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Another new species of the *Paralimosina beckeri*-group  
from the Canary Islands (Diptera: Sphaeroceridae)

By

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Abstract: A new species *Paralimosina avolans* sp.n. is described from the Canary Islands (La Palma) and the description of *P. franzi* L. Papp et Roháček, 1981 is supplemented along with a short discussion of the species-group. With seven figures.

Soon after publishing of our paper on the *Paralimosina beckeri*-group, Prof. Dr. Herbert FRANZ made another collecting trip to the Canary Islands and together with other valuable insect material he managed to collect again reduced-winged flies on Tenerife, Gran Canaria, El Hierro and La Palma. He generously sent us this latter material shortly after his return. As he wrote us: "Alle apteren und brachypteren Fliegen wurden aus Laubstreu und morschem Holz gesiebt". Specimens of three species of the *Paralimosina beckeri*-group were found in this material including a new species from La Palma. The specimens had been preserved in alcohol but in the course of the present studies they were pinned on minuta-pins. The holotype and two paratypes of the new species are deposited in the collection of Prof. H. FRANZ (Mödling), two paratypes are in the Hungarian Natural History Museum, Budapest and one paratype is deposited in the collection of the Cilecian Museum, Opava.

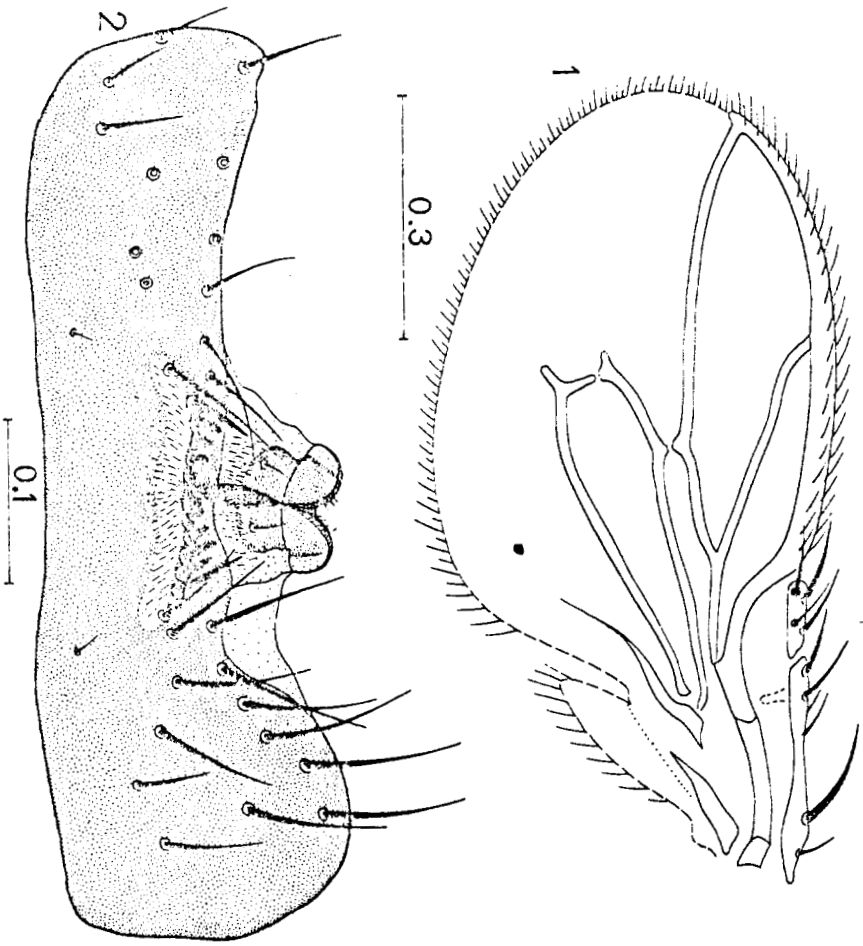
We should like to express our most sincere thanks to Professor Dr. Herbert FRANZ for making this material available for study.

