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## New record *Leucodellus zagdani* (Putshkov, 1970) (Hemiptera: Heteroptera: Miridae) and updated checklist of Heteroptera on maize fields in the Central Anatolia Region

İç Anadolu Bölgesi mısır ekim alanlarında yeni kayıt *Leucodellus zagdani* (Putshkov, 1970) (Hemiptera: Heteroptera: Miridae) ve güncellenmiş Heteroptera kontrol listesi

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### ABSTRACT

This study was carried out in the maize cultivation areas of Aksaray, Kırşehir, Konya, Karaman, Nevşehir, Niğde, Kayseri, Kırıkkale, Ankara, Eskişehir, Sivas, Yozgat and Çankırı provinces in the Central Anatolia Region between 2017 and 2022. Surveys were carried out in three different phenological periods of maize, according to the simple random sampling method. In each location where the research was conducted, plants on 2-meter rows at 5 points were examined using visual inspection and traps in the first two periods, and using visual inspection and a Japanese umbrella in the 3rd period. Results showed that 36 species, belonging to 25 genera from 10 families (Alydidae, Anthocoridae, Berytidae, Geocoridae, Lygaeidae, Miridae, Nabidae, Pentatomidae, Rhopalidae, Tingidae) were recorded. Among them, *Leucodellus zagdani* (Putshkov, 1970) was the second record in Türkiye, and the first record for maize. *Kalama trimaizeis* (Schrank, 1801) was reported for the third time in the fauna of Türkiye.

### INTRODUCTION

Maize (*Zea mays* L., Poaceae: Poales), which has been cultivated for thousands of years, is a warm climate grain that can be cultivated in almost every climate zone in the world, except the Antarctic continent. Among the world's grain production (about 3 billion tons), maize ranks first in terms of production (about 1 billion tons) and second in terms of cultivation area (about 730 million hectares), with

approximately 196 million hectares (Anonymous 2020). Approximately 20% of world maize production is used for human food (direct consumption), 10% for processed food, 10% for other consumption and seed, and 60% for animal feed (Özcan 2009). Thirty-five percent of the maize grown in Türkiye is used in human nutrition, 30% in animal feed, and 20% in the animal feed industry (Gençtan et al. 1995).

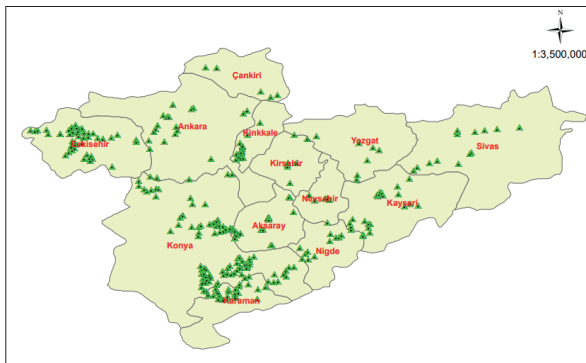
Maize, which is grown in almost all regions of Türkiye, ranks third after wheat and barley in terms of production (Anonymous 2014), is cultivated in an area of approximately 12.900 thousand decares, and approximately 34 million tons of product is obtained (Anonymous 2021).

In Türkiye, the increase in irrigated areas in agriculture, the development of animal husbandry, agricultural support policies, etc. for these reasons, maize cultivating areas in the Central Anatolia Region have increased during the last decades and, consequently, entomological pests have raised. Nowadays, there are more than 400 more or less species harmful to maize, which cause damage in different phenological stages of the plant (Şimşek 2004). In the study conducted for this purpose, Heteroptera species found in the maize plant were also identified.

Heteroptera Latreille, 1810 is one of the largest and most diverse groups of insects, with more than 45.254 described species. Among these, 8.354 species in 1.520 genera are recorded in the Palearctic region (Henry 2017). Studies on the Heteroptera in Türkiye indicated that more than 1.500 Heteroptera species have been recorded so far, which represents about 5% of the insect fauna (Tezcan 2020). The present study aims to provide an updated checklist of Heteroptera species, in Türkiye, as well as to refer *Leucodellus zagdani* as a new record for maize.

## MATERIALS AND METHODS

Heteroptera specimens were collected during the spring, summer, and autumn of 2017-2022 from Aksaray, Kırşehir, Konya, Karaman, Nevşehir, Niğde, Kayseri, Kırıkkale, Ankara, Eskişehir, Sivas, Yozgat, and Çankırı provinces of the Central Anatolia region. The surveys were conducted in 13 provinces, 77 districts and 304 locations (Figure 1) on a total of 54.720 maize plants in 3 different phenological stages of maize. Surveys were carried out by visual inspection and using a net trap in 5 points of each location in the first two phenological periods of the maize and both visual inspection



**Figure 1.** Survey areas of maize fields in the Central Anatolia Region

and using a Japanese umbrella in the 3rd period. Materials were deposited in the Nazife Tuatay Plant Protection Museum (Ankara).

## RESULTS

In the study, 36 species, 25 genera and 10 families belonging to the Heteroptera from Türkiye are included. The species were listed below.

### HETEROPTERA (HEMIPTERA)

#### Family ALYDIDAE Amyot and Serville, 1843

Genus: *Alydus* Fabricius, 1803

*Alydus calcaratus* (Linnaeus, 1758)

Material examined: Ankara, Ayaş 737 m, 40°1'887"N, 32°17'71"E, 2.07.2020, ♀, ♂.

Previous records: Adana, Amasya, Ankara, Artvin, Balıkesir, Bayburt, Çankırı, Çorum, Erzurum, Giresun, İzmir, Kars, Kastamonu, Kayseri, Tokat, Trabzon (Önder et al. 2006, Dursun and Fent 2009, Yıldırım et al. 2011, 2013, Fent and Japoshvili 2012, Küçükbasmacı and Kıyak 2015, Zengin and Dursun 2019, Akman and Dursun 2021, Kıyak and Baş 2021).

#### Family ANTHOCORIDAE Fieber, 1836

Genus: *Cardiastethus* Fieber, 1860

*Cardiastethus nazarenus* Reuter, 1884

Material examined: Kayseri, Bünyan, Büyüktuzhisar, 1208 m, 38°57'8"N, 35°50'15"E, 19.09.2019, ♀, ♂, Bünyan, Karatay, 1437 m, 38°38'67"N, 35°56'68"E, 19.09.2019, ♀, ♂, Melikgazi, Yeşilyurt, 1086 m, 38°48'73"N, 35°36'54"E, 19.09.2019, ♀, ♂, Yahyalı, İlyashı, 1081 m, 38°10'82"N, 35°17'91"E, 18.09.2019, ♀, ♂, Yeşilhisar, Musahacılı, 1077 m, 38°12'53"N, 35°17'97"E, 18.09.2019, ♀, ♂.

Previous records: Adıyaman, Antalya, Batman, Diyarbakır, Gaziantep, Hatay, İzmir, Mardin, Mersin, Muğla, Siirt, Şanlıurfa, Şırnak (Hoberlandt 1955, Tuatay et al. 1972, Önder et al. 1983, 2006, Ülgentürk et al. 2013, Yiğit and Telli 2013, Bolu 2019).

Genus: *Orius* Wolff, 1811

*Orius (Heterorius) horvathi* (Reuter, 1884)

Material examined: Aksaray, Çulfa, 958 m, 38°18'486"N, 33°14'19"E, 07.09.2017, ♀, ♂, Eskil, Atarlar, 970 m, 38°13'466"N, 33°23'79"E, 07.09.2017, 2 ♀♀, ♂, Bayramdöğün, 1002 m, 07.09.2017, ♀, ♂, Meryemağıl, 961 m, 38°18'339"N, 33°15'945"E, 07.09.2017, ♀, ♂, Ankara, Ayaş, 737 m, 40°01'887"N, 32°17'71"E, 02.09.2020, 2 ♀♀, 2 ♂♂, Gündül,

Güneyce, 735 m, 40°03'25"N, 32°11'60"E, 02.09.2020, ♀, ♂, Polatlı, Oğuzlar, 694 m, 39°47'894"N, 32°02'999"E, 02.09.2020, ♀, ♂, Şereflikoçhisar, Akin, 920 m, 39°08'35"N, 33°16'48"E, 01.09.2020, 2 ♀♀, 2 ♂♂, Şeker, 982 m, 39°08'485"N, 33°11'932"E, 01.09.2020, ♀, ♂, Çankırı, Kızılırmak, Hacılar, 565 m, 40°19'976"N, 33°51'883"E, 06.10.2021, ♀, ♂, Kızılırmak, Tepealagöz, 539 m, 40°22'00"N, 33°58'215"E, 06.10.2021, 2 ♀♀, 2 ♂♂, Eskişehir, Alpu, Aktepe, 830 m, 39°42'590"N, 30°57'508"E, 08.09.2020, 4 ♀♀, 4 ♂♂, Bahçecik, 767 m, 39°48'530"N, 30°52'57"E, 08.09.2020, 5 ♀♀, 4 ♂♂, Beylikova, Akköprü, 743 m, 39°41'445"N, 31°15'482"E, 09.09.2020, ♀, ♂, Çifteler, Emineken, 869 m, 39°22'992"N, 31°5'640"E, 09.09.2020, 4 ♀♀, 4 ♂♂, Mahmutiye, 905 m, 39°26'505"N, 31°00'513"E, 09.09.2020, ♀, ♂, 760 m, 39°47'430"N, 30°57'895"E, 08.09.2020, 4 ♀♀, 2 ♂♂, Odunpazarı, Sarıkavak, 932 m, 37°46'144"N, 34°44'567"E, 08.09.2020, ♀, ♂, Sevinç, 782 m, 39°45'870"N, 30°35'609"E, 08.09.2020, ♀, ♂, Tepebaşı, Beyazaltın-2, 836 m, 39°52'62"N, 30°51'43"E, 07.09.2020, ♀, ♂, Kayseri, Melikgazi, Yeşilyurt, 1086 m, 38°48'73"N, 35°36'54"E, 19.09.2019, ♀, 11 ♂♂, Yeşilhisar, Musahacılı, 1077 m, 38°12'53"N, 35°17'97"E, 18.09.2019, ♀, ♂, Kırıkkale, Çelebi, Karabucak-2, 749 m, 39°30'273"N, 33°24'323"E, 31.08.2020, ♀, ♂, Karakeçili, Akkoşan-1, 780 m, 39°37'562"N, 33°23'197"E, 31.08.2020, 2 ♀♀, 2 ♂♂, Keskin, Köprüköy-1, 750 m, 39°33'848"N, 33°25'989"E, 31.08.2020, ♀, ♂, Nevşehir, Avanos, Alibeyyeri, 917 m, 38°44'31"N, 34°46'48"E, 17.09.2019, ♀, ♂, Derinkuyu, 1362 m, 38°23'27"N, 34°44'70"E, 17.09.2019, ♀, ♂, Sivas, Gemerek, Eskiçubuk, 1153 m, 39°14'651"N, 36°08'625"E, 15.09.2021, ♀, ♂, Yıldızeli, Bakircioğlu, 1265 m, 39°49'138"N, 36°46'142"E, 15.09.2021, ♀, ♂.

