

DERBIDAE (FULGOROIDEA) FROM THE MASCARENES

By J. R. WILLIAMS*

Derbidae hitherto recorded from the Mascarene Islands are *Muirileguatia fernandesi* (Muir), *Paraphenice insularis* Muir and *P. lopezi* Muir from Rodrigues (Muir, 1925), and an unidentified *Phenice* sp. from Mauritius (Mamet, 1957)**. Nine new species are described here, four from Réunion and five from Mauritius.

All type specimens have been deposited in the British Museum (Nat. Hist.).

Genus *Muirileguatia* Metcalf

Leguatia Muir (nec Schlegel, 1858), 1925, *Trans. Ent. Soc. Lond.* 1924: 469 (Orthotype: *Leguatia fernandesi* Muir, *op. cit.*).

Muirileguatia Metcalf, 1945, *Gen. Catal. Hemipt.*, Fasc. IV, Pt 4: 137.

M. fernandesi, previously the only known species of this genus is from Rodrigues Island. The generic definition needs little amendment. The width of the head, excluding the subantennal processes, is much less than that of the thorax. The vertex is wider than long in midline but the overall length about equals the width and the lateral margins are either more or less straight and converging slightly towards the apex, or gently convex with the apical width usually a little less than the basal. The lateral margins of the frons are distinctly though feebly concave in face view, rather than parallel, in the species here described and are strongly and smoothly convex in profile in both sexes. The metatibiae are laterally unarmed and have five apical teeth, while the first and second metatarsal segments are both six-toothed apically. On the tegmen, there is a prominent cluster of pores at Cu_1 fork and the open clavus does not extend to midway.

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** The two species of *Aquaelicism* also listed by Mamet were misidentified Cixiidae (Mamet, pers. comm.).

