

New or Little-Known Tipulidae from New Caledonia (Diptera)

By CHARLES P. ALEXANDER

Massachusetts State College
Amherst, Massachusetts

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OUR KNOWLEDGE of the crane-flies of New Caledonia is still very incomplete. The first collections made in the island were by Professor and Mrs. Cockerell, representing six species (Alexander, 1929).^{*} Later a few additional species were secured by Professor Jean Risbec, of the Ecole Frédéric Surleau, Noumea (Alexander, 1934 a, 1934 b) bringing the total list to nine species. In May 1940, Dr. F. X. Williams was sent to New Caledonia by the Hawaiian Sugar Planters' Association in order to investigate the insect pests of agricultural and medical importance, particularly in their future relations to the Hawaiian Islands (Williams, 1943). Although busily engaged in this economic survey, Dr. Williams secured no fewer than twelve species of crane-flies, of which nine were additions to the list as then known. The species now known from New Caledonia may be listed as follows:

Tipulinae

Macromastix (Macromastix) caledoniana Alexander (1934-b).

M. (M.) cockerellae Alexander (1929).

M. (M.) novocaledonica Alexander (1929).

M. (M.) productifrons sp.n. (this report).

M. (M.) risbeci Alexander (1934-b).

Limoniinae

LIMONINI

Limonia (Dicranomyia) illingworthi (Alexander) (1929; this report).

L. (Thrypticomys) subsaltens (Alexander) (1929; this report).

L. (Idioglochina) tusitala novocaledonica (Alexander) (1929; this report).

L. (Geranomyia) circipunctata (Brunetti) (this report).

L. (G.) conjuratoides sp.n. (this report).

L. (Libnotes) notata (van der Wulp), var. (this report).

Helius (Helius) neocaledonicus sp.n. (this report).

Orimarga (Orimarga) risbeci Alexander (1934-a).

HEXATOMINI

Gynoplistia (Paralimnophila) neocaledonica sp.n. (this report).

^{*}The references are cited in the short bibliography at the end of the introduction.

G. (Gynoplistia) williamsiana sp.n. (this report).

ERIOPTERINI

Gonomyia (Idiocera) cockerelli Alexander (1929).

Gonomyia (Lipophleps) novocaledoniae sp.n. (this report).

Erioptera (Trimicra) pilipes (Fabricius), var. (this report).

All types of the new species and representatives of other species have been returned to Dr. Williams for inclusion in the collection of the Hawaiian Sugar Planters' Association Experiment Station, Honolulu. Duplicates are retained in my collection of these flies. I am very deeply indebted to Dr. and Mrs. Williams for the privilege of studying this small but important series of Tipulidae.

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1934-a. New or little-known Tipulidae from Eastern Asia (Diptera), XIX. *Philippine Journ. Sci.*, 54: 309-342, 3 pls.

1934-b. New or little-known Tipulidae from Eastern Asia (Diptera), XX. *Ibid.*, 54: 433-471, 2 pls.

Williams, F. X.

1943. Mosquitoes and some other noxious flies that occur in New Caledonia. *The Hawaiian Planters' Record*, 47: 205-222, 15 figs.

RECORD OF SPECIES

Macromastix (Macromastix) productifrons sp.n.

Size relatively large (wing, female, 13 mm. or more); general coloration of body obscure brownish yellow, the praescutum with four scarcely differentiated stripes; thorax unusually glabrous; antennae 15-segmented; front long-produced; wings yellow, stigma oval, darker brown, veins glabrous.

Female.—Length, including frontal prolongation, about 10-10.5 mm.; wing, 13-14 mm.; frontal prolongation alone about 2 mm.; antenna, 1.8-2 mm.

