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Contributions to Pentatomoidea (Heteroptera) Fauna of Western Black Sea Region with a New Record for Anatolian Fauna: *Neottiglossa lineolata* (Mulsant & Rey, 1852)

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SUMMARY

In this present study, performed in the Western Black Sea Region between the years 2005 and 2007, 68 species from 37 genera and 5 families (Pentatomidae, Cydnidae, Scutelleridae, Plataspidae, Acanthosomatidae) of Pentatomoidea were determined. 46 of these species belongs to Pentatomidae, 15 to Scutelleridae, 4 to Cydnidae, 2 to Plataspidae and 1 to Acanthosomatidae. 28 species are new records for Western Black Sea Region. *Neottiglossa lineolata* (Mulsant & Rey, 1852) is a new record for Anatolian Pentatomidae fauna.

Key words: Pentatomoidea, fauna, taxonomy, new record, Western Black Sea Region, Anatolia

INTRODUCTION

Pentatomoidea, a superfamily which attracted many scientists' attention with the agricultural pest species from different families possessing economic importance, is represented with 7 families in Turkey. These are Pentatomidae, Scutelleridae, Cydnidae, Thyreocoridae, Acanthosomatidae, Dinidoridae and Plataspidae.

The first studies on Turkey Pentatomoidea started as early as mid 1800s by foreign scientists and has continued until today. Horvath (1883a, 1901, 1903, 1906a, 1906b, 1919) reported a great number of species from many localities in Anatolia, especially from the southern and southeastern parts. Reuter (1890) and Gadeau de Kerville (1939), Puton (1892), Escherich (1897), Kiritshenko (1918, 1924), Fahringer (1922), Zwölfer (1930), Seidenstücker (1957, 1958, 1960, 1963, 1975), Wagner (1959, 1966) are some other researchers who also studied in the country and reported a number of species. Among these, the most comprehensive species list is that of Hoberlandt (1955) who reported 170 species from Pentatomoidea.

The studies of Lodos et al. (1978, 1998), Lodos and Önder (1978, 1979, 1980, 1982, 1983), Kıyak (1990, 1993, 2000) and Önder et al. (1995) are the most detailed native studies aimed to discover Turkey Pentatomoidea fauna. Fent and Aktaç (1999, 2007) reported many new records for both Turkey and Thrace Region Pentatomoidea fauna in their studies carried out in the Thrace Region.

The current available data on faunal members of Pentatomoidea in our present study area which consisted of the Western Black Sea Region is rather limited. Lodos

et al. (1998) performed a detailed field survey to reveal the pest insect compositions of the Western Black Sea, Central Anatolia and Mediterranean Regions and reported 52 species from Pentatomoidea from the former region which also constitutes our research area. Moreover, with the contribution of foreign scientists, i.e. Hoberlandt (1955) and Linnavuori (1965), as well as of native ones (Önder et al., 1981; Lodos & Önder, 1983) this number increased to 58.

The former studies performed in our present study region have not focused on the region specially and their main aim was not the determination of Pentatomoidea fauna of the region. Moreover, the studies except that of Lodos et al. (1998) reported only limited number of specimens from Pentatomoidea. Western Black Sea Region covers a rather big area and is characterized by different habitat conditions. We aimed in this present study to contribute to not only the region fauna but also to Turkey fauna as a whole.

MATERIALS AND METHODS

The field studies started in 2005 and lasted until 2007. Specimens were collected from 68 localities from 9 provinces in the Western Black Sea Region in spring and summer months during which Pentatomoidea are active.

The specimens were obtained using a sweeping net for those found on short grass-type plants and using a Japanese umbrella from trees and bushes. Male genitalia preparations were prepared for identification of species of the genera *Carpocoris, Odontoscelis, Odontotarsus* and *Eurygaster.* Tamanini (1959), Stichel (1960, 1961, 1962), Wagner (1965), Seidenstücker (1971), Lodos & Önder (1978, 1979, 1980, 1983) were consulted for constructions of keys and identifications.

A "*" sign was used at the end of the records to represent the species which were reported as to be new for the region. The localities as well as their coordinates and altitudes are listed in Table 1.

