Spherozeridae (Diptera) in the Collection of the Hungarian Natural History Museum
I. Archiborborus Duda, 1921

By

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In the last ten years many Hungarian zoological collecting expeditions worked in different countries of the world and collected rich materials of animals. So, I have to mention by name Dr. Tóth (Argentina, 1960-61, India, 1967), J. Balogh et al. (Congo, 1963-64, South America, 1963-66, 1966-67), J. Balogh (Australia, New Guinea, 1965, 1966, 1969), S. Endrödy-Younga (Ghana, 1963-72), Z. Kása, (Mongolia, 1993-98), H. Steenmanx - S. Ma- huska - J. Papp - S. Horvatovics (North Korea, 1971-72). Among the collected insects there were numerous flies, the majority are preserved in alcohol, their number is between one and two millions (probably closer to the second value). Recently the spherozerids were selected from that huge material and ordered into genera early in this year. The material in alcohol was estimated to amount to 15,000 specimens, the very rich Hungarian and Palaearctic collections prepared on minutia pins represent a further addition, and we have an exotic collection which though contains only some hundreds of spherozerids, it is very rich in types (most of them determined by O. Duda).

In this paper I propose to commence the publication of all these materials by genera. It will be followed by the material in our collection of the genera Sphaerozerina and those of the genus Coprosus Bond. With the exception of some genera I do not propose to work at monograph level, first of all because the species of most problematic genera are insufficiently represented in our collection; however, an attempt will be made in the course of these works to solve many of the existing morphological and taxonomical problems, the old type-material will be studied (for lectotype designation, etc.) and the new species described.

In the present paper the genus Archiborborus Duda, 1921, is discussed. Its species are rather well-known, mainly on the basis of Duda's (1921) and Richards' (1961) works. The species of the genus occur only in South America. There they replace not only the species of Coprosus Fall., which are absent in

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South America, but its species fill many of the niches in which Limosina species or species of other genera live in the Old World (see below).

In our collection there are 188 specimens belonging to seven species and one of the species is new to science. The species are discussed in alphabetical order and those, which are not in our collection, are listed with remarks.

Archiborbus (Proteocyphon) argentinensis sp. n.

Body shining black, wings not reduced.

Head longer than high, mouth edge in profile hardly protruding. Eyes big, longitudinally oval. Third parts of head black, fore part of horns, cheeks, facial plate and fore parts of genae yellow with a slightly grey tint, tending gradually to black on genae. Chaetotaxy of head: procoecular and postocellar robust, long, outer and inner verticals also strong (though on the type-specimen only the base of the former ones are present); 1 pair of short bristles in post-vertical position, but several similar bristles on upper part of occiput, gradually transitional a well-ordered postocular row of comparatively long but thin bristles on each side, interfrontal and inner orbital rows consisting of many yet thin and short bristles; 2 long upper orbits. Between frontal triangle and orbitabia not sharply defined but well discernible recesses, vibrissae long and thick, genal bristle also strong. Antennae ochreous yellow, second joint with 2 long proctodeal inner, 1 long surangular upper, and several short bristles; third joint with short, arista with long pilosity.

Thoracic chaetotaxy: 1 humeral, 1 long anterior and 1 short posterior notopleural, 1 presutural, 2 supraalar, 1 postalar, 3 dorsocentral and 2 acutal pairs of bristles, 1 robust sternopleural. Acrostichal microchaetae (as far as discernible on holotype) arranged in 4 rows. Femora and tibiae black, but distal end of femora, both ends of tibiae and all tarsal joints yellow. 11 of male with a small black apical tooth. Apical third of anterterior side of mid femora with a row of 4 spine-like bristles, basal half of ventral side with long setiform hairs, apical third of postocervical side with somewhat thicker, long bristles.

Chaetotaxy of mid tibia: 5 diliform, thin but long perpendiculareatae on dorsal ridge, 1 thick bristle each below middle, at distal fourth and at distal eighth on anteroventral side (and base of a bristle at upper third?), preapical width of bristles, 1 strong bristles at apical third of interocervical side, 1 robust bristle also in apical fourth of postocervical side. Hind femora with some long dorsal bristles, ventrally with only 1 bristle at apical third. Hind tibia without anteroventral bristle, dorsal side with longer setiform hairs, very long dorsal perapical, and 1 subventral and laterocervical spiniform black bristle each at apex. Wing measurements: holotype: approximately 1.90 × 0.64 mm, wing slightly bent downward, thus not precisely measurable. One long incising bristle on costa nearalar base, central section not, with long bristles, m, with only short setiform bristles. Pattern on wing similar to those of related species, but vein r2+3 not white on white-spot areas, and cross-veins also not white (merely much paler brown than veins on dark-spot areas). Haltere pale, yellowish brown.