Front unusually produced, the prolongation about one-third longer than remainder of head, obscure yellow, infuscated above, more blackened near apex; entire prolongation with short but very abundant setae, the remainder of head glabrous or nearly so; no nasus; palpi dark brown, terminal segment a little shorter than the three basal segments combined. Antennae (female) short, 15-segmented, the outer two segments more or less fused; flagellar segments cylindrical, the outer ones shorter; verticils shorter than the segments. Head orange; anterior vertex, immediately behind the antennae, with a small but conspicuous conical tubercle; a dark median vitta extending from the tubercle backward, becoming very narrow behind and finally obsolete at near midlength of the posterior vertex.

Pronotum yellowish brown. Mesonotum with the ground obscure brownish yellow, the praescutum with four very poorly differentiated darker stripes that are very indistinctly bordered by still darker brown; vestiture of interspaces reduced to scattered small yellow setae; posterior sclerites of notum slightly darker brown, virtually glabrous. Pleura yellow. Halteres brownish yellow, the base of stem a trifle brightened. Legs with the coxae and tro-

chanters pale yellow; remainder of legs yellow, the outer tarsal segments more blackened; tips of tibiae very narrowly and vaguely darkened. Wings (pl. XII, fig. 1) with a yellowish tinge; stigma oval, darker brown; cell *Sc* a trifle darker than the ground; veins brown. Veins unusually glabrous, including those beyond the cord. Venation: *Rs* relatively long, exceeding R_{2+3} ; *m-cu* at fork of M_{3+4} , or slightly beyond on the base of M_1 ; petiole of cell M_1 longer than *m*; basal section of M_{1+2} unusually transverse, virtually in alignment with the anterior cord.

Abdomen chiefly obscure brownish yellow, the intermediate segments yellowish brown to dark brown; sternites clearer yellow. Ovipositor with all valves very short and inconspicuous; both cerci and hypovalvae compressed, the former nearly circular in outline.

Holotype, ♀, Nepoui Valley, August 1940 (Williams). *Paratopotypes*, 3 ♀♀

The most similar species in New Caledonia, and the only other one having the front at all produced, is *Macromastix* (*Macromastix*) *novocaledonica* Alexander, which is much smaller, with the front less produced, and with the details of coloration and venation of the wing distinct. By my key to the species of *Macromastix* in New Caledonia (Philippine Journ. Sci., 54: 443; 1934), the present fly runs to *novocaledonica*.

***Limonia* (*Dicranomyia*) *illingworthi* (Alexander)**

Dicranomyia illingworthi Alexander; Ann. Ent. Soc. America, 7: 239-240; 1914.

Limonia (*Dicranomyia*) *illingworthi* Alexander; Encycl. Entomol., Diptera, 5: 89-90, fig. 8 (♂ hypopygium); 1929.

Noumea, July 6-August 23, 1940; St. Louis, 1940 (F. X. Williams).

***Limonia* (*Thrypticomysia*) *subsaltens* (Alexander)**

Dicranomyia subsaltens Alexander; Ann. Mag. Nat. Hist., [9] 13: 34-35; 1924.

Limonia (*Thrypticomysia*) *subsaltens* Alexander; Encycl. Entomol., Diptera, 5: 88; 1929.

Noumea, August 29, 1940 (Williams).

***Limonia* (*Idioglochina*) *tusitala novocaledonica* Alexander**

Limonia (Idioglochina) novocaledonica Alexander; Encycl. Entomol., Diptera, 5: 90-91; 1929.

Nakety, on sea reef, October 9, 1940 (Williams).

***Limonia* (*Geranomyia*) *circipunctata* (Brunetti)**

Geranomyia circipunctata Brunetti; Fauna British India, Dipt. Nematocera 390; 1912.

Noumea, August 23, 1940, at light (Williams); pinned with a female *Limonia* (*Dicranomyia*) *illingworthi*. Differs from typical *circipunctata* in having the tips of the femora and tibiae unblackened, the wing pattern very restricted, and with the edge of the

mesal-apical lobe of the gonapophysis microscopically serrulate. Later described species, as *decemguttata* de Meijere (Java) and *venustithorax* Alexander (Australia), were placed in the strict synonymy of *circipunctata* Brunetti (British India) by Edwards, but all such should be re-examined for subspecific distinctions.

