

**Studies in Pacific Bibionidae (Diptera)<sup>1</sup>**  
**Part II:<sup>2</sup> Genus *Philia* Meigen**

By **D. ELMO HARDY<sup>3</sup>**

The genus *Philia* is rather poorly understood in the Pacific area and the present report must be considered as a preliminary study of the species now known from this region. The genus, as is the family, is very restricted in its distribution in the Pacific. Species of *Philia* have been recorded only from Australia, New Zealand, the Philippine Islands, Java and Borneo. The present study adds New Guinea to the distribution records.

At present time there are but twenty-one species and one variety of *Philia* known from Australia and the Pacific island areas, except Japan. Descriptions of these species and a key are presented herein. Just the diagnostic characters are given in cases where the species has been adequately described in other publications or where the writer has not seen the species.

The writer is much indebted to Paul Freeman, British Museum (Natural History); Dr. Alan Stone, United States National Museum; and Dr. J. C. Bequaert, Museum of Comparative Zoology, for having had the privilege of studying the Pacific *Philia* in their collections.

**Key to Known Pacific *Philia***

1. Males .....	2
Females .....	20
2. Thorax and abdomen entirely dark brown to black; legs usually all black.....	3
Thorax at least rufous on the dorsum, or variegated with red; coxae and femora usually rufous .....	17
3. Hind tarsal subsegments conspicuously swollen, not over three times longer than wide and usually about as thick as the tip of the tibiae.....	4
Hind tarsi slender, subsegments not swollen, metatarsi six to eight times longer than wide .....	11
4. Rostrum (the sclerotized portion of the head in front of the eyes) very elongate, equal in length to the remainder of the head (Tasmania, So. Australia) .....	longirostris (Macquart), p. 265
Rostrum not as long as the lower section (section of smaller facets) of the eye, usually not noticeably developed beyond the eye margin.....	5
5. Front tibiae with three spines on a strong prominence at upper third of the segment, and with a single spine situated at the apical two-thirds of the tibia (fig. 8a; wings yellow-brown fumose (New Zealand).....	nigrostigma (Walker), p. 268
Spines of front tibiae not arranged as above; wings usually hyaline or slightly smoky .....	6
6. Front tibiae with just one row of spines above the apical set.....	7
Front tibiae with the spines above the apical set arranged in two rows, these sometimes lie close together but are lined up in rows (figs. 2a and 11a).....	8

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7. Hind metatarsi strongly swollen, they are equal in width or wider than the apices of the femora or the tibiae; wings faintly yellow fumose (Australia).....*varipes* (Skuse), p. 274  
Hind metatarsi not so strongly swollen, about half as thick as the apices of the tibiae; wings slightly milky (Philippine Islands).....*acutidens* (Edwards), p. 260
8. Front tibiae with only four spines above the apical set; these arranged in two closely placed rows just above the middle of the segment; the top two spines close together and the lower pair more widely spaced (fig. 2a) (Philippine Islands).....*bakeri* n. sp., p. 260  
Front tibiae with five spines above the middle set, not arranged as above..... 9
9. Very densely pilose species; radial veins lined with strong hairs on the dorsal surface; wings fumose; antennae short and with nine to ten segments; hind metatarsi about three times longer than wide (Australia).....*crinita* n. sp., p. 262  
Sparsely pilose species, mesonotum and scutellum chiefly bare; radial vein bare except for a few microscopic hairs near base; wings hyaline; antennae elongate and thirteen segmented; hind metatarsi two times longer than wide..... 10
10. The first set of spines above the apical set on the front tibiae widely separated from the second; the first set located near the basal third and the second set near the apical two-thirds (fig. 11a); hind metatarsi wider than apices of tibiae (fig. 11b); apical spurs of front tibiae nearly equal in size to the spines (New Zealand).....*segnis* (Hutton), p. 272  
The two sets above the apical set are close together and located at the middle of the tibiae (fig. 5a); the hind metatarsi not as thick as the tibiae and the apical spurs about two times larger than the spines (New Zealand).....*insolita* (Hutton), p. 264
11. Front tibiae with three large spines situated at the middle of the segment (Philippine Islands).....*trispinosa* (Edwards), p. 273  
Front tibiae with four or more spines above the apical set..... 12
12. Stigmata absent; wings hyaline, very slightly milky; front tibiae with three spines situated just before the middle and two more spines just beyond the middle (Java).....*sublacteata* (Edwards), p. 273  
Stigmata prominent, dark brown in color; wings smoky; front tibial spines not as above..... 13
13. Coxae and all femora bright yellow-orange; front tibiae with four spines in the middle arranged in two sets, the top two close together on the middle of the tibia and the other two widely separated; the tibiae also with one large spine, on the outer side, situated at the outer two-thirds of the segment (fig. 9a) (Java).....*quintana* n. sp., p. 270  
At least the middle and hind femora chiefly dark, except possibly in *nigriventris* (De Meijere); tibial spines not as above..... 14
14. Flagella of antennae with ten or eleven segments; front tibiae with two spines placed side by side and close together at middle and two more, also side by side but much wider apart, immediately beyond the middle of the segment; anal area of wing not well developed, somewhat obtuse (Java).....*obtusa* (Edwards), p. 269  
Flagella of antennae with seven or eight segments; front tibial spines not as above; anal area well developed, the angle formed by the sides of the anal lobe acute ..... 15
15. Front tibiae with five spines above the apical set, three in a row (near middle?) and with two short tooth-like spines externally placed; coxae and femora yellow (Java).....*nigriventris* (De Meijere)?, p. 268  
Front tibial spines not as above; legs chiefly testaceous or all black..... 16
16. Front tibiae with two spines near basal one-third and three spines at the apical two-thirds of the segment; legs testaceous, coxae and femora tinged with rufous (Australia).....*pictipes* (Skuse), p. 270  
Front tibiae with three spines just before middle and one more spine on outer side a little more distally placed; legs black (Philippine Islands).....*scabricollis* (Edwards), p. 272

