

Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey.

VIII. Family; Cicadellidae : Idiocerinae

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Summary

Cicadellidae: Idiocerinae species found in Turkey up to the end of 1979 are listed in this paper. The list includes 24 species belonging to 9 genera of this subfamily. At the result of this faunistic study, 13 species: *Rhytidodus nobilis* (Fieber), *R. wagneri* Dlab., *Idiocerus stigmaticalis* Lewis, *I. vicinus* Mel., *Populicerus albicans* (Kbm.), *P. scharifi* Dlab., *Sulamicerus ancorarius* (Dlab.), *Viridicerus ustulatus* (M.R.), *Tremulicerus mesopyrrhus* (Kbm.), *T. poecilus* (H.S.), *T. vitreus* (F.), *Balcanocerus larvatus* (H.S.), *B. ramallahicus* Dlab. established as new records for Turkey. Distribution, abundance and the plants on which the specimens were collected of each species are given.

Introduction

Turkish fauna of subfamily Idiocerinae is not extensively studied. Previous to this study nine species were recorded by other authors. Oshanin (1908, 1912) listed only 1 species, *Sulamicerus stali* (Fieb.) Turkey. Zachvatkin (1946) examined *Balcanocerus balcanicus* (Horv.) that material collected from western Anatolia and established genus a *Chunrocerus* for this species and *I. niveosparsus* Leth. Wagner (1958) described *Balcanocerus alkani* (Wagner) from the material collected in Gaziantep by Prof. Dr. B. Alkan, Metcalf

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(1962, 1966) listed 4 species from Turkey according to the previous works. Dr. Dlabola collected and recorded 6 species, *Idiocerus lituratus* (Fall.), *I. herrichi* Kbm., *Acericerus rotundifrons* (Kbm.), *B. balcanicus*, *B. brusinae* (Horv.), *Taeniocerus ocularis* (M.R.) and described *Rhytidodus boluicus* Dlab. from Idiocerinae in Turkey in his various publications (Dlabola, 1957, 1970, 1971, 1977c and 1981). Nast (1972), listed 4 species of Idiocerinae, based on various works. In the present study the authors recorded 24 species belonging to 9 genera of Idiocerinae. The Turkish fauna of Idiocerinae should be larger than that listed here. Because there were some female specimens which their identifications could not be done. In case of more careful collecting, the number of species in Idiocerinae will increase.

The generic classification of Idiocerinae made by Dlabola (1974 b) is accepted by the authors in this paper. The synonyms, distribution of each species in Palaearctic region is taken from Nast (1972). In case of additional country, besides Nast (*l.c.*)' distribution is given at the end.

In Idiocerinae, only *Sulamicerus stali* (Fieber) is economically important in Turkey. This species is very destructive on pistachio trees in southeastern part of Turkey, by feeding the nymphs and adults on the leaves, shoots and fruits. The extracted honeydew after feeding, covers up the plant which prevents the normal respiration. Shoots and fruits could not develop normally, buds not open next spring and cause fruit fall in June. Damage is more serious in dry years and cause about 30-40 % fruit loss and the quality is decreased (Alkan, 1953; İleri ve Ayfer, 1954). The biology, control methods and pesticides and distribution of this species in Turkey have been studied extensively also by Tokmakoğlu ve Çelik (1972), Ulu et al. (1972), Tokmakoğlu (1973) and Çelik (1974, 1975). The other species have not been observed to be economically important.

The authors are grateful to Dr. Dlabola, of National Museum (Nat. Hist.) Prague, Czechoslovakia, for his identifications of some species.

Rhytidodus boluicus Dlabola, 1970

General Distribution : Endemic.

Distribution in Turkey : Dlabola (*l.c.*) described this species from the material collected in Bolu (Düzce).

Material examined : Adana (Hasanbeyli), Ankara (Bağlum, Beypazarı), Çankırı (Şabanözü), Diyarbakır (Central province), İzmir (Ayrancılar), Kayseri (Hacılar), Manisa (Alaşehir)-Totally 42 specimens.

