

**FAUNISTIC STUDIES ON  
PENTATOMOIDEA  
(Plataspidae, Acanthosomatidae, Cydnidae,  
Scutelleridae, Pentatomidae)  
OF WESTERN BLACK SEA, CENTRAL  
ANATOLIA AND MEDITERRANEAN  
REGIONS OF TURKEY**

**Niyazi LODOS   Feyzi ÖNDER   Esat PEHLİVAN   Ruşen ATALAY  
Enis ERKİN   Yusuf KARSAVURAN   Serdar TEZCAN   Sami AKSOY**

**İzmir-1998**

**To the memories of the Late**  
**Assoc.Prof.Dr. Ruşen ATALAY (1947-1994)**  
**and**  
**Prof.Dr. Niyazi LODOS (1921-1997)**  
**who are the co-authors of this publication**

**This study was supported by TÜBİTAK (The Scientific and  
Technical Research Council of Turkey)**

**(Project Numbers: TOAG/336 & 502)**

The authors wish to thank **TÜBİTAK** (The Scientific and Technical Research Council of Turkey) for financial support of project and to **HEKTAŞ** and **DOW-ELANCO** companies for financial support of printing and also to **Nilay Gülperçin, A.Emre Örümlü, İ.Meltem Düzbastılar, Ferruh Kepekçi, Meltem Gezen** and **Canan Çelik** their helps in preparing the publication.

## CONTENTS

<b>ABSTRACT</b>	I
<b>ÖZET</b>	I
<b>I - INTRODUCTION</b>	1
<b>II - MATERIAL AND METHODS</b>	2
<b>III- RESULTS OF FAUNISTIC STUDIES</b>	4
<b>A. Family : Plataspidae</b>	4
1.Genus: <i>Coptosoma</i> Lp.	4
<b>B..Family: Acanthosomatidae</b>	6
1.Genus: <i>Acanthosoma</i> Ct.	6
2.Genus: <i>Arma</i> H.	6
3.Genus: <i>Cyphostethus</i> Fieb.	6
4.Genus: <i>Elasmostethus</i> Fieb.	7
5.Genus: <i>Elasmucha</i> Stal	7
<b>C. Family. Cydnidae</b>	9
1.Genus: <i>Aethus</i> Dall.	9
2.Genus: <i>Amaurocoris</i> Stal	10
3.Genus: <i>Crocistethus</i> Fieb.	10
4.Genus: <i>Cydnus</i> F.	11
5.Genus: <i>Geotomus</i> M.-R.	11
6.Genus: <i>Legnotus</i> Schi.	12
7.Genus: <i>Macroscytus</i> Fieb.	13
8.Genus: <i>Ochetostethus</i> Fieb.	13
9.Genus: <i>Sehirus</i> A.S.	14
10.Genus: <i>Thyreocoris</i> Schr.	16
<b>D. Family: Scutelleridae</b>	16
1.Genus: <i>Eurygaster</i> Lp.	17
2.Genus : <i>Irochrotus</i> A.S.	18
3.Genus: <i>Odontoscelis</i> Lp	19
4.Genus: <i>Odontotarsus</i> Lp	22
5.Genus: <i>Phimodera</i> Gm.	24
6.Genus: <i>Psacasta</i> (Gm).	25
7.Genus: <i>Solenosthedium</i> A.S.	26
<b>E.Family: Pentatomidae</b>	27
<b>Subfamily:Asopinae</b>	27
1.Genus: <i>Jalla</i> H.	27
2.Genus: <i>Picromerus</i> A .S.	27
3.Genus: <i>Zicrona</i> A.S.	28

<b>Subfamily: Pentatominae</b>	29
1. Genus: <i>Acrosternum</i> Fieb.	29
2. Genus: <i>Aelia</i> F.	30
3. Genus: <i>Agatharchus</i> Stal	32
4. Genus: <i>Apodiphus</i> Spin.	33
5. Genus: <i>Bagrada</i> Stal	34
6. Genus: <i>Brachynema</i> M.R.	36
7. Genus: <i>Carpocoris</i> Klt.	36
8. Genus: <i>Cnephosa</i> Jak.	39
9. Genus: <i>Codophila</i> M.R.	40
10. Genus: <i>Dolycoris</i> M.R.	42
11. Genus: <i>Dyroderes</i> Spin.	43
12. Genus: <i>Eurydema</i> Lp.	44
13. Genus: <i>Eysarcoris</i> H.	47
14. Genus: <i>Holcogaster</i> Fieb.	48
15. Genus: <i>Holcostethus</i> Fieb.	49
16. Genus: <i>Mustha</i> A.S.	51
17. Genus: <i>Neottiglossa</i> Kb.	51
18. Genus: <i>Nezara</i> A.S.	52
19. Genus: <i>Palomena</i> M.R.	52
20. Genus: <i>Pausias</i> Jak.	53
21. Genus: <i>Piezodorus</i> Fieb.	54
22. Genus: <i>Pitedia</i> Reut.	54
23. Genus: <i>Raphigaster</i> Lp.	55
24. Genus: <i>Rhombocoris</i> M.	56
25. Genus: <i>Risibia</i> Hv.	56
26. Genus: <i>Sciocoris</i> Fn.	57
27. Genus: <i>Stagonomus</i> Gk.	62
28. Genus: <i>Staria</i> D.	64
29. Genus: <i>Stenozygum</i> Fieb.	64
30. Genus: <i>Trochiscocoris</i> Reut.	65
<b>Subfamily: Podopinae</b>	66
1. Genus: <i>Ancyrosoma</i> A.-S.	66
2. Genus: <i>Derula</i> M.R.	66
3. Genus: <i>Graphosoma</i> Lp.	67
4. Genus: <i>Leprosoma</i> Bar.	68
5. Genus: <i>Tarisa</i> A.-S.	69
6. Genus: <i>Tholagmus</i> Stal	70
7. Genus: <i>Ventocoris</i> H.	71
8. Genus: <i>Vilpianus</i> Stal	73
<b>REFERENCES</b>	74

## ABSTRACT

This study was carried out during the years of 1979-1982 in the Central Anatolia and Western Black Sea Regions and also during the years of 1984-1987 in the Mediterranean Region of Turkey.

During this study totally 159 species were found in 64 genera and in 5 families of Pentatomoidea. The number and percentages of the species of the families are given as follows: Plataspidae 4 (2,5 %); Acanthosomatidae 7 (4,4 %); Cydnidae 21 (13,2 %); Scutelleridae 25 (15,7 %) and Pentatomidae 102 (64,2 %).

## ÖZET

Bu çalışma 1979-1982 yılları arasında Orta Anadolu ve Batı Karadeniz Bölgeleri'nde, 1984-1987 yılları arasında ise Akdeniz Bölgesi'nde yürütülmüştür. Çalışmada saptanan Pentatomoidea üstfamilyasının Plataspidae, Acanthosomatidae, Cydnidae, Scutelleridae ve Pentatomidae familyalarına bağlı türler bu yayın içinde değerlendirilmiştir.

Sözü edilen 5 familyaya ait 64 cins içinde yer alan 159 tür belirlenmiş olup, bu türlerin familyalara göre dağılımı ve oranları aşağıdaki şekilde bulunmuştur: Plataspidae 4 (% 2,5); Acanthosomatidae 7 (% 4,4); Cydnidae 21 (% 13,2); Scutelleridae 25 (% 15,7) ve Pentatomidae 102 (% 64,2).

**Correspondence address:**

Department of Plant Protection

Faculty of Agriculture

University of Ege

35100 Bornova, Izmir, Turkey

## I. INTRODUCTION

Turkey is a country which located as a bridge between Europe and Asia. It has different climatic conditions. Both geographic position and climatic differentiations have some effects on flora and fauna. Because of this, Turkey have been focusing by Turkish and foreign scientists for a long period.

The aim of this study is to make contribution to some faunistical records of Pentatomoidea of the Western Black Sea, Central Anatolia and the Mediterranean Regions of Turkey. These regions have different climatic conditions and contain different habitats. Pentatomoidea contains both important phytophagous and also zoophagous insects.

Although there have been local studies, there has not been any detailed study on this area up to now. In the studies of Fairmaire (1866), Puton (1892), Puton et Noualhier (1895), Gadeau de Kerville (1939), Hoberlandt (1955), Seidenstücker (1957, 1958, 1960), Wagner (1959, 1966), Linnavuori (1965 ) have been given some faunistic records on Turkish Pentatomoidea.

The studies of Lodos et al.(1978), Lodos and Önder (1978 a, 1983) and Awel (1977) on Pentatomidae; Lodos and Önder (1979) on Acanthosomatidae; Lodos and Önder (1978 b) on Plataspidae; Lodos and Önder (1980) on Cydnidae; Abbas and Önder (1991) on Scutelleridae are the other important studies on fauna of Turkish Pentatomoidea.

First research project have been realised in the Aegean and Marmara Regions of Turkey during the years of 1972-1976. Second and third steps of this study realised in Western Black Sea and Central Anatolia and in the Mediterranean Regions of Turkey during the years of 1979-1982 and 1984-1987, respectively.

This publication contains the results of the recent studies on Pentatomoidea during the years of 1979-1987.

## II- MATERIAL AND METHODS

This study concerning with the species of Pentatomoidea was realised in the Central Anatolia and the Western Black Sea Region and the Mediterranean Region between 1979-1982 and 1984-1987 respectively.

For realising this study the following 27 cities, their towns and villages have been investigated: **In the Western Black Sea Region:** Bartın, Bolu, Karabük, Kastamonu, Sinop, Zonguldak; **In the Central Anatolian Region:** Aksaray, Ankara, Çankırı, Çorum, Eskişehir, Karaman, Kayseri, Kırıkkale, Kırşehir, Konya, Nevşehir, Niğde, Yozgat; **In the Mediterranean Region:** Adana, Antalya, Gaziantep, Hatay, İçel, Kahramanmaraş, Kilis, Osmaniye (Fig. 1).

For this purpose, three regions were visited in the different times, because of their various climatic and floristic properties.

In this study all the plants, under the barks, debris, stones and soil surfaces in certain depth were examined. Sweep net was used for collecting specimens from lower plants while beating tray was used for collecting specimens from trees and bushes. Light trap was used for insects which was been active in night, pincers and pooter were used for insects which were found on soil, under stones, barks and debris, aerial collector, which was developed by Önder et al. (1979), fitting over a car was used for collecting flying insects.

Collections of collected specimens were made with usual methods. These materials preserved in the collections of Department of Plant Protection, Faculty of Agriculture, University of Ege, Bornova, Izmir, Turkey.

Identification of specimens were made by the first and second authors based on the relevant literature such as Stichel (1960-1961), Lodos & Önder (1978 a, b, 1979, 1980, 1983). To clarify the understanding of distribution of Pentatomoidea the localities have been shown on the maps. Data is shown as an empty or covered square, circle etc. for each species.

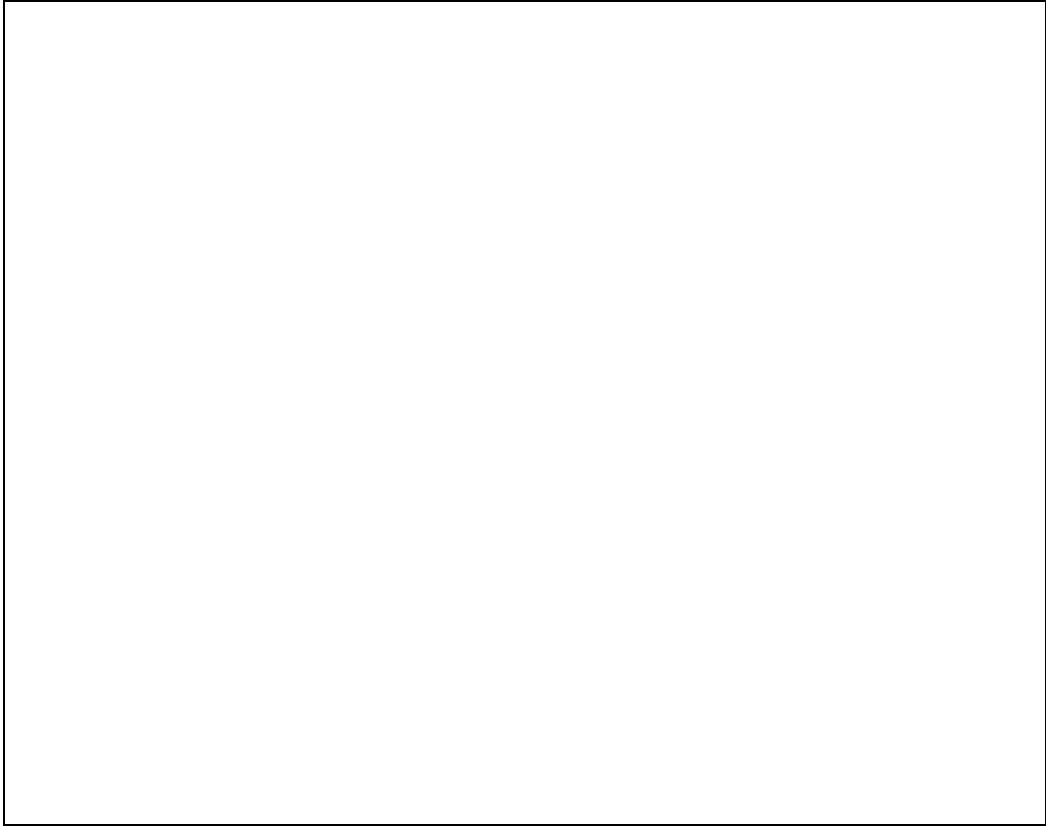


Figure 1. Map of research area. I. Mediterranean Region; II. Central Anatolian Region; III. Western Black Sea Region.

### III- RESULTS OF FAUNISTIC STUDIES

As a result of this study totally 159 species were found in 64 genera and in 5 families namely Plataspidae, Acanthosomatidae, Cydnidae, Scutelleridae and Pentatomidae of Pentatomoidea (Table 1).

Table 1.Number of the genera and species of Pentatomoidea.

Family	Number of genera	Number of species
Plataspidae	1	4
Acanthosomatidae	5	7
Cydnidae	10	21
Scutelleridae	7	25
Pentatomidae	41	102
Total	64	159

The detailed information of the species of Pentatomoidea, found in this project, are given alphabetically as follows.

#### A. FAMILY: PLATASPIDAE Dallas,1851

There are more than 450 species of Plataspidae in the world. They are distributed in the temperate zones of Palaearctic and also in Australian, Oriental and Ethiopian Regions.

*Coptosoma* species cause some damages to the leguminous plants. Up to now 4 species of *Coptosoma* have been determined in Turkey and all of them were found in this area.

1. Genus: *Coptosoma* Lp.

1. *Coptosoma costale* Stal

**Material studied:** Adana (Karatepe), Hatay (İskenderun, Soğukoluk, Yayladağ), İçel (Cehennemdere, Gülnar, Tarsus), Osmaniye (Kadirli, Zorkun ). 42 specimens (Fig 2).

**Occurrence:** Common.

**Biological note:** Adults were collected from the end of May to the middle of July. They were taken on *Onobrychis oxydontha*.

## 2. *Coptosoma mucronatum* (Seid.)

**Material studied:** İel (Glnar), Kahramanmaraş (Elbistan, Gksun, Nurhak Mountain), Konya (Hadım) (Fig.2). 48 specimens.

**Occurrence:** Very common.

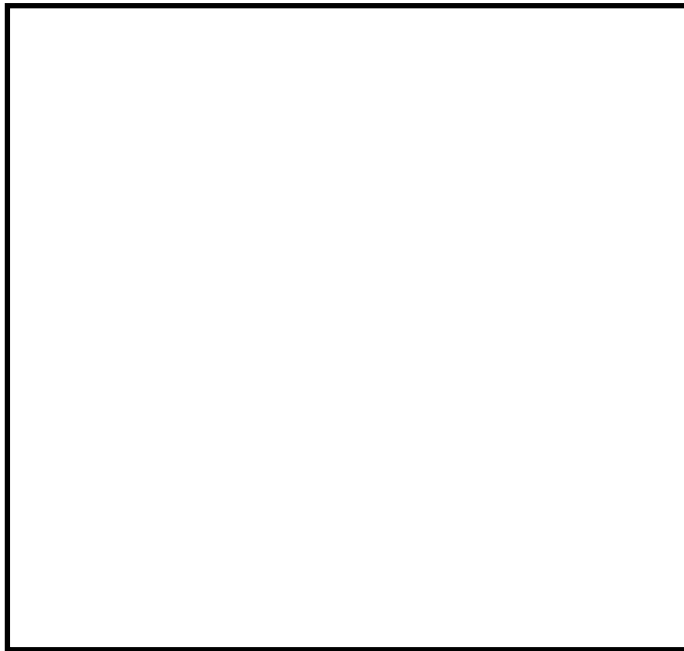
**Biological note:** Adults were collected from the end of May to the end of July. They were taken on *Ainsworthia trachycarpa*, *Alhagi* sp., *Ononis* sp., weeds and also on the other species of leguminous plants.

## 3. *Coptosoma putoni* Mont.

**Material studied:** Adana (Karatepe), İel (Glnar), Nevşehir (Avanos), Osmaniye (Kadirli) (Fig 2). 3 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected from the end of May to the end of June. They were taken from air by aerial collector and also on weeds.



- *Coptosoma costale*
- ◆ *Coptosoma putoni*
- *Coptosoma scutellatum*
- *Coptosoma mucronatum*

Figure 2. Distribution of the species of *Coptosoma*

## 4. *Coptosoma scutellatum* (G.)

**Material studied:** Adana (Gavur Mountain, Saimbeyli), Bartın (Ulus), Çankırı (Central province), İçel (Cehennemdere, Çamlıyayla, Güzeloluk, Tarsus), Kahramanmaraş (Central province, Göksun), Osmaniye (Central province), Zonguldak (Central province, Ereğli) (Fig.2). 48 specimens.

**Occurrence:** Very common.

**Biological note:** Adults were collected from the beginning of June to the beginning of August. They were taken on *Coronilla emerus emeroides*, *Onobrychis oxydontha*, *Trifolium* sp., *Vicia* sp. and also on weeds.

## B.FAMILY: ACANTHOSOMATIDAE Stal,1864

Most of the species of this family are phytophagous and feed on the trees and bushes. Some species are also predator. Phytophagous species are in the genera of *Acanthosoma*, *Elasmucha*, *Elasmotethus* and *Cyphostethus* and predator species belongs to the genus of *Arma*. There are more than 200 species of 70 genera in this family. In this area, 7 species belonging 5 genera were found.

1. Genus: *Acanthosoma* Ct.

1. *Acanthosoma haemorrhoidale* (L.)

**Material studied:** Bolu (Abant Lake , Yığılca), Zonguldak (Devrek)(Fig.3). Only 3 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from the end of May to the mid of July. They were taken on *Alnus* sp., *Crataegus pyracantha* and *Populus* sp.

This species can make important damages to the fruits of forest trees. It is also reported as a destructive species on the fruits of pears.

2. Genus: *Arma* H.

1. *Arma insperata* Hv.

**Material studied:** İçel (Çamlıyayla, Tarsus), Karabük (Safranbolu) (Fig 3). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** They were collected at the end of May and at the mid of June on *Lonicera* sp. and *Quercus* sp.

3. Genus: *Cyphostethus* Fieb.

1. *Cyphostethus tristriatus* (F.)

**Material studied:** Adana (Feke, Pozantı), Antalya (Akseki, Kaş, Söğüt plateau), İçel (Arslanköy, Fındıkpınarı, Gülnar, Güzeloluk, Mut, Namrun), Kahramanmaraş (Andırın,

Göksun), Karabük (Eskipazar), Karaman (Central province), Konya (Beyşehir), Osmaniye (Zorkun)(Fig 3). 61 specimens.

**Occurrence:** Very common.

**Biological note:** Adults were collected from the end of April to the end of July. They were taken on *Cedrus* sp., *Cupressus* sp., *Juniperus communis*, and *Quercus* sp. This species is found on forest trees especially on *Juniperus* spp. It is not important.

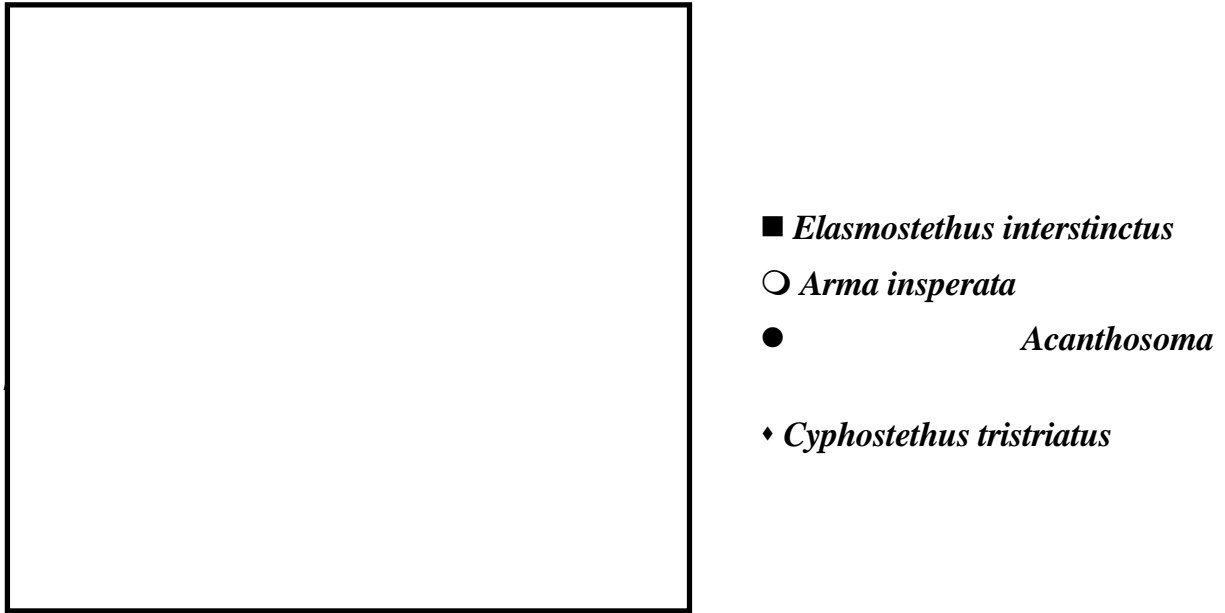


Figure 3. Distribution of the species of *Acanthosoma*, *Arma*, *Cyphostethus* and *Elasmotherus*.

4. Genus : *Elasmotherus* Fieb.

1. *Elasmotherus interstinctus* (L.)

**Material studied:** Ankara ( Central province )(Fig 3). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected at the beginning of May. They were taken on *Cedrus* sp. This species is also found on various forest trees and it is not important.

5. Genus: *Elasmucha* Stal

1. *Elasmucha antennata* (Reut.)

**Material studied:** Bartın (Central province), Kahramanmaraş (Andırın, Göksun) (Fig 4). 5 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected from the end of April to the end of May. They were taken on *Alnus* sp. and *Platanus orientalis*.

### 2. *Elasmucha eckerleini* (Jos.)

**Material studied:** Antalya (Finike, Gündoğmuş, Korkuteli, Kumluca ) (Fig 4). 5 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected from the end of April to the end of July. They were taken on *Peganum harmala* and on *Platanus orientalis*.

### 3. *Elasmucha grisea* (L.)

**Material studied:** Bartın (Central province). Only 1 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adult was collected at the end of May. It was taken on the soil. The species of *Elasmucha* are found on forest and fruit trees, but they are not economically important .



- *Elasmucha grisea*
- *Elasmucha antennata*
- ◆ *Elasmucha eckerleini*

Figure 4. Distribution of the species of *Elasmucha*.

### C. FAMILY: CYDNIDAE Billberg,1820

The species of this family are found under stones, in the cracks of soil and the around of the roots of meadow plants. The mean foods are plant roots and detritus.

There are more than 500 species of this family in the world. 21 species belonging 10 genera were found in this area.