- 17. Very tiny species, 2.5 mm. in length; wings very pale yellowish, almost hyaline; front tibiae with two spines near the basal third and three spines near the apical two-thirds of the segment (fig. 4a); mesonotum, pronotum and scutellum brown to blackish in the middle (New Guinea).....**exigua** n. sp., p. 263  
Not as above, dark-winged species, 4.0-7.5 mm. in length; tibial spines differently arranged ..... 18
- 18. Thorax entirely rufous; femora all rufous except for slightly darkened apices; flagella of antennae with eleven distinct segments; front tibiae usually with six spines in the middle set; species 6.5-8.0 mm. in length (New Guinea).....**multispinosa** n. sp., p. 266  
Pleura brown to black; at least middle and hind legs brown to blackish; flagella eight-segmented; three to four spines in the middle set on front tibiae; species 4.0-4.5 mm. in length..... 19
- 19. Dorsum of thorax uniformly red; abdomen brownish red; anterior pronotal comb with two groups of four teeth; posterior comb with a row of six small teeth in the middle and two larger teeth, one in front of the other, on each side (Borneo).....**rubida** (Edwards), p. 271  
Thorax and abdomen shining black; teeth of pronotal combs not as above (Java).....**nigriventris** (De Meijere) ?, p. 268
- 20. Front tibiae with three large spines on a prominence at basal third and a single spine at the apical two-thirds (fig. 8a); rather large dark-winged species, 6.5-9.0 mm. in length (New Zealand).....**nigrostigma** (Walker), p. 268  
Tibial spines not as above..... 21
- 21. Rostrum very elongate, equal to slightly longer than the remainder of the head and one and one-third times longer than the antennae..... 22  
Rostrum not longer than the compound eyes, usually much shorter..... 23
- 22. Front tibiae with two spines near the base and three spines near the middle of the segment; eyes nearly bare (Australia).....**longirostris** (Macquart), p. 265  
Front tibiae with four spines in a row just above the middle; eyes densely pilose (Australia).....**rostrata** n. sp., p. 271
- 23. Wings hyaline ..... 24  
Wings distinctly fumose..... 25
- 24. Wings whitish, veins white; stigmata pale brown; length 2.5 mm. (Australia).....**desistens** (Walker), p. 262  
Wings not whitish, veins yellowish to brown; stigmata prominent, brown; length, 4.5 mm. (Australia).....**lecticollis** (Skuse), p. 265
- 25. Thorax entirely dark brown to black..... 26  
Thorax at least variegated with red..... 29
- 26. Front tibiae with just three spines above apical set; spurs of front tibiae only about half as large as the apical spines (Philippine Islands).....**trispinosa** (Edwards), p. 273  
More than three spines above apical set; spurs equal or larger than apical spines ..... 27
- 27. Front tibiae with three spines in a set just before the middle and with two teeth a little more distally placed on the outer side one in front of the other (Philippine Islands).....**scabricollis** (Edwards), p. 272  
Spines of front tibiae not so arranged..... 28
- 28. Front tibiae with three spines on a strong prominence at basal one-third of the segment and with a single spine at the apical two-thirds (fig. 8a); abdomen ferruginous beneath, femora red with black tips. (New Zealand).....**nigrostigma** var. **zealandica** (Walker), p. 269  
Front tibiae with two spines at the basal one-third and three spines at apical two-thirds (fig. 11a); abdomen all dark brown to black; legs brown to blackish. (New Zealand).....**segnis** (Hutton), p. 272
- 29. Front tibiae with three spines on a strong prominence at basal third of the segment and with a single spine at the apical two-thirds (New Zealand).....**nigrostigma** (Walker), p. 268  
Tibial spines not as above..... 30

30. Front tibiae with two sets of spines near middle, two spines in top set and three in second set (fig. 5a) (New Zealand, Australia).....*insolita* (Hutton), p. 264  
Just one set of spines above the apex of the tibiae..... 31
31. Four spines in middle set on the front tibiae; membrane of abdomen orange-red; wings smoky (Philippine Islands).....*acutidens* (Edwards), p. 260  
Usually six spines in the middle of the front tibiae; membrane of abdomen black; wings brown fumose..... 32
32. Thorax entirely yellow-red; larger species, body, 7.0 mm.; wings, 9.0 mm. (New Guinea).....*multispinosa* n. sp., p. 266  
Dorsum of thorax brownish red; pleura black; smaller species, body and wings, 5.0 mm. (Java).....*nigriventris* (De Meijere)?, p. 268

***Philia acutidens* (Edwards) (Fig. 1a)**

*Dilophus acutidens* Edwards, 1929, Notul. Ent., 9:79.

This species has strongly clavate hind femora and is closely related to *Philia varipes* (Skuse). It appears to differ from *varipes* by not having the hind metatarsi so strongly swollen. In the original description Edwards states that the antennae have only six distinct segments in the flagellum. He also states that the row of spines on each front tibia is arranged immediately before the middle. One female specimen, which appears to be this species, has been studied from the Philippines. The antennae are, however, ten segmented, the body is entirely rufous and the tibial spines, above the apical set, are situated near the basal third of the segment (fig. 1a). The two specimens which Edwards studied may have had the antennal segments more compact than in the one at hand. Edwards' female had the head, prothorax, pleura, abdominal plates, tibiae and tarsi black. The specimen herein recorded may possibly be a different species from *acutidens*.

Male length: body, 3.5 mm.; wings, 3.2 mm.

Female length: body, 4.5 mm.; wings, 3.2 mm.

Type locality: Balbalasang, Philippine Islands.

Type in the British Museum (Natural History).

The specimen at hand was from La Lun Mts. Davao, Mindanao, Philippine Islands, July 2 (C. F. Clagg).

***Philia bakeri* n. sp. (Fig. 2a)**

This species is related to *Philia acutidens* (Edwards). It is readily distinguished by the brownish fumose wings, the dark posterior veins, the eleven-segmented antennae and by the difference in arrangement of the spines on the front tibiae.

*Male*.—*Head*: Eyes densely brown pilose, vertex with long curved bristles which extend three times the height of the ocellar tubercle. Antennae dark brown to black, eleven segmented. Rostrum produced almost half as long as the lower portion of the eye but not extending beyond bases of the antennae. *Thorax*: Polished blue-black on the dorsum, tinged with reddish on the pleura. Pile elongate and all black. Halteres with brown to black knobs and yellow stems. *Legs*: Blackish with a deep tinge of red, all pile dark brown to black. Front tarsi with some very long, erect bristles on the dorsal surfaces, these bristles are three times longer than the tarsus is wide. There are four spines on each front tibia above the apical set. These are arranged in two closely placed rows just above the middle of the tibia. The two uppermost spines are placed close together on the dorsal surface of the segment; two widely spaced spines lie just below these (fig. 2a). The tibial spurs are not larger than the spines in the apical set. The hind tibiae are strongly swollen at their apices and are distinctly wider than the femora. The hind tarsi are greatly swollen, with the subsegments oval in shape. The basitarsi