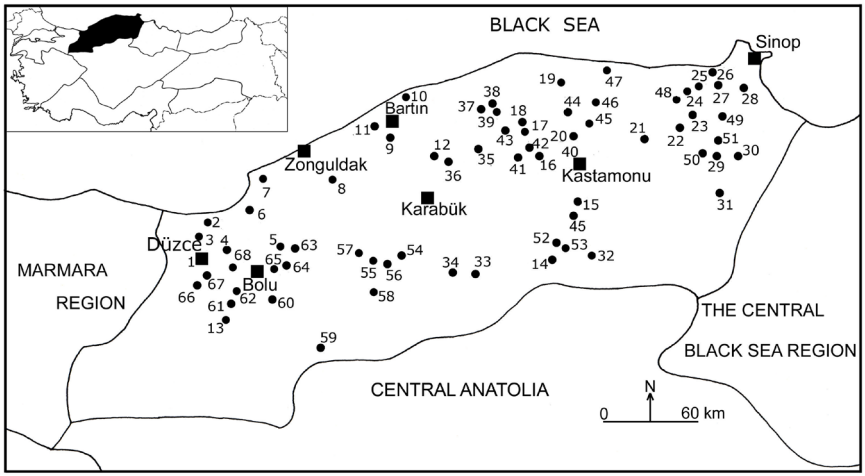

Fig. 1. Collecting localities in Western Black Sea Region.

Table. 1 The localities, coordinates, altitudes and dates where Pentatomoidea species were recorded in Western Black Sea Region.

Loc. No	Locality	Altitude (m)	Coordinate	Date
1	Düzce (Central province)	156m	40°48'N31°10'E	11.07.2005
2	Düzce (Akçakoca-Dadalı Village)	59m	41°03'N31°11'E	11.07.2005
3	Düzce (Boğaziçi)	165m	40°50'N31°09'E	11.07.2005
4	Düzce (Gürcüçiftlik Village)	177m	40°53'N31°13'E	12.07.2005
5	Düzce (Yığılca -Karakaş Village)	522m	40°58'N31°34'E	12.07.2005
6	Düzce (between Yığılca and Alaplı)	64m	41°06'N31°24'E	13.07.2005
7	Zonguldak (Karadeniz Ereğlisi-Aydınlar)	150m	41°06'N31°25'E	13.07.2005
8	Zonguldak (Gökçebey-Bakacakkadı)	48m	41°19'N32°05'E	14.07.2005
9	Bartın (Akmanlar Village)	74m	41°32'N32°14'E	14.07.2005
10	Bartın (Amasra road, 5 th km)	144m	41°38'N32°21'E	14.07.2005
11	Bartın (between Bartın and İnkum near Gürgenpınar Village)	Sea level	41°39'N32°15'E	15.07.2005
12	Bartın (Uluyayla)	1100m	41°34'N32°38'E	15.07.2005
13	Bolu (Mudurnu road, 10 km. away Mudurnu)	797m	40°30'N31°13'E	16.07.2005
14	Çankırı (between Ilgaz and Kastamonu 4 th km	942m	40°54'N31°37'E	27.06.2006
15	Kastamonu (Beşdeğirmenler Village)	1044m	41°11'N33°47'E	28.06.2006
16	Kastamonu (9 km away Daday)	818m	41°28'N33°35'E	29.06.2006
17	Kastamonu (5 km away Azdavay)	843m	41°35'N33°18'E	29.06.2006
18	Kastamonu (Azdavay-Küre road-5 th km)	827m	41°39'N33°21'E	29.06.2006 29.07.2007
19	Kastamonu (Küre-Camili Village)	1126m	41°44'N33°40'E	29.06.2006
20	Kastamonu (Küre road, 40 km away Kastamonu)	1107m	41°40'N33°42'E	29.06.2006
21	Kastamonu (Taşköprü-Kıvrımçay)	515m	41°35'N34°19'E	30.06.2006
22	Kastamonu (Hanönü-Aşağıçakırçay)	384m	41°37'N34°32'E	30.06.2006
23	Sinop (Boyabat-Uzunçay Village)	1329m	41°41'N34°38'E	30.06.2006
24	Sinop (Ayancık-Bakırlızaviye Village)	1289m	41°47'N34°39'E	30.06.2006
25	Sinop (Ayancık-between Hacıyakası and Köşeyakası Village)	240m	41°49'N34°37'E	01.07.2006 05.07.2007
26	Sinop-Ayancık (Ağaçlı Village)	4m	41°56'N34°43'E	01.07.2006
27	Sinop (between Selbeyi and Erfelek)	137m	41°53'N34°55'E	01.07.2006
28	Sinop (Karapınar-Boyabat road)	977m	41°45'N34°55'E	01.07.2006
29	Sinop (Boyabat-Çatpınar Village)	252m	41°27'N34°51'E	02.07.2006
30	Sinop (Durağan-Dağdelen Village)	223m	41°25'N34°57'E	02.07.2006
31	Sinop (Saraydüzü-Yaylacılı Village)	231m	41°15'N34°52'E	02.07.2006 02.07.2007
32	Kastamonu (Tosya-Dipsiz Lake)	1230m	41°05'N34°02'E	02.07.2006
33	Çankırı (Kurşunlu)	1179m	40°50'N33°13'E	03.07.2006
34	Çankırı (Çerkeş)	1166m	40°48'N32°55'E	03.07.2006
35	Karabük (Eflani-Kadıköy Pond)	930m	41°27'N32°59'E	26.06.2007
36	Karabük (Ovacuma)	324m	41°27'N32°43'E	26.06.2007
37	Kastamonu (Küre Dağları Milli Parkı- Valla Canyon road)	527m	41°41'N33°05'E	27.06.2007
38	Kastamonu (Pınarbaşı-Kerte Village-Kokurdan Plateau)	1029m	41°43'N33°07'E	27.06.2007
39	Kastamonu (Pınarbaşı-Kerte Village-Kokurdan Plateau 8 th km)	1010m	41°43'N35°'08E	27.06.2007
40	Kastamonu-Central province	850m	41°21'N33°46'E	28.06.2007
41	Kastamonu (Daday-Taşçılar Pond)	992m	41°28'N33°23'E	28.06.2007
42	Kastamonu (Daday-Yumurtacı Pond)	938m	41°28'N33°26'E	28.06.2007
43	Kastamonu (Azdavay)	822m	41°38'N33°17'E	29.06.2007
44	Kastamonu (Seydiler-Kepez Village)	1118m	41°41'N33°47'E	29.06.2007
45	Kastamonu (Devrekani-Kulaksızlar Dam)	1104m	41°38'N33°54'E	29.06.2007
46	Kastamonu (Devrekani-Çatalzeytin road 18 th km)	1195m	41°42'N33°58'E	30.06.2007
47	Kastamonu (Çatalzeytin-Hamidiye Village)	603m	41°55'N34°10'E	30.06.2007
48	Sinop (between Ayancık and Boyabat)	1074m	41°43'N34°38'E	01.07.2007

