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Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. XVIII. Family Cicadellidae : Deltocephalinae; Macrostelini (Part II)

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Summary

The Turkish Macrostelini fauna is represented altogether by 23 species which belong to the five genera. From which **Balclutha pellucens** (Horv.), **Macrosteles alpinus** (Zett.), **M. frontalis** (Scott) and **Sagatus punctifrons** (Fall.) are recorded first time for the Turkish fauna. Distributions, abundance, economical importance and plants which the specimens were collected on of each species are given.

Introduction

Previously, Fahringer (1922) and Linnavuori (1965) one species each; Dlabola (1957, 1971, 1981) 15 species; Nast (1972) 11 species and Kalkandelen (1974) 9 species of this tribe were recorded from Turkey. With this study 4 species added to the Macrostelini fauna of Turkey.

Some of the Macrostelini species are economically important pests of some cultivated plants. Their importance is due especially being the vestors of plant diseases. For example *Cicadulina bipunctella* and *C. zeae* are known to be the vector of maize streak virus and *B. hebe, B. rosea* and *B. saltuella* are found infesting truck crops in Egypt (Ammar, 1977; Habib et al., 1980).

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C. bipunctella and *H. hebe* have been accused to be the vector of maize rough dwarf virus in Israel. However, after some trials, it has been concluded that these insects failed to transmitting the disease (Harpaz, 1961). These two species have been found in citrus plantations, especially on vegetations undergrowth in the Mediterranean Region of Turkey and causing damage on the leaves and fruits (Soylu, 1978).

Olmi (1968), reported *M. sexnotatus* as being one the mojor pest on rice in the Po Valley in Northern Italy and stated that it has 2—3 generations a year and overwinters in egg stage. Ishihara (1969) listed it, as one of the important vector that transmitten disease of European aster yellow. Belli et al. (1975) reported it as being a vector of mycoplasma that cause rice yellows disease. Slogteren and Muller (1972) found that *M. sexnotatus* transmitting the mycoplasma lissers disease of hyacinths as it transmitted aster yellows to gladiolus in Netherlands. It was found on clover and mint, as well as on cereals and grasses in Poland (Nowacka, 1978). Camprag (1980) reported it as being one of the important pest of wheat and other cereals in Yugoslavia and neighboring countries. Samyn et al. (1982), made some transmission tests of clover phyllody and hydrangae greening diseases with several leafhoppers species in Belgium. They found that *M. sexnotatus* is capable to transmitting mycoplasma - like disease to the test plant of *Vinca rosea,* but not transmitting of hydrangea greening disease.

M. laevis is more serious pest than *M. sexnotatus.* Because it is being the vector of several important diseases of cultivated and uncultived plants. Horvath (1969) reported it being the vector of clover dwarf disease of clover and rape in Hungary. Ishihara (1969) listed it as a vector of European aster yellows. It has been also stated being one of the vector of oat sterile dwarf and barley yellow dwarf diseases in Sweden (Lindsten et al., 1970).

The other vector species among the Macrostelini tribe is *M. quadripunctulatus.* This species is accused to transmitting the European aster yellows (Ishihara, 1969) and tagetes (marigald) witche broom (Belli et al., 1972).

Ishihar (l.c.) reported *M. viridigriseus* as a vector of green petal of strawberry. According to Nowacka (1978), it is found on young plantings of bentgrass *(Agrostis)* in Southern Poland.

The above mentioned species are also widely distributed in Turkey and found largely. However they were not observed to be important pests on cultivated plants at the moment.

Synonyms, distribution of the species in Palearctic Region are taken from Nast (1972). Additional countries are given with the literature citation.

Irinula erythrocephala (Ferrari, 1882)

Synonymy : *Balclutha wagneri* Lindberg, 1954.

General Distribution : Canary Is., France, Iran, Italy, Japan. Madeira Archipelago, Turkey, Yugoslavia, Greece, Crete (Dlabola, 1977)

Distribution in Turkey : Dlabola (1. c.) reported it from Adana (Kozan).

The authors have no representative material of this species.

Cicadulina bipunctella (Matsumura, 1908)

General Distribution : Algeria, Canary Is., Cyprus, Egypt, Iraq, Israel, Japan, Jordan, Libya, Tunisia, Turkey; (Australian, Ethiopian and Oriental regions.) Pakistan, Crete (Dlabola, 1971, 1977).

Distribution in Turkey : Ruppel (1965) reported this species from Adana, Karataş and İçel (Alata). Dlabola (1971, 1981) also reported it from Gaziantep (Fevzipaşa), İçel (Central province, Erdemli).

