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**Orijinal araştırma** (Original article)

## Contributions to the Syrphidae (Diptera) fauna of Siirt province

Siirt ili Syrphidae (Diptera) faunasına katkılar

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### ABSTRACT

This study is based on Syrphidae specimens collected from Şirvan district of Siirt province. Specimens were collected from different locations using sweep net. The specimens were examined under stereo microscope and species identifications were made. A total of 14 genera and 23 species, including 10 species from Syrphinae and 13 species from Eristalinae were identified: *Cheilosia antiqua* (Meigen, 1822), *Chrysogaster basalis* Loew, 1857, *Episyrphus balteatus* (De Geer, 1776), *Eristalinus sepulchralis* (Linnaeus, 1758), *Eristalinus megacephalus* (Rossi, 1794), *Eristalinus taeniops* (Wiedemann, 1818), *Eristalis arbustorum* (Latreille, 1758), *Eristalis tenax* (Linnaeus, 1758), *Eumerus amoenus* Loew, 1848, *Eupeodes corollae* (Fabricius, 1794), *Eupeodes luniger* (Meigen, 1822), *Lejogaster tarsata* (Meigen, 1822) ; Soos ve Papp, 1988), *Melanostoma mellinum* (Linnaeus, 1758), *Merodon velox* Loew, 1869, *Neoascia podagrica* (Fabricius, 1775), *Neoascia tenur* (Harris, 1780), *Paragus bicolor* (Fabricius, 1794), *Paragus haemorrhous* Meigen, 1822, *Paragus pecchiolii* Rondani, 1857, *Paragus tibialis* (Fallen, 1817), *Sphaerophoria rueppelli* (Wiedemann, 1830), *Sphaerophoria scripta* (Linnaeus, 1758) and *Syrirta pipiens* (Linnaeus, 1758). In addition, the distribution of the identified species in the Palaearctic and in Türkiye are given.

### INTRODUCTION

The Syrphidae family is in the Syrphoidea superfamily within the Brachycera of the order Diptera. The Syrphidae family is divided into four subfamilies: Eristalinae, Microdontinae, Pipizinae and Syrphinae (Van Veen 2010). It has more than 250 genera and about 6300 species worldwide. The species diversity of the Syrphidae family differs in geographical regions. There are 1590 species in the Palearctic, 870 in the Nearctic, 400 in Australia and Oceania, 528 in the Afrotropical and 771 in the Oriental regions (Courtney et

al. 2009, Mengual et al. 2014, Mengual et al. 2022, Peck 1988, Smith and Vockeroth 1980, Ssymank and Nielsen 2012, Thompson and Vockeroth 1989, Thompson and Rotheray 1998, Vockeroth and Thompson 1987).

Adults of the Syrphidae family have a body length of 4-25 mm and head is round or oval. The compound eyes are always dichoptic in females and holoptic in males. The thorax may be matt or shiny black, brown or metallic green. There are groups with yellow and orange stripes on the

thorax, while in some groups the thorax may be entirely one colour (Van Veen 2010). The humeral callus is glabrous in the Syrphinae subfamily and hairy in the Eristalinae, Pipizinae and Microdontinae subfamilies (Speight 2020).

The wings of the Syrphidae are usually transparent. The vena spuria, which extends between the Radius ( $R_{4+5}$ ) and Media (M1) and is not connected to any vein at either end, is the most important feature that distinguishes syrphids from other dipterous families (Speight 2020). The abdomen are usually broad, oval, elliptical, elongated or slender and usually shiny black, metallic green, yellow, brown or red. There may be short or long hairs on the abdomen, and some groups may not have any hairs at all (Sarıbiyık 1994, Van Veen 2010).

Syrphids are a group of insects that feed on the nectar and pollen of flowering plants and play a critical pollinator role in agriculture. These insects make important contributions to the ecological balance of crops and native wild plant species in diverse ecosystems worldwide (Van Veen 2010).

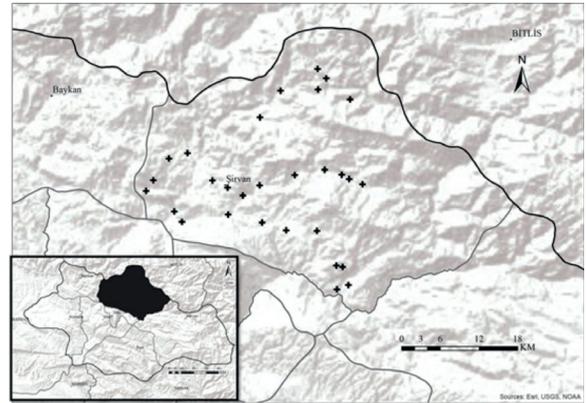
Syrphid studies in Türkiye were initially conducted by foreign researchers (Bischof 1902, Sack 1932). However, in recent years, Turkish researchers have made important contributions to the syrphid fauna of Türkiye (Gözüaçık and Özgen 2018, Hayat et al. 2020, Sarıbiyık 2017).

Studies on syrphids in Türkiye have been carried out in a way to cover both faunistic research and plant protection studies due to the widespread and all-season availability of these species (Sarıbiyık 1994). Syrphid species can be used as effective natural enemies against some pests and in biological control studies (Hayat et al. 2023). In the Syrphidae section of the Palearctic region catalog of Diptera, only 54 species were known from Türkiye (Peck 1988). Later, this number increased to 314 in the check list of syrphids of Türkiye by Sarıbiyık (2014). With the recent studies, the number of syrphid species in Türkiye has exceeded 350 (Gözüaçık and Özgen 2018, Hayat et al. 2020, 2023, Özkan and Çalışkan 2011, Pehlivan and Atakan 2014, Reemer et al. 2009, Sarıbiyık 2009, Toth 2013, Yetkin 2006, Vujic et al. 2020).

Compared to the studies in Türkiye, the studies conducted in Siirt province are quite limited and insufficient. In the previous studies, only 3 species were recorded from Siirt province. These species are as follows: *Eupeodes corollae* (Fabricius, 1794), *Merodon aberrans* Egger, 1860 and *Scaeva dignota* (Rondani, 1857) (Aslan and Uygun 2007, Sarıbiyık 2014).

Siirt Province is located in the southeastern region of Türkiye, and the designated research area, Şirvan District,

is situated in the northern part of the province. Siirt has a continental climate (Figure 1). Four seasons are experienced distinctly. Summers are dry and hot, winters are cold and rainy. There are Doğruyol, Kurtalan, Kapılı and Yazlıca in the northern part of Siirt, Cemikarı, Ceman and Herekul Plateaus in Pervari region and Bacavan Plateau in Şirvan (Anonymous 2023a, 2023b). In the vegetation cover of Siirt, steppe vegetation is widespread in low areas, while forested areas are found in mountainous areas. In the southern parts, steppe vegetation is more prominent, while oak, pine and cedar are more prominent in the mountainous areas in the northern parts (Anonymous 2023a, 2023b).