Table 1 continued.

49	Sinop (Akgöl)	1024m	41º41'N34º35'E	01.07.2007
50	Sinop (Boyabat-Koçak)	340m	41º36'N34º38'E	01.07.2007
51	Sinop (Boyabat-Bektaş Village)	361m	41º32'N34º46'E	02.07.2007
52	Çankırı (Ilgaz-Kırkpınar Plateau)	1797m	41º00'N33º37'E	03.07.2007
53	Çankırı (Ilgaz-road Kırkpınar Plateau)	1088m	40º59'N33º41'E	03.07.2007
54	Karabük (Eskipazar-Büyükyayalar Village)	854m	40º55'N32º28'E	07.08.2007
55	Karabük (Eskipazar-between Budaklar Village and Hacıahmetler)	830m	40º55'N32º29'E	07.08.2007
56	Karabük (Eskipazar-Adiller Village)	1392m	40º54'N32º23'E	07.08.2007
57	Karabük (Eskipazar-Sarıkadılar Village detour)	796m	40º56'N32º16'E	07.08.2007
58	Bolu (between Gerede and Kızılcahamam road, Avşar Plateau 15th km)	1337m	40º39'N32º21'E	08.08.2007
59	Ankara-between Beypazarı and Kıbrıscık (Karagöl)	1419m	40º21'N31º55'E	08.08.2007
60	Bolu (Gölcük)	1068m	40º49'N31º41' E	09.08.2007
61	Bolu (Abant Lake)	1332m	40º36'N31º16'E	09.08.2007
62	Bolu (between Abant Lake Akçaalan Village)	946m	40º39'N31º23'E	09.08.2007
63	Bolu (Yedigöller-Bolu road)	753m	40º56'N31º44'E	10.08.2007
64	Bolu (Yedigöller -Bolu road)	1284m	40º55'N31º44'E	10.08.2007
65	Bolu (Yedigöller -Bolu road)	1433m	40º55'N31º42'E	10.08.2007
66	Düzce (Cevizli Köy-Efteni Lake)	137m	40º46'N31º07'E	15.08.2007
67	Düzce (between Aydınpınar and Düzce)	137m	40º46'N31º07'E	11.08.2007
68	Düzce (Dipsiz Lake)	820m	40º44'N31º21'E	12.08.2007

RESULTS

Pentatomidae Leach, 1815

Ancyrosoma leucogrammes (Gmelin, 1790)

Material examined: loc. 22, 1♂; loc. 30, 1♀; loc. 31, 3♂♂; loc. 36, 1♀, 1♂; loc. 40, 1♀; loc. 41, 2♂♂; loc. 42, 1♂; loc. 50, 1♀;. loc. 55, 1♀.

