

(presumably from Loch Loven), that may be used for dissection. It is to be hoped that in due course our other Haliplids will become better studied, now the way has been paved by Mr. Edwards (2) and by Mr. Balfour-Browne (1), who confined himself to the "*ruficollis*" group. The biology of the Haliplidæ is extremely interesting, as has been shown by Matheson (3) in America.

BIBLIOGRAPHY.

- (1) F. BALFOUR-BROWNE. "On the British Species of *Halipilus*, Latreille, related to *Halipilus ruficollis*, De Geer, with some Remarks upon *H. fulvicollis*, Erichson, and *H. furcatus*, Seidlitz." *Ann. & Mag. Nat. Hist.* ser. 8, vol. xv., Jan. 1915, p. 109, fig. 2.
- (2) J. EDWARDS. "A Revision of the British Species of *Halipilus*, Latreille." *Ent. Month. Mag.* 2nd ser. vol. xxii. pp. 3, 5-6.
- (3) R. MATHESON. "The Haliplidæ of North America, North of Mexico." *Journ. N.Y. Ent. Soc.* vol. xx., Sept. 1912, pp. 188-190.
- (4) A. ZIMMERMANN. *Catalogus Coleopterorum*, pars 71 (Haliplidæ), p. 304.

IV.—*New or little-known Tipulidæ (Diptera).* — XIX.
Australasian Species. By CHARLES P. ALEXANDER, Ph.D.,
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THE species of crane-flies described in the present paper are from various Pacific Islands. The important collection from Fiji was sent by Messrs. Greenwood and Veitch to the Imperial Bureau of Entomology, and thence to the writer through Dr. Marshall and Mr. Edwards. Collections from the Solomons were sent from the Bishop Museum and the Museum of Comparative Zoology, Cambridge, Massachusetts. Other islands included are the Hawaiian Islands, Austral Islands, New Britain, and New Hebrides. For the interesting material from New Britain, I am indebted to Mr. Gerald F. Hill. The *Epiphragma* from New Hebrides was included in large and important series of crane-flies in the Paris Museum kindly sent to me by Mons. Séguy.

Doaneomyia fijiensis, sp. n.

Female.—Length about 4·8 mm. ; wing 6·5 mm.

Generally similar to *D. tahitiensis*, Alexander, differing as follows:—

Head scarcely darker brown than the mesonotum. The
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white tibial bases are twice as extensive as those of *D. tahitiensis*, being fully two-thirds the white apex; the total amount of white on the tibiæ thus exceeds the brown central portion; the dark basal ring on metatarsi almost black. Wings with the basal petiole even longer and more slender than in *D. tahitiensis*. Sc_2 is retreated back from the tip of Sc_1 for a considerable distance, Sc_1 alone being longer than the stigma; petiole of cell M_2 shorter and cell 2nd *A* narrower than in *D. tahitiensis*. Abdomen almost uniformly dark brown, the sternites a little paler.

Hab. Fiji.

Holotype, ♀, Mountains, Laütoka, April 11, 1920 (*W. Greenwood*).

Type in the collection of the British Museum (Natural History).

Dicranomyia (Thrypticomyia) subsaltens, sp. n.

Male.—Length about 5 mm.; wing 6.5 mm.

Female.—Length 5.5 mm.; wing 6.4 mm.

Generally similar to *D. (T.) apicalis* (Wiedemann), differing as follows:—

Size larger (wing over 6 mm.). Wings almost uniformly tinged with pale brown, the stigma elongate, darker brown. Venation: Sc_1 ending opposite the origin of *Rs*, Sc_2 far removed from the tip of Sc_1 , so that the latter vein alone is about two-thirds the length of *Rs*; inner end of cell 1st M_2 rather squarely truncated, lying distad of the inner end of cell R_3 ; basal deflection of Cu_1 at or before mid-length of cell 1st M_2 . Metatarsi with about the basal third darkened.

Hab. Fiji.

Holotype, ♂, Laütoka, April 22, 1922 (*W. Greenwood*).

Allotopotype, ♀, June 12, 1922 (*R. Veitch*).

Paratopotype, ♂, with the type; *paratypes*, ♂, Nadi, July 27, 1913 (*J. F. Illingworth*), in author's collection; ♂, Walu Bay, Suva, June 1922 (*D. Stoner*), in collection of University of Iowa.

Type in the collection of the British Museum (Natural History).

This is the species formerly determined by the writer (*Ann. Ent. Soc. Amer.*, 7: 239; 1914) as being *Dicranomyia saltens* (Doleschall). It has since been shown, however, that the latter species is a *Euglochina*, whereas *D. apicalis* (Wiedemann) is a *Thrypticomyia* and is the earliest-described species of the subgenus. A comparison with the type of

D. apicalis has shown the Fijian species to be amply distinct, easily recognized by the larger size and almost uniformly darkened wings, with vein Sc_1 very long.

Dicranomyia bryani, sp. n.

