

Holotype ♂: Belgian Congo, N.W. Kivu, 4000 feet, Upper Oso River, forest with some grass, (wet season) February 1924 (*T. A. Barns*).

Allotype ♀: Uganda, Kampala, 28. iii. 1926 (*G. L. R. Hancock*).

Paratypes: 2 ♂♂, Belgian Congo, N.W. Kivu, Mokoto Lakes District, 5000–7500 feet, September 1921 (*T. A. Barns*).

EXPLANATION OF THE PLATES.

PLATE I.

- Fig. 1. *Opisthodontia spodopasta*, Tams, sp. n., ♀.
 Fig. 2. *Lechriolepis nephropyropa*, Tams, sp. n., ♂.
 Fig. 3. *Pseudolyra megista*, Tams, sp. n., ♀.
 Fig. 4. *Streblote dysimata*, Tams, sp. n., ♀.
 Fig. 5. *Bombycopsis hyatti*, Tams, sp. n., ♀.
 Fig. 6. *Leipoxais dolichoprygma*, Tams, sp. n., ♂.
 Fig. 7. *Leipoxais typodes*, Tams, sp. n., ♀.
 Fig. 8. *Streblote callizona*, Tams, sp. n., ♀.
 Fig. 9. *Streblote collenettei*, Tams, sp. n., ♂.
 Fig. 10. *Streblote das*, Hering, ♂.

PLATE II.

- Fig. 1. *Bombycopsis lepta*, Tams, sp. n., ♀.
 Fig. 2. *Odontocheilopteryx ungemachi*, Tams, sp. n., ♂.
 Fig. 3. *Odontocheilopteryx eothina*, Tams, sp. n., ♂.
 Fig. 4. *Chilena scotti*, Tams, sp. n., ♂.
 Fig. 5. *Chilena cardinali*, Tams, sp. n., ♂.
 Fig. 6. *Streblote finitorum*, Tams, sp. n., ♂.
 Fig. 7. *Chrysopsyche pyrodes*, Tams, sp. n., ♂.
 Fig. 8. *Lechriolepis cryptognoma*, Tams, sp. n., ♂.
 Fig. 9. *Trabala prasinosphena*, Tams, sp. n., ♂.
 Fig. 10. *Pseudolyra parva*, Tams, sp. n., ♂.

II.—*New or little-known Tipulidæ (Diptera).*—XLVII.
Australasian Species. By CHARLES P. ALEXANDER,
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THE crane-flies herein described as new are all from Australia, with the sole exception of a species of *Trentepohlia* from Papua. I am greatly indebted to Messrs. Davidson, Ferguson, Heron, Mjöberg, Perkins, Taylor, and Wilson for their continued co-operation in making known this interesting fauna. Except where stated to the contrary, the types of the novelties are preserved in the author's collection.

Trentepohlia (Mongoma) brevipes, sp. n.

General coloration reddish brown, the dorsal pleurites darkened; halteres short, dark brown; legs unusually short, the tarsi considerably less than the tibiae; legs brownish black, the tarsi paling to dirty white; wings with a brownish tinge, the stigma very small; abdominal segments dimidiate, dark brown and obscure yellow.

Female.—Length about 7 mm.; wing 5.8 mm. Hind leg, femur 7.7 mm.; tibia 7.5 mm.; tarsus 5.3 mm.

Rostrum yellowish brown, the palpi darker. Antennae dark brown; flagellar segments elongate, with relatively short scattered verticles. Head brownish ochreous, darker above.

Pronotum brownish black. Mesonotal præscutum reddish brown, darker laterally and sublaterally on the posterior half, the latter areas crossing the suture and suffusing the scutal lobes; median area of scutum whitish; scutellum pale testaceous, darker laterally; postnotal mediotergite dark, paler medially, the total effect of coloration of the mesonotum being a vague pale median stripe. Pleura yellowish testaceous, the dorsal pleurites dark brown. Halteres short, dark brown. Legs with the coxae and trochanters yellowish testaceous; femora brownish black, the extreme bases obscure yellow; tibiae brownish black; tarsi brown at base, paling to dirty white; legs short for a member of this genus, the tarsi shorter than the tibiae; tarsal segments decreasing in length outwardly, the terminal three combined being shorter than the second; fore legs broken. Wings with a faint brownish suffusion, the small oval stigma darker brown; cells *C* and *Sc* light yellow, the coloration continued as a narrow line along the anterior margin to the wing-apex, in cells *R*₂ and *R*₃ being vaguely bordered behind by a dusky line; other veins of wing, especially *Cu*, less distinctly seamed with darker; veins darkened, the costal veins more yellowish. Macrotrichia of costal margin relatively dense and conspicuous. Venation: *Sc*₁ ending opposite the cephalic end of *R*₂, the latter subequal to *R*₃₊₄; cell 1st *M*₂ relatively small, the inner ends of cells *R*₅, 2nd *M*₂, and *M*₃ nearly in alignment, the second a trifle more distad; apical fusion of *Cu*₁ and 1st *A* slight.

Abdomen conspicuously dimidiate, the tergites dark brown, the apical half of each just before the posterior

margin with a transverse obscure yellow band ; on the sternites the pale coloration is more extensive, the posterior margins of the segments being less evidently darkened ; ovipositor reddish horn-colour, the tergal valves strongly upcurved.

Hab. Papua.

Holotype, ♀, Suai, Vailala River (*H. O. C. Littlechild*).

Type in the collection of the Australian Institute of Tropical Medicine.

Trentepohlia (*Trentepohlia*) *taylori*, sp. n.

