



Entomofauna

ZEITSCHRIFT FÜR ENTOMOLOGIE

Band 38, Heft 9: 177-192

ISSN 0250-4413

Ansfelden, 2. Januar 2017

Contribution to the knowledge of the Herdoniini and Stenodemini (Hemiptera: Heteroptera: Miridae: Mirinae) fauna of Turkey

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Abstract

This study is based upon material of the tribes Herdoniini and Stenodemini collected from different localities of Turkey between 1983 and 2014, mostly 2006-2014. In this study, one species from one genera of Herdoniini and fifteen species from six genera of Stenodemini are recorded from Turkey. In addition, new localities are added for some species previously reported for Turkey.

Zusammenfassung

Diese Studie basiert auf Material der Triben Herdoniini und Stenodemini, das zwischen 1983 und 2014 an verschiedenen Lokalitäten in der Türkei gesammelt wurde. Eine Art aus einer Gattung der Herdoniini und 15 Arten aus 6 Gattungen der Stenodemini werden neu für die Türkei nachgewiesen, ebenso neue Fundorte für bereits aus der Türkei bekannte Arten.

Introduction

Miridae (or plant-bugs) is a group of Miroidea, which at world scale comprises eight subfamilies. In the World they are represented by nearly 10.040 species, 1507 genera (CASSIS et al. 2006). This family comprising eight subfamilies Isometopinae, Psallopinae Cylapinae, Orthotylinae, Bryocorinae, Deraeocorinae, Mirinae and Phylinae (CASSIS & SCHUH 2012). Species in the tribe of Stenodemini have usually narrow, elongate body; more commonly greenish or yellowish. They live on grasses and sedges and are phytophagous. They are macropterous or brachypterous. Hemelytra of brachypterous specimens (Leptopterna, Actitocoris) is not shorter than one-third of abdomen length; in macropterous or submacropterous specimens, either cuneus separated by distinct fracture and membrane with 2 cells, or (Teratocoris) body green, or (Actitocoris) pronotum partly yellow (SCHWARTZ 2008).

Turkey is biogeographically one of the most interesting countries in the West Palaearctic region. Some faunistic studies on this family in the Turkey have been made by HOBERLANDT (1955), BINGÖL (1978), LODOS et al. (1978), ÖNDER (1976), ALTINAYAR (1981), ÖNDER et al. (1981), YAYLA (1983), ÖZKAN (1984), KARAAT (1986), ÖNDER & LODOS (1987), ÇAM (1988), LODOS et al. (1989), ÖZBEK & ALAOĞLU (1987), ÖNDER et al. (1990; 1998), YILDIRIM & ÖZBEK (1992), GÜÇLÜ et al. (1995a, 1995b), ÇEVİK (1996), YAŞARAKINCI & HİNCAL (1997, 2000), TEZCAN & ÖNDER (1999, 2003), YILDIRIM et al. (1999), ATAKAN (2000), BEYAZ (2000), ÖZSARAÇ & KIYAK (2001), LODOS et al. (2003), KIYAK et al. (2004), ÇETİN & ALAOĞLU (2005), AYYILDIZ & ATLİHAN (2006) and ÖNDER et al. (2006).

The aim of this paper is to present new collection and biological data on Mirinae in Turkey.

Materials and Methods

The material of the Mirinae was collected from different localities of Turkey between 1983 and 2014. In addition, in previous years collected material from different localities of Turkey, Ataturk University, Faculty of Agriculture, Department of Plant Protection, the Entomology Museum, Erzurum, Turkey (EMET) preserved in the collection is also evaluated. Material was obtained by sweeping from meadow and pasture lands containing a variety of flowering plants. Provinces of the collected specimens are given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET).

Result and Discussion

In this study, one species from one genera of Herdoniini and fifteen species from six genera of Stenodemini are recorded from Turkey.

Tribe Herdoniini CARVALHO, 1959

Genus *Camponotidea* REUTER, 1879

Camponotidea fiebri REUTER, 1879

Material examined: Adana: Yumurtalık, 22.V.1992, ♂.

Distribution in Turkey: Almost all regions (ÖNDER et al. 2006).

Tribe Stenodemini CHINA, 1943

Genus *Acetropis* FIEBER, 1858

Subgenus *Acetropis* FIEBER, 1858

Acetropis (Acetropis) carinata (HERRICH-SCHAEFFER, 1841)

Material examined: Bayburt: Kop Mountain Pass, 2344 m, 12.VIII.2009, ♀; Aydintepe, Arpalı, 1550 m, 17.VI.2010, ♀, Demirözü, 1650 m, 17.VI.2010, 4 ♀♀, ♂; Erzurum: Aşkale, 1600 m, 8.VII.2009, ♂, Hatuncuk, N 39°48'15.6", E 040°42'09.3", 1869 m, 5.VII.2012, ♂, Küçükgeçit, N 39°56'03.1", E 040°43'32.8", 1660 m, 19.VI.2012, ♀, 2 ♂♂; Çat, Yukarı Çat, N 39°39'36.1", E 041°02'34.1", 2138 m, 18.VII.2012, 4 ♀♀; Köprüköy, Güzelhisar, 1930 m, 2.VII.2010, ♀; Oltu, İğdeli, N 40°32'44.8", E 041°50'27.6", 1660 m, 30.VI.2012, 2 ♀♀; Palandöken, 2000 m, 8.VIII.2009, 2 ♀♀; Pasinler, Yayla, 1990 m, N 40°05'42.7", E 041°44'03.5", 17.VII.2011, 3 ♀♀, 25.VIII.1983, ♀; Pazaryolu, N 40°24'45.2", E 040°46'8.6", 1510 m, 22.VI.2011, ♂; Tortum, 1653 m, 15.VI.2010, ♀, Taşbaşı, 1816 m, N 40°15'26.6", E 041°32'13.8", 13.VII.2011, 2 ♀♀, ♂, Yakutiye, Güzelyayla, 2000 m, 19.VIII.2009, 4 ♀♀, ♂, Karagöbek, 2033 m, N 40°10'15.1", E 041°26'14.9", 13.VII.2011, ♀, ♂, N 40°09'28.9", E 041°25'58.5", 1961 m, 16.VII.2012, 2 ♀♀, ♂, University field, 1850 m, 2.VII.2008, ♀, 3.VII.2008, ♀, 7.VII.2008, ♀, 9.VII.2007, 6 ♀♀, 22.VII.2009, ♀, 23.VII.2007, ♀, 25.VII.2007, 5 ♀♀.