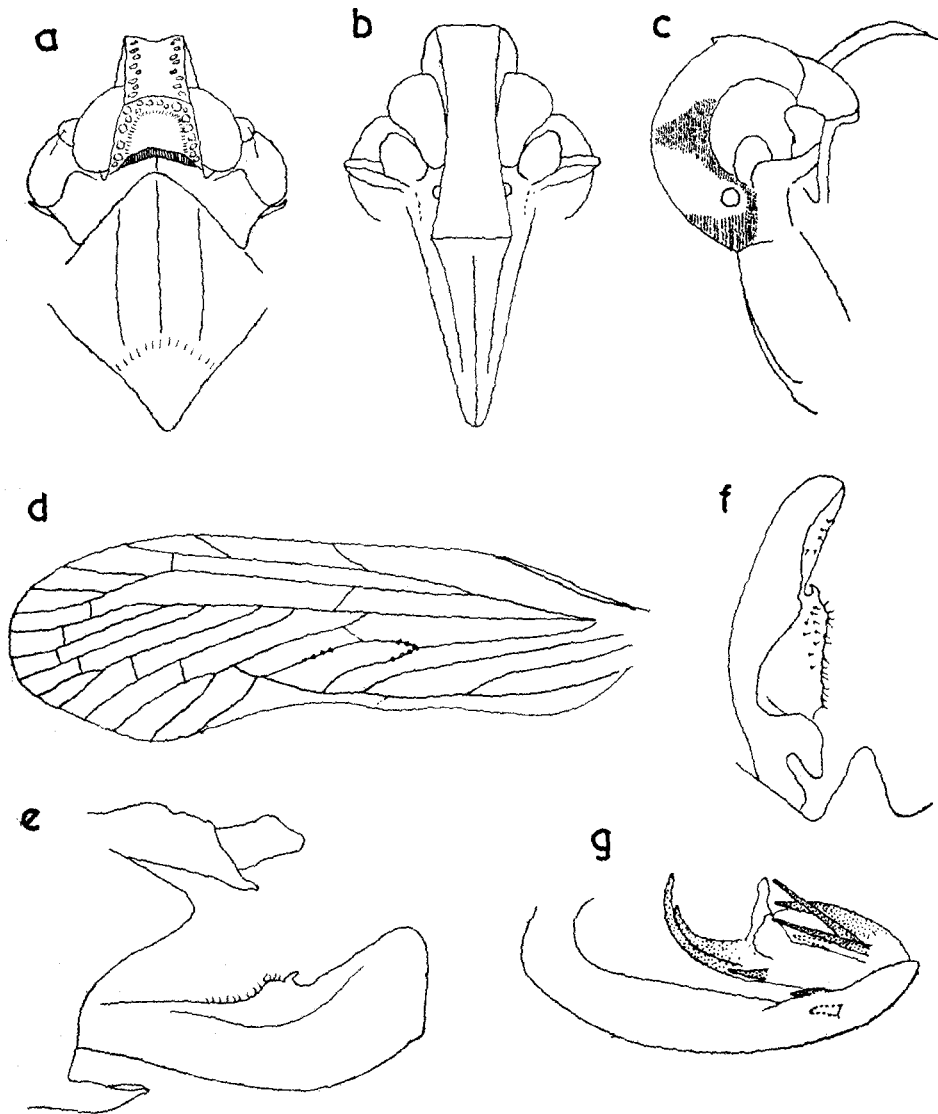


Fig. 1. *Muirileguatia borbonica* sp. nov. (a) head and thorax, dorsal view; (b) head and pronotum, anterior view; (c) head and pronotum, lateral view; (d) tegmen; (e) anal segment, pygofer and genital style, lateral view; (f) genital style and medioventral process of pygofer, ventral view; (g) aedeagus, from the left.

Muirileguatia borbonica sp. nov. (Fig. 1 (a) — (g))

Length 2.5—3.0 mm, tegmen 4.5—5.5 mm. Vertex with lateral margins straight and converging distad. Tegmina with first sector of M forked after midway, its two branches (M7 & M8) not connected by a transverse vein; Cu_1 fork well before level of clavus (terminus Cu_2)

Pale stramineous, marked fuscous. Gena before eye and around and below lateral ocellus, clypeus, pronotum laterally above fovea, and mesonotum laterally, fuscous. Tegmina suffused fuscous except along fore and hind margins and central areas of some cells; veins mostly darker than adjacent membrane, ultimate portions of R and M branches at apex pallid white. Wings lightly suffused fuscous, veins darker.

Pygofer with medioventral process subtriangular with a blunt apex in ventral view. Aedeagus curving dorsad, two short, stout spines directed cephalad at about 3/4 from base, one dorsal and the other dorsolateral on the right; flagellum with a group of four basal, outer spines and also with three spines near apex, two of them large. Genital styles with an inner lobe near base directed cephalad and a small spur near middle of dorsal edge; ventral edge in ventral view deeply emarginate distad of inner, basal lobe.

Holotype ♂, REUNION, Mare Longue, xii. 73 (J. R. Williams & H. Dove)

Paratypes, 2 ♀, same data as holotype.

Muirileguatia mauritiensis sp. nov. (Fig. 2 (a) - (b))

Length 3.5 mm, tegmen 6.0 mm. Vertex with lateral margins straight and slightly converging or slightly convex. Tegmina with first sector of M forked after midway, its two branches not connected by a transverse vein; Cu_1 fork before level of apex of clavus.

Ochraceous with vertex, frons and genae uniformly suffused fuscous, carinae of vertex and frons dark fuscous. Tegmina entirely and more or less uniformly infuscate; veins darker, except two proximal branches of Sc and ultimate portions of R and M branches at apex pallid white. Wings infuscate, veins darker.

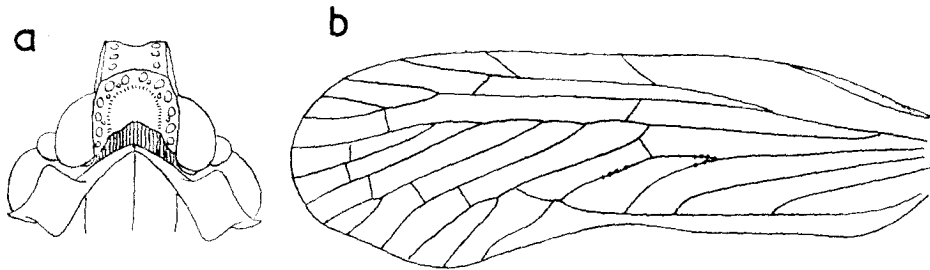


Fig. 2. *Muirileguatia mauritiensis* sp. nov. (a) head and pronotum, dorsal view; (b) tegmen.

Holotype ♀, MAURITIUS, Vacoas, 11. i. 73 (J. A. Lalouette)

Paratype ♀, same data as holotype, except 27. ii. 75.

This species closely resembles *M. borbonica* but is easily distinguished from it by pigmentation, particularly by the absence of dark patches on the genae.

Muirileguatia acuminata sp. nov. (Fig. 3 (a)—(f))

Length 3.0—3.5 mm, tegmen 6.0—6.5 mm. Vertex with lateral margins gently convex, narrower apically. Tegmina with first sector of M forked near base, its two branches connected by a transverse vein: Cu_1 fork level with apex of clavus.