General coloration yellowish brown, variegated with darker brown ; femora obscure yellow at base, deepening to dark brown before tip, the apex narrowly and abruptly pale yellow ; tibiæ and tarsi pale yellow, the outer tarsal segments brownish black ; wings greyish yellow, with a longitudinal dusky washing at near mid-width.

Female.—Length about 9 mm. ; wing 6×1.2 mm.

Rostrum short, obscure yellow ; palpi brownish black. Antennæ black, the base of the first segment obscure yellow. Head brown.

Mesonotum yellowish brown, the præscutum with three dark brown stripes, the median stripe ending just before the suture ; scutum yellowish brown, the lobes darkened ; scutellum and postnotum dark brown, pruinose. Pleura pale ochreous brown, the dorso-pleural region and ventral sternopleurite somewhat darker. Halteres pale. Legs with the coxæ and trochanters yellowish testaceous ; femora obscure yellow, darkened outwardly, the coloration deepening to a broad dark brown ring before apex, the latter narrowly and abruptly pale yellow ; tibiæ and tarsi pale yellow, the outer tarsal segments passing into brownish black ; legs relatively long and slender, especially the femora and tibiæ ; no especial armature on legs. Wings greyish yellow, the stigmal region scarcely darkened ; a vague brown wash appearing as a longitudinal line at near mid-width of the wing, in the bases of the anal cells, in cell *M* adjoining vein *Cu*, across the fork of *M* into the base of cell *R*₅ ; veins pale, darker in the clouded area. Venation : as in *fijiensis*, differing in the details : *Sc* longer, *Sc*₁ extending to opposite one-fourth the length of *R*₂₊₃₊₄ ; basal section of *M*₁₊₂ shorter, subequal to the second section of *M*.

Abdomen relatively elongate, dark brown, the sternites a little paler; ovipositor very small, brownish horn colour.

Hab. North Queensland.

Holotype, ♀, Townsville, April 1927, at light (*F. H. Taylor*).

Type in the collection of the Australian Institute of Tropical Medicine.

I take great pleasure in naming this species in honour of my friend Mr. Frank H. Taylor. The species is closest to *T. (T.) fijiensis* (Alexander) in the general coloration of the wings and body, differing in the coloration of the legs and details of venation. The brown longitudinal wash on the wings of the present species is indicated in *fijiensis* by a more diffuse wash in the same cells. The venation of *fijiensis* as originally figured (*Ann. Ent. Soc. America*, vii. pl. xxxiv. fig. 6, 1914) is erroneous in the length of *Sc*, which ends about opposite the fork of *Rs*.

Gonomyia (Lipophleps) mesoneura, sp. n.

General coloration dark brown; rostrum yellow; antennæ black; halteres with the knobs dark brown; wings tinged with brownish yellow; *Sc* of moderate length, *Sc*₁ ending just before the origin of *Rs*, the latter nearly straight.

Female.—Length about 5 mm.; wing 5.2–5.3 mm.

Rostrum light yellow; palpi black. Antennæ black throughout. Head grey, the front light yellow.

Pronotum and anterior lateral pretergites light sulphur-yellow. Mesonotal præscutum and scutum dark brown, the lateral margins of the former restrictedly yellow; median region of scutum a trifle brightened; scutellum brown, the caudal margin dirty yellow; postnotal mediotergite brownish grey, the cephalo-lateral region yellow. Pleura dark brown, with a broad silvery-white longitudinal stripe extending from the fore coxæ to the base of the abdomen; a more yellowish area involves the dorso-pleural membrane, wing-root, and dorsal portion of the pleurotergite. Halteres dusky, the knobs dark brown. Legs with the fore coxæ dark brown, the basal half whitened; middle and posterior coxæ yellow, their bases infuscated; trochanters obscure brownish yellow; remainder of legs brown, the tarsi passing into black. Wings relatively narrow, strongly tinged with brownish yellow, the stigmal region slightly darker brown; veins brown, more yellowish

in the basal and costal portions. Anterior branch of *Rs* with macrotrichia the entire length. Venation: *Sc* of moderate length, *Sc*₁ ending just before the origin of *Rs*, *Sc*₂ a short distance from its tip; *Rs* long and straight, much as in *skusei*, but somewhat shorter; cell 1st *M*₂ smaller, the veins beyond it correspondingly elongated; cell 2nd *A* narrower.

Abdomen brownish black, the caudal margins of the sternites vaguely paler; ovipositor with the valves light horn-yellow.

Hab. Victoria.

Holotype, ♀, Balnarring, April 28, 1929 (*F. E. Wilson*).

Paratopotype, ♀.

Type returned to Mr. Wilson.

Gonomyia mesoneura is most closely allied to *G. skusei*, Alexander (*gracilis*, Skuse, preoccupied), and *G. fuscohalterata*, Alexander, in the relative length and course of *Rs*, differing in the darkened halteres and relatively short *Sc*.

Teucholabis (Teucholabis) reginæ, sp. n.

General coloration bright yellow and shiny black; præscutum with three broad black stripes; thoracic pleura black, with a transverse yellow line occupying the pteropleurite and meral region; a broad longitudinal stripe of silvery pubescence on the ventral pleurites; wings pale yellow, the costal region brighter; sparse brown seams along the cord, outer end of cell 1st *M*₂, and wing-apex; cell 1st *M*₂ very long and narrow, exceeding vein *M*₁₊₂ beyond it.

Male.—Length about 5.5 mm.; wing 6 × 2.15 mm.

Female.—Length about 7 mm.; wing 6.3 mm.

Rostrum approximately as long as the remainder of head, dark brown, brighter at base; palpi brownish black. Antennæ with the first scapal segment brown, the remainder of organ black; flagellar segments oval. Head dark grey, the anterior vertex more silvery grey.