Previous records: Adana, Adıyaman, Antalya, Diyarbakır, Gaziantep, Mardin, Muş, Şanlıurfa, Siirt (Çelik 1981, Zeren and Düzgüneş 1983, Karaat 1986, Yayla 1984, Akkaya 1995, Göven 1995, Büyük and Özpınar 1999, Bolu et al. 2005, Özgen and Karsavuran 2005, Büyük 2008, Bolu 2019, Pehlivan and Atakan 2020, Kaymak 2022).

*Orius (Heterorius) minutus* (Linnaeus, 1758)

Material examined: Ankara, Şereflikoçhisar, Şeker, 982 m, 39°08'485"N, 33°11'932"E, 01.09.2020, ♀, ♂, Eskişehir, Alpu, Gökçeoğlu, 852 m, 39°43'829"N, 30°52'866"E, 08.09.2020, ♀, ♂.

Previous records: Adana, Adıyaman, Ankara, Antalya, Artvin, Bartın, Batman, Diyarbakır, Edirne, Erzincan, Erzurum, Gaziantep, Iğdır, Karaman, Kars, Kastamonu, Konya, Mardin, Niğde, Siirt, Şanlıurfa, Tokat, Zonguldak (Hoberlandt 1955, Önder and Adıgüzel 1979, Yaşarakıncı 1991, Çam 1993, Göven 1995, Yıldırım et al. 2013, Yazıcı

2019, Bolu 2019, 2020, Pehlivan and Atakan 2020, Yazıcı 2022c).

*Orius (Orius) laevigatus* (Fieber, 1860)

Material examined: Ankara, Ayaş, 737 m, 40°01'887"N, 32°17'71"E, 02.09.2020, ♀, ♂, Güneyce, 735 m, 40°03'249"N, 32°11'601"E, 02.09.2020, ♀, ♂, Polatlı, Oğuzlar, 694 m, 39°47'894"N, 32°02'999"E, 02.09.2020, ♀, ♂, Eskişehir, Mihaliççık, Yunusemre, 756 m, 39°45'344"N, 31°29'84"E, 09.09.2020, ♀, ♂, Seyitgazi, Yenikent, 918 m, 39°34'281"N, 30°45'713"E, 09.09.2020, ♀, ♂, Tepebaşı, Keskin, 837 m, 39°49'963"N, 30°22'859"E, 06.07.2020, ♀, ♂, Kırıkkale, Karakeçili, Akkoşan-2, 756 m, 39°28'604"N, 33°24'361"E, 30.06.2020, ♀, ♂.

Previous records: Diyarbakır, Mardin, Şanlıurfa (Önder and Adıgüzel 1979, Bolu 2019).

*Orius (Orius) niger* (Wolff, 1811)

Material examined: Aksaray, Bozcamahtut, 972 m, 38°12'948"N, 33°21'52"E, 04.07.2017, 2 ♀♀, ♂, Eskil, Atarlar, 970 m, 38°13'466"N, 33°23'793"E, 07.09.2017, ♀, ♂, Eskil, Beşoğlu, 1005 m, 38°08'930"N, 33°18'547"E, 07.09.2017, ♀, ♂, Böğet, 939 m, 38°26'432"N, 33°50'228"E, 06.09.2017, ♀, ♂, Çukuryurt, 962 m, 38°16'769"N, 33°14'933"E, 07.09.2017, ♀, ♂, Çulfa, 958 m, 38°18'486"N, 33°14'19"E, 07.09.2017, ♀, ♂, Filikçitol, 958 m, 38°15'895"N, 33°18'262"E, 07.09.2017, ♀, ♂, Gümüşdüğün, 972 m, 38°14'98"N, 33°19'944"E, 07.09.2017, ♀, ♂, Meryemağul, 961 m, 38°18'339"N, 33°15'945"E, 07.09.2017, ♀, ♂, Koçaş-2, 950 m, 38°27'425"N, 33°49'294"E, 30.06.2017, 2 ♀♀, ♂, Koçaş, 938 m, 38°26'574"N, 33°53'196"E, 06.09.2017, 2 ♀♀, ♂, Konya, 985 m, 38°11'360"N, 33°19'702"E, 07.09.2017, ♀, ♂, Kökez, 978 m, 38°17'69"N, 33°13'309"E, 07.09.2017, ♀, ♂, Koçaş, 940 m, 38°27'927"N, 33°50'133"E, 06.09.2017, 2 ♀♀, ♂, Ortaköy, Sarıkaraman-1, 992 m, 38°46'837"N, 34°09'989"E, 08.09.2017, ♀, ♂, Ortaköy, Sarıkaraman-1, 992 m, 38°46'837"N, 34°09'989"E, 29.06.2017, ♀, ♂, Yenikent, 919 m, 38°17'202"N, 33°44'743"E, 07.09.2017, ♀, ♂, Yenikent, 919 m, 38°16'888"N, 33°42'960"E, 06.09.2017, 2 ♀♀, ♂, Yeşiltömek, 945 m, 35°28'430"N, 33°50'225"E, 06.09.2017, ♀, ♂, Ankara, Bala, Kesikköprü-1, 770 m, 39°24'723"N, 33°22'200"E, 01.09.2020, ♀, 3 ♂♂, Bala, Tigem-Hacıbekir, 867 m, 39°22'32"N, 33°19'471"E, 01.09.2020, ♀, ♂, Gölbaşı, Karacaören, 1057 m, 39°22'613"N, 32°56'220"E, 01.09.2020, 2 ♀♀, 2 ♂♂, Güdül, Güneyce, 735 m, 40°03'249"N, 32°11'601"E, 02.09.2020, ♀, 2 ♂♂, Haymana, Kerpiçlik, 990 m, 39°03'737"N, 32°35'730"E, 01.09.2020, 2 ♀♀, ♂, Kalecik, 733 m, 40°07'746"N, 33°29'926"E, 01.07.2020, 2 ♀♀, ♂, Polatlı, Kiranharmanı, 690 m, 39°66'266"N, 31°96'912"E, 02.07.2020, ♀, ♂, Oğuzlar, 694 m, 39°47'894"N,

32°02'999"E, 02.09.2020, ♀, 2 ♂♂, Şereflikoçhisar, Akin, 920 m, 39°08'35"N, 33°16'48"E, 01.09.2020, ♀, ♂, Çankırı, Germece, 612 m, 40°25'181"N, 33°42'598"E, 06.10.2021, ♀, ♂, Eskişehir, Alpu, Bozan, 783 m, 39°46'513"N, 31°6'438"E, 08.09.2020, 2 ♀♀, ♂, Gökçeoğlu, 852 m, 39°43'829"N, 30°52'866"E, 08.09.2020, ♀, ♂, Beylikova, Yalınlı, 740 m, 39°42'288"N, 31°23'377"E, 09.09.2020, 2 ♀♀, ♂, Çifteler, Hayriye, 892 m, 39°22'628"N, 30°57'839"E, 09.09.2020, 3 ♀♀, 2 ♂♂, Mahmudiye, Tokathan, 908 m, 39°36'264"N, 30°49'732"E, 09.09.2020, ♀, ♂, Odunpazarı, Karacahüyük, 780 m, 39°45'877"N, 30°35'609"E, 08.09.2020, ♀, ♂, Sarıkavak, 932 m, 37°46'144"N, 34°44'567"E, 08.09.2020, ♀, 2 ♂♂, Seyitgazi, Çukurağıl, 925 m, 39°30'663"N, 30°46'861"E, 09.09.2020, ♀, ♂, Doğançayır, 915 m, 39°32'567"N, 30°49'44"E, 09.09.2020, ♀, ♂, Yenikent, 918 m, 39°34'281"N, 30°45'713"E, 09.09.2020, ♀, ♂, Sivrihisar, İlören, 688 m, 39°54'132"N, 32°46'543"E, 09.09.2020, ♀, ♂, Tepebaşı, Beyazaltın-2, 836 m, 39°52'62"N, 30°51'43"E, 07.09.2020, ♀, ♂, Karagözler, 814 m, 39°45'908"N, 30°24'524"E, 06.07.2020, ♀, ♂, Kayseri, Develi, Sarıca, 1090 m, 38°14'38"N, 35°24'36"E, 18.09.2019, ♀, ♂, Soysallı, 1074 m, 38°21'89"N, 35°22'93"E, 18.09.2019, ♀, ♂, Melikgazi, Yeşilyurt, 1086 m, 38°48'73"N, 35°36'54"E, 19.09.2019, ♀, ♂, Yeşilhisar, 1092 m, 38°26'56"N, 35°8'27"E, 18.09.2019, ♀, ♂, Yeşilhisar, Musahacılı, 1077 m, 38°12'53"N, 35°17'97"E, 18.09.2019, 2 ♀♀, ♂, Kırkkale, Balıseyh, 838 m, 39°56'364"N, 33°42'64"E, 31.08.2020, ♀, ♂, Çelebi, Alıcıyenyapan, 747 m, 39°29'318"N, 33°25'121"E, 30.06.2020, ♀, ♂, Kaldırım-1, 750 m, 39°25'344"N, 33°23'812"E, 31.08.2020, ♀, ♂, Karakeçili, Akkoşan-1, 780 m, 39°37'562"N, 33°23'197"E, 31.08.2020, ♀, ♂, Keskin, Köprüköy-3, 724 m, 39°34'660"N, 33°25'491"E, 31.08.2020, ♀, ♂, Köprüköy-1, 750 m, 39°33'848"N, 33°25'989"E, 31.08.2020, ♀, 2 ♂♂, Kırşehir, Boztepe, Külhöyük, 1147 m, 39°18'819"N, 34°15'851"E, 08.09.2017, ♀, ♂, Konya, Altınekin, Nasuh kuyusu, 977 m, 38°22'681"N, 32°59'933"E, 07.09.2018, ♀, ♂, Oğuzeli, 995 m, 38°20'147"N, 33°07'414"E, 29.05.2018, ♀, 4 ♂♂, Yenikuyu, 984 m, 38°14'917"N, 33°04'613"E, 07.09.2018, ♀, ♂, Yeniayla, 959 m, 38°20'654"N, 32°46'898"E, 10.09.2018, ♀, ♂, Çumra, Güvercinlik, 1002 m, 37°36'364"N, 32°49'777"E, 06.09.2018, ♀, ♂, Okçu-1, 992 m, 37°31'781"N, 32°48'817"E, 06.09.2018, ♀, ♂, Üçhöyük, 988 m, 37°54'985"N, 32°54'919"E, 06.09.2018, ♀, ♂, Ereğli, Çiller, 994 m, 37°38'959"N, 34°06'08"E, 03.09.2018, ♀, ♂, Karapınar, Akkuyu, 983 m, 37°42'908"N, 33°23'98"E, 04.09.2018, ♀, ♂, Küçükkaşlama, 992 m, 37°36'52"N, 33°11'460"E, 23.05.2018, ♀, ♂, Nevşehir, Acıgöl, Karapınar, 1301 m, 38°33'22"N, 34°13'10"E, 17.09.2019, ♀, ♂, Avanos, Ayhanlar, 933 m, 38°46'14"N, 34°44'57"E, 17.09.2019, ♀, ♂, Gülşehir, Yeşilöz, 915 m, 38°45'88"N, 34°42'58"E, 17.09.2019, ♀, ♂, Niğde,