General coloration dark chestnut-brown, the præscutum with a broad median stripe and broad lateral margins of brown; wings conspicuously clouded with brown; abdominal segments indistinctly bicolorous.

Male.—Length about 6 mm.; wing 8.4 mm.

Rostrum and palpi black. Antennæ brownish black throughout. Head dark brown.

Mesonotal præscutum dark chestnut-brown with a conspicuous brownish-black median stripe that does not reach the suture; lateral margins of sclerite brownish black, the usual interspaces thus being very broad; scutal lobes dark brown, the median area narrowly paler; scutellum obscure yellow; postnotum brownish black, the anterior two-thirds slightly pruinose. Pleura brown with an indistinct blackish longitudinal stripe extending from the cervical sclerites to the postnotum. Halteres pale brown, the base of the stem and the apices of the knobs conspicuously pale yellow. Legs with the coxæ brown, the posterior coxæ paler; trochanters brownish testaceous; femora dark brown, the bases and apices a little paler; tibiæ and tarsi dark brown. Wings faintly darkened, distinctly clouded with brown; stigma oval, brown; very broad pale brown seams at origin of R_s , along the cord and on the outer end of cell 1st M_2 ; cell Sc and a suffusion across the bases of cells R , M , Cu , and the *Anal*s paler brown; veins dark brown. Venation: Sc short, Sc_1 ending a short distance beyond the origin of R_s , Sc_2 immediately opposite this origin; cell 1st M_2 about as long as vein M_{1+2} beyond it; basal deflection of Cu_1 just before the fork of M .

Abdominal segments dark brown, the caudal margins of the sclerites narrowly but distinctly margined with paler; basal sternites more extensively pale.

Hab. Hawaiian Islands.

Holotype, ♂, 29 mi. Olaa, Hawaii, July 22 (*W. M. Giffard*).

Type in the collection of the Bishop Museum, Honolulu.

This very distinct species is named in honour of Mr. Edwin H. Bryan, Jr., to whom I am greatly indebted for the privilege of studying important collections of Hawaiian Tipulidæ.

Dicranomyia rapæ, sp. n.

General coloration dark brown, the præscutum with a still darker brown median stripe; wings faintly tinged with brown; stigma and spots at origin of *Rs* and at arculus darker brown; *Sc* short, *Sc*₁ ending just beyond the origin of *Rs*.

Female.—Length about 7 mm.; wing 7–7.5 mm.

Rostrum and palpi dark brown. Antennæ dark brown, the terminal segments broken. Head dark grey.

Mesonotum dark brown, the præscutum with a darker brown median stripe; scutal lobes dark brown, the median area narrowly grey; scutellum light grey; postnotum light grey, the lateral sclerites a little darker. Pleura dark brown, sparsely pruinose. Halteres with the bases obscure yellow, the knobs broken. Legs with the coxæ and trochanters light brown; femora pale brown, the tips narrowly and rather indistinctly blackened; remainder of legs obscure yellow, the terminal tarsal segments infuscated. Wings with a faint brownish tinge; stigma subcircular, dark brown; brown clouds at arculus and at origin of *Rs*, the latter also including the tip of vein *Sc*; less distinct brown clouds along the cord; veins dark brown. Venation: *Sc* ending immediately beyond the origin of *Rs*, *Sc*₂ close to its tip; *Rs* a little less than twice the basal deflection of *R*₄₊₅; basal deflection of *Cu*₁ just before the fork of *M*.

Abdomen dark brown. Ovipositor with the tergal valves moderately elongate, almost straight.

Hab. Austral (Tubuai) Islands.

Holotype, ♀, Rapa, November 1921, at light (*Mrs. A. M. Stokes*).

Paratopotypes, 2 broken specimens.

Type in the collection of the Bishop Museum, Honolulu.

Dicranomyia fijiana, sp. n.

Wings subhyaline, with a series of small brown clouds in cells *R*₁, *R*₃, *R*₅, 2nd *M*₂, *M*₃, *Cu*, *Cu*₁, and 1st *A*; vein *Sc* short, *Sc*₂ at the tip of *Sc*₁; cell 1st *M*₂ closed; basal deflection of *Cu*₁ at the fork of *M*.

Male.—Length 5 mm.; wing 6.4 mm.

Body of insect discoloured, the general coloration apparently dark brown or grey. Halteres brown, the basal half of the stem paler. Legs broken beyond the trochanters. Wings subhyaline, spotted and dotted with dark brown and grey; the brown marks are at arculus, tip of *Sc*, extending caudad along the cord, and at the outer end of cell

1st M_2 ; the smaller grey clouds are distributed as follows:—Two in cell R ; one each in cells R_3 , R_5 , 2nd M_2 , and M_3 in an almost straight line; cloud in cell Cu at tip of vein Cu_2 ; in cell Cu_1 near the outer end of vein 1st A ; one near base and one near apex of vein 2nd A in cell 1st A ; veins yellow, darker in the infuscated areas. Venation: Sc short, Sc_1 ending just beyond the origin of Rs , Sc_2 not far from its tip and also just beyond the origin of Rs ; Rs relatively short and straight, about one-third longer than the arcuated basal deflection of R_{4+5} ; R_{2+3} angulated at apex; cell 1st M_2 elongate, gently widened distally, about as long as vein M_3 beyond it; basal deflection of Cu_1 at the fork of M . Abdomen brown, the elongate fleshy lobes of the hypopygium a little paler.

