

**Preliminary list of Auchenorrhyncha with notes on distribution and importance
of species in Turkey. XXIV. Family : Cicadellidae : Deltocephalinae ;
Athysanini (Part IV)**

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Summary

This fourth part of Athysanini comprises 21 species belonging to the genera of *Handianus*, *Stictocoris*, *Scleroracus*, *Limotettix*, *Laburrus*, *Euscelidius*, *Conosanus*, *Euscelis*, *Streptanus*, *Artianus* and *Zercanus*. Six species, namely : *Handianus modestus* (Mel.), *Scleroracus decumanus* (Kont.), *Laburrus abrotani* Emel., *Euscelidius variegatus* (Kbm.), *Artianus interstitialis* (Germ.) and *Zercanus rubro-ocellatus* Dlab. are added as new records to the Turkish fauna. Distribution, abundance and plants which the specimens were collected on of each species are given.

Athysanini was completed with this article and so far 87 species of 33 genera have been listed from Turkey and in which 20 species are being added as new records.

Introduction

Most of the species listed here have been previously recorded by different authors. The earliest records have been made by Oshanin (1912); Fahringer (1922), Gadeau de Kerville (1939) and later on by Linnavuori (1965), also by Kalkandelen (1974 a, b). However Dlabola (1957, 1971, 1981) made the largest records of this group and listed several species from Turkey including the new species.

Several species of this group seem to be economically important being vectors of plant diseases. Giannotti et al. (1969), Fritsche et al. (1972), Bernhard et al. (1977) and Samyn et al. (1982) are reported transmitting

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several important diseases in many countries. Sahtiyancı (1972) and also Bremer and Raatikanen (1975) are reported some species of this group transmitting some diseases in Turkey. These are indicated in the following list.

Synonyms, distributions of the species in Palaearctic Region are taken from Nast (1972). Additional countries are given with literature citations.

Handianus ignoscus (Melichar, 1896)

Synonymy : *H. ignoscus mediterraneus* Linn., 1962.

General Distribution : Albania, Austria, Bulgaria, Czechoslovakia, German D. R., Hungary, Italy, Poland, Romania, Turkey, USSR (Kazakhstan, Maritime Territory, Moldavia, Tadzhikistan, Ukraine).

Distribution in Turkey : Oshanin (1912) has listed this species from Turkey. Dlabola (1957) collected some dark pigmented specimens of this species in Ankara (Baraj).

The authors have no representative material of this species.

Handianus modestus (Melichar, 1896)

General Distribution : Romania, Yugoslavia, USSR (s. Russia, m. Siberia, Ukraine).

Distribution in Turkey : This species constitutes a new record for Turkey.

Material examined : Erzurum (Serçeme Deresi), Kars (Sarıkamış) - Totally 8 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in mid July in *Pinus* forest.

Handianus procerus (Herrich - Schäffer, 1835)

Synonymy : *H. procerus palestinensis* Linn., 1962.

General Distribution : Austria, Bulgaria, Czechoslovakia, France, Hungary, Israel, Jordan, Poland, Portugal, Romania, Turkey, USSR (Azerbaijan, Georgia, Kazakhstan, Moldavia, s. Russia, Tadzhikistan, Ukraine, Uzbekistan), Yugoslavia. Iran (Dlabola, 1981).

Distribution in Turkey : Oshanin (1912) has listed this species from Turkey. Dlabola (1957, 1981) reported it from Ankara (Baraj, Beynam, Mogan gölü), Edirne, Bolu (Gerede, Bolu dağları) Erzurum (Kandilli) and Nevşehir

(Ürgüp). Kalkandelen (1974 a) also reported it from Ankara (Çubuk Baraj I and II, Eymir gölü, Lalahan).

Material examined : Ağrı (Tendürek Dağı), Afyon (Çay), Ankara (Keskin), Antalya, Bitlis, Erzurum, Isparta (Central province, Eğridir), İzmir (Bozdağ), Konya (Hadim, Seydşehir), Malatya (Tahir Dağı), Nevşehir (Boyalı), Niğde, Urfa (Harran), Van (Başkale), Zonguldak (Safranbolu) - Totally 106 specimens. It seems to be distributed largely in Turkey.

