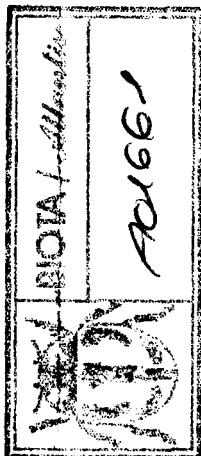


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Sphaeroceridae (Diptera) from the Canary Islands

By

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Abstract: Locality data of sixteen Sphaerocerid species from the Canary Islands. *Elachisoma euphorbiae* sp. n., *Limosina baezi* sp. n., *Leptocera (Pteremis) canaria* sp. n., new to science, *Leptocera (Rachispoda) lutosoidea* Duda new to the Islands, with remarks and a complete list of the Sphaerocerid fauna of the Canary Islands are given.

The Canary Islands are among the most interesting parts of the world from zoogeographical point of view. The fauna as island fauna also deserves detailed studies but as the Canary Islands are on the border of the Palearctic Region and since numerous Ethiopic faunal elements are also present in their fauna, they have been in the focus of the interest of zoologists long since. In consequence of the thorough studies, the fauna of the Islands are comparatively well known. There is a great deal of data on Sphaerocerids, too. BECKER (1908) listed 16 Sphaerocerid species in his lengthy paper, DUDA (1918) described a new species (*Limosina beckeri*) from the Canary Islands, FREY (1936) analyzed the fly fauna cenologically and found additional species. HACKMAN (in FREY 1958) enriched the known Sphaerocerid fauna with two further species and described a new one *Leptocera (Rachispoda) freyi*. On the basis of the above publications the general characteristics of the Sphaerocerid fauna of the Canary Islands became distinct: it mainly consists of species though occurring on the southern parts of the Palearctic Region, endemic, circumtropical and Old World subtropic species were also found.

Thus, I was very much delighted in receiving a material of 36 Sphaerocerid specimens for identification, which were collected by Senor M. BAEZ (Universidad de la Laguna, Departamento de Zoológia, Tenerife). This is a small material as regards the number of the specimens is concerned still it proved to be very interesting: 16 species belonging in six genera were found, among them three are new to science while one species new is to the fauna of the Canary Islands. I should like to express my most sincere thanks to Senor M. BAEZ for making the valuable material available for elaboration.

The specimens (including the holotypes) are in the collection of the Universidad de la Laguna, Dpto de Zoológia, Tenerife, excepting some paratypes, which are deposited in the collection of the Zoological Department of the Hungarian Natural History Museum, Budapest.

I wish to treat the material in the systematic order, then the Sphaerocerid species are enumerated so far in found in Canary Islands.

♂ *Copromyza (Borborillus) costalis* Zetterstedt, 13-17 - Tenerife: 1 ♂: Mte de Icod, 19. I. 74. Ref.: BECKER 1908 (as *Borborus unicolor* n. sp., see DUDA 1938), FREY 1936.

♂ *Poecilosomella angulata* (Thomson, 1868) - Gran Canaria: 1 ♂: Arguineguin, 22. 9. 73. Ref.: HACKMAN in FREY 1958. An interesting circumtropic species.

♂ *Coproica ferruginata* (Stenhammar, 1854) - Tenerife: 1 ♂: Icod, 12. IV. 76; Gran Canaria: 1 ♂: Lagunetas, 23. 9. 73. Ref.: FREY 1936, HACKMAN in FREY 1958.

✓ Coprotea vagans (Haliday, 1833) - Tenerife: 1 ♂: Bajamar, 19. III. 74; 1 ♀: Playa S. Marcos, 28. III. 74. Ref.: BECKER 1908 (as Limosina albipennis Rond.), FREY 1936.

✓ Elachisoma aterrimum (Haliday, 1933) - Tenerife: 1 ♀: V. Jimenez, 27. I. 74. Ref.: FREY 1936 (as Limosina (Elachisoma) nigerrima Hal.).

➤ Elachisoma euphorbiae sp. n.

