

**Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. XI. Family Cicadellidae, Typhlocybinae : Alebrini and Dikraneurini**

Niyazi LODOS\*

Ayla KALKANDELEN\*\*

**Summary**

This paper includes eleven species of 7 genera from two tribes. Only *Micantulina* (*Micantulina*) *micantula* (Zett.) is a new record for the Turkish fauna. Distribution, abundance and plants which the specimens were collected on of each species are given.

**Introduction**

Oshanin (1906-1908, 1912) has made earliest records of two species, *Micantulina* (*Mulsantina*) *stigmatipennis* (M. R.) and *Alebra albostriella* (Fall.) from Turkey. Fahringer (1922) followed him also with two species, *Dikraneura variata* Hardy and *Notus flavipennis* (Zett.). However the presence of these last two species in Turkey seem to be doubtful today. Ribaut (1936) listed only *M. (M.) stigmatipennis* from Turkey. Dlabola (1957, 1971b, 1981) recorded the following species from Turkey: *A. albostriella*, *A. wahlbergi* (Boh.) *Liguporia juniperi* (Leth.), *M. (M.) stigmatipennis*, *Erythria* (*Erythria*) *aureola* (Fall.), *M. (M.) acuticeps* (Linn.), *M. (M.) teucarii* (Cerutti). Linnavuori (1965) added *Emelyaniviana mollicula* (Boh.) to the Turkish fauna with addition of two previously recorded species (namely

---

\* University of Ege, Faculty of Agriculture, Department of Plant Protection, İzmir / Turkey.

\*\* Plant Protection Research Institute, Plant Protection Museum, Kalaba - Ankara / Turkey.

*A. albostriella* and *L. juniperi*). Metcalf (1968) also listed 4 species from Turkey according to the earlier workers.

Synonyms, distribution of species in Palaearctic region are taken from Nast (1972). In case of additional country, it is given with literature citation at the end.

Many Typhlocybae species cause extensive damage to cultivated plants by sucking the plant juice and dry them up when they build up in large populations, especially at early stage of plants. In this group of Typhlocybae, only *A. albostriella* was reported to be economically harmful on Chestnut, Apple, Alder and especially on Hazelnut in Italy by Viggiani (1971). It was also found on other forest trees. *A. wahlbergi* was also found feeding on Hazelnut, but injury caused by this pest is not important. However none of the species reported in this paper are economically important in Turkey today.

The authors would like to express their thanks to Dr. J. Dlabola, of National Museum (Nat. Hist.) Pragae, Czechoslovakia, for the identification of some species.

### Alebrini

*Alebra albostriella* (Fallén, 1826)

Synonymy : *Cicada elegantula* Zett., 1823; *Typhlocyba discicollis* H. S., 1834; *Eupteryx fasciata* Curt., 1837; *Typhlocyba fulveola* H. S., 1838; *T. eximia* Hardy, 1850; *T. fastuosa* Graaf, Six et Snellen van Vollenhoven, 1862; *Alebra albostriella viridis* Rey, 1894; *A. flavocephala* Kupka, 1899; *A. albostriella diluta* Ribaut, 1936; *A. albostriella dufouri* Ribaut, 1936.

General Distribution: Algeria, Austria, Azores, Belgium, Bulgaria, Czechoslovakia, Denmark, England, France, Germany, Hungary, Ireland, Israel, Italy, Jordan, Madeira Archipelago, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Syria, Turkey, USSR., Yugoslavia; (Nearctic region). Greece (Dlabola, 1977 b), Iran (Dlabola, 1981).

Distribution in Turkey: Oshanin (1912) listed it from Turkey. Linnavuori (1965) collected many specimens near Bolu and İzmit and one specimen on Yayladağ - Belen way. Dlabola (1957, 1971 b, 1981) also recorded it from Adana (Tapan Gavur dağı), Bitlis (Tatvan), İzmit (Sapanca Gölü), Malatya (Karahan geçidi 1880 m), Maraş (Nuruhak Dağı) and 30 km southeast of Kütahya.

Material examined: Ankara (Kırıkkale), Artvin (Murgul), Çorum (Central province, Bayat), İzmir (Tire), Kayseri (Erciyes), Ordu (Mesudiye) - Totally 41 specimens.

Occurrence: Common, but sometimes in small numbers.