Hab. Fiji.

Holotype, ♂, Mount Evans, Lautoka, May 11, 1919 (*W. Greenwood*).

Type in the collection of the British Museum (Natural History).

Limonia veitchi, sp. n.

General coloration greenish yellow; thorax with a black dorso-median stripe that divides on the scutum and scutellum, enclosing a linear pale area; femora brown with a subterminal yellow ring; wings subhyaline, the costal region more yellowish; cord and longitudinal veins narrowly seamed with dark brown.

Male.—Length 8–10 mm.; wing 10–12 mm.

Female.—Length 8.5 mm.; wing 9.5 mm.

Rostrum and palpi brownish black. Antennæ brownish black throughout. Head brown, the vertex blackish medially.

Pronotum pale greenish, with a black, longitudinal, median stripe. Mesothorax pale greenish, in older specimens fading into dull yellow, the præscutum with a black median stripe that divides at the suture into two narrower stripes that cross the mesal portions of the scutal lobes on to the scutellum, the medial areas of both the scutum and scutellum being broadly pale; mediotergite of postnotum black, the mark narrowed posteriorly. Halteres pale green, the knobs dark brown. Legs with the coxæ and trochanters pale greenish; femora obscure yellow at bases, soon passing into dark brown; a subterminal obscure yellow ring that is usually a little less extensive than the black femoral tips; tibiæ and tarsi black. Wings subhyaline, the prearcular cells and cells C and Sc more yellowish; stigma small,

circular, dark brown; the cord, outer end of cell 1st M_2 , and most of the longitudinal veins are narrowly but conspicuously seamed with dark brown. Venation: Sc_1 ending about opposite one-third the length of the basal section of R_{2+3} ; Sc_1 longer than the basal deflection of Cu_1 ; Rs more than three times the deflection of R_{4+5} ; Cu_2 equal to or shorter than the basal deflection of Cu_1 .

Abdominal tergites bicolorous, the narrow base and lateral margins, and the broader apex of each segment, yellow, the extensive median portion dark brown. In the female and some males the yellow at the base of the segments is not indicated.

Hab. Fiji.

Holotype, ♂, Mountains, Laütoka, May 1, 1921 (*W. Greenwood*).

Allotopotype, ♀.

Paratopotypes, 2 ♂'s; *paratype*, ♂ (*R. Veitch*).

Type in the collection of the British Museum (Natural History).

This handsome crane-fly is named in honour of Mr. R. Veitch.

Limonia novæ-brittanica, sp. n.

General coloration dark brown, the humeral angles of the præscutum and portions of the scutum obscure yellow; legs uniformly dark brown; wings faintly tinged with brown; stigma small, circular; Sc long.

Male.—Length 6.5–8 mm.; wing 8.2–8.5 mm.

Rostrum and palpi dark brown. Antennæ dark brown throughout. Head dark brown.

Pronotum dark brown. Mesonotal præscutum dark brown, the humeral angles very restrictedly obscure yellow; scutum obscure yellow, the centre of each lobe largely brown; scutellum and postnotum brown, the sutures tinged with yellow. Pleura infuscated. Halteres brown, the base of the stem yellow. Legs with the coxæ obscure brownish yellow, the bases of the outer faces of fore and middle coxæ infuscated; trochanters brownish yellow; remainder of the legs dark brown. Wings faintly tinged with brown, iridescent, the subcostal cell a little darker; stigma small, circular, pale brown; veins dark brown. Venation: Sc long, Sc_1 extending to opposite two-thirds the length of the basal section of R_{2+3} ; Sc_1 a little shorter than the basal deflection of R_{4+5} ; Rs a little less than three times the basal deflection of R_{4+5} ; m and outer deflection of M_3 subequal; basal deflection of Cu_1 near mid-length of cell 1st M_3 .

Abdominal tergites dark brown, the caudal and lateral margins a little paler; basal sternites obscure yellow; ventral lobes of hypopygium pale brown.

Hab. New Britain.

Holotype, ♂, Rabaul, May 29, 1922 (G. F. Hill).

Paratopotypes, 3 ♂'s.

Type in the collection of the author.

Libnotes solomonis, sp. n.

Belongs to the *strigivena* group; general coloration yellow; antennal flagellum pale; pleura yellow, narrowly lineate with dark brown; apex of fore femora and bases of all tibiæ blackened; wings yellowish, the veins sparsely variegated with darker but not spotted and dotted as in *L. strigivena* and allies.

