

ECTOPARASITOID BRACONINAE SPECIES (HYMENOPTERA: BRACONIDAE) OF PLANT PEST (COLEOPTERA, DIPTERA, LEPIDOPTERA AND HYMENOPTERA) DETERMINED FROM BİNGÖL, BİTLİS, MUŞ AND VAN PROVINCES OF TURKEY

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ABSTRACT: In order to determine Braconidae fauna of Turkey, adult specimens of Braconidae (Hymenoptera, Braconidae) were collected from various habitats of Bingöl, Bitlis, Muş and Van provinces using Malaise and light traps and sweeping nets among 2016 and 2017. Obtained material was prepared according modern taxonomic rules and appropriately labeled. Relevant literature and comparison material available in our collection was used for taxonomical examination of the material collected. The altitudes and coordinates of localities, collection dates are given. In total, 40 species belonging 4 genera of Braconinae are reported for the studied region. *Bracon (Orthobracon) titubans* (Wesmael, 1838) is new to the fauna of Turkey.

KEY WORDS: Hymenoptera, Braconinae, new record, Bitlis, ectoparasitoid, fauna

Pesticide Use in the World and Turkey is one of the most important problems of today's world. Because the world population is growing rapidly. According Food and Agriculture Organization (FAO) reports that 15-20 million tons of food are needed every year Since the surface area of the world is limited, it is not possible to cultivate new areas for production that will meet this need. For this reason, more production can be done than existing areas. Therefore, pesticides are accepted as materials that can not be abandoned today in all over the World (Anonymous, 217).

The taxonomy of the parasitic Hymenoptera is perhaps the least known of any large group of insects and, until recent years, the Braconidae have received even less attention than many other groups of Parasitica. There is therefore a pressing need for revisionary work in most parts of the family. Moreover this is no mere academic exercise; many species of Braconidae use as hosts insects which are economically important as pests of crops and forests. The need for programmed "biological" control is already becoming more urgent as the effectiveness of chemical methods of pest control declines (Shaw & Huddleston, 1991).

Geographically, Turkey forms a natural bridge between the old world continents of Asia, Africa and Europe. The Anatolian peninsula is the western most point of Asia, divided from Europe by the Bosphorus and Dardanelles straits. Thrace is the western part of Turkey on the European continent. In addition, European Turkey is one of the access points for species arriving from Europe to Anatolia during the recent glaciation, and the area provides numerous types of habitats for a wide range of plants and animals. Kars-Erzurum Plateau, the gate of Caucasian fauna consisting of Siberia and cold steppe elements in the Northern East is the shoreline of Eastern Black Sea, which is the entrance of

boreal (woodland) Caucasian fauna. The gates of eremial elements are the Iğdır-Aralık Triangle and Hakkari-Van Plateau in the south. While desert elements reach Turkey from the Syrian border, African elements reach the country mostly from Hatay-Amanos line (especially woodlands). Mediterranean elements enter the country from southwestern Anatolia whereas European elements enter (have been entering) the country from Thrace. The Braconinae fauna of Turkey is not well known. The first studies of Turkish Braconinae fauna were by Kohl (1905), Fahringer & Friese (1921) and Fahringer (1922). However, a number of more recent additional records have been published based on material collected for plant protection research. The first studies aimed at revealing the Braconinae fauna of Turkey started in 1979 with specimens collected from the many regions of Turkey (except Ağrı, Ardahan, Bingöl, Bitlis, Hakkari, Iğdır, Kars, Mardin, Muş, Siirt, and Şanlıurfa provinces) evaluated and 195 species from nine genera were recorded (Beyarslan, 1988, 1991, 1992, 1996, 2002a,b, 2011a,b, 2014, 2017; Beyarslan et al., 2002b, 2005, 2006a,b, 2008a,b, 2014; Bolu et al., 2009; Beyarslan & Çetin Erdoğan, 2012; Beyarslan & Şahin, 2018).

MATERIAL AND METHOD

Material of Braconinae were collected with a trap, light traps and Malesia traps. The adult Braconids are separated from the other material with the help of the absorption tube. The material obtained is prepared and labeled according to modern taxonomic rules and was identified using the relevant literature and comparative material available in our collection (Tobias, 1986, 2000; Beyarslan & Fischer, 1990; Achterberg, 1993; Belokobylskij, 1993; Beyarslan & Tobias, 2008; Yu et al., 2016).

RESULTS

Genus *Bracon* Fabricius, 1804

Subgenus *Bracon* Fabricius, 1804

Bracon (Bracon) chagrinius Beyarslan, 2002

Examples examined: Bitlis, Tatvan, Küçükku village, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K, 42°19'17"D), 1784 m. 07.09.2016, 1♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Turkey) (Yu et al., 2016).