*Paralimosina beckeri* (Duda, 1918)

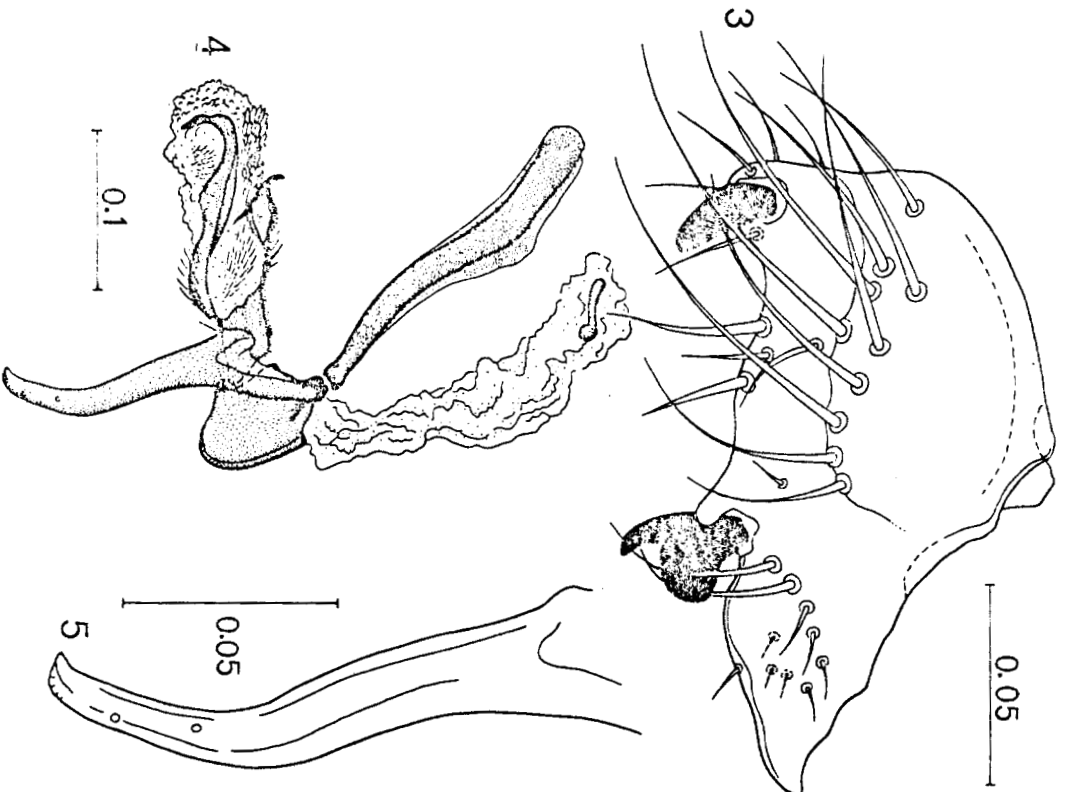
A rather significant material (19 ex.) was studied now, all of them were collected on El Hierro. 3 ♂, 3 ♀: Tifor, El Hierro, Lorbeerwald-Restbestand über der Strasse, Waldstreu, gesiebt, 29.1.1982 (Sp 1479); 4 ♂, 3 ♀: El Hierro, Las Playas, 5-31.1.1982 (Sp 1481); 1 ♀: El Hierro, El Golfe, Lorbeerwald, Laubstreugesiebe, ca. 1100 m, 9.2.1982 (Sp 1482); 1 ♂, 2 ♀: Umg. San Andrés, El Hierro, Aufforstung mit Kiefern (*Pinus insignis*), ca. 1100 m, Naderstreugesiebe, 5.2.1982 (Sp 1480); 1 ♂: El Hierro, 1.1982 (Sp 1477); 1 ♀: Tifor, El Hierro, ca. 1000 m, Brezal (*Erica arborea*-Sekundärvegetation, Streugesiebe), 15.1.1982 (Sp.1470). The genitalia of all specimens were studied and found to be conspecific.

Measurements in mm: body length 1.71 (holotype), 1.69-1.81 (paratype males); wings 0.96 x 0.43 (holotype), 0.84 x 0.36, 0.88 x 0.38, 0.90 x 0.37, 0.99 x 0.47, 1.01 x 0.48 (paratypes); body characteristics of holotype male: length of arista: 0.63, middle interfrontal 0.17, length of inner vertical: 0.28, length of vibrissae: 0.23, length of postalar bristle: 0.29, basal bristle on costal vein: 0.10, length of middle tibia: 0.48, length of middle metatarsus: 0.29, length of middle second tarsomere: 0.145, length of abdomen: 0.84.

Body and legs dark brown, subsining, only knees, apices of tibiae and ventral side of tarsi lighter; yellowish brown. Frontal triangle trapezoidal, weakly shining. Anterior ors much thinner and shorter than posterior one (7:16, or 0.08 mm: 0.18 mm). Posterior interfrontal pair short (0.067 mm on holotype) anterior pair thin and even shorter on majority of specimens. Antennae far removed from each other. Height of eyes 0.26 mm, width of gena at narrowest 0.10 mm.



