

**A FAUNISTIC STUDY AND SOME ECOLOGICAL
OBSERVATIONS ON
EUMENIDAE (INSECTA: HYMENOPTERA) SPECIES OF
PROVINCES OF AKSARAY, KIRŞEHİR AND NEVŞEHİR**

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ABSTRACT

In this study, the Eumenidae family (Insecta: Hymenoptera) has been investigated faunistically in the Middle Anatolia and within the family, adult individuals' natural habitats and their food plants have been determined at the end of the natural ecological observations. 37 species and subspecies from Aksaray province, 42 from Kırşehir province, and 33 from Nevşehir province have been recorded. Among these, 37 species and subspecies for Aksaray, 41 for Kırşehir, and 30 for Nevşehir have been new records.

Keywords: Eumenidae, Fauna, Ecology, Aksaray, Kırşehir, Nevşehir.

**AKSARAY, KIRŞEHİR VE NEVŞEHİR İLLERİ EUMENIDAE
(INSECTA: HYMENOPTERA) FAUNASI ÜZERİNE BİR
ARAŞTIRMA VE BAZI EKOLOJİK GÖZLEMLER**

ÖZET

Bu çalışmada Eumenidae familyası (Insecta: Hymenoptera) Orta Anadolu'da faunistik olarak araştırılmıştır. Bu familyanın doğal habitatlarındaki ergin bireyleri ve yedikleri bitkiler doğal ekolojik gözlemlerin sonucunda belirlenmiştir. Aksaray ilinden 37, Kırşehir ilinden 42 ve Konya ilinden 33 tür ve alt tür kayıt altına alınmıştır. Bunlar arasında Aksaray ilinden 37, Kırşehir ilinden 41 ve Nevşehir ilinden 30 tür ve alt tür yeni kayıttır

Anahtar Kelimeler: *Eumenidae, Fauna, Ecology, Aksaray, Kırşehir, Nevşehir*

1. INTRODUCTION

The family Eumenidae includes 3000 species through the world. They are in Aculeata group of Apocrita subordo. They live soliter. They make their nests with mud and clay, collect Lepidoptera (Geometridae, Tortricidae) carterpillars and Coleoptera (Curculionidae, Chrysomelidae) larvae for their offspring [1]. They have an important role in biological control. The adult wasps feed on carbohydrates from the nectaries of flowers and the honey dew of aphids. The species of flowers visited by eumenid wasps according to the flowering period of the plants and the flight periods of the wasps [2].

The study area, Aksaray, Kırşehir and Nevşehir provinces, covering Middle Anatolia are within the Iran-Turan floristic region. The plain under 1000m altitude are covered with Iran-Turan originated steps while those over 1000m are covered with antropogenic mountain steps. There are natural coniferous forests and oak groves over 1300-1800m altitude around Çiçek Mountain in Kırşehir and Hasan Mountain in Aksaray. Some walleys, like Ihlara and Selime Walleys, are natinal naturpark [3].

The Eumenidae family represents 250 species from 43 genus in Turkey [4]. There were known totally 12 species and subspecies from Nevşehir province [5-10], three species from Kırşehir province [5, 6, 11]. There were not known any species from Aksaray province.

With this study it is aimed to expose the Fauna of Eumenidae of Aksaray, Kırşehir and Nevşehir provinces, their habitat preferences, food plants.

2. MATERIAL AND METHOD

Total of 426 (326 ♀♀, 100 ♂♂) samples were collected from their habitats with net from May 1999 to October 2003 and they were prepared as standart museum materials. Samples were identified according to their morphology [5, 6, 7, 10-34] Some of samples were identified by Dr. Josef Gusenleitner (Linz-Austria). Samples were collected mostly near the surface of standing water, mud and stones near creek and they were at the height of 5-6 cm from ground during flying. Some of samples were collected over plants. Plants were identified in Herbarium of Ankara University. The habitats were classified according to their ecological features and vegetation types. The habitat, the species prefer, were attempted to be determined. Studied areas divided into 10 catagories: Plain Steppe (nonwooded steppe with herbaceous plants, thorny plants mostly

under 1000-1200m altitude); Mountain Steppe (wooded steppe with herbaceous plants mostly over 1200m altitude); Humid Meadows (grassy areas near and around creek and water basin, *Mentha* species are dominant); Gallery Forest (natural woods that become near stream in valleys); Coniferous Forest (*Pinus* species dominate); Mixed Quercus Forest (*Quercus* species dominate); Ruderal (near roads); Segetal (wet or dry agricultural areas); Cultivated Areas (the places around the city with cultivated plants); Water Sources (natural or artificial water sources).