Occurrence : Widely distributed, sometimes in large numbers.

Biological note : Specimens were collected starting from mid-June through August mainly on *Populus* and some overwintering adults were obtained under the belt traps on apple trees in December. It seems to be a potential pest of *Populus* sp. in some parts of Western Anatolia.

Rhytidodus decimusquartus (Schrank, 1776)

Synonymy : *Jassus crenatus* Germ., 1827; *J. scurra* Germ., 1837; *Idiocerus germari* Fieb., 1868; *I. scurra fulvus* Rey, 1894.

General distribution : Nearly The Whole Europe except that Peninsula of Scandinavia, but including England, Bulgaria and Yugoslavia, also Tunisia, Sicily, USSR (Armenia, Azerbaijan, Georgia, Kazakhstan, Moldavia, M. and S. Russia, Ukraine, Uzbekistan); (Nearctic and Australian-New Zealand-Regions).

Distribution in Turkey : According to Sekendiz (1974), this species found in Adapazari, İzmit and Urfa (Birecik).

Biological note : Sekendiz (l.c.), states that it attacks to *Populus* spp. especially *P. euphratica* in Birecik; female inserts her eggs into thin branches in autumn and adults can be seen on the trees from the end of May up to the middle of autumn. Its population is not high enough to cause any appreciable damage.

Material examined : Authors have no representative of this species.

Rhytidodus nobilis (Fieber, 1868)

Synonymy : *Bythoscopus trifasciatus* Kbm, 1868

General Distribution : China (Inner Mongolia), USSR. (Caucasus, Kazakhstan, Kirghizia, s.Russia, Tadzhikistan, Ukraine).

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

Material examined : Van (Akköprü) - Only two specimens.

Occurrence : Extremely occasional.

Biological note : The specimens were collected in mid-July. Emelyanov (1964), collected them on *Populus nigra*.

Rhytidodus wagneri Diabola, 1965

General Distribution : (?) Austria, Czechoslovakia, (?) Italy, Mongolia, USSR. (Kazakhstan, Turkmenie, Ukraine).

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

Material examined : Adana (Hasanbeyli), Konya (İçeri Çumra), Manisa (Alaşehir, Gördes), Nevşehir (Çat), Niğde (Ulukışla, Çiftehan, İhlara) - Totally 22 specimens.

Occurrence : Sometimes common especially in central Anatolia, but in small numbers.

Biological note : Specimens were collected mainly in July through October, on *Populus* and some overwintering adults were obtained in early December under the belt traps on apple trees, and some near the apple trees in late April. Dlabola (1974 a) has given *Populus nigra* as the host plant of this species.

Idiocerus herrichi Kirschbaum, 1868

General Distribution : Afghanistan, Austria, Bulgaria, Czechoslovakia, England, Finland, France, Germany, Hungary, Italy, (?) Netherlands, Norway, Poland, Romania, Sweden, Switzerland, USSR, Yugoslavia, Iran, Turkey (Dlabola, 1981).

Distribution in Turkey : Dlabola (1.c.) reported this species from Sivas (Topaluşağı 850 m.) near Fırat river, especially on *Populus* and *Salix*.

Material examined : Ankara (Çubuk, Elmadağ), Çorum, Erzincan (Çağlağan), Erzurum (Uzundere), Kayseri (Himmetdede), Kırşehir (Kaman), Nevşehir (Avanos), Sivas (Susehri), Tokat, Van (Başkale, Akköprü) - Totally 20 specimens.

Occurrence : Common but in small numbers.

Biological note : Specimens were collected in July through August, mostly on *Salix*, some on *Populus* and a few on *Ulmus*, *Tamarix*, *Alhagi* and *Urtica*. This species is found on especially on *Salix* as Dlabola (1961, 1981) and Emelyanov (1964) indicated.