Biological note: Specimens were collected starting from the beginning of May up to September, mostly in Chestnut, Wild Pear and some on Juniper, Tamarisk and *Centaurea*, Oak, Alder, Birch, Hawthorn, Hazelnut, Lime, Jujube, Maple and Sorb trees are given as host plants for this species by other workers (Ribaut, 1936; Dlabola, 1971 b; Emelyanov, 1964). According to Viggiani (1971), it is largely found on Chestnut, Apple, Birch and Hazelnut trees in Italy. The majority of the examined specimens in this study, were collected on Wild Pear and Chestnut trees.

*Alebra wahlbergi* (Boheman, 1845)

Synonymy: *A. albostriella insignata* McAtee, 1926; *A. wahlbergi pallescens* Ribaut, 1936; *A. wahlbergi brunnea* Ribaut, 1936.

General Distribution: Algeria, Austria, Belgium, Czechoslovakia, Denmark, England, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Sweden, Switzerland, Turkey, USSR., Yugoslavia.

Distribution in Turkey: Dlabola (1957) collected only two specimens in Adana (Kozan-Toros, Karataş).

Material examined: İstanbul (Beşiktaş) and Mardin (Midyat) - Only two specimens.

Occurrence: Very occasional.

Biological note: Specimens were collected in mid-June and the beginning of July. Oak, Maple, Birch, Elm, Lime, Tilia, Hazelnut, Hawthorn, Sorb and Chestnut trees are given as host plants of this species (Ribaut, 1936; China, 1943; Emelyanov, 1964), but it is stated that this species is rarely found on Oak. Viggiani (1971) believed that this species is not a serious pest on Hazelnut in Italy.

### Dikraneurini

*Erythria (Erythria) aureola* (Fallén 1806)

Synonymy: *Typhlocyba chlorophana* H.S., 1843; *Erythria luteipes* Prohaska, 1923.

General Distribution: Austria, Belgium, Czechoslovakia, Denmark, England, Finland, France, Germany, Italy, Netherlands, Norway, Poland,

Romania, Spain, Sweden, Switzerland, USSR., Yugoslavia. Iran and Turkey (Dlabola, 1971 b).

Distribution in Turkey: Dlabola (1971 b) recorded it from Bitlis (Baykan).

Material examined : Ankara (Karagöl) - Only three specimens.

Occurrence: Occasionally.

Biological note : Specimens were collected at the beginning of July and mid-September, on weeds (Species is unknown). Ribaut (1936) and Dlabola (1971 b, 1977 b), Emelyanov (1964) reported *Calluna vulgaris* and *Thymus* as its host plants.

*Liguropia juniperi* (Lethierry, 1876)

Synonymy: *L. menozii* Haupt, 1930.

General Distribution: Algeria, Cyprus, France, Italy, (also Sardinia and Sicily), Tunisia, Turkey, Yugoslavia.

Distribution in Turkey: Dlabola (1957) recorded it from Adana (Karapınar-Toros) and Linnavuori (1965) also from Adana (Gülek geçidi).

Material examined: İzmir (Menemen) - Only one specimen.

Occurrence: Very occasionally.

Biological note : One specimen was collected in mid-July. Cypress and species of Juniper are given as host plants of this species (Ribaut, 1936; Dlabola, 1957; Linnavuori, 1965).

*Emelyanoviana mollicula* (Boheman, 1845)

Synonymy: *Typhlocyba facialis* Flor, 1861; *T. florii* Kbm., 1868; *Notus albicans* Lett., 1876.

General Distribution: Albania, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Netherlands, Tunisia, Turkey, USSR, Yugoslavia. Greece (Dlabola, 1977 b).

Distribution in Turkey: Linnavuori (1965) collected two specimens in Bolu (Akçakoca). Later on Dlabola (1971 a) reported it from İzmir.

Material examined: Ankara (Karagöl) - Only one specimen.

Occurrence: Very occasionally.

Biological note: One specimen was collected in mid-September. Other authors reported Labiatae (*Hyssopus officinalis*, *Melissa officinalis*, *Ocimum basilicum*, *Origanum majorana*, *O. onites*, *O. vulgare*, *Salvia officinalis*, *S. sclarea*, *Thymus serpyllum*), *Ononis*, *Veronica*, *Chrysanthemum balsamita* as host plants of this species (Ribaut, 1936; China, 1943; Vidano and Arzone, 1978).

*Dikraneura variata* Hardy, 1850

Synonymy : *Notus agnatus* Lett., 1874; *Dikraneura lenensis* Linn., 1853.

General Distribution: Austria, Belgium, Czechoslovakia, Denmark, England, Finland, Germany, Greece (Corfu), Hungary, Italy, Netherlands, Poland, Romania, Switzerland, Turkey, USSR., (Nearctic region).

