

LEAF-MINING AND TORTOISE BEETLES OF ÇANKIRI AND KAYSERİ PROVINCES IN TURKEY WITH NEW RECORDS (CHRYSOMELIDAE: HISPINAE AND CASSIDINAE)

Neslihan Bal*, **Didem Coral Şahin**** and **Hüseyin Özdikmen***

* Gazi University, Science Faculty, Department of Biology, 06500 Ankara, TURKEY. E-mails: neslihansilkın@gmail.com; ozdikmen@gazi.edu.tr

** Directorate of Plant Protection Central Research Institute, Ankara, TURKEY. E-mail: didemsahin@ziraimucadele.gov.tr

[Bal, N., Coral Şahin, D. & Özdikmen, H. 2018. Leaf-mining and tortoise beetles of Çankırı and Kayseri provinces in Turkey with new records (Chrysomelidae: Hispinae and Cassidinae). Munis Entomology & Zoology, 13 (2): 409-420]

ABSTRACT: This work is the first attempt for entire leaf-mining and tortoise beetles' fauna of Çankırı and Kayseri provinces. All known taxa from Çankırı and Kayseri provinces are given with new faunistic data in the present text. As a result of this work, a total of 14 species of 4 genera for Hispinae and Cassidinae fauna of Çankırı province and 12 species of 4 genera for Hispinae and Cassidinae fauna of Kayseri province are determined. In addition, 1 subfamily (Hispinae), 1 genus (*Hispa*) and 10 species for the fauna of Çankırı province and 5 species for the fauna of Kayseri province are new records. Especially, 3 very rare species as *Cassida parvula* Boheman, 1854 in after 7 years and *Cassida sanguinosa* Suffrian, 1844 in after 7 years from Kayseri province, and *Cassida sanguinosa* Suffrian, 1844 in after 7 years and *Ischyronota jordanensis* Borowiec, 1986 in after 24 years from Çankırı province are the second records for Turkey. Moreover, 4 species as *Cassida brevis* Weise, 1884 and *Cassida sanguinosa* Suffrian, 1844 from Kayseri province, and *Cassida murraea* Linnaeus, 1767, *Cassida sanguinolenta* O. F. Müller, 1776 and *Cassida sanguinosa* Suffrian, 1844 from Çankırı province are the first records for Central Anatolian region of Turkey. Complete faunal lists of Hispinae and Cassidinae of Çankırı and Kayseri provinces are also annexed to the end of text.

KEY WORDS: Coleoptera, Chrysomelidae, Hispinae, Cassidinae, fauna, new records, Çankırı, Kayseri, Turkey

The fauna of Hispinae and Cassidinae of Turkey includes 2 species of 2 genera and 51 species of 6 genera respectively (Ekiz et al., 2013; Özdikmen et al., 2014; Özdikmen & Kaya, 2014).

This work is based on the specimens in the subfamilies Hispinae and Cassidinae collected from Çankırı and Kayseri provinces. Both provinces are located in Central Kızılırmak part in Central Anatolian region of Turkey (Özdikmen & Kaya, 2014).

Çankırı is a province in the North of Central Anatolian region of Turkey. Northern counties of the province are in Western Black Sea region. It is bordered by Karabük and Kastamonu provinces in the North, Çorum province in the East, Kırıkkale province in the South-east, Ankara province in the South and Bolu province in the West. It is situated about 800 m above sea level. It has a total of 12 counties (incl. Center county) (Map 1). The counties of Çankırı province are Center, Atkaracalar, Bayramören, Çerkeş, Eldivan, Ilgaz, Kızılırmak, Korgun, Kurşunlu, Orta, Şabanözü and Yapraklı. Eldivan, Kızılırmak, Şabanözü, Yapraklı and Center counties are placed in Central Anatolian region of Turkey. The remaining 7 counties of Çankırı province are located in Western Black Sea region of Turkey.

Kayseri is a province in the South-eastern part of Central Anatolian region of Turkey. It is bordered by Yozgat province in the North, Nevşehir province in the

West, Niğde province in the South-west, Sivas province in the East and North-east, and Adana and Kahramanmaraş provinces in the South. It is situated about 1060 m above sea level. It has a total of 17 counties (incl. Center county) (Map 2). The counties of Kayseri province are Center, Akkışla, Bünyan, Develi, Felahiye, Hacılar, İncesu, Kocasinan, Melikgazi, Özvatan, Pınarbaşı, Sarıoğlan, Sarız, Talas, Tomarza, Yahyalı and Yeşilhisar. All counties of Kayseri province are placed in Central Anatolian region of Turkey.

This work is the first attempt for leaf-mining and tortoise beetles' fauna of Çankırı and Kayseri provinces. According to Ekiz et al. (2013) and Özdikmen & Kaya (2014), only 1 species of 1 genus of leaf-mining beetles was known from Kayseri province as *Hispa atra* Linnaeus, 1767. Leaf-mining beetles have never been reported from Çankırı province until now. On the other side, 6 species of 3 genera of tortoise beetles were known from Kayseri province as *Cassida margaritacea* Schaller, 1783, *Cassida prasina* Illiger, 1798, *Cassida saucia* Weise, 1889, *Cassida viridis* Linnaeus, 1758, *Hypocassida subferruginea* (Schrank, 1776) and *Ischyronota desertorum* (Gebler, 1833). Tortoise beetles have been represented with 4 species of 3 genera from Çankırı province up to now as *Cassida seraphina* Ménétrié, 1836, *Cassida viridis* Linnaeus, 1758, *Hypocassida subferruginea* (Schrank, 1776) and *Ischyronota desertorum* (Gebler, 1833).

We had the opportunity to study material of Hispinae and Cassidinae collected during the expedition of Çankırı and Kayseri provinces in 2013-2016, 2018 and many new records were detected. We determined the leaf-mining and tortoise beetles' fauna of Çankırı and Kayseri provinces include 1 species of 1 genus and 19 species of 3 genera respectively.

The aim of the current work is to summarise data on the fauna of subfamilies Hispinae and Cassidinae in Turkey. New faunistic data on 17 species are presented. Besides, all known taxa from Çankırı and Kayseri provinces are also given in the text according to cited literatures (mentioned above).

MATERIALS AND METHODS

The available specimens for the present study were collected by the authors from Çankırı and Kayseri provinces in Turkey in 2013-2016 and 2018. As a result of identification, 1 species for subfamily Hispinae and 16 species for subfamily Cassidinae were determined. The available specimens for the present study are deposited at Gazi University and Nazife Tuatay Plant Protection Museum (NTM) (Turkey, Ankara).