***Limonia (Geranomyia) conjuratoides* sp.n.**

Allied to *conjurata*; general coloration brownish black; antennal flagellum strongly nodulose, the segments narrowed at both ends, provided with very long verticils; wings with a strong brownish tinge, restrictedly patterned with still darker brown, including a series of four costal areas; basal section of Sc_2 preserved; vein R_1 very long, subequal to R_{2+3} ; male hypopygium with the tergal lobes produced into slender spinous points; ventral dististyle with the main body oval; a single rostral spine, from a cylindrical tubercle; gonapophyses with a strong lateral spine, additional to the gently curved mesal-apical spine.

Male.—Length, excluding rostrum, about 7 mm.; wing, 7.7 mm.; rostrum, about 2.2 mm.

Rostrum at base unusually thick and deep, yellowish brown, the enlarged portion a little longer than the remainder of head; remainder of rostrum (labial palpi) brown, the short tips suddenly narrowed, yellow; maxillary palpi black. Antennae black; flagellar segments strongly narrowed at incisures and there produced into short basal and apical necks, giving the antennae a beadlike appearance; verticils very strong, the longest unilaterally distributed, about twice the length of the segments, those of opposite face a little shorter. Head dark brown, sparsely pruinose; anterior vertex narrow, only about two-thirds the diameter of scape.

Pronotum black. Mesonotum dark liver-brown or brownish black, the humeral portions of praescutum a little more reddened; median region of praescutum a little more blackened in front to produce a poorly indicated stripe; postnotum slightly pruinose. Pleura dark brown, slightly pruinose; dorsopleural membrane infuscated. Halteres slightly infuscated, base of stem yellow. Legs with coxae brownish yellow; trochanters yellow; remainder of legs brown, the terminal tarsal segments more blackened; claws simple. Wings (pl. XII, fig. 2) with a strong brownish tinge, restrictedly patterned with still darker brown, as follows: A series of four costal areas, the first three more extensive than the ground interspaces, involving cells C and Sc ; second area over the supernumerary crossvein in cell Sc ; third area over the fork of Sc ; fourth area over the free tip of Sc_2 ; elsewhere on disk more restricted and less evident infuscations, including origin of Rs and cord; veins brown, the central portion of vein R_1 pale, representing the normal position of the otherwise unindicated stigma. Venation: Sc_1 ending about opposite one-fifth the length of Rs , Sc_2 a short distance before origin of latter; supernumerary crossvein in cell Sc at near midlength of distance between h and tip of Sc_1 ; R_1 unusually long, as in *conjurata*, subequal in length to R_{2+3} or a little less than Rs ; cell 1st M_2 about as long as vein M_{1+2} beyond it; $m-cu$ a trifle longer than distal section of Cu_1 ; cell 2nd A widest opposite anal angle.

Abdominal tergites brown, more blackened laterally; posterior borders of outer segments a little paler; eighth and ninth tergites paler, the remainder of hypopygium black. Male hypopygium (pl. XII, fig. 7) with the tergite, 9t, truncate across base, slightly narrowed outwardly, the caudal margin with a deep V-shaped notch, the lateral lobes produced caudad into long slender spinous points. Basistyle, b , moderately large, its total area about equal to that of the ventral dististyle; ventromesal lobe oval, with numerous long coarse setae that are nearly as long as the lobe itself. Dorsal dististyle a

nearly straight black rod, the tip gently curved to a short black point. Ventral dististyle, *vd*, with the body oval, setiferous; rostral prolongation slender; a single spine, arising from a cylindrical tubercle placed at near midlength of outer face of prolongation, the spine more than one-half the length of the dorsal dististyle or subequal in length to the entire prolongation itself. Gonapophyses, *g*, appearing as flattened black plates, each at apex narrowed into a slender, gently curved spine; on margin before apex with a slightly smaller straight spinous point. Aedeagus, *a*, relatively narrow, at apex produced directly into a more slender cylindrical point.