1. Genus : *Aethus* Dall.

1. *Aethus hispidulus* (Klug)

**Material studied** :Osmaniye (Central province-Bahçe)(Fig.5). Only 1 specimen.

**Occurrence** : Very occasionally.

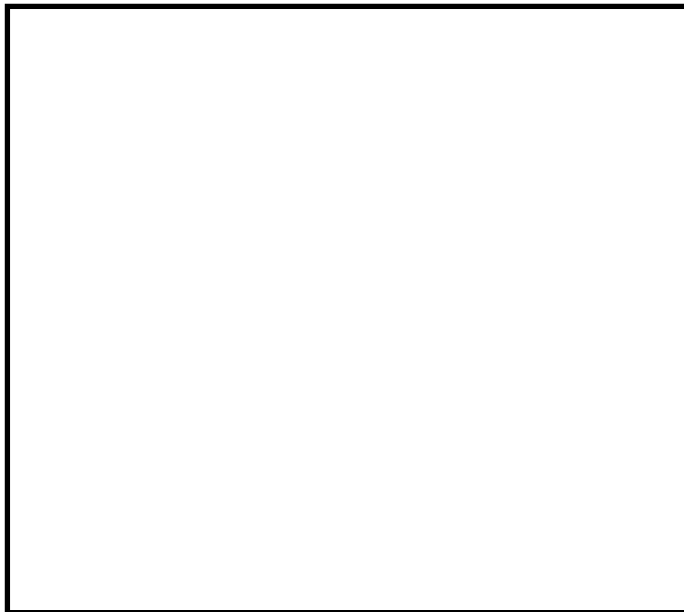
**Biological note** : This single specimen was taken by aerial collector at the first week of June.

2. *Aethus nigrinus* (F.)

**Material studied**: Nevşehir (Ürgüp)(Fig 5). Only 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : Adult was collected from air by aerial collector.



■ *Aethus pilosulus*

● *Aethus hispidulus*

◆ *Aethus nigrinus*

Figure 5. Distribution of the species of *Aethus*.

### 3. *Aethus pilosulus* (K.)

**Material studied:** Aksaray (Central province), Hatay (Hassa-Akbez, Hassa), Gaziantep (Islahiye), Konya (Karapınar)(Fig.5). 16 specimens.

**Occurrence :** Occasionally.

**Biological note :** Adults were collected under stone at the end of April and one adult from air at the beginning of June.

### 2. Genus : *Amaurocoris* Stal

#### 1. *Amaurocoris curtus* (Br.)

**Material studied:** Kahramanmaraş (Ahrır Mountain )(Fig.6). Only 1 specimen.

**Occurrence :** Very occasionally.

**Biological note :** A single specimen was collected at the mid of July on soil.

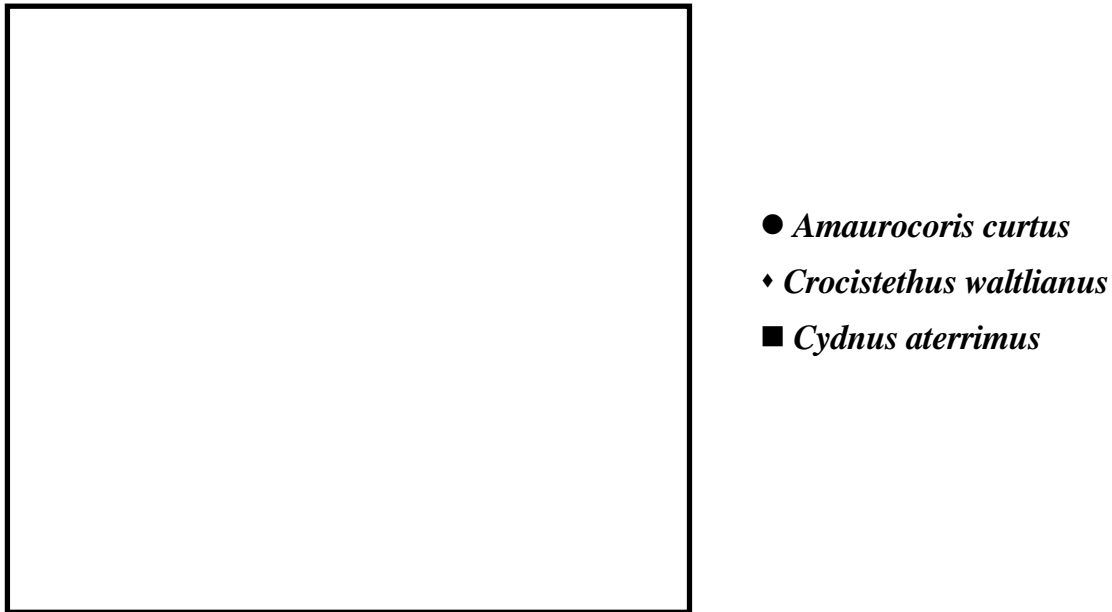


Figure 6. Distribution of the species of *Amaurocoris*, *Crocistethus* and *Cydnus*.

### 3. Genus : *Crocistethus* Fieb.

#### 1. *Crocistethus waltlianus* (Fieb.)

**Material studied:** Antalya ( Serik ), Gaziantep ( Burç, Yavuzeli ), Hatay (Hassa-Akbez), İçel (Gülнар , Kırобası), Kayseri ( Erciyes Mountain )(Fig.6). 11 specimens.

**Occurrence :** Occasionally.

**Biological note** : Adults were taken by aerial collector, understone and also different plants such as on *Astragalus* sp., *Verbascum* sp. and weeds, from the end of April to the end of June.

4. Genus : *Cydnus* F.

1. *Cydnus aterrimus* (Fst.)

**Material studied**:Antalya ( Kemer ), Hatay (Samandağı), Karabük (Eskipazar), Kırşehir (Mucur)(Fig.6). 4 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected from the end of May to the mid of August. They were taken on different plants such as *Euphorbia* sp., *Inula* sp. and weeds, and also from soil.

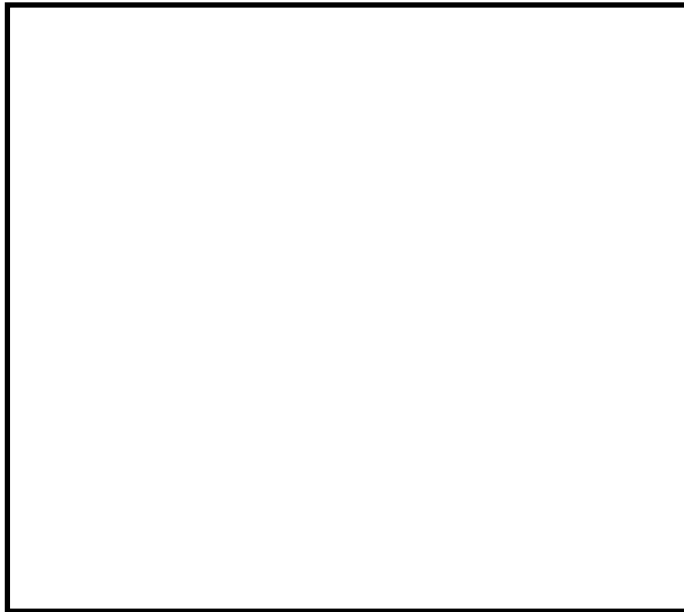
5. Genus : *Geotomus* M. R.

1. *Geotomus brunnipennis* Wgn.

**Material studied**:Konya ( Akşehir, Central province ), Nevşehir ( Derinkuyu )(Fig.7). 4 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected from the end of April to the mid of August. They were taken from understone.



- *Geotomus punctulatus*
- *Geotomus brunnipennis*
- ◆ *Geotomus elongatus*

Figure 7. Distribution of the species of *Geotomus*.

## 2. *Geotomus elongatus* (H.-S.)

**Material studied:** Adana (Central province, Ceyhan), Aksaray (Central province), İçel (Güzeloluk, Gülnar, Kirobası, Mut, Uzuncaburç), Kahramanmaraş (Göksun-1500m.)(Fig.7). 15 specimens.

**Occurrence :** Occasionally.

**Biological note :** Specimens were collected from the mid of April to the mid of August. They were taken on *Galium dumosum*, *Quercus* sp., weeds, from air, soil, understone and also in the light trap.

## 3. *Geotomus punctulatus* (C.)

**Material studied :** Antalya (Elmalı), Niğde ( Bor )(Fig.7). Only 2 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Specimens were collected by aerial collector and understone in April.

6. Genus : *Legnotus* Schi.

### 1. *Legnotus fumigatus* (C.)

**Material studied:** İçel ( Tarsus ), Kahramanmaraş (Göksun), Kayseri ( Erciyes Mountain ), Niğde (Central province), Osmaniye ( Zorkun )(Fig.8). 6 specimens.

**Occurrence :** Occasionally.

**Biological note:** Specimens were collected from the end of April up to the end of June. They were taken on weeds, *Astragalus* spp. and also from understone and soil.

### 2. *Legnotus limbosus* (G.)

**Material studied:** Adana ( Central province), Osmaniye ( Zorkun, 1380m. )(Fig.8). 6 specimens.

**Occurrence :** Occasionally.

**Biological note :** Adults were taken on weeds, *Mentha* sp., *Quercus* sp., *Vicia cracca*, on the soil from the beginning of May to the mid of July.



- *Legnotus fumigatus*
- ◆ *Legnotus limbosus*

Figure 8. Distribution of the species of *Legnotus*.

7. Genus : *Macroscytus* Fieb.

1. *Macroscytus brunneus* (F.)

**Material studied:** Antalya ( Alanya, Finike ), Hatay (İskenderun, Arsuz )(Fig.9). 6 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Adults were collected at the end of May and in July in the light traps

8. Genus : *Ochetostethus* Fieb.

1. *Ochetostethus balcanicus* Wgn.

**Material studied :** Kırşehir ( Kaman ), Nevşehir ( Central province ). 5 specimens.

**Occurrence :** Occasionally.

**Biological note :** Adults were collected at the end of June. They were taken on weeds, *Cirium* sp., and also by aerial collector.

2. *Ochetostethus nanus* (H.-S.)

**Material studied :** Adana (Karaisalı, Pozantı), Antalya Korkuteli, Serik), Çorum (Alaca), İçel (Erdemli, Güzeloluk, Mut,Silifke), Karaman (Ermenek), Kayseri (Incesu, Pınarbaşı), Konya (Yunak),Osmaniye (Düziçi)(Fig.9). 19 specimens.

**Occurrence :** Occasionally.



- ◆ *Ochetostethus balcanicus*
- *Ochetostethus nanus*
- *Macroscytus brunneus*

Figure 9. Distribution of *Macroscytus* and the species of *Ochetostethus*.

**Biological note** : Specimens were collected from the end of April to the mid of August. They were taken on *Pirus elaeagnifolia*, *Quercus* sp., *Sinapis* sp. and weeds and also from soil, understone and by aerial collector.

9. Genus : *Sehirus* A.-S.

1. *Sehirus bicolor* (L.)

**Material studied** : Bolu (Mudurnu), İçel (Silifke)(Fig.10). 3 specimens.

**Occurrence** : Very occasionally.

**Biological note** : They were collected at the end of April and mid of July, on *Prunus domestica* and from soil

2. *Sehirus delagrangi* Put.

**Material studied** : Hatay (Reyhanlı), Niğde (Çamardı)(Fig.10). 3 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected at the end of April and at the end of June, on *Astragalus* sp. and *Circium* sp.

3. *Sehirus marginatus* (Sign.)

**Material studied** : Adana (Feke, Pozantı), Eskişehir (Mahmudiye)(Fig 10). 5 specimens.

**Occurrence** :Occasionally.

**Biological note** :Adults were taken on *Medicago sativa*, *Paliurus* sp. and understone at the beginning of June and July.



■ *Sehirus marginatus*

● *Sehirus delagrangi*

◆ *Sehirus bicolor*

Figure 10. Distribution of *Sehirus bicolor*, *S. delagrangi* and *S. marginatus*.

#### 4. *Sehirus melanopterus* (H.-S.)

**Material studied** : Adana (Gezbeli), Antalya(Korkuteli), Bartın (Kurucaşile), Çankırı (Çerkeş), Çorum (Iskilip), Eskişehir (Mihaliçcık), Gaziantep (Oğuzeli), Hatay (Yayladağı), İçel (Fındıkpınarı), Kahramanmaraş (Afşin), Kayseri (Erciyes Mountain 2600m.), Nevşehir (Derinkuyu, Hacıbektaş), Osmaniye (Zorkun,1280 m.) Sinop (Central province), Zonguldak (Çaycuma)(Fig.11). 27 specimens.

**Occurrence** :Common.

**Biological note** :Specimens were collected from the end of May up to mid of August.They were taken from understone and soil and also on other plants such as *Althaea* sp., *Centaurea* sp., *Juniperus communis*, *Prunus cereasus*, *Quercus* sp., *Rosa* sp., *Rubus* sp. and also on some weeds.

#### 5. *Sehirus morio* (L.)

**Material studied** : İçel (Güzeloluk), Kastamonu (Devrekani)(Fig.11). 2 specimens.

**Occurrence** :Very occasionally.

**Biological note** : They were collected on weeds and understone at the first week of June.

#### 6. *Sehirus sexmaculatus* Rmb.

**Material studied** : Aksaray (Ihlara Valley)(Fig.11). 6 specimens.

**Occurrence** : Occasionally.

**Biological note** :Adults were collected at the beginning of May on *Ballota* sp.



- ⑥ *Sehirus morio*
- *Sehirus sexmaculatus*
- ◆ *Sehirus melanopterus*
- *Thyreocoris scarabaeoides*

Figure 11. Distribution of *Sehirus melanopterus*, *S.morio*, *S.sexmaculatus* and *Thyreocoris scarabaeoides* .

10. Genus : *Thyreocoris* Schr.

1. *Thyreocoris scarabaeoides* (L.)

**Material studied:** Antalya (Kaş), Nevşehir (Avanos)(Fig.11). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:**Specimens were collected by the aerial collector at the beginning of April and at the end of June.

#### D. FAMILY : SCUTELLERIDAE Leach, 1815

There are more than 600 species of Scutelleridae in the world. It contains the phytophagous species and they are harmful especially on gramineous plants such as cereals, weeds and meadows.

In this area 25 species belonging 7 genera have been determined.

1. Genus : *Eurygaster* Lp.

1. *Eurygaster austriaca* (Sch.)

**Material studied** : Adana (Feke), Antalya (Gazipaşa, Gündoğmuş, Kumluca, Serik), Eskişehir (Sarıcakaya), İçel (Güzeloluk 1710 m.), Kahramanmaraş (Andırın), Karabük (Central province), Karaman (Central province)(Fig.12). 10 specimens.

**Occurrence** : Very occasionally.

**Biological note** :The specimens were collected on *Avena sativa*, *Cedrus* spp. and *Triticum sativa* and under stones. They were taken from the end of April to the first week of July.

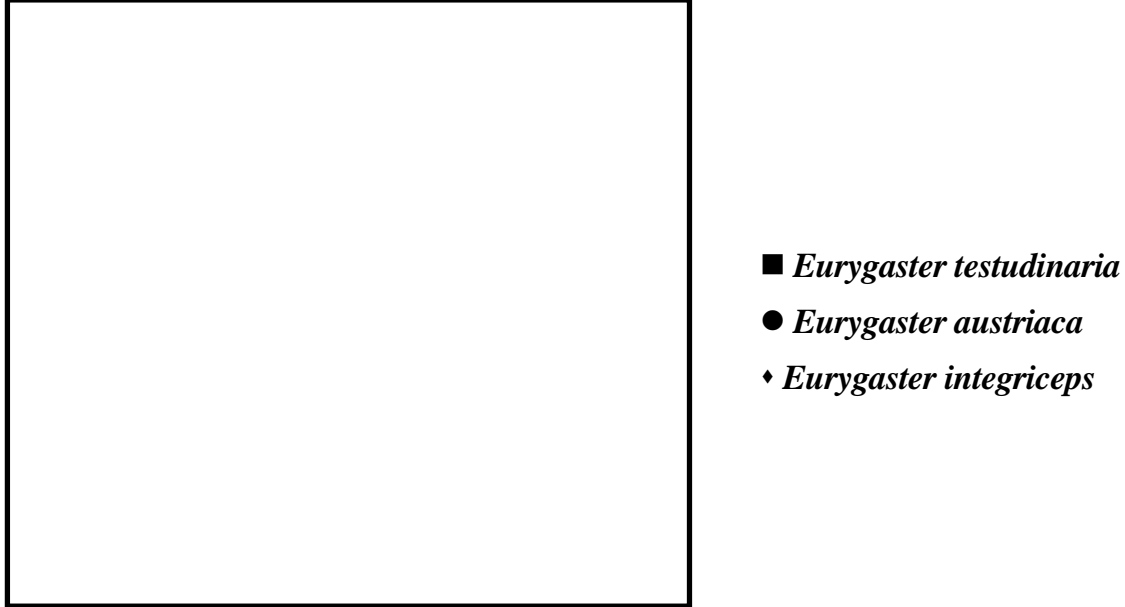


Figure 12. Distribution of *Eurygaster austriaca*, *E. integriceps* and *E. testudinaria*

## 2. *Eurygaster integriceps* Put.

**Material studied** : Adana (Central province, Karataş, Misis, Yumurtalık), Gaziantep (Araban, Central province, Islahiye, Oğuzeli), Hatay (Altınözü, Dört Yol, Hassa-Akbez, İskenderun, Reyhanlı, Soğukoluk), İçel (Tarsus-Cehennemdere, Tarsus-Çamlıyayla, Mersin), Kahramanmaraş (Andırın 650 m., Central province), Kilis (Central province), Osmaniye (Bahçe, Central province, Zorkun 1380 m.)(Fig.12). 54 specimens.

**Occurrence** : Common.

**Biological note** : They were collected from the end of April to the end of July, on weeds, gramineous plants and *Triticum sativa*.

## 3. *Eurygaster testudinaria* (G.)

**Material studied** : Bartın (Central province, Ulus)(Fig.12). Only 2 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected on weeds in the mid of July. Adults were taken on *Avena sativa*, *Elaeagnus orientalis*, gramineous plants especially, *Hordeum vulgare*, *Triticum sativa*, *Onopordum* sp., *Phloemis* sp., *Pistacia* sp., *Rosa* sp., *Ulmus* sp., *Verbascum* sp., weeds and also from the air. They were also collected around the roots of some trees near the Kaman (Hirfanlı dam) (Kırşehir province) in aestivation period.

#### 4. *Eurygaster maurus* (L.)

**Material studied** : Adana (Central province, Karaisalı, Saimbeyli, Tufanbeyli), Ankara (Ayaş, Balcı, Güdül, Kalecik, Kızılcahamam), Bartın (Central province, Ulus), Antalya (Alanya, Central province, Gazipaşa, Dağ, Güllük Mountain, Gündoğmuş, Kaş, Kemer, Kumluca, Manavgat, Serik, Sinan plateau), Bolu (Central province, Düzce, Mudurnu, Yığılca), Çankırı (Çerkeş), Çorum (Bayat, Central province), Eskişehir (Çifteler, Mahmudiye), Gaziantep (Araban, Central province, Yavuzeli), Hatay (Altınözü, İskenderun-Soğukoluk, Hassa, Hassa-Akbez, Kırıkhan, Reyhanlı, Samandağı), İçel (Anamur, Fındıkpınarı, Gülnar, Güzeloluk, Kirobası 1100 m., Mersin, Mut, Silifke, Tarsus, Tarsus-Aslanköy, Tarsus-Cehennemdere, Tarsus-Çamlıyayla, Tarsus- Gözne), Kahramanmaraş (Andırın 650 m., Central province, Elbistan, Göksun, Nurhak Mountain), Karabük (Central province, Eskipazar, Safranbolu), Karaman (Ermenek), Kastamonu (Central province, Taşköprü, Tosya), Kayseri (Bünyan, Central province, Pınarbaşı, Yılanlıdağ), Kırıkkale (Central province, Keskin), Kırşehir (Kaman, Mucur), Nevşehir (Central province), Niğde (Central province, Çamardı, Ulukışla), Osmaniye (Düziçi, Kadirli), Sinop (Boyabat), Yozgat (Central province), Zonguldak (Ereğli)(Fig.13). More than 350 specimens.

**Occurrence** : Fairly common.

**Biological note** : These specimens were collected from the beginning of April to the mid of August. The most common *Eurygaster* species in the Central Anatolia and West Black Sea Regions is *E. maurus*. The adults and nymphs of *E. maurus* which was as much as uncountable is found, so it shows that *E. maurus* dominant species in these Regions. Adults and nymphs of these species feed primarily on wheat and the other gramineae plants. They make serious damage through sucking. It seen that in the places where were studied these species found with *Aelia rostrata* both of these species together make important damages. It was determined that both of these species were single or in groups under plant straglers near the root of various trees at Hirfanlı dam in the middle of August

2. Genus : *Irochrotus* A. S.

##### 1. *Irochrotus maculiventris* (Gm.)

**Material studied** : Gaziantep (Oğuzeli), İçel (Güzeloluk), Kahramanmaraş (Elbistan)(Fig.14). 4 specimens.

**Occurrence** : Very occasionally.

**Biological note** : They were collected from the beginning of June to the first week of July, on weeds.



● *Eurygaster maurus*

Figure 13. Distribution of *Eurygaster maurus*.

3. Genus : *Odontoscelis* Lp.

1. *Odontoscelis byrrhus* Seid.

**Material studied:** Adana (Tufanbeyli), Antalya (Finike), İçel (Anamur, Aydınçık, Ovacık, Gülnar, Güzeloluk), Kahramanmaraş (Göksun), Kastamonu (Central province), Kayseri (Tomarza, Yılanlıdağ), Kırıkkale (Keskin), Nevşehir (Ürgüp), Niğde (Çamardı)(Fig.15). 40 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected in the fields from the end of April up to the mid of August. They were taken on *Astragalus* sp., *Medicago maritimus*, *Onobrychis* sp., weeds and by the aerial collector and also from the soil and understone.

2. *Odontoscelis dorsalis* (F.)

**Material studied :** Çorum (Central province, Osmancık), İçel (Anamur, Aydınçık-Ovacık, Gözne), Karaman (Central province)(Fig.15). 21 specimens.

**Occurrence :** Occasionally.

**Biological note :** The adults were collected from the end of April to the beginning of August. They were taken understone and on *Anchusa azurea* and weeds



● *Irochrotus maculiventris*

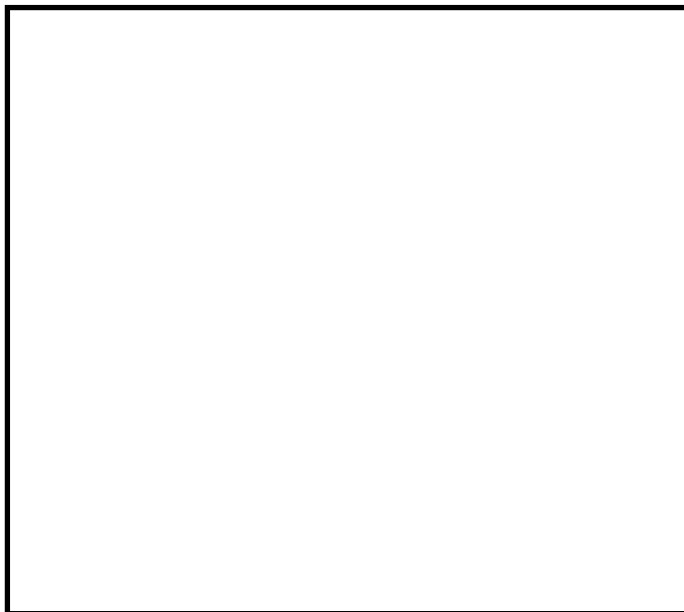
Figure 14. Distribution of *Irochrotus maculiventris*.

3. *Odontoscelis dubius* Wgn.

**Material studied:** Adana (Tufanbeyli), Antalya (Kaş)(Fig.15). 5 specimens.

**Occurrence:** Very occasionally.

**Biological note:** They were collected from the mid of June to the beginning of August on weeds and soil.



- *Odontoscelis byrrhus*
- *Odontoscelis dorsalis*
- ◆ *Odontoscelis dubius*

Figure 15. Distribution of *Odontoscelis byrrhus*, *O.dorsalis* and *O.dubius*

4. *Odontoscelis fuliginosus* (L.)

**Material studied :** Bartın (Central province), Karaman (Central province), Kastamonu (Central province), Kırıkkale (Central province, Keskin), Kırşehir (Kaman)(Fig.16). 11 specimens.

