

## DATA ON THE OCCURRENCE AND DISTRIBUTION OF SOME TABANIDS (DIPTERA) IN ROMANIA.

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Data concerning the distribution of 47 species are presented, out of which two, *Hybomitra expollicata* (Pand.) and *Haematopota scutellata* Ols., Mch. et Chv. are signalled for the first time in the fauna of the country.

During the 20 years that have elapsed since the publication of Dinulescu's work (1958), no more studies have been devoted exclusively to Tabanids in Romania. Data about them appeared however in papers concerning other families of the order Diptera — Weinberg (1960, 1968, 1972, 1974 1976), Brădescu (1963) and Nagy (1972).

As it also results from the work of Chvála, Lyneborg and Moucha (1972) the distribution of Tabanids in Romania is still little known.

In my turn, consulting older papers — Fleck (1904), Frivaldszky (1872, 1876), Móczár (1952), Mocsáry (1872), Strobl (1896), Thalhammer (1918) — referring to the occurrence of these Dipterans in Romania, I am presenting some data additional as compared to Dinulescu's work (op. cit.) (collecting localities, altitude, number and sex of specimens) for 28 species, 2 of which (*Haematopota csikii* Szil. and *Tabanus rupium* Br.) were not mentioned in the fascicle of Fauna.

The present paper also includes the results of the identification of 214 Tabanids in the collections of the “Grigore Antipa” Museum, captured all over the country, including some natural reservations such as the Retezat National Park. I identified in this material 39 species, 2 of which are signalled for the first time in the fauna of our country.

The material of the collections of the “Grigore Antipa” Museum has been captured (1948—1980) by the following researchers: Gabriela Andrei, M. Băcescu, Vl. Brădescu, Margareta Cantoreanu, I. Drăghia, I. Firu, N. Găldean, Anneliese Ionescu, Victoria Iuga-Raica, B. Kis, D. Manoleli, Amelie Marcus, C. Nagy, St. Negru, A. Papadopol, C. Pârvu, A. Popescu-Gorj, Atena Roșca, Xenia Scobiola, I. Sienkiewicz, C. Tărăbuță, St. Torcea, C. Vlad, Medeea Weinberg, E. Worell.

