

Heteroptera (Hemiptera) species visiting *Verbascum densiflorum* Bertol. in Edirne (Türkiye)

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ABSTRACT: This study was performed as weekly field excursions from September 2005 to December 2006 during autumn, winter (except January-March) spring and summer seasons in a field covering an area of 4500 m² in Balkan Campus of Trakya University (Edirne) where a denseflowered *Verbascum densiflorum* Bertol. (Scrophulariaceae) population existed. Members of different insect orders were collected from *V. densiflorum* plants and a total of 52 species belonging to 14 families (Rhyparochoromidae 11 species, Miridae 8 species, Pentatomidae 8 species, Lygaeidae 4 species, Rhopalidae 4 species, Geocoridae 3 species, Oxycarenidae 3 species, Coreidae, Berytidae, Reduviidae and Tingidae 2 species for each and Scutelleridae, Anthocoridae and Alydidae 1 species for each) within Heteroptera (Hemiptera) were determined. When the collection times of the species are considered, 13 species were found in summer season during when the specimens were active and feeding and in autumn and winter seasons in their wintering periods, whereas 28 species were found only in autumn-winter and 11 species were found only in summer seasons. 43 of the determined species were phytophagous, 7 were zoophagous, 1 was zoophytophagous and 1 was phytozoophagous. The presence of Heteroptera species on *V. densiflorum* was reported for the first time with the present study. In addition, three of the identified species, *Aoploscelis bivirgata* (A. Costa, 1853), *Aphanus rolandri* (Linnaeus, 1758), and *Ischnocoris hemipterus* (Schilling, 1829) were recorded for the first time for the Thrace Region.

KEYWORDS: Heteroptera, *Verbascum densiflorum*, visiting, Edirne, Türkiye.

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INTRODUCTION

Verbascum densiflorum Bertol. (Scrophulariaceae) also known as the denseflowered mullein is a biennial herbaceous plant and its natural habitat is Europe and Asia. It is found only in Edirne and Kırklareli in Thrace Region in Türkiye. It mostly likes calcareous, clayey silicic acid soils. It rarely grows in forests, pastures and roadsides. The plant is 1-2 m. plant arrives. Only rosette leaves develop in the first year, and stem and flowers develop in the second year (Huber-Morath, 1978; Davis et al., 1988; Yılmaz & Dane, 2012). This plant, which does not want extreme growing conditions, grows easily in mostly forested areas, pastures and roadsides. Many insects living in their natural habitats spread to agricultural areas and damage crops. In recent years, alternative plants have been planted on the edges of agricultural areas where insects will feed, and the products have been protected. The "Enemies" hypothesis (Root, 1973) predicts a positive correlation between the richness of plant varieties and the abundance of natural enemies, which predicts a greater presence of natural enemies in multicultural compared to monocultures, resulting in further reduction of herbivorous populations in monoculture habitats (Letourneau, 1987) The higher availability of pollen and nectar in various habitats compared to simple habitats has been reported as a factor that may increase the populations of predators and parasitoids (Root, 1973; Andow, 1991). Population dynamics and biological control effectiveness of insect pest predators and parasitoids in agricultural ecosystems. The effect of plant diversity on plant diversity has been extensively studied (Russell, 1989; Altieri & Letourneau, 1984; Sheehan, 1986; Andow, 1991), a similar study in greenhouses was done by Sanchez et al. (2003).

Sanchez et al. (2003) tested harmful whitefly populations on tomatoes grown in greenhouses in the presence and absence of *Verbascum thapsus* L. *Dicyphus hesperus* Knight (Heteroptera: Miridae), which uses *V. thapsus* as a food plant, is also a zoophytophagous. It has been

shown that the whitefly population is suppressed when *D. hesperus* eats tomato whitefly as an alternative food in greenhouses where *V. thapsus* is found.

In this study, it was aimed to determine the diversity of Heteroptera on *V. densiflorum* and to determine its use as an alternative plant. Detection of predators, zoophytophagous, phytozoophagous or zoophagous heteroptera that can be detected on *V. densiflorum* and their use in the biological control of herbivores that are harmful in agricultural areas will provide data for studies.

MATERIALS AND METHODS

The study was carried out in the Balkan Campus of Trakya University, in an area of approximately 4500 m² between 2005-2006 (41°38'08"N, 26°36'36"E, h: 40 m). The study area is a field where *V. densiflorum* is concentrated and surrounded by almond trees (*Amygdalus communis* L.) and other fields with herbaceous plants (Figure. 1). Heteroptera adult specimens on *V. densiflorum* were collected with insect net and aspirator every week for two years from September 2005 to December 2006. Since the plant is a 2-year herbaceous plant, the sampling was started at the rosette stage. The samples obtained from the stem, flower and leaves of the plant were mounted and identified by taking into account the group-specific preparation techniques. The detected Heteroptera species, the collection dates of the samples, the season and the host species in the literature are given in Table 1.

RESULTS AND DISCUSSION

52 species belonging to 14 families from Heteroptera suborder on *V. densiflorum* were determined. According to their diet, 43 species are phytophagous, 7 species zoophagous, 1 species zoophytophagous and 1 species phytozoophagous. Considering the collection dates of the species for two years, 11 species were identified in summer (10 phytophagous and 1 zoophytophagous), 28 species in winter (22 phytophagous, 5 zoophagous and 1

phytozoophagous), 13 species in both summer and winter (11 phytophagous, 2 zoophagous) (Table 1). 10 of the phytophagous species visited *V. densiflorum* for feeding, 11 for both feeding and wintering and 22 for only wintering. 2 zoophagous (*Geocoris erythrocephalus*, *Orius niger*) species were found on *V. densiflorum* during both summer and winter periods. These species are most likely visiting the plant during summer to feed on mites, aphids and eggs and larvae of various insects and stay on the same plant for wintering. 5 zoophagous (*Geocoris ater*, *G. megacephalus*, *Metapterus linearis*, *Deraeocoris punctulatus*, *Coranus griseus*) and 1 phytozoophagous species (*Aphanus rolandri*) were determined to visit the plant only for wintering. 1 zoophytophagous species (*Campylomma verbasci*) were found on *V. densiflorum* during summer and they are thought to feed either on mites and aphids present on the plant or on the plant itself. *V. thapsus*, a common *Verbascum* species, is known as its main host. *C. verbasci* overwinter in the egg stage. Therefore, it was not found in the winter period.

It is seen that 8 species (7 zoophagous (predator), 1 zoophytophagous species) detected on *V. densiflorum* can be used in the biological control of herbivores, which are harmful in many plants that are planted in fields and gardens and have economic importance.

