

*Original research***Taxonomic studies on the Opiinae (Hymenoptera, Braconidae) fauna of the Turkish central part of Eastern Anatolia Region (Bingöl, Bitlis, Muş and Van)****Ahmet BEYARSLAN** 

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**Abstract:** In order to determine Opiinae fauna of Turkey, adult specimens of Opiinae (Hymenoptera, Braconidae) are collected from different habitats of Bingöl, Bitlis, Muş and Van using Malaise and light traps and sweeping nets between 2016 and 2017. The collected materials are prepared and labeled. In addition, relevant literature and comparison materials available in our collection are used for taxonomical examination of the obtained material. The altitudes and coordinates of localities and collection dates are presented. A total of 24 species in 4 genera and 12 subgenera are determined. From these species *Opius (Merotrachys) podomelas* Fischer, 1972 is firstly record in the fauna of Turkey.

**Keywords:** Agromyzidae, Podomelas, Parasitoid, malasiae, Braconidae, Yu, Tobias

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**Introduction**

The taxonomy of the parasitic Hymenoptera is perhaps the least known member of a large group of insects; until recently, Braconidae have received less attention than many other groups of Parasitica. Therefore, there is an increasing need for revisionary studies involving the most part of the family. Moreover, there is not an academic practice in the related literature; many species of Braconidae are used as host insects which are economically important as pests of crops and forests. The need for programmed “biological” control has currently become more urgent as the effectiveness of chemical methods of pest control has been decreasing (Shaw and Huddleston, 1991).

The Opiinae is a large and economically important family of hymenopteran species that lives in all zoogeographic regions, with various species from 51 countries (Yu et al., 2016). Insects are small (1-3 mm) or rarely medium (up to 4.0-4.5 mm) in size, usually with a short body and relatively long forewings. The venation is complete but usually lacking anal cross-veins on the

forewing and usually lacking the recurrent vein on the hind wing. The pterostigma is often thin and long (cuneate or linear), the radial cell usually reaches the wing apex, and the second radiomedial cell is usually long. In many species, the oral cavity is developed, the mandibles are often broadened basally, and the occipital ridge, as a rule, is somewhat developed in the temporal region and is reduced above. The first metasomal tergite usually has 2 longitudinal ridges. The ovipositor is often short, rarely somewhat long. The body is usually smooth, usually with granulose sculpture; it is usually black, rarely with a somewhat developed lightcolored pattern (Tobias, 1986). Species of Opiinae are solitary koinobiont endoparasitoids of phytophagous Muscomorpha Diptera: Tephritidae (fruit flies), Agromyzidae (leaf-miner flies), Anthomyiidae, Calliphoridae, Cecidomyiidae, Drosophilidae, Ephydriidae, Muscidae, Scathophagidae, Tachinidae, Tephritidae, Trypetinae; more rarely Hymenoptera: Cynipidae and Lepidoptera: Gelechiidae, Noctuidae, and Tortricidae (Beyarslan, 2015).

The first studies aimed at revealing the Braconinae fauna of Turkey started in 1979 and specimens are collected from various regions of Turkey (except Agri, Hakkari, Mardin, Siirt, Şanlıurfa and Şırnak provinces); they are carefully evaluated and a total of 217 Opiinae species are recorded (Fischer, 1958a, 1958b, 1959, 1960, 1962, 1972, 1992, 1997, 2004; Papp, 1982, 1990; Beyarslan and Inanc, 1992; Fischer and Koponen, 1999; Hincal et al., 1996; Civelek et al., 2002; Cıkman et al., 2006, 2008; Fischer and Beyarslan, 2005a, 2005b, 2011, 2012, 2013a, 2013b; Yildirim et al., 2010; Beyarslan and Fischer, 2011, 2013; Beyarslan, 2015; Beyarslan and Şahin, 2018).

### Material and Methods

Adult specimens of Braconidae were collected from different locality of Bingöl, Bitlis, Muş and Van provinces, using Malaise and light traps and sweeping nets. The obtained adult specimens were then pinned and properly labelled. The comparison material in our collection and related literature were utilized when evaluating the study material (Fischer, 1958a, 1958b, 1959, 1960, 1962, 1972, 1992, 1997, 2004; Papp, 1982, 1990; Tobias, 1986; Shaw and Huddleston, 1991; van Achterberg, 1993; Fischer and Beyarslan, 2005a, 2005b, 2011, 2012, 2013a, 2013b; Beyarslan and Fischer, 2011, 2013). Information on parasitoids, hosts, general distributions (in terms of zoogeographical region) and parasitoids of species are given according Fischer (1972), Yu et al. (2016). In the text, the host plants of host species are shown in brackets. The genera and species are tabulated alphabetically therein. The specimens are deposited in the collection of the Zoological Museum of Department of Biology, Bitlis Eren University.

