

Preliminary list of Chrysomelidae with notes on distribution and importance of species in Turkey. II. Subfamily Cassidinae Spaeth

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Summary

A list of 35 species of Turkish Cassidinae is presented, eight of them being registered for the first time in the region. The distribution in Turkey and biological data are also briefly summarized.

Introduction

The present paper is the second report of a series of publications concerning the fauna of Chrysomelid - beetles in Turkey. It is prevalently based on material collected by one of the authors (Kısmalı) during more than twenty seven years of searches from all over the Region. At present this material is deposited in the collections of Department of Plant Protection, Faculty of Agriculture, University of Ege, İzmir, and partly in the authors collections. Moreover a small number of some relevant specimens were also utilized from the collections of the Natural History Museum of Verona (marked with ***), of the Museum of the Zoological Institut of Rome University (marked with **) and from one of authors collection (Sassi, marked with *). Besides, we have also included five species previously signaled from Turkey, whose presence we couldn't confirme through material directly examined. As the result, a list of 35 taxa is presented, including eight species newly recorded to the fauna of Turkey.

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Results

Cassida algerica Lucas, 1894

General distribution: Prevalently Mediterranean species. Known from Africa, Italy, Armenia (Eastern limit of its areal) (Bibolini, 1973).

Distribution in Turkey: We have not traced any explicit reports of this species from Turkey.

Material examined: Van (Başkale) - Totally 5 specimens have been examined.

Biological notes: Xerophilous species, feeds exclusively on cultivars of *Cynara cardunculus* and some spontaneous, strictly related taxa (*Carthamus*, *Galactites*). More frequently collected in March, April and August.

Cassida atrata Fabricius, 1787

General Distribution: Turanian - European species (Vigna Taglianti et al., 1992). Known from Middle and East Europe, Caucasus, Asia Minor (Winkler, 1930; Gruév, 1990).

Distribution in Turkey: Recorded by Bodemeyer (1900) from Bursa and İçel (Bulgar Maden), by Günther (1954) from Edime.

Material examined: Bolu (Abant lake*), Eskişehir (in centrum*, Çukurhisar***), Çorum (Mecitözü *) - Totally 4 specimens have been examined.

Biological notes: Meso - xerophilous species; feeds on *Salvia* (Mohr, 1966). According to Müller (1953), it is an orophilous species.

Cassida bella Faldermann, 1837

General distribution: Turanian - Mediterranean species. Known from Caucasus (Winkler, 1930), Turkey (Bodemeyer, 1900).

Distribution in Turkey: Bodemeyer (1900) recorded it from İçel (Bulgar Maden).

Material examined: Artvin (Petek), İzmir (Bornova), Sakarya - Totally 4 specimens have been examined.

Biological notes: No literature datum regarding host plants is available. More frequently collected in June and August on *Mentha pulegium* and *Zea Mays*.

Cassida berolinensis Suffrian, 1844

General distribution: Palearctic species. Known from Europe, Siberia, C. Asia, Mongolia (Lopatin, 1977).

Distribution in Turkey: Bodemeyer (1906) recorded it from Bilecik.

Material examined: We didn't have the opportunity to see any specimen from Turkey.

Biological notes: Meso - hygrophilous species. Feeds on *Stellaria*, *Silene*, *Myosoton*, *Cerastium*, *Spergula*, *Honckenya* (Brovdy, 1983).

Cassida brevis Weise, 1884

General distribution: Prevalently Centraasiatic species. Known from Greece, Turkey, Syria, Irak, C. Asia, N. Afghanistan (Lopatin, 1977; Spaeth and Reitter, 1926).

Distribution in Turkey: Weise (1884) described the species from Amasya. Bodemeyer (1900) recorded it from İçel (Bulgar Maden).

Material examined: Siirt - Totally 2 specimens have been examined.

Biological notes: No literature datum regarding host plants is available. More frequently collected in July and August. It seems to be an orophylous species.

Cassida canaliculata Laicharting, 1781

General distribution: Turanian - European species. Known from central Europe to Kazakistan (Winkler, 1930; Lopatin, 1977).