Holotype, ♂, Noumea, August 23, 1940 (Williams).

Although undoubtedly related to *Limonia* (*Geranomyia*) *conjurata* Alexander (New South Wales; Barrington Tops, altitude 5,000 feet, January), the present fly is entirely distinct, particularly in the details of venation and structure of the male hypopygium, especially the simple ventral dististyle and the deeply bispinous gonapophyses.

***Limonia* (*Libnotes*) *notata* (van der Wulp), var.**

Libnotes notata van der Wulp; Tijdschr. v. Entomol., 21 194, pl. 12, fig. 5; 1878.

One female, Thi valley, November 8, 1940 (Williams). Edwards expressed the belief that *L. (L.) howensis* Alexander, of Lord Howe Island, and *L. (L.) solomonis* Alexander, of the Solomons, were conspecific with *notata*, described from Sumatra. The former has the wings virtually unpatterned, while the latter is readily told by the broad, conspicuous, blackened bases of the tibiae.

***Helius* (*Helius*) *neocaledonicus* sp.n.**

Size large (wing, female, 9 mm.); rostrum unusually long and slender, black, only a little less than one-third the length of remainder of body; general coloration of body black; halteres and legs chiefly blackened, the tarsi paling to brown; wings with a strong blackish tinge, the oval stigma darker brown; *Sc*₁, ending shortly before fork of *Rs*; cell 1st *M*₂ small, short-pentagonal, *M*₃₊₄ being only about one-third the length of vein *M*₁; *m-cu* immediately before fork of *M*; valves of ovipositor unusually long.

Female.—Length, excluding rostrum, about 9 mm.; wing, 9 mm.; rostrum, about 2.8 mm.

Rostrum unusually long and slender, nearly one-third as long as remainder of body; palpi black. Antennae black throughout, relatively short; basal flagellar segments short-cylindrical, the verticils unilaterally distributed, on the more proximal segments stout and subequal in length to the segments; outer segments more elongate, with more delicate verticils; terminal segment a trifle longer than the penultimate. Head velvety black, narrowed behind; eyes large, with fine ommatidia; anterior vertex about one-half wider than diameter of scape.

Thorax dark brownish black to black; pretergites a little paler; median region of scutum paler; thorax with moderately abundant but unusually long and conspicuous erect black setae. Halteres blackened, base of stem narrowly paler. Legs with coxae dark reddish brown; trochanters chestnut brown; remainder of legs long and slender; femora black, their bases very restrictedly obscure yellow; tibiae black; tarsi paling into brown. Wings (pl. XII, fig. 3) with a strong blackish tinge, the oval stigma darker brown; prearcular field,

together with cells C and Sc , less heavily darkened; veins dark brown. Veins of distal half of wing, particularly beyond cord, with unusually abundant macrotrichia. Venation: Sc long, Sc_1 ending shortly before the fork of Rs , Sc_2 still longer, at its tip; Rs long, arcuated at origin; anterior branch of Rs subangulate at origin, the two branches strongly divergent at their outer ends, R_{4+5} ending very close to wing tip; cell $1st\ M_2$ small, short-pentagonal, M_{3+4} only about one-third as long as vein M_1 ; $m-cu$ immediately before fork of M .

Abdomen black, including the genital shield. Ovipositor with both cerci and hypovalvae unusually elongate, the cerci very slender.

Holotype, ♀, Thi River Valley, November 8, 1940 (Williams).

The present fly is very different from the various species of the typical subgenus known from New Zealand, Australia and New Guinea, especially in the venation, with the unusually small cell $1st\ M_2$, in conjunction with the large body size and very long, slender rostrum.