Occurrence : Common and sometimes found in small numbers.

Biological note : Specimens were collected starting from late May through early September, on weeds and legumes. Dlabola (1957, 1981) reported it steppe vegetations and Emelyanov (1964) on *Echinops ritro*, *Senecio* spp. and other compositae; Kalkandelen (l. c.) on *Peganum harmala* L.

Stictocoris picturatus (C. Sahlberg, 1842)

Synonymy : *Cicada lineata* F., 1787 (Primary homonym), *C. hybneri* Gmelin, 1790 (Nomen oblitum).

General Distribution : Albania, Austria, China (Sinkiang), Czechoslovakia, Finland, France, German D. R., German F. R., Hungary, Italy, Poland, Romania, Sweden, Turkey, USSR, Yugoslavia.

Distribution in Turkey : Dlabola (1957) and Kalkandelen (1974 a) both listed it from Ankara (Çubuk Barajı).

Material examined : Ankara (Çubuk), Çorum (İskilip) - Only 2 specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in late June and early July, on weeds.

Scleroracus decumanus (Kontkanen, 1949)

Synonymy : *Cicada striatula* Fall. 1806 (Primary homonym).

General Distribution : Bulgaria, Czechoslovakia, Finland, France, German D. R., German F. R., Great Britain (England, Wales), Italy, Netherlands, Poland, Romania, USSR.

Distribution in Turkey : This is the first record of this species in Turkey.

Material examined : Kars (Sarıkamış) - Only 3 specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in mid-July in *Pinus* forest.

Limotettix striola (Fallen 1806)

Synonymy : *Jassus frenatus* Germ., 1821; *Limotettix striola ferganensis* Dubovsky, 1966.

General Distribution : Albania, Algeria, Austria, Azores, Belgium, Bulgaria, China (Kansu, Manchuria), Cyprus, Czechoslovakia, Denmark, Finland, France, German D. R., German F. R., Great Britain (England, Scotland), Italy, Ireland, Japon, Korean Peninsula, Mongolia, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, USSR, Yugoslavia; (Nearctic region). Iran (Dlabola, 1981).

Distribution in Turkey : Metcalf (1967) listed it from Turkey according to previous works. Dlabola (1957, 1981) reported it from Ankara (Beynam, Mogan gölü), Konya (Kızılviran), Malatya (Balaban, Darende, Karahan Geçidi) and Kahraman Maraş (Nurhak Dağı). Kalkandelen (1974 a, b) also reported it from Ankara (Central province, Çubuk, Elmadağ, Eymir, Hasanoglan, Karagöl, Mogan gölü) and Nevşehir (Boyalı, Çat).

Material examined : Ağrı (Patnos), Ankara (Kazan), Artvin (Murgul), Bolu (Düzce), Bursa (İnegöl), Çankırı (Karacahasan, Karaömer, Ilgaz), Diyarbakır (Central province), Erzincan (Ilıç, Refahiye), Erzurum (Tortum, Tufanç), İstanbul (Kartal), Kars (İğdır), Kahraman Maraş (Göksun), Niğde (Central province, Çiftahan), Sakarya (Hendek), Urfa (Hilvan), Van (Başkale, Gevaş), Zonguldak (Ulus) - Many specimens. It distributes largely in Turkey.

Occurrence : Common and found sometimes in large numbers.

Biological note : Specimens were collected from late May through early September, on *Oryza sativa*, graminaceous weeds, *Trifolium* spp., *Medicago sativa*, and also from light traps. Mostly found in humid habitat.

Laburrus abrotani Emelyanov, 1962

General Distribution : Mongolia, USSR (Kazakhstan, Ukraine).

Distribution in Turkey : This species constitutes a new record for Turkey.