**Occurrence :** Somewhat common, but found in very small numbers.

**Biological note :** These specimens were collected from the end of April to the mid of June. They were taken on weeds and also on soil and understones.

5. *Odontoscelis minutus* Jak.

**Material studied** : Adana (Feke, Karatepe, Kozan 855 m.), Hatay (Antakya), İçel (Fındıkpınarı, Güzeloluk), Kahramanmaraş (Andırın, Elbistan), Osmaniye (Kadirli)(Fig.16). 28 specimens.

**Occurrence** : Occasionally.

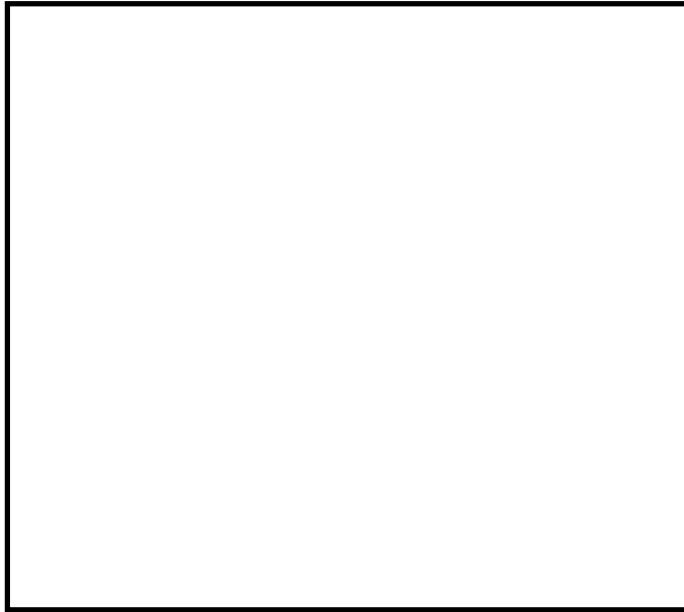
**Biological note** : They were collected from the end of May to the end of July, on *Pinus* sp., weeds, soil, understones and by the aerial collector.

6. *Odontoscelis seminitens* Wgn.

**Material studied** : Gaziantep (Islahiye), Kahramanmaraş (Andırın 1230 m.)(Fig.16). 4 specimens.

**Occurrence** : Very occasionally.

**Biological note** : They were collected at the first half of June, on soil. *Odontoscelis* species are polyphagous. They feed mainly on Leguminous and various plants. They are frequently seen on the soil under plants while they were walking. They are not important.



- *Odontoscelis fuliginosus*
- *Odontoscelis minutus*
- ◆ *Odontoscelis seminitens*

Figure 16. Distribution of *Odontoscelis minutus*, *O.fuliginosus* and *O.semunitens*

4. Genus : *Odontotarsus* Lp.

1. *Odontotarsus caudatus* (Bm.)

**Material studied**: Adana (Kozan 855 m., Yumurtalık), Kırşehir (Mucur)(Fig.17). 4 specimens.

**Occurrence**: Occasionally.

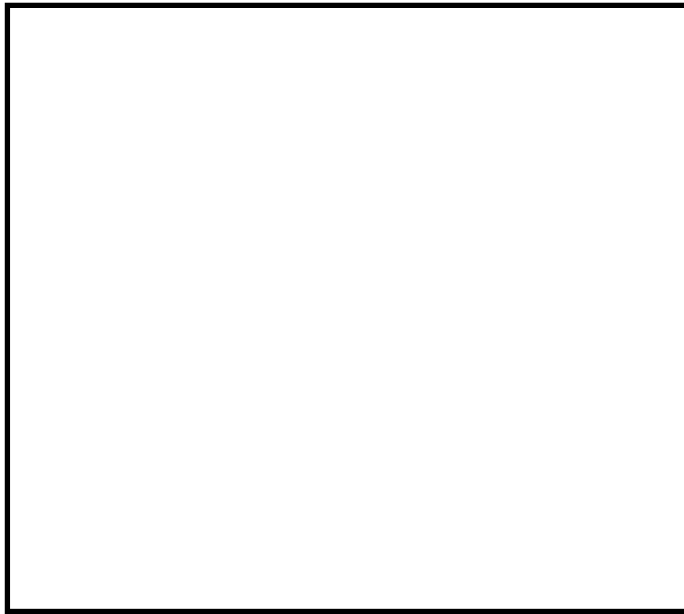
**Biological note**: Adults were collected on weeds. They were taken from beginning to the end of June.

2. *Odontotarsus freyi* Put.

**Material studied:** Adana (Gavurdağı), Antalya (Central province, Güllük Mountain, Kaş, Kekova, Kemer, Olympos Mountain), Gaziantep (Oğuzeli), Hatay (Kırıkhan), İçel (Anamur, Erdemli, Gülnar, Silifke, Tarsus-Cehennemdere, Tarsus-Çamlıyayla), Kahramanmaraş (Andırın), Nevşehir (Avanos), Niğde (Ulukışla)Osmaniye (Central province, Düziçi)(Fig.17). 35 specimens.

**Occurrence :** Nearly common but found in small numbers.

**Biological note :** Adults were collected from the mid of April to the beginning of August. They were taken on *Cistus* sp., gramineous plants, *Poterium* sp., *Salvia* sp., *Sorghum halepense*, *Thymus* sp., *Triticum sativa* and also different species of weeds.



- *Odontotarsus caudatus*
- *Odontotarsus freyi*
- *Odontotarsus impictus*
- ◆ *Odontotarsus karatasensis*

Figure 17. Distribution of *Odontotarsus impictus*, *O.caudatus*, *O.freyi* and *O.karatasensis*

### 3. *Odontotarsus impictus* Jak.

**Material studied:** Adana (Tufanbeyli), Ankara (Beypazarı), Çankırı (Çerkeş), Çorum (Central province), Hatay (Kırıkhan), Karabük (Safranbolu), Kayseri (İncesu, Yılanlıdağ)(Fig.17). 11 specimens.

**Occurrence :** Occasionally.

**Biological note :** The specimens were collected from the end of April to the mid of August. They were taken on *Avena sativa*, *Triticum sativa*, *Veronica* sp., weeds and also from the soil.

### 4. *Odontotarsus karatasensis* Hob.

**Material studied:** Adana (Central province, Karaisalı, Karatepe), Ankara (Kalecik), Antalya (Saklıkent, 2000 m.), Çankırı (Osmancık), Gaziantep (Araban, Central province), Hatay (Antakya, Hassa, Kırıkhan), Kahramanmaraş (Ahır Mountain, Central

province), Kırşehir (Mucur), Nevşehir (Ürgüp), Osmaniye (Düziçi)(Fig.17). 24 specimens.

**Occurrence:** Nearly common, but found in small numbers.

**Biological note:** Adults were collected from the end of April up to the mid of July. They were taken on *Centaurea* sp., gramineous plants, *Triticum sativa* and different species of weeds.

#### 5. *Odontotarsus plicatulus* Hv.

**Material studied:** Gaziantep (Nizip, Oğuzeli), Kahramanmaraş (Elbistan, Nurhak Mountain), Kilis (Central province), Nevşehir (Avanos)(Fig.18). 8 specimens.

**Occurrence:** Very occasionally.

**Biological note:** The specimens were collected from the beginning of June to the mid of July. They were taken on gramineous plants and different species of weeds.

#### 6. *Odontotarsus purpureolineatus* (R.)

**Material studied:** Adana (Tufanbeyli), Gaziantep (Central province, Oğuzeli), Hatay (Kırıkhan), Kahramanmaraş (Göksun 1340 m., Nurhak Mountain)(Fig.18). 10 specimens.

**Occurrence :** Occasionally.

**Biological note :** They were collected from the end of April to the third week of July. They were taken on *Cirsium* sp., *Onopordum* sp., gramineous plants especially on *Triticum* spp. and different species of weeds.

#### 7. *Odontotarsus robustus* Jak.

**Material studied:** Adana (Gavur Mountain, Kozan 855 m.), Antalya (Gazipaşa), Hatay (Altınözü, Yayladağı, İskenderun), İçel (Cehennemdere, Çamlıyayla, Tarsus), Karaman (Ermenek), Kırkkale (Keskin), Osmaniye (Central province)(Fig.18). 21 specimens.

**Occurrence :** Occasionally.

**Biological note :** Adults were collected from the beginning of May up to the third week of July. They were taken on *Sinapis* sp., *Trifolium argatum*, *Triticum sativa*, gramineous plants, different species of weeds.

#### 8. *Odontotarsus rufescens* Fieb.

**Material studied :** Adana (Tufanbeyli), Antalya (Güllük Mountain), Gaziantep (Araban, Central province, Nizip, Oğuzeli), Hatay (İskenderun), İçel (Fındıkpınarı), Kahramanmaraş (Ahır Mountain, Central province, Elbistan), Kastamonu (Central province), Kilis (Central province), Nevşehir (Gülşehir)(Fig.18). 19 specimens.

**Occurrence** : Occasionally.

**Biological note** : They were collected from the end of May up to end of July. They were taken on graminous plants, *Onopordum* sp., *Sinapis* sp., *Triticum* sp. , different species of weeds. *Odontotarsus* species have very low densities and very rare. They usually feed on plants belong to the families of Umbelliferae and Labiatae.

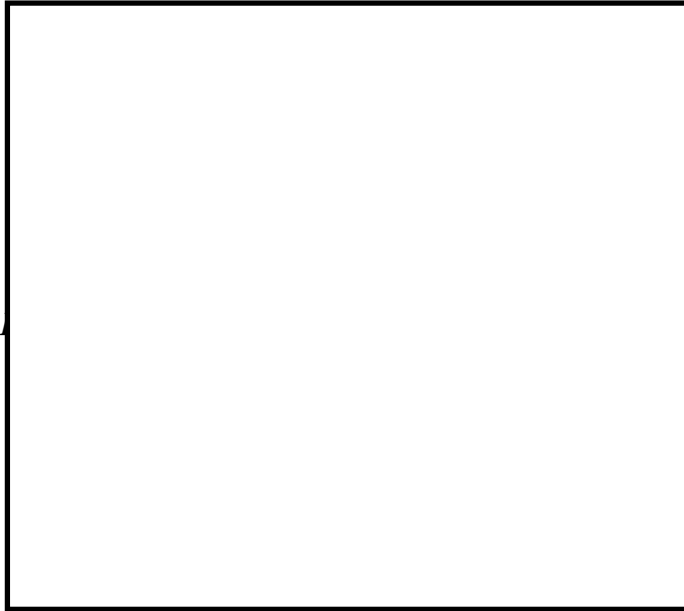
5. Genus: *Phimodera* Gm.

1. *Phimodera fumosa* (Fieb.)

**Material studied** : Adana (Tufanbeyli 1230 m.)(Fig.19). 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : It was collected at the first week of June on weeds.



⑥ *Odontotarsus plicatulus*

■ *Odontotarsus*

● *Odontotarsus robustus*

◆ *Odontotarsus rufescens*

Figure 18. Distribution of the species of *Odontotarsus plicatulus*, *O. purpureolineatus*, *O. robustus* and *O. rufescens*

2. *Phimodera tuberculata* Jak.

**Material studied** : Kahramanmaraş (Göksun)(Fig.19). 2 specimens.

**Occurrence** : Very occasionally.

**Biological note** :They were taken at the second week of June on graminaceous plants and also on *Medicago sativa*. This is the first record for Turkish fauna.



- *Phimodera fumosa*
- *Phimodera tuberculata*

Figure 19. Distribution of the species of *Phimodera*.

6. Genus: *Psacasta* (Gml.)

1. *Psacasta exanthematica* (Scop.)

**Material studied** : Adana (Karatepe), Antalya (Gazipaşa), Çankırı (Central province), Çorum (Central province), İçel (Gözne, Mut, Tarsus-Çamlıyayla 1200 m.), Gaziantep (Central province), Kahramanmaraş (Afşin, Central province, Elbistan, Göksun), Kayseri (Pınarbaşı), Osmaniye (Kadirli)(Fig.20). 24 specimens.

**Occurrence** : Nearly common but found in small numbers.

**Biological note** : They were collected from the end of May up to mid of August. They were taken on borraginaceous plants e.g. *Anchusa azurea*, *Echium* sp. *Triticum* sp., different species of weeds and also by the aerial collector.

2. *Psacasta pallida* Reut.

**Material studied** : Bolu (Mudurnu), Kırşehir (Kaman), Konya (Ereğli, Seydişehir)(Fig.20). 5 specimens.

**Occurrence** : Very occasionally.

**Biological note** : The specimens were collected from the end of May to the beginning of July. They were taken on gramineous plants, *Triticum sativa* and some weeds.



- *Psacasta tuberculata*
- *Psacasta pallida*

- *Psacasta exanthematica*
- ◆ *Solenosthedium bilunatum*

Figure 20. Distribution of the species of *Psacasta* and *Solenosthedium*.

### 3. *Psacasta tuberculata* (F.)

**Material studied** : Adana (Central province, Yumurtalık), Antalya (Mavikent), Hatay (Antakya, Arsuz, İskenderun), İçel (Erdemli, Gülnar, Tarsus, Mut), Kırkkale (Central province), Kırşehir (Kaman).(Fig.20). 28 specimens.

**Occurrence** : Nearly common, but found in small numbers.

**Biological note** : They were collected from the beginning of May to the end of July. They were taken on *Anchusa* sp., *Echium italicum*, *E. plantagineum*, *Paliurus* spp. and different species of weeds.

Although *Psacasta* species were found in wheat fields, their main hosts are the species of Borraginaceae family. Their population densities are low and they are found as very rare so they are not important.

## 7. Genus: *Solenosthedium* A.S.

### 1. *Solenosthedium bilunatum* (Lef.)

**Material studied** : Antalya (Manavgat, Mavikent, Serik), İçel (Anamur, Gülnar, Tarsus)(Fig.20). 19 specimens.

**Occurrence** : Occasionally.

**Biological note** : They were collected in the fields from the third week of April to the end July. They were taken on *Daphne gnidioides*, *Myrtus* sp., *Paliurus spina-christi*. But its main host plant is *Paliurus spina-christi*.

## E. FAMILY : PENTATOMIDAE Leach, 1815

Most of the species of this family are phytophagous and the all species of the **Asopinae** are predators. There are more than 3400 species of this family in the world.

102 species belonging to 41 genera were found in this area. The species of the genera of *Jalla*, *Picromerus* and *Zicrona* are predators.

### Subfamily : Asopinae

1. Genus : *Jalla* H.

1. *Jalla dumosa* (L.)

**Material studied** : Ankara (Central province) and Kayseri (Yılanlıdağ)(Fig.21). 2 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected at the end of June on weeds. According to Lodos and Önder (1983) they were found very occasionally at the Middle and West parts of Turkey and its host plants are unknown.

2. Genus : *Picromerus* A.S.

1. *Picromerus bidens* (L.)

**Material studied** : Çorum (Iskilip) and Nevşehir (Ürgüp)(Fig.21). 3 specimens.

**Occurrence** : Very occasionally.

**Biological note** : These specimens were collected on *Rubus* sp. at the first half of August.

2. *Picromerus conformis* (H.-S.)

**Material studied** : Ankara (Central province) and Çorum (Iskilip)(Fig.21). 3 specimens.

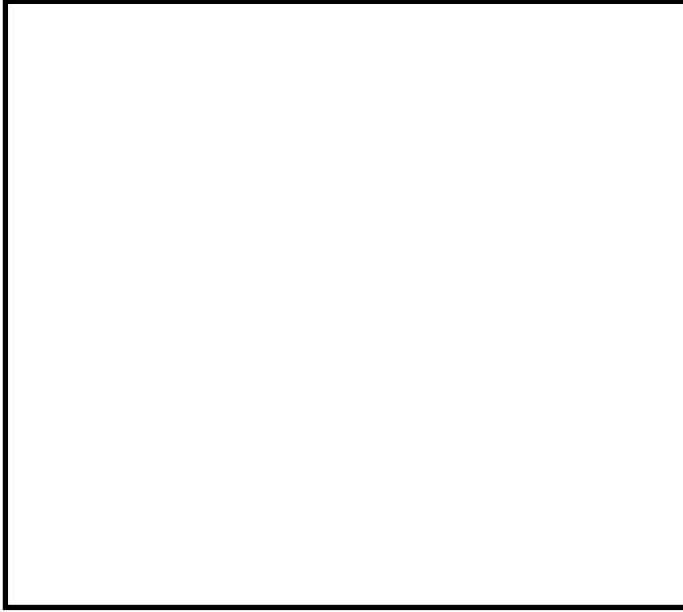
**Occurrence** : Very occasionally.

**Biological note** : Adults were collected in the mid of July and in the first week of August. They were taken on *Crataegus* sp., *Quercus* sp.. *Picromerus* spp. were found on Lepidoptera larvae that are harmful on several fruit and forest trees. Also, *P. bidens* found on Tenthredinidae (Hym.) and Chrysomelidae (Col.) larvae and bedbug, *Cimex lectularius*(Het., Cimicidae) (Lodos and Önder, 1983).

3. Genus : *Zicrona* A.-S.

1. *Zicrona coerulea* (L.)

**Material studied** : Adana (Central province, Kozan), Bartın (Ulus), Gaziantep (Oğuzeli), Hatay ( Dört Yol, Hassa, Hassa- Akbez, Samandağı, Yayladağı), İçel (Gülnar), Karabük (Eskipazar), Kilis (Central province), Konya (Bozkır), Zonguldak (Çaycuma)(Fig.21). 15 specimens.



- *Jalla dumosa*
- *Picromerus conformis*
- *Picromerus bidens*
- ◆ *Zicrona coerulea*

Figure 21. Distribution of the species of Asopinae.

**Occurrence :** Occasionally.

**Biological note :** The specimens were collected on *Equestrum* sp., *Mentha* sp., *Prunus domestica*, *Rubus* sp., *Urtica* sp., some weeds, gramineous, umbelliferous plants and by aerial collector from the beginning of June to the end of July. This species is found rarely nearly all over the Turkey. Generally they are fed on Chrysomelidae (Col.) larvae (Lodos and Önder, 1983).

### **Subfamily : Pentatominae**

1. Genus : *Acrosternum* Fieb.

1. *Acrosternum heegeri* (Fieb.)

**Material studied:** Antalya (Central province, Kaş, Kekova), İçel (Tarsus)(Fig.22). 6 specimens

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from the beginning of July up to the beginning of August. They were taken on different plants such as *Capparis* sp., *Paliurus* sp. and *Platanus* sp. and also in the light traps.



- *Acrosternum millieri*
- ◆ *Acrosternum heegeri*

Figure 22. Distribution of the species of *Acrosternum*.

### 2. *Acrosternum millieri* (M.-R.)

**Material studied** : Adana (Karaisalı, Kozan), Antalya (Central province, Gündoğmuş, Manavgat, Kemer, Kumluca and Saklıkent 730 m.), Çorum (Osmancık), Hatay (İskenderun-Arsuz), İçel (Anamur, Gülnar, Kuzucubelen, Mut)(Fig.22). 35 specimens.

**Occurrence** : Nearly common.

**Biological note** : Adults were collected from the last week of April up to the end of July. They were taken on *Capparis* sp., *Cistus* sp., *Crataegus* sp., *Cupressus* spp., *Daucus* sp., *Juniperus* sp., *Morus* sp., *Paliurus* sp., *Pistacia* sp., *Poterium* sp., *Punica* sp., *Vitex* sp., *Vitis* sp. and also in the light traps.

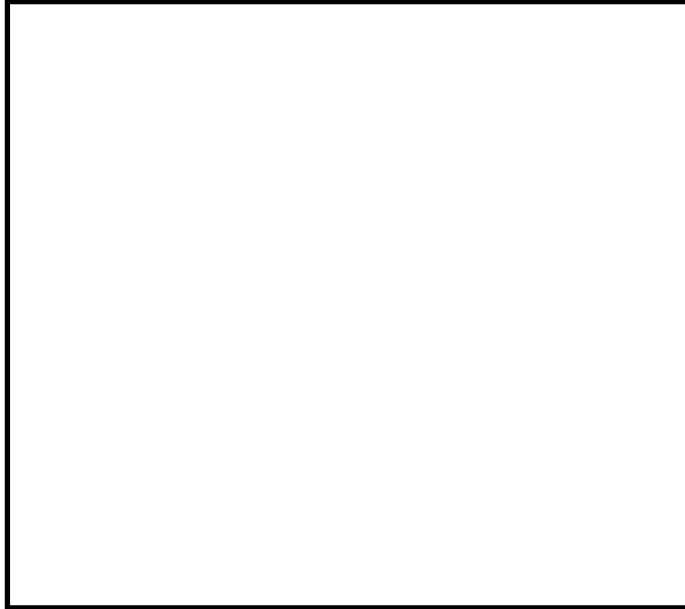
### 2. Genus: *Aelia* F.

#### 1. *Aelia acuminata* (L.)

**Material studied** : Adana (Karaisalı, Karatepe, Kozan, Pozantı, Saimbeyli, Yumurtalık), Ankara (Şereflikoçhisar), Antalya (Alanya, Central province, Elmalı, Güllük Mountain, Gündoğmuş, Kemer, Kumluca, Manavgat, Mavikent, Serik), Bartın (Central province, Ulus), Bolu (Akçakoca), Çankırı (Ilgaz), Gaziantep (Araban, Islahiye, Nizip, Oğuzeli, Yavuzeli), Hatay (Akbez-Hassa, Altınözü, Harbiye, Kırıkhan), İçel (Anamur, Çamlıyayla 900 m.- Fındıkpınarı, Erdemli, Gözne, Gülnar, Mut, Tarsus-Cehennemdere), Kahramanmaraş (Andırın 850 m., Elbistan, Göksun 1340 m.,Türkoğlu), Karabük (Eskipazar, Safranbolu), Karaman (Central province), Kastamonu (Cide, Taşköprü), Kırşehir (Kaman), Nevşehir (Hacıbektaş), Niğde (Bor), Osmaniye (Central province, Düziçi, Kadirli, Zorkun), Sinop (Ayancık, Central province), Zonguldak (Çaycuma, Ereğli, Ulus)(Fig.23). 210 specimens.

**Occurrence** : Common.

**Biological note** : Adults were collected in the fields from the mid of April to the end of August. They were taken on *Alyssum* sp., *Astragalus* sp. *Avena* sp., *Cirsium* sp., *Quercus* sp., *Sideritis* sp., *Triticum sativa*, gramineous plants, and also on weeds and by the aerial collector.



● *Aelia albovittata*

◆ *Aelia acuminata*

Figure 23. Distribution of *Aelia acuminata* and *A. albovittata*.

### 2. *Aelia albovittata* Fieb.

**Material studied** : Adana (Pozantı), Hatay (Antakya-Arsuz, Hassa- Akbez), İçel (Güzeloluk 1000m.), Karaman (Central province), Kırıkkale (Keskin)(Fig.23). 6 specimens.

**Occurrence** : Very occasionally.

**Biological note** : They were collected from the end of April to the first week of July, on *Inula* sp., *Poterium* sp., gramineous plants and weeds.

### 3. *Aelia rostrata* Bh.

**Material studied:** Adana (Gezbeli 1960 m.), Aksaray (Ihlara Valley), Ankara (Ayaş, Bala, Elmadağ, Kalecik, Kızılcahamam, Şereflikoçhisar), Antalya (Korkuteli, Saklıkent 2000 m.), Bolu (Mudurnu), Çankırı (Çerkeş, Ilgaz), Çorum (Iskilip), Eskişehir (Çifteler, Sarıcakaya), Kahramanmaraş (Göksun), Karabük (Eskipazar, Safranbolu), Kastamonu (Central province, Devrekani), Kayseri (Pınarbaşı, Yeşilhisar, Yılanlıdağ), Kırıkkale (Central province, Keskin), Kırşehir (Central province, Kaman, Mucur), Konya (Akşehir, Doğanhisar, Ereğli, Seydişehir), Nevşehir (Central province, Gülşehir, Hacibektaş)(Fig.24). 221 specimens.

**Occurrence:** Common.

**Biological note:** The specimens were collected from the beginning of May to the mid of August. They were taken on *Acacia* sp., *Elaeagnus* sp., *Hordeum vulgare*, *Peganum* sp., *Pirus* sp., *Pinus malus*, *Platanus orientalis*, *Rosa* sp., *Secale cereale*, *Sinapis* sp., from soil, *Triticum sativa*, *Ulmus* sp., understone, *Vicia cracca*, *Viscum album*, some gramineaeous weeds and by the aerial collector.