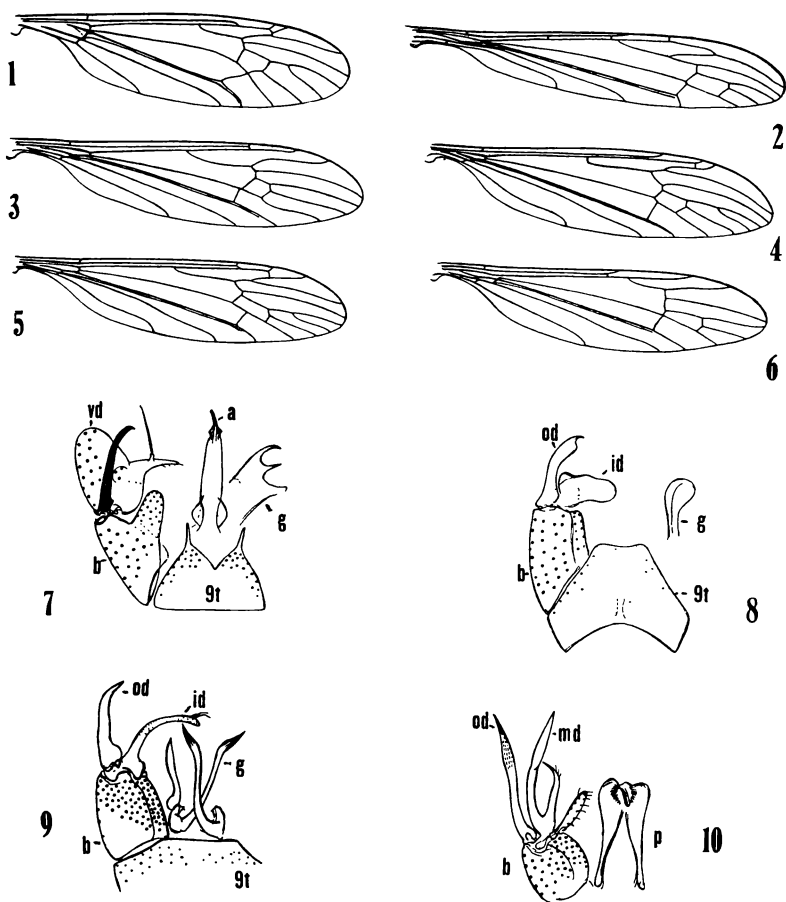
Gynoplistia (Paralimnophila) neocaledonica sp.n.

General coloration of thorax uniformly orange, unpatterned; head black, pruinose in front; antennae 16-segmented, simple, uniformly blackened; halteres with brownish black knobs; wings brownish yellow, sparsely variegated with darker; stigma long-oval, darker brown; abdomen brownish black, the eighth and ninth segments abruptly light yellow; male hypopygium with spine of outer dististyle gently curved, the apical notch very shallow; gonapophyses appearing as relatively short rods that expand at tips into flattened, nearly hyaline blades.

Male.—Length, about 9 mm.; wing, 10.5 mm.; antenna, about 2.2 mm.

Rostrum and palpi black. Antennae 16-segmented, black throughout, the scape pruinose; flagellar segments oval, with truncated bases, the outer ones more narrowly joined, the segments gradually decreasing in size outwardly; terminal segment only about one-third the size of the penultimate; verticils shorter than the segments. Head black, gray pruinose on front, anterior vertex and the narrow orbits; anterior vertex approximately four times the diameter of scape.

Thorax uniformly orange, unpatterned, the mesonotum with a very sparse yellow pollen; pseudosutural foveae large but concolorous with the ground and very inconspicuous. Halteres with stem yellow, knob brownish black. Legs with coxae and trochanters orange-yellow; femora and tibiae brownish yellow, the tips narrowly blackened; basal tarsal segments brown, the terminal one more blackened; legs only moderately setiferous; claws relatively small, simple. Wings (pl. XII, fig. 4) with a weak brownish yellow ground, sparsely variegated with darker; stigma long-oval, darker brown; very restricted, somewhat paler brown seams on cord and over origin of Rs , most extensive on the anterior cord; veins brown, Sc and the prearcular veins somewhat more yellow. Venation: Sc long, Sc_1 ending almost opposite the fork of R_{2+3+4} , Sc_2 some distance from its tip, Sc_1 alone about one-half longer than R_{2+3+4} ; Rs long, very strongly arcuated or weakly angulated at origin, in longitudinal alignment with R_{2+3+4} , the latter shorter than the basal section of Rs ; anterior branch of Rs relatively short, at apex deflected strongly cephalad, vein R_1 bending strongly caudad so cell R_3 at margin is unusually extensive; petiole of cell M_1 variable in length, from two-thirds to fully equal to the cell; $m-cu$ from one-third to one-fifth its length beyond the fork of M ; vein $2nd\ A$ sinuous.



