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**A contribution to ichneumonid wasps of Iran (Hym.:  
Ichneumonidae): Anomaloninae, Cremastinae, Ctenopelmatinae,  
Mesochorinae, Metopiinae and Orthopelmatinae)**

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**Abstract**

This checklist provides faunistic data for 19 species belonging to 6 ichneumonid wasps: Anomaloninae, Cremastinae, Ctenopelmatinae, Mesochorinae, Metopiinae, and Orthopelmatinae, of which, 3 species from Anomaloninae, 4 species and 2 genera (*Cremastus* and *Trathala*) from Cremastinae, 1 species and 1 genus (*Mesoleius*) from Ctenopelmatinae, 2 species from Metopiinae and 1 species from Orthopelmatinae are newly recorded for the Iranian fauna. A brief check list of the previously recorded species of these subfamilies from Iran is provided. The present work increases the number of the Iranian species of Anomaloninae, Cremastinae, Ctenopelmatinae, Metopiinae, Orthopelmatinae, and Mesochorinae to 9, 7, 2, 5, 2, and 1 respectively.

**Key words:** Iran, fauna, Ichneumonidae, Anomaloninae, Cremastinae, Ctenopelmatinae, Mesochorinae, Metopiinae and Orthopelmatinae.

چکیده

این مقاله اطلاعات فونستیک مربوط به ۱۹ گونه از زنبورهای خانواده Ichneumonidae متعلق به ۶ زیر خانواده Anomaloninae, Cremastinae, Ctenopelmatinae, Mesochorinae, Metopiinae و Orthopelmatinae را ارائه داده است، که از این تعداد ۳ گونه از Anomaloninae، ۴ گونه و ۲ جنس *Cremastus* و *Trathala* از Cremastinae، ۱ گونه و ۱ جنس

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*Mesoleius* از Ctenopelmatinae، ۲ گونه از Metopiinae و ۱ گونه از Orthopelmatinae گزارش‌های جدیدی برای فون ایران می‌باشند. به علاوه نام تمام گونه‌هایی که تا کنون از ایران گزارش شده‌اند به همراه مناطق پراکنش آن‌ها ذکر شده است. بر اساس این مطالعه گونه‌های شناخته شده از ایران به ترتیب برای زیر خانواده‌های Anomaloninae، Cremastinae، Ctenopelmatinae، Metopiinae و Orthopelmatinae به تعداد ۹، ۷، ۲، ۵ و ۲ گونه افزایش یافته و تنها یک گونه از زیرخانواده Mesochorinae از ایران شناخته شده است\*.

**واژه‌های کلیدی:** ایران، فون، Ichneumonidae، Anomaloninae، Cremastinae، Ctenopelmatinae، Mesochorinae و Metopiinae.

## Introduction

Ichneumonidae is the largest hymenopterous family. It is known as one of the largest in the Insecta with more than 60000 species. This cosmopolitan family usually occurs in all kinds of climates, though humid habitats are more favourite. The eastern Palaearctic and eastern Nearctic regions are particularly rich in ichneumonid species. Ichneumonids are parasitoids of immature holometabolous insects from orders such as Coleoptera, Diptera, Hymenoptera, Lepidoptera, Raphidioptera, Trichoptera and also non-insect Chelicerata (Araneae) (Townes 1969 and 1970, Goulet & Huber, 1993). The highly diverse family of Ichneumonidae, with 39 subfamilies, has been poorly represented in Iran.

The Anomaloninae contains 760 species worldwide, of which 210 species occur in the Palaearctic region (Yu *et al.*, 2005). From this subfamily 6 species have previously been recorded from Iran (Townes *et al.*, 1965, Kasparyan 1981, Kolarov 1986, Shojaei 1996, Mojeni & Šedivý, 2001, Kolarov & Ghahari, 2005). This subfamily is named Anomalinae and Theriinae by Townes and Dash, respectively.

The Cremastinae consists of 650 known species, of which 130 species occur in the Palaearctic region (Yu *et al.*, 2005). From this subfamily 3 species have previously been recorded from Iran (Radjab 1986, Yu *et al.*, 2005, Anento *et al.*, 2002, Kolarov & Ghahari, 2005).

