

A faunistic survey of the Braconinae (Hymenoptera: Braconidae) of Kerman province, Iran

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Abstract

The Braconinae fauna of Kerman province (South-Eastern Iran) was studied from 2013 to 2017. A total of 23 species belonging to five genera were identified, of which three species, *Bracon (Bracon) speerschneideri* Schmiedeknecht, 1897, *B. (Ophthalmobracon) lissothorax* (Tobias, 1967) and *B. (O.) nocturnus* (Tobias, 1962) are recorded for the first time for the fauna of Iran.

Keywords: Fauna, parasitoids, new records, Iran.

مطالعهٔ فونستیک زنبورهای زیرخانواده Braconinae (Hymenoptera: Braconidae) استان کرمان، ایران

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چکیده

فون زنبورهای زیرخانواده Braconinae از سال ۱۳۹۶ تا سال ۱۳۹۲ در استان کرمان (جنوب شرق ایران) مطالعه شد. در مجموع، ۲۳ گونه متعلق به پنج جنس شناسایی شد، که از این تعداد سه گونه *Bracon (Bracon) speerschneideri* Schmiedeknecht, 1897, *B. (O.) nocturnus* (Tobias, 1962) و *B. (Ophthalmobracon) lissothorax* (Tobias 1967) برای اولین بار برای فون ایران گزارش می‌شوند.

واژگان کلیدی: فون، پارازیتوئیدها، گزارش‌های جدید، ایران.

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Introduction

Braconidae is the second largest family of the order Hymenoptera. It has a worldwide distribution with almost 20000 species mostly scattered in tropical and subtropical regions (Quicke, 1987; van Achterberg, 2014). Members of this family are small- to medium-sized, and vary in color of the body in a range of black, red, orange and white (Quicke, 2015). The subfamily Braconinae contains 190 genera and about 3000 species (Yu *et al.*, 2016). Most members of this subfamily are gregarious or solitary idiobiont ectoparasitoids of weakly to deeply concealed larval hosts, particularly Lepidoptera and Coleoptera, but some

also attack Diptera and Hymenoptera (Quicke, 2015). Some of them, such as the members of *Bracon* Fabricius, 1804, were used to control wood-borers, stem borers and stored grain pests (Quicke, 2015). *Bracon* is a large genus with almost a thousand species and a worldwide distribution. Many studies have been carried out on Braconinae of the Palearctic region (Papp, 2008; Wang *et al.*, 2009; Li *et al.*, 2016) and in the recent years, study on the fauna of Iranian Braconinae is significantly growing (Ameri *et al.*, 2013, 2015; Zargar *et al.*, 2014, 2015; Rahmani *et al.*, 2017; Iranmanesh *et al.* 2017). To date, 123 species of Braconinae have been recorded for the fauna of Iran (Farahani *et al.*, 2016; Rahmani *et al.*, 2017). This part of our on-going study of the family Braconidae in Iran is based on material collected from the Kerman province.

Materials and methods

Specimens were collected mostly from high mountain localities of northern (Kuhpayeh, Sirch, Bardsir, Bidkhan, Negar, Qal-eh-Askar, Rabor) and a small part of southern Kerman province (Kahnooj, Jiroft) by sweeping net and Malaise traps during 2013–2017 (fig. 1) and stored in 75% ethanol. Collected material was treated using the AXA method (van Achterberg, 2009), mounted on triangular cards, and examined using the Motic SMZ-168 stereomicroscopes. In order to verify identifications, specimens were compared with types of the according species. Taxonomic status of the listed taxa is given following Papp (2012) and Yu *et al.* (2016). Specimens are deposited in the collections of the Zoological Museum of Shahid Bahonar University of Kerman, Kerman, Iran (ZMSBUK) and the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia (ZISP).

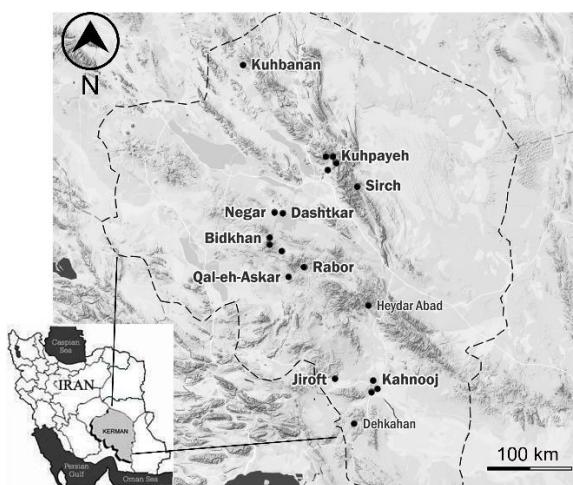


Fig. 1. Map of the sampling localities in Kerman province, Iran.