Material examined : Adana (Central province, Ceyhan, Karataş), İçel (Tarsus), İzmir (Karaburun, Narlıdere) - Totally 54 specimens.

Occurrence : Common in west and southern parts of Turkey and sometimes found somewhat large populations.

Biological note : Specimens were collected in July, through August and mid - September. They were taken on corn and some caught by light traps. This species has been known to be the vector of maize streak virus. Avidov and Harpaz (1969) have given *Arachis hypogaea, Gossypium herbaceum, Prunus persica, Zea mays, Oryza sativa* as the host plants of this species and the last two hosts, it causes to form small swellings on the leaf veins after feeding.

Cicadulina zeae China, 1926

General Distribution : Canary Is., Cyprus, Madeira Archipelago, Turkey; (Australian and Ethiopian Regions).

Distribution in Turkey : Dlabola (1957) reported it from Adana (Central province, Abacılar, Kozan, Karataş) and İçel (Alata).

The authors have no representative material of this species.

Balclutha flavella Linnavuori, 1962

General Distribution : Israel. Iran and Turkey (Dlabola, 1981).

Distribution in Turkey : Dlabola (1. c.) reported it from Malatya (Darende, Balaban), Tunceli (Pülümür geçidi), Erzurum (Kandilli) and Ağrı (Tahir dağı) in Turkey.

The authors have no representative material of this species.

Balclutha hebe (Kirkaldy, 1906)

Synonymy : *B. virescens* Haupt, 1927; *B. hortensis* Lind., 1948.

General Distribution : Canary Is., Egypt, Iraq, Jordan, Turkey; (Australian Ethiopian, Oriental, Nearctic and Neotropical Regions). Lebanon, Greece and Crete (Dlabola 1974, 1977).

Distribution in Turkey : Dlabola (1957, 1971, 1981) reported it from Adana (Central province, Kozan, Ağapınarı, Karataş), Ankara (Beynam), Gaziantep (Fevzipaşa) and İçel (Central province, Silifke, Erdemli).

Material examined : Adana (Central province, Misis, Ceyhan, Yarbaşı), Adıyaman (Besni, Gerger), Ankara (Central province, Eymir) Bitlis (Hizan), Burdur (Ağlasun), Diyarbakır (Central province, Çermik, Çüngüş, Ergani, Silvan), Elazığ (Sivrice), Gaziantep (Nurgana), İçel (Tarsus), Konya (Ereğli, Karaman, Karapınar, Meram), Malatya (Central province, Pötürge), Mardin (İdil, Yeşilli), Muğla (Dalaman), Nevşehir (Boyalı, Çat, Göreme, Nar, Ürgüp), Urfa (Siverek, Ceylanpınar, Harran). Many specimens.

Occurrence : Very common and found sometimes in large populations.

Biological note : Specimens were collected starting from late April through mid - October and some specimens in late November in southern part of Turkey. Specimens were taken mostly on rice, wheat, sugarbeet, corn, *Trifolium* and *Medicago sativa*. According to Lodos (1982), together with *Chlorita paolii* (Oss.) it causes severe damage to orange and mandarin in southern Turkey. However, Abu Yaman (1967), reported it being a pest on vine in Iraq.

Balclutha pellucens Horvarth, 1909

Synonymy : *Dicraneura viridella* Lindberg, 1941.

General Distribution : Azores, Canary Is., Madeira Archipelago.

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

Material examined : Ağrı (Tutak - Patnos), Adıyaman, Amasya, Ankara (Central province, Çubuk, Karagöl, Kayaş, Eymir, Elmadağ, Hasanoğlan, Lalahan, Şereflikoçhisar), Artvin (Seyitler), Bitlis (Central province, Reşadiye), Bolu (Kıbrıscık, Seben), Burdur (Karagent köyü), Çankırı (Çatalelma), Diyar-

bakır (Central province, Devegeçidi), Elazığ (Gezin), Erzincan (Altıntepe, Bahçeliköy, Çağlıyan, Ilıç, Sakaltutan, Üzümlü), Erzurum (Hasankale, İspir, Serçemederesi, Tortum), Hakkari (Yüksekova), Kars (Gaziler, Iğdır, Sarıkamış), Mardin (Sultanşehmuz, Yukarıkonak), Samsun (Kavak, Çakallı), Van (Akköprü, Beyüzümü, Elmalı, Güzeldere, Başkale, Kırkgeçit) - Totally 232 specimens.

It distributes widely, especially in eastern part of Turkey.

Occurrence : Common and sometimes found in large populations.

Biological note : Specimens were collected starting from early June through early September, but mostly in July. They were taken on rice, grass, *Stipa, Medicago sativa, Trifolium* and beans.