Distribution in Turkey; Weise (1893) recorded it from Turkey, without specific location.

Material examined: We didn't have the opportunity to see any specimen from Turkey.

Biological notes: Mesophilous species feeds on *Salvia pratensis* (Weise, 1893).

Cassida fastuosa Schaller, 1783

General distribution: Palearctic species. Known from S. Europe, W. Siberia, C. Asia (Lopatin, 1977), Mongolia (Brovdy, 1983).

Distribution in Turkey: Weise (1901, 1906) recorded it from Konya (Akşehir).

Material examined: We didn't have the opportunity to see any specimen from Turkey.

Biological notes: Hygrophilous species, feeds on *Pulicaria dysenterica*, *Inula* and *Senecia* (Spaeth and Reitter, 1926; Lopatin, 1977).

Cassida fausti Spaeth and Reitter, 1926

General distribution: Turanian - European species. Known from Caucasus, Ukraine and European Turkey (Matis, 1973).

Distribution in Turkey: Günther (1954) recorded this species from Edirne, Ankara (Mogan lake).

Material examined: Afyon (Dinar), İzmir (Bornova, Narlıbahçe, Ödemiş - Erikli, Bergama - Poyracık), Samsun (Bafra), Zonguldak (Karabük). - Totally 39 specimens have been examined.

Biological notes: Brovdy (1983) recorded it on *Arctium* sp. The specimens examined were taken in April and August on *Convolvulus arvensis*, *Sinapis* sp. and weeds.

Cassida hablitziae Motschulsky, 1838

General distribution: Turanian - Mediterranean species. Known from Caucasus and Armenia (Spaeth and Reitter, 1926).

Distribution in Turkey: We have not traced any explicit report of this species from Turkey.

Material examined: Trabzon (Sümela)*.

Biological notes: Feeds on *Hablitzia tamoides* (Chenopodiaceae) according to the original description of the species (Motschulsky, 1838). The single specimen examined was collected in June, at 1500 m. above sea level.

Cassida hexastigma Suffrian, 1844

General distribution: Mediterranean species. Known from S. France, Spain, Italy, Corse, Morocco (Weise, 1893; Spaeth, 1914 b; Kocher, 1958).

Distribution in Turkey: We have not traced any explicit reports of this species from Turkey.

Material examined: Muğla (Bodrum). - Only 1 specimen has been examined.

Biological notes: No literature regarding host plants is available. The material was collected in June on *Matricaria* sp.

Cassida humeralis Kraatz, 1874

General distribution: Mediterranean species. Known from Algeria, S. Spain, Sicily (Spaeth and Reitter, 1926; Spaeth, 1914 b).

Distribution in Turkey: We have not traced any explicit reports of this species from Turkey.

Material examined: Isparta (Eğridir), İzmir (Bornova). - Totally 3 specimens have been examined.

Biological notes: According to Jolivet (1967) it feeds on various species of the thistles' tribe. The material collected in June and August on *Cynara scolymus*.

Cassida inquinata Brullé, 1832

General distribution: Turanian - European species. Known from Southern Europe, C. Asia, Syria, N. Africa (Brovdy, 1983; Jolivet, 1967; Gruev, 1967).

Distribution in Turkey: Sahlberg (1912 - 1913) reported it from İzmir (Menemen, Lesbo Island).

Material examined: Balıkesir (Gönen), Bursa (İzmit, Karacabey), Kırklareli (Lüleburgaz), Çanakkale (Eceabat, Çan, Gökçeada), Giresun (Bulancak ***), İzmir (Bornova, Karşıyaka, Torbalı, Selçuk, Yamanlar), Manisa (Kula). Muğla (Bodrum), Tekirdağ (Saray), Trabzon (Tirebolu ***), Samsun (Bafra ***), - Totally 21 specimens have been examined.

Biological notes: Xerophilous species, feeds on *Matricaria*, *Anthemis* (Müller, 1953), *Ormenis* (Spaeth and Reitter, 1926). More frequently collected from the end of April to the beginning of June.