Male.—Length 12–13.5 mm.; wing 14–17 mm.

Rostrum and palpi dark brown. Antennæ with the scape dark brown, the flagellum conspicuously brownish yellow. Head greyish brown; vertex between eyes very narrow.

Pronotum obscure yellow. Mesonotal præscutum with the disk brownish grey, the broad sublateral margins fulvous, the extreme edge black; the sublateral margins are separated from the disk by an indistinct brownish border; posterior half of the usual median stripe darker grey, margined on either side by a conspicuous, arcuated, brown line, the entire mark appearing oval; scutum whitish grey medially, the lobes obscure yellow, each with a brown dash in its centre; scutellum obscure yellow; mediotergite of postnotum infuscated medially, obscure yellow laterally. Pleura yellow, whitish pollinose, narrowly longitudinally vittate with dark brown; the more dorsal extending from the cervical sclerites above the fore coxæ to beneath the origin of the halteres; the ventral stripe includes the lower margin of the sternopleura; a third stripe lies along the suture between the mediotergite and pleurotergite of the postnotum, extending backwards on to the abdomen. Halteres yellow, the middle portion of the knobs dark brown. Legs with the coxæ yellow, the fore coxæ infuscated; trochanters yellow; femora obscure yellow, the tips broadly blackened, most conspicuous on the fore femora, on the posterior femora replaced by a subterminal brown annulus; tibial bases conspicuously blackened, on the fore legs about one-half as extensive as the femoral apex; apices of tibiæ darkened; tarsi light brown, the three terminal segments black. Wings tinged with yellow, the costal region brighter;

stigma yellow, the outer end (tip of R_1) with a small brown cloud, the proximal end (Sc_2) with a large and conspicuous dark brown area; cord and outer end of cell 1st M_2 seamed with brown; brown clouds at ends of veins Cu_1 , Cu_2 , 1st A , 2nd A , and the anal angle; veins pale, black in the infuscated areas; R_s interrupted by pale beyond mid-length. Venation: r beyond the tip of R_1 strongly arcuated; inner end of cell 2nd M_2 lying far proximad of cell M_3 ; basal deflection of Cu_1 about one and one-half times its length beyond the fork of M .

Abdominal tergites reddish brown, trivittate with black, the dorsal stripe interrupted at posterior margin of each segment; hypopygium pale.

Hab. Solomon Islands.

Holotyp♂, Guadacananar Island, January 17-18, 1921 (*J. A. Kusche*).

Paratopotype, ♂.

Type in the collection of the Bishop Museum, Honolulu.

Libnotes greenwoodi, sp. n.

Belongs to the *strigivena* group; mesonotal præscutum brown with a **W**-shaped transverse yellow band near mid-length; pleura with a longitudinal dark brown stripe; femora with subterminal black and yellow rings; wings subhyaline, heavily variegated along the veins with dark and paler brown; r at tip of R_1 ; inner end of cell 2nd M_2 far proximad of cell M_3 .

Male.—Length 13-14 mm.; wing 18-19 mm.

Female.—Length about 15 mm.; wing 15.5 mm.

Rostrum and palpi dark brown. Antennæ dark brown. Head yellowish brown, the narrow portion of the vertex between the eyes fulvous.

Pronotum pale brownish yellow, the cephalic portion a little infuscated laterally. Mesonotal præscutum brown with an irregular **W**-shaped yellowish cross-band near mid-length; scutum obscure yellow, each lobe with a dark brown centre; scutellum light brown; postnotum with the mediotergite obscure yellow, with the lateral and cephalic margins infuscated; pleurotergites largely infuscated. Pleura obscure yellow with a conspicuous dark brown longitudinal stripe extending from the postnotal pleurotergite to the propleura, including the basal half of the outer face of the fore coxæ. Halteres yellow, the knobs dark brown. Legs with the fore coxæ as described above; middle and hind coxæ yellow with a conspicuous black spot near mid-length; femora pale

brown, gradually darkening outwardly, with a moderately narrow, dark brown subterminal ring preceded by a slightly wider yellow annulus; extreme apex greenish yellow, this approximately one-half as wide as the brown subterminal ring; tibiæ dark brown, the extreme base and apex black; tarsi black. Wings greyish subhyaline, very extensively spotted and clouded with dark and pale brown along the veins, the clouded areas more extensive than the clear ones; veins greenish yellow and brown, alternated. Venation: tip of R_1 shorter than r ; outer deflection of M_3 lying far distad, so cell $2nd\ M_2$ is from one-third to one-half longer than cell M_3 ; basal deflection of Cu_1 about two-thirds as long as the basal deflection of M_{3+4} .

Abdominal tergites obscure yellow, indistinctly trivittate with dark brown, the median stripe becoming obliterated near mid-length of the organ; sternites and hypopygium yellow. In the female, the median tergal stripe is obliterated.

Hab. Fiji.