Distribution in Turkey: Kütahya (ÖNDER 1976); İçel (YARDIM 1990; LODOS et al. 2003); Ankara, Bursa, Kayseri, Kütahya (ÖNDER et al. 2006).

Genus *Leptopterna* FIEBER, 1858

Leptopterna ferrugata (FALLEN, 1807)

Material examined: Erzurum: Karayazı, Kırgındere, 2215 m, 2.VII.2010, ♂, Yeniköy, N 39°43'31.8", E 041°59'29.5", 2199 m, 17.VII.2012, 2 ♂♂; Palandöken, 2300 m, 1.VIII.2010, ♀; Tekman, Geyikli, N 39°47'48.5", E 042°4'31.4", 2185 m, 16.VII.2011, ♀, Yakutiye, University field, 1850 m, 26.VI.2008, 2 ♂♂, 3.VII.1996, ♂, 18.VII.1997, ♂, 5.VIII.1998, ♂, 9.VIII.2008, ♂, 18.VIII.1999, ♂.

Distribution in Turkey: Kayseri, Konya (ÖNDER 1976; ÖNDER et al. 2006); Edirne (YARDIM 1990).

Genus *Megaloceroea* FIEBER, 1858

Megaloceroea recticornis (GEOFFROY, 1785)

Material examined: Erzurum: Horasan, Kırkdikme, N 40°01'46.9", E 042°01'57.7", 1561 m, 13.VIII.2011, ♂.

Distribution in Turkey: İzmir (ÖNDER 1970); Aydin, Balıkesir, Bilecik, Bursa, Çanakkale, Edirne, İstanbul, Kırklareli, Kocaeli, Manisa, Sakarya, Tekirdağ (ÖNDER 1976); Antalya, Erzurum, İzmir, Kırşehir (YARDIM 1990); Bolu, Çankırı, Kırşehir (Lodos et al. 2003); Marmara and Aegean Regions (ÖNDER et al. 2006); Ankara (KİYAK & AKAR 2010).

Genus *Notostira* FIEBER, 1858

Notostira elongata (GEOFFROY, 1785)

Material examined: Erzurum: Aşkale, Gökcübük, N 39°56'55.8", E 040°48'22.6", 1699 m, 23.VII.2011, 2 ♀♀, ♂, Kandilli, Atlikonak, N 39°55'36.5", E 040°56'16.9", 1757 m, 5.VII.2012, 2 ♀♀, Kop Mountain, N 40°01'57.1", E 040°31'0.8", 2380 m, 5.IX.2012, ♂, Koşapınar, N 40°00'55.4", E 040°47'39.3", 1866 m, 18.VII.2012, ♀, Küçükgeçit, N 39°56'43.2", E 040°47'12.1", 1709 m, 23.VII.2011, ♀, ♂, Yeniköy, N 39°51'28.8", E 040°41'24.1", 1935 m, 5.VII.2012, ♀, ♂; Aziziye, Yarımcı, 1950 m, 20.VII.2010, ♀; Horasan, Hacıahmet, N 40°10'37.4", E 042°08'17.5", 1823 m, 13.VIII.2012, ♂, Muratbağı, N 40°09'12.2", E 042°03'02.7", 1852 m, 22.VI.2012, ♀, 2 ♂♂, Yeşildere, N 40°07'8.0", E 042°05'26.6", 1684 m, 21.VIII.2011, ♂, Yukarı Bademözü, N 40°09'13.9", E 042°10'15.9", 1907 m, 14.VII.2012, 3 ♀♀; İspir, Madenkörprübaşı, N 40°26'33.7", E 46°50'41.6", 1244 m, 24.VI.2012, ♂, Öztoprak, N 40°31'05.9", E 041°03'15.8", 1724 m, 15.VII.2012, 2 ♀♀; Karayazı, Alemdağ, N 39°36'004", E 041°52'19.8", 2095 m, 17.VII.2012, ♀; Narman, N 40°21'09.9", E 041°55'02.0", 1543 m, 30.VI.2012, 2 ♀♀, Demirdağ, N 40°19'23.5", E 041°42'45.5", 2028 m, 16.VII.2012, 5 ♀♀, Mahmutçavuş, N 40°20'16.1", E 041°56'01.4", 1546 m, 13.VIII.2012, 4 ♀♀, Şehitler, N 40°19'54.9", E 041°46'39.2", 1884 m, 16.VII.2012, ♀, ♂, Yanıktaş, N 40°16'43.4", E 041°52'1.4", 1628 m, 30.VII.2011, ♀; Oltu, Çamlıbel, N 40°28'31.3", E 041°46'26.9", 1661 m, 30.VI.2012, ♀, N 40°29'36.1", E 041°45'45.2", 1775 m, 13.VII.2011, ♀, ♂, Duralar, N 40°28'31.5", E 041°58'42.4", 1421 m, 30.VII.2011, 2 ♀♀, Güzelsu, N 40°34'49.9", E 042°02'24.6", 1221 m, 30.VI.2012, ♀, Özdere, N 40°27'57.7", E 041°44'11.9", 1927 m, 16.VII.2012, 2 ♀♀, Sarısaç, N 40°31'56.1", E 041°54'36.9", 1388 m, 5.VIII.2012, ♂, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, 3 ♂♂; Palandöken, N 39°51'56.4", E 041°16'19.7", 2155 m, 22.VII.2012, 3 ♀♀, 2 ♂♂; Taşlıgündüz, N 39°48'41.2", E 041°07'10.0", 1875 m, 5.VII.2012, 4 ♀♀; Pasinler, Yayla, N 40°05'42.7", E 041°44'03.5", 1990 m, 17.VII.2011, ♂; Pazaryolu, N 40°25'12.6", E 040°46'13.9", 1430 m, 4.VIII.2012, ♀, ♂; Şenkaya, Gaziler, N 40°25'27.0", E 042°20'39.4", 1810 m, 14.VII.2012, ♀, Gözebaşı, N 40°24'39.9", E 042°18'11.5", 1794 m, 14.VII.2012, ♀, Paşalı, N 40°40'08.7", E 042°12'18.4", 1106 m, 19.VII.2011, ♀; Tortum, Pehlivanlı, N 40°29'37.1", E 041°30'17.6", 1158 m, 21.VII.2012, ♀, Suyatağı, N 40°27'20.2", E 041°30'14.0", 1236 m, 21.VII.2012, ♀, Şenyurt, N 40°26'22.0", E 041°28'39.5", 1265 m, 21.VII.2012, ♀, Taşbaşı, N 40°15'26.6", E 041°32'13.8", 1816 m, 13.VII.2011, ♀; Uzungere, Yayla, N 40°27'48.6", E 041°39'32.3", 2005 m, 13.VII.2011, ♀, Yakutiye, University field, 1800 m, 18.VIII.2010, 2 ♀♀; Mersin: Erdemli, Üçtepe, 120 m, 25.IX.2012, ♀.

