

THE ANNALS
AND
MAGAZINE OF NATURAL HISTORY.
[NINTH SERIES.]

No. 104. AUGUST 1926.

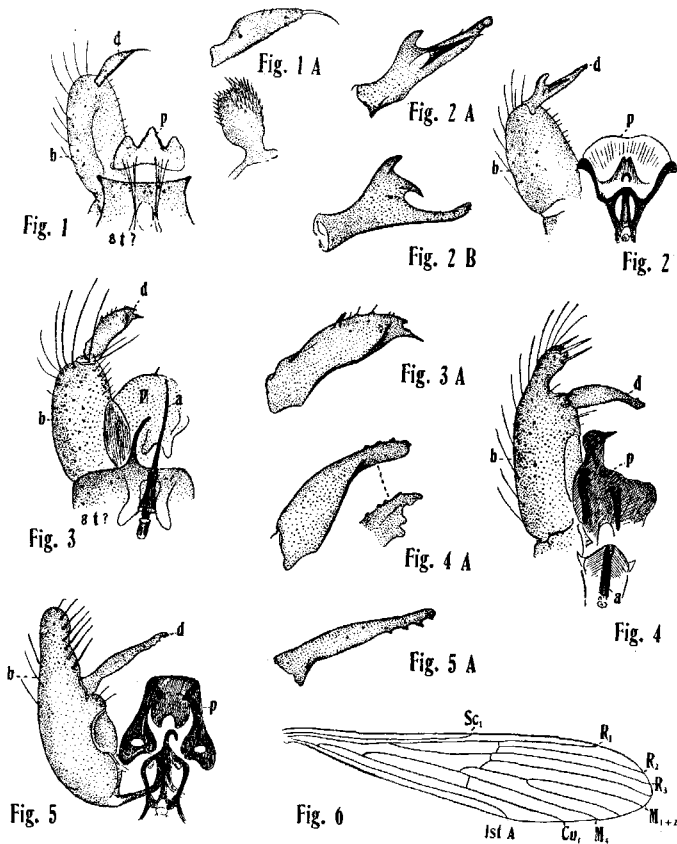
XIX.—*New or little-known Tipulidæ (Diptera).—XXXII. Australasian Species.* By CHARLES P. ALEXANDER, Ph.D., F.E.S., Massachusetts Agricultural College, Amherst, Massachusetts, U.S.A.

THE species considered in the present instalment are from Australia and Tasmania. The majority of the specimens were collected by Dr. A. L. Tonnoir, to whom my sincere thanks are extended for the privilege of examining this splendid series. Other specimens were collected by my friends Messrs. Ferguson, Hardy, and Hill, to all of whom I express my deep thanks for kind co-operation in making known the Australian Tipulid fauna. The Tonnoir material has been returned to Dr. Tonnoir; Dr. Ferguson's specimens will be placed in the Australian Museum; Mr. Hardy's in the collection of the University of Queensland, Brisbane; Mr. Hill's in the National Museum, Victoria.

TASIOCERA, Skuse.

889. *Tasiocera*, Skuse, Proc. Linn. Soc. New South Wales, (2) iv. pp. 815, 816.

The genus *Tasiocera* was erected by Skuse to receive two Australian species (*T. tenuicornis*, Skuse, and *T. gracilicornis*, Skuse). In 1920, the writer (Mem. Queensland Mus. vii. p. 1) proposed *tenuicornis* as type. Since this date, six
Ann. & Mag. N. Hist. Ser. 9. Vol. xviii. 12



Male genitalia and wing-venation of Australian species of
Tasiocera, Skuse.

Explanation of symbols:—*Hypopygial*. *a*=ædeagus; *b*=basistyle; *d*=dististyle; *p*=phallosome; *8 t P*=supposed ninth tergite. *Venational*. *Cu*=Cubitus; *1st A*=1st Anal; *M*=Media; *R*=Radius; *Sc*=Subcosta.

Fig. 1.—Male hypopygium of *T. unisetosa*, sp. n.

Fig. 1 A.—Dististyle, enlarged; lateral lobe of ninth tergite.

Fig. 2.—Male hypopygium of *T. avillaris*, sp. n.

Figs. 2 A, B.—Different views of dististyle of same, enlarged.

Fig. 3.—Male hypopygium of *T. caudifera*, sp. n.

Fig. 3 A.—Dististyle, enlarged.

Fig. 4.—Male hypopygium of *T. attenuata*, sp. n.

Fig. 4 A.—Dististyle, enlarged; tip of dististyle of another specimen, still more enlarged, to show variation in apical denticles.

Fig. 5.—Male hypopygium of *T. angustistylus*, sp. n.

Fig. 5 A.—Dististyle, enlarged.

Fig. 6.—Wing of *T. angustistylus*.

additional species have been described by the writer from New Zealand and five others are characterized below from New South Wales, Victoria, and Tasmania. The members of the genus seem to be restricted to this general region*.

Two species described as members of the genus do not seem to belong here. *Tasiocera minutissima*, Edwards (Trans. Linn. Soc. London, Zool. xv. pp. 210-211, 1912), of the Seychelles Islands, is not a true member of the genus, although closely allied thereto in the structure of the male hypopygium, especially the simple dististyles. The structure of the antennæ and the wings is very different, however. The second species, *Tasiocera fragilicornis*, Riedel (Arch. für Naturgeschichte, lxxxii. Abt. A, Heft 5, pp. 112, 113, 1916), was described from Formosa. The writer subsequently examined material of this and found that it was referable to the tribe Hexatomini rather than to the Eriopterini, the genus *Taiwanomyia*, Alexander (Philippine Journ. Sci. xxii. pp. 476-477, 1923), being proposed to receive it.

The genus *Tasiocera* is well characterized by the great length and structure of the male antenna, the cuneiformly narrowed wings with certain venational peculiarities (especially the lack of the anterior arculus, the basal fusion of *Cu* and *M*, and the extreme brevity of vein *2nd A*), and the structure of the male hypopygium (especially the single dististyles, and the varied structure of the phallosome, which is sometimes asymmetrical).

The exact homologies of the parts of the male hypopygium of *Tasiocera* are still much in doubt, and certain structures are herein interpreted with a question. The various species have a pale fleshy plate that is tentatively homologized as being the ninth tergite. This is not shown in the accompanying figures (except a single lateral lobe or angle in fig. 1 A). Its exact identity must be held in question, as must that of the plate called "8t?" in the figures. More material is needed before the constituent parts of the phallosome can be homologized.

Tasiocera unisetosa, sp. n.

Size small (wing, ♂, under 3 mm.); general coloration dark brown; vein *2nd A* extending some distance beyond the origin of *M*; male hypopygium with the dististyle terminal in position, relatively slender, the apex extended into a powerful apical seta.

* Since the above was written, Mr. Edwards has informed me that he has seen an Oriental species of *Tasiocera*.

Male.—Length about 2·2 mm.; wing 2·8 mm.

Antennæ with the flagellar segments elongate-cylindrical, shortened distally, near mid-length of the organ passing into a generally elongate-fusiform structure, the segments shortened to the tip; pedicels of the subterminal segments become longer, but are still shorter than the dilated portions of the segments. Head dark brown.