**Figure 1.** Study area, + : sampling stations (the lower left corner shows the location of Şirvan district in Siirt province)

The lack of sufficient studies on Siirt province was the first reason for this subject to be considered as a research topic. In addition, the study area was chosen as a research region because it is ecologically favorable for syrphids to live. The aim of this study was to determine the Syrphidae fauna of Siirt province and to increase the systematic and taxonomic studies by revealing the biodiversity and to contribute to the fauna of Türkiye.

## MATERIALS AND METHODS

The material collected in this study was collected from Siirt (Şirvan) province between April and September 2023 and 29 different localities were visited (Figure 1).

In the study area, specimens were collected from habitats with different vegetation cover either by direct observation of specimens or by sweeping method using sweep net. The captured specimens were killed in ethyl acetate killing jars and then pinned or small specimens were glued to small triangular pieces of paper. The specimens were then placed in collection boxes as standard museum material and identified using the relevant literature.

Nikon SMZ 445 model stereo microscope was used for species identification. Identifications were carried out by Assoc. Prof. Dr. Mustafa Cemal Çiftçi from the Department of Entomology, Plant Protection Division, Faculty of Agriculture, Siirt University and Senior Agricultural Engineer Fatma Erbek. During species identification, the studies conducted by Barkalov and Stahls 2022, Bartsch et al. 2009, Coe 1966, Grkovic et al. 2017, 2019a, 2019b, Hippa 1968, Kazerani et al. 2017, Khaganinia and Kazerani 2014, Reemer et al. 2009, Rego et al. 2022, Sack 1932, Smith et al. 2017, Speight et al. 2013, 2014, Speight 2017, 2020, Speight et al. 2021, Toth 2013, Van Veen 2010, Vujic et al. 2013, 2018, 2019, 2020, 2021, 2022, 2023 were utilized. The identified specimens are kept in the Entomology Museum of Siirt University, Faculty of Agriculture, Department of Plant Protection.

The map of Siirt province and the maps of the localities collected in the study were prepared using ESRI ArcGIS Desktop 18.08 program.

## RESULTS

In this study, a total of 700 specimens (428 males and 272 females) were evaluated and 14 genera belonging to 2 subfamilies of the Syrphidae family were found. *Cheilosia*, *Chrysogaster*, *Eristalinus*, *Eristalis*, *Eumerus*, *Lejogaster*, *Merodon*, *Neoscasia*, *Syritta* belonging to Eristalinae subfamily and *Episyrphus*, *Eupeodes*, *Melanostoma*, *Paragus*, *Sphaerophoria* belonging to Syrphinae subfamily were identified as 23 species. All specimens were collected from the Siirt province, Şirvan district. Therefore, province and district informations are not given in the "material examined" section.

### Subfamily: Eristalinae

#### Genus: *Cheilosia* Meigen, 1822

##### *Cheilosia antiqua* (Meigen, 1822)

Material Examined: 1♀, Elmadalı, 38°17' 18" N / 42°16' 94" E, 1200 m, 06.08.2023, leg. F. Erbek.

Palaearctic Distribution: Ireland, central and southern Europe, European Russia (Speight 2017).

Distribution in Türkiye: Hakkari (Sarıbiyık 2014). This species is the second record for Türkiye and the first record from Siirt province.

#### Genus: *Chrysogaster* Meigen, 1803

##### *Chrysogaster basalis* Loew, 1857

Material Examined: 1♀, Kirazlı, 38°07' 97" N / 42°15' 00" E 1400 m 06.08.2023, leg. F. Erbek

Palaearctic Distribution: France, Germany, Spain, Portugal, North Africa, Switzerland, Romania, most of the Balkan Peninsula (Bosnia-Herzegovina, Croatia, Macedonia, Serbia and Greece), Iran, Türkiye (Hayat et al. 2020, Khaghaninia et al. 2011, Speight 2017).

Distribution in Türkiye: Isparta (Hayat et al. 2020). This species is the second record for Türkiye and recorded for the first time from Siirt province.

#### Genus: *Eristalinus* Rondani, 1845

##### *Eristalinus megacephalus* (Rossi, 1794)

Material Examined: 2♀♀, Derinçay, 38°01' 28" N / 42°04' 43" E, 906 m, 13.06.2023, 2♀♀, same data, 09.09.2023; 1♂, Fatih, 38°02' 52" N / 42°67' 70" E 700 m 26.08.2023, 1♂, same data, 02.09.2023; 1♂, Hürmüz, 38°06' 64" N / 42°21' 88" E, 1194 m, 20.05.2023, leg. F. Erbek.

Palaearctic Distribution: Spain, France, and Italy, Egypt, Türkiye and North Africa, (Speight 2017).

Distribution in Türkiye: Diyarbakır, Isparta, Kayseri, Muğla (Gözüaçık and Özgen 2018, Hayat 2020, Sarıbiyık 2014). This species is recorded from Siirt province for the first time.

##### *Eristalinus taeniops* (Wiedemann, 1818)

Material Examined: 1♀, 1♂, Hürmüz-Yarıntepe, 38°06' 64"N / 42°21' 88" E, 1194 m, 20.05.2023, leg. F. Erbek.

Palaearctic Distribution: Portugal, Spain, Mediterranean basin (Southern France including Corsica, Italy including Sardinia and Sicily), former Yugoslavia, Albania, Romania, Cyprus, Greece (Crete and Rhodes), Türkiye, Lebanon, Israel, North Africa (Syria, Egypt, Libya, Tunisia, Morocco), Canary Islands, India and Pakistan (Peck 1988, Speight 2017).

Distribution in Türkiye: Adana, Ankara, Antalya, Çorum, Denizli, Erzurum, Hatay, Isparta, İzmir, Kahramanmaraş, Kayseri, Mersin, Muğla, Kars, Kastamonu, Konya (Hayat et al. 2020, Sarıbiyık 2014, Toth 2013). It is recorded for the first time from Siirt province.

##### *Eristalinus sepulchralis* (Linnaeus, 1758)

Material Examined: 1♀, İncekaya, 38°01' 56" N / 42°11' 80" E, 1038 m, 02.09.2023, leg. F. Erbek.