Figure 21. Distribution of *Aelia rostrata*, *A.satunini* and *A.virgata*.

#### 4. *Aelia satunini* Kir.

**Material studied :** Karaman (Ermenek)(Fig.24). 4 specimens.

**Occurrence :** Very occasionally.

**Biological note :** They were collected at the first week of July on gramineaeous plants.

#### 5. *Aelia virgata* Klug

**Material studied :** Gaziantep (Central province), Kahramanmaraş (Göksun 1340 m.)(Fig.24). 3 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Specimens were collected on *Astragalus* sp. and weeds in the mid of July.

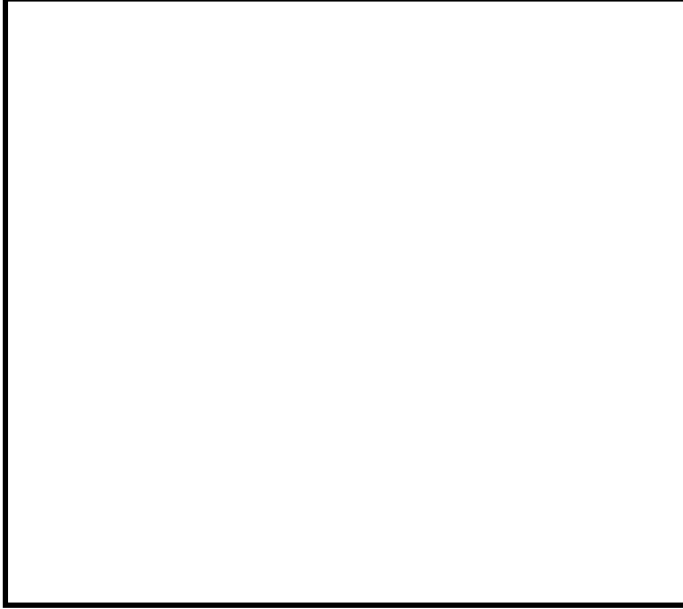
### 3. Genus: *Agatharchus* Stal

#### 1. *Agatharchus herrichi* (Klt.)\*

**Material studied:** Adana (Gezbeli), İçel (Gülнар, Güzeloluk), Kahramanmaraş (Göksun 1340 m.), Kayseri (Erciyes Mountain)(Fig.25). 25 specimens.

**Occurrence** : Occasionally.

**Biological note** : Adults were collected from the end of April up to the first half of August. They were taken on *Astragalus* sp.



- *Agantharchus montanus*
- ◆ *Agatharchus herrichi*

Figure 25. Distribution of the species of *Agatharchus*.

## 2. *Agantharchus montanus* (Jak.)

**Material studied** : Karaman (Central province), Konya (Karapınar)(Fig..25). 7 specimens.

**Occurrence** : Very occasionally.

**Biological note** : The specimens were collected in the end of April. They were taken under stone and on *Astragalus* sp. There is not enough information in literature about host plants. In this research, this species are found on *Astragalus* sp. definitely. Their population is low.

## 4. Genus: *Apodiphus* Spin.

### 1. *Apodiphus amygdali* (Gm.)

**Material studied** : Adana (Saimbeyli), Antalya (Dağ, Kemer), Eskişehir (Sarıcakaya), Gaziantep (Central province, Oğuzeli), İçel (Mut), Kahramanmaraş (Central province), Kilis (Central province)(Fig.26). 13 specimens.

**Occurrence** : Occasionally.



♦ *Apodiphus amygdali*

Figure 26. Distribution of *Apodiphus amygdali*.

**Biological note :** They were collected from the end of April to the end of July, on *Armeniaca vulgaris*, *Castanea* sp., *Juglans regia*, *Pirus communis*, *Rubus* sp., *Salix* sp., *Solanum melongena*, *Vitis* sp., *Amygdalus* sp. and also by the aerial collector. According to Lodos et al. (1978), this species is found widely on fruit trees in Aegean and Marmara Regions, but is found rarely in Mid Anatolia and West part of Black Sea Region. It is not important for these regions.

5. Genus: *Bagrada* Stal

1. *Bagrada abeillei* Put.

**Material studied :** Gaziantep (Central province, Islahiye, Nizip, Oğuzeli), Kilis (Central province)(Fig..27). 68 specimens.

**Occurrence :** Nearly common.

**Biological note :** Adults were collected from the beginning of June up to the mid of July. They were taken on *Capparis* sp., *Salsola* sp., *Sinapis* sp., *Verbascum* sp., gramineous plants and weeds and also by the aerial collector.

2. *Bagrada cicur* Hv.

**Material studied :** Gaziantep (Araban, Nizip, Oğuzeli), Kahramanmaraş (Göksun), Kilis (Central province)(Fig..27). 43 specimens.

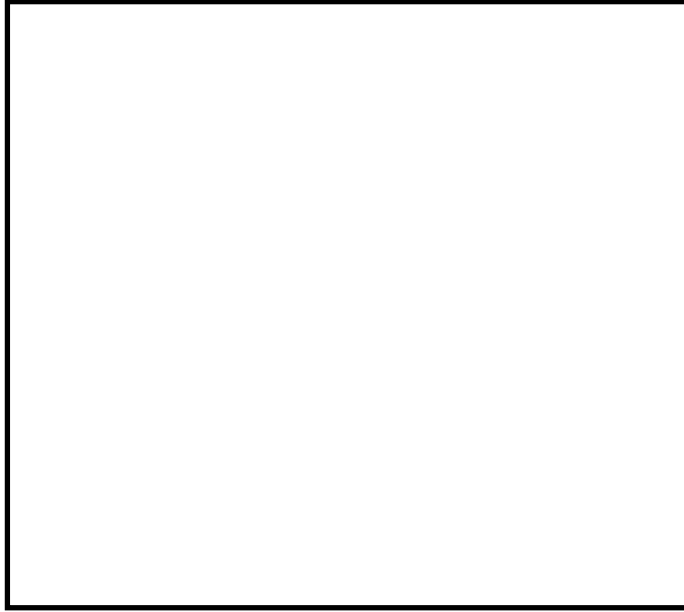
**Occurrence :** Occasionally.

**Biological note** : Specimens were collected from the beginning of June to the third week of July, on *Capparis* sp., *Salsola* sp., *Sinapis* sp., umbelliferous plants and weeds..

### 3. *Bagrada concinna* Hv.

**Material studied**: Gaziantep (Araban, Central province, Oğuzeli), Hatay (Hassa-Akbez), Kahramanmaraş (Central province)(Fig.27). 17 specimens.

**Occurrence** : Occasionally.



- *Bagrada concinna*
- *Bagrada cicur*
- ◆ *Bagrada abeillei*

Figure 27. Distribution of *Bagrada concinna*, *B. cicur* and *B. abeillei*.

**Biological note** : Adults were collected in the from the beginning of April to the beginning of June, on *Capparis* sp., *Sinapis* sp., and also on weeds.

### 4. *Bagrada kaufmanni* Osh.

**Material studied** : İçel (Mut)(Fig.28). Only 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : A single specimen was found on *Sinapis* sp. at the end of May.

### 5. *Bagrada lepida* (Hv.)

**Material studied** : Gaziantep (Islahiye), İçel (Arslanköy, Gözne, Tarsus) (Fig.28). 7 specimens.

**Occurrence** : Occasionally.

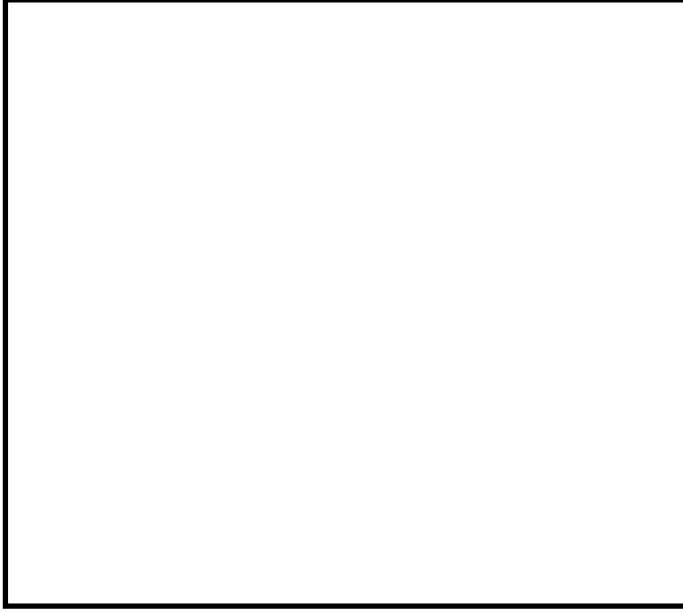
**Biological note** : Adults were collected from the beginning of June to the beginning of July on *Alyssum murale* and some weeds.

6. *Bagrada stolata* Hv.

**Material studied** : Kayseri (Yılanlıdağ), Kırşehir (Kaman) (Fig.28). 2 specimens.

**Occurrence** : Very occasionally.

**Biological note** : Adults were collected in the end of July and in the third week of August, on weeds. This species is found rarely and there is not enough information about its host plants and damage.



- *Bagrada stolata*
- *Bagrada lepida*
- ◆ *Bagrada kaufmanni*

Figure 28. Distribution of *Bagrada stolata*, *B. lepida* and *B. kaufmanni*.

6. Genus: *Brachynema* (M.-R.)

1. *Brachynema virens* (K.)

**Material studied** : Ankara (Beypazarı), Kırıkkale (Keskin), Nevşehir (Avanos), Niğde (Central province)(Fig.29). 8 specimens.

**Occurrence** : Very occasionally.

**Biological note** : The specimens were collected from the beginning of May to the mid of August. They were taken on *Peganum harmala* and in the light traps. According to the available literature, this species is found on *Alhagi camelorum*, *Anabasis aphylla*, *Zygophyllum fabage*. But, in this research it was found only on *P. harmala*.



♦ *Brachynema virens*

Figure 29. Distribution of *Brachynema virens*.

7. Genus: *Carpocoris* Klt.

1. *Carpocoris fuscispinus* (Bh.)

**Material studied:** Ankara (Bağlum, Polatlı), Antalya (Kaş, Korkuteli, Saklıkent), Çankırı (Eldivan, Ilgaz, Kurşunlu, Şabanözü), Çorum (Iskilip), Eskişehir (Mihalıçcık), Gaziantep (Araban, Yavuzeli), Hatay (Soğukoluk), Kahramanmaraş (Andırın, Pazarcık), Karaman (Central province), Kastamonu (Devrekani), Kırıkkale (Keskin), Kırşehir (Kaman), Konya (Bozkır), Yozgat (Çekerek)(Fig.30). 30 specimens.

**Occurrence:** Common but in small numbers.

**Biological note:** They were collected from the beginning of April to the first week of August, on *Cirsium* sp., *Hordeum* sp., *Lens esculenta*, *Juglans regia*, *Peganum* sp., *Triticum* sp., *Verbascum* sp. and weeds.

2. *Carpocoris iranus* Tam.

**Material studied:** Gaziantep (Central province, Nizip, Oğuzeli), Hatay (Hassa-Akbez), Kahramanmaraş (Ahır Mountain, Central province, Göksun 1420 m., Nurhak Mountain)(Fig.30). 31 specimens.

**Occurrence:** Nearly common.

**Biological note:** Specimens were collected from the beginning of May to the third week of July. They were found on *Centaurea* sp., Compositae plants, *Euphorbia* sp., *Medicago sativa*, *Sinapis* sp., *Trifolium* sp., *Triticum* sp., *Verbascum* sp. and also on weeds.

3. *Carpocoris mediterraneus* Tam.

**Material studied:** Adana (Karaisalı, Karatepe, Misis, Namrun, Yumurtalık, Ankara (Kalecik), Antalya (Alanya), Bartın (Kurucuşile), Bolu (Akçakoca, Mengen), Çorum (Osmancık), Hatay (Hassa-Akbez, Altınözü, Antakya, Kırıkhan, Yayladağı), İçel (Anamur, Gülnar, Mut, Silifke 1000 m.), Kahramanmaraş (Andırın, Gavur Mountain, Göksun), Karabük (Safranbolu), Kastamonu (Central province), Karaman (Ermenek), Osmaniye (Düziçi, Zorkun)(Fig.30). 125 specimens.

**Occurrence:** Common.

**Biological note:** Adults were collected from the end of April to the first week of August. They were taken on *Althaea* sp., *Asphodelus* sp., *Centaurea* sp., *Cirsium* sp., *Echium* sp., *Knautia* sp., *Medicago sativa*, *Olea europea*, *Onopordum* sp., *Phloemis* sp., *Sinapis* sp., *Triticum sativa*, *Verbascum* sp., gramineaceous plants and some weeds.

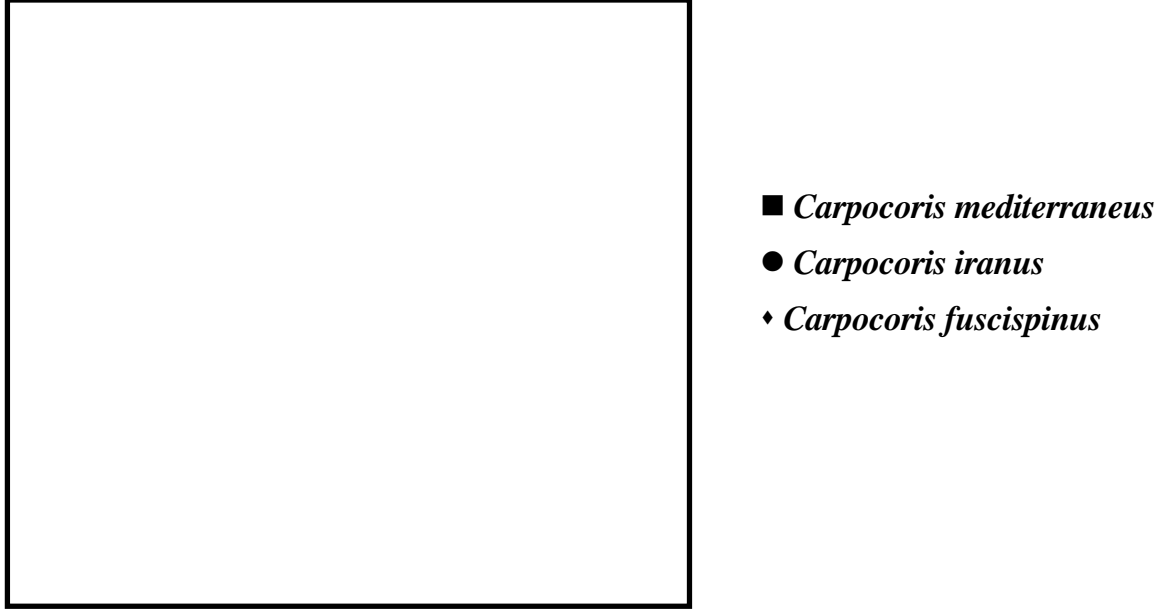


Figure 30. Distribution of *Carpocoris fuscispinus*, *C. iranus* and *C. mediterraneus*.

#### 4. *Carpocoris melanocerus* (M.-R.)

**Material studied:** Adana (Karataş, Yumurtalık), Ankara (Central province), Çankırı (Ilgaz), Çorum (Bayat), İçel (Namrun), Kırıkkale (Keskin), Niğde (Central province)(Fig.31). 12 specimens.

**Occurrence:** Occasionally.

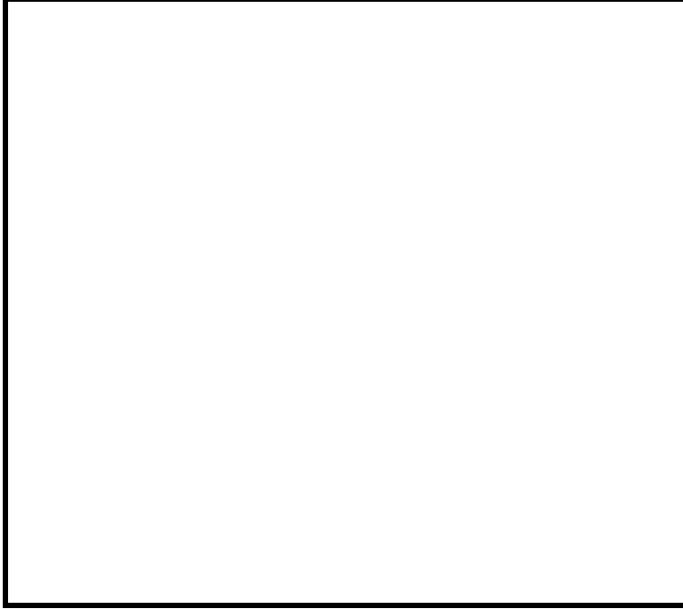
**Biological note:** They were collected from the end of April to the first week of August, on *Anchusa* sp., *Asphodelus* sp., *Centaurea* sp., *Knautia* sp., *Triticum sativa*, weeds and by the aerial collector.

#### 5. *Carpocoris pudicus* (Pd.)

**Material studied:** Adana (Ceyhan), Antalya (Elmalı, Kaş), Bartın (Ulus), Çankırı (Central province, Osmaniye Iskilip), Hatay (Altınözü, Antakya, Hassa, Reyhanlı, Yayladağı), Kahramanmaraş (Central province, Elbistan, Gavur Mountain, Göksun), Karabük (Safranbolu), Karaman (Central province, Ermenek), Kastamonu (Devrekani), Kayseri (Yeşilhisar, Yılanlıdağ), Yozgat (Çekerek)(Fig.31). 50 specimens.

**Occurrence:** Nearly common.

**Biological note:** They were collected from the beginning of April to the mid of August. They were taken on *Centaurea* sp., *Cirsium* sp., *Medicago* sp., *Onopordum* sp., *Quercus* sp., *Verbascum* sp., gramineaeous plants, umbelliferous plants, and weeds.



- *Carpocoris pudicus*
- ◆ *Carpocoris melanocerus*

Figure 31. Distribution of *Carpocoris pudicus* and *C. melanocerus* .

#### 6. *Carpocoris purpureipennis* (De G.)

**Material studied:** Adana (Gavur Mountain, Saimbeyli, Yumurtalık), Antalya (Akseki, Alanya, Central province, Elmalı, Finike, Güllük Mountain, Gündoğmuş, Kaş, Korkuteli, Kumluca, Manavgat, Saklıkent 730 m. 1800 m.), Hatay (Altınözü, İskenderun, Kırıkhan, Samandağı, Soğukoluk, Yayladağı), İçel (Anamur, Erdemli, Gülnar, Mersin, Mut, Tarsus-Arslanköy, Cehennemdere, Çamlıyayla 900 m., Fındıkpınarı 1000 m., Gözne), Kahramanmaraş (Andırın 650 m., Göksun), Osmaniye (Central province, Zorkun)(Fig.32). 197 specimens.

**Occurrence:** Common.

**Biological note:** Adults were collected from the mid of April to the first week of August. They were taken on *Althea rosae*, *Asphodelus* sp., *Avena sativa*, *Cornus mas*, *Centaurea* sp., *Cirsium* sp., *Galium* sp., *Lamium* sp., *Lupinus varius*, *Medicago maritima*, *Onopordum* sp., *Peganum harmala*, *Prunus domestica*, *Rhamnus* sp., *Salvia* sp., *Sideritis* sp., *Sinapis* sp., *Triticum* sp., *Verbascum* sp., *Vicia* sp., umbelliferous plants, weeds and by the aerial collector.

*Carpocoris* spp. are polyphagus and they are found on compositaeous plants. Sometimes they are harmful on gramineaeous plants.



■ *Carpocoris purpureipennis*

Figure 32. Distribution of *Carpocoris purpureipennis*.

8. Genus: *Cnephosa* Jak.

1. *Cnephosa flavomarginata* Jak.

**Material studied:** Kahramanmaraş (Göksun 1340 m.), Niğde (Çamardı)(Fig.33). 2 specimens.

**Occurrence:** Extremely occasionally.

**Biological note:** Adults were collected at the second half on June, on *Astragalus* sp. During this study, only two specimens were collected on *Astragalus* sp.

9. Genus: *Codophila* M.-R.

1. *Codophila lunulata* (Gz.)

**Material studied:** Adana (Tufanbeyli), Çankırı (Central province, Yapraklı), Kahramanmaraş (Afşin,Elbistan), Kırşehir (Kaman, Mucur), Nevşehir (Gülşehir), Niğde (Bor)(Fig.34). 14 specimens.

**Occurrence:** Occasionally.

**Biological note:** They were collected from the mid of August. Only one specimens was collected at the end of April. They were taken on *Euphorbia* sp., *Peganum harmala* and umbelliferous plants.



♦ *Cnephosa flavomarginata*

Figure 33. Distribution of *Cnephosa flavomarginata*.

2. *Codophila pusio* (Klt.)

**Material studied:** Ankara (Beypazarı), Çankırı (Central province, Kurşunlu), Çorum (Bayat, Sungurlu), Eskişehir (Çifteler), Gaziantep (Central province, Islahiye, Araban), Kahramanmaraş (Afşin, Pazarcık), Karaman (Central province); Kastamonu (Tosya), Kayseri (Erciyes Mountain, Yılanlıdağ), Konya (Ereğli), Nevşehir (Avanos, Gülşehir)(Fig.34). 45 specimens.

**Occurrence:** Nearly common.

**Biological note:** The specimens were collected from the beginning of June to the mid of August, on *Chenopodium* sp., *Cirsium* sp., *Euphorbia* sp., *Onopordum* sp., *Peganum harmala*, gramineous and leguminosaeous plants and weeds and also by the aerial collector.

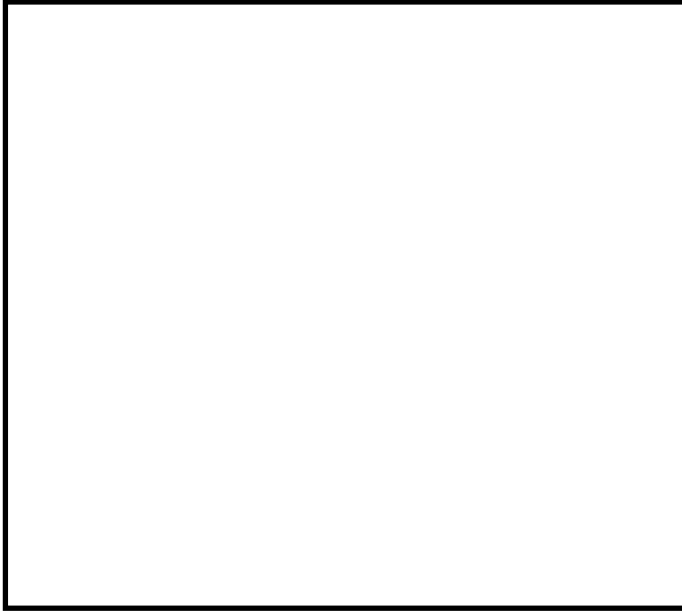
3. *Codophila varia* (F.)

**Material studied:** Adana (Pozantı, Tufanbeyli), Ankara (Kalecik), Antalya (Central province, Güllük Mountain, Serik), Çankırı (Central province), Çorum (Central province, Iskilip, Osmancık) Gaziantep (Araban, Central province, Islahiye, Oğuzeli, Yavuzeli), Hatay (Altınözü, Hassa-Akbez, İskenderun, Samandağı, Yayladağı), İçel (Anamur, Erdemli, Gülnar 1000 m., Silifke, Tarsus-Namrun), Kahramanmaraş, Karabük (Safranbolu), Karaman (Ermenek), Kayseri (Yılanlıdağ), Kırşehir (Mucur), Konya (Akşehir, Seydişehir), Nevşehir (Ürgüp), Osmaniye (Zorkun)(Fig.34). 78 specimens.

**Occurrence :** Common

**Biological note :** They were collected from the end of April to the mid of August, on *Carthamus* sp., *Centaurea* sp., *Cirsium* sp., *Daucus* sp., *Echium plantagineum*, *Medicago sativa*, *Onopordum* sp., *Sinapis* sp., *Verbascum* sp., umbelliferous and gramineous plants and also weeds.

Among these species, *Codophila lunulata* and *C. varia* prefer umbelliferous plants, *C. pusio* prefers euphorbiaceaeous plants. They do not cause important damage on them.



