

A Preliminary List on the Host Plants of Lygaeoidea Species (Hemiptera: Heteroptera) in Turkey- II

Meral Fent¹ Ahmet Dursun² Suat Kiyak³

¹Trakya University, Faculty of Science, Department of Biology, 22030, Edirne/Turkey. E-mail: m_fent@hotmail.com ORCID iD 0000-0001-5787-6714

²Amasya University, Faculty of Arts and Science, Department of Biology, 05100, Amasya/Turkey
E-mail: ahmet.dursun@amasya.edu.tr ORCID iD: 0000-0002-5114-7470

³Gazi University, Faculty of Sciences, Department of Biology, 06500, Ankara/Turkey
E-mail: skiyak@gazi.edu.tr ORCID iD: 0000-0001-8167-8283

ABSTRACT: This study constitutes the second part of a preliminary list on the host plants of Lygaeoidea species in Turkey presented by Kiyak et al (2020).

In the first part of the study, Kiyak et al. (2020) presented and discussed the plant taxa belonging to 36 plant families and the related Lygaeoidea species list in alphabetical order.

In this study, 187 taxa belonging to 38 plant families, 67 at genera level and 120 at species level, were defined in relation to Lygaeoidea species. In addition, additional informations on the 10 plant families in the first study are presented.

KEYWORDS: Hemiptera, Lygaeoidea, host plant, relationship, Turkey.

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INTRODUCTION

The species belonging to the Lygaeoidea superfamily are phytophagous, except for the species of Geocoridae family, which are predators on various insect species. Information about the feeding habits of these species is given in the first part of the study (Kiyak et al., 2020).

In the first part of the study and in the current study, a list of plants related to Lygaeoidea species was created on the literature data of previous years and studies conducted in Turkey in recent years.

In the first part of the study, a total of 222 taxa, 77 of which were defined at the genera level and 145 at the species level, belonging to 36 plant families were given between 1922 and 2020 (Kiyak et al., 2020).

In the last studies, it is seen that more animal and insect species have started to be seen outside their natural ranges due to many reasons such as increased human activation and global warming.

Some of these alien species increase excessively and reach a level that causes significant damage.

These alien and invasive species include Heteroptera and even Lygaeoidea species.

By making a list of plants related to Lygaeoidea species in Turkey, the both studies aim **i)** to provide data about the food preferences of Lygaeoidea species and the plant species and families to which they are more prone **ii)** to assist new studies on this group.

MATERIAL AND METHODS

The previous and recent studies on Lygaeoidea species in Turkey were reviewed, and host plant lists were created from these studies and listed according to plant families.

The literatures used in this study are; Fahringer (1922), Hoberlandt (1956), Seidenstücker (1958, 1963, 1965), Tuatay et al. (1972); Aysev (1974), Lodos et al. (1978, 1999), Çakır (1988), Özbek &

Alaoğlu (1988), Çakır & Önder (1990), Kiyak (1990, 1993, 2019), Çağlar (1992) Stichel (1957-1962) Öz Saraç & Kiyak (2001), Öz Saraç et al. (2001); Beyaz & Tezcan (2002), Atlıhan et al. (2003), Gençer et al. (2004), Öncül Abacıgil et al. (2010), Tezcan et al. (2010), Matocq et al. (2014), Yıldırım & Eroğlu (2015), Dirik & Kıvanç (2016), Kiyak & Özdamar (2017), Arslangündoğdu et al. (2018), Yücel & Kıvanç (2018), Yazıcı (2019), Yazıcı & Sertkaya (2020), Çerçi & Tezcan (2020), Özgen et al. (2020).

As a result of the literature review, plant taxa associated with Lygaeoidea species in Turkey were listed according to families, and a total of 74 plant families were identified.

The first 36 of these plant families in alphabetical order and their related Lygaeoidea species were presented in the first part of the study.

The remaining 38 families and their related taxa and related Lygaeoidea species are presented in Table 1 in alphabetical order in the present part of the study.

In addition, the missing records belonging to the plant families in the first part of the study are added to the bottom of Table 1.

In Table 2 and Figure 1 plant families and the numbers of Lygaeoidea species related to them, and in Table 3 and Figure 2, plant families and plant taxon numbers belonging to these families are given.

Plant species are given with their valid names, and the synonymous names in the old literature are also indicated in parentheses.

RESULTS

In this part of the study, 187 plant taxa belonging to 38 plant families and related Lygaeoidea species are listed alphabetically in Table 1. In addition, the additional records that were overlooked in Part I are added to the under of the table.

Table 1. The plant relationships of Lygaeoidea species in Turkey.

Lamiaceae		
Lamiaceae	<i>Horvathiolus guttatus</i> (Rambur, 1839) <i>Metopoplax origani</i> (Kolenati, 1845)	Kıyak, 1993 Lodos et al., 1999
<i>Ajuga</i> sp.	<i>Pionosomus varius</i> (Wolff, 1804)	Stichel, 1957
<i>Ballota</i> sp.	<i>Beosus quadripunctatus</i> (Müller, 1766) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Plinthisus longicollis</i> Fieber, 1861	Lodos et al., 1999
<i>Calamintha</i> sp.	<i>Ortholomus punctipennis</i> (Herrich-Schaeffer, 1838)	Stichel, 1957
<i>Lavandula multifida</i> L.	<i>Heterogaster artemisiae</i> Schilling, 1829	Stichel, 1957
<i>Lycopus europaeus</i> L.	<i>Heterogaster cathariae</i> (Geoffroy, 1785)	Stichel, 1957
<i>Marrubium parviflorum</i> Fish & Mey.	<i>Melanocoryphus albomaculatus</i> (Goeze, 1778)	Kıyak 1990
<i>Melissa officinalis</i> L.	<i>Heterogaster cathariae</i> (Geoffroy, 1785)	Stichel, 1957
<i>Mentha</i> sp.	<i>Geocoris arenarius</i> (Jakovlev, 1867) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Heterogaster artemisiae</i> Schilling, 1829 <i>Microplax interrupta</i> (Fieber, 1837) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Scolopostethus affinis</i> (Schilling, 1829)	Stichel, 1957 Çakır, 1988 Lodos et al., 1978, 1999
<i>Mentha arvensis</i> L.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825)	Çakır, 1988
<i>Mentha piperita</i> L.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825)	Çakır, 1988
<i>Mentha rotundifolia</i> (L.) Huds.	<i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Aysev, 1974
<i>Micromeria varia</i> Benth.	<i>Heterogaster artemisiae</i> Schilling, 1829	Stichel, 1957
<i>Nepeta</i> sp.	<i>Scolopostethus affinis</i> (Schilling, 1829)	Stichel, 1957
<i>Nepeta troodi</i> Holmboe	<i>Heterogaster cathariae</i> (Geoffroy, 1785)	Stichel, 1957
<i>Origanum</i> sp.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius thymi thymi</i> (Wolff, 1804)	Bayaz & Tezcan, 2002
<i>Origanum syriacum</i> L.	<i>Geocoris luridus luridus</i> (Fieber, 1844)	Çakır, 1988
<i>Origanum vulgare</i> L.	<i>Metopoplax origani</i> (Kolenati, 1845)	Stichel 1957; Aysev, 1974
<i>Phlomis</i> sp.	<i>Artheneis foveolata</i> Spinola, 1837 <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Çakır, 1988; Lodos et al., 1999
<i>Rosmarinus officinalis</i> L.	<i>Tropidothorax leucopterus</i> (Goeze, 1778)	Stichel, 1957; Aysev, 1974
<i>Salvia</i> sp.	<i>Emblethis ciliatus</i> Horváth, 1875 <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Graptopeltus lynceus</i> (Fabricius, 1775) <i>Heterogaster artemisiae</i> Schilling, 1829 <i>Microplax interrupta</i> (Fieber, 1837) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Platylax salviae</i> (Schilling, 1829)	Stichel, 1957; Çakır, 1988; Lodos et al., 1999
<i>Salvia glutinosa</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974
<i>Salvia pratensis</i> L.	<i>Platylax salviae</i> (Schilling, 1829)	Stichel, 1957
<i>Salvia verticillata</i> L.	<i>Emblethis verbasci</i> (Fabricius, 1803) <i>Platylax salviae</i> (Schilling, 1829)	Stichel, 1957
<i>Sideritis</i> sp.	<i>Geocoris ater</i> (Fabricius, 1787)	Çakır, 1988
<i>Sideritis hyssopifolia</i> L.	<i>Cymus clavicularis</i> (Fallén, 1807) <i>Ischnopeza hirticornis</i> (Herrich-Schaeffer, 1850) <i>Platylax inermis</i> (Rambur, 1839)	Lodos et al., 1978

