THE SPECIES OF SUBORDER HETEROPTERA (HEMIPTERA)
ON VINEYARDS AGROECOSYSTEMS WHICH IS FOUND IN
DİYARBAKIR, ELAZIĞ AND MARDİN PROVINCES, TURKEY

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[Özgen, İ. 2012. The species of suborder Heteroptera (Hemiptera) on vineyards agroecosystems which found in Diyarbakır, Elazığ and Mardin provinces, Turkey. Munis Entomology & Zoology, 7 (1): 255-258]

ABSTRACT: This study has been realized in the localities of Diyarbakır, Elazığ and Mardin during 2006-2007 where vineyards agroecosystem plantations are common. In total, 10 Heteroptera species from five families (Pentatomidae, Scutelleridae, Miridae, Coreidae and Lygaeidae) were recorded in these provinces. The distribution of collected species in each province varied greatly; these were in total, 2 species from two families recorded at two sampling locations in Diyarbakır, 3 species from two families recorded at one sampling locations in Elazığ, 5 species from three families at two sampling locations in Mardin respectively. From these families was collected of 59 specimens. Apart the Nysius cymoides and Holcostethus vernalis Wolff, 1804, all species were recorded of first times of the vineyards agroecosystem.

KEY WORDS: Vineyard, Heteroptera, fauna, Turkey.

Our country is the most favorable climate for wine-growing. The country is very old and well-established wine-growing culture, a gene has the potential to rich. The people of Anatolia was used with different ways to grape production. On the other hand; The processing of grape must obtained in different ways. This products were wine, vinegar and nutritional products such as molasses, and uses to meet energy needs. One of the most important problems in the areas were pests which affected to vineyard area. Oztürk et al. (2005) was listed 267 specimens of 63 families to reported that the harmful species between 1938 to 2004 years in vineyard area from Turkey. There were 25 specimens in these species, also belonging to the Hemiptera in the vineyard areas of the Southeastern and Eastern Anatolia region. Günyaydın (1972) was studied on the vineyard pests Southeastern and Eastern Anatolia regions. He was determined to important pest: Eriophyes vitis Colomerus, Arboridia adanae Dlabola, Haplothrips glabiceps Bagnall, Anaphothrips vittis Priesner specimens in the vineyard areas. Maçan (1984) was determined to 5 specimens in Homoptera order; 3 specimens in Lepidoptera order, 3 specimens in Coleoptera order, 2 specimens in Thysanoptera order, 1 specimen in Diptera order in Diyarbakır, Elazığ, Malatya, Mardin, Siirt and Şanlıurfa provinces. The studies in this area were to determine of general insect order. This study was conducted to determine of Hemiptera specimens between 2006 to 2007 years in Diyarbakır, Elazığ and Mardin provinces.

MATERIAL AND METHODS

The present study on fauna of Hemiptera order was carried out during 2006-2007 in different vineyards areas of the Diyarbakır, Elazığ and Mardin provinces. Surveys have been performed with sweep net and knock down metods. Classification and nomenclature of Pentatomidae, Scutelleridae, Miridae, Coreidae and Lygaeidae suggested by Tamanini (1959) and Stichel (1960, 1961,
1962). Material have been identified by Dr. Meral FENT (Department of Zoology, Faculty of Science, Trakya University).

RESULT AND DISCUSSION

In this study, was determined of the ten species belong five family of Heteroptera suborder in Diyarbakır, Elazığ and Mardin provinces of Turkey.

List of the species:

**Family: Pentatomidae**

*Holcostethus strictus vernalis* Wolff, 1804

**Material examined:** Elazığ, Central province, 14.VI.2006, 8 exs.

**Remarks:** Distribution in East and southeastern Anatolia region of this specimen was in Diyarbakır (central, Ergani, Bismil, Hazro, Silvan), Batman (Central), Elazığ (Sivrice, Gezin), Gaziantep, Şanlıurfa, Mardin, Şırnak (Central, Kurtalan), Şırnak (Cizre, Silopi) provinces (Uygun et al., 1995; Önder et al., 1995; Özgen et al., 2005; Kaplan, 2007). Host plants of this species have been strawberry, wheat and almond (Özgen et al., 2005; Bolu et al., 2006; Kaplan, 2007).

