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**PRELIMINARY DATA ON THE PRESENCE  
OF LEPTOGASTRINAE (DIPTERA: ASILIDAE)  
IN THE ROMANIAN FAUNA**

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Abstract. We present all records of the genus *Leptogaster* Schiner, 1862 in Romania and publish the data of the material preserved in „Grigore Antipa“ National Museum of Natural History, Bucharest. In four maps we marked the data regarding the distributions of these dipterans in Romania. Out of the 12 species recorded in Europe, six species (*Leptogaster cylindrica*, *L. gracilis*, *L. guttiventris*, *L. hispanica*, *L. linearis*, *L. pubicornis*) are present in Romania.

Résumé. Nous présentons tous les mentions du genre *Leptogaster* Schiner, 1862 en Roumanie et nous publions les données du matériel préservé dans le Muséum National d'Histoire Naturelle „Grigore Antipa“, Bucarest. Dans quatre cartes nous avons marqué les données concernant la distribution de ces diptères en Roumanie. Parmi les 12 espèces mentionnées en Europe, six espèces (*L. cylindrica*, *L. gracilis*, *L. guttiventris*, *L. hispanica*, *L. linearis*, *L. pubicornis*) sont présentes en Roumanie.

Key words: Leptogastrinae, Asilidae, Romania, species, faunistics.

In 1862, Schinner grouped the insects with a thin abdomen, five times longer than wide, in which alula is absent, as well the pulvilli, in a subfamily of Asilidae, which he named Leptogastrinae. In 1968, Charles Martin raised the Leptogastrinae in the family rank. Because at that time the Leptogastrinae were considered a separated family from Asilidae, it was not published in the fauna fascicle of Romania, Insecta – Asilidae (Ionescu & Weinberg, 1971). In 1988, Artigas and Papavero included the Leptogastrinae in Asilidae, becoming a subfamily rank again.

Two reasons made us to draw up this paper: the first, that in the fauna fascicle on the Asilidae in Romania (Ionescu & Weinberg, op.cit.) they were not included, and the second one, this subfamily of Asilidae, Leptogastrinae, is less present in the Romanian literature. No paper dedicated to this subfamily, which could confirm the data on the presence of these dipterans in the Romanian fauna, was published, since now. The already published records of the Leptogastrinae species of Romania are in the faunistic lists together with other dipteran species of other families.

In Romania, only the genus *Leptogaster* Meigen, 1803 of this subfamily was recorded. The species of this genus are easily identified due to the filiform aspect of their very thin and long abdomen.

Preliminary data, present in this paper, are only the beginning of our study on the Leptogastrinae of Romania.

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English translation by Mihaela Barcan Achim.

## MATERIAL AND METHOD

For this paper we used the material from the collection of “Grigore Antipa” National Museum of Natural History (Bucharest), which will be noted with the acronym *MGAB* within the text. This material was not published since now. It consist of 62 specimens of Leptogastrinae, grouped in four species (*Leptogaster cylindrica*, *L. guttiventris*, *L. hispanica* and *L. pubicornis*).

The paper bases on 85 specimens, namely: the inventoried Leptogastrinae collection of “Grigore Antipa” National Museum of Natural History, formed of 62 specimens, to which other 23 specimens, which belong to two species (*Leptogaster cylindrica*, *L. pubicornis*) collected by Angela Petrescu during 1990-2004, are added. Six of the Leptogastrinae specimens from the Museum collection were studied by the great American dipterologist, the late Charles Martin, specimens which have labels in pin certifying this.

In Romania, these dipterans were collected accidentally. It suits perfectly Frey's (1937) and Oldroyd's (1972) remarks, who asserted that these fragile insects, with their gentle flight through vegetation, like some ballerinas, draw attention less to the collector. When the grass is mowed with a net, a few specimens reach the collectors' tube due to the delicacy of their body structure. We have to pay much attention to these insects when collecting them with the entomological net.