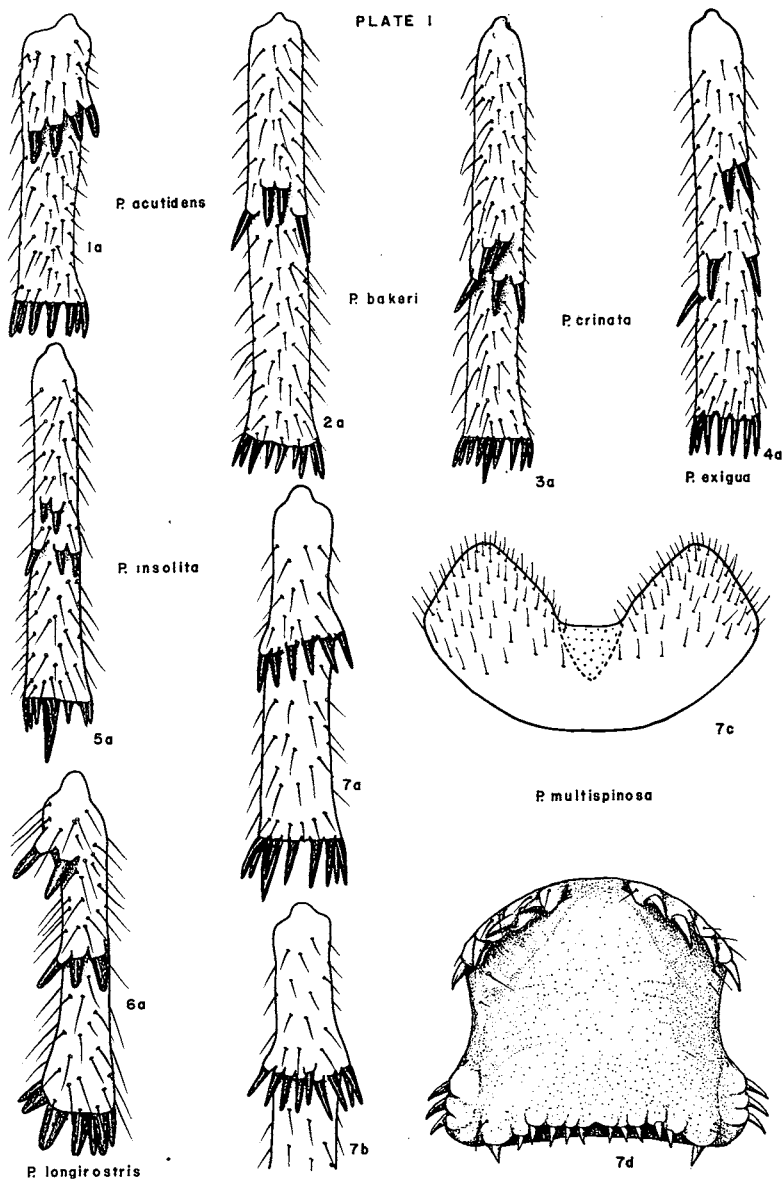


Plate I

1. *Philia acutidens* (Edwards)? *a.* front tibia.
2. *P. bakeri* n. sp. *a.* front tibia.
3. *P. crinita* n. sp. *a.* front tibia. (Note misspelling on plate.)
4. *P. exigua* n. sp. *a.* front tibia. (Approximately twice the scale of other drawings.)
5. *P. insolita* (Hutton). *a.* front tibia.
6. *P. longirostris* (Macquart). *a.* front tibia.
7. *P. multispinosa* n. sp. *a.* front tibia, typical; *b.* front tibia, atypical; *c.* ninth tergum of male; *d.* anterior portion of notum.

are almost as wide as the apices of the tibiae and are just slightly over two times longer than wide. *Wings*: Brown fumose, stigmata and anterior veins dark brown; posterior veins lighter brown. The costa extends half way between the tips of veins  $R_4$  and  $M_1$ . *Abdomen*: Shining black, densely covered with yellow pile. The genitalia have not been studied.

Length: body, 5.0 mm.; wings, 5.3 mm.

Female unknown.

Holotype male: Baguio, Benguet, Philippine Islands, 1927 (C. F. Baker).  
Type returned to the United States National Museum.

***Philia crinita* n. sp.** (Fig. 3a)

This species is related to *Philia insolita* (Hutton) but is distinguished by the densely haired body and legs, the bristled radial veins, the fumose wings and brownish posterior veins; the short, nine to ten segmented antennae and by the more slender hind metatarsi.

*Male*.—All pile long and black, much more dense than on most *Philia*. *Head*: Pile of the compound eyes about equal in length to that of the face. Rostrum produced but not greatly elongated. The rostrum is about two-thirds as long as the lower portion of each eye and is slightly produced beyond the bases of the antennae. The antennae are short and compact and contain but nine clearly visible segments. *Thorax*: Highly polished black on the dorsum, tinged lightly with reddish on the sides. The teeth in the thoracic combs are black. The pile on the dorsum is equal in length to the scutellum. The halteres are brown to black with yellowish stems. *Legs*: Chiefly brown to blackish and moderately tinged with yellow. The tibiae are paler in color than the femora and are often almost entirely yellow, especially on the middle and hind legs. Most of the leg pile is equal or longer than the width of the segment which bears it. Spines of front tibiae rather similar to those of *P. insolita* except that they are located beyond the middle of the tibia (fig. 3a). Apical spurs larger than the spines in the apical set. The middle tibiae each have a strong spine on the dorsal median surface. Hind tibiae are strongly swollen, and they are much thicker at their apices than are the femora. The tarsal segments are swollen but are not strongly inflated. The basitarsi are about three times longer than wide and are much narrower than the apices of tibiae. *Wings*: Yellowish fumose, the stigmata and all veins are colored with brown. The radial veins are lined with strong black hairs on the dorsal surface. *Abdomen*: All black, rather slender; it is one and one-fourth times longer than the head and thorax combined. The genitalia have not been studied.

Length: body, 5.5-6.0 mm.; wings, 4.7-5.1 mm.

Female unknown.

Holotype male: Mt. Wellington, New Zealand, Dec. 10, 1916 (C. E. Cole). Three paratype males, from the following localities: Arthur's Pass, New Zealand, Nov. 20-Dec. 11, 1919, and Otira, N. Z., Nov. 20, 1919.

Type and two paratypes returned to the United States National Museum. One paratype in the B. P. Bishop Museum collection, Honolulu, T. H.

***Philia desistens* (Walker)**

*Dilophus desistens* Walker, 1861, Trans. Ent. Soc. Lond. (n.s.), 5:332.

This species is apparently known only from the female. It is related to *Philia lecticollis* (Skuse) and may possibly be synonymous with that species. From the original descriptions *P. desistens* and *lecticollis* appear to differ slightly in size and in the color of the wing membrane and veins. Walker's description states that the body of *P. desistens* is  $1\frac{3}{4}$  lin.; that the wing membrane is whitish, the veins are white and the stigma is pale brown. In the original description of *lecticollis* Skuse says that the body

is 4.5 mm. long, the wings are nearly hyaline, the veins are yellowish to brown, and the stigma is brown.

Skuse (1890) states that this may possibly be the same as *P. pictipes* (Skuse), known only for the male.

Length: body "1-3/4 lin."; wings, "3 lin."

Type locality: New South Wales.

Type in the British Museum (Natural History).

The writer has not seen this species.

### *Philia exigua* n. sp. (Fig. 4a)

This is the smallest species of *Philia* known to the writer. It is about two times smaller than any other species which has been described from the Pacific region. It seems most closely related to *P. gratiosa* (Bigot) of Northern India and is similar to this species in size and general appearance. It is distinguished by the chiefly yellow legs, the pale stigmata and by the difference in the arrangement of the spines on the front tibiae. *P. gratiosa* has just a single set of four spines located at the middle of the segment. The arrangement of the spines on the front tibiae is similar to that of *P. pictipes* (Skuse) but that species is larger, has the antennae short and only nine-segmented, the thorax entirely black, the stigmata dark brown, the legs chiefly brown, the abdomen two times longer than the thorax, and the body pile pale yellow.