Propodal sternite of male (Fig. 1) rather peculiar as lateral edges bent inwards thus lateral lobes bent outwards. Lateral lobes pointed, middle of sternite hardly enacrginated. Inner genitalia not studied.
In its description, Deda indicated its holotype and the types of the species between Deda, 1931, incorrectly as belonging to the Vienna Museum. Later (Duda, 1932) he corrected this statement for setous ("möglichkeiten gehören nie dem Museum in Buda[pest]"). Actually, the holotype of calceatus also was in our collection at all times. The holotype female is in rather good condition, although its wings are transversely broken and its apical scutellars are absent. Its abdomen is strongly contracted and heads downward. Measurement taken also along the abdomen, the specimen is 4.5 mm instead of 4.0 mm, as given in its description. (It should be noticed here that almost all of Deda's measurement data are slightly less than the factual values.)

Richards (1961) had not the possibility to study this species as the disposition of the type was unknown, so he was not able to fit it in his key; but he deduced rightly from the description that it runs to the couplet 10 in his key. Now his key can be completed as follows:

10 bigger species, 4.5 mm. Mid tibia with 4 strong antero dorsal and 1 anteroverentral bristles. From in front and between occellar triangle and orbita reddish.

A. calceatus Deda
- Smaller species, 1.75—2.5 mm. Mid tibia with 2 antero dorsal and either 1 ventral or 1 antero ventral and posteroverentral bristle each. From shining or dull black.

10a Mid tibia with 1 ventral bristle, Occipital triangle, orbits and dorsum of thorax shining black.

A. hirtus (Ritter)

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A. (Prosopogrypus) chilensis Richards, 1931


The specimens in our collection agree well with description, although the male pedogenital structures are less slightly emarginate than that of the drawing in the description (Richards, 1931, Fig. 20, f). Additional localities, referring to the species are: Argentina (Neuquén), Chile (La Pintana, Río Bío).

A. (Archiborborus) bicornis (Maquart, 1843)


In the Argentina it was collected only at Buenos Aires except for the above data. Other known localities: Uruguay (Montevideo), Falkland I., Chile (Aranas, Magallanes, Chiloé 1).

A. (Prosopogrypus) orbiculatus Duda, 1921

Chile: 2 ♀; 1 ♂ (in alcohol): Lagoa la Coatzari, 4780 m, 26. XI, 1965, Berlese samples from Lakshore: lakeshores brack water plant (L. LORO), No. 192.

Subsequently to the discovery of the type-specimen, the species was found first in our material, now to Chile. Without a study of the specimens of var. lentifrons Duda, 1921, it seems not impossible from the basis of its description that is a distinct species (cf. Duda, 1921; Richards, 1961).

A. (Prosopogrypus) setosus Duda, 1921

As mentioned above, its type-specimens are in our collection. The male is now designated as lectotype. The specimens are somewhat fragmented; the hind femora, tibiae and tarsi, and the joints 2–5 and right tarsi are missing on the lectotype male, its wings are adherent to each other, the base of the right wing is unfractured, the thoracic bristles partly missing; the mid and hind femora, tibiae and tarsi and the hind right tarsi are entirely missing on the paralectotype female, the right half of its antennae is broken.

The important characters in its separation from the related species are: Body length of lectotype male approx. 3.5 mm (its abdomen curve slightly down, thus difficult to measure), wing length 3.25 mm, wing width 1.49 mm. Body length of paralectotype female 2.8 mm, wing length 2.22 mm, wing width 1.45 mm.