Stramineous patched fuscous. Frons medially for about apical half, clypeus, sides of head below eyes, pronotum dorsally adjacent to foliate lateral carinae, and mesonotum laterally, fuscous to dark fuscous. Tegmina slightly opaque, variegated fuscous, veins more or less concolorous with adjacent membrane. Wings whitish-hyaline, veins concolorous.

Pygofer with medioventral process large, tapering to a sharp point and acutely subtriangular in ventral view. Aedeagus straight and slender, except basally, with a short spine at extreme apex on right directed caudad; flagellum with a large inner spine and three smaller

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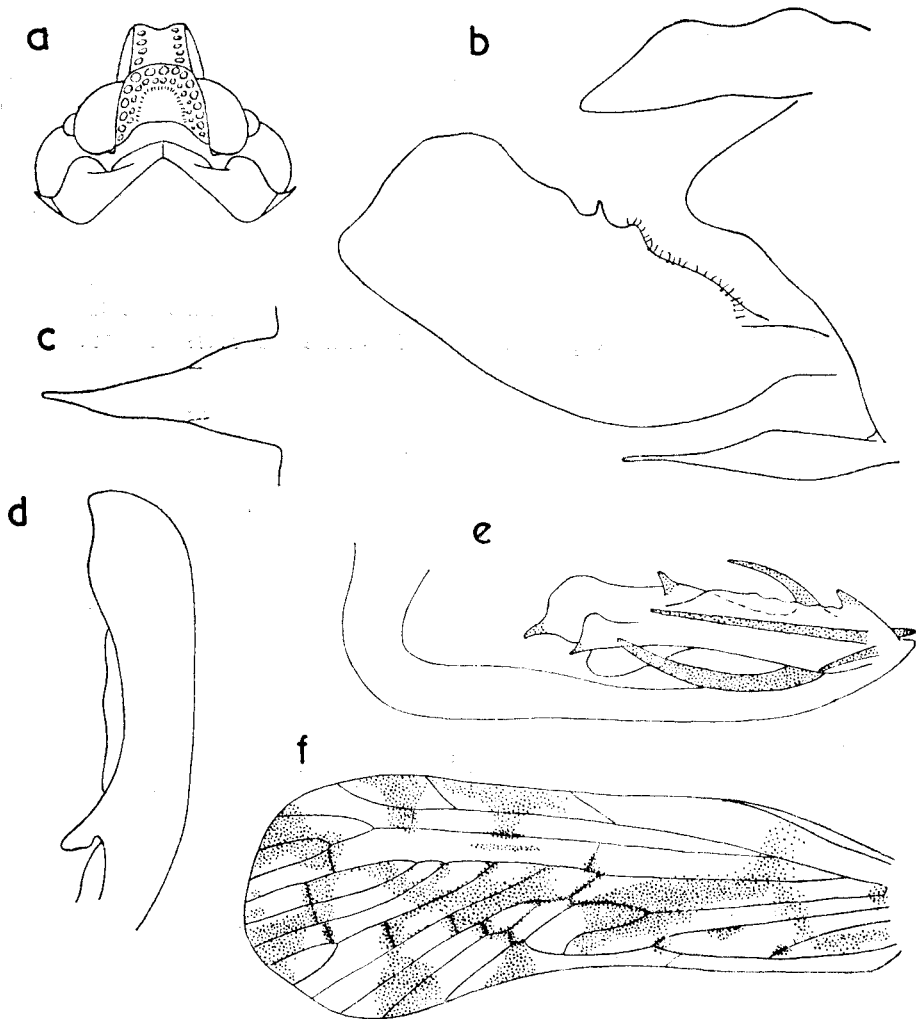


Fig. 3: *Muirileguatia acuminata* sp. nov. (a) head and pronotum, dorsal view; (b) anal segment, pygofer and genital style, lateral view; (c) medioventral process of pygofer, ventral view; (d) genital style, ventral view; (e) aedeagus, from the left; (f) tegmen.

outer spines at base, a strong spine at about 1/4 from base, three thorn-like spurs on apical half, and a rounded ventral lobe. Genital styles with an inner lobe near base directed cephalad and a small spur near middle of dorsal edge.

Holotype ♂, REUNION, Bebour, xii. 73 (J. R. Williams & H. Dove).

Paratypes, 2 ♂, 1 ♀, same data as holotype.

This species is distinguished by the conspicuous mottling, and by the early branching of the first sector of M, on the tegmina. In the male, the aedeagus and the large, acute medioventral process of the pygofer are distinctive.

Genus *Aethocauda* gen. nov.