3. RESULTS

Raphiglossa eumenoides eumenoides S.S.Saunders, 1850

Material Examined (1♀): Kırşehir: Kaman, Köprüköy, 1300m, 30.08.2002, 1♀. **Phenology:** August. **Habitat Type:** Mountain Steppe, Water sources. **Plant Records:** *Alhagi* sp.

Tropidodonynerus interruptus interruptus (Brullé, 1832)

Material Examined (1♂): Kırşehir: Center, 950m, 11.07.2002, 1♂. **Phenology:** July. **Habitat Type:** Cultivated areas.

Odynerus (Odynerus) melanocephalus armeniacus (Morawitz, 1885)

Material Examined (3♀♀, 2♂♂): Aksaray: Güzelyurt, 1600m, 21.06.2003, 1♀, 1♂; Kırşehir: Akçakent, Mahzenli, 1250m, 22.06.2003, 2♀♀; Nevşehir: Ürgüp, 1100m, 20.06.2003, 1♂. **Phenology:** June. **Habitat Type:** Mountain Steppe, Water sources, Humid Meadows. **Plant Records:** *Mentha* sp.

Hemipterophilus aberrans (Morawitz, 1885)

Material Examined (28♀♀): Aksaray: Güzelyurt, Ihlara Valley, 1250m., 15.06.2001, 8♀♀; Taşpınar, Helvadere (Hasandağ), 1450m., 16.06.2001, 3♀♀, Yenipınar (Hasandağ), 1400m., 16.06.2001, 5♀♀; Hasandağ, 1550m., 19.06.2003, 6♀♀; Melendiz, 1600m., 19.06.2003, 1♀; Ortaköy, 1300m., 21.06.2003, 1♀; Güzelyurt, 1600m., 21.06.2003, 2♀♀; Kırşehir: Akçakent, Mahzenli, 1250m., 22.06.2003, 2♀♀. **Phenology:** June. **Habitat Type:** Mountain Steppe, Water sources.

Hemipterophilus bembeciformis bembeciformis (Morawitz, 1867)

Material Examined (1♀, 1♂): Kırşehir: Center, Güneykent, 900m., 22.06.2003, 1♀, 1♂. **Phenology:** June. **Habitat Type:** Humid Meadows.

Alastor (Alastor) mocsaryi (André, 1884)

Material Examined (3♂♂): Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 1♂; Nevşehir: Center, 1000m., 02.07.2003, 2♂♂. **Phenology:** July. **Habitat Type:** Ruderal.

Microdynerus (Pseudomicrodynerus) eurasius Blüthgen, 1938

Material Examined (2♀♀, 1♂): Aksaray: Güzelyurt, 1250m, 05.07.2001, 1♀; Kırşehir: Akpınar, Hamit, 1000m, 19.07.2000, 1♂; Nevşehir: Ürgüp,

1100m, 05.07.2001, 1♀. **Phenology:** July. **Habitat Type:** Mountain Steppe, ruderal, Humid Meadows. **Plant Records:** *Rubus* sp.

Leptochilus (Euleptochilus) limbiferus anatolicus Blüthgen, 1955

Material Examined (1♀): Kırşehir: Çiçekdağ, Akçakent Road, 1300m, 20.07.2000, 1♀. **Phenology:** July. **Habitat Type:** Mountain Steppe, ruderal. **Plant Records:** *Xanthium spinosum*.

Tachyancistrocerus rhodensis (Saussure, 1855)

Material Examined (5♀♀): Aksaray: Ortaköy, 1100m, 18.07.2003, 2♀♀; Kırşehir: Mucur, 1000m, 16.07.2003, 1♀; Nevşehir: Kozaklı, 1000m, 16.07.2003, 2♀♀. **Phenology:** July. **Habitat Type:** Plain Steppe, Water sources. **Plant Records:** *Mentha* sp., *Vitis* sp.