Geocoridae family species feed on small arthropods and are important predators in controlling harmful species. During our research, three species of this family were detected on *V. densiflorum*. Among these species, *Geocoris megacephalus* hosts include cotton leafworm (*Spodoptera littoralis*), cotton striped leafworm (*Spodoptera exigua*), vegetable pest (*Heliothis armigera*), cotton aphid (*Aphis gossypii*) (Turhan et al., 1983). The other detected species *G. erythrocephalus* feeds on aphids as well as *Tetranychus urticae*, *T. atlanticus* and *T. cinnabarinus*. The genus *Tetranychus* includes economically very harmful species. *Geocoris ater* occasionally feeds on *Lepidargyrus ancorifer*, a Miridae species known to

damage plants such as onions and pistachios (Çakır & Önder, 1990). Heteroptera species generally spend the winter as adults, and more rarely as nymphs and eggs. Adult individuals choose a variety of sheltered places such as leaf litter, tree bark, under stones, and plant galleries for wintering. *Verbascum* species generally provides a suitable wintering environment for insects with its hairy and thick leaves. Survival of as many predators as possible during the winter period plays an important role in suppressing herbivorous species. Because individuals coming out of the winter usually mate, lay eggs and die. Önder et al. (1983) reported that *Geocoris* species generally overwinter in the bottom leaves of *Verbascum* species. In this study, it was determined that all *Geocoris* species overwintered in the bottom leaves of *V. densiflorum*. By planting *V. densiflorum* or other *Verbascum* species distributed in that region on the edges of cotton fields and vegetable gardens, harmful herbivores can be kept under control by taking advantage of the predatory feeding feature of *Geocoris* species.

In the study of Göven & Gümüş (1998) in which they determined the natural enemies of cotton striped worm (*Spodoptera exigua*) which is harmful in cotton fields in Diyarbakır province, *Geocoris pallidipennis* were determined. Ruberson et al. (1994) in the USA *S. exigua* in their study in which they tested the effect of natural enemies in the fight against the disease, they found that approximately 11 predatory natural enemies suppressed *S. exigua* populations and resulted in 99% death.

Orius niger, one of the zoophagous species detected in this study, is a very polyphagous species that preys on aphids, pislids, whiteflies, thrips, Lepidoptera, pentatomids, eggs of mites, larvae of noctuids in the Palearctic Region (Péricart, 1972). In Türkiye, the Mediterranean flour moth, *Ephestia kuehniella* Zeller, 1879 (Lepidoptera: Pyralidae), *Tetranychus cinnabarinus* Boisduval (Acari: Tetranychidae), *Bemisia tabaci* Gennadius (Hemiptera: Aleyrodidae), pests such as flower thrips *Frankliniella*

occidentalis (Pergananidae) eggs and is important in the control of these pests (Bahşi & Tunç, 2008; Efe & Çakmak, 2013; Pehlivan & Atakan, 2017). Herard (1986) identified *O. niger* as a predator of *Cacopsylla pyri* in pears, but also collected numerous specimens of the predator from the stinging nettle *Trioza urticae* surrounding pear orchards.

The principal herbaceous hosts of *Campylomma verbasci* are common mullein, *Verbascum thapsus* L., and potato, *Solanum tuberosum* L., throughout its distribution. Common mullein is usually described as the major host but nymphs or adults have been found on a variety of plants in the summer. The nymphs cause injury to some fruit varieties by feeding on the flower parts following fruit set. More commonly they prey on the wide variety of small arthropods and eggs. The nymphs and adults are described as useful predators in both Europe and North America. Significant feeding has been observed on *Psylla mali* Schm., *Psylla pyricola* Forster, *Tetranychus telarius* (L.), *T. mcdanieli* McG., *T. pacificus* McG., *Eriophyes pyri* (Pagenstecher), *Aphis pomi* DeG., *Rhopalosiphum fitchii* (Sand.), *Anuraphis rosea* (Forbes), *Cydia pomonella* (L.), *Phenacoccus aceris* (Signoret), and *Bryobia praetiosa* Koch. The European red mite, *Panonychus ulmi* Koch, is frequently reported as a major component of the diet of *C. verbasci* (Thistlewood, 1986).

Alternative food crops, which are applied to remove harmful insects from economically produced plants and planted on the margins of the fields in question, have been used frequently in recent years. According to the data obtained as a result of the study, it is seen that this plant can be used to repel harmful insects, especially considering the species richness of predator, zoophagous and zoophytophagous insects on *V. densiflorum*. This is the first study to detect Heteroptera living on *V. densiflorum*.

In this study also, three species of Rhyparochromidae family, *Aoploscelis bivirgata* (A. Costa, 1853), *Aphanus rolandri*

(Linnaeus, 1758) and *Ischnocoris hemipterus* (Schilling, 1829) determined for the first time in Thrace Region.

Aoploscelis bivirgata is a very rare species, previously recorded from the Anatolian part of Türkiye, from Hatay (Akbez) (Puton & Noualhier, 1895) and Ankara (Kızılcahamam) (Péricart, 1998a). In the Palearctic distribution, the species is found in Europe, especially in Bulgaria and Greece, neighboring the Thrace Region, in the Balkans and in southern Europe, in North Africa, in Algeria, Morocco and Tunisia, and in Asia with Anatolia, in Armenia, Cyprus and Syria (Aukema, 2020). In this study, 3 specimens were detected in the lower leaves of *V. densiflorum* during the wintering period. This finding is the first record of this species in the Thrace Region, which was previously recorded from only two localities in Anatolia.

Aphanus rolandri has been recorded in many localities (Adana, Adıyaman, Akşehir, Ankara, Antalya, Balıkesir, Bingöl, Bolu, Çorum, Elazığ, Kahramanmaraş, Karabük, Kars, Kayseri, Kırşehir, Kahramanmaraş, Konya, Muğla, Niğde, Osmaniye, Samsun, Zonguldak) in Anatolia (Péricart, 1998b; Lodos et al., 1999; Önder et al., 2006; Öncül-Abacıgil et al., 2010). It has a wide distribution in the Palearctic Region, especially in Europe (Aukema, 2020). In this study, only a single specimen was detected in the wintering period under the bottom leaves of *V. densiflorum*, and this is the first record of the species in the Thrace Region.

Ichnocoris hemipterus is a very rare species that has been identified from the Anatolian part of Türkiye only from Kayseri (Péricart, 1998a). This species, which has a wide distribution in Europe, is known from Asia, Anatolian part of Türkiye, Azerbaijan, Armenia and Georgia (Aukema, 2020). Apart from one specimen in May, a large number of specimens were found overwintering between the lower leaves of *V. densiflorum*.

The finding in this study is the first record of the species in the Thrace Region and the second in Türkiye.

Table 1. Heteroptera species on *Verbascum densiflorum*, collection dates, sample numbers, season and host information.