<i>Stachys cretica</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Özsaraç et al., 2001
<i>Teucrium</i> sp.	<i>Emblethis verbasci</i> (Fabricius, 1803)	Stichel, 1957
<i>Teucrium polium</i> L.	<i>Geocoris erythrocephalus</i>	Özsaraç & Kıyak, 2001
<i>Thymus</i> sp.	<i>Cymus clavicularis</i> (Fallén, 1807) <i>Emblethis verbasci</i> (Fabricius, 1803) <i>Microplax interrupta</i> (Fieber, 1837) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Ortholomus punctipennis</i> (Herrich-Schaeffer, 1838) <i>Pionosomus varius</i> (Wolff, 1804)	Stichel, 1957; Aysev, 1974
<i>Thymus serpyllum</i> L.	<i>Tropistethus holosericus</i> (Scholtz, 1846)	Stichel, 1957
<i>Thymus vulgaris</i> L.	<i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804)	Lodos et al., 1978, 1999
Lauraceae		
<i>Laurus</i> sp.	<i>Heterogaster urticae</i> (Fabricius, 1775) <i>Metopoplax origani</i> (Kolenati, 1845)	Lodos et al., 1999
<i>Laurus nobilis</i> L.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
Linaceae		
<i>Linum</i> sp.	<i>Nysius ericae ericae</i> (Schilling, 1829)	Stichel, 1957
Lythraceae		
<i>Lythrum portula</i> (L.) D. A. Webb (Syn. <i>Peplis portula</i> L.)	<i>Cymus clavicularis</i> (Fallén, 1807)	Stichel, 1957; Aysev, 1974
<i>Punica</i> sp.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825)	Çakır, 1988
<i>Punica granatum</i> L.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844)	Çakır, 1988; Lodos et al., 1999
Malvaceae		
<i>Abelmoschus esculentus</i> (L.) Moench. (Syn. <i>Hibiscus esculentus</i>)	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Lodos et al., 1999
<i>Abutilon</i> sp.	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Stichel, 1957, Aysev, 1974
<i>Althaea</i> sp.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Aysev, 1974 ; Lodos et al., 1999
<i>Althaea rosea</i> Hohen. ex Boiss.	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Gossypium</i> sp.	<i>Cymus melanocephalus</i> Fieber, 1861 <i>Geocoris arenarius</i> (Jakovlev, 1867) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris lineola lineola</i> (Rambur, 1839) <i>Geocoris megacephalus</i> (Rossi, 1790) <i>Geocoris</i> sp. <i>Graptostetizus servus</i> (Fabricius, 1787) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Stichel, 1957; Tuatay et al., 1972; Aysev, 1974 ;Çakır, 1988; Çakır & Önder, 1990; Lodos et al.,1999; Yazıcı, 2019
<i>Gossypium hirsutum</i> L.	<i>Leptodemus minutus</i> Jakovlev 1876	Yazıcı & Sertkaya, 2020
<i>Hibiscus</i> sp.	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Aysev, 1974
<i>Malva</i> sp.	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Lodos et al., 1999
<i>Malva multiflora</i> (Cav.) Soldano, Banfi & Galasso (Syn. <i>Lavatera cretica</i> L.)	<i>Oxycarenus hyalinipennis</i> (A. Costa, 1843)	Stichel 1957; Aysev, 1974
<i>Urena lobata</i> L.	<i>Graptostetizus servus</i> (Fabricius, 1787)	Stichel, 1957
Moraceae		
<i>Morus</i> sp.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al.,1999
<i>Morus alba</i> L.	<i>Megalonotus praetextatus</i> (Herrich-Schaeffer, 1835) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Kıyak, 1990; Lodos et al.,1999
Myrtaceae		
<i>Eucalyptus</i> sp.	<i>Horvathiolus superbus</i> (Pollich, 1781)	Aysev, 1974
Nitrariaceae		
<i>Peganum harmala</i> L.	<i>Emblethis ciliatus</i> Horváth, 1875 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Tropidothorax leucopterus</i> (Goeze, 1778)	Lodos et al., 1999

Oleaceae		
<i>Fraxinus</i> sp.	<i>Caenocoris nerii</i> (Germar, 1847) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Aysev, 1974; Çakır, 1988; Lodos et al., 1999
<i>Fraxinus excelsior</i> L.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Aysev, 1974; Çakır, 1988; Lodos et al., 1999
<i>Jasminum fruticans</i> L.	<i>Macroplax fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Xanthochilus quadratus</i> (Fabricius, 1798)	Çağlar, 1992
<i>Ligustrum</i> sp.	<i>Geocoris luridus luridus</i> (Fieber, 1844)	Çakır, 1988; Lodos et al., 1999
<i>Olea europaea</i> L.	<i>Aphanus rolandri</i> (Linnaeus, 1758) <i>Arlheneis foveolata</i> Spinola, 1837 <i>Caenocoris nerii</i> (Germar, 1847) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Geocoris lineola</i> (Rambur, 1839) <i>Geocoris megacephalus</i> (Rossi, 1790) <i>Graptostethus servus</i> (Fabricius, 1787) <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Horvathiolus superbus</i> (Pollich, 1781) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Lamprodema maura</i> (Fabricius, 1803) <i>Lygaeus creticus</i> (Lucas, 1854) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macropternella inermis</i> (Fieber, 1851) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Microplax albofasciata</i> (A. Costa, 1847) <i>Microplax limbata</i> Fieber, 1864 <i>Nysius cymoides</i> (Spinola, 1837) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Peritrechus meridionalis</i> Puton, 1877 <i>Plinthisus longicollis</i> Fieber, 1861 <i>Proderus belloveyei</i> Puton, 1874 <i>Raglius alboacuminatus</i> (Goeze, 1778) <i>Remaudiereana annulipes</i> (Bärensprung, 1859) <i>Scolopostethus pictus</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Taphropeltus nervosus</i> (Fieber, 1861) <i>Xanthochilus quadratus</i> (Fabricius, 1798)	Lodos et al., 1978, 1999; Çakır, 1988; Öncül Abacıgil et al., 2010
Onagraceae		
<i>Epilobium hirsutum</i> L.	<i>Geocoris megacephalus</i> (Rossi, 1790)	Stichel, 1957; Aysev, 1974
Papaveraceae		
Papaveraceae	<i>Brachyplax tenuis</i> (Mulsant & Rey, 1852)	Matocq et al., 2014
<i>Eschscholzia</i> sp.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Fumaria asapela</i> Boiss.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Kiyak, 1990
<i>Fumaria judaica</i> Boiss	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Özsaraç & Kiyak, 2001
<i>Papaver</i> sp.	<i>Brachyplax tenuis</i> (Mulsant & Rey, 1852)	Seidenstücker, 1958
Pedaliaceae		
<i>Sesamum indicum</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius senecionis senecionis</i> (Schilling, 1829)	Lodos et al., 1978, 1999; Çakır, 1988
Pinaceae		
<i>Abies</i> sp.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Abies alba</i> Mill.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797)	Aysev, 1974
<i>Cedrus</i> sp.	<i>Caenocoris nerii</i> (Germar, 1847) <i>Gastrodes grossipes</i> (De Geer, 1773) <i>Geocoris ater</i> (Fabricius, 1787) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster artemisiae</i> Schilling, 1829 <i>Lasiocoris crassicornis</i> (Lucas, 1849) <i>Lygaeosoma sardeum erythropterum</i> (Puton, 1876) <i>Microplax limbata</i> Fieber, 1864 <i>Orsillodes longirostris</i> Puton, 1884	Çakır, 1988; Lodos Önder et al 1999; Çerçi & Tezcan, 2020
<i>Pinus</i> sp.	<i>Emblethis ciliatus</i> Horváth, 1875 <i>Gastrodes grossipes</i> (De Geer, 1773) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Graptopeltus lynceus</i> (Fabricius, 1775) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Ischnopeza hirticornis</i> (Herrich-Schaeffer, 1850)	Stichel, 1957; Çakır, 1988; Lodos et al., 1978, 1999

