

## A contribution to the knowledge of the Meloidae (Coleoptera) fauna of Turkey along with new records

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**Abstract:** The faunistic study on Meloidae conducted from 1970s up to 1996 based on the collection of over 4000 specimens and 147 species of 17 genera in two subfamilies are reported. Among them *Alosimus reitterianus* (Semenov), *Coryna confluens* Reiche, *Mylabris cingulata* Falderman, *M. colligata* Redtenbacher, *M. furcimacula* Sumakov, *M. serana* (Escherich), *M. suturalis* Pic, *Meloe ganglbauery* Apfelbeck, *M. glazunovi* Pliginskij, *M. rufiventris* Germar, *M. scabriusculus* Brand et Erichson, *Apalus bipunctatus* Germar, *A. spectabilis* Schaun, *Stenoria analis* Schaun and *Zonitis nigriventris* Motschulsky are new records for the Turkish fauna. Besides that *Cerocoma scovitzii intermedia* Maran, *Lydus anatolicus* Muche, *L. gibbiger* Escherich, *Micromerus bitlisensis* Kaszab, *M. dersimensis* Kaszab, *M. semiobscurus* (Pic), *M. tauricus* Maran, *Mylabris ciliciensis* (Escherich), *M. concolor* Marseul, *Oenas armeniacus* Kaszab, *Lytta vesicatoria heydeni* Haag-Rutenberg and *Stenoderia anatolica* Frivaldszky are endemic species and subspecies in Turkey. Host plants of some of the species are recorded, in related to this, *Micromerus erivanicus* (Maran) is an important pest of flowers of *Vicia* spp. and *Onobrychis sativa*; *Mylabris quadripunctata* (F.) is also pest on soft grain of wheat. The triangulins of *Meloe violaceus* Mansham are found in the hives of honey bees in some villages of Oltu (Erzurum).

**Key Words:** Meloidae, Coleoptera, Faunistic, Turkey

### Türkiye'nin Meloidae (Coleoptera) Faunasına bir katkı ve bazı yeni kayıtlar

**Özet:** Türkiye'nin Meloidae faunasını saptamak amacıyla, 1970'li yıllardan 1996'ya kadar sürdürülen bu çalışmada, 4000'in üzerinde örnek toplanmış ve iki altfamilya içerisinde, 17 cinse ait 147 türün varlığı belirlenmiştir. Bunlar arasında, *Alosimus reitterianus* (Semenov), *Coryna confluens* Reiche, *Mylabris cingulata* Faderman, *M. colligata* Redtenbacher, *M. furcimacula* Sumakov, *M. serana* (Escherich), *M. suturalis* Pic, *Meloe ganglbauery* Apfelbeck, *M. glazunovi* Pliginskij, *M. rufiventris* Germar, *M. scabriusculus* Brand et Erichson, *Apalus bipunctatus* Germar, *A. spectabilis* Schaun, *Stenoria analis* Schaun ve *Zonitis nigriventris* Motschulsky Türkiye faunası için yeni türlerdir. Diğer taraftan, *Cerocoma scovitzii intermedia* Maran, *Lydus anatolicus* Muche, *L. gibbiger* Escherich, *Micromerus bitlisensis* Kaszab, *M. dersimensis* Kaszab, *M. semiobscurus* (Pic), *M. tauricus* Maran, *Mylabris ciliciensis* (Escherich), *M. concolor* Marseul, *Oenas armeniacus* Kaszab, *Lytta vesicatoria heydeni* Haag-Rutenberg ve *Stenoderia anatolica* Frivaldszky ise endemik tür ve alttürlerdir.

Birçok türün konukçuları saptandı. *Micromerus erivanicus*'un *Vicia* türleri ve korunganın önemli bir zararlısı olduğu belirlenirken, *Mylabris quadripunctata* (F.)'nın da buğday başaklarında yumuşak taneleri yediği gözlemlendi. Diğer taraftan, *Meloe vilaceus* Marsham'ın triangulin'lerinin de Oltu (Erzurum)'da arı kovanlarına yoğun bir şekilde saldırdığı tespit edildi.

**Anahtar Sözcükler:** Meloidae, Coleoptera, Faunistik, Türkiye

### Giriş

The family Meloidae is commonly known as oil or blister beetles. They are generally medium to large-sized (3-35 mm), elongate, soft-bodied, elytra with soft and flexible, pronotum narrower than either the head or the elytra (1).

The Meloidae is one of the most interesting of all Coleoptera families on account of the remarkable biology; hypermetamorphic, that is, the first instar larva (triangulin) is active and campodeiform, while the subsequent larval stages are sedentary and scarabaeiform. The larvae are semi-parasitic predators,

usually feeding either in the nests of bees on the larvae and foodstores, or on the egg cases (oothecae) of grasshoppers. Adult meloids are phytophagous, and certain groups, on account of their moderate size and swarming behaviour, can cause considerable damage to crops by feeding on the foliage or flowerheads (2, 3, 4). Thus, a species may often be beneficial to agriculture as a larva, helping to control grasshopper populations, yet be a pest as an adult. Some species are considered destructive, for their larvae feed on bee eggs and on the food stored in the cells, and the adults feed on plants (5).

The Meloidae comprise approximately 120 genera and 3000 species, which are widely distributed

throughout most regions of the world, especially favouring warmer and drier climates (4).

The Meloidae fauna of Turkey has been studied by foreign scientists, such as Bodemeyer (6), Ganglbauer (7), Kaszab (8, 9, 10, 11, 12), Mucho (13), Pardo Alcaida (14) and Bologna (15). Particularly Kaszab described many new species from various localities of Turkey and provided keys to species and genera. As a native scientist Öncüer (16) listed many species of Meloidae occurring in Turkey mostly in western Anatolia in his catalogue and indicated most of them as new records for the Turkish fauna. However, all of them had been already reported by Bologna (15).

Adults of many species of Meloidae are destructive pests of a wide variety of ornamental flowers and agricultural crops, including potato, tomato, various leguminous plants, flax, pulses, okra, tobacco, sugarbeet, onion, spinach, pumpkin, mango, citrus fruits and some other crops in various countries (17, 18, 29, 20). Bodenheimer (21), Nizamlioglu (22), Özer and Duran (23), Özbek (24), Giray (25), and Yıldırım and Özbek (26) reported some species of Meloidae as pests on various cultivated plants in Turkey.

The Meloidae fauna of Turkey is not well known, particularly eastern Anatolia, there are still large areas of the country not well explored or not explored at all. The aim of this study is to provide a data base for such an important family whose members are agricultural pests or have influence on the biological balance.

## Material and Method

This study is based mostly on the material collected by the first author, his colleagues and students throughout the country including Thrace since the 1970s. Some of the material was also collected by D. Szaloki and his colleagues as indicated in the text. Identification of some of the reference material was done by Z. Kaszab (Hungary), M. A. Bologna (Italy) and D. Szaloki (Hungary). The whole material by Özbek and his colleagues is deposited in the Entomological Museum of Agricultural Faculty, at Atatürk University, Erzurum, Turkey. The number of examined specimens is given in parenthesis. All taxa were given in alphabetical order within the subfamilies.

## Results and Discussion

In this study, 147 species of 17 genera belonged to two subfamilies of Meloidae were reported.

## LYTTINAE

*Alosimus* Mulsant, 1857

*Alosimus abeillei* Escherich, 1896

Material examined: 16.V.1987, Suluova (Amasya) (4), (Leg. I. Rozner); 22.VII.1992 Tokat (1); 5.IX.1990, Turnalı, Şenkaya (Erzurum), 2000 m (1).

Distribution in Turkey: Çankırı and Amasya (15).

Distribution in the world: Turkey (27); Asia Minor, Armenia (28).

*Alosimus armeniacus* (Faldermann, 1837)

It is very common particularly in Erzurum, Bayburt, Ardahan, Kars and Ağrı provinces above 1000 m. Samples were also collected from the provinces of Gümüşhane, Tokat, Diyarbakır, Ankara and Niğde, Özbek (29) reported this species as pest of alfalfa flowers. It is also observed feeding on *Cardaria draba* and *Crambe orientalis*.

Distribution in Turkey: Siirt (12); Bolu, Ankara, Sinop and Samsun (15).

Distribution in the world: Asia Minor, Syria, Caucasus (12); Greece (15).

*Alosimus castaneus* Escherich, 1896

Material examined: 17.IV.1995, Silvan (Diyarbakır), 1400 m (1); 17.VI.1995, Dikyar, Uzundere (Erzurum), 1500 m (4); 9.VII.1995, University field (Erzurum), 1850 m (1); 12.VII.1995, Atlıkonak, İLica (Erzurum), 1900 m (2).

Distribution in Turkey: Midyat (Mardin), Kurtalan (Siirt) (12).

Distribution in the world: Caucasus, Syria (28).

*Alosimus chalybaeus* (Tauscher, 1812)

Material examined: 21.VI.1990, Akhisar (Manisa) (1), (Leg. Szekely); 8.V.1984, Aksu (Antalya) (2), (Leg. D. Szaloki); 26.V.1989, Ulukışla (Niğde) (27), (Leg. D. Podlussany); 9.VI.1996, Şelale, Uzundere (Erzurum), 1100 m (3); 23.VI.1983, Pozantı (Adana), 800 m (5), (Leg. K. Gasko); 16.VI.1995, Gölbaşı Yaylası, Uzundere (Erzurum), 2000 m, *Onobrychis montana*, *O. sativa*, (7); 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (4); 2.VII.1991, Antalya (1), 5.IX.1990, Turnalı, Şenkaya, 1600 m (7).

Distribution in Turkey: Birecik (Şanlıurfa) (12); Konya (6); Edirne (11); İzmir, Manisa (15). Giray (25) indicated as poppy pest in Uşak.

Distribution in the world: Turkey (27); South Russia, Ural, Caucasus, Asia Minor, The Balkan Peninsula, Rumania (28).

*Alosimus decolor* (Abeille de Perrin, 1880)

Material examined: 21.IV.1990, Bergama (İzmir) (2), (Leg. A. Podlussany); 21.IV.1990, Akhisar (Manisa) (35), (Leg. K. Szekely and A. Podlussany); 12.V.1993, Bornova (İzmir) (1); 23.V.1984, Silivri (İstanbul) (10), (Leg. D. Szaloki).

Distribution in Turkey: Edirne (11); Mardin (12); Manisa, İzmir and Yozgat (15).

Distribution in the world: Turkey (27); Asia Minor, Caucasus, Armenia, Greece, Turkey (28).

*Alosimus gracilis* (Abeille de Perrin, 1880)

Material examined: 27.V.1989, Sarıkavak (İçel) (1), (Leg. A. Podlussany); 30.VI.1983, Çamlıyayla (İçel), 1400 m (4), (Leg. K. Gasko); 5. VII. 1991, Termessos (Antalya) (1); 7.VII.1977, Silifke (İçel) (1); 5.IX.1990 Turnalı, Şenkaya (Erzurum) (2).

Distribution in Turkey: Tarsus (İçel) (12).

Distribution in the world: Turkey (27); Syria, Asia Minor, Caucasus, Armenia, Persia (28); Palestine (15).