Balclutha punctata (Fabricius, 1775)

Synonymy : *Cicada punctata* Thunberg, 1784 (Preoccupied), *C. tricolor* Gmel., 1790; *Eupteryx clypeata* Curt., 1837; *Cicadula spereta* Zett., 1840; *Gnathodus punctatus confluens* Rey, 1894; *G. p. impunctatus* Rey, 1894; *G. p. lineolatus* Horv., 1904; G. p. *thalassicus* Sidosrki, 1937; *Balclutha punctata taunica* Wagn., 1939; *B. p. langi* Dlab., 1944; *B. p. sagittaria* Rib., 1952.

General Distribution : Afghanistan, Albania, Algeria, Austria, Bulgaria, China (Manchuria), Cyprus, Czechoslovakia, Denmark, England, Finland, France, Germany, Greece, Hungary, Ireland, Italy (also Sardinia, Sicily), Japan, Korean Peninsula, Mongolia, Netherlands, Norway, Poland, Sweden, Switzerland, Tunisia, Turkey, USRR; (Australian, Nearctic, Oriental Regions). Iran (Dlabola, 1981).

Distribution in Turkey : Dlabola (1957) reported it from Ankara (Mogan and Beynam).

Material examined : Adıyaman (Nemrut dağı), Ankara (Çubuk, Eymir, Karagöl), Bitlis (Central province, Çukur), Bolu (Gerede, Kıbrıscık, Seben), Diyarbakır, Erzincan (Dumanlı dağ, Refahiye), Erzurum (Hasankale, Uzundere), Isparta (Eğridir), Kars (Iğdır), Sinop (Boyabat) - Totally 40 specimens.

Occurrence : Common but found in small numbers.

Biological note : Specimens were collected from late April to early September. They were taken on rice, wheat, grass, *Trifolium* spp. and some caught by light traps.

Balclutha rhenana Wagner, 1939

General Distribution : Afganistan, Austria, Bulgaria, Czeshoslovakia, Finland, Germany, Italy, Netherlands, USSR, Yugoslavia. Greece, Iran and Turkey (Dlabola 1977, 1981).

Distribution in Turkey : Dlabola (l.c.) reported it from Malatya (Balaban), Van (Başkale) and İçel (Erdemli). It seems to be restricted in south and southeastern parts of Turkey.

Material examined : Erzurum (Uzundere) - Only two specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in early July on meadow. Dlabola reported it on grass and *Juncus*.

Balclutha rosea (Scott, 1896)

Synonymy : *Gnathodus frontalis* Ferr., 1882; *Balclutha flava* Haupt, 1927 (Secondary homonym); *B. pulchella* Lind., 1948; *B. haupti* Metcalf, 1955.

General Distribution : Albania, Algeria, Canary Is., Cyprus, France (also Corsica), (?) German F.R., Italy, Israel, Jordan, Madeira Archipelago, Morocco, Spain, Turkey, USSR; (Ethiopian, Nearctic and Oriental Regions). Afghanistan, Greece, Crete (Dlabola, 1971, 1977).

Distribution in Turkey : Dlabola (1957, 1971, 1981) reported it from Adana (Central province, Karataş, Gavur dağı, Kozan) İçel (Alata, Erdemli), Gaziantep (Fevzipaşa). Linnavuori (1965) listed it from Hatay (İskenderun).

Material examined : Adana (Osmaniye), Diyarbakır, İçel (Tarsus), İzmir (Karaburun, Narlıdere), Konya (İçeri Çumra, Karaman), Nevşehir (Ürgüp) - Totally 20 specimens.

Occurrence : Somewhat common but found in very small numbers.