Eustenancistrocerus (Eustenancistrocerus) israilensis Giordani Soika, 1952

Material Examined (2♀♀): Aksaray: Hasandağ, 1500m, 11.07.2003, 1♀; Nevşehir: Center, 1100m, 14.08.2001, 1♀. **Phenology:** July-August. **Habitat Type:** Mountain Steppe, segetal, Water sources.

Eustenancistrocerus (Eustenancistrocerus) jerichoensis iconius Blüthgen, 1957

Material Examined (18♀♀, 1♂): Kırşehir: Mucur, 1000m., 18.07.2003, 2♀♀; Nevşehir: Kozaklı, 1000m., 18.07.2003, 14♀♀, 1♂. **Phenology:** July. **Habitat Type:** Plain Steppe, Water sources.

Eustenancistrocerus (Eustenancistrocerus) jerichoensis jerichoensis (Schulthess, 1928)

Material Examined (5♀♀): Aksaray: Güzelyurt, Manastır Walley, 1400m., 13.08.2002, 1♀; Hasandağ, 1500m., 11.07.2003, 4♀♀. **Phenology:** July-August. **Habitat Type:** Mountain Steppe, Water sources.

Eustenancistrocerus (Parastenancistrocerus) amadanensis amadanensis (Saussure, 1855)

Material Examined (14♀♀, 2♂♂): Aksaray: Güzelyurt, Melendiz girişi, 1600m., 13.08.2002, 1♂; Hasandağ, 1550m., 11.07.2003, 1♀, 10.09.2003, 1♀; Kırşehir: Kaman, Karakaya Barajı, 1100m., 04.10.2000, 1♀; Mucur, 1000m., 16.07.2003, 1♀; Nevşehir: Derinkuyu, Niğde Road, 1100m., 12.08.2001, 1♀; Gülşehir, 1000m., 21.08.2001, 4♀♀, 1♂; Kozaklı, 1000m., 16.07.2003, 5♀♀. **Phenology:** July-October. **Habitat Type:** Mountain Steppe, Plain Steppe, ruderal, Humid Meadows. **Plant Records:** *Mentha* sp.

Jucancistrocerus jucundus jucundus (Mocsáry, 1883)

Material Examined (27♀♀, 1♂): Aksaray: 160. km, 900m., 11.08.2002, 1♀; Hasandağ, 1500m, 11.07.2003, 1♀; Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 1♀; Mucur, 1000m., 16.07.2003, 2♀♀; Nevşehir: Acıgöl, 1300m., 05.07.2001, 1♀; Derinkuyu, 19.06.2001, 2♀♀, 1♂; Center, 1000m., 02.07.2003, 3♂♂; Kozaklı, 1000m., 16.07.2003, 19♀♀.

Phenology: June-August. **Habitat Type:** Plain and Mountain Steppe, Water sources, ruderal.

Stenodynerus aequisculptus aequisculptus (Kostylev,1940)

Material Examined (1♀): Nevşehir: Ürgüp, Ortahisar, 1000m., 11.08.2001, 1♀. **Phenology:** August. **Habitat Type:** Segetal. **Plant Records:** *Vitis* sp.

Stenodynerus bluethgeni van der Vecht, 1971

Material Examined (2♀♀): Kırşehir: Kaman, Karakaya Dam, 950m., 04.10.2000, 1♀; Nevşehir: Derinkuyu, 1100m., 11.08.2000, 1♀.

Phenology: August-October. **Habitat Type:** Humid Meadows, ruderal. **Plant Records:** *Mentha* sp.

Stenodynerus chevrieranus (Saussure, 1855)

Material Examined (4♀♀): Aksaray: Taşpınar, Hamidiye, 950m., 14.09.2002, 1♀; Kırşehir: Mucur, 1150m., 15.09.2000, 1♀; Nevşehir: Ürgüp, Damsa creek, 1100m., 31.07. 2001, 1♀, Ortahisar, 1100m., 15.08. 2002, 1♀. **Phenology:** July-September. **Habitat Type:** Plain Steppe, Humid Meadows. **Plant Records:** *Mentha* sp., *Vitis* sp.