The Ctenopelmatinae with 1200 regional species contains 800 species in the Palaearctic

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region (Yu *et al.*, 2005). Only one species belonging to this subfamily has previously been recorded from Iran (Masnadi-Yazdinejad 2008).

The Mesochorinae consists of 660 known species, of which 160 species occur in the Palaearctic region (Yu *et al.*, 2005). From this subfamily 1 species has previously been recorded from Iran (Masnadi-Yazdinejad & Riedel, 2008).

The Metopiinae consists of 70 known species, of which 320 species occur in the Palaearctic region (Yu *et al.*, 2005). From this subfamily 3 species have previously been recorded from Iran (Kasparyan 1981, Tolkanitz 1987, Kolarov 1995, Yu *et al.*, 2005, Kolarov & Ghahari, 2005).

The Orthopelmatinae consists of 9 known species, of which 5 species occur in the Palaearctic region (Yu *et al.*, 2005). From this subfamily 1 species have previously been recorded from Iran (Talebi *et al.*, 2004).

This article provides additional records of these subfamilies from Iran along with their distribution in the country.

#### Material and methods

The material for this study was made possible by the extensive collections of ichneumonids during 1998-2007 in addition to the available specimens at the Hayk Mirzayans Insect Museum (HMIM) from 1970 till 2007. Sweeping insect nets, Malaise and light traps were used for collecting the specimens. To increase the efficiency in net sampling, the sweeping nets with a moderately long handle (120 cm) and wide ring diameter (of 45 cm) were used. The collected ichneumonid specimens were preserved in ethanol 76%. Samplings were done without any regularity or time table. The collected specimens by Malaise trap were gathered after 24 or 48 hours and for light trap after a night. Collected specimens after preserving in Ethyl alcohol 76% or Ditrix solution carried to laboratory and mounted into the collection boxes. Some identification and confirmation have been done by M. Riedel (Klinik Fallingb., Bad Fallingb., Germany) and the second author.

The entire examined materials are deposited at the Hayk Mirzayans Insect Museum (HMIM), Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection.

#### Result

The total species known from Iran belong to the six subfamilies Anomaloninae,

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Cremastinae, Ctenopelmatinae, Mesochorinae, Metopiinae and Orthopelmatinae including the new records are presented for the Iranian fauna. The newly recorded species are marked with one asterisk and the new genera with two asterisks. According to the results, the newly recorded species/genera for these subfamilies are Anomaloninae 3 species, Cremastinae 4 species, 2 genera, Ctenopelmatinae 1 species, 1 genus, Mesochorinae 1 species, Metopiinae 2 species and, Orthopelmatinae 1 species. The list of all known species from the six subfamilies is given in tables 1-6. The list is based on both the material examined by the authors and the literature review. The related references and the distribution area of each species are mentioned in the tables. The exact collecting localities and dates given too. A short comment is presented for each examined species.

**1- Subfamily Anomaloninae**

Body small to large, slender; clypeus often not separated from face by groove, its apical margin often with a median point; ventroposterior corner of propleuron with strongly produced lobe that touches or overlaps pronotum; tarsal claws simple or pectinate; metasomal segment 1 long and usually slender, without glymma and with no trace of tergal-sternal suture and with spiracle near apex. The Anomaloninae are koinobiont endoparasitoids of Lepidoptera or Coleoptera. They put their egg into the larvae while the emergence always occurs in the pupa. The adults often found in drier habitats than the other ichneumonid subfamilies (Goulet and Huber, 1993).

Seven species from two tribes have been previously recorded from this subfamily. (Šedivý 1968; Kasparyan 1981, Mojení & Šedivý, 2001, Yu *et al.*, 2005; Kolarov & Ghahari, 2005). This subfamily consist of 2 tribes: Anomalonini and Gravenhorstini.