Cassida linnavuorii Borowiec, 1986

General distribution: Probably Turanian - Mediterranean species. It was described a single specimen from N. Irak (Borowiec, 1986).

Distribution in Turkey: We have not traced any explicit reports of this species from Turkey.

Material examined: Mardin (Ömerli). - Only 1 specimen has been examined.

Biological notes: Neither literature nor collection data regarding the biology of the species are available. Collected in August on *Quercus* sp. Collection data reported the unusual indication *Quercus* sp., it needs further confirmations.

Cassida margaritacea Schaller, 1783

General distribution: Sibirian - European species. Known from Europe, Caucasus, Siberia, Asia Minor (Winkler, 1930; Brovdy, 1983).

Distribution in Turkey: Sahlberg (1912 - 1913) reported it from Konya (Karaman). Brovdy (1983) recorded it from Asia Minor, without more specific indications.

Material examined: Adana (Yumurtalık), Artvin (Kabarcet, 550 m), Bolu (Dorukhan passage ***, Yiğilca), Diyarbakır, Trabzon (Arsin). - Totally 11 specimens have been examined.

Biological notes: Xerophilous species; feeds on *Silene*, *Saponaria*, *Spergula*, *Thymus*, *Herichrysum*, *Centaurea*, *Antennaria* (Brovdy, 1983; Weise, 1893). More frequently collected from March to September.

Cassida murraea Linnaeus, 1767

General distribution: Asiatic - European species. Known from Europe, C. Asia, Japan (Winkler, 1930; Brovdy, 1983).

Distribution in Turkey: Bodemeyer (1906) reported it from Asia Minor, without more specific indications.

Material examined: Bolu (Gerede - Karabük river ***), Edirne, Giresun (Bulancağ ***), Kastamonu *, Ordu (Kumru, Ünye), Rize (Kalkandere ***), Sinop (Boyabat), Tekirdağ (Saray), Trabzon (Akçaabat ***). - Totally 15 specimens have been examined.

Biological notes: Hygrophilous species, feeds on *Inula*, *Pulicaria* (Kleine, 1917); dubitatively on *Mentha*, *Verbascum*, *Salicaria* (Gressitt and Kimoto, 1963). More frequently collected from April to July. Unripes in July.

Cassida nebulosa Linnaeus, 1758

General distribution: Olearctic species. Known from Europe, C. Asia, Siberia, Korea, Japan, China, Mongolia (Borowiec, 1990; Gressitt, 1952; Lopatin, 1964; Winkler, 1930). Sporadic reports also from N. America (Riley, 1986).

Distribution in Turkey: Recorded by İyriboz (1935) from Tokat (Turhal).

Material examined: Adapazarı, Artvin, Balıkesir (Manyas), Bursa (Yenişehir), Çanakkale (Abide), Giresun **, Gümüşhane, Kastamonu (Taşköprü), Konya (Akşehir), İzmir (Bornova, Ödemiş). - Totally 64 specimens have been examined.

Biological notes: Mesophilous species. Feeds on several spontaneous and cultivated Chenopodiaceae (*Chenopodium*, *Atriplex* and *Beta*) and Amaranthaceae (*Amaranthus*) (Kimoto, 1966). Gruev (1967) recorded also *Mentha* and *Zea* as host plants. More frequently collected in June and July on *Beta vulgaris* var. *rapa*.

Cassida nobilis Linnaeus, 1758

Siberia, C. Asia, Mongolia, Korea, Japan (Brovdy, 1983; Gressitt and Kimoto 1963; Lopatin, 1975). Dubitatively present in Alaska (Riley, 1986).

Distribution in Turkey: Recorded by Bodemeyer (1900) from Konya (Akşehir) and İçel (Bulgar Maden); by Sahlberg (1912 - 1913) from Anatolia (Lesbo island). Also recorded from Amasya, Adapazarı, Kocaeli (Gebze), Tokat (Turhal) by İyriboz (1935), Öge (1959), Nizamlioğlu (1964).