As yet, a small number of Leptogastrinae was mentioned from the collections of two Romanian museums: Bruckenthal Museum, Sibiu (Ionescu & Weinberg, 1963, 1966) and Museum of Oltenia, Craiova (Weinberg & Chimişliu, 1996). The material preserved at “Grigore Antipa” National Museum of Natural History is the most numerous Leptogastrinae collection from Romania, for the time being.

The material is in entomological pins (Fig. 1) or stuck on cardboard (Fig. 2). In this paper it is listed alphabetically after the species and collecting years. For each species we present the specimen number, the sex, collecting date and place and, between brackets, the abbreviation of the county name, collector's abbreviated name (as in the abbreviation list).

The species presentation has three headings: mentions in literature, material and remarks.

The 62 specimens from the Museum collection and the 23 specimens collected by Angela Petrescu, between 1990-2004, were identified by Medeea Weinberg.

Along the years, the material was collected with the entomological net. The recent use of the Malaise traps in Europe, both the material quality and the number of the specimens increased, allowing the approaching of some modern morphological studies, necessary in a correct delimitation of the species, and an analysis of the variability in the offing, which creat the possibility of completing the present concise diagnoses.

The paper includes five maps. In the first one (Fig. 3) the counties are marked by their abbreviated names, for a proper orientation in the following maps, which present the distribution of the *Leptogaster* species in Romania, according to the published data and to the material studied by us.

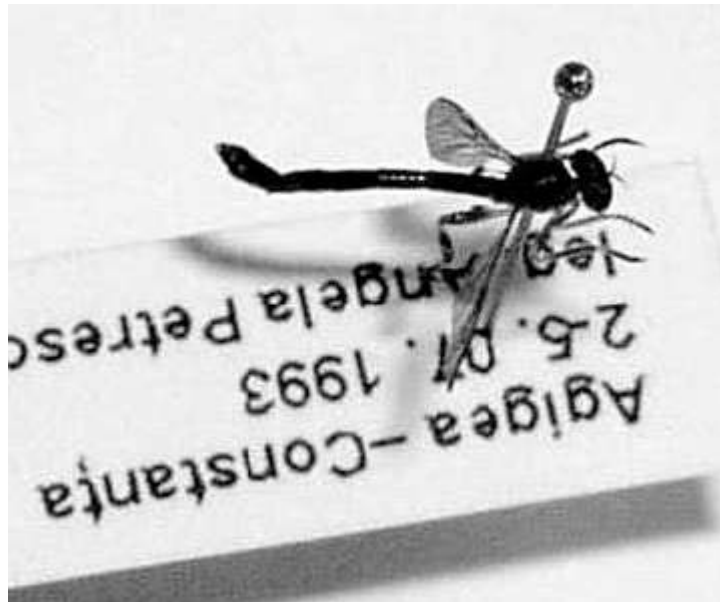


Fig. 1 – *Leptogaster pubicornis*, specimen fixed in pin (photo Gabriel Chișamera).



Fig. 2 – *Leptogaster cylindrica*, specimen stuck on cardboard (photo Gabriel Chișamera).

Abbreviations of the collectors' names:

B.K. - Béla Kis; A.P.G. - Aurelian Popescu-Gorj; A. Pe. - Angela Petrescu; C.N. - Carol Nagy; Ch. M. - Charles Martin; I.D. - Ion Drăghia; I.S. - Igor Senkiewici; L.D. - Lucia Dușa; M.C. - Margareta Cantoreanu; M.W. - Medeea Weinberg; N.S. - Nicolae Săvulescu; V.B. - Vladimir Brădescu; X.S.P. - Xenia Scobiola-Palade; W. - Worell.



Fig. 3 – The map of Romania and its counties.

Abbreviations: the names of the counties where the material was collected and mentions in literature: BH – Bihor; BV – Brașov; CL – Călărași; CT – Constanța; DB – Dâmbovița; DJ - Dolj; GJ – Gorj; IF – Ifov; HR – Harghita; MH - Mehedinți; MM – Maramureș; PH – Prahova; TL – Tulcea; TR – Teleorman; SB – Sibiu; SV – Suceava; VN – Vrancea.