**Tribe Anomalonini**

*\*Anomalon amseli* (Hedwig, 1961)

*Microcremastus amseli* Hedwig, 1961

**Material examined:** Khorasane Razavi, 1 ♂, Mashhad, 10.V.1999, A. Masnadi-Yazdinejad.

**Distribution:** Palearctic.

**Remarks:** The species *A. amseli* is newly recorded from Iran.

*Anomalon cruentatum* (Geoffroy 1785)

*Ichneumon petiolatus* Geoffroy, 1785

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*Ophion foliator* Fabricius, 1798

*Nototrachys rufoorbitale* Cameron, 1906

*Nototrachys flavoorbitale* Cameron, 1907

*Anomalon epiphanii* Izquierdo, 1977

**Material examined:** Ardabil: 1 ♀, Jeiran, 11.VI.2006, A. Masnadi-Yazdinejad.

**Distribution:** Eastern and western Palaearctic; Oriental.

**Remark:** The major host species are *Gonocephalum rusticum* (Col.: Tenebrionidae), *Agrotis ipsilon* (Lep.: Noctuidae) and *Ptilodon capucina* (Lep.: Notodontidae) (Yu *et al.*, 2005).

#### Tribe Gravenhorstini

\**Barylypa delictor* (Thunberg, 1824)

**Material examined:** Gilan, 1 ♂, Rasht, 12.V.2006, A. Masnadi-Yazdinejad.

**Distribution:** Eastern and western Palaearctic.

**Remark:** This is the first record of this species from Iran. Its hosts species are *Acronictamenyanthidis*, *Actinotia hyperici*, *Calophasia lunula*, *Eutricha capensis*, *Lymantria dispar* (Lep.: Lymantriidae) and *Malacosoma castrense*, *Malacosoma neustria* (Lep.: Lasiocampida) (Yu *et al.*, 2005).

\**Barylypa helleni* Schnee, 1989

**Material examined:** Ghom, 1 ♀, Ghom, 3.XI.1974, Farz.

**Distribution:** Europe and western Palaearctic.

**Remark:** This is the new record for the Iranian fauna. Its host species is *Zygaena ephialtes* (Lep.: Zygaenidae) (Yu *et al.*, 2005).

*Anomalon pallidum* (Gravenhorst, 1829)

*Anomalon rufum* Provancher, 1874

*Anomalon melanocneme* Vollenhoven, 1878

*Laphyctes insidiator* Forster, 1878

*Anomalon laticeps* Rudow, 1883

*Anomalon discrepans* Brauns, 1895

*Anomalon renidens* Tosquinet, 1896

*Anomalon humerale* Brulle, 1932

*Barylypa persicator* Aubert, 1966

**Material examined:** Hormozgan, 1 ♂, Geno, 1550 m., 18.IV.1994, E. Ebrahimi and M. Parchami-Araghi.

**Distribution:** Eastern and western Palaearctic.

**Remarks:** The major noctuid host species are *Agrotis ipsilon*; *Agrotis segetum*; *Helicoverpa armigera*; *Helicoverpa zea*, *Spodoptera exigua* and *Spodoptera litura*. The other hosts are *Lymantria dispar* (Lep.: Lymantriidae) and *Malacosoma neustria* (Lep.: Lasiocampidae) (Yu *et al.*, 2005).

## 2- Subfamily Cremastinae

Body not very large, slender; clypeus small to moderately large, separated from face by groove; ventroposterior corner of propleuron with strongly produced lobe, the lobe touching or overlapping pronotum. Many species are well known as endoparasitoids of Lepidoptera; known as koinobionts and, less commonly, attack the Coleoptera larvae in tunnels, buds, galls, leaf rolls and other concealed situations (Goulet & Huber, 1993). From this subfamily 3 species have been previously recorded for the Iranian fauna. (Radjabi, 1986, Narolsky, 1990, Anento *et al.*, 2002, Yu *et al.*, 2005, Kolarov & Ghahari, 2005). We totally examined 6 species, of which, 5 species and 3 genera are new records for the Iranian fauna.

*\*\*Cremastus gigas* Heinrich, 1953

**Material examined:** Fars, 1 ♂, Marvdasht, 19.V.2000. A. Masndi-Yazdinejad.

**Distribution:** Europe and western Palaearctic.

**Remark:** The newly recorded species *C. gigas* is a parasitoid of *Lymantria dispar* (Lep.: Lymantriidae) (Yu *et al.*, 2005).