The Turkish distribution patterns for each species are given only concerning provinces. For distribution data of the taxa, Löbl & Smetana (2010) for World and Ekiz et al. (2013) and Özdikmen & Kaya (2014) for Turkey are used in the text chiefly.

RESULTS AND DISCUSSIONS

Hispinae and Cassidinae from Çankırı and Kayseri provinces that include 20 species of 4 genera, are presented as follows:

FAMILY CHRYSOMELIDAE Latreille, 1802

SUBFAMILY HISPINAE Gyllenhal, 1813

TRIBE HISPINI Gyllenhal, 1813

GENUS *HISPA* Linnaeus, 1767

SPECIES *Hispa atra* Linnaeus, 1767

The species has Sibero-European chorotype. It is distributed in Europe, European Russia, Siberia, Afghanistan, Kirgizia, Kazakhstan, Mongolia, China, Iran, European Turkey (Thrace) and Asian Turkey (Anatolia). It is widely distributed in Turkey. It has been recorded by various authors in many provinces from all Turkish regions. It is known from Aksaray, Ankara, Antalya, Artvin, Balıkesir, Bolu, Bursa, Çanakkale, Denizli, Diyarbakır, Erzurum, Gaziantep, Hakkari, Isparta, İstanbul, İzmir, Karaman, **Kayseri**, Kocaeli, Konya, Kütahya, Malatya, Manisa, Mardin, Niğde, Ordu, Sakarya, Siirt, Tokat and Yalova provinces in Asian Turkey (Anatolia) and İstanbul province in European Turkey (Thrace) (Tomov & Gruev, 1975; Kismalı, 1989; Gök & Çilbırođlu, 2003; Aslan et al., 2009; Ően & Gök, 2009; Özdikmen, 2011, Ekiz et al., 2013; Özdikmen & Kaya, 2014; Dikmen & Özuluđ, 2018). So the records in this work are the new record for Çankırı province.

Material examined: **Çankırı**: Center, between Karadayı-Külburun villages, 40°22' N 33°47' E, 25.IV.2014, 638 m, 1 specimen; Kızılırmak, entry of AŐađınovacık village, 40°26' N 33°53' E, 25.IV.2014, 576 m, 2 specimens; Center, Çayırpınar plateau, 40°28' N 33°54' E, 25.IV.2014, 726 m, 1 specimen; Center, between Pehlivanlı-Alaçatı villages, 40°34' N 33°52' E, 26.IV.2014, 925 m, 2 specimens; Orta, Elden village, 40°39' N 32°58' E, 21.V.2014, 1446 m, 1 specimen; Eldivan, entry of Çukuröz village, 40°36' N 33°26' E, 09.VII.2014, 1102 m, 1 specimen; Őabanözü, Çaparkayı, 40°31' N 33°21' E, 11.VII.2014, 1229 m, 1 specimen; Eldivan, entry of Küçükacıbey village, 40°27' N 33°33' E, 19.VI.2015, 920 m, 1 specimen; Kızılırmak, between Çullu-Kevallı villages, 40°18' N 34°1' E, 01.V.2015, 589 m, 1 specimen; Kızılırmak, Korçullu, 40°19' N 34°2' E, 17.V.0215, 645 m, 1 specimen; Yapraklı, between Yüklü-Çevrecik villages, 40°40' N 33°49' E, 25.V.2015, 983 m, 1 specimen; ÇerkeŐ, between AŐsar-Kükürt villages, 40°54' N 33°1' E, 20.VI.2015, 1205 m, 1 specimen. **Kayseri**: Yahyalı, Dikme, 38°01' N 35°31' E, 06.V.2018, 1385 m, 1 specimen.

SUBFAMILY CASSIDINAE Gyllenhal, 1813**TRIBE CASSIDINI Gyllenhal, 1813****GENUS *CASSIDA* Linnaeus, 1758****SPECIES *Cassida atrata* Fabricius, 1787**

The species has C and E-European chorotype. It is distributed in Europe, European Turkey (Thrace) and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by various authors in many provinces from 4 Turkish regions. It is known from Ankara, Bolu, Bursa, Çorum, EskiŐehir, Isparta, Mersin and Niğde provinces in Asian Turkey (Anatolia) and Edirne province in European Turkey (Thrace) (Günther, 1954; Kismalı & Sassi, 1994; Warchalowski, 2003; Gruev, 2004; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014). So the record in this work is the new record for Kayseri province.

Material examined: **Kayseri**: İncesu, Kızılören, Ötebatan, 38°36' N 35°17' E, 08.V.2018, 1270 m, 1 specimen.

SPECIES *Cassida brevis* Weise, 1884

The species has Turano-European chorotype. It is distributed in Greece, European Turkey (Thrace), Armenia, Iran, Iraq, Israel, Lebanon, Syria, Afghanistan, Turkmenistan and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by various authors in many provinces from 5 Turkish regions. It is known from Adıyaman, Afyonkarahisar, Amasya, Antalya, Isparta, Kastamonu, Kütahya, Mersin, MuŐ and Siirt provinces in Asian Turkey (Anatolia) (Weise, 1884; Kismalı & Sassi, 1994; Warchalowski, 2003; Borowiec, 2007; Aslan et al., 2009; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen

& Kaya, 2014). So the record in this work is the new record for Kayseri province and hereby Central Anatolian region of Turkey.

Material examined: **Kayseri**: Melikgazi, Hisarcık Erciyes, 38°36' N 35°30' E, 08.VII.2016, 1682 m, 1 specimen; Yahyali, Kirazlı district, 38°03'10" N 35°23'48" E, 12.IV.2018, 1373 m, 5 specimens.

SPECIES *Cassida margaritacea* Schaller, 1783

The species has Europeo-Mediterranean chorotype. It is distributed in Europe, Azerbaijan, Syria, Asian Turkey (Anatolia) and North Africa (Algeria). It is rather widely distributed in Turkey. It has been recorded by several authors in many provinces from 4 Turkish regions. It is known from Adana, Artvin, Bolu, Diyarbakır, Karaman, **Kayseri**, Mersin and Trabzon provinces in Asian Turkey (Anatolia) (Sahlberg, 1913; Kısmalı & Sassi, 1994; Borowiec, 2007; Ekiz et al., 2013; Özdikmen & Kaya, 2014).