EXPLANATION OF FIGURES PLATE XII

Fig. 1. *Macromastix* (*Macromastix*) *productifrons* sp.n.; venation.

Fig. 2. *Limonia* (*Geranomyia*) *conjuratooides* sp.n.; venation.

Fig. 3. *Helius* (*Helius*) *neocaledonicus* sp.n.; venation.

Fig. 4. *Gynoplistia* (*Paralimnophila*) *neocaledonica* sp.n.; venation.

Fig. 5. *Gynoplistia* (*Gynoplistia*) *williamsiana* sp.n.; venation.

Fig. 6. *Gonomyia* (*Lipophleps*) *novocaledoniae* sp.n.; venation.

Fig. 7. *Limonia* (*Geranomyia*) *conjuratooides* sp.n.; male hypopygium.

Fig. 8. *Gynoplistia* (*Paralimnophila*) *neocaledonica* sp.n.; male hypopygium.

Fig. 9. *Gynoplistia* (*Gynoplistia*) *williamsiana* sp.n.; male hypopygium.

Fig. 10. *Gonomyia* (*Lipophleps*) *novocaledoniae* sp.n.; male hypopygium.

(Symbols: a, aedeagus; b, basistyle; g, gonapophysis; id, inner dististyle; md, intermediate dististyle; od, outer dististyle; p, phallosome; t, tergite; vd, ventral dististyle.)

Abdomen brownish black, the first sternite a little more brightened at base; eighth and ninth segments abruptly light yellow. Male hypopygium (pl. XII, fig. 8) with the tergite, *9t*, large, having the characteristic conformation of the subgenus, the narrowed caudal border very gently emarginate. Outer dististyle, *od*, smooth, the spine gently curved, the apical notch very shallow. Inner dististyle very obtuse at apex. Gonapophyses, *g*, appearing as relatively short rods that expand at tips into flattened, nearly hyaline blades.

Holotype, ♂, Nepoui Valley, August 1940 (Williams).

Gynoplistia (Paralimnophila) neocaledonica is entirely different from all other species of the subgenus so far made known. Members of the group center in Australia and Tasmania, where approximately 35 species are known to date, including many with long-branched antennae. Those having simple antennae, as in the present fly, are much fewer in species in the Old World, with only three or four in Australia and two others in New Zealand (see Alexander, *Victorian Naturalist*, 1943:89-91; October 1943). In South America, particularly Chile, rather numerous species occur, all having the antennae simple.

***Gynoplistia (Gynoplistia) williamsiana* sp.n.**

Thorax and abdomen orange, the latter with segments six and seven uniformly black; head and appendages black; antennae 16-segmented, in male with ten long-branched segments, in female with nine segments having somewhat shorter branches; wings yellow, patterned with darker; cell *M*₁ present; male hypopygium with both dististyles slender; inner gonapophyses appearing as strong rods, decussate across their bases, the tips acute.

Male.—Length, about 11-12 mm.; wing, 9.5-10 mm.; antenna, about 3.2-3.4 mm.

Female.—Length, about 14-15 mm.; wing, 10.5-12 mm.; antenna, about 2.5 mm.