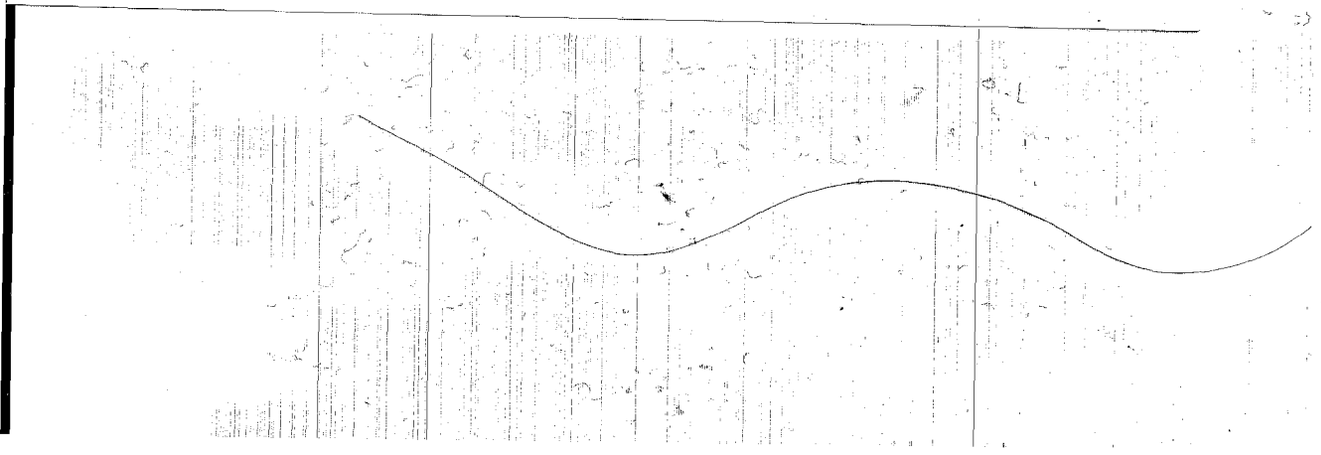
Biological note : Specimens were collected in July to mid - October. They were taken on corn and wheat and some caught by light traps.

Balclutha saltuella (Kirschbaum, 1868)

Synonymy : *Gnathodus angustus* Then, 1886; *G. incisus* Mats., 1902.

General Distribution : China (Manchuria), Bulgaria, Czechoslovakia, Egypt, France, German F.R., Hungary, Israel, Italy, Japan, Romania, Switzerland, USSR (Maritime Territory), Yugoslavia; (Nearctic, Neotropical and Oriental Regions). Pakistan, Turkey, Greece (Dlabola 1971, 1977).

Distribution in Turkey : Dlabola (1971) reported it from Bitlis (Reşadiye), Gaziantep (Fevzipaşa), İçel.



The authors have no representative material of this species.

Occurrence : Very occasionally.

Macrosteles alpinus (Zetterstedt, 1828)

General Distribution : Austria, Czechoslovakia (Bohemia), England, Finland, France, German F.R., Italy, Mongolia, Norway, Sweden, Switzerland, USSR.

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

Material examined : Ankara (Beypazarı), Artvin (Murgul), Çorum (İskilip), Diyarbakır, Erzurum, Sivas (Suşehri), Trabzon Akçaabat) - Totally 29 specimens.

Occurrence : Somewhat common but found in small numbers.

Biological note : Specimens were collected starting from mid - May to late August. They were caught mostly by light traps and some collected on grasses.

Macrosteles fieberi (Edwards, 1889)

Synonymy : *Cicadula frontalis* Fieber, 1888 (Primary homonym).

General Distribution : Austria, Bulgaria, Czechoslovakia, England, Finland, France, Germany, Ireland, Mongolia, Netherlands, Norway, Poland, Romania, Sweden, Turkey, USSR, Yugoslavia; (Nearctic Region). Iran (Dlabola, 1981).

Distribution in Turkey : Dlabola (1957, 1981) reported it from Adana (Karataş), Bolu (Gerede), Ankara (Mogan gölü), Van (Gevaş), Kalkandelen (1974) listed it from Ankara (Çubuk, Elmadağ, Etimesgut, Eymir, Hasanoğlan, Karagöl, Yukarıkışla köyü), Konya (Karaman, Meram) and Nevşehir (Avanos, Göreme). It seems to be distributed largely in Turkey.

Material examined : Ağrı (Doğubeyazıt, Patnos), Ankara (Kazan), Bitlis (Reşadiye), Çankırı (İnandık, Karaömer, Konak), Bolu (Düzce, Dörtdivan, Seben), Konya (Ereğli), Van (Başkale, Beyüzümü, Elmalı, Erciş) in addition to Kalkandelen's (l.c.) material. Many specimens.

Occurrence : Very common and found sometimes in large numbers.

Biological note : Specimens were collected starting from May through mid - October. They were taken on wheat, rice and other gramineous grasses, especially in marshy places.

Macrosteles forficula (Ribaut, 1927)

General Distribution : Afghanistan, Bulgaria, France, Italy, Spain, Turkey.

Dstribution in Turkey : Dlabola (1957, 1981) reported it from Adana (Bürücek), Bolu (Gerede), Konya (Kızılviran), Van (Gevaş). Kalkandelen (1974), also reported it from Ankara (Elmadağ, Eymir, Hasanoğlan, Karagöl, Lalahan, Yukarıkışla köyü).

Material examined : Ankara (Nallıhan), Bolu (Kıbrıscık, Seben), Erzincan (Ilıç, Refahiye), Erzurum (Tufanç köyü, Uzundere). Several specimens.