- A. — Agigea (Constanța)  
 Ai. — Aiud (Alba)  
 Al. — Aleșd (Bihor)  
 Am. — Amara Lake (Ialomița)  
 Az. — Azuga (Prahova)  
 B. — Baia Mare (Maramureș)  
 Ba. — Babadag (Tulcea)  
 Bd. — Bădila IAS (Tulcea)  
 Bg. — Bugiulești (Vâlcea)  
 Bi. — Bîlea Lake (Făgăraș Mts.)  
 Bl. — Beliu (Arad)  
 Bn. — Băneasa Forest (Constanța)  
 Br. — Borșa (Maramureș)  
 Bt. — Bașta (Bacău)  
 C. — Caraorman (Tulcea)  
 Cb. — Cibin Mts.  
 Cd. — Cindrel (Cibin Mts)  
 Cg. — Cugir (Alba)  
 Cl. — Cluj-Napoca (Cluj)  
 Cm. — Cimpina (Prahova)  
 Cn. — Cernica Lake (Ilfov)  
 Co. — Comana (Ilfov)  
 Cp. — Cîrpa (Hunedoara)  
 Cr. — Crișan (Tulcea)  
 Cs. — Carașova (Caraș-Severin)  
 Cv. — Comarova Forest-Mangalia (Constanța)  
 D. — "Donnea" block station, 12. Km. S.,  
     S.E. from Cugir  
 Db. — Dumbrava Sibiu (Sibiu)  
 E. — Eforie (Constanța)  
 Es. — Esecchio (Constanța)  
 (F.) — F r i v a l d s z k y  
 (Fl.) — F l e c k  
 Fn. — Fundata Lake (Ialomița)  
 G. — Glimboaca (Sibiu)  
 Gb. — Grebeneac-Domogled (Caraș-Severin)  
     (Caraș-Severin)  
 Ge. — Geaca (Cluj)  
 Gr. — Greci (Tulcea)  
 Gș. — Gușterița (Sibiu)  
 Gu. — Gura Zlata (Retezat Mts.)  
 H. — Hagieni Forest-Constanța (Constanța)  
 Hc. — Băile Herculane (Caraș-Severin)  
 I. — Ieșelnița (Mehedinți)  
 L. — Lacu Roșu (Harghita)
- M. — Mangalia (Constanța)  
 Mc. — Măcin (Tulcea)  
 Mg. — Măgura (Alba)  
 Mh. — Mehadia (Caraș-Severin)  
 (Mo.) — M ó c z á r  
 (Moc.) — M o c s á r y  
 N. — Negoii (Făgăraș Mts.)  
 Nc. — Niculițel (Tulcea)  
 O. — Ocna Sibiu (Sibiu)  
 Ol. — Orlat (Sibiu)  
 Or. — Oradea (Bihor)  
 Oș. — Orșova (Mehedinți)  
 P. — Padiș Chalet (Apuseni Mts.)  
 Pd. — Podul Beului-Nera Valley (Caraș-Severin)  
 Pn. — Poiana Stinei (Prahova)  
 Po. — Poiana Izei (Maramureș)  
 Pr. — Preajba (Dolj)  
 Ps. — Palas (Constanța)  
 Pt. — Păltiniș (Sibiu)  
 R. — Răcătău (Brașov)  
 Rl. — Riul Mare (Alba)  
 Ro. — Roman (Neamț)  
 Rs. — Reșița (Caraș-Severin)  
 S. — Sarinasuf (Tulcea)  
 Sb. — Sibiu (Sibiu)  
 Sc. — Scărișoara-Belioara (Alba)  
 Se. — Semic Mts.  
 Sf. — Sfintu Gheorghe (Tulcea)  
 Sg. — Sighișoara (Mureș)
- Si. — Sinaia (Prahova)  
 Sl. — Slănic Moldova (Bacău)  
 Sn. — Sulina (Tulcea)  
 St. — Slătioara (Suceava)  
 Ș. — Șimleu (Sălaj)  
 So. — Șontea-Delta Dunării  
 Sr. — Șura Mică (Sibiu)  
 T. — Techirghiol (Constanța)  
 (Th.) — T h a l h a m m e r  
 Tl. — Tulnici (Vrancea)  
 Tr. — Turnu Roșu (Sibiu)  
 Va. — Valul lui Traian (Constanța)  
 Vd. — Vidra (Vrancea)  
 Vg. — Văliug (Caraș-Severin)  
 Vl. — Valea Lungă (Bucegi Mts.)  
 Z. — Zimbru (Arad)

In the list of abbreviations, the counties and the mountains are noted within brackets. In the text, brackets include the abbreviations of authors in whose papers I found data not mentioned in the fascicle of fauna. The list of species is presented below, according to the nomenclature of the book of Chvála, Lyneborg and Moucha (op. cit.)

*Pangonius pyritosus* Loew. 1 ♂, 2 ♀♀, H., 19.VI.1962, 29.VII.1973; 2 ♂♂, Ps., 21.VI.1962; 1 ♂, Cv., 16.VI.1965; 3 ♂♂, 1 ♀, Bn., 16.VII.1964, 30.VII.1965; 1 ♂, Es. 8.VI.1961; 3 ♂♂, 7 ♀♀, A., 20.VI.1960, 18.VI.1962, 15—26.VI.1964, 1.VII.1977; 2 ♂♂, 2 ♀♀, T., 17.VI.1958, 20.VI.1962; 1 ♀, E., 20.VI.1962; 3 ♂♂, Va., 19.VI.1955, 29.VI.1.VII.1961; 2 ♀♀, Gr., 11.VI.196

11.VII.1960; 5 ♂♂, Nc., 25.—29.VI.1967; 6 ♂♂, 5 ♀♀, C., 21.VII.1962, 10.V.1967.