Derula flavoguttata Mulsant & Rey, 1856

Material examined: loc. 5,1♀, 1♂; loc. 18, 5♀♀, 6♂♂; loc. 37, 2♀♀, 1♂.

Graphosoma lineatum (Linnaeus, 1758)

Material examined: loc. 14, 1♀; loc. 16, 1♀, 1♂; loc. 18, 1♀, 1♂; loc. 20, 1♀; loc. 22, 1♂; loc. 26, 1♀; loc. 29, 1♂; loc. 30, 1♂; loc. 36, 1♀; loc. 37, 1♂; loc. 38, 1♂; loc. 40, 1♀; loc. 44, 1♂; loc. 46, 1♂; loc. 50, 1♀; loc. 54, 1♂; loc. 55, 1♂; loc. 58, 1♀; loc. 62, 1♂; loc. 64, 1♀; loc. 65, 1♀; loc. 67, 1♀; loc. 68, 1♀.

**Graphosoma semipunctatum* (Fabricius, 1775)

Material examined: loc. 15, 1♀.

**Podops rectidens* Horváth, 1883

Material examined: loc. 37, 1♀.

**Tholagmus flavolineatus* (Fabricius, 1798)

Material examined: loc. 51, 1♀.

**Vilpianus galii* (Wolff, 1802)

Material examined: loc. 22, 2♀♀, 2♂♂.

Eurydema blanda Horváth, 1903

Material examined: loc. 33, 1♀, 1♂; loc. 34, 2♀♀, 3♂♂.

Eurydema oleracea (Linnaeus, 1758)

Material examined: loc. 14, 1♀, 1♂; loc. 19, 1♀; loc. 20, 1♀, 1♂; loc. 22, 1♂; loc. 34, 3♀♀, 8♂♂; loc. 40, 1♂; loc. 44, 1♀; loc. 48, 1♀, 1♂; loc. 64, 2♀♀, 2♂♂.

Eurydema ornata (Linnaeus, 1758)

Material examined: loc. 2, 1♂; loc. 6, 2♀♀, 1♂; loc. 19, 1♂; loc. 20, 1♂; loc. 22, 8♀♀, 5♂♂; loc. 29, 1♀, 1♂; loc. 30, 1♀; loc. 31, 1♂; loc. 32, 1♂; loc. 33, 1♂; loc. 34, 1♂; loc. 40, 2♂♂; loc. 42, 1♂; loc. 50, 2♀♀; loc. 51, 2♀♀, 1♂; loc. 55, 1♀, 2♂♂.

**Eurydema rugulosa* (Dohrn, 1860)

Material examined: loc. 22, 1♀, 1♂.

Eurydema ventralis Kolenati, 1846

Material examined: loc. 22, 6♀♀, 1♂; loc. 30, 1♀; loc. 51, 1♀.

**Trochiscocoris rotundatus rotundatus* Horváth, 1883

Material examined: loc. 42, 1♀.

Nezara viridula (Linnaeus, 1758)

Material examined: loc. 66, 1♂; loc. 67, 1♀.

Piezodorus lituratus (Fabricius, 1794)

Material examined: loc. 15 2♀♀; loc. 16, 2♂♂; loc. 18, 1♀; loc. 22, 1♀, 1♂; loc. 24, 1♀; loc. 25, 2♀♀; loc. 30, 1♀; loc. 32, 1♀; loc. 34, 1♀; loc. 47, 1♀; loc. 48, 1♀; loc. 64, 1♀, 1♂.

**Pentatoma rufipes* (Linnaeus, 1758)

Material examined: loc. 63, 1♂.

Rhaphigaster nebulosa (Poda, 1761)

Material examined: loc. 39, 1♀.

Carpocoris fuscispinus (Boheman, 1851)

Material examined: loc. 45, 1♂.

Carpocoris mediterraneus mediterraneus Tamanini, 1958

Material examined: loc.7, 1♂; loc. 8, 3♂♂; loc. 16, 2♂♂; loc. 36, 1♂; loc. 37, 2♂♂; loc. 45, 2♂♂; loc. 50, 1♂; loc. 57, 1♂; loc. 67, 1♂.

Carpocoris melanocerus (Mulsant & Rey, 1852)

Material examined: loc. 15, 1♀; loc. 23, 2♀♀, 1♂; loc. 64, 1♀, 1♂; loc. 65, 1♀,1♂.