Bracon (Bracon) intercessor Nees, 1834

Examples examined: Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K, 42°32'4"D), 1684 m. 27.07.2016, 2♂♂. Bitlis Adilcevaz, Erik bağı village, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°47'23"K, 42°52'28"D), 2205 m. 28.07.2016, 2♀♀. Bitlis, Center, Ortakapı village, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*) (38°17'42"K, 42°0'41"D), 1247 m. 17.10.2017, 2♂♂. Bitlis Adilcevaz Culture Park, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38° 48'24"K, 42°44'4"D), 1650 m. 01.07.2017, 1♀. Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K, 42°44'4"D), 1650 m. 01.07.2017, 1♂. **Hosts: Chalcidoidea. Eurytomidae: Tetramesa hyalipennis** (Walker, 1832); *Tetramesa rossica* (Rimsky-Korsakov, 1914). **Coleoptera, Attelabidae: Attelabus nitens** (Scopoli, 1763). **Cerambycidae: Agapanthia villosoviridescens** (De Geer, 1775) [*Aster tripolium*]; *Agapanthia violacea* (Fabricius, 1775); *Phytoecia coerulescens* (Scopoli, 1763) [*Anchusa* sp.]. **Curculionidae: Anthonomus (Anthonomus) pedicularius** (Linnaeus, 1758); *A.(A.) pomorum* (Linnaeus 1758); *A. sorbi* Germar, 1821; *Curculio crux* Fabricius, 1777; *C. salicivorus* Paykull, 1792; *Lixus (Eulixus) brevirostris* Boheman 1835, *L. (E.) incanescens* Boheman, 1835 [*Atriplex patula hastata*]; *L. (Compsolixus) juncii* Boheman, 1835; *Microlarinus lareynii* (Jacquelin du Val, 1852); *M.*

Lypriformis (Wollaston, 1861); *Sibinia femoralis* Germar, 1824. **Rhynchitidae:** *Rhynchites bachus* (Linnaeus, 1758); **Brentidae:** *Apion opeticum* Bach, 1854. **Diptera. Agromyzidae:** *Liriomyza huidobrensis* (Blanchard, 1926). **Lepidoptera. Coleophoridae:** *Augasma atraphaxidellum* (Kuznetsov, 1957); **Gelechiidae:** *Scrobipalpa obsoletella* (Fischer von Röslerstamm, 1841). **Sesiidae:** *Chamaesphecia astatiformis* (Herrich-Schäffer, 1845), *Paranthrene tabaniformis* (Rottmberg, 1775) [*Populus* sp.]; *Synanthedon culiciformis* (Linnaeus, 1758). **Tortricidae:** *Sparganothis pilleriana* (Voukassovitch 1924); **Yponomeutidae:** *Argyresthia conjugella* Zeller 1839. **Hymenoptera. Tenthredinidae:** *Pontania (Eupontania) acutifoliae* Zinovjev 1985; *P. bella* (Zaddach, 1876); *P. (Eupontania) kriechnbaumeri* Konow 1901; *P. (P.) nigricantis* (Kopelke, 1986), [*Salix nigricans*]; *Pontania (Eupontania) pedunculi* (Hartig, 1837); *Pontania vesicator* (Breimi-Wolf, 1849); *Pontania (Eupontania) viminalis* (Linnaeus, 1758) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) gusaricus* Telenga, 1933**

Examples examined: Bitlis Adilcevaz, (*Ásphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 28.07.2016, 3♀♀. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) longicollis* (Wesmael, 1838)**

Examples examined: Bitlis, Nemrut Dağı, Küçük İhk Lake, (*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. 13.08.2014, 3♂♂. **Hosts:** **Diptera. Chloropidae:** *Chlorops (Chlorops) pumilionis* (Bjerkander 1778) [*Hordeum vulgare*] (Beyarslan, 2014). **Distribution:** Oriental, Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) luteator* Spinola, 1808**

Examples examined: Bitlis, Ahlat Abdurrahmangazi, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) 38°45'27"K,42°31'41"D), 1649 m. 38°45'27"K,42°31'41"D), 1649 m. 18.06.2016,1♀; 01.07.2017, 1♂. Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K,43°19'14"D), 1750 m. 28.10.2016, 3♀♀. Muş, Konukbekler, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K, 41°24'33"D), 1288 m. 29.07.2016, 1♀, 1♂. **Hosts:** **Lepidoptera. Gelechiidae:** *Metzneria aestivella* (Zeller, 1839). *Metzneria lappella* (Linnaeus 1758). **Diptera. Tephritidae:** *Urophora solstitialis* (Linnaeus 1758) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) mariae* Dalla Torre, 1898**

Examples examined: Bitlis, Ahlat, Abdurrahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m. 01.07.2017, 1♀. **Hosts:** **Diptera. Tephritidae:** *Alophora costalis* (Malloch, 1929) [*Centaurea* sp.] (Beyarslan, 2014). **Distribution:** Eastern Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) nigratus* (Wesmael, 1838)**

Examples examined: Bitlis, Tatvan Kuşlu Mezra, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°28'56"K,42°18'40"D), 1654 m. 23.07.2017, 1♂. **Hosts:** **Diptera. Tephritinae:** *Chaetostomella cylindrica* (Robineau-Desvoidy, 1830). **Lepidoptera. Coleophoridae:** *Coleophora millefolii* Zeller, 1849. **Tortricidae:** *Cydia compositella* (Fabricius, 1775). **Zygaenidae:** *Zygaena (Mesembrynus) minus* (Denis & Schiffermüller, 1775); *Zygaena minus* ([Denis & Schiffermüller], 1775) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Bracon) trucidator* Marshall, 1888**

Examples examined: Bitlis, Ahlat, Abdurrahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m. 14.06.2016, 1♀. Bitlis, Adilcevaz, Erikbağı village, (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38° 47'45"K,42°49'43"D), 1660 m. 28.07.2016, 2♀♀. Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K,42°44'4"D), 1650 m. 01.07.2017, 2♀♀. **Hosts:** **Coleoptera. Curculionidae:** *Ceutorhynchus fairmairei* Brisout, 1880. **Diptera, Tephritidae:** *Myopites inulaedysentericae* Blot, 1827; *Urophora solstitialis* Linnaeus, 1758 [*Carduus nutans*]. **Lepidoptera. Pyralidae:** *Homoeosoma nebulella*