*Chrysops caecutiens* (L.) Or. (Moc.); Cg., Vg., (F.); 1 ♂, 1 ♀, O., 21.VI., 24.VII.1896 (S.); 1 ♀, Şr., 10.VII.1896 (S.); Cg., 310. m., D., 1200.—1300. m. (Mo.); 1 ♀, Sl., 17.VII.1977; 1 ♀, Db., 29.VI.1961; 1 ♀, Tl., 18.VII.1963; 1 ♀, Ş., 30.VII.1957; 1 ♀, Z., 14.VIII.1960; 1 ♂, Ba., 9.IX.1967.

*Ch. viduatus* F. 1 ♂, O., 14.VII.1895 (S.); 1 ♀, Hc., 13.VII. 1976; 15. ♀♀, H., 19.VI., 12.—13.VIII.1962, 23.VII.1963; 1 ♀, Cv., 2.VI.1962; 1 ♂, A., 31.V.1962; 9 ♂♂, 2 ♀♀, M., 4.VI.1962.

*Ch. parallelogramus* Zell. Or. (Th.)

*Ch. flavipes* Meig. Gb. (F.); 1 ♂, Or. 2.VIII.1964.

*Ch. rufipes* Meig. 1 ♂, Sn., 16.VII.1969.

*Ch. italicus* Meig. Or. (Th.); 1 ♂, 1 ♀, T., 23.VII.1960, 20.VI.1962; 5 ♂♂, 8 ♀♀ A., 31.V., 7.VIII.1962, 28.V., 30.VIII.1963, 15.—28.VI.1964.

*Silvius alpinus* (Scop.) 1 ♂, Sr., 8.VI.1896 (S.); Cl (Th.); Vg. (F.); 1 ♂, Vd., 23.VII.1962; 1 ♂, Sg., V.1967; 2 ♂♂, 1 ♀, Ai., 18.VIII.1980. I included here all the data referring to *S. vituli* (F.) and *S. alpinus* (Drap.) cited for our country's territory.

*Nemoria vitripennis* (Meig.) 1 ♂, Vd., 19.VII.1967; 1 ♂, Ro., 25.VI. 25.VI.1973.

*Hybomitra auripila* (Meig.) N., (S.); Az. (Fl.).

*H. expollicata* (Pand.) (Fig. 1.) 2 ♀♀, Fn., 8.VII.1972.

Geographical distribution (Fig. 3): Spain, France, Italy, D.R. of Germany, England, Netherlands, Belgium, Denmark, Sweden, U.S.S.R. (The Moldavian S.S.R., Ukraine, Siberia, Kazakhstan, Uzbekistan, Primorye). In Europe, the species is found in the coastal areas or in isolated saline biotops. Fundata Lake is a part of the balneary complex of the Amara Lake



Fig. 1.—The distribution in Europe of the species *Hybomitra expollicata* ▲ species newly signalled in Romania's fauna, in the Romanian Plain.

which is salty. The species is now signalled for the first time in Romania's fauna.

*H. pilosa* (Loew) 1 ♂, Gș., 25.V.1896 (S.); Or., O., Mh. (Th.)

*H. montana* (Meig.) 1 ♂, Cd. (S.); Bl., Cb., Mh. (Th.); 1 ♀, Gu., 9.VIII.1979.

*H. ciureai* (Ség.) 3 ♀♀, Șo., 3.VIII.1980.

*H. ukrainica* (Ols.) 2 ♀♀, C., 12.VI.1969; 1 ♀, Bd., 29.VI.1967.

*H. acuminata* Loew 1 ♀, I., 3.—5.VI.1966; 2 ♀♀, Cș., 21.VI.1970; 1 ♀, Ba., 20.VI.1963; 1 ♀, Cv., 2.VI.1962; 1 ♀, S., 24.VI.1963.

*Atylotus latistriatus* (Br.) 1 ♂, Cv., 2.VI.1962. I mention now for the first time in Romania the female of this species, in a new locality.

*A. fulvus* Meig. 2 ♀♀, Ol., 1 ♂, O., 20.VII.1896, 1 ♀, Sb., 24.VIII.1896 (S.); Mg., 1500 m. (Mo.); 1 ♀, C., 2.VI.1962.

*A. loewianus* (Vilk.) 1 ♂, I., 11.VIII.1969; 1 ♂, Ai., 18.VIII.1980.