Antepipona deflenda deflenda (S.S.Saunders, 1853)

Material Examined (4♀♀, 2♂♂): Aksaray: 160.km, 900m., 11.08.2002, 2♂♂; Taşpınar, Hamidiye, 950m., 14.09.2000, 1♀; Kırşehir: Kaman, 1200m., 30.08.2002, 1♀, Karakaya Dam, 1100m., 04.10.2000, 1♀; Nevşehir: Derinkuyu, 1100m., 11.08.2001, 1♀. **Phenology:** August-October. **Habitat Type:** Plain Steppe, ruderal.

Antepipona insana insana (Giordani Soika, 1943)

Material Examined (2♀♀): Aksaray: Ortaköy, 1300m., 21.06.2003, 2♀♀. **Phenology:** July. **Habitat Type:** Mountain Steppe, Water sources.

Antepipona iconia (Blüthgen,1951)

Material Examined (1♀, 2♂♂): Nevşehir: Derinkuyu, Niğde Road, 1100m., 12.08.2001, 2♂♂, Kaymaklı, 1000m., 13.08.2001, 1♀. **Phenology:** August. **Habitat Type:** Plain Steppe, ruderal.

Antepipona laevigata (Blüthgen,1951)

Material Examined (3♀♀): Aksaray: Taşpınar, Helvadere, 1400m., 16.06.2001, 1♀; Kırşehir: Çiçekdağ, Akçakent Road, 1300m., 20.07.2000, 1♀; Nevşehir: Derinkuyu, 1100m., 11.08.2001, 1♀. **Phenology:** June-August. **Habitat Type:** Mountain Steppe, Plain Steppe, Humid Meadows.

Antepipona orbitalis orbitalis (Herrich-Schaeffer, 1839)

Material Examined (1♀, 1♂): Aksaray: Taşpınar, Helvadere, 1400m., 16.06.2001, 1♀; Kırşehir, Kaman, Köprüköy, 1300m., 05.07.2003, 1♂. **Phenology:** June-July. **Habitat Type:** Mountain Steppe, Humid Meadows.

Plant Records: *Mentha* sp.

Antepipona albosignata Gusenleitner, 1986

Material Examined (1♂): Nevşehir: Ürgüp, 1100m., 05.07.2001, 1♂.
Phenology: July. **Habitat Type:** Cultivated areas.

Brachydynerus quadrimaculatus (André, 1884)

Material Examined (1♀): Kırşehir: Center, Güneykent, 900m., 22.06.2003, 1♀. **Phenology:** June. **Habitat Type:** Plain Steppe, Water sources.

Parodontodynerus ephippium ephippium (Klug, 1817)

Material Examined (5♀♀): Aksaray: Güzelyurt, Melendiz, 1600m., 13.08.2002, 2♀♀; Kırşehir: Çiçekdağ, Akçakent, 1300m., 20.07.2000, 1♀; Nevşehir: Kozaklı, 1000m., 18.07.2003, 2♀♀. **Phenology:** June-August. **Habitat Type:** Plain Steppe, Mountain Steppe, Humid Meadows. **Plant Records:** *Mentha* sp.

Allodynerus delphinalis delphinalis (Giraud, 1866)

Material Examined (1♀): Nevşehir: Ürgüp, 1100m., 05.07.2001, 1♀. **Phenology:** July. **Habitat Type:** Plain Steppe.

Pseudopipona (Pseudopipona) herrichii herrichii (Saussure, 1856)

Material Examined (2♀♀): Aksaray: Ortaköy, 1300m., 21.06.2003, 1♀; Kırşehir: Center, 950m., 21.06.2003, 1♀. **Phenology:** June. **Habitat Type:** Plain Steppe, Water sources.

Pseudopipona (Pseudopipona) lativentris lativentris (Saussure, 1855)

Material Examined (3♀♀): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 05.10.2000, 1♀; Taşpınar, Helvadere, 1400m., 16.06.2001, 2♀♀. **Phenology:** June-October. **Habitat Type:** Mountain Steppe, Gallery Forest, Water sources. **Plant Records:** *Eryngium* sp.

Pseudopipona (Pseudopipona) niveopicta Giordani Soika, 1970

Material Examined (1♀): Aksaray: Taşpınar, Hamidiye, 990m., 14.08.2002, 1♀. **Phenology:** August. **Habitat Type:** Humid Meadows.