Material examined: Ankara (Polatlı), Antalya (Finike), Aydın, Balıkesir (in centrum, Manyas), Çanakkale (in centrum), Çorum (İskilip), Denizli (Acıpayam), Erzurum (Ilica, Oltu), İzmir (Selçuk, Ephesus *), Kastamonu (in centrum), Konya (Yunak), Niğde, Samsun (Bafra), Sinop (Erfelek). - Totally 185 specimens have been examined.

Biological notes: Mesophilous and polyphagous species. Literature data recorded as host plants several genera of Caryophyllaceae (*Silene*, *Spergula*, *Stellaria*), Chenopodiaceae (*Chenopodium*, *Atriplex*, *Beta*), Amaranthaceae (*Amaranthus*), Urticaceae and Compositae (Brovdy, 1983; Müller, 1953; Spaeth and Reitter, 1926). Collected in April and July on *Convolvulus arvensis*, *Beta vulgaris* var. *rapa* and *Chenopodium album*.

Cassida palaestina Reiche, 1858

General distribution: Prevalently Centroasiatic species. Known from Middle East, Iran, Caucasus, C. Asia, Afghanistan, Asia Minor (Berti et Rapilly, 1973; Lopatin, 1981; Winkler, 1930).

Distribution in Turkey: Spaeth (1914 a) and Berti et Rapilly, (1973) recorded it from Turkey, without more specific indications. Gül - Zümreoğlu (1972) recorded this species from İzmir (Bornova).

Material examined: Adana (Düziçi, Karataş), Bursa (Karacabey), Diyarbakır (Çermik), Gaziantep (Kilis), Hatay (Altınözü, Kırıkhan, Yayladağ), İçel (Silifke, Tarsus). - Totally 15 specimens have been examined.

Biological notes: Probably xerophilous species, feeds on *Cirsium* spp. (Berti et Rapilly 1973). The specimens examined were prevalently taken in April - June. Unripes in April.

Cassida pannonica Suffrian, 1844

General distribution: Asiatic - European Euroasiatic species. Known from E. Europe, SW Siberia, C. Asia, NW. China, Asia Minor (Matis, 1973).

Distribution in Turkey: Formerly recorded by Bodemeyer (1900; 1906 from Konya (Akşehir Gök mountain) and by Günther (1954) from Ankara (Mogan lake).

Material examined: Antalya (Akseki), Balıkesir (Bandırma), Bilecik (Gölpazarı), Bursa (İzmit), Hakkari (Beytüşşebab), İzmir (Bornova, Gümüşsu, Güzelbahçe, Menemen), Mersin (Namrun) **, Niğde (Ulukışla). - Totally 13 specimens have been examined.

Biological notes: Meso - xerophilous species, feeds on *Centaurea*, *Carduus* and *Artemisia* (Bordy, 1986; Brovdy, 1983), More frequently collected in May and June on *Cynara scolymus* and *Erodium* sp.

Cassida prasina Illiger, 1798

General distribution: Palearctic species. Known from Europe, Asia Minor, C. Asia, Siberia, China (Brovdy, 1983; Gressit, 1952).

Distribution in Turkey: Formerly recorded by Weise (1893) without more specific indications. It is also recorded by Bodemeyer (1900) from Konya (Akşehir); by

Ganglbauer (1905) from Sakarya (Sapanca); by Sahlberg (1912 - 1913) from İzmir, Konya (Karaman - Bulgar mountain), Denizli (Baba mountain); by Gruev and Tomov, (1979) from Kayseri and Yılanlı mountain.

Material examined: Adapazarı *** (in centrum) , Antalya (Saklıkent - 1860 m), Aydın (Kuşadası), Balıkesir (Bandırma), Bilecik (Gölpazarı), Bolu (Abant *, Gerede - Karabük river ***), Gaziantep (Kilis), Giresun (Bulancağ *, Şebinkarahisar), Hatay (Kırıkhan), İçel (Çamlıyayla), İzmir (Narlıbahçe, Ödemiş, Zeytinadağ ***), Kahramanmaraş (Andırın - 1220 m), Manisa (Alaşehir, Salihli), Tokat (Niksar - Ardıçlı *** , Turhal *), Tunceli (Pülümür passage ***), Zonguldak (Bartın, Karabük). - Totally 25 specimens have been examined.