SPECIES	DATUM	SEASON	HOST
ALYDIDAE			
<i>Camptopus lateralis</i> (Germar 1817)	01.06.2006, 1 individual	summer	Phytophagous. oligophagous Fabaceae (<i>Coronilla</i> , <i>Medicago</i> , <i>Lotus</i> , <i>Trifolium</i> , <i>Onobrychis</i>). (Wachmann et al., 2007). <i>Hypericum perforatum</i> , <i>Astragalus</i> sp. <i>Sambucus nigra</i> (Dursun et al., 2010). <i>Chrysanthemum</i> sp. (Asteraceae) <i>Rosa</i> sp., (<i>Rosaceae</i>) <i>Rumex</i> sp. (Polygonaceae) (Akman & Dursun, 2021).
ANTHOCORIDAE			
<i>Orius niger</i> (Wolff, 1811)	20.12.2005, 1 individual 25.05.2006, 1 individual 12.06.2006, 1 individual	summer- winter	Zoophagous. Very polyphagous species that preys on eggs of aphids, pislids, whiteflies, thrips, lepidopters, pentatomids and mites and larvae of noctuids (Péricart, 1972). This species is found on Boraginaceae, Ericaceae, Fabaceae, <i>Urtica</i> , <i>Artemisia</i> (Wachmann et al., 2006)
BERYTIDAE			
<i>Berytinus montivagus</i> (Meyer-Dür, 1841)	13.10.2005, 2 individuals 20.10.2005, 1 individual	winter	Phytophagous. Oligophagous, Fabaceae (<i>Medicago</i> , <i>Trifolium</i>) (Wachmann et al., 2007).
<i>Gampsocoris culicinus</i> Seidenstücker, 1948	27.10.2005, 1 individual 14.12.2006, 1 individual	winter	Phytophagous. Polyphagous, Lamiaeaceae, Boraginaceae, Scrophulariaceae, Fabaceae, <i>Stachys sylvatica</i> (Wachmann et al., 2007).
COREIDAE			
<i>Centrocoris variegatus</i> Kolenati, 1845	27.10.2005, 2 individuals 06.10.2005, 1 individual 09.10.2005, 1 individual	winter	Phytophagous. Asteraceae, <i>Cirsium</i> sp., <i>Sambucus ebulus</i> (Dursun & Fent, 2009; Akman & Dursun, 2021).
<i>Coreus marginatus marginatus</i> (Linnaeus, 1758)	13.10.2005, 1 individual 09.11.2005, 1 individual	winter	Phytophagous. Polyfag. Polygonaceae, <i>Rumex</i> , <i>Polygonum</i> species. Asteraceae, Rosaceae (<i>Rubus</i>), Scrophulariaceae (<i>Verbascum</i>) (Wachmann et al., 2007). <i>Rubus santus</i> , <i>Rubus canascens</i> , <i>Sambucus nigra</i> , <i>Paliurus spina</i> (Dursun & Fent, 2009).
GEOCORIDAE			
<i>Geocoris ater</i> (Fabricius, 1787)	06.10.2005, 1 individual	winter	Zoophagous. It is a predator of various aphids and mites. They were taken on <i>Arbutus</i> sp., <i>Berberis</i> sp., <i>Cedrus</i> sp., <i>Convolvulus</i> sp., <i>Juncus</i> sp., <i>Medicago maritimus</i> , <i>M. minima</i> , <i>Onopordum</i> sp., <i>Salix</i> sp., <i>Verbascum</i> sp., weeds, on the ground and under stone (Lodos et al., 1999). This species overwinter the bottom leaves of <i>Verbascum</i> and <i>Astragalus</i> species in adult stage. (Önder et al., 1983)
<i>Geocoris erythrocephalus</i> (Lepeletier & Serville 1825)	27.09.2005, 3 individuals 08.10.2005, 1 individual 13.10.2005, 3 individuals 27.10.2005, 1 individual 09.11.2005, 2 individuals 27.04.2006, 1 individual 05.07.2006, 1 individual 27.10.2006, 1 individual 07.12.2006, 1 individual 14.12.2006, 2 individuals	summer- winter	Zoophagous. It is a predator of various aphids and mites. They were taken on <i>Althaea</i> sp., <i>Anchusa</i> sp., <i>Astragalus</i> sp., <i>Ballota</i> sp., <i>Cannabis</i> sp., <i>Centaurea</i> sp., <i>Cirsium</i> sp., <i>Cistus</i> sp., <i>Crataegus</i> sp., <i>Daucus</i> sp., <i>Fagus</i> sp., <i>Glychirrizza glabra</i> , <i>Inula</i> sp., <i>Juglans regia</i> , <i>Juniperus</i> sp., <i>Lathyrus</i> sp., <i>Medicago sativa</i> , <i>Mentha</i> sp., <i>Olea europea</i> , <i>Onopordum</i> sp., <i>Pinus</i> sp., <i>Phaseolus vulgaris</i> , <i>Pistacia vera</i> , <i>Pyrus angustifolia</i> , <i>P. malus</i> , <i>Populus</i> sp., <i>Prunus armeniaca</i> , <i>Punica granatum</i> , <i>Quercus</i> sp., <i>Rhus</i> sp., <i>Rosa</i> sp., <i>Rubus</i> sp., <i>Salix</i> sp., <i>Salvia</i> sp., <i>Sesamum indicum</i> , <i>Sinapis</i> sp., <i>Spinacia oleracea</i> , <i>Tamarix</i> sp., <i>Urtica</i> sp., <i>Verbascum</i> sp., <i>Veronica</i> sp., <i>Vitex agnus-castus</i> , Poaceae and Apiaceae species (Lodos et al., 1999; Kiyak et al., 2020).

