Z.); 1♀, same locality, 8.06.2021 (Z.); 1♂, 4♀♀, same locality, 6–11.06.2022 (B., Z.); 3♂♂, 1♀, Khoja-Obigarm, 30.05.2021 (B.); 1♂, 1♀, Kalon, 7.06.2018 (B.); 1♂, Safed-Dara, 29.05.2021 (B.).

Notes on ecology. One of the most common and widespread species. Its specimens are common from lowland biotopes to highlands. The species is commonly found along the edges of marshes and on the shores of virtually any freshwater body, including lakes, ponds, ditches, canals, streams and rivers. It is an anthropophilic species and occurs in the most types of agricultural lands, as well as in orchards and urban parks. It usually flies low, rarely more than 1 m above the ground and often rests on vegetation. The larvae are coprophagous and their abundance depends on the number of livestock in the area. Adults have been recorded on the flowers of *Potentilla* sp., *Sisymbrium loeselii*, *Tanacetum* sp., *Daucus carota*, *Heracleum lehmannianum*, *Carun carvi*, *Capsella bursa-pastoris* and *Tamarix* sp. Flight period: April-September.

Distribution. Palaearctic and Ethiopian regions.

Tribe Xylotini

***Xylota* Meigen, 1822**

127. Xylota (s. str.) *ignava* (Panzer, 1798)

For the studied territory, the species is indicated for the first time.

Material examined. Uzbekistan 1♀, Qoratog, 23.06.2021 (R.); 1♂, Dukonkhona, 21.06.2021 (R.). **Tajikistan** 2♂♂, 5♀♀ Iskanderkul, 17–18.06.2022 (B., Z.); 3♂♂, 1♀ 12 km from Shakhriston pass 22.07.2018 (Z.); 3♂♂, 2♀♀ Kalon, 30.06–12.07.2018 (B., Z.); 1♀ same locality, 7.06.2022 (B.).

Notes on ecology. The species occurs in the mid-mountain zone in mixed forests with poplar and hazel, on trunks, logs and fallen trees, either in sunny spots or on the ground nearby; it has also been recorded on the flowers of rose and hawthorn. Flight period: June to July.

Distribution. Throughout the Palaearctic, excluding North Africa.

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