Distribution in Turkey: Ankara, Kütahya (ÖNDER 1976); Kars, Kütahya (YARDIM 1990); Çankırı, Çorum, Kayseri, Nevşehir, Sinop, Yozgat (Lodos et al. 2003; ÖNDER et al. 2006).

Notostira poppiusi REUTER, 1911

M a t e r i a l e x a m i n e d : Bayburt: Kop Mountain, 17.VI.2010, ♂, Aydintepe, Arpalı, 1550 m, 17.VI.2010, 2 ♂♂, Demirözü, 1650 m, 17.VI.2010, 2 ♂♂; Erzincan: 1185 m, 10.VI.2010, ♂, Akyazı, 1202 m, 11.VII.2010, 2 ♂♂; Erzurum: Aşkale, Abdalcık, 1756 m, 1.VIII.2010, ♂, Atlikonak, N 39°55'36.5", E 040°56'16.9", 1757 m, 5.VII.2012, ♂, Çayköy, N 39°58'35.9", E 040°55'49.8", 1876 m, 23.VII.2011, ♂, Kop Mountain, N 40°01'57.1", E 040°31'0.8", 2380 m, 5.IX.2012, ♂, Küçükgeçit, N 39°56'43.2", E 040°47'12.1", 1709 m, 23.VII.2011, ♂, Aziziye, 1850 m, 8.VII.2009, ♀, Dadaşkent, N 39°55'09.3", E 041°12'20.7", 1806 m, 12.VII.2014, ♀, Yoncalık, 1900 m, 4.VIII.2009, ♂; Horasan, Çayırdüzü, N 40°8'34.8", E 042°3'23.5", 1794 m, 21.VIII.2011, ♀, 2 ♂♂; İspir, Madenköprübaşı, 1292 m, 30.VII.2010, ♂; Karayazı, Karasu, N 39°42'51.1", E 042°00'00.5", 2186 m, 16.VII.2011, ♂; Köprüköy, 1720 m, 2.VII.2010, ♂, Soğuksu, N 39°53'17.4", E 041°57'34.8", 1756 m, 17.VII.2012, ♂; Narman, N 40°21'09.9", E 041°55'02.0", 1543 m, 30.VI.2012, ♂, 2.VII.1987, 2 ♂♂; Demirdağ, N 40°19'23.5", E 041°42'45.5", 2028 m, 16.VII.2012, ♂, Kilimli, N 40°19'50.9", E 041°58'50.3", 1726 m, 16.VII.2012, ♂, Mahmutçavuş, N 40°20'16.1", E 041°56'01.4", 1546 m, 13.VIII.2012, 2 ♂♂, Ünlükaya, N 39°18'36.0", E 041°55'19.2", 1700 m, 8.VI.2012, ♂; Oltu, 2.VII.1987, 5 ♂♂, 1750 m, 3.VIII.2009, ♂, Çamlıbel, N 40°29'06", E 041°45'47", 1635 m, 14.VII.2014 m, 2 ♂♂, Özdere, N 40°25'19.5", E 041°43'25.1", 1822 m, 6.VII.2012, ♂, Sarızaz, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, ♂, Yolboyu, N 42°32'59", E 042°00'05", 1135 m, 10.VI.2012, ♂; Olur, Taşlıköy, 885 m, 4.VIII.2009, ♂; Palandöken, Abdurrahmangazi, N 39°52'36.0", E 041°18'35.2", 2170 m, 22.VII.2012, ♂, 2197 m, 1.VIII.2010, 2 ♂♂; Palandöken Mountain, N 39°51'56.4", E 041°16'19.7", 2155 m, 22.VII.2012, ♀, ♂, 2000 m, 8.VIII.2009, ♂, Taşlıgünde, N 39°48'41.2", E 041°07'10.0", 1875 m, 5.VII.2012, ♂; Pasinler, Övenler, N 39°59'17", E 041°34'43.9", 1710 m, 21.VIII.2011, ♂; Pazaroğlu, N 40°25'12.6", E 040°46'13.9", 1430 m, 4.VIII.2012, ♂, Kümbettepe, N 40°25'48.7", E 040°45'51.8", 1376 m, 24.VI.2012, ♂; Şenkaya, Gözebaşı, N 40°24'39.9", E 042°18'11.5", 1794 m, 14.VII.2012, 2 ♂♂; Hoş, N 40°38'50.0", E 042°19'26.0", 1193 m, 9.VI.2012, 2 ♂♂, Paşa, N 40°29'19.2", E 041°48'18.6", 1586 m, 9.VI.2012, ♂, N 40°40'08.7", E 042°12'18.4", 1106 m, 19.VII.2011, ♂; Penek, N 40°39'16.6", E 042°17'12.9", 1145 m, 9.VI.2012, 2 ♂♂, Sındırın, 1491 m, 31.VII.2010, ♂, Taht, N 40°37'59.4", E 042°20'39.7", 1283 m, 9.VI.2012, ♂, N 40°38'29", E 042°20'0.3", 1232 m, 14.VII.2014, ♂; Tekman, Geyikli, N 39°47'48.5", E 042°43'1.4", 2185 m, 16.VII.2011, ♂; Tortum, N 40°18'33", E 041°31'33", 1518 m, 14.VII.2014, ♀; Pehlivانlı, N 40°29'37.1", E 041°30'17.6", 1158 m, 21.VII.2012, ♀; Taşbaşı, N 40°15'26.6", E 041°32'13.8", 1816 m, 13.VII.2011, ♂; Yukarı Sivri, N 40°20'27.5", E 041°39'01.1", 1962 m, 16.VII.2012, ♂; Uzungere, Çamliyamaç, N 40°36'43.4", E 041°32'41", 1290 m, 7.VIII.2011, ♂; Şelale, N 40°39'40.9", E 041°40'03.0", 1012 m, 27.V.2011, ♀; Yaya, N 40°27'48.6", E 041°39'32.3", 2005 m, 13.VII.2011, ♂; Yakutiye, Akdağ, 1820 m, 1.VII.2010, ♂; Dumlubaba, Güngörmez, 2500 m, 1.VII.2010, 3 ♂♂; University field, N 39°53'59.1", E 041°14'19.0", 1880 m, 22.VII.2011, ♀, 2 ♂♂, 1850 m, 23.VII.2007, ♂, 1800 m, 26.VII.1983, ♂, 27.VII.2010, ♂, 5.VIII.2010, ♀, ♂, 12.VIII.2010, 2 ♀♀; İğdır: 25.VI.1971, ♂; Kars: Sarıkamış, Karakurt, 1500 m, 22.VI.2010, ♂; Konya: Beyşehir, Gökcimen, 26.VII.1997, ♀; Mersin: Erdemli, Üçtepe, 120 m, 10.VIII.2012, ♀.