	<i>Ischnodemus suturalis</i> Horváth, 1883 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Megalonotus longipilis</i> (Puton, 1884) <i>Metopoplax fuscinervis</i> Stål, 1872 <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Orsillus depressus</i> (Mulsant & Rey, 1852) <i>Orsillus reyi</i> Puton, 1871 <i>Plinthus longicollis</i> Fieber, 1861 <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Scolopostethus affinis</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	
<i>Pinus nigra</i> J.F. Arnold	<i>Graptopeltus validus</i> (Horváth, 1875) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Ortholomus punctipennis</i> (Herrich-Schaeffer, 1838) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Rhyparochromus phoeniceus</i> (Rossi, 1794) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Hoberlandt, 1956; Çağlar, 1992;
<i>Pinus strobus</i> L.	<i>Eremocoris plebejus</i> (Fallén, 1807) <i>Gastrodes grossipes</i> (De Geer, 1773)	Stichel, 1957
<i>Pinus sylvestris</i> L.	<i>Eremocoris plebejus</i> (Fallén, 1807) <i>Gastrodes grossipes</i> (De Geer, 1773)	Stichel, 1957; Yıldırım & Eroğlu, 2015
Plantaginaceae		
<i>Antirrhinum majus</i> L.	<i>Nysius ericae ericae</i> (Schilling, 1829)	Lodos et al., 1999
<i>Misopates orontium</i> (L.) Raf. (Syn. <i>Antirrhinum orontium</i>)	<i>Rhyparochromus phoeniceus</i> (Rossi, 1794)	Özsaraç et al., 2001
<i>Plantago coronopus</i> L.	<i>Henestaris laticeps laticeps</i> (Curtis, 1836) <i>Henestaris halophilus</i> (Burmeister, 1835)	Stichel, 1957; Wagner, 1967; Aysev, 1974
<i>Plantago indica</i> L.	<i>Henestaris halophilus</i> (Burmeister, 1835)	Özsaraç et al., 2001
<i>Plantago maritima</i> L.	<i>Henestaris halophilus</i> (Burmeister, 1835)	Wagner, 1967
<i>Veronica</i> sp.	<i>Beosus quadripunctatus</i> (Müller, 1766) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835)	Çakır, 1988; Lodos et al., 1999
Platanaceae		
<i>Platanus</i> sp.	<i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Megalonotus sabulicola</i> (Thomson, 1870)	Hoberlandt, 1956; Çakır, 1988; Lodos, Önder et al., 1999
<i>Platanus orientalis</i> L.	<i>Arocatus longiceps</i> Stål, 1872 <i>Emblethis ciliatus</i> Horváth, 1875 <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1978, 1999
Plumbaginaceae		
<i>Acantholimon</i> sp.	<i>Xanthochilus quadratus</i> (Fabricius, 1798)	Kiyak, 1990
Poaceae		
Poaceae	<i>Cymophyes ochroleuca</i> Fieber, 1870 <i>Emblethis angustus</i> Montandon, 1890 <i>Emblethis ciliatus</i> Horváth, 1875 <i>Geocoris ater</i> (Fabricius, 1787) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Henestaris halophilus</i> (Burmeister, 1835) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus hyalinipennis</i> (A. Costa, 1843) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Paromius gracilis</i> (Rambur, 1839) <i>Rhyparochromus pini</i> (Unnaeus, 1758) <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Hoberlandt, 1956; Stichel, 1957; Ay- sev, 1974; Lodos Önder et al., 1978, 1999; Çakır, 1988
<i>Aegilops caudata</i> L.	<i>Beosus maritimus</i> (Scopoli, 1763)	Özsaraç et al., 2001
<i>Agropyron</i> sp.	<i>Nysius cymoides</i> (Spinola, 1837)	Lodos et al., 1999