*\*Pristomerus luridus* Kokujev, 1905

*Pristomerus pallidus* Kriechbaumer, 1884

**Material examined:** Khorasan Razavi, 1 ♀, Astan-e Ghods farm, Unite, 2280 m, 18.IV.1997, M. Badii, H. Barari and A. Sarafrazi.

**Distribution:** Eastern and western Palaearctic.

**Remark:** This is the first record for the species *P. luridus* from Iran.

*Pristomerus vulnerator* Panzer, 1799

*Pristomerus schreineri* Ashmead, 1904

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*Pristomerus marginalis* Habermehl, 1923

*Cremastus stigmaticus* Hellen, 1949

**Material examined:** Azarbajejan-e Gharbi, 3 ♀♀, Kahriz, 16.X.2003, Akbarzade.

**Distribution:** Eastern and western Palaearctic, Nearctic, Oceanic; Oriental.

**Remark:** This species is used as a biocontrol agent of lepidopterous tortricid species *Cydia nigricana*, *Cydia pomonella* and *Grapholita molesta* (Radjabi, 1986, Yu *et al.*, 2005).

*Temelucha persicator* (Horstmann and Yu, 1999)

**Material examined:** Gilan, 1 ♂, Rudbar, Arbenaf, Dorfak, 2400-2700 m. 30.VIII.1999, E. Ebrahimi, M. Badii and M. Mofidi-Neyestanak.

**Distribution:** Eastern and western Palaearctic, Ethiopian.

*\*Temelucha schoenobia* (Thomson, 1980)

**Material examined:** Golestan, 1 ♀, P. M. Golestan, Golzar, 840 m., 25.IX.2000, R. Ghaiofar.

**Distribution:** Eastern and western Palaearctic.

**Remark:** The species *T. schoenobia* is newly recorded from Iran.

*\*\*Trathala hierochontica* Schmiedeknecht, 1910

**Material examined:** Mazandaran, 1 ♀, Golestan Forest, Tang-e Gol, 700 m., 17.V.1993, A. Pazoki and M. Badii.

**Distribution:** Eastern and western Palaearctic.

**Remark:** The species *T. hierochontica* is newly recorded from Iran.

### 3- Subfamily Ctenopelmatinae

This subfamily has been mentioned by Townes as Scolobatinae (Townes, 1969; Goulet & Huber, 1993). The Ctenopelmatinae is easily recognized by the following characters: Body small to large; fore wing 2.9 to 22 mm long; clypeus fairly flat, usually wide and short; it is separated from face by groove and its apical margin often blunt or rounded; apex of protibia with tooth on dorsal margin; ovipositor barely extending beyond metasomal apex, its tip with subapical dorsal notch unless the ovipositor is very slender, the tip of lower valve without teeth. In point of biology the species of this subfamily are koinobiont endoparasitoids of Symphyta and, rarely, Lepidoptera. The oviposition is into the egg or larva, with emergence

after the host cocoon is spun. Ctenopelmatinae is a worldwide subfamily with 7 tribe, 95 genera and 1200 species, of which most species occurs in the Holarctic region. One newly recorded species and genus is presented as follow.

#### Tribe Mesoleini

*\*\*Mesoleius aulicus* Gravenhorst, 1829

*Mesoleius pusio* Holmgren, 1857

*Mesoleius tenthredinis* Morley, 1912

**Material examined:** Tehran, 1 ♂, Dizin, Velayatrud, 2500 m, 15.VII.1993, E. Ebrahimi and M. Parchami Araghi.

**Distribution:** Western Palaearctic.

**Remark:** The newly recorded species *M. aulicus* gets attracted to the light and known as a biological agent for *Pristiphora erichsonii*. The other major tenthredinid host species are *Hoplocampa crataegi*, *Hoplocampa fulvicornis*, *Nematus fuscipennis*, *Nematus miliaris*, *Nematus rumicis*, *Pontania viminalis*, *Pristiphora abietina*, *Pristiphora erichsonii*, *Trichiocampus viminalis* (Yu *et al.*, 2005).