D i s t r i b u t i o n i n T u r k e y : No locality record (HOSSEINI 2013).

Notostira erratica (LINNAEUS, 1758)

M a t e r i a l e x a m i n e d : Bayburt: Aydintepe, Arpalı, 1550 m, 17.VI.2010, 2 ♀♀, ♂, Demirözü, 1650 m, 17.VI.2010, 3 ♀♀; Erzincan: 1185 m, 10.VI.2010, 3 ♀♀, Akyazı, 1202 m, 11.VI.2010, ♀; Geyikli, 1160 m, 11.VI.2010, ♀; Üzümlü, 1518 m, 10.VI.2010, ♀; Erzurum: Aşkale, Çayköy, 1691 m, 1.VIII.2010, ♂, N 36°56'50", E 040°47'49", 1700 m, 29.VII.2014, 2 ♀♀; Kandilli, 1707 m, 1.VIII.2010, ♀; Aziziye, 1900 m, 4.VIII.2009, 2 ♀♀; Abdalcık, 1756 m, 1.VIII.2010, 2 ♀♀; Dadaşkent, N 39°55'09.3", E 041°12'20.7", 1806 m, 12.VII.2014, 2 ♀♀, ♂; Eskipolat, N 40°04'30.8", E 040°56'45.1", 1847 m, 24.VI.2012, ♂; Yarımca, 1950 m, 20.VII.2010, 3 ♀♀, 2 ♂♂; Horasan, 6.VII.1988, ♀, N 40°00'53", E 041°59'06", 1588 m,