Pronotum obscure yellow, darker in front. Anterior lateral pretergites bright yellow. Mesonotal præscutum bright yellow, with three shiny black stripes, the median stripe ending some distance before the suture; lateral stripes very broad, almost semioval in outline, reaching the lateral margin of the sclerite; median area of scutum broadly yellow, the lobes almost covered by shiny black triangular marks, the posterior lateral callosities yellow;

scutellum bright yellow; postnotal mediotergite black, the lateral margins on cephalic half restrictedly yellow. Pleura chiefly black, this including the extensive sternopleurite and anepisternum and the anterior portion of the pleurotergite; dorso-pleural membrane, pteropleurite, and meral region light yellow, the latter with an appressed silvery pubescence; dorsal sternopleurite with a broad longitudinal stripe of silvery-grey pubescence. Halteres dusky, the knobs orange. Legs with the coxæ dark brown, their apices yellow; trochanters obscure yellow; femora yellow, the tips of the fore femora narrowly blackened, of the other femora scarcely darkened; tibiæ brownish yellow, the extreme base and broad apices blackened; posterior tibiæ obscure yellow, the tips very narrowly infumed; basal tarsal segments brownish yellow, their apices darkened; terminal tarsal segments dark brown. Wings with a pale yellow tinge, the base and costal region brighter yellow; stigma oval, dark brown; broad pale brown seams along the cord and outer end of cell 1st M_2 ; wing-apex very narrowly dark brown; veins brown, darker in the infuscated area along the cord; basal and costal areas yellow. Venation: Sc_1 ending about opposite two-thirds the length of R_s , Sc_2 some distance from its tip, placed at near one-third the length of R_s ; R_{2+3+4} a little shorter than R_{1+2} ; cell 1st M_2 unusually long and narrow, gently widened outwardly, longer than any of the veins beyond it; $m-cu$ about its own length beyond the fork of M .

Abdominal segments brownish black, the bases of the segments broadly yellow; hypopygium dark brown; basal sternites more extensively yellow.

Hab. South Queensland.

Holotype, ♀, "Wilmont," Mt. Tamborine, in house, altitude about 2000 feet, November 12, 1927 (*Wm. Davidson*).

Allotopotype, ♀, November 30, 1927.

The only other species of *Teucholabis* described from Australia is *T. meridiana*, Skuse (Victoria). The present species is closely allied and very similar in its general coloration, differing especially in the details of coloration and venation. Skuse describes the venation of *meridiana* as being *exactly* like that of the genotype, *complexa*, O.-S., with certain exceptions that do not involve the medial field. In *T. reginæ*, cell 1st M_2 is very long and narrow, notably more so than in *complexa*.

Tasiocera hiemalis, sp. n.

General coloration dark brown; antennæ (♂) elongate; wings with vein 2nd *A* not distinct from the anal margin; male hypopygium with the dististyle subterminal in position, long and slender, the apex strongly bent into an acute spine; phallosomic plate darkened, its caudal margin very broadly emarginate.

Male.—Length about 3.2–3.3 mm.; wing 4–4.2 mm.

Female.—Length about 3 mm.; wing about 4.2 mm.

Rostrum and palpi brown. Antennæ (♂) elongate, considerably longer than the body; outer flagellar segments with glabrous necks, the outer ones very slender; setæ of flagellar segments angularly bent beyond base. Antennæ (♀) short. Head dark brown.

Mesonotum dark brown; the lateral pretergites a little paler. Pleura a little paler than the notum. Halteres elongate, dusky, the knobs a little darker. Legs dark brown, the femoral bases a little brightened. Wings with a dusky suffusion, the veins slightly darker; macrotrichia dark brown. Venation: 2nd anal vein not distinct from the anal margin of wing.

Abdomen dark brown, the hypopygium paler. Male hypopygium with the apical lobe of the basistyle relatively long, but stout. Dististyle subterminal, pale in colour, long and slender, gradually narrowed to the outer end, the apex strongly bent, prolonged into an acute apical spine. Phallosome appearing as a broad chitinated plate, the caudal margin very broadly emarginate, each caudal-lateral angle produced into a spine; in some cases with a smaller subterminal spine on either side of the phallosomic plate.

Hab. Victoria.

Holotype, ♂, Belgrave, in dark fern gully, altitude 900 feet, June 4, 1928 (*F. E. Wilson*).

Allotopotype, ♀, pinned with a paratype ♂.

Paratopotypes, 12 ♂♀.

Type returned to Mr. Wilson.

Tasiocera terræ-reginæ, sp. n.

General coloration dark brown; wings with R_{2+3} relatively long, strongly arcuated; cell 1st M_2 closed; vein 2nd *A* short, nearly confluent with the anal margin; male hypopygium with the dististyle subterminal in position, slender; phallosome consisting of flattened plates

on either side of the ædeagus, each terminating in a conspicuous spine.

Male.—Length about 3.4 mm.; wing 4 mm.

Rostrum brown; palpi black. Antennæ (♂) elongate, the first flagellar segment very long, approximately twice the second; outer flagellar segments with conspicuous glabrous apical necks that become longer and more conspicuous on the outer segments; scapal segments obscure yellow, the flagellum dark brown. Head dark brown.

Mesonotum dark brown, the humeral region of the præscutum testaceous-yellow. Pleura testaceous-yellow. Halteres dusky. Legs pale, clothed with abundant appressed black setæ that conceal the ground-colour. Wings with a greyish suffusion, the veins somewhat darker; macrotrichia brownish black. Venation: R_{2+3} relatively long, strongly arcuated to weakly angulated; R_{2+3+4} a little longer than the basal section of R_5 ; cell 1st M_2 closed, elongate; $m-cu$ less than its own length beyond the fork of M ; vein 2nd A very short, nearly confluent with the anal margin, ending just before the level of the posterior arculus.