#### Tribe Perilissini

*Priopoda apicaria* (Geoffroy, 1785)

*Ichneumon luteolus* Gmelin, 1790

*Ichneumon sticticus* Fabricius, 1798

*Ichneumon glabrator* Thunberg, 1822

**Material examined:** Tehran, 1 ♂, Firuzkuh, 12 km, N Firuzkuh, Vash village, 2200 m, 4.VI.2005, Berg.

**Distribution:** Western Palaearctic.

**Remark:** Its host species is *Arge ustulata* (Lep.: Argidae) (Yu *et al.*, 2005).

#### 4- Subfamily Mesochorinae

Body small to large (fore wing 3-25 mm long); Clypeus not separated from face by groove, its apical margin without median notch or tooth; labrum sometimes prominently exposed; fore wing with areolet large and usually rhombic (diamond-shaped); postpectal carina never complete; propodeum usually completely carinate; tarsal claws simple or pectinate; first tergite more or less long; ovipositor very slender, without dorsal subapical



notch. They are mostly koinobiont hyperparasitoids of ectoparasitic or endoparasitic Braconidae and Ichneumonidae and less frequently, of Tachinidae (Diptera). There is a report of a mesochorine reared as a primary endoparasitoid of Lepidoptera. This subfamily consist of 7 genera, of which most species belong to the genus *Mesochorus* Gravenhorst, 1829. The species *Cidaphus alarius* (Gravenhorst, 1829) has been previously recorded from Iran (Masnadi-Yazdinejad & Riedel, 2008). 2 species including one newly recorded species and genus of this subfamily are recorded for the Iranian fauna.

*Cidaphus alarius* (Gravenhorst, 1829)

*Paniscus areolatus* Boie, 1850

*Cidaphus thuringiacus* Brauns, 1889

*Mesochorus gigas* Kriechbaumer, 1897

*Plesiophthalmus brischkei* Szepligeti, 1911

**Material examined:** Ghilan, 1 ♀, Loshan, Amarloo- Damash, 1750 m. 12. VI. 2006, Masnadi-Yazdinejad.

**Distribution:** Eastern and western Palaearctic; Oriental.

**Remark:** This species gets attracted to the light and attacks to ichneumonid species such as *Banchus hastator*, *Dusona cultrator* and *Ichneumon mixtus*. The other known host species are *Ancylys achatana* (Lep.: Tortricidae), *Biston betularia* (Lep.: Geometridae), *Ernestia rudis* (Dip.: Tachinidae), *Furcula bicuspis* (Lep.: Notodontidae), *Melanchra persicariae* (Lep.: Noctuidae) (Yu *et al.*, 2005).

Table 1- The Iranian species of Anomaloniinae

Tribe	Species	Distribution in Iran	References
Anomalonini	<i>Anomalon amsceli</i> (Hedwig, 1961)	Khorasane razavi (Mashhad)	<b>New record</b>
	<i>Anomalon cruentatum</i> (Geoffroy, 1785)	Ardabil (Jeiran)	Morley 1912; Šedivý 1968, Townes & al. 1965, Kolarova & Ghahari 2005
Gravenhorstini	<i>Barylypa amabilis</i> (Tosquinet, 1900)	Gorgan, Gonbad, Kermanshah, Minodasht, Kordkoy, Zabol, Gilan (Rasht)	Meyer 1935; Townes & al. 1965; Kasparyan 1981; Yu & Horstmann 1997; Kolarova & Ghahari, 2005.
	<i>Barylypa delictor</i> (Thunberg, 1824)		<b>New record</b>
	<i>Barylypa helleni</i> Schme, 1989	Ghom (Ghom)	<b>New record</b>
	<i>Barylypa pallida</i> (Gravenhorst, 1829)	Hormozgan (Geno)	Yu and Horstmann, 1997, Kolarov and Ghahari, 2005
	<i>Barylypa transcaspica</i> Kokujev, 1903	Gorgan, Gonbad, Minodasht Shianku,	Townes & al. 1965; Kolarov & Ghahari 2005
	<i>Barylypa uniguttata</i> (Gravenhorst, 1829)	Ramsar	Kasparyan 1981; Kolarov 1986, Kolarov & Ghahari 2005.
	<i>Kokujewiella ibera</i> (Ceballos, 1957)	Hamedan	Aubert & al. 1984; Kolarov & Ghahari 2005.