<i>Andropogon dystachius</i> L.	<i>Paromius gracilis</i> (Rambur, 1839)	Stichel, 1957
<i>Avena barbata</i> Pott ex Link	<i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Aysev, 1974
<i>Bromus arvensis</i> L.	<i>Beosus maritimus</i> (Scopoli, 1763)	Özsaraç et al., 2001
<i>Bromus madritensis</i> L.	<i>Metopoplax fuscineris</i> Stål, 1872	Özsaraç et al., 2001
<i>Elytrigia repens</i> (L.) Newski (Syn. <i>Agropyron repens</i>)	<i>Paromius gracilis</i> (Rambur, 1839)	Lodos et al., 1999
<i>Glyceria</i> sp.	<i>Ischnodemus suturalis</i> Horváth, 1883	Seidenstücker, 1958
<i>Imperata arundinacea</i> Cirillio	<i>Paromius gracilis</i> (Rambur, 1839)	Stichel, 1957
<i>Hordeum</i> sp.	<i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Hordeum vulgare</i> L.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Lolium</i> sp.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Çakır, 1988
<i>Oryza sativa</i> L.	<i>Geocoris megacephalus</i> (Rossi, 1790)	Çakır, 1988
<i>Panicum turgidum</i> Forrsk.	<i>Cymophyes ochroleuca</i> Fieber, 1870	Stichel, 1957
<i>Phragmites</i> sp.	<i>Cymus melanocephalus</i> Fieber, 1861 <i>Dimorphopterus blissoides</i> (Baerensprung, 1859)	Stichel, 1957; Lodos et al., 1999
<i>Poa bulbosa</i> var. <i>vivipara</i> Koeler	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Kiyak, 1990
<i>Saccharum revanense</i> L. (Syn. <i>Erianthus ravennae</i>)	<i>Paromius gracilis</i> (Rambur, 1839)	Stichel, 1957
<i>Secale cereale</i> L.	<i>Aphanus rolandri</i> (Linnaeus, 1758)	Lodos et al., 1999
<i>Sorghum halepense</i> (L.) Pers.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Çakır, 1988
<i>Triticum</i> sp.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Cymus claviculus</i> (Fallén, 1807) <i>Emblethis denticollis</i> Horváth, 1878 <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Megalonotus praetextatus</i> (Herrich-Schaeffer, 1835) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus modestus</i> (Fallén, 1829) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Rhyparochromus phoeniceus</i> (Rossi, 1794) <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Tropidothorax leucopterus</i> (Goeze, 1778) <i>Xanthochilus satumi</i> (Rossi, 1790)	Lodos et al., 1978, 1999; Çakır, 1988; Dirik & Kivan, 2016
<i>Triticum aestivum</i> L. (Syn. <i>Triticum vulgare</i> , <i>Triticum sativum</i>)	<i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Spilostethus saxatilis</i> (Scopoli, 1763) <i>Metopoplax fuscineris</i> Stål, 1872	Alkan, 1948; Lodos et al., 1999; Özsaraç et al., 2001
<i>Zea mays</i> L.	<i>Nysius cymoides</i> (Spinola, 1837) <i>Scolopostethus pictus</i> (Schilling, 1829)	Lodos et al., 1978; Özgen et al., 2020
Polygonaceae		
<i>Atraphaxis</i> sp.	<i>Emblethis setifer</i> Seidenstücker, 1966	Seidenstücker, 1967
<i>Polygonum</i> sp.	<i>Metopoplax origani</i> (Kolenati, 1845) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Aysev, 1974
<i>Rumex</i> sp.	<i>Geocoris megacephalus</i> (Rossi, 1790) <i>Heterogaster artemisiae</i> Schilling, 1829 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Xanthochilus minusculus</i> (Reuter, 1885)	Kiyak, 1993; Çakır, 1988; Lodos et al., 1999
<i>Rumex acetosella</i> L.	<i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Metopoplax origani</i> (Kolenati, 1845)	Lodos et al., 1978
<i>Rumex scutatus</i> L.	<i>Horvathiolus superbus</i> (Pollich, 1781)	Stichel, 1957
Portulacaceae		
<i>Portulaca</i> sp.	<i>Geocoris megacephalus</i> (Rossi, 1790) <i>Geocoris lineola lineola</i> (Rambur, 1839)	Aysev, 1974
<i>Portulaca oleracea</i> L.	<i>Nysius senecionis senecionis</i> (Schilling, 1829)	Fahringer, 1922; Hoberlandt, 1956; Stichel, 1957

Ranunculaceae		
<i>Adonis</i> sp.	<i>Lygaeus equestris</i> (Linnaeus, 1758)	Stichel, 1957; Aysev, 1974
<i>Nigella arvensis</i> L.	<i>Apterola louni</i> (Saunders, 1876)	Kıyak & Özdamar, 2017
<i>Nigella sativa</i> L.	<i>Lygaeus equestris</i> (Linnaeus, 1758)	Stichel, 1957; Aysev, 1974
Rhamnaceae		
<i>Paliurus</i> sp.	<i>Orsillus depressus</i> (Mulsant & Rey, 1852)	Lodos et al., 1999
<i>Paliurus spina-christi</i> Mill.	<i>Caenocoris neri</i> (Germar, 1847) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758)	Lodos et al., 1978
Rosaceae		
<i>Amygdalus</i> sp.	<i>Brachyplax tenuis</i> (Mulsant & Rey, 1852) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Lodos et al., 1999
<i>Amygdalus communis</i> L. (Syn. <i>Prunus amygdalus</i>)	<i>Emblethis denticollis</i> Horváth, 1878 <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Megalonotus sabulicola</i> (Thomson, 1870) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1978, 1999; Çakır, 1988
<i>Aruncus sylvester</i> Kostel ex Mexim	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957
<i>Cotoneaster integerrimus</i> Medik.	<i>Horvathiolus superbus</i> (Pollich, 1781)	Stichel, 1957; Aysev, 1974
<i>Crataegus</i> sp.	<i>Arocatus melanocephalus</i> (Fabricius, 1798) <i>Artheneis alutacea</i> Fieber, 1861 <i>Emblethis denticollis</i> Horváth, 1878 <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Stichel, 1957; Çakır, 1988; Lodos et al., 1999
<i>Cydonia oblonga</i> Mill. (Syn. <i>Cydonia vulgaris</i>)	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Raglius zarudnyi</i> (Jakovlev, 1905) <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1978, 1999; Gençer et al., 2004
<i>Fragaria</i> sp.	<i>Nysius ericae ericae</i> (Schilling, 1829)	Stichel, 1957
<i>Fragaria vesca</i> L.	<i>Emblethis angustus</i> Montandon, 1890 <i>Geocoris megacephalus</i> (Rossi, 1790)	Lodos et al., 1978; Yazıcı, 2019
<i>Malus angustifolia</i> (Aiton) Michx. (Syn. <i>Pyrus angustifolia</i>)	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Lodos et al., 1999
<i>Malus domestica</i> Borkh. (Syn. <i>Malus communis</i> , <i>Pyrus malus</i>)	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Kleidocerys resedae resedae</i> (Panzer, 1797) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Metopoplax fuscineris</i> Stål, 1872 <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Peritrechus meridionalis</i> Puton, 1877 <i>Scolopostethus affinis</i> (Schilling, 1829) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Aysev, 1978; Lodos et al., 1978, 1999
<i>Malus sylvestris</i> (L.) Mill.	<i>Emblethis griseus</i> (Wolff, 1802) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Yiğit & Uygun, 1982
<i>Mespilus germanica</i> L.	<i>Heterogaster urticae</i> (Fabricius, 1775) <i>Lygaeus creticus</i> Lucas, 1854	Lodos et al., 1978
<i>Pirus elaeagrifolia</i> Pall.	<i>Geocoris ater</i> (Fabricius, 1787) <i>Macroplax fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Taphropeltus nervosus</i> (Fieber, 1861) <i>Xanthochilus minusculus</i> (Reuter, 1885)	Lodos et al., 1978

