

Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. XIX. Family Cicadellidae: Deltocephalinae: Deltocephalini, Scaphytopiini, Doraturini

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S u m m a r y

Turkish fauna of these tribes is represented by 18 species belonging to eight genera. *Deltocephalus pulicaris* (Fall.), *Doratura exilis* Horv., *D. veneta* Dlab., *Aconura impicta* (Linn.) and *A. jackowlefi* Leth. are newly added to the fauna by this study. Distribution, abundance and plants which the specimens were collected on of each species are given.

Introduction

Thirteen species of this faunistical list have been recorded previously from Turkey. Oshanin (1912) has listed *Recilia coronifera* (Marsh.) and *Doratura impudica* Horv. from Turkey. Dlabola (1957, 1981) recorded of *Recilia schmidtgnei* (Wagn.), *Chiasmus conspurcatus* (Perr.), *Doratura heterophylla* Horv., *D. homophylla* (Flor), *Stymphalus rubralineatus* (Stal) and *Aconurella proluxa* (Leth.) beside some other species. Linnavuori (1965) added *Aconura oculata* (Lind.) to the fauna with two previously recorded species. Nast (1972) listed nine species from Turkey. Kalkandelen (1974) studied the Central Anatolian fauna and added *Doraturopsis heros* (Mel.) and *Doratura concors* Horv. and made records of previously known four species.

These species are not drawn attention upon themselves as being economically important. They do not built up large populations and are not determined being vectors of virus diseases of plants.

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The specimens of the species reported by Kalkandelen (1974) are also in the collection of senior author, and the specimens reported in this manuscript are additional material of these related species. Synonyms, distribution of species in Palaearctic Region are taken from Nast (1972). Additional countries were given with literature citations.

Deltocephalini Fieber, 1869

Deltocephalus pulicaris (Fallen, 1806)

Synonymy: *D. pulicaris convexus* Rey, 1894; *D. p. fumigatus* Rey, 1894

General Distribution: Algeria, Andorra, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy (also Sicily), Mongolia, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, USSR, Yugoslavia; (Nearctic Region).

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

Material examined: Erzurum (Tufanç köyü)-Only two specimens.

Occurrence: Very occasionally.

Biological note: The specimens were collected in mid-July of 1970, on meadow.

Recilia coronifera (Marshall, 1866)

Synonymy: *Jassus (Deltocephalus) coroniceps* Kbm., 1868; *Deltocephalus i-album* Scott, 1881.

General Distribution: Austria, Czechoslovakia, England, France, Germany, Hungary, Iraq, Italy, Japan, Mongolia, Morocco, Netherlands, Romania, Spain, Turkey, USSR, Yugoslavia.

Distribution in Turkey: Metcalf (1967) listed this species from Turkey according to Horvath (1901b), in addition to Oshanin (1912). The presence of this species is also being confirmed by this study.

Material examined: Rize-Ordu two specimens.

Occurrence: Very occasionally.

Biological note: The specimens were collected in late August of 1975 on labiatae.

Recilia schmidtgeni (Wagner, 1939)

General Distribution: Albania, Austria, Bulgaria, China (Manchuria) Czechoslovakia, France, German F.R., Hungary, Iran, Italy, Jordan, Morocco, mania, Turkey, USSR, Yugoslavia. Crete (Diabola, 1977).

Distribution in Turkey: Dlabola (1957 and 1981) reported this species from Adana (Kozan, Karataş and Misis), Ankara (Mogan gölü) and İçel (Erdemli). Kalkandelen (1974) collected some specimens from Ankara (Çubuk, Çubuk Baraj II, Eymir gölü, Lalahan).

Material examined: Ankara (Central province, Kırkkale), Diyarbakır (Central province), Erzincan (Üzümlü), İzmir, (Narlıdere, Mordoğan), Nevşehir (Çat), Samsun (Central province), Urfa (Ceylanpınar)-Totally 37 specimens. It seems to be distributed largely in Turkey.

Occurrence: Found somewhat in small numbers.

Biological note: Specimens were collected from early June to mid-September, in steppe vegetation and from light traps.

Scaphytopiini Oman, 1931

Stymphalus rubrolineatus (Stal, 1855)

Synonymy: *Platymetopius rubrostriatus* Horv., 1907; *Pl. rubrovittatus* Mats., 1914.

General Distribution: Albania, Bulgaria, Cyprus, Israel, Italy, Japan (Yakushima Is.), Korean Peninsula, USSR; (Ethiopian and Oriental Regions). Crete (Dlabola, 1977), Iran, Turkey (Dlabola, 1981).

Distribution in Turkey: Dlabola (1981) reported it from İçel (Erdemli).