*Male*.—All vestiture black except for the gray pubescence on the head. *Head*: Eyes sparsely covered with very short microscopic hairs and divided into two portions by a difference in the size of the facets on the lower third. Lower portion of eyes black, upper part brown. Ocelli moderately prominent, with a few long bristles. Face and underside of head densely gray pubescent with a few short black hairs intermixed. Rostrum not at all produced, face not protruding beyond the eye margin. Antennae eleven segmented and about four-fifths as long as the head. Scape, pedicel and basal half of first flagellar segment yellow, remainder of antennae brown. *Thorax*: Pronotum and postnotum polished brownish black, humeri and sides of prothorax yellow. Mesonotum with a broad reddish brown stripe down the middle and with brownish yellow sides. Scutellum reddish brown above, yellow on the sides. Mesopleura and sternopleura brownish red; metapleura, hypopleura and pteropleura yellowish. Knobs of halteres black, stems yellow. Mesonotum with two pairs of large dorsocentral bristles near the anterior margin and with two more pairs just before the scutellum. Scutellum with six long, marginal bristles. Sides of pronotum with a row of five to six long bristles extending longitudinally between the combs. Front comb of pronotum made up of four large spines on each side, the hind comb has ten to twelve small teeth in a continuous row. *Legs*: Chiefly pale yellow, only apices of front and middle tibiae and apical halves of hind tibiae reddish brown. Last four subsegments of tarsi black; basitarsi yellow, with very narrow black tips. All tibiae and tarsi slender, the hind basitarsi are six or more times longer than wide. Front tibiae each with three sets of strong spines. The first set is composed of two teeth and is located just slightly above the middle of the segment, the second set is at the apical one-third of the tibia and has three spines, with one slightly below the other two (fig. 4a). Apical set with nine spines, the spur is not noticeably larger than the other spines. *Wings*: Very faintly fumose, almost hyaline, stigmata pale yellowish brown. The posterior veins are yellowish, the anteriors are brown. The costa extends about three-fourths the distance between the tips of  $R_s$  and  $M_1$ . The basal one-third of vein  $M_1$  is completely lacking. *Abdomen*: Brown above, yellowish on the venter and rather densely covered with moderately long hairs. The genitalia have not been dissected but the claspers have been observed to be short, broad and rounded at apices.

Length: body, 2.5 mm.; wings, 3.0 mm.

Female unknown.

Holotype male: Mafulu, Papua, 4,000 ft., Jan. 1934 (L. E. Cheesman).  
One paratype male, same data as type.

The type and paratype have been returned to the British Museum (Natural History).

***Philia insolita* (Hutton) (Fig. 5a)**

*Dilophus insolitus* Hutton, 1901, Trans. N. Zealand Inst., 34:193.

This species was not well defined by Hutton and it is entirely speculative as to what he might have had before him. The species is apparently closely related to *Philia segnis* (Hutton). In the original descriptions of these species he gives no structural characters by which they can be separated and on the basis of the descriptions it would appear that these are synonymous. The writer has, however, studied two New Zealand species which fit Hutton's descriptions and is assuming that these are the species which he described.

The species which most nearly fits the description of *insolita* is distinguished from *segnis* by having the legs of the males chiefly black; the two sets of spines, above the apical set, on the front tibiae are arranged more closely together; the apical spurs of the front tibiae are much more strongly developed and the hind basitarsi are not so strongly swollen.

*Male*.—Pile all black, rather sparse. *Head*: Rostrum short, just slightly produced beyond the eye margin. Antennae slender, thirteen segmented. Compound eyes rather thickly covered with short hairs, ocellar tubercle moderately developed. *Thorax* and *abdomen*: Entirely black, pile short and scattered. Halteres entirely black. *Legs*: Chiefly dark reddish brown to black, femora tinged with reddish. The front tibiae each have two sets of spines at the middle; the top set contains two spines, the lower contains three (fig. 5a). The apical spurs are two times larger than the spines of the apical set. The hind tibiae are rather strongly swollen at their apices and are distinctly wider than the femora. The hind tarsi are strongly swollen, the basitarsi are about two times longer than wide and are not quite equal in width to the apices of the tibiae. The middle tibiae each have a strong spine on the dorsal surface at the middle. *Wings*: Hyaline, costal vein faintly yellowish fumose. Stigmata and anterior veins brown, posteriors usually colorless, sometimes faintly yellowish. The genitalia have not been studied.

Length: body, 4.5-5.5 mm.; wings, 4.3-5.3 mm.

*Female*.—*Head*: The rostrum is about three-fourths as long as one eye and the antennae are situated close to its anterior margin. The ocellar tubercle is very well developed and is located close to the posterior margin of the head. The front is finely rugose and sub-opaque; it is slightly sunken between the eyes and is raised into a median tubercle just above the antennae. The head and antennae are brownish to black, and the rostrum is often tinged with reddish. *Thorax*: Entirely reddish yellow, except for some brownish discolorations on the top margins of the pleura and the sides of scutellum. Halteres with yellowish stems and brown to black knobs. *Legs*: Coxae and femora bright reddish yellow. The tibiae vary from brown to blackish tinged with yellow to entirely yellowish. The tarsi are brown to black. The spines of the second set on each front tibia are arranged in a more oblique row than in the males. *Wings*: Distinctly yellowish and dark brown. The posterior veins are pale brown. *Abdomen*: Brown with a rufous tinge; the cerci are black.

Length: body and wings, 5.0-6.0 mm.

Type locality: Christchurch, New Zealand.

Type in the Canterbury Museum, Christchurch.

The above described specimens were from the following localities: Kumara, New Zealand (J. W. Campbell); Ohakune, New Zealand, Nov. 20-Dec. 25, 1919 (collector unknown) and Oct. 1922 (T. R. Harris).

***Philia lecticollis* (Skuse)**

*Dilophus lecticollis* Skuse, 1890, Proc. Linn. Soc. New S. Wales, 5:637.

The writer has not seen this species. It is apparently known only from the female. It appears to be related to *Philia desistens* (Walker) and is distinguished by having a prominent, brown, stigma in the wing, by having yellowish to brown wing veins and by the hyaline wing membrane.

The thorax is brownish testaceous and the abdomen is dark brown to shining black. The body pile is yellow. The rostrum is short, not conspicuously developed. The front tibiae have four prominent spines arranged in a row before the middle. The tarsi are slender.

Length: body and wings, 4.5 mm.

Type locality: Waterloo, New South Wales.

Type in the Macleay Museum, University of Sydney.

***Philia longirostris* (Macquart) (Fig. 6a)**

*Dilophus longirostris* Macquart, 1850, Dipt. Exot., 4th suppl., 17.

This is apparently the species which Macquart described as *longirostris*. It is obviously the one which Skuse (1890) described as Macquart's species. Macquart's figure of the dorsal view of the male shows just two sets of spines on each front tibia. The spines are not clearly shown, however, and it is probable that Skuse's conclusions were correct and that the species actually possesses three sets of tibial spines. The species is characterized by the very elongate rostrum.

*Male*.—All pile pale yellowish, except for the dark head pile. *Head*: Rostrum equal in length to the compound eyes. Eyes sparsely brownish pilose. Antennae short, eleven-segmented and inserted near the base of the rostrum. *Thorax and abdomen*: Shining black, all pile long and conspicuous. Halteres with yellowish stems and black knobs. *Legs*: Black, rather densely pilose. Front tibiae each with two spines at basal one-third and with three spines just beyond the middle of the segment (fig. 6a). The apical spur on the front tibiae are slightly longer than the spines. The posterior tarsi are strongly swollen, the basitarsi are only about two times longer than wide and are slightly thicker than the apices of the tibiae. *Wings*: Hyaline, stigmata and anterior veins brown; posteriors colorless. The costa extends almost half the distance from the tip of  $R_2$  to  $M_1$ . The genitalia have not been studied.

