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## NOTES ON HIPPELATES (DIPTERA: CHLOROPIDAE), WITH A NEW BRAZILIAN SPECIES.

By J. M. Aldrich, U. S. National Museum.

The genus was established by Loew in Berliner Ent. Zeitschrift, vol. 7, 1863, p. 38 (Centuries, part. 3, No. 69). He described two species, *nobilis* and *plebejus*, and strangely overlooked the hind tibial spur in his Oscinis pallipes (page 39), and Oscinis flaviceps (page 40), which also belong to Hippelates, as I found in examining the types, at the Museum of Comparative Zoology, in 1915. Coquillett designated *plebejus* as type in Proceedings U. S. Nat. Mus., vol. 37, 1910, p. 552; while Enderlein designated *nobilis* as type, in Sitzungsberichte Ges. Naturforsch. Freunde, 1911, p. 191, probably not having seen Coquillett's paper.

Malloch published a thorough revision of the North American species in Proceedings U. S. Nat. Mus., vol. 46, 1913, pp. 239– 266, with two plates. As he had not seen Loew's types, he made some mistakes in identifying the Loew species, which I corrected in these proceedings, vol. 31, 1929, p. 35.

A new paper entitled "Die neotropischen Chloropiden," by Dr. Oswald Duda has lately been sent to me by the author, with the explanation that it is a mere fragment, hardly one-eighth of his manuscript, of which he was unable to get the remainder published. It was published in Folia Zoologia et Hydrobiologia, vol. 2, September, 1930, pp. 46–128. The author attempted a revolutionary treatment of the family, but the part printed consists only of keys and is almost impossible to follow. I refrain from further discussion of it at present.

Mr. C. H. Curran has published four species of *Hippelates* in American Museum Novitates, No. 220, 1926, pages 4 and 5; these are all from the West Indies.

It is not proposed to revise the genus herein, but merely to give some notes along with the description of the new species.

The standing of *Hippelates* has been questioned in recent years. Kertesz examined the type of *Cadrema lonchopteroides* Walker, described from Celebes in Proceedings Linn. Soc., vol. 4, 1860, p. 117. His report is in Annales Mus. Nat. Hung., vol. 12, 1914, p. 674. The type is headless, but the hind tibia has a long curved apical spur (mentioned by Walker), and Kertesz states positively that Cadrema, of which it is the sole species, must take priority over *Hippelates*. No one seems to have seen another specimen of *lonchopteroides*, which is strikingly marked in having an apical dark spot in the wing. Becker's Parahippelates fuscipleuris from New Guinea, has such a spot, but from the description seems to have longer plumosity on the arista. From existing data by Walker and Kertesz, I believe lonchopteroides is nearly related to the widespread Prohippelates pallidus Loew, and is far more likely to be congeneric with it than with Hippelates plebejus. I therefore continue to use *Hippelates*, leaving *Cadrema* for elucidation when additional material of the type species shall have been discovered. I am indebted to Mr. Malloch for calling to my attention the occurrence of *pallidus* in the Pacific region; it is evidently the same species which Becker identified as *Hippelates nigricornis* Thoms., in his work on Indo-Australian Chloropidae, Annales Mus. Nat. Hung., vol. 9, 1911, p. 103. Malloch reported it from Samoa (insects of Samoa, Chloropidae, 1930, p. 245).

#### Hippelates pallipes Loew.

I have just mentioned that Loew published this as an Oscinis. The type was from Cuba (Gundlach). He published *Hippelates flavipes* in Berliner Ent. Zeitsch., vol. 10, 1866, p. 184 (Centuries, pt. 6, No. 95); this species was also from the same collector in Cuba. His type series contains two species, his own *pallipes* and in minor part *partitus* Becker. I designate the part agreeing with *pallipes* as the true types, believing that less confusion will result from sinking the name *flavipes* than from transferring it to another species.

## Hippelates currani, new name.

I propose this for *Hippelates collusor* Curran, Amer. Mus. Novitates, No. 220, 1926, p. 4. Townsend described Oscinis collusor from Lower California, in Proceedings Cal. Acad. Sci. sec. ser., vol. 4, 1895, p. 619. His type was in the California Academy and was destroyed in the San Francisco fire; I had examined it a few months before, but did not get enough of a description to place it except as to the genus. It is a *Hippelates*, as might be surmised from his statement that the species annoys people, causing irritation of the eyes.

I have recently identified three specimens of *currani* that were sent by Dr. A. da Costa Lima, of Rio Janeiro, who received them from Dr. M. Florentino da Silva, of Parahyba do Norte, Brazil.