<i>Geocoris megacephalus</i> (Rossi, 1790)	20.10.2005, 1 individual 13.10.2005, 3 individuals 09.11.2005, 1 individual 14.12.2006, 2 individuals	winter	Zoophagous. It is a predator of various aphids and mites. They were taken on <i>Astragalus</i> sp., <i>Cirsium</i> sp., <i>Trifolium</i> sp., <i>Verbascum</i> sp., weeds and on the ground (Lodos et al., 1999). <i>Olea</i> sp. (Kaçar & Dursun, 2015). This species overwinter the bottom leaves of <i>Verbascum</i> and <i>Astragalus</i> species in adult stage (Önder et al., 1983).
LYGAEIDAE			
<i>Lygaeus equestris</i> (Linnaeus, 1758)	06.10.2005, 1 individual 05.07.2006, 1 individual 21.07.2006, 2 individuals	summer -winter	Phytophagous. Polyphagous, <i>Adonis vernalis</i> , <i>Vincetoxicum</i> , They were taken on different plants and trees such as <i>Astragalus</i> sp., <i>Centaurea</i> sp., <i>Chenopodium</i> sp., <i>Convolvulus</i> sp., <i>Elaeagnus orientalis</i> , <i>Euphorbia</i> sp., <i>Juniperus</i> sp., <i>Lens culinaris</i> , <i>Nerium oleander</i> , <i>Olea europea</i> , <i>Onopordum</i> sp., <i>Peganum harmala</i> , <i>Pinus</i> sp., <i>Pyrus communis</i> , <i>P. malus</i> , <i>Pistacia vera</i> , <i>Platanus</i> sp., <i>Populus</i> sp., <i>Prunus armeniaca</i> , <i>P. domestica</i> , <i>Quercus</i> sp., <i>Rhus</i> sp., <i>Rosa</i> sp., <i>Rubus</i> sp., <i>Rumex</i> sp., <i>Salix</i> sp., <i>Sinapis</i> sp., <i>Spinacia oleracea</i> , <i>Tamarix</i> sp., <i>Verbascum</i> sp., <i>Vicia</i> sp., <i>Vitex</i> sp.,* weeds, Brassicaceae plants, Apiaceae species (Lodos et al., 1999). <i>Artemisia maritima</i> , <i>A. absintium</i> , <i>Digitalis amandiana</i> , <i>D. chinensis</i> , <i>Pyrthrum cinerariaefolium</i> , <i>Lysimachia vulgaris</i> , <i>Echinops sphaerocephalus</i> , <i>Rheum capsicum</i> , <i>Centaurea sibirica</i> (Zobar & Kıvan, 2005)
<i>Nysius ericae</i> (Schilling, 1829)	13.10.2005, 1 individual 07.12.2006, 3 individuals 14.12.2006, 2 individuals 09.11.2005, 2 individuals 20.10.2005, 3 individuals 20.10.2006, 1 individual	winter	Phytophagous. Polyphagous, it has an extensive host plant list but is more common in Asteraceae species. (Wachmann et al., 2007). They were taken on different species of plants such as <i>Anthemis</i> sp., <i>Antirrhinum majus</i> , <i>Astragalus</i> sp., <i>Centaurea</i> sp., <i>Chenopodium</i> sp., <i>Cirsium</i> sp., <i>Juncus</i> sp., <i>Matricaria</i> sp., <i>Medicago sativa</i> , <i>Mentha</i> sp., <i>Phloemis</i> sp., <i>Quercus ilex</i> , <i>Q. macrolepis</i> , <i>Salvia</i> sp., <i>Sambucus</i> sp., <i>Tamarix</i> sp., <i>Triticum</i> sp., <i>Verbascum</i> sp., <i>Vicia</i> sp., Poaceae species (Lodos et al., 1999).
<i>Nysius senecionis senecionis</i> (Schilling, 1829)	06.10.2005, 2 individuals 13.10.2005, 13 individuals 20.10.2005, 26 individuals 27.10.2005, 15 individuals 09.11.2005, 15 individuals 07.12.2006, 4 individuals 15.10.2006, 1 individual 14.12.2006, 11 individuals 17.12.2006, 1 individual	winter	Phytophagous. Polyphagous, Asteraceae species, <i>Artemisia</i> , <i>Senecio</i> and <i>Matricaria</i> (Wachmann et al., 2007). They were taken on <i>Chenopodium</i> sp., <i>Sinapis</i> sp., <i>Verbascum</i> sp. and also different species of weeds (Lodos et al., 1999).
<i>Nysius thymi</i> (Wolff, 1804)	13.10.2005, 1 individual 09.11.2005, 3 individuals 07.12.2006, 1 individual 27.10.2005, 1 individual 15.11.2006, 1 individual 14.12.2006, 4 individuals 06.10.2005, 1 individual 20.10.2005, 2 individuals	winter	Phytophagous. Polyphagous, it has an extensive host plant list Asteraceae (<i>Senecio</i> , <i>Achillea</i> , <i>Erigeron</i> , <i>Inula</i>), Lamiaceae (<i>Thymus</i>) Brassicaceae (<i>Lepidium</i>) (Wachmann et al., 2007). They were taken on <i>Centaurea</i> sp., <i>Cicer arietinum</i> , <i>Glycyrrhiza glabra</i> , <i>Gossypium</i> sp., <i>Juniperus</i> sp., <i>Mentha</i> sp., <i>Phloemis</i> sp., <i>Salvia</i> sp., <i>Sinapis</i> sp., <i>Tamarix</i> sp., <i>Thymus vulgaris</i> , <i>Triticum</i> sp., <i>Verbascum</i> sp., Poaceae species and weeds (Lodos et al., 1999).
MIRIDAE			
<i>Adelphocoris vandalicus</i> (Rossi, 1790)	01.06.2006, 1 individual 12.06.2006, 3 individuals 23.06.2006, 9 individuals 05.07.2006, 3 individuals	summer	Phytophagous. Ployphagous, it feeds on Fabacea family species and its larvae and adults are common on <i>Verbascum</i> . (Wachman et al., 2004). <i>Centaurea</i> , <i>Echinops</i> , <i>Verbascum</i> , <i>Tanacetum</i> (Wagner, 1970/1971). <i>Astragalus penduliflorus</i> <i>Astrodaucus orientalis</i> , <i>Carum carui</i> , <i>Centaurea solstitialis</i> , <i>Centranthus longiflorus</i> , <i>Convolvulus arvensis</i> , <i>Crepis foetida</i> ,

			<i>Echium italicum</i> , <i>E. vulgare</i> , <i>Euphorbia amygdaloides</i> , <i>Falcaria vulgaris</i> , <i>Inula oculus-christi</i> , <i>Lotus corniculatus</i> var. <i>tenuifolius</i> , <i>Lythrum salicaria</i> , <i>Medicago sativa</i> , <i>Melilotus officinalis</i> , <i>Salvia nemorosa</i> , <i>S. verticillata</i> (Yazıcı & Yıldırım, 2017).
<i>Brachycoleus steini</i> Reuter, 1877	01.06.2006, 1 individual	summer	Phytophagous. On <i>Centaurea</i> sp. in hilly steppes (Linnavuori, 2007) and <i>Scolymus hispanicus</i> (Linnavuori, 2009); <i>Calluna vulgaris</i> , <i>Cirsium</i> sp., <i>Onopordum</i> sp., <i>Alhagi</i> sp., <i>Vicia cracca</i> , <i>Vicia</i> sp., Poaceae species, (Lodos et al., 2003)
<i>Campylomma verbasci</i> (Meyer-Dur, 1843)	02.06.2006, 9 individuals 01.06.2006, 4 individuals 23.06.2006, 1 individual	summer	Zoophytophagous. This species regularly found on <i>Verbascum</i> . It is also found in herbaceous plants, deciduous woods. It is harmful to potatoes and some woody Rosaceae species. As a zoophagous, it stings and sucks eggs of leaf mites and aphids (Sternorhyncha, Aleyrodidae and Cicadidae) (Wachman et al., 2004).
<i>Cyphodema instabilis</i> (Lucas, 1849)	01.06.2006, 1 individual	summer	Phytophagous. <i>Genista</i> sp. <i>Medicago sativa</i> , <i>Matricaria</i> sp. <i>Cirsium</i> sp. <i>Sinapis</i> sp. <i>Vitex agnus castus</i> , <i>Cirsium</i> sp. <i>Laurus nobilis</i> <i>Lonicera</i> sp., <i>Verbascum</i> sp., Poaceae species and weeds (Lodos et al., 2003)
<i>Deraeocoris punctulatus</i> (Fallén, 1807)	07.12.2006, 1 individual 14.12.2006, 1 individual	winter	Zoophagous. It feeds on aphids and is found on <i>Artemisia</i> , <i>Rumex</i> , <i>Chenopodium</i> , <i>Tanacetum</i> , <i>Senecio</i> , <i>Thymus</i> and overwinters as adults under the bark of trees such as <i>Aesculus</i> , <i>Juglans</i> , <i>Populus</i> and <i>Taxus</i> and in dry litter (Wachman, 2004); <i>Spinacia putoni</i> , <i>Matricaria</i> sp. <i>Triticum sativa</i> , <i>Vicia cracca</i> , <i>Gossypium hirsutum</i> (Lodos et al., 2003). It was also determined that it was fed with <i>Aphis gossypii</i> . (Öncüer, 1991; Kocadal, 2006).
<i>Horistus orientalis</i> (Gmelin, 1790)	01.06.2006, 5 individuals 27.04.2006, 1 individual 25.05.2006, 2 individuals	summer	Phytophagous. Liliaceae, <i>Galium</i> , <i>Verbascum</i> , <i>Achillea</i> , <i>Senecio</i> , <i>Bromus</i> (Wachmann, 2004)
<i>Lygus gemellatus</i> (Herrich-Schaffer, 1835)	23.06.2006, 1 individual	summer	Phytophagous. <i>Artemisia</i> spp. (Wachmann, 2004)
<i>Lygus pratensis</i> (Linnaeus, 1758)	01.06.2006, 2 individuals 12.06.2006, 2 individuals	summer	Phytophagous. Polyphagous, Asteraceae (<i>Matricaria</i> , <i>Artemisia</i> , <i>Chrysanthemum</i> , <i>Tanacetum</i> , <i>Achillea</i> , <i>Senecio</i>), <i>Verbascum</i> sp. This species overwinters under the bark of conifers such as <i>Pinus</i> , <i>Picea</i> , <i>Juniperus</i> , under moss and leaf litter. (Wachmann, 2004). <i>Olea</i> sp. (Kaçar & Dursun, 2015).
OXYCARENIDAE			
<i>Metapoplax origani</i> Kolenati, 1845	12.06.2006, 1 individual 23.06.2006, 2 individuals	summer	Phytophagous. Polyphagous, Asteraceae (<i>Helichrysum</i> , <i>Chrysanthemum</i> , <i>Achillea</i> , <i>Anthemis</i> , <i>Matricaria</i>). This species winters under the bark of various trees. (Wachmann et al., 2007). They were taken on <i>Althaea rosae</i> , <i>Astragalus</i> sp., <i>Cistus</i> spp., <i>Corylus avellana</i> , <i>Crataegus</i> sp., <i>Cydonia vulgaris</i> , <i>Fagus</i> sp., <i>Juncus</i> sp., <i>Laurus</i> sp., <i>Matricaria chamomilla</i> , <i>Melilotus</i> sp., <i>Phloemis</i> sp., <i>Pinus</i> sp., <i>Pyrus communis</i> , <i>Quercus</i> sp., <i>Rosa</i> sp., <i>Salix</i> sp., <i>Sinapis</i> sp., <i>Tamarix</i> sp., <i>Ulmus</i> sp., <i>Verbascum</i> sp., Brassicaceae, Lamiaceae and Poaceae species, different species of weeds (Lodos et al., 1999).
<i>Microplax interrupta</i> (Fieber, 1837)	09.11.2005, 2 individuals	winter	Phytophagous. Asteraceae (<i>Helichrysum</i> , <i>Tanacetum</i> , <i>Filago</i> , <i>Achillea</i> , <i>Micropus</i> , <i>Anthemis</i>) (Wachmann et al., 2007); Adults were collected on <i>Juncus</i> sp., <i>Juniperus</i> sp., <i>Mentha</i> sp., <i>Quercus</i> sp., <i>Salvia</i> sp., <i>Verbascum</i> sp. and on weeds, (Lodos et al., 1999).