Facial plate and antennae reddish brown, genal bristle weak, shorter than one-third of virga. Frontal triangle, orbita and predominant part of me-
sonomatum shining black, but there are also pruinose parts of mesonotum. Arcro-
tichals in 2 well-ordered rows. A pruinose band on hind edge of mesopleura along its whole height. mfd of male distally with an apical ventral small black tooth. Armature of mid tibia: 1 weaker bristle at 16/51, 1 very robust bristle each at 20/51, 20/54, 25/55, 28/55, 33/55, 44/53 on anterodorsal side, 1 strong bristle each at 14/51, 19/51, 23/51, 29/51, 37/51, 41/51, 42/51, 43/51 on posterodorsal side, preapical wreath of bristles. 1 robust anterodorsal below distal third, 1 posterodorsal at apical 4/5. Hind tibia with a 0.9 mm long dorsal preapical bristle. 1 moderately strong anterodorsal bristle slightly above distal third, one row each of long thin bristles and bristle-like setae in whole length of anterodorsal and poster-
dorsal sides, among them 2 anterodorsals, and 2 posterodorsals thicker, thus regardable as bristles. One straight anterodorsal preapical, 1 straight anterior apical and 1 curved anterodorsal apical spine at apex of tibia. Whole wing unicolorous light brown, veins brown but darker on base of wing. Very long setae on abdominal tergites of male laterally, genitalic area slightly with long setae, sternites with perpendicular, evenly distributed, very thin but not short setae. Pregenital sternite of male large, its biggest length at middle, convex, medio-distantly with a fringe of long dense bristle-like setae. Female abdomen less setaceous, long, thin cerit with 2 long hairs each and some short hairs.

Label data of lectotype: Bolivia, Cilloturnes, Archibarbarus setosus ♂. n. sp. (Duda's handwriting), det. O. Duda; label data of paralectotype: Bolivia, Cilloturnes, Archibarbarus setosus ♂. n. sp. (Duda's handwriting), det. O. Duda.

As its mesonotum is shining and has only 2 rows of arcrrostichal microsetae, its wings are not spotted, the male prepeneral sternite is similar mostly to that of orbitas, perhaps it is nearer related to the species orbitas Duda, 1921, than to wardipenus Duda, 1921 (cf. Richards, 1961).

A. (Pencroyracus) submaculatus Duda, 1921

Specimens on umbitua paras: South Argentina: 1 ♀: Rio Negro, El Bolson, [Pampa Azona, 350 m], 5. II. 61, [netted in grasses on dairy-field at 18 o'clock ]


Specimens in alcohol: Chile: 3 ♀: 7 ♂: Concepcion (Provincia Valparaiso), 5 km from Concepcion on road leading to Quinterno, 10. X. 1963, Repose-samples from sand dunes, decaying fruit branch of Papis lying on ground (I. Lokea), No. 46, 1 ♀: Curacavi (Provincia Santiago), Los Ceribis, 72 km W from Santiago, 15. I. 1966, 10 soil traps with ethylhydrocyan in hillside ditch (I. Lokea), No. 366, South Argentina: Rio Negro, El Bolson: 4 ♂: 2 ♀: from trap in soil by Arroyo Negro, 350 m, 28. II. 1961, Gv. Torai, No. 25; 2 ♀: Pampa Azona, 350 m, 1. XI. 1961, sifted from under cattile carcass (3 month old), Gv. Torai, 95

It is much the most abundant species in our material. New for Argentina. The specimens belonging undoubtedly to the same species display considerable differences in body length. The smallest measured specimen are only 2.1 mm, the biggest one is 4.3 mm. Likewise, as Richards (1961) has observed, there are specimens of very different wing size. Female specimens are found in this material, together with specimens possessing normal wings, which have wings not reaching the hind edge of tergite 5, and there are male specimens with wings just overreaching the end of the abdomen, although their wing of normal size is so long that the apical third of the wing is behind the end of the abdomen.


I regard the valid name of the last species versipes (Biot) (Barbosa versipes Biot, 1888). Richards (1931) studied the types of this species, but as there was a name Barbosa versipes Medders, 1830, at that time, he considered the former name preoccupied, and described allisonia sp. n. as the basis of other specimens, clearly indicating that he applied it to the same species. His course was hardly correct, because the name Barbosa versipes Biot, 1888, referred to a species which did not belong to the same genus as the species named Bar- bosa versipes Medders, 1830, so the first one is not homonymous with the second one. Thus the name of allisonia Richards, 1931, enters into synonymy with versipes (Biot, 1888), and as Richards designated allisonia sp. n. as the type-

ZUSAMMENFASSUNG

Sphaeroceriden (qebasa) in der Sammlung der Europäischen Naturhistorischen Museen I. Archilochus Bong, 1941

Der Verfasser beschreibt 7 Archilochus-Arten, von denen eine, A. (Prooponon) splen- donastes sp. n. für die Wissenschaft neu ist. Diese steht A. splen donastes Borgan, 1849, welche jedoch durch die nachfolgenden Flügel und die Form des Propropofonon der Mannchen von der Schwesterart gut ab.

REFERENCES


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6. Dufay, G. (1921): Floraquilla and Arachidorma, zwei neue riodaminiene Diptera-Bemara-