Head, excluding subantennal processes, much narrower than the pronotum. Vertex wider than long in midline; narrowing anteriorly, width at apex half to three quarters width at base; sides straight or gently convex; posterior margin angulately excavate; anterior margin carinate, sometimes obscurely so, and convex; lateral margins broadly raised and beset with sensory pits; profile rounding evenly into that of frons. Frons medially ecarinate; lateral margins raised, beset with sensory pits, subparallel. Clypeus tricarinate; sides straight, subparallel or converging slightly distad. Antennae with first segment short, second ovate. Subantennal processes ~~with a deep~~ foliate. Pronotum deeply, broadly, and angulately or roundedly excavate posteriorly; median carina prominently raised; lateral carinae subfoliately raised; lateral areas not forming an antennal fovea. Mesonotum tricarinate. Metatibiae with one small lateral spine after midway and five teeth at apex; first and second metatarsal segments both with five teeth at apex.

Tegmina widening more or less evenly from base; length about thrice width; Sc, R, and M not forming a common stalk; Sc + R fork between levels of union of claval veins and apex of clavus; M with seven branches at apical margin, its first sector forked in proximal half, its apex three-branched, trident-like, apparently by forking of fourth sector at extreme base; clavus closed, not extending to midway; Cu_{1b} not

reaching margin, its apex connected to apex Cu_2 by cross-vein. Wings more than half length of tegmina; R and M simple, Cu_{1a} forked before midway, Cu_{1b} simple.

Pygofer with posterolateral margins acutely prominent; medioventral process comprising two elongate arms united basally, the left bifurcate. Genital styles with an inner dorsal protuberance bearing a small spur.

Type species, *Aethocauda fusca* sp. nov.

This genus is distinguished mainly by the shape of the vertex, the apical portion of M on the tegmina, and the divided medioventral process of the pygofer. It runs to couplet 15 (*Paraphenice* Muir, *Fescennia* Stal) in Fennah's (1952) key of Cenchreini.

Aethocauda fusca sp. nov. (Fig. 4 (a) — (h))

Overall length 9.0 mm, tegmen 7.5 mm.

Head and thorax dorsally dark fuscous, ventrally, including frons, sides of head and legs, paler. Tegmina infusate, veins and membrane adjacent to veins darker. Wings infusate, veins darker.

Medioventral process of pygofer with the right arm apically curved and acute, the left arm bifurcate with both apices blunt. Aedeagus subcylindrical, curved slightly ventrad, with a long spinose process at apex below directed cephalad; flagellum with two long spinose processes at base, the left serrate apically, the right serrate from near base, and a spinose process at midway on left.

Holotype ♂, MAURITIUS, Macabé Forest, 23.x.71 (J.R. Williams).

Aethocauda serrapicis sp. nov. (Fig. 5 (a) — (e)).

Overall length 7.5 mm, tegmen 6.5 mm.

Vertex with carina obscure at anterior margin.

Head and thorax stramineous with vertex, frons and genae suffused fuscous; pronotum marked fuscous behind eyes; abdomen dorsally dark fuscous. Tegmina infusate, except apex and large semicircular