Idiocerus lituratus (Fallen, 1806)

Synonymy : *Iassus dorsiger* Le Peletier et Serville, 1825; *I. lineolatus* Le Peletier et Serville, 1825; *Idiocerus maculipennis* Curtis, 1839; *I. lituratus rubrifrons* Rey, 1894.

General Distribution : Albania, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy, Mongolia, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, USSR, Yugoslavia.

Distribution in Turkey : This species has been listed from Turkey by Horvath (1905), Oshanin (1910, 1912) according to Metcalf (1966). Dlabola (1957) had taken one female specimen in Ankara (Beynam).

The authors have no representative of this species.

Idiocerus stigmatalis Lewis, 1834

Synonymy : *Bythoscopus adustus* H.S., 1837.

General Distribution : Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Spain, Sweden, USSR, Yugoslavia; (Nearctic region).

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

Material examined : Ağrı (Taşlıçay), Trabzon (Maçka) - Totally 5 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected in early July and August. Ribaut (1952) stated that this species found especially on *Salix*, sometimes on *Populus* and *Alnus*.

Idiocerus vicinus Melichar, 1898

General Distribution : Austria, France, Israel, Italy, Spain, USSR., Afghanistan, Crete and Greece, Iran (Dlabola, 1977 a, 1981).

Distribution in Turkey : Species constitutes a new record for Turkey.

Material examined : Adana (Hasanbeyli), Ankara (Central province-Bağlum), Bilecik, Edirne (Lalapaşa), Eskişehir (Seyitgazi), Kayseri (Yeşilhisar), Kütahya, Manisa (Alaşehir), Niğde (Ihlara)-Totally 13 specimens.

Occurrence : Common but in small numbers.

Biological note : Specimens were collected from May through August, and one overwintering adult specimen under the belt trap on an apple tree in December. Specimens were collected mostly on *Salix* and some on *Populus* trees.

Acericerus rodundifrons (Kirschbaum, 1868)

General Distribution : Austria, France, Germany, Italy, Romania, USSR., Yugoslavia, Turkey (Dlabola, 1971), Czechoslovakia (Dlabola, 1977 b).

Distribution in Turkey : Dlabola (1.c.) previously reported this species from Denizli on *Acer campestre*.

Material examined : Artvin (Murgul) - Totally 5 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected in late August on *Acer* sp.

Populicerus albicans (Kirschbaum, 1868)

Synonymy : *Idiocerus albicans fuscocoerulea* Edwards, 1914.

General Distribution : Austria, Czechoslovakia, Denmark, England, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Spain, Sweden, USSR, n. Yugoslavia; (Nearctic region).

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

Material examined : Afyon (Şuhut) - Totaly 6 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected in mid-June on *Populus*. Ribaut (1952) and Emelyanov (1964) reported this species on *Populus alba*.

Populicerus populi (Linnaeus, 1761)

Synonymy : *Cicada coryli* L. 1761; *C. biguttata* F., 1794 (Primary homonym); *Jassus stigma* Germar, 1821; *Jassus marginata* Le Peletier et Serville, 1825; *Idiocerus aeneus* Curtis, 1839; *I. effulgens* Curtis, 1839; *I. sulphurens* Curtis, 1839.

General Distribution : Algeria, Austria, Belgium, China, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Japan, Netherlands, Norway, Palestine, Poland, Portugal, Romania, Spain, Sweden, USSR., Yugoslavia.

Distribution in Turkey : Metcalf (1966) listed this species from Turkey according to Germar (1821) and Flor (1861). This species recorded from Turkey by the above writers but giving without specific location. It is known to Turkey only from these earlier records up to the present time. Also Nast (1972) has not included Turkey in its distribution. Therefore the authors are now able to confirm the presence of this species with its exact finding localities in Turkey.

Material examined : Rize (Kaçkar dağı) - Only two specimens.

Occurrence : Very occasional.

Biological note : Specimens were collected in late-August, on *Alnus*. Ribaut (1952) and Emelyanov (1964) report this species on *Populus alba*, P.

tremulae, and sometimes on *Salix*. Chararas (1972) has given some informations about its biology in Turkey.