Holotype, ♂, Mountains, Laütoka, January 5, 1921 (W. Greenwood).

Allotopotype, ♀.

Paratopotypes, ♂'s.

Type in the collection of the British Museum (Natural History).

This interesting species is named in honour of the collector, Mr. W. Greenwood.

"Bred from fruits of *Eugenia malaccensis* (Myrtaceæ); egg to emergence not less than 17 days."

Libnotes manni, sp. n.

Belongs to the *samoënsis* group; general coloration brown and yellow; sexes strongly dimorphic, especially as regards the wings; mesonotal præscutum with three conspicuous brown stripes; femora pale brown, the tips conspicuously and abruptly light yellow; in the male, R_s short, in alignment with the remaining elements of the cord, r about three times its length beyond the supernumerary cross-vein in cell Sc_1 ; fork of M very wide; caudal margins of segments broadly obscure yellow.

Male.—Length 9 mm.; wing 11 mm.

Female.—Length 7 mm.; wing 8.4 mm.

Rostrum and palpi dark brown. Antennæ with the scapal segments pale brown, the flagellum brownish black. Head with the anterior part of the vertex reduced to a narrow

silvery strip; remainder of vertex darker grey with a conspicuous dark brown median stripe; lateral regions and genæ similarly darkened.

Pronotum obscure brown, dark brown medially. Mesonotal præscutum yellow with a very conspicuous dark brown median stripe and slightly less intense lateral stripes, the median stripe feebly constricted near mid-length of the sclerite; scutum pale, the lobes almost entirely dark brown; scutellum and postnotum yellowish testaceous, darker posteriorly. Pleura testaceous, the propleura and adjoining parts of mesepisternum infuscated. Halteres pale, the knobs brown. Legs with the fore coxæ infuscated, the remaining coxæ and the trochanters yellow; femora pale brown, the tips conspicuously and abruptly light yellow; tibiæ pale brown; tarsi darker brown. Wings faintly tinged with brown, the costal region brighter; in the ♂ the bases of cells *C* and *Sc* are infuscated; stigma conspicuous, oval, brown; brown clouds beyond the cord in cells *Sc*₁ and 1st *R*₁ extending almost to the stigma; a narrow infuscation along the cord; in the ♀ the only infuscation is the small oval stigma. Venation: in the ♂, *Sc* ends just beyond the base of *Rs*, *Sc*₂ not far from its tips; a supernumerary cross-vein in cell *Sc*₁ at the proximal end of the stigma; extreme tip of *R*₁ atrophied; *r* about three times its length beyond the supernumerary cross-vein in cell *Sc*₁; *Rs* short, subequal to the basal section of *M*₁₊₂ and in alignment with the remaining elements of the cord; radial veins deflected strongly caudad in both sexes, but more strongly so in the male; *m* longer and more arcuated than the outer deflection of *M*₃. In the ♀, *Sc* is long, extending far beyond the origin of *Rs*, *Sc*₁ and *Sc*₂ both being beyond the fork of *Rs*; *r* only its length beyond the supernumerary cross-vein in cell *Sc*₁; *Rs* more than twice the basal deflection of *M*₁₊₂ and in alignment with the base of *R*₄₊₅, but not the other elements of the cord; basal deflection of *Cu*₁ at two-fifths the length of cell 1st *M*₂.

Abdomen brown, the segments conspicuously margined caudally with obscure yellow; hypopygium obscure yellow. Ovipositor with the tergal valves slender; sternal valves blackened at base.

Hab. Solomon Islands.

Holotype, ♂, Florida, Tulagi (*W. M. Mann*).

Allotopotype, ♀.

Type in the collection of the Museum of Comparative Zoology.

This species is related to *L. samoënsis*, Alexander (Samoa), and *L. subæqualis*, Alexander (North Queensland). It is named in honour of the collector, Dr. W. M. Mann.

Gonomyia (Lipophleps) digitifera, sp. n.

General coloration grey and yellow; femora yellow with two brown annuli; wings greyish subhyaline, sparsely spotted with brown; *Sc* short, cell 1st M_2 closed; basistyles of male hypopygium with a slender finger-like lobe on mesal face.

Male.—Length about 3.8 mm.; wing 3.3 mm.

Female.—Length 4–4.5 mm.; wing 3.5–4.3 mm.

Rostrum and palpi dark brown. Antennæ dark brown, the second scapal segment obscure yellow. Head obscure yellow, the vertex dark medially.