Distribution in Turkey: This species has been recorded from Eskişehir in 1912 by Fahringer (1922) under the name of *Diraneura luteola* Put. which is later on proved that it is actually *D. variata* Hardy (Ribaut, 1936; China, 1943).

Occurrence: Although this species reported by Fahringer (1922) and listed from Turkey by Nast (1972), there has been no other records. Also the authors have not collected any material. Therefore we are doubtful for the presence of this species in Turkey.

*Micantulina (Micantulina) micantula* (Zetterstedt, 1840)

Synonymy: *Dikraneura quinquepunctata* Melichar, 1900; *Cicadella fieberi* Metcalf, 1968.

General Distribution: Algeria, Austria, Czechoslovakia, Denmark, Finland, n. Italy, Mongolia, Norway, Poland, Sweden, Switzerland and USSR; Iran (Dlabola, 1977 a).

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

Material examined: Erzincan (Çağlayan) and Kastamonu. Totally 36 specimens.

Occurrence: Not common but found in small numbers.

Biological note : Specimens were collected at beginning of July, 1970, at humid habitat. Dlabola (1966) reported *Ballota*, *Aegopodium*, *Filipendula* as host plants of this species.

*Micantulina (Mulsantina) acuticeps* (Linnavuori, 1962)

General Distribution: Cyprus, Israel, Turkey, Iran (Dlabola, 1971 b).

Distribution in Turkey: Dlabola (1971 b) recorded it from Çorum (Delice river - Sungurlu), Hakkari and Van (Başkale).

Material examined : Ankara (Beypazarı), Kayseri (Yeşilhisar) and Nevşehir (Gülşehir). Totally 10 specimens.

Occurrence: Occasionally.

Biological note: Specimens were collected in July-August, mostly on Elm tree. Some also caught by light trap. Dlabola (1971 b) collected it on *Verbascum*.

*Micantulina (Mulsantina) stigmatipennis* (Mulsant et Rey, 1855)

Synonymy : *Typhlocyba quadripunctata* Kbm., 1868; *Notus pulcherrimus* Horv., 1884.

General Distribution : Austria, Bulgaria, Cyprus, Czechoslovakia, France, Germany, Greece, Italy (also Sardinia and Sicily), Spain, Turkey, USSR., Yugoslavia. Iran (Dlabola, 1981).

Distribution in Turkey: Oshanin (1906-1908) and Metcalf (1968) listed it from Turkey. Ribaut (1936) recorded it as northern Anatolia. Dlabola (1957, 1981) reported it from Ankara (Mogan Gölü), Kayseri (Topaluşağı, 850 m), Van (Başkale).

Material examined: Istanbul, Ankara (Çubuk, Karagöl, Eymir gölü, Lalahan, Elmadağ), Burdur (Karagent köyü), Isparta (Kayı köyü, Yakiören), İzmir (Bornova), Manisa (Gölmarmara) - Totally 200 specimens.

Occurrence : Common and sometimes in large numbers.

Biological note : Specimens were collected from late April through the beginning of September. *Verbascum* is given as a host plant by other workers. Many specimens were captured by light trap.

*Micantulina (Mulsantina) teucris* (Cerutti, 1938)

Synonymy: *Dicraneura teucris impunctata* Cerutti, 1938; *D. teucris incompleta* Cerutti, 1938.

General Distribution: Austria, Bulgaria, Italy, Switzerland, USSR (Ukraine), Yugoslavia. Turkey, Greece (Dlabola, 1971b, 1977b).

Distribution in Turkey: Dlabola (1971 b) recorded it from Çorum (Delice river-Sungurlu), Bolu (Düzce), Van (Başkale), Eskşehir and Bilecik.

Material examined: Ankara (Polatlı) - only one specimen.

Occurrence: Extremely occasional.

Biological note: One specimen was collected in late May. From the material recorded by Dlabcla (1971 b), it appears to be found from late May through mid-September on steppe vegetation.

*Notus flavipennis* (Zetterstedt, 1828)

Synonymy: *Cicadula orichalcea* Dahlb., 1850; *Notus marginatus* J. Sahlberg, 1871; *Dicraneura armata* Buckton, 1891; *D. armata* Haupt, 1912 (Primary homonym); *D. haupti* Osh., 1912.

General Distribution: (?) Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy, Mongolia, Netherlands, Norway, Poland, Romania, Spain, Switzerland, USSR; (Nerctic region).