([Denis & Schiffermüller], 1775). **Gelechiidae:** *Metzneria lappella* (Linnaeus, 1758) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

Bracon (Bracon) variegator Spinola, 1808

Examples examined: Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.), (39°2'26"K,43°19'14"D), 1750 m. 28.07.2016, 1♀. Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K,42°44'4"D), 1650 m. 01.07.2017, 1♀, 1♂. Bitlis, Tatvan, Kuşlu Mezra, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°28'56"K,42°18'40"D), 1654 m. 13.08.2017, 1♀. **Hosts:** **Coleoptera.** **Anobiidae:** *Anobium abietis* Fabricius, 1792. **Lepidoptera.** **Coleophoridae:** *Coleophora ibipennella* Zeller, 1849. **Depressariidae:** *Agonopterix propinquella* (Treitschke, 1835). **Gelechiidae:** *Anarsia lineatella* Zeller, 1839; *Recurvaria nanella* ([Denis & Schiffermüller], 1775); *Teleiodes modestus* Danilevsky,?. **Gracillariidae:** *Phyllonorycter kleemannella* (Fabricius, 1781); *P. mespilella* (Huebner, 1805). **Nolidae:** *Earias insulana* (Boisduval, 1833). **Oecophoridae:** *Endrosia sarcitrella* (Linnaeus, 1758). **Pyralidae:** *Ephestia terebellum* Zeller, ?. **Tortricidae:** *Adoxophyes orana* (Barell, 1973) [*Malus* sp.]. **Tortricidae:** *Archips rosana* (Linnaeus, 1758); *Cydia strobilella* (Linnaeus, 1758); *Pandemis heparana* (Denis & Schiffermüller, 1775) [*Malus* sp.]; *Tortrix viridana* Linnaeus, 1758. **Yponomeutidae:** *Yponomeuta padella* (Linnaeus, 1758) (Beyarslan, 2014). **Distribution:** Oceanic and Palaearctic (Beyarslan, 2014).

Subgenus *Cyanopterobracon* Tobias, 1957

***Bracon (Cyanopterobracon) armeniacus* Telenga, 1936**

Examples examined: Bitlis, Tatvan, Dibekli village, (*Nigella arvensis*, *Papaver laevigatum*, *Convolvulus cantabricus*), (38°28'10"K,42°25'7"D), 1820 m. 21.06.2017, 1♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Beyarslan, 2014).

***Bracon (Cyanopterobracon) fallax* Szépligeti, 1901**

Examples examined: Bitlis, Adilcevaz Culture Park, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K,42°44'4"D), 1650 m. 01.07.2017, 1♀. Bitlis, Ahlat, Abdurrahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53' 54"K,41°17'14"D), 1960 m.01.07.2017, 1♀. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Cyanopterobracon) subfallax* Beyarslan, 2017**

Examples examined: Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K,42°44'4"D), 1650 m. 01.07.2017, 1♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Turkey) (Beyarslan, 2014).

Subgenus *Glabrobracon* Fahringer, 1927

***Bracon (Glabrobracon) ahngeri* Telenga, 1936**

Examples examined: Bitlis, Tatvan, Küçüksu village, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K,42°19'17"D), 1784 m. 21.06.2017, 1♀. Bitlis, Tatvan, Reşadiye village, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m. 21.06.2017, 1♀, 1♂. **Hosts:** Unknown. **Distribution:** Oriental and Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) angustiventris* Tobias, 1957**

Examples examined: Bitlis, Tatvan Kuşlu Mezra, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°28'56"K,42°18'40"D), 1654 m. 13.06.2017, 1♂. Bitlis, Merkez, Buzlupınar, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K,38°74'41"D), 1605 m. 26.06.2016, 1♂. Bitlis, Adilcevaz, Erikbaşı village, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°47'23"K,42°52' 28"D), 2205 m. 28.07.2016, 1♂. Bitlis, Merkez, Orta Kapı village, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°17'42"K,42°0'41"D), 1247 m. 17.06.2017, 2♀♀, 7♂♂. Bitlis, Buzlupınar, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K,38°74'41"D), 1605 m. 17.06.2017, 1♂. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) atrator* Nees, 1834**

Examples examined: Bitlis, Center, Buzlupınar, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K, 38°74'41"D), 1605 m. 26.06.2016, 1♀. Bitlis, Adilcevaz, Center, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K, 42°44'4"D), 1650 m. 08.07.2016, 1♂. Muş, between Yaygın-Solhan, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K, 41°19'9"D), 1279 m. 29.07.2016, 1♀. **Hosts:** **Coleoptera. Curculionidae:** *Apion buddenbergi* Bedel, (Brentidae); *Gymnetron antirrhini* (Paykull, 1800); *G. campanulae* Schoenherr, 1825; *G. villosulum* Gyllenhal, 1838 [*Veronica* sp.]. **Diptera. Agromyzidae:** *Amauromyza flavifrons* Meigen, 1830; **Tephritidae:** *Tephritis conura* Loew, 1844; *T. neesii* Meigen, 1830, *T. separata* Rondani, 1871. **Lepidoptera. Coleophoridae:** *Coleophora coronillae* Zeller, 1849 (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) bilgini* Beyarslan, 2002**

Examples examined: Bitlis, Buzlupınar, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K, 38°74'41"D), 1605 m. 26.06.2016, 1♂. Bingöl, Salköy, (*Astragalus* sp., *Âcantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K, 41°19'9"D), 1279 m. 29.07.2017, 2♀♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Turkey) (Beyarslan, 2014).