*A. rusticus* (L.) Gb. (F.); Az. (FL.); O., Mh. (Th.); 1 ♂, 3 ♀♀, Db., 18.VIII.1953; Bî., July, 1948; 1 ♂, Bt., 7.VII.1951.

*Tabanus quatuornotatus* Meig. Hc. (F.); 1 ♀, Gș., 20.V.1896 (S.); 1 ♀, Sc., 19.VI.1957; 1 ♀, Hc., 19.VII.1964; 1 ♂, Mc., 26.VI.1967.

*T. rupium* Br. Cd. (S.). The species is not included on the list of tabanids in the fascicle of fauna. Geographical distribution: this Mediterranean species is known from Spain, France, Italy, Albania, Greece and Jugoslavia; eastwards, from Turkey, Armenia, Azerbaidjan and the Caucasus. In the Brukenthal Museum's collections from Sibiu, I found 1 ♀ from Prejba (Cibin Mountains), VI.1916, det. E. Brandsch.

*T. bifarius* Loew. Or. (Th.)

*T. tenuicornis* (End.) 4. ♀♀, H., 19.VI.1962; 1 ♀, A., 28.VI.1964.

Species of middle length, resembling *T. bifarius* but differing from it in the sharper palps entirely covered by pale hairs in both sexes. In the female, frons narrower than in *T. bifarius* and article 3 of antenna narrower as well. The species is signalled for the first time in Romania's fauna by Chvála, Lyneborg and Moucha (op. cit.) without any specification of a collecting locality. Geographical distribution: Corfu, Bulgaria, Romania, Hungary, Caucasus, Austria, Czechoslovakia.

*T. glaucopsis* Meig. 1 ♀, Bg., 5.VIII.1964; 1 ♀, A., 28.VI.1964; 1 ♀, Ai., 18.VIII.1980.

*T. cordiger* Meig. Sc. (F.); 1 ♀, Ol. (S.); Bl.; Oș.; Al.; Or.; Cb. (Th.)

*T. unifasciatus* Loew 1 ♀, Ai., 18.VIII.1980

*T. bromius* L. 1 ♀, Tr., 1 ♀, Pt., 10.VIII.1896 (S.); Va., (Moc.); Cș. (F.); Az. (FL.); Rl., D. (Mo.); 1 ♀, Ge., 25.VI.1957; 7 ♀♀ Ai., 18.VIII.1980; 1 ♀, B., 15.VIII.1957; 10. ♀♀ St., 21.VIII.1970; 1 Nc., 29.VI.1967; 1 ♀, Oș., 7.VIII.1963; 1 ♀, Or., 8.VIII.1964.

*T. maculicornis* Zett. Az. (FL.); Bl. (Th.); 1 ♂, Si., 5.VI.1963; 2 ♀♀ Ai., 18.VIII.1980; 1 ♀, Cm., 24.V.1967.

*T. tergestinus* Egg. Cș., Se. (F.); D. (Mo.); 1 ♀, Ai., 18.VIII.1980.

*T. autumnalis* L. 1 ♀, I., 3.VI.1966, Bn., 5.VIII.1970; 1 ♂, 1 ♀, A., 30.VIII.1963; 1 ♂, C., 12.V.1967; 1 ♂, Sf., 13.VIII.1971.

*T. spectabilis* Loew Mh. (Th.)

*T. spodopterus* Meig. Cș., Se. (F.); Gș., Ol., 7 ♀♀ Cd. (S.); Oș., Hc., Rs. (Th.); 2 ♀♀, Ai., 18.VIII.1980.

*T. sudeticus* Zell. Mg., 1500 m. (Mo.); Mh. (Th.); 1 ♀, Ai., 18.VIII.18.VIII.1980.

*T. bovinus* L. Or., Bl., D., (Mo.); 1 ♀, Po., 2.VIII.1960.