Body somewhat bigger and lighter than that of E. aterrimum. Head much longer than high, eyes very small, bare. Chaetotaxy of head (number and position of head bristles) similar to that of aterrimum; e. g. ocellars much longer than length of antennae (in aterrimum antennae longer than ocellar bristles). Inner orbital rows inclinate and robust. Third antennal joint subspherical, with only short pubescence, arista very long haired. Praelabrum (clypeus) very big and not hidden. Vibrissae very long, longer than height of head at their stem. Thoracic chaetotaxy: 2 weak humeral, 2 notopleural, 1 supraalar, 1 postalar, 1 dorsocentral in prescutellar position, 2 scutellar and 1 strong sternopleural pairs of bristles. Acrostichal microchaetae long and scattered, between dorsocentral bristles 4 rows, more anteriorly 6 rows countable. Legs comparatively short and thick (type-specimens somewhat immature, legs crumpled, hardly suitable for study). Mid tibia with strong ventral spur, hind tibia dorsally with only moderately long bristles (like in aterrimum). Wings fumose brown, veins thick and brown. Costal base with 1 very long bristle (longer than longitudinal diameter of eye). Also regular bristles of costal vein unusually long but additional very long and thick bristles can also be found, standing perpendicular to alar plane. Vein r_{4+5} very long, slightly upcurving and ending not far from tip of wing. Vein r_{2+3} more distant from costa than in aterrimum. $c_x = 2.1-2.5$. Common section of veins r_{2+3} and r_{4+5} equal with basal section of r_{4+5} , in aterrimum latter much longer than former one. Vein section t_a-t_p very short, only half length of cross-vein t_p . Anal vein geniculate similar in shape to that of aterrimum. Alula big and wide. Knob of halteres blackish brown, stalk yellowish. Genitalia not studied.

Body-length: holotype male: 1.13 mm (along curved abdomen), paratypes: 1.00-1.15 mm (somewhat immature specimens, abdomen somewhat contracted, probably longer when alive).

Holotype male: Tenerife, Las Galletas, 7. II. 74; M. BAEZ; on lower side of label: (hand-writing) en "Euphorbia canariensis". Paratypes: 1 ♂, 1 ♀; data as for holotype (male paratype is deposited in the collection of the Zoological Department, HNHM); 1 ♀: Tenerife, Las Galletas, 7. II. 74; M. BAEZ (no hand-writing on lower side) (Zool. Dept. HNHM).

Elachisoma euphorbiae sp. n. runs in the key of Palaearctic Elachisoma species (PAPP 1971) to aterrimum, and in fact it is its closest relative. Nevertheless, this new species is easily separable from E. aterrimum Hal.: its head and thoracic bristles are much longer, its wings are darker and veins darker and thicker, its vein r_{4+5} is the longest among the Palaearctic Elachisoma species terminating not far from tip of wing, its c_x value is higher than that of aterrimum, and, it has very long bristles on the costal vein.

➤ Limosina baezi sp. n.

This species belongs to the L. crassimana Hal. species-group and it can be separated from the other species only by the characteristics of the male genitalia.

