

NEW DIPTERA OF THE FAMILY PHORIDAE FROM PARAGUAY.¹

By CHARLES T. BRUES.

The present short communication relating to Paraguayan *Phoridae* is based upon some very interesting material recently accumulated for the Hungarian National Museum by Mrs. BABARCY and Mr. FIEBRIG and sent to me by Dr. KERTÉSZ for examination.

The only *Phoridae* hitherto credited to the fauna of Paraguay are three in number² and the present collection serves to add four more, three of which are undescribed while the other was previously known from Bolivia. One genus (*Gymnophora*) common to northern Europe and North America appears in South America for the first time, represented by a species closely similar to its northern congener.

Phora LATR.

There is an additional Paraguayan species in the present material, very similar to *Ph. paraguayana* BRUES (Ann. Mus. Nat. Hungarici, Vol. V, 1907. p. 400) but quite distinct as can be seen from the following key which aims to distinguish as clearly as possible the species of *Phora* which have the fore tibiae furnished with a series of four or five small setae, and have the proboscis of the female more strongly chitinized than usual. Whether this group is really of subgeneric value, I do not feel sure, but it is very conveniently designated as Group *Dorniphora* DAHL.

1. Hind tibiae with four or five small serial bristles similar to those of the fore tibiae. — — — — — 2.
- Hind tibiae without such a series of small bristles. — — — — — 3.

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² *Phora paraguayana* BRUES, *Aphiochaeta meridionalis* BRUES and *A. pauxilla* BRUES described in volume 5 of the present journal (1907. pp. 400—403). The peculiar termitophilous fly, *Termitomastus leptoproctus* SILVESTRI from Argentine Republic is erroneously attributed to the Phoridae by BRETHES. (An. Mus. Nac. Buenos Aires, Vol. XVI, p. 291.) It is one of the nematocerous Diptera.

2. Bristles of hind tibiæ placed along the outer edge of the hind side Paraguay. — — — — — *Ph. paraguayana* BRUES.
 - Bristles of hind tibiæ placed on the side near the inner edge. North America. — — — — — *Ph. incisuralis* LW.
 3. Hind tibiæ entirely without bristles — — — — — 4.
 - Hind tibiæ with a stout bristle at basal third and a second just before tip. New Guinea. — — — — — *Ph. papuana* BRUES.
 4. Front dark brown or black; proboscis enlarged but not elongated. — 5.
 - Front reddish-yellow; proboscis of female elongated. Bismarck Archipelago. *Ph. Bohmii* DAHL.
 5. Front with the bristles of the middle row forming a straight transverse line; all closer to the occipital margin than to each other. Southern U. S. America. — — — — — *Ph. perplexa* BRUES.
 - Bristles of middle frontal row forming a curved line, strongly bowed upwards. — — — — — 6.
 6. Abdomen black, segments narrowly margined with yellow and lighter along the median line in the male, black in the female; fork of third vein beyond tip of first. West Indies. — — — — — *Ph. divaricata* ALDRICH.
- Abdomen orange yellow with a large lateral black spot on each segment (female); fork of third vein opposite tip of first. Paraguay.
- Ph. meridionalis* n. sp.

Phora meridionalis n. sp.

Female. Length 2·3 mm. Similar to *Ph. divaricata* ALDRICH, but larger and differing mainly as set forth above. Brownish-yellow; the front black except lower margin, and the abdomen with a large black spot on each side of segments two to five, the spots becoming more approximate posteriorly and confluent on the sixth segment. Front as wide as its greatest height; all the bristles strongly reclinate, lower pair close together; first row or four curved down medially, the median bristles farther from each other than from the lateral bristle; next row very strongly curved, equidistant, the lateral ones much lower than the median ones. Ocelli on a distinct tubercle; occipital margin distinctly arched when seen from in front. Surface of front whitish pollinose. Antennæ a little enlarged, the third joint short ovate, almost triangular, with strongly pubescent arista. Postocular cilia enlarged below, small above. Proboscis heavily chitinated, slender, porrect, as long as the palpi which are flattened, but not enlarged and closely appressed to it; palpi each with four moderately long bristles at the tip. Cheeks each with one strong and one weak macrochæta; sides of face opposite antennæ with a macrochæta opposite the base of the antenna. Thoracic dorsum rather shining, with one pair of dorsocentral macrochætæ.