*Heptatoma pellucens* F. (Fig. 2., A.) Rs. (Th.); 2 ♀♀, Ai., 18.VIII.1980. Aradi (1956) and Dinulescu (op. cit.) considered it as "probable in the Carpathian basin" although Thalhhammer (op. cit.) had signalled it out already from Reșița. Geographical distribution: a species distributed in a large area in Europe; in Sweden it reaches 64° N. It has not yet been found in Portugal, in Spain and in the British Isles. To the East, it reaches to the Altai and Sajjan Mountains. It has not yet been signalled from Mongolia.

*Haematopota bigoti* Gob. 1 ♀, Ro., 12.VI.1973.

*H. crassicornis* Wahlb. 2 ♀♀, Cm., Vl., 24.—27.V.1967; 2 ♀♀, Pd., 7.VIII.1965.

*H. csikii* Szil. (Fig. 2., B., B.) 1 ♀, Tl., 18.VIII.1963; 1 ♀, Cn., 14.VII.1980; 1 ♀, Pr., 22.VIII.1973. Signalled out by Szilády (1923) from Comana (after Leclercq, 1966). It is not included in the fascicle of fauna. This rare European species is known as certain from Spain and

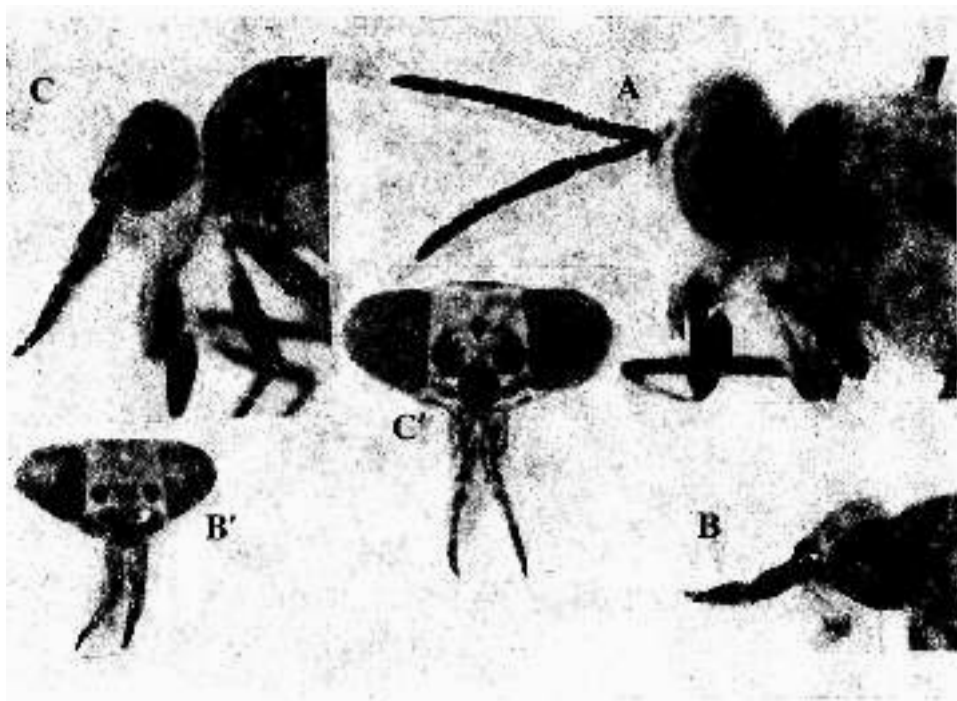


Fig. 2. A. — *Heptatoma pellucens* ♀, (From Aiud, Alba County); B.B'. — *Haematopota csikii* (From Tulnici, Vrancea County); C. C'. — *H. scutellata* (From Retezat Mountains)

France, its occurrence in Albania, Bulgaria and Austria being based on old bibliographical data.

*H. grandis* Meig. 1 ♀, Pd., 11.VII.1977.

*H. italica* Meig. (Fig. 5., A.—C.) Az., M. (*Fl.*); 1 ♀, I., 13.VIII.1969; 3 ♀♀, G., 19.VIII.1980.

*H. pallens* Loew (Fig. 3) 1 ♀, Sn., 11.IX.1966; 2 ♂♂, C., 14.—16.—16.VI.1969; 3 ♀♀, Am., 31.VIII.1980; 2 ♀♀, I., 21.V.1968. Found for the first time in Romania by Weinberg (1972) in the Danube Delta, I signal it now from the central part of the Romanian Plain and from the south-west of the country. Finding the species in the south of Romania, I realized that its distribution area is more extended to the west as it has been known so far.