Bor, Balcı, 1099 m, 37°56'23"N, 34°26'37"E, 27.06.2019, ♀, ♂, Sivas, Gemerek, Yenidoğan, 1150 m, 39°11'800"N, 36°05'128"E, 15.09.2021, ♀, ♂, Şarkışla, Cemel, 1258 m, 39°21'54"N, 36°27'204"E, 15.09.2021, 2 ♀♀, 2 ♂♂, Yozgat, Boğazlıyan, 1148 m, 39°07'661"N, 35°12'636"E, 08.09.2021, ♀, ♂.

Previous records: Adana, Adıyaman, Ankara, Antalya, Artvin, Bayburt, Batman, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Gaziantep, Iğdır, Karaman, Kars, Kastamonu, Konya, Mardin, Niğde, Siirt, Şanlıurfa (Hoberlandt 1955, Önder and Adıgüzel 1979, Önder et al. 1984, Karaat 1986, Yıldırım et al. 2013, Kaplan 2014, Matocq et al. 2014, Yazıcı 2019, 2022c, Bolu 2019, 2020, Pehlivan and Atakan 2020).

#### Family: BERYTIDAE Fieber, 1851

Genus: *Berytinus* Kirkaldy, 1900

*Berytinus (Lizinus) montivagus* (Meyer-Dür, 1841)

Material examined: Karaman, Ayrancı, Böğecik, 1003 m, 38°28'54"N, 33°49'61"E, 26.06.2019, ♀, ♂.

Previous records: Ankara, Aydın, Diyarbakır, İzmir (Hoberlandt 1955, Lodos et al. 1984, Önder et al. 2006, Bolu 2020, Yazıcı 2022b).

#### Family: GEOCORIDAE Baerensprung, 1860

Genus: *Geocoris* Fallen, 1814

*Geocoris (Geocoris) megacephalus* (Rossi, 1790)

Material examined: Konya, Karapınar, Yirce, 996 m, 37°33'191"N, 33°31'572"E, 28.06.2018, ♀, ♂.

Previous records: Adana, Adıyaman, Amasya, Antalya, Aydın, Denizli, Diyarbakır, Elazığ, İzmir, Kahramanmaraş, Kayseri, Malatya, Manisa, Mardin, Mersin, Muğla, Nevşehir, Niğde, Siirt, Tekirdağ, Şanlıurfa, Uşak (Hoberlandt 1955, Aysev 1974, Çakır and Önder 1990, Yazıcı et al. 2015, Çerçi and Özgen 2021).

#### Family: LYGAEIDAE Schilling, 1829

Genus: *Nysius* Dallas, 1852

*Nysius cymoides* (Spinola, 1837)

Material examined: Ankara, Polatlı, Karapınar, 690 m, 39°38'903"N, 32°12'607"E, 2.07.2020, ♀, ♂, Karaman, Ayrancı, Böğecik, 1003 m, 38°28'54"N, 33°49'61"E, 26.06.2019, 2 ♀♀, ♂, 1117 m, 37°21'24"N, 33°40'2"E, 20.08.2019, ♀, ♂, Bölük yazı, 1047 m, 37°12'21"N, 33°45'58"E, 25.06.2019, ♀, ♂, 27.05.2019, ♀, ♂, Burunoba-2, 999 m, 37°25'98"N, 33°22'87"E, 26.06.2019, ♀, ♂, Kazımkarabekir, Kızılkuyu,



1052 m, 37°20'11"N, 32°49'58"E, 24.06.2019, ♀, ♂, Karaman, İslıhisar, 1011 m, 37°20'48"N, 33°1'59"E, 21.08.2019, ♀, ♂, 25.06.2019, 5 ♀♀, 2 ♂♂, Kaşoba, 1007 m, 37°25'69"N, 33°1'15"E, 25.06.2019, 4 ♀♀, 6 ♂♂, Kılbasan-3, 1004 m, 37°15'8"N, 33°11'66"E, 27.05.2019, ♀, ♂, Mesudiye-1, 1010 m, 37°29'59"N, 33°8'11"E, 25.06.2019, ♀, 3 ♂♂, Ortaoba, 1011 m, 37°27'35"N, 33°2'71"E, 27.05.2019, ♀, ♂, Kayseri, Bünyan, 1424 m, 38°50'1"N, 35°50'99"E, 10.07.2019, ♀, 3 Melikgazi, 19.06.2019, 6 ♀♀, 6 ♂♂, Yeşilyurt, 1086 m, 38°48'73"N, 35°36'54"E, 10.07.2019, ♀, 2 ♂♂, 19.06.2019, ♀, 2 ♂♂, Pınarbaşı, Pazarören, 1437 m, 38°39'1"N, 36°9'44"E, 20.06.2019, 3 ♀♀, 3 ♂♂, Sarıođlan, 1176 m, 39°4'44"N, 36°1'16"E, 20.06.2019, 2 ♀♀, 2 ♂♂, Yahyalı, 19.06.2019, 4 ♀♀, 7 ♂♂, Yeşilhisar, Kılcan, 1100 m, 38°16'88"N, 35°7'2"E, 9.07.2019, ♀, ♂, Nevşehir, Acıgöl, Karapınar, 1301 m, 38°33'22"N, 34°13'10"E, 30.05.2019, ♀, ♂, Nevşehir, Derinkuyu, 1362 m, 58°23'27"N, 34°44'70"E, 28.06.2019, 2 ♀♀, ♂, Gülşehir, Eğrikuyu, 976 m, 38°44'9"N, 34°33'6"E, 28.06.2019, ♀, ♂, Yeşilöz, 915 m, 38°45'88"N, 34°42'58"E, 30.05.2019, ♀, ♂, Yeşilyurt, 935 m, 38°49'6"N, 34°27'76"E, 17.09.2019, ♀, ♂, Niğde, Altunhisar, Yakacık, 1180 m, 37°59'95"N, 34°18'99"E, 29.05.2019, ♀, ♂, Niğde, Bor, Emen, 1074 m, 37°48'91"N, 34°27'7"E, 29.05.2019, ♀, ♂, Konaklı, 1351 m, 38°9'74"N, 34°52'80"E, 27.06.2019, ♀, ♂, Ovacık-1, 1342 m, 38°6'19"N, 34°47'7"E, 27.06.2019, ♀, ♂, Sivas, Çayboyu, 1326 m, 39°47'651"N, 37°2'249"E, 28.06.2021, ♀, ♂, Ulaş, Ekincioglu, 1367 m, 39°28'428"N, 36°59'75"E, 28.06.2021, ♀, ♂, Yozgat, Boğazlıyan, 1148 m, 39°7'661"N, 35°12'636"E, 23.06.2021, ♀, ♂, Sarıkaya, Çıkrıkçı, 1097 m, 39°33'303"N, 35°27'243"E, 8.09.2021, ♀, ♂, Mescitli, 1125 m, 39°31'17"N, 35°33'35"E, 23.06.2021, ♀, ♂, Sorgun, Karaveli, 1088 m, 39°37'540"N, 35°14'319"E, 10.06.2021, ♀, ♂.

Previous records: Adana, Adıyaman, Ankara, Antalya, Aksaray, Artvin, Aydın, Balıkesir, Bayburt, Burdur, Bursa, Çanakkale, Çorum, Denizli, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Eskişehir, Gaziantep, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Karaman, Kars, Kayseri, Kırklareli, Kırşehir, Kilis, Kocaeli, Konya, Nevşehir, Manisa, Mardin, Mersin, Muğla, Niğde, Osmaniye, Sivas, Şanlıurfa, Şırnak, Tekirdağ, Tokat, Yalova, Yozgat, Zonguldak (Aysev 1974, Lodos et al. 1999, Önder et al. 2006, Abacıgil et al. 2010, Matocq et al. 2014, Yazıcı et al. 2015, Çerçi et al. 2018, Yazıcı 2022a, b).

*Nysius graminicola graminicola* (Kolenati, 1845)

Material examined: Konya, Çumra, Okçu-1, 992 m, 37°31'781"N, 32°48'817"E, 28.06.2018, ♀, ♂, Üçhöyük, 988 m, 37°54'985"N, 32°54'919"E, 6.09.2018, ♀, ♂, Karapınar, Akkuyu, 983 m, 37°42'908"N, 33°23'98"E, 27.06.2018, ♀, ♂.

Previous records: Adana, Afyonkarahisar, Ankara, Artvin, Aydın, Balıkesir, Bayburt, Bilecik, Burdur, Çanakkale, Çorum, Denizli, Edirne, Erzincan, Erzurum, Eskişehir, Gaziantep, Hatay, Isparta, İstanbul, İzmir, Kahramanmaraş, Karaman, Kars, Kastamonu, Kayseri, Kocaeli, Konya, Manisa, Mersin, Muğla, Nevşehir, Şanlıurfa, Tekirdağ, Uşak, Zonguldak (Hoberlandt 1955, Aysev 1974, Önder et al. 2006, Yazıcı et al. 2015, Dursun 2016, Aksu and Çıkman 2019, Sarı and Yıldırım 2021, Yazıcı 2022b).