Occurrence : Common and sometimes found in small numbers.

Biological note : Specimens were collected starting from early May to mid - September. They were taken mostly on grasses in marshy places and also on rice.

Macrosteles frontalis (Scott, 1875)

Synonymy : *Cicadula tetrasticta* Horv., 1897; *C. hamata* Oss., 1936.

General Distribution : Austria, Belgium, Czechoslovakia, England, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, USRR (Latvia, Ukraine), Yugoslavia.

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

Material examined : Artvin (Murgul) - Only five specimens.

Occurrence : Very occasionally.

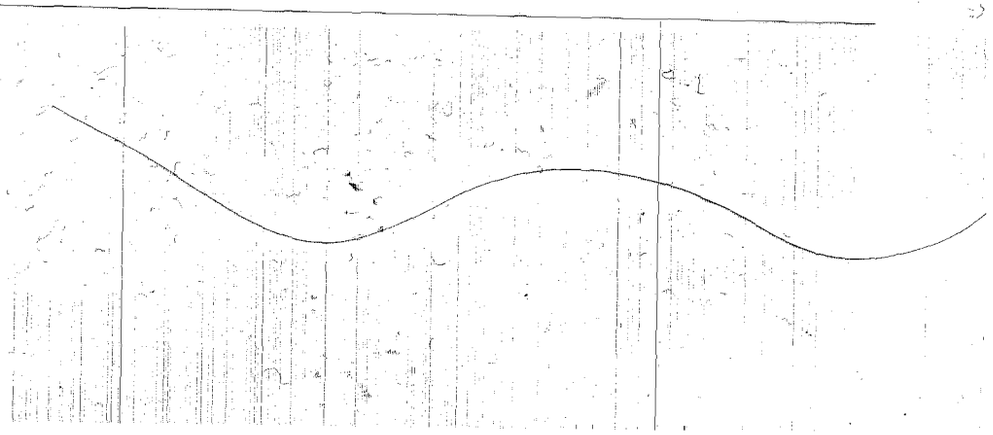
Biological note : All the specimens were caught by light trap. Ribaut (1952) and Emelyanov (1964) have given *Phragmites* and *Equisetum palustre* as the host plants of this species.

Macrosteles horvathi (Wagner, 1935)

Synonymy : *Cicadula mannerheimi* Kontkanen, 1935; *C. nubila* Oss., 1936.

General Distribution : Albania, Austria, Canary Is., China (Manchuria), Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy, (?) Japan, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, USSR, Yugoslavia. Turkey (Kalkandelen, 1974).

Distribution in Turkey : Kalkandelen (1974) found only one male specimen in Ankara (Hasanoğlan) in the marshy area. Dlabola (1981) also reported it from Ankara (Mogan gölü).



Material examined : Ankara (Mogan gölü), Erzurum (Tortum, Uzundere). - Totally 7 specimens in addition to specimen from Hasanoğlan. It seems to be confined in middle and eastern part of Turkey.

Occurrence : Very occasionally.

Biological note : The specimens were collected in mid - July in marshy area. Ribaut (1952) and Emelyanov (1964) have given *Juncus* as the host of this species.

Macrosteles laevis (Ribaut, 1927)

General Distribution : Afghanistan, Albania, Austria, Bulgaria, China (Manchuria), Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Iceland, Italy, Mongolia, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, Turkey, USSR; (Nearctic Region). Iran and Crete (Dlabola 1971 and 1977).

Distribution in Turkey : This species has been listed in many places in Turkey by Dlabola (1957, 1971, 1981) and also by Kalkandelen (1974). It is largely distributed nearly all over in Turkey.

Material examined : Unlimited specimens were collected nearly all over in Turkey.

Occurrence : Very common and sometimes found in large populations.

Biological note : Specimens were collected from late April up to mid - October. They were taken mostly on gramineous grasses also some on *Trifolium* species in marshy areas, rice, bean and corn. Some are also caught by light traps. Bogavac (1968) reported about it being the most widespread and abundant species that found on maize in spring and summer time in Serbia (Yugoslavia). Camprag (1980) stated that it is one most important leafhopper species and caused severe losses on winter wheat in Hungary in the years of 1954, 1965 and 1967. Nowacka (1978) reported it also being the most widespread and abundantly found on cereals, forage legumes, celery, potato and beet in Poland.

Macrosteles lividus (Edwards, 1894)

General Distribution : Denmark, England, Finland, Germany, Mongolia, Netherlands, Poland, Sweden, USRR. Turkey (Kalkandelen, 1974).

Distribution in Turkey : Kalkandelen (1974) reported it from Ankara (Elmadağ, Hasanoğlan, Yukarıkışla köyü) and Nevşehir (Boyalı).

