

**NEW RECORDS AND SOME NEW DISTRIBUTION DATA TO
THE TURKISH ALLANTINAE, BLENNOCAMPINAE,
HETERARTHRIINAE, AND SELANDRINAE
(TENTHREDINIDAE, SYMPHYTA, HYMENOPTERA) FAUNA**

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ABSTRACT: In this study, four species have been determined from North Eastern of Anatolia Region belonging to family of Tenthredinidae as the first records from Turkey. Totally 12 species were given with new distribution data. All species in this paper were determined and pictured with body, antenna and fore wing of species. The number of the species of Turkish Symphyta fauna has risen up to 360 with new records.

KEY WORDS: Fauna, Hymenoptera, new records, Tenthredinidae, Turkey

Turkey is a biologically diverse region due to its variable topography and climate which provides many different habitats (Çıplak, 2003a; 2008; Korkmaz et al., 2010b), being a natural bridge between Europe and Asia (Kosswig, 1955; Çıplak et al., 2002) and an overlapping area of three phytogeographic regions: Euro-Siberian, Mediterranean and Irano-Turanian (Davis, 1965; Zohary, 1973). The topographic and climatic structures of Turkey give it a rich and diverse fauna and flora. The order Hymenoptera is one of the most diverse and species group of insects which include more than 250.000 described species world-wide (Gullan & Cranston, 2010).

The suborder Symphyta includes those Hymenoptera, which are structurally primitive, most families and superfamilies are relatively small taxa containing, world-wide, about 8631 species (Taeger & Blank, 2011). Symphytans may be recognized by the absence of a marked constriction between the first and second abdominal segments, and by the possession of at least one closed anal cell in the forewing. The larvae have well-developed head capsule and most have thoracic legs; the majority of free-feeding larvae are caterpillar-like with abdominal prolegs. With the exception of the Orussidae the larvae are phytophagous (Gauld & Bolton, 1988; Goulet & Huber, 1993).

The Tenthredinoidea is the largest superfamily of Symphyta, contains 8 families and, 7456 species in these families (Taeger & Blank, 2011). The family Tenthredinidae (Hymenoptera) is called Sawflies; it is a large family, including more than seven-eighths of all members belonging to the suborder Symphyta (Chalastogastra) (Comstock, 1964).

Tenthredinidae is the best represented in the North temperate regions; species richness tends to increase from south to north. There are more than 6000 species in 360 genera in temperate regions of the northern hemisphere (Liston, 1995; Goulet & Huber, 1993; Taeger & Blank, 1998; Lacourt, 1999). More than 900 species occur in Europe (Liston, 1995), and 5721 species in the world (Taeger & Blank, 2011). There is considerable disagreement over the composition of the various subordinate groups. Lacourt (1999) divided the family into 14 subfamilies in his catalog. More recently, Taeger & Blank (2011) recognized 7 subfamilies. The

Turkish fauna is comparatively poorly studied despite its zoogeographic interest. The first comprehensive study on the sawfly fauna of Turkey was conducted by Guichard & Harvey (1967).

Benson (1966, 1968) made a faunistic and systematical study on the Symphyta of Turkey, and described new taxa and constructed keys to some genera and species occurring in Turkey. Later, Wolf (1968) and Chevin & Chenon (1982), recorded some sawfly species from Turkey. Since Chevin & Chenon (1982) no additional faunistic study has been conducted, although some studies have appeared dealing with different sawfly pests on various cultivated, forested areas, and ornamental plants (Alkan, 1948; Özeren, 1970; Baş, 1973). In recent years, several studies have been published on Turkish sawflies and a number of new records have been reported (Çalmaşur, 2006, 2011; Çalmaşur & Özbek 2004a, b, c, 2006a, b; Blank & Taeger, 2006; Hastoğlu & Başbüyük, 2006, Korkmaz et al., 2010a, b; Budak et al., 2011).

In this study were reported six species of sawflies for the Turkish fauna for the first time. These new records with combination of data from literature reveal that the total number of symphytan species in Turkey is well above 360.

MATERIALS AND METHODS

The present paper is based on specimens collected during 1996-2005 in various localities of Turkey by the author. In addition, some material in the Entomology Museum Erzurum, Turkey (EMET), was evaluated and included in this work. Although the specimens have been collected in different parts of the country, the majority of the sawfly samples were collected from eastern Turkey.

The habitats were mainly alpine meadows, mountain tundra, roadsides, and uncultivated areas between cultivated lands, orchards and open areas in forests. Material collected by insect net. The materials mentioned in this study were deposited in EMET, Turkey. For determination of the material, Benson (1952) and Zhelochovtsev (1988) were used. Undetermined specimens were identified and others confirmed by Dr. David R. Smith. Species were treated in alphabetical order with in the subfamily. The genera and species are listed in the alphabetic order and distribution data in the World is organized according to Taeger & Blank (2011). All records were arranged in the following way: province, town, local place, geographic name and altitude if available, date of collecting, number of individuals as male and female.