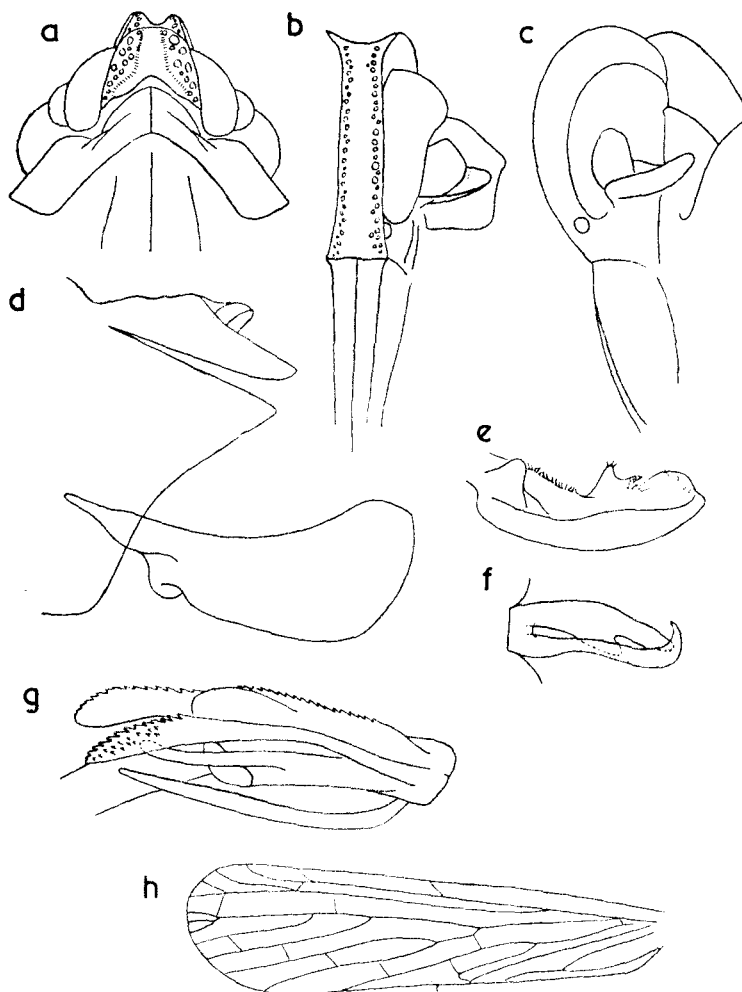


Fig. 4. *Aethocauda fusca* sp. nov. (a) head and pronotum, dorsal view; (b) head and pronotum, anterior view; (c) head and pronotum, lateral view; (d) pygofer (medioventral process omitted), anal segment and genital style, lateral view; (e) genital style, ventral view; (f) medioventral process of pygofer, ventral view; (g) aedeagus, from the left; (h) tegmen.

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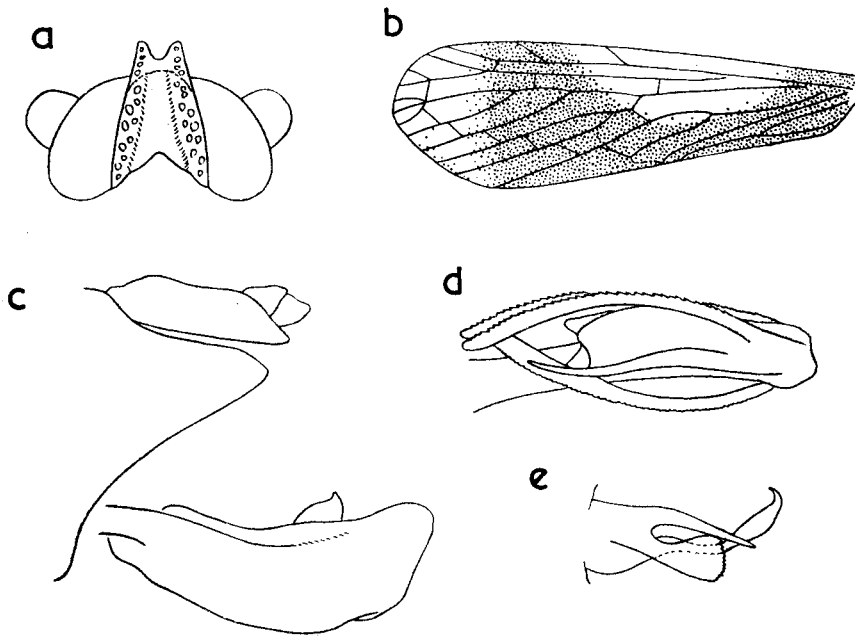


Fig. 5. *Aethocauda serrapicis* sp nov. (a) head, dorsal view; (b) tegmen; (c) anal segment, pygofer and genital style, lateral view; (d) aedeagus, from the left; (e) medioventral process of pygofer, ventral view.

area at leading edge, hyaline. Wings infusate apically and basally, otherwise hyaline. Veins on tegmina and wings concolorous with adjacent membrane.

Medioventral process of pygofer with right arm apically curved and acute, the left bifurcate at middle with one branch slender and acute, the other expanded to a broad, serrate apex. Aedeagus subcylindrical, slightly curved ventrad, with a long serrate spinose process at apex below directed cephalad; flagellum with two long, similar, serrate spinose processes at base, and a spinose process near base on left.

Holotype ♂, REUNION, Col Bellevue, xii. 73 (J. R. Williams & H. Dove).

Aethocauda decora sp. nov. (Fig. 6 (a)—(e))

Overall length 8.0 mm, tegmen 7.0 mm.

Pale stramineous, lateral carinae of frons, mesonotum laterad of lateral carinae, dark fuscous. Tegmina whitish-opaque, patched dark fuscous, veins M₅—7 and Cu_{1a} dark distad of transverse veins, otherwise veins concolorous with adjacent membrane. Wings whitish-opaque veins concolorous.

Medioventral process of pygofer with both arms relatively long, the right bulbous at extreme base and apically acute, the left bifurcate after midway with both apices acute. Aedeagus subcylindrical, straight, with a short spinose process, which is serrate in the middle, at apex, below directed cephalad; flagellum with three basal spines, the left serrate apically, the middle serrate along entire length, the right incrassate and serrate basally, slender apically, and a fourth spine at about midway.