*Alosimus luteus* (Waltl, 1838)

Material examined: 8.VI.1990, Karababa Köprüsü (Adıyaman) (1), (Leg. D. Szaloki); 17.IV.1995, Silvan (Diyarbakır), 1400 m (3); 3.VI.1989, Hozat (Tunceli), 1500 m (1); 5.VI.1996, Ceylanpınar (Şanlıurfa) (1).

Distribution in Turkey: Diyarbakır, Siirt (12); Diyarbakır (15).

Distribution in the world: Turkey (27); Syria, Asia Minor (28); Persia, Palestine (15).

Our study and literature knowledge show that, *A. luteus* is present in south east Anatolia.

*Alosimus marginicollis* Haag-Rutenberg, 1880

Material examined: 17.V.1984, Göreme (Nevşehir) (12), (Leg. D. Szaloki); 27.V.1981, Kütahya; 11.VI.1977, Keskin (Ankara) (1), (Leg. A. Podlussany); 15.VII.1992, Tokat (1).

Distribution in Turkey: Borchmann (27) and Kaszab (28) indicated this species presence in Turkey but no locality.

Distribution in the world: Turkey (27); Asia Minor, Mesopotamia (28).

*Alosimus pallidicollis* (Gyllenhal, 1806)

Material examined: 5.VI.1989, Hozat (Tunceli), 1600 m (1); 24-30.VI.1983, Çamlıyayla (İçel) 1400 m (8), (Leg. K. Gasko).

Distribution in Turkey: Bingöl (12); Kovancılar (Elazığ) (15).

Distribution in the world: Asia Minor, Syria, Armenia (28).

*Alosimus reittedianus* (Semenov, 1990)

9.VI.1996, Şelale, Uzundere (Erzurum), 1100 m (7); 12.VI.1996, Serinkaya, Horasan (Erzurum), 1650 m (7); 16.VI.1995, Gölbaşı Yaylası, Uzundere (Erzurum), 1700 m (2); 16.VIII.1995, Karlı, Tortum (Erzurum), 2400 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Cacasus (28).

*Alosimus smyrnensis* (Maran, 1942)

Material examined: It is very common in Aegean Region of Turkey.

Distribution in Turkey: Bornova (İzmir) (12); İzmir, Denizli and Kütahya (15). Giray (25) reported as poppy pest in Uşak.

Distribution in the world: Asia Minor, Greece (Parnassus), R hodes, (28); Persia (15).

*Alosimus syriacus* (Linnaeus, 1764)

Material examined: 6.VII.1976, Niğde (1).

Distribution in Turkey: Konya (6); Birecik (Şanlıurfa) (12).

Distribution in the world: Turkey (27); Asia Minor, Caucasus, South Russia, Rumania, the Balkan Peninsula, the Carpathian Basin, Austria (28).

*Cerocoma* Geoffroy, 1762

*Cerocoma adamovichiana* (Piller et Mitterpacher, 1783)

Material examined: 18.VI.1986, Bandırma (Balıkesir) (1), 10.VII.1996, Horasan (Erzurum), 1700 m (1)

Distribution in Turkey: Edirne (11).

Distribution in the world: Slovakia, Hungary, Dalmatia, the Balkan Peninsula, Turkey (30).

This is the new record in Anatolia of Turkey.

*Cerocoma dahli* Kraatz, 1863

Material examined: 3.IV.1990, Kabasakal (Adana) (2), (Leg. D. Szaloki); 8.IV.1990, Adıyaman (8), (Leg. D. Szaloki); 17.IV.1995, Silvan (Diyarbakır) 1400 m (31);

15.V.1984, Çamlıyayla (İçel) (1), (Leg. D. Szaloki); 16.V.1984, Niğde (2), (Leg.D. Szaloki); 29.V.1995, Çanakkale (2); 4.VI.1989, Ağrı Mt. (3), (Leg. A. Podlussany); 5. VI.1989, Karakurt (Kars) (5), (Leg. A. Podlussany); 7.VI.1989, Başköy (Erzincan) (1), (Leg. A. Podlussany); 9.VI.1996, Şelale, Uzundere (Erzurum), 1000 m, *Achillea biebersteinii*, *A. millefolium* (9); 12.VI.1996, Tortum (Erzurum), 1650 m (3); 12.VI.1996, Pasinler (Erzurum), 1750 m, *A. biebersteinii* (4); 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (10) 19.VI.1996, Kurupınar, Oltu, 1300 m (1); 22.VI.1980, Pasinler, 1700 m (1); 22.VI.1996, Okçular, Horasan (Erzurum), 1700 m, *A. biebersteinii* (2); 25.VI.1996, Keriçli, Tortum, 2300 m; 26.VI.1996, Aşkale (Erzurum), 1700 m, *A. millefolium* (2); 27.VI.1996, Sarıkamış (Kars), 2150 m (1); 29.VI.1983, Horasan, 1600 m (1); 6.VII.1991, Aşkale, 1700 m (1); 8.VII.1995, University field (Erzurum) 1850 m (3); 9.VII.1995, Universty field (Erzurum), 1850 m (1); 10.VII.1996, Horasan, 1700 m (1); 12.VII.1995, Atlıkonak, Ilica (Erzurum), 1700 m, *A. millefolium* (4); 2.VIII.1991, Tokat, 1000 m (1); 3.VIII.1996, Universty field, 1850 m (4).

Distribution in Turkey: Osmaniye, Birecik (Şanlıurfa), Kayseri, Elazığ, Niğde (12); Çorum, Gümüşhane and Erzurum (15).

Distribution in the world: Turkey (27); Syria, Asia Minor, Caucasus, Rumania (12, 13).

#### ***Cerocoma ephesica* Reitter, 1885**

Material examined: 5.VII.1995, Bayırbağ (Erzincan), 1400 m (5); 30.VII.1990, İspir (Erzurum), 1250 m (1); 5.VIII.1994, Alımpınarı (Antalya), 1000 m, *Mentha longifolia* (1).

Distribution in Turkey: Bolu (11), Afyon (15).

Distribution in the world: Turkey (27); Egypt, Persia, Asia Minor, the Balkan Peninsula (31).

This species was first record from eastern Anatolia.

#### ***Cerocoma festiva* Faldermann, 1837**

Material examined: 3-15.VII.1996, Universty field (Erzurum), 1850 m (2); 7.VII.1996, Madenköprübaşı, İspir (Erzurum), (2); 22.VII.1993, Ardi, Horasan (Erzurum), 1600 m (2); 24.VII.1991, İspir, 1400 m (3); 24.VII.1996, Muş (1); 27.VII.1994, Turnalı, Şenkaya (Erzurum), 1750 m (1); 30.VII.1990, İspir, 1300 m (1); 8-10.VIII.1995, Universty field (Erzurum), 1850 m (5); 10.VIII.1994, Büyükdere, Pasinler (Erzurum), 1940 m (1).

Distribution in Turkey: Tunceli (12).

Distribution in the world: Eastern Turkey; Transcaucasus, Persia (31).

#### ***Cerocoma gloriosa* Mulsant, 1857**

Material examined: 12.V.1984, Taurus Mt. (İçel) (4), (Leg. D. Szaloki); 9.VI.1977, Dalaman (Muğla) (1), (Leg. A. Podlussany); 30.VI.1983, Çamlıyayla (İçel) (2), (Leg. K. Gasko).

Distribution in Turkey: Osmaniye (12).

Distribution in the world: Asia Minor, Caucasus, Syria (30).

#### ***Cerocoma kunzei* Frivaldszky, 1835**

Material examined: 10.V.1984, Gazipaşa and Güney (Antalya) (4), (Leg. D. Szaloki); 18.VI.1994, Madenköprübaşı, İspir (Erzurum), 1400 m, *Achillea biebersteinii*, *A. millefolium* (2); 28.VI.1996, Tercan (Erzincan), 1500 m (2).

Distribution in Turkey: Elazığ (12).

Distribution in the world: Syria, Asia Minor, Caucasus, Persia, the Balkan Peninsula, Palestine (30).

#### ***Cerocoma muehlfeldi* Gyllenhal, 1817**

Material examined: 24.VI.1996, Kuzulu Köyü (Kırklareli), 500 m (43); 5.VII.1987, Tokat, 1100 m (1); 11.VII.1995, Horasan (Erzurum), 1700 m (1); 13.VII.1990, Torul (Gümüşhane), 800 m (1).

Distribution in Turkey: Elazığ, Bingöl, Tunceli (12); Ankara, Manisa, Amasya and Kahramanmaraş (15).

Distribution in the world: Hungary, the Balkan Peninsula, Asia Minor, Iraq (31); Persia, Transcaucasus, South Russia, Cyprus (15).

#### ***Cerocoma schaefferi* (Linnaeus, 1758)**

Material examined: 18.VI.1979, Oltu (Erzurum) (1); 19-21.VI.1983, Aladağ, Kızılcahamam (Ankara), 1400 m, (Leg. K. Gasko).

Distribution in Turkey: Borchmann (27) indicated this species presence in Turkey but no locality.

Distribution in the world: Turkey (27); South France, Central Europe, Asia Minor, European part of Russia (31).

#### ***Cerocoma schreberi* Fabricius, 1781**

Material examined: 10.VI.1995, Çerkezköy (Tekirdağ) (2); 24.VI.1996, Kuzul Köyü (Kırklareli), 500 m (16); 16.VII.1976, İnegöl (Bursa) (1); 18.VII.1990, Antalya (1); 20.VII.1995, Çorlu (Tekirdağ) (3).

Distribution in Turkey: Kahramanmaraş (12); Adapazarı (15).

Distribution in the world: Europe, South Russia, Siberia (Tomsk), Asia Minor, Turkestan, Mongolia (31).

*Cerocoma scovitzii intermedia* Maran, 1944

Material examined: 8.VI.1991, Erzincan, 1300 m (1).

Distribution in Turkey: Akşehir (Konya), Malatya, Elazığ (12); Fevzipaşa (Gaziantep) (15).

Distribution in the world: Endemic subspecies in Turkey

*Cerocoma syriaca* Abeille de Perrin, 1880

Material examined: 17.IV.1995, Silvan (Diyarbakır), 1400 m (1); 28.VI.1996, Tercan (Erzincan), 1500 m (5); 23.VII.1984, Erzincan, 1300 m (1).

Distribution in Turkey: Siirt (12); İzmit and Yalova (15).

Distribution in the world: Palestine (15); the Balkan Peninsula, Asia Minor, Caucasus, Persia, Syria (30).

*Coryna* Billberg, 1813 (sensu Bologna, 1978)

*Coryna confluens* Recihe, 1865

Material examined: 5.VI.1992, Akseki (Antalya), 1200 m (1) (Leg. I. Rydh).

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: The Balkan Peninsula (27).

*Coryna polymorpha* (Pallas, 1771)

Material examined: 24.VI.1994, Gündoğmuş (Antalya), 600 m (1) (Leg. I. Rydh).

Distribution in Turkey: Edirne (11).

Distribution in the world: Caucasus, European part of South Russia, Kazakhstan, South Europe, Syria, Asia Minor, Algeria, South-West Siberia, Turkmenistan (32).