Results

A total of 23 species belonging to five genera, *Atanycolus* Förster, 1863, *Bracon* Fabricius, 1804, *Iphiaulax* Förster, 1863, *Pseudovipio* Szépligeti, 1896 and *Rhadinobracon* Szépligeti, 1906 were identified, of which three species, *Bracon (Bracon) speerschneideri* Schmiedeknecht, 1897, *B. (Ophthalmbracon) lissothorax* (Tobias, 1967) and *B. (O.) nocturnus* (Tobias, 1962) are newly recorded from Iran. The identified material is listed below and the new records are marked with an asterisk.

Atanycolus ivanowi (Kokujev, 1898)

Material examined: Bidkhan ($29^{\circ}34'58.9"N$, $56^{\circ}30'45.1"E$, 2941 m), swept on *Medicago sativa*, leg. F. Abdolalizadeh: 24 May 2014, 1♀ (ZMSBUK).

Distribution in Iran: Alborz (Shojai, 1968; Zargar *et al.*, 2014, reported as *Atanycolus ivanovi*), Kordestan, Markazi, Semnan, Tehran (Shojai, 1968; Davatchi & Shojai, 1969; Radjabi, 1976, 1991, reported as *Atanycolus sculpturatus* (Thomson, 1892)), Tehran (Zargar *et al.*, 2014, reported as *A. ivanovi*), Fars (Lashkari Bod *et al.*, 2011, reported as *A. sculpturatus*), Guilan, Qazvin (Zargar *et al.*, 2014, reported as *A. ivanovi*).

Bracon (Bracon) gusaricus Telenga, 1933

Material examined: 5♀: Shahdad, Sirch ($30^{\circ}11'51.1"N$, $57^{\circ}33'43.9"E$, 1691 m), swept on *Rubus* sp., leg. M. Iranmanesh: 10 August 2014, 1♀ (ZMSBUK); Shahdad, Sirch ($30^{\circ}12'05.2"N$, $57^{\circ}34'07.1"E$, 1720 m), swept on *Triticum aestivum*, leg. M. Iranmanesh: 09 May 2014, 1♀ (ZMSBUK); Kahnood, Heydar Abad ($28^{\circ}56'58.2"N$, $57^{\circ}42'02.8"E$, 510 m), swept on *Medicago sativa*, leg. M. Changizi: 06 April 2016, 1♀ (ZMSBUK); Kahnood, Tomgoran ($28^{\circ}01'48.2"N$, $57^{\circ}44'22.2"E$, 528 m), Malaise trap, leg. M. Changizi: 04 May 2017, 1♀ (ZMSBUK); Jiroft, Booluk ($28^{\circ}09'55.8"N$, $57^{\circ}18'06.5"E$, 632 m), swept on *Triticum* sp., leg. M. Changizi: 05 May 2017, 1♀ (ZMSBUK).

Distribution in Iran: Hormozgan (Ameri *et al.*, 2014), Kerman, North Khorasan, Sistan-o Baluchestan (Rahmani *et al.*, 2017).

Bracon (Bracon) intercessor Nees, 1834

Material examined: 2♀: Bardsir, Bidkhan ($29^{\circ}35'27.5"N$, $56^{\circ}30"44.4"E$, 2910 m), swept on *Medicago sativa*, leg. F. Abdolalizadeh: 28 August 2014, 1♀ (ZMSBUK); Shahdad, Sirch ($30^{\circ}11'58.8"N$, $57^{\circ}33'50.7"E$, 1702 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 17 October 2014, 1♀ (ZMSBUK).

Distribution in Iran: Tehran (Zargar *et al.*, 2015), Semnan (Naderian *et al.*, 2012), Hormozgan (Ameri *et al.*, 2014), Kerman, North Khorasan, Sistan-o Baluchestan, Kermanshah (Rahmani *et al.*, 2017).

***Bracon (Bracon) intercessor laetus* Wesmael, 1838**

Material examined: Baft, Qal-eh-Askar (29°31'17.1"N, 56°39'53.3"E, 2638 m), swept on herbaceous plants, leg. S. Safahani: 31 August 2015, 1♀ (ZISP).

