

## ICHNEUMONIDAE (HYMENOPTERA) FROM NORTH-EASTERN TURKEY. III.

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ABSTRACT: Faunistic data of 24 species from Turkey are reported. Five species marked in the text by asterisk are new records for Turkish fauna. A zoogeographic characterisation for each species is proposed.

KEY WORDS: Ichneumonidae, Metopiinae, fauna, Turkey, new record, zoogeographic characterisation.

The Ichneumonidae fauna of Turkey is not well studied. In the catalogue of Kolarov (1995) 383 species were listed from Turkey. Later many authors (Kolarov et al., 1997a,b; Kolarov et al., 1999; Kolarov et al., 2002; Çoruh et al., 2002; Kolarov & Gürbüz, 2004; Gürbüz, 2005; Yurtcan & Beyarslan, 2005; Yurtcan & Beyarslan, 2006; Çoruh & Özbek, 2008; Riedel et al., 2010; Kolarov & Çalmaşur, 2011 etc.) have made contributions to the Turkish fauna. In the present paper unpublished data for 24 species from subfamily Metopiinae from North Eastern Turkey are listed. Five species are new record for Turkish fauna. A zoogeographic characterisation for each species is proposed.

### MATERIAL AND METHODS

Materials were collected by sweeping with a hand net and Malaise traps. The stuffing and taxonomical identification of collected material was carried out in the Atatürk University of Erzurum. Generally the taxonomical works of Tolkanitz (1987 and 2007) were used. The materials are preserved in the Entomology Museum of Atatürk University of Erzurum, Turkey.

### RESULTS

#### Subfamily Metopiinae

##### *Colpotrochia cincta* (Scopoli, 1763)

**Material examined:** Artvin: Çoruh valley near Oltu Road, 16.VI.2001, 1 male.

**Distribution:** Palaearctic region.

##### *Colpotrochia tricolor* (Aubert, 1979)

**Material examined:** Kars: Sarıkamış, Karakurt, TCK Fountain, 1500 m, 10-19.VI.2003, 1 female (from Malasia trap), 22.VI.2010, 1 females, 2 males.

**Distribution:** Turkey.

##### *Drepanoctonus tricoloratus* (Sedivy, 1971)

**Material examined:** Kars: Sarıkamış, Karakurt, TCK Fountain, 1500 m, 16-23.VIII.2002, 9 females, 11 males, 23-29.VIII.2002, 2 females, 2 males, 8-14.IX.2002, 2 females, 5 males, 10-19.VI.2003, 7 females, 11 males, 29.VII-08.VIII.2003, 1 female, 1 male,

08.VIII.2003, 1 males, 08-19.VIII.2003, 2 females, 3 males (from Malasia trap), 19.VIII.2003, 1 male, 17.VIII.2005, 1 female.

**Distribution:** Ukraine, Georgia, Turkey, Russia-Chita oblast and Mongolia.

***Exochus albicinctus* Holmgren, 1873**

**Material examined:** **Erzurum:** Aribahçe, 2000-2400 m, 20.VII.2001, 1 male; Hınıs 40 km SE, 1800 m, 14.IX.2002, 1 male; Narman, Kireçli, 2000 m, 02.VII.2000 m, 1 male; Pasinler, Küprükçöy, Kayabaşı, 1600 m, 14.VI.2004, 1 male.

**Distribution:** Palaearctic region.

**\**Exochus bolivari* Seyrig, 1927**

**Material examined:** **Artvin:** Yusufeli 2-8 km SW Altıparmak, 1300 m, 25-27.VII.2005, 1 female.

**Distribution:** Spain, France, Corsica and Moldova.

***Exochus britannicus* Morley, 1911**

**Material examined:** **Kars:** Sarıkamış, Karakurt, TCK Fountain, 1500 m, 09-27.VIII.2004, 1 female (from Malasia trap). **Konya:** Güneysınır, Güragaç, 1020 m, 08.VIII.2002, 1 female.

**Distribution:** United Kingdom, Poland, Hungary, Romania, Moldova, Turkey, Kazakhstan and Russia-Chita oblast.

***Exochus castaniventris* Brauns, 1896**

**Material examined:** **Konya:** Güneysınır, Güragaç, 1020 m, 16.VII.2000 m, 1 male. **Erzurum:** University Campus, 1850 m, 08-11.VII.1999, 3 females, 1 male.

**Distribution:** Spain, France, Malta, Poland, Hungary, Romania, Greece, Bulgaria, Moldova, Georgia, Turkey, Russia-Volgograd oblast, Kazakhstan, Uzbekistan and Egypt.

***Exochus consimilis* Holmgren, 1858**

**Material examined:** **Erzurum:** Çat, Çirişli, 2000 m, 01.VII.2002, 1 male; Oltu, Tutmaç-Başaklı, 1900 m, 01.VII.2000, 1 male. **Rize:** Ovit Mt., 2400 m, 29.VII.2003, 1 male; İkizdere, Çamlık, 1600-2000 m, 29.VII.2000 m, 1 male.