#### RESULTS

##### Subfamily Leptogastrinae Schinner, 1862

##### *Leptogaster cylindrica* (De Geer, 1776)

*Mentions in literature.* It was recorded in Băile Herculane and Orșova since 1873 by Kowarz. Thalhammer (1918) considered it common. Șuster (1947) recorded it in Iași. Ionescu & Weinberg published data on five specimens from the collection of the Bruckenthal Museum, collected from Sibiu, Brașov, Dumbrava Sibiu, in 1963 and 1966. Weinberg (1967) mentioned it as a frequent species, between the 5th of July and 25th of August, in southern Dobrogea, in Comarova (today Neptun and Saturn seaside resorts), Hagieni, Albești and Canaraua Fetii, and in the Danube Delta, in Periprava (Weinberg, 1968). Weinberg & Chimișliu (1996) recorded it from Opreșor (MH) and Desa (DJ). Pârnu (2003) recorded it in Elma,

Smereceeni, Brustani, Izvorul Izei, Săcătură, Colibi, Cornești, Berbești (MM), and Weinberg & Petrescu (2004), in Săcătură (MM), Poiana (TR), Agigea (CT).

*Material.* In MGAB collection there are 11 specimens: 1 ♀ - Turnișor (SB), 31.VII.1931; 1 ♀ - Dumbrava (SB), 10.VI.1948 (W.); 1 ♂ - Piatra Craiului (DB), 10-11.VIII.1959 (I.S.); 1 ♀ - Sinaia (PH), 29.VI.1962 (M. C.) identified Ch. M., 1972; 1 spec. - Sinaia (PH), 29.VI.1962 (M.C.) identified Ch. M., 1972, specimen with the abdomen absent; 1 ♂, 1 ♀ - Șandru, Câmpulung Moldovenesc (SV), 21.VII.1962; 1 ♀ - Tulnici (VN), 12.VII.1963, (V.B.); 1 ♂, 1 ♀ - Borsec (HR), 12.VI.1966, (X.S.P.); 1 ♂ - Suceava (SV), 12.VII.1969 (B.K.) identified Ch. M., 1972; To all these, the four specimens recently collected from Jiului Valley, Lainici Monastery (GJ), on 7.VII.2004 (A.Pe.) are added.

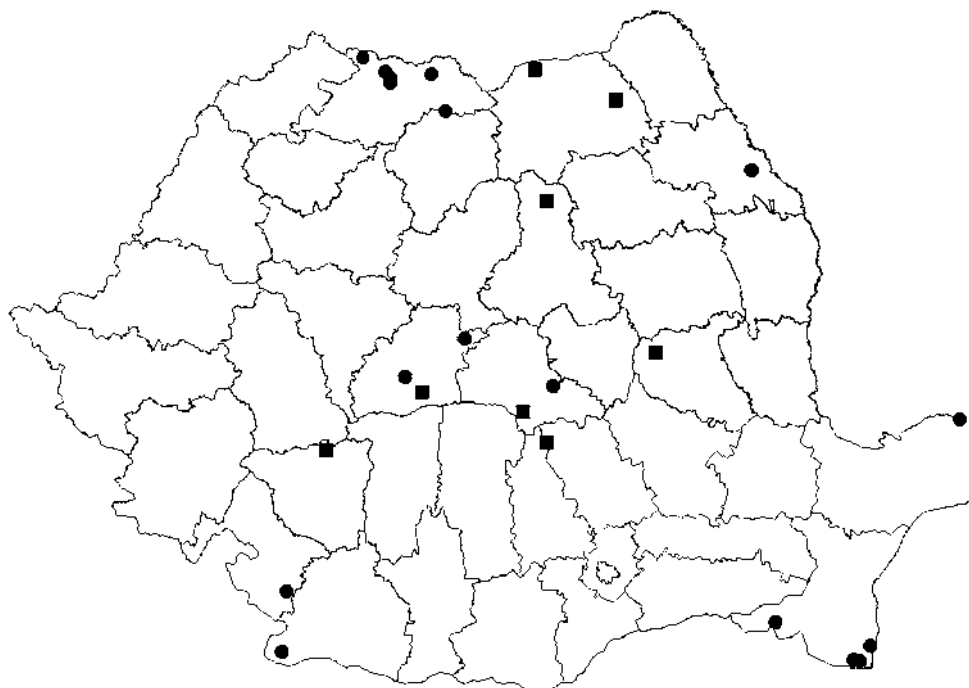


Fig. 4 – The distribution of *Leptogaster cylindrica* (De Geer, 1776) in Romania, according to the data from collections (■) and literature (●).