RESULTS

Allantinae

Monostegia abdominalis (Fabricius, 1798)

Head and thorax black except for the clypeus, labrum and some of the mouthparts, tegula, and edge of the pronotum, which are yellow; legs yellow except more or less bases of coxae; abdomen ochreous. Wings suffused with brown from the base; stigma and venation piceous becoming yellow at extreme base. In male, tergites often brown. Tarsal segments short, broadened apically. 5-8th antennal segments in female serrate (Figs. 1,2,3,a). Body 6-8.

General Distribution: Austria, Belgium, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Jordan, Lithuania, Luxembourg, Macedonia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, USA, Yugoslavia (Serbia and Montenegro).

Distribution in Turkey: Amasya, Ankara, Samsun, Tokat, Trabzon (Benson, 1968).

Material examined: Artvin: Yusufeli, Altıparmak, 12.VI.1997, 1 ♀.

Host plants: *Lysimachia vulgaris*, *Lysimachia nummularia*, *Anagallis arvensis*, *Glaux maritima* (Lacourt, 1999).

Blennocampinae

***Ardis sulcata* (Cameron, 1882)**

Head, thorax and abdomen all black; legs black with knees and front of fore and middle tibiae and tarsi brown (Figs. 1,2,3,b). Body 5-7.

General Distribution: Austria, Croatia, Czech Republic, Germany, Great Britain, Italy, Slovakia, Spain, Switzerland.

Distribution in Turkey: New for Turkish fauna.

Material examined: Bayburt: Çalidere, 16.VI.2000, 1850 m, 1 ♀; Erzurum: Aziziye, Athkonak, 20.V.2000, 2000 m 1 ♂.

Host plant: *Rosa* spp. (Lacourt, 1999).

***Blennocampa phyllocolpa* Viitasaari & Vikberg, 1985**

Body short, black; tibiae and tarsi whitish. Claws sharply curved, barely projecting beyond pulvilli. Third antennal segment at least twice to fourth. Parietals sparsely punctate, lustrous (Figs. 1,2,3,c). Body 4.

General Distribution: Austria, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Kazakhstan, Latvia, Luxembourg, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia and Montenegro).

Distribution in Turkey: Sivas (Taeger & Blank, 2011).

Material examined: Erzurum: Tortum, Uzunkavak, 12.VII.2001, 1800 m, 1 ♀.

Host plant: *Rosa canina* (Zhelochovtsev, 1988).

***Eurhadinoceraea athalioides* (Jakowlew, 1891)**

Head black except for above of eye, thorax laterally and abdomen yellow, proscutum black, tegulae yellow, sheath black. 3rd, 4th and 5th antennal segments equal length. Legs yellow except for tarsi. Wings infuscate (Figs. 1,2,3,d). Body 5-6.

General Distribution: China, France, Germany, Kyrgyzstan, Russia.

Distribution in Turkey: New for Turkish fauna.

Material examined: Erzurum: Arasvadisi, 23.V.2001, 1600 m, 1 ♀; Kars: Sarkamış, Karakurt, Şeytangeçmez, 27.V.2003, 1450 m, 1 ♀.

Host plant: *Pulsatilla vulgaris* (Lacourt, 1999).

***Eutomostethus gagathinus* (Klug, 1816)**

Abdomen black. Parietals glabrous. Legs yellow. Antennal segments nearly equal long, antenna black on base, upper surface of flagellum brown, IX. antennal segment flat. Hind wings with 1 central cell (Figs. 1,2,3,e). Body 5-6.

General Distribution: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Israel, Italy, Kazakhstan, Latvia, Macedonia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia and Montenegro).

Distribution in Turkey: Erzurum (Benson, 1968).

Material examined: Erzurum: Aşkale, 23.V.2000, 1700 m, 3 ♀♀, Dumlu, Köşk, 01.VI.1995, 1850m, 1 ♀, 26.V.2002, 2 ♀♀; Atlıkonak, 08.VI.2001, 2400m, 1 ♀, 13.VI.2002, 2000m, 1 ♀, 21.VI.2004, 2100m, 1 ♀; Şenkaya, Ormanlı, 20.V.1994, 1800 m, 1 ♀; Gümüşhane: Vauk Geçidi, 21.VI.2001, 1850 m, 1 ♂.

Host plant: *Jungus* spp. (Lacout, 1999).

***Eutomostethus luteiventris* (Klug, 1816)**

Abdomen yellow, basally and apically black, head and thorax black, scarcely punctured and shining. Face and frons glabrous. Legs yellow except for the black coxae, trochanters and bases of femora especially on fore legs in female (Figs. 1,2,3,f). Body 5-7.