◆ *Codophila lunulata*

● *Codophila pusio*

■ *Codophila varia*

Figure 34. Distribution of the species of *Codophila*.

10. Genus: *Dolycoris* M.- R.

1. *Dolycoris baccarum* (L.)

**Material studied** : Adana (Central province, Gavur Mountain, Gezbeli, Misis, Tufanbeyli, Tuzla, Yumurtalık), Aksaray (Central province, Ihlara Valley), Ankara (Ayaş, Bağlum, Beypazarı, Central province, Çubuk, Çubuk-Karagöl, Elmadağ, Kalecik, Kızılcahamam, Nallıhan), Antalya (Akseki, Central province, Elmalı, Finike, Güllük Mountain, Gündoğmuş, Kaş, Korkuteli 1400m., Kumluca, Mavikent, Saklıkent 1860 m, Serik, Sinekçibeli, Söğüt Valley), Bartın (Ulus), Bolu (Central province, Düzce, Gerece, Mudurnu, Yığılca), Çankırı (Central province, Çerkeş, Şabanözü, Yapraklı), Çorum (Central province, Iskilip), Eskişehir (Mihaliçcik, Sarıcakaya, Sivrihisar), Gaziantep (Araban, Central province, Oğuzeli, Yavuzeli), Hatay (Altınözü, Hassa-Akbez, Kırıkhan, Reyhanlı), İçel (Arslanköy, Cehennemdere, Central province, Çamlıyayla, Erdemli, Gülnar, Güzeloluk, Mut, Silifke, Tarsus), Kahramanmaraş (Afşin, Ahır Mountain, Andırın, Central province, Elbistan, Göksun, Nurhak Mountain, Pazarcık), Karabük (Eskipazar), Karaman (Ermenek), Kastamonu (Araç, Central province, Devrekani, Taşköprü, Tosya), Kayseri (Erciyes Mountain, Yeşilhisar), Kilis (Central province), Konya (Bozkır, Central province, Doğanhisar, Ereğli, Hadim, Kulu, Seydişehir), Nevşehir (Hacıbektaş, Ürgüp), Niğde (Central province, Çamardı, Ulukışla), Osmaniye (Düziçi, Zorkun), Sinop (Ayancık), Yozgat (Çekerek, Sarıkaya), Zonguldak (Ereğli) (Fig.35). More than 600 specimens.

**Occurrence:** Very common.



● *Dolycoris baccarum*

Figure 35. Distribution of *Dolycoris baccarum*.

**Biological note:** They were collected from the beginning of April to the mid of August, on *Alhagi* sp., *Alkanna* sp., *Althae rosae*, *Astragalus* sp., *Carthamus* sp., *Cedrus* sp., *Centaurea* sp., *Chrysanthemum coranarium*, *Cicer arientinum*, *Cirsium* sp., *Cistus* sp., *Cupressus* sp., *Echinops viscosus bithynicus*, *Echium* sp., *Eleagnus orientalis*, *Fruticosus* sp., *Galium* sp., *Cupressus* sp., *Helianthus annuus*, *Hordeum* sp., *Inula* sp., *Juniperus* sp., *Lupinus varius*, *Medicago marino*, *M.sativa*, *Ononis adenotriche*, *Onopordum* sp., *Papaver spicatum*, *Peganum harmala*, *Phloemis* sp., *Pirus malus*, *Prunus domestica*, *Rubus* sp., *Sahira* sp., *Salix* sp., *Salvia* sp., *Scolymus hispanicus*, *Sideritis* sp., *Sinapis* sp., *Solanum tuberosum*, *Spinacia oleracea*, *Tamarix* sp., *Triticum sativa*, *Urtica* sp., *Verbascum* sp., gramineous and umbelliferous plants and also on weeds and by the aerial collector.

*D. baccarum* is a common species. It was found in large amount in the areas. It is polyphagous. They are harmful on various lower plants (very occasionally on tree and bushes) by sucking the generative parts of plants. They are very important.

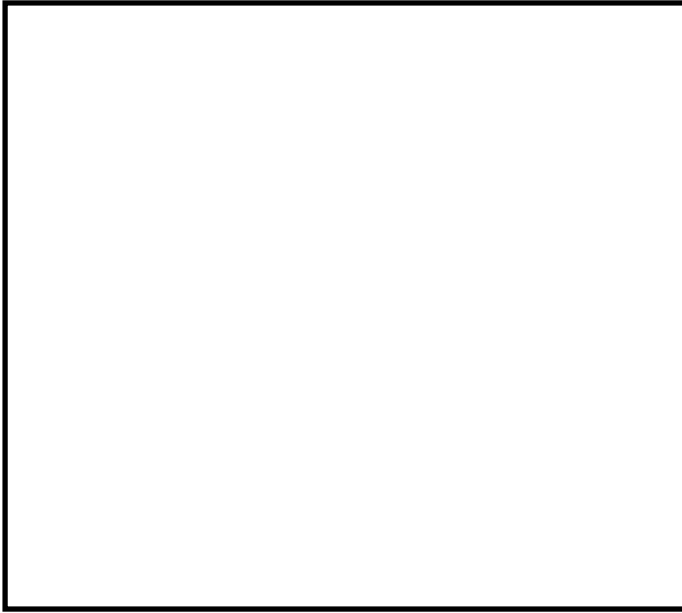
11. Genus: *Dyroderes* Spin.

1. *Dyroderes umbriculatus* (F.)

**Material studied** : Adana (Gavur Mountain), Aksaray (Ihlara Valley), Antalya (Elmalı, Güllük Mountain), Bartın (Ulus), Bolu (Central province), Hatay (Antakya, Samandağı), Karaman (Ermenek), Konya (Bozkır), Nevşehir (Ürgüp), Osmaniye, Zonguldak (Çaycuma)(Fig.36). 26 specimens.

**Occurrence** : Nearly common.

**Biological note** : Adults were collected in the fields from the end of April to the mid of August. They were taken on *Galium* sp., *Fagus* sp., *Rubus* sp., *R. fruticosus*, *Urtica* sp., *Verbascum* sp., and different species of weeds. This species has a very low population densities and lives on blackberry and *Galium* sp. It has not economic importance.



● *Dyroderes umbriculatus*

Figure 36. Distribution of *Dyroderes umbriculatus*.

12. Genus: *Eurydema* Lp.

1. *Eurydema blandum* Hv.

**Material studied** : Adana (Saimbeyli), Ankara (Elmadağ, Kalecik, Polatlı), Antalya (Kale, Serik), Kahramanmaraş (Göksun), Kırıkkale (Central province), Niğde (Ulukışla)(Fig.37). 27 specimens.

**Occurrence** : Nearly common.

**Biological note** : Adults were collected in the fields from the end of April until the end of August. They were taken on, *Capparis* sp., *Sinapis* sp., *Spinacia oleracea*, cruciferous plants and different species of weeds.

2. *Eurydema fieberi* (Schml.)

**Material studied**: Antalya (Central province, Saklıkent 1860 m., Söğüt plateau 1480 m), Gaziantep (Central province, Oğuzeli, Yavuzeli), Hatay (Hassa-Akbez, Yayladağı), Kahramanmaraş (Afşin, Göksun, Nurhak Mountain, Pazarcık), Karaman (Ermenek), Kastamonu (Araç), Kırşehir (Kaman), Kilis (Central province), Nevşehir (Central province), Niğde (Ulukışla), Osmaniye (Zorkun 1480 m)(Fig.37). 129 specimens.

**Occurrence** : Fairly common, sometimes found in large numbers.

**Biological note** : Adults were collected in the fields from the end of April until the third week of July. They were taken on *Capparis* sp., *Sinapis* sp. different species of weeds and by the aerial collector.



- ◆ *Eurydema blandum*
- *Eurydema fieberi*
- *Eurydema formosum*

Figure 37. Distribution of *Eurydema blandum*, *E. fieberi* and *E. formosum*.

### 3. *Eurydema formosum* Pt.

**Material studied** : Gaziantep (Oğuzeli)(Fig.37). 12 specimens.

**Occurrence** : Very occasionally.

**Biological note** : They were collected from the beginning of June to the mid of July on *Capparis* sp., *Sinapis* sp. and weeds.

### 4. *Eurydema oleraceum* (L.)

**Material studied** : Antalya (Saklıkent), Bartın (Central province), Bolu (Abant lake, Central province, Gerede, Mudurnu), Çorum (Central province), Eskişehir (Sarıcakaya), Kastamonu (Central province, Taşköprü), Osmaniye (Zorkun), Zonguldak (Ereğli)(Fig.38). 96 specimens.

**Occurrence** : Nearly common.

**Biological note** : Adults were collected in the fields from the beginning of May up to the third week of August but mostly in May. They were taken on *Sinapis* sp. and different species of weeds

### 5. *Eurydema ornatum* (L.)

**Material studied**: Adana (Central province, Ceyhan, Feke, Gavur Mountain, Karaisalı, Kozan, Misis, Namrun, Saimbeyli, Tuzla, Yumurtalık), Aksaray (Central province), Ankara (Ayaş, Bağlum, Beypazarı, Elmadağ, Kalecik, Kızılcahamam, Nallıhan, Polatlı), Antalya (Alanya, Central province, Gazipaşa, Finike, Kaş, Kemer, Kumluca, Manavgat, Serik, Sinan, Söğüt plateau 1370 m.), Bolu (Mudurnu), Çankırı (Central province), Çorum (Alaca, Central province, Iskilip, Osmancık), Eskişehir (Central province,

Mahmudiye, Sarıcakaya), Gaziantep (Araban, Central province, Islahiye, Nizip, Oğuzeli, Yavuzeli), Hatay (Altınözü, Arsuz, Dörtyol, Hassa-Akbez, İskenderun, Kırıkhan, Reyhanlı, Samandağı, Yayladağı) İçel (Anamur, Çamlıyayla 900 m., Cehennemdere, Erdemli, Fındıkpınarı, Gülnar, Kırobaşı, Mersin, Mut, Silifke, Tarsus), Kahramanmaraş (Afşin, Andırın, Central province, Elbistan, Göksun, Nurhak Mountain, Türkoğlu), Karabük (Central province, Safranbolu), Karaman (Ermenek), Kastamonu (Araç, Central province, Taşköprü, Tosya), Kayseri (Central province), Kırıkkale (Central province), Kilis (Central province), Konya (Akşehir, Ereğli), Nevşehir (Göreme), Niğde (Central province, Ulukışla), Osmaniye (Bahçe, Central province, Düziçi, Kadirli, Zorkun), Yozgat (Sarıkaya)(Fig.38). 695 specimens.

**Occurrence:** Very common.

**Biological note:** Adults were collected from the second week of April to the second week of August, on *Alhagi* sp., *Alyssum murale*, *Capparis* sp., *Cirsium* sp., *Cornus mas*, *Fagus* sp., *Medicago sativa*, *Onobrychis sativa*, *Ononis* sp., *Onopordum* sp., *Pirus malus*, *Rorippa* sp., *Sinapis* sp., *Spinacia oleracea*, *Triticum sativa*, *Verbascum* sp., *Veronica* sp., *Vicia cracca*, cruciferous and umbelliferous plants and different species of weeds, light trap and also by the aerial collector.

#### 6. *Eurydema rugulosum* D.

**Material studied :** Adana (Yumurtalık), Antalya (Central province, Güllük Mountain, Kaş, Saklıkent 1860m.), Hatay (Antakya, Dörtyol, Yayladağı), İçel (Erdemli, Gülnar, Gözne, Kırobaşı, Namrun, Silifke, Tarsus), Kahramanmaraş (Andırın, Pazarcık), Karaman (Ermenek)(Fig.38). 84 specimens.

**Occurrence :** Occasionally.

**Biological note :** They were collected from the mid of April to the end of July on *Capparis* sp., *Centaurea* sp., *Sinapis* sp., cruciferous plants, weeds and under stone.

#### 7. *Eurydema spectabile* Horv.

**Material studied :** Adana (Karataş, Misis), Antalya (Kaş, Kekova, Serik, Manavgat), İçel (Mut, Silifke), Bartın (Central province)(Fig.39). 59 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Adults are collected from the third week of April to the beginning of August, on *Capparis* sp., *Sinapis* sp., cruciferous plants and by the aerial collector.



- ◆ *Eurydema oleraceum*
- *Eurydema ornatum*
- *Eurydema rugulosum*

Figure 38. Distribution of *Eurydema oleraceum* , *E. rugulosum* and *E. ornatum*.

#### 8. *Eurydema ventrale* Klt.

**Material studied** : Bolu (Mudurnu), Çorum (Alaca), Karaman (Ermenek), Kastamonu (Central province, Taşkörü), Kırıkkale (Central province), Kırşehir (Kaman), Niğde (Ulukışla)(Fig.39). 15 specimens.

**Occurrence** : Nearly common.

**Biological note** : Adults were collected in the fields from the end of April up to the third week of August. They were taken on *Sinapis* sp. and different species of cruciferous weeds.

#### 13. Genus: *Eysarcoris* H.

##### 1. *Eysarcoris aeneus* (Scop.)

**Material studied**: Adana (Central province)(Fig.40). 2 specimens.

**Occurrence**: Extremely occasionally.

**Biological note**: They were collected at the second week of June on *Medicago sativa*.

##### 2. *Eysarcoris fabricii* Kk.

**Material studied** : Bolu (Mengen)(Fig.40). 8 specimens.

**Occurrence** : Extremely occasionally.

**Biological note** : Adults were collected at the last week of May on *Urtica* sp. and *Verbascum* sp.



- *Eurydema ventrale*
- ◆ *Eurydema spectabile*

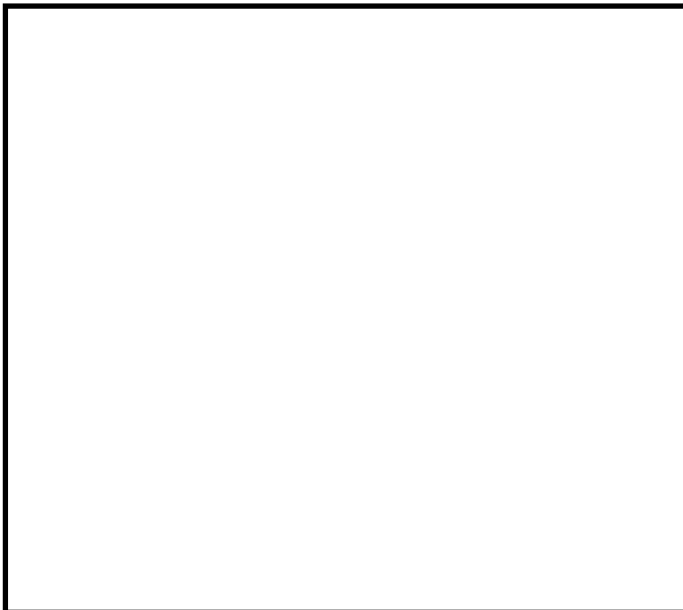
Figure 39. Distribution of *Eurydema spectabile* and *E.ventrale*.

### 3. *Eysarcoris inconspicuus* (H.-S.)

**Material studied:** Adana (Ceyhan, Gavur Mountain, Karataş, Saimbeyli, Yumurtalık), Antalya (Alanya, Central province, Demre, Elmalı, Güllük Mountain, Kaş, Korkuteli, Manavgat, Mavikent), Bartın (Central province, Ulus), Bolu (Akçakoca), Çorum (Osmancık), Gaziantep (Araban, Islahiye, Yavuzeli), Hatay (Arsuz, Hassa- Akbez, İskenderun, Kırıkhan, Samandağı), İçel (Anamur, Çamlıyayla, Mut, Silifke, Tarsus), Kahramanmaraş (Andırın, Central province, Türkoğlu), Karaman (Central province), Nevşehir (Gülşehir), Niğde (Ulukışla), Osmaniye (Bahçe, Düziçi, Kadirli, Zorkun)(Fig.40). 79 specimens.

**Occurrence :** Nearly common.

**Biological note :** Adults were collected in the fields from the second week of April until third week of August. They were taken on *Circium* sp., *Cistus* sp., *Equestrum* sp., *Inula* sp., *Juniperus* sp., *Laurus nobilis*, *Mentha* sp., *Salix* sp., *Salvia* sp., *Sideritis* sp., *Verbascum* sp., *Tamarix* sp., *Triticum sativa*, gramineous plants , different species of weeds, also light trap and by the aerial collector.



- ◆ *Eysarcoris aeneus*
- *Eysarcoris fabricii*
- *Eysarcoris inconspicuus*

Figure 40. Distribution of the species of *Eysarcoris*.

14. Genus: *Holcogaster* Fieb.

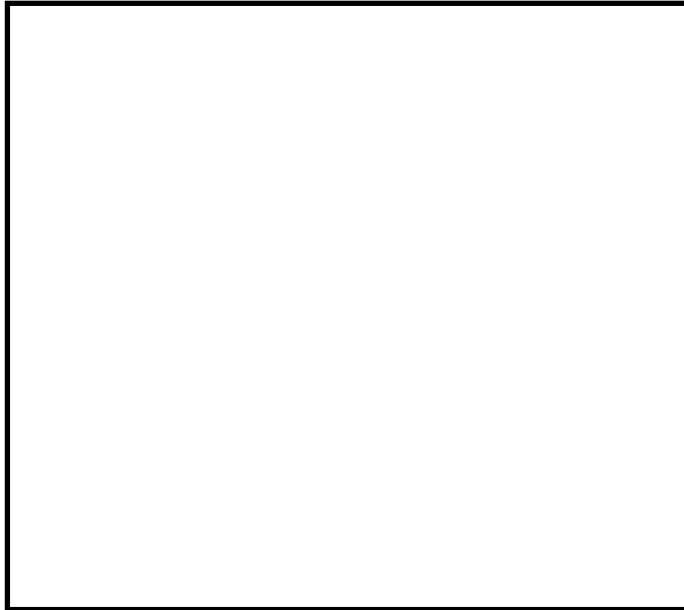
1. *Holcogaster exilis* Hv.

**Material studied:** Antalya (Demre, Korkuteli, Saklıkent), Çorum (Kargı), Eskişehir (Mihaliçık, Sarıcakaya), Hatay (Harbiye), İçel (Anamur, Gözne), Kahramanmaraş (Andırın), Karaman (Ermenek), Sinop (Boyabat)(Fig.41). 80 specimens.

**Occurrence :** Nearly common.

**Biological note :** Adults were collected from the end of May to the beginning of August. They were taken on *Cedrus* sp., *Juniperus* sp. and *Pinus* sp.

Although according to literature (Lodos et al., 1978) this species is harmful on tobacco, its real hosts are pine, cedrus, cypress and juniper etc. In some areas they are found in high population



● *Holcogaster exilis*

Figure 41. Distribution of *Holcogaster exilis*.

15. Genus: *Holcostethus* Fieb.

1. *Holcostethus albipes* (F.)

**Material studied:** İçel (Gülнар, Kırobası)(Fig.42). 3 specimens.

**Occurrence :** Very occasionally.

**Biological note:** Adults were collected at the end of April. They were taken on weeds.

2. *Holcostethus sphacelatus* (F.)

**Material studied :** Osmaniye (Bahçe)(Fig.42). Only 1 specimen.

**Occurrence :** Very occasionally.

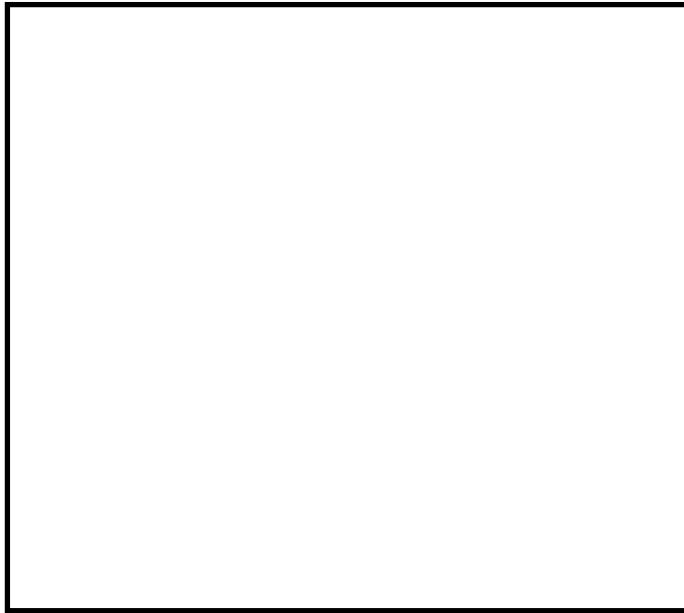
**Biological note :** Adult was collected at the beginning of June. It was taken on *Rubus* sp.

3. *Holcostethus strictus* (F.)

**Material studied :** Adana (Kozan, Misis), Antalya (Elmalı, Gündoğmuş, Korkuteli), Çorum (Kargı), Gaziantep (Oğuzeli), Karabük (Safranbolu)(Fig.42). 11 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Adults were collected from the beginning of April to the beginning of August. They were taken on *Juniperus* sp., *Punica granatum*, *Sinapis* sp., *Triticum sativa*, *Verbacum* sp. and some weeds.



- ⑥ *Holcostethus albipes*
- *Holcostethus strictus*
- *Holcostethus sphacelatus*
- ◆ *Holcostethus vernalis*

Figure 42. Distribution of the species of *Holcostethus*.

4. *Holcostethus vernalis* (W.)

**Material studied :** Adana (Saimbeyli, Yumurtalık), Ankara (Elmadağ), Antalya (Alanya, Central province, Elmalı, Kemer, Korkuteli, Serik, Manavgat), Çankırı (Ilgaz), Çorum (Central province), Eskişehir (Sarıcakaya, Mihaliçcik), Gaziantep (Central province, Kilis, Oğuzeli), Hatay (Hassa- Akbez, Kırıkhan), İçel (Cehennemdere, Çamlıyayla, Erdemli, Gülnar, Namrun, Tarsus), Kahramanmaraş (Ahır Mountain), Karabük (Eskipazar), Karaman (Central province, Ermenek), Kastamonu (Çatalzeytin, Taşköprü,

Tosya), Kayseri (Yeşilhisar), Kırşehir (Kaman), Konya (Ereğli), Niğde (Ortaköy), Osmaniye (Düziçi), Zonguldak (Ereğli, Çaycuma)(Fig.42). 75 specimens.

**Occurrence** : Very common.

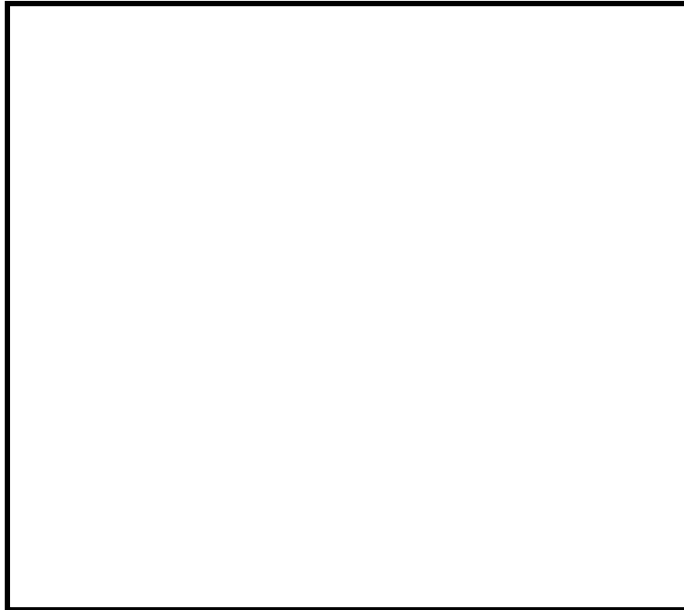
**Biological note** : Adults were collected from beginning of April to the mid of August. They were taken on *Arundo donax*, *Celtis australis*, *Centaurea* sp., *Crataegus* sp., *Pistacia vera*, *Prunus malus*, *P. amygdali*, *P. armeniaca*, *Pirus malus*, *Punica granatum*, *Quercus* sp., *Rosa* sp., *Rubus* sp., *Sinapis* sp., *Solanum melongena*, *Triticum sativa*, *Verbascum* sp.

This species is more common than other *Holcostethus* spp. but its population level is lower than others. They are found on many plants.

16. Genus: *Mustha* A.S.

1. *Mustha spinosula* (Lef.)