*Coryna sexmaculata* (Olivier, 1811)

Material examined: 12.VII.1977, Silifke (İçel), 50 m (1); 22.VII.1990, Termessos (Antalya), 600 m (1).

Distribution in Turkey: Malatya and Adana (15).

Distribution in the world: Turkey, Syria, Persia, Caucasus, Central Asia, South Russia (15).

*Lydus* Latreille, 1803

*Lydus anatolicus* Muehle, 1962

Material examined: 18.VII.1985, Yozgat, 1000 m, *Centaurea solstitialis* (1).

Distribution in Turkey: Endemic species (13).

*Lydus gibbiger* Escherich, 1896

Material examined: 29.V.1989, Aşağı Coplu

(Adıyaman) (1) (Leg. I. Rozner).

Distribution in Turkey: Cizre (Şırnak) (12).

Distribution in the world: Asia Minor (9).

*Lydus pilicollis* Fairmaire, 1892

Material examined: 22.V.1992, Ceyhan (Adana) (1); 7.VI.1977, Alanya (Antalya) (6), (Leg. A. Podlussany); 9.VI.1977, Dalaman (Muğla) (4), (Leg. A. Podlussany); 29.VI.1977, Silifke (İçel), 50 m (1); 30.VI.1983, Çamlıyaşla (İçel) (9), (Leg. K. Gasko); 7.VII.1996, Kızılbaş, Mersin (1); 11.VII.1996, Muş, (3).

Distribution in Turkey: Adana (15).

Distribution in the world: Asia Minor, Syria (9).

*Lydus trimaculatus* (Fabricius, 1787)

Material examined: 10.VI.1995, Çerkezköy (Tekirdağ) (11); 15.VI.1995, Bilcek, 600 m (3); 15.VI.1989, Karacabey (Bursa) (16), (Leg. A. Podlussany); 15.VI.1989, Gündoğan (Balıkesir) (3), (Leg. A. Podlussany); 23.VI.1983, Pozantı (Adana), 800 m (1), (Leg. K. Gasko); 2.VII.1996, Keçiören (Ankara), 100 m, (2); 5.VII.1992, Çine (Aydın); 10.VII.1996, Keşan (Edirne), 50 m (18); 20.VII.1994, Beytepe (Ankara), 900 m (2); 22.VIII.1993, Ankara, 1000 m (2).

This species was first recorded from central and southern Anatolia.

Distribution in Turkey: Bursa and Çanakkale (15).

Distribution in the world: Hungary, the Balkan Peninsula, Rumania, Italy (9).

*Lydus turcicus* Kaszab, 1952

Material examined: 2.VI.1983, Adana (1); 9.VI.1996, Şelale, Uzundere (Erzurum), 1100 m (1); 17.VI.1996, Sütözü, Oltu (Erzurum), 1700 m (1); 27.VI.1995, University field (Erzurum), 1850 m (1); 28.VI.1996, Tercan (Erzincan), 1500 m (1); 29.VI.1996, Uzundere (Erzurum), 1100 m (1); 1-3.VII.1995, University field (Erzurum), 1850 m (5); 6.VII.1995, Aşkale (Erzurum), 1700 m (3); 10.VII.1995, Köse (Gümüşhane) (1); 11.VII.1995, Horasan (Erzurum), *Onopordum* sp. (1); 20.VII.1994, Beytepe (Ankara), 900 m (2); 21.VII.1984, Sandıklı, Kemaliye (Erzincan), (1); 22-23.VII.1989, Kuzgunkiran Geçidi (Bitlis), 2300 m (4), (Leg. M. Hreblay); 9.VIII.1994, Aşkale 1900 m (1); 22.VIII.1993, Ankara, 1000 m (2).

Distribution in Turkey: Akşehir (Konya), Eskişehir, Malatya (9); Bolu Mts. (11); İzmit, Balıkesir, Manisa, Isparta, Konya and Elazığ (15).

Distribution in the world: Asia Minor (9); Syria (15).

***Lydus unicolor* Reitter, 1887**

Material examined: 22.V.1992, Ceyhan (Adana), *Triticum* sp. (1); 3.VI.1996, Rabat, Pasinler (Erzurum), 2400 m (10); 9.VI.1996, Şelale, Uzundere (Erzurum), 1000 m (2); 24.VI.1990, Zorkun Yaylası (Osmaniye), 1200 m (1); 30.VI.1996, Dikyar, Uzundere, 1400 m (1); 1.VII.1991, Bahçeli (Erzincan) (2); 5.VII.1989, Karagöbek (Erzurum), 2200 m, *Cephalaria alpina* (10); 7.VII.1996, İspir (Erzurum), (4); 11.VII.1996, Muş, 1700 m (2); 15.VII.1996, Universty field (Erzurum), 1850 m (2); 17.VII.1996, Pasinler, 1600 m (10); 19.VII.1990, Karaçuha, Horasan (Erzurum), 1600 m (6); 19.VII.1978, Erzurum, 1850 m, *Crambe orientalis* (5); 21.VII.1984, Sandıklı, Kemaliye (Erzincan) (9); 25.VII.1996, Turnalı Şenkaya (Erzurum), 1750 m (7); 26.VII.1983, Cevizli (Erzincan), 1300 m, *Arctium lappa* (11); 30.VII.1990, İspir (Erzurum), 1200 m (2); 6.VIII.1988, Turnalı, Şenkaya (Erzurum), 2200 m, *C. alpina* (2); 1.IX.1978, Başaklı, Oltu (Erzurum), 1850 m, *Cirsium* sp. (2); 2.IX.1988, Turnalı, Şenkaya (Erzurum), 2200 m, *C. alpina* (7). *C. alpina* is the most favourite host plant of *L. unicolor*.

Distribution in Turkey: Bayburt (12); Artvin (15).

Distribution in the world: Caucasus, Armenia, Persia (9); Turkey (12).

***Micromerus* Mulsant et Rey, 1858**

***Micromerus bitlisensis* Kaszab, 1958**

Material examined: 17.IV.1995, Silvan (Diyarbakır), 100 m (4); ?, Van Gölü, S.Ufer (1) (Leg. Petrovitz).

Distribution in Turkey: Bitlis, Van Gölü (33).

Distribution in the world: Endemic species in Turkey

***Micromerus collaris* (Fabricius, 1787)**

Material examined: 11.VI.1977, Keskin (Ankara) (3), (Leg. A. Podlussany); 11.VI.1992, İnegöl (Bursa) (4), (Leg. Romsauer); 15.VI.1992, Yaraski Lake (Burdur) (1), (Leg. L. Nemeth); 9.VII.1996, Susuz (Çankırı), 1200 m, *Vicia* sp. (13); 15.VII.1994, Manisa (1).

Distribution in Turkey: Burdur and Isparta (15).

Distribution in the world: Turkey (27); Macedonia, Greece, Bulgaria, North-West Turkey, South Russia, North Caucasus (33).

***Micromerus dersinensis* Kaszab, 1968**

Material examined: 15.VI.1994, Hazar Gölü (Elazığ) (18), (Leg. K. Gasko); 18-19.VI.1994, Çamlıbel Geçidi (Tokat), 1400 m (17), (Leg. K. Gasko); 19.VII.1989, Hozat (Tunceli), 1500 m (1).

Distribution in Turkey: Tunceli, Bingöl-Karlıova Road (12); Dayırbakır (15).

Distribution in the world: Endemic species in Turkey.

***Micromerus erivanicus* (Maran, 1941)**

It is a very common and high populated species in Erzurum, Ağrı, Muş, Bingöl, Tunceli, Kars, Ardahan, Erzincan, Bayburt and Gümüşhane provinces. *Vicia cracca* is the most favourite host plant, it feeds on other *Vicia* species as well including *V. sativa*. In some years it causes important damage to flowers of *V. sativa* and prevents seed setting. It is also a destructive pest on flowers of *Onobrychis sativa*. In some locations up to 12 specimens were recorded per square meter on a sainfoin field. As a matter of fact, Özbek (24) reported *M. erivanicus* as sainfoin pest in the vicinity of Erzurum. Adults appear in June and are active until the end of September.

Distribution in Turkey: Kağızman (Kars) (34); Erzurum (24).

Distribution in the world: Armenia (Erevan, Eczmiadzin), Turkey (34).

***Micromerus semiobscurus* (Pic, 1898)**

Material examined: 23.IV.1990, Gürün (Sivas) (1), (Leg. Herczig et Ronkay); 15.VII.1994, Kemalpaşa (İzmir) (1).

Distribution in Turkey: Tokat (33, 35).

Distribution in the world: It is an endemic species in Turkey.

***Micromerus strebai* (Maran, 1940)**

Material examined: 14.V.1984, Ulaş (İçel) (4), (Leg. D. Szaloki); 30.VI.1983, Çamlıyayla (İçel), 1400 m (1), (Leg. K. Gasko).

Distribution in Turkey: Bulgar Mt., Ceyhan (Adana) (36), Hatay (12).

Distribution in the world: North Syria, Turkey (33).

***Micromerus tauricus* (Maran, 1940)**

Material examined: 8.V.1984, Aksu (Antalya) (1), (Leg. D. Szaloki); 7.VI.1987, Tauros Mts. 1250 m (1), (Leg. I. Björgergen).

Distribution in Turkey: Type locality is Taurus Mts. (Antalya-Mersin).

Distribution in the world: It is an endemic species in Turkey.

***Mylabris* Fabricius, 1775**

***Mylabris apicenigra* Sumacov, 1924**

Material examined: 29.V.1989, Nemrut (Adıyaman), 1000 m (2), (Leg. A. Podlussany); 10.VI.1977, Göreme (Nevşehir) (1), (Leg. A. Podlussany); 29.VI.1990, Pehlivanlı, Tortum (Erzurum), 1100 m (1).

Distribution in Turkey: Bingöl, Tunceli (12).

Distribution in the world: Persia (Luristan) (32).

***Mylabris bimaculata* Klug, 1845**

Material examined: 12.VI.1993, Silifke (İçel) (1); 24.VII.1993, Silifke (İçel) (1); 20.VIII.1973, Harput (Elazığ) (1).

Distribution in Turkey: İçel (11).

Distribution in the world: Persia, Syria, Asia Minor, Caucasus (11).

***Mylabris calida* (Pallas, 1784)**

Material examined: 23.VI.1983, Pozantı (Adana) (1), (Leg. K. Gasko); 25.VI.1989, Truva (Çanakkale) (2), (Leg. M. Medveg); 26.VI.1987, Aralık (İğdır) 1000 m (17); 30.VII.1990 Gölcük, Kocaeli (5); 14.VIII.1991, Demirkent, Yusufeli (Artvin) (1); 20.IX.1994, Tuzla (İstanbul), 50 m (1).

Distribution in Turkey: Bolu (11); Edirne, Çanakkale, Bilecik, Manisa, İzmir, Eskişehir and Konya (15).

Distribution in the world: South Kazakhstan, Afghanistan, Central Asia, Caucasus, Persia, Syria, Asia Minor, the Balkan Peninsula, North Africa (32).

***Mylabris ciliciensis* (Escherich, 1899)**

Material examined: 24.VI.1987, İğdır, 1100 m (1).