Palaearctic Distribution: Fennoscandia, Iberia, North Africa, Ireland, India most of Europe, Russia, Siberia, China, Italy, Türkiye, Egypt, Syria, Bulgaria, Japan (Sarıbiyık 1994, Speight 2017).

Distribution in Türkiye: Adana, Afyonkarahisar, Aksaray, Ankara, Antalya, Bolu, Çankırı, Denizli, Edirne, Eskişehir, Hatay, İstanbul, İzmir, Kahramanmaraş, Konya, Karabük,

Kastamonu, Kayseri, Muğla, Nevşehir, Şanlıurfa (Gözüaçık and Özgen 2018, Hayat et al. 2020, Sarıbıyık 2014, Toth 2013). It is recorded for the first time from Siirt province.

**Genus: *Eristalis* Latreille, 1804**

***Eristalis arbustorum* (Latreille, 1758)**

Material Examined: 1♂ Serinpınar, 37°57' 19" N / 42°11' 58" E 928 m 06.05.2023; 1♂, Fatih, 38°01' 34" N / 41°57' 00" E, 648 m, 07.05.2023, 2♂♂, same data, 13.06.2023, 1♂, same data, 26.08.2023; 1♀, Hürmüz-Yarımtepe, 38°06' 64" N / 42°21' 88" E, 1194 m, 20.05.2023; 1♂, Maden, 38°05' 36" N / 42°11' 23" E, 1234 m, 20.05.2023; 2♂♂, İkizler, 38°03' 19" N / 41°54' 56" E, 1004 m, 29.05.2023; 1♀, 3♂♂, Boylu, 38°05' 41" N / 41°52' 57" E, 957 m, 29.05.2023; 2♂♂, Nergizli, 38°03' 12" N / 41°57' 15" E, 645 m, 29.05.2023; 1♂, Elmadalı, 38°17' N / 42°16'. E, 1200 m, 06.08.2023, 2♂♂, same data, 10.06.2023; 2♀♀, 3♂♂, Derinçay, 38°07' 97" N / 42°02' 50" E, 906 m, 09.09.2023, 1♂, same data, 09.07.2023, 1♂, same data, 26.08.2023, 3♀♀, same data, 13.06.2023, 2♂♂, same data, 02.09.2023; 1♂, Tangoli Fish Facilities, 38°03' 42" N / 42°02' 45" E, 890 m, 25.06.2023; 1♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m 30.06.2023; 2♀♀, 6♂♂, Durankaya, 37°96' 07" N / 42°07' 00" E, 1388 m, 30.06.2023; 1♀, 2♂♂ Kirazlı, 38°07' 97" N / 42°15' 00" E, 1400 m, 06.08.2023, 2♂♂, same data, 26.08.2023; 1♀, Çeltikyolu, 38°14' 01" N / 42°07' 14" E, 1500 m, 06.08.2023; 3♀♀, 2♂♂, Elmadalı Milhan, 38°19' 10" N / 42°15' 32" E, 1890 m, 06.08.2023; 2♂♂, Akgeçit, 38°06' 71" N / 42°19' 40" E, 1200 m, 26.08.2023; 1♀, İncekaya, 38°00' 52" N / 42°06' 43" E, 1038 m, 13.06.2023; 3♀♀, Şirvan Center entrance, 38°03' 42" N / 42°02' 45" E, 952 m, 20.05.2023, leg. F. Erbek.

Paleartic Distribution: North Africa, the entire Palearctic Region (Speight 2017).

Distribution in Türkiye: Adana, Afyonkarahisar, Aksaray, Ankara, Antalya, Bartın, Bolu, Burdur, Çankırı, Denizli, Diyarbakır, Düzce, Edirne, Erzurum, Eskişehir, Hatay, Isparta, İzmir, Kahramanmaraş, Karabük, Kastamonu, Kayseri, Konya, Mersin, Muğla, Niğde, Sinop, Sivas, Şanlıurfa, Tokat, Zonguldak (Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbıyık 2014, Toth 2013, Yetkin 2006). It is recorded for the first time from Siirt province.

***Eristalis tenax* (Linnaeus, 1758)**

Material Examined: 1♂, Derinçay, 38°03' 47" N / 42°07' 00" E, 906 m, 02.09.2023, 3♂♂, same data, 09.09.2023, 1♂, same data, 06.05.2023; 1♂, Boylu, 38°05' 41" N / 41°56' 57" E, 957 m, 29.05.2023; 1♀, İncekaya, 38°01' 52" N / 42°11' 43" E, 1038 m, 13.06.2023 1♀ Durankaya, 37°96' 07" N / 42°07' 00"

E 1388 m, 30.06.2023; 1♂, Kirazlı, 38°07' 97" N / 42°15' 00" E 1400 m 06.08.2023; 1♂ Elmadalı, 38°17' 18" N / 42°16' 94" E 1200 m 06.08.2023; 1♀ Elmadalı Milhan, 38°19' 10" N / 42°15' 32" E 1890 m 06.08.2023; 1♂, Akgeçit, 38°06' N / 42°20' E, 1200 m. 26.08.2023, leg. F. Erbek.

Paleartic Distribution: Azerbaijan, Armenia, Georgia, Scandinavia, Spain, Italy, Japan, Caucasus, Kazakhstan, Kyrgyzstan, Kola Peninsula, Madeira, Canary and Azores, Portugal, Türkiye, Turkmenistan, Yugoslavia and Greece (Peck 1988, Sarıbıyık 1998, Speight 2017).

Distribution in Türkiye: Adana, Afyonkarahisar, Aksaray, Ankara, Antalya, Aydın, Bartın, Bolu, Çankırı, Denizli, Diyarbakır, Düzce, Edirne, Erzurum, Eskişehir, Hatay, Isparta, İstanbul, İzmir, Kahramanmaraş, Kastamonu, Kayseri, Konya, Malatya, Mersin, Muğla, Sinop, Sivas, Şanlıurfa, Tokat, Trabzon, Uşak (Gözüaçık and Özgen 2018, Pehlivan and Atakan 2014, Sarıbıyık 2014, Toth 2013). It is recorded for the first time from Siirt province.

**Genus: *Eumerus* Meigen, 1822**

***Eumerus amoenus* Loew, 1848**

Material Examined: 1♂ Pirinçli, 37°95' N / 42°19' E 820 m 26.06.2023, leg. F. Erbek.

Paleartic Distribution: France, Crete, Cyprus, Rhodes, Azores, Morocco, Spain, Canary Islands, Portugal, Greece, Germany, Switzerland, Caucasus, Kazakhstan, Mongolia, Tajikistan, Turkestan, Türkiye (Peck 1988, Speight 2017).