Distribution in Turkey: Although Fahringer (1922) reported it from Bursa (Uludağ 1300 m on *Circium hypoleucum*) under the name of *Dicraneura flavipennis* Zett., Turkey is not listed in the distribution list of this species in Nast (1972). There has been no other record made from Turkey up to this time. The authors also have no representative material of this species to confirm its presence in Turkey at the time of publication of this paper. Therefore its presence of this species in Turkey is known to us only Fahringer's (l.c.) record.

## Özet

Türkiye Auchenorrhyncha türlerinin yayılışı ve önemlerine ait ön listesi.  
XI. Familya Cicadellidae: Typhlocybinæ: Alebrini ve Dikraneurini

Bu makale yukarıda isimleri verilen tribus'lere dahil 7 cinsin 11 türünü kapsamaktadır. Bunlardan sadece *Micantulina (Micantulina) micantula* (Zet.) Türkiye faunası için yeni kayıttır. Her bir türün yayılışı, ekonomik önemi ve üzerinde toplandığı bitkiler verilmeye çalışılmıştır.

## Literature cited

China, W.E., 1943. New and Little-known Species of British Typhlocybidæ with Keys to the Genera *Typhlocyba*, *Erythroneura*, *Dicraneura*, *Notus*, *Empoasca* and *Alebra*. *Trans. Soc. Brit. Ent.*, 8 (4): 111-153.

- Diabola, J., 1957. Results of the Zoological Expedition of the National Museum in Prague to Turkey. 20. Homoptera, Auchenorrhyncha. *Acta Ent. Mus. Nat. Pragae*, 31 (469): 19-68.
- , 1966 - Ergebnisse der mongolisch - deutschen Expeditionen 1962 und 1964. Nr. 16. Homoptera Auchenorrhyncha. *Acta entom. bohemoslovaca*, 63: 440-452.
- , 1971 a. 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.
- , 1971 b. Taxonomische und chorologische Ergänzungen der Zikadenfauna von Anatolien, Iran, Afghanistan und Pakistan (Homoptera, Auchenorrhyncha). *Acta entom. bohemoslovaca*, 68 (6): 377 - 396.
- , 1977 a. Neu Iranische Cicadelliden Gattungen und Arten mit faunistischen Erstfunden (Homoptera, Auchenorrhyncha). *Ibid.*, 74 (4): 242-262.
- , 1977 b. Chorologische Ergänzungen zur Zikadenfauna des Mittelmeergebietes (Homoptera, Auchenorrhyncha). *Acta Ent. Mus. Nat. Pragae*, 33 B (1 - 2): 21-31.
- , 1981. Ergebnisse der Tschechoslowakisch - Iranischen Entomologischen Expeditionen nach dem Iran (1970 und 1973) (Mit Angaben über einige Sammelresultate in Anatolien) 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
- Fahringer, J., 1922. Eine Rhynchotenausbeute aus der Türkei, Kleinasien und den benachbarten Gebieten. *Konowia*, 1: 296-307.
- Linnavuori, R., 1965. Studies on the South and East-Mediterranean Hemipterous fauna. *Acta Entomol. Fennica, Helsinki*, 21 : 1-70
- Metcalf, Z. P., 1968. General Catalogue of the Homoptera. Fas. VI. Cicadelloidea. Pt. 17 Cicadellidae. ARS. USDA. Washington, D.C. 1513 pp.
- Nast, J., 1972. Palaearctic Auchenorrhyncha (Homoptera). An Annotated Check List. Polish Academy of Sciences Institute of Zoology. Polish Scientific Publishers, Warszawa, 551 pp.
- Oshanin, B., 1936-1908. Verzeichnis der Palaearktischen 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. 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., 1936. Faune de France. 31. Homoptères Auchénorhynques. I (Typhlocybidae). Fédération Française des Sociétés de Sciences Naturelles. Office Central de Faunistique, 228 pp.
- Viggiani, G., 1971. Ricerche sulla entomo fauna dell nocciola. III. Le cicaline (Homoptera, Typhlocybidae). 1. Identificazione delle species e reperti biologici preliminari. **Boll. Lab. Entomol. Agr. Portici**, 29: 149-173.
- Vidano, C. and A. Arzone, 1978. Typhlocybinae on Officinal Plants. Auchenorrhyncha Newsletter I. Abstracts of Auch. Workshop 23-25 th August 1978, Wageningen, The Netherlands (Edited by R.H. Cobben. Laboratory of Entomology, Agrucutural University, Wageningen.), 33 pp.