**Material studied**: Adana (Central province), Ankara (Bağlum, Central province, Kızılcahamam), Antalya (Akseki, Central province, Demre, Elmalı, Güllük Mountain, Gündoğmuş, Kaş, Serik), Karaman (Ermenek)(Fig.43). 21 specimens.



◆ *Mustha spinosula*

Figure 43. Distribution of *Mustha spinosula*.

**Occurrence** : Occasionally.

**Biological note** : They were taken on *Crataegus* sp., *Ceratonia siliqua*, *Juniperus* sp., *Pinus* sp., *Pirus malus*, *Prunus amygdalus*, *Quercus* sp. and from the soil. They were collected from the mid of April to the beginning of August.

17. Genus: *Neottiglossa* Kb.

1. *Neottiglossa leporina* (H.S.)

**Material studied** :Bartın (Ulus), Çankırı (Çerkeş), Kahramanmaraş (Göksun)(Fig.44) 9 specimens.

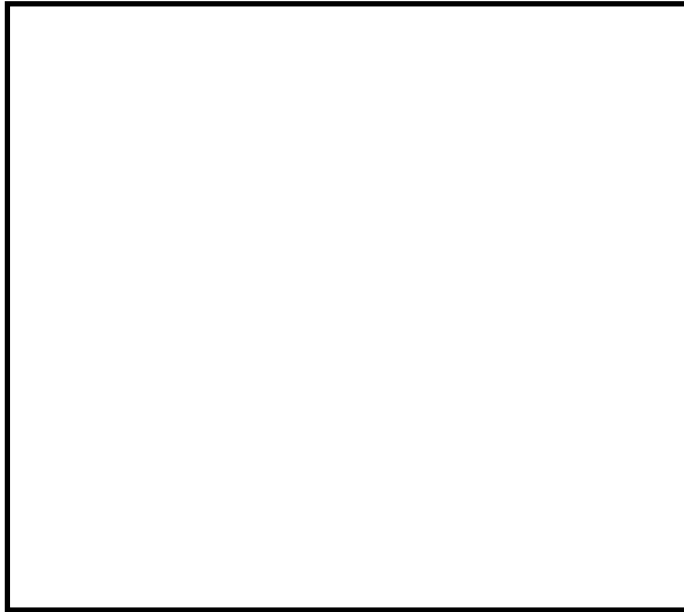
**Occurrence** : Occasionally.

**Biological note** : Adults were collected from the mid of June to the mid of July. They were taken on weeds. This species is fed on wild gramineous plants especially on *Poa* spp.

18. Genus: *Nezara* A.-S.

1. *Nezara viridula* (L.)

**Material studied** : Adana (Central province, Karaisalı, Misis, Yumurtalık), Antalya (Akseki, Alanya, Central province, Elmalı, Gazipaşa, Gündoğmuş, Kaş, Manavgat, Mavikent, Olympos Mountain, Serik), Gaziantep (Central province), Hatay (Antakya, Altınözü, Arsuz, Dörtyol, Hassa- Akbez, İskenderun, Samandağı, Soğukoluk), İçel (Gülner, Mersin, Silifke, Tarsus), Kahramanmaraş(Andırın, Central province), Osmaniye (Central province, Zorkun)(Fig.44). 115 specimens.



- *Nezara viridula*
- ◆ *Neottiglossa leporina*

Figure 44. Distribution of the species of *Neottiglossa* and *Nezara*.

**Occurrence** : Very common.

**Biological note** : Adults were collected from the second week of April to the beginning of August. They were taken on weeds, *Althae* sp., *Capparis* sp., *Centaurea* sp., *Hordeum vulgare*, *Morus alba*, *Onopordum* sp., *Paliurus* sp., *Phloemis* sp., *Phaseolus*

*vulgaris*, *Rubus* sp., *Sesamum indicum*, *Sinapis* sp., *Styrax* sp., *Thymus vulgaris*, *Triticum sativa*, *Verbascum* sp., *Vicia faba* and some umbelliferous plants.

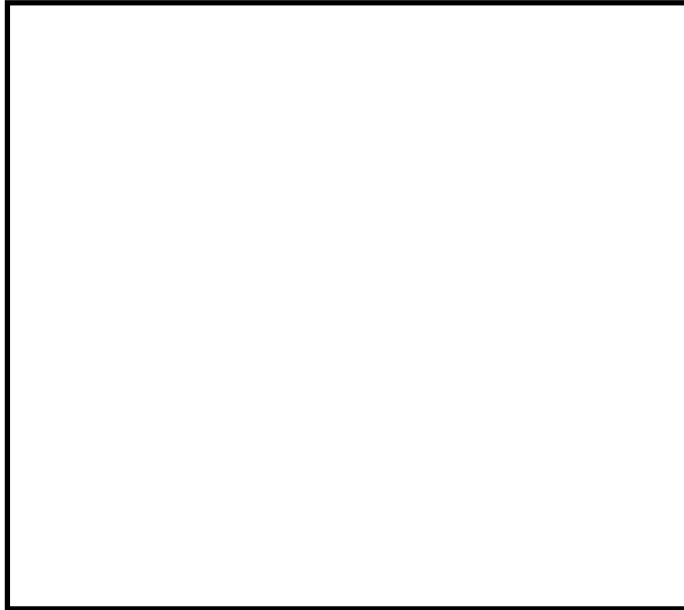
19. Genus: *Palomena* M.- R.

1. *Palomena prasina* (L.)

**Material studied:** Ankara (Bağlum, Nallıhan), Antalya (Akseki, Central province, Elmalı, Güllük Mountain, Korkuteli, Sinan), Bartın (Central province, Ulus), Bolu (Abant Lake, Central province, Mengen), Çorum (Iskilip), Karabük (Eskipazar, Safranbolu), Karaman (Ermenek), Kastamonu (Central province, Küre), Sinop (Erfelek), Osmaniye (Zorkun), Zonguldak (Devrek, Ereğli)(Fig.45). 36 specimens.

**Occurrence :** Common.

**Biological note:** Adults were collected from the second week of April to the beginning of August. They were taken on *Althae* sp., *Alnus* sp., *Capparis* sp., *Cedrus* sp., *Celtis* sp., *Centaurea* sp., *Cornus mas*, *Elaeagnus angustifolia*, *E. orientalis*, *Fagus* sp., *Galium* sp., *Hordeum vulgare*, *Juglans regia*, *Juniperus* sp., *Onopordum* sp., *Pinus* sp., *Pirus malus*, *Prunus domestica*, *P. persica*, *Quercus* sp., *Rosa* sp., *Rubus* sp., *Solanum tuberosum*, *Ulmus* sp., *Verbascum* sp. and on weeds.



■ *Palomena viridissima*

◆ *Palomena prasina*

Figure 45. Distribution of the species of *Palomena*.

2. *Palomena viridissima* (Pd.)

**Material studied:** Hatay (Yayladağı), İçel (Arslanköy, Cehennemdere, Çamlıyayla, Namrun, Tarsus), Osmaniye (Central province, Zorkun)(Fig.45). 24 specimens.

**Occurrence :** Common.

**Biological note** : Adults were collected from the April to the mid of July. They were taken on *Crataegus* sp., *Cydonia vulgaris*, *Fagus* sp., *Lonicera periclymenum*, *Rosa* sp., *Styrax* sp., *Terebinthus* sp. and also on weeds.

20. Genus: *Pausias* Jak.

1. *Pausias martini* (Pt.)

**Material studied**: Karaman (Ermenek)(Fig.46). 1 specimen.

**Occurrence**: Very occasionally.

**Biological note**: Adult was collected at the beginning of July. It was taken on *Pistacia terebinthus*.

21. Genus. *Piezodorus* Fieb.

1. *Piezodorus lituratus* (F.)

**Material studied**: Adana (Karataş,Kozan), Antalya (Güllük Mountain, Kaş, Saklıkent, Sinan, Sinekçibeli), Bolu (Abant Lake, Düzce, Mudurnu), Çankırı (Ilgaz), Çorum (Central province, Iskilip), Hatay (Antakya, Arsuz, Altınözü, Soğukoluk), İçel (Anamur, Cehennemdere, Çamlıyayla, Erdemli,Gülнар, Mut, Tarsus, Uzuncaburç), Karabük (Safranbolu), Kastamonu (Devrekani, Küre), Nevşehir (Ürgüp), Sinop (Türkeli)(Fig.46). 90 specimens.



◆ *Pausias martini*

● *Piezodorus lituratus*

Figure 46. Distribution of the species of *Pausias* and *Piezodorus*.

**Occurrence**: Very common.

**Biological note**: Adults were collected from the beginning of April to the mid of August. They were taken on *Astragalus* sp., *Corylus avellana*, *Cytisus* sp., *Genista* sp., *Juniperus* sp., *Medicago sativa*, *Melilotus* sp., *Pinus* sp., *Pirus malus*, *Quercus* spp.,

*Spartium junceum*, *Rosa* sp., *Rubus fruticosus*, *Sinapis* sp., *Styrax* sp., *Vicia* sp., leguminosous plants and also on weeds.

22. Genus. *Pitedia* Reut.

1. *Pitedia juniperina* (L.)

**Material studied:** Kastamonu (Central province)(Fig.47). 1 specimen.

**Occurrence:** Very occasionally.

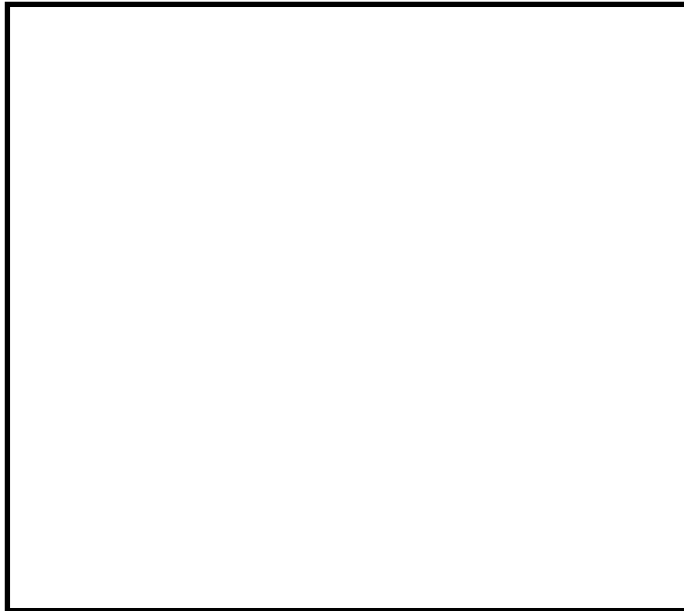
**Biological note:** Adult was collected at the mid of July. It was taken on *Quercus* sp.

2. *Pitedia pinicola* (M.-R.)

**Material studied:** Adana (Tufanbeyli), Bolu (Abant Lake)(Fig.47). 30 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from the end of May to the mid of June. They were taken on *Juniperus* sp. especially on *J.communis*. Main host plants of *Pitedia* spp. are coniferaous plants. *P.pinicola* is found on *Juniperus* sp. that is on sunny slope of a hill. There is not information about their damages and biologies.



- *Pitedia pinicola*
- ◆ *Pitedia juniperina*

Figure 47. Distribution of the species of *Pitedia*.

23. Genus. *Raphigaster* Lp.

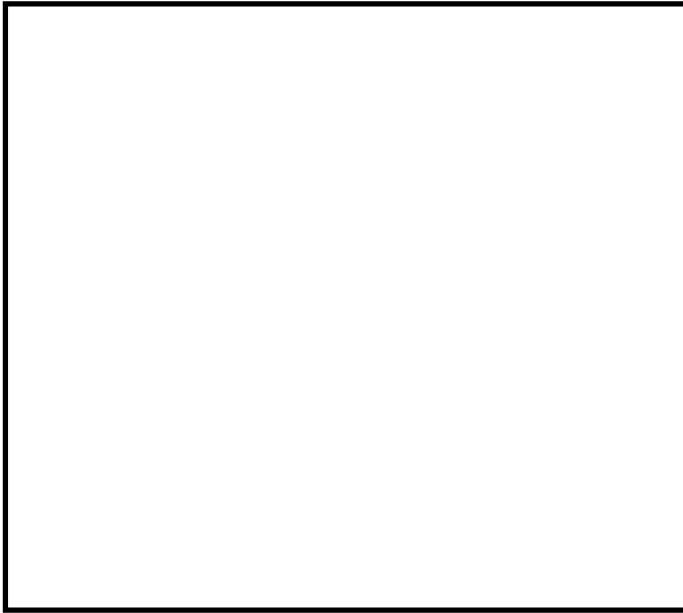
1. *Raphigaster nebulosa* (Pd.)

**Material studied:** Adana (Feke, Pozantı), Aksaray (Ihlara Valley), Ankara (Central province, Çubuk, Elmadağ, Polatlı, Şereflikoçhisar), Antalya (Central province, Elmalı,

Finike, Gündoğmuş, Kaş, Kumluca), Bartın (Ulus), Bolu (Central province, Mudurnu), Çankırı (Central province, Ilgaz), Hatay (Altınözü), İçel Gülnar, Güzeloluk, Gözne, Fındıklı, Mut, Namrun), Kahramanmaraş (Afşin, Elbistan, Göksun, Nurhak Mountain), Karabük (Central province), Karaman (Central province, Ermenek), Kastamonu (Tosya), Kayseri (Bünyan, Central province), Kilis (Central province), Konya (Central province, Çumra), Nevşehir (Avanos), Niğde (Central province, Ortaköy, Ulukışla), Yozgat (Central province)(Fig.48). 92 specimens.

**Occurrence:** Common but found in small numbers.

**Biological note:** Adults were collected from the beginning of April to the third week of August. They were taken on *Acacia* sp., *Cedrus* sp., *Citrus limonum*, *Cornus mas*, *Corylus avellana*, *Crataegus* sp., *Cupressus* sp., *Eleagnus orientalis*, *Juniperus* sp., *Platanus orientalis*, *Pinus* sp., *Pirus communis*, *P.malus*, *Populus* sp., *Prunus armeniaca*, *P.amygdali*, *P. domestica*, *P.mahaleb*, *P.persica*, *P. avium*, *Punica granata*, *Quercus* sp., *Rosa* sp., *Rubus* sp., *Salix* sp., *Styrax* sp., *Tamarix* sp., *Ulmus* sp., weeds and also from by the aerial collector. *R. nebulosa* is found on fruit and forest trees. But its biology is not known.



● *Raphigaster nebulosa*

Figure 48. Distribution of *Raphigaster nebulosa*.

24. Genus: *Rhombocoris* M.

1. *Rhombocoris regularis* (H.-S.)

**Material studied:** Antalya (Saklıkent)(Fig.49). Only 2 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected at the mid of May. They were taken on *Verbascum* sp.

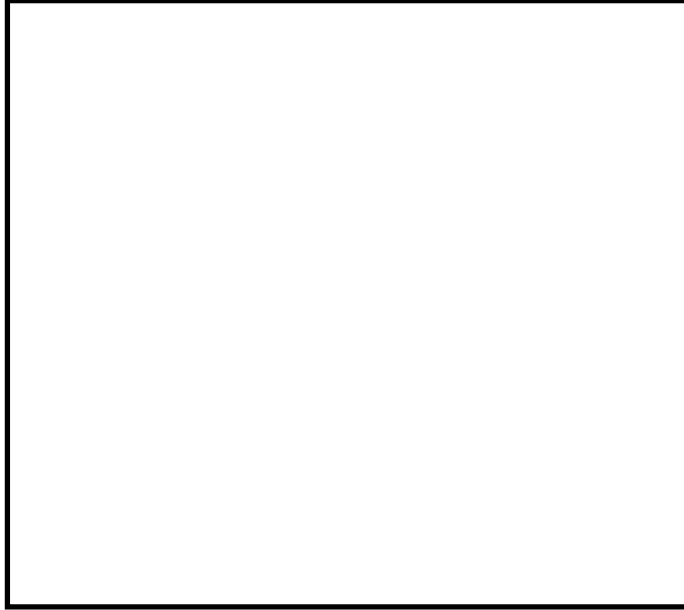
25. Genus: *Risibia* Hv.

1. *Risibia verbasci* Lod. and Önd.

**Material studied:** Konya (Doğanhisar-Destiğın)(Type locality)(Fig.49). 12 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected in the fields from the end of April up to first week of July. They were taken on *Verbascum* sp.



- *Risibia verbasci*
- ◆ *Rhombocoris regularis*

Figure 49. Distribution of the species of *Rhombocoris* and *Risibia*.

26. Genus. *Sciocoris* Fn.

1. *Sciocoris atifi* Lod. and Önd.

**Material studied:** Hatay (Altınözü), Kahramanmaraş (Nurhak Mountain)(Fig.50). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected in the fields from the end of April to the end of July. They were taken on weeds and by the aerial collector.

2. *Sciocoris capitatus* Jak.

**Material studied:** Bolu (Mengen),Kahramanmaraş (Andırın), Kastamonu (Central province, Devrekani), Konya (Akşehir, Beyşehir), Niğde (Ulukışla)(Fig.50). 8 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected in the fields from the third week of April until third week of August. They were taken on *Juniperus* sp., on the soil and understone.

3. *Sciocoris cursitans* F.

**Material studied:** Hatay (Yayladağı)(Fig.50). 11 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected at the mid of July on weeds.

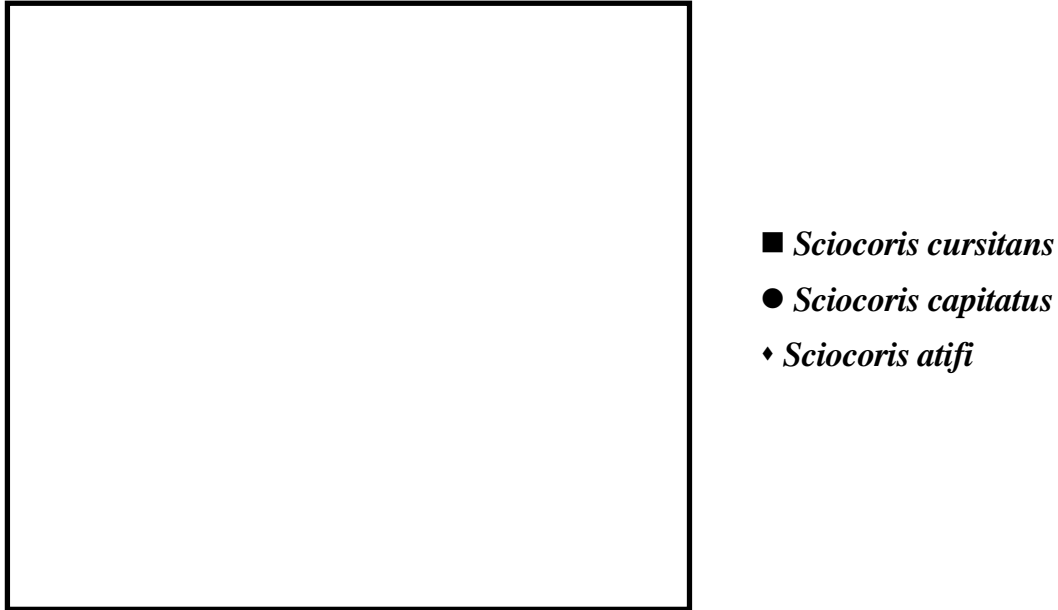


Figure 50. Distribution of *Sciocoris atifi*, *S. capitatus* and *S. cursitans*.

4. *Sciocoris helferi* (Fieb.)

**Material studied:** Kayseri (Pınarbaşı, Yılanlıdağ)(Fig.51). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected at the second week of August on weeds and under stones.

5. *Sciocoris homalonotus* (Fieb.)

**Material studied:** Kastamonu (Central province)(Fig.51). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected at the beginning of June on weeds.

6. *Sciocoris luteolus* (Fieb.)

**Material studied:** Adana (Central province), Antalya (Central province, Manavgat), Gaziantep(Central province), Hatay (Hassa), İçel (Tarsus), Kahramanmaraş (Elbistan), Kayseri (Erciyes Mountain), Kırşehir (Kaman, Mucur)(Fig.51). 34 specimens.

**Occurrence:** Nearly common.

**Biological note:** Adults were collected in the field from the third week of April to the mid of August. They were taken on *Euphorbia* sp., *Verbascum* sp., *Salvia* sp. *Quercus* sp., *Vitis vinifera*, gramineous plants and different species of weeds.

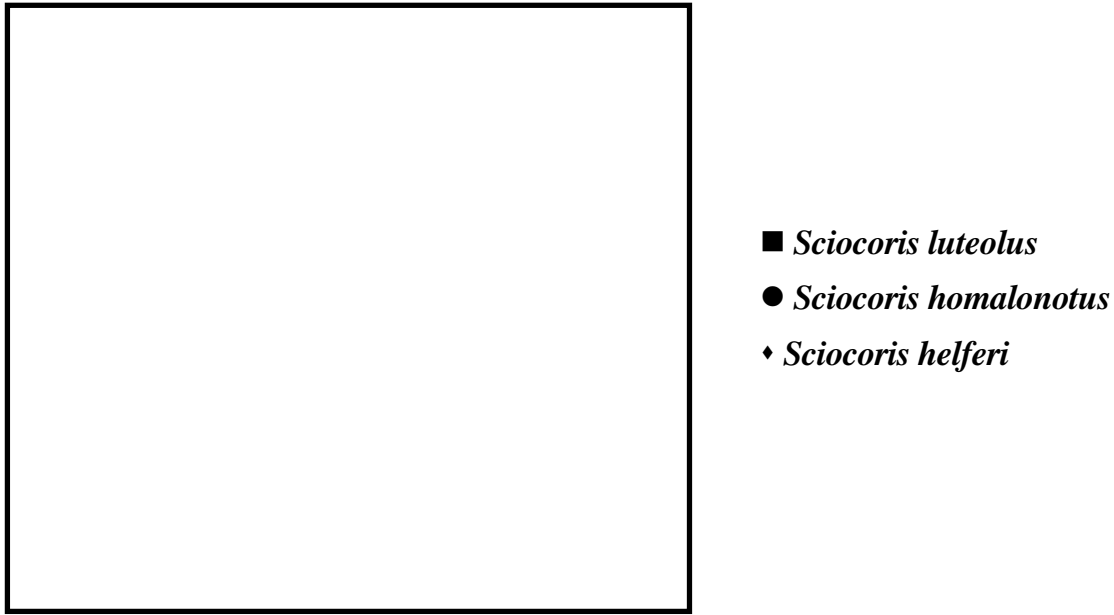


Figure 51. Distribution of *Sciocoris helferi*, *S. homalonotus* and *S. luteolus*.

#### 7. *Sciocoris macrocephalus* (Fieb.)

**Material studied:** Antalya (Gündoğmuş), İçel (Çamlıyayla, Fındıkpınarı 1200 m., Tarsus), Kahramanmaraş (Elbistan, Nurhak Mountain), Nevşehir (Hacıbektaş), Niğde (Çamardı)(Fig.52). 10 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from end of April second week of July. They were taken on different species of weeds and *Platanus orientalis*.

#### 8. *Sciocoris maculatus* Fieb.

**Material studied:** Antalya (Akseki). Çankırı (Eldivan). Hatay (Harbiye), Kayseri (Erciyes Mountain), Kırşehir (Kaman)(Fig.52). 5 specimens.

**Occurrence:** Occasionally.

**Biological note:** They were collected in the fields from the third week of April to third week of August. They were taken on *Astragalus* sp., *Sideritis* sp., *Verbascum* sp. and weeds.

9. *Sciocoris microphthalmus* Fl.

**Material studied:** Adana (Saimbeyli), Hatay (Hassa- Akbez)(Fig.52). 4 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from beginning of June to the second week of July. They were taken on different species of weeds.