Distribution in Türkiye: Erzincan, İzmir, Isparta (Hayat et al. 2020, Sarıbıyık 2014). This species is recorded from Siirt province for the first time.

**Genus: *Lejogaster* Rondani, 1857**

***Lejogaster tarsata* (Meigen, 1822)**

Material Examined: 1♀ Derinçay, 38°02' 44" N / 42°19' 08" E 906 m 13.08.2023; 1♀, İncekaya, 38°05' 15" N / 42°10' 61" E 1038 m 09.09.2023; 1♀, Fatih, 38°02' 09" N / 42°96' 00" E 700 m 09.09.2023, leg. F. Erbek.

Paleartic Distribution: Fennoscandia, Mediterranean islands (Corsica and Sicily), Ireland, Europe, Russia, Iran, Afghanistan, Uzbekistan, Tajikistan, Kyrgyzstan, Turkmenistan, Kazakhstan, Mongolia, Türkiye and Siberia (Speight 2017).

Distribution in Türkiye: Adana, Afyonkarahisar, Aksaray, Ankara, Antalya, Bolu, Çankırı, Denizli, Kahramanmaraş, Konya, Karabük, Kastamonu, Kayseri, Muğla, Sakarya, Sivas, Zonguldak (Hayat et al. 2020, Sarıbıyık 2014, Toth 2013). It is recorded from Siirt province for the first time.

**Genus: *Merodon* Meigen, 1803**

***Merodon velox* Loew, 1869**

Material Examined: 1♂, Elmadalı, 38°10' 52" N / 42°07' 13" E 1350 m 10.06.2023, leg. F. Erbek.

Palaearctic Distribution: Balkan Peninsula, former Yugoslavia, Georgia, Türkiye and Greece (Peck 1988, Speight 2017, Vujic et al. 2020).

Distribution in Türkiye: Adana, Ankara, Antalya, Bolu, Burdur, Bursa, Denizli, Erzurum, Hakkari, İzmir, Kahramanmaraş, Kars, Kastamonu, Kayseri, Muğla, Zonguldak (Hayat et al. 2020, Sarıbiyik 2014, Toth 2013). It was recorded for the first time from Siirt province.

**Genus: *Neoascia* Williston, 1886**

***Neoascia podagrica* (Fabricius, 1775)**

Material Examined: 1♀ İncekaya, 38°02' 57" N / 42°19' 24" E, 1038 m, 23.07.2023, leg. F. Erbek.

Palaearctic Distribution: Fennoscandia, Iberia, Mediterranean (including Crete, Cyprus and Madeira), North Africa, Ireland, Europe (former Yugoslavia and Italy), Türkiye, Israel, Russia and Siberia (Speight 2017).

Distribution in Türkiye: Adana, Aksaray, Ankara, Antalya, Bolu, Bursa, Çankırı, Denizli, Isparta, Kahramanmaraş, Kastamonu, Kayseri, Mersin, Muğla, Niğde, Sakarya, Tokat (Bayrak and Hayat 2008, Hayat et al. 2020, Sarıbiyik 2014, Toth 2013). It is recorded for the first time from Siirt province.

***Neoascia tenur* (Harris, 1780)**

Material Examined: 1♀, İncekaya, 38°02' 57" N / 42°19' 24" E, 1038 m, 23.07.2023, leg. F. Erbek.

Palaearctic Distribution: Iceland, Ireland, Siberia, Russia, Türkiye (Speight 2017).

Distribution in Türkiye: Ankara, İzmir (Toth 2013). It is recorded from Siirt for the first time.

**Genus: *Syritta* Le Peletier et Serville, 1828**

***Syritta pipiens* (Linnaeus, 1758)**

Material Examined: 2♀♀, 1♂, Akgeçit, 38°06' 71" N / 42°19' 40" E, 1200 m, 26.08.2023; 1♀, 3♂♂, Bayındır, 38°06' 02" N / 41°58' 25" E, 736 m, 29.05.2023; 1♀ Boylu, 38°05' 41" N / 41°52' 57" E, 957 m, 29.05.2023; 1♀, 2♂♂, Çeltikyolu, 38°14' 22" N / 42°07' 32" E, 1500 m, 06.08.2023; 4♂♂, 2♀♀ Derinçay, 38°02' 44" N / 42°19' 08" E, 906 m, 23.07.2023, 2♂♂, same data, 13.08.2023, 1♂, same data, 02.09.2023, 1♂, 3♀♀ same data, 09.07.2023, 1♂, same data, 26.08.2023, 1♂, same data, 09.09.2023; 2♀♀, 18♂♂, Durankaya, 37°96'

07" N / 42°07' 00" E, 1388 m, 30.06.2023, 4♂♂, same data, 23.07.2023; 2♂♂, Elmadalı, 38°17' 18" N / 42°16' 94" E, 1200 m, 06.08.2023; 1♂, Fatih, 38°02' 52" N / 42°67' 70" E, 680 m, 26.08.2023, 4♀♀, same data, 02.09.2023; 1♀, İkizler and Nergizli, 38°03' 19" N / 41°54' 56" E, 1004 m, 29.05.2023; 1♀, İkizler, 38°04' 29" N / 41°55' 30" E, 995 m, 29.05.2023; 1♂, İncekaya, 38°07' 52" N / 42°06' 43" E, 1038 m, 13.06.2023, 1♀, same data, 19.04.2023, 1♂, same data, 06.05.2023, 1♂, same data, 26.08.2023, 2♂♂, same data, 13.08.2023; 1♂ Kirazlı, 38°07' 79" N / 42°15' 00" E, 1400 m, 26.08.2023, 2♀♀, 13♂♂, same data, 06.08.2023; 1♂, Piriñçli, 37°95' 70" N / 42°19' 40" E, 820 m, 26.06.2023, 1♂, same data, 23.07.2023, 5♂♂, 3♀♀, same data, 02.09.2023; 5♂♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m, 30.06.2023; 1♀, 1♂, Şirvan Center entrance, 38°07' 07" N / 42°02' 09" E, 952 m, 26.06.2023; 1♀, 2♂♂, Tangoli Fish Facilities, 38°03' 42" N / 42°02' 45" E, 890 m, 25.06.2023; 2♀♀, İncekaya Zinehari, 38°01' 56" N / 42°10' 80" E, 1038 m, 02.09.2023, 4♂♂, same data, 09.09.2023, leg. F. Erbek.