Biological notes: Mesophilous species, feeds on *Achillea*, *Tanacetum*, *Matricaria*, *Anthemis* (Müller, 1953). The material was collected from April to August.

Cassida reitteri Weise, 1892

General distribution: Turanian - Mediterranean species (Vigna Taglianti et al., 1992). Known from Armenia (Winkler, 1930) and Turkey (Günther, 1954).

Distribution in Turkey: Recorded by Günther (1954) from Ankara (Mogan lake).

Material examined: We didn't have the opportunity to see any specimen from Turkey.

Biological notes: No literature datum regarding host plants is available.

Cassida rubiginosa Müller, 1776

General distribution: Palearctic species. Known from Europe, Siberia, C. Asia, China, Korea, Tibet, Japan, N. Africa. Introduced and established in N. America (Brody, 1983; Gressitt and Kimoto, 1963; Jolivet, 1967; Riley, 1986; Spaeth and Reitter, 1926).

Distribution in Turkey: Recorded by Sahlberg (1912 - 1913) and Tuatay et al. (1972) from İzmir (Efeşus, Menemen) and Gruev (1979) from Bursa (Karacabey).

Material examined: Adana (Ceyhan, Kozan), Afyon (Sultandağı ***), Ankara (Elmadağ), Balıkesir (Bigadiç, Manyas), Bolu (Abant ***, Gerede ***), Bursa (Karacabey, Mudanya), Çorum (Boğazkale ***, in centrum), Eskişehir *, Edirne, Giresun (Kümbet ***), Isparta (Eğridir), İzmir (Bergama - Kozak, Bornova, in centrum *** , Kemalpaşa, Menemen, Ödemiş, Torbalı), Kastamonu (Ilgazdağı passage *** , Taşköprü), Kırklareli (Lüleburgaz), Konya (Seydişehir) Kütahya (Tavşanlı), Manisa (Turgutlu), Mersin (Namrun ***), Sakarya (Geyve), Samsun, Şivas (Çamlıbel passage ***), Tekirdağ. - Totally 80 specimens have been examined.

Biological notes: Mesophilous species, feeds on *Carduus*, *Cirsium*, *Arctium*, *Tanacetum*, *Cynara*, *Centaurea*, *Artemisia*, *Sylibum*,

Onopordon, *Saussurea*, *Sonchus* (Brovdy, 1983; Jolivet, 1967; Müller, 1953). It has also been reported (Brovdy, 1983) as occurring on *Ocimum* (Labiatae). The material collected from April to June on *Beta vulgaris* var. *rapa*, *Centaurea calcutrea*, *Cynara scolymus*, *Chenopodium* sp.

Cassida rufovirens Suffrian, 1844

General distribution: Turanian - European species. Known from C. Europe, Balcans, Turkey (Günther, 1954; Winkler, 1930).

Distribution in Turkey: Recorded by Günther (1954) from Ankara (Çamlıdere - Işık mountain).

Material examined: Kars (Sarkamış **). Only one specimen has been examined.

Biological notes: Mesophilous species; feeds on *Achillea*, *Matricaria*, *Anthemis* (Bedel, 1889 - 1901; Weise, 1893). More frequently collected in June - July.

Cassida sanquinolenta Müller 1776

General distribution: Prevalently Siberian - European species. Known from Kazakhstan, Europe, Siberia, (Lopatin, 1977).

Distribution in Turkey: We have not traced any explicit report of this species from Turkey.

Material examined: Bilecik, İzmir (Bergama - Poyracık, Ödemiş, Tire), Kütahya (Gelçük dağı **), Sinop. - Totally 8 specimens have been examined.

Biological notes: Mesophilous and oligophagous species, feeds on *Achillea* (Weise, 1893). More frequently collected from April to July.

Cassida saucia Weise, 1889

General distribution: Turanian - Mediterranean species. Known from Caucasus, Turkey, Iran (Lopatin, 1981; Spaeth, 1914 a).