*Remarks.* For the first time, in 1967, *Leptogaster cylindrica* is recorded from the South of Romania by Weinberg (Fig. 4), where it is frequent, unlike the Danube Delta (Weinberg, 1968), where, between 1962-1966, numerous field trips were made, from May to September, and when only 1 ♂ and 1 ♀ were collected, in July, at Periprava. As it results from figure 4, the species is frequent from southern Romania to Maramureș, in the North of the country (Pârvu, 2003; Weinberg & Petrescu, 2004). The collecting places show us that it is present from the marine sand banks (Weinberg & Petrescu, op. cit.) to the afforested areas of northern Romania, and can reach 800 m altitude.

*Leptogaster guttiventris* Zetterstedt, 1842

*Mentions in literature.* Recorded in Orșova by Kowarz (1873) and by Thalhammer (1918), records taken over by Weinberg (1975).

*Material.* In MGAB collection there are 24 specimens: 2 ♂♂ - Agigea (CT), 2.VII.1957; 1 ♂ - Agigea (CT), 18.VI.1958 (M.W.); 1 ♂, 1 ♀ - Valu lui Traian (CT), 19.VI.1958 (M.W.); 1 ♀ - Valu lui Traian (CT), 26.VI.1961 (M.W.); 1 ♀ - Agigea (CT), 18.VI.1962 (V.B.); 1 ♂, 1 ♀ - Valu lui Traian (CT), 22.VI.1962 (X.S.P.); 1 ♂ - Comarova (CT), 24.VI.1962 (V.B.); 1 ♂ - Hagieni (CT), 5.VII.1962 (A.P.G.); 1 ♀ - Agigea (CT), 20.VII.1962 (M.W.); 1 ♀ - Agigea (CT), 9.VIII.1962 (I.D.); 1 ♀ - Hagieni (CT), 6.VI.1963 (A.P.G.); 1 ♂, 1 ♀ - Babadag (TL), 19.VI.1963 (X.S.P.); 2 ♂♂, 1 ♀ - Agigea (CT), 20.VI.1964 (M.W.); 1 ♂ - Agigea (CT), 18.VII.1964 (M.W.); 1 ♂ - Albești (CT), 23.VII.1965; 1 ♀ - Comarova (CT), 25.VII.1965; 1 ♀ - Agigea (CT), 20.VII.1966 (M.W.); 1 ♀ - Agigea (CT), 5.VIII.1966 (C.N.).