Material examined: **Kayseri**: Talas, Ali Mt., 38°40'06" N 35°33'51" E, 13.IV.2018, 1348 m, 1 specimen.

SPECIES *Cassida murraea* Linnaeus, 1767

The species includes 3 subspecies as the nominotypical subspecies, *Cassida murraea halophila* Spaeth, 1926 that is distributed only in Russia and Iran and *Cassida murraea ussuriensis* Spaeth, 1921 that is known only from Far East Russia. It is represented with the nominotypical subspecies in Turkey.

SUBSPECIES *Cassida murraea murraea* Linnaeus, 1767

The subspecies has Sibero-European chorotype. It is distributed in Europe, Siberia, Far East Russia, Kazakhstan, Mongolia, China, European Turkey (Thrace) and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by several authors in many provinces from only 2 Turkish regions. It is known from Bartın, Bolu, Düzce, Giresun, Karabük, Kastamonu, Ordu, Rize, Sakarya, Sinop and Trabzon provinces in Asian Turkey (Anatolia) and İstanbul, Edirne and Tekirdağ provinces in European Turkey (Thrace) (Kısmalı & Sassi, 1994; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014; Dikmen & Özüluğ, 2018). So the record in this work is the new record for Çankırı province and hereby Central Anatolian region of Turkey.

Material examined: **Çankırı**: Atkaracalar, exit of Höyük village, 40°52' N 33°03' E, 19.VIII.2014, 1378 m, 1 specimen.

SPECIES *Cassida nobilis* Linnaeus, 1758

The species has Palearctic chorotype. It is distributed in Europe, European Turkey (Thrace), Siberia, Korea, Japan, Kirgizia, Kazakhstan, Uzbekistan, Mongolia, China, Asian Turkey (Anatolia) and North Africa (Algeria). It is widely distributed in Turkey. It has been recorded from many provinces from 6 Turkish regions. It is known from Amasya, Ankara, Antalya, Aydın, Balıkesir, Çanakkale, Çorum, Denizli, Erzurum, Isparta, İzmir, Kastamonu, Kocaeli, Konya, Mersin, Niğde, Sakarya, Samsun, Sinop and Tokat provinces in Asian Turkey (Anatolia) (Kısmalı & Sassi, 1994; Ekiz et al., 2013; Özdikmen & Kaya, 2014). So the records in this work are the new record for Çankırı province.

Material examined: **Çankırı**: Center, Alaçatı, 40°32' N 33°33' E, 15.V.2015, 870 m, 1 specimen; Kızılırmak, between Küçükbahçeli-Büyükbahçeli villages, 40°23' N 33°58' E, 16.V.2015, 560 m, 1 specimen.

SPECIES *Cassida pannonica* Suffrian, 1844

The species has Sibero-European chorotype. It is distributed in Europe, West Siberia, Kirgizia, Kazakhstan, Uzbekistan, China, Israel, Lebanon, Syria and Asian Turkey (Anatolia). It is widely distributed in Turkey. It has been recorded

by various authors in many provinces from all Turkish regions. It is known from Adana, Ankara, Antalya, Balıkesir, Bilecik, Bursa, Çorum, Düzce, Gaziantep, Hakkari, Hatay, İzmir, Karabük, Kars, Kastamonu, Konya, Mersin, Muğla, Muş, Niğde, Osmaniye, Samsun and Tunceli provinces in Asian Turkey (Anatolia) (Günther, 1954; Kısmalı & Sassi, 1994; Warchałowski, 2003; Gruev, 2004; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014). So the records in this work are the new record for Çankırı province.

Material examined: **Çankırı:** Kızılırmak, exit of Karamürsel village, Halimintepe, 40°24' N 34°02' E, 24.IV.2014, 550 m, 1 specimen; Kızılırmak, entry of Kemalli village, 40°18' N 34°02' E, 24.IV.2014, 686 m, 1 specimen; Kızılırmak, between Bostancı-Hacılar villages, 40°19' N 33°51' E, 25.IV.2014, 565 m, 1 specimen; Center, Tuz Cave district, 40°31' N 33°45' E, 25.IV.2014, 699 m, 1 specimen; Center, between Pehlivanlı-Alaçatı villages, 40°34' N 33°52' E, 26.IV.2014, 925 m, 1 specimen; Center, Aşağıçavuş-Yukarıçavuş return, 40°40' N 33°35' E, 09.V.2015, 837 m, 1 specimen; Center, Balıbağı village, 40°34' N 33°46' E, 15.V.2015, 1037 m, 1 specimen; Center, between Ovacık-Kuzuköy, 40°32' N 33°53' E, 15.V.2015, 919 m, 1 specimen; Center, entry of Karadayı, 40°24' N 33°45' E, 16.V.2015, 856 m, 2 specimens; Kızılırmak, Yukarıalagöz village, 40°22' N 33°53' E, 16.V.2015, 642 m, 1 specimen; Kızılırmak, Kavaklı, 40°22' N 34°1' E, 16.V.2015, 542 m, 1 specimen; Yapraklı, Bugay, 40°42' N 33°46' E, 25.V.2015, 897 m, 1 specimen; Yapraklı, entry of Çevrecik, 40°39' N 33°49' E, 25.V.2015, 953 m, 1 specimen; Yapraklı, Kirliakça, 40°37' N 33°54' E, 26.V.2015, 914 m, 3 specimens; Ilgaz, Yaylaören village return, 40°52' N 33°30' E, 17.VI.2015, 914 m, 1 specimen; Ilgaz, entry of Şeyh Yunus village, 40°50' N 33°31' E, 18.VI.2015, 1421 m, 1 specimen; Bayramören, Harmançık road, 41°2' N 33°13' E, 21.VI.2015, 861 m, 1 specimen; Atkaracalar, Budakpınarı, 40°51' N 33°8' E, 22.VI.2015, 1096 m, 1 specimen; Yapraklı, entry of Kaymaz village, 40°43' N 33°54' E, 29.VI.2015, 1011 m, 1 specimen; Yapraklı, between Yüklü-Çevrecik return, 40°40' N 33°45' E, 29.VI.2015, 926 m, 1 specimen.

SPECIES *Cassida parvula* Boheman, 1854

The species has Asiatic-European chorotype. It is distributed in East Europe, European Russia, Georgia, Far East Russia, Kirgizia, Kazakhstan, Mongolia, Turkmenistan, Uzbekistan, China and Asian Turkey (Anatolia). It is a rare species for Turkey. It has been recorded only by Özdikmen (2011) from Antalya and Konya provinces in Asian Turkey (Anatolia) until now. So the records in this work are the new record for Kayseri province, and the second record for Turkey in after 7 years.