Distribution in Iran: No locality cited (Papp, 2012), Mazandaran (Zargar *et al.*, 2015), South Khorasan (Hedwig, 1957). Kerman province.

Remarks: The differences of *B. intercessor laetus* and *B. intercessor* are presented in Zargar *et al.* (2015).

***Bracon (Bracon) leptus* Marshall, 1897**

Material examined: 2♂, 1♀: Kuhpayeh, Nehzat Abad (30°25'38.9"N, 57°18'58.9"E, 2550 m), swept on *Medicago sativa*, leg. S. Safahani: 10 August 2015, 1♂ (ZMSBUK); Rabor, Siyahbanooieh (29°20'43.6"N, 56°55'45.5"E, 2461 m), swept on *Medicago sativa*, leg. S. Safahani: 25 April 2015, 1♂ (ZMSBUK); Shahdad, Sirch (30°11'31.7"N, 57°34'39.7"E, 1689 m), swept on *Mentha longifolia*, leg. M. Iranmanesh: 26 July 2014, 1♀ (ZMSBUK).

Distribution in Iran: Hormozgan (Ameri *et al.*, 2014), Isfahan (Rahmani *et al.*, 2017).

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

Material examined: 4♂, 2♀: Kuhpayeh, Darb Anarestan (30°29'23.1"N, 57°11'47.6"E, 2550 m), swept on *Medicago sativa*, leg. S. Safahani: 12 July 2015, 2♂ (ZMSBUK); Baft, Qal-eh-Askar (29°29'45.3"N, 56°40'21.8"E, 2695 m), swept on *Medicago sativa*, leg. S. Safahani: 31 August 2015, 1♂ (ZMSBUK); Shahdad, Sirch (30°11'58.8"N, 57°33'50.7"E, 1702 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 17 September 2014, 1♀ (ZMSBUK); Shahdad, Sirch (30°11'52.1"N, 57°34'07.9"E, 1722 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 28 June 2014, 1♂ (ZMSBUK); Shahdad, Sirch (30°11'31.7"N, 57°34'39.7"E, 1689 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 26 July 2014, 1♀ (ZMSBUK).

Distribution in Iran: Ilam (Gharali, 2004, on safflower shoot flies; Lotfalizadeh & Gharali, 2014), no specific locality cited (Beyarslan *et al.*, 2005), East Azarbaijan, Chaharmahal-e-Bakhtiari (Lotfalizadeh & Gharali 2014, on *Carthamus tinctorius*), North Khorasan, Khorasan-e Razavi (Rahmani *et al.*, 2017).

***Bracon (Bracon) pectoralis* Wesmael, 1838**

Material examined: 2♀, 1♂: Kuhpayeh, Simk (30°30'01.4"N, 57°11'48.0"E, 2386 m), swept on *Medicago sativa*, leg. S. Safahani: 12 July 2015, 2♀ (ZMSBUK); Kuhpayeh, Vamegh Abad (30°30'47.9"N, 57°16'21.2"E, 2057 m), swept on *Medicago sativa*, leg. S. M. Madjdzadeh: 12 August 2015, 1♂ (ZMSBUK).

Distribution in Iran: Hormozgan (Ameri *et al.*, 2015), Guilan, Qazvin (Zargar *et al.*, 2015), Kerman, North Khorasan (Rahmani *et al.*, 2017).

Bracon (Bracon) subrugosus Szépligeti, 1901

Material examined: Shahdad, Sirch ($30^{\circ}11'58.8"N$, $57^{\circ}33'50.7"E$, 1702m), swept on *Medicago sativa*, leg. M. Iranmanesh: 22 May 2014, 1♂ (ZMSBUK).

Distribution in Iran: No specific locality cited (Papp, 2012).

Bracon (Bracon) speerschneideri Schmiedeknecht, 1897*

Material examined: Bardsir, Dashtkar ($29^{\circ}54'55.4"N$, $56^{\circ}38'50"E$, 2077 m), swept on *Medicago sativa*, leg. F. Abdolalizadeh: 30 May 2014, 1♀ (ZISP).

Distribution in Iran: Kerman province (new record).

Bracon (Bracon) trucidator Marshall, 1888

Material examined: Bardsir, Dashtkar ($29^{\circ}55'N$, $56^{\circ}40'E$, 2084 m), swept on *Medicago sativa*, leg. Sh. Ghotbi: 30 August 2013, 1♂ (ZMSBUK).