Distribution in Turkey: Niğde (12); Diyarbakır (15).

Distribution in the world: It is an endemic species in Turkey.

***Mylabris cincta* Olivier, 1811**

Material examined: 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (12); 24.VI.1993, Zorkun Yaylası (Osmaniye) (1); 25.VI.1991 Turnalı, Şenkaya (Erzurum), 2000 m (1); 27.VI.1975, Kayseri (4); 27.VI.1996, Işhan, Yusufeli (Artvin), 800 m (20); 28.VI.1996, Tercan (Erzincan), 1500 m (1); 28.VI.1996, Aşkale (Erzurum), 1700 m, *Vicia* sp. (44); 3.VI.1987, İzmir, 1400 m (3), (Leg. D. Szaloki); 4.VII.1994 Yusufeli (Artvin), 500 m (25); 5.VII.1995, Anzav, Oltu (Erzurum) 1000 m (2); 8.VII.1995, Oltu 1200 m (4); 7.VII.1996, Maden Köprübaşı, İspir (Erzurum), 1500 m (6); 8.VII.1995, Kaledibi, Tortum (Erzurum), 1500 m (11); 9.VII.1987, Başaklı, oltu (Erzurum), 1700 m (1); 9.VII.1991, Termessos (Antalya), 600 m, *Centaurea solstitialis* (7); 13.VII.1990, Aşvalı, Oltu, 1000 m (1); 14.VII.1996,

Çamlıbel, Oltu, 1750 m (7); 15.VII.1984, Iliç (Erzincan), 1200 m (1); 24.VII.1991, İspir, 1300 m (1); 25.VII.1996, Turnalı, Şenkaya, 1800 m (2); 27.VII.1992, Taşlıköy, Olur (Erzurum), 1100 m, *C. polydiformis* (1); 28.VII.1990, Tortumkale, Tortum (Erzurum), 1400 m, *C. virgata* (1); 28.VII.1996, Karakalan, Oltu, 1200 m (4); 30.VII.1996, Dikyar, Uzundere (Erzurum), 1450 m, *Cichorium intybus* (18); 28.VIII.1996, Karakaban, Oltu, 1500 m (2).

Distribution in Turkey: Bolu (11); Bingöl, Elazığ, kayseri (12); Manisa, Muğla, İzmir, Isparta, Antalya, Adana, Van, Tunceli and Erzurum (15).

The literature and our records show that *M. cincta* is a common species in Turkey.

Distribution in the world: Turkey, Afghanistan (27); Caucasus, Greece, Asia Minor, Syria, Persia, Afghanistan, North Africa (32).

***Mylabris cingulata* Faldermann, 1837**

Material examined: 25.VI.1996, Delice (Ankara) 800 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Transcaucasus, syria, Arabia, Persia (32).

Distribution in the world: South Persia (32).

***Mylabris concolor* Marseul, 1870**

Material examined: 2.VII.1988, Hozat (Tunceli) (1).

Distribution in Turkey: Ereğli (Konya) (12); Elazığ (15).

Distribution in the world: Turkey (27) (Endemic in Turkey).

***Mylabris crocata* (Pallas, 1781)**

Material examined: 5.V.1984, Pamukkale (Denizli) (26), (Leg. D. Szaloki); 9.VI.1986, Yeşilhisar (Niğde), 1400 m (1); 23.VI.1983, Pozantı (Adana), 800 m (2), Leg. K. Gasko).

Distribution in Turkey: Nevşehir, Elazığ (12); Manisa, İzmir, Afyon and Eskişehir (15).

Distribution in the world: South Russia, Kazakhstan, Central Asia, Mongolia, Asia Minor, Persia, Syria, Spain, Germany, Hungary, the Balkan Peninsula (32).

***Mylabris emiliae* (Escherich, 1899)**

Material examined: 12.VII.1979, Erzurum (1); 14.VII.1970, Erzurum 1850 m (1); 1.VII.1979, Erzurum, 1850 m (3).

Distribution in Turkey: Borchmann (27) did not indicate the location.

Distribution in the world: Asia Minor, Syria, Caucasus (27).

***Mylabris externepunctata* Faldermann, 1832**

Material examined: 18.VI.1994, İspir (Erzurum), 1100 m (4); 1.VII.1996, Palandöken (Erzurum) 2300 m (10); 2.VII.1996, Tortum (Erzurum), 1600 m (1); 9.VII.1996, Universty field (Erzurum), 1850 m (4); 12.VII.1994, Ortabahçe, Aşkale (Erzurum) (1); 13.VII.1989, Kireçlidağı, Narman (Erzurum), 2400 m (7); 6.VIII.1988, Turnalı Şenkaya (Erzurum), 2000 m (8); 5.VIII.1991, Ahırcık, İlica (Erzurum), 2300 m (1); 10.VIII.1994, Dikyar, Uzundere (Erzurum), 1500 m (2); 24.VIII.1988, Kargapazarı (Erzurum), 2800 m (1); 2.IX.1988, Turnalı, Şenkaya, 2000 m (4).

Distribution in Turkey: East Anatolia (32)

Distribution in the world: Transcaucasus, Persia, Azerbaijan, Eastern Anatolia (32).

***Mylabris fabricii* Sumakov, 1924**

Material examined: It is a widespread species throughout the country from the coastal region up to 3000 m. It has high population in the localities where *Calliptamus italicus* makes outbreaks in meadow areas of Erzurum and Kars. *Chondrilla wuncea*, *Cichorium intybus*, *Centaurea polydifformis*, *C. virgata*, *Cirsium* sp., *Onobrychis sativa*, *Melilotus officinalis*, *Tragopogon* sp. were recorded as host plant.

Distribution in Turkey: Muş, Elazığ, Bingöl, Ereğli (Konya), Niğde (12); Eskişehir, İzmir, Ankara, Adana, Artvin, Mardin, Bayburt, ERzincan, Tunceli, Kahramanmaraş (15).

Distribution in the world: European part of South Russia, Kazakhstan, Caucasus, Uzbekistan, Persia, Turkey, Greece, Spain, South France, Italy (32).

***Mylabris festiva* (Pallas, 1773)**

Material examined: 25.VII.1977, Erzincan, 1300 m (1).

Distribution in Turkey: Bingöl (12).

Distribution in the world: Turkey (27); The Balkan Peninsula, Anatolia, European part of South Russia, Kazakhstan, Altaj, Siberia, Jest Mongolia (32).

***Mylabris formosa* Welman, 1910**

Material examined: 12.VII.1973, Yalova (1).

Distribution in Turkey: Kuzin (32) indicated the presence of this species in Thrace but no locality.

Distribution in the world: The Balkan Peninsula (32).

***Mylabris furcimakula* Suimakov, 1915**

Material examined: 29.VI.1983, Dumludağı (Erzurum), 2400 m, *Taraxacum officinale* (5); 1.VII.1996, Palandöken (Erzurum), 2200 m (10); 26.VII.1992, Süngübayır, Olur (Erzurum), 2000 m (2); 5.VIII.1991, Ahırcık, İlica (Erzurum), 2300 m (8); 24.VIII.1988, Kargapazarı Mts. (Erzurum), 2200 m (6).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Transcaucasus (15).

***Mylabris fusca* (Olivier, 1811)**

Material examined: 8.IV.1990, Karababa Köprüsü (Adıyaman) (3), (Leg. D. Szaloki); 17.IV.1995, Silvan (Diyarbakır), 1600 m (2); 28.V.1987, Eskişehir (3), (Leg. I. Rozsner); 29.V.1989, Nemrut (Adıyaman), 1000 m (15), (Leg. A. Podlussany); 15.VI.1994, Başaklı, Oltu (Erzurum) (1); 15.VI.1996, Büyükgeçit, Aşkale (Erzurum), 1700 m (5); 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (7); 17.VI.1995, Silvan (Diyarbakır), 1400 m (7); 18.VI.1994, Pazaryolu (Erzurum), 1200 m (1); 20.VI.1994, University field (Erzurum), 1850 m, *Cichorium intybus* (5); 29.VI.1977, Silifke (içel), 150 m (1); 29.VI.1990, Pehlivanlı, Tortum (Erzurum) (5); 1-9.VII.1995, Universty field (Erzurum), 1850 m, *Onobrychis sativa* (9); 4.VII.1990, ANTakya (1); 9.VII.1996, Muş (2); 15.VII.1985, Erzurum, (2); 15.VII.1996, Büyükgeçit, Aşkale (Erzurum), 1750 m (2); 21.VII.1971, Muş, *Centaurea iberica* (5); 21.VII.1984, Sandıklı, Kemaliye (Erzincan), 1700 m (8); 22.VII.1994, Palandöken (Erzurum), 2200 m (1); 10.VIII.1996, Akçadağ (Malatya) (1); 11.VIII.1994, Dereboğazi (Erzurum), 2000 m, *C. intybus* (2).

Distribution in Turkey: Adana, Diyarbakır, Mardin, Siirt, Hakkari, Muş, Elazığ, Bingöl, Tunceli, Ereğli (Konya), Artvin, Manisa, İzmir, Aydın and Muğla (15).

Distribution in the world: Turkey (27); South Russia, Central Asia, Kopet-Dag, Trancaucasus, North Persia, Syria, Asia Minor (32).

Literature knowledge and our records reveal that *M. fusca* is a widespread species in Turkey.

***Mylabris geminata* Fabricius, 1798**

Material examined: 15.VI.1994, Başaklı, Oltu (Erzurum), 1500 m, *Tragopogon* sp. (2); 20.VI.1994, Universty field (Erzurum), 1850 m, *Cichorium intybus* (3); 27.VI. 1996, Sarıkamış (Kars), 2150 m (1);

28.VI.1996, AKsu (Erzurum), 1650 m (8); 29.VI.1996, Uzundere (Erzurum), 1400 m (1); 1.VII.1996, Palandöken (Erzurum), 2400 m (5); 2.VII.1983, Pasinler (Erzurum), (1); 7.VII.1994, Ferhatlı, Ardanuç (Artvin), 650 m (1); 6.VII.1995, Aşkale (Erzurum), (1); 9.VII.1995-96, Universty field (Erzurum), 1850 m, *Chondrilla juncea*, *Centaurea solstitialis* (6); 11.VII.1995, Horasan (Erzurum) (1); 13.VII.1983, 20.VII.1983, 21.VII.1971, Muş, *C. iberica*, *C. solstitialis* (8); 13.VII.1983, Palandöken (Erzurum), 2200 m (1); 25.VII.1983, Pasinler (Erzurum) (29); 26.VII.1983, Cevizli (Erzincan), 1300 m, *Arctium lappa* (2); 18.VIII.1996, 2150 m (1); 24.VIII.1988, Kargapazarı Mts. (Erzurum), 2800 m (1); 3.IX.1979, Erzurum, *C. intybus* (2); 28.IX.1995, Rize, (1).

Distribution in Turkey: Niğde, Ankara (15).

Distribution in the world: South Europe, Eurpean part of South Russia (32). *M. geminata* was first recorded from eastern and north eastern Anatolia.