Thorax uniformly dark brown. Halteres elongate, pale brown, the extreme bases brighter. Legs uniformly dark brown. Wings with a uniform pale brown tinge, the veins and macrotrichæ still darker brown. Venation: R_{2+3} about equal to or a little shorter than the basal deflection of R_{4+5} ; second anal vein extending some distance beyond the origin of M .

Abdomen dark brown, including the hypopygium (fig. 1). What seems to represent the eighth tergite ($8t?$) broad, the extreme lateral angles produced laterad in small, obtuse, darkened points; caudal margin transverse, ill-delimited, the dorsal surface with sparse elongate setæ. Apices of ninth tergite appear as fleshy lobes that are densely set with strong flattened spines and setæ. Basistyle cylindrical, with long setæ, longest near apex. Dististyle (fig. 1 A) terminal in position, slender, broadest before mid-length, thence narrowed gradually to the apex, which is prolonged into a very powerful curved seta; surface of the style with a few microscopic setæ, mostly subapical in position. Phallosome trilobed.

Hab. Tasmania (West).

Holotype, ♂, King River, February 4, 1923 (*A. Tonnoir*).

Tasiocera axillaris, sp. n.

Male hypopygium with the dististyle terminal in position, ending in three conspicuous points or spines.

Male.—Length about 2–2·3 mm.; wing 3·4–4·2 mm.

Rostrum brownish ochreous; palpi brown. Antennæ more than twice the length of the body, the basal three or four flagellar segments elongate-cylindrical, only a trifle narrowed at apex; remaining segments slightly enlarged basally, the apex produced into a pedicel, this becoming longer and more conspicuous on the subterminal segments, where it nearly equals the dilated portion in length; all segments with conspicuous erect verticils. Head dark greyish brown.

Thorax uniformly dark brown. Halteres pale brown, the

knobs darker. Legs brown. Wings pale brown, the veins slightly darker; macrotrichiæ dark brown. Venation: R_{2+3} in alignment with Rs , about twice the length of the basal deflection of R_{4+5} ; vein *2nd A* ending a very short distance beyond the origin of *M*.

Abdomen brown, the hypopygium testaceous brown. Male hypopygium (fig. 2) with the basistyles relatively stout. Dististyle terminal in position (figs. 2 A, B), produced into three conspicuous points: a slightly curved flattened spine on outer margin before mid-length, with a second, more slender, acute spine in its axil; the main axis of the style is further produced into a long slender rod that is weakly toothed at apex, the distal half with scattered microscopic setulæ.

Hab. Tasmania.

Holotype, ♂, Wilmot, January 8, 1923 (*A. Tonnoir*).

Paratypes, ♂, Burnie, January 31, 1923 (*A. Tonnoir*); ♂, Adventure Bay, December 30, 1922 (*A. Tonnoir*).

Tasiocera caudifera, sp. n.

Male.—Length about 3 mm.; wing 4.8 mm.

Generally similar to *T. gracilicornis*, Skuse, differing conspicuously in the genitalic characters.

Vein *2nd A* ending a short distance before the origin of *Rs*.

Male hypopygium (fig. 3) with the dististyle (fig. 3 A) terminal in position, relatively large, flattened, just below the apex extended into a pale flattened blade with a few additional smaller teeth at apex; a small finger-like lobe on outer edge of style near mid-length. The phallosome is very large and developed, appearing as very extensive pale plates across the genital chamber. *Ædeagus* very long and slender for a member of this genus, nearly straight. What seems to be the eighth tergite (*8t?*) is produced medially into a slender, curved, tail-like projection.

Hab. New South Wales.

Holotype, ♂, Sydney, August 27, 1922 (*E. W. Ferguson*).

The type is in the writer's collection, other specimens in Dr. Ferguson's material. The fly was sent to me by Dr. Ferguson as *T. gracilicornis*, Skuse, to which species it is most closely allied, differing, however, in the structure of the hypopygium. *M. Tonnoir* secured the true *gracilicornis* in New South Wales, and the genitalia conform closely to the description and figure given by Skuse.

Tasiocera attenuata, sp. n.

Male hypopygium with the dististyle subterminal in position; phallosome heavily chitinized, asymmetrical, the caudal margin resembling the head and beak of a bird.

Male.—Length about 2.4–3 mm.; wing 3.8–4.7 mm.

Female.—Length about 3.8 mm.; wing about 4.2 mm.

Antennæ (♂) elongate, approximately twice the length of the body; basal segment of flagellum very long, approximately equal to the combined head and thorax; segments beyond the first with short apical pedicels, the segments becoming shorter, with longer pedicels, toward the end of the organ; scapal segments paler than the flagellum. Antennæ (♀) short, not extending to the wing-root; outer flagellar segment oval. Head dark brown, the vertex between the eyes narrow.

Thorax brown, the pleura paler. Halteres elongate, brown. Legs with the coxæ pale brown, the remainder of the legs darker brown. Wings tinged with pale brown, somewhat darker brown adjoining the veins; veins darker brown; macrotrichiae brownish black. Venation: R_{2+3} nearly twice as long as the basal deflection of R_{4+5} , in alignment with R_s ; r on R_2 about three times its length beyond the origin; vein 2nd A extending to some distance beyond the origin of M , lying nearer to the level of the origin of R_s than to M .

Abdomen dark brown, the basal sternites paler; male hypopygium large, pale ochreous. Male hypopygium (fig. 4) with the basistyles unusually elongate, the apex slightly produced and constricted immediately beyond the point of insertion of the dististyle, this rounded apex provided with from two to four powerful spinous bristles, together with numerous other smaller ones that extend down the outer face of style. Dististyle (fig. 4 A) slender, narrowed distally, the margin irregularly serrulate. Phallosome asymmetrical, heavily chitinized, and blackened, the apex resembling the head and beak of a bird; disk of phallosome produced into a conspicuous chitinized spine. Ædeagus small, curved.

Hab. Tasmania.

Holotype, ♂, Strahan, west coast, February 5, 1923 (*A. Tonnoir*).

Allotopotype, ♀, February 1924 (*G. H. Hardy*); collector's number 406.

Paratopotypes, 1 ♂, 1 ♀, with type; 1 ♂, with the allotype; *paratypes*, 2 ♂♂, 1 ♀, Zeehan, west coast, February 7,

1923 (*A. Tonnoir*); 1 ♂, Cradle Valley, north-west, altitude 3500 feet, January 23, 1923 (*A. Tonnoir*); 1 ♂, Adventure Bay, south-east, December 28, 1922 (*A. Tonnoir*).

Prof. Hardy's material is in the collection of the University of Queensland. *Tasiocera attenuata* appears to be the commonest and most widely distributed species of the genus in Tasmania. It is easily recognized by the large pale hypopygium, the subterminal dististyle, and the massive asymmetrical phallosome.

Tasiocera angustistylus, sp. n.

Male hypopygium with dististyle subterminal, very slender; phallosome symmetrical.

Male.—Length about 2–2.2 mm.; wing 3.5 mm.

Female.—Length 1.8–1.9 mm.; wing 3 mm.