## Hippelates plebejus Loew.

The relationship with *nobilis* and *proboscideus* is not altogether clear, but I identify the last-named in a series of 13 from Higuito, Costa Rica (Schild), and six from Panama (5 Trinidad River, 1 Boqueron River, all collected by Busck); having examined the types of *nobilis* and *plebejus*, 1 tentatively separate the three species as follows:

Sc	cutellum bordered with reddish	plebejus.
Sc	cutellum wholly black, concolorous with mesonotum.	
	Hind femora and tibiae ringed with brown; cheek one-third	
	eye-height	nobilis.
	Hind femora and tibiae wholly or almost wholly yellow;	
	cheek one-fourth eye-height	proboscideus.

In *nobilis* the ocellar triangle may not show the shining black spot in the apex, and if present it may be narrow as indicated by Loew; in *proboscideus* it is present and rounded in all the specimens seen. *Proboscideus* shows no characters to justify the subgenus *Siphomyia* which Williston based upon it, and which Duda in his recent paper cited above elevates to full generic rank.

## Hippelates longulus Becker.

Described in his work on the nearctic Chloropidae (Ann. Mus. Nat. Hung., vol. 10, 1912, p. 89). The single type, a female, was returned to me. Becker made a mistake in the locality, calling it Canada, when it is Grenada, W. I.; it should have been in his neotropical paper.

I have carefully examined the type, and can make it out to be nothing but a specimen of *capax* Coq., which Malloch has made the type of the new genus Pseudohippelates.

#### Hippelates brasiliensis, new species.

Resembles *Hippelates pallidus* Loew, but has narrower cheeks and has distinct white pollen on the parafacial and upper part of cheek.

Thorax shining black, including pleurae; frontal triangle shining black, large; legs wholly pale yellow, only the last tarsal joint sometimes brownish.

Male, female. Frontal triangle large, highly polished, its upper angles barely separated from the eyes, its sides convex, the tip sometimes yellow, almost touching anterior edge of front. Lower part of front yellow, becoming brownish upward. When viewed from in front and a little below, the parafrontals are white pollinose like the parafacials. Antennae pale yellow, third joint wider than long, its upper edge infuscated; arista yellow on basal joint, the remainder black and distinctly pubescent under moderately high power (20 diameters). Face dark in middle; palpi gellow, rather large; proboscis PROC. ENT. SOC. WASH., VOL. 33, NO. 4, APR., 1931

brownish black, the main segment considerably shorter than head, labella of about equal length, folded back; inner edge of mouth dark. Cheek yellow, in side view about one-eighth eye-height, without prominent angle in vibrissal region; when viewed more from below, the lower third is shining, the rest white pollinose.

Thorax with a median row of hairs arising from punctures; next to this laterally a less distinct row not in punctures; then a row, somewhat double posteriorly, arising from conspicuous punctures giving almost the effect of a groove (all this is the same as in *pallipes*). Scutellum with the normal two minute bristles at tip.

Abdomen polished black, the base yellow for about two segments.

Legs very pale yellow, with hairs of same color, only the tibial spurs and claws black. Hind tibial spurs arising at five-sixths the length of the tibiae, which they hardly surpass.

Wings hyaline, veins very pale, costa a little darker.

Length, 1.4 to 1.6 mm.

Described from 25 specimens of both sexes received from R. C. Shannon; he writes that they were collected at the city of Parahyba, State of Parahyba, Brazil, by Dr. Eduardo Araujo, who suspected that they may be conveyors of the disease called Yaws.

Type.-Female, Cat. No. 43456, U. S. N. M.

Four of the paratypes are deposited in the Instituto Oswaldo Cruz, Rio Janeiro; four in the Instituto Biologico, Sao Paulo; and four are returned to Mr. Shannon.

# BIOLOGICAL NOTES ON THE TRIGONALIDAE (HYMEN-OPTERA).<sup>1</sup>

By CURTIS P. CLAUSEN,

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In a recent paper the writer presented an account of the life history of *Poecilogonalos thwaitesii* (Westw.), parasitic in the cocoons of *Henicospilus* in India. The life history as given was incomplete, lacking information on the hatching of the egg and on the characteristics of the primary larval stage. The present paper deals with these two points in two genera, *Poecilogonalos* and *Orthogonalos*, studied in Japan.

MANNER OF OVIPOSITION.

The leaf-ovipositing habit in the Trigonalidae was first demonstrated by Mr. Cho Teranishi in the case of *Poecilogonalos* 

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<sup>&</sup>lt;sup>1</sup>Clausen, Curtis P., Biological Studies on *Poecilogonalos thwaitesii* (Westw.) Parasitic in the Cocoons of Henicospilus (Hymen.: Trigonalidae), Proc. Ent. Soc. Washington, Vol. 31, No. 4, pp. 67–79, 1929.