***Mylabris humerosa*** (Escherich, 1899)

Material examined: 22-24.IV.1990, Bergama (İzmir) (2), (Leg. J. Muskovits); 19.V.1991, Termessos (Antalya) (1), (Leg. Kirschenhofer); 30.VI.1996, Dikyar, Uzundere (Erzurum), 1400 m (1); 20.VII.1983, Başaklı, Oltu (Erzurum), 1700 m *Cichorium intybus* (2); 11.VII.1996, Dikyar, Uzunder, 1400 m (1).

Distribution in TURkey: Mardin, Tunceli, Muş, Elazığ, Bingöl, Hakkari (12).

Distribution in the world: Transcaucasus, Turkmenistan, Uzbekistan, Greece, Asia Minor, Syria (32).

This species was first recorded from western and southern Turkey.

***Mylabris laevicollis*** Marseul, 1870

Material examined: 25.VI.1987, Iğdır, 1000 m (1); 1.VII.1996, Palandöken (Erzurum) (9); 5.VII.1996, ARTvin, 800 m, (4); 9.VII.1996, University field (Erzurum), 1850 m (1); 25.VII.1996, Turnalı, Şenkaya (Erzurum), 1750 m, (5); 18.VIII.1996, Sarıkamış (Kars) (10).

Distribution in Turkey: Bursa (15).

Distribution in the world: Caucasus, Transcaucasus, Transcaspian Region, Greece, Asia Minor (32).

This species was first recorded from eastern and north eastern part of the country.

***Mylabris olivieri*** Billberg, 1813

Material examined: 8.VI.1977, Anamur (İçel) (6), (Leg. A. Podlussany); 12-23.VI.1994, Akseki (Antalya), 1200 m (2), (Leg. I. Rydh); 28.VI.1996, Tercan (Erzincan), 1500 m (1); 5.VII.1995, Ballıköy (Erzincan), 1400 m (4); 6.VII.1995, Aşkale (Erzurum), 1700 m (1); 7.VII.1994, Akarsu, Ardanuç (Artvin), 700 m (7); 8.VII.1967, 8.VII.1983, 8.VII.1995 Erzurum (3); 9.VII.1980, Kağızman (Kars), 1400 m; 9.VII.1996, Tosya (Kastamonu), 650 m (5); 10.VII.1995, University field (Erzurum), 1850 m, *Cichorium intybus* (3); 11.VII.1996, Alaca, Ilica (Erzurum), 1750 m, *Chondrilla juncea*, (4); 13.VII.1979, Akdağ (Erzurum), 2100 m, *Cirsium arvense* (1); 15.VII.1996, University field, 1850 m (1); 18.VII.1967, Erzurum, 2200 m, *Melilotus officinalis* (2); 20.VII.1983, Başaklı, Oltu (Erzurum), 1600 m, *C. intybus* (1); 21.VII.1971, Muş, *Centaurea solstitialis* (5); 28.VII.1990, Erzurum (1); 31.VII.1979, Erzurum, 1850 m (1); 9.VII.1989, Erzurum, 1850 m (1); 11.VIII.1994 Çat (Erzurum), 2000 m (1); 10.VIII.1994, Büyükdere, Pasinler (Erzurum), 1950 m, *C. polydiformis* (4); 29.VIII.1967, Erzurum, 1850 m, *C. virgata* (2).

Distribution in Turkey: Ankara (11); Bilecik, Eskişehir, Konya, Ankara, ELazığ, Malatya, Bayburt (15).

Distribution in the world: European part of Russia, Central Asia, Caucasus, Transcaucasus, Asia Minor (32); Transcaspian Region, Persia (15); Kazakhstan, tajikistan (37).

Literature knowledge and this study show that *M. olivieri* is a common and high-populated species in Turkey.

***Mylabris pusilla*** Olivier, 1811

Material examined: 18.VI.1994, İspir Geçidi (Erzurum), 2100 m (1); 29.VI.1991, Gavurdağı (Erzurum) 2500 m (1); 30.VI.1989, Narman (Erzurum), 1750 m (1); 17.VII.1981, Selim (Kars), 2100 m, *Cirsium* sp. (2); 26.VII.1992, Süngübayır, Olur (Erzurum), 2100 m (1); 3.VIII.1995, Palandöken (Erzurum), 2200 m (1); 24.VIII.1988, Kargapazarı Mts. (Erzurum), 2800 m, *Taraxacum officinale* (1).

Distribution in Turkey: Kars and Ardahan (15).

Distribution in the world: Turkey (15); European part of Russia, Siberia, Kazakhstan, Kirgizia, Uzbekistan, Caucasus, Syria (32).

Literature knowledge and our records show that this species has been found only in eastern Anatolia so far.

***Mylabris quadripunctata*** (Linnaeus, 1767)

It is a common species throughout the country, from the coastal region up to 2500 m. Particularly in eastern Anatolia the population is higher. *Cichorium intybus*,

*Carduus* spp., *Cirsium* sp., *Centaurea iberica*, *C. solstitialis wuncea*, *Onopordum* spp., *Tragopogon* sp., *Taraxacum* sp., *Triticum vulgare*, *Medicago sativa* and *Onobrychis sativa* are important host plants. It feeds on flowers of wheat, barley and rye as well as some grasses. It is remarkable that occasionally it is found feeding on soft grain. In some cases half of the head is eaten. The damage done by this species on head of wheat resembles that caused by *Anisoplia* spp. (Scarabaeidae). On the other hand, Özer and Duran (23) reported this species as pest of alfalfa and sainfoin in Central Anatolia.

Distribution in Turkey: Edirne, Ankara (11); Mardin, Malatya, Tunceli, Erzincan, Kayseri, Konya, Kahramanmaraş, Hatay, Antalya (12); Edirne, Tekirdağ, İstanbul, Adapazarı, Bilecik, Çanakkale, Manisa, İzmir, Muğla, Eskişehir, Isparta, Konya, Ankara, Yozgat, Sinop, Ordu, Tunceli, Erzurum, Artvin, Niğde, Adana, Şanlıurfa (15).

Distribution in the world: European part of Russia, South Europe, Turkey, Persia, Caucasus, Central Asia, Afghanistan, Mongolia (32).

***Mylabris scabiosae* (Olivier, 1811)**

Material examined: It is a widespread species throughout the country. However its population is higher in Erzurum, Erzincan, Ankara, Ağrı, Kars, Ardahan, Muş, Van and Bitlis provinces than the rest of the country. It has been recorded from 500 m up to 2800 m. As host plant; flowers of *Allium carinatum*, *A. fallax*, *Anchusa* spp., *Arctotis* sp., *Arthemisia* spp., *Mentha longifolia*, *Carduus* spp., *Centaurea argentea*, *Cb polydiformis*, *C. scabiosa*, *C. solstitialis*, *C. virgata*, *Cephalaria alpina*, *Cichorium intybus*, *Cirsium* spp., *Crambe orientalis*, *Onopordum* spp., *Medicago sativa*, *Onobrychis montana*, *O. sativa*, *Taraxacum officinale*, *Tragopogon* sp. and *Verbascum* spp. were recorded. It is remarkable that the population of *C. scabiosae* is quite high at the localities where *Calliptamus italicus* L. (Orthoptera, Acrididae) makes outbreaks in eastern Anatolia.

Bodenheimer (21) recorded this species as poppy pest in Malatya, Özer and Duran (23) reported it as alfalfa and sainfoin pest in Central Anatolia.

Distribution in Turkey: Tarsus (İçel) (12); Bilecik, Çanakkale, Manisa, Eskişehir, Konya, Ankara and Malatya (15).

Distribution in the world: Caucasus, European part of South Russia, Central Asia, Kazakhstan, the Balkan Peninsula, Asia Minor, Syria, Mesopotamia, Persia (32).

***Mylabris serana* (Escherich, 1897)**

Material examined: 17.IV. 1983, Başaklı, Oytu (Erzurum), 1600 m. *Salix* sp. (1); 8.VI.1983, Erzurum, 1850 m (4); 1.VI.1966, Erzurum (2), 21.VII.1971, Muş, *Centaurea iberica* (3); 26.VII.1983, Cevizli (Erzincan), 1300 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Armenia (32).

*Mylabris sinuata* Klug, 1845

Material examined: 16.VI.1991, Tokat, 1000 m (1).

Distribution in Turkey: Kahramanmaraş (15).

Distribution in the world: Syria, Cyprus, Libya, Turkey (15).

***Mylabris suturalis* Pic, 1898**

Material examined: 6.VIb 1974, Bingöl, 2100 m (10).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Syria (38).

***Mylabris syriaca* Klug, 1845**

Material examined: 31.V.1989, Siirt (7), (Leg. A. Podlussany); 8.VI.1977, Aydıncık (İçel) (32), (Leg. A. Podlussany); 30.VI.1983, Çamlıyayla (İçel) (2), (Leg. K. Gasko); 2.VII.1996, Kızıldağ (İçel) (4); 7.VII.1996, Manavgat (Antalya) (1); 9.VII.1991, Termessos (Antalya), 950 m (3); 9.VII.1983, Bağtepe, Kozan (Adana) (4); 12.VII.1996, Çamlık, Bucak (Burdur) (1); 15.VII.1996, Senirkent (Isparta) (1); 15.VII.1996, Muş, 1700 m (4); 9.VIII.1991, Osmaniye (1); 30.VII.1996, Manavgat (8).

Distribution in Turkey: Hatay (12); Muğla, Antalya and Mersin (15).

Distribution in the world: Eastern Persia, Syria, Asia Minor, Greece, Egypt, Nubia (32).

Literature knowledge and this study reveal that this species is generally distributed in Mediterranean region, it is first recorded in eastern Anatolia.

***Mylabris variabilis* (Pallas, 1782)**

Material examined: 10.VI.1995, Çenkeköy (Tekirdağ) (15); 12.VI. 1994, Gündoğmuş (Antalya) 600 m (1), (Leg. O. Nodmar); 13.VI.1983, Korudağ, Keşan (Edirne) (3), (Leg. K. Gasko); 15.VI.1989, Keşan (Edirne) (2), (Leg. A. Podlussany); 15.VI.1989, Karacabey (Bursa) (1); 15.VI.1989, Ulukır (Balıkesir) (6), (Leg. A. Podlussany); 17.VI.1994, Akşehir (Konya) (1), (Leg. O. Nodmar); 23.VI.1994, Akşehir (3), (Leg. I.