Material examined : Ağrı (Doğubeyazıt) - Only one specimen in addition to the above mentioned material.

Occurrence : Very occasionally.

Biological note : The specimens were collected in July on grass.

Macrosteles ossiannilssoni Lindberg, 1954

Synonymy : *M. ossiannilssoni* Le Quesne, 1968 (Primary homonym.)

General Distribution : Canary Is., Czechoslovakia, Denmark, England, Finland, Germany, Madeira Archipelago, Sweden, Iran, Egypt, Crete, Turkey (Dlabola 1971, 1977, 1981).

Distribution in Turkey : Dlabola (1981) reported it from Sakarya (Sapanca gölü), Ankara (Mogan gölü), Erzurum, Ağrı (Tahir dağı, Cemal dağı).

Material examined : Adıyaman (Central province, Kızılcapınar), Bitlis (Hizan), Diyarbakır - Totally 23 specimens.

Occurrence : Somewhat common but found in very small numbers.

Biological note : Specimens were collected mostly in June and some in July and August. They were taken on rice and some specimens were caught also by light trap.

Macrosteles quadripunctulatus (Kirschbaum, 1868)

Synonymy : *Cicadula ramigera* Zach., 1933.

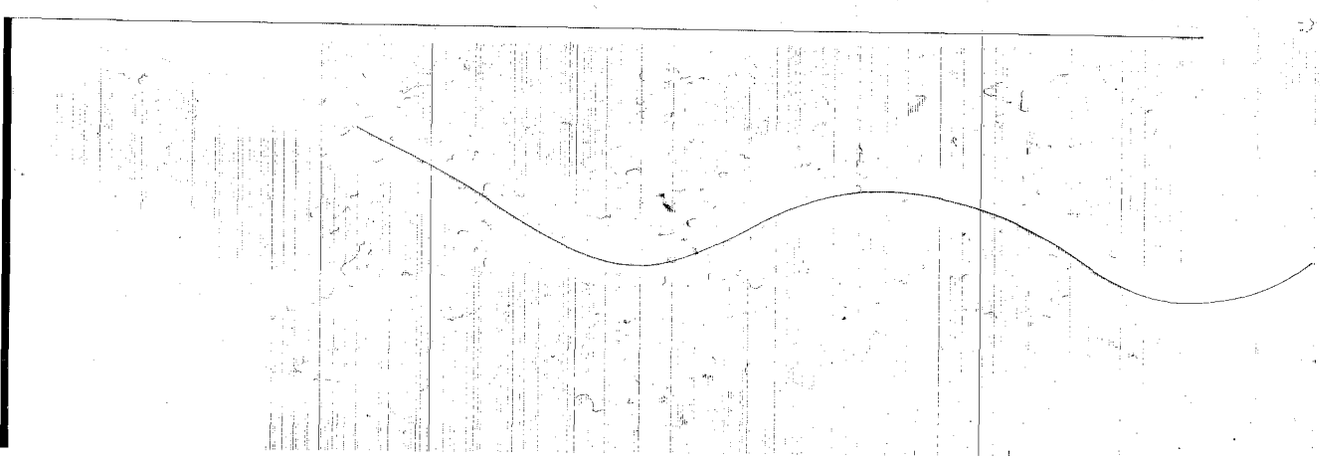
General Distribution : Afghanistan, Bulgaria, Czechoslovakia, Denmark, England, Finland, Germany, Greece, Hungary, Iraq, Israel, Italy, Netherlands, Poland, Romania, Sweden, Turkey, USSR, Yugoslavia. Iran (Dlabola, 1981), (France Guistina, 1983).

Distribution in Turkey : Dlabola (1957) reported it from Adana (Kozan) and Ankara (Hasanoğlan). Kalkandelen (1974) listed it from Ankara (Çubuk Baraj I), Isparta (Yakıören köyü), Konya (Ereğli, Meram), Nevşehir (Central province, Nar, Avanos, Göreme, Ürgüp). Giray (1982) also reported it from İzmir (Menemen).

Material examined : Adana (Central province, Osmaniye), Adıyaman (Gerger), Ağrı (Doğubeyazıt, Patnos), Ankara (Çubuk, Çamlıdere, Mogan gölü), Bingöl (Genç), Bitlis (Kermete, Mutki), Diyarbakır (Central province, Çermik, Çüngüş, Silvan), Erzincan (Central province, Üzümlü), İçel (Tarsus), İzmir (Bornova, Menemen, Ödemiş), Malatya (Central province, Hasırcılar), Manisa (Saruhanlı), Uşak, Van (Beyüzümü, Erciş), Zonguldak (Ulus). - Totally 85 specimens.