Table 2- The Iranian species of Crenastinae

Species	Distribution in Iran	References
<i>Cremastus gigas</i> Heinrich, 1953	Fars (Marvdasht)	New record
<i>Pristomerus luridus</i> Kokujev, 1905	Khorasan (Astan-e ghods farm)	New record
<i>Pristomerus vulnerator</i> Panzer, 1799	Azərbaycan-e Gharbi (Kahriz)	Radjabi 1986
<i>Temelucha dorsonigra</i> (Hedwig, 1957)	—	Yu & Horstmann, 1997; Anento & al. 2002, Kolarov & Ghahari 2005 (no locality is mentioned).
<i>Temelucha persicator</i> (Horstmann and Yu, 1999	Gilan (rudbar, Arbenaf, dorfak)	Yu & Horstmann 1997
<i>Temelucha schoenobia</i> (Thomson, 1980)	Golestan (P. M. Golestan)	New record
<i>Trathala hierochontica</i> Schmiedeknecht, 1910	Mazandaran ( Golestan Forest, Tang-e Gol)	New record

**Table 3-** The Iranian known species of subfamily Ctenopelmatinae.

Tribe	Species	Distribution in Iran	References
Mesolini	<i>Mesoleius aulicus</i> <b>Gravenhorst, 1829</b>	Tehran (Dizin, Velayatrud)	<b>New record</b>
Perilissini	<i>Priopoda apicaria</i> (Geoffroy, 1785)	Tehran (Firuzkuh, Markazi district, 12km, N Firuzkuh, Vash village)	Masnadi-Yazdinejad 2008

**Table 4-** The Iranian species of Mesochorinae.

Species	Distribution in Iran	References
<i>Cidaphus alarius</i> (Gravenhorst, 1829)	Ghilan (Loshan, Amarloo- Damash)	Masnadi-Yazdinejad & Riedel, 2008

**Table 5-** The Iranian species of Metopinae.

Species	Distribution in Iran	References
<i>Exochus castaniventris</i> <b>Brauns, 1896</b>	Esfahan (Ardestan, Mahabad)	<b>New record</b>
<i>Exochus gravipes</i> (Gravenhorst, 1829)	————	Kasparyan, 1981; Kolarov & Ghahari, 2005 (No locality is mentioned)
<i>Exochus mitratus</i> <b>Gravenhorst, 1829</b>	Tehran, 1 ♀, Robat Karim, Yagheh	<b>New record</b>
<i>Metopius croceicornis</i> Thomson, 1887	————	Tolkanitz 1987; Kolarov 1995, Kolarov & Ghahari, 2005.
<i>Metopius vespulator</i> Aubert, 1979	————	Yu & Horstmann, 1997, Kolarov & Ghahari, 2005.

Table 6- The Iranian species of Orthopelmatinae.

Species	Distribution in Iran	References
<i>Orthopelma mediator</i> Thunberg, 1822	Tehran, Tabariz, Oromieeh	Talebi <i>et al.</i> , 2004
<i>Orthopelma pavoniae</i> (Gravenhorst, 1829)	Zanjan (Khorramdarreh, Hidaj)	New record

### 5- Subfamily Metopinae

Body small to large (fore wing 3 to 11 mm long); clypeus not separated from face by groove, both forming an evenly convex surface except in *Metopius*, where face has a flat or concave shield-shaped area bounded into triangular process extending between or over toruli; sternaulus of mesopleuron absent or short; ovipositor short, not extending beyond metasomal apex and sometimes with weak dorsal notch some distance from apex.

The species of this cosmopolitan subfamily are koinobiont endoparasitoids of Lepidoptera larvae, usually those in leaf rolls or folds. The oviposition is into the larva and emergence is from the pupa. Metopiinae includes 26 genera and 704 species. Three species from two genera have been previously recorded from Iran. (Kasparyan, 1981, Tolkanitz, 1987, Kolarov, 1995, Yu *et al.*, 2005, Kolarov & Ghahari, 2005). This result consists of three examined specimens including two new reports for the Iranian fauna.