22.VII.2014, ♂, Dönertaş, N 40°12'54.6", E 042°08'07.7", 2009 m, 13.VIII.2012, ♀, Hacıahmet, N 40°10'37.4", E 042°08'17.5", 1823 m, 13.VIII.2012, ♀; İspir, 1300 m, 7.VIII.2009, 2 ♀♀, ♂, İspir Pass, 1950 m, 20.VIII.2009, ♀, Madenköprübaşı, N 40°26'33.7", E 040°50'41.6", 1244 m, 24.VI.2012, ♀, ♂, 1292 m, 30.VII.2010, ♂; Karayazı, Catalören, N 39°46'32.1", E 042°01'43.1", 2313 m, 16.VII.2011, ♀; Köprüköy, Örentaş, 2038 m, 29.VII.2010, ♂; Narman, 21.VII.1987, 3 ♀♀, 3 ♂♂, 1565 m, 21.VII.2010, 2 ♀♀, ♂; Oltu, N 40°5'0.4", E 041°56'57", 1455 m, 14.VII.2014, 3 ♀♀, 22.VII.1987, 4 ♀♀, 4 ♂♂, 1750 m, 3.VIII.2009, ♀, 2 ♂♂, Çamlıbel, N 40°29'06", E 041°45'47", 1635 m, 14.VII.2014 m, 3 ♀♀, İnanmış, N 40°27'44.4", E 041°42'42", 1812 m, 31.VII.2011, ♂, Sarisaz, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, ♂, Yolboyu, N 40°38'55", E 042°08'50", 1135 m, 14.VII.2014, ♀, ♂; Palandöken, Abdurrahmangazi, 2197 m, 1.VIII.2010, 6 ♀♀, Dutçu, 2000 m, 24.VII.2010, ♂, Palandöken Mountain, 2300 m, 21.VII.2010, 3 ♀♀, 1.VIII.2010, 2 ♀♀, ♂, 2000 m, 8.VIII.2009, ♂; Pasınler, 25.VII.1983, 11 ♀♀, ♂; Senkaya, 1815 m, 31.VII.2010, ♂, Gözebaşı, N 40°24'39.9", 042°18'11.5", 1794 m, 14.VII.2012, ♀, 2 ♂♂, Taht, N 40°38'29", E 042°20'0.3", 1232 m, 14.VII.2014, ♀, Turnalı, 1700 m, 31.VII.2010, ♀, ♂; Tortum, 1653 m, 15.VI.2010, ♂; Uzundere, Yayla Pass, 2300 m, 21.VII.2010, ♀; Yakutiye, Akdağ, 1820, 1.VII.2010, ♀, Dumlubaba, Güngörmez, 2500 m, 1.VII.2010, ♀, University field, 1850 m, 18.V.2007, ♀, 25.VI.2009, ♀, 26.VI.2008, ♀, ♂, 3.VII.2008, 2 ♀♀, 7.VII.2008, ♀, 2 ♂♂, 9.VII.2008, ♀, 2 ♂♂, 16.VII.1996, ♀, 16.VII.2008, ♀, 22.VII.2009, ♀, 23.VII.2008, 3 ♂♂, 24.VII.2008, 3 ♀♀, 26.VII.1983, ♀, 27.VII.2010, ♀, 2 ♂♂, 29.VII.2009, 3 ♀♀, 1.VIII.2002, ♀, 3.VIII.2007, ♀, 4.VIII.2008, ♀, 5.VIII.2010, 2 ♀♀, ♂, 10.VIII.2010, 2 ♂♂, 12.VIII.2010, ♀, 18.VIII.2010, 2 ♀♀, 3 ♂♂, 14.IX.2007, ♀, ♂, 25.IX.2010, ♂; İğdır: 25.VI.1971, ♀; Kars: Kağızman, 1750 m, 22.VI.2010, ♀, Sarıkamış, Karakurt, 1470 m, 29.VII.2010, 3 ♀♀, 1900 m, 13.VIII.2009, 2 ♀♀; Konya: Beyşehir, Gökçimen, 3.VII.1997, ♀, 5.VII.1997, 2 ♀♀; Muş: 21.VII.1971, ♂.

D i s t r i b u t i o n i n T u r k e y : Artvin, Bilecik, Bursa (ÖNDER 1976); Erzurum (ÖZBEK & ALAOĞLU 1987); Bayburt, Bitlis, Erzurum, Sivas, Van (YARDIM 1990); Siirt (ÖNDER et al. 1995); Adana, Ağrı, Bartın, Çankırı, Karabük, Kastamonu, Kayseri, Konya, Yozgat (Lodos et al. 2003; ÖNDER et al. 2006); Ankara (KİYAK & AKAR 2010); İzmir (TEZCAN et al. 2010).

Genus *Stenodema* LAPORTE, 1833

Subgenus *Brachystira* FIEBER, 1858

Stenodema (Brachystira) calcarata (FALLEN, 1807)

M a t e r i a l e x a m i n e d : Erzurum: Aşkale, Kop Mountain, N 40°01'57.1", E 040°31'0.8", 2380 m, 5.IX.2012, ♂; Aziziye, Rizekent, N 40°09'56.2", E 040°59'53.1", 2081 m, 24.VI.2012, ♂; İspir, N 40°28'51.1", E 041°00'12.2", 1261 m, 22.VI.2011, ♂, Aşağı Özbağ, N 40°28'02.3", E 040°58'25.8", 1177 m, 15.VII.2012, ♂, Kân, N 40°28'11", E 040°59'5", 1316 m, 22.VI.2011, ♂, Kirazlı, N 40°26'53.4", E 040°53'07.6", 1219 m, 24.VI.2012, ♀, Yeşilvadi, N 40°15'53.9", E 040°59'21.4", 2285 m, 24.VI.2012, 5 ♀♀; Karayazı, Çatalören, N 39°46'32.1", E 042°01'43.1", 2313 m, 16.VII.2011, ♀; Köprüköy, Yeşilova, N 39°46'02.7", E 042°02'07.8", 2288 m, 17.VII.2012, ♀, ♂; Narman, Beyler, N 39°18'29", E 041°41'54.5", 2076 m, 23.VI.2011, 4 ♀♀; Oltu, İnanmış, N 40°27'44.4", E 041°42'42", 1812 m, 31.VII.2011, ♀.

D i s t r i b u t i o n i n T u r k e y : İzmir (ÖNDER 1970; TEZCAN et al. 2010); Adana, Afyonkarahisar, Artvin, Balıkesir, Bitlis, Burdur, Kırklareli, Kütahya, Muğla, Rize, Samsun, Tekirdağ, Tokat, Trabzon, Uşak (ÖNDER 1976); Bursa, Sakarya (ÖNDER et

al. 1981); Aydın, Elazığ, Erzurum (YARDIM 1990); Gaziantep (ÖNDER et al. 1995); Ankara, Antalya, Hatay, İçel, Kahramanmaraş, Kilis, Konya, Niğde, Sinop, Yozgat (LODOS et al. 2003); Almost all regions (ÖNDER et al. 2006); Diyarbakır (MATOCQ et al. 2014).