Abdomen dark brown. Male hypopygium with the dististyle subterminal in position, long and slender, narrowed outwardly, the tip a slightly decurved spine, before the apex with microscopic pale denticles. Phallosome consisting of a powerful flattened plate on either side of the ædeagus, the two together forming an arch, these plates relatively narrow, the apical-cephalic angle produced into a conspicuous spine. In *primaveris*, Alexander, which has a somewhat similar structure of the phallosome, the lateral plates are broader, widely dilated outwardly, the apical-cephalic spine shorter and more acute, the remainder of this dilated portion with microscopic appressed spinulæ.

Hab. South Queensland.

Holotype, a broken ♂, National Park, McPherson Range, altitude 3000 feet, May 26, 1928 (*F. A. Perkins*).

Type in the collection of the University of Queensland.

Tasiocera acanthophallus, sp. n.

Size large (wing, ♂, 5 mm.); vein 2nd A present; male hypopygium with the dististyle subterminal in

position, slender, provided with microscopic denticles ; a pale spine on mesal face of basistyle just caudad of the dististyle ; ædeagus covered with microscopic spinulæ.

Male.—Length about 4 mm. ; wing 5 mm.

General coloration dark brown. Antennæ (♂) much longer than the entire body, dark throughout. Mesonotum dark brown, the scutellum beneath and the anterior lateral pretergites paler. Halteres dusky. Legs pale, clothed with dark setæ. Wings subhyaline, the veins pale brown ; macrotrichia dark brown. Venation : R_{2+3+4} subequal to the basal section of R_5 ; cell 1st M_2 closed ; $m-cu$ nearly its own length beyond the fork of M ; vein 2nd A distinct, extending to slightly beyond mid-distance between the arculus and origin of Rs ; cell 2nd A relatively wide for a member of this genus.

Abdomen dark, the hypopygium somewhat paler. Male hypopygium with the basistyle elongate, considerably produced beyond the point of insertion of the dististyle, terminating in three or four powerful setæ ; mesal face of style just caudad of the dististyle produced into a pale spine. Dististyle long and slender, gradually narrowed outwardly, the outer half on inner margin with several tubercles set with microscopic peg-like spines, the apex of the style a decurved pale tooth. Phallosome appearing as a depressed brown plate, broadest on basal half, the apex more narrowed, the caudal margin very gently concave ; phallosome without evident spinous armature. Ædeagus densely set with microscopic spinulæ.

Hab. New South Wales.

Holotype, ♂, Brooklana, Eastern Dorrig, altitude 2000 feet, August 8, 1928 (*W. Heron*).

Tasiocera acanthophallus agrees only with *T. tenuicornis*, Skuse, in the subterminal dististyle of the male hypopygium, with an acute pale spine on the basistyle immediately caudad of its insertion. It differs conspicuously in the slender dististyle, simple phallosome, and spinous ædeagus.

Tasiocera cyatheti, sp. n.

Male.—Length about 2.6 mm. ; wing 3.8 mm.

Allied to *T. primavera*, Alexander (*Encycl. Ent. Diptera*, iv. p. 122, 1928), of north-eastern New South Wales, differing especially in the details of structure of the male hypopygium.

General coloration of the body dark brown, the humeral region of præscutum, the lateral pretergites, and the pleura more testaceous. Antennæ black, the segments elongate-cylindrical. Wings dusky, the veins darker. Venation: *m-cu* about its own length beyond the fork of *M*; vein 2nd *A* becoming confluent with the anal margin of wing shortly beyond the level of the arculus. Male hypopygium (fig. 1) with the dististyle subterminal in position, unusually slender, much as in *angustistylus*, gradually narrowed to the decurved spinous tip; lower margin of style on distal half with a series of pale denticles. Apex of basistyle beyond the insertion of the dististyle narrowed to the blunt tip, which is armed with four or five powerful setæ in a row, in addition to scattered smaller setæ. Phallosome with the powerful lateral arms appearing as flattened blades, the apical portions dilated, in slide mounts superimposed to appear as a bridge or arch like portion across the median line.

Hab. Victoria.

Holotype, ♂, Belgrave, in fern gully, altitude 900 feet, January 13, 1929 (*F. E. Wilson*).

Type returned to Mr. Wilson.

Tasiocera bucephala, sp. n.

General coloration testaceous-brown; wings with vein 2nd *A* relatively long, ending shortly beyond the origin of *Rs*; male hypopygium with the dististyle nearly terminal in position, irregular in form, the lower angle produced into a very slender pale rod; phallosomic structure with the caudal-lateral angles produced into blackened horns that are directed mesad.