Populicerus sharifi Dlabola, 1977 a

General Distribution : Iran (Dlabola, 1.c.).

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

Material examined : Ankara (Çubuk, Etimesgut), Çankırı (Şabanözü), Edirne (İpsala), Kayseri (Himmetdede), Nevşehir (Ürgüp), Van (Akköprü), Yozgat (Çekerek, Sorgun) - Totally 29 specimens.

Occurrence : Common, but sometimes in small numbers.

Biological note : Specimens were collected in July and August, mostly on *Populus*, a few on *Salix*, *Elaeagnus*, *Cupressus* and from light traps.

Sulamicerus ancorarius (Dlabola, 1964)

General Distribution : Afghanistan, Iran, s. Yugoslavia (Dlabola 1974a, 1981).

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

Material examined : Diyarbakır (Lice), Konya (Ermenek), Siirt (Şirvan) - Only 3 specimens.

Occurrence : Very occasional.

Biological note : Specimens were collected from late April to mid-July, on *Quercus*, *Juglans regia* and *Pistacia vera* as Dlabola (1981) stated.

Sulamicerus stali (Fieber, 1868)

Synonymy : *Idiocerus bicolor* Mel., 1896; *I. toktogulensis* Dubovsky, 1970.

General Distribution : Cyprus, Poros, Rhodes, Turkey, USSR. (Kirghizia, Tadzhikistan, Uzbekistan), Iran (Dlabola, 1981).

Distribution in Turkey : Oshanin (1908, 1912) and Lindberg (1948) listed this species from Turkey. Metcalf (1966) also listed it from Turkey according to Melichar and also the authors that are given above. Dlabola (1957) reported this species from Adana (Abacılar-Çakıt). Ulu et al. (1972) had made survey on the pest of pistacio in Aegean Region and concluded that this species was distributed in Aydın, Balıkesir, Çanakkale, İzmir, Manisa, Muğla, Uşak in 1969-1970. Tokmakoğlu (1973) stated that it is found mainly in Gaziantep, Urfa, Maraş, Siirt and Malatya in southeastern part of Turkey and *S. stali* was one of the most important pest of pistacio in that region.

Material examined : Adiyaman (Besni), Gaziantep (Central province-Battal, Cağdin, Güneriz, Araban), Manisa (Alaşehir, K. Belen), Muğla (Bodrum, Gökova, Güllük, Marmaris), Urfa (Birecik, Central province) - Totally 110 specimens.

Occurrence : Common and found sometimes in large numbers.

Biological note : Specimens were collected starting the end of May, through June which has high population, and July and August on *Pistacia vera*, some on *P. terebinthus* and a few on *Celtis* sp. It overwinters as adult stage in sheltered places, become active in early April, begin to lay first eggs on the young shoots, then on leaf stems and fruit clusters within 30-40 days. Nymphs could be seen in late April through May and adults at the end of May. It has one generation in a year.

The overwintering adults cause damage by putting eggs on young shoots, leaf stems and fruit bunches. Nymphs and young adults cause damage by feeding on shoots, leaves and fruits, plant juice come out at the sites of sucking and mixing it with honeydew extracted by the insects and cover up the plants as a sticky material. This sticky material prevents normal respiration of plants, fruits and shoots could not develop next spring, and cause fruit fall in June about 20 % which could reach up to 30-40 % in dry years (Alkan, 1953; İleri ve Ayfer, 1954; Tokmakoglu, 1973; Çelik, 1974).

Viridicerus ustulatus (Mulsant et Rey, 1855)

Synonymy : *Cercopis viridis* Schrank, 1801 (Primary homonym); *Bythoscopus salicetorum* M.R., 1855; *Idiocerus prasinus* Kbm., 1868.

General Distribution : Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, France, Germany, Greece, Hungary, Italy, Jordan, Lebanon, Morocco, Poland, Romania, Spain, Switzerland, Tunisia, USSR, Yugoslavia.