Material examined: **Kayseri:** Develi, 38°22'39" N 35°29'05" E, 09.VII.2015, 1198 m, 1 specimen; Yahyalı, Dikme, 22.VII.2016, 1404 m, 1 specimen; Yahyalı, Sarioğlan, 14.VII.2016, 1120 m, 1 specimen.

SPECIES *Cassida prasina* Illiger, 1798

The species has Sibero-European chorotype. It is distributed in Europe, European Russia, Siberia, Kazakhstan, China, European Turkey (Thrace) and Asian Turkey (Anatolia). It is widely distributed in Turkey. It has been recorded by various authors in many provinces from all Turkish regions. It is known from Antalya, Aydın, Balıkesir, Bartın, Bilecik, Bolu, Denizli, Düzce, Gaziantep, Giresun, Hatay, İzmir, Kahramanmaraş, Karabük, Karaman, Kayseri, Kilis, Konya, Manisa, Mersin, Sakarya, Tokat, Tunceli and Zonguldak provinces in Asian Turkey (Anatolia) and Kırklareli province in European Turkey (Thrace) (Sahlberg, 1913; Gruev & Tomov, 1979; Kısmalı & Sassi, 1994; Gruev, 2004; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014).

SPECIES *Cassida sanguinolenta* O. F. Müller, 1776

The species has Sibero-European chorotype. It is distributed in Europe, Armenia, European Russia, West Siberia, Kazakhstan and Asian Turkey

(Anatolia). It has been recorded by several authors in only 6 provinces from 5 Turkish regions. It is known from Bilecik, İzmir, Kahramanmaraş, Kütahya, Muş and Sinop provinces in Asian Turkey (Anatolia) (Kısmalı & Sassi, 1994; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014). So the records in this work are the new record for Çankırı province and hereby Central Anatolian region of Turkey.

Material examined: **Çankırı**: Yapraklı, Kirliakça, 40°37' N 33°54' E, 26.V.2015, 914 m, 1 specimen.

SPECIES *Cassida sanguinosa* Suffrian, 1844

The species has Palearctic chorotype. It is distributed in Europe, Siberia, Kazakhstan and Asian Turkey (Anatolia). It is a rare species for Turkey. It has been recorded only by Özdikmen (2011) from Bartın and Kastamonu provinces in Asian Turkey (Anatolia) until now. So the records in this work are the new record for Çankırı and Kayseri provinces and hereby Central Anatolian region of Turkey. Also they are the second records for Turkey in after 7 years.

Material examined: **Çankırı**: Kızılırmak, entry of Kuzeykişla village, 40°22' N 34°03' E, 24.IV.2014, 600 m, 1 specimen; Kızılırmak, entry of Kemallı village, 40°18' N 34°02' E, 24.IV.2014, 686 m, 1 specimen; Center, Tuz Cave district, 40°31' N 33°45' E, 26.IV.2014, 699 m, 1 specimen; Orta, Elden village, 40°39' N 32°58' E, 21.V.2014, 1446 m, 1 specimen; Orta, entry of Dodurga, 40°36' N 33°00' E, 22.V.2014, 1351 m, 1 specimen; Bayramören, exit of Yurtpinar village, 40°56' N 33°9' E, 24.IV.2015, 829 m, 1 specimen; Atkaracalar, entry of Hüyük village, 40°51' N 33°3' E, 25.IV.2015, 1331 m, 2 specimens; Ilgaz, exit of Belören village, 40°51' N 33°30' E, 26.IV.2015, 923 m, 1 specimen; Center, Akçavallı-Başegmez villages road, 40°41' N 33°35' E, 27.IV.2015, 840 m, 2 specimens; Center, entry of Başegmez village, 40°43' N 33°37' E, 27.IV.2015, 870 m, 1 specimen; Center, between Yukarıçavuş-Paşaköy, 40°42' N 33°39' E, 27.IV.2015, 953 m, 2 specimens; Kızılırmak, Cacıklar village return, 40°23' N 34°2' E, 01.V.2015, 563 m, 1 specimen; Kurşunlu, Dağören-Sünürlü return, 40°48' N 33°16' E, 10.V.2015, 996 m, 2 specimens; Orta, Elden village, 40°39' N 32°57' E, 10.V.2015, 1482 m, 1 specimen; Kurşunlu, Köprülü village return, 40°48' N 33°16' E, 11.V.2015, 1153 m, 1 specimen; Orta, exit of Sancar village, 40°39' N 33°10' E, 11.V.2015, 1279 m, 3 specimens; Eldivan, entry of Elmacı village, 40°28' N 33°33' E, 13.V.2015, 937 m, 2 specimens; Eldivan, entry of Çiftlik village, 40°34' N 33°30' E, 14.V.2015, 844 m, 1 specimen; Ilgaz, exit of Belören, 40°51' N 33°30' E, 27.V.2015, 903 m, 1 specimen; Korgun, Öz, 40°43' N 33°31' E, 31.V.2015, 854 m, 1 specimen; **Kayseri**: Develi, Kocahacı, 38°11'15" N 35°23'50" E, 07.V.2018, 1092 m, 2 specimens; İncesu, Bahçelievler, , 38°37'58" N 35°11'48" E, 08.V.2018, 1072 m, 1 specimen.

SPECIES *Cassida saucia* Weise, 1889

The species has SW-Asiatic (Anatolo-Caucasian + Irano-Caucasian + Irano-Anatolian) chorotype. It is distributed in Armenia, Azerbaijan, Iran and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by several authors in many provinces from 4 Turkish regions. It is known from Amasya, Ankara, Balıkesir, Çorum, Düzce, Gaziantep, **Kayseri**, Kilis and Siirt provinces in Asian Turkey (Anatolia) (Kısmalı & Sassi, 1994; Warchałowski, 2003; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014).

SPECIES *Cassida seraphina* Ménériés, 1836

The species has SW-Asiatic chorotype. It is distributed in Eastern Europe (Greece, European Russia and European Turkey), Armenia, Kazakhstan and Asian Turkey (Anatolia). It is widely distributed in Turkey. It has been recorded by various authors in many provinces from 6 Turkish regions. It is known from Amasya, Ankara, Antalya, Balıkesir, Bilecik, Bolu, Burdur, Bursa, **Çankırı**, Çorum, Düzce, Eskişehir, Erzurum, Isparta, İstanbul, İzmir, Kastamonu, Kırşehir, Konya,

Kütahya, Sakarya, Samsun, Sivas, Tokat and Uşak provinces in Asian Turkey (Anatolia) and İstanbul province in European Turkey (Thrace) (Gül-Zümreoğlu, 1972; Kısmalı & Sassi, 1994; Warchalowski, 2003; Borowiec, 2007; Aslan et al., 2009; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014; Dikmen & Özuluğ, 2018).