Distribution in Iran: Hamadan (Samin, 2015), Kerman, North Khorasan, Kermanshah (Rahmani *et al.*, 2017).

Bracon (Glabrobracon) picticornis Wesmael, 1838

Material examined: 4♀, 2♂: Shahdad, Sirch ($30^{\circ}11'58.8"N$, $57^{\circ}33'50.7"E$, 1702 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 17 September 2014, 2♀ (ZMSBUK); Shahdad, Sirch ($30^{\circ}11'45.6"N$, $57^{\circ}34'03.6"E$, 1718 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 17 September 2014, 1♀ (ZMSBUK); Shahdad, Sirch ($30^{\circ}11'52.1"N$, $57^{\circ}34'07.9"E$, 1722 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 28 June 2014, 2♂ (ZMSBUK); Shahdad, Sirch ($30^{\circ}11'44.6"N$, $57^{\circ}33'50.6"E$, 1702 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 2 August 2014, 1♀ (ZMSBUK).

Distribution in Iran: No specific locality cited (Papp, 2012), Kermanshah (Rahmani *et al.*, 2017), Hormozgan (Ameri *et al.*, 2015), Mazandaran (Zargar *et al.*, 2015), Kerman, North Khorasan (Rahmani *et al.*, 2017).

Bracon (Habrobracon) concolorans Marshall, 1900

Material examined: Baft, Qal-eh-Askar ($29^{\circ}31'17.1"N$, $56^{\circ}39'53.3"E$, 2638 m), swept on herbaceous plants, leg. S. Safahani: 31 August 2015, 1♀ (ZMSBUK).

Distribution in Iran: Fars (Lashkari Bod *et al.*, 2011, reported as *Habrobracon nigricans*), Hormozgan (Ameri *et al.*, 2014, reported as *Bracon (Habrobracon) nigricans*), North Khorasan, Isfahan, Zabol, Khorasan-e Razavi (Rahmani *et al.*, 2017).

Remarks: The listed specimens are conspecific with the type of *B. nigricans*.

***Bracon (Lucobracon) erraticus* Wesmael, 1838**

Material examined: Kuhbanan, Fidkoiyeh ($31^{\circ}27'24.9"N$, $56^{\circ}11'16.8"E$, 2114 m), swept on *Medicago sativa*, leg. S. Safahani: 21 August 2015, 1♀ (ZMSBUK).

Distribution in Iran: Fars (Lashkari Bod *et al.*, 2011, reported as *Bracon praetermissus*), Hormozgan (Ameri *et al.*, 2014), no specific locality cited (Papp, 2012, reported as *B. erraticus* var. *confinis*), Alborz (Zargar *et al.*, 2015).

***Bracon (Lucobracon) guttiger* Wesmael, 1838**

Material examined: Shahdad, Sirch ($30^{\circ}11'31.6"N$, $57^{\circ}34'39.8"E$, 1683 m), swept on herbaceous plants, leg. M. Iranmanesh: 10 August 2014, 1♀ (ZMSBUK).

Distribution in Iran: Qazvin (Samin, 2015).

***Bracon (Ophthalmobracon) ophthalmicus* Telenga, 1933**

Material examined: 2♀: Shahdad, Sirch ($30^{\circ}11'58.8"N$, $57^{\circ}33'50.7"E$, 1702 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 17 September 2014, 1♀ (ZMSBUK); Kahnood, Heydar Abad ($28^{\circ}56'58.2"N$, $57^{\circ}42'02.8"E$, 510 m), swept on *Medicago sativa*, leg. M. Changizi: 04 May 2016, 1♀ (ZMSBUK).

Distribution in Iran: Hormozgan (Ameri *et al.*, 2015).

Bracon (Ophthalmobracon) lissothorax* (Tobias, 1967)

Material examined: Bardsir, Bidkhan ($29^{\circ}39'46.7"N$, $56^{\circ}30'51.8"E$, 2431 m), reared from stem galls of *Tamarix* sp., leg. S.M. Madjdzadeh: 30 May 2014, 1♀ (ZISP).

Distribution in Iran: Kerman province (new record).

Remarks: The key to the Palearctic species of the subgenus *Ophthalmobracon* is presented in Tobias (1986).