Palaearctic Distribution: North and South America, North Africa, Palaearctic Region, Germany, Norway, Hungary, Mongolia, China, Afghanistan, Türkiye, Iran, Morocco, Algeria, Madeira, (Claussen and Lucas 1988, Peck 1988, Sack 1932, Speight 2017).

Distribution in Türkiye: Adana, Adıyaman, Afyonkarahisar, Aksaray, Ankara, Antakya, Antalya, Aydın, Bartın, Bolu, Çanakkale, Çankırı, Denizli, Diyarbakır, Düzce, Edirne, Erzurum, Eskişehir, Hatay, Isparta, İstanbul, İzmir, Kahramanmaraş, Karabük, Kars, Kastamonu, Kayseri, Konya, Mersin, Muğla, Niğde, Osmaniye, Sinop, Şanlıurfa, Tokat, Zonguldak (Bayrak and Hayat 2008, Dousti and Hayat 2006, Gözüaçık and Özgen 2018, Hayat et al. 2020, Özgür 1986, Pehlivan and Atakan 2014, Sarıbiyik 2014, Toth 2013, Yetkin 2006). It is recorded for the first time from Siirt province.

**Subfamily: Syrphinae**

From the subfamily Syrphinae, a total of 10 species, including 1 species of *Episyrphus*, 2 species of *Eupeodes*, 1 species of *Melanostoma*, 4 species of *Paragus* and 2 species of *Sphaerophoria* were identified.

**Genus: *Episyrphus* Matsumura & Adachi, 1917**

***Episyrphus balteatus* (De Geer, 1776)**

Material Examined: 1♀, Derinçay, 38°01' 27" N / 42°05' 17" E, 928 m, 06.05.2023; 1♂, İncekaya, 38°00' 52" N / 42°06' 43" E, 1038 m, 13.06.2023, 1♀, same data, 19.04.2023; 1♀, 1♂, Piriñçli, 37°95' 40" N / 42°19' 40" E, 820 m, 26.06.2023, 2♀♀, same data, 23.07.2023; 1♂, Şirvan Center entrance, 38°07' 07" N / 42°02' 09" E, 952 m, 26.06.2023, leg. F. Erbek.

Palaearctic Distribution: Europe, North Africa, Australia, Netherlands, Germany, Norway, Hungary, Afghanistan, Mongolia, Japan, China, Algeria, Canary Islands, Egypt, Crete Island, Central Europe, Czech Republic, Türkiye and Iran (Claussen and Lucas 1988, Sack 1932, Speight 2017).

Distribution in Türkiye: Adana, Adıyaman, Aksaray, Ankara, Antalya, Artvin, Balıkesir, Bartın, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çukurova, Denizli, Diyarbakır, Edirne, Erzincan, Erzurum, Eskişehir, Isparta, İstanbul, İzmir, Hatay, Kahramanmaraş, Kars, Konya, Karabük, Kastamonu, Kayseri, Manisa, Mardin, Mersin, Muğla, Niğde, Ordu, Osmaniye, Sinop, Sivas, Şanlıurfa, Tekirdağ, Tokat, Zonguldak (Bayrak and Hayat 2008, Candemir and Kara 2003, Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbyık 2009, 2014, Toth 2013). It is recorded for the first time from Siirt province.

**Genus: *Eupeodes* Osten Sacken 1877**

***Eupeodes corollae* (Fabricius, 1794)**

Material Examined: 7♂♂, 4♀♀, İncekaya, 38°01' 57" N / 42°11' 24" E, 1038 m, 19.04.2023; 4♀♀, 6♂♂ Derinçay, 38°01' 27" N / 42°05' 17" E, 928 m, 06.05.2023; 2♀♀, 1♂ Fatih, 38°01'34" N / 41°57' 00" E, 648 m, 06.05. 2023, 8♀♀, 7♂♂ same data, 07.05.2023; 1♀, 2♂♂ Maden, 38°05' 66" N / 42°11' 43" E, 1234 m, 20.05.2023; 1♀, Derinçay, 38°02' 83" N / 42°09' 47" E, 906m, 09.07.2023; 1♀, Elmadalı, 38°17' 18" N / 42°16' 94" E, 1200 m, 06.08.2023, leg. F. Erbek.

Palaearctic Distribution: Iceland, Fennoscandia, İberia, Madeira, Canary Islands, North Africa, Ireland, Japan, China, Russia, Siberia, Türkiye, Urals (Speight 2017).

Distribution in Türkiye: Adana, Adıyaman, Afyonkarahisar, Mediterranean Coastal Strip, Aksaray, Ankara, Antalya, Artvin, Bartın, Bolu, Bursa Burdur, Çankırı, Çukurova, Denizli, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Eskişehir, Hatay, Iğdır, Isparta, İzmir, Kahramanmaraş, Karabük, Kars, Kastamonu, Kayseri, Konya, Mardin, Mersin, Muğla, Nevşehir, Niğde, Ordu, Osmaniye, Sinop, Sivas, Şanlıurfa, Siirt, Tokat, Zonguldak (Gözüaçık and Özgen 2018, Özkan and Çalışkan 2011, Pehlivan and Atakan 2014, Sarıbyık 2009, 2014, Toth 2013).

***Eupeodes luniger* (Meigen, 1822)**

Material Examined: 1♀, 3♂♂ İncekaya, 38°01' 57" N / 42°11' 24" E, 1038 m, 19.04.2023; 3♂♂, Derinçay, 38°01' 27" N / 42°05' 17" E, 928 m, 06.05.2023, 1♂, same data, 09.07.2023; 2♂♂, 3♀♀ Fatih, 38°01' 34" N / 41°57' 00" E, 648 m, 07.05.2023; 1♂ Elmadalı, 38°17' 18" N 42°16' 94" E 1200 m 06.08.2023, leg. F. Erbek.

Palaearctic Distribution: Entire Palaearctic Region (Speight 2017).

Distribution in Türkiye: Adana, Ankara, Antalya, Bolu, Çankırı, Denizli, Edirne, İzmir, Karabük, Kastamonu, Manisa, Muğla (Hayat et al. 2020, Sarıbyık 2014). It is recorded for the first time from Siirt province.