Antennæ moderately elongate, in the male with the basal flagellar segment elongate-cylindrical, with scattered erect delicate setæ; the succeeding segments are shorter, more enlarged basally, with short terminal pedicels that become longer toward the end of the organ. In the female the antennæ are a trifle longer than the combined head and thorax, the flagellar segments oval. Head dark brown.

Thorax dark brown, the pleura paler. Halteres elongate, brown. Legs with the coxæ and trochanters pale brown, the remainder of the legs darker brown. Wings (fig. 6) tinged with brown, the veins a little darker; macrotrichæ darker brown. Venation: R_{2+3} about equal to basal deflection of R_{4+5} ; vein 2nd *A* lies so close to the anal margin as to be indistinguishable in the material at hand.

Male hypopygium (fig. 5) with the basistyles unusually elongate, each produced caudad beyond the level of insertion of the dististyle into a stout obtuse lobe that is provided along mesal face with a series of powerful spinous setæ. Dististyle (fig. 5 A) subterminal in position, placed on mesal face of basistyle near mid-length, very slender, narrowed to the slightly curved, weakly toothed apex; ventral margin of style on distal half with two or three separated denticles. Phallosome symmetrical, complicated in structure. *Ædeagus* relatively small, curved.

Hab. New South Wales, Victoria, Tasmania.

Holotype, ♂, Eaglehawk Neck, Tasman Peninsula, Tasmania, November 22, 1922 (*A. Tonnoir*).

Allotype, ♀, Narara, New South Wales, November 3, 1921 (*A. Tonnoir*).

Paratopotype, 1 ♂, with type; *paratypes*, 2 ♂♂, with

allotype; 2 ♂♂, 1 ♀, Sassafras, Mt. Dandenong, Victoria, October 20-21, 1922 (*A. Tonnoir*).

CRYPTOLABIS, Osten-Sacken.

1859. *Cryptolabis*, Osten-Sacken, Proc. Acad. Nat. Sci. Philadelphia, p. 224 (1859).

This curious and isolated genus was erected by Osten-Sacken for the reception of *C. paradoxa*, Osten-Sacken, of North-eastern North America. Later, the genus was found to occur in Western North America and to be more abundantly represented in number of species in tropical and temperate South America. Up to the present time, *Cryptolabis* has been found only in the New World, where it is represented by six known species, four in the typical sub-genus, with abundant macrotrichæ in the distal cells of the wing (*bisinuata*, Doane, *paradoxa*, Osten-Sacken, *sepulchralis*, Alexander, and *tropicalis*, Alexander), and two in *Pro-cryptolabis*, Alexander, with the cells of the wing glabrous (*argentinensis*, Alexander, and *tenuicincta*, Alexander). It is therefore a matter of great interest and importance to add the genus to the Australasian fauna. M. Tonnoir discovered two species in New South Wales and Tasmania.

The nearest affinities of the genus seem to be with *Tasiocera*, Skuse, but there is a profound gap between the two genera. The structure of the male hypopygium is of a very peculiar nature. There is but a single dististyle, which is small and simple, placed at the apex of the basistyle. The phallosome is a stout, heavily chitinized, sinuous or convoluted tube extending far back into the body, in the extreme cases covering three abdominal segments. The caudal end terminates in an acute point, the cephalic end usually with two flattened rods. This structure is shortest in the genotype. In the Australian species there lies between the dististyles a median, heavily chitinized structure that seems to have no counterpart in the genotype and which appears to be a tergal structure, and is here tentatively designated as such. The ovipositor is fleshy, the valves being very small and blunt. The eggs are very large, relatively few in number, and with a heavy black chorion.

The two Australian species described at this time are closely allied, but readily separable by the structure of the male hypopygium. The species are most closely allied to the Paraguayan *C. sepulchralis*, Alexander.

Cryptolabis tonnoiri, sp. n.

General coloration of præscutum reddish brown, the

postnotum with a large obscure yellow mark on the suture; wings with macrotrichiæ extensively developed, including cell *M*; male hypopygium with the dististyle terminating in a slender straight spine; median tergal structure a broad black spine.

Male.—Length about 3.2 mm.; wing 4 mm.

Rostrum and palpi dark brown. Antennæ of moderate

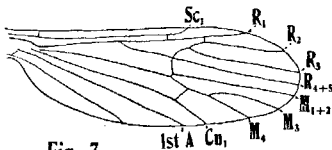


Fig. 7

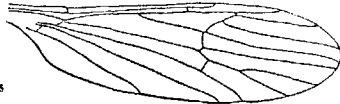


Fig. 8

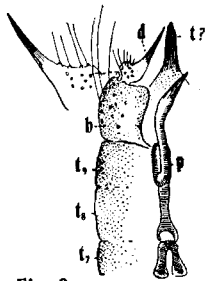


Fig. 9

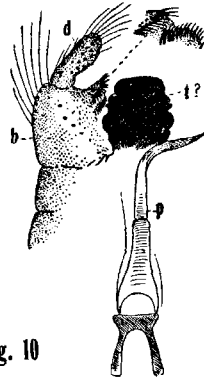


Fig. 10

Wing-venation and male genitalia of Australian species of *Cryptolabis*, Osten-Sacken.

Explanation of symbols:—*Hypopygial*. *b*=basistyle; *d*=dististyle; *p*=phallosome; *t?*=doubtful tergal structure. *Venational*. *Cu*=cubitus; *1st A*=1st Anal; *M*=Media; *R*=Radius; *Sc*=Subcosta.

Fig. 7.—Wing of *C. tonnoiri*, sp. n.

Fig. 8.—Wing of hypopygium of *C. tasmanica*, sp. n.

Fig. 9.—Male hypopygium of *C. tonnoiri*, sp. n.

Fig. 10.—Male hypopygium of *C. tasmanica*, sp. n.

length, if bent backward extending about to the wing-root, dark brown throughout; second scapal segment enlarged; flagellar segments oval, the more basal ones shorter, the segments with relatively long dark verticils. Head light brown.

Pronotum light yellow, the broad lateral pretergites concolorous. Mesonotal præscutum light reddish brown, the

humeral region brighter, darker antero-medially; scutum dark brown; scutellum more testaceous medially; postnotum dark with a conspicuous yellow mark occupying the anterolateral portion of the mediotergite and the anterior portion of the pleurotergite. Pleura dark brown, the dorso-pleural membrane paler. Halteres pale yellow, the knobs large, the distal half of the stem infuscated. Legs with the coxæ yellowish testaceous, the fore coxæ darker; trochanters yellow; femora and tibiæ yellow, their tips narrowly infuscated; tarsi yellowish testaceous, the segments gradually passing into brown; segments of legs with long erect setæ. Wings (fig. 7) with a faint brownish tinge, the stigmal region vaguely darkened; anal angle infuscated; a vague ill-defined clouding along the cord; veins brown, darker brown along the cord. Numerous macrotrichia in all the cells of the wing, except *Sc* and the basal portions of *R*, 1st *R*₁, and *M*. Venation: *Sc*₁ ending opposite the fork of *R*₂₊₃, *Sc*₂ opposite the fork of *R*_s, the latter in alignment with *R*₄₊₅; *m-cu* near mid-length of *M*₃₊₄, the petiole of cell *M*₃ a little longer than *m-cu*.