Distribution in Turkey: Spaeth (1914 a) recorded it from Asia Minor, without more specific indications.

Material examined: Ankara (Elmadağ, Şereflikoçhisar), Balıkesir, Çorum (İskilip), Gaziantep (Kilis, Oğuzeli), Kayseri (Yahyalı), Siirt (Kozluk). - Totally 33 specimens have been examined.

Biological notes: Literature data totally lacking. Among the material examined, collection data record six specimens as taken on *Lycium europaeum* and others on weeds.

Cassida seraphina Mènètries, 1836

General distribution: Turanian - Mediterranean species. Known from Caucasus, Turkey, Greece (Spaeth, 1914 a; Spaeth and Reitter, 1926).

Distribution in Turkey: Bodemeyer (1900) and Spaeth (1914 a) recorded it from Asia Minor. From Adapazarı, Amasya, Eskişehir, Samsun, Tokat, Uşak by İyriboz (1935), Öge (1959), Nizamlioğlu (1964).

Material examined: Adapazarı, Amasya, Ankara (Elmadağ, Kalecik, Polatlı), Antalya (Kumluca), Balıkesir (in centrum, Manyas), Bilecik (in centrum, Pazaryeri), Bolu (Akçakoca), Burdur, Bursa (in centrum, İznik, Karacabey), Çankırı (Yapraklı), Çorum (in centrum, İskilip), Erzurum, Eskişehir (in centrum, Sivrihisar), İzmir (Bornova, Kemalpaşa, Narlıbahçe, Tire), İstanbul *, Kastamonu, Kütahya (Domaniç, in centrum *, Tavşanlı), Sivas (Çamlıbel passage, Suşehri), Tokat (Turhal), Uşak. - Totally 431 specimens have been examined.

Biological notes: Feeds and harmful on *Beta vulgaris* var. *rapa* in Turkey (İyriboz, 1935; Öge, 1959, Nizamlioğlu 1964; Onat, 1973; Kısmalı ve Kaşkavalcı 1993). It has also been reported (İyriboz, 1935) as occurring on *Cynara scolymus*. The specimens examined were collected from April to September mainly on *B. vulgaris* var. *rapa*, *B. vulgaris* var. *cicla*, *B. vulgaris* var. *cruenta*, *Chenopodium album*, and *Spinacia oleracea*.

Cassida stigmatica Suffrian, 1844

General distribution: Palearctic species. Known from Central and Eastern Europe, W. Siberia, C. Asia, China Afghanistan (Brovdy, 1983; Gressitt, 1952; Gruev, 1988).

Distribution in Turkey: We have not traced any explicit report of this species from Turkey.

Material examined: Adana (Karataş), Ankara (Keskin), Bolu (Mengen), Çanakkale (Eceabat), Konya (Seydişehir), Kütahya. - Totally 8 specimens have been examined.

Biological notes: Mesophilous species; feeds on *Achillea*, *Tanacetum* (Spaeth and Reitter, 1926); perhaps on *Chenopodium* and *Atriplex* (Brovdy, 1983). More frequently collected from March to July.

Cassida subferruginea Schrank, 1776

General distribution: Palearctic species. Known from Europe, Syria, Jordan, N. Africa, Siberia, C. Asia, Mongolia, Afghanistan, China, (Sahlberg, 1912 - 1913; Winkler, 1930; Brovdy, 1983; Gruev, 1981; Jolivet, 1967; Lopatin, 1966).

Distribution in Turkey: Recorded by Bodemeyer (1900) from Sakarya (Sapanca); by Ganglbauer (1905) from Kayscri (Yılanlı mountain); by Sahlberg (1912 - 1913) Konya (Karaman - Bulgar mountain); by Medvedev (1970) from Sakarya (Kaynarca), Samsun (Bafra), Bolu (between Düzce and Akçakoca) and generically from South - east Turkey; by Kerville (1939) from Ankara and Mogan lake.