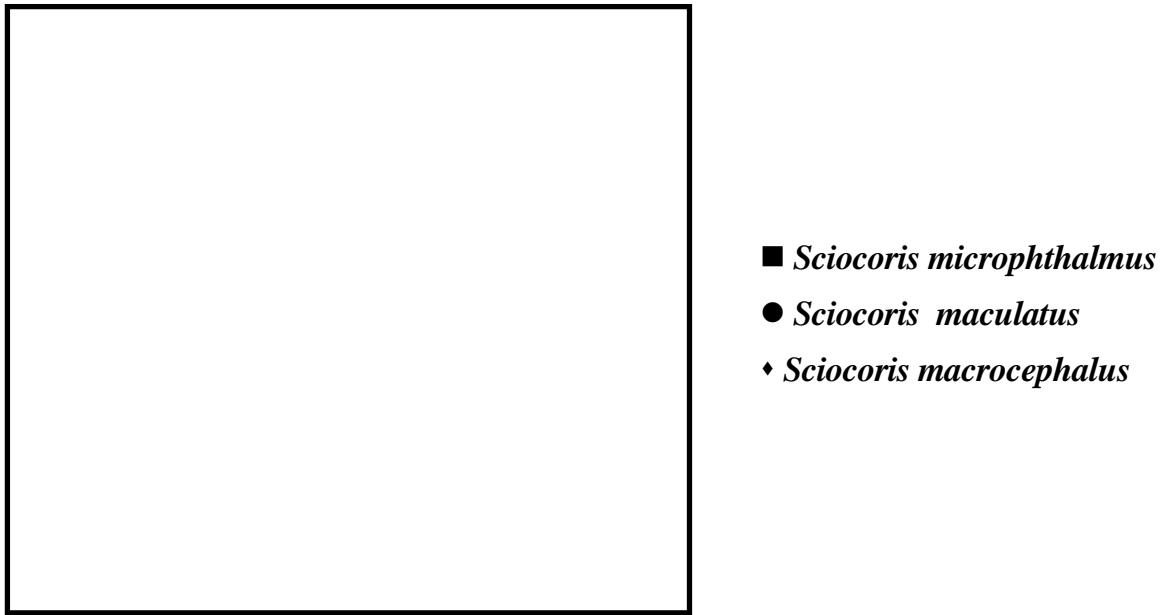


Figure 52. Distribution of *Sciocoris macrocephalus*, *S. maculatus* and *S. microphthalmus*.

10. *Sciocoris ochraceus* Fieb.

**Material studied:** Adana (Gavur Mountain), Kahramaraş (Andırın, Elbistan, Göksun, Nurhak Mountain)(Fig.53). 11 specimens.

**Occurrence:** Occasionally.

**Biological note:** They were collected at the second half of July. They were taken on *Helianthus annuus*, soil and different species of weeds.

11. *Sciocoris pallens* Klug

**Material studied:** Antalya (Korkuteli, Saklıkent 1860 m.), Hatay (Hassa-Akbez), İçel (Çamlıyayla), Kahramanmaraş (Andırın, Göksun 1410 m., Pazarcık)(Fig.53). 10 specimens.

**Occurrence:** Common but found in small numbers.

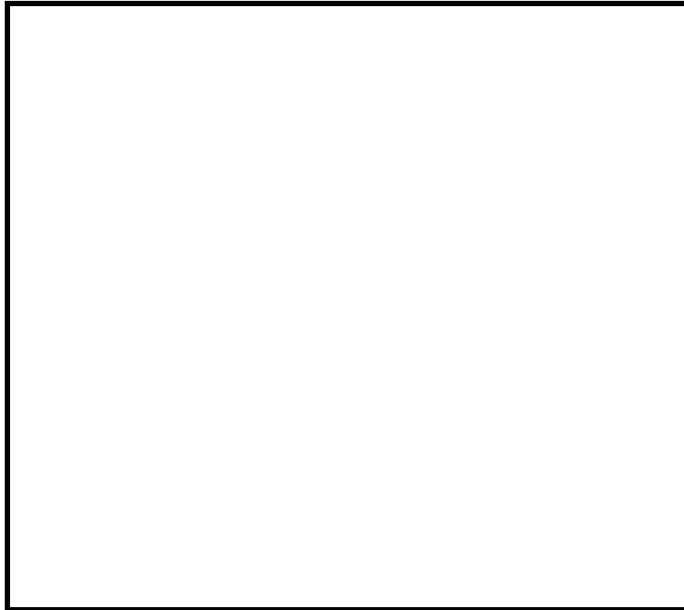
**Biological note:** Adults were collected in the field from the end of April to the end of July. They were taken on *Astragalus* sp., *Triticum sativa*, soil and also by the aerial collector.

### 12. *Sciocoris pictus* Wgn.

**Material studied:** Adana (Tufanbeyli 1400 m. and 1575 m.), Gaziantep (Nizip), İçel (Güzeloluk 1090 m., Kıröbaşı 1440 m., Silifke), Kahramanmaraş (Andırın, Elbistan), Osmaniye (Zorkun)(Fig.53). 10 specimens.

**Occurrence:** Nearly common, but found in small numbers.

**Biological note:** Adults were collected from end of May to third week of July. They were taken on different species of weeds and also from understone.



- *Sciocoris pictus*
- *Sciocoris pallens*
- ◆ *Sciocoris ochraceus*

Figure 53. Distribution of *Sciocoris ochraceus*, *S. pallens* and *S. pictus*.

### 13. *Sciocoris resslı* Wgn.

**Material studied:** Gaziantep (Oğuzeli), Kayseri (Erciyes Mountain)(Fig.54). 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected from at the beginning of June and at the end of June. They were taken on *Astragalus* sp. and *Rubus* sp.

14. *Sciocoris sahlbergi* Wgn.

**Material studied:** Adana (Feke), Hatay (Hassa-Akbez), İçel (Anamur, Aydınçık-Ovacık, Silifke), Kahramanmaraş (Ahır Mountain 1550 m., Elbistan, Göksun, Nurhak Mountain) (Fig.54). 20 specimens.

**Occurrence:** Occasionally.

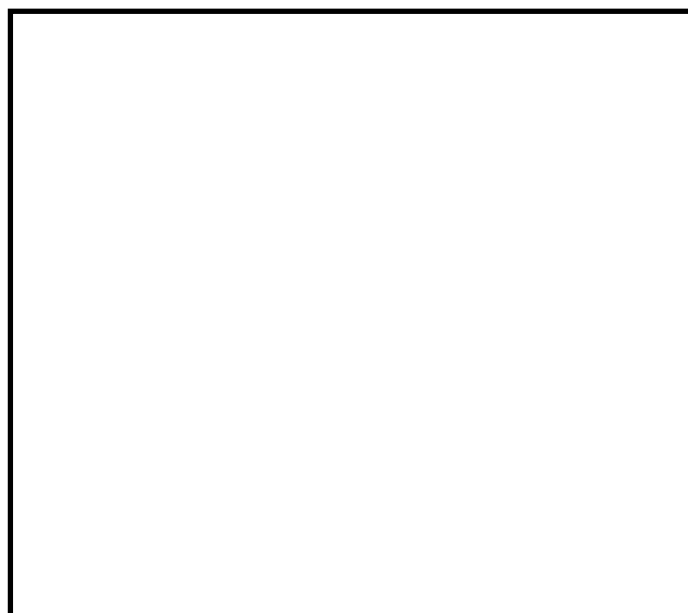
**Biological note:** Adults were collected in the field from the third week of June. They were taken on *Astragalus* sp., *Poterium* sp., *Tamarix* sp. and different species of weeds.

15. *Sciocoris sulcatus* Fieb.

**Material studied:** Adana (Gavur Mountain), Ankara (Kızılcahamam), Kayseri (Central province), Kırıkkale (Keskin), Konya (Beyşehir, Central province), Niğde (Ulukışla), Osmaniye (Central province, Zorkun)(Fig.54). 8 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from the third week of April to the first week of August. They were taken on weeds, understone, *Astragalus* sp. and also from the air by collector.



- *Sciocoris sulcatus*
- *Sciocoris sahlbergi*
- ◆ *Sciocoris resli*

Figure 54. Distribution of *Sciocoris resli*, *S. sahlbergi* and *S. sulcatus*.

27. Genus: *Stagonomus* Gk.

1. *Stagonomus amoenus* Br.

**Material studied:** Adana (Karaisalı, Antalya (Finike, Güllük Mountain), Hatay (Yayladağı, İskenderun, Soğukoluk, Samandağ), İçel (Anamur, Cehennemdere, Erdemli, Gözne 1000 m., Güzeloluk), Kahramanmaraş (Ahır Mountain, Andırın, Elbistan), Kayseri (Central province, Yılanlıdağ), Karaman (Ermenek), Osmaniye (Zorkun, 1280 m.)(Fig.55). 105 specimens.

**Occurrence:** Common.

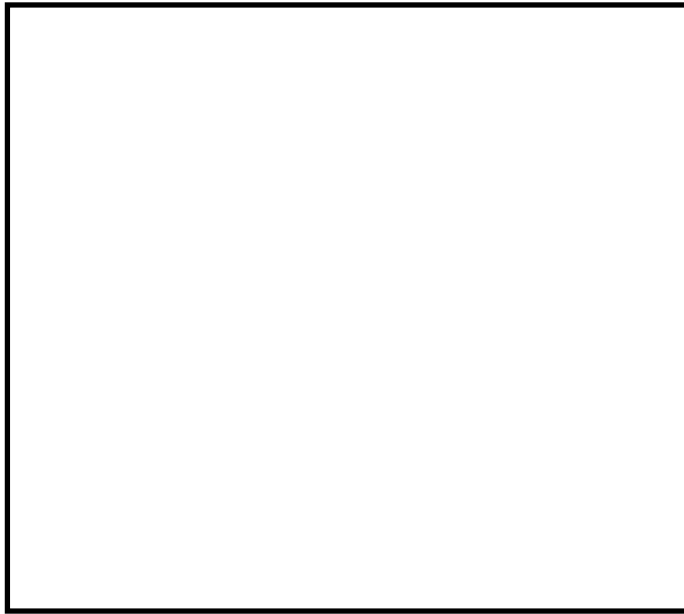
**Biological note:** Adults were collected in the fields from the mid of April up to mid of August. They were taken on *Cirsium* sp., *Euphorbia* sp., *Quercus* sp., *Rubus* sp., *Salvia* sp., *Sinapis* sp., different species of weeds and also by the aerial collector.

## 2. *Stagonomus bipunctatus* (L.)

**Material studied:** Adana (Karatepe), Antalya (Güllük Mountain, Kaş, Korkuteli), Gaziantep (Araban), Hatay (Antakya, Hassa-Akbez, Kırıkhan, Yayladağı), İçel (Çamlıyayla, Mut), Kahramanmaraş (Ahır Mountain, Elbistan), Osmaniye (Kadirli)(Fig.55). 17 specimens.

**Occurrence:** Occasionally.

**Biological note:** Adults were collected from the third week of April, up to end of July. They were taken on *Verbascum* sp., different species of weeds and also from air by the aerial collector.



- *Stagonomus bipunctatus*
- ◆ *Stagonomus amoenus*

Figure 55. Distribution of *Stagonomus amoenus* and *S. bipunctatus*.

## 3. *Stagonomus devius* Seid.

**Material studied:** Kahramanmaraş (Afşin, Andırın 850 m.)(Fig.56). 4 specimens.

**Occurrence:** Very occasionally.

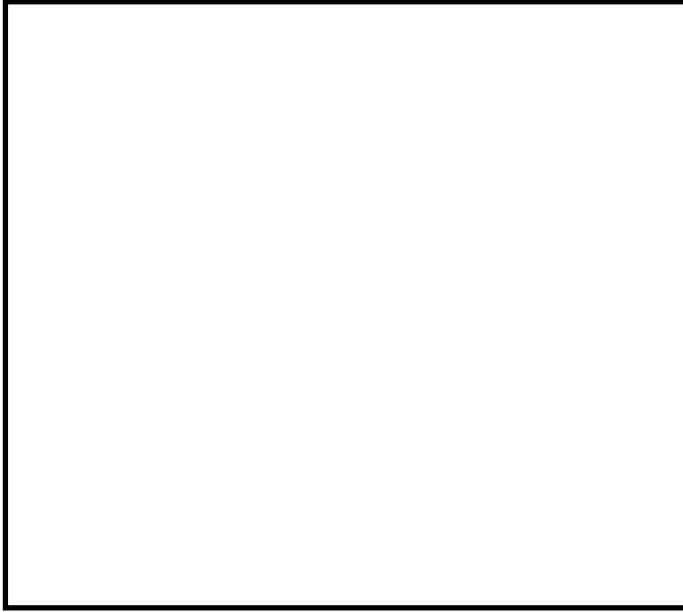
**Biological note:** They were collected at the third week of July on *Alyssum* sp. and some weeds.

## 4. *Stagonomus pusillus* H.-S.

**Material studied:** Karabük (Safranbolu)(Fig.56). Only 1 specimen.

**Occurrence:** Very occasionally.

**Biological note:** Adult was collected at the end of May . It was taken on weeds.



● *Stagonomus pusillus*

◆ *Stagonomus devius*

Figure 56. Distribution of *Stagonomus devius* and *S. pusillus*.

28. Genus: *Staria* D.

1. *Staria lunata* (H.)

**Material studied:** Adana (Karatepe), Antalya (Alanya, Olympos Mountain, Gazipaşa, Güllük Mountain; Gündoğmuş, Kaş, Sinekçibeli 1545m), Bartın (Kurucaşile), Bolu (Düzce), Çankırı (Çerkeş), Hatay (Antakya, Akbez-Hassa), İçel (Gülнар, Kırobası 1100 m., Mut, Silifke), Kahramanmaraş (Andırın), Osmaniye (Düziçi, Kadirli) (Fig.57). 44 specimens.

**Occurrence:** Nearly common.

**Biological note:** Adults were collected from the end of April up to the beginning of July. They were taken on *Juniperus* sp., *Phloemis* sp., *Salvia* sp., *Styrax* sp., *Triticum sativa*, *Verbascum* sp., umbelliferous plants and different species of weeds and also from the soil.

29. Genus: *Stenozygum* Fieb.

1. *Stenozygum coloratum* Fieb.

**Material studied:** Adana (Yumurtalık), Antalya (Central province, Finike, Kaş, Kalkan), İçel (Anamur, Gülнар)(Fig.57). 55 specimens.

**Occurrence:** Fairly common, but found in large numbers.

**Biological note:** Adults were collected from the beginning of April up to the third week of August. They were taken on *Capparis* sp. and *Sinapis* sp.



- *Stenozygum coloratum*
- ◆ *Staria lunata*

Figure 57. Distribution of the species of *Staria* and *Stenozygum*.

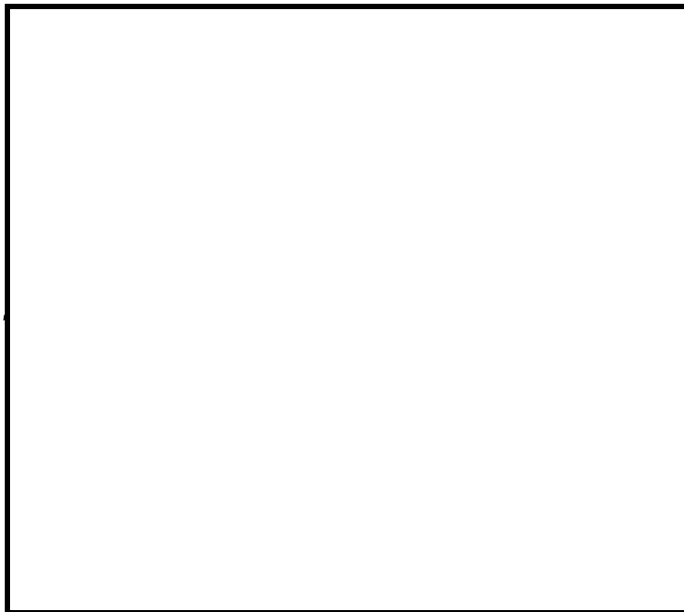
30. Genus: *Trochiscocoris* Reut.

1. *Trochiscocoris hemipterus* (Jak.)

**Material studied:** Karaman (Ermenek)(Fig.58). Only 1 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adult was collected at the third week of April. It was taken on weeds.



- *Trochiscocoris*
- ◆ *Trochiscocoris hemipterus*

Figure 58. Distribution of the species of *Trochiscocoris*.

2. *Trochiscocoris sanguinolentus* Hv.

**Material studied:** Konya (Doğanhisar), Nevşehir (Ürgüp)(Fig.58). Only 2 specimens.

**Occurrence:** Very occasionally.

**Biological note:** Adults were collected from the beginning of July to the mid of August. They were taken on weeds.

### **Subfamily: Podopinae A.-S.**

1. Genus: *Acyrosoma* A.-S.

#### 1. *Acyrosoma leucogrammes* (Gml.)

**Material studied :** Adana (Central province, Karatepe, Kozan, Misis, Yumurtalık), Ankara (Nallıhan), Antalya (Central province, Alanya, Finike, Gazipaşa, Güllük Mountain, Gündoğmuş, Kaş, Kemer, Korkuteli, Mavikent, Serik), Çorum (Iskilip), Gaziantep (Central province, Islahiye, Nizip, Oğuzeli), Hatay (Akbez-Hassa, İskenderun, Kırıkhan, Samandağı), İçel (Arslanköy, Gülnar, Güzeloluk 1090 m., Mut, Çamlıyayla-Tarsus, Cehennemdere), Kahramanmaraş (Andırın, Nurhak Mountain), Karaman (Ermenek), Kayseri (Yılanlıdağ), Osmaniye (Düziçi, Kadirli, Zorkun)(Fig.59). 119 specimens.

**Occurrence :** Common.

**Biological note :** Adults were taken on species of umbelliferous plants, *Torilis arvensis neglecta* from the beginning of May to the mid of August. *A. leucogrammes* is a phytophagous pest which feeds on umbelliferous plants. Although it is found in the Central Anatolia it causes damage especially on the seeds of anise, celery and carrot in some parts of Western Anatolia. It is necessary to work on it in detailed.

2. Genus: *Derula* M.-R.

#### 1. *Derula delagrangei* Put.

**Material studied:**Kilis (Central province)(Fig.59). 1 specimen.

**Occurrence :** Extremely rare.

**Biological note :** It was collected at the end of April by the aerial collector.

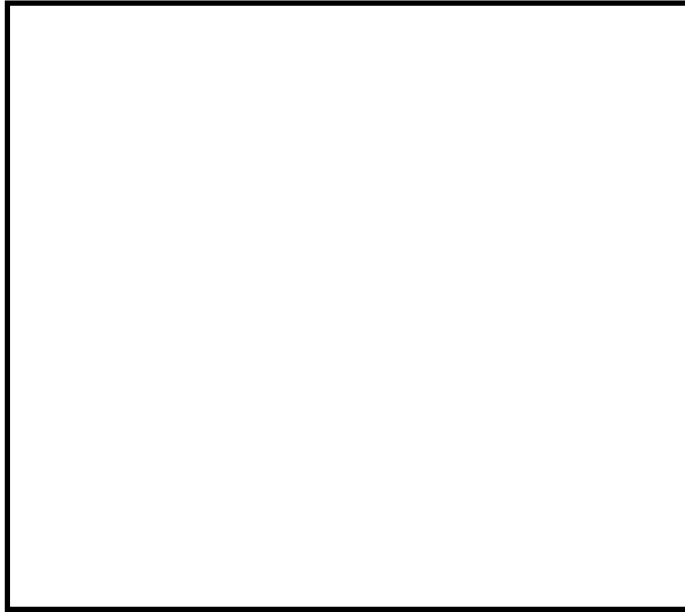
#### 2. *Derula flavoguttata* M.-R.

**Material studied :** Adana (Ceyhan), Antalya (Central province, Gündoğmuş), Bolu (Mudurnu), İçel (Arslanköy, Tarsus), Sinop (Gerze)(Fig.59). 8 specimens.

**Occurrence :** Very occasionally.

**Biological note :** Adults were collected from the beginning of May to the third week of July. They were taken on *Rosa* sp., *Secale cereale*, some weeds and from air. Its main

host plants are umbelliferous but it does not cause important damage because of its low population.



- *Ancyrosoma leucogrammes*
- *Derula delagrangei*
- ◆ *Derula flavoguttata*

Figure 59. Distribution of the species of *Ancyrosoma* and *Derula*.

### 3. Genus: *Graphosoma* Lp.

#### 1. *Graphosoma italicum* (Ml.)

**Material studied** : Adana (Saimbeyli), Ankara (Elmadağ, Gütül), Antalya (Elmalı, Güllük Mountain, Kaş, Saklıkent 730 m.), Çankırı (Ilgaz), Çorum (Bayat, Central province, Iskilip), Eskişehir (Sarıcakaya), Gaziantep (Central province, Nizip, Oğuzeli), Hatay ( Akbez-Hassa, Yayladağı), İçel (Arslanköy, Cehennemdere, Çamlıyayla, Tarsus), Karabük (Safranbolu), Kastamonu (Tosya), Osmaniye (Central province, Zorkun)(Fig.60). 145 specimens.

**Occurrence** : Common.

**Biological note** : They were collected from the beginning of May to the beginning of August. They were found on umbelliferous plants, such as *Daucus* spp., *Alyssum murale* some the other weeds and by the aerial collector.

#### 2. *Graphosoma semipunctatum* (F.)

**Material studied**: Adana (Karatepe), Çorum (Central province), Gaziantep (Araban, Oğuzeli), Hatay (Samandağı), Kahramanmaraş (Andırın), Kayseri (Yılanlıdağ), Osmaniye (Central province, Zorkun)(Fig.60). 11 specimens.

**Occurrence** : Occasionally.

**Biological note :** Adults were taken on umbelliferous plants from the beginning of July to the mid of August. Species of *Graphosoma* feed especially different umbelliferous plants. If their population increased, they might be pest in seeds of anise, celery and carrot. It is an important species which must be studied in detail.

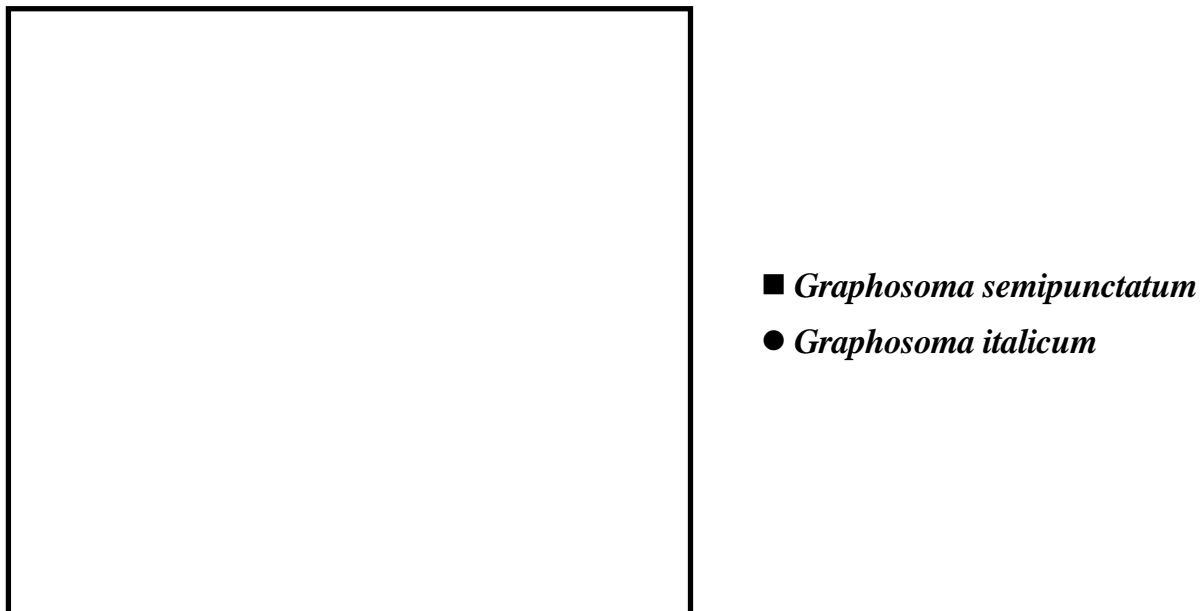


Figure 60. Distribution of the species of *Graphosoma*.

4. Genus: *Leprosoma* Bar.

1. *Leprosoma inaequale* Hv.

**Material studied :** Kahramanmaraş (Göksun), Kayseri (Central province)(Fig.61). 5 specimens.

**Occurrence :** Occasionally.

**Biological note :** Adults were collected from the beginning of May to the end of August. They were taken on *Astragalus* sp. and also on the soil. Species of *Leprosoma* which found rarely can be collected under the plants, on soil and understone.

2. *Leprosoma tuberculatum* Jak.