Material examined: Diyarbakır (Silvan), İstanbul Doğankent), Mardin-Totally five specimens.

Occurrence: Occasionally.

Biological note: The specimens were collected from mid-July to mid-October of 1977, from light traps. Lindberg (1948) has given *Erianthus ravennae* as the host plant of this species.

Doraturini Emelyanov, 1962

Chiasmus conspurcatus (Perris, 1857)

Synonymy: *Athysanus laboulbenii* Perr., 1857; *Atractotypus gautschii* Then, 1886.

General Distribution: Afghanistan, Albania, Austria, Bulgaria, Canary Is., Egypt, France, Iraq, Israel, Italy (also Sardinia), Jordan, Portugal, Romania, Spain, Turkey, USSR, Yugoslavia. Iran (Dlabola, 1971).

Distribution in Turkey: Dlabola (1957, 1971) reported it from Ankara (Mogan gölü), Adana (Kozan) and Antalya (Masure-Gazipaşa, Aspendos-Perge). Kalkandelen (1974) collected some specimens from Ankara (Central province, Eymir gölü, Kayaş) and Konya (Ereğli, Meram).

Material examined: Artvin (Borçka), Çankırı (Çatalelma), Diyarbakır (Cüngüş), Rize (Central province), Urfa (Harran)-Totally six specimens.

Occurrence: Occasionally.

Biological note: The specimens were collected from June to late August, in steppe vegetation.

Doraturopsis heros (Melichar, 1902)

Synonymy: *Doratura zolotovi* Kusn., 1929; *Doraturopsis acutus* Lind., 1935; *Adoratura desertorum* Kusn., 1938; *A. fergana* Kusn., 1938; *A. macrocephala* Kusn., 1938; *A. pallida* Kusn., 1938; *A. tomara* Dlab., 1958.

General Distribution: China (Sinkiang), Iran, USSR. Turkey (Kalkandelen, 1974).

Distribution in Turkey: Kalkandelen (1974) collected only one specimen of this species in Ankara.

Material examined: Çorum (Alaca, Sungurlu)-Only two specimens.

Occurrence: Very occasionally.

Biological note: The specimens were collected in early August on weeds. Emelyanov (1964) has given *Phragmites communis* as a host plant of this species.

Doratura concors Horvath, 1903

Synonymy: *D. semenovi* Kusn., 1952; *D. concors dzungarica* Mit., 1971.

General Distribution: Czechoslovakia (Moravia), Hungary, n. Italy, Poland, USSR, Yugoslavia, Turkey (Kalkandelen, 1974).

Distribution in Turkey: Kalkandelen (1974) collected specimens of the species in Ankara (Çubuk Baraj I and Lalahan).

Material examined: İzmir (Bozdağ), Siirt (Central province)-Only four specimens.

Occurrence: Very occasionally.

Biological note: The specimens were collected from mid-June to late July, on steppe vegetation.

Doratura exilis Horvath, 1903

General Distribution: Albania, Andorra, Austria, Bulgaria, Czechoslovakia, France, Germany, Hungary, Italy, Mongolia, Poland, Portugal, Romania, Sweden, USSR, Yugoslavia.

Distribution in Turkey: Kalkandelen (1974) reported this species as a synonym of *D. stylata* (Boh.) according to Le Quesne (1964), but the specimens were actually *D. exilis* Horv. These specimens were collected from An-

kara (Karagöl, Lalahan). However, it would not be as an error to accept this species as a new record for Turkey.

Material examined: Ankara (Beynam)-Only one specimen additional to the above mentioned specimens.

Occurrence: Very occasionally.

Biological note: The specimen was collected in mid-August on steppe vegetation.

Doratura heterophyla Horvath, 1903

General Distribution: Bulgaria, Greece, Italy, Romania, Turkey, USSR, Yugoslavia.

Distribution in Turkey: Dlabola (1957) reported it from Adana and Edirne. Unfortunately authors have no representative material of this species.

Doratura homophyla (Flor, 1871)

General Distribution: Albania, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Iraq, Italy, Israel, Mongolia, Netherlands, Poland, Romania, Sweden, Turkey, USSR, Yugoslavia. Iran (Dlabola, 1981).

Distribution in Turkey: Dlabola (1957) reported it from Adana (Kozan), Ankara (Beynam), Edirne; Linnavuori (1965) from Hatay (İskenderun) and Kalkandelen (1974) from Ankara (Çubuk, Lalahan).

Material examined: Ankara (Kırıkkale, Kızılcahamam, Polath), Bolu, Diyarbakır (Central province), Eskişehir (Alpu), Gaziantep (Nurgana), Van (Başkale)-Totally 17 specimens.

Occurrence: Occasionally.