**Genus: *Melanostoma* Schiner 1860**

***Melanostoma mellinum* (Linnaeus, 1758)**

Material Examined: 1♀, Ayranlı, 38°04' 13" N / 41°55' 35" E, 1016 m, 29.05.2023; 1♂, Çeltikyolu, 38°08' 22" N / 42°04' 32" E, 1300 m, 10.06.2023; 10♂♂, 1♀, Derinçay, 38°02' 89" N / 42°19' 07" E, 906 m, 23.07.2023, 1♂, same data, 26.06.2023, 1♀, 2♂♂, same data, 09.07.2023, 1♀, 1♂, same data, 13.06.2023; 7♂♂, Durankaya, 37°96' 07" N / 42°07' 00" E, 1388 m, 30.06.2023; 8♀♀, 10♂♂, Elmadalı, 38°17' 52" N / 42°17' 13" E, 1350 m, 10.06.2023, 1♂, same data, 06.08.2023; 2♀♀, Fatih, 38°01' 34" N / 41°57' 00" E, 648 m, 06.05.2023; 1♀ Gözlüce, 38°09' 43" N / 42°05' 43" E, 1220 m, 10.06.2023; 10♂♂, İncekaya, 38°00' 52" N / 42°06' 43" E, 1038 m, 13.06.2023, 5♂♂, 11♀♀, same data, 23.07.2023; 6♀♀, 23♂♂, Piriçli, 37°95' 70" N / 42°19' 40" E, 850 m, 26.06.2023, 5♂♂, same data, 23.07.2023, 1♀, same data, 09.09.2023, 2♂♂, 3♀♀, same data, 02.09.2023; 1♀, 1♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m, 30.06.2023; 1♀, Şirvan Center entrance, 38°07' 07" N / 42°02' 09" E, 952 m, 26.06.2023; 14♀♀, 8♂♂, Tangoli Fish Facilities, 38°03' 42" N / 42°02' 45" E, 890 m, 25.06.2023, leg. F. Erbek.

Palaearctic Distribution: Afghanistan, Bulgaria, Morocco, Iran, Scandinavia, Spain, Italy, Japan, Maderia and Canary Islands, Mongolia, Russia, Iceland, Siberia, Ireland, Türkiye and North Africa (Sarıbyık 1998, Speight 2017).

Distribution in Türkiye: Adana, Adıyaman, Mediterranean Coastal Strip, Aksaray, Ankara, Antalya, Artvin, Aydın, Bolu, Çanakkale, Çankırı, Çukurova, Denizli, Diyarbakır, Edirne, Erzincan, Erzurum, Eskişehir, Hatay, Iğdır, Isparta, İzmir, Kahramanmaraş, Konya, Karabük, Kars, Kastamonu, Kayseri, Mersin, Muğla, Niğde, Ordu, Sinop, Sivas, Şanlıurfa, Tokat, Zonguldak (Bayrak and Hayat 2008, Dousti and Hayat 2006, Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbyık 2009, 2014, Toth 2013). It is recorded for the first time from Siirt province.

**Genus: *Paragus* Latreille 1804**

***Paragus bicolor* (Fabricius, 1794)**

Material Examined: 1♀, İkizler, 38°04' 19" N / 41°55' 56" E 995 m, 29.05.2023; 1♀, 3♂♂, Tangoli Fish Facilities, 38°03' 42" N / 42°02' 45" E, 890 m, 25.06.2023; 1♂, 1♀ Piriçli, 37°95' 70" N / 42°19' 40" E, 820 m, 26.06.2023; 3♀♀, 4♂♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m, 30.06.2023; 3♀♀, 1♂, Durankaya, 37°97' 89" N / 42°18' 07" E, 1388 m, 23.07.2023, 5♀♀, 12♂♂ same data, 30.06.2023; 1♀, 3♂♂,

Derinçay, 38°02' 83" N / 42°09' 47" E, 906 m, 09.07.2023, 1♀, 1♂, same data, 23.07.2023; 1♂, İncekaya, 38°02' N / 42°19' E, 1038 m, 23.07.2023, 1♂, same data, 26.06.2023, 1♂, same data, 09.09.2023, leg. F. Erbek.

Palaearctic Distribution: Sweden, Denmark, North Africa, France, Europe, Mongolia, Iran, Afghanistan, North America, England, Hungary, Crete Island, Italy, Bulgaria, Russia, Ukraine, Georgia, Azerbaijan, Armenia, Kazakhstan, Türkiye, Turkmenistan and Siberia (Claussen and Lucas 1988, Coe 1966, Speight 2017, Toth 2013).

Distribution in Türkiye: Adana, Adıyaman, Mediterranean Region Coastline, Aksaray, Ankara, Antalya, Bolu, Çankırı, Denizli, Diyarbakır, Edirne, Erzurum, Isparta, İzmir, Konya, Kahramanmaraş, Karabük, Kastamonu, Kayseri, Mersin, Muğla, Nevşehir, Niğde, Şanlıurfa, Tokat, Zonguldak (Bayrak and Hayat 2008, Dousti and Hayat 2006, Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbiyik 2014, Toth 2013, Yetkin 2006). It is recorded for the first time from Siirt province.

#### ***Paragus haemorrhous* Meigen, 1822**

Material Examined: 1♂, İncekaya, 38°00' 52" N / 42°06' 43" E, 1038 m, 13.06.2023, 2♂♂, same data, 23.07.2023; 4♂♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 30.06.2023; 1♀, Elmadalı, 38°17' 18" N / 42°16' 94" E, 1200 m, 06.08.2023; 1♂ Fatih, 38°02' 52" N / 42°67' 70" E, 670 m, 26.08.2023, leg. F. Erbek.

Palaearctic Distribution: Northern Norway, Iberia, North Africa, Israel, Türkiye, Ireland, Europe (Former Yugoslavia and Italy) and Russia, North America (Speight 2017).

Distribution in Türkiye: Antalya, Edirne, Erzurum, İzmir, Muğla, Nevşehir (Hayat et al. 2020, Sarıbiyik 2014, Toth 2013). It is recorded for the first time from Siirt province.

#### ***Paragus pecchiolii* Rondani, 1857**

Material Examined: 1♂, Piriñli, 37°95' 70" N / 42°19' 40" E, 820 m, 26.06.2023; 1♂ same data, 23.07.2023; 1♀, Durankaya, 37°96' 07" N / 42°07' 00" E 30.06.2023, leg. F. Erbek.

Palaearctic Distribution: North Africa, France, Europe, Germany Switzerland, Austria, Türkiye, Russia (Speight 2017).

Distribution in Türkiye: Muğla, İzmir (Hayat and Tezcan 2023, Sarıbiyik 2014). It is recorded for the first time from Siirt province of Türkiye.