Rostrum and palpi black. Antennae 16-segmented, black, the pedicel a trifle more piceous; in male, formula 2+3+7+4; longest branch exceeding five times the segment that bears it; branch of first segment more than twice the length of segment; terminal segment about one-third longer than the penultimate, pointed at apex. In female, antennal formula 2+9+5, the branches arranged in a gentle spiral; basal branch a little shorter than the segment; longest branch about two and one-half times the segment; terminal two segments in both sexes bearing large circular pores. Head black, more pruinose in front; anterior vertex in both sexes about twice the diameter of scape.

Entire thorax opaque orange, without clearly defined markings. Halteres with stem yellow, knob blackened. Legs with coxae and trochanters orange; femora obscure yellow, the tips blackened, more broadly so on fore legs where about the outer half is included, much narrower on posterior legs where approximately the distal quarter is darkened; tibiae and tarsi black; claws (male) at base with a row of microscopic denticles. Wings (pl. XII, fig. 5) yellow, the prearcular and costal fields a little clearer yellow; a rather conspicuous brown pattern, including the oval, dark brown stigma, and conspicuous seams at origin of *Rs*, along cord, and on outer end of cell *1st M*₂; still paler and less distinct brown washes on the longitudinal veins beyond cord and over vein *Cu*; in the paratype female, the wings are even more heavily darkened and suffused, especially along *Cu* and in the cells beyond cord; veins brown, still darker in the patterned areas. Macrotrichia of veins

relatively sparse, lacking or virtually so in outer radial and medial fields, excepting a rather abundant series on distal section of R_5 . Venation: Sc_1 ending about opposite one-third to one-half R_{2+3+4} , Sc_2 at its tip; cell $1st\ M_2$ rectangular, with $m-cu$ at near midlength; cell M_1 about one-half longer than its petiole.

Abdomen (male) orange, the posterior half of tergite two and distal portion of tergite three with more or less distinct dark rings; segments six and seven uniformly black, eight and nine abruptly orange-yellow. In female, the subbasal darkenings virtually lacking, with only a triangular area on sides of second tergite; pleural region weakly infuscated; subterminal black ring as in male; ovipositor and genital shield orange; valves of ovipositor elongate, cerci slender, very gently upcurved. Male hypopygium (pl. XII, fig. 9) with the tergal region, $9t$, transverse, its central portion a little produced, its margin truncate. Basistyle, b , stout, the apical lobes poorly developed. Both dististyles elongate, the outer, od , glabrous, from an enlarged base, gradually narrowed to an acute point; inner style, id , a little shorter, strongly curved, its apex obliquely truncate, with abundant short setulae and about two elongate setae. Gonapophyses, g , exceeding the aedeagus in length, the inner pair appearing as powerful rods, decussate near bases, expanded near tips into narrow blades, thence narrowed into powerful spines; outer apophyses shorter, appearing as narrow flattened blades, their tips acute. Aedeagus slender, its basal portion subtended on either side by an expanded flange.

Holotype, ♂, Saint Louis, 1940 (Williams). *Allotopotype*, ♀, October 14, 1940. *Paratopotype*, 1 broken ♂ *paratype*, ♀, Thi River Valley, November 6, 1940 (Williams).

I take great pleasure in naming this very distinct crane-fly in honor of Dr. Francis X. Williams. There is no close described relative among the host of species of *Gynoplistia* now known from New Zealand, Australia and New Guinea. The genus had not been reported from the smaller islands of Oceania. The orange thorax suggests *Gynoplistia* (*Gynoplistia*) *annulata* Westwood, of eastern Australia, but in every other respect the flies are entirely unlike.

Gonomyia (Lipophleps) novocaledoniae sp.n.

General coloration brownish gray, variegated with yellow; thoracic pleura with a very conspicuous, china-white, longitudinal stripe, bordered both above and below by dark brown; halteres yellow; femora obscure yellow, the tips gradually more infuscated; wings tinged with brownish yellow, stigma faintly indicated; Sc_1 ending nearly opposite or just before origin of R_s ; anterior branch of R_s gently sinuous; cell $1st\ M_2$ subequal in length to vein M_3 beyond it; $m-cu$ at the fork of M ; abdomen chiefly dark brown, the hypopygium somewhat more brownish yellow; male hypopygium with three dististyles, the intermediate one profoundly and unequally bifid.