Holotype ♂, MAURITIUS, Macabé Forest, 23. x. 71 (J. R. Williams)

Aethocauda rubella sp. nov. (Fig. 7 (a)—(b))

Overall length 9.5 mm, tegmen 8.0 mm.

Castaneous, with vertex, frons, clypeus, sides of head under eyes, pronotum medially, mesonotum and abdomen, suffused fuscous. Tegmina infusate with hyaline areas as illustrated; Sc, R and M tinged red.

Holotype ♀, MAURITIUS, Mt. Cocotte, 16. ii. 74 (J. R. Williams)

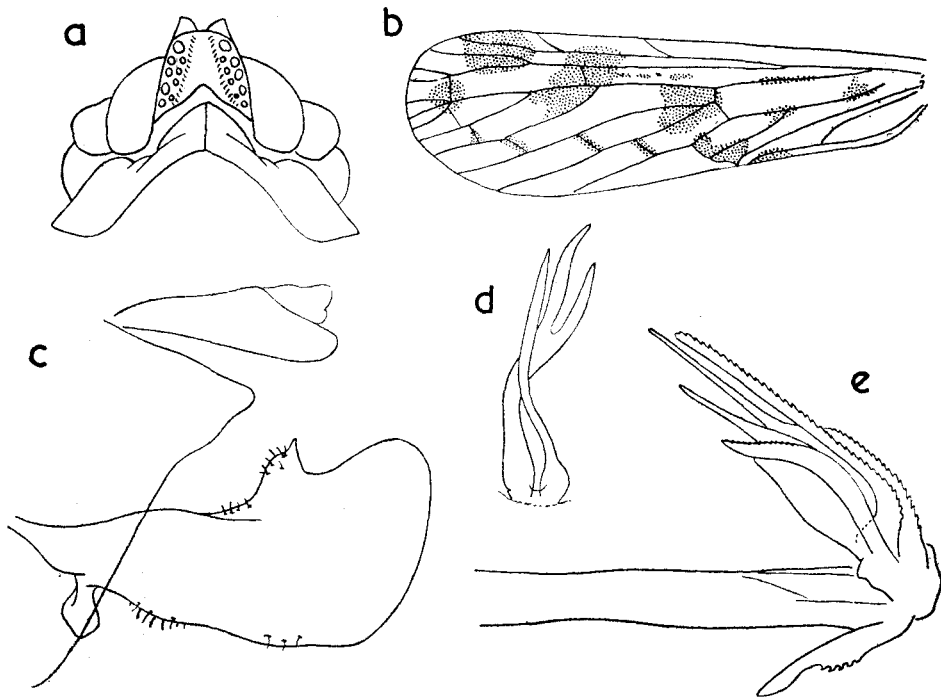


Fig. 6 *Aethocauda decora* sp. nov. (a) head and pronotum, dorsal view; (b) tegmen (c) pygofer, anal segment and genital style, lateral view; (d) medioventral process of pygofer, ventral view; (e) aedeagus, from the left.

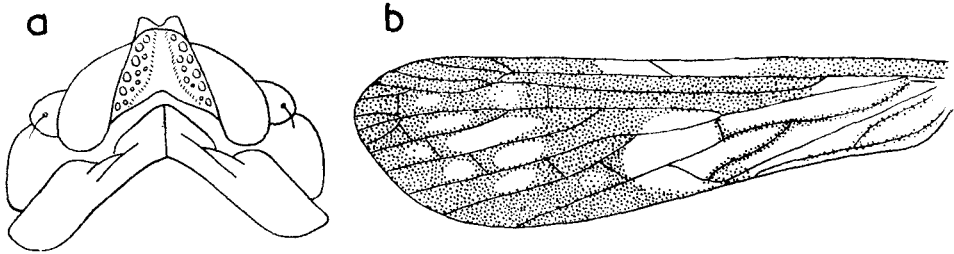


Fig. 7. *Aethocauda rubella* sp. nov. (a) head and pronotum, dorsal view; (b) tegmen.

Genus *Diprora* gen. nov.

Head, excluding subantennal processes, much narrower than pronotum. Vertex with width greater than length in midline and almost equal to overall length; width at apex about half width at base; sides gently convex; posterior margin deeply and angulately emarginate; anterior margin carinate, straight; lateral and anterior margins greatly raised, the former into narrow, flat-topped ridges beset with sensory pits; in profile almost straight and horizontal, meeting frons angulately. Frons narrow and medially ecarinate; lateral margins sharply and greatly raised into narrow ridges topped with sensory pits, converging towards middle, but not meeting, then diverging. Clypeus tricarinate with median carina obsolete basally; sides straight, converging gradually distad. Antennae with first segment short, second ovate. Subantennal processes well developed, foliate. Pronotum deeply and broadly excavate posteriorly; median carina prominently raised; lateral carinae subfoliately raised; lateroventral areas not forming an antennal fovea. Metatibiae laterally unarmed, five-toothed at apex; first and second metatarsal segments each five-toothed apically.