Material examined: Adana, Amasya *** (in centrum), Antalya (Gündoğmuş, Finike, Saklıkent), Ankara (Polatlı), Aydın (in centrum, Çine, Nazilli), Balıkesir (Susurluk), Bilecik (in centrum, Osmaneli ***), Bitlis (Tatvan), Bursa (Mudanya), Bolu (Abant ***), Çanakale (Gökçeada), Denizli (Tavas), Edirne (Lalapaşa), Erzurum (Kop dağı passage ***), Erzincan, Erzurum - Ağrı (Tahir passage), Hatay, İçel (Tarsus **, Cehennemdere), İstanbul (Kilyos), İzmir (Balçova, Bornova, Çeşme, Kemalpaşa, Narlıbahçe, Selçuk, Torbalı), Kocaeli, Kütahya, Konya (Karaman), Manisa (Turgutlu), Muş, Rize, Sakarya (Hendek), Samsun (in centrum, Bafra ***), Siirt, Sinop (Dranazdağ passage ***), Urfa (Harran, Hilvan), Yozgat (Sarıkaya), Zonguldak (Çaycuma, Ereğli). - Totally, 95 specimens have been examined.

Biological notes: Mesophilous, feeds on Convolvulaceae; Müller (1953) recorded it also on cultivated Chenopodiaceae (Beta spp.). More frequently collected from May to beginning of August. Unripes in August.

Cassida subreticulata Suffrian, 1844

General distribution: Prevalently Asiatic - European species. Known from Central and Southern Europe, Siberia, C. Asia, Asia Minor (Lopatin, 1977).

Distribution in Turkey: Spaeth (1914 a) described from Tokat the subspecies *helva*, which was afterwards regarded by Lopatin (1977) as a synonym of the nominal form.

Material examined: Ankara (Elmadağ), İçel (Gülner), Kastamonu (Tosya), Konya (Ermenek), Nevşehir (Avanos), Ordu (Ünye *). Totally 8 specimens have been examined. All the specimens look quite different from the European ones and match well with the original description of ssp. *helva*.

Biological notes: Meso - Xerophilous species. Feeds on *Saponaria officinalis*, *Silene*, *Dianthus* (Brovdy, 1983). One specimen was taken on *Paliurus orientalis*; three specimens, collected in different localities, bear the label datum "*Quercus* sp.". It seems quite surprising indeed and needs further confirmations.

Cassida vibex Linnaeus, 1767

General distribution: Palearctic species. Known from Europe, Siberia, C. Asia, China, N. Africa, Japan (Matis, 1973).

Distribution in Turkey: Matis (1973) recorded it from Asia Minor, and Sahlberg (1912 - 1913) from Anatolia, without more specific indications.

Material examined: Samsun (Bafra ***). Only one specimen has been examined.

Biological notes: Mesophilous species, feeds on Compositae (*Cirsium*, *Arctium*, *Carduus*, *Centaurea*, *Tanacetum*, *Achillea*). More frequently collected in May, June, August.

Cassida viridis (Linnaeus, 1758)

General distribution: Palearctic species. Known from Europe, Siberia, C. Asia, China, Japan. (Gressitt and Kimoto, 1963; Spaeth, 1914 b; Winkler, 1930).

The subspecies *nigriceps* Fairm. Is distributed in the Mediterranean region, and the ab. *flaviceps* Mars. Is recorded in Syria, Southern Russia and Turkey (Bodemeyer, 1900; Winkler, 1930).

Distribution in Turkey: Listed from Adapazarı (Sapanca), Ankara (Mogan lake, Ayaş), Erzurum (Gavur mountain) by Bodemeyer (1900) and Günther (1954). İyriboz (1935) recorded it in Tokat (Turhal).

Material examined: Ankara (Kızılcahamam), Balıkesir (Burhaniye in centrum), Bolu (Abant lake *), Çankırı (Çerkeş), Diyarbakır ***, İzmir (Ödemiş, Bozdağ ***, Tire), Kastamonu *, Tokat (Turhal), Trabzon (Sümela ***), Tunceli, Urfa (Siverek). - Totally 21 specimens have been examined.

Subsp. *nigriceps*: Ankara (Beynam *, Eymir lake), Diyarbakır *, Kayseri (Himmetdede), Kırşehir, Konya (Seydişehir).