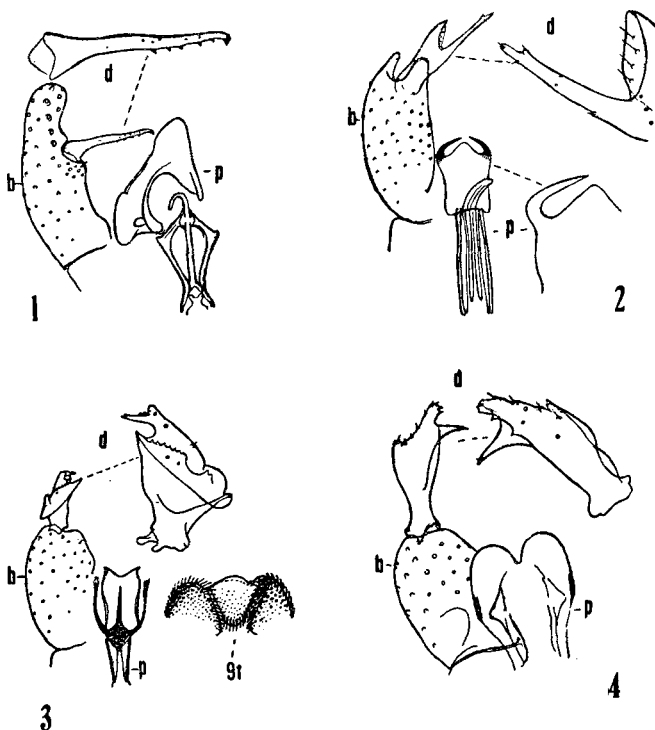
Male.—Length about 3 mm.; wing 4.4 mm.

Rostrum obscure yellow; palpi dark brown. Antennæ elongate, exceeding the body. Head dark grey.

Mesonotum testaceous-brown, the lateral margins of the sclerites more yellowish. Pleura testaceous-yellow. Halteres dusky. Legs with the coxæ and trochanters concolorous with the pleura; remainder of legs densely clothed with long black setæ. Wings greyish subhyaline; veins a little darker than the ground-colour; macrotrichia elongate, dark brown. Venation: R_{2+3+4} in alignment with *Rs*, subequal to the basal section of R_5 ; cell 1st M_2 elongate, closed; *m-cu* close to fork of *M*;

vein 2nd *A* relatively elongate, ending shortly beyond the origin of *Rs*.

Abdomen dark brown, the sternites somewhat brighter ; hypopygium pale. Male hypopygium (fig. 2) with the basistyle stout, terminating in two flattened-compressed blades, one slender, with smooth margins, its apex obtuse ;



Male hypopygia of Australian species of *Tasiocera*, Skuse.

[Explanation of symbols : *b*, basistyle ; *d*, dististyle ; *p*, phallosome ; *t*, tergite.]

Fig. 1. *Tasiocera cyatheti*, sp. n.

Fig. 2. *Tasiocera bucephala*, sp. n.

Fig. 3. *Tasiocera dicksoniæ*, sp. n.

Fig. 4. *Tasiocera taylori*, sp. n.

the second blade is wider, the margin microscopically serrulate. Dististyle nearly terminal, arising between the two blades of the basistyle, the base stout, extended into a dusky blade, the lower angle further produced into a

very slender pale rod. Phallosomid structure appearing as a roughly rectangular plate, the caudal-lateral angles produced into black incurved horns. Cephalad of this structure is a long framework of slender pale feebly chitinized rods extending into the body.

Hab. Victoria.

Holotype, ♂, Ben Cairn, above Millgrove, April 7, 1928 (*F. E. Wilson*).

Paratopotypes, 1 fragmentary ♂ with type; 2 ♂♂, altitude 2900–3200 feet, in beech gully, February 9, 1929 (*F. E. Wilson*).

Type returned to Mr. Wilson.

Tasiocera dicksoniæ, sp. n.

General coloration dark brown; outer flagellar segments (♂) binodulose; wings dusky, the veins seamed with still darker brown; vein 2nd *A* barely indicated, ending opposite the origin of the arculus; male hypopygium with the dististyle terminal in position, narrowed at base, more or less capitate, spinous and roughened.

Male.—Length about 3.2 mm.; wing 4.2 mm.

Rostrum and palpi brown. Antennæ (♂) nearly twice the length of the body, brownish black, the scape brighter; outer flagellar segments conspicuously binodulose, with basal and medial whorls of verticils. Head grey, more yellowish behind.

Mesothorax dark brown, the pleura more testaceous-brown. Halteres elongate, pale brown. Legs dark brown, the coxæ and trochanters slightly paler. Wings with a dusky tinge, the veins seamed with still darker brown; veins pale. Venation: cell 1st *M*₂ closed; vein 2nd *A* barely indicated, ending opposite the origin of the arculus.

Abdomen dark brown, the hypopygium only a little brighter. Male hypopygium (fig. 3) with the dististyle terminal in position, narrow at base, broadly expanded and more or less capitate distally, armed with two spines and a serrulate flange. Phallosomic structure relatively simple, chitinized, the caudal margin of the median plate emarginate; a slender blackened median spine, the margins entirely smooth.

Hab. Victoria.

Holotype, ♂, Belgrave, in dark fern gully, March 31, 1929 (*F. E. Wilson*).

Type returned to Mr. Wilson.

Tasiocera taylори, sp. n.

Size small (wing, ♂, 3 mm.); distal segments of flagellum strongly nodulose; cell M_2 open by the atrophy of the basal section of M_3 ; male hypopygium with the dististyle terminal in position, before apex on mesal margin produced into a long pale spine.

Male.—Length about 2.2 mm.; wing 3 mm.

Antennæ much longer than the body, apparently about twice this length; flagellar segments strongly nodulose, the apical pedicel of each segment exceeding the strongly enlarged basal portion. Head dark brown.

Mesonotum and pleura brown. Halteres with darkened knobs. Wings uniformly dusky, the veins darker; macrotrichia dark. Venation: R_2 subequal to R_{2+3} ; cell M_2 open by the atrophy of the basal section of M_3 ; vein 2nd A very reduced or lacking.

Male hypopygium (fig. 4) with the basistyle short and stout. Dististyle terminal in position, constricted beyond base, thence gradually expanded, on mesal margin before apex produced into a long pale spine. Phallosome a depressed plate, the caudal margin deeply notched medially, the lobes obtuse, their margins slightly roughened. Ædeagus smooth.