<i>Potentilla</i> sp.	<i>Tropistethus holosericus</i> (Scholtz, 1846)	Stichel, 1957
<i>Potentilla neumanniana</i> Rchb. (Syn. <i>Potentilla verna</i>)	<i>Ortholomus punctipennis</i> (Herrich-Schaeffer, 1838)	Stichel, 1957; Aysev, 1974
<i>Prunus</i> sp.	<i>Leptodemus minutus</i> (Jakovlev, 1874) <i>Stygnocoris rusticus</i> (Fallén, 1807)	Lodos et al., 1978, 1999
<i>Prunus armeniaca</i> L.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster artemisiae</i> Schilling, 1829 <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Peritrechus meridionalis</i> Puton, 1877 <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Çakır, 1988; Lodos et al., 1999
<i>Prunus avium</i> L.	<i>Aphanus rolandri</i> (Linnaeus, 1758) <i>Taphropeltus nervosus</i> (Fieber, 1861) <i>Beosus quadripunctatus</i> (Müller 1766) <i>Eremocoris fenestratus</i> (Herrich & Schaeffer 1839) <i>Graptostethus servus</i> (Fabricius 1787) <i>Icus angularis</i> Fieber 1861 <i>Lamprodema maura</i> (Fabricius 1803) <i>Nysius graminicola</i> graminicola (Kolenati 1845) <i>Nysius helveticus</i> (Herrich & Schaeffer 1850) <i>Paromius gracilis</i> (Rambur 1839) <i>Remaudiereana annulipes</i> (Barensprung 1859) <i>Scolopostethus pictus</i> (Schilling 1829)	Lodos et al., 1978, 1999; Tezcan et al., 2010
<i>Prunus cerasus</i> L.	<i>Metopoplax origani</i> (Kolenati, 1845)	Lodos et al., 1978
<i>Prunus domestica</i> L.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Megalonotus sabulicola</i> (Thomson, 1870) <i>Metopoplax origani</i> (Kolenati, 1845)	Lodos et al., 1978, 1999; Çakır, 1988
<i>Prunus mahaleb</i> L.	<i>Lygaeus creticus</i> Lucas, 1854	Lodos, Önder et al., 1978
<i>Prunus persica</i> (L.) Batsh.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Lygaeosoma anatolicum</i> Seidenstücker, 1960 <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758)	Lodos et al., 1978, 1999
<i>Pyrus communis</i> L.	<i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplax fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius cymoides</i> (Spinola, 1837) <i>Peritrechus meridionalis</i> Puton, 1877	Lodos et al., 1978, 1999
<i>Pyrus elaeagrifolia</i> Pall.	<i>Geocoris ater</i> (Fabricius, 1787) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Macroplax fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Megalonotus praetextatus</i> (Herrich-Schaeffer, 1835) <i>Taphropeltus nervosus</i> (Fieber, 1861) <i>Xanthochilus minusculus</i> (Reuter, 1885)	Lodos et al., 1978, 1999
<i>Rosa</i> sp.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Engistus salinus</i> (Jakovlev, 1874) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Oxycarenus hyalinipennis</i> (A. Costa, 1843) <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Stygnocoris rusticus</i> (Fallén, 1807)	Lodos et al., 1978, 1999; Çakır, 1988; Yücel & Kıvanç, 2018
<i>Rosa canina</i> L.	<i>Eremocoris praenotatus</i> Seidenstücker, 1965	Seidenstücker, 1965
<i>Rubus</i> sp.	<i>Arocatus longiceps</i> Stål, 1872 <i>Beosus maritimus</i> (Scopoli, 1763) <i>Cymus melanocephalus</i> Fieber, 1861 <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplax fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Scolopostethus pictus</i> (Schilling, 1829)	Lodos, Önder et al., 1978, 1999; Çakır, 1988
<i>Rubus ideaus</i> L.	<i>Spilostethus pandurus</i> (Scopoli, 1763)	Kıyak, 1990

<i>Sanguisorba minor</i> Scop.	<i>Emblethis dilaticollis</i> (Jakovlev, 1874) <i>Ortholomus jordani</i> Hoberlandt, 1953 <i>Raglius confusus</i> (Reuter, 1886)	Kiyak, 1990; Lodos et al., 1999
<i>Sanguisorba officinalis</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974
<i>Sarcopterium spinosum</i> (L.) Spach.	<i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835)	Özsaraç et al., 2001
<i>Sorbus aria</i> (L.) Crantz.	<i>Lygaeus creticus</i> Lucas, 1854	Stichel, 1957; Aysev, 1974
Rubiaceae		
<i>Galium</i> sp.	<i>Cymus claviculus</i> (Fallén, 1807)	Stichel, 1957; Aysev, 1974
<i>Galium mollugo</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974
Rutaceae		
<i>Citrus</i> sp.	<i>Metopoplax fuscineris</i> Stål, 1872 <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Heterogaster urticae</i> (Fabricius, 1775)	Lodos et al., 1978, 1999
<i>Citrus unshui</i> Marc.	<i>Lygaeus creticus</i> Lucas, 1854	Lodos et al., 1978
Salicaceae		
<i>Populus</i> sp.	<i>Arheneis foveolata</i> Spinola, 1837 <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Gonianotus galactodennus</i> Fieber, 1861 <i>Graptopeltus validus</i> (Horváth, 1875) <i>Homoscelis ruficollis</i> Horváth, 1884 <i>Leptodemus minutus</i> (Jakovlev, 1874) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Ortholomus carinatus</i> (Lindberg, 1932) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Stichel, 1957; Seidens-tücker, 1960; Lodos et al., 1978, 1999; Çakır, 1988
<i>Populus alba</i> L.	<i>Leptodemus minutus</i> (Jakovlev, 1874)	Lodos et al., 1978
<i>Populus nigra</i> L.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797)	Aysev, 1974; Yıldırım & Eroğlu, 2015
<i>Populus tremula</i> L.	<i>Arheneis alutacea</i> Fieber, 1861	Lodos et al., 1978
<i>Salix</i> sp.	<i>Arheneis alutacea</i> Fieber, 1861 <i>Arheneis foveolata</i> Spinola, 1837 <i>Arheneis hyrcanica</i> (Kolenati, 1845) <i>Arheneis balcanica</i> (Kormilev, 1938) <i>Beosus maritimus</i> (Scopoli, 1763) <i>Caenocoris nerii</i> (Germar, 1847) <i>Camptocera glaberrima</i> (Walker, 1872) <i>Cymus glandicolor</i> Hahn, 1832 <i>Geocoris ater</i> (Fabricius, 1787) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Horvathiolus superbus</i> (Pollich, 1781) <i>Leptodemus minutus</i> (Jakovlev, 1874) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Microplax limbata</i> Fieber, 1864 <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Peritrechus meridionalis</i> Puton, 1877 <i>Scolopostethus decoratus</i> (Hahn, 1833) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974; Lodos et al., 1978, 1999; Çakır, 1988; Matocq et al., 2014; Kiyak, 2019
<i>Salix aurita</i> L.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797)	Aysev, 1974
<i>Salix babylonica</i> L.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797)	Yıldırım & Eroğlu, 2015
Santalaceae		
<i>Viscum album</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Lodos et al., 1999
Scrophulariaceae		
<i>Scrophularia</i> sp.	<i>Heterogaster artemisiae</i> Schilling, 1829 <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Aysev, 1974; Kiyak, 1990; Lodos et al., 1999
<i>Verbascum</i> sp.	<i>Aphanus rolandri</i> (Linnaeus, 1758) <i>Arheneis foveolata</i> Spinola, 1837 <i>Cymus melanocephalus</i> Fieber, 1861 <i>Emblethis angustus</i> Montandon, 1890 <i>Emblethis ciliatus</i> Horváth, 1875 <i>Emblethis verbasci</i> (Fabricius, 1803) <i>Eremocoris fenestratus</i> (Herrich-Schaeffer, 1839)	Stichel, 1957; Lodos et al., 1978, 1999; Aysev, 1974; Kiyak, 1993; Çakır, 1988; Çakır, & Önder, 1990;