It distributes largely in Turkey.

Occurrence : Common, but found very small numbers.



Biological note : Specimens were collected from mid - June to late September. They were taken on corn, tabacco, mint, sesame. Some caught also by light traps. Ribaut (1952) given *Corispermum hysopifolium, Setaria, Panicum* as the host plants of this species.

Macrosteles sexnotatus (Fallen, 1806)

Synonymy : *Jassus devestans* Guérin - Meneville, 1852; *J. didymus* M.R., 1855; *Cicadula diminuta* Leth., 1876; *C. sexnotata binotata* Rey, 1894; *C. sexnotata submaculata* Rey, 1894.

General Distribution : Algeria, Austria, Azores, Belgium, Bulgaria, Canary Is., China, Cyprus, Czechoslovakia, Denmark, Egypt, England, Finland, France, Germany, Hungary, Iceland, Iran, Ireland, Israel, Italy (also Sardinia and Sicily), Japan, Jordan, Korean Paninsula, Madeira Archipelago, Mongolia, Morocco, Netherlands, Poland, Romanai, Spain, Sweden, Tunisia, Turkey, USSR, Yugoslavia.

Distribution in Turkey : Fahringer (1922) reported it from Bursa and Konya. Dlabola (1957) also reported it from Adana (Abacılar), İçel (Alata) and Konya (Kızılviran). Kalkandelen (1974) listed it from Ankara (Karagöl, Yukarıkışla köyü, Çubuk, Eymir, Elmadağ, Kayaş, Lalahan ,Hasanoğlan, Kızılcahamam, Polatlı), Konya (Çarıklar, Ereğli, İçeri Çumra, Karaman, Meram) and Nevşehir (Avanos, Göreme, Nar, Ürgüp).

It distributes largely in Turkey.

Material examined : Adıyaman (Central province, Kızılcapınar), Ağrı (Doğubeyazıt), Bolu (Düzce, Kıbrıscık, Seben), Çankırı (Ilgaz, Yerkuyu, Çatalelma), Diyarbakır (Central province), Erzurum (Aşkale), İzmir (Bornova, Narlıdere), Ordu (Kumru), Trabzon (Maçka), Van (Başkale) - Many specimens.

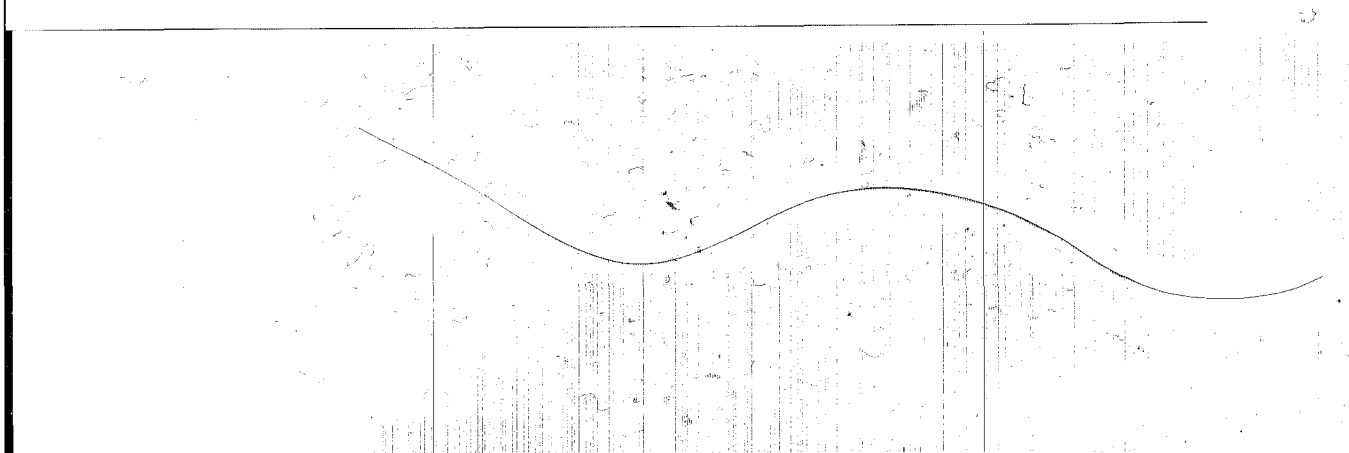
Occurrence : Very common and sometimes found in large populations.

Biological note : Specimens were collected from May to mid - October. They were taken on cultivated gramineous plants, especially on wheat rice and corn. Some are taken also by light traps. Ribaut (1952) stated that this species has been found also on *Juncus* in addition to gramineous plants at humid area.