Abdomen brown, including the hypopygium. Male hypopygium (fig. 9) with the basistyles stout, their bases nearly glabrous, the outer lateral portions with setæ that become long and conspicuous near the outer lateral angles. Dististyle (*d*) fleshy at base, the apex produced into a slender, straight, black spine, the tip acute. From between the styli juts a powerful median spine, whose homologies cannot be stated, but which may represent the tergite (*t*?). The phallosome (*p*) is a stout, sinuous, or slightly convoluted blackened tube that extends back into the abdomen to the seventh segment, the apex terminating into a long acute spine, the base with two bars that are broadly expanded at tips, the notch between very deep and narrowly U-shaped.

Hab. New South Wales.

Holotype, ♂, Narara, November 3, 1921 (*A. Tonnoir*).

This interesting fly is named in honour of the collector, Dr. A. L. Tonnoir.

Cryptolabis tasmanica, sp. n.

General coloration of præscutum dark brown, including the postnotum; sternopleurite with an obscure yellow marking; wings with relatively sparse macrotrichia, cell *M* and bases of cells *R*₁, *R*₅, and *Cu* without them; male hypopygium with the dististyles entirely fleshy; median

tergal structure massive, subquadrate, the caudal margin truncate and microscopically serrulate.

Male.—Length 2·8–3 mm.; wing 4·2 mm.

Female.—Length 3·8–4·2 mm.; wing 5–6 mm.

Rostrum and palpi brown. Antennæ short, dark brown throughout, if bent backward not attaining the wing-root; flagellar segments oval. Head light brown.

Pronotum light yellow, the median area a little infuscated. Lateral pretergites clear light yellow. Mesonotal præscutum with three approximated or confluent dark brown stripes, the humeral region and lateral margins rather broadly and conspicuously paler brown; scutal lobes dark brown, paler behind, the median area pale; scutellum yellowish testaceous; postnotum dark brown. Thoracic dorsum with rather abundant short yellow setæ. Pleura dark brown, sparsely grey pruinose; sternopleurite with a large pale dorsal marking; dorso-pleural membrane pale. Halteres pale. Legs with the coxæ dark brown, the middle coxæ paler; trochanters obscure yellow; femora yellowish testaceous, the tips infuscated, more extensively so on the fore femora; tibiæ brownish testaceous, the tips narrowly darkened; tarsi passing into brown; setæ of legs less conspicuous than in *C. tonnoiri*. Wings (fig. 8) with a faint darker tinge, the anal angle still more infuscated; veins light brown. Macrotrichia not so extensive as in *C. tonnoiri*, cell *M* and the broad bases of cells *R*, *R*₅, *M*₂, *M*₄, *Cu*, and 1st *A* being glabrous. Venation: *m-cu* less than its length beyond the fork of *M*.

Abdomen dark brown, the hypopygium and ovipositor paler. Male hypopygium (fig. 10) very different in structure from *C. tonnoiri*. Dististyle (*d*) entirely fleshy, not at all produced into a spine, provided with conspicuous setæ that are larger and more striking at the apex. Basistyle (*b*) very broad, the mesal apical angle with two dense groups of setæ. The spinous structure in *tonnoiri* that was suggested as possibly being tergal is here represented by a massive, roughly quadrate structure (*t*?), the caudal margin truncated and microscopically serrulate. The phallosome (*p*) is less elongate, more bulbous at base, the apex not conspicuously blackened, the basal bars slender and widely divergent.

Hab. Tasmania.

Holotype, ♂, Burnie, January 31, 1923 (*A. Tonnoir*).

Allotype, ♀, Geeveston, December 7, 1922 (*A. Tonnoir*).

Paratopotypes, 1 ♂, 1 ♀; *paratype*, ♀, Wilmot, January 8, 1923 (*A. Tonnoir*).

Amphineurus (Amphineurus) flavoscutellatus, sp. n.

General coloration greyish brown, the præscutum with the lateral margins broadly whitish, narrowly margined internally with dark brown; scutellum yellow; pleura whitish with two conspicuous dark brown stripes; antennæ yellow; tips of femora broadly yellow.

Male.—Length 3·5–3·6 mm.; wing 5–5·2 mm.

Female.—Length 4·3 mm.; wing 5·8 mm.

Rostrum and palpi dark brown. Antennæ short, clear yellow, the terminal segments of the flagellum somewhat darker; flagellar segments oval with black verticils. Head greyish brown, the orbits narrowly clearer grey.

Pronotum pale, the lateral margins dark brown. Mesonotal præscutum reddish brown, sparsely pruinose behind; humeral region and lateral margins broadly whitish, narrowly margined internally by a brownish-black line; scutum light brown, the broad median area more greyish, the posterior callosities of the scutal lobes in some cases conspicuously sulphur-yellow; scutellum yellow; postnotum dark brown, a little more reddish behind. Pleura pale yellow or white, with two conspicuous dark brown longitudinal stripes, one dorsal, including the propleura and the dorsal mesopleurites, passing above the root of the halteres, the second stripe including the sternopleurite and the meron, the pale stripe between broad, silvery grey. Halteres brown, the base of the stem ochreous, the knobs conspicuously light yellow. Legs with the coxæ light brownish testaceous, the bases narrowly infuscated; trochanters light yellow; femora pale with dark setæ, the tips broadly and conspicuously light yellow; tibiæ and tarsi dark brown. Wings with a brown tinge, the costa and stigmal region more yellowish, the latter bordered posteriorly with darker brown; veins *Cu*₁ and *2nd A* more clouded with dusky; vague paler areas beyond the cord in the medial field and in the ends of veins *Cu* and *1st A*; veins dark brown, the macrotrichæ still darker. In fresh unrubbed specimens the wing is variegated with yellow and black macrotrichæ, the ground-colour being yellowish with black patches, especially evident in the costal region and following vein *2nd A*; the cells beyond the cord have small nebulous darker areas. Venation: *Rs* only gently arcuated at origin; *m-cu* immediately before the fork of *M*.

Abdomen reddish brown above, the lateral margins of the tergites conspicuously velvety-black; sternites ochreous yellow; hypopygium brownish testaceous. Male hypopygium with the ninth tergite narrowed apically, the caudal

margin with a V-shaped notch, the lobes formed rounded and set with microscopic spicules. Ventral lobe of basistyle very long and slender, extending caudad beyond the other elements of the hypopygium. Two of the three dististyles are long needle-like rods, one straight, the other longer, curved to the narrowly flattened apex. The third dististyle is a short flattened blade. Phallosome very flattened.

Hab. Victoria.

Holotype, ♂, Ferntree Gully, Mt. Dandenong, February 22, 1924 (G. F. Hill).

Allotopotype, ♀.

Paratopotypes, 2 ♂ ♂.

Types in the collection of the National Museum, Victoria.

Erioptera amabilis, sp. n.

Anterior mesonotum ochreous-yellow, the posterior sclerites dark brown; pleura with a conspicuous brown longitudinal stripe; femora extensively blackened; wings with a heavy brown pattern that is in part cross-banded; male hypopygium with the ninth tergite broad, the margin divided into three regions, demarked by two powerful spinous setæ.

