

**Preliminary list of Auchenorrhyncha with notes on distribution and
importance of species in Turkey. XXV. Family : Cicadellidae :
Deltocephalinae : Paralimnini Distans (Part I)**

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Summary

The first section of Paralimnini comprises 22 species belonging to the genera of *Aglena*, *Paramesus*, *Parapotes*, *Paralimnus*, *Arocephalus* and *Psammotettix*. The following species are new records for the Turkish fauna : *Paramesus major* Haupt, *Parapotes reticulatus* (Horv.), *Arocephalus languidus* (Flor), *Psammotettix helvolus* (Kbm.), *Ps. ornaticeps* (Horv.) and *Ps. salsuginosus* Logv. Distribution, abundance and plants which the specimens were collected on of each species are given.

Introduction

Previously 16 species were recorded of this group from Turkey by different workers; Oshanin (1906-8, 1912), Fahringer (1922), Haupt (1930), Gadeau de Kerville (1939), Dlabola (1957, 1971, 1977, 1979), Linnavuori (1965) and Kalkandelen (1974 a, b).

Several *Psammotettix* species are known to be economically important, by causing direct harm on cultivated plants as well as by being vectors of plant diseases. Especially *Ps. striatus* (L.) is the most important one as a vector of wheat dwarf virus and winter wheat mosaic virus diseases on

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wheat and other gramineous plants (Vacke 1961, 1962; Shaskol'skaya, 1962; Emelyanov, 1964). It has been found also harmful on maize in Yugoslavia, on wheat, barley, oats, rye and maize in Bulgaria, on rice in northern Italy and Spain (Bogavac, 1968; Olmi, 1968; Kharizanov, 1972; Medina et al., 1982). *Ps. provincialis* Ribaut also is one of the vectors of winter wheat mosaic virus on wheat in Russia (Emelyanov, l. c.). Horvath (1969) detected *Ps. alienus* (Dahlbom) in rape fields having clover dwarf disease besides known vector *Macrostoteles laevis* (Ribaut) of this disease.

Although these species have been recorded on many cultivated plants, and found abundantly and distributed widely in Turkey, there has been no observed important case as being destructive on cultivated plant up to now.

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

Aglena ornata (Herrich - Schaffer, 1838)

Synonymy : *Tettigonia pallida* Walter, 1851 (Primary homonym); *Aglena ornata ornata* Kirk., 1906.

General Distribution : Albania, Bulgaria, France, Greece (Corfu), Iran, Israel, Italy (also Sardinia and Sicily), Morocco, Romania, Spain, Turkey, USSR (Moldavia, s. Russia, Ukraine).

Distribution in Turkey : Oshanin (1906 - 8, 1912) listed this species from Turkey. Fahringer (1922), Gadeau de Kerville (1939) and Kalkandelen (1974 b) reported this species being in different parts of Turkey.

Material examined : Diyarbakır (Devegeçidi) - Only two specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in mid - June.

Paramesus major Haupt, 1927

General Distribution : Czechoslovakia (Bohemia), Israel, USSR (Kazakhstan, Uzbekistan).

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

Material examined : Ankara (Eymir gölü, Mogan gölü), Çankırı (Hacıhasan, Ilgaz), Diyarbakır (Central province, Çınar), K. Maraş, Siirt - Totally 39 specimens.

Occurrence : Somewhat occasionally.

Biological note : The specimens were collected from June to late September, mostly on rice, grass and a few by light trap.

Paramesus obtusifrons (Stal, 1853)

Synonymy : *Cicada nervosa* Fall. 1826 (Primary homonym); *Athysanus verralli* Scott, 1875; *Paramesus nervosus caucasicus* Mel., 1913.

General Distribution : Afghanistan, Albania, Bulgaria, Czechoslovakia, Cyprus, Denmark, Finland, France, German D. R., German F. R., Great Britain, Hungary, Italy (also Sardinia), Mongolia, Netherlands, Norway, Poland, Romania, Sweden, Tunisia, Turkey, USSR (Nearctic region).