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

Material examined : Bilecik (Bozüyük), Burdur (Central province), Konya (Akşehir, Çumra) - Totally 23 specimens.

Occurrence : Not very common but found in small numbers.

Biological note : Specimens were collected in late April and May on *Populus tremula*, a few on *Salix* and *Pirus elaeagrifolia*. Ribaut (1952) reported it on *Populus alba*, *P. nigra*, *P. tremula* and overwinters on *Juniperus communis*, *Cupressus* and *Tamarix*.

Tremulicerus mesopyrrhus Kirschbaum, 1868

Synonymy : *Idiocerus socialis* Fieb., 1868; *I. mesopyrrhus variegata* Ribaut, 1952.

General Distribution : Afghanistan, France, Greece, Italy, Morocco, Portugal, Spain, Switzerland, USSR, Yugoslavia, Crete (Dlabola, 1977 c).

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

Material examined : Adana (Pozantı), Ankara (Eymir Gölü), Bitlis (Tatvan), Çankırı, Gümüşhane (Kelkit), İzmir (Ödemiş-Bozdağ), Konya (Meram, Seydişehir), Manisa (Alaşehir), Van (Başkale) - Totally 24 specimens.

Occurrence : Occasional, but sometimes in small numbers.

Biological note : Specimens were collected in late April through June, July and August, mainly on *Populus*, a few on *Salix* and *Elaeagnus*.

Tremulicerus poecilus (Herrich-Schaffer, 1835)

Synonymy : *Bythoscopus (Jassus) falciger* Boh., 1845; *Idiocerus discolor* Flor, 1861; *I. venustus* Scott, 1874.

General Distribution : Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Iraq, Italy, Morocco, Norway, Poland, Sweden, Switzerland, Tunisia, USSR., Yugoslavia, Greece, Iran (Dlabola, 1977 c, 1981).

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

Material examined : Bitlis (Tatvan), Gümüşhane (Central province), Kastamonu (Ilgaz dağı 1250 m), Van (Beyüzümü) - Totally 5 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected from mid-July through August and one specimen in November on *Juniperus*. The other specimens were taken on weeds. Ribaut (1952), Emelyanov (1964) and Dlabola (1961, 1981) reported *Salix*, *Populus nigra* and *Carpinus* as the host plants of the species.

Tremulicerus vitreus (Fabricius, 1803)

Synonymy : *Idiocerus auronitens* Kbm., 1868; *I. halbum* Fieber, 1868.

General Distribution : Austria, Belgium, Czechoslovakia, Denmark, England, France, Germany, Italy, Netherlands, USSR., Cyprus, Iran (Dlabola 1958, 1977 a).

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

Material examined : Ankara (Çubuk), Gümüşhane (Kelkit), Konya (İçeri Çumra), Nevşehir (Nar) - Totally 13 specimens.

Occurrence : Occasional, but sometimes in small numbers.

Biological note : Specimens were collected in mid-July and early October, on *Populus* and *Salix*. Ribaut (1952) states that this species found on *Populus nigra*, sometimes on *Alnus* and *Tilia*, and overwinters on *Juniperus*.

Balcanocerus alkani (Wagner, 1958)

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

Distribution in Turkey : This species had been described by Wagner (1958) from the specimens collected in Gaziantep on *Pistacia vera* by Prof. Dr. B. Alkan. Some paratypes are in the collection of Department of Plant Protection, A.Ü. Agricultural Faculty in Ankara. Çelik (1974) also reported this species in Gaziantep on pistachio.

Material examined : Adıyaman (Besni), Gaziantep (Araban, Güneriz), Siirt (Central province, Aydınlar) - Totally 7 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected from early June through July on *Pistacia vera*. Wagner (1958) stated according to the information taken from Prof. Alkan that, this species was found on pistachio with *Sulamicerus stali* (Fieber) in one tenth ratio.

Balcanocerus balcanicus (Horvath, 1903)

General Distribution : Bulgaria, Romania, Turkey, Yugoslavia.