*Nysius senecionis senecionis* (Schilling, 1829)

Material examined: Karaman, Ayrancı, Böğecik, 1003 m, 38°28'54"N, 33°49'61"E, 26.06.2019, ♀, ♂, Nevşehir, Derinkuyu, 1362 m, 58°23'27"N, 34°44'70"E, 28.06.2019, ♀, ♂, Niğde, Konaklı, 1351 m, 38°9'74"N, 34°52'80"E, 27.06.2019, ♀, ♂.

Previous records: Adana, Ankara, Artvin, Aydın, Bayburt, Çanakkale, Denizli, Edirne, Erzincan, Erzurum, Hatay, İzmir, Kars, Muğla (Hoberlandt 1955, Lodos et al. 1978, Fent 2011, Yazıcı et al. 2015).

Genus: *Oxycarenus* Fieber, 1837

*Oxycarenus (Euoxycarenus) pallens* (Herrich-Schäffer, 1850)

Material examined: Ankara, Kahramankazan, Aydın, 862 m, 40°10'89"N, 32°39'927"E, 5.06.2020, ♀, ♂, Eskişehir, Odunpazarı, Sevinç, 782 m, 39°45'870"N, 30°35'609"E, 9.06.2020, ♀, ♂, Sivas, Zara, Şehitler, 1321 m, 39°52'30"N, 37°43'985"E, 14.06.2021, ♀, ♂.

Previous records: Adana, Ankara, Antalya, Balıkesir, Bayburt, Bolu, Çorum, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Gaziantep, Hatay, Iğdır, Isparta, İzmir, Kahramanmaraş, Karabük, Karaman, Kastamonu, Kayseri, Kırkkale, Kırşehir, Kilis, Konya, Nevşehir, Mardin, Mersin, Nevşehir, Niğde, Sinop, Sivas, Zonguldak (Hoberlandt 1955, Tuatay et al. 1972, Aysev 1974, Lodos et al. 1999, Kıyak et al. 2004, Önder et al. 2006, Abacıgil et al. 2010, Matocq et al. 2014, Yazıcı et al. 2015, Dursun 2016, Çerçi and Özgen 2021, Çerçi et al. 2022, Yazıcı 2022b).

*Oxycarenus (Oxycarenus) hyalinipennis* (A. Costa, 1843)

Material examined: Eskişehir, Alpu, Gökçeođlu, 852 m, 39°43'829"N, 30°52'866"E, 10.06.2020, ♀, ♂, Kayseri, Pınarbaşı, Pazarören, 1437 m, 38°39'1"N, 36°9'44"E, 20.06.2019, ♀, ♂, Konya, Çumra, İnlı, 1055 m, 37°27'419"N, 32°51'15"E, 28.06.2018, ♀, ♂.

Previous records: Adana, Ankara, Antalya, Çanakkale, Gaziantep, Hatay, İstanbul, İzmir, Karaman, Kastamonu, Kilis, Konya, Mersin, Muğla, Niğde, Osmaniye, Sinop

(Hoberlandt 1955, Aysev 1974, Lodos et al. 1999, Şerban 2010, Yazıcı et al. 2015, Yazıcı 2022b).

Genus: *Raglius* Stål, 1872

*Raglius alboacuminatus* (Goeze, 1778)

Material examined: Kırıkkale, Çelebi, Kaldırım-2, 749 m, 39°26'242"N, 33°23'135"E, 30.06.2020, ♀, ♂.

Previous records: Ankara, Balıkesir, Edirne, Erzincan, Eskişehir, Hatay, İstanbul, Kars, Kayseri, Kahramanmaraş, Muş (Lodos et al. 1999, Önder et al. 2006, Abacıgil et al. 2010, Dursun 2016, Çerçi et al. 2018, Yazıcı 2022b).

**Family: MIRIDAE Hahn, 1833**

Genus: *Adelphocoris* Reuter, 1896

*Adelphocoris lineolatus* (Goeze, 1778)

Material examined: Niğde, Bor, Emen, 1074 m, 37°48'91"N, 34°27'7"E, 27.06.2019, ♀, ♂.

Previous records: Adana, Ankara, Artvin, Bayburt, Edirne, Erzincan, Erzurum, Elazığ, Iğdır, Kars, Kayseri, Manisa, Mersin, Niğde, Tokat, Tunceli (Hoberlandt 1955, Yazıcı and Yıldırım 2016a, Çerçi et al. 2018, Yazıcı 2015).

Genus: *Campylomma* Reuter, 1878

*Campylomma verbasci* (Meyer-Dür, 1843)

Material examined: Karaman, Ayrancı, Saraybüyükburun, 1102 m, 37°12'56"N, 33°39'37"E, 20.08.2019, ♀, ♂.

Previous records: Adana, Ankara, Antalya Aydın, Balıkesir, Bayburt, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Denizli, Diyarbakır, Edirne, Erzincan, Erzurum, Eskişehir, Gaziantep, Hatay, Iğdır, Isparta, İzmir, Kahramanmaraş, Karaman, Kars, Kastamonu, Kayseri, Kırıkkale, Kırşehir, Konya, Mardin, Mersin, Nevşehir, Niğde, Sakarya, Siirt, Yozgat, Zonguldak (Hoberlandt 1955, Önder 1976, Önder et al. 1981, Özkan 1984, Önder et al. 1995, Lodos et al. 2003, Ayyıldız and Atlıhan 2006, Önder et al. 2006, Matocq et al. 2014, Yazıcı 2015, Yazıcı and Yıldırım 2016b).

Genus: *Deraeocoris* Kirschbaum, 1856

*Deraeocoris (Camptobrochis) pallens* (Reuter, 1904)

Material examined: Ankara, Bala, Tigem-Hacıbekir, 867 m, 39°22'32"N, 33°19'471"E, 1.07.2020, ♀, ♂, Şereflikoçhisar, Akin, 920 m, 39°8'35"N, 33°16'48"E, 1.09.2020, ♀; Eskişehir, Alpu, Karakamış, 787 m, 39°50'237"N, 30°53'997"E, 8.09.2020, ♀, ♂; Konya, Altınekin, Oğuzeli, 995 m, 38°20'147"N, 33°7'414"E, 2.07.2018, ♀, ♂; Yeniayla, 959 m, 38°20'654"N, 32°46'898"E, 3.07.2018, ♀, ♂; Karapınar,

Erozyon, 1009 m, 37°42'282"N, 33°30'175"E, 27.06.2018, ♀, ♂; Sekizli Yolu, 995 m, 37°44'427"N, 33°32'179"E, 5.09.2018, ♀, ♂; Sivas, Ulaş, Ekincioglu, 1367 m, 39°28'428"N, 36°59'75"E, 28.06.2021, ♀, ♂.

Previous records: Adana, Antalya, Artvin, Diyarbakır, Gaziantep, Hatay, İzmir, Kahramanmaraş, Kilis, Mardin, Mersin, Muğla, Osmaniye, Şanlıurfa (Hoberlandt 1955, Önder 1976, Özkan 1984, Önder et al. 1995, Atakan 2000, Lodos et al. 2003, Önder et al. 2006, Tezcan et al. 2010, Yazıcı 2015).

*Deraeocoris (Camptobrochis) serenus* (Douglas and Scott, 1868)

Material examined: Kayseri, Kocasinan, Kızık, 1079 m, 38°51'75"N, 35°33'69"E, 19.06.2019, ♀, ♂.

Previous records: Adana, Afyon, Ağrı, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bilecik, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Diyarbakır, Edirne, Elazığ, Erzurum, Eskişehir, Gaziantep, Hakkâri, Hatay, Iğdır, İçel, İstanbul, İzmir, Kahramanmaraş, Karabük, Karaman, Kastamonu, Kayseri, Kırklareli, Kırşehir, Kilis, Kocaeli, Konya, Kütahya, Malatya, Manisa, Mardin, Mersin, Muğla, Nevşehir, Niğde, Sakarya, Sinop, Tekirdağ, Uşak, Van, Yozgat (Hoberlandt 1955, Önder 1976, Önder et al. 1981, Özkan 1984, Önder et al. 1995, Yıldırım et al. 1999, Yaşarakıncı and Hıncal 2000, Lodos et al. 2003, Gençer et al. 2004, Ayyıldız and Atlıhan 2006, Önder et al. 2006, Matocq et al. 2014, Küçükbasmacı and Kıyak 2015, Yazıcı 2015, Çerçi and Özgen 2021).

Genus: *Leptopterna* Fieber, 1858

*Leptopterna dolabrata* (Linnaeus, 1758)

Material examined: Niğde, Edikli, 1358 m, 38°11'55"N, 34°58'4"E, 27.06.2019, ♀, ♂.

Previous records: Adana, Ankara, Bursa, Çankırı, Edirne, Giresun, Kars, Kahramanmaraş, Karabük, Kastamonu, Kocaeli, Zonguldak (Hoberlandt 1955, Önder et al. 2006).

Genus: *Leucodellus* Reuter, 1906

*Leucodellus zagdani* (Putshkov, 1970)

Material examined: Aksaray, Yenikent, 919 m, 38°16'888"N, 33°42'960"E, 4.07.2017, ♂; Ankara, Polatlı, Oğuzlar, 694 m, 39°47'894"N, 32°2'999"E, 2.07.2020, ♀; Kayseri, Kocasinan, Elagöz, 1061 m, 38°48'96"N, 35°31'3"E, 19.06.2019, ♂; Kırıkkale, Karakeçili, Akkoşan-2, 756 m, 39°28'604"N, 33°24'361"E, 2.06.2020, ♀; Konya, Çumra, Alemdar, 1052 m, 37°39'755"N, 32°47'530"E, 28.06.2018, ♀.

Previous records: Ordu (Çerçi and Koçak 2017).

Note: This species was reported in 2017 by Çerçi and Koçak as a new record for Türkiye from Ordu province. In our study, we are listed as the second record for Türkiye. In addition, *Leucodellus zagdani* is reported as a new record for maize in the study.