Male.—Length, about 4 mm.; wing, 4 mm.

Rostrum and palpi black. Antennae with the scape and pedicel obscure yellow, more or less infuscated, flagellum black; outer segments elongate cylindrical, the intermediate ones (about three to seven) with exceedingly long verticils, as is common in males of the subgenus. Head yellow, the center of vertex slightly more darkened.

Pronotum and pretergites yellow. Mesonotum chiefly dark brownish gray, only vaguely patterned with other colors; lateral border of praescutum broadly more yellow; central region of scutum paler gray pruinose, with a darker median vitta; scutellum darker medially at base, the broad apex clearer gray

over a pale ground; mediotergite darker on central portion, the sides and pleurotergite paler. Pleura chiefly brownish yellow, with a very conspicuous, china-white, longitudinal stripe extending from behind the fore coxae to the base of abdomen, passing beneath the root of halteres, this stripe very narrowly bordered both above and beneath by dark brown, the latter color paling gradually into the ground. Halteres yellow. Legs with the coxae testaceous yellow, the middle and posterior pairs more darkened basally; femora obscure yellow, the tips gradually more infuscated; tibiae almost uniform brownish yellow; tarsi passing into black. Wings (pl. XII, fig. 6) tinged with brownish yellow, the outer radial field slightly more infuscated; prearcular and costal fields clearer yellow; stigma oval, very pale brown, inconspicuous; veins pale brown, those in the clearer areas paler. *Rs* and the longitudinal veins beyond cord with abundant trichia. Venation: *Sc*₁ ending nearly opposite to just beyond origin of *Rs*, *Sc*₂ a short distance from its tip; *Rs* relatively long, a trifle more than one-half its anterior branch, the latter gently sinuous; cell 1st *M*₂ subequal in length to vein *M*₃ beyond it; *m-cu* at the fork of *M*.

Abdomen chiefly dark brown, the incisures somewhat paler; hypopygium somewhat more brownish yellow. Male hypopygium (pl. XII, fig. 10) without a tergal setiferous comb. Basistyle, *b*, small, suboval in form. Three dististyles, the outer, *od*, a simple, nearly straight rod, at its apex narrowed into a strong black spine, the surface of distal half with microscopic setulae; intermediate style, *md*, profoundly and unequally bifid, the outer arm a flattened yellow blade that narrows very gradually to the acute point, the blade subequal in length to the outer style; inner arm only about one-half as long as the outer one, gradually narrowed to an acute blackened spine, the lower or inner margin with a few setae, more conspicuous shortly before the apical spine; inner dististyle elongate, fleshy, the length about four times the greatest diameter; margin with about a dozen strong setae but none of these fasciculate. Phallosome, *p*, stout, with widely expanded blades, before apex with fringes of yellow setae; apex of aedeagus decurved.

Holotype, ♂, Saint Louis, 1940 (Williams).

In the structure of the male hypopygium, the present fly differs widely from the now numerous regional species of the subgenus. It bears some slight resemblance to *Gonomyia* (*Lipophleps*) *pietatis* Alexander, of Guam and the Carolines, but the relationship is not particularly close.

Erioptera (Trimicra) pilipes (Fabricius), var.

Tipula pilipes Fabricius; Mantissa Ins., 2: 324; 1787.

Erioptera (*Trimicra*) *pilipes* (Fabricius) Edwards; Trans. Soc. British Ent., 5 (1) 129; 1938.

Noumea, July-August 1940; Saint Louis, October 14, 1940 (Williams).

This is one of the most puzzling crane-flies known. What appears to represent a single species occurs virtually throughout the world, including the remote oceanic islands. Unless their present distribution was attained by commerce, it is very difficult to attempt an explanation of possible manners in which it could have been brought about.