Distribution in Turkey : Oshanin (1906 - 8, 1912), Haupt (1930) and Dlabola (1957) listed this species from Turkey (mostly some parts of middle Anatolia). Kalkandelen (1974 a) reported it from Ankara based on one specimen. However, she found some differences in the genital characters at the time and after reexamination of this specimen, it was determined as *P. major* Haupt.

The authors have no representative material of this species.

Parapotes reticulatus (Horvath, 1897)

General Distribution : Czechoslovakia (Slovakia) , German D. R., Hungary, Poland, Romania, USSR (s. Russia).

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

Material examined : Sakarya (Hendek) - Only one female specimen.

Occurrence : Very occasionally.

Biological note : The specimen was collected in early July, by a light trap.

Paralimnus inexpectatus Dlabola, 1961

General Distribution : Israel, Mongolia, Romania, USSR (s. Russia, Tadzhikistan, Uzbekistan). Turkey (Kalkandelen, 1974 b).

Distribution in Turkey : Kalkandelen (l. c.) reported it from Ankara (Çubuk).

Material examined : Konya (Seydişehir) - Only one specimen.

Occurrence : Very occasionally.

Biological note : The specimen was collected in mid - June, on alfalfa.

Paralimnus picturatus Haupt, 1930

Synonymy : *Deltocephalus lindneri* Fahringer, 1942; *Paralimnus subtilis* Linn., 1965.

General Distribution : Egypt, Jordan, Mongolia, Turkey, USSR (Kazakhstan, Moldavia, s. Russia).

Distribution in Turkey : This species has been described by Haupt (l. c.), based on the specimens collected in Konya (Akşehir).

Material examined : Manisa (Alaşehir) - Only one specimen.

Occurrence : Very occasionally.

Biological note : The specimen was collected in late May, in a vineyard. Dlabola (1961) reported it on *Phragmites* sp.

Arocephalus languidus (Flor, 1861)

Synonymy : *Jassus (Deltocephalus) pallipes* Kbm., 1868; *J. (D). pusillus* Kbm., 1868; *J. productus* Thomson, 1869; *Deltocephalus haupti* Lind., 1924; *D. languidus ocellatus* Cerutti, 1939.

General Distribution : Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German D. R., German F. R., Hungary, Italy, Norway, Poland, Romania, Switzerland, Tunisia, USSR.

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

Material examined : Ankara (Çubuk), Kars (Sarıkamış) - Only two specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in mid-July and early August, on *Pinus* sp.

Arocephalus longiceps (Kirschbaum, 1868)

Synonymy : *Jassus (Deltocephalus) longivalvis* Kbm., 1868; *Deltocephalus linnei* Fieber, 1869.

General Distribution : Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, France, German D. R., German F. R., Greece, Hungary, Italy, Mongolia, Netherlands, Poland, Romania, Spain, Switzerland, USSR. Turkey (Kalkandelen, 1974 b).

Distribution in Turkey : Kalkandelen (l. c.) reported it from Ankara (Çubuk, Karagöl, Elmadağ) and Nevşehir (Göreme).

Material examined : Ankara (Çubuk), Bolu (Kibrısık, Seben), Erzincan (Çağlayan), İzmir (Bozdağ), Konya (Ereğli) - Totally 17 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected from late April through mid - September, on rice and gramineous plants.

Psammotettix alienus (Dahlbom, 1850)

Synonymy : *Jassus (Deltocephalus) breviceps* Kbm., 1868; *D. flavidus* Fieber, 1869; *D. karafutonis* Mats., 1914.

General Distribution : Albania, Algeria, Austria, Belgium, Bulgaria, Canary Is., Czechoslovakia, Denmark, Egypt, Finland, France, German D. R., German F. R., Hungary, Italy (also Sicily), Libya, Madeira Archipelago, Mongolia, Norway, Poland, Portugal, Romania, Spain, Sweden, USSR, Yugoslavia; (Nearctic region). Afghanistan, Iran, Turkey (Dlabola, 1971).