**Material studied :** Kahramanmaraş (Göksun)(Fig.61). Only 1 specimen.

**Occurrence :** Very occasionally.

**Biological note :** A single specimen was collected at the beginning of May. It was taken on the soil.

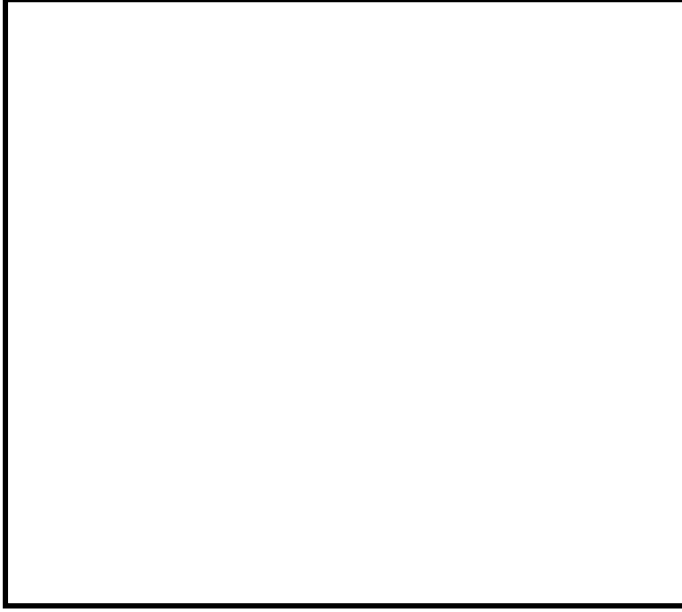
5. Genus: *Tarisa* A.-S.

1. *Tarisa fraudatrix* Hv.

**Material studied** : Kahramanmaraş (Afşin)(Fig.62). 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : It was collected at the mid of June on weeds.



■ *Leprosoma tuberculatum*

● *Leprosoma inaequale*

Figure 61. Distribution of the species of *Leprosoma*.

2. *Tarisa igdirensis* Lod. and Önd.

**Material studied** : Çorum (Sungurlu)(Fig.62). Only 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : That specimen was taken on weeds at the beginning of August.

3. *Tarisa osmanica* Hob.

**Material studied** : Antalya (Korkuteli), Kahramanmaraş (Afşin), Kayseri (Incesu, Yılanlıdağ), Kırıkkale (Keskin), Kırşehir (Central province, Çiçekdağı, Kaman, Mucur), Nevşehir (Hacıbektas, Ürgüp), Yozgat (Central province)(Fig.62). 73 specimens.

**Occurrence** : Common.

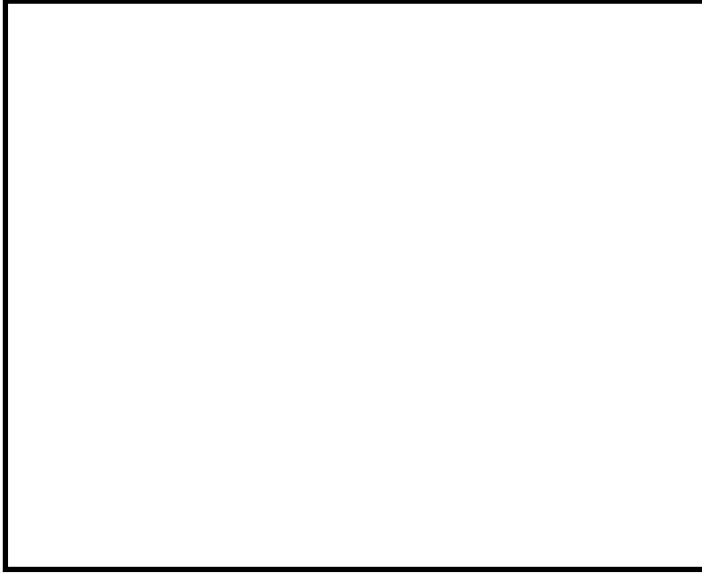
**Biological note** : Adults were collected from the end of June to the mid of August. They were taken on *Alkanna* sp., *Salsola kali*, gramineous plants and also some the other weeds.

#### 4. *Tarisa virescens* H.-S.

**Material studied** : Gaziantep (Nizip), Kırşehir (Kaman, Mucur), Nevşehir (Hacıbektaş, Ürgüp) (Fig.62). 12 specimens.

**Occurrence** : Occasionally.

**Biological note** : Specimens were collected from the end of June to the mid of August. They were collected on *Anchusa* sp., *Salsola* sp. and also on some weeds. According to Lodos and Önder (1978 a) species of *Tarisa* live on *Chenopodium* which grow up on salty soil.



- *Tarisa fraudatrix*
- *Tarisa igdirensis*
- ◆ *Tarisa osmanica*
- *Tarisa virescens*

Figure 62. Distribution of the species of *Tarisa*.

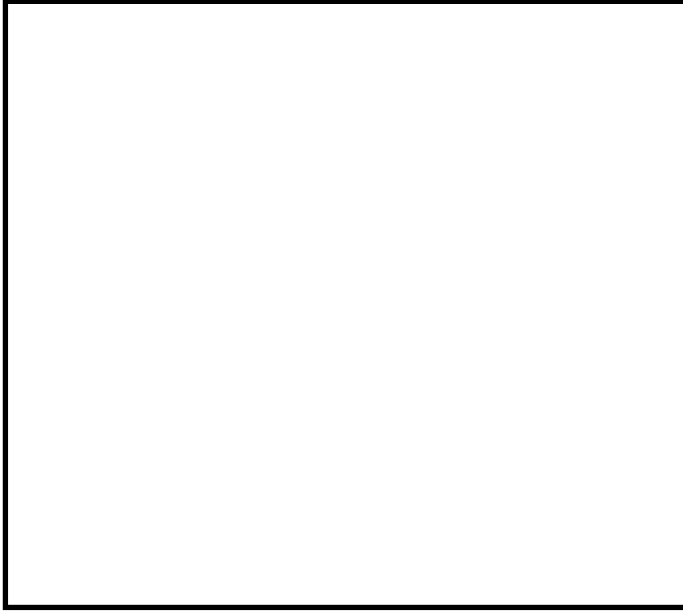
#### 6. Genus: *Tholagmus* Stal

##### 1. *Tholagmus flavolineatus* (F.)

**Material studied** : Adana (Karatepe, Kozan, Pozantı), Antalya (Anamur, Central province, Gazipaşa), Gaziantep (Oğuzeli), Hatay (Altınözü, Dört Yol, Hassa, Arsuz-İskenderun), İçel (Tarsus), Kahramanmaraş (Central province, Göksun, Nurhak Mountain), Kayseri (Yılanlıdağ), Osmaniye (Kadirli)(Fig.63). 34 specimens.

**Occurrence** : Common but found in small numbers.

**Biological note** : Adults were collected in the fields from the end of May up to the first week of August but mostly in July. They were taken on *Centaurea* sp., *Cirsium* sp., *Juniperus* sp., *Vitex agnus-castus*, gramineous plants, umbelliferous plants, different species of weeds, wild carrot, alfalfa and also by the aerial collector. Host plants of this species which is rarely found in the Central Anatolia and the west part of Black Sea Region are umbelliferous plants. It causes local damage on anise in the Western Anatolia. It would be caused damage on celery and carrot when its population level was increased.



● *Tholagmus flavolineatus*

Figure 63. Distribution of *Tholagmus flavolineatus*.

7. Genus: *Ventocoris* H.

1. *Ventocoris armeniacus* Kir.

**Material studied** : Kahramanmaraş (Elbistan-Nurhak Mountain)(Fig.64). 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : Adult was collected on weeds on the second week of June.

2. *Ventocoris falcatus* (Cyr.)

**Material studied**: Osmaniye (Central province)(Fig.64). 3 specimens.

**Occurrence** : Occasionally.

**Biological note** : Adults were collected at the first week of June on *Sinapis* sp.

3. *Ventocoris fischeri* (H.-S.)

**Material studied** : Antalya (Korkuteli), İçel (Gülnar)(Fig.64). 2 specimens.

**Occurrence** : Occasionally.

**Biological note** : They were found on *Cirsium* sp. and *Peganum harmala*. They were collected from the end of July up to the mid of August.

4. *Ventocoris halophilus* (Jak.)

**Material studied** : Kırşehir (Kaman), Niğde (Central province)(Fig.65). 4 specimens.

**Occurrence** : Occasionally.

**Biological note** : Adults were collected on weeds at the end of June.

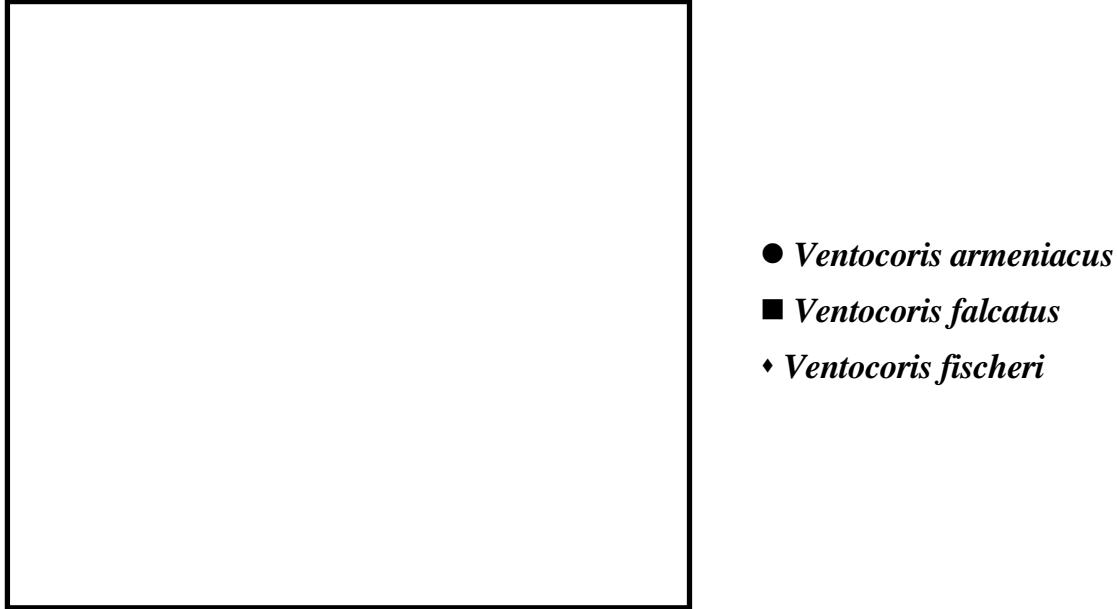


Figure 64. Distribution of *Ventocoris armeniacus*, *V. falcatus* and *V. fischeri*

##### 5. *Ventocoris horvathi* (Put.)

**Material studied** : Gaziantep (Central province)(Fig.65). Only 1 specimen.

**Occurrence** : Very occasionally.

**Biological note** : It was found on weeds at the mid of July.

##### 6. *Ventocoris trigonus* (Kir.)

**Material studied** : Ankara (Nallıhan), Gaziantep (Central province, Oğuzeli), Kahramanmaraş (Afşin)(Fig.65). 8 specimens.

**Occurrence** : Occasionally.

**Biological note** : Adults were found on gramineaeous plants, wild almond and different species of weeds . They were collected from the beginning of June up to the third week of July.

Species of *Ventocoris* generally feed on ranunculous and cruciferous plants. They have not economical importance.



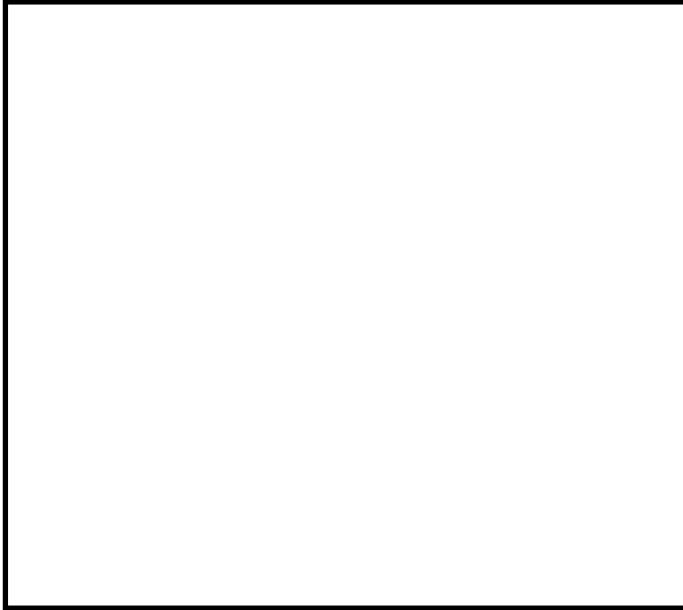
- ◆ *Ventocoris halophilus*
- *Ventocoris horvathi*
- *Ventocoris trigonus*

Figure 65. Distribution of *Ventocoris halophilus*, *V. horvathi* and *V. trigonus*.

8. Genus: *Vilpianus* Stal

1. *Vilpianus galli* (W.)

**Material studied** : Adana (Gavur Mountain), Kahramanmaraş (Göksun)(Fig.66). 2 specimens.



- *Vilpianus galli*

Figure 66. Distribution of *Vilpianus galli*.

**Occurrence** : Occasionally.

**Biological note** : Adults were collected on third week of July. They were taken on weeds.

**REFERENCES**

- Abbas, H. & F. Önder, 1991. Türkiye *Eurygaster* Lap. (Heteroptera, Scutelleridae) türleri üzerinde sistematik arařtırmalar.. **E.U.Fen Bil.Enst.Derg.**, 2(1):165-172.
- Awel, M.W., 1977. Türkiye’de bulunan önemli *Aelia* (Heteroptera, Pentatomidae) türlerinin taksonomik karakterleri ve bunlardan Ege Bölgesi’nde yaygın olarak bulunan *Aelia acuminata* L.’nin biyolojisi ve doğal düşmanları üzerinde arařtırmalar. E.Ü. Zir. Fak. Ent. Zirai. Zool. Kürs., (Unpublished Ph.D.Thesis).
- Fairmaire, L., 1866. Notice sur les Coleopteres recoltés Par. P. J. Lederer de L’Asie Mineure. **Ann. Soc. ent. France**, 249-280.
- Gadeau de Kerville, H., 1939. Voyage zoologique d’Henri Gadeau de Kerville en Asie-Mineure (Avril-Mai 1912). Paul Le Chevalier, Paris, 148 pp.
- Hoberlandt, L., 1955. Results of the Zoological Scientific Expedition of the National Museum in Praha to Turkey. 18. Hemiptera IV. Terrestrial Hemiptera-Heteroptera of Turkey. **Acta ent. Mus. natn. Pragae**, Suppl. 3: 1-264.
- Horvath, G., 1905. Ergebnisse einer naturwissenschaftlichen Reise zum Erdschias-dagh (Klein-Asien). Hemipteren. **Annls naturh. Mus. Wien**, 20: 179-189.
- Linnavuori, R., 1965. Studies on the South and East Mediterranean Hemiptereus Fauna III. Hemipterological observations from Turkey. **Act. ent. fenn.**, 21: 44-61.
- Lodos, N., F. Önder, E. Pehlivan & R. Atalay, 1978. Ege ve Marmara Bölgelerinin zararlı böcek faunasının tespiti üzerinde çalışmalar (Curculionidae, Scarabaeidae (Coleoptera); Pentatomidae, Lygaeidae, Miridae (Heteroptera) . T.C. Gıda, Tarım ve Hayvancılık Bakanlığı, Zir.Müc. Zir. Kar.Gen. Mdr. Yay. Ankara, 301 pp.
- Lodos, N. & F. Önder, 1978 (a). Contribution to the study of Turkish Pentatomoidea (Heteroptera). I. *Tarisa* A. S. **Türk. Bit. Kor. Derg.**, 2 (1): 15-29.
- Lodos, N. & F. Önder, 1978 (b). Türkiye Pentatomoidea (Heteroptera) üstfamilyası üzerinde arařtırmalar. II. Familya: Plataspidae Dall. **Türk. Bit. Kor. Derg.**, 2 (4): 195-209.
- Lodos, N. & F. Önder, 1979. Contribution to the study of Turkish Pentatomoidea. IV. Family: Acanthosomatidae Stal, 1864. **Türk. Bit. Kor. Derg.**, 3 (3): 139-160.
- Lodos, N. & F. Önder, 1980. Türkiye Pentatomoidea (Heteroptera) üstfamilyası üzerinde arařtırmalar. II. Familya: Cydnidae Billberg. E.Ü. Zir. Fak. Yay. No.381 pp.
- Lodos, N. & F. Önder, 1983. Contribution to the study of Turkish Pentatomoidea (Heteroptera). VI. Asopinae (Amyot and Serville), 1843. **Türk. Bit. Kor. Derg.**, 7 (4): 221-230.
- Önder, F., Y. Karsavuran, S. Aksoy, E. Pehlivan & E. Erkin, 1979. Hareketli bir taşıt aracından, uçuş halinde böcekleri yakalamaya yarayan bir yöntem (Havadan toplayıcı). **Türk. Bit. Kor. Derg.**, 3 (4): 145-150.
- Puton, A., 1892. Hémiptéres nouveaux ou peu connues et notes diverses. IV: Hémiptéres d’Akbés. Region de l’Amanus (Syrie septentrionale).Recoltes pas M. Delagrangé. **Revue d’Ent.**, 11: 24-36.

- Puton, A. et M. Noualhier, 1895. Supplement a la liste des Hémiptères d'Akbés. **Revue d'Ent., 14:** 170-177.
- Seidenstücher, G., 1957. Heteropteren aus Anatolien I. **İstanbul Univ. Fen Fak. Mecm., 22:** 179-189.
- Seidenstücher, G., 1958. Heteropteren aus Anatolien II. **İstanbul Univ. Fen Fak. Mecm., 23:** 119-129.
- Seidenstücher, G., 1960. Heteropteren aus Anatolien III. **İstanbul Univ. Fen Fak. Mecm., 25:** 145-154.
- Stichel, W., 1960. Illustrierte Bestimmungstabellen der Wanzen. II. Europa, 4 (14-17): 442- 544, Berlin.
- Stichel, W., 1961. Illustrierte Bestimmungstabellen der Wanzen. II. Europa, 4 (18-21): 545- 666, Berlin.
- Wagner, E., 1959. Beitrag zur Heteropteren fauna Anatoliens. **Z. Angew. ent. Hamburg, 44:** 102-113.
- Wagner, E., 1966. Eine Heteropterenausbeute aus der Türkei (Hemiptera, Heteroptera). **Bull. Rech. agron. Gembloux, N.S. 1:** 646-654.

**FAUNISTIC STUDIES ON PENTATOMOIDEA**

**(Plataspidae, Acanthosomatidae, Cydnidae, Scutelleridae, Pentatomidae)**

**OF WESTERN BLACK SEA, CENTRAL ANATOLIA AND MEDITERRANEAN  
REGIONS OF TURKEY**

**Niyazi LODOS    Feyzi ÖNDER    Esat PEHLİVAN  
Ruşen ATALAY    Enis ERKİN Yusuf KARSAVURAN  
Serdar TEZCAN    Sami AKSOY**

**İzmir-1997**

**ABSTRACT**

This study was carried out during the years of 1979-1982 in the Central Anatolia and Western Black Sea Regions and also during the years of 1984-1987 in the Mediterranean Region of Turkey.

During this study totally 159 specimens were found in 64 genera and in 5 families of Pentatomoidea. The number and percentages of the species of the families are given as follows: Plataspidae 4 (2,5 %); Acanthosomatidae 7 (4,4 %); Cydnidae 21 (13,2 %); Scutelleridae 25 (15,7 %) and Pentatomidae 102 (64,2 %).

**ÖZET**

Bu çalışmada 1979-1982 yılları arasında Orta Anadolu ve Batı Karadeniz Bölgeleri'nde, 1984-1987 yılları arasında ise Akdeniz Bölgesi'nde yürütülmüş olup çalışma sırasında Pentatomoidea üstfamilyasına bağlı Plataspidae, Acanthosomatidae, Cydnidae, Scutelleridae ve Pentatomidae familyalarına bağlı türler değerlendirilmiştir.

Sözü edilen 5 familyaya ait 64 cins içinde yer alan 159 tür belirlenmiş olup bu türlerin familyalara göre dağılımı ve oranları aşağıdaki şekilde bulunmuştur: Plataspidae 4 (% 2,5); Acanthosomatidae 7 (% 4,4); Cydnidae 21 (% 13,2); Scutelleridae 25 (% 15,7) ve Pentatomidae 102 (% 64,2).

**This study was supported by TÜBÝTAK (The Scientific and Technical Research Council of Turkey)**

**(Project Numbers: TOAG/336 & 502)**



The authors wish to thank **TüBÝTAK** (The Scientific and Technical Research Council of Turkey) for financial support of project and to **HEKTAP** and **DOW-ELANCO** companies for financial support of printing and also to **Nilay Gülperçin, A.Emre Örümlü, Ý.Meltem Düzbastýlar, Ferruh Kepekçi, Meltem Gezen** and **Canan Çelik** their helps in preparing the publication.

## CONTENTS

ABSTRACT

ÖZET

I-INTRODUCTION

II-MATERIAL AND METHODS

III-RESULTS OF FAUNISTIC STUDIES

A. Family : Plataspidae

1.Genus:*Coptosoma* Lp.

B.Family:Acanthosomatidae

1.Genus: *Acanthosoma* Ct.

2.Genus: *Arma* H.

3.Genus: *Cyphostethus* Fieb.

4.Genus: *Elasmostethus* Fieb.

5.Genus: *Elasmucha* Stal.

C. Family: **Cynidae**

1.Genus: *Aethus* Dall.

2.Genus: *Amaurocoris* Stal.

3.Genus: *Crocistethus* Fieb.

4.Genus: *Cydnus* F.

5.Genus: *Geotomus* M.R.

6.Genus: *Legnotus* Schi.

7.Genus: *Macroscytus* Fieb.

8.Genus: *Ochetostethus* Fieb.

9.Genus: *Sehirus* A.S

10.Genus: *Thyreocoris* Schr.

D. Family: **Scutelleridae**

1.Genus: *Eurygaster* Lp.

2.Genus : *Irochrotus* A.S

3.Genus: *Odontoscelis* L.p

4.Genus: *Odontotarsus* L.p

5.Genus: *Phimodera* Gm.

6.Genus: *Psacasta* Gml.

7.Genus: *Solenosthedium* A.S

E.Family: **Pentatomidae**

**Subfamily:Asopinae**

1.Genus: *Jalla* H.

2.Genus: *Picromerus* A .S

3.Genus: *Zicrona* A.S

**Subfamily:Pentatominae**

1.Genus: *Acrosternum* Fieb.

2.Genus: *Aelia* F.

3.Genus: *Agatharchus* Stal.

4.Genus: *Apodiphus* Spin.

5.Genus: *Bagrada* Stal.

6.Genus: *Brachynema* M.R.

7.Genus: *Carpocoris* Klt.

8.Genus: *Cnephosa* Jak.

9.Genus: *Codophila* M.R.

10. Genus: *Dolycoris* M.R.
11. Genus: *Dyroderes* Spin.
12. Genus: *Eurydema* L.p.
13. Genus: *Eysarcoris* H.
14. Genus: *Holcogaster* Fieb.
15. Genus: *Holcostethus* Fieb.
16. Genus: *Mustha* A.S.
17. Genus: *Neottiglossa* K.b.
18. Genus: *Nezara* A.S
19. Genus: *Palomena* M.R
20. Genus: *Pausias* Jak.
21. Genus: *Piezodorus* Fieb.
22. Genus: *Pitedia* Reut.
23. Genus: *Raphigaster* Lp.
24. Genus: *Rhombocoris* M.
25. Genus: *Risibia* Hv.
26. Genus: *Sciocoris* Fn.

27. Genus: *Stagonomus* Gk.

28. Genus: *Staria* D.

29. Genus: *Stenozygum* Fieb.

30. Genus: *Trochiscocoris* Reut.

### **Subfamily: Podopinae**

1. Genus: *Ancyrosoma* A.-S.

2. Genus: *Derula* M.R.

3. Genus: *Graphosoma* Lp.

4. Genus: *Leprosoma* Bar.

5. Genus: *Tarisa* A.-S.

6. Genus: *Tholagmus* Stal

7. Genus: *Ventocoris* H.

8. Genus: *Vilpianus* Stal