Pleuræ with a series of several bristles above the fore coxa, a macrochætæ above the spiracle and several along the edge of the mesonotum. Scutellum evenly arcuate behind, three times as wide as long; with two marginal bristles and a fine bristly hair to the side of each bristle. Abdomen opaque, bare; second segment elongated, without any bristles laterally. Ovipositor pale yellow, clothed with long bristly hairs. Legs long, the posterior femora only slightly broadened. Anterior tibiæ with a series of four equidistant bristles, each as long as the thickness of the tibia, along its outer side; middle tibiæ each with a pair of macrochætæ at the base; hind tibiæ bare except that the pubescence is a little more bristly along the outer edge at the base. Wings hyaline, faintly yellowish; distinctly infuscated at their tips; veins brown, costal vein slightly extending beyond the middle of the wing, its bristles, very fine, short and closely placed; first vein ending at four-fifths the distance from the humeral cross-vein to the tip of the third vein; third vein lying very close to the first to near its furcation which is opposite the tip of the first vein; fourth vein evenly curved, almost straight, ending as close to the wing tip as the fifth which is nearly straight; 6th vein straight; seventh obsolete. Halteres pale yellow.

One female from San Bernardino, Paraguay, February or March, 1906 (BABARCZY).

This species approaches the West Indian *Ph. divaricata* ALDRICH, but seems to be quite distinct. As previously noted it is related to *Ph. paraguayana*, but lacks the bristles upon the hind tibiæ and the wings have a much shorter costal vein and less strongly curved fourth vein.

Hypocera LIOY.

There is one undescribed species from San Bernardino which falls in the group hitherto known from only Europe and North America, in which the vertex is semicircularly elevated with a sharp rim above. I had thought at first that there were two species, so greatly do the sexes differ in the color and form of the antennæ, but as I can discover no characters aside from such as are probably only sexual differences, believe that the specimens before me represent but a single species. The following are the differences:

Male. Antennæ black; third joint much elongated, sharply pointed and thickly clothed with piceous pubescence; palpi black.

Female. Antennæ orange-yellow; third joint short-ovate, nearly bare; palpi orange-yellow.

Hypocera insperata n. sp.

Male. Length 2.5 mm. Black, with hyaline wings; tips of anterior femora, their tibiae and tarsi brownish yellow. Head considerably flattened antero-posteriorly and concave behind above and on the sides. In anterior view the front is a little wider than high, and across the top is deeply transversely depressed and then semicircularly elevated into a sharp ridge on the occipital margin as in *H. coronata* BECKER and *H. Johnsoni* BRUES; seen from above the concave upper part is slightly over one-third as high as the convex front. Lower row of frontal bristles forming a strongly curved line with the median bristles lower, although all bristles in this row are equidistant from one another but closer to the eye margin. Next row of bristles equidistant, the lateral ones close to the eye margin; the row curving upward at the center where the bristles are quite close to the lower margin of the occipital depression. Ocelli forming a curved line, each on a tubercle which fits into an emargination of the frontal edge anterior to it; lateral ocelli separated from the eye only by their own diameter. Occipital bristles as usual; long, as are the others. Postocular cilia stout except at the extreme top. Antennae with the third joint large, elongate pyriform, nearly as long as the width of the front, and very densely clothed with fusco-piceous hairs; arista one-third longer than the third joint, moderately pubescent. Palpi very small, dorso-ventrally flattened, with large stout macrochætæ. Surface of front very sparsely but rather coarsely punctured, each puncture with a fine hair. Thorax pubescent, rather shining, with one pair of small dorsocentral macrochætæ. Scutellum transverse, flat, not pubescent; opaque, twice as wide as long but little curved on its posterior margin; at each side with a single long bristle about three times as long as the scutellum. Abdomen subshining, its surface bare except along the sides where there is a rather dense band of bristly hairs, weaker posteriorly. Second segment greatly elongated, at the middle nearly half as long as wide, its posterior part and the 3—5th segments which are very short, quite distinctly fluted, caused by rounded longitudinal elevations and depressions alternating across the abdomen. Sixth segment much narrowed with the hypopygium projecting as a polished black swelling with a few hairs at its tip. Legs very stout, the posterior femora fully one-third as broad as long. Anterior tarsi not, or indistinctly enlarged or flattened, their tibiae with a short, stout macrochæta at its basal third. Middle tibia with three macrochætæ, one externally at the basal fourth, one behind at the basal third, and one externally just before the tip in addition

to a long apical spur. Hind tibia with two macrochætæ, one externally at basal third and a second externally just before tip, in addition to four apical spurs; internally at apex with several comb-like rows of appressed flattened bristles. Wings hyaline, narrow; costal vein with moderately fine, closely placed cilia, ending barely beyond the middle of the wing, first vein ending one-third nearer the tip of the third than the basal cross-vein; third vein bare, not forked nor swollen at its tip; fourth vein straight except for a moderate curve near base, ending much nearer the wing tip than does the nearly straight fifth; sixth distinct, but the seventh almost obsolete. Halteres entirely black.

Female. Length 2·8—3·2 mm. The palpi and antennæ are orange yellow; the third joint of the latter dusted with very short yellowish pubescence, scarcely one-third longer than thick and bearing an arista about five times its own length. Abdomen without the fluting of the margins to the segments seen in the male and also scarcely hairy along the sides. Wings with the third vein faintly beset with microscopic bristles, more distinctly so than in the male where they are practically absent. Otherwise similar to the male.