Genus: *Lygus* Hahn, 1833

*Lygus gemellatus gemellatus* (Herrich-Schäffer, 1835)

Material examined: Aksaray, Yenikent, 919 m, 38°17'202"N, 33°44'743"E, 5.07.2017, 2 ♀♀, 2 ♂♂; Eski, Bozcamahtut, 972 m, 38°12'948"N, 33°21'52"E, 7.09.2017, ♀, ♂, Koçaş, 940 m, 38°27'927"N, 33°50'133"E, 30.06.2017, ♀, ♂, Ankara, Bala, Tigem-Hacibekir, 867 m, 39°22'32"N, 33°19'471"E, 1.07.2020, ♀, ♂; Eskişehir, Beylikova, Akköprü, 743 m, 39°41'445"N, 31°15'482"E, 10.06.2020, ♀, ♂; Seyitgazi, Doğançayır, 915 m, 39°32'567"N, 30°49'44"E, 9.09.2020, ♀, ♂; Kırşehir, Boztepe, Küllhöyük, 1147 m, 39°18'819"N, 34°15'851"E, 3.07.2017, ♀, ♂; Konya, Altinekin, Akıncılar, 990 m, 38°21'922"N, 32°54'918 "E, 2.07.2018, ♀, ♂; Dedeler, 958 m, 38°19'222"N, 32°44'821"E, 2.07.2018, ♀, ♂; Cihanbeyli, Sırtağul, 950 m, 38°24'874"N, 33°1'502"E, 3.07.2018, ♀, ♂; Çumra, Kuzucu, 1055 m, 37°23'609"N, 32°47'212"E, 28.06.2018, ♀, ♂; 1055 m, 37°23'609"N, 32°47'212"E, 6.09.2018, ♀, ♂; Çumra, Uzunkuyu-Feriz, 1002 m, 37°34'960"N, 33°8'213"E, 29.06.2018, ♀, ♂; Üçhöyük, 988 m, 37°54'985"N, 32°54'919"E, 6.09.2018, ♀, ♂; Konya, Karapınar, Yassıca, 1002 m, 37°51'628"N, 33°36'207"E, 28.06.2018, ♀, ♂; Sarayönü, Gözlu, 954 m, 38°28'67"N, 32°27'516"E, 10.07.2018, ♀, ♂; 38°28'67"N, 32°27'516"E, 28.05.2018, ♀, ♂; Sarayönü, Karatepe, 1026 m, 38°21'613"N, 32°25'885"E, 10.07.2018, ♀, ♂; Selçuklu, Kaleköy, 975 m, 38°14'459"N, 32°44'918"E, 10.09.2018, ♀, ♂; 975 m, 38°14'459"N, 32°44'918"E, 3.07.2018, ♀, ♂; Yunak, Yolçatı, 918 m, 38°54'716"N, 32°7'371"E, 9.07.2018, ♀, ♂; Yozgat, Yerköy, Sekili, 692 m, 39°45'311"N, 34°13'836"E, 23.06.2021, ♀, ♂.

Previous records: Adana, Ağrı, Amasya, Ankara, Antalya, Artvin, Bayburt, Bitlis, Bursa, Çanakkale, Denizli, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Eskişehir, Iğdır, İçel, İzmir, Kahramanmaraş, Kars, Kayseri, Konya, Kütahya, Mardin, Mersin, Muş, Nevşehir, Siirt, Tekirdağ, Uşak, Yozgat (Hoberlandt 1955, Önder 1976, Altınayar 1981, Kıyak 1990, Önder et al. 1995, Önder et al. 2006, Fent 2011, Matocq et al. 2014, Yazıcı 2015, Yazıcı and Yıldırım 2016a).

*Lygus pratensis* (Linnaeus, 1758)

Material examined: Aksaray, Yenikent, 919 m, 38°17'202"N,

33°44'743"E, 5.07.2017, ♀, ♂, Koçaş, 940 m, 38°27'927"N, 33°50'133"E, 30.06.2017, ♀, ♂, Ankara, Gündül, Güneçye, 735 m, 40°3'249"N, 32°11'601"E, 2.07.2020, ♀, ♂, Polatlı, Kiranharmanı, 690 m, 39°66'266"N, 31°96'912"E, 2.07.2020, ♀, ♂, Eskişehir, Alpu, Bozan, 783 m, 39°46'513"N, 31°6'438"E, 7.07.2020, ♀, ♂, Mahmudiye, Fahriye, 897 m, 39°37'66"N, 30°55'768"E, 8.07.2020, ♀, ♂, Kayseri, Bünyan, Köprübaşı, 1433 m, 38°40'95"N, 36°1'82"E, 19.09.2019, ♀, ♂, 1424 m, 38°50'1"N, 35°50'99"E, 10.07.2019, ♀, ♂; Yeşilhisar, Musahacılı, 1077 m, 38°12'53"N, 35°17'97"E, 18.09.2019, ♀, ♂; Konya, Altinekin, Soyhan, 995 m, 38°17'903"N, 33°10'215"E, 29.05.2018, ♀, ♂; Kadınhanı, Altınova, 978 m, 38°48'13"N, 32°4'874"E, 8.06.2018, ♀, ♂; Karapınar, Yirce, 996 m, 37°33'191"N, 33°31'572"E, 5.09.2018, ♀, ♂; Sarayönü, Gözlu-2, 1027 m, 38°29'877"N, 32°29'855"E, 11.09.2018, ♀, ♂; Nevşehir, Gülşehir, Yeşilöz, 915 m, 38°45'88"N, 34°42'58"E, 17.09.2019, ♀, ♂; Niğde, Bor, Kayı, 1082 m, 37°54'62"N, 34°24'19"E, 27.06.2019, 2 ♀♀, ♂; Sivas, Çukurbel, 1284 m, 39°49'387"N, 37°11'352"E, 14.09.2021, ♀, ♂; Ulaş, Karacalar, 1384 m, 39°27'267"N, 36°57'563"E, 14.09.2021, ♀, ♂; Karacalar, 1384 m, 39°27'267"N, 36°57'563"E, 28.06.2021, ♀, ♂; Yıldızeli, Mumcu, 1268 m, 39°47'678"N, 36°45'762"E, 29.06.2021, ♀, ♂.

Previous records: Adana, Adıyaman, Afyonkarahisar, Ağrı, Amasya, Ankara, Antalya, Ardahan, Artvin, Aydın, Balıkesir, Bartın, Bayburt, Bilecik, Bingöl, Bitlis, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Diyarbakır, Düzce, Edirne, Elazığ, Erzincan, Erzurum; Eskişehir, Gaziantep, Hakkâri, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Karabük, Karaman, Kars, Kastamonu, Kayseri, Kırkkale, Kırklareli, Kırşehir, Kilis, Kocaeli, Konya, Kütahya, Malatya, Manisa, Mardin, Muğla, Muş, Nevşehir, Niğde, Osmaniye, Sakarya, Samsun, Siirt, Sinop, Şanlıurfa, Trabzon, Tunceli, Uşak, Van, Yozgat, Zonguldak (Hoberlandt 1955, Önder 1976, Altınayar 1981, Önder et al. 1981, Önder et al. 1984, Karaat 1986, Kıyak 1990, Önder et al. 1995, Yaşarakıncı and Hıncal 2000, Lodos et al. 2003, Önder et al. 2006, Tezcan et al. 2010, Matocq et al. 2014, Yazıcı 2015, Yazıcı and Yıldırım 2016a, Yazıcı 2022c).

*Lygus rugulipennis* Poppius, 1911

Material examined: Aksaray, Bozcamahtut, 972 m, 38°12'948"N, 33°21'52"E, 4.07.2017, ♀, ♂, Yenikent, 919 m, 38°17'202"N, 33°44'743"E, 5.07.2017, ♀, ♂, Yenikent, 919 m, 38°17'202"N, 33°44'743"E, 7.09.2017, ♀, 2 ♂♂; Eski, Böget, 939 m, 38°26'432"N, 33°50'228"E, 6.09.2017, ♀, ♂; Koçaş-4, 933 m, 38°28'226"N, 33°49'690"E, 30.06.2017, 3 ♀♀, 2 ♂♂; Ortaköy, Sarıkaraman-1, 992 m, 38°46'837"N, 34°9'989"E, 29.06.2017, ♀, ♂; Ortaköy, Sarıkaraman-2, 993 m,

38°46'920"N 34°8'834"E, 29.06.2017, ♀, ♂, Ankara, Güdül, Güneyce, 735 m, 40°3'249"N, 32°11'601"E, 2.07.2020, ♀, ♂, Gökçeoğlu, 852 m, 39°43'829"N, 30°52'866"E, 7.07.2020, ♀, ♂, Eskişehir, Alpu, Yeşildon, 772 m, 39°46'407"N, 31°2'114"E, 7.07.2020, ♀, ♂, Beylikova, Akköprü, 743 m, 39°41'445"N, 31°15'482"E, 10.06.2020, 2 ♀♀, 2 ♂♂, Çifteler, 871 m, 39°23'158"N, 32°2'816"E, 10.06.2020, ♀, ♂, Sakaryabaşı, 877 m, 39°20'544"N, 31°3'451"E, 8.07.2020, ♀, ♂, İnönü, Oklubalı, 820 m, 39°49'454"N, 30°14'588"E, 7.09.2020, ♀, ♂, Odunpazarı, Karacahüyük, 780 m, 39°45'877"N, 30°35'609"E, 9.06.2020, ♀, ♂, Sarıkavak, 932 m, 37°46'144"N, 34°44'567"E, 9.06.2020, ♀, ♂, Karaman, Ayrancı, Saray-Hüyükburun, 1102 m, 37°12'56"N, 33°39'37"E, 26.06.2019, ♀, ♂, Kızık, 1009 m, 37°15'90"N, 33°18'64"E, 28.05.2019, ♀, ♂, Kayseri, Bünyan, Karatay, 1437 m, 38°38'67"N, 35°56'68"E, 10.07.2019, ♀, ♂, Köprübaşı, 1433 m, 38°40'95"N, 36°1'82"E, 20.06.2019, ♀, ♂, Develi, Sindelhöyük, 1107 m, 38°21'93"N, 35°24'80"E, 18.09.2019, 3 ♀♀, 4 ♂♂, Yahyalı, İlyaslı, 1081 m, 38°10'82"N, 35°17'91"E, 18.09.2019, ♀, ♂, Yeşilhisar, Çıtlık, 1092 m, 38°19'26"N, 35°6'71"E, 31.05.2019, ♀, ♂, Kırıkkale, Keskin, Köprüköy-2, 767 m, 39°32'107"N, 33°25'320"E, 30.06.2020, ♀, ♂, Kırşehir, Kaman, Bügüz, 831 m, 39°23'683"N, 33°26'394"E, 29.06.2017, ♀, ♂, Güzler, 910 m, 38°21'261"N, 34°8'1813"E, 3.07.2017, ♀, ♂, Konya, Altunekin, Akıncılar, 990 m, 38°21'922"N, 32°54'918"E, 2.07.2018, ♀, ♂, Dedeler, 958 m, 38°19'222"N, 32°44'821"E, 5.06.2018, ♀, ♂, Yenikuyu, 984 m, 38°14'917"N, 33°4'613"E, 2.07.2018, ♀, ♂, Cihanbeyli, Böğürdelik, 961 m, 38°46'664"N, 32°37'222"E, 10.07.2018, ♀, ♂, Kavaklı, 960 m, 38°26'58"N, 33°27'39"E, 3.07.2018, ♀, ♂, Çeltik, Gökpinar, 864 m, 39°2'122"N, 31°48'854"E, 30.05.2018, ♀, ♂, Çeltik, Odabaşı, 832 m, 38°54'310"N, 31°53'825"E, 13.09.2018, ♀, 2 ♂♂, Çumra, İnlı, 1055 m, 37°27'419"N, 32°51'15"E, 28.06.2018, ♀, ♂, Çumra, Türkmencamili, 999 m, 37°32'389"N, 32°55'754"E, 29.06.2018, ♀, ♂, Uzunkuyu-Feriz, 1002 m, 37°34'960"N, 33°8'213"E, 29.06.2018, ♀, ♂, Üçhöyük, 988 m, 37°54'985"N, 32°54'919"E, 6.09.2018, ♀, ♂, 998 m, 37°33'590"N, 32°51'174"E, 6.09.2018, ♀, ♂, Ereğli, Melicek, 1014 m, 37°28'538"N, 33°58'581"E, 26.06.2018, ♀, ♂, Sazgeçit, 1010 m, 37°35'451"N, 33°55'4418"E, 3.09.2018, ♀, ♂, Taşağıl, 1005 m, 37°28'108"N, 33°54'690"E, 26.06.2018, ♀, ♂, Kadınhanı, Bakırpınarı, 1058 m, 38°15'746"N, 32°18'448"E, 9.07.2018, ♀, ♂, Karapınar, Akkuyu, 983 m, 37°42'908"N, 33°23'98"E, 27.06.2018, ♀, ♂, Karapınar, Yassıca, 1002 m, 37°51'628"N, 33°36'207"E, 28.06.2018, ♀, ♂, Sarayönü, Başhöyük, 950 m, 38°19'270"N, 32°38'345"E, 5.06.2018, ♀, ♂, Gözülü, 954 m, 38°28'67"N, 32°27'516"E, 10.07.2018, ♀, ♂, 1027 m, 38°29'877"N, 32°29'855"E, 28.05.2018, ♀, ♂, 11.09.2018, ♀, ♂, Yunak, Altınöz, 1027 m, 38°29'877"N, 32°29'855"E,