Length: body, 4.5-5.3 mm.; wings, 4.0-4.5 mm.

*Female*.—The rostrum is about equal to the remainder of the head and the antennae are inserted at about one-third of its length. The sides of the prothorax and the area directly behind the second thoracic comb are rufous, the remainder of the thorax is usually black; however, one specimen, which had the mesonotum entirely rufous, has been studied. The front coxae and femora are rufous, the middle and hind femora are reddish at their bases; legs otherwise dark reddish brown to black. The tibial spines are stronger and more blunt than in the male, and the hind tarsi are slender. Wings faintly yellowish tinged, posterior veins lightly colored. Otherwise as in the male, except for genital characters.

Type locality: Given as Tasmania by Macquart. Dr. G. H. Hardy has reported that the majority, if not all, of Macquart's Diptera, listed in his 4th Supplement from Tasmania, were actually from Sydney, Australia.

Macquart said his type was in the Tasmania Museum.

Skuse has recorded the species from South Australia. The writer has studied specimens from: Sydney, New South Wales (Bridwell) and Stradbroke Id., Australia (Bridwell).

***Philia multispinosa* n. sp.** (Figs. 7a-e)

This species appears to be related to *Philia rubida* (Edwards). It is distinguished by the all red thorax and chiefly red femora, the eleven segmented flagella of the antennae, the more numerous spines on the middle of each front tibia and by its larger size.

*Male*.—All pile black. *Head*: Antennae rather elongate, distinctly thirteen segmented. Rostrum well developed beyond the eye margin but scarcely produced beyond the bases of antennae. Eyes bare and dark reddish brown in color. Each compound eye is divided into two portions by a longitudinal, slightly depressed, line extending through the lower two-fifths. Ocellar tubercle rather prominent and with a few short, black hairs on the hind portion. Under portion of head sparsely black pilose. *Thorax*: Entirely polished, yellowish red, except for the shining black tegulae. Knobs of halteres black, stems yellowish brown. Anterior pronotal comb with two sets of three to five (usually four) teeth. Posterior comb with two to four teeth in a longitudinal row at each side and with a row of twelve smaller teeth extending transversely between these (fig. 7d). Mesonotum and scutellum bare except for some sparse black hairs around their margins. *Legs*: Front coxae shining yellowish red, bare except for a few black bristles above. Middle and hind coxae minutely rugose, opaque blackish brown and microscopically pubescent. Trochanters reddish brown to slightly blackish. Femora yellowish red except for the narrow brown to blackish apices. Front tibiae dark reddish, slightly discolored with brown. Middle and hind tibiae and all tarsi black. Front tibiae each with two sets of prominent spines. The apical set contains eight to nine dark reddish spines besides the large, black, apical spur; the spur is much thicker and longer than any of the spines. The second set is located on a strong tubercle above the middle, near the basal two-fifths of the tibia and contains four to nine well developed spines (figs. 7a and 7b). Most specimens in the long series at hand have six spines in the second set, only one specimen has four spines and one has nine; quite a number of specimens have five and seven spines, respectively. The hind tibiae and tarsi are slender, their sides are parallel or nearly so. *Wings*: Brown fumose, slightly darker along the costal margin. Stigmata dark brown and rather conspicuous in spite of the dark wing membrane. Costal vein extending slightly more than half way between the apices of the  $R_2$  and  $M_1$ . Anterior veins dark brownish black, posteriors concolorous with the wing membrane. *Abdomen*: Black, covered with rather abundant black pile. *Genitalia*: Ninth sternum reddish yellow, about as wide as long and slightly concave on the hind margin. The claspers are short and thick and are slightly pointed at their apices (fig. 7e). The ninth tergum is about two times wider than long and the hind margin has a broadly U-shaped concavity extending almost one-half the length of the sclerite (fig. 7c).

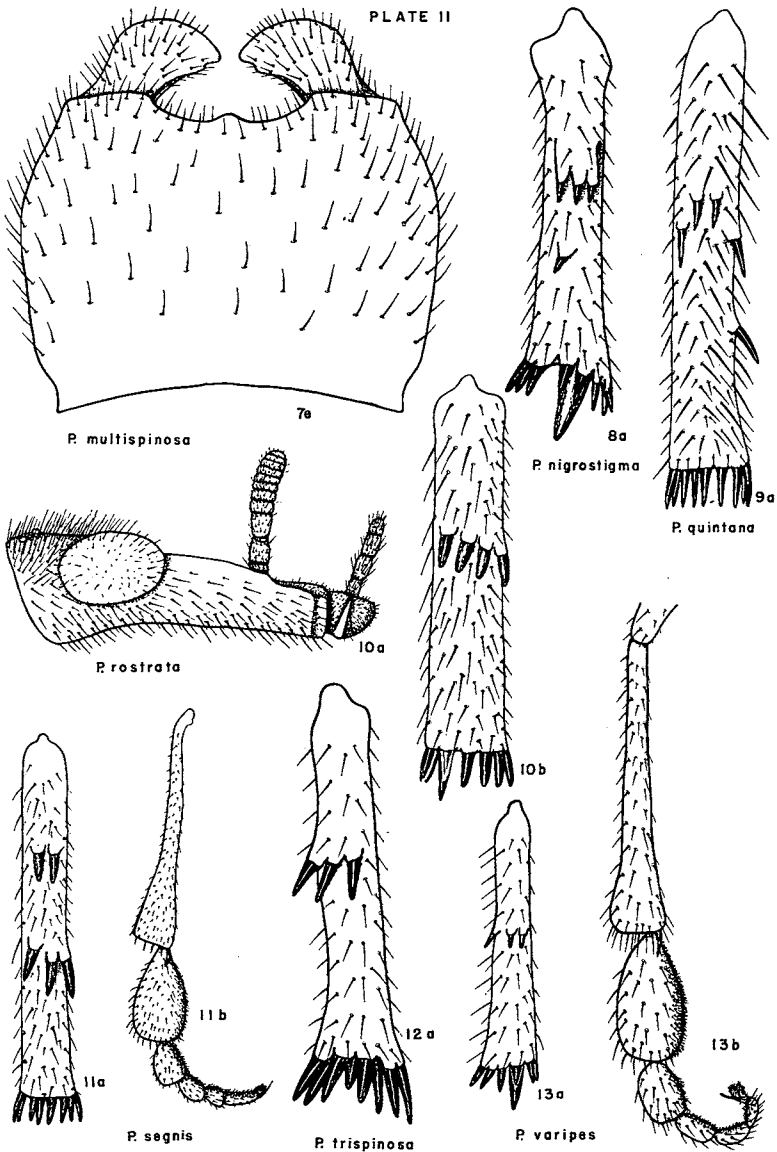
Length: body, 6.5-7.5 mm.; wings, 8.0-8.5 mm.