Habitat: Paraguay. San Bernardino (FIEBIG, 1908). One male and three females.

This is a very robust species, resembling the North American *H. Johnsoni* BRUES, but distinguished by its blackish antennæ and palpi in the male, the presence of only two scutellar bristles, and the equidistant bristles of the lower frontal row. It resembles still more closely the European *H. coronata* BECKER, in chætotaxy and habitus, but the position of the lateral ocelli and the frontal bristles is very different.

One of the females before me is much more pale in color, with the scutellum and middle legs honey yellow and the abdominal segments banded indistinctly with pale at apex. I believe it only a freshly emerged specimen however, and not a true color variety.

Melaloncha pulchella BRUES.

Trans. American Entom. Soc., Vol. 29, p. 375 (1903).

There is in the present collection, a single male bearing the label «Paraguay, Fiebrig» which probably belongs to this species, originally described from Songo, Bolivia.

It differs somewhat in color, the thorax is yellowish anteriorly, except for a complete dark median stripe and the pleuræ are orange-colored on their upper half, while the second to sixth abdominal seg-

ments are entirely covered with bluish-white, iridescent pollen, except for narrow opaque black posterior margins.

It is therefore, probably only a well-defined color variety.

Gymnophora Macq.

Up to the present writing this genus has remained monotypical, represented by *G. arcuata* MEIG. first described as a member of the European fauna,¹ and the later recognized from the United States by OSTEN SACKEN in 1878 (Cat. Dipt. N. Amer. Smithsonian Misc. Coll., p. 212). It is therefore of considerable interest to know that the genus is represented in Paraguay by a second species of which there are two specimens in the small collection before me.

As will appear from the following detailed description, the South American form is quite different from the European *arcuata*, but is without doubt congeneric as it presents all the generic peculiarities of the typical species except for slightly less reduced frontal bristles.

In this connection, I have been led to compare closely North American specimens of *arcuata* with those from Europe to make sure of their identity. A single example from the Pacific Coast (Tacoma, Wash.) is not distinguishable from others collected in Germany, but all the specimens from the eastern United States which I have at hand, show slight but constant differences in the wings. They lack a slight, but very distinct swelling of the costa just before the tip of the first vein, which meets the costa nearer to the base of the wing than in European examples, where its tip is opposite the furcation of the third vein. Further material is necessary, however, to show that individuals from the eastern United States are really distinct from the European and Pacific Coast form. If such should prove the case, it will not be so surprising, since many palæarctic insects appear in Western North America and not in the Atlantic Region.

Gymnophora colona n. sp.

Female. Length 1.5—1.8 mm. Black, shining on the head and thorax; legs yellowish brown, darker on the posterior pair; wings infuscated. Front shining, not punctate or pollinose, but sparsely hairy; occipital row of bristles with the lateral bristle quite well developed, but with the median pair shorter. Lateral bristle of next row below also

¹ MEIGEN, Syst. Besch. zweifl. Ins., VI, p. 222, 1830.

quite well-developed, but the other frontal bristles very short and weak. Ocelli close together, on a distinct tubercle. Antennæ black, with velvety pubescence; third joint circular in lateral view, but appearing compressed when seen from the front. Arista with the two basal joints very stout, bare; third joint strongly pubescent. Palpi black, with numerous short bristly hairs about their tips; proboscis very short, castaneous. Mesonotum very shining and sparsely clothed with short hairs, with a large, very distinctly impressed, area before the scutellum; scutellum with two delicate but distinct bristles. Sides of mesonotum lined with decumbent bristly hairs; one pair of much reduced dorsocentral macrochaetæ. Abdomen bare, subopaque, with the second segment slightly elongated. Legs slender, thinly hairy. Anterior coxæ testaceous, their femora and tibiæ brownish yellow and their tarsi fuscous; middle legs piceous, lighter on the femora; hind legs piceous. Halteres entirely black. Wings quite distinctly tinged with fuscous, venation blackish brown; costal vein extending scarcely beyond the middle of the wing, very stout except at base; fringed with short fine hairs; first vein ending twice as far from the humeral cross-vein as from the tip of the third, and opposite the furcation of the third; second vein ending midway between the tips of the first and third. Fourth vein evenly but slightly curved, recurved at base and apex; fifth vein distinctly sinuous, ending far from the fourth as in the European *arcuata*; sixth vein strongly sinuous; seventh very distinct, nearly straight.

A second female differs by its paler legs and pleuræ, and fuscous thoracic dorsum.

Type from San Bernardino, Paraguay, 1908 (FIEBRIG), paratype from Paraguay (FIEBRIG).

The shining front with more distinct bristles and the black halteres are the most conspicuous characters distinguishing this species from the European *G. arcuata* MEIG.