#### ***Paragus tibialis* (Fallen, 1817)**

Material Examined: 1♀, İközler, 38°04' 29" N / 41°55' 30" E, 995 m, 29.05.2023; 1♂, Tangoli Fish Facilities, 38°03' 42"

N / 42°02' 45" E, 890 m, 25.06.2023; 1♀, Piriñli, 37°95' 70" N / 42°19' 40" E, 820 m, 26.06.2023, 1♂, same data, 02.09.2023; 1♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m, 30.06.2023; 1♂, Derinçay, 38°02' 44" N / 42°19' 08" E, 906 m, 13.08.2023, 1♂ same data, 09.07.2023; 1♂, Fatih, 38°02' 52" N / 42°67' 70" E, 670 m, 26.08.2023; 1♂, 1♀, İncekaya, 38°02' 57" N / 42°19' 24" E, 1038 m, 23.07.2023, 1♀ same data, 13.08.2023, 1♀ same data, 13.06.2023, 1♂ same data, 26.08.2023, leg. F. Erbek.

Palaearctic Distribution: Norway, Sweden, Denmark, North Africa, England, former Yugoslavia, Israel and Türkiye (Speight 2017).

Distribution in Türkiye: Adana, Mediterranean Region Coastline, Aksaray, Ankara, Antalya, Bolu, Çankırı, Çukurova, Diyarbakır, Düzce, Hatay, Isparta, İzmir, Erzurum, Mersin, Kahramanmaraş, Karabük, Kastamonu, Kayseri, Kırşehir, Konya, Muğla, Niğde, Şanlıurfa, Tokat, Zonguldak (Bayrak and Hayat 2008, Dousti and Hayat 2006, Gözüaçık and Özgen 2018, Hayat et al. 2020, Sarıbiyik 2009, 2014, Toth 2013, Yetkin 2006). It is recorded for the first time from Siirt province.

#### **Genus: *Sphaerophoria* Le Peletier & Serville, 1828**

##### ***Sphaerophoria rueppelli* (Wiedemann, 1830)**

Material Examined: 1♂, 1♀, Boylu, 38°05' 41" N / 41°52' 57" E, 957 m, 29.05.2023; 1♀, Çeltikçiyolu, 38°08' 22" N / 42°04' 32" E, 1300 m, 10.06.2023; 1♀, Derinçay, 38°02' 44" N / 42°19' 08" E, 906 m, 23.07.2023, 1♀, same data, 26.06.2023, 1♀, same data, 09.07.2023, 3♀♀, same data, 13.06.2023; 3♂♂, Durankaya, 37°97' 89" N / 42°18' 07" E, 1388 m, 23.07.2023; 4♀♀, Elmadalı, 38°17' 52" N / 42°17' 13" E, 1350 m, 10.06.2023; 2♂♂, Fatih, 38°01' 34" N / 41°57' 00" E, 648 m, 06.05.2023, 1♂, 2♀♀ same data, 07.05.2023; 1♀, Hürmüz and Yarımtepe, 38°06' 64" N / 42°21' 88" E, 1194 m, 20.05.2023; 1♀, İncekaya, 38°01' 15" N / 42°11' 61" E, 1038 m, 09.09.2023; 1♂, Kapılı, 37°57' 19" N / 42°11' 58" E, 928 m, 06.05.2023; 1♀, Nergizli, 38°03' 12" N / 41°57' 15" E, 645 m, 29.05.2023; 2♂♂, Sevindik, 37°97' 55" N / 42°19' 11" E, 1255 m, 30.06.2023; 1♂, Şirvan Center entrance, 38°07' 07" N / 42°02' 09" E, 952 m, 26.06.2023, leg. F. Erbek.

Palaearctic Distribution: Norway, Sweden, North Africa, Spain, Italy, Bulgaria, Estonia, Czech Republic, Europe (including the Mediterranean islands, Türkiye and Greece), Russia, Afghanistan, China, Tajikistan, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Mongolia, Afghanistan, Korea, Syria, Iran and Egypt (Laska 2003, Speight 2020).

Distribution in Türkiye: Adana, Adıyaman, Mediterranean Coastline, Aksaray, Ankara, Antalya, Aydın, Bolu,

Çanakkale, Çankırı, Çukurova, Diyarbakır, Düzce, Hatay, Isparta, İzmir, Kahramanmaraş, Kastamonu, Kayseri, Kırşehir, Konya, Mersin, Muğla, Osmaniye, Şanlıurfa, Tokat, Zonguldak (Bayrak and Hayat 2008, Candemir and Kara 2003, Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbiyik 2009, 2014, Toth 2013, Yetkin 2006). It is recorded for the first time from Siirt province.

### *Sphaerophoria scripta* (Linnaeus, 1758)

Material Examined: 15 ♂♂, 4 ♀♀, Akgeçit, 38°04' 22" N / 42°17' 00" E, 1200 m, 20.05.2023; 1 ♀, 2 ♂♂, Ayranlı, 38°04' 13" N / 41°55' 35" E, 1016 m, 29.05.2023; 1 ♂, Bayındır, 38°06' 02" N / 41°58' 25" E, 736 m, 29.05.2023; 2 ♂♂, Boylu, 38°05' 41" N / 41°52' 57" E, 957 m, 29.05.2023; 5 ♀♀, 2 ♂♂, Demirkapı, 38°03' 56" / 42°04' 28"E, 1025 m, 20.05.2023; 6 ♀♀, 1 ♂, Derinçay, 38°01' 27" N / 42°05' 17" E, 928 m, 06.05.2023, 1 ♂, same data, 23.07.2023, 1 ♂, same data, 02.09.2023, 8 ♂♂, same data, 09.07.2023, 1 ♀, 1 ♂, same data, 26.08.2023, 2 ♀♀, same data, 09.09.2023, 3 ♀♀, 6 ♂♂, same data, 13.06.2023; 4 ♀♀, Durankaya, 37°96' 07"N / 42°07' 00" E, 1388 m, 30.06.2023; 2 ♀♀, 1 ♂, Elmadalı, 38°17' 18" N / 42°16' 94" E, 1200 m, 06.08.2023, 24 ♀♀, 12 ♂♂, same data, 10.06.2023; 1 ♂, Fatih, 38°01' 06" N / 41°57' 05" E, 648 m, 06.05.2023, 2 ♀♀, 7 ♂♂, same data, 07.05.2023; 4 ♂♂, Gözlüce, 38°09' 97" N / 42°05' 47" E, 1220 m, 10.06.2023; 8 ♀♀, 6 ♂♂, Hürmüz and Yarıntepe, 38°06' 64" N / 42°21' 88" E, 1194 m, 20.05.2023; 2 ♀♀, 2 ♂♂, İkizler and Nergizli, 38°03' 19" N / 41°54' 56" E, 1004 m, 29.05.2023; 2 ♀♀, 1 ♂, İkizler, 38°04' 29" N / 41°55' 30" E, 995 m, 29.05.2023; 5 ♀♀, 14 ♂♂, İncekaya, 38°00' 52" N / 42°06' 43" E, 1038 m, 13.06.2023; 9 ♀♀, 23 ♂♂, Maden, 38°07' 66" N / 42°12' 43" E, 1363 m, 20.05.2023; 1 ♂, Nergizli, 38°03' 12" N / 41°57' 15" E, 645 m, 29.05.2023; 2 ♀♀, 3 ♂♂, Oya and Cevizlik, 38°09' 35" N / 42°12' 06" E, 1717 m, 10.06.2023; 1 ♀, Pirinçli, 37°95' 19" N / 42°19' 58" E, 850 m, 06.05.2023, 1 ♂, same data, 09.09.2023; 3 ♂♂, Şirvan Center entrance, 38°03' 42" N / 42°02' 45" E, 952 m, 20.05.2023; 2 ♀♀, Şirvan Pervari three way junction, 38°02' 00" N / 42°01' 53" E, 770 m, 13.06.2023; 1 ♀, 2 ♂♂, Tangoli Fish Facilities, 38°03' 42" N / 42°02' 45" E, 890 m, 25.06.2023; 1 ♂, Tatlıpayam, 38°01' 54" N / 42°15' 18" E, 928 m, 06.05.2023, leg. F. Erbek.