Biological notes: Hygro - mesophilous species, feeds on Labiatae (*Stachys*, *Mentha*, *Salvia*, *Galeopsis*, *Lycopus*); maybe on *Cirsium* species too (Weise, 1893). More frequently collected from June to August.

Cassida vittata Villers, 1789

General distribution: Palearctic species. Known from Europe, Siberia, C. Asia, Japan, N. Africa (Spaeth, 1914 b; Brovdy, 1983).

Distribution in Turkey: Recorded by Sahlberg (1912 - 1913) from Denizli (Sarayköy) and İyriboz (1935) without specific indications.

Material examined: Balıkesir (Manyas), Burdur (Göhlisar), Tokat (Niksar). - Totally 17 specimens have been examined.

Biological notes: Feeds on several Chenopodiaceae (*Chenopodium*, *Atriplex*, *Salicornia*, *Salsola*, *Suaeda*, *Beta*) and *Caryophyllaceae* (*Lychnis*, *Spergula*) (İyriboz, 1935; Müller, 1953; Mohr, 1966; Jolivet, 1967). Collected from June to August.

Ischironota brisouti (Reitter, 1889)

General distribution: Probably Mediterranean species. The nominal form is known from Sahara, Algeria and Morocco (Winkler, 1930). The ssp. *jordanensis* Borowiec occurs in Jordan (Borowiec, 1986).

Distribution in Turkey: We have not traced any explicit reports of this species from Turkey.

Material examined: Ankara (Hirfanlı Dam). The specimen belong to the nominal form. Only 2 specimens have been examined.

Biological notes: Xero - halophilous species; literature data record the host as *Anabasis prostrata* (Chenopodiaceae) (Jolivet, 1967). The specimens examined were taken on *Salsola* sp. in August.

Ischironota desertorum (Gebler, 1833)

General distribution: Centroasiatic species. Known from SW. Russia, C. Asia, Syria, N. Iran, Afghanistan, Pakistan, Mongolia (Borowiec, 1986, 1990; Lopatin, 1981; Medvedev, 1979, 1985).

Distribution in Turkey: Recorded by Gruev and Tomov (1979) from Kayseri.

Material examined: Ağrı (Doğu Beyazıt), Çankırı (Yapraklı), İzmir (Menemen, Selçuk *). - Totally 24 specimens have been examined.

Biological notes: Halophilous species feeds on *Salicornia*, *Salsola*, *Suaeda* (Brovdy, 1983). The specimens examined were collected from July to September.

Macromonycha apicalis ssp. *anatolica* (Weise, 1900)

General distribution: The nominal form has a prevalently. Centroasiatic distribution. It is known from Caucasus, Turkey, Palestine, W. Turkestan, Iran, N. Afghanistan (Spaeth and Reitter, 1926; Lopatin, 1967; Gruev, 1982).

Distribution in Turkey: The subspecies was described by Weise (1900) from Ali Hoca Valley (South Anatolia).

Material examined: We didn't have the opportunity to see any specimen from Turkey.

Biological notes: No literature datum regarding host plants is available.

Özet

Türkiye Chrysomelidae türlerinin yayılış ve önemlerine ait notlarla ön listesi. II. Alt familya Cassidinae Spaeth.

Bu makalede 1966 yılından 1992 yılı sonuna kadar, bitkilerden atrap ve silkeleme yoluyla toplanan Cassidinae türleri verilmiştir. Ege Üniversitesi Ziraat Fakültesi Bitki Koruma Müzesinde bulunan bu örneklerin yanısıra, İtalya'da Verona Tabiat Tarihi Müzesi (***) işaretli), Roma Üniversitesi Zooloji Enstitüsü Müzesi (** işaretli) ve Dr. Sassi'nin Milano'daki kişisel koleksiyonunda (* işaretli) mevcut örnekler de incelenmiştir. Cassidinae alt familyasına bağlı toplam 35 tür içinde 8 tür Türkiye için ilk kayıt niteliğindedir. Bütün türlerin yayılış, konukçu bitki ve önemleri belirtilmiştir.

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