Biological note: Specimens were collected starting from early May to late August on steppe vegetation.

Doratura impudica Horvath, 1897

General Distribution: Albania, Austria, Bulgaria, Czechoslovakia, Denmark, England, France, Germany, Hungary, Italy, Netherlands, Poland, Romania, Sweden, Turkey, USSR, Yugoslavia.

Distribution in Turkey: Oshanin (1912) has listed it from Turkey. Metcalf (1963) reported it from Turkey according to Horvath (1903, 1905), Jensen-Haarup (1920), Haupt (1935a) and Ossiannilsson (1935b) in addition to Oshanin. Dlabola (1981) also reported it from Nevşehir (Ürgüp), Erzurum (Kandilli) and Van (Başkale).

Material examined : Ankara (Bağlum, Lalahan), Gaziantep (Nurgana)-
Only three specimens.

Occurrence : Very occasionally.

Biological note : The specimens were collected in mid-June and mid-July
on steppe vegetation. Emelyanov (1964) has given *Agropyron sibiricum* as a
host plant of this species.

Doratura stylata (Boheman, 1847)

Synonymy: *D. stylata macroptera* Kusn., 1928.

General Distribution: Albania, Algeria, Austria, Belgium, Bulgaria, Czeç-
hoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy,
Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Tunisia,
USSR, Yugoslavia; (Nearctic region).

Distribution in Turkey: Although Kalkandelen (1974) reported it in her
work, but specimens were actually *D. exilis*, not *D. stylata*. However Diabola
(1981) reported it from Van (Başkale).

Material examined: Ankara (Çamlidere), Gümüşhane (Bayburt, Kelkit),
Kars (Sarıkaş), Van (Kirtgeçit-Gürpınar)-Totally 39 specimens. It seems
to be restricted in middle and eastern part of Turkey.

Occurrence: Somewhat common and sometimes found in small numbers.

Biological note: The specimens were collected in mid-July and August, on
Stipa, oats, and other gramineae grasses.

Doratura veneta Diabola, 1969

General Distribution: Italy.

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

Material examined: Ankara (Keskin), Kars (Iğdır, Sarıkaş)-Totally 22
specimens.

Occurrence: Occasionally, but sometimes found in small numbers.

Biological note: Specimens were collected in mid-July and late August,
on undergrowth of *Pinus* trees.

Aconura impicta (Linnavuori, 1962)

General Distribution: Israel.

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

Material examined: Konya (Ulukışla, Yunak), Niğne (Bor) -Totally 6
specimens.

Occurrence: Occasionally.

Biological note: The specimens were collected in late April by air traps and also on weeds.

Aconura jakowlefi Lethierry, 1876

General Distribution: USSR, Iran (Dlabola, 1981).

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

Material examined: İzmir (D.kili)-Only one specimen.

Occurrence: Very occasionally.

Biological note: The specimen was collected in late May on *Salicornia*. Dlabola (l. c.) collected specimens on *Alhagi*, *Alhagi-Salsola* vegetations in mountain steppe, and salty places in Iran.

Aconura oculata (Lindberg, 1948)

General Distribution: Cyprus, Turkey.

Distribution in Turkey: Linnavuori (1965) reported it from Niğde (Aksaray).

Material examined: Çankırı (Yapraklı), Çorum (Sungurlu)-Totally 34 specimens.

Occurrence: Somewhat common in middle Anotolia and sometimes found in small numbers.

Biological note: The specimens were collected in early August on weeds. Lindberg (1948) collected specimens on *Aeluropus villosis* in Cyprus.

Aconura volgensis Lethierry, 1876

Synonymy: *Carinifer maculiceps* Linnavuori, 1962.

General Distribution: Afghanistan, Iran, Iraq, Mongolia, Turkey, USSR.

Distribution in Turkey: Nast (1972) listed this species from Turkey. The authors have no other records on the presence of this species in Turkey and also have no representative material.

Aconunella proliza (Lethierry, 1885)

Synonymy: *Thamnotettix minutus* Haupt, 1917; *Deltocephalus simplex* Haupt, 1927 (Primary homonym); *Thamnotettix sanguisuga* Lind., *Deltocephalus obtusus* Metcalf, 1955.

General Distribution: Afghanistan, Canary Is., Cyprus, Egypt, France (also Corsica), Iran, Iraq, Israel, Italy, Jordan, Libya, Madeira, Archipelago, Morocco, Portugal, Romania, Spain, Spanish Sahara, Turkey, USSR, Yugoslavia; (Ethiopian region). Pakistan, Crete (Dlabola 1971, 1977).