### Results

In this study, the collected and prepared materials were carefully analyzed. A total of 25 species were identified under 4 genera and 12 subgenus of subfamily Opiinae; of these species *Opius Opius (Merotrachys) podomelas* (Fischer, 1972) is recorded for the first time in the fauna of Turkey. The already known plant pests (70 Agromyzidae and 2 Coleophoridae) host species are also presented. 70 Agromyzidae and 2 Coleophoridae host species of this species are also known. Thus, the basis for biological control research has been prepared.

### 1. Subfamily: Opiinae

#### 1.1. Genus: *Opius* Wesmael, 1835

##### Subgenus: *Adontopius* Fischer, 1984

##### *Opius (Adontopius) nanosoma* Fischer, 1989

**Material examined:** Bitlis, Adilcevaz, Merkez, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K, 42°44'4"D), 1650 m. 28.07.2016, 1♀, Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K, 42°16'41"D), 1671 m. 07.07.2016, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic (Beyarslan and Fischer 2013).

##### Subgenus: *Allophlebus* Fischer, 1972

##### *Opius (Allophlebus) staryi* Fischer, 1958

**Material examined:** Bingöl, Salköy, (*Astragalus* sp., *Acantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K, 41°19'9"D), 29.07.2016, 2♀♀, Bitlis, Tatvan, Kıyıldüzü Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K, 42°25'01"D), 1688 m. 10.07.2016, 1♀.

**Hosts: Diptera. Agromyzidae:** *Aulagromyza tremulae* (Hering, 1957); *Phytomyza aquilegiae* Hardy, 1849; *Phytomyza minuscula* Goureau, 1851 (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic (Beyarslan and Fischer 2013).

##### *Opius (Allophlebus) tabificus* Papp, 1979

**Material examined:** Bitlis, Tatvan, Kıyıldüzü Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K, 42°25'01"D), 1688 m. 10.07.2016, 1♀, Bitlis, Tatvan, Fuar, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K, 42°16'41"D), 1671 m. 07.07.2016, 1♀, 07.07.2016, 1♀, 1♂. Bitlis, Adilcevaz, Merkez, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K, 42°44'4"D), 1650 m. 18.08.2016, 1♀. Bingöl, Solhan, (*Astragalus* sp., *Acantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K, 41°19'9"D), 1279 m. 29.09.2016, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic (Beyarslan and Fischer 2013).

**Subgenus: *Cryptonastes* Foerster, 1862**

***Opius (Cryptonastes) gracilis* Fischer, 1957**

**Material examined:** Bingöl, Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♀.

**Hosts: Diptera. Agromyzidae:** *Agromyza bicophaga* Hering, 1925; *A. pulla* Meigen, 1830; *A. rondensis* Strobl, 1900; *Amauromyza gyrans* (Fallen, 1823); *Chromatomyia loniceræ* (Robineau-Desvoidy, 1851); *C. syngenesiae* Hardy, 1849; *Liriomyza* sp.; *L. sonchi* Hendel, 1931; *L. strigata* (Meigen, 1830); *L. trifolii* (Burgess in Comstock, 1880); *Napomyza xylostei* Robineau-Desvoidy, 1851; *Phytomyza anemones pulsatilla* Hering, 1925; *P. dauci* Hering, 1927; *P. ferulae* Hering, 1927; *P. obscura* Hendel, 1920; *P. origani* Hering, 1931; *P. silai* Hering, 1935; *P. spondylii* Robineau-Desvoidy, 1851 (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic.

**Subgenus: *Gastrosema* Fischer, 1972**

***Opius (Gastrosema) caucasi* Tobias, 1986**

**Material examined:** Bingöl, Salköy, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 29.07.2016, 1117 m. Bitlis, Tatvan, Kıyıldüzü Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K,42°25'01"D), 1688 m. 10.07.2016, 1♀. Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 20.07.2016, 5♀♀, 1♂. Bitlis, Tatvan, Sarıkum Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K,42°25'01"D), 1688 m. 15.07.2016, 1♀. Bitlis, Tatvan, Fuar, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41" D), 1671 m. 07.07.2016, 1♀. Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41"D), 1671 m. 07.07.2016, 3♀♀, 1♂, Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K,43°19'14"D), 1750 m. 20.07.2016, 3♀♀, 1♂.