Pronotum whitish. Mesonotal præscutum pale brown with three confluent dark grey stripes; tuberculate pits black; pseudo-sutural foveæ pale reddish brown; scutal lobes grey; scutellum yellow with a small median brown spot; mediotergite of postnotum yellow, darker posteriorly. Pleura dark brown with a narrow longitudinal yellow stripe, sparsely pruinose, extending from the fore coxæ to beneath the halteres; dorso-pleural region indistinctly pale. Halteres yellow, the knobs brown. Legs with the coxæ and trochanters yellow; femora yellow with a narrow brown ring immediately beyond mid-length and a broad, conspicuous, brown annulus immediately before the apex, the yellow ring enclosed being a little more extensive than the brown subapical annulus; tibiæ brownish yellow, the tips narrowly blackened; tarsi dark brown, passing into black. Wings greyish subhyaline: stigma oval, pale brown; small dark brown spots at arculus, tip of *Sc*, and tip of vein R_{2+3} ; less distinct brown seams along the cord and outer end of cell 1st M_2 ; veins pale brown, a little darker in the infuscated areas. Venation: *Sc* short, Sc_1 ending immediately beyond the origin of *Rs*, Sc_2 at the extreme tip of Sc_1 ; *Rs* long, approximately equal to R_{2+3} ; cell 1st M_2 closed; basal deflection of Cu_1 about one-third its length before the fork of *M*.

Abdomen dark brown, the segments with conspicuous pale caudal margins, the genital segment in the female more reddish. Male hypopygium with the basistyles comparatively short and stout, on the mesal face with a slender finger-like lobe directed caudad; two dististyles, the outermost shorter, cylindrical, the apex strongly curved, blackened,

acutely pointed, with a few setæ before the tip; inner style longer, gently angulated before apex, the mesal face near base with a densely setiferous fleshy lobe. Gonapophyses appearing as a flattened plate, the caudal margin bifid, each angle produced into an acute blackened point. Beneath this plate project caudad two slender pale filaments.

Hab. Fiji.

Holotype, ♀, Laütoka, March 26, 1920 (*W. Greenwood*).

Allotopotype, a badly broken ♂, April 2, 1920 (*R. Veitch*).

Paratopotypes, ♀, with the type.

Type in the collection of the British Museum (Natural History).

Trentepohlia (Mongoma) brevicellula, sp. n.

Size small (wing under 6 mm.); general coloration uniformly dark brown; legs unicolorous brown; wings tinged with brown; cell 1st M_2 short and broad.

Male.—Length 5.5 mm.; wing 5.8 mm.

Female.—Length 6 mm.; wing 5.7 mm.

Rostrum and palpi brown. Antennæ dark brown. Head dark brown.

Mesonotum brown, very slightly paler laterally. Pleura pale brownish yellow. Halteres pale brown, the base of the stem a little brighter. Legs with the coxæ and trochanters yellowish testaceous; remainder of the legs uniformly brown, the tarsal segments beyond the metatarsi broken. Wings strongly tinged with brown, cell *C*, *Sc*, and the stigma darker brown; veins dark brown. Venation: *r* variable in position, at or before the fork of R_{2+3} , in some cases the distance about one-half its length; cell 1st M_2 unusually short and broad for a member of this group, widened distally; *m* usually equal to or a little shorter than the other elements closing cell 1st M_2 ; distal fusion of Cu_2 and 1st *A* subequal to *m*.

Abdomen uniformly brown.

Hab. Fiji.

Holotype, ♂, Loloti, December 19, 1920 (*W. Greenwood*).

Allotopotype, ♀.

Paratopotype, 2 ♂'s.

Type in the collection of the British Museum (Natural History).

Epiphragma hebridensis, sp. n.

General coloration dark brown, grey pruinose; centre of disk of mesonotal præscutum clearer grey; wings whitish subhyaline, with an irregular ocelliform brown pattern; abdomen brownish yellow, trivittate with dark brown.

Female.—Length about 10 mm.; wing 9·6 mm.

Rostrum and palpi brown. Antennæ lacking. Head light brown with a darker brown median stripe extending from the vertex to the occiput.

The thorax is rubbed and can be described in general terms only. The præscutum has the disk largely dark grey, the lateral margins dark brown; the region anterior to the pseudosutural foveæ brighter brown; postnotum grey, the mediotergite narrowly darker laterally, pleurotergites greyish brown. Pleura dark brown, grey pruinose, leaving a narrow, longitudinal, brown stripe extending from the cervical sclerites above the fore coxæ to the postnotum. Halteres with the base of the stem yellowish, the remainder broken. Legs with the coxæ and trochanters yellow, the fore coxæ weakly infuscated; remainder of the legs broken. Wings whitish subhyaline with an irregular ocelliform brown pattern; stigmal region yellowish; the brown areas are distributed as follows:—Two large brown circles occupy the basal third of the wing between veins *C* and *Cu*, the first with the base of cell *R* as a centre, the second with the origin of *Rs* as a centre, the two circles being confluent; a narrow seam along the supernumerary cross-vein; very irregular and narrow circles occupy the region of the cord and beyond, including one with its centre at the fork of M_{1+2} ; wing-apex in cells R_3 , R_5 , and M_1 darkened; small brown clouds at ends of veins M_3 and Cu_1 ; conspicuous solid brown clouds in the outer ends of cells Cu_1 , Cu , and 1st *A*, at end of vein 2nd *A* and at mid-length of cell 2nd *A*; veins darker brown. Venation: cell M_1 much shorter than its petiole; basal deflection of Cu_1 at about two-fifths the length of cell 1st M_2 ; one wing of the type has an adventitious cross-vein in cell R_5 beyond the level of *m*.