Bracon (Ophthalmobracon) nocturnus* (Tobias, 1962)

Material examined: 2♀: Kahnood, Amir Abad ($28^{\circ}00'03.2"N$, $57^{\circ}44'14.4"E$, 510 m), swept on *Triticum* sp., leg. M. Changizi: 06 April 2016, 1♀ (ZMSBUK); Kahnood, Sargorich ($28^{\circ}09'16.3"N$, $57^{\circ}45'50.5"E$, 687 m), swept on *Medicago sativa*, leg. M. Changizi: 05 November 2016, 1♀ (ZISP).

Distribution in Iran: Kerman province (new record).

***Bracon (Pigeria) piger* Wesmael, 1838**

Material examined: 3♀, 1♂: Kuhpayeh, Biduiyeh ($30^{\circ}30'42.8"N$, $57^{\circ}11'07.6"E$, 2250 m), swept on *Mentha longifolia*, leg. S. Safahani: 12 July 2015, 1♂ (ZMSBUK); Shahdad, Sirch ($30^{\circ}12'05.2"N$, $57^{\circ}34'07.1"E$, 1720 m), swept on *Medicago sativa*, leg.

M. Iranmanesh: 09 May 2014, 1♀ (ZMSBUK); Shahdad, Sirch ($30^{\circ}11'52.1''N$, $57^{\circ}34'07.9''E$, 1722 m), swept on *Medicago sativa*, leg. M. Iranmanesh: 09 June 2014, 1♀ (ZMSBUK); Baft, Qal-eh-Askar ($N29^{\circ}15'06.9''$, $E56^{\circ}44'31.4''$, 2647 m), leg. S. Safahani: 15 July 2015, 1♀ (ZMSBUK).

Distribution in Iran: Mazandaran (Sakenin *et al.*, 2012), Guilan (Zargar *et al.*, 2015), Hormozgan (Ameri *et al.*, 2014), Charmahal-e-Bakhtiari (Samin *et al.*, 2015), Kerman, North Khorasan and Sistan-o Baluchestan (Rahmani *et al.*, 2017).

***Bracon (Rostrobracon) urinator* (Fabricius, 1798)**

Material examined: Kahnood, Tomgoran ($28^{\circ}01'56.8''N$, $57^{\circ}44'35.9''E$, 531 m), swept on *Hordeum vulgare*, leg. M. Changizi: 15 April 2016, 1♂ (ZMSBUK).

Distribution in Iran: East Azarbaijan, Kerman (Telenga, 1936; Farahani *et al.*, 2016), Kermanshah and North Khorasan (Rahmani *et al.*, 2017).

***Iphiaulax (Euglyptobracon) impeditor* (Kokujev, 1898)**

Material examined: Kuhpayeh, Vamegh Abad ($30^{\circ}30'47.9''N$, $57^{\circ}16'21.2''E$, 2057 m), swept on *Medicago sativa*, leg. S.M. Madjdzadeh: 10 August 2015, 1♂ (ZMSBUK).

Distribution in Iran: No exact locality cited (Fahringer, 1926).

***Pseudovipio castrator* (Fabricius, 1798)**

Material examined: Kuhpayeh, Darb Anarestan ($30^{\circ}29'23.1''N$, $57^{\circ}11'47.6''E$, 2550 m), swept on *Medicago sativa*, leg. S. Safahani: 13 July 2015, 1♀ (ZMSBUK).

Distribution in Iran: West Azarbaijan (Samin *et al.*, 2014), Hormozgan, Qazvin (Zargar *et al.*, 2014).

***Pseudovipio tataricus* (Kokujev, 1898)**

Material examined: Kuhpayeh, Darb Anarestan ($30^{\circ}29'23.1''N$, $57^{\circ}11'47.6''E$, 2550 m), swept on *Medicago sativa*, leg. S. Safahani: 14 July 2015, 1♀ (ZMSBUK).

Distribution in Iran: No exact locality cited (Telenga, 1936).

***Rhadinobracon zarudnyi* (Telenga, 1936)**

Material examined: Kahnood, Dehkahan ($27^{\circ}41'25.4''N$, $57^{\circ}32'00.8''E$, 783 m), Malaise trap, leg. M. Changizi: 04 May 2016, 1♀ (ZISP).

Distribution in Iran: Sistan-o Baluchestan (Telenga, 1936).