Male.—Length about 3.5 mm.; wing 5 mm.

Rostrum and palpi dark brown. Antennæ pale yellowish brown, of moderate length, the flagellar segments fusiform, each with a central verticil of erect silvery hairs. Head pale buffy, the vertex between the eyes of moderate width.

Dorsum of pronotum pale brown. Mesonotal præscutum and scutum bright ochreous-yellow, unmarked; scutellum brown with a median pale line; postnotal mediotergite dark brown, paler posteriorly. Pleura traversed by a broad dorso-longitudinal dark brown stripe that extends from the propleura, broadening behind to include the entire postnotal pleurotergite; ventral pleurites and sternites pale yellowish testaceous, the meron a little infuscated. Halteres black, the extreme base of the stem pale yellow. Legs with the coxæ and trochanters pale yellowish testaceous; femora black, the bases extensively pale, narrowest on fore legs where less than the basal third is included, broadest on the posterior legs where about the basal half is pale; tibiæ brownish yellow, the tips darker, most conspicuously and extensively so on the fore tibia; mid-tibiæ with a sub-basal area of black hairs; posterior tibiæ with only the extreme tip narrowly infuscated; tarsi yellow, the terminal two segments dark brown. Wings subhyaline, the base and costal region and a seam between the branches of *Cu* pale yellow; wing-membrane conspicuously

and extensively clouded with brown, this appearing as irregular fasciæ, as follows: at arculus; a Y-shaped cross-band includes the cord as the stem and distal arm, the proximal arm at or near the outer ends of cell *R* and 1st *R*₁; a narrow but complete fascia crosses the wing at about mid-distance between the cord and wing-tip; small brown marginal spots at ends of all longitudinal veins, larger on the cubital and anal veins; a small brown cloud at fork of *M*₃₊₄ and another beyond mid-length of vein 2nd *A*; the general effect produced is thus of a relatively heavy cross-banded pattern; veins pale, darker in the infuscated areas; trichiæ long and black. Venation: *R*₂₊₃ short; *M*₃₊₄ about equal to *m-cu*; vein 2nd *A* moderately sinuous, about intermediate between the conditions found in *Erioptera* and *Ilisia*.

Abdomen uniformly dark brown, including the hypopygium, the styli a little paler. Male hypopygium with the ninth tergite very broad, the caudal margin divided into three regions, separated from one another by a powerful, gently curved, marginal seta, the lateral regions forming broad diverging lobes, the broader median area low and indistinctly trilobed. Basistyle produced into a long pale ventral lobe and a shorter darkened dorsal lobe. Dististyles two, the more ventral one pale, deeply divided to appear somewhat like a tuning-fork, the second distinctly blackened. Phallosome asymmetrical, the apparent gonapophysis single, narrowed into a slender, gently curved, sparsely setiferous apical horn.

Hab. New South Wales.

Holotype, ♂, Mt. Wilson, Blue Mts., November 19, 1921 (*A. Tonnoir*).

Erioptera delectabilis, sp. n.

Male.—Length about 3.5 mm.; wing 5 mm.

Generally similar to *E. amabilis*, sp. n., differing in the coloration of the wings and legs and in the details of structure of the male hypopygium.

Legs with the dark colour much more restricted, the femoral tips being rather narrowly dark brown, this colour including less than the apical quarter, the amount a trifle greater on the fore femora; bases of the femora, especially the middle pair, with dusky setæ to produce a faint infuscation on more than the basal half; fore tibæ rather extensively infuscated, this including about the distal fourth; tarsi pale, the terminal two segments abruptly

blackened; fore legs elongate, the tibiæ a trifle longer than the femora, the tarsi much longer than the tibiæ; basitarsus about one-third longer than the remainder of tarsi taken together; middle tarsi short, the basitarsus shorter than the remainder of the tarsi; posterior tarsi shorter than the tibiæ. Wings with the pattern much more restricted than in *amabilis*, the brown pattern being confined to spots and narrow broken cross-bands, the latter continuous only along the cord. Male hypopygium much as in *amabilis*, the tergite very distinct, broad, large; the median area with a small obtuse triangular lobe, the caudal margin of tergite without setæ.

Hab. Victoria.

Holotype, ♂, Sassafras, Mt. Dandenong, October 19, 1922 (*A. Tonnoir*).

Paratopotypes, 2 ♂♂, October 21, 1922.

Erioptera (Erioptera) funesta, sp. n.

General coloration dark brown, including the head and rostrum; præscutum with three delicate brown lines on anterior half, the lateral margins of the sclerite paler; pleura dark, with a paler stripe on the sternopleurite; knobs of halteres dark; wings relatively narrow; vein 2nd *A* strongly sinuous, especially apically.

Female.—Length about 4 mm.; wing 5 mm.

Rostrum and palpi dark brown. Antennal scape dark brown; flagellum broken. Head dark brown.

Pronotum dark, the posterior notum slightly obscure brownish yellow. Mesonotal præscutum dark brown, the lateral margin fading into brownish yellow; viewed dorsally there is a distinct darker brown line on either side of the broad median area, this line extending caudad to the level of pseudosutural foveæ; a fainter and even narrower median brown line passes between the approximated tuberculate pits; scutal lobes concolorous with the præscutum, the median area pale; scutellum dark brown, shiny; postnotum dark brown, grey pruinose. Pleura dark brownish grey with a broad paler longitudinal stripe on the dorsal portion of the sternopleurite; dorso-pleural membrane dark. Halteres pale, the knobs infuscated. Legs with the coxæ and trochanters brownish testaceous; remainder of legs broken. Wings relatively narrow, especially the basal half, with a pale brown tinge; veins darker brown; macrotrichiæ short, still darker. Venation: R_{2+3} long, approximately three times the basal deflection of R_{4+5} ; *m-cu* a short distance

before the fork of *M*; distal section of *Cu*₁ nearly straight, the tips only vaguely deflected; apical sinuation of vein 2nd *A* longer than in *E. simulans*, n. n.; all apical forks deep.

Abdomen dark brown, with yellow setæ. Ovipositor with the valves horn-coloured; tergal valves stout, relatively broad, strongly incurved to the acute tips.

Hab. Tasmania.

Holotype, ♀, Eaglehawk Neck, Tasman Peninsula, November 22, 1922 (*A. Tonnoir*).

Erioptera (Erioptera) simulans, n. n.

New name for *Erioptera ochracea*, Skuse, Proc. Linn. Soc. New South Wales, (2) iv. p. 819 (1889), nec *E. ochracea*, Meigen, Syst. Besch. i. p. 114 (1818).

I am greatly indebted to Dr. Ferguson for a male of this species (Sydney, December 16, 1923, Ferguson coll.). *M. Tonnoir* secured a female at Narara, November 3, 1921.

The male hypopygium is very different in structure from that of *E. lucerna*, sp. n. Dististyles terminal in position, the outer with conspicuous black microscopic serrulations and spines before the acute apex; inner style a conspicuous flattened blade, the apex bent at a right angle into a long slender point. Outer gonapophyses appearing as suboval pale blades, each with a carina back from the apex.