*H. pandazisi* (Kröb.) Rs. (*Th.*)

*H. pluvialis* (L.) Or., Bl. (*Moc.*); Cș., Cg., Rl., Cp. 1314 m. (*Mo.*); 1 ♀, Ps., 30. V. 1964; 1 ♀, C., 2.VI.1969; 2 ♀♀, G., Ai., 18.—19.VIII.1980

*H. scutellata* Ols., Mch. et Chv. (Fig. 2., C., C') 1 ♀, Br., 1.VIII.1963; 4 ♀♀, Gu., 3., 4., 21.VIII.1979. Species belonging to the *H. pluvialis* group,



Fig. 3. — The distribution of the species *Haematopota pallens* + The occurrence of the species in the south of Romania.

showing on scutellum a large white-grey spot; on the frons, the pair of velvety black spots are conspicuously large, usually touching the inferior callosity and the margins of the eyes. Geographical distribution: Austria, Czechoslovakia, Germany, Switzerland, Italy, France. The species is now signalled for the first time in Romania's fauna.

*Philipomyia aprica* (Meig.) Mh. (Th.); 3 ♀♀, L., 1.VIII.1964.

*Ph. graeca* (F.) Or. (Th.); 1 ♂, R., 27.VII.1971.

### CONCLUSIONS

Starting from the idea that at present the distribution of Tabanids in Romania is incompletely known, on the basis of the material and through the centralization of all the bibliographical data, are presented 10 genera with 47 species, whose taxonomy was brought up-to-date and for which have been found 169 collecting localities-some of them (85) signalled now for the first time and some others (84) cited in the literature, but not included in the fascicle of fauna. The species *Hybomitra expollicata* (Pand) and *Haematopota scutellata* Ols., Mch. et Chv. are signalled for the first time in the fauna of the country, while the species *Haematopota csikii* Szil. and *Tabanus rupium* Br. that were mentioned in the old literature but were not included in the fascicle of fauna (D i n u l e s c u, op. cit.), are added to the list of the Tabanids in Romania.

### ACKNOWLEDGEMENTS

I thank Dr Medeea Weinberg for the kindness of having put literature at my disposal, and Dr L. Lyneborg of Copenhagen, one of the authors of "The Horse Flies of Europe" (1972) for having sent to me this book.

Thanks are also due to Dr D. Dumitrescu who provided me with Friwaldszky's paper (1872). My thanks go also to Vl. Brădescu and C. Vlad who placed at my disposal a recently collected material. To G. Oprea I thank for achieving the illustrating material.

## DESPRE PREZENȚA ȘI RĂSPÎNDIREA UNOR TABANIDE (DIPTERA) ÎN ROMÂNIA.

### REZUMAT

Lucrarea cuprinde date din două surse:

1. Din vechi liste faunistice, în care au fost găsite 84 de localități și alte date neincluse în fascicula de faună (D i n u l e s c u, 1958.) pentru 28 de specii. Dintre acestea, două specii, *Haematopota csikii* Szil și *Tabanus rupium* Br. nu au fost incluse în fascicula de faună.

2. Din determinarea unui material de tabanide (214 exemplare) din colecțiile Muzeului « Grigore Antipa », provenind de pe întreg cuprinsul țării, în care au fost identificate 39 de specii. Două dintre ele, *Hybomitra expollicata* (Pand.) și *Haematopota scutellata* Ols., Mch. et Chv. sînt semnalate

pentru prima dată în fauna României. Pentru speciile aflate în material se citează 85 de noi localități de colectare.

Pentru o serie de specii, unele date ca probabile în literatura românească, altele menționate de autori străini ca prezente în România, fără numirea vreunei localități de colectare, se aduc contribuții privind prezența și distribuția lor în România.