***Bracon (Glabrobracon) cingulator* Szépligeti, 1901**

Examples examined: Bitlis, Center, Buzlupınar, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K, 38°74'41"D), 1605 m. 26.06.2016, 2♀♀. Bitlis Adilcevaz Center, (*Asphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K, 42°44'4"D), 1650 m. 28.07.2016 1♀. Muş, Konukbekler village, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K, 41°24'33"D), 29.07.2017, 2♀♀. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) delibator* Haliday, 1833
(Syn. *anthracinus* Nees)**

Examples examined: Bitlis, Ortakapı, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°17'42"K, 42°0'41"D), 1247 m. 17.06.2017, 2♀♀. **Hosts:** **Lepidoptera. Tortricidae:** *Cydia strobilella* (Linnaeus, 1758). **Coleoptera. Curculionidae:** *Gymnetron campanulae* Schoenherr, 1825; *Hyllobius piceus* (De Geer, 1775). **Phalacridae:** *Olibrus aeneus* (Fabricius, 1792) [*Tripleurospermum perforatum*]. **Diptera. Tephritidae:** *Urophora cuspidata* (Meigen, 1826) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) fadiche* Beyarslan, 1996**

Examples examined: Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K, 42°44'4"D), 1650 m. 01.07.2017, 1♀. Bitlis, Ortakapı, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°17'42"K, 42°0'41"D), 1247 m. 17.06.2017, 1♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Turkey) (Beyarslan, 2014).

***Bracon (Glabrobracon) flavipalpis* Thomson, 1892**

Examples examined: Bingöl, Salköy, (*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:** Eastern Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) helleni* Telenga, 1936**

Examples examined: Bitlis, Adilcevaz, Culture Park, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K, 42°44'4"D), 1650 m. 01.07.2017, 1♀. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) kirgisorum* Telenga, 1936**

Examples examined: Bitlis, Tatvan, Dibekli village, (*Nigella arvensis*, *Papaver laevigatum*, *Convolvulus cantabricus*), (38°28'10"K, 42°25'7"D), 1820 m. 27.07.2016, 1♀. Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.)

(39°2'26"K,43°19'14"D), 1750 m. 28.07.2016, 1♀. Muş, Konukbekler village, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K,41°24'33"D), 2♀♀. 29.07.2016, 2♀♀, 1♂. Bingöl, Salköy, (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K, 41°19'9"D), 1279 m. 29.07.2016, 1♀. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m. 21.07.2017, 2♀♀, 1♂. **Hosts: Diptera. Agromyzidae:** *Phytomyza orobanchia* Kaltenbach, 1864 [*Orobanche* sp.] (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) lividus* Telenga, 1936**

Examples examined: Bitlis, Adilcevaz, Center, (*Ásphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 28.06.2016, 1♂, 28.07.2016, 2♀♀. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m. 27.07.2016, 1♀,1♂. Muş, Konukbekler, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K,41°24'33"D), 29.07.2016, 1♂. Muş, between Yaygın-Solhan (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 2♂♂. **Host: Hymenoptera. Tenthredinidae:** *Pontania vesicator* (Breml, 1849) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) obscurator* Nees, 1811**

Examples examined: Bitlis, Ahlat, Abdurahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m.14.06.2016, 2♂♂. Bitlis, Adilcevaz Center, (*Ásphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 28.06.2016, 2♂♂, 28.07.2016, 1♂. Bitlis, Buzlupınar, (*Ásphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°29'42"K,38°74'41"D), 1605 m. 17.06.2017, 1♂. **Hosts: Coleoptera. Curculionidae:** *Hylesinus fraxini* (Panzer, 1779); *Onthotomicus suturalis* (Gyllenhal, 1827). **Buprestidae:** *Trachys pumila* Illiger, 1803; *T. troglodytes* Kiesenwetter, 1857. **Scolytidae:** *Ips typographus* (Linnaeus, 1758). **Diptera. Phasiinae:** *Alophora costalis* (Malloch, 1929) [*Centaurea* sp.]. **Tephritidae:** *Cheilosia albipila* Meigen, 1838 (Syrphidae); *Hartigia xanthostoma* (Eversmann, 1847) [*Filipendula ulmaria*] (Sarcophagidae); *Tephritis neesii* Meigen, 1830 [*Leucanthemum vulgare*]. **Lepidoptera. Coleophoridae:** *Coleophora caespitiella* Zeller, 1839; *C. vulpecula* Zeller, 1849 [*Astragalus* sp.]. **Epermeniidae:** *Phaulermis fulviguttella* (Zeller, 1839). **Pyralidae:** *Phycitodes maritima* (Tengström, 1848); *Homoeosoma sinuellum* (Fabricius, 1794) [*Plantago lanceolata*]. **Tineidae:** *Agnathosia mendicella* Denis & Schiff, 1775 [*Antrodia serialis*]; **Tortricidae:** *Dichrorampha sedatana* Busck, 1906; *Spilonota ocellana* (Denis & Schiffermüller, 1775) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) osculator* Nees, 1811**