Distribution in Turkey : Zachvatkin (1946) examined the material from western Anatolia collected by N.N. Jenjouriste in 1934. Later Dlabola (1971) reported one female specimen collected in Mersin (Mezitli) by W. Wittmer.

Material examined : Adana (Hasanbeyli), Bingöl, Konya (Karaman), Nevşehir (Central province-Bağcılık İst.) - Totally 8 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected in late April, June and up to the beginning of October, on *Prunus communis* and *Pirus malus*. Dlabola (l.c.) stated that this species is found sporadically on maquis formation.

Balcanocerus brusinae (Horvath, 1891)

General Distribution : Cyprus, Italy, Jordan, Yugoslavia, Turkey, Iran (Dlabola, 1977 c, 1981).

Distribution in Turkey : Ulu et al. (1972) reported this species in Aegean Region on pistachio. Dlabola (1977 c) reported it from Diyarbakır (Çermik-Sinek) collected on *Celtis*.

Material examined : Adana, Diyarbakır (Çermik-Sinek), Gaziantep (Arab), Gümüşhane (Torul), Muğla (Central province, Ula) - Totally 9 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected in June and July, on *Salix*, *Celtis* and some weeds. Ulu et al. (1.c.) reported it being harmful to pistachio in Aegean Region. Dlabola (1981) also reported it on pistachio from Iran.

Balcanocerus larvatus (Herrich-Schaffer, 1837)

Synonymy : *Cicada exaltata* 1803 (Primary homonym); *C. notata* F., 1803 (Primary homonym).

General Distribution : Austria, Belgium, Czechoslovakia, Denmark, France, Germany, Greece (Corfu), Hungary, Israel, Italy (?), Norway, Poland, Romania, USSR., Yugoslavia, Cyprus, n.Africa (Dlabola, 1977 c).

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

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

Occurrence : Very occasional.

Biological note : Specimens were collected in early July. Ribaut (1952), Dlabola (1961) and Emelyanov (1964) reported it on *Prunus spinosa*, Linnavori (1962) on *Prunus amygdalinus* in Israel.

Balcanocerus ramallahicus Dlabola, 1965

General Distribution : Jordan.

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

Material examined : Ankara (Lalahan), Gaziantep (Güneriz) - Totally 9 specimens.

Occurrence : Occasional.

Biological note : Specimens were collected starting from early June through September, on *Prunus amygdalinus* and *Pistacia vera*.

Taeniocerus ocularis (Mulsant et Rey, 1855)

Synonymy : *Idiocerus taeniops* Fieber, 1868.

General Distribution : Albania, Algeria, Cyprus, France, Italy, Libya, Morocco (?), Netherlands, Spain, Tunisia, USSR., Yugoslavia, Greece, Turkey (Dlabola, 1977 c, 1981).

Distribution in Turkey : Dlabola (1981) recently reported one specimen from Mersin (Erdemli) collected in 1970 on maquis formation.

Material examined : Bitlis, Hakkari (Çukurca), Manisa, Niğde (Ihlara) - Only 4 specimens.

Occurrence : Very occasional.

Biological note : Specimens were collected in early May and June, on *Pistacia vera* and various weeds. Lindberg (1948) also reported it on pistachio in Cyprus. Emelyanov (1964) reports on *Populus alba*, Dlabola (1977 c, 1981) on maquis formations.