Distribution in Turkey : Dlabola (1971 and 1981) reported it from several parts of Turkey. It seems to be distributed all over in Turkey.

Material examined : Adana (Pozantı), Amasya (Central province, Taşova), Ankara (Central province, Çubuk, Elmadağ, Eymir, Karagöl, Lalahan, Kızılcahamam, Polath), Balıkesir (Balya), Bursa (Gemlik), Diyarbakır (Central province), Erzincan (Central province, Çağlayan, Dumanlı dağları, Refahiye), Hakkari (Central province), Kars (İğdir), Kastamonu (Tosya), Konya (Akşehir), Mardin (İdil), Muş (Solhan), Sakarya (Adapazarı, Hendek), Siirt (Kurtalan), Sinop (Boyabat, Duragan), Uşak (Bölme), Van (Başkale, Güzeldere, Edremit, Erciş), Yozgat (Boğazlıyan, Sorgun) - Many specimens.

Occurrence : Very common and sometimes found in large numbers.

Biological note : Specimens were collected from late April up to late September: on grass, wheat, rice, cotton, corn, maize and also from light traps.

Psammotettix cephalotes (Herrich - Schaffer, 1834)

Synonymy : *Jassus (Deltocephalus) citrinellus* Kbm., 1868; *J. (D.) sulphurellus* Kbm., 1868; *J. (D.) tristis* Kbm., 1868; *D. normani* Scott., 1881.

General Distribution : Albania, Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German D. R., German F. R., Great Britain (also in Scotland), Hungary, Ireland, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Turkey, USSR, Yugoslavia.

Distribution in Turkey : Dlabola (1957) and Kalkandelen (1974 b) reported it from Ankara (Beynam, Mogan gölü, Çubuk, Elmadağ, Karagöl, Polath), Isparta (Kayı köyü) and Konya (Çarıklar).

Material examined : Erzincan (Altintepe), Van (Başkale - Güzeldere) - Only 4 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in July, on weeds.

Psammotettix cerinus (Lindberg, 1948)

General Distribution : Cyprus, Turkey.

Distribution in Turkey : Linnavuori (1965) and Dlabola (1981) reported it from Hatay (İskenderun) and İçel (Erdeмли).

Material examined : Adana - Only 3 specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in early May on Citrus trees.

Psammotettix comitans Emelyanov, 1964

General Distribution : USSR (Kazakhstan, Kirghizia, Ukraine, Uzbekistan). Turkey (Kalkandelen, 1974 b)

Distribution in Turkey : Kalkandelen (*l. c.*) reported it from Ankara (Çubuk).

Material examined : Niğde (Çamardı), Sakarya (Adapazarı), Van (Başkale) - Totally 5 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in June and July, on weeds, *Verbascum* and also from light traps.

Psammotettix confinis (Dahlbom, 1850)

Synonymy : *Jassus (Deltocephalus) eurylobus* Kbm., 1868; *D. heydeni* Fieb., 1872; *D. thenii* Edw., 1915; *D. spathifer* Ribaut, 1925.

General Distribution : Albania, Austria, Bulgaria, Czechoslovakia, Denmark, Finland, France, German D. R., German F. R., Great Britain (also in Scotland, Wales), Hungary, Ireland, Italy (also Sardinia and Sicily), Mongolia, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, Turkey, USSR, Yugoslavia; (Nearctic region). Crete (Dlabola, 1977).

Distribution in Turkey : Dlabola (1957, 1971) listed it from Adana (Gavur Jağı), Ankara (Beynam, Mogan gölü), Bitlis (Tatvan), Edirne, Konya (Beyşehir) and Siirt (Baykan). Kalkandelen (1974 b) reported it also

from Ankara (Çubuk, Elmadağ, Eymir gölü, Hasanoğlan, Karagöl, Kayaş), Isparta (Kayı köyü).