**Host: Diptera. Agromyzidae:** *Chromatomyia horticola* (Goureau, 1851) (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic.

**Subgenus: *Hypocynodus* Foerster, 1862**

***Opius (Hypocynodus) bouceki* Fischer, 1958**

**Material examined:** Bitlis, Merkez, Buzlupınar, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K,38°74'41"D), 1605 m. 26.06.2016, 1♀.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic.

***Opius (Hypocynodus) latidens* Fischer, 1990**

**Material examined:** Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41"D), 1671 m. 07.07.2016, 1♀.

**Hosts:** Unknown (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic.

***Opius (Hypocynodus) ponticus* Fischer, 1958**

**Material examined:** Muş, Yaygın and Bingöl, Solhan Arası, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♀, Bingöl, Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic (Beyarslan and Fischer 2013).

**Subgenus: *Ilcopius* Fischer, 1992**

***Opius (Ilcopius) moravicus* Fischer, 1960**

**Material examined:** Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 18.07.2016, 1♂.

**Hosts:** Unknown

**Distribution:** Western Palaearctic.

***Opius (Ilcopius) pulchriceps* Szépligeti, 1898**

**Material examined:** Bitlis, Adilcevaz, Ortakapı Köyü (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°17'42"K,42°0'41"D), 1247 m. 17.06.2017, 1♂.

**Hosts: Diptera. Agromyzidae:** *Liriomyza bryoniae* (Kaltenbach, 1858) [*Vicia faba*]; *L. congesta* (Becker 1903); *Phytomyza ilicis* Curtis 1846.

**Distribution:** Nearctic, Oriental, Western Palaearctic.

**Subgenus: *Merotrachys* Fischer, 1972**

***Opius (Merotrachys) podomelas* Fischer, 1972**

**Material examined:** Bitlis, Adilcevaz, Ortakapı Köyü, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*) (38°17'42"K,42°0'41"D), 1247 m. 17.06.2017, 1♀.

**Hosts:** Unknown.

**Distribution:** South Africa (Yu et al. 2012). This species is the first record for fauna of Turkey.

**Diagnosis:** Mesonotum without back pit, sternaulus smooth or missing, mouth open, maxillary palpus nicht longer than the head high, metasoma behind the first metasomal tergite with sculpture, propodeum with sculpture. Second metasomal tergite not shortened, Body completely black, Legs dark, especially the hind coxae black.

**Subgenus: *Misophthora* Foerster, 1862**

***Opius (Misophthora) bulgaricus* Fischer, 1959**

**Material examined:** Bitlis, Nemrut Kalderası, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp., *Quercus* sp., *Pinus* sp.), (38°37'10"K, 42°14'28"D), 2485 m. 16.06.2016, 1♀.

**Host:** Diptera. Agromyzidae: *Chromatomyia horticola* (Goureau, 1851) (Beyarslan and Fischer 2013).

**Distribution:** Western Palaearctic.

**Subgenus: *Nosopoea* Foerster, 1862**

***Opius (Nosopoea) speciosus* Fischer, 1959**

**Material examined:** Bitlis, Tatvan, Kuşlumezra, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp.), (38°30'7"K,42°16'52"D), 1695 m. 03.09.2017, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic.

**Subgenus: *Opiothorax* Fischer, 1972**

***Opius (Opiothorax) abditus* Fischer, 1960**

**Material examined:** Bitlis, Tatvan, Yoncabaşı, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp.), (38°30'7"K,42°16'52"D), 1765 m. 27.07.2016, 1♀. Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41"D), 1671 m. 07.07.2016, 1♀. Muş, Yaygın-Bingöl, Solhan arası, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.08.2016, 2♀♀.

**Hosts:** Unknown.

**Distribution:** Palaearctic.

***Opius (Opiothorax) filicornis* Fischer, 1963**

**Material examined:** Bitlis, Tatvan, Küçüksu Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp.), (38°26'40"K,42°19'19"D), 1721 m. 18.09.2016, 1♀, 1♂.

**Hosts:** Diptera. Agromyzidae: *Agromyza nana* Meigen, 1830 [*Trifolium dubium*]; *Phytomyza scotina* Hendel, 1920 [*Salvia pratensis*] (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic.

***Opius (Opiothorax) levis* Wesmael, 1835**

**Material examined:** Bingöl, Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♀, 1♂. Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41"D), 1671 m. 17.07.2016, 2♀. Bitlis, Tatvan, Adabağ, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K, 42°25'01"D), 1688 m. 09.07.2016, 1♀.