**Distribution:** Holarctic region.

***Exochus erythronotus* (Gravenhorst, 1820)**

**Material examined:** **Kars:** Sarıkamış, Karakurt, TCK Fountain, 1500 m, 27.V.2003, 1 male.

**Distribution:** Madeira Islands, Europe, Georgia, Turkey and Armenia.

**\**Exochus ferus* Tolkanitz, 1993**

**Material examined:** **Rize:** Ayder, Çamlıhemşin, 1200-1550 m, 30.VII.2000, 1 male.

**Distribution:** Hungary, Eastern Europe, Armenia, Kazakhstan, Siberia and Sakhalin.

**\**Exochus flavifrons* Boheman, 1863**

**Material examined:** **Erzurum:** Oltu-Başaklı, 2100 m, 24.VII.2005, 1 male.

**Distribution:** Sweden, Finland, Germany, Poland, late Czechoslovakia, Hungary, Bulgaria, Moldova and Ukraine.

***Exochus lictor* Haliday, 1838**

**Material examined:** **Kars:** Sarıkamış, Karakurt, TCK Fountain, 1500 m, 02.V.2000 m, 1 male. **Rize:** Ayder Çamlıhemşin, 1200-1550 m, 30.VII.2000 m, 1 male.

**Distribution:** Holarctic region.

***Exochus mitratus* Gravenhorst, 1829**

**Material examined:** **Artvin:** 300 m, 16.V.2006, 1 male; Yusufeli Morkaya, 1300 m, 27.VII.2003, 1 male. **Bayburt:** Aydıntepe, Arpalı, 17.VI.2010, 1 male; Yoncahık, 2800-2900 m, 5.VII.2000, 2 males. **Bingöl:** Karlıova, Çobantaşı, 1455 m, 10.VIII.2004, 1 male.

**Erzurum:** University Campus, 1850 m, 8.VI.2005, 1 female, 12.VI-2.VII.2004, 1 female, 10.VIII.2000 m, 1 male, 23.VII.2005, 1 female; Konaklı, 2000-2400 m, 22.VII.2000 m, 3

males, 2 females; Gölet, 22.VII.2006, 1960 m, 1 male; Aşkale, 1950 m, 28.V.2001, 2 females; 28.VI.2000, 1 female; 14.VII.2000 m, 2 females, 1 male, İlica, Gülyurt, Bakımevi, 2100 m, 16.VI.2002, 2 males; Narman Kireçli, 2000 m, 2.VII.2000 m, 1 male; Oltu-Başaklı, 2100 m, 24.VII.2005, 1 male, Kaleboğazı, 8.VIII.2000, 1 female, Sarısaz, 1450 m, 18.V.2000 m, 1 female, Tutmaç-Başaklı, 1700-2000 m, 1-2.VII.2000 m, 3 females, 3 males; Tortum, Petrol Ist. Karşısı, 1700 m, 24.V.2005, 1 male; Uzundere, 1200 m, 16.V.2003, 1 male; 21.VII.2000 m, 1 male; Balkalı, 1040 m, 29.VI.2003, 1 male; 10.VII.2003, 1 male. **Kars:** Aras Valley, 1500-1600 m, 23.V.2001, 1 male; Arpaçay Küçükpirveli, 1800 m, 27.VII.2000 m, 1 male; Il Sınırı, 1470 m, 14.VI.2004, 1 female; Sarıkamış, Karakurt, TCK Fountain, 1500 m, 2.V.2000, 1 male; 8-14.0.2002, 1 female. **Rize:** İkizdere, Ovit Mt., 2400-2600 m, 11.VII.2000, 1 male; Çamlık, 1600 m, 29.VIII.2000 m, 1 male.

**Distribution:** Holarctic region.

#### *Exochus protuberans* Kolarov & Çoruh, 2009

**Material examined:** Erzurum: Ispir, Maden Köprübaşı, 1450 m, 17.VII.2003, 1 female.

**Distribution:** Turkey.

#### *Exochus suborbitalis* Schmiedeknecht, 1924

**Material examined:** Ağrı: Eleşkirt, Alkuşak, 2100 m, 22.VI.2002, 1 male. **Ardahan:** Göle Ormanlık Alan, 2160 m, 25.VII.2005, 1 male. **Artvin:** Yusufeli, 21.IX.2000, 1 female. **Bayburt:** Maden, 1050 m, 16.VI.2000, 1 female. **Bingöl:** Yenibağlar, 3.VI.2003, 1400 m, 1 male. **Erzincan:** Mercan Yollarüstü, 1360 m, 4.VIII.2003, 1 male. **Erzurum:** University Campus, 1850 m, 4.VII.2000, 1 male, 20-28.VII.2003, 1 male (from malasia trap); 10.VIII.2000, 2 males; Söğütlü, 1900 m, 15.VI.2002, 1 male; 8-11.VIII.1999, 4 males (from malasia trap); Horasan, 1750 m, 4.V.2000, 1 male; Oltu Inanmış, 1700 m, 26.VII.2000, 1 male, Sarısaz, 21.IX.2000, 1 female, Tutmaç-Başaklı, 1700-2100 m, 31.VII.2001, 1 female; Olur Süngübayır, 1850 m, 30.VII.1999, 2 males; Uzundere, 27.VI.2000, 2 males. **Kars:** Sarıkamış, Karakurt, TCK Fountain, 1500 m, 6-20.VIII.2003, 1 male.