Tegmina about three times as long as wide; M not forming a common stalk with Sc + R; Sc + R fork a little before midway (at about 40%); M with seven branches at apical margin, pectinately branched with five sectors, the first sector forked; Cu_{1b} not reaching margin; clavus open, Cu₂ curving into subapical transverse line of cross-veins. Wings about three-fourths length of tegmina; R and M simple, Cu_{1a} forked near base, Cu_{1b} simple.

Type species, *Diprora lineata* sp. nov.

Diprora lineata sp. nov. (Fig. 8 (a) — (h))

Overall length 8.0 mm, tegmen 7.0 mm.

Head, excluding eyes, antennae and subantennal processes, more or less uniformly deep red, with carinae of vertex and frons dark fuscous; body otherwise pale stramineous except pronotum dorsally and mesonotum laterally usually fuscous to some degree. Tegmina hyaline with a broad, fuscous longitudinal band along middle curving near apex to leading edge, veins pale. Wings hyaline, veins pale.

Pygofer with prominent lateroapical angles and a small, subtriangular medioventral process. Aedeagus slightly curved upwards, with a thorn-like spur at apex below on left directed cephalad; flagellum with a narrow lobe at base on left bearing four short spines and with three larger spines on expanded apex. Genital styles with a dorsal spur.

Holotype ♂, REUNION, Bebour, xii.73 (J.R. Williams & H. Dove)

Paratype, REUNION, 4♂, 5♀, same data as holotype; 1♂. Notre Dame; 1♂, Col Bellevue, other data as holotype.

The broad dark stripe along the tegmina, more pronounced in some individuals than in others, is a prominent character of this species.

Subgenus *Diproroda* subgen. nov.

Vertex with overall length greater than width (4:3); junction of vertex and frons in profile forming a slight prominence. Frons with lateral ridges contiguous at apex of head. Tegmina with third sector of M bifurcate and eight branches of M at apical margin. Otherwise similar to *Diprora* Williams.

Type species, *Diprora (Diproroda) mauritiana* sp. nov.