*Female*.—Rostrum about one-half as long as one eye. The portion of the head behind the eyes is not quite equal in length to the rostrum from a lateral view. Ocellar tubercle rather prominent and situated near the hind margin of the head. Front and vertex finely rugose, the former becoming more smooth and polished near antennae. Rostrum and underside of face polished black. Posterior comb of pronotum with four to seven teeth on each side. Posterior veins slightly darker than the wing membrane. Otherwise like the male except for genital characters.

Length: body, 7.0 mm.; wings, 9.0 mm.

Holotype male and allotype female: Mt. Tafa, Papua, 8,500 ft., March 1934 (L. E. Cheesman). Seventy-six paratypes (thirty-one females and forty-five males). Forty-four, same data as type and thirty-six from northern Dutch New Guinea, Japan Camp 2, Mt. Eiori, 2,000 ft., Sept. 1938 (L. E. Cheesman).

Holotype, allotype and sixty-six paratypes returned to the British Museum. Four paratypes have been deposited in the United States National Museum, two are in the American Museum of Natural History, two are in the B. P. Bishop Museum and two are in the University of Hawaii collection.



7. *P. multispinosa* n. sp. *e.* male genitalia, ventral.
8. *P. nigrostigma* (Walker). *a.* front tibia.
9. *P. quintana* n. sp. *a.* front tibia.
10. *P. rostrata* n. sp. *a.* head of female, lateral view; *b.* front tibia.
11. *P. segnis* (Hutton). *a.* front tibia; *b.* hind tibia and tarsus of male.
12. *P. trispinosa* (Edwards). *a.* front tibia.
13. *P. varipes* (Skuse). *a.* front tibia (drawn to same scale as other tibiae); *b.* hind tibia and tarsus of male.

***Philia nigriventris* (De Meijere)**

*Dilophus nigriventris* De Meijere, 1913, Tijdschr. Voor Ento., 56:327.

The species was described from a single female, and the males have not been positively associated. De Meijere's subsequent description (1924) of the male of what he considered to be *nigriventris* is very possibly based upon an entirely different species.

The female described by De Meijere had the head and appendages black; the top of the thorax and scutellum polished brownish red and the pleura black; the abdomen blackish brown; the coxae and femora narrowly black at apices and the tibiae and tarsi black; front tibiae with six spines in a row before the middle; the wings brownish fumose, the stigma not much darker than the membrane; the anterior veins black and the posteriors yellow.

Length: body and wings, 5.0 mm.

De Meijere's male differed from the female as follows according to his description: the thorax and abdomen shining black, the latter relatively long and slender; the hypopygium not strongly developed; wings somewhat brownish fumose, stigma long oval and blackish brown; knobs of halteres brownish black, stems yellowish; legs black with yellow coxae and femora, the hind femora are somewhat club-shaped; the front tibiae have three or four spines in addition to the apical set and also have a pair of short tooth-like spines externally placed ("und auch aussen mit ein paar kurzen zahnartigen Dornen"). It is not clear from the description whether these two short spines are in line with the three or four spines or whether they represent a second row.

Length: body, 4.5 mm.; wings, 4.0 mm.

*P. nigriventris* is apparently related to *multispinosa* n. sp., but has the thorax and abdomen predominantly to entirely dark brown to shining black.

Type locality: Java.

Type in the Zoological Museum at Amsterdam.

The writer has not seen this species.

***Philia nigrostigma* (Walker) (Fig. 8a)**

*Biblio nigrostigma* Walker, 1848, Cat. Dipt., p. 121.

*Dilophus spectabilis* Nowicki, 1875, Mem. der Krankauer K. K. Akad. d. Wissen., 2:10.

This species is recognized by the characteristic arrangement of spines on the front tibiae, by the swollen subsegments of the hind tarsi, by the moderately elongated rostrum; by the black pile and all black body and legs, and by the strongly developed tibial spurs on the front legs.

The antennae are thirteen segmented in both sexes. The last apparent segment, however, possibly contains two closely fused segments. The rostrum is produced beyond the bases of the antennae. In the male it is about three-fourths as long as the antennae and nearly equal in length to the area of small facets at the lower portion of each compound eye. The rostrum of the female is almost equal in length to the remainder of the head. The pile is all black in both sexes. The males are entirely shining black. The females are rather variable in color, ranging from all red on

the dorsum to almost entirely black. The front coxae of both sexes and all femora of the females vary from brownish red to yellow-red. The paler, more ferrugineous, forms of *nigrostigma* fit the variety *zealandica* (Walker). The front tibiae have three spines situated on a strong prominence near the basal third of the segment and also have a single spine at the apical two-thirds (fig. 8a). Each front tibia possesses nine spines in addition to the very large apical spur. The spur is more than two times longer and thicker than the apical spines. The wings of both sexes are yellow-brown fumose, darker brown along the costal margin. The stigma is dark brown and is very conspicuous.

Length: body and wings, 6.5-9.0 mm.

Type locality: New Zealand.

Type in the British Museum (Natural History).

Hutton (1901) recorded the species from Auckland, Wellington and the Chatham Islands.

The writer has studied a large series of specimens from the following localities in New Zealand: Ohakune, Oct. 1922 (T. R. Harris); Queensland, Dec. 12, 1914 (Russell); Silverstream, Dunedin, Nov. 13, 1919; Middle Marsh, Dec. 12, 1913; Bottle Lake, Nov. 22, 1926; Kumara (J. W. Campbell); Charteris Bay, Nov. 20, 1919 (J. W. Campbell) and Clifton, Nov. 20, 1919 (J. W. Campbell).

Edwards (1932) provisionally referred one male specimen from Tjibodas, Java to "*D. nigrostigma* De Meij."<sup>4</sup> This was probably a specimen of *Philia quintana* n. sp. and not *nigrostigma* (Walker).

#### ***Philia nigrostigma* var. *zealandica* (Walker)**

*Biblio zealandicus* Walker, 1858, Trans. Ento. Soc. Lond. (n. s.), 4:235.

This variety differs from the typical *nigrostigma* only in the paler coloration of the females. Hutton has distinguished it from the typical form on the basis of the female abdomen being ferrugineous beneath instead of black. It is apparently impossible to separate the males of *zealandica* from those of typical *nigrostigma*.

Type locality: New Zealand.

Type in the British Museum (Natural History).

Distribution the same as for the typical form.

#### ***Philia obtusa* (Edwards)**

*Dilophus obtusus* Edwards, 1932, Treubia, 14:141.

Edwards says that this species resembles *Philia trispinosa* (Edwards) "in its rather long antennae and black legs, differing from that and other related species in the obtuse anal area of the wing."

*P. obtusa* is an entirely black species. The rostrum is scarcely developed beyond the eye margin. The front tibiae have "two spines placed side by side and close together externo-dorsally at middle; two more, also side by side but much wider apart [are located] immediately beyond middle." Edwards also says that the wings are slightly smoky and the stigma is dark brown. The anal area is not greatly developed and is somewhat obtuse.

<sup>4</sup> Edwards probably was referring to *nigrostigma* (Walker).

Length of body and wings, 5.0 mm.

Female unknown.

Type locality: Mt. Idjen, Java.