Rydh); 10.VI.1995, Çenkezköy, 200 m (28); 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (20); 21.VI.1995, Demiröz, Digor (Kars), 1850 m (6); 24.VI.1990, Zorkun Yaylası (Osmaniye), 1300 m (2); 25.VI.1991, Turnalı, Şenkaya (Erzurum), 2100 m (2); 27.VI.1993, Tortum (Erzurum), 1500 m, *Melilotus officinalis* (1); 27.VI.1996, Sarıkamış (Kars), 2150 m, *Chicorium intybus* (12); 29.VI.1989, Turnalı, Şenkaya, *Cephalaria alpina* (2); 29.VI.1996, Şavşat (Artvin), 1000 m (2); 30.VI.1992, Millipark, Davutlar (Aydın), 50 m (3); 30.VI.1996, Dikyar, Uzundere (Erzurum) 1400 m (1); 1.VII.1996, Artvin, 450 m (9); 5.VII.1995, Ballıköy (Erzincan), 1400 m (2); 5.VII.1996, Manavgat (Antalya), 150 m (5); 7.VII.1994, Akarsu, Ardanuç (Artvin) (1); 10.VII.1994, Büyükdere, Pasinler (Erzurum), 1950 m (1); 10.VII.1996, Keşan, 50 m (2); 11.VII.1996, Kızılbaş (İçel), (1); 11.VII.1996, Dikyar, Uzundere (Erzurum), 1400 m (1); 16.VII.1993, Serik (Antalya), *Cirsium* sp. (2); 19.VII.1996, Manavgat (Antalya) (5); 20.VII.1995, Saray (Tekirdağ) (16); 20.VII.1995, Çorlu (Tekirdağ) (14); 21.VII.1971, Muş, 1600 m, *Centaurea solstitialis* (2); Başaklı, Oltu (Erzurum), 1600 m, *Tragopogon* sp. (11); 25.VII.1996, Turnalı, Şenkaya, 1750 m (15); 4.VIII.1983, Laloğlu, Selim (Kars), 2200 m (1), *Cirsium arvense*; 6.VIII.1988, Turnalı, Şenkaya (Erzurum), 2000 m (9); 8.VIII.1995, Kireçli, Tortum (Erzurum), *Cirsium* sp. (2); 9.VIII.1987, Başaklı, Oltu, *Cirsium* sp., *Carduus* sp (11); 10.VIII.1995, University field (Erzurum), 1850 m *Onobrychis sativa* (1); 11.VIII.1983, Sarıkamış (Kars), 2100 m, *C. intybus*, *O. sativa* (5); 14.VIII.1996, Ayaş (Ankara), (2); 25.VIII.1996, Muş, 1600 m, *Chondrilla juncea*, (5); 27.VIII.1993, Tortum (Erzurum) (1); 23.VIII.1996, Aşkale (Erzurum), 1750 m, *Mentha* sp. (86); 2.IX.1988, Turnalı, Şenkaya, 2000 m (9); 5.IX.1990 ve 6.IX.1994 Turnalı, Şenkaya, *C. alpina* (4); 12.IX.1981, Başaklı, Oltu, 1600 m, *Tragopogon* sp. (1).

Distribution in Turkey: Edirne (11); Ereğli (Konya), Tunceli, İstanbul (12); Kocaeli, Balıkesir, Bursa, Çanakkale, Çankırı and Adana (15).

Özer and Duran (23) reported it as alfalfa and sainfoin pest in Central Anatolia.

The literature and our records show that *M. variabilis* is a common and high populated species in the country.

Distribution in the world: Caucasus, Transcaucasus, South and Eastern Europe, Asia Minor, north Africa, Kazakhstan, Turkmenistan (32).

#### *Mylabris zebraea* (Marseul, 1870)

Material examined: 29.V.1989, Nemrut (Adıyaman), 1000 m (6), (Leg. A. Podlussany); 6.VI.1989, Erzurum

(1), (Leg. A. Podlussany); 12.VI.1989, Midas (Eskişehir) (1), (Leg. A. Podlussany); 13.VI.1989, Kırka (Eskişehir) (3) (Leg. A. Podlussany); 13.VI.1989, Termessos (Antalya) (1), (Leg. I. Rydh); 16.VI.1994, Üzümlü (Erzincan), 1300 m (4); 25.VI.1996, Çamlıdere Geçidi (Ankara), 1300 m (5); 28.VI.1996, Aşkale (Erzurum), 1900 m (4); 28.VI.1996, Tercan (Erzincan), 1500 m (2); 1.VII.1996, Alaca, Ilıca (Erzurum), 1700 m (8); 1.VII.1996, Palandöken (Erzurum), 2000 m (2); 5.VII.1995, Ballıköy (Erzincan) 1400 m (5); 6.VII.1996, Aşkale, 1750 m (2); 8.VII.1979, Erzurum, 1850 m (1); 11.VII.1996, Horasan (Erzurum), 1600 m (3); 17.VII.1996, Sütkans, Oltu (Erzurum), 1700 m (2); 18.VII.1979, Palandöken, 2000-2300 m (15); 18.VII.1979, University field (Erzurum), 1850 m, *Triticum* sp.(2); 13.VII.1994, Palandöken, 2200 m (1); 20.VII.1983, Başaklı, Oltu (Erzurum), 1600 m, *Tragopogon* sp. (1); 20.VII.1994, Beytepe, Ankara, 950 m *Echinops orientalis* (1); 21.VII.1984, Sandıklı, Kemaliye (Erzincan), 1200 m (1); 27.VII.1996, İshan, Yusufeli (Artvin), 800 m, *Chondrilla juncea* (2); 3.VIII.1981, Uzunahmet (Erzurum) 1900 m (5); 6.VIII.1996, Palandöken, 2200 m (2); 8.VIII.1983, Erzurum) (1); 8.VIII.1995, Kireçli Mt., Tortum (Erzurum), 2300 m (1); 10.VIII.1994 Büyükdere, Pasinler, 1950 m, *Crambe orientalis* (1); 20.VII.1992, Süngübayır, Olur (Erzurum), 1850 m, *Achillea millefolium* (1); 2.IX.1994 Pazaryolu (Erzurum), *Centaurea solstitialis* (1).

Distribution in Turkey: Bingöl, Tunceli, Hatay (12); Çanakkale, İzmir, Denizli, Afyon, Muğla, Eskişehir, Konya, Ankara, Yozgat, Çorum, Bayburt, Gaziantep and Mardin (15).

The literature and our records reveal that *C. zebraea* is a widespread species in Turkey.

Distribution in the world: Turkey (27); Greece, Central Asia, (15); Transcaucasus, North Persia, Mesopotamia (32).

#### *Oenas* Latrieille, 1802

##### *Oenas armeniacus* Kaszab, 1951

Material examined: 8.VII.1996, Muş, 1600 m (1); 11.VII.1995, Horasan (Erzurum), 1600 m, *Daucus psedorientalis* (2).

Distribution in Turkey: Erzurum (39).

Distribution in the world: It is an endemic species in Turkey and type locality is Erzurum.

##### *Oenas crassicornis* (Illiger, 1800)

Material examined: 22.V.1992, Ceyhan (Adana) (1);

7.VI.1994 Bornova (İzmir) (1); 17.VI.1996, Pazaryolu (Erzurum), 2500 m (9); 18.VI.1994, Madenköprübaşı, İspir (Erzurum), 1100 m (7); 20.VI.1994, University field (Erzurum), 1850 m (1); 28.VI.1996, Tercan (Erzincan), 1500 m (35); 7.VII.1996, Palandöken (Erzurum), 2400 m (2); 7.VII.1996, Pazaryolu (Erzurum), 1500 m (2); 7.VII.1996, Madenköprübaşı, İspir (Erzurum), (14); 8.VII.1996, Muş, 1700 m (3); 19.VII.1996, Keşan (Edirne), 50 m, *Eryngium campestre* (5); 19.VII.1996, Çamlık, Burdur, (4); 20.VII.1994, Beytepe, Ankara, 950 m (1); 2.VII.1983, Adana (14); 22.VII.1992, Karaköy (Samsun) (2); 29.VII.1994, Turnalı, Şenkaya (Erzurum), 1700 m (2); 16.VIII.1996, Karlı, Tortum (Erzurum) (1).

Distribution in Turkey: İzmit, Bilecik, Bursa, Isparta, Manisa, İzmir, Kırıkkale and Yozgat (15).

Distribution in the world: Turkey (27); Carpathian Basin, Dalmatia, Rumania, the Balkan Peninsula, Asia Minor (39).

This species was first recorded from eastern Anatolia.

***Oenas tarsensis*** Abeille de Perrin, 1880

Material examined: 2.VII.1983, Adana, 100 m (1).

Distribution in Turkey: Adana, Tokat, Tarsus (39).

Distribution in the world: Turkey (27); Asia Minor (39).

***Oenas tenuicornis*** Abeille de Perrin, 1880

Material examined: 17.IV.1995, Silvan (Diyarbakır), 1400 m (1); 6.VII.1995, Aşkale (Erzurum) (1); 8.VII.1995, Oltu (Erzurum), 1300 m (2); 11.VII.1995, Horasan (Erzurum), 1600 m, *Daucus pseudorientalis* (11); 27.VII.1990, Coşkunlar, Olur (Erzurum), 1150 m, *Melilotus officinalis* (2); 16.VIII.1995, Karlı, Tortum (Erzurum), 2400 m, *Cephalaria alpina* (3).

Distribution in Turkey: Ceyhan (Adana) (39).

Distribution in the world: Turkey (27); Armenia (Erevan), Asia Minor, Syria (39).

***Epicauta*** Redtenbacher, 1845

***Epicauta erythrocephala*** (Pallas, 1776)

Material examined: 25.VI.1986, Bahçeli (Erzincan), 1350 m (1).

Distribution in Turkey: Edirne (11).

Distribution in the world: Bulgaria, Asia Minor, Transcaucasus, South Russia (10).

***Lytta*** Fabricius, 1787

***Lytta vesicatoria freudei*** Kaszab, 1958

Material examined: 6.VI.1981, Erzurum, 1850 m (1); 9.VI.1984, Derekapı, Tortum (Erzurum), 1300 m (7); 25.VI.1980, Akdağ (Erzurum), 2100 m, *Cephalamia alpina* (14); 25.VI.1996, Kireçli Mt., Tortum (Erzurum), 2000 m (11); 30.VI.1996, Dikyar, Uzundere (Erzurum), 1600 m (5); 1.VII.1990, Alaybey (Erzurum), 1900 m (1); 2.VII.1996, Palandöken (Erzurum), 2200 m (7); 11.VII.1996, Dikyar, Uzundere, 1500 m (5); 8.VIII.1995, Rabat, Pasinler (Erzurum), 2200 m, *C. alpina* (6); 5.IX.1990, Turnalı, Şenkaya (Erzurum), 2200 m, *C. alpina* (22).

Distribution in Turkey: It is not known clearly.

Distribution in the world: Caucasus (40).

***Lytta vesicatoria heydeni*** Haag-Rutenberg, 1880

Material examined: 8.VII.1992, Tokat (1).

Distribution in Turkey: Borchmann (27) indicated the presence of this subspecies in Turkey but no locality.

Distribution in the world: Asia Minor (27) (Endemic in Turkey).

***Teratolytta*** Semen, 1894

***Teratolytta dives*** (Brulle, 1832)

Material examined: 4.IV.1990, Adana (5), (Leg. D. Szaloki); 21.IV.1990, Marmara Gölü (Manisa) (1), (Leg. D. Szaloki); 21.IV.1990, Kınık (İzmir) (1), (Leg. A. Podlussany); 24.IV.1990, Küçükkuş (Balıkesir) (1), (Leg. A. Podlussany); 26.IV.1990, Kavak (Çanakkale) (1), (Leg. J. Muskovits); 13.V.1984, Tauros Mts, Aladağ (İçel) (37), *Cytisus* (Leg. D. Szaloki).

Distribution in Turkey: İçel (12).