Material examined: **Çankırı:** Kızılırmak, between Kemalli-Halaçlı villages, 40°18' N 33°58' E, 24.IV.2014, 608 m, 1 specimen; Kızılırmak, entry of Aşağıovacık village, 40°26' N 33°53' E, 25.IV.2014, 576 m, 1 specimen; Şabanözü, entry of Kamış village, 40°33' N 33°20' E, 23.V.2014, 1221 m, 89 specimens; Şabanözü, entry of Kamış village, 40°33' N 33°20' E, 09.V.2015, 1208 m, 11 specimens; Kurşunlu, 4 km to Dağören, 40°48' N 33°16' E, 10.V.2015, 1110 m, 1 specimen; Çerkeş, entry of Gelik district, 40°50' N 32°55' E, 20.VI.2015, 1318 m, 1 specimen; Çerkeş, between Cedine-Kabak villages, 40°53' N 32°55' E, 20.VI.2015, 1355 m, 1 specimen; Bayramören, entry of Dereköy, 41°1' N 33°14' E, 21.VI.2015, 1048 m, 1 specimen; Şabanözü, exit of Kamış village (Maruf road), 40°33' N 33°20' E, 28.VI.2015, 1217 m, 11 specimens.

SPECIES *Cassida stigmatica* Suffrian, 1844

The species has Palearctic or Sibero-European + N-Africa chorotype. It is distributed in Europe, Siberia, Afghanistan, Kirgizia, Kazakhstan, China, Asian Turkey (Anatolia) and North Africa (Tunisia). It is rather widely distributed in Turkey. It has been recorded by Kısmalı & Sassi (1994) and Özdikmen (2011) from 5 Turkish regions. It was firstly reported by Kısmalı & Sassi (1994) from Adana, Çanakkale, Konya and Kütahya provinces in Asian Turkey (Anatolia). Then Özdikmen (2011) recorded it from Ankara, Bolu and Kastamonu provinces in Asian Turkey (Anatolia). These records were also repeated by Ekiz et al. (2013) and Özdikmen & Kaya (2014). So the records in this work are the new record for Çankırı province.

Material examined: **Çankırı:** Ilgaz, between Beyköy-Saraycık villages, 40°59' N 33°44' E, 19.VI.2015, 1195 m, 1 specimen; Yapraklı, Yukarıöz, 40°51' N 33°44' E, 25.VI.2015, 1380 m, 2 specimens.

SPECIES *Cassida subreticulata* Suffrian, 1844

The species has Sibero-European or Asiatic-European chorotype. It is distributed in Europe, Siberia, Far East Russia, Japan, Kazakhstan, Mongolia, Turkmenistan, China, Iran and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by Kısmalı & Sassi (1994), Özdikmen (2011) and Ekiz et al. (2013) from 3 Turkish regions. It was firstly reported by Kısmalı & Sassi (1994) from Ankara, Kastamonu, Mersin, Nevşehir, Ordu and Tokat provinces in Asian Turkey (Anatolia). Then Özdikmen (2011) recorded it from Karabük and Konya provinces in Asian Turkey (Anatolia). Latter Ekiz et al. (2013) gave it from Isparta province in Asian Turkey (Anatolia). These records were also repeated by Özdikmen & Kaya (2014). So the records in this work are the new record for Çankırı province.

Material examined: **Çankırı:** Ilgaz, Kale village, 40°57' N 33°39' E, 17.VII.2014, 980 m, 1 specimen; Ilgaz, between Kayı village return- Kırşark village, 40°56' N 33°28' E, 29.IX.2015, 1137 m, 1 specimen; Ilgaz, Kazancı village-Kırkpınar-Yayla return, 40°59' N 33°41', 19.VI.2015, 1110 m, 4 specimens; Yapraklı, between Yuvasaray-Yukarıöz, 40°52' N 33°46' E, 25.VI.2015, 1077 m, 1 specimen; Yapraklı, Yukarıöz, 40°51' N 33°44' E, 25.VI.2015, 1380 m, 1 specimen.

SPECIES *Cassida vibex* Linnaeus, 1767

The species has Asiatic-European chorotype. It is distributed in Europe, Kazakhstan, Mongolia, China, European Turkey (Thrace) and Asian Turkey (Anatolia). It is rather widely distributed in Turkey. It has been recorded by

various authors in many provinces from 5 Turkish regions. It is known from Ankara, Antalya, Bartın, Bolu, Çorum, Isparta, İzmir, Kastamonu, Mersin, Nevşehir, Niğde and Samsun provinces in Asian Turkey (Anatolia) and European Turkey (Thrace) without any real locality (Sahlberg, 1913; Kısmalı & Sassi, 1994; Gök & Çilbıroğlu, 2003; Borowiec, 2007; Aslan et al., 2009; Şen & Gök, 2009; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014). So the records in this work are the new record for Çankırı and Kayseri provinces.

Material examined: **Çankırı**: Atkaracalar, entry of Hüyük village, 40°51' N 33°3' E, 25.IV.2015, 1331 m, 1 specimen; Kızılırmak, between Küçükbahçeli-Büyükbahçeli, 40°23' N 33°58' E, 01.V.2015, 583 m, 1 specimen; Center, Aşağıçavuş, 40°41' N 33°36' E, 09.V.2015, 847 m, 2 specimens; Center, Alanpınar-Başegmez return, 40°41' N 33°35' E, 09.V.2015, 822 m, 2 specimens; Kurşunlu, Dağören-Sünürlü return, 40°48' N 33°16' E, 10.V.2015, 996 m, 1 specimen; Eldivan, Oğlaklı village, 40°32' N 33°33' E, 13.V.2015, 1027 m, 2 specimens; Eldivan, entry of Elmacı village, 40°28' N 33°33' E, 13.V.2015, 937 m, 1 specimen; Eldivan, entry of Çiftlik village, 40°34' N 33°30' E, 14.V.2015, 844 m, 1 specimen; Center, Tuzlu return-Yapraklı turnout, 40°35' N 33°40' E, 15.V.2015, 885 m, 1 specimen; Center, Balıbağı village, 40°34' N 33°46' E, 15.V.2015, 1037 m, 1 specimen; Kızılırmak, Yukarıalagöz village, 40°22' N 33°53' E, 16.V.2015, 642 m, 2 specimens; Ilgaz, exit of Belören, 40°51' N 33°30' E, 27.V.2015, 903 m, 6 specimens; Ilgaz, Belören, 40°51' N 33°30' E, 18.VI.2015, 914 m, 4 specimens; Ilgaz, Sazak village, 40°56' N 33°43' E, 18.VI.2015, 1144 m, 1 specimen; Ilgaz, Kırkpınar plateau road, 41°00' N 33°41' E, 19.VI.2015, 1230 m, 1 specimen; Yapraklı, Yukarıöz, 40°51' N 33°44' E, 25.VI.2015, 1380 m, 1 specimen; **Kayseri**: Tomarza, Toklar, 10.VII.2015, 1425 m, 1 specimen.