***Stenodema (Brachystira) trispinosa* REUTER, 1904**

M a t e r i a l e x a m i n e d : Erzurum: Aziziye, Yoncalık, N 40°0'3'6.6", E 040°55'34.7", 1800 m, 22.VI.2011, ♀; İspir, Aşağı Özbağ, N 40°28'02.3", E 040°58'25.8", 1177 m, 15.VII.2012, 5 ♂♂, Yeşilvadi, N 40°15'53.9", E 040°59'21.4", 2285 m, 24.VI.2012, ♀, Yaku-
tiye, Dumlubaba, Güngörmez, 2500 m, 1.VII.2010, ♀

D i s t r i b u t i o n i n T u r k e y : Ağrı, Ankara (ÖNDER 1976); Adana, Erzurum (YARDIM 1990); Kahramanmaraş, Kırşehir, Niğde (LODOS et al. 2003; ÖNDER et al. 2006).

Subgenus *Stenodema* LAPORTE, 1833

***Stenodema (Stenodema) holsata* (FABRICIUS, 1787)**

M a t e r i a l e x a m i n e d : Erzurum: Pazaryolu, 1453 m, 30.VII.2010, ♂, Tortum, Suyatağı, N 40°27'20.9", E 041°30'08.9", 1245 m, 27.V.2011, ♀.

D i s t r i b u t i o n i n T u r k e y : Artvin, Trabzon (ÖNDER 1976); Gümüşhane (YARDIM 1990); Kars, Kocaeli (ÖNDER et al. 2006).

***Stenodema (Stenodema) laevigata* (LINNAEUS, 1758)**

M a t e r i a l e x a m i n e d : Erzurum: Aşkale, Abdalcık, 1756 m, 1.VIII.2010, 2 ♀♀; Çat, Tuzlataşı, 1910 m, 6.VIII.2010, ♀; Horasan, Akçataş, N 40°07'00.1", E 042°08'31.9", 1659 m, 13.VIII.2012, ♂; İspir, Aşağı Özbağ, N 40°28'02.3", E 040°58'25.8", 1177 m, 15.VII.2012, ♂, Köprüköy, N 40°27'30.9", E 040°57'21.2", 1135 m, 24.VII.2011, 3 ♀♀; Köprüköy, N 39°57'55.2", E 041°51'02.3", 1621 m, 13.VIII.2011, 2 ♂♂; Narman, 1565 m, 21.VII.2010, ♀, Demirdağ, 21.VII.2010, ♀, Kireçli Pass, 2400 m, 31.VII.2010, ♀, Oltu, Sütkans, 25.VI.1996, ♀; Palandöken, Abdurrahmangazi, 2197 m, 1.VIII.2010, ♀; Pasinler, 1.VI-
II.1983, ♀, Epsemce, N 39°59'14.4", E 041°46'43.9", 1666 m, 21.VIII.2011, ♀, Pazaryolu, 1453 m, 30.VII.2010, ♀, 1010 m, 7.VIII.2009, 4 ♀♀, 2 ♂♂; Şenkaya, 8.VII.1988, ♂, Göze-
başı, N 40°24'39.9", E 042°18'11.5", 1794 m, 14.VII.2012, ♀, Turnalı, 29.VI.1989, ♀; Tor-
tum, 2.VII.1987, ♀, Suyatağı, N 40°27'20.2", E 041°30'14.0", 1236 m, 21.VII.2012, ♂; Uzun-
dere, 2000 m, 27.V.2010, ♀, N 40°31'57.2", E 041°32'39.2", 1147 m, 7.VIII.2011, ♂, 20.VIII.
1995, 2 ♂♂; Yakutiye, Dumlubaba, Güngörmez, 2200 m, 19.VIII.2009, ♂, University field,
26.VII.1983, ♀, 30.VII.1987, 2 ♀♀, 1800 m, 3.VIII.2007, ♀, 1850 m, 4.VIII.2008, ♂; Yeşil-
dere, 2000 m, 19.VIII.2009, ♀; Çankırı: Eskipazar, 31.VIII.1984, ♀; Giresun: 11.I.1984, ♂;
İğdir: Tuzluca, 900 m, 18.VI.2009, ♀.

D i s t r i b u t i o n i n T u r k e y : Ankara, Artvin, İstanbul, Trabzon (ÖNDER 1976); Bursa (ÖNDER et al. 1981; GENÇER et al. 2004); Bolu, Erzurum, İzmir, Ordu (YARDIM 1990); Diyarbakır (ÖNDER et al. 1995); Bolu, Çankırı, Çorum, Kayseri Nevşehir, Zonguldak (LODOS et al. 2003); Antalya (ÖNDER et al. 2006).

***Stenodema (Stenodema) turanica* REUTER, 1904**

M a t e r i a l e x a m i n e d : Erzincan: Üzümlü, 1518 m, 10.VI.2010, ♀; Erzurum: Aziziye, Eskipolat, 1857 m, 30.VII.2010, 2 ♂♂; Toprakkale, N 40°14'27.9", E 040°59'01.1", 2151 m, 22.VI.2011, 2 ♂♂; Çat, Tuzlataşı, 1900 m, 6.VIII.2010, ♂; İspir, N 40°29'20.4", E 041°00'31", 1236 m, 22.VI.2011, ♂; Oltu, Sarisaz, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, ♂; Palandöken, Abdurrahmangazi, 2197 m, 1.VIII.2010, ♂; Şenkaya, Gözebaşı, N 40°24'39.9", E 042°18'11.5", 1794 m, 14.VII.2012, ♀; Tortum, N 40°27'20.9", E 041°30'08.9", 1245 m, 27.V.2011, 2 ♀♀; Uzungere, Çağlayanlı, N 40°39'34.4", E 041°40'32.6", 967 m, 27.V.2011, 2 ♀♀; Yakutiye, Güzelyayla, 2000 m, 19.VIII.2009, ♀, 2 ♂♂; University field, 1850 m, 26.VI.2008, ♂, 3.VII.2008, ♀, 25.VII.1986, ♀, 1800 m, 17.VIII.2010, ♂.