Distribution in the world: Turkey (27); The Balkan Peninsula, Asia Minor, Persia (40).

***Meloe*** Linnaeus, 1758

***Meloe autumnalis*** Olivier, 1792

Material examined: 23.VII.1975, Ardahan, 2000 m (1).

Distribution in Turkey: Borchmann (27) indicated the presence of this species in Turkey but no locality.

Distribution in the world: Europe, Algeria, Turkey (27).

***Meloe brevicollis*** Panzer, 1793

Material examined: 20.VI.1972, Ardahan, 2000 m (1).

Distribution in Turkey: Pripisnova (37) indicated the presence of this species in Turkey but no locality.

Distribution in the world: Central Europe, Aisa Minor, Turkestan, European part of Russia, Kazakhstan, Central Asia, North Africa, Mongolia, Tajikistan (37).

***Meloe cavensis*** Petagna, 1819

Material examined: 21.VIII.1994, Antalya (1).

Distribution in Turkey: It is not known clearly.

Distribution in the world: South Europe (27).

***Meloe cicatricosus*** Leach, 1815

Material examined: 9.IV.1990, Silvan (Diyarbakır) (1), (Leg. D. Szaloki); 6.V.1991, Pınarbaşı (Kayseri) (1), (Leg. I. Retezar); 21.VII.1979 Yusufeli (Artvin), 600 m (1).

Distribution in Turkey: Bilecik (15).

Distribution in the world: England (27); Central and South Europe, Turkey, Persia, Caucasus, Central Asia, Afganistan, South Russia (15).

***Meloe deflexus*** Reitter, 1889

Material examined: 7.IV.1990, Narince (Adıyaman) under stones (1); 8.IV.1990, Karababa Bridge (Adıyaman) under stones (4), (Leg. D. Szaloki).

Distribution in Turkey: Amanus Mt., Topboğazi (Hatay) (12).

Distribution in the world: Syria (27), Turkey (41).

***Meloe erythrocnemus*** Pallas, 1782

Material examined: 18.IV.1990, Çiçek Mt. (Konya) (1), (Leg. J. Muskovits); 24.V.1987, Sandal (Sivas) (2), (Leg. I. Rozner); 2.VII.1994, Beytepe, Ankara, 900 m (1).

Distribution in Turkey: Borchmann (27) and Pripisnova (37) indicated presence of this species in Turkey but no locality.

Distribution in the world: Turkey (27) South Eastern Europe, Persia, Afghanistan, European part of South Russia, North Africa, Krim Peninsula, Kazakhstan, Tajikistan, Asia Minor, Turkestan, South Siberia (37).

***Meloe ganglbaueri*** Apfelbeck, 1907

Material examined: 18.VII.1993, Serik (Antalya) (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Montenegro (27).

***Meloe glazunovi*** Pliginskij, 1910

Material examined: 14.VII.1979, Ardahan, 21000 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Krim Peninsula, Afganistan, Caucasus, Transcaucasus, Turkmenistan, European part of South Russia, Persia (37).

***Meloe hungarus*** Schrank, 1776

Material examined: 18.VIII.1978, Ankara (1).

Distribution in Turkey: Eskişehir (15). Giray (25) reported it as poppy pest in Uşak.

Distribution in the world: South and Central Europe, Turkey, Palestine (15), South Russia (27).

***Meloe mediterraneus*** Müller, 1925

Material examined: 9.IV.1990, Silvan (Diyarbakır) under stones (8); 10.IV.1990, Basur (Bitlis) under stones (2); 11.IV.1990, Yeniköşk and Gedikbuk (Van) under stones (14); 12.IV.1990, Savican (Ağrı) (27); 13.IV.1990, Aşkale and Erzurum under stones (8); 14.IV.1990, Eskikeslik (Erzincan) under stones (1), (Leg. D. Szaloki, all of the material); 19.V.1987, Aluçra (Gümüşhane) (1), (Leg. I. Rozner); 19.VII.1990 Serik (Antalya) (1).

Distribution in Turkey: Asia Minor (42).

Distribution in the world: Sicily, Dalmatia, Istria, Hungary (42).

***Meloe olivieri*** Chevrolat, 1833

Material examined: 13.V.1987, İzzettin (Kırıkkkale) (2), (Leg. I. Rozner); 27.VII.1982, ERzincan (1).

Distribution in Turkey: Eskişehir (15).

Distribution in the world: Asia Minor, Persia, Syria (27).

***Meloe proscarabaeus*** Linnaeus, 1758

Material examined: 10.IV.1990, Küçüksu (Bitlis) (2); 12.IV.1990, Sarıcan (Ağrı) (1); 14.IV.1990, Eskikeslik (Erzincan) (1); 15.IV.1990, Göreme (Nevşehir) (2), (Leg. D. Szaloki); 18.IV.1990, Çiçek Mt. (Konya) (1), (Leg. J. Muskovits); 26.IV.1990, Kavak (Çanakkale) (14), (Leg. A. Podlussany and J. Muskovits); 17.IV.1995, Silvan (Diyarbakır), 1400 m (1); 6.V.1991, Pınarbaşı (Kayseri) (2), (Leg. I. Retezar); 15.V.1970, Muş, 1850 m (2); 7.V.1974, Ardahan, 2000 m (1); 17.V.1984, Göreme (Nevşehir) (1), (Leg. D. Szaloki); 18.V.1984, Keskin (Ankara) (1), (Leg. D. Szaloki); 24.V.1994, Dikyar, Uzundere (Erzurum), 1100 m (1).

Distribution in Turkey: Bolu and Çankırı (15).

Distribution in the world: South and Central Europe, Afghanistan, Tajikistan, Kazakhstan, Asia Minor, Russia, Syria, Siberia, Turkestan, North Africa (37).

***Meloe rufiventris* Germar, 1817**

Material examined: 17.VII.1987 Erzincan, 1300 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: France, Eastern Europe, South Russia, Caucasus (42).

***Meloe rugosus* Marsham, 1802**

Material examined: 15.VII.1978, Ankara, 1000 m (1).

Distribution in Turkey: Bilecik and Bolu (15).

Distribution in the world: Central and South Europe, Caucasus, Algeria, Turkestan (27), South Russia (15).

***Meloe scabriusculus* Brandt et Erichson, 1832**

Material examined: 10.VII.1989, Horasan (Erzurum), 1600 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Sicily (27), Central and South Europe, South Russia, Caucasus, Turkestan (42).

***Meloe tuccius* Rossi, 1792**

Material examined: 18.IV.1990, Yunuslar (Konya) (1), (Leg. K. Szekely); 21.IV.1990, Kınık (İzmir) (1), (Leg. K. Szekely); 6.V.1991, Pınarbaşı (Kayseri) (3), (Leg. I. Retezar); 11.V.1973, Horasan (Erzurum), 1700 m *Salix* sp. (1); 13.V.1987, Izzettin (Kırıkkale) (2), (Leg. I. Rozner).

Distribution in Turkey: Turkey (27) (no locality), Aisa Minor (15).

Distribution in the world: Turkey (27), South Europe, Asia Minor, Caucasus, Turkestan, Kazakhstan, Afghanistan, Austria, Hungaria, Canary Islands (15).

***Meloe varigatus* Donovan, 1776**

Material examined: 10.IV.1990, Küçüksu (Bitlis) (1), (Leg. D. Szaloki); 10.IV.1995, Kahramanmaraş (1); 23-24.IV.1990, Bergama (İzmir) (5), (Leg. J. Muskovits and A. Podlussany); 17.VII.1992, Madenköprübaşı, İspir (Erzurum), 1400 m (1); 1.VIII.1979, Oltu Erzurum (1).

Distribution in Turkey: Nizamlıoğlu (22) reported this species as sugarbeet pest. Eskişehir (15).

Distribution in the world: Europe, Eastern Mediterranean, North Palearctic except Siberia (42).

***Meloe violaceus* Marsham, 1802**

Material examined: 12.IV.1990, Eleşkirt (Ağrı), (1), (Leg. D. Szaloki); 30.VI.1996, Çam Geçidi (Artvin), 2450

m 51); 4.VII.1996, Ovit Pass (Rize), 2600 m (1); 8.VII.1984, Oltu (Erzurum), 1300 m (2); 17.VII.1992, Madenköprübaşı, İspir (Erzurum) (1).

An outbreak of *M. violaceus* occurred in 1984 in some villages of Oltu (Erzurum) which is a good beekeeping area. The triungulins were found in the hives of honey bees. A high level of infection was observed in some apiaries.

Distribution in Turkey: (?)

Distribution in the world: Palearctic (42).

**NEMOGNATHINAE**

***Apalus* Fabricius, 1775**

***Apalus bipunctatus* Germar, 1817**

Material examined: 12.VII.1994, Artvin, 400 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Central and Eastern Europe (43), Caucasus, Central Asia, Kazakhstan, Tajikistan (37).

***Apalus necydalaeus* (Pallas, 1782)**

Material examined: 17.IV.1995, Silvan (Diyarbakır) (1); 5.VII.1973, Erzurum, 1900 m (1); 9.VII.1995 University field (Erzurum), 1850 m (1).

Distribution in Turkey: Asia Minor (43).

Distribution in the world: Asia Minor, Hungary, Greece, Caucasus, Turkestan, Siberia (43).

***Apalus spectabilis* Schaun, 1859**

Material examined: 17.VI.1976, Çanakkale (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Hungary, Greece, Macedonia (43).

***Euzonitis* Semenov, 1893**

***Euzonitis fluvipennis* (Fabricius, 1792)**

Material examined: 26.VIII.2077, Ardahan, 2000 m (1).

Distribution in Turkey: Bochmann (27) indicated the presence of this species in Turkey but no locality.

Distribution in the world: Turkey (27), Hungary, Asia Minor, South Russia (43).

***Euzonitis quadrimaculata* (Pallas, 1782)**

Material examined: 28.VI.1996, Anzer, Rize, 2000 m (1); 8.VII.1996, Taşova (Amasya), 300 m (1); 17.VIII.1991, Erzurum, (1); 21.VIII.1986, Sarıkamış

(Kars), 2100 m (1).

Distribution in Turkey: İçel (12); Ankara and Isparta (15).

Distribution in the world: South Europe, Central Europe, Central Asia, South Russia, Mongolia, Asia Minor, Cyprus, Persia (15).

***Euzonitis rubida*** (Menetries, 1832)

Material examined: 25.V.1988, Termessos (Antalya), 600 m (1), (Leg. I. Rydh); 26.V.1989, Ulukışla (Niğde) (1), (Leg. A. Podlussany); 9.VI.1996, Şelale, Uzundere (Erzurum), 1100 m (5); 17.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (7); 20.VI.1994,

University field (Erzurum), 1850 m, *Centaurea carduiformis* (9); 23.VI.1989, Pozantı (Adana) 800 m (1), (leg. K. Gasko); 25.VI.1996, Anzer (Rize), 2200 m (1); 9.VII.1995, University field, 1850 m (1); 23.VII.1996, Palandöken (Erzurum), 2400 m (1); 30.VII.1983, Çamlıyayla (İçel) (21), (Leg. K. Gasko); 30.VIII.1994, Pazaryolu (Erzurum), 1400 m (1).