General Distribution: Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, USA.

Distribution in Turkey: New for Turkish fauna.

Material examined: Artvin: Kafkasör, 22.V.2001, 1300 m, 1 ♂.

Host plant: *Juncus inflexus*, *J. effusus* (Lacourt, 1999).

***Halidamia affinis* (Fallén, 1807)**

Head and antenna black except for light spots on ventral side of antennal segments 6 to 9. Thorax black with edge of tegula, metapleuron, and posterior central edge of mesopleuron orange. abdomen and legs yellow. Black pattern on abdomen variable. Genae narrow linear. Sheath long and broadly rounded at apex (Figs. 1,2,3,g). Body 5-6.

General Distribution: Algeria, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Israel, Italy, Latvia, Luxembourg, Macedonia, Moldova, Morocco, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, USA.

Distribution in Turkey: Amasya (Benson, 1968).

Material examined: Artvin: Ardanuç, Ferhatlı, 21.V.2002, 450 m, 1 ♀; Erzurum: University Campus, 7.VI.2002, 1850 m, 1 ♀.

Host plant: *Galium aparine*, *G. molluga* (Lacourt, 1999).

***Monardis plana* (Klug, 1817)**

Black except that the front of fore and middle knees and tibiae may be brownish, wings slightly infuscate with black venation. Genal length equal to ocellar diameter. 3rd segment of Antenna about one and a half times length of 4th, 5th to 9th each slightly shorter than the segment in front. Sheath with obtuse apical denticle. Tegulae black (Figs. 1,2,3,h). Body 6-7.

General Distribution: Austria, Belgium, Bosnia and Herzegovina, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Hungary, Italy, Latvia, Macedonia, Netherlands, Romania, Russia, Slovakia, Spain, Switzerland, Ukraine.

Distribution in Turkey: New for Turkish fauna.

Material examined: Kars: Sarıkamış, 13.VI.2003, 1990 m, 1 ♂.

Host plant: *Rosa* spp. (Lacourt, 1999).

***Monophadnus pallescens* (Gmelin, 1790)**

Head and antenna black. Thorax black with tegula dull white to reddish brown. Legs with each coxa, trochanter, and most of each femur black; extreme apex of each femur and each tibia white; each tarsus white, infuscate apically. Abdomen black. Antenna with second segment slightly longer than wide; third segment subequal in length to fourth plus fifth segments. Claws without denticle. Denticles of saw triangular. Wings more or less transparent, light colored (Figs. 1,2,3,i). Body 5-6.

General Distribution: Andorra, Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, USA.

Distribution in Turkey: Rize, Trabzon (Benson, 1968), Erzurum (Pasinler) (Çalmaşur & Özbek 2004 b).

Material examined: Erzurum: Airport road, 11.V.2003, 1850 m, 2 ♀♀; 23.V.2003, 5 ♀♀; Oltu, Sarısaz, 17.V.2003, 1350 m, 1 ♀.

Host plant: *Anemone nemorosa*, *Ranunculus acris*, *R. repens* (Lacourt, 1999).

***Pareophora pruni* (L., 1758)**

Body ovoid, antennae short. Head and thorax black, abdomen and legs yellow. 3rd antennal segment slightly longer than 4th (Figs. 1,2,3,j). Body 5-6.

General Distribution: Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Great Britain, Greece, Hungary, Italy, Latvia, Luxembourg, Netherlands, Poland, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Distribution in Turkey: Sivas (Taeger & Blank, 2011).

Material Examined: Erzurum: Athkonak, 08.VI.2001, 2400 m, 2 ♀♀.

Host plant: *Prunus spinosa*, *P. dulcis* (Zhelokhovtsev, 1988).

Heterarthrinae***Endelomyia aethiops* (Gmelin, 1790)**

Body black, tegulae black. Fore and mid tibiae dirty yellow on outer side. Hind tibiae without white ringed. The wings are uniformly infuscate. Stigma light coloured (Figs. 1,2,3,k). Body 4-5.

General Distribution: Albania, Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Kyrgyzstan, Latvia, Luxembourg, Macedonia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, USA.

Distribution in Turkey: Samsun (Benson, 1968).

Material examined: Kars: Sarıkamış, 13.VI.1900, 1 ♀.

Host plant: *Rosa canina*, *Rosa* sp. (Zhelokhovtsev, 1988).

Selandrinae***Birka cinereipes* (Klug, 1816)**

Epicranium hardly rising above ocelli. Antennal segments longer than after ones. Legs black marked with white; the hind tibia black apically; claws with small subapical tooth. Tarsi entirely black. Tibiae White from base up to middle (Figs. 1,2,3,l). Body 4-6.

General Distribution: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Latvia, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine.

Distribution in Turkey: Bolu (Benson, 1968).

Material examined: Artvin: Genya Mountain, 11.VII.2003, 1800 m, 1 ♂.