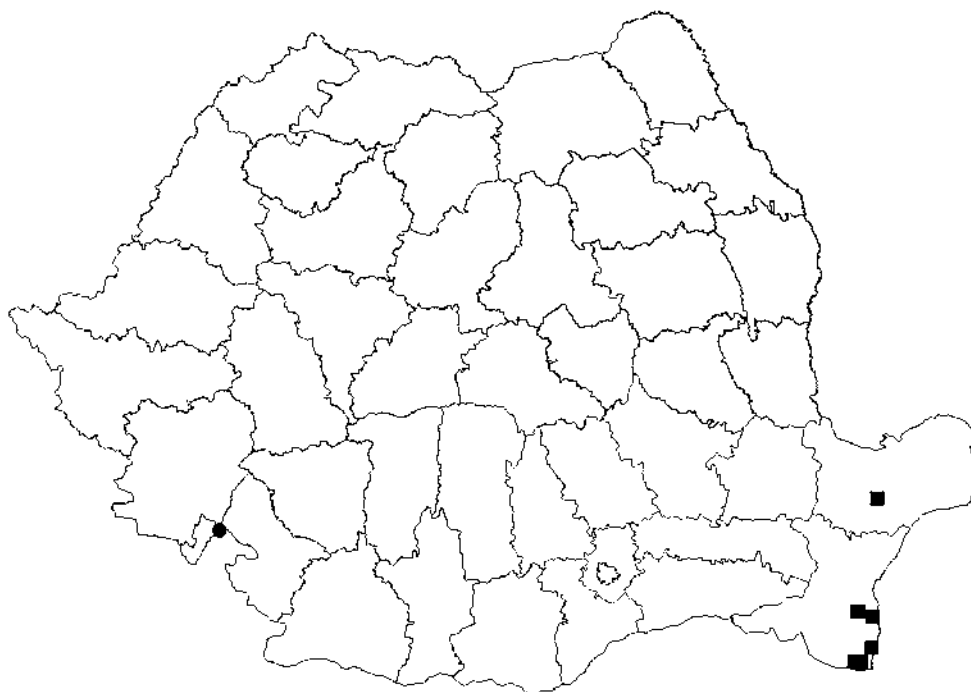


Fig. 5 – The distribution of *Leptogaster guttiventris* Zetterstedt, 1842 in Romania, according to the data from collections (■) and literature (●).

*Remarks.* It is a prevalent species in southern areas, phenomenon confirmed also in Romania, as it results from figure 5. It occurs in a relatively large number from the half of June to the half of August.

*Leptogaster gracilis* Loew, 1847

*Mentions in literature.* It was recorded for the first time in Romania by M. A. Ionescu and Medeea Weinberg, from Ocna Sibiului, in 1966, after a specimen from the collection of Bruckenthal Museum. Weinberg (1976) found it again in

northern Dobrogea: 1 ♂ from Niculițel, on 8.VII, and 1 ♀ from Cocoș Monastery, on 10.VI, material collected between 1972-1974.

*Material.* In MGAB collection there is a single specimen: 1 ♂ - Nifon, Dobrogea (TL), leg. Igor Senkiewici.

*Remarks.* It has been occurred in a very small number in the afforested areas, for the time being (Fig. 6).

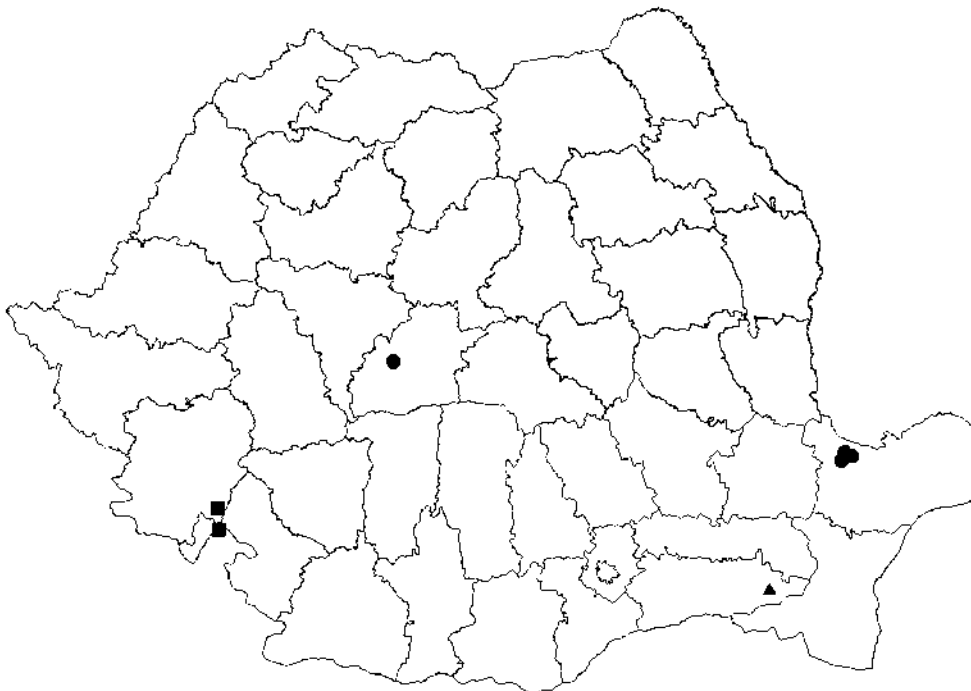


Fig. 6 – The distribution of *Leptogaster linearis* Becker, 1906 (▲) *Leptogaster hispanica* Meigen, 1838 (■) and *Leptogaster gracilis* Loew, 1847 (●) in Romania, according to the data from collections and literature.