Erioptera (Erioptera) lucerna, sp. n.

General coloration ochreous, including the rostrum; head dark brown, the vertical tubercle yellowish; mesonotal præscutum with three brown stripes; knobs of halteres infuscated; male hypopygium with the dististyles sub-terminal in position.

Male.—Length about 4 mm.; wing about 5 mm.

Rostrum ochreous; palpi dark brown. Antennæ with the scapal segments somewhat enlarged, ochreous; flagellar segments dark brown; flagellum broken beyond the base. Head dark brown, the vertical tubercle yellowish.

Pronotum light brown, the lateral pretergites pale. Mesonotal præscutum ochreous, with three distinct brown stripes, the median stripe broader, not reaching the suture; lateral stripes short, crossing the suture on to the scutal lobes; scutellum brownish testaceous, paler caudally; post-notum pale, the sides of the medio-tergite somewhat darkened, pruinose. Pleura largely ochreous. Halteres

pale, the knobs infuscated. Legs with the coxæ and trochanters yellowish testaceous; remainder of legs brownish yellow, the terminal tarsal segments passing into brown. Wings with a brownish-yellow tinge, veins and macrotrichiæ dark brown, the veins with long conspicuous macrotrichiæ. Venation: r on R_2 about its own length beyond origin; $m-cu$ some distance before the fork of M , this about equal to $r-m$; vein Cu_1 with the distal section approximately straight; vein *2nd A* strongly sinuous, especially the distal third.

Abdomen brown, including the hypopygium. Male hypopygium with the basistyles produced considerably beyond the level of insertion of the dististyles into an elongate, conical, setiferous lobe. Mesal face of basistyle with two conspicuous short spines from enlarged bases, the more basal spine considerably larger than the distal one. Dististyles two, the outer one pale, dilated at apex into a triangular head that is slightly split, the tip obtuse. Inner dististyle lying close to the other, a pale, slender, simple rod. Gonapophyses very large, chitinized, arcuated, slightly dilated into narrow blades before the acute tips. Inner gonapophysis a deeply bifurcated pale plate.

Hab. Queensland.

Holotype, ♂, Burpengary, July 1919.

Gonomyia (Lipophleps) fuscohalterata, sp. n.

Rostrum black; antennæ black throughout; head brown and yellow; scutellum yellowish brown; thoracic pleura brown, with a broad whitish-yellow longitudinal stripe; halteres long, dark brown, the knobs a trifle paler; wings with a pale brown tinge, the stigma scarcely darker; *Sc* long; abdominal tergites uniformly dark brown.

Female.—Length about 4.5 mm.; wing 5 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments elongate-oval, the basal segments longer and thicker, the terminal segments very slender; verticils of moderate length only. Head brown, the anterior vertex and the occiput conspicuously light yellow, separated by a dusky spot on the disk of the vertex.

Pronotum and lateral pretergites conspicuously light yellow, the latter vaguely darkened beyond the pseudosutural foveæ, the tegular region similarly light yellow. Mesonotum dark brown, the pseudosutural foveæ shiny brownish black, the extreme lateral margins of the præscutum a little paler; scutum dark brown, the posterior lateral angles of the lobes

obscure yellow; scutellum yellowish brown; postnotum dark brown. Pleura dark brown with a broad pale yellow longitudinal stripe extending from behind the fore coxæ to the base of the abdomen, passing beneath the base of the halteres, the stripe slightly whitish pruinose. Halteres elongate, dark brown, the knobs with a vague yellow tinge. Legs with the coxæ and trochanters brown; femora light brown; tibiæ brown, the tarsi conspicuously pale yellowish brown, only the two terminal segments dark brown. Wings with a pale brown tinge, the stigma scarcely darker; veins darker brown. Venation: Sc_1 ending about opposite one-third the length of R_s , Sc_2 at about one-third of the distance beyond the origin of R_s ; cell R_3 strongly widened outwardly; cell 1st M_2 strongly narrowed at base; $m-cu$ shortly before the fork of M .

Abdominal tergites dark brown, the sternites somewhat paler brown. Ovipositor with the valves long and slender, the tergal valves gently upcurved; basal shield and bases of valves darkened.

Hab. New South Wales.

Holotype, ♀, Mt. Wilson, Blue Mts., November 19, 1921 (*A. Tonnoir*).

Rhabdomastix minima, sp. n.

General coloration dark brown; legs pale brownish testaceous, including the tarsi; wings with a pale brown tinge; cell 1st M_2 narrowed, the outer end pointed, m being much longer than the outer deflection of M_3 ; macrotrichiæ of veins relatively sparse.

Female.—Length about 2.6 mm.; wing 3 mm.

Rostrum and palpi dark brown. Antennæ moderately elongate, if bent backward extending to the wing-root or just beyond, dark brown, the flagellar segments elongate-oval. Head brown.

Pronotum and mesonotum dark brown. Pleura colorous, the pleurotergite paler. Halteres broken beyond the dark bases. Legs with the coxæ and trochanters yellowish testaceous, the fore coxæ darker; remainder of legs pale brownish testaceous, only the terminal tarsal segments darker; the longer posterior legs are more infuscated, including the tarsi. Wings with a pale brown tinge, the veins darker brown; stigma oval, darker brown than the ground-colour. Macrotrichiæ relatively sparse, none on R_s , R_{2+3} , R_2 , or R_3 ; a scattered series on R_{4+5} about to the origin; others on outer half of distal sections of M_{1+2} and

M_3 ; no trichiæ on M , M_4 , Cu , or the anal veins. Venation: Sc of moderate length, Sc_1 ending just before mid-length of Rs ; cell 1st M_2 relatively long and narrow, the outer end pointed, m being much longer than the outer deflection of M_3 ; $m-cu$ from one-third to one-half its length beyond the fork of M ; vein 2nd A gently sinuous.

Abdomen dark brown, the ovipositor brownish horn-colour, the bases of the valves blackened; tergal valves of ovipositor nearly straight, deep, the tips acute.

Hab. New South Wales.

Holotype, ♀, Waterfall, November 1921 (*A. Tonnoir*).

Rhabdomastix minima is much smaller than the genotype, *R. osten-sackeni*, Skuse, differing, moreover, in the coloration of the tarsal segments, the wing-venation, and the number and arrangement of the macrotrichiæ on the wing-veins. The fly that was described by the writer as *Rhabdomastix generosa* (Records South Australian Museum, ii. p. 238 (1922)), based on a legless female, has since been received in small numbers and proves to be more correctly referable to *Ischnothrix*, Bigot.

Ceratocheilus tasmaniensis, sp. n.

Mesonotal præscutum reddish brown, the lateral margins broadly light grey, the disk with three conspicuous brown stripes that do not tend to become confluent; halteres yellow; wings with a pale brown tinge; vein R_{2+3} with about fifteen macrotrichiæ; vein M_4 with a central group of about six macrotrichiæ; abdomen bicolorous.

Male.—Length (excluding rostrum) 6.5 mm.; wing 6.3 mm.; rostrum 6 mm.