Distribution in Turkey: Dlabola (1957, 1971, 1981) reported it from Adana (Kozan), Ankara (Beynam, Mogan gölü), Hakkari (Esendere-Yüksekova), İçel (Silifke-Işıklı), Antalya (Bucak, Aspendos-Perge) and Nevşehir (Ürgüp). Linnavuori (1965) also reported it from Niğde (Aksaray).

Material examined: Ankara (Central province, Kalecik), Artvin (Central province, Ardanuç), Erzincan (Central province), Erzurum (Uzundere), Gaziantep (Türkoğlu), Maraş (Afşin), Rize (Central province)-Totally 15 specimens. It seems largely distributed in Turkey.

Occurrence: Common, but found in small numbers.

Biological note: The specimens were collected in July and August, on gramineae grasses.

Özet

Türkiye Auchenorrhyncha türlerinin yayılışı ve önemlerine ait ön listesi. XIX. Familya Cicadellidae: Deltocephalinae: Deltocephalini, Scaphytopiini, Doraturini

Bu tribu'ların Türkiye faunası, sekiz cinse ait 13 tür ile temsil edilmektedir. *Deltocephalus pulicaris* (Fall.), *Doratura exilis* Horv., *D. veneta* Dlab., *Aconura impicta* (Linn.) ve *A. jakowlefi* Leth. türleri Türkiye için yeni kayıtlardır. Her bir türün yayılış alanı ve üzerinde toplandığı bitkiler verilmeye çalışılmıştır.

Literature cited

- Dlabola, J., 1957, Results of the Zoological Expedition of the National Museum in Pragae to Turkey. 20. Homoptera Auchenorrhyncha. *Acta Ent. Mus. Nat. Pragae*, 31 (469) : 19-68.
- Dlabola, J., 1971. Taxonomische und Chorologische Ergänzungen zur Türkischen und Iranischen Zikaden fauna (Homoptera, Auchenorrhyncha) (Sammelausbeute von Dr. Wittmer, mit einem Nachtrag über andere Gebeite der Palaarktis). *Acta Faun. Ent. Mus. Nat. Pragae*, 14 : 115-138.
- Dlabola, J., 1977. Chorologische Ergänzungen zur Zikadenfauna des Mittelmeergebietes (Hom.: Auchenorrhyncha). *Sbornik Norodniho Muzee V Praze. Acta Ent. Mus. Nat. Pragae*, 33 B (1-2) : 21-31.

- Dlabola, J., 1981. Ergebnisse der Tschechoslowakisch-Iranischen Entomologischen Expeditionen nach dem Iran (1970 und 1973) (Mit Ausgaben über einige Sammelresultate in Anatolien) Homoptera: Auchenorrhyncha (II. Teil). *Acta Ent. Mus. Nat. Pragae*, 40 : 127-311.
- Emelyanov, A.F., 1964-, Suborder Cicadinea (Auchenorrhyncha). Keys to the Insects of the European USSR. Vol. 1 Apterygota, Palaeoptera, Hemimetabola. Ed.: Ga. Ya. Bei-Bienko. Academy of Sciences of the USSR. Zoological Keys to the Fauna of the USSR. 84 : 421-551.
- Kalkandelen, A., 1974, Orta Anadolu'da Homoptera: Cicadellidae Familyası Türlerinin Taksonomileri Üzerinde Araştırmalar. Ziraî Mücadele ve Karantina Genel Md. Araştırma Eserleri Serisi, 221s.
- Lindberg, H., 1948. On the Insect Fauna of Cyprus. Results of the Expedition of 1939 by Harald Hakan and P.H. Lindberg I-II. Introduction. II. Heteroptera und Homoptera Cicadina der Insel Zypern. *Comm. Biol.*, 10 (7) : 23-175.
- Linnavuori, R., 1965. Studies on the South and East Mediterranean Hemipterous Fauna. *Acta Ent. Fennica*, 21 : 1-70.
- Metcalf, Z.P., 1963, General Catalogue of the Homoptera. Fas. VI. Cicadelloidea. Pt. 8. Aphrodidae. ARS, USDA. 268 pp.
- Metcalf, Z.P., 1967. General Catalogue of the Homoptera. Fas. VI. Cicadelloidea. Pt. 10 Cicadellidae. ARS., USDA. Washington, D.C., 2074 pp.
- Nast, J., 1972, Palaeartic Auchenorrhyncha (Homoptera). An Annotated Check List, Polish Academy of Sciences Institute of Zoology. Polish Scientific Publishers, Warszawa, 551 pp.
- Oshanin, B., 1912,- Katalog der Paläarktischen Hemipteren (Heteroptera, Homoptera, Auchenorrhyncha und Psylloidea). Verlag von R. Friedländer und Sohn, Berlin, 187 pp.