Hab. North Queensland.

Holotype, ♂, Eungella, 45 miles west of Mackay, altitude 2300 feet, March 1929 (*F. H. Taylor*).

Type in the collection of the Australian Institute of Tropical Medicine.

This interesting and very distinct species of *Tasiocera* is named in honour of the collector, Mr. Frank H. Taylor.

Cryptolabis (Cryptolabis) convoluta, sp. n.

General coloration brown, variegated with yellow; wings creamy, with a pale brown fascia along the cord; macrotrichia of cells abundant; male hypopygium with the dististyle fleshy, at tip provided with spinous setæ; ædeagus convoluted; phallosomic structure massive, its caudal margin with a broad V-shaped notch.

Male.—Length about 4.4–2 mm.; wing 4.8–5 mm.

Female.—Length about 5 mm.; wing about 5.6 mm.

Rostrum obscure yellow, the palpi a little darker. Antennæ dark brown, slightly paler in some specimens. Head obscure yellow to brownish yellow.

Mesonotum dark brown, in some cases much paler, obscure yellow; lateral margins of the præscutum broadly pale yellow; scutellum pale. Pleura dark brown, variegated with obscure yellow and paler brown, the dorso-pleural region and a short ventral stripe being yellow, the extensive meron pale brown. Halteres pale yellow. Legs with the coxæ and trochanters yellowish testaceous; remainder of legs obscure yellow, the outer tarsal segments dark brown; segments of legs with conspicuous pale setæ. Wings with a creamy ground-colour, the caudal margin more greyish; a pale brown fascia extends along the cord from R_2 to vein Cu_1 ; veins obscure yellow, dark brown in the infuscated portions. Macrotrichia of cells relatively extensive, including most cells with the exception of the basal portions of R and the anal cells, and about the basal half of cells M and Cu . Venation: $r-m$ before or close to the fork of Rs ; $m-cu$ nearly its own length beyond the fork of M .

Abdominal tergites brown, the sternites and hypopygium obscure yellow; in some specimens the whole abdomen is more uniformly yellow. Male hypopygium most nearly as in *tasmanica*, Alexander, in the unarmed dististyle and massive unpointed phallosomic structure. Basistyles short and stout. Dististyle fleshy, provided with long setæ, those at the apex more spinous, with one or two similar stout setæ on the lateral face. Ædeagus elongate, convoluted, beyond the base directed cephalad, thence bent on itself and directed caudad, narrowed apically. Phallosomic structure massive, the posterior portion microscopically roughened, the caudal margin with a broad V-shaped notch, not evenly truncated as in *tasmanica*.

Hab. New South Wales.

Holotype, ♂, Brooklana, Eastern Dorriggo, along stream, October 16, 1927 (*W. Heron*).

Allotopotype, ♀.

Paratopotypes, 2 ♂♂.

Amphineurus (Amphineurus) fergusoni, sp. n.

General coloration brown, the præscutum with three light grey stripes; halteres dusky; femora yellow, with three brown rings; wings yellowish subhyaline, with small brown dots produced by dark patches of macrotrichia.

Male.—Length about 3·8–4 mm. ; wing 5–5·5 mm.

Female.—Length about 5–6 mm. ; wing 6·6–7·5 mm.

Rostrum and palpi black. Antennæ short, brown, the scape and base of the first flagellar segment more yellow ; flagellar segments long-oval. Head dark grey.

Anterior lateral pretergites restrictedly whitish. Mesonotal præscutum brown with three light grey stripes, in some cases the median stripe more buffy grey ; humeral region china-white ; scutum brown, each lobe and the median area variegated with grey ; scutellum obscure yellow ; postnotum dark grey. Pleura pale brownish grey, the dorsal sclerites darker brown ; sternites restrictedly darkened. Halteres dusky, the base of stem narrowly obscure yellow. Legs with the coxæ and trochanters yellow ; femora yellow, each with three brown rings, the last terminal in position ; tibiæ obscure yellow, the tips a little darkened ; tarsi brown, passing into dark brown outwardly. Wings yellowish subhyaline, with small patches of dark macrotrichia scattered over the membrane to produce a dotted appearance ; when the wing is denuded, only the stigma and a vague seam on the cord appear darker than the ground-colour ; veins pale brown. Venation : all medial veins arising from end of vein *M*, or nearly so ; *m-cu* about one-half its length before the fork of *M*.

Abdomen dark brown, the massive hypopygium obscure buffy with conspicuous black styli. Male hypopygium with the ninth tergite extensive, narrowed outwardly, the caudal margin with a deep V-shaped notch, the lobes formed dusky, their margins serrulate. Ventral lobe of basistyle a relatively slender pale fleshy lobe, provided with conspicuous setæ. Base of style with a long ribbon-like blade that terminates in a long black spine. Of the three dististyles, one is a blackened scabrous rod that terminates in an acute spine, its distal half with conspicuous appressed spines, the inner margin before mid-length with a slender black recurved lobe ; inner dististyle a slender pale rod from an enlarged base, the apex microscopically roughened ; third style a shorter flattened yellow blade, the apex bifid, its outer spine acute and blackened, its inner a little longer and broader, the tip obtuse. Gonapophyses appearing as black flattened blades that terminate in three spines, the outer lateral one largest. Ovipositor powerful, horn-coloured, the genital segment obscure yellow.

Hab. West Australia.

Holotype, ♂, Perth, August 22, 1926 (*E. W. Ferguson*).

Allotopotype, ♀.