Material examined : Ağrı (Doğubeyazıt, Hamur), Van (Çaldıran, Muradiye) - Totally 28 specimens. It seems to be restricted in eastern part of Turkey.

Occurrence : Occasionally.

Biological note : Specimens were collected in mid-July and mid-August, on weeds. Emelyanov (1962, 1964) reported it being found on *Artemisia abrotanum* and *A. proceriformis*.

Laburrus handlirschi (Matsumura, 1908)

Synonymy : *Athysanus artemisiae* Mats., 1900 (Primary homonym), *Laburrus maculosus* Vilbaste, 1967.

General Distribution : Afghanistan, Czechoslovakia, Hungary, Mongolia, Turkey, USSR.

Distribution in Turkey : Dlabola (1957, 1981) listed it from Ankara (Baraj, Mogan gölü) and Van (Başkale). Kalkandelen (1974 a, b) also reported it from Ankara (Çubuk barajı I, Eymir gölü) Konya (Şereflikoçhisar) and Nevşehir (Central province). It seems to be restricted in Central Anatolia.

Material examined : Kırşehir (Yılandağı) - Totally 4 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in mid-August, on *Artemisia*.

Euscelidius mundus (Haupt, 1927)

Synonymy : *Euscelis sordidus munda* Haupt, 1927, *Euscelidius orientalis* Dlabola, 1957.

General Distribution : Afghanistan, Iran, Israel, Jordan, Turkey, USSR (Kazakhstan, Kirghizia). Crete (Dlabola, 1977).

Distribution in Turkey : Linnavuori (1965) collected only one specimen in Hatay (İskenderun). Kalkandelen (1974, a, b) reported also only one male specimen from Isparta (Yakören Köyü).

Material examined : Ankara (Central province), Diyarbakır (Central province), Erzurum (Central province, İspir), Gaziantep (Nurgana), İzmir (Karaburun, Narlıdere, Ödemiş), Mardin (Cizre), Urfa (Ceylanpınar), Van (Başkale, Çatak) - Totally 87 specimens. It seems largely distributed in Turkey.

Occurrence : Common and found sometimes in small numbers.

Biological note : The specimens were collected from the early June through late September, from light traps and a few specimens on cotton.

Euscelidius obenbergeri Dlabola, 1957

General Distribution : Endemic.

Distribution in Turkey : Dlabola (1957) described this species from the specimens collected in Ankara (Baraj).

The authors have no representative material of the species.

Euscelidius schenckii (Kirschbaum, 1868)

Synonymy : *Athysanus zetterstedti* Mel., 1896.

General Distribution : Austria, Bulgaria, Canary Is., Cyprus, Czechoslovakia, Denmark, Finland, France, German D. R., German F. R., Great Britain, Greece, Hungary, Iraq, Italy (also Sicily), Norway, Poland, Romania, Sweden, Tunisia, USSR, Yugoslavia; (Nearctic region). Turkey (Kalkandelen, 1974 a, b).

Distribution in Turkey : Kalkandelen (I. c.) reported only one specimen who collected it in Ankara (Etimesgut) by light trap.

Material examined : Bursa (Karacabey), Diyarbakır (Central province), İçel (Tarsus), İzmir (Bayındır), Siirt (Kozluk) - Totally 7 specimens.

Occurrence : Occasionally.

Biological note : Specimens were collected from late April through late July, on rice, tobacco, *Raphanus* and from light traps.

Euscelidius variegatus (Kirschbaum, 1858)

Synonymy : *Athysanus irroratus* Scott, 1875; *A. variegatus doderi* Ferr., 1888; *A. obscurellus maculosus* Rey, 1891; *A. variegatus duplex* Rey, 1894.

General Distribution : Algeria, Austria, Azores, Belgium, Bulgaria, Canary Is., Czechoslovakia, France, German F. R., Great Britain, Italy (also Sardinia and Sicily), Morocco, Netherlands, Poland, Portugal, Spain (also Balearic Is.), Tunisia, USSR, Yugoslavia.