Carpocoris pudicus (Poda, 1761)

Material examined: loc. 62, 2♀♀, 2♂♂.

Carpocoris purpureipennis (De Geer, 1773)

Material examined: loc. 1, 1♀; loc. 3, 1♀, 2♂♂; loc. 4, 1♀,1♂; loc. 5, 1♂; loc. 6, ♀; loc. 7, 3♀♀; loc. 14, 1♂; loc. 16, 3♀♀, 4♂♂; loc. 17, 3♀♀, 3♂♂; loc. 18, 3♀♀, 1♂; loc. 20, 2♀♀, 1♂; loc. 22, 1♀; loc. 25, 2♀♀; loc. 26, 2♂♂; loc. 30, 5♀♀, 4♂♂; loc. 32, 1♀; loc. 33, 4♂♂; loc. 34, 1♂; loc. 38, 1♀; 1♂; loc. 41, 1♀, 1♂; loc. 42, 1♂; loc. 44, 1♂; loc. 46, 2♀♀; loc. 47, 1♀, 1♂; loc. 48, 1♀; loc. 51, 2♀♀, 1♂; loc. 53,1♂; loc. 55, 1♂; loc. 57, 1♀, 1♂; loc. 58, 1♀; loc. 62, 1♀; loc. 68, 1♀, 1♂.

Codophila varia varia (Fabricius, 1787)

Material examined: loc. 30, 2♀♀, 3♂♂; loc. 32, 07.2006, 1♂.

Dolycoris baccarum (Linnaeus, 1758)

Material examined: loc. 1, 1♀; loc. 3, 1♂; loc. 6, 2♀♀, 1♂; loc. 8, 1♀, 1♂; loc. 14, 1♀; loc. 16, 1♀, 1♂; loc. 17, 1♀; loc. 19, 1♀; loc. 20, 1♂; loc. 22, 2♀♀; loc. 23, 1♂; loc. 30, 1♀; loc. 31, 1♀; loc. 33, 1♀; loc. 38, 1♂; loc. 40, 1♀; loc. 42, 1♂; loc. 45, 2♂♂; loc. 46,1♀; loc. 48, 2♀♀; loc. 51, 1♀, 1♂; loc. 53, 1♀; loc. 57, 1♀; loc. 58, 1♀; loc. 59, 1♂; loc. 61, 1♂; loc. 62, 1♀; loc. 64, 1♂; loc. 65, 1♀; loc. 66, 2♀♀; loc. 67, 1♀.

Holcostethus strictus strictus (Fabricius, 1803)

Material examined: loc. 22, 1♀; loc. 39, 1♀; loc. 40, 1♀.

Palomena prasina (Linnaeus, 1761)

Material examined: loc. 5, 1♀; loc. 17, 1♀, 1♂; loc. 19, 1♀; loc. 32, 2♀♀; loc. 39, 1♂.

Staria lunata (Hahn, 1835)

Material examined: loc. 4, 1♀; loc. 5, 1♀, 1♂; loc. 6, 1♀; loc. 17, 1♀; loc. 18, 1♀, 3♂♂; loc. 22, 1♀; loc. 24, 1♀; 1♂; loc. 26, 2♂♂; loc. 40, loc. 48, 1♀, 2♂♂; loc. 62, 2♂♂.

Aelia acuminata (Linnaeus, 1758)

Material examined: loc. 13 1♀, 1♂; loc. 14, 1♂; loc. 16, 2♀♀; loc. 17, 3♀♀, 2♂♂; loc. 18, 1♀, 4♂♂; loc. 19, 1♀; loc. 20, 1♂; loc. 22, 1♀, 1♂; loc. 25, 1♀; loc. 26, 1♀; loc. 29, 2♂♂; loc. 35, 3♀♀, 2♂♂; loc. 37, 2♀♀; loc. 38, 1♀; loc. 42, 1♂; loc. 45, 1♀; loc. 57, 1♀, 2♂♂; loc. 58, 3♂♂; loc. 64, 2♀♀, 1♂; loc. 65, 1♀; loc. 68, 1♀.

Aelia rostrata Boheman, 1852

Material examined: loc. 16, 2♂♂; loc. 17, 3♀♀, 1♂; loc. 18, 2♀♀; loc. 42, 1♂; loc. 53, 1♂; loc. 59, 1♀.

Neottiglossa leporina (Herrich-Schaeffer, 1830)

Material examined: loc. 13, 1♂; loc. 16, 2♀♀, 1♂; loc. 18, 1♂; loc. 41, 3♂♂; loc. 43, 2♀♀, 2♂♂; loc. 48, 1♀; loc. 57, 1♂; loc. 59, 1♀, 1♂; loc. 64, 2♂♂; loc. 65, 2♀♀, 1♂.