Examples examined: Bingöl, Solhan, (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m. 29.07.2016, 1♂, Bitlis, Ortakapı, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°17'42"K,42°0'41"D), 1247 m. 17.06.2017, 1♂. **Hosts: Lepidoptera. Coleophoridae:** *Coleophora alticolella* Zeller, 1849; *C. caespitiella* Zeller, 1839; *C. colutella* (Fabricius, 1794) [*Lotus corniculatus*]; *C. discordella* Zeller, 1849; *C. flaviella* Mann, 1857; *C. frischella* Linnaeus, 1758; *C. gallipennella* Huebner, 1796; *C. lutipennella* (Zeller, 1838); *C. milvipennis* Zeller, 1839; *C. obscenella* (Herrich-Schäffer, 1855) [*Solidago virgaurea*]; *C. ochrea* (Haworth, 1828); *C. saponariella* Heeger, 1888; *C. serenella* Zeller, 1849; *C. serratella* (Linnaeus, 1761); *C. solitariella* Zeller, 1849; *C. spinella* (Schrank, 1802) [*Crataegus monogyna*]; *C. spiraeella* Rebel, 1916; *C. therinella* Tengström, 1848; *C. trifariella* Zeller, 1849; *C. vibicella* (Huebner, 1813); *C. vicinella* Zeller, 1849; *C. vulpecula* Zeller, 1849. **Cosmopterigidae:** *Cosmopterix eximia* Haworth, 1828 [*Humulus lupulus*]; **Tortricidae:** *Cydia strobilella* (Linnaeus, 1758). **Nepticulidae:** *Ectoedemia agrimoniae* (Frey, 1858) [*Agrimonia eupatoria*]. **Elachistidae:** *Elachista contaminatella* Zeller, 1847 [*Carex distans*]. **Elachistidae:** *Gravitarmata margarotana* Zeller, 1847. **Elachistidae:** *Millieria dolosalis* Zeller, 1847 [*Aristolochia clematidis*]. **Momphidae:** *Mompha*

conturbatella (Huebner, 1819). **Tortricidae:** *Rhyacionia perangustana* Snellen, 1883 (Beyarslan, 2014). **Distribution:** Oriental and Palearctic. Introduced into New Zealand for biological control (Beyarslan, 2014).

***Bracon (Glabrobracon) parvicornis* Thomson, 1892**

Examples examined: Bitlis, Ahlat, Abdurahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m. 18.07.2016, 1♂. Van, Erciş, (*Sideritis montana*, *Ziziphora capitata*, *Z. tenuior*), (39°2'2"K,43°19'43"D), 1750 m. 28.07.2016, 4♀♀. **Hosts:** Unknown. **Distribution:** Oriental and Palearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) parvulus* (Wesmael, 1838)**

(Syn. *fumipennis* Thom.)

Examples examined: Bitlis, Ahlat, Abdurahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m.01.07.2017, 1♀. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26" K,42°32'4"D), 1684 m.21.06.2017, 1♀. **Hosts:** **Diptera. Agromyzidae:** *Amauromyza flavifrons* Meigen, 1830. **Cecidomyiidae:** *Clinodiplosis strobi* Kieffer, 1909. **Tephritidae:** *Chaetostomella cylindrica* Robineau-Desvoidy, 1830 [*Chrysanthemum* sp.]; *Tephritis bardanae* Schrank, 1803; *T. conura* Loew, 1844 [*Cirsium oleraceum*]; *T. pulchra* Loew, 1844 [*Chrysanthemum leucanthemum*, *Scorzonera jaquiniana*]; *Trupanea stellata* (Fuessly, 1775) (Beyarslan, 2014). **Distribution:** Oriental and Palearctic (Beyarslan, 2014).

***Bracon (Glabrobracon) pineti* Thomson, 1892**

Examples examined: Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m.27.07.2016, 1♀. Bitlis, Tatvan, Küçüküsu village, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K, 42°19'17"D), 1784 m. 21.06.2017, 1♀. **Hosts:** **Coleoptera. Anobiidae:** *Anobium abietis* Fabricius, 1792; *Ernobius abietinus* (Gyllenhal, 1808); *E. longicornis* (Sturm, 1837); *E. nigrinus* (Sturm, 1837). **Lepidoptera. Tortricidae:** *Cydia strobilella* (Linnaeus, 1758); *Rhyacionia perangustana* Snellen, 1883. **Geometridae:** *Thera variata* ([Denis & Schiffermüller], 1775) (Beyarslan, 2014). **Distribution:** Palaeartic (Beyarslan, 2014).

***Bracon (Glabrobracon) popovi* Telenga, 1936**

Examples examined: Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K,43°19'14"D), 1750 m. 28.07.2016, 1♀. Muş, Konukbekler, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K,41°24'33"D), 29.07.2016, 1♂. **Hosts:** Unknown. **Distribution:** Palaeartic (Beyarslan, 2014).