Euodynerus (Euodynerus) curictensis Blüthgen, 1940

Material Examined (3♀♀, 1♂): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2001, 1♀; Hasandağ, 1550m., 03.07.2003, 1♀, 1♂; Kırşehir: Çiçekdağ, Çamlitepe, 1400m., 20.07.2000, 1♀. **Phenology:** June-July. **Habitat Type:** Mountain Steppe, Gallery Forest.

Euodynerus (Euodynerus) dantici dantici (Rossi, 1790)

Material Examined (5♀♀): Aksaray: Hasandağ, 1550m., 03.07.2003, 2♀♀; Kırşehir: Çiçekdağ, Çamlitepe, 1400m., 20.07.2000, 1♀; Nevşehir: Kozaklı, 1200m., 19.06.2001, 1♀, 1000m., 18.07.2003, 1♀. **Phenology:** June-July. **Habitat Type:** Plain Steppe, Mountain Steppe, Water sources. **Plant Records:** *Astragalus* sp.

Euodynerus (Euodynerus) disconotatus disconotatus (Lichtenstein, 1884)

Material Examined (9♀♀, 4♂♂): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2001, 1♂; 160.km, 900m., 11.08.2002, 1♂; Hasandağ, 1550m., 03.07.2003, 6♀♀, 2♂♂, 10.09.2003, 1♀; Kırşehir: Center,

Güneykent, 900m., 22.06.2003, 1♀; Nevşehir: Ürgüp, 1100m., 15.08.2002, 1♀. **Phenology:** June-September. **Habitat Type:** Mountain Steppe, Gallery Forest, Plain Steppe, Water sources.

Euodynerus (Euodynerus) fastidiosus (Saussure, 1853)

Material Examined (1♂): Nevşehir: Center, 1100m., 14.08.2001, 1♂. **Phenology:** August. **Habitat Type:** Plain Steppe, Water sources.

Euodynerus (Euodynerus) semisaecularis semisaecularis (Dalla Torre, 1889)

Material Examined (25♀♀, 1♂): Aksaray: Güzelyurt, 1500m., 13.08.2002, 1♂, Melendiz, 1600m., 13.08.2002, 2♀♀; Hasandağ, 1550m., 10.09.2003, 1♀; Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 17♀♀; Çiçekdağ, Çamlıtepe, 1400m., 20.07.2000, 3♀♀; Center, Güneykent, 900m., 22.06.2003, 1♀; Nevşehir: Hacıbektaş, 950m., 23.06.2003, 1♀. **Phenology:** June-September. **Habitat Type:** Plain Steppe, Mountain Steppe, Coniferous Forest., Water sources.

Chlorodynerus ypsilon rhodius Blüthgen, 1954

Material Examined (1♀): Aksaray: Hasandağ, 1550m., 03.07.2003, 1♀. **Phenology:** July. **Habitat Type:** Mountain Steppe, Water sources.

Syneodynerus egregius egregius (Herrich-Schaeffer, 1839)

Material Examined (3♀♀): Aksaray: Ortaköy, 1300m., 21.06.2003, 1♀; Kırşehir: Center, 950m., 22.06.2003, 1♀; Nevşehir: Kozaklı, 1000m., 18.07.2003, 1♀. **Phenology:** June-July. **Habitat Type:** Ruderal, Humid Meadows.

Ancistrocerus auctus auctus (Fabricius, 1793)

Material Examined (6♀♀): Aksaray: Hasandağ, 1550m., 19.06.2003, 3♀♀; Kırşehir: Center, 950m., 22.06.2003, 1♀; Nevşehir: Derinkuyu, Niğde Road, 1100m., 12.08.2001, 1♀; Center, 1100m., 05.07.2001, 1♀. **Phenology:** June-August. **Habitat Type:** Mountain Steppe, Plain Steppe, ruderal, segetal.

Ancistrocerus gazella (Panzer, 1798)

Material Examined (2♀♀, 1♂): Aksaray: Güzelyurt, 1500m., 13.08.2002, 1♂; Kırşehir: Center, Dinekbağ, 1100m., 19.06.2001, 1♀; Nevşehir: Avanos, 1100m., 05.07.2001, 1♀. **Phenology:** June-August. **Habitat Type:** Mountain Steppe, ruderal, Water sources. **Plant Records:** *Tamarix* sp., *Mentha* sp.