**Neottiglossa lineolata* (Mulsant & Rey, 1852)

Material examined: loc. 35, 1♀.

**Apodiphus amygdali* (Germar, 1817)

Material examined: loc. 54, 1♀.

**Mustha spinosula* (Lefebvre, 1831)

Material examined: loc. 40, 1♂.

**Eysarcoris aeneus* (Scopoli, 1763)

Material examined: loc. 9, 1♀.

Eysarcoris ventralis (Westwood, 1837)

Material examined: loc. 67, 1♀.

Eysarcoris venustissimus (Schrank, 1776)

Material examined: loc. 9, 1♀.

**Stagonomus amoenus* (Brullé, 1832)

Material examined: loc. 1, 1♂; loc. 6, 1♀; loc. 13, 1♀; loc. 18, 4♀♀; loc. 24, 1♀; loc. 36, 6♀♀, 6♂♂; loc.43, 2♀♀, 2♂♂; loc. 47, 2♂♂; loc. 48, 5♀♀, 3♂♂; loc. 50, 1♀.

**Stagonomus bipunctatus* (Linnaeus, 1758)

Material examined: loc. 30, 1♂; loc. 36, 1♀, 2♂♂; loc. 37, 1♂; loc. 42, 1♂; loc. 66, 1♀.

Dyroderes umbraculatus (Fabricius, 1775)

Material examined: loc. 54, 2♂♂.

Sciocoris cursitans cursitans (Fabricius, 1794)

Material examined: loc. 1, 1♀; loc. 5, 1♂; loc. 17, 2♂♂; loc. 18, 1♀; loc. 37, 1♀; loc. 38, 6♀♀, 1♂; loc. 64, 1♀.

**Sciocoris deltocephalus* Fieber, 1861

Material examined: loc. 42, 1♀.

Sciocoris homalonotus Fieber, 1851

Material examined: loc. 40, 1♀.

**Sciocoris luteolus* Fieber, 1861

Material examined: loc. 13, 1♂; loc. 42, 1♀, 1♂.

**Sciocoris sulcatus* Fieber, 1851

Material examined: loc. 17, 1♂; loc. 18, 3♀♀; loc. 27, 1♀, 1♂; loc. 36, 2♂♂; loc. 37, 5♀♀, 2♂♂; loc. 42, 3♀♀, 2♂♂.

**Picromerus bidens* (Linnaeus, 1758)

Material examined: loc. 16, 1♂.

Zicrona caerulea (Linnaeus, 1758)

Material examined: loc. 11, 1♀; loc. 20, 2♀♀.

Scutelleridae Leach, 1815

Odontotarsus impictus Jakovlev, 1886

Material examined: loc. 14, 1♂.

**Odontotarsus purpureolineatus* (Rossi, 1790)

Material examined: loc. 13, 1♂; loc. 35, 1♂; loc. 42, 1♀, 3♂♂; loc. 45, 2♀♀, 3♂♂; loc. 57, 1♂; loc. 59, 1♀; loc. 62, 1♀, 2♂♂.

**Odontotarsus robustus* Jakovlev, 1884

Material examined: loc. 4,, 1♀; loc. 33, 1♀; loc. 16, 2♀♀, 1♂; loc. 19, 1♀, 6♂♂; loc. 20, 3♀♀, 3♂♂; loc. 30, 2♂♂; loc. 40, 1♀; loc. 48, 3♀♀, 1♂; loc. 62, 6♀♀, 6♂♂; loc. 68, 1♂.

Odontotarsus rufescens Fieber, 1861

Material examined: loc. 22, 1♀; loc. 45, 1♂; loc. 50, 1♂.

Odontoscellis byrrhus Seidenstücker, 1972

Material examined: loc. 56, 1♂.

Odontoscelis fuliginosa (Linnaeus, 1761)

Material examined: loc. 34, 1♀, 1♂; loc. 37, 2♀♀, 2♂♂; loc. 38, 2♀♀; loc. 44, 2♀♀, 2♂♂; loc. 46, 33♀♀, 10♂♂.

**Odontoscelis hispidula* Jakovlev, 1874

Material examined: loc. 48, 1♂.

Eurygaster austriaca austriaca (Schrank, 1776)

Material examined: loc. 34, 1♂.

**Eurygaster dilaticollis* Dohrn, 1860

Material examined: loc. 52, 2♀♀; loc. 56, 1♂; loc. 65, 1♂.