***Bracon (Glabrobracon) variator* Nees, 1811**

Examples examined: Bitlis, Ahlat, Abdurahmangazi, 14.06.2016, 1♂. Bitlis, Nemrut, Krater Kalderası, Küçük İlık Lake, (*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. 18.06.2016, 1♀. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m. 27.07.2016, 2♀♀, 4 ♂♂; 21.07.2017, 2♀♀, 1♂. Bitlis, Adilcevaz, Erikbağı village, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°47'23"K,42°52'28"D), 2205 m. 28.07.2016, 1♂. Bingöl, Solhan, (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41°19'9"D), 1279 m.29.07.2016, 1♂. Bingöl, Salköy, (*Astragalus* sp., *Ácantholimon* sp., *Thymus* sp., *Artemisia* sp.), (38°54'5"K,41° 19'9"D), 1279 m. 29.07.2016, 1♀. **Hosts:** **Coleoptera. Anobiidae:** *Ernobius nigrinus* (Sturm, 1837). **Buprestidae:** *Coraeus florentinus* (Herbst, 1801). **Chrysomelidae:** *Bruchidius lividimanus* (Gyllenhal, 1833); *B. poupillieri* Allard, 1868; *Bruchus atomarius* (Linnaeus, 1761); *B. laticollis* Boheman, 1833; *B. lentis* Frölich, 1799; *B. viciae* Olivier, 1795. **Curculionidae:** *Anthonomus pomorum* (Linnaeus, 1758); *Baris chlorizans* Germar, 1837; *B. cuprirostris* Germar, 1817; *B. laticollis* (Marshall, 1802); *Ceutorhynchus assimilis* Paykull, 1792; *C. punctiger* (Gyllenhal, 1837); *Gymnetron asellus* (Gravenhorst, 1807); *G. campanulae* (Campanula) Schoenherr, 1825; *G. tetrum* (Fabricius, 1792); *Larinus flavescens* Germar,

1824; *L. jaceae* (Fabricius, 1775); *L. planus* Germar, 1824; *L. turbinatus* (Gyllenhal, 1836); *Magdalis rufa* Germar, 1824; *Pissodes validirostris* Gyllenhal, 1835; *Sibinia viscaria* Linnaeus, 1761; *S. viscaria* (*Silene inflata*) Linnaeus, 1761; *Sitona longulus* Gyllenhal, 1834. **Diptera. Tephritidae:** *Sphenella marginata* Fallen, 1814; *Chaetostomella cylindrica* (Robineau-Desvoidy, 1830); *Noeeta pupillata* Fallen, 1814; *Tephritis leontodontis* (DeGeer, 1776); *Urophora (Carduus) nutans* (Fabricius, 1775). **Anthomyiidae:** *Anthomyia albimana* Zetterstedt, 1845; *Botanophila seneciella* Meade, 1892; **Cecidomyiidae:** *Mikiola fagi* (Hartig, 1839). **Hymenoptera. Tenthredinidae:** *Hoplocampa minuta* (Christ, 1791); *H. brevis* (Klug, 1816); *H. flava* (Linnaeus, 1761); *Caliroa cerasi* (Linnaeus, 1758). **Lepidoptera. Hadeninae:** *Hadena bicurris* (Hufnagel, 1766); **Amphipyridae:** *Gortyna xanthenes (Cynara scolymus)* Germar, 1844. **Noctuidae:** *Myelois circumvoluta (Onopordum acanthium)* (Fourcroy, 1785). **Pyralidae:** *Etiella zinckenella* (Treitschke, 1832); *Myelois circumvoluta* (Fourcroy, 1785); *Dioryctria abietella* ([Denis & Schiffermüller], 1775). **Sesiidae:** *Synanthedon andrenaeformis* Laspeyres 1801, **Nymphalidae:** *Vanessa cardui* Linnaeus, 1758; **Carposinidae:** *Carposina niponensis* Walsingham 1900. **Coleophoridae:** *C. coronillae* Zeller, 1849; *C. medelichensis* Krone, 1908. **Gelechiidae:** *Mesophleps corsicella* Herrich-Schäffer, 1856; *Pexicopia malvella* (Huebner, 1805); *Platyedra subcinerea* (Haworth, 1828). **Geometridae:** *Perizoma lugdunaria* Herrich-Schäffer 1855; **Gracillariidae:** *Phyllonorycter mespilella* (Huebner, 1805). **Lycaenidae:** *Lampides boeticus* (Linnaeus 1767). **Tortricidae:** *Acleris variegana* (Malus) ([Denis & Schiffermüller], 1775); *Barbara herrichiana* Obraztsov 1960; *Cydia dorsana* Fabricius, 1775; *C. funebrana* (Treitschke, 1835); *Eucosma cana* (Haworth, 1811); *Gypsonoma aceriana* (Duponchel, 1843); *Pandemis cerasana* (Huebner, 1786); *Rhopobota naevana* (Malus) (Huebner, 1817); *Rhyacionia resinella* (Linnaeus 1758) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

Subgenus *Lucobracon* Fahringer, 1927

Bracon (Lucobracon) breviradius Beyarslan, 2014

Examples examined: Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K, 43°19'14"D), 1750 m. 28.07.2016, 1♀. **Hosts:** Unknown. **Distribution:** Western Palaearctic (Turkey) (Beyarslan, 2014).

Bracon (Lucobracon) hungaricus (Szepligeti, 1896)

Examples examined: Bitlis, Ortaköy, 17.06.2017, 1♀, 1♂. Bitlis, Ahlat, Abdurrahman Gazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K, 41°17'14"D), 1960 m. 01.07.2017, 1♀. **Hosts:** Coleoptera. **Cerambycidae:** *Chytus arietis* (Linnaeus, 1758) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

Bracon (Lucobracon) meyeri Telenga, 1936

Examples examined: Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K, 42°32'4"D), 1684 m. 21.06.2017, 2♀♀, 1♂. **Hosts:** Unknown. **Distribution:** Palaearctic (Beyarslan, 2014).