\**Exochus castaniventris* Brauns, 1896

*Exochus meridionalis* Seyrig, 1927

**Material examined:** Esfahan, 1 ♂, Ardestan, Mahabad, 950 m, E. Ebrahimi and M. Parchami-Araghi.

**Distribution:** Eastern and western Palearctic.

**Remark:** It is the first record of the species *E. castaniventris* from Iran.

\**Exochus mitratus* Gravenhorst, 1829

*Exochus affinis* Holmgren, 1858

*Exochus australis* Thomson, 1894

*Exochus paradoxus* Schmiedeknecht, 1900

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*Exochus pseudaffinis* Strobl, 1903

*Exochus britannicus* Morley, 1911

*Exochus punctifer* Schmiedeknecht, 1924

**Material examined:** Tehran, 1 ♀, Robatkarim, Yagheh, 1000 m, 19.V.1992, E. Ebrahimi and M. Badii.

**Distribution:** Eastern and western Palaearctic, Nearctic.

**Remark:** It is a newly recorded endoparasitoid species for the Iranian fauna and known as solitary species that emerges from the pupal stage of *Eudemis porphyra* (Lep.: Tortricidae), *Phycita roborella* (Lep.: Pyralidae), *Yponomeuta malinella* and *Yponomeuta padella* (Lep.: Yponomeutidae) (Yu *et al.*, 2005).

*Metopius croceicornis* Thomson, 1887

*Ichneumon chrysopus* Lewing, 1797, (homonym)

**Material examined:** Tehran, 2 ♂♂, Dizin, Velayatrud, 2500 m, 15.VIII.1993, E. Ebrahimi and M. Parchami-Araghi.

**Distribution:** Eastern and western Palaearctic.

**Remark:** This species emerges from pupal stage of *Cerura vinula* (Lep.: Notodontidae), *Lasiocampa terreni* and *Lasiocampa trifolii* (Lep.: Lasiocampidae) (Yu *et al.*, 2005).

#### 6- Subfamily Orthopelmatinae

Body small (fore wing between 3 to 4 mm long); clypeus small and weakly convex, separated from face by groove, apical margin concave and exposing a semicircular labrum; sternaulus of mesopleuron absent or short; fore wing with areolet open, hind wing without vein *2m-cu*; ovipositor 0.3 – 1.6 times as long as metatibia, its dorsal subapical notch absent. The species of this subfamily are endoparasitoids in galls of Cynipidae on *Rubus* and *Rosa*. Orthopelmatinae consists of one genus (*Orthopelma* Taschenberg, 1865) and 9 species. The species *Orthopelma mediator* Thunberg, 1822 has been previously recorded from Iran (Talebi *et al.*, 2004). The following result includes two examined materials, of which one species is newly recorded for the fauna of Iran. Two species were examined including one species that is newly recorded for the Iranian fauna.

*Orthopelma mediator* Thunberg, 1822

*Ichneumon bedeguaris* Geoffroy, 1785, (homonym)

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*Hemiteles luteolator* Gravenhorst, 1829

*Hemiteles pavoniae* Rondani, 1877

*Orthopelma minutum* Ashmead, 1890

*Orthopelma rosaecola* Ashmead, 1890

**Material examined:** Fars, 1 ♂, Shiraz, Maharlou Lake, 1500 m., 23.IV.1992, M. Badii and H. Mirzayans.

**Distribution:** Western Palaearctic; Nearctic.

**Remark:** This species emerges from the cocoon; or larva/nymph. The host species are *Leucania obsoleta* (Lep.: Noctuidae), *Pristiphora abietina* (Hym.: Tenthredinidae), *Rabdophaga saliciperda* (Dip.: Cecidomyiidae) and *Saturnia pyri* (Lep.: Saturnidae) (Yu *et al.*, 2005).

\**Orthopelma pavoniae* (Gravenhorst, 1829)

**Material examined:** Zanjan, 1 ♀, Khorramdarreh, Hidaj, 1750 m, 29.VII.1992, M. Parchami-Araghi and M. Badii.

**Distribution:** Western Palaearctic.

**Remark:** The species *O. pavoniae* is a new record for the Iranian fauna. The known host species is *Saturnia pyri* (Lep.: Saturnidae) (Yu *et al.*, 2005).

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