Type in the British Museum (Natural History).

The writer has not seen this species.

### *Philia pictipes* (Skuse)

*Dilophus pictipes* Skuse, 1889, Proc. Linn. Soc. N. S. Wales, 2nd Ser., 3:1381.

This species fits near *Philia scabricollis* (Edwards) in the above key to the species of *Philia* and is distinguished by the arrangement of spines on the front tibiae and by the leg coloration. Skuse (1890) indicated that this may be the male of *P. desistens* (Walker).

The body is entirely shining black and is sparsely covered with pale yellow pile. The antennae are very short and possess nine segments. The legs are slender and testaceous in color, the front femora and coxae are paler colored than the remainder of the legs. The front tibiae have two sets of spines above the apex, one set of three spines near the apical third and two spines near the basal third of the segment. The stigma is prominent and brown in color. The anterior veins are brown and the posteriors are pale. The costal vein extends more than half way between the apices of veins  $R_s$  and  $M_1$ .

Length: body, 3.4 mm.; wings, 2.6 mm.

Female unknown.

Type locality: Knapsack Gully, Blue Mts., Australia.

Type in the Macleay Museum, University of Sydney.

The writer has not seen this species; the above notes are from the original.

### *Philia quintana* n. sp. (Fig. 9a)

This species is closely related to *Philia sublacteata* (Edwards) and is evidently the same as the male specimen from Java which he referred to "*D. nigristigma* De Meijere" (1932). *P. quintana* differs from *sublacteata* by having the wings lightly fumose, by having the stigmata brown, by having cell  $M_1$  petiolate and by having the spines of the front tibiae differently arranged.

*Male.—Head:* Eyes with just a small amount of microscopic pile. Rostrum very short, not extended much beyond the eye margin. The ocelli are large, and the ocellar tubercle is moderately developed. The antennae are broken on the specimen at hand. *Thorax:* The dorsum is polished black with a faint reddish tinge in the ground color of the sides. The pleura are brownish red. The dorsocentral hairs are very short and dark. The front thoracic comb has twelve to fourteen slender, sharp-pointed teeth. The posterior comb is made up of about ten very small, inconspicuous teeth. The halteres have pale stems and brownish knobs. *Legs:* Pile of coxae and all femora bright yellow-orange, except for the extreme tips of the latter which are brownish. The middle and hind coxae and all trochanters are yellowish brown. The tibiae and tarsi are dark reddish brown to black. The front tibiae each have four spines near the middle, arranged in two sets, and also have a single spine situated at the apical two-thirds of the segment on the outside edge (fig. 9a). The two basal spines are arranged close together near the basal third of the tibiae and two more widely spaced spines are arranged just before the middle of the segment (fig. 9a). The apical spur is not larger than the

apical spines. The hind legs are slender, the femora are just slightly swollen and the tibiae are almost parallel sided. The hind metatarsi are six to seven times longer than wide. *Wings*: Light yellowish fumose, stigmata brown. Anterior veins dark brown, posteriors pale brown. The costa extends half the distance between the tips of  $R_3$  and  $M_1$ . Cell  $M_1$  with a short petiole, this section of  $M_{1+2}$  is about half as long as the first section of  $M_{3+4}$  (commonly called the m crossvein). The anal area is quite large and is rather acutely pointed below. *Abdomen*: Dark brown to blackish with a reddish tinge in the ground color. All pile yellowish and sparse. *Genitalia*: The sternum is reddish and in the unrelaxed specimen appears to be cleft about one-third its length. The claspers are short and thick, rounded at apices. The hind margin of the ninth tergum is straight.

Length: body and wings, 4.0 mm.

Female unknown.

Holotype male: Tjibodas, Mt. Gede, Java, 4500 ft., 1909 (Bryant and Palmer).

Type returned to the Museum of Comparative Zoology at Cambridge, Massachusetts.

### *Philia rostrata* n. sp. (Figs. 10a-b)

This species is related to *Philia longirostris* (Macquart). It is distinguished by the following characters: just one set of spines is present above the apical set on each front tibia; the rostrum is much more elongated; the pile on the legs is black; the thorax of the female is all black; the wings are more fumose and the size larger.

*Female*.—*Head*: Highly polished black, rather densely brown to black pilose, except for the dorsal surface of the rostrum. The rostrum is slightly longer than the remainder of the head (fig. 10a). The antennae are eleven segmented and situated near the apical two-thirds of the rostrum. The ocellar tubercle is not developed, the ocelli are scarcely raised above the level of the vertex. *Thorax*: Entirely polished black except for the brownish red teeth of the anterior comb. The pile is all pale yellow, rather long and dense. The halteres are black. *Legs*: Front coxae and femora bright orange, legs otherwise black. Pile of coxae yellow, other segments densely black pilose. Front tibiae each with four large, blunt spines, in a slightly oblique row near basal third of the segment (fig. 10b). Apical spurs well developed, much larger than the spines in the apical set. *Wings*: Brownish yellow fumose, stigmata and anterior veins blackish; posteriors pale yellow-brown. The costa extends nearly half the distance from the tip of  $R_3$  to  $M_1$ . *Abdomen*: Chiefly dark reddish brown, black at the apex. All pile pale yellow and rather dense.

Length: body, 6.5 mm.; wings, 7.0 mm.

Male unknown.

Holotype female: Argalong, Buccleugh, New South Wales (T. Vaughn Sherrin). Type returned to the United States National Museum.

### *Philia rubida* (Edwards)

*Dilophus rubida* Edwards, 1926, Jour. Sarawak Mus., 3:247.

Edwards allies this species to "*D. nigristigma* De Meijere"<sup>5</sup> and says that De Meijere's species differs from *rubida* "in the dark scutellum and the more numerous teeth in the pronotal combs; also in the brighter red posterior femora."

The dorsum of the thorax and the scutellum are uniformly red, the metanotum and pleura are dark brown. The antennae appear to be ten

<sup>5</sup> Edwards probably was referring to *nigrostigma* (Walker).

segmented. The anterior pronotal comb has two sets of four spines each. The posterior comb has two teeth, placed one in front of the other at each side, and a row of six smaller teeth in the middle. The coxae and trochanters are orange. The front femora are reddish, darkened at their apices and bases, and the hind femora are dark brown. The tibiae and tarsi are black. Front tibiae each with a transverse row of three spines above the apical set and with a fourth spine more distally placed on the outer side. The wings are brownish fumose, darker on the costal margin.

Length: body and wings, 4.0 mm.

Female unknown.

Type locality: Mt. Murud, Borneo.

Type in the British Museum (Natural History).

The writer has not seen this species, the above notes are from the original.

### *Philia scabricollis* (Edwards)

*Dilophus scabricollis* Edwards, 1929, Notul. Ent., 9:79.

This species is related to *Philia trispinosa* (Edwards) but has four spines above the apical set on the front tibiae; the wings are less smoky fumose and the stigma is scarcely darker than the wing membrane. Edwards reported that it resembled "*D. nigrostigma* (De Meijere)"<sup>6</sup> in regard to the spines on the front tibiae and the wing venation but "differs in the black color of the female and the duller, more rugose area in front of the thorax."