#### BIBLIOGRAPHY

- ARADI (M. P.), 1956 — Tabanids from the Carpathian Basin in the collections of the Hungarian Natural History Museum. *Fol. Ent. Hung.*, **9**, 21: 431—458.
- BRĂDESCU (VL.), 1963 — Données nouvelles sur deux Diptères roumains rares. *Trav. Mus. Hist. nat. «Grigore Antipa»*, **4**: 315—317.
- CHVÁLA (M.), LYNEBORG (L.), MOUCHA (J.), 1972 — The Horse Flies of Europe (Diptera, Tabanidae); 1—500. *Copenhagen*.
- DINULESCU (GH.), 1958 — Diptera — Tabanidae. In: Fauna R. P. R., **11**, 2: 1—276, *București*.
- FLECK (ED.), 1904 — Die Dipteren Rumäniens. *Bul. Soc. Sci.*, **13**, 1—2: 95—96.
- FRIVALDSZKY (J.), 1872 — Állatani. In: Munk (M.), A Herkulesfürdő és környéke. Természettudományi, orvosi, fürdőszeti, történelmi és statisztikai. **16**: 103, *Pest*.
- FRIVALDSZKY (J.), 1876 — Adatok Temes és Krasso megyék faunájához. *Mat. és Természettud. Közlem.*, **13**: 367, *Budapest*.
- LECLERCQ (M.), 1966 — Révision systématique et biogéographique des Tabanidae (Diptera) Paléarctiques. 2. *Tabaninae. Mém. Inst. r. Sci. nat. Belg.*; 1—237.
- MOCSÁRY (S.), 1872 — Adatok Bihar megye Faunájához. *Mat. és Természettud. Közlem.*, **10**: 190
- MÓCZÁR (M.), 1952 — Adatok a Kudsiri havasok — Munții Sebesului rovarfaunájához. *Rovartani Közlem. Fol. Ent. Hung.*, **5**, 1—8: 132—137.
- NAGY (C.), 1972 — Contribution à l'étude des insectes du supralittoral du secteur Roumain de la Mer Noire. *Cerc. mar., I. R. C. M.*, **3**: 171—189.
- STROBL (G.), 1896 — Siebenbürgische zweiflügler, *Verh. Mitt. siebenb. Ver. Naturw. Hermannstadt*, **16**: 19.
- THALHAMMER (J.), 1918 — Diptera. In: Fauna Regni Hungariae, *Budapest*.
- WEINBERG (MEDEEA), 1960 — Beiträge zur Verbreitung der Tabaniden (Diptera) in der Rumänischen Volksrepublik *Trav. Mus. Hist. nat. «Grigore Antipa»*, **2**: 411—413.
- WEINBERG (MEDEEA), 1968 — Ord. Diptera-Brachycera (Fam. Stratiomyidae, Tananidae, Therevidae, Conopidae et Sciomyzidae) In: L'Entomofaune de l'île de Letea (Delta du Danube). *Trav. Mus. Hist. nat. «Grigore Antipa»*, **9**: 281—291.
- WEINBERG (MEDEEA), 1972 — Ord. Diptera (Brachycera), Stratiomyidae, Tabanidae, Asilidae, Therevidae, Conopidae et Sciomyzidae. In: L'Entomofaune du «Grind» de Caraorman (Delta du Danube). *Trav. Mus. Hist. nat. «Grigore Antipa»*, **12**: 208—215.
- WEINBERG (MEDEEA), 1974 — Ord. Diptera (Stratiomyidae, Tabanidae, Asilidae, Therevidae et Sciomyzidae) In: L'Entomofaune du «Grind» Sărăturile — Sf. Gheorghe (Delta du Danube). *Trav. Mus. Hist. nat. «Grigore Antipa»*, **14**: 176—178.
- WEINBERG (MEDEEA), 1976 — Ord. Diptera (Fam. Tipulidae, Limoniidae, Stratiomyidae, Tabanidae, Nemestrinidae, Asilidae, Leptogastridae, Therevidae, Bombyliidae, Conopidae et Sciomyzidae). In: L'Entomofaune du nord de la Dobrogea, la zone Măcin-Tulcea-Niculitel. *Trav. Mus. Hist. nat. «Grigore Antipa»*, **17**: 174—178.

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