Abdominal tergites brownish yellow, narrowly trivittate with dark brown; sternites brighter yellow, the lateral stripes even more conspicuous but the median stripe broken into pale brown spots near the base of the segments. Ovipositor with the tergal valves long, slender, curved; sternal valves very short but high.

Hab. New Hebrides.

Holotype, ♀, Port Sandwich, Ile Mallicolo, 1902 (*Dr. Joly*).

Type in the collection of the Paris Museum.

Ctenacroscelis lepidus, sp. n.

General coloration yellowish brown, the pleura variegated with darker; wings tinged with yellow, the cubital and anal

cells clouded with brown in their outer ends; lateral lobes of ninth tergite of male hypopygium obliquely truncated, the lateral angles subacute.

Male.—Length about 22 mm. ; wing 23 mm.

Female.—Length about 25 mm. ; wing 23·8 mm.

Frontal prolongation of the head long, yellow, the ventro-lateral portions dark brown; palpi brown, the terminal segments dark brown. Antennæ reddish fulvous. Head obscure fulvous, indistinctly darker behind.

Pronotum brown, darker brown laterally. Mesonotal præscutum olive-brown, indistinctly marmorate with darker, with three dark brown stripes, these narrowly margined with pale greenish, the median stripe paler anteriorly; scutum olive, each lobe with two separate dark brown marks, the anterior one smaller; postnotum olive, the caudal margin of the mediotergite dark brown. In the female, the markings on the præscutum and scutum are barely indicated. Pleura light yellow, the propleura, a blotch on the mesepisternum, and the ventro-lateral portions of the sternopleura dark brown; a silvery-yellow area on the pleurotergite of the postnotum immediately cephalad of the halteres. Halteres brown, the base of the stems and the knobs yellow. Legs with the fore coxæ largely suffused with brown in the male, the other coxæ brownish olive; trochanters brown; femora brown, the tips a little darkened; tibiæ and tarsi dark brown, the bases of the tibiæ very narrowly pale. Wings tinged with yellow, the bases and cells *C* and *Sc* more saturated; cells *Cu*, 1st *A*, and 2nd *A* yellowish subhyaline, handsomely variegated with irregular brown clouds in the outer ends of the cells; stigma pale brown; basal deflection of *Cu*₁ conspicuously seamed with brown; a narrow but conspicuous oblitative area before the cord; veins brown, narrowly and very indistinctly seamed with pale brown. Venation: *R*₃ sinuous; petiole of cell *M*₁ longer than *m*; fusion of *M*₃ and *Cu*₁ moderately extensive.

Abdomen yellowish brown, the tergites with an indistinct median stripe, the lateral margins of the segments narrowly yellow. Male hypopygium with the lobes of the tergite obliquely truncated, the lateral angles subacute; median notch comparatively broad, subshiny, extending on to the dorso-median area of the tergite as a linear groove. Ninth sterno-pleurite not conspicuously produced; outer dististyle relatively long and narrow, only slightly dilated near mid-length.

Hab. Fiji.

Holotype, ♂, Loloti, December 19, 1920 (*W. Greenwood*).

Allotopotype, ♀.

Type in the collection of the British Museum (Natural History).

Ctenacroscelis walkerianus, sp. n.

General coloration pale brownish yellow, the præscutum with darker stripes; legs unicolorous reddish yellow; wings tinged with greyish yellow, not conspicuously variegated; lateral lobes of ninth tergite of male hypopygium truncate.

Male.—Length about 16 mm.; wing 19 mm.

Frontal prolongation of the head obscure brownish yellow; palpi concolorous, the terminal segment passing into black. Antennæ obscure yellow throughout, the intermediate flagellar segments a little produced on the ventral face, the segments with a very few short black setæ. Head obscure yellow, the vertical tubercle low but conspicuous.

Pronotum pale brown, variegated with darker brown on the sides. Mesonotal præscutum pale brownish yellow, with a greenish cast, the two intermediate præscutal stripes dark brown, only narrowly separated from one another; lateral stripes slightly less distinct; scutal lobes brownish yellow, each with two dark brown areas; scutellum brownish yellow, the lateral sclerites darker; postnotum concolorous with the scutellum, the caudal margin narrowly but conspicuously dark brown. Pleura brownish yellow, variegated with darker brown, especially on the anterior part of the mesepisternum and around the wing-root; sternopleura dark brown ventrally except on the narrow median area. Halteres pale brown, the extreme base of the stem pale, the knobs obscure yellow. Legs with the fore coxæ a little infuscated on the outer face, the other coxæ yellow; remainder of the legs uniform reddish yellow. Wings with a strong greyish-yellow tinge, more saturated at the base and in cells *C* and *Sc*; stigma very pale brown; pale brown seams along the basal deflection of *Cu*₁ and at the tip of vein *2nd A*; a narrow transverse obliterative area before the stigma, crossing cell *1st M*₂ into the base of cell *M*₃; veins pale brown. Venation: *R*₂ moderately arcuated; cell *1st M*₂ comparatively long and narrow; petiole of cell *M*₁ longer than *m*; fusion of *M*₂ and *Cu*₁ a little shorter than *m*.