D i s t r i b u t i o n i n T u r k e y : Adiyaman, Ankara, Artvin, Bingöl, Bursa, Denizli, Elazığ, Gümüşhane, Hakkâri, Kütahya, Mardin, Muğla, Muş, Trabzon, Van (ÖNDER 1976); Erzurum (ÖZBEK & ALAOĞLU 1987; YILDIRIM et al. 1999); Adana, Ağrı, Bitlis, Erzincan, Şanlıurfa (YARDIM 1990); Diyarbakır, Siirt, Şırnak (ÖNDER et al. 1995); Antalya, Çankırı, Çorum, İçel, Kahramanmaraş, Kayseri, Konya, Nevşehir, Niğde, Osmaniye, Yozgat (LODOS et al. 2003); Almost all regions (ÖNDER et al. 2006); İzmir (TEZCAN et al. 2010); Mardin (MATOCQ & ÖZGEN 2010); Siirt (MATOCQ et al. 2014).

***Stenodema (Stenodema) virens* (LINNAEUS, 1767)**

M a t e r i a l e x a m i n e d : Erzurum: Aziziye, Rizekent, N 40°0.9'49.1", E 041°00'03.5", 2097 m, 22.VI.2011, ♀; Horasan, Yeşildere, N 40°07'8.0", E 042°05'26.6", 1684 m, 21.VIII.2011, ♀; İspir, Yeşilvadi, N 40°15'53.9", E 040°59'21.4", 2285 m, 24.VI.2012, 2 ♀♀; Narman, Cimenli, N 40°8'47", E 041°53'22.5", 2311 m, 19.VII.2011, ♀; Olur, Ormanağız, 955 m, N 40°45'57.7", E 042°04'30.8", 19.VII.2011, ♂; Palandöken, Taşlıgünüey, N 39°47'46.7", E 041°6'41.1", 1968 m, 9.VIII.2011, ♂; Uzungere, Yayla, N 40°27'48.6", E 041°39'32.3", 2005 m, 13.VII.2011, ♀; Yakutiye, Dumlubaba, Güngörmez, 2500 m, 1.VII.2010, ♂.

Distribution in Turkey: Ankara, Aydin, Bilecik, Burdur, Çanakkale, Denizli, Erzurum, Kastamonu, Muğla (ÖNDER 1976); Bolu, Bursa, İstanbul, Kocaeli, Sakarya (ÖNDER et al. 1981); Afyon, Diyarbakır, Elazığ, Malatya, Şanlıurfa, Van (YARDIM 1990); Artvin (GÜÇLÜ et al. 1995b); Ağrı, Aksaray, Çankırı, Kars, Kayseri, Kocaeli, Nevşehir, Yozgat (LODOS et al. 2003; ÖNDER et al. 2006); İzmir (TEZCAN et al. 2010).

Genus *Trigonotylus* FIEBER, 1858

***Trigonotylus pulchellus* (HAHN, 1834)**

M a t e r i a l e x a m i n e d : Adiyaman: Besni, 22.VI.1990, ♀; Artvin: 650 m, 3.VIII.2009, ♂; Bayburt: Kop Mountain Pass, 2344 m, 12.VIII.2009, ♂; Erzincan: Üzümlü, 1500 m, 22.IX.2009, 3 ♀♀, 4 ♂♂; Erzurum: Aşkale, Çayköy, N 39°56'46.6", E 040°48'27.4", 1720 m, 21.VI.2011, ♂; Aziziye, Kümbet, N 39°48'57.8", E 041°0.4'33", 1836 m, 9.VIII.2011, ♀; Yoncalık, 1800 m, 22.VI.2011, 2 ♂♂; Çat, Taşağıl, N 39°41'43.5", E 041°02'59.7", 2166 m, 18.VII.2012, ♂; Yaylasuyu, N 39°43'31.4", E 040°58'42.5", 2208 m, 18.VII.2012, 4 ♀♀, ♂; Horasan, N 40°00'53", E 041°59'06", 1588 m, 22.VII.2014, ♀; İspir, 1300 m, 7.VIII.2009, ♂, 22.IX.1986, 6 ♀♀; Karayaşı, Alemdağ, N 39°38'24", E 041°56'14.8", 2022 m, 16.VII.2011, ♂, N 39°36'00.4", E 041°52'19.8", 2095 m, 17.VII.2012, ♀; Çatalören, N 39°46'32.1", E 042°01'43.1", 2313 m, 16.VII.2011, 2 ♀♀; Karasu, N 39°42'51.1", E 042°00'00.5", 2186 m, 16.VII.2011, ♀, ♂; Yeniköy, N 39°43'31.8", E 041°59'29.5", 2199 m, 17.VII.2012, 3 ♀♀, ♂; Köprüköy, Geyikli, N 39°48'02.1", E 042°04'05.4", 2144 m, 17.VII.2012, ♂; İlicasu,