**Eurygaster integriceps* Puton, 1881

Material examined: loc. 18, 2♀♀; loc. 22, 1♀; loc. 24, 1♀; loc. 34, 1♀; loc. 37, 1♀; loc. 62, 1♀.

Eurygaster maura (Linnaeus, 1758)

Material examined: loc. 14, 1♀; loc. 17, 1♀; loc. 18, 5♀♀, 1♂; loc. 30, 1♀, 1♂; loc. 31, 1♀; loc. 37, 1♀, 1♂; loc. 42, 1♀; loc. 56, 1♂.

Eurygaster testudinaria (Geoffroy, 1785)

Material examined: loc. 7, 1♂; loc.15, 1♀; loc. 18, 1♂; loc. 37, 1♀; loc. 38, 1♀; 1♂; loc. 41, 1♀; loc. 55, 1♀.

**Psacasta exanthematica exanthematica* (Scopoli, 1763)

Material examined: loc. 4, 1♂; loc. 18, 1♂; loc. 34, 3♀♀; loc. 40, 1♀; loc. 48, 1♀; loc. 51, 1♀.

**Psacasta neglecta* (Herrich-Schaeffer, 1837)

Material examined: loc. 42, 1♂.

**Psacasta tuberculata* (Fabricius, 1781)

Material examined: loc. 16, 1♀.

Plataspidae Dallas, 1851

**Coptosoma mucronatum* Seidenstücker, 1963

Material examined: loc. 5, 1♂; loc. 6, 7♀♀, 15♂♂; loc. 41, 3♂♂.

Coptosoma scutellatum (Geoffroy, 1795)

Material examined: loc. 1, 12♀♀; 7♂♂; loc. 3, 1♂ loc.4, 3♀♀; loc. 6, 2♀♀, 1♂; loc.7, 1♀; loc. 8, 1♀, 1♂; loc. 9, 1♀, 4♂♂; loc. 10, 3♀♀; loc. 11, 8♀♀, 4♂♂; loc. 15, 3♀♀, 3♂♂; loc. 24, 3♀♀; loc. 26, 3♀♀;loc. 38, 15♀♀, 8♂♂; loc. 47, 8♀♀, 7♂♂.

Cydnidae Billberg, 1820

Canthophorus melanopterus melanopterus (Herrich-Schaeffer, 1835)

Material examined: loc. 13, 2♀♀, 6♂♂; loc. 35, 3♀♀, 1♂; loc. 37, 1♀; loc. 38, 1♀; loc. 40, 1♀, 1♂; loc. 42, 1♀; loc. 43, 1♂; loc. 53, 2♀♀.

Cydnus aterrimus (Forster, 1771)

Material examined: loc. 45, 1♂.

**Ochetostethus balcanicus* Wagner, 1940

Material examined: loc. 40, 1♀.

**Sehirus dissimilis* Horváth, 1919

Material examined: loc. 23, 1♀.

Acanthosomatidae Signoret, 1864

Acanthosoma haemorrhoidale haemorrhoidale (Linnaeus, 1758)

Material examined: loc. 60, 1♂.

CONCLUSIONS AND DISCUSSION

This present study performed over a three-years period in 68 different localities in the Western Black Sea Region revealed 68 species from 5 families (Acanthosomatidae, Pentatomidae, Cydnidae, Scutelleridae and Plataspidae) of Pentatomoidea. Among the represented families throughout the region Pentatomidae was the richest one in terms of species numbers with a total of 46 species followed by Scutelleridae with 15, Cydnidae with 4, Plataspidae with 2 and Acanthosomatidae with a single species. 28 (*Coptosoma mucronatum, Sehirus dissimilis, Ochetostethus balcanicus, Eurygaster integriceps, E. dilaticollis, Odontoscelis hispidula, Odontotarsus robustus, O. purpureolineatus, Psacasta exanthematica, P. neglecta, P. tuberculata, Stagonomus amoenus, S. bipunctatus, Eysarcoris aeneus, Podops rectidens, Graphosoma semipunctatum, Vilpianus gali, Tholagmus flavolineatus, Mustha spinosula, Trochiscocoris rotundatus, Eurydema rugulosa, Pentatoma rufipes, Apodiphus amygdali, Sciocoris sulcatus, S. luteolus, S. deltocephalus, Picromerus bidens* and *Neottiglossa lineolata*) out of 68 species are new records for the region and *Neottiglossa lineolata* (Mulsant & Rey, 1852) is a new record for Anatolian Pentatomidae fauna.