Figs 1-2. *Paralimosina evolans* sp.n., paratype male - 1: wing - 2: male 5th sternum. Scales: 0.3 mm for Fig. 1 and 0.1 mm for Fig. 2



Figs. 3-5. *Paralimosina evolans* sp.n., paratype male - 3: telomere (surstylius) in subalar - 4: ardegal complex - 5: postcandle. Scales: 0.05 mm for Fig. 3, 5 and 0.1 mm for Fig.

[i.e. eyes not reduced. Arista with 0.015 mm long cilia. Thoracic chaetotaxy as in its congeners (2 pairs of dc, no prst, etc.). Sternopleural bristle rather thin and comparatively short, only 0.16 mm. Apical scutellar 0.57 mm, basal scutellar pair 0.34 mm (holotype). Costal vein dark brown, other veins light brown to ochraceous, plane of wings dark brown. It is a brachypterous species, i.e. venation is complete (Fig. 1), wings are rounded, veins are comparatively thick. Discal cell with two distal appendages, bristles  $mg_1$  almost as long as basal bristle (this latter is the shortest in the reduced-winged forms of this species-group). Middle tibia with anterodorsal and posterodorsal bristle pairs at upper third and at distal 7/9.

Male 5th sternum (Fig. 2) resembling to that of *P. beckeri* but more transverse; posterior medial lobe longer, more sparsely pilose and also slightly different in shape; in addition, the medial row of robust spines in front of the medial thick (stripe) is terminated laterally by a single longer spine (2-3 in *beckeri*) and posterior margin displaying a distinct transverse, pale pigmented and finely pubescent area. Perandrium, hypandrium and pseudocerci as in *P. beckeri* incl. their chaetotaxy. Telomere (surstylus) (Fig. 3) very similar to that of *P. beckeri* but somewhat longer (higher), particularly at posterior lobe; its anterior lobe relatively large and carrying more setae than that of *P. beckeri*. Micropubescence not developed on posterior lobe. Aedeagal complex (Fig. 4) with phallosome and distiphallus formed as in *P. beckeri* (see PAPP and ROHÁČEK, 1981) except for the armature of apical part of distiphallus. Postgonite (Fig. 5) slender, long and with simple apex but without subapical tubercle (cf. Fig. 19 of PAPP and ROHÁČEK, 1981), thus rather resembling that of *franzi*. Ejaculatory apodeme present but small.

Holotype male: Canary Is., La Palma, Strasse von Sta. Cruz zum Tunnel de la Cumbre, Ceseibe aus Laubstreu unter Castanea und Lorbeer, 17.2.1982 (Sp 1496-88), leg. H. Franz.

Paratypes: 5 ♂; data same as for the holotype.