2380 m, 17.VII.2010, ♂; Yücelik, N 39°46'02.7", E 042°02'07.8", 2288 m, 17.VII.2012, ♂; Narman, Mahmutçavuş, N 40°20'16.1", E 041°56'01.4", 1546 m, 13.VIII.2012, ♂; Yanıktaş, N 40°16'43.4", E 041°52'1.4", 1628 m, 30.VII.2011, 3 ♂♂; Oltu, 10.VII.1989, ♀, Sarısaz, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, 5 ♀♀, 5 ♂♂; Olur, Boğazören, N 40°49'19.2", E 042°12'42.6", 1168 m, 19.VII.2012, ♀, ♂; Coşkunlar, N 40°44'32.7", E 042°11'11.4", 1054 m, 30.VII.2011, ♂; Çataksu, N 40°45'58.0", E 042°01'39.7", 909 m, 6.VII.2012, ♂; Taşlıköy, N 40°45'59.6", E 042°01'35.6", 860 m, 19.VII.2011, ♀, ♂, 885 m, 4.VIII.2009, ♂; Pasinler, 1600 m, 30.VII.2010, 2 ♀♀, Demirdöven, 1727 m, 29.VII.2010, ♀, 10 ♂♂; Korucuk, 1792 m, 29.VII.2010, ♀; Serçeboğazi, N 40°00'39.4", E 041°38'23.9", 1725 m, 12.VIII.2012, ♂; Şenkaya, 31.VII.1988, ♂; Paşalı, 1173 m, 31.VII.2010, 2 ♂♂; Sındırın, 1491 m, 31.VII.2010, ♀; Taht, N 40°38'29", E 042°20'0.3", 1232 m, 14.VII.2014, ♂; Yakutiye, Güzelyayla, 2000 m, 19.VIII.2009, ♀, University field, 1850 m, 25.VIII.1998, 2 ♀♀; Giresun: 2.VIII.1990, ♀, ♂, 9.VIII.1984, ♀, ♂, 10.VIII.1990, 2 ♂♂, 11.VIII.1984, 2 ♀♀; İğdır: 830 m, 23.VI.2010, ♀, 28.VIII.1990, ♀, Melekli, 850 m, 23.VI.2010, ♀, ♂, Aralık, 830 m, 23.VI.2010, 3 ♂♂; Karakoyunlu, Taşburun, 830 m, 23.VI.2010, ♂; Kars: Kağızman, 1750 m, 22.VI.2010, ♀.

Distribution in Turkey: İzmir (ÖNDER 1970; TEZCAN et al. 2010); Ağrı, Ankara, Artvin, Aydın, Balıkesir, Bilecik, Bursa, Çanakkale, Denizli, Edirne, Kırklareli, Muğla, Sakarya, Tekirdağ, Uşak, Zonguldak (ÖNDER 1976); Bolu, İstanbul (ÖNDER et al. 1981); Şanlıurfa (YARDIM 1990); Diyarbakır (ÖNDER et al. 1995); Manisa (BEYAZ 2000); Adana, Aksaray, Antalya, Bartın, Çankırı, Çorum, Eskişehir, Gaziantep, Hatay, İçel, Kahramanmaraş, Kayseri, Mersin, Nevşehir, Niğde, Osmaniye, Yozgat (Lodos et al. 2003); Aegean and Marmara Regions (ÖNDER et al. 2006); Mardin (MATOCQ & ÖZGEN 2010); Siirt (MATOCQ et al. 2014).

Trigonotylus ruficornis (GEOFFROY, 1785)

Material examined: Erzurum: İspir, 22.IX.1986, ♀; Oltu, Sarısaz, N 40°32'00.9", E 041°54'27.2", 1421 m, 30.VIII.2012, ♂; Şenkaya, Paşalı, N 40°40'08.7", E 042°12'18.4", 1106 m, 10.VII.2011, ♂.

Distribution in Turkey: Artvin, Aydın, Bilecik, Çanakkale, Kars, Kütahya, Manisa, Rize, Trabzon, Uşak (ÖNDER 1976); Edirne (ÖNDER et al. 1984); Ağrı, Erzincan, Erzurum, İzmir, Kırklareli, Mardin, Samsun, Van (YARDIM, 1990); Diyarbakır (ÖNDER et al. 1995); İçel (Lodos et al. 2003); Adana, Ankara, Bartın, Çorum, Eskişehir, Gaziantep, Hatay, Kahramanmaraş, Kastamonu, Kırşehir, Konya, Mersin, Osmaniye, Zonguldak (ÖNDER et al. 2006); Mardin (MATOCQ & ÖZGEN 2010); Diyarbakır, Siirt (MATOCQ et al. 2014).

Trigonotylus tenuis REUTER, 1893

Material examined: Giresun: 9.VI.1984, ♀, ♂; İğdır: 23.VIII.1990, ♀, Melekli, 8.VII.1992, ♀.

Distribution in Turkey: Elazığ (MATOCQ et al. 2014).

Discussion

As the result of present study one species from one genera of Herdoniini and fifteen species from six genera of Stenodemini are recorded from Turkey. Among them, *Leptopterna euxina* VINOKUROV, 1982, *Notostira elongata* (GEOFFROY, 1785), *Notostira poppiusi* REUTER, 1911, *Notostira erratica* (LINNAEUS 1758), *Stenodema* (*Stenodema*) *laevigata* (LINNAEUS, 1758) and *Trigonotylus pulchellus* (HAHN 1834) has been found the most abundant and widespread species. Separately, some new localities were added to known distribution aerea. All the recorded species are phytophagous.

As a result of the current study, the total number of species recorded from Turkey is raised to 580, belonging to 151 genera from Miridae and our knowledge on the distribution of previously known species has broadened. However, supplementary researches are necessary to know better the composition of the Turkish fauna of Miridae and monitor the expansion of these potential predators of cultures.

Acknowledgments

We are grateful to Dr. Rauno Linnavuori (Finland) and Dr. Chérot Frédéric (Belgium) for determining some of the reference material. The study was supported by the Atatürk University Scientific Research Fund (Project Number: 2009/23) and is a partial summary of Gülsen Yazıcı's PhD thesis (Atatürk University, Institute of Science, Department of Plant Protection), adopted on 11.05.2015. We also thank all my colleagues that in previous years collected material from different localities of Turkey.

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- Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:
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Jahr/Year: 2017

Band/Volume: [0038](#)

Autor(en)/Author(s): Yazici Gülsen, Yıldırım Erol

Artikel/Article: [Contribution to the knowledge of the Herdoniini and Stenodemini
\(Hemiptera: Heteroptera: Miridae: Mirinae\) fauna of Turkey 177-192](#)