Material examined : Ağrı (Patnos, Tutak), Balıkesir (Susurluk), Erzincan (Central province, Altıntepe, Çağlayan, Kovalık, Ilıç, Refahiye, Üzümlü), Erzurum (İspir - Serçeme deresi, Tufanç), Giresun (Şebinkarahisar), Kars (İğdır), Ordu (Kumru), Sivas (Suşehri), Van (Gevaş) - Totaly 65 specimens.

Occurrence : Somewhat common but found in small numbers.

Biological note : The specimens were collected from June to September, mostly on gramineous plants.

Psammotettix helvolus (Kirschbaum, 1868)

Synonymy : *Jassus (Deltocephalus obtusiceps* Kbm., 1868; *D. rhombifer* Fieb., 1869; *D. substriatus* Then, 1902.

General Distribution : Albania, Austria, Belgium, Czechoslovakia, Denmark, Egypt, France, German D. R., German F. R., Italy (also Sardinia), Netherlands, Poland, Romania, Switzerland, Tunisia, USSR, Yugoslavia.

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

Material examined : Ankara (Çubuk, Elmadağ), Isparta-Only 6 specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in late April and May, on gramineous plants.

Psammotettix majusculus Linnavuori, 1951

General Distribution : Cyprus, Egypt, Israel, Turkey, USSR (Georgia).

Distribution in Turkey : Linnavuori (1965) reported it from Adana (Pozanti).

The authors have no representative material of this species.

Psammotettix ornaticeps (Horvath, 1897)

General Distribution : Austria, Bulgaria, Czechoslovakia, German F. R., Hungary, Romania, USSR.

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

Material examined : Ankara (Tuzgölü), Erzurum (Aşkale), Niğde (Ulukışla), Van (Başkale - Güzelsu) - Only 7 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in late April and early May and in July, on gramineous plants and *Artemisia* sp.

Psammotettix pictipennis (Kirschbaum, 1868)

Synonymy : *Deltocephalus fasciatus* Fieber, 1869.

General Distribution : Afghanistan, Austria, Bulgaria, Czechoslovakia (Slovakia), Hungary, Israel, Romania, Spain, Turkey, USSR. Iran (Dlabola, 1971, 1981).

Distribution in Turkey : Dlabola (1957, 1971, 1981) listed it from Adana (Karataş), Ankara (Mogan gölü, Delice nehri), Bolu (Düzce), Malatya (Balaban), Van (Aşkale) and Çorum (Sungurlu). Kalkandelen (1974 b) reported it also from Ankara (Çubuk, Elmadağ, Karagöl, Mogan gölü). It seems to be distributed largely in Turkey.

Material examined : Adana (Karataş), Ankara (Kazan, Tuzgölü), Bolu (Kıbrısçık, Seben), Çankırı (İlgaz, Yerkuyu), Erzincan (Altın-tepe, Demirpınar), K. Maraş (Türkoğlu), Kars (İğdir), Kayseri (Erciyes), Konya (Karaman), Niğde (Aksaray, Ulukışla), Urfa (Ceylanpınar), Van (Central province), Zonguldak (Bartın) - Totally 46 specimens.

Occurrence : Somewhat common but found in small numbers.

Biological note : Specimens were collected from late April through August, mostly on gramineous plants, rice, corn and cotton.

Psammotettix prolongatus Dlabola, 1979

General Distribution : Endemic.

Distribution in Turkey : Dlabola (*l. c.*) described this species based on the specimens found in Çanakkale (Gökçeada).

Material examined : Type specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in late June, on grass.

Psammotettix provincialis (Ribaut, 1925)

General Distribution : Afghanistan, Bulgaria, China (Kansu), Cyprus, Czechoslovakia (Moravia), France, Greece, Hungary, Iran, Italy (also

Sardinia and Sicily), Mongolia, Portugal, Romania, Turkey, USSR, Yugoslavia; (Oriental region).