Distribution in Turkey : This species constitutes a new record for Turkey.

Material examined : Bursa (İnegöl), İstanbul (Erenköy) - Totally 4 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in mid - July on sour cherry. According to Giannotti et al. (1969) and Bernhard et al. (1977) reported being vector of some diseases in some European countries.

Conosanus obsoletus (Kirschbaum, 1858)

Synonymy : *Jassus (Athysanus) sejungendus* Kbm., 1868; *J. (A.) covexus* Kbm., 1868; *A. sexpunctatus* J. Sahlberg 1871; *A. piceus* Scott, 1875.

General Distribution : Albania, Algeria, Austria, Azores, Belgium, Bulgaria, Cyprus, Czechoslovakia, Denmark, France, German D. R., German F. R., Great Britain (England, Scotland, Wales), Greece, Hungary, Ireland, Italy (also Sicily), Netherlands, Poland, Portugal, Romania, Spain, Sweden,

Switzerland, Turkey, USSR, Yugoslavia; (Nearctic region). Iran (Dlabola, 1981).

Distribution in Turkey : Gadeau de Kerville (1939) reported it from İzmir. Dlabola (1957) listed it from Adana (Bürücek, Toros), Ankara (Beynam, Mogan gölü) and Kalkandelen (1974 a, b) found it in Ankara (Çubuk, Elmadağ, Eymir gölü, Hasanoglan).

Material examined : Adana (Soğanlı), Aydın (Söke), Balıkesir (Gönen), Bolu (Düzce, Seben), İzmir (Samsun Dağı), Kırşehir (Hirfanlı, Kaman), Niğde (Çamardı) - Totally 11 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected from June through early September, on beat, rice, *Mentha*, and weeds in humid habitat.

Euscelis alsius Ribaut, 1952

General Distribution : Bulgaria, France, Israel, Italy, Mongolia, Morocco, Portugal, Spain, Turkey, USSR, Iran, Egypt, Cyprus, Greece (Dlabola, 1971, 1974 a, 1977).

Distribution in Turkey : Linnavuori (1965) collected several specimens in Adana (Gülek), Ankara and Niğde (Ulukışla). Dlabola (1971) reported from Tunceli (Ovacık). Kalkandelen (1974 a, b) collected specimens in Ankara (Central province, Çubuk, Elmadağ, Et mesgut, Eymir gölü, Hasanoglan, Lalahan). Giray (1980) reported this species from İzmir (Çeşme) on *Pimpinella anisum*. Dlabola (1981) reported from Bolu (Gerede), İçel (Erdemli), Nevşehir (Ürgüp), Sakarya (Sapanca) and Van (Başkale).

Material examined : It is one of the most widely distributed species that found in Turkey. Many specimens are examined that collected nearly all over in Turkey.

Occurrence : Very common and found sometimes in large numbers.

Biological note : Specimens were collected from late April through late September, on wheat, rice, cotton, tobacco, *Trifolium* spp., *Medicago sativa*, weeds and also from light traps.

Euscelis distinguendus (Kirschbaum, 1858)

General Distribution : Albania, Austria, Bulgaria, Czechoslovakia, Finland, France, German D. R., German F. R., Greece, Iraq, Italy (also Sicily), Netherlands, Norway, Poland, Portugal, Romania, Sweden, Tunisia, Turkey, USSR, Yugoslavia.

Distribution in Turkey : Dlabola (1957) reported it from Edirne.

The authors have no representative material of the species.

Euscelis incisus (Kirschbaum, 1858)

Synonymy : *Cicada plebeja* Fall., 1806 (Primary homonym); *Athysanus obscurellus* Kbm., 1858; *Jassus (Athysanus) pallidior* Kbm., 1868; *Athysanus communis* Edw., 1888; *A. plebejus tessellatus* Rey, 1891; *A. P. fusciventris* Rey, 1894; *A. P. paradoxus* Rey, 1894; *Euscelis plebejus ochreatea* Haupt, 1927; *Eu. p. albingensis* Wagner, 1939; *Eu. galiberti* Ribaut, 1952; *Eu. plebeja subplebejus* H. Müller, 1954; *Eu. p. superplebejus* H. Müller, 1954; *Eu. p. aestivalis* H. Müller, 1954; *Eu. p. vernalis* H. Müller, 1954.