<i>Oxycarenus pallens</i> (Herrich-Schäffer, 1850)	13.10.2005, 1 individual 20.10.2005, 1 individual 27.10.2005, 2 individuals 09.11.2005, 2 individuals 25.05.2006, 6 individuals 01.06.2006, 3 individuals 12.06.2006, 2 individuals 23.06.2006, 9 individuals 10.09.2006, 1 individual	summer -winter	Phytophagous. Polyphagous, <i>Centaurea</i> spp. and other Asteraceae species (Wachmann et al., 2007). Adults were collected on <i>Althaea rosae</i> , <i>Amygdalus</i> sp., <i>Astragalus</i> sp., <i>Beta vulgaris</i> , <i>Capparis</i> sp., <i>Centaurea solstitialis</i> , <i>Cirsium</i> sp., <i>Daucus</i> sp., <i>Fagus</i> sp., <i>Hordeum</i> sp., <i>Inula</i> sp., <i>Juncus</i> sp., <i>Juniperus</i> sp., <i>Matricaria chamomilla</i> , <i>Medicago sativa</i> , <i>Olea europea</i> , <i>Onopordum</i> sp., <i>Phloemis</i> sp., <i>Pyrus malus</i> , <i>Quercus</i> sp., <i>Rhus</i> sp., <i>Rubus</i> sp., <i>Salix</i> sp., <i>Sinapis</i> sp., <i>Sonchus</i> sp., <i>Tamarix</i> sp., <i>Triticum</i> sp., <i>Verbascum</i> sp., Poaceae and Leguminaceae species and weeds (Lodos et al., 1999).
PENTATOMIDAE			
<i>Anthemina lunulata</i> (Goeze, 1778)	09.11.2005, 1 individual	winter	Phytophagous. Polyphagous, <i>Euphorbia</i> sp., <i>Peganum harmala</i> and various Apiaceae species (Lodos et al., 1998). <i>Artemisia absinthium</i> , <i>A. campestris</i> , <i>A. vulgaris</i> , <i>Centaurea scabiosa</i> , <i>Euphorbia</i> sp., <i>Fragaria vesca</i> , <i>Gnaphalium</i> sp., <i>Helichrysum aernarium</i> , <i>Heraclium platytaenim</i> , <i>Medicago sariva</i> , <i>Sambucus ebulus</i> , <i>Verbascum thapsus</i> , <i>Verbascum</i> sp. (Awad, 2000) <i>Lavatera bryoniifolia</i> , <i>Nerium oleander</i> , <i>Sigesbeckia orientalis</i> (Dursun & Kartal, 2008a).
<i>Carpocoris mediterraneus</i> Tamanini, 1958	07.09.2005, 3 individuals 27.09.2005, 2 individuals 06.10.2005, 1 individual 27.10.2005, 2 individuals 04.05.2006, 3 individuals 01.06.2006, 1 individual 12.06.2006, 2 individuals 28.06.2006, 4 individuals 05.07.2006, 3 individuals 05.07.2006, 1 individual 12.07.2006, 6 individuals 21.07.2006, 7 individuals 28.07.2006, 3 individuals 10.08.2006, 1 individual 13.08.2006, 1 individual 15.11.2006, 1 individual	summer -winter	Phytophagous. Polyphagous, <i>Althaea</i> sp., <i>Asphodelus</i> sp., <i>Asteriscus spinosus</i> , <i>Cannabis sativa</i> , <i>Carduus nutans</i> , <i>C. pinocephalus</i> , <i>Carlina corymbosa</i> , <i>Centaurea</i> sp., <i>Cirsium arvense</i> , <i>Cirsium</i> sp., <i>Cynara scolymus</i> , <i>Daucus carota</i> , <i>Dolichos lubia</i> , <i>Echium</i> sp., <i>Galactites tomantosa</i> , <i>Hypochoeris radiata</i> , <i>Knautia</i> sp., <i>Matricaria chamomilla</i> , <i>Medicago sativa</i> , <i>Olea europea</i> , <i>Onopordum</i> sp., <i>Phloemis</i> sp., <i>Scabiosa atropurpurea</i> , <i>Scolymus hispanicus</i> , <i>Sesamum indicum</i> , <i>Sinapis</i> sp., <i>Solanum tuberosum</i> , <i>Spartium junceum</i> , <i>Triticum sativa</i> , <i>Verbascum thapsus</i> , <i>Verbascum</i> sp., <i>Vitis vinifera</i> , <i>Zea mays</i> (Lodos et al., 1998; Awad, 2000). <i>Carthamus glaucus</i> , <i>Centaurea virgata</i> , <i>Cirsium arvense</i> , <i>Eryngium creticum</i> , <i>Hypericum perforatum</i> , <i>Lavatera bryoniifolia</i> , <i>Picris strigosa</i> , <i>Salvia tomentosa</i> , <i>Scolymus hispanicus</i> , <i>Torylis leptophylla</i> , <i>Verbascum</i> sp., (Dursun & Kartal, 2008a)
<i>Carpocoris pudicus</i> (Poda, 1761)	07.09.2005, 1 individual 12.07.2006, 1 individual 21.07.2006, 2 individuals	summer -winter	Phytophagous. Polyphagous, <i>Achillea millefolium</i> , <i>Aronia rotundifolia</i> , <i>Altropa belladonna</i> , <i>Capsicum annum</i> , <i>Carduus thistles</i> , <i>C. nutans</i> , <i>Centaurea</i> sp., <i>Cirsium</i> sp., <i>Daucus carota</i> , <i>Digitalis microcantha</i> , <i>Epibolium angustifolium</i> , <i>Eryngium maritimum</i> , <i>Hypericum perforatum</i> , <i>Medicago</i> sp., <i>Onopordum</i> sp., <i>Quercus</i> sp., <i>Rosa</i> sp., <i>Rubus idaeus</i> , <i>R. ulmifolius</i> , <i>Scrophularia canina</i> , <i>Triticum</i> sp., <i>Verbascum lycnitis</i> , <i>V. thapsus</i> , <i>Verbascum</i> sp. <i>Viburnum lantana</i> , weeds (Lodos et al., 1998; Awad, 2000) <i>Carthamus glaucus</i> , <i>Centaurea virgata</i> , <i>Cirsium arvense</i> , <i>Eryngium creticum</i> , <i>Hypericum perforatum</i> , <i>Lavatera bryoniifolia</i> , <i>Linum flavum</i> subsp. <i>flavum</i> , <i>Onopordum tauricum</i> , <i>Pictis strigosa</i> , <i>Scolymus hispanicus</i> , <i>Torylis leptophylla</i> (Dursun & Kartal, 2008a).