Macrosteles sordidipennis (Stal, 1858)

Synonymy : *Cicadula sexnotata salina* Reuter, 1886

General Distribution : Austria, Czeshoslovakia, Denmark, England, Finland, Germany, Hungary, Mongolia, Netherlands, Norway, Poland, Sweden, USSR. Turkey (Kalkandelen, 1974).



Distribution in Turkey : Kalkandelen (1.c.) reported it under the name of *M. salinus* (Reuter) and listed it from Ankara (Çubuk, Eymir, Hasanoğlan, Karagöl, Yukarıkışla köyü).

Material examined : There is no additional material collected after to Kalkandelen.

Occurrence : Very occasional.

Macrosteles viridigriseus (Edwards, 1922)

General Distribution : Austria, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Netherlnds, Norway, Poland, Romania, Switzerland, USSR; (Nearctic Region). Turkey (Kalkandelen, 1974).

Distribution in Turkey : Kalkandelen (1.c.) reported only one male specimen from Ankara (Çubuk - Yukarıkışla köyü) and there is no additional material collected since that date.

Occurrence : Very occasional.

Sagatus punctifrons (Fallen, 1826)

Synonymy : *Cicadula punctifrons repleta* Fieber, 1855; *C.p. addita* Rey, 1894.

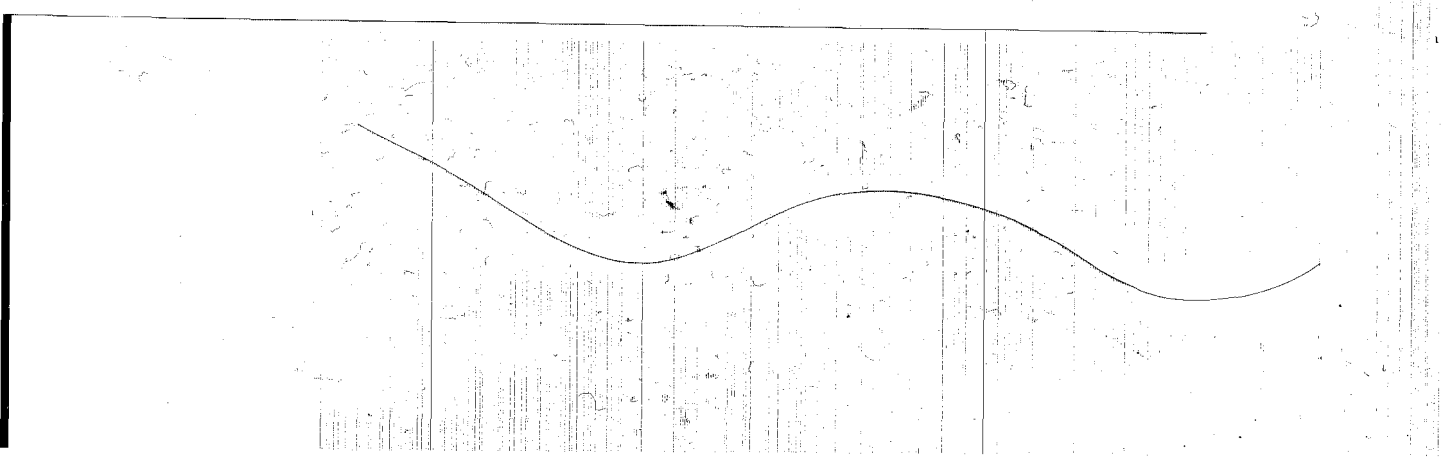
General Distribution : Albania, Austria, Belgium, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, USSR; (Nearctic Region).

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

Material examined : Ağrı (Taşlıçay) - Only three specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in early August, on weeds Ribaut (1952) and Emelyanov (1964) have given *Salix* species as a host plants of this species.



Özet

Türkiye Auchenorrhyncha türlerinin yayılışı ve önemlerine ait ön listesi. XVIII. Familya : Cicadellidae : Deltocephalinae : Macrostelini (II. Kısım)

Bu çalışmada 1967 yılından beri toplanan örneklerin teşhisi ve literatür kayıtları ile birlikte Türkiye'den Macrostelini tribusundan beş cinse ait 23 tür tesbit edilmiştir Bunlardan **Balclutha pellucens** (Horv.), **Macrosteles alpinus** (Zett.), **M. frontalis** (Scott) ve **Sagatus punctifrons** (Fall.) türleri Türkiye için yeni kayıtlardır. Her bir türün yayılışı, ekonomik önemi ve üzerinde toplandığı bitkiler verilmeye çalışılmıştır.

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