General Distribution : Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, Cyprus, Czechoslovakia, Denmark, France, German D. R., German F. R., Great Britain, Hungary, Iran, Ireland, Israel, Italy, Jordan, Madeira Archipelago, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Tunisia, USSR, Yugoslavia. Turkey (Fahringer, 1922; Dlabola, 1957; Kalkandelen, 1974 a, b).

Distribution in Turkey : Fahringer (l. c.), Dlabola (1957), Kalkandelen (1974 a, b) and Giray (1980) reported this species respectively from the following areas in Turkey : Istanbul (Pendik); Adana (Kozan, Toros), Ankara (Beynam, Çubuk Barajı, Mogan Gölü), Edirne, Ankara (Çubuk, Elmadağ, Eymir Gölü, Hasanoğlan, Karagöl, Kayaş, Lalahan), Kayseri (Bünyan, Develi, Pınarbaşı, Talas, Yahyalı), Burdur (Karageçit Köyü), Eskişehir (Biçer), Isparta (İğdecik Köyü), Adapazarı; İzmir (Mordoğan).

Material examined : Many specimens are examined which collected nearly all over in Turkey.

Occurrence : Very common and sometimes found in large numbers.

Biological note : Specimens were collected starting from early April through late August, on wheat, corn, maize, legumes, cotton, tobacco, sunflower, alfalfa, *Trifolium* spp. and weeds, some from light traps. This species is claimed to be vector of several plant diseases in many European countries as well as in Turkey by several workers (Giannotti et al., 1969; Fritsche et al., 1972; Sahtiyancı, 1972; Bremer and Raatikainen, 1975; Samyn et al., 1982).

Euscelis lineolatus Brullé, 1832

Synonymy : *Phrynomorphus nitidus* Curtis, 1833; *Jassus (Athysanus) stictopteris* Flor, 1861; *J. (A.) ochrosomus* Kbm. 1868; *A. bilunaris* Rey, 1891; *Euscelis bilobatus* Wagner in Ribaut, 1952.

General Distribution : Albania, Algeria, Bulgaria, Canary Is., France, German F. R., Great Britain, Greece, Hungary, Ireland, Italy (also Sardinia and Sicily), Jordan, Morocco, Netherlands, Portugal, Spain, Switzerland, Tunisia, USSR (Azerbaijan, Uzbekistan), Yugoslavia, Turkey, Iran (De Ker-ville, 1939; Dlabola, 1981).

Distribution in Turkey : Gadeau de Kerville (l. c.) listed this species from Ankara and İzmir. Dlabola (l. c.) listed it also from İstanbul on *Salvia aethiopica*.

Material examined : Ankara (Kalecik, Keskin, Kırıkkale, Şereflikoçhisar, Tuz gölü), Artvin (Central province), Balıkesir (Savaştepe), İzmir (Bornova, Cumaovası, Mordoğan), Kırklareli (Central province), Kırşehir (Central province), Konya (Bozkır, Ereğli, Ermenek, Yunak), Malatya (Central province), Manisa (Demirci), Niğde (Bor, Çiftahan, Ortaköy, Ulukışla), Trabzon (Akçaabat), Uşak (Banaz) - Totally 52 specimens. It seems to be distributed widely in Turkey.

Occurrence : Common, but found in small numbers.

Biological note : Specimens were collected starting from mid-March through late August, on wheat, alfalfa, *Trifolium* spp., *Euphorbia* and weeds. Samyn et al. (1982) proved that *E. incisus* and *E. lineolatus* are capable transmitting mycoplasma-like organisms which cause clover phyllody in Belgium.