<i>Verbascum</i> sp.	<i>Gastrodes grossipes</i> (De Geer, 1773) <i>Geocoris arenarius</i> (Jakovlev, 1867) <i>Geocoris ater</i> (Fabricius, 1787) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Geocoris megacephalus</i> (Rossi, 1790) <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Horvathiolus superbus</i> (Pollich, 1781) <i>Lamprodema maura</i> (Fabricius, 1803) <i>Lygaeosoma anaticum</i> Seidenstücker, 1960 <i>Lygaeosoma sardeum sardeum</i> Spinola, 1837 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Megalonotus emarginatus</i> (Rey, 1888) <i>Megalonotus sabulicola</i> (Thomson, 1870) <i>Metopoplax fuscineris</i> Stål, 1872 <i>Metopoplax origani</i> (Kolenati, 1845) <i>Microplax interrupta</i> (Fieber, 1837) <i>Nysius senecionis senecionis</i> (Schilling, 1829) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Plinthus longicollis</i> Fieber, 1861 <i>Rhyparochromus phoeniceus</i> (Rossi, 1794) <i>Scolopostethus cognatus</i> Fieber, 1861 <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Spilostethus saxatilis</i> (Scopoli, 1763) <i>Xanthochilus minusculus</i> (Reuter, 1885)	Stichel, 1957; Lodos et al., 1978, 1999; Aysev, 1974; Kiyak, 1993; Çakır, 1988; Çakır, & Önder, 1990;
<i>Verbascum sinuatum</i> L.	<i>Emblethis angustus</i> Montandon, 1890	Özşarac et al., 2001
Solanaceae		
<i>Capsicum</i> sp.	<i>Nysius cymoides</i> (Spinola, 1837)	Özgen et al., 2020
<i>Solanum lycopersicum</i> L.	<i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius ericae ericae</i> (Schilling, 1829)	Stichel, 1957; Kiyak, 1990
<i>Solanum melongena</i> L.	<i>Nysius cymoides</i> (Spinola, 1837)	Özgen et al., 2020
<i>Solanum nigrum</i> L.	<i>Nysius cymoides</i> (Spinola, 1837)	Özgen et al., 2020
<i>Solanum tuberosum</i> L.	<i>Geocoris pallidipennis pallidipennis</i> (A. Costa, 1843) <i>Emblethis griseus</i> (Wolff, 1802) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850)	Stichel, 1957; Aysev, 1974; Özbek & Alaoglu, 1988; Atlıhan et al., 2003; Özgen et al., 2020
Sapindaceae		
<i>Acer</i> sp.	<i>Lygaeosoma sardeum sardeum</i> Spinola, 1837	Lodos et al., 1999
Styracaceae		
<i>Styrax</i> sp.	<i>Arocatus melanocephalus</i> (Fabricius, 1798) <i>Caenocoris nerii</i> (Germar, 1847) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Çakır, 1988; Lodos et al., 1999
<i>Styrax officinalis</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Beosus maritimus</i> (Scopoli, 1763) <i>Lygaeus creticus</i> Lucas, 1854	Lodos et al., 1978
Tamaricaceae		
<i>Myricaria</i> sp.	<i>Artheis alutacea</i> Fieber, 1861	Lodos, Önder et al., 1999
<i>Reaumuria</i> sp.	<i>Henestaris laticeps laticeps</i> (Curtis, 1836)	Seidenstücker, 1958
<i>Tamarix</i> sp.	<i>Artheis alutacea</i> Fieber, 1861 <i>Artheis balcanica</i> (Kormilev, 1938) <i>Artheis foveolata</i> Spinola, 1837 <i>Artheis hyrcanica</i> (Kolenati, 1845) <i>Beosus quadripunctatus</i> (Müller, 1766) <i>Caenocoris nerii</i> (Germar, 1847) <i>Cymus melanocephalus</i> Fieber, 1861 <i>Emblethis brachynotus</i> Horváth, 1897 <i>Emblethis griseus</i> (Wolff, 1802) <i>Emblethis verbasci</i> (Fabricius, 1803) <i>Geocoris arenarius</i> (Jakovlev, 1867)	Hoberlandt, 1956; Stichel, 1957; Seidenstücker, 1958; Lodos et al., 1978, 1999; Çakır & Önder, 1990; Çakır, 1988; Lodos et al., Matocq et al., 2014

	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Holcocranum saturejae</i> (Kolenati, 1845) <i>Hyalochilus dolosus</i> Horváth, 1897 <i>Lygaeosoma sardeum erythropterum</i> (Puton, 1876) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Nysius thymi thymi</i> (Wolff, 1804) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Paromius gracilis</i> (Rambur, 1839) <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763)	
Thymelaeaceae		
<i>Daphne gnidioides</i> L.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825)	Çakır, 1988
Tiliaceae		
<i>Tilia</i> sp.	<i>Kleidocerys resedae resedae</i> (Panzer, 1797) <i>Arocatus melanocephalus</i> (Fabricius, 1798)	Stichel, 1957; Aysev, 1974
<i>Tilia tomentosa</i> Moench	<i>Oxycarenus lavaterae</i> (Fabricius, 1787)	Arslangündoğdu et al., 2018
Typhaceae		
<i>Typha</i> sp.	<i>Ischnodemus caspius</i> Jakovlev, 1871	Lodos et al., 1999
Ulmaceae		
<i>Ulmus minor</i> Mill. (Syn. <i>Ulmus campestris</i>)	<i>Caenocoris nerii</i> (Germar, 1847)	Lodos et al., 1978
<i>Ulmus</i> sp.	<i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Metopoplax origani</i> (Kolenati, 1845) <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Çakır, 1988; Lodos et al., 1999
<i>Ulmus glabra</i> Huds.	<i>Arocatus melanocephalus</i> (Fabricius, 1798)	Stichel, 1957
Urticaceae		
<i>Parietaria debilis</i> G. Forst	<i>Hyalochilus ovatulus</i> (A. Costa, 1853)	Stichel, 1957
<i>Parietaria vulgaris</i> Hill	<i>Hyalochilus dolosus</i> Horváth, 1897	Stichel, 1957
<i>Urtica</i> sp.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Geocoris erythrocephalus</i> (Lepeletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Heterogaster affinis</i> Herrich-Schaeffer, 1835 <i>Heterogaster urticae</i> (Fabricius, 1775) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Metopoplax fuscineris</i> Stål, 1872 <i>Orsillus depressus</i> (Mulsant & Rey, 1852) <i>Raglius pineti</i> (Herrich-Schaeffer, 1835) <i>Rhyparochromus phoeniceus</i> (Rossi, 1794) <i>Scolopostethus affinis</i> (Schilling, 1829) <i>Scolopostethus cognatus</i> Fieber, 1861 <i>Scolopostethus pictus</i> (Schilling, 1829) <i>Tropidothorax leucopterus</i> (Goeze, 1778)	Hoberlandt, 1956; Stichel, 1957; Çakır, 1988; Lodos, Önder et al., 1999
<i>Urtica dioeca</i> L.	<i>Heterogaster urticae</i> (Fabricius, 1775) <i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Microplax albofasciata</i> (A. Costa, 1847) <i>Nysius graminicola graminicola</i> (Kolenati, 1845) <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974; Lodos et al., 1978
<i>Urtica morifolia</i> Poir.	<i>Heterogaster urticae</i> (Fabricius, 1775)	Stichel, 1957; Aysev, 1974
<i>Urtica urens</i> L.	<i>Heterogaster urticae</i> (Fabricius, 1775)	Stichel, 1957; Aysev, 1974
Verbanaceae		
<i>Verbana officinalis</i> L.	<i>Platyplax inermis</i> (Rambur, 1839)	Stichel, 1957; Aysev, 1974
<i>Vitex</i> sp.	<i>Lygaeus equestris</i> (Linnaeus, 1758)	Lodos et al., 1999