28.05.2018, ♀, ♂, Hacıfakılı, 896 m, 38°52'327"N, 31°56'315"E, 13.09.2018, 3 ♀♀, 3 ♂♂, Yolçatı, 918 m, 38°54'716"N, 32°7'371"E, 9.07.2018, ♀, ♂, Niğde, Bor, Aliyer, 1090 m, 37°52'4"N, 34°32'65"E, 27.06.2019, ♀, ♂, Sivas, Altınyayla, Deli İlyas, 1450 m, 39°18'224"N, 36°46'913"E, 14.09.2021, ♀, ♂, Deli İlyas, 1450 m, 39°18'224"N, 36°46'913"E, 29.06.2021, ♀, ♂, Şarkışla, Cemel, 1258 m, 39°21'54"N, 36°27'204"E, 29.06.2021, ♀, ♂, Ulaş, Karacalar, 1384 m, 39°27'267"N, 36°57'563"E, 28.06.2021, ♀, ♂, Sorgun, Karaveli, 1088 m, 39°37'540"N, 35°14'319"E, 10.06.2021, ♀, ♂.

Previous records: Adana, Adapazarı, Adıyaman, Afyonkarahisar, Ağrı, Aksaray, Ankara, Antalya, Artvin, Bartın, Bayburt, Bilecik, Bingöl, Bitlis, Bolu, Burdur, Bursa, Çankırı, Çorum, Denizli, Düzce, Edirne, Elazığ, Erzincan, Erzurum, Eskişehir, Gaziantep, Giresun, Hakkâri, Iğdır, İskenderun, İstanbul, İzmir, Kahramanmaraş, Karabük, Karaman, Kars, Kastamonu, Kayseri, Kırıkkale, Kırklareli, Kırşehir, Kocaeli, Konya, Kütahya, Malatya, Mersin, Muş, Nevşehir, Niğde, Sakarya, Samsun, Sinop, Şanlıurfa, Tekirdağ, Trabzon, Tunceli, Uşak, Van, Yozgat, Zonguldak (Önder 1976, Önder et al. 1981, Önder et al. 1984, Karaat 1986, Özbek and Alaoğlu 1987, Kıyak 1990, Önder et al. 1995, Yıldırım et al. 1999, Lodos et al. 2003, Gençler et al. 2004, Önder et al. 2006, Tezcan et al. 2010, Yazıcı 2015, Yazıcı and Yıldırım 2016a, Çerçi et al. 2018, Yazıcı 2022c).

#### Family: NABIDAE A. Costa, 1853

Genus: *Nabis* Latreille, 1802

*Nabis (Nabis) ferus ferus* (Linnaeus, 1758)

Material examined: Ankara, Polatlı, Kıranharmanı, 690 m, 39°66'266"N, 31°96'912"E, 2.07.2020, ♀, ♂, Kayseri, Kocasinan, Salur, 1080 m, 38°51'38"N, 35°35'33"E, 10.07.2019, ♀, ♂, Niğde, Bor, Emen, 1074 m, 37°48'91"N, 34°27'7"E, 27.06.2019, ♀, ♂.

Previous records: Adana, Ağrı, Aksaray, Amasya, Ankara, Antalya, Bursa, Çanakkale, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Eskişehir, Giresun, Iğdır, Isparta, İzmir, Karaman, Kars, Kayseri, Kırklareli, Konya, Mardin, Mersin, Niğde, Şanlıurfa, Tokat, Trabzon (Hoberlandt 1955, Kıyak 1990, Önder et al. 2006, Dursun 2011, Yıldırım et al. 2013, Kaplan 2014, Asal 2015, Yazıcı 2023).

*Nabis (Nabis) pseudoferus pseudoferus* Remane, 1949

Material examined: Ankara, Ayaş, Tekke, 774 m, 39°52'636"N, 32°23'758"E, 2.07.2020, ♀, ♂, Ankara, Bala, Tigem-Hacıbekir, 867 m, 39°22'32"N, 33°19'471"E, 1.07.2020, 2 ♀♀, 2 ♂♂, 850 m, 39°52'17"N, 32°5'820"E, 2.07.2020, 2 ♀♀, ♂, 850 m, 39°52'17"N, 32°5'820"E, 2.09.2020, ♀, ♂, Polatlı,



Kiranharmanı, 690 m, 39°66'266"N, 31°96'912"E, 2.07.2020, ♀, ♂, Sarıoba, 669 m, 39°50'578"N, 32°4'598"E, 2.07.2020, ♀, ♂, Uzunbeyli, 853 m, 39°6'33"N, 31°59'602"E, 2.09.2020, ♀, ♂, Sincan, Malıköy, 737 m, 39°46'116"N, 32°22'831"E, 3.07.2020, ♀, ♂, Şereflikoçhisar, Akin, 920 m, 39°8'35"N, 33°16'48"E, 1.07.2020, ♀, ♂, Eskişehir, Alpu, Gökçeoğlu, 852 m, 39°43'829"N, 30°52'866"E, 7.07.2020, ♀, ♂, Gökçeoğlu, 852 m, 39°43'829"N, 30°52'866"E, 8.09.2020, 2 ♀♀, ♂, Osmaniye, 781 m, 39°50'964"N, 30°56'90"E, 8.09.2020, ♀, ♂, Beylikova, Akköprü, 743 m, 39°41'445"N, 31°15'482"E, 8.07.2020, ♀, ♂, 743 m, 39°41'445"N, 31°15'482"E, 9.09.2020, ♀, ♂, Çifteler, 871 m, 39°23'158"N, 32°2'816"E, 9.09.2020, ♀, ♂, İnönü, Oklubalı, 820 m, 39°49'454"N, 30°14'588"E, 7.09.2020, ♀, ♂, Mahmudiye, 905 m, 39°26'505"N, 31°0'513"E, 9.09.2020, ♀, ♂, Odunpazarı, Karaçay, 770 m, 39°46'753"N, 30°51'8"E, 8.09.2020, ♀, 2 ♂♂, Sarıkavak, 932 m, 37°46'144"N, 34°44'567"E, 8.09.2020, ♀, ♂, Sevinç, 782 m, 39°45'870"N, 30°35'609"E, 8.09.2020, ♀, ♂, Seyitgazi, Çukurağul, 925 m, 39°30'663"N, 30°46'861"E, 9.09.2020, ♀, ♂, Kalkanlı, 915 m, 39°35'927"N, 30°46'671"E, 9.09.2020, ♀, ♂, Yenikent, 918 m, 39°34'281"N, 30°45'713"E, 9.09.2020, ♀, ♂, Sivrihisar, Gülçayır, 865 m, 39°15'523"N, 31°23'956"E, 9.09.2020, ♀, 2 ♂♂, Ortaklar, 721 m, 39°38'559"N, 31°46'540"E, 10.06.2020, ♀, ♂, Tepebaşı, Çukurhisar, 932 m, 38°46'144"N, 34°44'567"E, 7.09.2020, ♀, ♂, Keskin, 837 m, 39°49'963"N, 30°22'859"E, 6.07.2020, ♀, ♂, Satılmışoğlu, 804 m, 39°48'231"N, 30°120'166"E, 7.09.2020, 2 ♀♀, ♂, Karaman, Ayrancı, Bögecik, 1003 m, 38°28'54"N, 33°49'61"E, 20.08.2019, ♀, ♂, Saray-hüyükburun, 1102 m, 37°12'56"N, 33°39'37"E, 20.08.2019, ♀, 2 ♂♂, Kâzımkarabekir, Kızılkuyu, 1052 m, 37°20'11"N, 32°49'58"E, 24.06.2019, ♀, ♂, 1025 m, 37°15'37"N, 32°58'48"E, 19.08.2019, ♀, ♂, Özyurt, 1056 m, 37°16'42"N, 32°53'65"E, 24.06.2019, ♀, ♂, 1056 m, 37°16'42"N, 32°53'65"E, 19.08.2019, ♀, ♂, Sinci, 1036 m, 37°19'48"N, 32°51'91"E, 24.06.2019, ♀, ♂, Çakırbağ, 1018 m, 37°11'96"N, 33°7'24"E, 20.08.2019, ♀, ♂, Dinek, 1003 m, 37°21'36"N, 33°12'57"E, 20.08.2019, ♀, ♂, 1003 m, 37°21'36"N, 33°12'57"E, 25.06.2019, ♀, ♂, Mesudiye-1, 1010 m, 37°29'59"N, 33°8'11"E, 21.08.2019, ♀, ♂, Salur, 1004 m, 37°17'48"N, 33°18'53"E, 25.06.2019, ♀, ♂, Kayseri, Bünyan, Köprübaşı, 1433 m, 38°40'95"N, 36°1'82"E, 19.09.2019, ♀, 2 ♂♂, 1433 m, 38°40'95"N, 36°1'82"E, 20.06.2019, ♀, ♂, Develi, Soysallı, 1074 m, 38°21'89"N, 35°22'93"E, 18.09.2019, ♀, 2 ♂♂, Kocasinan, Buğdaylı, 1059 m, 38°48'8"N, 35°31'61"E, 19.09.2019, 2 ♀♀, 2 ♂♂, Salur, 1080 m, 38°51'38"N, 35°35'33"E, 10.07.2019, ♀, Yazır, 1063 m, 38°49'93"N, 35°32'86"E, 19.09.2019, ♀, ♂, Melikgazi, Bağpınar, 1106 m, 38°49'9"N, 35°38'14"E, 4.07.2018, ♀, ♂, Yeşilyurt, 1086 m, 38°48'73"N, 35°36'54"E, 19.09.2019, ♀, ♂, Yeşilhisar, Kesik, 1105 m, 38°22'63"N, 35°5'59"E, 9.07.2019, ♀, ♂, Musahacılı,