Paratopotypes, 2 ♂♂; *paratypes*, 2 ♀♀, Pemberton, August 28, 1926; 1 ♀, Bridgetown, August 29, 1926; 1 ♂, Donnybrook, August 29, 1926 (*E. W. Ferguson*).

Type returned to Dr. Ferguson.

This very distinct crane-fly is named in honour of the memory of the collector, the late Dr. Eustace W. Ferguson, whose untimely death removed from the lists one of the most capable of Australian entomologists.

Amphineurus (Amphineurus) spinitergatus, sp. n.

General coloration grey, variegated with darker; thoracic pleura with two narrow dark brown stripes; knobs of halteres brownish yellow; wings narrow, greyish yellow, maculated with patches of black and yellow setæ; R_{2+3+4} long, more than twice the basal section of R_5 ; $m-cu$ at fork of M ; male hypopygium with the ninth tergite bearing a conspicuous black spine on either side of the median notch.

Male.—Length about 4.8 mm.; wing 5.5 mm.

Rostrum and palpi black. Antennæ much paler, brownish ochreous, the outer flagellar segments somewhat darker. Head dark grey, the orbits narrowly paler grey.

Posterior pronotum and lateral pretergites pale yellow. Mesonotal præscutum nearly covered by three reddish-grey stripes, the interspaces a little darker; lateral stripes margined externally by a narrow dark brown line; humeral region and lateral margins of sclerite obscure yellow; posterior sclerites of mesonotum light grey, the scutellum more yellowish, especially behind. Pleura grey, with two narrow dark brown longitudinal stripes, the dorsal stripe including the dorso-pleural membrane. Halteres with the stem dusky, its base light yellow, the knobs obscure brownish yellow. Legs with the coxæ pale, the fore coxæ somewhat brighter; femora yellow, with darker setæ, especially outwardly; remainder of legs yellow, the terminal tarsal segments passing into brown. Wings narrow, with a greyish-yellow suffusion, the base and costal region clearer yellow; membrane covered with scattered patches of stout black macrotrichia and more

slender yellow hair-like setæ, to produce a maculated appearance. Venation: Sc relatively short, ending distinctly before R_2 , Sc_2 shortly beyond origin of Rs ; Rs long, arcuated at origin, the base pale; R_{2+3+4} more than twice the basal section of R_5 ; $m-cu$ at fork of M , somewhat oblique in position and insensibly arcuated.

Abdomen chiefly dark brown, variegated medially with pale; hypopygium obscure yellow. Ninth tergite with the apex heavily blackened, the margin with a U-shaped median notch, the lateral lobes truncate, the mesal angle of each lobe further produced into a long, straight, powerful spine. Outermost dististyle longest, gently expanded at tip into a paddle-like portion, the margin with appressed spines and a few yellow setæ. Phallosome broadly dilated, the lateral margin on either side with a gently curved black spine that is a little longer than the tergal spine.

Hab. New South Wales.

Holotype, ♂, Brooklana, Eastern Dorriggo, altitude about 500 feet, September 20, 1928 (*W. Heron*).

Amphineurus spinitergatus is apparently closest to *A. maculosus* (Skuse), differing especially in the coloration of the antennæ and halteres, and the details of venation. The male of *maculosus* appears to be still undiscovered.

Erioptera (Erioptera) diplacantha, sp. n.

General coloration pale brown; wings with a faint greyish tinge; vein 2nd *A* gently sinuous; male hypopygium with the dististyles terminal in position, the inner style a broad flattened blade, its apex split into two acute spines.

Male.—Length about 2.5–3.3 mm.; wing 3–4 mm.

Rostrum testaceous, darker above; palpi brownish black. Antennæ dark brown throughout. Head dark brown.

Mesonotum almost uniform pale brown, the præscutum a little darker medially in front. Pleura more testaceous. Halteres pale, the knobs broken. Legs with the coxæ and trochanters yellowish testaceous; remainder of legs pale brown, the terminal tarsal segments darker brown. Wings with a faint greyish tinge, the costal region a little brighter; veins pale brown, the macrotrichia dark brown. Venation: R_{2+3+4} relatively long, exceeding $m-cu$; R_2 about one-half R_{2+3} ; $m-cu$ at fork of M ; vein 2nd *A* gently sinuous, ending just before $m-cu$.

Abdominal tergites brownish testaceous, the sternites paler. Male hypopygium with both dististyles terminal in position; outer style a little longer than the inner, relatively slender, broadest just before mid-length, thence narrowed to the obtuse dusky apex; inner dististyle a broad flattened blade that is divided by a deep apical split into two acute spines, the lateral spine shorter, more slender, gently sinuous; inner spine broader at base, the long apex acute. Gonapophyses appearing as slender dusky horns, at base more expanded, with a lateral lobule, before tip with a tooth-like flange.

Hab. South Queensland, New South Wales.

Holotype, ♂, Mt. Tamborine, South Queensland, altitude about 2000 feet, February 20, 1928 (*W. H. Davidson*).

Paratype, ♂, Brooklana, Eastern Dorrig, New South Wales, altitude about 2000 feet, December 4, 1928 (*W. Heron*).

Paragymnastes riedeli, sp. n.

1920. *Gnophomyia* sp., Riedel, Arkiv för Zoologi, xiii. no. 14, p. 4.

General coloration brownish black, handsomely variegated with yellow; halteres with orange knobs; legs with the femora obscure brownish yellow, the tips brownish black; tibiae and tarsi black; wings strongly dusky; R_2 present; cell 1st M_2 open by the atrophy of the outer deflection of M_3 .

Male.—Length about 5.5 mm.; wing 5.7–6 mm.