**Hosts:** Diptera. Agromyzidae: *Liriomyza congesta* Becker, 1903; *L. flaveola* Fallen, 1823; *L. strigata* Meigen, 1830; *Phytomyza crassiseta* Zetterstedt, 1860; *Phytomyza crassiseta* etterstedt, 1860; *P. glechomae* Kaltenbach, 1862. Drosophilidae: *Scaptomyza (Scaptomyza) graminum* (Fallen, 1823). Ephydriidae: *Hydrellia griseola* (Fallen, 1813) (Beyarslan and Fischer 2013).

**Distribution:** Afrotropical and Palaearctic.

**Subgenus: *Pendopius* Fischer, 1972**

***Opius (Pendopius) bajaraniae* Fischer, 1989**

**Material examined:** Bingöl, Karlıova, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp.), (39°17'51"K,41°0'45"D), 1815 m. 29.07.2016, 1♂. Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 18.07.2016, 1♀, 2♂♂. Bitlis, Tatvan, Toki, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'46"K,42°16'41"D), 1671 m. 07.10.2016, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic.

**1.2. Genus: *Phaedrotoma* Foerster, 1862**

***Phaedrotoma benignus* (Papp, 1981)**

**Material examined:** Bingöl, Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m.29.07.2016, 1♀. Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 18.07.2016, 3♂♂. Bitlis, Tatvan, Fuar, (*Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°30'7"K,42°16'52"D), 1667 m. 07.07.2016, 1♀.

**Hosts:** Unknown.

**Distribution:** Palaearctic.

***Phaedrotoma depeculator* Foerster, 1862**

**Material examined:** Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 18.07.2016, 3♂♂. Bitlis, Tatvan, Küçüksu Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp.), (38°26'40"K,42°19'19"D), 1721 m. 15.07.2016, 1♀.

**Hosts: Diptera. Agromyzidae:** *Cerodontha denticornis* (Panzer, 1806) [*Holcus lanatus*]; *Chromatomyia ramosa*, (Hendel, 1923); *C. succisae*, (Hering, 1922); *Ophiomyia* sp. [*Medicago sativa*]; *Phytomyza griffithsi* Spencer, 1963 [*Plantago media*]; *P. plantaginis* Robineau-Desvoidy, 1851 [*Plantago lanceolata*] (Beyarslan and Fischer 2013).

**Distribution:** Palaearctic.

***Phaedrotoma diversa* (Szépligeti, 1898)**

**Material examined:** Bitlis, Adilcevaz, Erikbağı Köyü, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°47'23"K,42°52'28"D), 2205 m. 08.07.2016, 2♀♀. Bitlis, Adilcevaz, Merkez, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 18.07.2016, 1♀. Bitlis, Tatvan, Kıyıldüzü Köyü, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Hypericum* sp.) (38°37'23"K, 42°25'01"D), 1688 m. 10.07.2016, 1♂. Bitlis, Tatvan, Kuşlumezra, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp.), (38°30'7"K,42°16'52"D), 1695 m. 15.07.2016, 1♀, 2♀♀.

**Hosts: Diptera. Agromyzidae:** *Calycomyza solidaginis* (Kaltenbach, 1869) [*Solidago virgaurea*]; *Chromatomyia*

*scabiosae* (Hendel, 1935) [*Scabiosa columbaria*]; *C. succisae*, (Hering, 1922); *C. syngenesiae*, Hardy 1849; *Liriomyza centaureae* Hering, 1927 [*Centaurea nigra*]; *Phytomyza gentianae* Hendel, 1920 [*Centaurea minus*]; *P. plantaginis* Robineau-Desvoidy, 1851 (Beyarslan and Fischer 2013).

**Distribution:** Western Palaearctic.

***Phaedrotoma exiguus* (Wesmael, 1835)**

**Material examined:** Bitlis, Ahlat, Abdurrahman Gazi, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp.), (38°45'37"K, 42°31'17"D), 1671 m. 16.09.2014, 1♂, ab. Bitlis, Tatvan, Küçüksu Köyü, (*Hypericum* sp., *Juniperus* sp., *Quercus* sp., *Pinus* sp.), (38°26'40"K,42°19'19"D), 1721 m. 15.07.2016, 5♀♀, 3♂♂. Bitlis, Tatvan, Kuşlumezra, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp., *Quercus* sp., *Pinus* sp.), (38°30'7"K,42°16'52"D), 1695 m. 27.09.2017, 1♂.