SPECIES *Cassida viridis* Linnaeus, 1758

The species has Palearctic chorotype. It is distributed in Europe, Siberia, Far East Russia, Japan, Korea, Kazakhstan, Uzbekistan, China, Syria, Asian Turkey (Anatolia) and North Africa (Morocco). It is widely distributed in Turkey. It has been recorded by various authors in many provinces from all Turkish regions. It is known from Adana, Aksaray, Amasya, Ankara, Balıkesir, Bolu, Çanakkale, **Çankırı**, Diyarbakır, Erzurum, Hatay, Isparta, İzmir, Kahramanmaraş, Kastamonu, **Kayseri**, Kırşehir, Konya, Muş, Nevşehir, Niğde, Osmaniye, Sakarya, Şanlıurfa, Tokat, Trabzon, Tunceli and Zonguldak provinces in Asian Turkey (Anatolia) and İstanbul and Tekirdağ provinces in European Turkey (Thrace) (Günther, 1954; Gül-Zümreoğlu, 1972; Kısmalı & Sassi, 1994; Gök & Çilbıroğlu, 2003; Borowiec, 2007; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014; Dikmen & Özuluğ, 2018).

Material examined: **Çankırı**: Center, Aşağıçavuş village, 40°41' N 33°36' E, 27.IV.2015, 833 m, 1 specimen; Ilgaz, between Kırşlar-Okçular, 40°56' N 33°29' E, 29.V.2015, 1059 m, 1 specimen; Ilgaz, exit of Kırşlar village, 40°56' N 33°29' E, 17.VI.2015, 914 m, 2 specimens; **Kayseri**: Sarız, Yedioluk, 10.VI.2015, 1740 m, 1 specimen; Sarız, Yedioluk, 38°34'24" N 36°25'59" E, 10.VI.2015, 1740 m, 2 specimens.

GENUS *HYPOCASSIDA* Weise, 1893

SPECIES *Hypocassida subferruginea* (Schrank, 1776)

The species has Palearctic chorotype. It is distributed in Europe, Siberia, Far East Russia, Afghanistan, Kirgizia, Kazakhstan, Mongolia, Tadjikistan, Turkmenistan, Uzbekistan, China, Israel, European Turkey (Thrace), Asian Turkey (Anatolia) and North Africa (Algeria, Egypt, Morocco). It is widely distributed in Turkey. It has been recorded by various authors in many provinces from all Turkish regions. It is known from Adana, Ağrı, Aksaray, Amasya, Ankara, Antalya, Aydın, Balıkesir, Bitlis, Bolu, Burdur, Bursa, Çanakkale, **Çankırı**, Çorum, Denizli, Düzce, Erzincan, Erzurum, Eskişehir, Hatay, Isparta, İstanbul, İzmir, Kahramanmaraş, Karabük, Karaman, Kastamonu, **Kayseri**, Kocaeli, Konya, Kütahya, Manisa, Mersin, Muş, Niğde, Osmaniye, Rize, Sakarya, Samsun, Siirt,

Sinop, Sivas, Şanlıurfa, Yozgat and Zonguldak provinces in Asian Turkey (Anatolia) and Edirne, İstanbul and Tekirdağ provinces in European Turkey (Thrace) (Sahlberg, 1913; Günther, 1954; Kısmalı & Sassi, 1994; Aslan & Özbek, 1999; Gök & Çilbıroğlu, 2003; Gök & Gürbüz, 2004; Borowiec, 2007; Aslan et al., 2009; Özdikmen, 2011; Ekiz et al., 2013; Özdikmen & Kaya, 2014).