Distribution in Turkey : Metcalf (1967) listed it from Turkey according to Zachvatkin (1933). Dlabola (1957) reported it from Adana (Abacılar, Karataş, Kozan), Ankara (Mogan gölü) and Edirne; Kalkandelen (1974 b) in Ankara (Beynam, Çubuk, Karagöl, Kayaş, Elmadağ, Lalahan, Eymir gölü, Gölbaşı (Central province), Kayseri (Develi, Yahyalı, Yeşilhisar), Konya (Akşehir, Çarıklar, İçeri Çumra, Meram), Nevşehir (Çat, Nar, Ürgüp) and Sakkarya (Adapazarı). It seems distributed largely in Turkey.

Material examined : Adana (Ceyhan), Antalya (Güloluk), Bolu (Kıbrısçık, Seben), Çankırı (Hacıhasan, Yerkuyu), Diyarbakır (Central province), Erzurum, İstanbul (Erenköy), İzmir (Bornova, Narlıdere), Van (Gürpınar, Kırkgeçit) - Many specimens.

Occurrence : Very common and sometimes found in large numbers.

Biological note : Specimens were collected from late April up to late September, on gramineous plants, rice, corn, *Stipa* sp. and also from light traps.

Psammotettix salsuginosus Logvenenko, 1961

General Distribution : USSR (Moldavia, Ukraine).

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

Material examined : İzmir (Dikili, Kumkale) - Only 6 specimens.

Occurrence : Occasionally.

Biological note : The specimens were collected in late May, on *Salicornia* sp.

Psammotettix striatus (Linnaeus, 1758)

Synonymy : *Cicada striata* F., 1794 (Primary Homonym); *Jassus strigatus* Germ., 1821; *J. varipennis* H. S., 1838; *J. (Deltocephalus) pallidus* Flor., 1861; *D. flavipennis* Scott, 1876; *D. amyoti* Vismara, 1878; *D. striatus divergens* Rey, 1894; *D. capitatus* Mats., 1903; *D. immundus* Mats., 1908.

General Distribution : From the Palaearctic and Nearctic regions.

Distribution in Turkey : Metcalf (1967) listed it from Turkey according to Horvath (1905) and Oshanin (1910). Dlabola (1957, 1971) reported it from Adana (Central province, Gavurdağı, Kozan), Ankara (Beynam, Çamlıdere, Çubuk Baraj, Mogan gölü, Delice deresi and Kızılcahamam), Konya (Bey-

şehir), Kayseri (Erciyeş), Bolu, Çorum (Sungurlu), Amasya (Merzifon). Kalkandelen (1974 a) reported it also from Ankara, Konya, Kayseri, Nevşehir, Sakarya (Adapazarı). It is distributed practically all over in Turkey.

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

Occurrence : Very common and found sometimes in very large numbers.

Biological note : Specimens were collected from late April up to late September; on grass, wheat, rice, cotton, corn, maize, tobacco, alfalfa, garden mint, various vegetables and also from light traps.

Psammotettix transcaucasicus Dlab. 1961

General Distribution : USSR (Georgia, Kazakhstan). Turkey (Dlabola, 1977).

Distribution in Turkey : Dlabola (1977, 1981) reported this species from İzmir (Bozdağ) and Sivas (Gürün).

The authors have no representative material of the species.

Özet

Türkiye Auchenorrhyncha türlerinin yayılışı ve önemlerine ait ön listesi XXV. Familya : Cicadellidae : Deltocephalinae : Paralimnini Distans (Kısım I)

Paralimnini tribusuna bağlı Türkiye'de bulunan türler listesinin birinci kısmında *Aglena*, *Paramesus*, *Parapotes*, *Paralimnus*, *Arocephalus* ve *Psammotettix* cinslerinden 22 tür listelenmiştir. *Paramesus major* Haupt, *Parapotes reticulatus* (Horv.), *Arocephalus languidus* (Flor), *Psammotettix helvolus* (Kbm.), *Ps. ornaticeps* (Horv.) ve *Ps. salsuginosus* Logv. türleri Türkiye için yeni kayıtlardır. Her bir türün yayılışı ve üzerinde bulunduğu bitkiler verilmeye çalışılmıştır.

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