Carpocoris purpureipennis (De Geer, 1773)	07.09.2005, 4 individuals 13.09.2005, 1 individual 27.09.2005, 4 individuals 06.10.2005, 1 individual 20.04.2006, 3 individuals 11.05.2006, 1 individual 01.06.2006, 1 individual 13.06.2006, 5 individuals 18.06.2006, 1 individual 23.06.2006, 1 individual 28.06.2006, 2 individuals 05.07.2006, 3 individuals 21.07.2006, 1 individual 28.07.2006, 1 individual 10.09.2006, 4 individuals 10.09.2006, 3 individuals	summer- winter	Phytophagous. Polyphagous, <i>Achillea</i> sp., <i>Althae rosae</i> , <i>Asphodelus microcarpus</i> , <i>Asphodelus</i> sp., <i>Avena sativa</i> , <i>Centaurea</i> sp., <i>Cirsium</i> spp., <i>Cornus mas</i> , <i>Daucus carota</i> , <i>Ficus carica</i> , <i>Galium</i> sp., <i>Hordeum</i> sp., <i>Lamium</i> sp., <i>Lupinus varius</i> , <i>Medicago maritima</i> , <i>Onopordum</i> sp., <i>Peganum harmala</i> , <i>Prunus domestica</i> , <i>Rhamnus</i> sp., <i>Rhaphanus sativus</i> , <i>Rhaphanus</i> sp., <i>Salvia</i> sp., <i>Sideritis</i> sp., <i>Sinapis</i> sp., <i>Triticum</i> sp., <i>Verbascum</i> sp., <i>Vicia</i> sp., various Apiaceae species and weeds (Lodos et al., 1998; Awad, 2000). <i>Carthamus glaucus</i> , <i>Centaurea virgata</i> , <i>Cirsium avense</i> , <i>Eryngium creticum</i> , <i>Hypericum perforatum</i> , <i>Lavatera bryoniifolia</i> , <i>Scolymus hispanicus</i> (Dursun & Kartal, 2008a)
Codophila varia (Fabricius, 1787)	07.09.2005, 1 individual 13.10.2005, 1 individual 28.07.2006, 1 individual	summer- winter	Phytophagous. Polyphagous, <i>Carthamus</i> sp., <i>Centaurea</i> sp., <i>Cirsium</i> sp., <i>Daucus</i> sp., <i>Echium plantagineum</i> , <i>Medicago sativa</i> , <i>Onopordum</i> sp., <i>Sinapis</i> sp., <i>Verbascum</i> sp., various Apiaceae and Poaceae species (Lodos et al., 1998). <i>Carthamus glaucus</i> , <i>Lavatera bryoniifolia</i> , <i>Scolymus hispanicus</i> , <i>Torilis leptophylla</i> (Dursun & Kartal, 2008a)
Dolycoris baccarum (Linnaeus, 1758)	07.09.2005, 7 individuals 06.10.2005, 1 individual 13.10.2005, 4 individuals 27.10.2005, 1 individual 20.12.2005, 2 individuals 25.05.2006, 1 individual 26.06.2006, 1 individual 05.07.2006, 3 individuals 12.07.2006, 2 individuals 21.07.2006, 2 individuals 10.08.2006, 1 individual 13.08.2006, 2 individuals 13.08.2006, 1 individual 07.12.2006, 1 individual	summer- winter	Phytophagous. Polyphagous, <i>Alhagi</i> sp., <i>Alkana</i> sp., <i>Althae rosae</i> , <i>Astragalus</i> sp., <i>Carthamus</i> sp., <i>Cedrus</i> sp., <i>Centaurea</i> sp., <i>Chrysanthemum coronarium</i> , <i>Cicer orientinum</i> , <i>Cirsium</i> sp., <i>Cistus</i> sp., <i>Cupressus</i> sp., <i>Echinops viscosus bithynicus</i> , <i>Echium</i> sp., <i>Eleagnus orientalis</i> , <i>Fruticosus</i> sp., <i>Galium</i> sp., <i>Helianthus annuus</i> , <i>Hordeum</i> sp., <i>Inula</i> sp., <i>Juniperus</i> sp., <i>Lupinus varius</i> , <i>Medicago marino</i> , <i>M. sativa</i> , <i>Ononis adenotriche</i> , <i>Onopordum</i> sp., <i>Papaver spicatum</i> , <i>Peganum harmala</i> , <i>Phloemis</i> sp., <i>Pirus malus</i> , <i>Prunus domestica</i> , <i>Rubus</i> sp., <i>Salix</i> sp., <i>Salvia</i> sp., <i>Scolymus hispanicus</i> , <i>Sideritis</i> sp., <i>Sinapis</i> sp., <i>Solanum tuberosum</i> , <i>Spinacia oleraceae</i> , <i>Tamarix</i> sp., <i>Triticum sativa</i> , <i>Urtica</i> sp., <i>Verbascum tapsus</i> , <i>Verbascum</i> sp., various Apiaceae and Poaceae species (Lodos et al., 1998). <i>Carthamus glaucus</i> , <i>Cirsium arvense</i> , <i>Corylus avellana</i> , <i>Crataegus monogyna</i> , <i>Echium vulgare</i> , <i>Euphorbia orientalis</i> , <i>Gladiolus italicus</i> , <i>Hypericum perforatum</i> , <i>Lavatera bryoniifolia</i> , <i>Picris strigosa</i> , <i>Rubus</i> sp., <i>Sideritis taurica</i> , <i>Sigesbeckia orientalis</i> , <i>Torilis leptophylla</i> , <i>Verbascum</i> sp., <i>Vicia lutea</i> . (Dursun & Kartal, 2008a)
Eurydema ornata (Linnaeus, 1758)	07.09.2005, 3 individuals 27.09.2005, 5 individuals 06.10.2005, 6 individuals 13.10.2005, 4 individuals 20.10.2005, 3 individuals 12.07.2006, 2 individuals 21.07.2006, 1 individual 10.09.2006, 1 individual	summer- winter	Phytophagous. Polyphagous, <i>Alhagi</i> sp., <i>Alyssum murale</i> , <i>Capparis</i> sp., <i>Cirsium</i> sp., <i>Cornus mas</i> , <i>Fagus</i> sp., <i>Medicago sativa</i> , <i>Onobrychis sativa</i> , <i>Ononis</i> sp., <i>Onopordum</i> sp., <i>Pirus malus</i> , <i>Rorippa</i> sp., <i>Sinapis</i> sp., <i>Spinacia</i> sp., <i>Triticum sativa</i> , <i>Verbascum thapsus</i> , <i>Verbascum pulvulentum</i> , <i>Verbascum</i> sp., <i>Veronica</i> sp., <i>Vicia cracca</i> , various, Apiaceae and Brassicaceae species (Lodos et al., 1998). <i>Alcea apterocaryg</i> , <i>Brassica oleracea</i> , <i>Calluna vulgaris</i> , <i>Conringia orientalis</i> , <i>Echium vulgare</i> , <i>Erodium cicutarium</i> , <i>Gladiolus italicus</i> , <i>Hypericum perforatum</i> , <i>Lavatera bryoniifolia</i> , <i>Malva neglecta</i> , <i>Matricaria chamomilla</i> var. <i>recutita</i> , <i>Medicago x-varia</i> , <i>Melilotus officinalis</i> , <i>Orchis anatolica</i> , <i>Ornithogalum sigmoideum</i> , <i>Picris strigosa</i> , <i>Raphanus raphanistrum</i> , <i>Rumex crispus</i> , <i>Salvia verticillata</i> , <i>Salvia viridis</i> , <i>Sideritis taurica</i> , <i>Sigesbeckia orientalis</i> , <i>Sinapsis arvensis</i> , <i>Sophora alopecurioides</i> , <i>Stipa bromoides</i> , <i>Trigopogon aureus</i> , <i>Vulpia myosuroides</i> , <i>Verbascum</i> sp., <i>Vicia lutea</i> (Dursun & Kartal, 2008b)