Female.—Length about 6 mm.; wing 5.5 mm.

Rostrum, palpi, and antennae black throughout; flagellar segments fusiform, with a dense erect pubescence and longer verticils that slightly exceed the segments in length. Head black, heavily grey pruinose.

Pronotum obscure yellow, the sides blackened, the posterior notum conspicuously light yellow, the narrow median portion darker. Lateral pretergites yellow. Mesonotal præscutum chiefly covered by three confluent black stripes, the humeral region and small interspatial areas before the suture obscure yellow, the lateral margins of the sclerite clearer yellow; scutum black, the posterior callosities and anterior median portion obscure yellow; scutellum yellowish orange, the base narrowly blackened; postnotal mediotergite black, with a yellowish spot on either side. Pleura light yellow, conspicuously variegated with black, this including most of the propleura and anepisternum, the ventral half of sternopleurite, dorsal

edge of pteropleurite, and the sclerites surrounding the base of the halteres; dorso-pleural membrane sulphur-yellow. Halteres short, pale brown, the large knobs orange. Legs with the coxæ blackened; trochanters dark reddish brown; femora obscure brownish yellow, the tips brownish black; tibiæ and tarsi brownish black; femora with flattened scales on basal portion. Wings with a strong dusky tinge, the small stigmal area darker brown; cells *C*, *Sc*, and 1st *R*₁ clearer, subhyaline. Venation: *Sc* elongate, *Sc*₁ ending at near three-fourths the length of *Rs*, *Sc*₂ some distance from its tip, placed just beyond mid-length of that portion of *Sc* beyond the origin of *Rs*; *Sc*₁ longer than *m-cu*; *Rs* long and straight; *R*₂₊₃₊₄ a trifle longer than the basal section of *R*₅; *R*₁₊₂ from three to four times *R*₂ alone; *R*₂₊₃ very reduced, approximately one-half *R*₂ or less, in some cases entirely lacking; elements of cord in transverse alignment; cell 1st *M*₂ open by the atrophy of outer deflection of *M*₃; cell 2nd *M*₂ deep, nearly twice its petiole; *m-cu* shortly beyond the fork of *M*; vein 2nd *A* relatively straight, the apex curved, cell 2nd *A* wide.

Abdominal tergites brownish black to black; sternites obscure yellowish brown, the outer sternites somewhat brighter; hypopygium dark. Male hypopygium small, the basistyles short and stout, the dististyle single, subterminal in position, flattened, yellow in colour. *Ædeagus* powerful, broad-based.

Hab. Queensland, New South Wales.

Holotype, ♂, Glen Lamington, Queensland (*E. Mj berg*).

Allotype, ♀, Brooklana, Eastern Dorrig, New South Wales, altitude 2000 feet, November 5, 1927 (*W. Heron*).

Paratopotype, ♂; *paratype*, 1 ♂, with the allotype, November 6, 1927; 1 ♂, November 15, 1927 (*W. Heron*).

Type in the collection of the Riksmuseet, Stockholm.

The type had earlier been placed in *Gnophomyia* by Riedel. The present species agrees with *P. cyanoceps* (Alexander) in the open cell 1st *M*₂, differing most notably in the retention of *R*₂. I take great pleasure in naming this interesting crane-fly in honour of my old friend and co-worker on the Tipulidæ, Postamtat M. P. Riedel.

Ceratocheilus davidsoni, sp. n.

General coloration light brown, the præscutal stripes ill-defined; wings with a faint brown tinge, chiefly pro-

duced by vague seams along the veins; macrotrichia of veins relatively sparse, the anterior branch of *Rs* with from two to five; abdominal segments bicolorous.

Male.—Length, excluding rostrum, about 5.5 mm.; wing 5 mm.; rostrum about 5.2 mm.

Rostrum nearly as long as the remainder of body, brown. Antennæ with scapal segments darker than the flagellum. Head brownish grey.

Pronotum dark brown. Mesonotal præscutum light brown, the usual stripes scarcely evident, the median region darkest, the humeral region brightened; scutal lobes dark brown, the posterior margin of each narrowly yellow; scutellum more reddish brown, with a conspicuous dark spot medially at base; postnotum pruinose. Pleura light brown, more or less distinctly striped longitudinally with greyish brown, the latter coloration including the dorsal pleurites and ventral sternopleurite. Halteres pale, the knobs obscure yellow. Legs with the coxæ and trochanters testaceous-yellow; femora pale brown, the outer ends somewhat darker; tibiæ and tarsi pale brown. Wings with a faint brown tinge, more evident as vague seams along the veins, the latter darker brown. Macrotrichia of veins relatively sparse, the anterior branch of *Rs* with only from two to five such trichia; posterior branch with a dense series the entire length; *M*₄ with from five to six on the central portion. Venation: anterior branch of *Rs* relatively short and only moderately sinuous, about one-fifth longer than *Rs*; cell *R* somewhat narrowed at costa.

Abdomen bicolorous, the tergites dark brown, the bases and apices of the segments broadly darkened, leaving the central two-fifths yellow; subterminal segments more uniformly darkened; hypopygium obscure yellow; sternites similar, the basal darkening slightly paler.

Hab. South Queensland.

Holotype, ♂, Mt. Tamborine, altitude about 2000 feet, November 1928 (*W. H. Davidson*).

I dedicate this crane-fly to the memory of the late Mr. Will H. Davidson, to whom I express my indebtedness for kindly co-operation in a study of the Australian Tipulidæ. *Ceratocheilus davidsoni* is most similar to *C. tasmaniensis*, Alexander, differing especially in the diagnostic features listed above.