**Distribution:** Europe, Caucasus, Turkey, Kazakhstan and Siberia.

#### \**Exochus thomsoni* Schmiedeknecht, 1924

**Material examined:** Erzurum: University Campus, 1850 m, 26.IX.2000 m, 1 female; Oltu, Inanmış, 1700 m, 27.VII.2000 m, 1 male.

**Distribution:** Europe, Caucasus, Kazakhstan, Middle Asia, Siberia and Far East of Russia.

#### *Exochus vafer* Holmgren, 1873

**Material examined:** Erzincan: Çağlayan Road Side, 1100 m, 6.VII.2001, 1 male. **Erzurum:** İlica, Ağzıaçık Geçidi, 2000 m, 19.VII.2003, 1 male; Tortum, Kazandere, 1190 m, 3.VIII.2004, 1 male.

**Distribution:** Europe, Caucasus, Turkey, Kazakhstan and Siberia (Chita oblast of Russia).

#### *Hypsicera femoralis* (Geoffroy, 1785)

**Material examined:** Ağrı: Doğubeyazıt, 15.VI.2001, 1 male. **Erzurum:** Cat, 2000 m, 11.VII.1994, 1 male.

**Distribution:** Cosmopolitan species, introduced into South Africa.

#### *Metopius (Peltastes) pinatorius* Brullé, 1846

**Material examined:** Erzurum: Arıbahçe, 2000-2400 m, 20.VII.2001, 1 female.

**Distribution:** Europe, Turkey, Turkmenistan, Siberia and Pacific coast of Russia.

#### *Metopius (Peltocarus) dentatus* (Fabricius, 1779)

**Material examined:** Bayburt: Maden, 1650 m, 16.VI.2000 m, 1 male. **Erzurum:** Pasinler, Çahyazı, 2400 m, 10.VII.1997, 1 female.

**Distribution:** Libya, Europe, Georgia, Turkey, Cyprus, Israel, Turkmenistan, Uzbekistan and Pacific coast of Russia.

#### *Spudaeus scaber* (Gravenhorst, 1829)

**Material examined:** Bayburt: Kop. Mt., 2300 m, 25.VI.2004, 1 male.

**Distribution:** Europe, Turkey, Kazakhstan and North America.

**\**Triclistus longicalcar* Thomson, 1887**

**Material examined:** **Artvin:** Genya Mt., 1900 m, 14.VII.2003, 1 female. **Erzurum:** University Campus, 1850 m, 7.VI.2003, 1 male; 9.VI.2005, 1 male; 14.VI.2004, 1 male; Palandöken DSİ Göleti, 2000 m, 12.X.2002, 1 male; Ispir, Gülyurt Mt., 2400 m, 7.VII.2004, 1 female; Oltu Inanmış, 1700 m, 26.VII.2000 m, 1 male; Olur Yeşilbağlar, 1000 m, 29.VI.2003, 1 female; Tekman Yaylası, 2450 m, 19.VII.2005, 1 female.

**Distribution:** Europe.

***Triclistus podagricus* (Gravenhorst, 1829)**

**Material examined:** **Erzurum:** İlica Athikonak, 2100 m, 21.VI.2004, 1 female; Olur, Yeşilbağlar, 1200 m, 25.VI.2001, 1 male.

**Distribution:** Holarctic region.

***Trieces tricarinatus* (Holmgren, 1858)**

**Material examined:** **Erzurum:** Dadaşköy, 9.VII.2004, 2 males, 1 female; Uzundere, Balıklı, 1040 m, 29.VI.2003, 1 male.

**Distribution:** Europe and Turkey.

**Zoogeographical characterisation**

The zoogeographic characterisation follows mainly the chorotype classification of the Near East fauna, proposed by Taglianti et al. (1999). After investigation of the recent geographic distribution of the species listed above, they can be divided into the following groups:

1. Cosmopolitan range: *Hypsicera femoralis*.
2. Holarctic chorotypes: *Exochus consimilis*, *E. lictor*, *E. mitratus*, *Spudaeus scaber* and *Triclistus podagricus*.
3. Palaearctic ranges: *Colpotrochia cincta*, *Exochus albicinctus*, *E. ferus*, *E. thomsoni*, *E. vafer*, *Metopius (Peltastes) pinatorius* and *M. (Peltocarus) dentatus*.
4. Sibero-European chorotypes: *Drepanoctonus tricoloratus* (Sibero-Eastern European chorotype), *Exochus britannicus* and *E. suborbitalis*.
5. Europeo-Mediterranean range: *Exochus castaniventris*.
6. European chorotypes: *Exochus bolivari*, *E. erythronotus*, *E. flavifrons*, *Triclistus longicalcar* and *Trieces tricarinatus*.
7. Eastern Anatolian endemic ranges: *Colpotrochia triclistor* and *Exochus protuberans*.

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