Subgenus *Orthobracon* Fahringer, 1927

Bracon (Orthobracon) exhilarator Nees, 1834

Examples examined: Bitlis, Hizan, Gayda village, 13.06.2016, 1♀. Bitlis, Ahlat, Abdurahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K, 41°17'14"D), 1960 m. 18.06.2016, 1♂. **Hosts:** Lepidoptera. **Tortricidae:** *Acleris rhombana* ([Denis & Schiffermüller], 1775); *Eupoecilia ciliana* Hübner, 1799. **Coleoptera. Curculionidae:** *Apion hookeri* Kirby, 1808. **Diptera. Scathophaginae:** *Nanna armillata* (Zetterstedt, 1846) [*Phleum pratense*]; *Nanna flavipes* (Fallén, 1819) [*Phleum pratense*]. **Tephritoidea:** *Pliorecepta poeciloptera* (Schrank, 1776); *Urophora stylata* (Fabricius, 1775) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

Bracon (Orthobracon) longiantennatus Tobias, 1957

Examples examined: Bitlis, Tatvan, Küçüküsu village, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K, 42°19'17"D), 1784 m. 19.08.2014, 1♀; Bitlis, Nemrut Dağı, İlk Lake, (*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. 19.09.2017, 2♀♀. **Hosts:** Unknown. **Distribution:** Eastern Palearctic (Beyarslan, 2014).

Bracon (Orthobracon) titubans (Wesmael, 1838)

Examples 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:** Unknown. **Distribution:** Palearctic. Austria, Bulgaria, Germany, Russia and Slovenia (Yu et al., 2016). **This species is a new record for the fauna of Turkey.**

Diagnostic features: Antenna is as long as mesosoma and metasoma, sutur between 2nd and 3rd tergites flat, middle of second tergite with sculpture, other tergites smooth, head and mesosoma dark brown, metasoma and legs light colored, body 2.5 mm (Fig. 1).

Subgenus *Pigeria* van Achterberg, 1985

Bracon (Pigeria) piger (Wesmael, 1838)

Examples examined: Bitlis, Ahlat, Abdurahmangazi, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (39°53'54"K,41°17'14"D), 1960 m. 18.06.2015, 1♂. Bitlis, Tatvan, Dibekli village, (*Nigella arvensis*, *Papaver laevigatum*, *Convolvulus cantabricus*), (38°28'10"K, 42°25'7"D), 1820 m. 21.06.2016, 1♂. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*, (38°29'26"K,42°32'4"D), 1684 m. 27.07.2016, 3♀♀, 2♂♂. Van, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K,43°19'14"D), 28.07.2016, 1♂. Bitlis, Adilcevaz Center, (*Âsphodelina fustulosus*, *Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°48'24"K,42°44'4"D), 1650 m. 28.07.2016, 1♀, 1♂. Bitlis, Adilcevaz, Erikbağı village, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°47'23"K,42°52'28"D), 2205 m. 28.7.2016, 1♂. Van, Erciş, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (39°2'26"K,43°19'14"D), 1750 m. 28.7.2016, 1♂. Bitlis, Center, Ortakapı village, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*) (38°17'42"K, 42°0'41"D), 1247 m. 17.06.2017, 1♂. Bitlis, entry of Adilcevaz, (*Stipalagas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K,42°44'4"D), 1650 m. 01.07.2017, 2♂♂. **Hosts:** Coleoptera. **Curculionidae:** *Pissodes validirostris* (Sahlberg, 1834). **Lepidoptera. Tortricidae:** *Cnephasia longana* (Haworth, 1811); *Cydia nigricana* (Fabricius, 1794). **Noctuidae:** *Heliothis peltigera* ([Denis & Schiffermüller], 1775). **Pyralidae:** *Etiella zinckenella* (Treitschke, 1832) (Beyarslan, 2014). **Distribution:** Holarctic. Introduced into California, Puerto Rico (Beyarslan, 2014).

Genus *Glyptomorpha* Holmgren, 1868

Glyptomorpha (Glyptomorpha) pectoralis (Brullé, 1832)

Examples examined: Bitlis, Tatavan, Küçüksu village, (*Allium* sp., *Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K,42°19'17"D), 1784 m. 07.08.2016, 1♀. **Hosts:** Coleoptera. **Buprestidae:** *Chrysobothris affinis* (Fabricius, 1794); *Sphenoptera gossypii* Kerremans, 1892; *S. laticollis* (Olivier, 1790); *S. montana* Dejean, 1833. **Cerambycidae:** *Plagionotus arcuatus* (Linné, 1758) (Beyarslan, 2014). **Distribution:** Afrotropical, Oriental and Palearctic (Beyarslan, 2014).

Genus *Habrobracon* Ashmead, 1895

Habrobracon colorans (Marshall, 1900)

Examples examined: Bitlis, Tatvan-Hizan 10. km, (*Anchusa* sp., *Astragalus* sp., *Cyperus* sp., *Hypericum* sp.) (38°26'14"K,42°19'17"D), 1790 m. 13.06.2015, 2♀♀. Bitlis, Tatvan, Reşadiye, (*Stipalagas parviflora*, *S. barbata*, *Alyssum minus*, *A. desertorum*), (38°29'26"K,42°32'4"D), 1684 m. 21.06.2017, 1♀. **Hosts:** Lepidoptera. **Tortricinae:** *Cnephasia sedana* (Constant, 1884); **Ryalidae:** *Etiella zinckenella* (Treitschke, 1832; *Loxostege sticticalis*. **Gelechiidae:** *Pexicopia malvella* (Hübner, 1805) (Beyarslan, 2014). **Distribution:** Oriental and Palearctic (Beyarslan, 2014).