Ancistrocerus parietum (Linnaeus, 1758)

Material Examined (3♀♀): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2001, 1♀; Kırşehir: Çiçekdağ, Çamlıtepe, 1400m., 20.07.2000, 1♀; Nevşehir: Derinkuyu, Niğde Road, 1100m., 12.08.2001, 1♀. **Phenology:** June-August. **Habitat Type:** Mountain Steppe, Coniferous Forest, Gallery Forest, ruderal. **Plant Records:** *Pinus nigra*.

Symmorphus (Symmorphus) gracilis (Brullé, 1832)

Material Examined (1♀): Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 1♀. **Phenology:** July. **Habitat Type:** Plain Steppe, ruderal.

Eumenes coarctatus lunulatus Fabricius, 1804

Material Examined (16♀♀, 7♂♂): Aksaray: Center, Mamasun Dam, 1000m., 05.10.2000, 2♀♀; Güzelyurt, Ihlara Walley, 1250m., 05.10.2000, 2♀♀; Eskil, Obruk, 1200m., 02.08.2001, 1♂; Taşpınar, Hamidiye, 950m., 14.09.2002, 1♀; Hasandağ, 1550m., 03.07.2003, 1♂, 10.09.2003, 6♀♀, 1♂; Kırşehir: Çiçekdağ, Akçakent Road, 1300m., 20.07.2000, 1♀, 1♂, Çamlitepe, 1400m., 20.07.2000, 1♀; Mucur, İnaç, 1150m., 04.10.2000, 1♀; Nevşehir: Derinkuyu, Güvercinlik, 1100m., 11.08.2001, 1♂; Hacıbektaş, 1100m., 16.08.2001, 1♀; Center, 1000m., 11.08.2001, 1♂; Kozaklı, 1000m., 18.07.2003, 1♀; Ürgüp, 1100m., 15.08.2003, 1♂. **Phenology:** July-October. **Habitat Type:** Plain and Mountain Steppe, Humid Meadows, Gallery Forest, ruderal, segetal. **Plant Records:** *Eryngium* sp., *Mentha* sp., *Vitis* sp.

Eumenes coronatus detonsus Blüthgen, 1943

Material Examined (5♀♀, 1♂): Aksaray: Güzelyurt, 1500m., 13.08.2003, 1♀, Melendiz girişi, 1600m., 13.08.2003, 1♀; Kırşehir: Çiçekdağ, Çamlitepe, 1400m., 20.07.2000, 1♀; Kaman, Köprüköy, 1250m., 05.07.2003, 1♂; Nevşehir: Avanos, 1100m., 15.08.2002, 2♀♀. **Phenology:** July-August. **Habitat Type:** Mountain Steppe, Coniferous Forest, Water sources. **Plant Records:** *Pinus nigra*.

Eumenes dubius dubius Saussure, 1852

Material Examined (6♀♀, 10♂♂): Aksaray: Eskil, Obruk, 1200m., 21.08.2001, 1♂; Hasandağ, 1550m., 19.06.2003, 2♂♂, 03.07.2003, 4♀♀, 2♂♂, 10.09.2003, 2♂♂; Melendiz, 1600m., 19.06.2003, 2♂♂; Kırşehir: Çiçekdağ, Akçakent Road, 1300m., 20.07.2000, 1♂; Nevşehir: Gülşehir, 1000m., 21.08.2001, 2♀♀. **Phenology:** June-September. **Habitat Type:** Plain and Mountain Steppe, Humid Meadows, Water sources. **Plant Records:** *Mentha* sp.(Nane).

Eumenes jarkandensis Blüthgen, 1938

Material Examined (22♀♀, 8♂♂): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2000, 4♀♀, Güzelyurt, 1500m., 13.08.2002, 4♀♀, Melendiz, 1600m., 13.08.2002, 2♀♀, Manastr Walley, 1400m., 13.08.2002, 3♀♀; Taşpınar, Helvadere, 1400m., 16.06.2001, 4♀♀; Ortaköy, 1300m., 21.06.2003, 1♀; Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 1♀; Nevşehir: Avanos, 1100m., 14.08.2001, 4♂♂; Derinkuyu, 1000m., 13.08.2001, 2♂♂; Hacıbektaş, 1100m., 16.08.2001, 1♂; Ürgüp, 1100m., 19.08.2001, 3♀♀, 1♂. **Phenology:** June-August. **Habitat Type:** Gallery Forest, Mountain Steppe, Water sources, Humid Meadows. **Plant Records:** *Mentha* sp.