Host plant: *Myosotis scorpioides* (Lacourt, 1999).

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Figure 1. Lateral view of Sawfly species. a. *Monostegia abdominalis*, b. *Ardis sulcata*, c. *Blennocampa phyllocolpa* d. *Eurhadinoceraea athalioides* e. *Eutomostethus gagathinus* f. *E. luteiventris* g. *Halidamia affinis* h. *Monardis plana* i. *Monophadnus pallescens* j. *Pareophora pruni* k. *Endelomyia aethiops* l. *Birka cinereipes*.

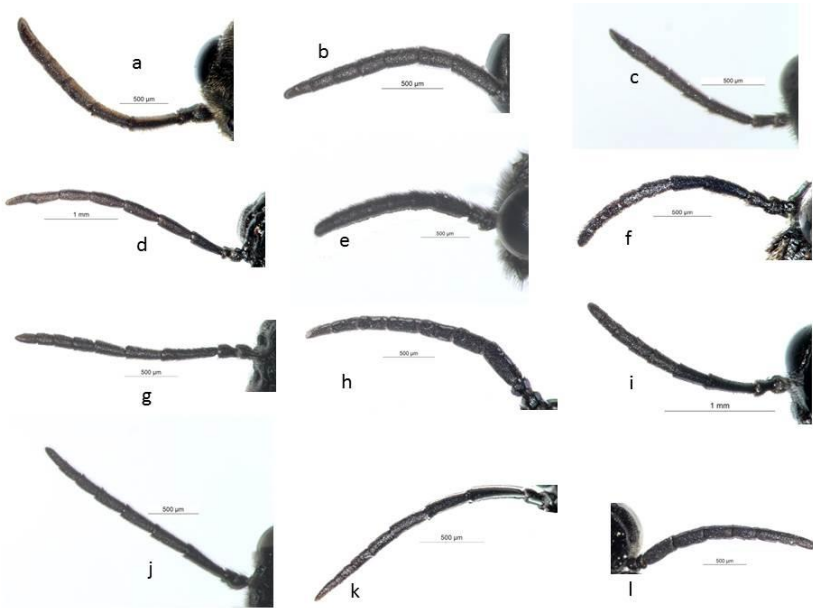


Figure 2. Antenna of Sawfly species. a. *Monostegia abdominalis*, b. *Ardis sulcata*, c. *Blennocampa phyllocolpa* d. *Eurhadinoceraea athalioides* e. *Eutomostethus gagathinus* f. *E. luteiventris* g. *Halidamia affinis* h. *Monardis plana* i. *Monophadnus pallescens* j. *Pareophora pruni* k. *Endelomyia aethiops* l. *Birka cinereipes*.

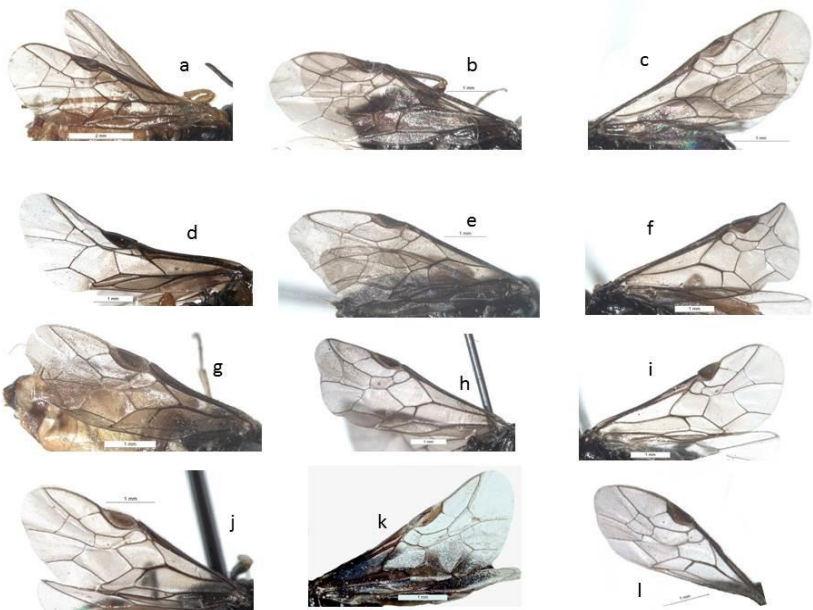


Figure 3. Wings of Sawfly species. a. *Monostegia abdominalis*, b. *Ardis sulcata*, c. *Blennocampa phyllocolpa* d. *Eurhadinoceraea athalioides* e. *Eutomostethus gagathinus* f. *E. luteiventris* g. *Halidamia affinis* h. *Monardis plana* i. *Monophadnus pallescens* j. *Pareophora pruni* k. *Endelomyia aethiops* l. *Birka cinereipes*.