***Habrobracon stabilis* (Wesmael, 1838)**

Examples examined: Muş, Konukbekler, (*Centaurea aspera*, *Galium murale*, *Medicago minima*, *Marrubium parviflorum*), (38°52'51"K, 41°24'33"D), 29.07.2016, 1♂. Bitlis, entry of Adilcevaz, (*Stipalagaqas barbata*, *Alyssum minus*, *A. desertorum*), (38°48'24"K, 42°44'4"D), 1650 m. 01.07.2017, 2♂♂. **Hosts:** **Coleoptera. Curculionidae:** *Anthonomus pomorum* (Linnaeus, 1758); *Hylesinus crenatus* (Fabricius, 1787); *H. fraxini* (Panzer, 1779); *H. oleiperda* Fabricius, 1792. **Dermestidae:** *AttaGenuspellio* (Linnaeus, 1758). **Anobiidae:** *Ernobius kiesenwetteri* Schilsky, 1898; *E. nigrinus* (Sturm, 1837). **Scolytidae:** *Ips typographus* (Linnaeus, 1758). **Diptera. Tephritidae:** *Chaetostomella cylindrica* Robineau-Desvoidy, 1830; *Noeeta pupillata* (Fallen, 1814). **Lepidoptera. Oecophoridae:** *Agonopterix subpropinquella* (Stainton, 1849). **Gelechiidae:** *Anarsia spartiella* (Schrank, 1802) [*Ulex minor*]; *Caryocolum marmorea* Haworth, 1829; *Exoteleia dodecella* (Linnaeus, 1758); *Gelechia senticetella* (Staudinger, 1859). *Mirificarma mulinella* (Zeller, 1839). **Agonoxenidae:** *Scrobipalpa brahmiella* Heyden, 1862; **Lymantriidae:** *Coleophora loricella* (Hübner, 1817). **Coleophoridae:** *Euproctis chrysorrhoea* (Linnaeus, 1758) [*Quercus pubescens*]. **Pyralidae:** *Ephestia terebellum* Zeller, ?. **Tortricidae:** *Archips rosana* (Linnaeus, 1758); *Avaria hyerana* Milliére, 1857; *Choristoneura murinana* (Huebner, 1799); *Clepsis rogana* Guenée, 1845 [*Veratrum album*]; *Cnephasia asseclana* ([Denis & Schiffmüller], 1775); *C. chrysantheana* (Duponchel, 1843); *C. longana* (Haworth, 1811); *Cydia strobilella* (Linnaeus, 1758) [*Abies excelsa*]; *Epinotia nigricana* (Herrich-Schaffer, 1851); *Rhyacionia buoliana* (Denis & Schiffmüller, 1775); *R. pinivorana* (Lienig ve Zeller, 1846); *Tortrix viridana* Linnaeus, 1758; *Zeiraphera griseana* (Huebner, 1799). **Yponomeutidae:** *Yponomeuta malinella* Zeller, 1838 (Beyarslan, 2014). **Distribution:** Holarctic and Oriental. It was introduced into the U.S.-Oregon for biological control (Beyarslan, 2014).

Genus *Pseudovipio* Szépligeti, 1896***Pseudovipio inscriptor* (Nees, 1834)**

Examples examined: Bitlis, Nemrut Dağı, İlk Lake, (*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. 13.09.2014, 1♀. **Hosts:** **Lepidoptera. Crambidae:** *Ostrinia nubilalis* (Huebner, 1796) (Beyarslan, 2014). **Distribution:** Palaearctic (Beyarslan, 2014).

DISCUSSION, CONCLUION AND RECOMMENDATIONS

40 species from 4 genera were identified with the taxonomic studies conducted on Braconinae (Hymenoptera, Braconidae) Fauna in Bigöl, Bitlis, Muş and Van provinces. Species of each genus determined were as follows: *Bracon* 37 species, *Glyptomorpha* 1 species, *Habrobracon* 1 species, *Pseudovipio* 1 species. Twenty five of these species are the first record for the study field. The species *Bracon titubans* is the new record for fauna of Turkey. The study revealed very common species distributed as follows: *Glyptomorpha pectoralis* in Afrotropical, Oriental, and Palaearctic regions; *Habrobracon stabilis* in Holarctic and Oriental regions; *Bracon osculator*, *B. parvulus* and *Habrobracon concolorans* in Oriental and Palaearctic regions; *B. variegator* in Oceanic and Palaearctic regions. Remaining species in Palaearctic region. Hosts of 18 from these species which have parasitoid lifestyle are not known. *B. variator* use 64 different pernicious bug larvae as host. Distribution area of *Bracon piger* is Holarctic region. It was placed in Puerto Rico; USA.-California; USA- Oregon for biological control against species of Curculionidae (Coleoptera), Tortricidae, Pyralidae and Noctuidae (Lepidoptera). This species can be used for biological control of above-mentioned pests in Turkey, too. Also *B. osculator* is parasitoid of following Lepidoptera species: Coleophoridae: 22, Cosmopterigidae: 1, Tortricidae: 1, Nepticulidae: 1, Elachistidae: 1, Elachistidae: 1, Elachistidae: 1, Momphidae: 1,

Tortricidae: 1 (Lepidoptera). It was introduced into New Zealand for biological control.

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Figure 1. *Bracon (Orthobracon) titubans* (Wesmael, 1838).