Neottiglossa lineolata has been recorded so far only in the Thrace Region in Turkey and only from 2 localities (Fent & Aktaç, 2007). The general distributional range of this species covers a number of countries in Europe (Bosnia Herzegovina, Bulgaria, France, Germany, Hungary, Italy, Portugal, Romania, southern Russia, Spain, Switzerland, Ukraine and Serbia and Montenegro) and includes Tunisia in northern Africa and Georgia and Azerbaijan in Asia. The presence of the species in Anatolia was revealed for the first time with this present study, with a record only from one locality (Karabük-Eflani). If we consider the Asian localities of the species in Georgia and Azerbaijan, its presence in Western Black Sea Region might be an expected case as this region lies on the migration way of northern faunal elements coming from Caucasia. Although the species is represented with rare populations, it is more likely to be found it in other localities in Anatolia with further detailed field studies.

The only record of *Podops rectidens*, a species we recorded from the region, was given from Anatolia by Rider (2006) in his Palaearctic Catalogue but no locality was associated for this record. We found only one specimen of this species in our present study in Küre Mountains National Park in Kastamonu-Pınarbaşı. This specimen possesses morphologically distinct characters that differ conspicuously from original and subsequent descriptions. In the descriptions of *P. rectidens*, tylus is not free distally and surrounded by genae (Horváth, 1883b; Josifov, 1981; Derzhansky, 2000). However, the distal part of the tylus of the specimen we collected is free, meaning that genae do not cover this part. Whether the tylus is distally closed or not is a character used to discriminate species of the genus *Podops*. On the other hand, our specimen has also certain *P. rectidens* chacteristics such as the shape of its pronotum being smooth laterally and the rotundate lateral corner (Fig. 2). Therefore, classify this species as *P. rectidens* (pers. comm., Petr Kment, Dmitry Gapon).

P. inunctus, another representative of the genus Podops except *P. rectidens* was recorded from Belgrad Forests in Thrace Region (Fent & Aktaç, 2007). This genus is represented in the Palaearctic with 9 species from 3 subgenera and is generally

found in Europe, especially in the Balkan Peninsula with *P. inunctus* and *P. rectidens* in Bulgaria and *P. curvidens* and *P. rectidens* in Greece (Josifov, 1981, 1986; Rider, 2006). *P. rectidens* is also known to occur in Albania, Bosnia Herzegovina, Hungary, Romania, southern Russia, Ukraine and Serbia and Montenegro in Europe and in Azerbaijan, Ukraine, Georgia, Cyprus and Syria in Asia (Derzhansky, 2000; Rider, 2006).

Sehirus dissimilis is another new record for the study region and this species has so far been known only from its type locality Kahramanmaraş (Lodos & Önder, 1980). Therefore, our present record constitutes the second record for this species. *S. dissimilis* has rather rare populations compared to other *Sehirus* species and it is hard to see this species in nature. However, the probability that this species could also be found inside the area lying between Kahramanmaraş and our studied area.

Odontoscelis hispidula is another species recorded in Turkey only in one locality (Konya-Ereğli) (Seidenstücker, 1960) and found in our study. Its general distributional range covers Austria, Bulgaria, Hungary, Romania, Ukraine and southern Russia in Europe and Azerbijan, Kazakhstan (Asian part), Armenia, Georgia, Kirghizistan, Mongolia and western and eastern Russia in Asia (Göllner-Scheiding, 1986; 2006). Göllner-Scheiding (1986) reported that *O. hispidula* was present in Mongolia in steppe and forest steppe areas with an altitude of 1300-2000 m. We found this species in our study in a locality between Boyabat and Ayancık at an altitude of 1074 m in a bait trap placed in a pine-oak mixed forest. As in the case of *S. dissimilis, O. hispidula* also has rare populations and is hard collect in nature.

In conclusion, this current study added 28 new species to the already known 58 species of Pentatomoidea in our study area making the total number 86. Our results have also contributed to the distributional data of some rare species in both the study area and Turkey in general.

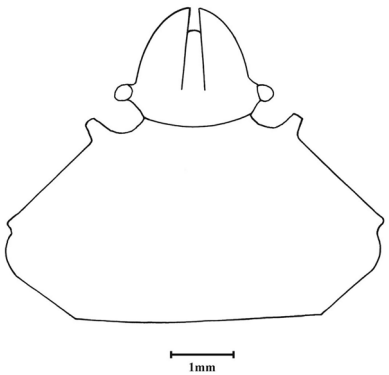

Fig. 2. *Podops rectidens* dorsal view (head and pronotum).

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