Palaearctic Distribution: Iceland, Fennoscandia, North Africa, Ireland, most of the Palaearctic Region, Türkiye and Nepal (Speight 2020).

Distribution in Türkiye: Adana, Adıyaman, Afyonkarahisar, Ağrı, Mediterranean Coastline, Aksaray, Ankara, Antalya, Artvin, Aydın, Bartın, Bolu, Burdur, Bursa, Çankırı, Çukurova, Denizli, Diyarbakır, Düzce, Edirne, Erzincan, Erzurum, Eskişehir, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Karabük, Kars, Kastamonu, Kayseri,

Kırıkkale, Kırşehir, Konya, Mersin, Muğla, Nevşehir, Ordu, Osmaniye, Sinop, Sivas, Şanlıurfa, Tekirdağ, Tokat, Trabzon and Zonguldak (Bayrak and Hayat 2008, Candemir and Kara 2003, Gözüaçık and Özgen 2018, Hayat et al. 2020, Pehlivan and Atakan 2014, Sarıbiyik 2009, 2014, Toth 2013). It was recorded for the first time from Siirt province.

### DISCUSSION

A total of 700 Syrphidae specimens were collected from 29 different localities in Siirt (Şirvan) province between April and September 2023. As a result of the study, a total of 23 species belonging to 14 genera, including 10 species from the subfamily Syrphinae and 13 species from the subfamily Eristalinae, were identified.

*Eupeodes corollae* (Fabricius, 1794), *Merodon aberrans* Egger, 1860 and *Scaeva dignota* (Rondani, 1857) were previously known in Siirt province (Aslan and Uygun 2007, Sarıbiyik 2014). As a result of this study, only *E. corollae* was detected among these 3 known species in Siirt. *M. aberrans* and *S. dignota* were not encountered.

*Sphaerophoria scripta* (Linnaeus, 1758), *Melanostoma mellinum* (Linnaeus, 1758), *Eristalis arbustorum* (Linnaeus, 1758) and *Syrirta pipiens* (Linnaeus, 1758) were the most frequently encountered species. These species have a wide distribution in the world and are cosmopolitan. *Cheilosia antiqua* (Meigen, 1822), *Chysogaster basalis* Loew, 1857, *Eumerus amoenus* Loew, 1848, *Paragus pecchiolii* Rondani, 1857, and *Neoascia tenur* (Harris, 1780) are common in Central Europe and Western Palearctic region. However, its distribution in Türkiye is limited and it has been recorded only in certain cities. *C. antiqua* and *C. basalis* are the second records from Türkiye and the first record for Siirt province.

With this study, 22 species were recorded for the first time from Siirt province. With 3 previously known species, the number of known syrphid species from Siirt province increased to 25. With this first comprehensive study from Siirt province, the general situation of Siirt province has been revealed and it is thought that it will shed light on the faunistic studies to be carried out in the future. Due to the location of the Southeastern Anatolia Region, having different elevations, different habitats and not enough syrphid studies, it is thought that more species can be found and species diversity can increase with the researches to be carried out in the Southeastern Anatolia Region.

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the Syrphidae Family (Diptera) of Siirt Province, Şirvan District".

#### Author's Contributions

Authors declare that each author's contribution is equal.

#### Statement of Conflict of Interest

The authors have declared no conflict of interest.

#### ÖZET

Bu araştırma, Siirt ili Şirvan ilçesinden toplanan Syrphidae örneklerine dayanmaktadır. Atrap kullanılarak farklı lokasyonlardan örnekler toplanmıştır. Örnekler, stereo mikroskop altında incelenerek teşhisleri yapılmıştır. Sonuç olarak, Syrphinae'den 10 tür, Eristalinae'den 13 tür olmak üzere toplam 14 cins ve 23 tür tespit edilmiştir: *Cheilosia antiqua* (Meigen, 1822), *Chrysogaster basalis* Loew, 1857, *Episyrphus balteatus* (De Geer, 1776), *Eristalinus sepulchralis* (Linnaeus, 1758), *Eristalinus megacephalus* (Rossi, 1794), *Eristalinus taeniops* (Wiedemann, 1818), *Eristalis arbustorum* (Latreille, 1758), *Eristalis tenax* (Linnaeus, 1758), *Eumerus amoenus* Loew, 1848, *Eupeodes corollae* (Fabricius, 1794), *Eupeodes luniger* (Meigen, 1822), *Lejogaster tarsata* (Meigen, 1822), *Melanostoma mellinum* (Linnaeus, 1758), *Merodon velox* Loew, 1869, *Neoascia podagrica* (Fabricius, 1775), *Neoascia tenur* (Harris, 1780), *Paragus bicolor* (Fabricius, 1794), *Paragus haemorrhous* Meigen, 1822, *Paragus pecchiolii* Rondani, 1857, *Paragus tibialis* (Fallen, 1817), *Sphaerophoria rueppelli* (Wiedemann, 1830), *Sphaerophoria scripta* (Linnaeus, 1758) ve *Syritta pipiens* (Linnaeus, 1758). Ayrıca tespit edilen türlerin palearktık ve Türkiye'deki yayılışları verilmiştir.

Anahtar kelimeler: Diptera, fauna, çiçek sinekleri, Türkiye, Siirt, Şirvan

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