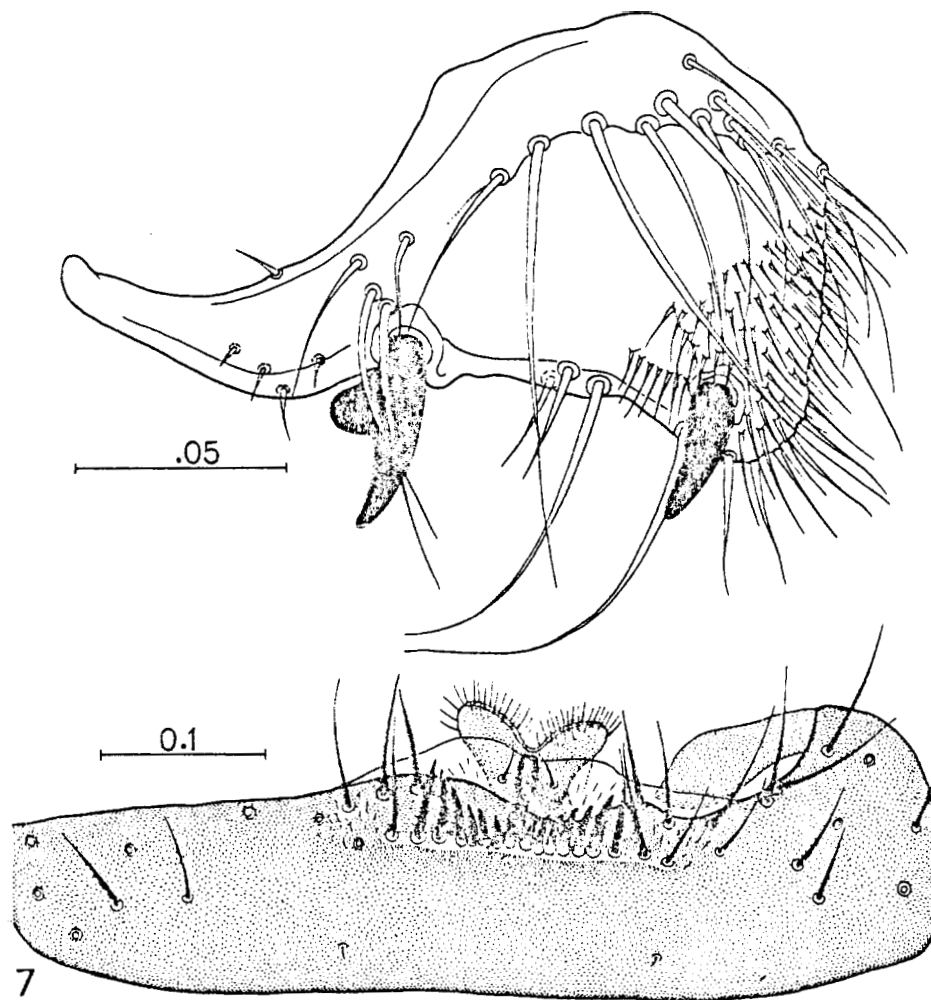
The new species is extremely similar to *P. beckeri* and it forms undoubtedly its closest known relative. There is a considerable resemblance in the formation and armature of male genitalia (e.g. telomere, aedeagus) but also in the cephalic and tibial chaetotaxy. However, it can be easily recognized by its reduced and very dark wings and relatively stout body apart from other differences in the armature of the male 5th sternum and the shape of its posterior lobe, in the length of telomere and the difference in the form of the apical part of postgonite.

#### *Paralimosina franzi* L. Papp & Roháček, 1981 (Figs 6-7)

Material studied: 3 ♂; Tenerife. Anagagebirge, Barranco de Iguana oberhalb des Barrio de Punta Anaga, Ceseibe aus feuchter bis nasser Lorbeerwaldstreu, 25.2.1982 (Sp 1493).

The original description (L. PAPP & ROHÁČEK, 1981, p. 146) was based on a single pair of severely damaged specimens. The three males collected recently by Prof. H. FRANZ enabled us to supplement it as follows: Male 5th sternum (Fig. 7) characterized by its comparatively small posteromedial lobe with long micropubescence on posterior margin and by a rather uniform row of thick spines in front of the medial, darkly pigmented thick (stripe), these spines lengthening laterad. Telomere (surstylus) (Fig. 6) with long setiform hairs not only on the upper part of posterior lobe but there are two hairs also above the anterior double-pointed spine and other two at ventral margin of the posterior part. Around the posterior robust spine there is an area covered by rather long micropubescence (longest among the species of this group).

Discussion. - The new species, *Paralimosina avolans* sp.n., described here, is the seventh species of the *Paralimosina beckeri*-group. It belongs to the first subgroup of L. PAPP & ROHÁČEK (1981), which comprises also *P. beckeri*, *P. gomerenis* and *P. franzi*. Of these, *P. beckeri* seems a widely distributed species known from the majority of the islands of the Canaries (see also new records above), while the other three species (all brachypterous) are limited to different islands (*P. avolans* sp.n. is endemic for La Palma, *P. franzi* to Tenerife and *gomerenis* to La Gomera). Apparently their common ancestor was a macropterous species similar to that of *P. beckeri*. It is very interesting, that the other two brachypterous species (forming the second subgroup) also occur on Tenerife (*P. pilifemorata*) and La Gomera (*P. anoptera*) and thus it seems highly probable that they evolved from a different, fully winged, ancestral species. The seventh species from La Palma has not been described and it is yet unplaced in any of the subgroups owing to insufficient material for study (see L. PAPP and ROHÁČEK, 1981). This discussion is designed to correct some mistakes involved in the discussion of L. PAPP and ROHÁČEK.



Figs 6-7. *Paralimosina franzi* L. Papp and Roháček, 1981 - 6: telomere (surstylus) in sublateral view - 7: male 5th sternum. Scales: 0.05 mm for Fig. 6 and 0.1 mm for Fig. 7

#### REFERENCES

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