*Eurydema fieberi* Schummer & Fieber, 1837

**Material examined:** Diyarbakır, Çermik, 01.VII.2006, 6 exs.

**Remarks:** This species have been determined in Gaziantep (Central, Kilis, Oğuzeli, Yavuzeli) province (Önder et al., 1995). It is the first record for the study area.

*Eurydema putoni* Jakovlev, 1877

**Material examined:** Mardin, Derik, 01.VII. 2007, 7 exs.

**Remarks:** This species have been determined in Erzurum province (Önder et al., 2006). It is the first record for the study area and vineyard area.

*Tholagmus flavolineatus* Wagner, 1955

**Material examined:** Elazığ, 12.V.2006, 6 exs.

**Remarks:** This species have been determined in Gaziantep (Oğuzeli) province (Önder et al., 1995). It is the first record for the study area and vineyard area.

*Sciocoris distinctus* Fieber, 1857

**Material examined:** Mardin, Derik, 19.VIII.2007, 3 exs, 05.IX.2007, 1 exs. Totally: 4 exs.

**Remarks:** This species have been determined in Ankara, Kars and Ordu provinces (Önder et al., 2006). It is the first record for the study area and vineyard area.

**Family: Scutellaridae**

*Psacasta tuberculata* Stichel, 1960

**Material examined:** Elazığ, 15.V. 2006, 3 exs.

**Remarks:** This species have been determined in Adana, Ankara, Antalya, Aydın, Gaziantep, Hatay, Kırşehir and Mersin provinces (Önder et al., 1996). It is the first record for the study area and vineyard area.

**Family: Miridae**

*Horistus orientalis* Gmelin, 1790

**Material examined:** Diyarbakır, Lice, 14.V. 2006, 6 exs.

**Remarks:** It is the first record for the study area and vineyard area.

**Family: Lygaeidae**

*Nysius graminicola graminicola* Kolenati, 1846

**Material examined:** Mardin, Savur, 17.V.2006, 4 exs.
Remarks: This species have been determined in Diyarbakir, Şanlıurfa and Mardin provinces (Akkaya; 1995; Uygun et al., 1995). It is the first record for vineyard area.

**Nysius cymoides** (Spinola, 1837)

**Material examined:** Mardin, Savur, 17.V.2006, 3 exs.

**Remarks:** This species have been determined in Diyarbakir, Şanlıurfa and Kilis provinces (Akkaya; 1995; Lodos et al., 1999). This species was known in weeds (Lodos et al., 1999). It is the first record for Mardin province and vineyard area.

**Family: Coreidae**

**Centrocoris variegatus** Kolenati, 1845

**Material examined:** Mardin: Derik, 01.VII.2006, 12 exs.

**Remarks:** This species is the first record for the study area and vineyard area. It is polyphagous. It is generally found on Chenopodiacea family plants (Anonymous 2009).

In the previously studies have been determined *Camptopus lateralis*, *Coreus marginatus* (L.), *Heterogaster urticae* F., *Lygaeus equestris* (L.), *L. pandurus* Scop., *Megalonotus sabellicola* Thomson, *Metopoplax origani* Kolenati, *Nysius cymoides* Spinola, *Lygus pratensis* L., *Exolopus pratensis* Kuzn., *Tuponia elegans* (Jakovlev), *Aelia acuminata* L., *Ancyrosoma leucogrammes* Gmelin, *Carpocoris mediterraneus* Tamanini, *C. purpuripennis* (De Geer), *Dolycoris baccarum* (L.), *Eurydema ornatum* (L.), *E. ventrale* Kolenati, *Graphosoma lineatum* L. *Holcostethus vernalis* Wolff., *Mustha spinosula* (Lef.), *Nezara viridula* (L.), *Raphigaster nebulosa* Pod, *Maccevethus caucasicus*, *Eurygaster maura* (L.) in the Turkey’s vineyard areas (Öztürk, 2005). *Nysius cymoides* and *Holcostethus vernalis* are also determined with the present investigation. The other species are firstly determined in the vineyard area. These species are polyphagous generally. They will be hazardous species with climatic changes of the region in the following years. Detailed studies on feeding behaviour and flora/fauna interactions of these species are required.

**ACKNOWLEDGEMENT**

I would like to extend my gratitude to Assoc. Prof. Dr. Meral FENT (Department of Zoology, Faculty of Science, Trakya University) who has made the identification of Heteroptera (Hemiptera) species.

**LITERATURE CITED**