Material examined: **Çankırı:** Şabanözü, between Şabanözü-Eldivan road 3rd km, 40°28' N 33°18' E, 24.IV.2013, 1141 m, 1 specimen; between exit of Center-Yapraklı, 40°35' N 33°37' E, 23.VII.2013, 730 m, 1 specimen; Çerkeş, Bildircin plateau env., 40°39' N 32°52' E, 29.VIII.2013, 1800 m, 1 specimen; Kızılırmak, between Korçullu-Kemalli villages, 40°18' N 34°02' E, 24.IV.2014, 646 m, 1 specimen; Kızılırmak, between Bostancı-Hacılar villages, 40°19' N 33°51' E, 25.IV.2014, 565 m, 1 specimen; Korgun, exit of Maruf village, 40°38' N 33°26' E, 20.V.2014, 1181 m, 1 specimen; Şabanözü, entry of Kamış village, 40°33' N 33°20' E, 23.V.2014, 1221 m, 2 specimens; Şabanözü, entry of Büyükyakalı village, 40°28' N 33°14' E, 23.V.2014, 1091 m, 1 specimen; Eldivan, between Akçalı-Maruf villages, 40°38' N 33°27' E, 09.VII.2014, 805 m, 1 specimen; Kurşunlu, entry of Köpürlü, 40°47' N 33°16' E, 10.VII.2014, 1006 m, 2 specimens; Orta, Ortabayındır, 40°34' N 32°59' E, 10.VII.2014, 1359 m, 1 specimen; Ilgaz, entry of Belsöğüt village, 40°56' N 33°36' E, 17.VII.2014, 1019 m, 1 specimen; Bayramören, between Feriz-Dere villages, 41°02' N 33°14' E, 19.VII.2014, 911 m, 1 specimen; Şabanözü, between Mart-Şabanözü, 40°27' N 33°17' E, 08.VIII.2014, 1152 m, 1 specimen; Eldivan, Akbulut village return, 40°30' N 33°30' E, 14.V.2015, 1076 m, 1 specimen; Center, entry of Karadayı, 40°24' N 33°45' E, 16.V.2015, 856 m, 1 specimen; Kızılırmak, Yukarıalagöz village, 40°22' N 33°53' E, 16.V.2015, 642 m, 2 specimens; Kızılırmak, Karallı-Kahyalı return, 40°18' N 33°56' E, 17.V.2015, 556 m, 1 specimen; Center, Dutağaç-Deyim return, 40°40' N 33°41' E, 25.V.2015, 855 m, 1 specimen; Ilgaz, Yaylaören, 40°53' N 33°30' E, 29.V.2015, 999 m, 1 specimen; Ilgaz, entry of Yaylaören village return, 40°52' N 33°30' E, 17.VI.2015, 914 m, 1 specimen; Ilgaz, entry of Eskice village, 40°54' N 33°29' E, 17.VI.2015, 983 m, 1 specimen; Ilgaz, Belören, 40°51' N 33°30' E, 18.VI.2015, 914 m, 1 specimen; Ilgaz, entry of Şeyhyunus village, 40°50' N 33°31' E, 18.VI.2015, 1421 m, 1 specimen; Ilgaz, Bükçük, 40°55' N 33°39' E, 18.VI.2015, 917 m, 1 specimen; Ilgaz, Candere-Sazak-Hacı Hasan return, 40°55' N 33°39' E, 18.VI.2015, 885 m, 1 specimen; Ilgaz, Sazak village, 40°56' N 33°43' E, 18.VI.2015, 1144 m, 1 specimen; Ilgaz, Onat, 40°58' N 33°41' E, 19.VI.2015, 1024 m, 1 specimen; Çerkeş, Kuzuören village road, 40°54' N 32°49' E, 22.VI.2015, 963 m, 1 specimen; Center, Paşaköy, 40°43' N 33°39' E, 27.VI.2015, 962 m, 1 specimen; Yapraklı, entry of Kaymaz village, 40°43' N 33°54' E, 29.VI.2015, 1011 m, 1 specimen; Korgun, Öz, 40°42' N 33°31' E, 30.VI.2015, 758 m, 1 specimen.

GENUS *ISCHYRONOTA* Weise, 1891

SPECIES *Ischyronota desertorum* (Gebler, 1833)

The species has Asiatic-European chorotype. It is distributed in Eastern Europe, European Russia, Armenia, Afghanistan, Pakistan, Kirgizia, Kazakhstan, Mongolia, Turkmenistan, Uzbekistan, China, Iran, Syria, Israel and Asian Turkey (Anatolia). It probably is rather widely distributed in Turkey. It has been recorded by several authors in 5 provinces from 4 Turkish regions. It is known from Ağrı, **Çankırı**, Iğdır, İzmir and **Kayseri** provinces in Asian Turkey (Anatolia) (Gruev & Tomov, 1979; Kısmalı & Sassi, 1994; Borowiec, 2007; Ekiz et al., 2013; Özdikmen & Kaya, 2014).

Material examined: **Çankırı:** Korgun, exit of Buğay, 40°42' N 33°28' E, 16.IV.2015, 964 m, 1 specimen.

SPECIES *Ischyronota jordanensis* Borowiec, 1986

The species has E-Mediterranean (Palaestino-Taurian) chorotype. It is distributed only in Jordan and Asian Turkey (Anatolia). It is a rare species for Turkey. It has been recorded only by Kısmalı & Sassi (1994) from Ankara province in Asian Turkey (Anatolia) until now. This record was also repeated by Ekiz et al. (2013) and Özdikmen & Kaya (2014). So the record in this work are the new record for Çankırı province. This is the second record for Turkey in after 24 years.

Material examined: **Çankırı**: Kızılırmak, between Çullu-Kevalli villages, 40°18' N 34°1' E, 01.V.2015, 589 m, 1 specimen.