Abdominal tergites obscure fulvous brown with a very narrow, dark brown median line; sternites concolorous, the bases of sternites 7 and 8 darker. Male hypopygium with

the lateral lobes of the ninth tergite shiny, rectangular, the mesal angles broadly rounded, the apices truncate, the median notch narrow, at its base with a small conical spine. Ninth sterno-pleurite not conspicuously produced; outer dististyle very large and flattened, obliquely truncated at apex, the caudal margin with two rows of short yellow setæ.

Hab. Fiji.

Holotype, ♂, Mount Evans, Laûtoka, April 4, 1920 (*W. Greenwood*).

Type in the collection of the British Museum (Natural History).

This species is dedicated to the memory of Francis Walker.

Nephrotoma solomonis, sp. n.

General coloration orange-yellow; occipital brand lacking; mesonotal præscutum with three brownish-black stripes, the median stripe more or less obliterated at its anterior end; wings with cells *C* and *Sc* yellow; abdominal tergites 1 to 7 with the caudal margins narrowly and evenly blackened.

Male.—Length about 12 mm.; wing 13 mm.

Female.—Length about 14 mm.; wing 13–13.5 mm.

Frontal prolongation of head yellow; palpi pale yellowish brown, the terminal segments darker. Antennæ relatively short, the scape orange; basal segment of flagellum usually pale; flagellar segments feebly bicolorous, the ground-colour light yellowish brown, passing into darker brown on the intermediate segments, the small basal swelling of the segments black. Head orange; no apparent occipital brand.

Pronotum orange. Mesonotal præscutum orange, more yellowish laterally; three brownish-black stripes, the median stripe more or less obliterated on its anterior third, its position faintly indicated by delicate reticulate lines; lateral stripes straight, but the outcurved ends faintly indicated in some specimens; scutum yellow, each lobe with two confluent brown spots, the anterior one smaller; a brown spot above each wing-root; scutellum yellow, faintly infuscated posteriorly; postnotum pale whitish yellow with two contiguous, circular, brown spots at posterior margin. Pleura yellow, very faintly variegated with darker. Halteres dark, the apex of each knob light yellow. Legs with the coxæ and trochanters yellow; femora brownish yellow; tibiæ obscure yellow, the tips very faintly darkened; tarsi dark

brown. Wings strongly tinged with yellow, cells *C* and *Sc* brighter; stigma small, pale brown; wing-tip indistinctly darkened; anal angle faintly darkened; veins brown. Venation: *Rs* nearly straight, subequal to the deflection of *R*₄₊₅; *m-cu* close to or, usually, just beyond the fork of *M*.

Abdominal tergites orange-yellow, the caudal margins of segments 1 to 7 narrowly and evenly blackened; segments 8 and 9 dark brown, the styli of the male hypopygium obscure yellow; sternites yellow. In the female, a transverse black ring near mid-length of tergite 2 (faintly indicated in some male specimens) and the caudal margins of segments 2 to 7 broader, the extreme basal lateral angles slightly infuscated; apices of sternites 2 and 3 very narrowly dark brown.

Hab. Solomon Islands.

Holotype, ♂, Florida, Tulagi (*W. M. Mann*).

Allotopotype, ♀.

Paratopotypes, 6 ♂ ♀'s.

Type in the collection of the Museum of Comparative Zoology.

Nephrotoma opima, sp. n.

Female.—Length 14 mm.; wing 12.5 mm.

Generally similar to *N. solomonis*, sp. n., differing as follows:—

Præscutal stripes entire, the broad median stripe feebly notched at both ends; lateral stripes outcurved, the anterior lateral extensions paler than the stripes themselves; scutellum orange. Wings somewhat darker, the subcostal cell conspicuously dark brown. Abdomen with tergites 1 to 5 orange-yellow, tergites 2 to 5 with broad, velvety-black, caudal rings; segments 3 to 5 with almost equally broad latero-basal triangles; tergite 2 with an oval brownish-black spot on either side of basal ring; sternites 1 to 5 yellow, the caudal margins very narrowly blackened, broadest on sternite 5; segments 6 to 8 inclusive entirely black. Ovipositor with the tergal valves horn-coloured, the sternal valves black at base and before the apices.

Hab. Solomon Islands.

Holotype, ♀, San Cristoval, Pamu (*W. M. Mann*).

Type in the collection of the Museum of Comparative Zoology.