Eumenes mediterraneus mediterraneus Kriechbaumer, 1879

Material Examined (25♀♀,30♂♂): Aksaray: Güzelyurt, Melendiz, 1300m., 13.08.2002, 3♀♀; Sivrihisar, 1770m., 13.08.2002, 1♀, Manastır Walley, 1400m., 13.08.2002, 1♀; Hasandağ, 1550m., 10.09.2003, 4♀♀, 3♂♂; Taşpınar, Hamidiye, 950m., 14.09.2002, 2♀♀; Kırşehir: Kaman, Karakaya Dam, 1100m., 04.10.1999, 1♂, Köprüköy, 1250m., 03.07.2003, 1♂; Center, Özbağ, 980m., 04.10.1999, 1♂; Akçakent, Mahzenli, 1250m., 22.06.2003, 1♀; Nevşehir: Acıgöl, 1050m., 17.08.2001, 3♀♀, 3♂♂; Avanos, 1100m., 14.08.2001, 4♂♂; Derinkuyu, Güvercinlik, 1100m., 11.08.2001, 1♂; Niğde Road, 1100m., 12.08.2001, 1♀, 3♂♂, Derinkuyu, 1000m., 13.08.2001, 1♀, 2♂♂; Kaymaklı, 1000m., 13.08.2001, 1♀; Gülşehir, 1000m., 21.08.2001, 1♀, 1♂; Hacıbektaş, 1100m., 16.08.2001, 1♀, 2♂♂; Center, 1100m., 14.08.2001, 2♀♀, 1000m., 11.08.2001, 1♂; Ürgüp, 1100m., 19.08.2001, 3♀♀, 4♂♂; Center, 1000m., 02.07.2003, 3♂♂. **Phenology:** June-October. **Habitat Type:** Mixed Quercus Forest, Humid Meadows, Water sources, ruderal, segetal, Mountain Steppe, Plain Steppe. **Plant Records:** *Mentha* sp., *Quercus* sp.

Eumenes papillarius papillarius (Christ, 1791)

Material Examined (6♀♀,2♂♂): Aksaray: Güzelyurt, Melendiz, 1600m., 13.08.2002, 1♀; Kırşehir: Center, 950m., 21.07.2003, 1♀; Nevşehir: Hacıbektaş, 1100m.,16.08.2001, 2♂♂; Avanos, 1100m., 15.08.2002, 4♀♀. **Phenology:** July-August. **Habitat Type:** Cultivated areas, Water sources, Mountain Steppe. **Plant Records:** *Mentha* sp.

Eumenes pomiformis pomiformis (Fabricius, 1781)

Material Examined (6♀♀, 4♂♂): Kırşehir: Akçakent, Attepesi, 1100m., 20.07.2000, 1♂; Çiçekdağ, Akçakent Road, 1300m., 20.07.2000, 3♀♀, 1♂, Çamlıtepe, 1400m., 20.07.2000, 3♀♀, 2♂♂. **Phenology:** July. **Habitat Type:** Mountain Steppe, Coniferous Forest, Water sources. **Plant Records:** *Pinus nigra*.

Eumenes sareptanus insolatus M.Müller, 1923

Material Examined (3♀♀): Kırşehir: Center, Aşıkpaşa, 1050m., 04.10.2000, 1♀; Kaman, Köprüköy, 1300m., 30.08.2002, 1♀; Nevşehir: 1000m., 02.09.2003, 1♀. **Phenology:** August-October. **Habitat Type:** Mountain Steppe, Coniferous Forest, Humid Meadows. **Plant Records:** *Euphorbia* sp., *Pinus nigra*.

Eumenes subpomiformis Blüthgen, 1938

Material Examined (2♀♀): Kırşehir: Çiçekdağ, Çamlıtepe, 1400m., 20.07.2000, 1♀; Akçakent, 1400m., 22.06.2003, 1♀. **Phenology:** June-July. **Habitat Type:** Mountain Steppe, Water sources.