LITERATURE CITED

- Aslan, E. G., Gök, A., Gürbüz, M. F. & Ayvaz, Y.** 2009. Species composition of Chrysomelidae (Coleoptera) in Saklikent vicinity (Antalya, Turkey) with observations on potential host plants. *J. Entomol. Res. Soc.*, 11 (3): 7-18.
- Aslan, İ. & Özbek, H.** 1999. Erzurum, Erzincan ve Artvin illeri Chrysomelinae (Coleoptera, Chrysomelidae) altfamilyası üzerinde faunistik ve sistematik bir araştırma. *Türk. J. Zool.*, 23 (3): 751-767.
- Borowiec, L.** 2007. Cassidinae (Coleoptera: Chrysomelidae) collected in Turkey during expeditions of the Upper Silesian Museum, Bytom, Poland. *Ann. Upper Silesian Mus. Bytom. (Entomol.)*, 14-15: 7-12.
- Dikmen, F. & Özüluğ, O.** 2018. Insect (Coleoptera and Orthoptera) species of İstanbul in the Zoology Collection of İstanbul University. *Turkish Journal of Bioscience and Collections*, 2 (1): 27-43.
- Ekiz, A. N., Şen, İ., Aslan, E. G. & Gök, A.** 2013. Checklist of leaf beetles (Coleoptera: Chrysomelidae) of Turkey, excluding Bruchinae. *Journal of Natural History*, 47 (33-34): 2213-2287.
- Gök, A. & Çilbıroğlu, E. G.** 2003. The Chrysomelidae fauna of Kovada Stream Arboretum (Eğirdir-Isparta, Turkey). *Nouv. Revue Ent. (NS)*, 20: 61-73.
- Gök, A. & Gürbüz, M. F.** 2004. The Chrysomelidae fauna of the Islands of Beyşehir Lake in Turkey. *Nouv. Revue Ent. (NS)*, 21: 43-48.
- Gruev, B.** 2004. The leaf beetles (Insecta: Coleoptera: Chrysomelidae) of the Sredna Gora Mountains (Bulgaria), fauna and zoogeography. *Trav. Sci. Univ. Plovdiv Animalia*, 40 (6): 77-96.
- Gruev, B. & Tomov, V.** 1979. Zur Kenntnis einiger in der Türkei, Jugoslawien und Griechenland vorkommender Arten der Familie Chrysomelidae (Coleoptera) aus der Zoologischen Staatssammlung München. *Spixiana*, 2 (3): 259-267.
- Gül-Zümreoglu, S.** 1972. İzmir Bölge Zirai Mücadele Araştırma Enstitüsü Böcek ve Genel Zararlılar Kataloğu, 1928-1969, 1.Kısım. İzmir: T.C. Tarım Bakanlığı Zirai Mücadele ve Zirai Karantina Genel Müdürlüğü Yayınları, p. 48-52.
- Günther, V.** 1954. Ergebnisse der Zoologischen expedition des National museums in Prag nach der Türkei. *Acta Entomol. Mus. Nat. Pragae*, 29: 159-162.
- Kısmalı, S.** 1989. Preliminary list of Chrysomelidae with notes on distribution and importance of species in Turkey. I. Subfamily Hispinae Gemminger & Harold. *Türk. Entomol. Derg.*, 13 (2): 85-89.
- Kısmalı, S. & Sassi, D.** 1994. Preliminary list of Chrysomelidae with notes on distribution and importance of species in Turkey. II. Subfamily Cassidinae Spaeth. *Türk. Entomol. Derg.*, 18 (3): 141-156.
- Löbl, I. & Smetana, A. (ed.)** 2010. *Catalogue of Palaearctic Coleoptera*, Vol. 6. Chrysomeloidea. Stenstrup: Apollo Books, 924 pp.
- Özdikmen, H.** 2011. A comprehensive contribution for leaf beetles of Turkey with a zoogeographical evaluation for all Turkish fauna (Coleoptera: Chrysomelidae). *Munis Entomology & Zoology*, 6 (2): 540-638.
- Özdikmen, H. & Kaya, G.** 2014. Chorotype identification for Turkish Chrysomeloidea (Coleoptera) Part I – Chrysomelidae: Hispinae and Cassidinae. *Munis Entomology & Zoology*, 9 (1): 58-70.
- Özdikmen, H., Mercan, N., Cihan, N., Kaya, G., Topcu, N. N. & Kavak, M.** 2014. The importance of superfamily Chrysomeloidea for Turkish biodiversity (Coleoptera). *Munis Entomology & Zoology*, 9 (1): 17-45.
- Sahlberg, J.** 1913. *Coleoptera Mediterranea Orientalia*. Quae in Aegypto, Palaestina, Syria, Caramania atque in Anatolia Occidentali anno 1904. Öfersigt af Finska Vetenskaps-Societetens Förhandlingar, 55 A; 19: 1-281.
- Şen, İ. & Gök, A.** 2009. Leaf beetle communities (Coleoptera: Chrysomelidae) of two mixed forest ecosystems dominated by pine-oak-hawthorn in Isparta province, Turkey. *Ann. Zool. Fenn.*, 46: 217-232.
- Tomov, V. & Gruev, B.** 1975. Chrysomelidae (Coleoptera) collected by K. M. Guichard in Turkey, Greece and Yugoslavia. *Trav. Sci. Univ. Plovdiv, Bulgaria. Biol.*, 13 (4): 133-151.
- Warchalowski, A.** 2003. Chrysomelidae: the leaf beetles of Europe and the mediterranean Area. Warszawa: Natura optima dux Foundation, 600 pp.
- Weise, J.** 1884. Beitrag zur Chrysomeliden-Fauna von Asias. *Deut. Entomol. Z.*, 28: 157-160.



Map 1. Çankırı province.



Map 2. Kayseri province.

ANNEX 1. Complete faunal list of Hispinae and Cassidinae in Çankırı province (new records are marked with the sign “*”).

FAMILY CHRYSOMELIDAE Latreille, 1802

***SUBFAMILY HISPINAE Gyllenhal, 1813**

***TRIBE HISPINI Gyllenhal, 1813**

***GENUS *HISPA* Linnaeus, 1767**

***SPECIES *Hispa atra* Linnaeus, 1767**

SUBFAMILY CASSIDINAE Gyllenhal, 1813

TRIBE CASSIDINI Gyllenhal, 1813

GENUS *CASSIDA* Linnaeus, 1758

***SPECIES *Cassida murraea* Linnaeus, 1767**

***SUBSPECIES *Cassida murraea murraea* Linnaeus, 1767**

***SPECIES *Cassida nobilis* Linnaeus, 1758**

***SPECIES *Cassida pannonica* Suffrian, 1844**

***SPECIES *Cassida sanguinolenta* O. F. Müller, 1776**

***SPECIES *Cassida sanguinosa* Suffrian, 1844**

SPECIES *Cassida seraphina* Ménétériés, 1836

***SPECIES *Cassida stigmatica* Suffrian, 1844**

***SPECIES *Cassida subreticulata* Suffrian, 1844**

***SPECIES *Cassida vibex* Linnaeus, 1767**

SPECIES *Cassida viridis* Linnaeus, 1758

GENUS *HYPOCASSIDA* Weise, 1893

SPECIES *Hypocassida subferruginea* (Schrank, 1776)

GENUS *ISCHYRONOTA* Weise, 1891

SPECIES *Ischyronota desertorum* (Gebler, 1833)

***SPECIES *Ischyronota jordanensis* Borowiec, 1986**

ANNEX 2. Complete faunal list of Hispinae and Cassidinae in Kayseri province (new records are marked with the sign “*”).

FAMILY CHRYSOMELIDAE Latreille, 1802

SUBFAMILY HISPINAE Gyllenhal, 1813

TRIBE HISPINI Gyllenhal, 1813

GENUS *HISPA* Linnaeus, 1767

SPECIES *Hispa atra* Linnaeus, 1767

SUBFAMILY CASSIDINAE Gyllenhal, 1813

TRIBE CASSIDINI Gyllenhal, 1813

GENUS *CASSIDA* Linnaeus, 1758

***SPECIES *Cassida atrata* Fabricius, 1787**

***SPECIES *Cassida brevis* Weise, 1884**

SPECIES *Cassida margaritacea* Schaller, 1783

***SPECIES *Cassida parvula* Boheman, 1854**

SPECIES *Cassida prasina* Illiger, 1798

***SPECIES *Cassida sanguinosa* Suffrian, 1844**

SPECIES *Cassida saucia* Weise, 1889

***SPECIES *Cassida vibex* Linnaeus, 1767**

SPECIES *Cassida viridis* Linnaeus, 1758

GENUS *HYPOCASSIDA* Weise, 1893

SPECIES *Hypocassida subferruginea* (Schrank, 1776)

GENUS *ISCHYRONOTA* Weise, 1891

SPECIES *Ischyronota desertorum* (Gebler, 1833)