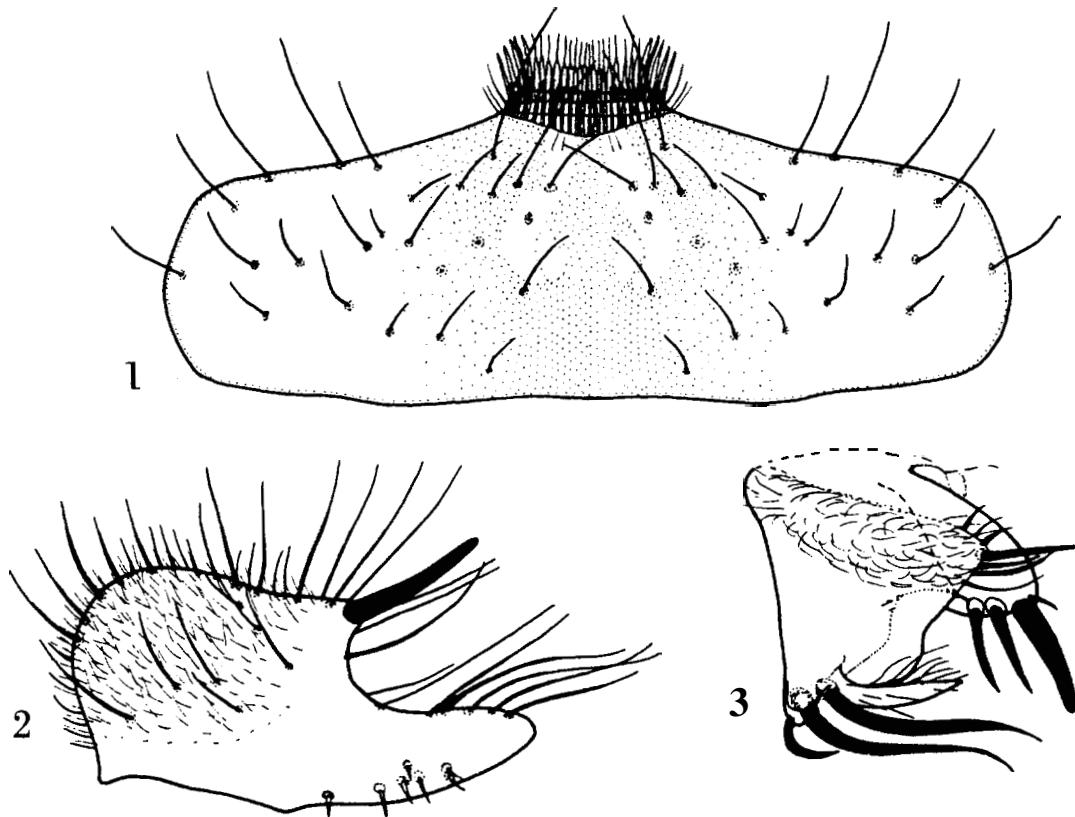
Frons anteriorly narrowly reddish, arista with moderately long hairs, prescutellar bristles comparatively long, exactly half length of posterior dorsocentral pair. Dorsal half of lower third of mid tibia with 3 bristles similar in position to those of crassimana Hal. Mid metatarsus comparatively short, only 1.2 times longer than second joint, but much thicker, ventral side of mid metatarsus with 2 rows of short, thick bristles. Male fore tibia thickened, anterodorsally with a slight impression, fore tarsal joint flattened but more moderately than in crassimana, mid and hind tibiae straight not curved. Alula big and very wide.

Vein r_{4+5} straight. Knob of halteres wholly light brown, stalk ochreous yellow. Male 5th sternite of abdomen (Fig. 1) with scattered bristles, none of them unusually long or thick, mediolaterally with 2 rows of thick, comb-like black teeth, end of which elongated into filiform tip. Basic structure of male surstyli (Fig. 2) similar to that of other species of the crassimana species-group but its medial thorn long and thin, its medially situated edge with very long bristles, but proximal edge only with scattered short thornlets; its digitiform process is somewhat narrower than that of related species.

Body-length: holotype male: 1.70 mm, paratype male: 1.74 mm.

Female unknown.

Holotype male: Tenerife, El Soccoro, 1. Xii. 73, M. BAEZ; paratype male: Tenerife, Agua-manga, 11. IV. 76. M. BAEZ (paratype male in the collection of Zool., Dept. HNHM). The abdomen of both type-specimens are prepared and placed in Canada balsam on small pieces of celluloid and pinned under the specimens.



Figs. 1-2. *Limosina baezi* sp.n., Fig. 3. *Leptocera* (*Pteremis*) *canaria* sp.n.

Limosina baezi sp. n. belongs to the most problematic species-group (crassimana-group) of the genus *Limosina* Macq. It can be separated from its congeners only by the armature of the male pregenital sternite and by the shape and bristles of surstyli.

I dedicate the new species to its collector, Senor M. BAEZ.

✓ *Limosina becken* Duda, 1918. - Tenerife: 2 ♂: Mte del Agua, 24. VIII. 73 (one of them in the Zool., Dept. HNHM). Pef.: DUDA 1916, 1938 (1 ex.), FREY 1936 (2 ex.), HACKMAN in FREY 1958 (1 ex.). A very rare endemic species of the Canary Islands.