Özet

Türkiye Auchenorrhyncha türlerinin yayılış ve önemlerine ait notlarla ön listesi. VIII. Familya Cicadellidae : Idiocerinae

Bu makalede Türkiye'de 1979 yılı sonuna kadar bulunmuş olan Idiocerinae türleri listelenmiştir. Bu liste, Idiocerinae altfamilyasından 9 cinse ait 24 türü kapsamaktadır. Bu faunistik çalışma sonunda bu altfamilyaya bağlı 13 tür: *Rhytidodus nobilis* (Fieber), *R. wagneri* Dlab., *Idiocerus stigmatalis* Lewis, *I. vicinus* Mel., *Populicerus albicans* (Kbm.), *P. scharifi* Dlab., *Sulamicerus ancorarius* (Dlab.), *Viridicerus ustulatus* (M.R.), *Tremulicerus mesopyrrhus* (Kbm.), *T. poecilus* (H.S.), *T. vitreus* (F.), *Balcanocerus larvatus* (H.S.), *B. ramallahicus* Dlab. Türkiye için yeni kayıt olarak tesbit edilmiştir. Her bir türün yayılışı, ekonomik önemi ve üzerinde toplandıkları bitkiler verilmiştir.

Literature cited

- Alkan, B., 1953. Antep fıstığının başlıca hastalık ve zararlıları. A.Ü. Ziraat Fakültesi Yıllığı, Fas. 3-4: 209-225.
- Chararas, C., 1972. Les insectes du peuplier. Ed. Librairie de la Faculté des Sciences, Paris, 372 pp.

- Çelik, M.Y., 1974. Preliminary studies on the relation between the sucking insects infestation and the empty fruit formation pistachio trees in Gaziantep province. *Plant Protection Research Annual, Ankara, Sayı: 8:37, 143.*
- , 1975. Preliminary studies on determining the pests and useful insects of pistachio nut (*Pistacia vera*), in Gaziantep province. *Plant Protection Research Annual, Ankara, Sayı: 9:43, 146.*
- Dlabr'a, J., 1957. Results of the zoological expedition of the National Museum in Pragae to Turkey. 20. Homoptera Auchenorrhyncha. *Acta ent. Musei Nat. Pragae, 31 (469) : 19-68.*
- , 1958. Records of Leafhoppers from Czechoslovakia and South European Countries. *Acta Faun. Ent. Mus. Nat. Pragae, 3:7-15.*
- , 1961. Die Zikaden von Zentralasien, Dagestan und Transkaukasien. *Acta Ent. Mus. Nat. Pragae, 34:241-358.*
- , 1970. Ergebnisse der zoologischen forschungen von Dr. Z. Kaszab in der Mongoloei. 220. Homoptera, Auchenorrhyncha. *Acta. Zool. Acad. Sci. Hung., 16 (1-2):1-25.*
- , 1971. Taxonomische und Chorologische Ergänzungen zur Türkischen und Iranischen Zikadenfauna (Homoptera, Auchenorrhyncha). (Sammelausbeute von Dr. Wittmer, mit einem Nachtrag über andere Gebiete der Paläarktis). *Acta Faun. Ent. Mus. Nat. Pragae, 14:115-138.*
- , 1974 a. Ergebnisse der Tschechoslowakisch-Iranischen entomologischen expedition nach dem Iran 1970. Nr.3. Homoptera, Auchenorrhyncha (1. Teil). *Acta Ent. Mus. Nat. Pragae. Suppl. 6:29-73.*
- , 1974 b. Generische gliederung der unter familie Idiocerinae in der Paläarktis (Homoptera: Auchenorrhyncha). *Acta. Faun. Ent. Nat. Pragae, 15:59-68.*
- , 1977 a. Neue Iranische Cicadelliden Gattungen und Arten mit faunischen Erstfunden (Homoptera, Auchenorrhyncha). *Acta Ent. Bohem. 74 (4): 242-262.*
- , 1977 b. Homoptera, Auchenorrhyncha. *Acta. Faun. Ent. Mus. Nat. Pragae. Suppl. 4:83-96.*
- , 1977 c. Chorologische Ergänzungen zur Zikaden fauna des Mittelmeergebietes (Hom: Auchenorrhyncha). *Acta Ent. Mus. Nat. Pragae, 33B (1-2): 21-31.*
- , 1981. Ergebnisse der Tschechoslowakisch-Iranischen entomologischen expeditionen nach dem Iran (1970 und 1973) (Mit Angaben über einige Sammelresultate in Anadolien) Homoptera: Auchenorrhyncha (II. Teil). *Ibid., 40:127-311.*
- Emelyanov, A.F., 1964. Suborder Cicadinea (Auchenorrhyncha). Keys to the insects of the European USSR. Vol. 1. Apterygota, Palaeoptera, Hemimetobola. Ed: Ga. Ya. Bei-Bienko. Academy of Sciences of the USSR, Zoological

Keys to the Fauna of the USSR. 84:421-551.