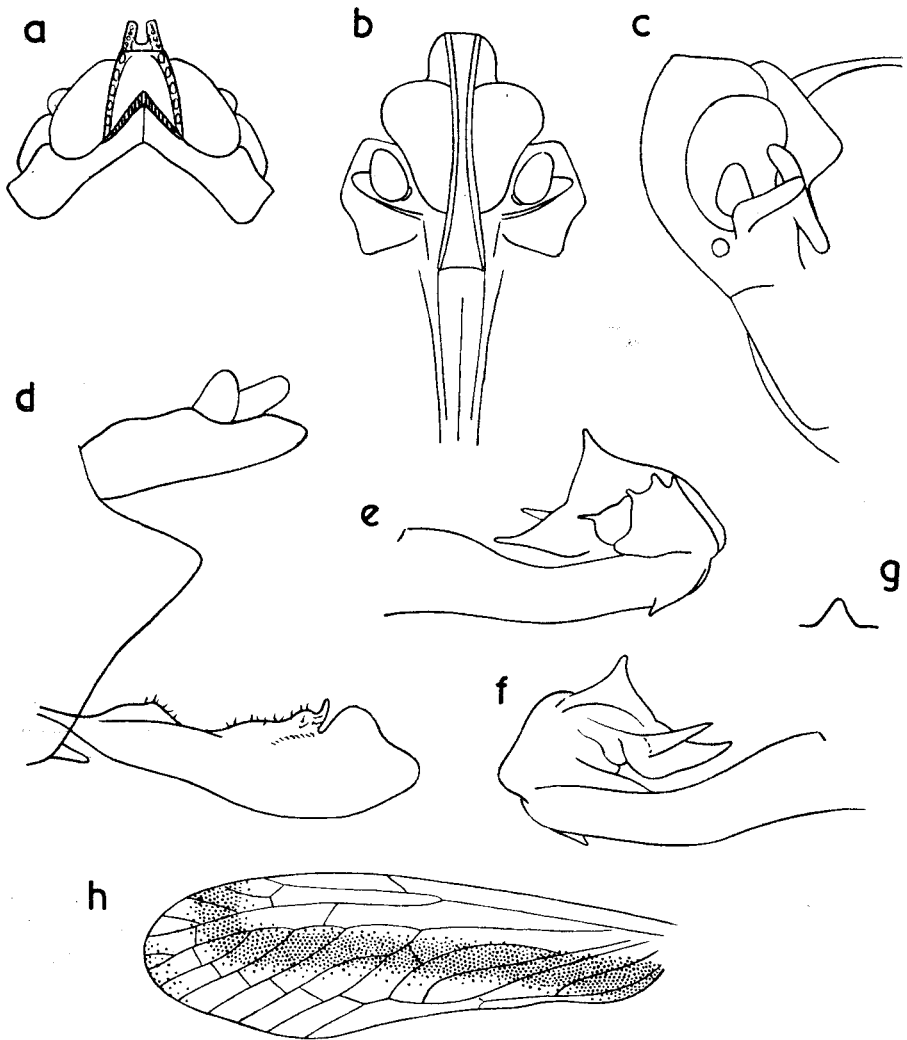


Fig. 8. *Diprora lineata* sp. nov. (a) head and pronotum, dorsal view; (b) head and pronotum, anterior view; (c) head and pronotum, lateral view; (d) pygofer, anal segment and genital style, lateral view; (e) aedeagus, from the left; (f) aedeagus, from the right; (g) medioventral process of pygofer, ventral view; (h) tegmen.

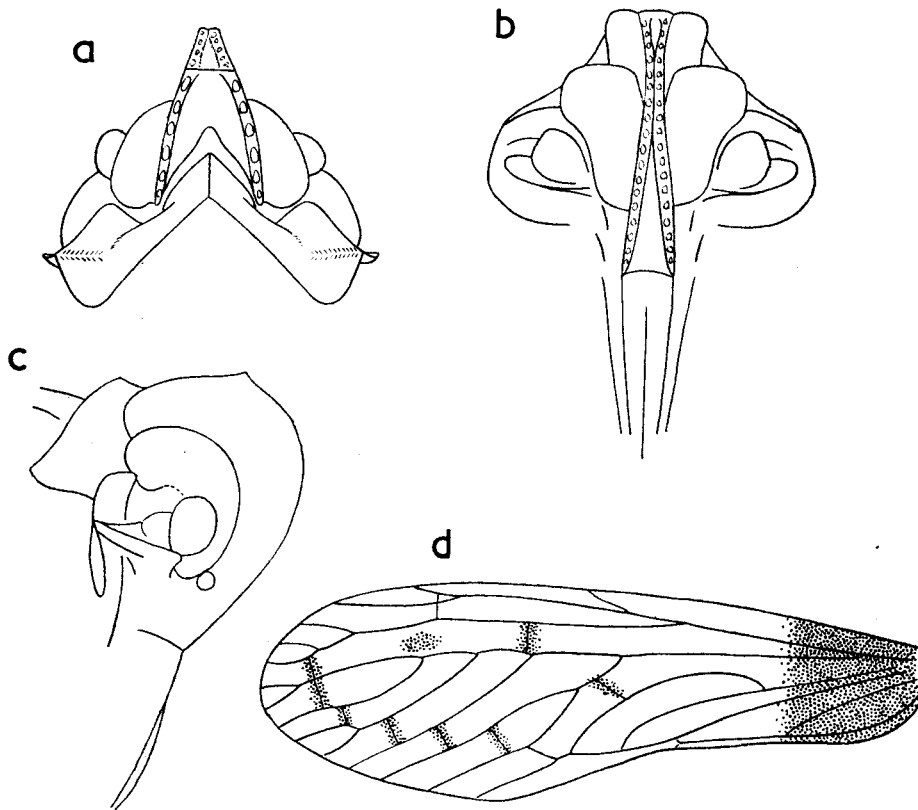


Fig. 9. *Diprora (Diproroda) mauritiana* sp. nov. (a) head and pronotum, dorsal view; (b) head and pronotum, anterior view; (c) head and pronotum, lateral view; (d) tegmen.

Diprora (Diproroda) mauritiana sp. nov. (Fig. 9 (a)—(b))

Overall length 10.0 mm, tegmen 8.5 mm.

Head castaneous, clypeus and lorae paler; pronotum pale castaneous; mesonotum, and abdomen dorsally, dark fuscous: ventral surface of thorax, including legs, and abdomen, stramineous. Tegmina hyaline except dark fuscous basally and along transverse veins; veins pale except a base of tegmina. Wings hyaline, veins pale.

Holotype ♀, MAURITIUS, Macabé, 4.xi.73 (J. R. Williams).

The elevation of *Diproroda* to generic status may prove to be necessary but in the absence of a male specimen of *D. mauritiana*, this does not seem to be justified at present. The erection of a subgenus to accommodate this species serves to emphasise the weighting attached to the morphological characters by which the female differs from *D. lineata*.

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