Rostrum only a little shorter than the body, brownish black throughout. Antennæ brownish black, the scapal segments paler. Head grey, darker on the vertex, the anterior vertex and orbits paler grey; corniculus depressed. Vertex between the eyes about equal in diameter to the second scapal segment.

Mesonotal præscutum reddish brown, the lateral margins broadly light grey, the disk with three conspicuous dark brown stripes, the median stripe broader; the stripes all widely separated, the lateral stripes being straight and not at all incurved toward the median line; scutal lobes dark brown, the median area grey in front, infuscated behind; scutellum brown, broadly reddish brown behind, the surface sparsely pruinose; postnotum dark, the margins of the mediotergite more reddish. Pleura dark brown with a

narrow pale longitudinal stripe occupying the dorsal portion of the sternopleurite, passing caudad to beneath the halteres. Halteres yellow, the knobs scarcely darkened. Legs with the fore and middle coxæ more or less infuscated basally, the posterior coxæ more uniformly testaceous; trochanters yellowish testaceous; femora brown, paler basally; tibiæ and tarsi brownish black. Wings not so strongly tinged with brown as in *C. australasiæ*, Alex., the cord and outer end of cell 1st M_2 vaguely but broadly seamed with darker. Macrotrichiæ: vein R_{2+3} with about fifteen (in *australasiæ* about five); M_4 with a central group of about six (*australasiæ* with more than twenty-five setæ, some paired, and distributed the entire length of vein). Venation: Sc_2 some distance before origin of R_s , Sc_1 a short distance beyond this origin.

Abdominal tergites distinctly bicolorous, the caudal margins broadly, the lateral margins more narrowly infuscated, the disk obscure brownish yellow; seventh tergite uniformly infuscated; eighth and ninth tergites obscure brownish yellow, the hypopygium dark brown; sternites almost like tergites.

Hab. Tasmania.

Holotype, ♂, Strahan, February 5, 1923 (*A. Tonnoir*).

The only regional species with which this fly may be confused is *C. australasiæ*, Alexander (Lord Howe Island). The two species are separable by the diagnostic characters given above.

Orimarga joana, sp. n.

General coloration yellowish ochreous, the postnotum and pleura dark brown, the latter with two longitudinal silvery stripes; legs yellow, the tips of the femora and tibiæ abruptly blackened; wings yellow with a dusky wash extending the whole length of the wing at near mid-width; cross-veins and deflections of veins with conspicuous dark brown seams; last section of M , M_{3+4} , and M_4 all approximately equal in length.

Female.—Length about 7.5 mm.; wing 6 mm.

Rostrum relatively elongate, a little shorter than the head, ochreous; palpi brownish black. Antennæ with basal segment of scape pale brown, the second segment and basal half of flagellum dark brown, the distal half of the flagellum fading into yellow; flagellar segments oval. Head brownish yellow.

Mesonotal præscutum light yellowish ochreous, the sub-lateral region infuscated, the lateral margin narrowly paler; scutal lobes and scutellum ochreous, the central region weakly infuscated; postnotum dark brown. Pleura dark brown with two conspicuous longitudinal silvery stripes, the shorter one dorsal in position, extending to just beneath the tegulæ; the longer ventral stripe extends from the fore coxæ to the base of abdomen, passing beneath the halteres; the dark stripe separating these silvery areas about as wide as the dorsal stripe. Halteres pale yellow, the knobs vaguely darkened. Legs with the coxæ yellow, the bases broadly dark brown; trochanters yellow, remainder of legs pale whitish yellow, the tips of the femora broadly and abruptly blackened; extreme base of tibia black, the tips abruptly blackened; tarsi yellow, the terminal segments passing into brown. Wings with a light yellow tinge, brighter at the base and along the costal margin, with conspicuous brown spots, grey clouds, and a longitudinal dusky wash at about mid-width of the wing, extending from the anal angle to the wing-tip; the brown markings include the arculus; origin of R_s (largest), Sc_2 , a large oval stigmal area at r , and smaller clouds at tip of R_{2+3} and on the vertical basal deflection of R_{4+5} ; somewhat paler clouds on $r-m$, $m-cu$, the fork of M and of M_{3+4} ; tiny darkened areas, appearing chiefly as discolorations of the vein-tips, on all the marginal longitudinal veins. Venation: Sc_1 ending shortly before mid-length of the long arcuated sector, Sc_2 not far from its tip; r at tip of R_1 , placed only about its own length beyond the fork of R_s ; basal section of R_{4+5} angulated and weakly spurred at origin; $r-m$ placed near mid-length of the long distal section of R_{4+5} and far beyond the other transverse elements of the wing; $m-cu$ about opposite Sc_2 , oblique; the last section of M , M_{3+4} , and M_4 all approximately equal in length.

Abdomen elongate, as in the group; tergites reddish yellow, the caudal margins of the segments narrowly infuscated; sternites more infuscated, especially laterally. Ovipositor with the valves relatively short, with a flattened circular expansion on ventral side just before the tip; the details of this cannot be more closely discerned in the unique type.

Hab. New South Wales.

Holotype, ♀, Wentworth Falls, Blue Mts., November 18, 1921 (*A. Tonnoir*).

This charming fly is dedicated to Miss Joan Edwards, eldest daughter of Fred W. Edwards. The presence of a

spur at the angulated bend of R_{4+5} near the normal position of $r-m$ in the genus might indicate that this vein has atrophied in the species, and the outlying element herein treated as being $r-m$ may be a supernumerary cross-vein.

TONNOIROMYIA, gen. nov.

Rostrum short; palpi 4-segmented, the terminal segment a little longer and more slender than the penultimate. Antennæ 15-segmented in the male, elongate, if bent backward extending to mid-length of the abdomen; flagellar segments elongate-cylindrical, the verticils very small, scarcely longer than the dense erect pubescence that covers the flagellar segments; flagellar segments gradually narrowed and shortened outwardly. In the female the antennæ are shorter and apparently 16-segmented, there being an additional small terminal segment that seems to be distinct from the penultimate; basal flagellar segment nearly as long as the two following taken together, the segments gradually decreasing in length to the tip (figs. 12, 13).

Pronotum very small, crowded. Pleura with the meron very small. Legs long and slender; tibiæ without spurs; claws (fig. 14) elongate, with a pale microscopic comb of about five teeth on basal half; empodia distinct. Wings (fig. 11) with Sc elongate, Sc_1 ending a short distance beyond the fork of Rs , Sc_2 close to its tip; r at tip of R_1 , placed about three times its own length beyond the fork of Rs ; basal section of R_{4+5} elongate, about equal to the penultimate section of R_1 ; $r-m$ more than twice its length beyond the fork of M ; cell 1st M_2 open by atrophy of m ; cell M_3 about as long as its petiole; $m-cu$ variable in position, before, at, or some distance before the fork of M ; vein Cu_2 very faint and ill-defined, becoming obliterated some distance before $m-cu$; vein 2nd A arcuated, connected with 1st A only near the base of the large prearcular cell.