<i>Vitex agnus-castus</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Xanthochilus saturnius</i> (Rossi, 1790)	Çakır, 1988, Lodos et al., 1999; Özsarac et al., 2001
Vitaceae		
<i>Vitis vinifera</i> L.	<i>Heterogaster urticae</i> (Fabricius, 1775) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Megalonotus sabulicola</i> (Thomson, 1870) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Nysius cymoides</i> (Spinola, 1837) <i>Nysius senecionis senecionis</i> (Schilling, 1829) <i>Nysius ericae ericae</i> (Schilling, 1829) <i>Platylax salviae</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Stichel, 1957; Lodos et al., 1978, 1999
Additional Information for Part I (Kıyak et al, 2020).		
Apiaceae		
Apiaceae (Umbelliferae)	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Nysius graminicola graminicola</i> (Kolenati, 1845)	Lodos et al., 1978, 1999; Çakır, 1988
<i>Conium maculatum</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Yazıcı, 2019
Apocynaceae		
<i>Nerium oleander</i> L.	<i>Arocatus longiceps</i> Stål, 1872 <i>Caenocoris nerii</i> (Germar, 1847) <i>Lygaeus creticus</i> Lucas, 1854 <i>Lygaeus equestris</i> (Linnaeus, 1758) <i>Metopoplax origani</i> (Kolenati, 1845) <i>Scolopostethus pictus</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763) <i>Tropidothorax leucopterus</i> (Goeze, 1778)	Stichel, 1957; Aysev, 1974; Lodos et al., 1978, 1999
Asparagaceae		
<i>Asparagus</i> sp.	<i>Geocoris megacephalus</i> (Rossi, 1790)	Aysev, 1974
Asphodelaceae		
<i>Asphodelus</i> sp.	<i>Beosus maritimus</i> (Scopoli, 1763) <i>Rhyparochromus vulgaris</i> (Schilling, 1829) <i>Spilostethus pandurus</i> (Scopoli, 1763)	Lodos et al., 1999
<i>Asphodelus microcarpus</i> Viv.	<i>Macroplox fasciata fasciata</i> (Herrich-Schaeffer, 1835)	Lodos et al, 1978
Asteraceae		
Asteraceae (Compositae)	<i>Plinthisus longicollis</i> Fieber, 1861	Lodos et al., 1999
<i>Echinops</i> sp.	<i>Pionosomus persimilis</i> Horváth, 1895	Hoberlandt, 1956
Cannabaceae		
<i>Cannabis</i> sp.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Çakır, 1988; Lodos et al., 1999
<i>Cannabis sativa</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825) <i>Kleidocerys ericae</i> (Horváth, 1908) <i>Spilostethus saxatilis</i> (Scopoli, 1763)	Lodos et al., 1978, 1999
Colchicaceae		
<i>Colchicum autumnale</i> L.	<i>Spilostethus saxatilis</i> (Scopoli, 1763)	Stichel, 1957; Aysev, 1974
Cupressaceae		
<i>Thuja</i> sp.	<i>Orsillus maculatus</i> (Fieber, 1861) <i>Orsillus depressus</i> (Mulsant & Rey, 1852)	Lodos et al., 1999
<i>Platycladus orientalis</i> L. (Syn. <i>Thuja orientalis</i>)	<i>Orsillus depressus</i> (Mulsant & Rey, 1852)	Stichel, 1957
Ericaceae		
<i>Rhododendron tomentosum</i> Harmaja (Syn. <i>Ledum palustre</i>)	<i>Kleidocerys resedae resedae</i> (Panzer, 1797)	Aysev, 1974
Fabaceae		
Fabaceae (Leguminosae)	<i>Cymus melanocephalus</i> Fieber, 1861 <i>Oxycarenus pallens</i> (Herrich-Schaeffer, 1850) <i>Rhyparochromus phoeniceus</i> (Rossi, 1794) <i>Stygnocoris sabulosus</i> (Schilling, 1829)	Lodos et al., 1999
<i>Acacia</i> sp.	<i>Geocoris luridus luridus</i> (Fieber, 1844) <i>Nysius cymoides</i> (Spinola, 1837) <i>Plinthisus mehadiensis</i> Horvath, 1881	Lodos et al., 1999; Çakır & Önder, 1990
<i>Medicago sativa</i> L.	<i>Geocoris erythrocephalus</i> (Lepelletier & Serville, 1825)	Yazıcı, 2019

Relationship of Lygaeoidea species and host plant families

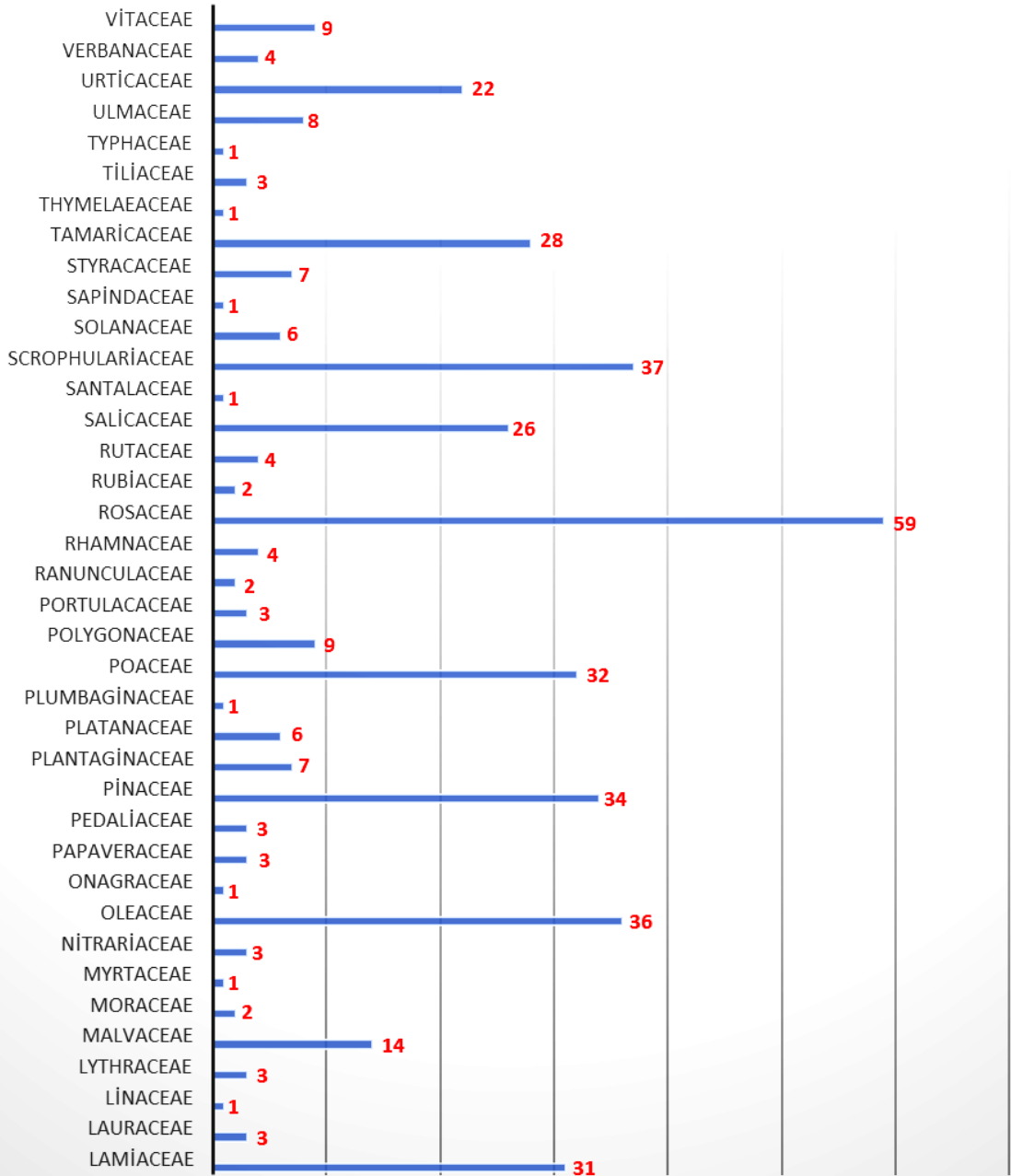


Figure 1. Distribution of Lygaeoidea species numbers according to families of host plants in Turkey.