Streptanus josifovi Dlabola, 1957

General Distribution : Cyprus, Bulgaria, Italy, Turkey (Kalkandelen, 1974 a, b), Greece (Dlabola, 1977).

Distribution in Turkey : Kalkandelen (l. c.) reported it from Ankara (Lalahan) and Kayseri (Yeşilhisar).

Material examined : Adana (Ceyhan, Karaisalı, Yumurtalık), Eskişehir (Sivrihisar), İçel (Gözne, Namrun, Tarsus), İzmir (Bozdağ), Konya (Beyşehir), Kütahya (Central province), Manisa (Central province) - Totally 21 specimens.

Occurrence : Somewhat occasionally.

Biological note : Specimens were collected from late April through early June, on wheat, alfalfa and weeds.

Artianus interstitialis (Germar, 1821)

Synonymy : *Athysanus diminutus* Kbm., 1858.

General Distribution : Austria, Czechoslovakia, France, German D. R., German F. R., Hungary, Italy, Poland, Romania, USSR, Yugoslavia.

Distribution in Turkey : This species constitutes a new record for Turkey.

Material examined : Erzurum - Only 1 male specimen.

Occurrence : Very occasionally.

Biological note : This single specimen was collected in late - July on weeds.

Artianus manderstjernii (Kirschbaum, 1868)

General Distribution : Bulgaria, Czechoslovakia, Hungary, Italy, Romania, Turkey, USSR (Armenia, Georgia, Moldavia, Ukraine), Yugoslavia, Libanon (Dlabola, 1974, b), France (Giustina, 1983).

Distribution in Turkey : Dlabola (1957) reported it from Ankara (Çubuk Baraj) and Edirne. Kalkandelen (1974, a, b) found it also in Ankara (Central province, Çubuk, Eymir gölü, Kayaş, Lalahan).

Material examined : Ağrı (Ağrı dağı), Ankara (Çamlidere, Kızılcahamam, Polatlı), Balıkesir (İvrindi), Çankırı (Çerkes), Diyarbakır (Central province), Gaziantep (Nurgana), İzmir (Bozdağ), Kırklareli (Vize), Urfa (Ceylanpınar), Van (Van gölü), Zonguldak (Safranbolu) - Totally 40 specimens. It seems to be distributed widely in Turkey.

Occurrence : Somewhat occasionally and found in small numbers.

Biological note : Specimens were collected from late May through late August on steppe-vegetation.

Zercanus rubroocellatus Dlabola, 1965

General Distribution : Jordan.

Distribution in Turkey : This species constitutes a new record for Turkey.

Material examined : Adana (Hasanbeyli, Pozantı) - Only 4 specimens. It seems to be restricted in southern part of Turkey.

Occurrence: Very occasionally.

Biological note : The specimens were collected in late June, July, and late August in apple orchard.

Özet

Türkiye Auchenorrhyncha türlerinin yayılışı ve önemlerine ait ön listesi.
XXIV. Familia : Cicadellidae : Deltocephalinae : Athysanini (Kısım IV)

Athysanini tribusunun dördüncü bölümünü oluşturan bu makale Handianus, Stictocoris, Scleroracrus, Limotettix, Labarrus, Euscelidus, Conosanus, Euscelis, Streptanus, Artianus ve Zercanus cinslerine ait 21 türü kapsamaktadır. Handianus modestus (Mel.), Scleroracrus decumanus (Kont.), Labarrus abrotani Emel., Euscelidius variegatus (Kbm.), Artianus interstitialis (Germ.) ve Zercanus rubrocellatus Dlab. türleri bu grup içinde Türkiye faunası için yeni kayıtlardır. Her bir türün yayılışı ve üzerinde bulunduğu bitkiler verilmeye çalışılmıştır.

Athysanini tribusuna ait liste, bu makalede verilen cins ve türlerle birlikte Türkiye'den 33 cinse ait 87 türü kapsamaktadır. Bunlardan 20 tür Türkiye faunası için yeni kayıt olmuştur.

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