#### *Leptogaster hispanica* Meigen, 1838

*Mentions in literature.* Thalhammer (1918) recorded it in Mehadia as *Leptogaster nigricornis* Loew, 1847. Weinberg (1975) caught 3 ♂♂ in Orșova, between 8-11.VII.1963-1964.

*Material.* In MGAB collection there is a single specimen: 1 ♂ - Orșova (MH), 11.VII.1964, leg. Lucia Dușa.

*Remarks.* As yet, this species was occurred only in western Romania (Fig. 6).

#### *Leptogaster linearis* Becker, 1906

*Mentions in literature.* In 1962, Ionescu and Weinberg recorded 1 ♀, from Jegălia railway station, leg. Igor Ceianu, on 19.VI.1955, the first record from Romania.

*Remarks.* The species doesn't exceed 6 mm long and, as yet, there is a single mention of its presence in Romania (Fig. 6), caught in South.

*Leptogaster pubicornis* Loewer, 1847

*Mentions in literature.* Medeea Weinberg cited it from Greci, northern Dobrogea, in 1976. This is the first record in Romania. Recently, Weinberg & Chimişliu (1996) cited it from Opreşor (MH) and Vâlcan (DJ). Weinberg & Petrescu (2004) recorded it in Agigea (CT).

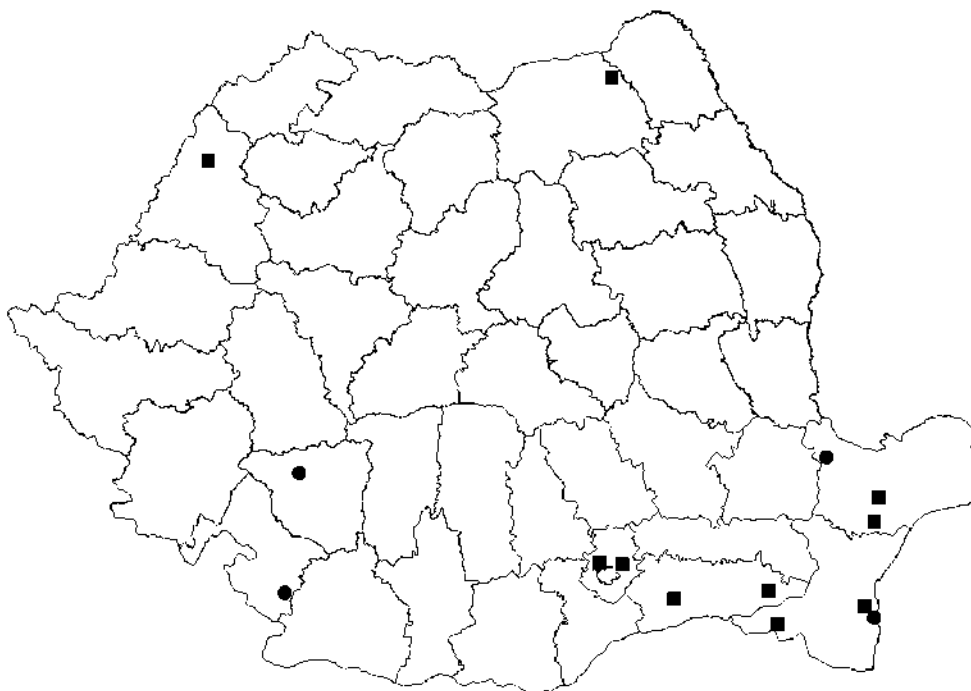


Fig. 7 – The distribution of *Leptogaster pubicornis* Loewer 1847, in Romania, according to the data from the collections (■) and literature (●).