Distribution in Turkey: İçel (12).

Distribution in the world: Turkey (27), Caucasus, Asia Minor, Transcaspi, Greece (43).

This species was first recorded from eastern and north eastern Anatolia.

***Euzonitis sexmaculata*** (Olivier, 1790)

Material examined: 3.VII.1989, Yozgat, *Centaurea solstitialis* (1); 8.VII.1996, Taşova (Amasya), 300 m (4).

Distribution in Turkey: Ankara and Samsun (15).

Distribution in the world: Turkey (27), South Europe, Asia Minor, Syria, North Africa (43), Tajikistan (37).

***Nemognatha*** Illiger, 1807

***Nemognatha chrysomelira*** (Fabricius, 1775)

Material examined: 23.VI.1994, Yarpuz (Adana) (1), (Leg. D. Nodmar); 4.VII.1994, Kınalıçam, Yusufeli (Artvin), 800 m (2); 6.VII.1994, Demirkent, Yusufeli (Artvin), 450 m (1); 9.VII.1996, Osmancık (Çorum), 450 m, *Echinops orientalis* (28); 15.VII.1995, Bilecik, 600 m (7); 20.VII.1994, Beytepe (Ankara), 950 m, *E. orientalis* (6); 25.VII.1996, Manavgat (Antalya), (2); 1-3.VIII.1994, Erzincan, 1300 m (4).

Distribution in Turkey: Bilecik, Kütahya and Isparta (15).

Distribution in the world: South Europe, the Balkan Peninsula, Greece, Turkey, Syria, Turkestan (43), Tajikistan (37).

***Stenodera*** Eschscholtz, 1818

***Stenodera anatolica*** Frivaldszky, 1884

Material examined: 17-25.V.1988, Yarpuz (Antalya) (2), (Leg. I. Rydh); 31.V.1987, Mersin (1), (Leg. I. Rozner); 8.VII.1991, Erzincan, 1300 m (1).

Distribution in Turkey: Tokat (27); Adana (12).

Distribution in the world: Asia Minor (43) Endemic species).

***Stenodera caucasica*** (Pallas, 1781)

Material examined: 17.IV.1995, Silvan (Diyarbakır), 1400 m (9); 14.VI.1970, Erzurum, (1); 15.VI.1994, Başaklı, Oltu (Erzurum), 1600 m (5); 15.VI.1995, Bilecik, 600 m (1); 18.VI.1994, Madenköprübaşı, İspir (Erzurum), 1200 m (3); 25.VI.1996, Sütkans, Oltu (Erzurum), 1700 m (1); 28.VI.1996, Tercan (Erzincan), 1500 m, *Euphorbia* sp. (15); 29.VI.1990, Pehlivanlı, Tortum (Erzurum), 1200 m (2); 11-13.VI.1989, Kırka and Kaymaz (Eskişehir) (3), (Leg. A. Porlussany and I. Rozner); 24.VI.1993, Zorkun Yaylası (Osmaniye), 1100 m (1); 5.VII.1994, Altıparmak, Yusufeli (Artvin), 1600 m (3); 9.VII.1996, Susuz (Çankırı), 1200 m (1); 11.VII.1986, Erzurum, (1); 13.VII.1968, Erzurum, (1); 13.VII.1990, Yeşilyayla (Erzurum) (1); 22.VII.1994, Palandöken (Erzurum), 2200 m (3); 26.VII.1994, Akşar, Şenkaya (Erzurum) (1).

Distribution in Turkey: Hakkari (12); Sinop and Kütahya (15).

Distribution in the world: Turkey (27); Caucasus, Asia Minor, Siberia (43), The Balkan Peninsula, Syria, Palestine, Persia (15).

***Stenodera coeruleiceps*** Fairmaire, 1892

Material examined: 19.IV.1990, Isparta (2), (Leg. A. Podlussany); 15.V.1984, Çamlıyayla (İçel) (5), (Leg. D. Szaloki).

Distribution in Turkey: İçel (12).

Distribution in the world: Turkey (12); Syria (Akbes) (43).

***Stenodera puncticollis*** (Chevrolat, 1829)

Material examined: 3.IV.1990, Kabasakal (Adana) (8), (Leg. D. Szaloki); 8.IV.1990, Karababa Köprüsü (Adıyaman) (10), (Leg. D. Szaloki).

Distribution in Turkey: Escherich (43) and Borchmann (27) indicated the presence of this species in Turkey but no locality.

Distribution in the world: Turkey (27), South Turkey, Syria (43).

***Stenoria*** Mulsant, 1857

***Stenoria analis*** Schaun, 1859

Material examined: 2.VI.1994, Kemalpaşa, Hopa (Artvin), (1); 2.IX.1994, Sugören, Hopa (artvin) (2).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: South Europe, Persia (43).

***Zonitis*** Fabricius, 1775

***Zonitis gibbicollis*** Abeille, 1880

Material examined: 30.VI.1983, Çamlıyayla (İçel) (1), (Leg. K. Gasko).

Distribution in Turkey: İçel (12).

Distribution in the world: Turkey (27); Asia Minor, Greece (43).

***Zonitis immaculata*** (Olivier, 1790)

Material examined: 26.VI.1996, Büyükcinesu (Çorum) 800 m (1); 8.VII.1996, Taşova (Amasya) 300 m (1); 18.VII.1994, Beytepe, Ankara 950 m (1).

Distribution in Turkey: İçel (12); Kızılören (Konya) (15).

Distribution in the world: Turkey (27); Spain, Italy, Greece, Asia Minor (43).

***Zonitis nana*** Ragusa, 1882

Material examined: 5.VII.1990, Turnalı, Şenkaya (Erzurum), 2000 m *Cephalaria alpina* (1).

Distribution in Turkey: Konya (12); Çankırı (15).

Distribution in the world: Turkey (27); Hungary, South France, Italy, Greece, the Balkan Peninsula, Asia Minor, Palestine, Syria, Austria, Czecho-Slovakia (15).

***Zonitis nigriventris*** Motschulsky, 1845

Material examined: 12.VI.1981, Iğdır 1100 m (1).

Distribution in Turkey: New record for the Turkish fauna.

Distribution in the world: Caucasus, Armenia (43).

***Zonitis praeusta*** Fabricius, 1792

Material examined: 7.VI.1977, Alanya (Antalya) (1), (Leg. Podlussany); 7.VI.1996, Palandöken (Erzurum), 2200 m (1); 11-13.VI.2996, Rabat, Pasinler (Erzurum), 2400 m, *Cephalaria alpina* (4); 28.VI.1996 Tercan (Erzincan) 1500 m (2); 5.VII.1995, Anzavderesi, Oltu (Erzurum), 800 m (1); 8.VII.1996, Destek (Samsun), 600 m, *Dipsacus laciniatus* (2); 11.VII.1990, Kargapazarı Mts. (Erzurum), 2300 m (1); 14.VII.1996, Çamlıbel, Oltu, 1700 m (1); 3.VIII.1995, Palandöken (Erzurum) 2200 m (1); 5.VIII.1994, Aliminpınarı (Antalya), 1000

m, *Mentha longifolia* (6); 8.VIII.1995, Palandöken, 2200 m (1).

Distribution in Turkey: Bolu and Eskişehir (15).

Distribution in the world: South Europe, Syria, Persia, Turkestan, Asia Minor, Algeria (43).

***Zonitis ruficollis*** Frivaldszky, 1877

Material examined: 29.VII.1993, Serik (Antalya) (1).

Distribution in Turkey: Mardin (12).

Distribution in the world: Algeria, Asia Minor, Syria (43).

The species that have been already recorded in Turkey, have not been encountered in this study are listed below:

*Lydus europaeus* Escherich, 1897: Köyceğiz (Muğla) (12).

*Lydus humeralis* Gyllenhal, 1817: Turkey (27)

*Lydus tarsalis cerastes* Abeille de Perrin, 1880: Mardin (12)

*Lydus tenuitarsis* Abeille de Perrin, 1880: Bingöl (12)

*Micromerus obenbergeri* Kaszab, 1958: Konya-Kayseri (33)

*Oenas afra* Linnaeus, 1767: Turkey (27)

*Cerocoma bodemeyeri* Reitter, 1913: Eskişehir (30)

*Cerocoma macedonica* Maran, 1944: Gümüşdör (İzmir), Çanakkale (30)

*Cerocoma malatyensis* Kaszab, 1941: Siirt (12)

*Cerocoma scovitzii* Faldermann, 1837: Turkey (27)

*Cerocoma turcica* Pardo Alcáida, 1977: Turkey (30)

*Mylabris decempunctata* Fabricius, 1781: Turkey (27)

*Mylabris decore* E. Frivaldszky, 1835: Turkey (27)

*Mylabris flavipennis* Motsch., 1872: Turkey (27)

*Mylabris floralis* Pallas, 1827: Turkey (27)

*Mylabris ledereri* Marseul, 1870: Turkey (27)

*Mylabris munda* Escherich, 1897: Turkey (27)

*Mylabris pentheri* Ganglbauer, 1905: Turkey (27)

*Mylabris sericea* Pallas, 1782: Turkey (27)

*Mylabris steppensis* Dokht., 1890: Turkey (27)

*Calydus escherichi* Reitter, 1898: Turkey (27)

*Teratolytta kulzeri* Kaszab, 1958: Van (12)

*Teratolytta vanensis* Kaszab, 1968: Van (12)

*Meloe bodemeyeri* Ganglbauer, 1900: Turkey (27)

*Meloe conicicollis* Reitter, 1907: Turkey (27), Fethiye (Muğla) (12)

*Meloe sericellus* Reiche, 1857: Turkey (27)

*Apalus apicalis* Latreille, 1804: Turkey (27)

*Apalus bimaculatus* Linnaeus, 1761: Turkey (27)

*Apalus montanus* Escherich, 1897: Turkey (27), Niğde (12)

*Stenoderia oculifera* Abeille de Perrin, 1880: Turkey (27)

*Euzonitis auricoma* Escherich, 1891: Turkey (27)

*Euzonitis bifasciata* Swartz, 1808: Turkey (27)

*Zonitis microcephala* Escherich, 1889: Turkey (27)

This study and literature knowledge show that 147 Meloidae species have been recorded for the time being in Turkey. Of 15 species are new records for the Turkish fauna, for many species new localities and host plants are found. Some of them are widespread over the country and have high population, others are moderate and rare species.

It is remarkable that more than 20 species were recorded about 70 years ago, but after a prolonged search they have not been found so far. Collection may not be adequate, but main factors are changes of landscape, destruction and modification of habitats. Unfortunately man has destroyed most of the natural

habitat in Turkey by his intervention in the landscape for the sake of agriculture, forestry, industry, recreation and urban development. But some are still left, especially in the higher regions of the Anatolia. However, in the most of the meadow area overgrazing is one of the most serious threats. It brings about impoverishment of diversity for both flora and fauna, soil erosion, and finally lead to ecosystem desertification. The results of overgrazing are more and more evident nowadays especially in eastern Anatolia. Forest fires and burning cereal residue left in the field after harvest are also important elements in destruction and loss of habitats in Turkey.

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