<i>Peribalus strictus vernalis</i> (Wolff, 1804)	21.07.2006, 1 individual	summer	Phytophagous. Polyphagous. <i>Achillea millefolium</i> , <i>Arundo donax</i> , <i>Betula</i> sp., <i>Celtis australis</i> , <i>Centaurea jacea</i> , <i>Crateagus</i> sp., <i>Epibolium angustifolium</i> , <i>Ficus carica</i> , <i>Gossypium</i> sp., <i>Juniperus communis</i> , <i>Medicago sativa</i> , <i>Olea europea</i> , <i>Pinus</i> sp., <i>Pirus malus</i> , <i>Pistacia vera</i> , <i>Prunus amygdali</i> , <i>P. armeniaca</i> , <i>Prunus domestica</i> , <i>Punica granatum</i> , <i>Quercus pedunculata</i> , <i>Rosa</i> sp., <i>Rubus caesius</i> , <i>Scrophularia</i> sp., <i>Sinapis</i> sp., <i>Solanum melongena</i> , <i>Triticum sativa</i> , <i>Urtica</i> sp., <i>Verbascum</i> sp. (Lodos et al., 1998; Awad, 2000).
REDUVIIDAE			
<i>Metapterus linearis</i> A.Costa, 1862	09.11.2005, 1 individual	winter	Zoophagous. Predator, this species lurks and catches small arthropods close to the ground (Wahman et al., 2006). It was found roots of willows, poplars, <i>Tamarix</i> , <i>Juncus</i> , <i>Cyperus</i> and under <i>Poterum spinosum</i> (Putshkov & Moulet, 2009).
<i>Coranus griseus</i> (Rossi, 1790)	09.11.2005, 1 individual	winter	Zoophagous. Predator, this species hides in hot arid biotopes, on the ground under stones or under rosette leaves of plants. There is no specific hunting information. (Wachmann et al., 2006). It was found on <i>Sinapis arvensis</i> , <i>Quercus</i> , <i>Nicotiana tabacum</i> , <i>Narcissus</i> , <i>Alhagi</i> , <i>Gossypium</i> , <i>Oryza sativa</i> , <i>Beta vulgaris</i> by Önder (1980).
RHOPALIDAE			
<i>Brachycarenum tigrinus</i> (Schilling, 1829)	07.09.2005, 1 individual 06.10.2005, 1 individual 20.10.2005, 1 individual 09.11.2005, 1 individual	winter	Phytophagous. Polyphagous, Brassicaceae (<i>Alyssus</i> , <i>Bertera</i> , <i>Sisymphium</i> , <i>Lepidium</i> , <i>Thlaspi</i> , <i>Biscutella</i> , <i>Capsella</i>), Chenopodiaceae (<i>Chenopodium</i>), Fabaceae (<i>Trifolium</i>), Asteraceae (<i>Artemisia</i>), Poaceae (<i>Poa</i>). Adults found overwintering under the <i>Calluna</i> and <i>Verbascum rosettes</i> (Wachman et al., 2007; Akman & Dursun, 2021).
<i>Liorhyssus hyalinus</i> (Fabricius, 1794)	07.09.2005, 1	winter	Phytophagous. Asteraceae (<i>Lactuca</i> , <i>Sonchus</i> , <i>Anthemis</i> , <i>Cirsium</i>), Poaceae (<i>Poa</i>) and weeds (Wachman et al., 2007; Akman & Dursun, 2021).
<i>Macevethus caucasicus</i> (Kolenati, 1845)	25.05.2006, 1 individual 27.09.2005, 1 individual 01.06.2006, 1 individual	summer -winter	Phytophagous. Polyphagous, <i>Centaurea</i> sp., <i>Cirsium</i> sp., <i>Matricaria chamomilla</i> , <i>Erodium</i> sp., <i>Medicago sativa</i> , <i>Oryza sativa</i> , <i>Triticum sativum</i> , <i>Quercus</i> sp., <i>Prunus amygdali</i> , <i>Hordeum</i> sp. Poaceae and Asteraceae species (Pehlivan, 1981; Modarres Awal, 1996; Linnavuori, 2012).
<i>Stictopleurus abutilon</i> (Rossi, 1790)	25.05.2006, 1 individual	summer	Phytophagous. Polyphagous, Various Asteraceae (<i>Artemisia</i> , <i>Achillea</i> , <i>Anthemisia</i> , <i>Calendula</i> , <i>Centaurea</i> , <i>Chrysanthemum</i> , <i>Matricaria</i> , <i>Pulicaria</i> , <i>Senecio</i> , <i>Tanacetum</i> , <i>Hieracium</i>), Ericaceae, Fabaceae, Onagraceae, Cistaceae, Lamiaceae, Rutaceae (Moulet, 1995; Wachman et al., 2007; Akman & Dursun, 2021)
RHYPAROCHROMIDAE			
<i>Aoploscelis bivirgata</i> (A. Costa, 1853)	20.10.2005, 3 individuals	winter	Phytophagous. Host plants unknown.
<i>Aphanus rolandri</i> (Linnaeus, 1758)	27.10.2005, 1 individual	winter	Phytozoophagous. Phytophagous in general. It also feeds on dead Arthropods and insect eggs. (Wachmann et al., 2007). They were collected on <i>Prunus avium</i> , <i>Secale cereale</i> , <i>Verbascum</i> sp. and weeds (Lodos et al., 1999).
<i>Beosus quadripunctatus</i> (Muller, 1766)	13.10.2005, 1 individual 20.10.2005, 1 individual 27.10.2005, 1 individual 14.12.2006, 2 individuals	winter	Phytophagous. The adults were collected on <i>Ballota</i> sp., <i>Carthamus</i> sp., <i>Juniperus</i> sp., <i>Matricaria</i> sp., <i>Ononis</i> sp., <i>Sinapis</i> sp., <i>Tamarix</i> sp., <i>Urtica</i> sp., <i>Veronica</i> sp., weeds, understone, on the ground (Lodos et al., 1999).
<i>Emblethis griseus</i> (Wolff, 1802)	27.10.2005, 1 individual	winter	Phytophagous. They were collected on <i>Astragalus</i> sp., <i>Cirsium</i> sp., <i>Medicago sativa</i> , <i>M. maritima</i> , <i>Tamarix</i> sp., weeds, on the ground, understone (Lodos et al., 1999).