*Material.* In MGAB collection there are 26 specimens: 1 ♀ - Jegălia railway station (CL), 19.VI.1955, identified by Ch. M.; 1 ♀ - Valu lui Traian (CT), 20.VI.1958 (M.W.); 1 ♂ - Herăstrău, Bucharest, 10.VI.1962 (V.B.); 1 ♂ - Agigea (CT), 17.VI.1963 (V.B.); 1 ♂ - Babadag (TL), 19.VI.1963 (X.S.P.); 1 ♂, 1 ♀ - Ciornuleasa (GR), 30.VII.1963 (V.B.); 1 ♀ - Băneasa, Canaraua Fetii (CT), 11.VI.1964 (N.S.); 1 ♀ - Agigea (CT), 25.VI.1964 (M.W.); 1 ♀ - Agigea (CT), 25.VI.1964 (X. S.P.); 1 ♀ - Greci (TL), 30.VI. - 4.VII.1964 (I.S.); 1 ♂, 2 ♀♀ - Agigea (CT), 20.VII.1964 (M.W.); 2 ♂♂ - Agigea (CT), 21.VII.1964 (M.W.); 1 ♂ - Agigea (CT), 21.VII.1964 (M.W.), identified by Ch. M., 1972; 2 spec. - Agigea (CT), 21.VII.1964 (M.W.), without abdomen; 1 ♀ - Agigea (CT), 23-28.VII.1964 (C.N.); 1 ♂ - Oradea (BH), 31.VII.1964 (C.N.); 1 ♀ - Oradea (BH), 2.VIII.1964 (C.N.); 1 ♂ - Suceava (SV), 13.VII.1965 (B.K.); 1 ♀ - Brăneşti (IF), 12.VII.1966 (V.B.); 1 ♂ - Brăneşti (IF), 26.VIII.1966 (V.B.) identified by Ch. M., 1972; 1 ♀ - Codru Histria (TL), 14.IX.1967 (X.S.P.); to which the most recently collected specimens are added: 5 ♂♂, 1 ♀, Agigea (CT), marine sand bank reserve, 2-5.VII.1993 (A. Pe).

*Remarks.* Common species, present from southern to northern Romania (Fig. 7).



## DISCUSSIONS

Now, in Europe, 12 species are recorded, out of which six species are in Romania: *Leptogaster cylindrica* (De Geer, 1776), *Leptogaster gracilis* Loewer, 1847, *L. guttiventris* Zetterstedt, 1842, *L. hispanica* Meigen, 1838, *L. linearis* Becker, 1906 and *L. pubicornis* Loew, 1847.

From these six species, three of them: *Leptogaster cylindrica* (De Geer, 1776), *L. guttiventris* Zetterstedt, 1842, *L. pubicornis* Loew, 1847 have a larger distribution in Europe, being the richest in specimens. Records confirm this aspect also for Romania.

Also, it is important to mention that, although *Leptogaster guttiventris* was recorded in our country since 1873, and *Leptogaster pubicornis*, since 1976, Romania is not included within the distribution of these species published in the Palaearctic Catalogue (Lehr, 1988).

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## DATE PRELIMINARE PRIVIND PREZENȚA LEPTOGASTRINELOR (DIPTERA: ASILIDAE) ÎN FAUNA ROMÂNIEI

## REZUMAT

Sunt centralizate toate semnalările privind genul *Leptogaster* Schiner, 1862 în România și sunt publicate acum datele existente în materialul conservat la Muzeul Național de Istorie Naturală „Grigore Antipa” din București. În patru hărți sunt marcate datele referitoare la repartiția acestor diptere în România. Cu toate că lucrarea prezintă elemente preliminare privind prezența acestei subfamilii în țara noastră, de remarcă este faptul, că din cele 12 specii ale genului semnalate în Europa, 6 specii, *Leptogaster cylindrica* (De Geer, 1776), *L. gracilis* Loew, 1847, *L. guttiventris* Zetterstedt, 1842, *L. hispanica* Meigen, 1838, *L. linearis* Becker, 1906, *L. pubicornis* Loew, 1847, au fost raportate de pe teritoriul României.

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