Delta unguiculatum unguiculatum (Villers, 1789)

Material Examined (2♀♀): Aksaray: Hasandağ, 1600m., 03.07.2003, 1♀; Kırşehir: Akçakent, 1400m., 22.06. 2003, 1♀. **Phenology:** June-July. **Habitat Type:** Mountain Steppe, Water sources.

Katamenes dimidiatus dimidiatus (Brullé, 1832)

Material Examined (2♀♀): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2001, 1♀; Kırşehir: Akpınar, Deveci, 900m., 19.07.2000, 1♀.

Phenology: June-July. **Habitat Type:** Plain Steppe, Gallery Forest.

Distribution: South Balkans, Crete, Cyprus, Turkey, Israel [29]; Palestine, Greece, Cyprus, Turkey [36]; Greece, Turkey, Cyprus, Israel [4].

Katamenes flavigularis (Blüthgen, 1951)

Material Examined (7♀♀, 1♂): Aksaray: Ortaköy, 1300m., 21.06.2003, 2♀♀; Kırşehir: Çiçekdağ, Çamlıtepe, 1400m., 20.07.2000, 3♀♀; Akçakent, Mahzenli, 1250m., 22.06.2003, 1♀, 1♂; Nevşehir: Acıgöl, 1000m., 21.06.2003, 1♀. **Phenology:** June-July. **Habitat Type:** Plain Steppe, Mountain Steppe, Coniferous Forest.

Katamenes sichelii sichelii (Saussure, 1852)

Material Examined (6♀♀, 3♂♂): Aksaray: Güzelyurt, Ihlara Walley, 1250m., 15.06.2001, 3♀♀, 1♂; Taşpınar, Helvadere, 1400m., 16.06.2001, 1♀, Hasandağ, 1550m., 19.06.2003, 1♀, 2♂♂; Kırşehir: Center, Güneykent, 950m., 22.06.2003, 1♀. **Phenology:** June. **Habitat Type:** Plain and Mountain Steppe, ruderal, Gallery Forest.

4. CONCLUSION

In this study, the Eumenidae family (Insecta: Hymenoptera) has been investigated faunistically in the Aksaray, Kırşehir and Nevşehir and natural habitats and their nutriment plants of adult individuals among this family have been determined based on the ecological observations. Totally 37 species and subspecies from Aksaray province, 42 from Kırşehir province, and 33 from Nevşehir province have been recorded. Among these, 37 species and subspecies for Aksaray, 41 for Kırşehir, and 30 for Nevşehir have been new records.

Species were collected mostly between June and July. Samples were found at the altitude of 1000-1300m. Habitat preference of the individuals were established. Species of Eumenidae have been rarely found at the dry and deeply watered areas. They prefer habitats that are mostly humid places at steppes, near water basin and near little creek with plants. Humid places that steppe intersects with forest, oak groves and coniferous woods. The food plants were tried to be determined as possibly while some of them were not determined. It was because some species were not collected over plants. *Mentha* sp., *Quercus* sp., *Alhagi* sp., *Xsanthium spinosum*, *Rubus* sp., *Prangos* sp., *Vitis* sp., *Astragalus* sp., *Echinops* sp., *Eryngium* sp., *Pinus nigra*. were visited by some species in study area.

The most common species in study area are *Eumenes jarkandensis* Blüthgen, 1938, *Eumenes d. dubius* Saussure, 1852, *Eumenes m. mediterraneus* Kriechbaumer, 1879. The common species are *Jucancistrocerus j. jucundus* (Mocsáry, 1883), *Hemipterochilus aberrans* (Morawitz, 1885), *Euodynerus (E.) s. semisaecularis* (Dalla Torre, 1889). The others are rare species.

With this study, Eumenidae Fauna of Aksaray, Kırşehir and Nevşehir, habitat types and food plants attempted to be exposed. Samples were stored at the Museum Entomology of Ankara University.

ACKNOWLEDGEMENTS

We thank Dr. J. Gusenleitner (Pfitznerstarsse 31, A-4020, Linz- Austria) for his help on the identification of some species.

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