1077 m, 38°12'53"N, 35°17'97"E, 18.09.2019, ♀, 4 ♂♂, Kırıkkale, Çelebi, Alıcıyeniyan, 747 m, 39°29'318"N, 33°25'121"E, 30.06.2020, ♀, ♂, Kaldırım-1, 750 m, 39°25'344"N, 33°23'812"E, 30.06.2020, ♀, ♂, 31.08.2020, ♀, ♂, Karabucak, 732 m, 39°30'50"N, 33°24'800"E, 31.08.2020, ♀, ♂, Keskin, Köprükoy-2, 767 m, 39°32'107"N, 33°25'320"E, 30.06.2020, ♀, ♂, Köprükoy-3, 724 m, 39°34'660"N, 33°25'491"E, 31.08.2020, ♀, ♂, Nevşehir, Avanos, Ayhanlar, 933 m, 38°46'14" N, 34°44'57"E, 28.06.2019, ♀, ♂, Gülşehir, Eğrikuyu, 976 m, 38°44'9"N, 34°33'6"E, 30.05.2019, ♀, ♂, 17.09.2019, ♀, ♂, Niğde, Bor, Balcı, 1099 m, 37°56'23"N, 34°26'37"E, 22.08.2019, ♀, ♂, Kayı, 1082 m, 37°54'62"N, 34°24'19"E, 22.08.2019, ♀, ♂, Sivas, Yıldızeli, Bakırcıoğlu, 1265 m, 39°49'138"N, 36°46'142"E, 15.09.2021, ♀, ♂, Yozgat, Sarıkaya, Mescitli, 1125 m, 39°31'17"N, 35°33'35"E, 8.09.2021, 2 ♀♀, ♂, Yerköy, 737 m, 39°40'994"N, 34°25'930"E, 23.06.2021, ♀, ♂, 8.09.2021, ♀, ♂.

Previous records: Adana, Adapazarı, Adıyaman, Amasya, Ankara, Artvin, Bartın, Bayburt, Bursa, Çanakkale, Diyarbakır, Düzce, Edirne, Elazığ, Erzincan, Erzurum, Giresun, Iğdır, Isparta, İzmir, Kars, Kastamonu, Kayseri, Konya, Sivas, Şırnak, Tokat, Trabzon (Hoberlandt 1955, Tuatay et al. 1972, Önder et al. 1981, 1983, Alaoglu and Özbek 1987, Önder et al. 2006, Tezcan et al. 2010, Dursun 2011, Fent 2011, Fent and Japoshvili 2012, Yıldırım et al. 2013, Küçükbasmacı and Kıyak 2015, Asal 2015, Dirik and Kivan 2016, Yazıcı 2023).

*Nabis (Nabis) punctatus punctatus* A. Costa, 1847

Material examined: Aksaray, Eskil, Bayramdügün, 1002 m, 38°8'938"N, 33°18'551"E, 7.09.2017, ♀, ♂, Aksaray, Yenikent, 919 m, 38°16'888"N, 33°42'960"E, 4.07.2017, ♀, ♂, Ortaköy, Sarıkaraman-2, 993 m, 38°46'920"N, 34°8'834"E, 29.06.2017, ♀, ♂, Kırşehir, Çoğun-1, 1064 m, 39°17'415"N, 34°7'385"E, 3.07.2017, 2 ♀♀, 4 ♂♂.

Previous records: Adıyaman, Afyonkarahisar, Amasya, Ankara, Batman, Burdur, Bursa, Çankırı, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Gaziantep, Giresun, Iğdır, Isparta, İzmir, Karaman, Kayseri, Kırşehir, Konya, Malatya, Mardin, Niğde, Şanlıurfa, Siirt, Sivas, Şanlıurfa, Tokat, Van, Yozgat, Zonguldak (Gençer et al. 2004, Dursun 2011, Yıldırım et al. 2013, Kaplan 2014, Matocq et al. 2014, Asal 2015, Bolu 2020, Yazıcı 2023).

**Family: PENTATOMIDAE Leach, 1815**

Genus: *Eurydema* Laporte, 1833

*Eurydema (Rubrodorsalium) ventralis Kolenati, 1846*

Material examined: Konya, Çumra, Kuzucu, 1055 m,

37°23'609"N, 32°47'212"E, 6.09.2018, ♀, ♂, Karapınar, Apak, 977 m, 37°41'512"N, 33°29'384"E, 27.06.2018, ♀, ♂.

Previous records: Adana, Afyon, Ağrı, Amasya, Ankara, Antalya, Artvin, Balıkesir, Bayburt, Bilecik, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Diyarbakır, Düzce, Edirne, Erzincan, Erzurum, Giresun, Hakkâri, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Karaman, Kastamonu, Kırıkkale, Kırklareli, Kırşehir, Kütahya, Kocaeli, Konya, Manisa, Mersin, Muğla, Muş, Niğde, Sakarya, Sinop, Sivas, Şırnak, Tekirdağ, Tokat, Trabzon, Tunceli, Uşak (Hoberlandt 1955, Lodos et al. 1978, Fent and Aktaç 1999, Önder et al. 2006, Külekçi et al. 2009, Şerban 2010, Dursun and Fent 2011, Fent 2011, Matocq et al. 2014, Yazıcı et al. 2014, Küçükbasmacı and Kıyak 2015, Dirik and Kıvan 2016, Bulak and Yıldırım 2021, Fent and Dursun 2022).

Genus: *Eysarcoris* Hahn, 1834

*Eysarcoris ventralis* (Westwood, 1837)

Material examined: Konya, Ereğli, Sazgeçit, 1010 m, 37°35'451"N, 33°55'418"E, 26.06.2018, ♀, ♂, Karapınar, Kurtbasan, 976 m, 37°43'968"N, 33°30'51"E, 27.06.2018, ♀, ♂.

Previous records: Ağrı, Adana, Adıyaman, Amasya, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bartın, Bolu, Burdur, Bursa, Çanakkale, Çorum, Diyarbakır, Düzce, Edirne, Elazığ, Erzincan, Erzurum, Gaziantep, Hatay, Isparta, İçel, İstanbul, İzmir, Kahramanmaraş, Karaman, Kastamonu, Kırklareli, Kocaeli, Konya, Manisa, Mardin, Muğla, Muş, Nevşehir, Niğde, Ordu, Osmaniye, Rize, Sakarya, Samsun, Siirt, Sinop, Sivas, Şanlıurfa, Şırnak, Tekirdağ, Tokat, Trabzon, Uşak, Zonguldak (Lodos et al. 1978, Önder et al. 1981, 1983, 1984, 1995, Kıyak 1990, Fent and Aktaç 1999, Öz Saraç and Kıyak 2001, Külekçi et al. 2009, Abacıgil et al. 2010, Şerban 2010, Dursun and Fent 2011, Gözüaçık et al. 2011, Tezcan et al. 2013, Yazıcı et al. 2014, Bulak and Yıldırım 2021, Çerçi and Özgen 2021, Fent and Dursun 2022).

Genus: *Graphosoma* Laporte, 1833

*Graphosoma (Graphosoma) italicum italicum* (O.F. Müller, 1766)

Material examined: Ankara, Kahramankazan, Aydın, 862 m, 40°10'89"N, 32°39'927"E, 3.07.2020, ♀, ♂.

Previous records: Adana, Adıyaman, Ağrı, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bayburt, Burdur, Bilecik, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Düzce, Edirne, Erzincan, Erzurum, Eskişehir, Gaziantep, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Karabük, Kars, Kastamonu, Kayseri, Kırklareli, Konya, Kütahya,

Manisa, Mersin, Muğla, Osmaniye, Sakarya, Sinop, Sivas, Tunceli, Yalova, Yozgat, Zonguldak (Hoberlandt 1955, Lodos et al. 1978, Fent and Aktaç 1999, Önder et al. 1995, Öz Saraç and Kıyak 2001, Önder et al. 2006, Külekçi et al. 2009, Şerban 2010, Fent 2011, Fent and Japoshvili 2012, Yazıcı et al. 2014, Küçükbasmacı and Kıyak 2015, Fent and Dursun 2022).

Genus: *Peribalus* Mulsant and Rey, 1866

*Peribalus (Peribalus) strictus strictus* (Fabricius, 1803)

Material examined: Kırıkkale, Çelebi, Alıcıyenyapan, 747 m, 39°29'318"N, 33°25'121"E, 30.06.2020, ♀, ♂, Konya, Karapınar, Hotamış, 995 m, 37°39'112"N, 33°20'729"E, 5.09.2018, ♀, ♂.

Previous records: Adana, Antalya, Aydın, Bayburt, Burdur, Çanakkale, Çorum, Denizli, Diyarbakır, Edirne, Elazığ, Gaziantep, Giresun, Iğdır, İzmir, Karabük, Kastamonu, Manisa, Mardin, Mersin, Muğla, Samsun, Sivas, Tekirdağ, Tokat, Zonguldak (Hoberlandt 1955, Önder et al. 1995, Fent and Aktaç 1999, Awad 2000, Dursun and Kartal 2008, Şerban 2010, Tezcan et al. 2010, 2013, Dursun and Fent 2011, Matocq et al. 2014, Çerçi et al. 2018, Bulak and Yıldırım 2021, Fent and Dursun 2022).