- İleri, M. ve M. Ayfer, 1954. Antep fıstığı (*Pistacia vera*) zararlıları ve hastalıkları. Adana Ziraat Mücadele Enstitüsü Yayını: 11,25 s.
- Lindberg, H., 1948. On the Insect Fauna of Cyprus. Results of the expedition of 1939 by Harold Hakan and P.H. Lindberg, II. Heteroptera und Homoptera Cicadina der Insel Zypern. *Comm. Biol.*, 10 (7):23-175.
- Linnavuori, R., 1962. Hemiptera of Israel. III. *Ann. Zool. Soc. «Vanamo»* 24:1-108.
- Metcalf, Z.P., 1962. General Catalogue of the Homoptera. Fas. VI. Cicadelloidea. Pt. 3. Gyponidae. ARS, USDA, 229 pp.
- , 1966. General Catalogue of the Homoptera. Fas. VI. Cicadelloidea. Pt. 16. Idioceridae. ARS, USDA, 237 pp.
- Nast, J., 1972. Palaearctic Auchenorrhyncha (Homoptera). An Annotated Check List. Polish Acad. Scien. Inst. Zool. Polish Scien. Pub. Warszawa, 551 pp.
- Oshanin, B., 1908. Verzeichnis der Paläarktischen Hemipteren. Mit besonderer Berücksichtigung Ihrer Verteilung im Russischen Reiche. II. Band Homoptera. Beilage zum «Annuaire de Musee Zoologique de l'Academie Imperiale des Sciences» Bd. XI, XII, XIII, 1906-1908. St. Petersburg. I-XVI, 493 pp.
- , 1912. Katalog der Paläarktischen Hemipteren (Heteroptera, Homoptera Auchenorrhyncha und Psylloidea). Verlag von R. Friedlander und Sohn, Berlin, 187 pp.
- Ribaut, H., 1952. Faune de France 57. Hemiptères Auchenorrhynques. II (Jassidae). Fédération Française des Sociétés Naturelles Office Central de Faunistique, 474 pp.
- Sekendiz, O.A., 1974. Türkiye hayvansal kavak zararlıları üzerine araştırmalar. K.T. Ü. Orman Fak. Yayın No. 3:194 s.
- Tokmakoglu, C. 1973. Antep fıstığı (*Pistacia vera*) zararlısı sıralı zenk (*Idiocerus stali* Fieb.)'e karşı sistematik etkili ilaçlarla yapılan denemeler. *Bitki Koruma Bülteni*, 13 (1):35-42.
- ve M.Y. Çelik, 1972. Insecticide experiment on Pistachio leafhopper *Idiocerus stali* Fieb. Plant Protection Research Annual, Ankara. Sayı: 6:57, 186.
- Ulu, O., A. Zümreoğlu ve S. San, 1972. The preliminary studyings on the pests parasites and predators of the Pistachio nuts in Aegean Region. Plant Protection Research Annual. Sayı: 6:55, 184.
- Wagner, W., 1958. *Pistacia vera*'da zararlı yeni bir *Idiocerus* türü (Homoptera, Jassidae). Çeviren: Z. Düzgüneş, 1960. *Bitki Koruma Bülteni*, 1 (4-5) : 58-61. (Original in: Entomologische Mitteilungen aus dem Zoologischen Stats Institut u. Zoologischen Museum Hamburg, No: 16.
- Zachvatkin, A.A., 1946. Studies on the Homoptera of Turkey. *Trans. Royal Ent. Soc. London*, 97 (6) : 149-178.