Male hypopygium (fig. 15) with the ninth tergite (t_9) broadly transverse, the caudal margin with a deep U-shaped median notch, the lateral lobes thus formed broadly truncate. Basistyles (b) relatively small, the dorsal lateral angle produced caudad into a clavate fleshy lobe, the surface setiferous, the setæ large and conspicuous at apex, the longest equalling the lobe itself. Ventro-mesal lobe of basistyle slightly produced. Dististyles borne at base of dorsal fleshy lobe (d), two in number but closely united by membrane at base; outer arm a blackened curved spine, bearing a smaller

appressed spine just beyond mid-length on the inner or concave face; inner arm subequal in length, paler brown, the basal half expanded and bearing a group of spinous setæ, the apex a flattened, gently curved rod, the tip obtuse, the surface with abundant microscopic punctures. Gonapophyses (fig. 16, *g*) very powerfully developed, arising close to the basistyle, thence bent mesad, the tips hanging pendant

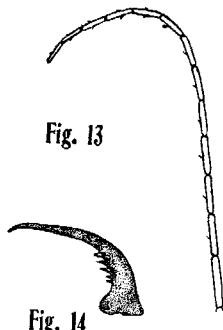
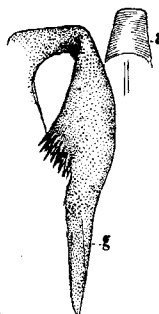
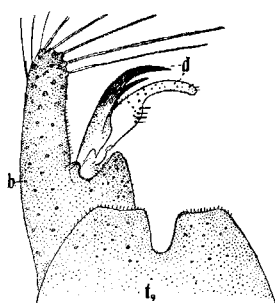
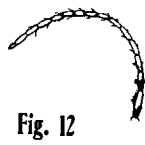
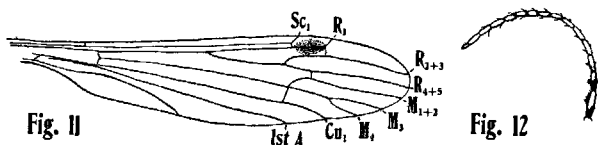


Fig. 15

Fig. 16

Fig. 13

Fig. 14

Male genitalia, wing-venation, and other structural details of *Tonnoiromyia*, gen. nov.

Explanation of symbols:—*Hypopygial*. *a*=ædeagus; *b*=basistyle; *d*=dististyle; *g*=gonapophysis; *t*=tergite. *Venational*. *Cu*=Cubitus; *1st A*=1st Anal; *M*=Media; *R*=Radius; *Sc*=Subcosta.

Fig. 11.—Wing.

Fig. 12.—Antennal flagellum, ♀.

Fig. 13.—Antennal flagellum, ♂.

Fig. 14.—Claw, ♀.

Fig. 15.—Hypopygium, ♂.

Fig. 16.—Gonapophysis and ædeagus, detached.

as powerful blades, near mid-length expanded, the lateral margin with an extensive group of spines, the apex produced into a long acute point. In a position of rest these spines are directed ventrad and cephalad. Ovipositor with the tergal valves long, slender, the bases straight, the tips suddenly upcurved, acute.

Genotype, *Tonnoiromyia tasmaniensis*, sp. n. (Australian Subregion).

The new genus *Tonnoiromyia* is named in honour of my friend and colleague, Dr. André L. Tonnoir, whose labours in Australia and New Zealand have added vastly to our knowledge of the Diptera of Australasia. I would place this annectant form in the tribe Limoniini, probably as a separate subtribe, the Tonnoiromyaria, pointing toward the Hexatomiini. The elongate antennæ of the male is an almost unknown feature in the Limoniini, but the other features point strongly toward this tribe. The structure of the male hypopygium, especially the gonapophyses, is very remarkable. In some respects the genus suggests *Amphilimnobia*, Alexander (Ethiopian Region), but is not closely allied.

Tonnoiromyia tasmaniensis, sp. n.

General coloration shiny black, the thoracic pleura pruinose; subterminal tarsal segments cream-coloured; wings with a dusky tinge, the stigma oval, dark brown.

Male.—Length 6–6.5 mm.; wing 7.8 mm.; antenna 5 mm.

Female.—Length 6.5–7 mm.; wing 7.5 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments of male with a dense erect microscopic black pubescence and slightly longer black verticils, the longest about one-fourth the length of the segment. Head grey, the centre of the vertex extensively blackened. Eyes of male widely separated, protuberant, with small ommatidia.

Pronotum black. Mesonotum shiny black, only sparsely pruinose, the scutellum a little more so. Præscutal setæ lacking. Pleura with a conspicuous microscopic grey pruinosity on the ventral pleurites and the anterior half of the pleurotergite, this pruinose area further interspersed with small appressed yellow setæ. Halteres with the base and knobs dark brown, the central portion of stem paler. Legs with the coxæ light brown, the fore coxæ darker; trochanters dark; femora and tibiæ black, the bases of former restrictedly paler; apices of basitarsi and tarsal segments 2 and 3 pale brownish yellow, with pale setæ, giving a creamy hue to the tarsi; terminal two tarsal segments brownish black. Wings with a strong dusky tinge; stigma oval, conspicuously dark brown; veins black with small macrotrichiæ. Venation (fig. 11): as described under the genus; in some cases R_{2+3} is weakly spurred near origin;

r is angularly bent near mid-length and may be a composite vein, the cephalic portion being true r , the caudal portion the base of R_2 with the distal section entirely atrophied; vein M_3 is more nearly in alignment with M_{3+4} than is M_4 .

Abdomen brownish black, the median region of the sternites paler. Male hypopygium as described under the generic diagnosis. Ovipositor with the basal shield and bases of sternal valves black, the remainder of the valves horn-coloured.

Hab. Tasmania.

Holotype, ♂, Eaglehawk Neck, Tasman Peninsula, November 23, 1922 (*A. Tonnoir*).

Allotype, ♀, Burnie, October 27, 1922 (*A. Tonnoir*).

Paratopotype, ♂; *paratypes*, 1 ♂, 1 ♀, with the allotype, October 25–27, 1922; 2 ♀ ♀, Wilmot, January 8, 1923 (*A. Tonnoir*); 1 ♂, National Park, December 15, 1922 (*A. Tonnoir*).

XX.—*The Spedan Lewis South American Exploration.*—

IV. *List of Mammals obtained by Sr. Budin on the Boundary between Jujuy and Bolivia.* By OLDFIELD THOMAS, F.R.S.

SEÑOR BUDIN'S next collecting-trip was to the highland country just on the northern edge of Jujuy, and across the boundary in Southern Bolivia, where he obtained about 120 examples, belonging to 15 species. Owing, however, to this being in the near neighbourhood of localities where he had previously collected, the species are in all cases referable to animals already known, thus showing how complete his work has been.

Quite a large proportion of the species now recorded were obtained in Sr. Budin's first collection of all—that at Maimara, near Humahuaca, Jujuy,—of which I gave an account in 1913, while others were found by him during his later Jujuy explorations. Our knowledge of the Jujuy mammalian fauna is, in fact, almost wholly due to him. The present list shows how the same fauna extends northwards, and is of value as helping to map the exact ranges of the various species.

The localities now referred to are, in Northern Jujuy, *Santa Catalina*, 4500 m., about 22° S., 66° W., and, in Southern Bolivia, *Lipez*, 4500 m., about 60 km. to the west