Table 2. The number of Lygaeoidea species on hostplants family in Turkey

Host plant Family	Number of Lygaeoidea species on the host	Host plant Family	Number of Lygaeoidea species on the host
Lamiaceae	31	Ranunculaceae	2
Lauraceae	3	Rhamnaceae	4
Linaceae	1	Rosaceae	59
Lythraceae	3	Rubiaceae	2
Malvaceae	14	Rutaceae	4
Moraceae	2	Salicaceae	26
Myrtaceae	1	Santalaceae	1
Nitrariaceae	3	Scrophulariaceae	37
Oleaceae	36	Solanaceae	6
Onagraceae	1	Sapindaceae	1
Papaveraceae	3	Styracaceae	7
Pedaliaceae	3	Tamaricaceae	28
Pinaceae	34	Thymelaeaceae	1
Plantaginaceae	7	Tiliaceae	3
Platanaceae	6	Typhaceae	1
Plumbaginaceae	1	Ulmaceae	8
Poaceae	32	Urticaceae	22
Polygonaceae	9	Verbanaceae	4
Polygonaceae	9	Vitaceae	9

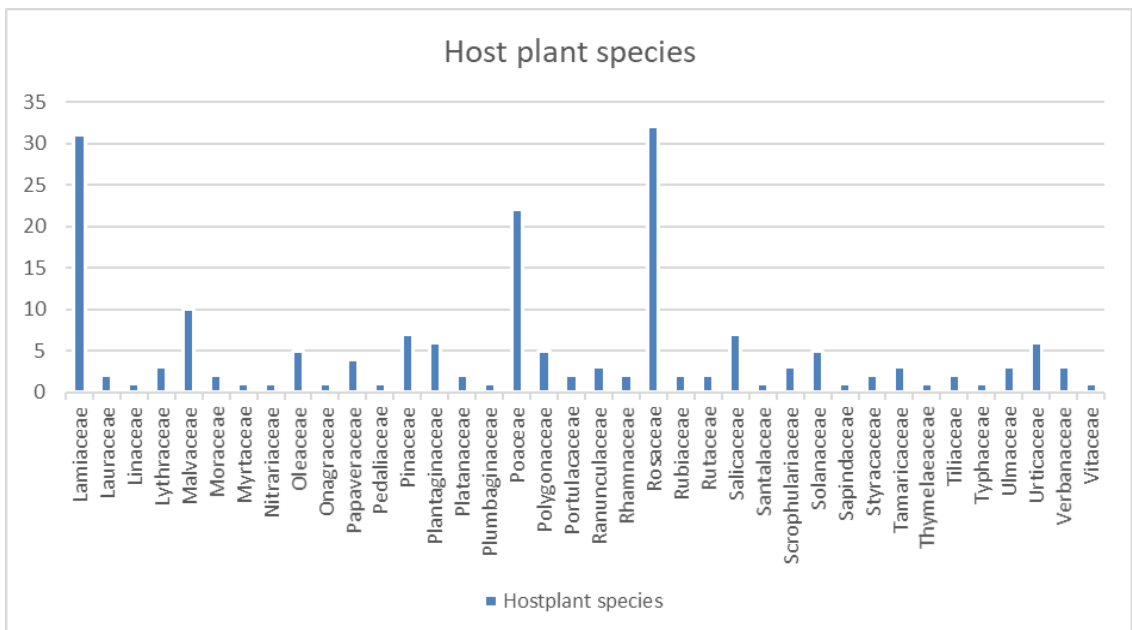
**Figure 2.** Host plants species of Lygaeoidea species in Turkey.

Table 3. The number of host plant species in Turkey

Host plant Family		Number of Host plant species	Host plant Family		Number of Host plant species
37	Lamiaceae	31	56	Ranunculaceae	3
38	Lauraceae	2	57	Rhamnaceae	2
39	Linaceae	1	58	Rosaceae	32
40	Lythraceae	3	59	Rubiaceae	2
41	Malvaceae	10	60	Rutaceae	2
42	Moraceae	2	61	Salicaceae	7
43	Myrtaceae	1	62	Santalaceae	1
44	Nitrariaceae	1	63	Scrophulariaceae	3
45	Oleaceae	5	64	Solanaceae	5
46	Onagraceae	1	65	Sapindaceae	1
47	Papaveraceae	4	66	Styracaceae	2
48	Pedaliaceae	1	67	Tamaricaceae	3
49	Pinaceae	7	68	Thymelaeaceae	1
50	Plantaginaceae	6	69	Tiliaceae	2
51	Platanaceae	2	70	Typhaceae	1
52	Plumbaginaceae	1	71	Ulmaceae	3
53	Poaceae	22	72	Urticaceae	6
54	Polygonaceae	5	73	Verbanaceae	3
55	Portulacaceae	2	74	Vitaceae	1

CONCLUSION AND DISCUSSION

In this study, as a result of the literature review between the years 1922-2021, a total of 187 taxa from 38 plant families (67 taxon at genera level, 120 taxon at species level) were identified in association with Lygaeoidea species.

Among these families, Rosaceae has the highest number of host plants, followed by Lamiaceae with 31 taxa number, Poaceae with 22 taxa number and Malvaceae with 10 taxa number (Table 3; Figure 2).

Considering the preference of Lygaeoidea species in these families, 59 species were

associated with Rosaceae, 34 species with Pinaceae, 32 species with Poaceae and Scrophulariaceae, 31 species with Lamiaceae and Oleaceae, 28 species with Tamaricaceae, 26 species with Salicaceae, 22 species with Urticaceae and 15 species with Malvaceae.

When the number of Lygaeoidea species is compared with the plant taxa, the most conspicuous family is the Scrophulariaceae with 32 Lygaeoidea species, related to 3 plant taxa.

It is followed by Tamaricaceae with 28 Lygaeid species related to 3 plant taxa, Oleaceae with 31 Lygaeid species related

to 5 plant taxa, Pinaecae with 34 Lygaeid species related to 7 plant taxa, Urticaceae with 22 Lygaeid species related to 6 plant taxa, and Salicaceae with 26 Lygaeid species related to 7 plant taxa.

Among the plant taxa, *Verbascum* is taxon most associated with the Lygaeid species, and 37 Lygaeid species have been identified on the species of this genera. *Olea europea* with 28 species, *Tamarix* sp. with 27 species, *Pinus* sp. with 20 species. and *Salix* sp., *Triticum* sp. with 18 species and *Urtica* sp. follow it.

When looking at this list, it can be seen that various species are present on one or more hosts.

For example, *Lygaeus equestris* (Linnaeus, 1758) and *Spilostethus pandurus* in 28, *Metopoplax origani* (Kolenati, 1845) 24, *Oxycarenus pallens* (Herrich-Schaeffer, 1850) 20, *Nysius graminicola graminicola* (Kolenati, 1845) and *Spilostethus saxatilis* (Scopoli, 1763) 16 different hosts were detected.

This study (Part-II), some overlooked records that should be included in the part I presented by Kiyak et al (2020) presents as an addition.

With these additional records, the number of families in the Part-I was increased to 39 families with the addition of Asparagaceae, Asphodelaceae and Colchicaceae families, consequently it include 232 taxa with the addition of 10 taxa (4 of at the genera level and 6 at the species level) which were not mentioned in the first study.

As a result of both studies, a total of 409 plant taxa were obtained from 77 plant families associated with Lygaeoidea species in Turkey.

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