<i>Lamprodema maura</i> (Fabricius, 1803)	27.10.2005, 1 individual 09.11.2005, 2 individuals 07.12.2006, 2 individuals	winter	Phytophagous. It feeds on seeds in the soil, especially on Chenopodiaceae. They were collected on <i>Capparis spinosa</i> , <i>Medicago sp.</i> , <i>Quercus ilex</i> , <i>Spinacia oleracea</i> , <i>Verbascum sp.</i> , some weeds, by light trap, on the ground, understone (Lodos et al., 1999).
<i>Ischnocoris hemipterus</i> (Schilling, 1829)	13.10.2005, 2 individuals 20.10.2005, 18 individuals 25.10.2005, 6 individuals 09.11.2005, 6 individuals 11.05.2006, 1 individual 14.10.2006, 3 individuals 14.12.2006, 1 individual 07.12.2006, 1 individual	summer- winter	Phytophagous. This species, which is more xerophilic, likes sandy and calcareous soils; is largely polyphagous. <i>Calluna</i> , <i>Artemisia</i> , <i>Sedum</i> , <i>Potentilla</i> , <i>Thymus</i> , <i>Verbascum</i> , <i>Teucrium</i> or in vegetative debris or bare ground hibernates as an adult (Péricart, 1999).
<i>Ischnopeza hirticornis</i> (Herrich-Schaeffer, 1850)	13.10.2005, 2 individuals	winter	Phytophagous. They were collected on <i>Astragalus sp.</i> , <i>Matricaria sp.</i> , <i>Onopordum sp.</i> , <i>Pinus sp.</i> , <i>Quercus sp.</i> , weeds, on the ground and also understone (Lodos et al., 1999).
<i>Plinthisus longicollis</i> Fieber, 1861	09.11.2005, 2 individuals 13.12.2005, 1 individual 27.12.2005, 1 individual 06.10.2005, 1 individual 07.12.2006, 1 individual 07.12.2006, 3 individuals	winter	Phytophagous. Polyphagous, they feed on seeds. Adults were collected on <i>Ballota sp.</i> , <i>Pinus sp.</i> , <i>Verbascum sp.</i> , Asteraceae species and on the ground (Lodos et al., 1999).
<i>Rhyparochromus vulgaris</i> (Schilling, 1829)	13.10.2005, 1 individual	winter	Phytophagous. Deciduous trees, thicket land. Specimens were collected on <i>Asphodelus sp.</i> , <i>Quercus sp.</i> , <i>Triticum sp.</i> , understone and also on the ground (Lodos et al., 1999)
<i>Stygnocoris flugineus</i> (Geoffroy, 1785)	13.12.2005, 3 individuals 07.12.2006, 1 individual 14.12.2006, 1 individual	winter	Phytophagous. This species is found on fallow soil rich in weeds. They insert and suck the seeds of different plants. It lays its eggs in the ground (Wachmann et al., 2007).
<i>Xanthochilus minusculus</i> (Reuter, 1885)	13.10.2005, 2 individuals 07.12.2006, 1 individual	winter	Phytophagous. Polyphagous. It feeds on the seeds of different plants. <i>X. quadratus</i> inhabits plains, mostly sparsely grown, dry, warm, open rural habitats, lowlands, light, sandy soils mostly in mountainous areas, as well as rocky substrates. (Wachmann et al., 2007).
SCUTELLERIDAE			
<i>Odontotarsus robustus</i> Jakovlev, 1884	13.12.2005, 1 individual 10.04.2006, 2 individuals	summer- winter	Phytophagous. <i>Sinapis sp.</i> , <i>Trifolium argatum</i> , <i>Triticum sativa</i> , various Poaceae species, various weeds (Lodos et al., 1998). <i>Poa sp.</i> , <i>Hordeum sp.</i> , <i>Centaurea sp.</i> , <i>Medicago sp.</i> (Dursun & Fent, 2010).
TINGIDAE			
<i>Catoplatus anticus</i> (Reuter, 1880)	20.10.2005, 1 individual	winter	Phytophagous. Tamaricaceae (<i>Tamarix</i>) (Önder & Lodos, 1983)
<i>Dictyla rotundata</i> (Herrich-Schaeffer, 1835)	20.10.2005, 2 individuals	winter	Phytophagous. Boraginaceae (<i>Anchusa arvensis</i> , <i>A. officinalis</i> , <i>A. gmelinii</i> , <i>A. procera</i> , <i>Buglossoides arvensis</i> , <i>Cynoglossum officinale</i> , <i>Echium vulgare</i> , <i>E. rubrum</i> , <i>E. italicum</i> , <i>Nonnea sp.</i> , <i>Pulmonaria molissima</i> , <i>Rindera tetraspis</i> , <i>Symphytum officinale</i>) (Péricart, 1983)



Figure 1. Research area (Edirne-Balkan Campus).

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