**Family: RHOPALIDAE Amyot and Serville, 1843**

Genus: *Brachycarenum* Fieber, 1860

*Brachycarenum tigrinus* (Schilling, 1829)

Material examined: Niğde, Bor, Balcı, 1099 m, 37°56'23"N, 34°26'37"E, 27.06.2019, ♀, ♂.

Previous records: Adana, Adıyaman, Amasya, Ankara, Aydın, Balıkesir, Bayburt, Çanakkale, Çorum, Denizli, Diyarbakır, Edirne, Elazığ, Erzincan, Erzurum, Iğdır, İstanbul, Karabük, Kars, Kastamonu, Kayseri, Kırşehir, Malatya, Nevşehir, Yozgat (Tuatay et al. 1972, Önder et al. 1984, Kıyak et al. 2004, Abacıgil et al. 2010, Şerban 2010, Yıldırım et al. 2011, 2013b, Matocq et al. 2014, Dursun 2016, Çerçi et al. 2018, Fent and Dursun 2019, Zengin and Dursun 2019, Akman and Dursun 2021, Kıyak and Baş 2021, Çerçi and Özgen 2021, Çerçi et al. 2022, Yazıcı 2022b).

Genus: *Drymus* Fieber, 1860

*Drymus (Sylvadrymus) brunneus confinis* Reuter, 1893

Material examined: Karaman, Kâzımkarabekir, Kızılkuyu, 1052 m, 37°20'11"N, 32°49'58"E, 24.06.2019, ♀, ♂.

Previous records: Adana, Diyarbakır, Erzincan, Erzurum, Hatay, Mardin, Mersin (Matocq et al. 2014, Yazıcı et al. 2015, Bolu 2020).

Genus: *Liorhyssus* Stål, 1870

*Liorhyssus hyalinus* (Fabricius, 1794)

Material examined: Karaman, Kâzımkarabekir, Sinci, 1036 m, 37°19'48"N, 32°51'91"E, 28.05.2019, ♀, ♂, Kayseri, Develi, Sarıca, 1090 m, 38°14'38"N, 35°24'36"E, 18.09.2019, ♀, ♂.

Previous records: Adana, Adıyaman, Amasya, Ankara, Antalya, Artvin, Batman, Bursa, Çankırı, Çorum, Denizli, Diyarbakır, Elazığ, Erzincan, Erzurum, Gaziantep, Giresun, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kars, Kastamonu, Konya, Mardin, Nevşehir, Ordu, Samsun, Siirt, Sivas, Şanlıurfa, Tokat, Tunceli (Hoberlandt 1955, Kıyak et al. 2004, Dursun and Fent 2009, Yıldırım et al. 2011, 2013, Matocq et al. 2014, Küçükbasmacı and Kıyak 2015, Çerçi et al. 2018, Zengin and Dursun 2019, Bolu 2020, Akman and Dursun 2021, Bulak and Yıldırım 2021, Çerçi and Özgen 2021).

Genus: *Maccevethus* Dallas, 1852

*Maccevethus corsicus corsicus* Signoret, 1862

Material examined: Konya, Karapınar, Hotamış, 995 m, 37°39'112"N, 33°20'729"E, 5.09.2018, ♀, ♂.

Previous records: Amasya, Çanakkale, Çorum, Erzurum, Giresun, Sivas, Tokat (Dursun and Fent 2009, Yıldırım et al. 2013, Zengin and Dursun 2019, Akman and Dursun 2021).

Genus: *Rhopalus* Schilling, 1827

*Rhopalus (Rhopalus) parumpunctatus* Schilling, 1829

Material examined: Ankara, Şereflikoçhisar, Akin, 920 m, 39°8'35"N, 33°16'48"E, 1.07.2020, ♀, ♂; Karaman, K.karabekir, Kızılkuyu, 1052 m, 37°20'11"N, 32°49'58"E, 24.06.2019, ♀, ♂.

Previous records: Adana, Adıyaman, Amasya, Ankara, Balıkesir, Batman, Bolu, Çankırı, Çorum, Diyarbakır, Edirne, Elazığ, Erzurum, Gazintep, Giresun, Kastamonu, Kayseri, Mardin, Nevşehir, Siirt, Sivas, Şanlıurfa, Tokat (Hoberlandt 1955, Lodos et al. 1984, Kıyak et al. 2004, Dursun and Fent 2009, Fent and Japoshvili 2012, Yıldırım et al. 2013, Matocq et al. 2014, Küçükbasmacı and Kıyak 2015, Çerçi et al. 2018, Zengin and Dursun 2019, Bolu 2020, Akman and Dursun 2021, Çerçi and Özgen 2021, Kıyak and Baş 2021).

**Family: TINGIDAE Laporte, 1832**

Genus: *Kalama* Puton, 1876

*Kalama trimaizeis* (Schrank, 1801)

Material examined: Sivas, Zara, Şehitler, 1321 m, 39°52'30"N, 37°43'985"E, 14.06.2021, ♀, ♂

Previous records: Diyarbakır (Bolu 2020, Maral et al. 2020).

Note: This species is the third record for Türkiye.

## DISCUSSION

With the increase in the area under maize cultivation in Türkiye due to the expansion of irrigated areas in agriculture, the development of livestock farming, policies to support agriculture, etc., the area under maize cultivation in the Central Anatolia region has increased day by day, and continues to increase.

Individual studies have been conducted in the Central Anatolia region, which has a wide host range and where the corn cultivation area has increased rapidly in recent years and constitutes 24% of Türkiye's total corn cultivation area (Ayrancı and Sade 2005, Elmalı 1996). Except for the study by Ercan (2006), no study has been realized to date. This study is the first and fundamental for our region, the provinces of the Central Anatolia region.

The research material for this study is 54.720 maize plants in three different phenological stages that were sampled from 304 locations across 77 districts in the provinces of Aksaray, Kırşehir, Konya, Karaman, Nevşehir, Niğde, Kayseri, Kırıkkale, Ankara, Eskişehir, Sivas, Yozgat, and Çankırı in Central Anatolia between 2017 and 2022. The result of the determination of the collected material was 883 samples belonging to 36 species from 25 genera from 10 families, including Alydidae (2 samples), Anthocoridae (302 samples), Berytidae (2 samples), Berytidae (2 samples), Geocoridae (2 samples), Lygaeidae (139 samples), Miridae (243 samples), Nabidae (163 samples), Pentatomidae (14 samples), Rhopalidae (14 samples), Tingidae (2 samples) (Figure 2). Among them, Leucodellus zagdani (Putshkov, 1970) is recorded for the second time and Kalama trimaizeis (Schrank, 1801) for the third time for the fauna of Türkiye. In addition, Leucodellus zagdani is reported as a new record for maize.

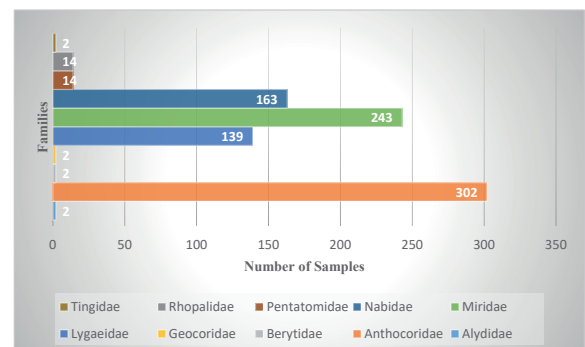
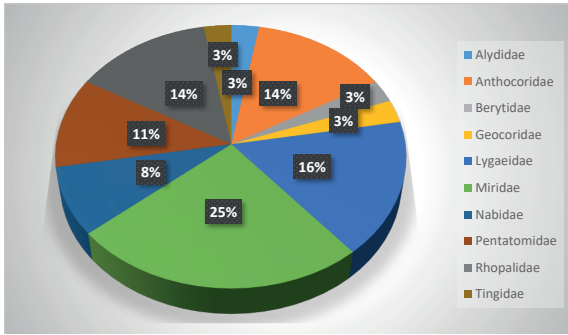


Figure 2. Numbers of families' specimens

Species recorded from Çankırı belong to 10 families (Figure 2). The majority of them belong to the families Miridae (25%, 9 species), Lygaeida (16%, 6 species), Anthocoridae (14%, 5 species), Rhopalidae (14%, 5 species), Pentatomidae (11%, 4 species), and Nabidae (8%, 3 species). Berytidae (3%, 1 sample), Alydidae (3%, 1 sample), Geocoridae (3%, 1 sample), and Tingidae (3%, 1 species) were underrepresented in the Heteroptera fauna of the Central Anatolia region when compared to the fauna of Türkiye (Figure 3). The underrepresentation of these families is probably due to the methods that we used to collect specimens.



**Figure 3.** The percentage number of species recorded from the Central Anatolia Region sorted into families

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#### Author's Contributions

Authors declare the contribution of the authors is equal.

#### Statement of Conflict of Interest

The authors have declared no conflict of interest.

#### ÖZET

Bu çalışma, 2017-2022 yılları arasında İç Anadolu Bölgesi'nde yer alan Aksaray, Kırşehir, Konya, Karaman, Nevşehir, Niğde, Kayseri, Kırıkkale, Ankara, Eskisehir, Sivas, Yozgat ve Çankırı illerinin mısır ekim alanlarında yürütülmüştür. Araştırmalar basit tesadüfi örnekleme yöntemine göre mısırın üç farklı fenolojik döneminde gerçekleştirilmiştir. Araştırmanın yapıldığı her lokasyonda 5 noktada 2 metrelik sıralar üzerinde bulunan bitkiler, ilk iki dönemde görsel inceleme ve tuzak kullanılarak, 3. dönemde ise görsel inceleme ve Japon şemsiyesi kullanılarak sürveyler yapılmıştır. Bu çalışmada 10

familyaya bağlı (Alydidae, Anthocoridae, Berytidae, Geocoridae, Lygaeidae, Miridae, Nabidae, Pentatomidae, Rhopalidae, Tingidae) 25 cinse ait 36 tür kaydedilmiştir. Bunlardan *Leucodellus zagdani* (Putshkov, 1970) Türkiye faunası için ikinci kez ve mısır için yeni kayıt, *Kalama trimaizeis* (Schrank, 1801) ise üçüncü kez kaydedilmiştir.

Anahtar kelimeler: mısır, sürvey, Heteroptera, yeni kayıt, İç Anadolu Bölgesi, Türkiye

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