**Hosts: Diptera. Agromyzidae:** *Agromyza nana* Meigen, 1830 [*Medicago sativa*, *Oxalis pescaprae*]; *A. rondensis* Strobl, 1900 [*Hordeum murinum*]; *Calycomyza solidaginis* (Kaltenbach, 1869) [*Solidago virgaurea*]; *Chromatomyia horticola* (Goureau, 1851); *Chromatomyia scabiosae* (Hendel, 1935); *Chromatomyia succisae* (Hering, 1922); *Chromatomyia syngenesiae* Hardy, 1849 [*Misopates orontium*]; *Liriomyza* sp. [*Artemisia vulgaris*, *Euphorbia paralias*]; *Liriomyza centaurea* Hering, 1927; *L. congesta* (Becker, 1903); *L. flaveola* (Fallén, 1823); *L. sonchi* Hendel, 1931 [*Conyza bonariensis*]; *L. strigata* (Meigen, 1830); *Phytomyza alpina* Groschke, 1957 [*Senecio jacobaea*]; *Phytomyza crassiseta* Zetterstedt, 1860; *P. gentianae* Hendel, 1920; *P. glechomae* Kaltenbach, 1862; *P. griffithsi* Spencer, 1963 [*Plantago media*]; *P. orobanchia* (Kaltenbach, 1864) [*Orobanche* sp.]; *P. plantaginis* Robineau-Desvoidy, 1851; *P. pullula* Zetterstedt, 1848 [*Achillea millefolium*]; *Scaptomyza graminu* (Fallén, 1823) (Beyarslan and Fischer 2013).

**Distribution:** Western Palaearctic.

***Phaedrotoma mirabunda* (Papp, 1982)**

**Material examined:** Bingöl, Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♀, 1♂.

**Hosts:** Unknown.

**Distribution:** Western Palaearctic.

**3.1.3. Genus: *Rhogadopsis* Brèthes, 1913*****Rhogadopsis reconditor* (Wesmael, 1835)*****Opius* (*Apodesmia*) *reconditor* Wesmael, 1835****Material examined:** Bitlis, Ahlat, Abdurrahman Gazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K, 41°17'14"D), 1960 m. 01.07.2011, 1♀.**Hosts: Diptera, Agromyzidae: *Amauromyza labiatarum*** (Hendel, 1920); *Amauromyza verbasci* (Bouché, 1847); *Phytomyza xylostei* Kaltenbach, 1862; *Phytomyza affinis* Fallen; 1823. **Coleophoridae: *Coleophora spinella*** (Schrank, 1802) (Beyarslan and Fischer 2013).**Distribution:** Palaearctic.**1.4. Genus: *Utetes* Foerster, 1862****Subgenus: *Utetes* str.s.*****Utetes* (*Utetes*) *curtipectus* (Fischer, 1958)****Material examined:** Bitlis, Tatvan, Kuşlumezra, (*Cyperus* sp., *Euphorbia* sp., *Hypericum* sp., *Juniperus* sp., *Quercus* sp., *Pinus* sp.), (38°30'7"K, 42°16'52"D), 1695 m. 13.09.2016, 2♂♂.**Hosts:** Unknown.**Distribution:** Western Palaearctic.**Discussion**

Twenty four species from 4 genera were identified with the taxonomic studies conducted on Opiinae (Hymenoptera, Braconidae) Fauna in Bigöl, Bitlis, Muş and Van provinces. The number of species identified from each genus are: *Opius* 17, *Phaerotoma* 5, *Rhogadopsis* 1 and *Utetes* 1. Seventeen of these species are recorded for the first time in the study field. The species *Opius* (*Merotrachys*) *podomelas* (Fischer, 1972) is a new record for the fauna of Turkey. The study revealed very common species which are *Opius* (*Ilicopius*) *pulchriceps* in Nearctic, Oriental and Western Palaearctic regions; *Opius* (*Opiothorax*) *levis* in Afrotropical and Palaearctic regions. 57% of the remaining species were distributed in western palaearctic and 43% in palaearctic. 18 hosts from these species which have parasitoid lifestyle are known. The species using the largest number of Agromyzidae (Diptera) larvae as hosts are *Phaerotoma exiguus* and *Opius* (*Cryptonastes*) *gracilis*. *Phaerotoma exiguus* uses 21 species plant pest larvae. *Opius* (*Cryptonastes*) *gracilis* uses 17 species plant pest larvae. These species can be used for biological control of plant pest species of Agromyzidae.

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