- ♂ Limosina bifrons Stenhammar, 1654. - Tenerife: 1 ♀: Icod, 12. IV. 76. Ref.: BECKER 1908 (as Limosina puerula Rond.), FREY 1936 (as puerula Rond. he listed bifrons Stenh. among the "zweifelhaft" species). It is a characteristic species on dung heaps in Europe. It reached the Canary Islands through human mediation, as it did some other parts of the world.
- ♂ Limosina plumosula Rondani, 1860. - Tenerife: 1 ♂: Mte del Agua, 24. VIII. 73. Ref.: BECKER 1908, FREY 1936, DUDA 1935.

♂ Leptocera (Pteremis) canaria sp. n.

Body and legs brown with moderately strong pruinosity, facial plate and coxae (sometimes also knees) yellowish brown. Head much higher than long, eyes big and spherical. Cephalic bristles: 2 strong upper orbitals, 1 pair each of ocellars, outer and inner verticals, comparatively very strong outer and inner occipital pairs of bristles. 3 pairs of long interfrontals. No inner orbital bristles, only some hairs beside and before anterior upper orbitals. Vibrissae very long. Third antennal joint rounded, evenly elongately hairy. Mesonotum with only 1 pair of dorsocentral bristles, and another 4-5 pairs of slightly enlarged dorsocentral microchatae. 1 pair of strong sternopleurals. Tibiae and tarsi of both sexes usual. Armature of mid tibia very peculiar, without any sexual - dimorphism: strong preapical ventrally but no ventroapical bristle present. Mid tibia anteroventrally with a weak bristle at middle of tibia anterodorsals: at 58/85 from base of tibia a very strong bristle at 25/85 a very strong bristle, at 31/85 a weak bristle, slightly more dorsally but at same height a similar bristle; at 25/85 a very strong dorsal bristle; posterodorsally weak bristles at 25/85, at 46/85 and at 64/85. Mid metatarsus ventrally without any stronger or longer bristle. Wings definitely brown, veins brown, costal section mg_1 with scattered long and comparatively thick bristles. Ratio c_x approx. 0.9. Vein r_{4+5} sinuate, ratio $t_a - t_p / t_p = 2.0$. Anal vein thin, slightly curved. Alula narrow. Knob of halteres dark brown, stalk lighter brown. Hind corners of sternite 4 and sternite 5 with 1 pair of long and thick bristles. Male sternite 6 comparatively wide, with dense, black teeth along its whole width. Surstylus (Fig. 3) rather intricate, its basic structure similar to that of L. (P.) fenestralis Fall., but ventral digitiform process with only two thorn-like bristles on one side of its big thorn, apical bristle of its short dorsomedial process shorter, than that of fenestralis males, beside its dorsolateral thorn-like hairy process 2 curved, long and 1 very strongly curved short and thick bristle. Female cerci flat and comparatively wide with short and moderately long, hair-like bristles only.

Body-length: holotype male (somewhat immature specimen, its abdomen contracted): 1.55 mm (somewhat longer when alive); paratype males: 1.50-1.60 mm, paratype female: 1.85 mm.

Holotype male: Tenerife, Mte Realejo Alto, 1. 76, M. BAEZ, (on lower side of label) ex larve Boletus sp. Paratypes: 1 ♂, 1 ♀: Tenerife, Las Lagunetas, 25. I. 74, M. Baez, ex larve en "Boletus" (female paratype deposited in the collection of the Zool. Dept. HNHM); 1 ♂: Tenerife, Cumbre de Realejo Baja, 1. XI. 73, M. BAEZ (Zool. Dept. HKHBI).

Leptocera (Pteremis) canaria sp. n. may easily be distinguished from any known Sphaerocerid species: it has one strong ventral preapical bristle on its mid tibia but it has no ventroapical bristle on mid tibia and no mid metatarsal bristle. In addition the armature of male surtyli (Fig. 3) differs in several characteristics from the males of L. (P.) fenestralis Fall.

♂ Leptocera (Opacifrons) humida (Haliday, 1836) - Tenerife: 1 ♂: La Laguna, 30. IV. 73; 1 ♀: Bco. Tahodio, 14. IX. 73; 1 ♀: Anaga, 25. V. 74. Ref.: BECKER 1908 (as Limosina pumilio Meig.), HACKMAN in FREY 1958 (as Spinotarsella humida Hal., nec Spinotarsella humida Hal. of FREY 1936).