Discussion

One of the most important problems for local insect biodiversity management is the lack of knowledge related to insect fauna. In the present research, we focused on the fauna of Braconinae of Kerman province, which has not been sufficiently explored before. Totally, 23 species belonging to five genera were collected from different localities of Kerman, of which three *Bracon* species are new records for the fauna of Iran. Considering the results of the current study, the distribution range of *B. speerschneideri*, which was previously known mainly from Western and Northern Europe, is seriously extended to the east. Further studies may reveal that this species have a wider distribution; however the two newly found species of the subgenus *Ophthalmobracon* (*B. lissothorax* and *B. nocturnus*) are possibly endemic for the Irano-Turanian subregion. All what is known about biology of these two closely related species is that they are nocturnal insects, attracting to light (Tobias, 1967). Thus, it is interesting to get the data on host plant of *B. (Ophthalmobracon) lissothorax*, which was reared for the first time from the stem galls of *Tamarix* sp..

To date, 30 species and one subspecies belonging to six genera of Braconinae have been recorded from Kerman province (including the current study). Among the recorded taxa, the genus *Bracon* with 24 species and one subspecies is the most abundant taxon (Table 1). Furthermore, 16 species and one subspecies are new records for Kerman province.

Almost all the species identified in the current study were collected using sweep net, except two species that were collected by Malaise trap. Most species were collected on alfalfa and other common vegetation, *Triticum aestivum* L., *Rubus* sp., *Mentha longifolia* (L.), *Hordeum vulgare* L. and herbaceous plants. *Bracon lissothorax* was reared from stem galls of *Tamarix* sp. for the first time. As mentioned above, most species of Braconinae attack members of Lepidoptera, Coleoptera, Diptera and Hymenoptera. Therefore, they play an important role in biological control programs. Unfortunately, there is no information on host association of the species in Iran.

Although the present study increases the number of species and subspecies of Braconinae known from Kerman province from 14 to 31 (Table 1), but some habitats in north, northwestern and southern parts of the province, especially Jazmurian basin district, have not yet been studied in detail and the real number is expected to be much higher. Thus, the fauna of Kerman province requires extensive investigations.

Table 1. Braconinae species recorded from Kerman province. New records for Iran are marked with an asterisk.

Species	Reference
<i>Atanycolus ivanowi</i> (Kokujev, 1898)	New record (present study)
<i>Bracon bilgini</i> Beyarslan, 2002	Rahmani <i>et al.</i> , 2017
<i>Bracon bipartitus</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon concolorans</i> Marshall, 1900	New record (present study)
<i>Bracon erraticus</i> Wesmael, 1838	New record (present study)
<i>Bracon erzurumiensis</i> Beyarslan, 2002	Rahmani <i>et al.</i> , 2017
<i>Bracon gusaricus</i> Telenga, 1933	Rahmani <i>et al.</i> , 2017
<i>Bracon guttiger</i> Wesmael, 1838	New record (present study)
<i>Bracon hebetor</i> Say, 1836	Modarres Awal, 1997
<i>Bracon intercessor</i> Nees 1834	Rahmani <i>et al.</i> , 2017
<i>Bracon intercessor laetus</i> Wesmael, 1838	New record (present study)
<i>Bracon leptus</i> Marshall, 1897	New record (present study)
<i>Bracon lissothorax</i> (Tobias, 1967)*	New record (present study)
<i>Bracon longicollis</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon luteator</i> Spinola, 1808	New record (present study)
<i>Bracon murgabensis</i> Tobias, 1957	Rahmani <i>et al.</i> , 2017
<i>Bracon nocturnus</i> (Tobias, 1962)*	New record (present study)
<i>Bracon ophthalmicus</i> Telenga, 1933	New record (present study)
<i>Bracon pectoralis</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon picticornis</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon piger</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon roberti</i> Wesmael, 1838	Rahmani <i>et al.</i> , 2017
<i>Bracon speerschneideri</i> Schmiedeknecht, 1897*	New record (present study)
<i>Bracon subrugosus</i> Szépligeti, 1901	New record (present study)
<i>Bracon trucidator</i> Marshall, 1888	Rahmani <i>et al.</i> , 2017
<i>Bracon urinator</i> (Fabricius, 1798)	New record (present study)
<i>Iphiaulax impeditor</i> (Kokujev, 1898)	New record (present study)
<i>Megalommum pistacivora</i> van Achterberg & Mehrnejad, 2011	van Achterberg & Mehrnejad, 2011
<i>Pseudovipio castrator</i> (Fabricius, 1798)	New record (present study)
<i>Pseudovipio tataricus</i> (Kokujev, 1898)	New record (present study)
<i>Rhadinobracon zarudnyi</i> (Telenga, 1936)	New record (present study)

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