The front tibiae of the males each have a set of three teeth arranged just before the middle and also have one tooth on the outer side a little more distally placed. The females have two teeth on the outer side, one placed in front of the other. The body is entirely black in both sexes. The legs are also entirely black in the males and nearly so in the females. The females have only the trochanters and extreme bases of the femora reddish.

Type locality: Balbalasang, Philippine Islands.

Type in British Museum (Natural History).

The writer has not seen this species; the above notes are from the original.

### *Philia segnis* (Hutton) (Figs. 11a-b)

*Dilophus segnis* Hutton, 1901, Trans. New Zealand Inst., 34:194.

This species is related to *P. insolita* (Hutton) as has been discussed previously under that species. The species which the writer recognized as *P. segnis* differs from *insolita* by having the legs of the males tinged with yellowish red and by having the first and second sets of spines on front tibiae more widely separated; the apical spurs are scarcely larger than the spines and the hind metatarsi more strongly swollen.

*Male.*—Similar in most respects to *insolita*. All the pile is black and the body is chiefly shining black, with the pleura sometimes rufous tinged. The rostrum is just slightly developed beyond the eye margin and the antennae are thirteen segmented

<sup>6</sup> Probably refers to *P. nigrostigma* (Walker).

but more compact than in *insolita*. *Legs*: Chiefly brownish, tinged with yellow. In some specimens the femora and tibiae are entirely yellow. The first set of spines on each front tibia possesses two teeth and is located near the basal third of the segment. The second set has three spines in an oblique row and is located near the apical two-thirds of the tibiae (fig. 11a). The hind metatarsi are very strongly swollen (fig. 11b). The middle tibiae each have a strong spine on the dorsal surface at the middle. The wings are similar to *insolita*, but the posterior veins are sometimes faintly colored.

Length: body, 4.7-5.0 mm.; wings, 4.0-4.2 mm.

*Female*.—The following notes are from Hutton (1901): The head and eyes are black, the thorax, abdomen and legs are dark brown. The hind legs are rather elongated, the femora and tibiae clavate and the tarsi are not swollen. The wings are tinged with brown and the stigmata are blackish brown.

Type locality: Christchurch, New Zealand.

Type in the Canterbury Museum, Christchurch.

The above described specimens were from the following localities in New Zealand: Kumara, Nov. 12, 1929; Ohakune, Dec. 25, 1919 (collector unknown) and 1922-1923 (T. R. Harris); Queenstown, Dec. 18, 1919, and Rucarton Bush, Nov. 10, 1924.

#### *Philia sublacteata* (Edwards)

*Dilophus sublacteatus* Edwards, 1932, *Treubia*, 14 (1): 141-142.

Edwards said that this species differs from other oriental species known to him "in the completely unclouded and slightly milky wings, without any obvious stigma." He indicates that it may possibly be the male of "*D. nigristigma* De Meijere"<sup>7</sup> but feels that this is unlikely.

The species is chiefly black, the second antennal segment and the stems of the halteres are yellowish, all coxae and femora are rufous. The tibiae and tarsi are slender. The front tibiae have three spines arranged in an oblique row before the middle of the segment and have two more spines beyond the middle, one placed well in front of the other. Anal area of the wings large and very acute.

Length: body, 4.0 mm.; wings, 3.5 mm.

Female unknown.

Type locality: Tjibodas, West Java.

Type in the British Museum (Natural History).

The writer has not seen this species, the above notes are from the original.

#### *Philia trispinosa* (Edwards) (Fig. 12a)

*Dilophus trispinosus* Edwards, 1929, *Notul. Ent.*, 9:78.

This species differs from other known Pacific *Philia* which are black colored and which have slender hind legs, by having just three spines above the apical set on the front tibiae.

Body and appendages entirely black except for the slightly yellowish stems of the halteres. The pile is chiefly black on the head, thorax, genital portion of abdomen, tibiae and tarsi; that of the scutellum, abdomen (except the apex), coxae and femora is chiefly pale. The antennae appear to be twelve segmented, the last three segments are very closely joined. The rostrum is not produced beyond the bases of the antennae and in

<sup>7</sup> Probably an error for *nigristigma* (Walker).

the female is less than half as long as the compound eyes. The three spines above the apical set on the front tibiae are situated near the middle of the segment (fig. 12a). The tibial spurs are comparatively short and inconspicuous, they are about half as large as the apical spines. The apical set possesses seven spines in addition to the short spur. The leg segments are all slender, the tarsi are not at all swollen. The posterior basitarsi are seven or eight times longer than wide. The wings are smoky, lightly brown fumose; the stigmata are brown. The costa extends about one-third of the distance between the tips of veins  $R_s$  and  $M_1$ . The anal area very large, the angle formed by the sides of the lobe is subacute.

Length of male: body and wings, 4.5-5.0 mm.

Length of female: body and wings, 6.0-6.7 mm.

Type locality: Benguet, Philippine Islands.

Type in the British Museum (Natural History).

The writer has identified the species from the following localities in the Philippines: Panai, Benguet, Luzon, April 30 (F. Rivers); Baguio, Benguet, 1927 (C. F. Baker) and Haight's Pl., Benguet, April 30 (F. Rivers).

One male specimen which fits *trispinosa* very closely has been seen from Arisan, Formosa, May 25, 1934 (L. Gressitt). It differs by having the wings hyaline except along the anterior margin and by having the costa ending just slightly beyond the tip of vein  $R_s$ . The genitalia conform with Edward's figure except that the hind margin of the ninth tergum is slightly concave.

#### ***Philia varipes* (Skuse) (Figs. 13a-b)**

*Dilophus varipes* Skuse, 1890, Proc. Linn. Soc. New South Wales, 5:635-636.

This species is related to *Philia acutidens* (Edwards) from the Philippine Islands. It is distinguished by its strongly swollen hind metatarsi and by the yellow fumose wings.

Entirely shining black species, except for a faint rufous tinge in the ground color of the coxae, femora and pleura and the yellowish colored stems of the halteres. The rostrum is very short and does not extend beyond the bases of the antennae. With the exception of the head, tibiae, tarsi and genital segments of the abdomen, the body and appendages are rather thickly covered with long yellow pile. The specimens which have been studied possessed three short spines above the apical set, arranged in a transverse row across the middle of the front tibiae (fig. 13a). The original description indicated that there are three or four spines near the middle on the front tibiae. The apical spurs of the front tibiae are approximately two times larger than the spines. There are seven spines in the apical set, in addition to the spur. The hind tibiae are moderately clavate at their apices and are broader at the widest point than the femora. The subsegments of the hind metatarsi are strongly swollen and oblong in shape (fig. 13b). The hind metatarsi are thicker than the tibiae and are but two times longer than wide. The wings are hyaline with a very slight yellowish tinge. The stigmata are

brown. The costa extends nearly half way between the apices of  $R_3$  and  $M_1$ . The anal vein is very weak and does not reach the wing margin.

Length: body, 4.5-5.5 mm.; wings, 3.8-4.5 mm.

Female unknown.

Type locality: Mount Kosciusko, Australia.

Type in the Australian Museum.

The writer has studied specimens from Crawley, West Australia and Yallingup, southwest Australia.

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