♂ Leptocera (Rachispoda) limosa (Fallén, 1820) - Tenerife: 1 ♀: Mte del Agua, 24. VIII. 73. Ref.: Becker 1908, Frey (1936) listed it among the doubtful species.

♂ Leptocera (Rachispoda) lutosoides (Duda, 1938) - Tenerife: 1 ♀: Bco. Tahodio, 14. IX. 73. New to the Canary Islands. This single female was identified by the characteristics of its genitalia. It is a little known Palearctic species, thus, the above reference is a very important to complement its known distribution.

♂ Leptocera (Rachispoda) varicornis (Strobl, 1900) - Tenerife: 1 ♀: La Cuesta, 2. Si. 75; 1 ♀: Bco. Tahodio, 14. IX. 73; Gran Canaria: 1 ♀: Tiles de Moyo, 24. IX. 73. Ref.: DUDA 1938.

♂ Leptocera (Leptocera) curvinervis (Stenhammar, 1854) - Tenerife: 2 ♀: La Vega, 12. IV. 76; 1 ♂: Mte Vilaflor, 22. V. 73; 1 ♂: ibid., 15. VIII. 74; 1 ♀: La Laguna, 30. IV. 73; Col. M. RAEZ; 1 ♂: Bco Añovingo, 9. III. 75; LA Palma: 1 ♀: Bco Las Nieves, 28. I. 75. Ref.: BECKER 1908 (as Limosina cilifera Rond., see DUDA 1935), FREY 1936 (as rosalis Rond.), HACKMAN in FREY 1958 (as Paracollinella curvinervis Stenh.).

Among the 16 species, which were found in the above material, twelve had been known from the Canary Islands formerly. This fact also shows that the Sphaerocerid fauna of the Canary Islands can be considered well-known compared to that of other parts of the world.

Finally, those species are listed, which were not found in this material but which had been collected on the Canary Islands by other authors (B: BECKER 1908; F: FREY 1936; H; HACKMAN in FREY 1938): Ischiolepta pusilla (Fallén, 1820) (F: as Sphaerocera), Copromyza (Olinea) atra Meigen, 1930: (B and F: as Olinea geniculata Macq., H: as Borborus ater Meig.), C. (Borborillus) marginatis (Adams, 1903) (B: as Borborillus marmoratus n. sp., F: as marmoratus Beck.) C. (Borborillus) sordida Zetterstedt, 1847 (B), C. (Copromyza) equina Fallén, 1820 (B, F; I also have seen one specimen from the Canary Islands, which was sent to me by Senor M. BAEZ earlier), Thoracochaeta brachystoma (Stenhammar, 1854) (B, F, H), Limosina brevicostata (Duda, 1918) (F), Limosina heteroneura Haliday, 1836 (F, H; B: as L. minutissima Zett.), Limosina mirabilis Collin, 1902 (F), Limosina moesta Villeneuve, 1918 (H, F: as L. antennata Duda), Leptocera (Opacifrons) coxata (Stenhammar, 1854) (F: as O. humida Hal., FREY 1945, H), L. (Rachispoda) acrosticalis Becker, 1903 (B, F), L. (Rachispoda) freyi Hackman, 1958 (H: as Collinellula), L. (Rachispoda) fuscipennis (Haliday, 1833) (F, H), L. (Rachispoda) lutosa (Stenhammar, 1854) (F), L. (Rachispoda) modesta (Duda, 1923) (H: as Collinellula), L. (Rachispoda) subinceptipennis (Brunetti, 1913) (F).

PAPP, L.: Sphaeroceridák a Kanári szigetekről (Diptera)

A szerző M. BAEZ által a Kanári-szigeteken gyűjtött 16 Sphaerocerida-faj leltéradatait közli. Közülük 3 faj új a tudományra (Elachisoma euphorbiae sp. n., Limosina baezi sp. n., Leptocera (Pteremis) canaria sp. n.), 1 faj (L. (Rachispoda) lutosoidea Duda) új a Kanári-szigetek faunájára. A talált fajok után a szerző roviden felsorolja azokat a fajokat is, melyeket már kimutattak a szigetekről. A most felfedezett fajokkal együtt a Kanári-szigetéről 37 Sphaerocerida faj ismeretes.

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