

## FULGOROIDEA (HOMOPTERA) FROM NEW CALEDONIA AND THE LOYALTY ISLANDS<sup>1</sup>

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*Abstract:* In this report 16 new genera, 1 new subgenus, 68 new species and 1 new subspecies of Fulgoroidea are described from New Caledonia and the Loyalty Is., and 24 known species are added to the faunal list to bring the total to 56 genera and 117 species of Fulgoroidea. The affinities of the fauna are briefly discussed: an Australian element and a Papuan element are recognised, together with south-west Pacific 'wides', particularly in Delphacidae. There is also a small residue of isolated endemic genera of indeterminate relationships.

This report deals with the Fulgoroidea Homoptera of New Caledonia and the Loyalty Is. and is based on a collection of over 800 specimens received on loan from the B.P. Bishop Museum, together with specimens in the accessions of the British Museum (Nat. Hist.). The collectors, and the years they visited the islands are as follows: L.E. Cheesman (1949), J.L. Gressitt (1960, 1963), C.R. Joyce (1958), N.L.H. Krauss (1959, 1962, 1963), G. Kuschel (1963), H.E. Milliron (1945), P.D. Montague (1914), J. Sedlacek (1961), R. Straatman (1963), F.X. Williams (1940) and C.M. Yoshimoto (1963). The type specimens of new species are in the Bishop Museum (BISHOP) or the British Museum (Natural History) (BMNH).

I am deeply indebted to Dr J.L. Gressitt, Bishop Museum for the privilege of studying this valuable collection, and to Mr J.P. Doncaster, British Mus. (Nat. Hist.) for the use of the New Caledonian accessions in his charge.

### HISTORY

The Fulgoroidea of New Caledonia and the Loyalty Is. have hitherto been little studied. In 1861, Montrouzier described 5 new species, *Pseudophana oxycephala* (Tropiduchidae), *Issus viridis* (Issidae), *Ricania translucida*, *R. marginata* (Ricaniidae) and *Flata farinosa* (Flatidae), and a little later Perroud & Montrouzier (1864) described 4 new species, *Aulacocephala kirbyi*, *Gastererion signoreti* (attributed to Issidae), *Ricania oceanica* (Ricaniidae) and *Phyllyphanta limbata* (Flatidae). Melichar (1898) described *Plestia inornata* (Ricaniidae) and, in 1906, *Tylana interpunctata* and *T. caledonica* (Issidae), and Distant (1920) described *Cixius aragoensis*, *C. montaguei* and *C. varicolor* (Cixiidae), *Ugyops houadouensis* and *U. inermis* (Delphacidae) and *Nisia albonotata* (Meenoplidae). Muir added further species: in 1925, *U. butleri*, in 1931, *Tarberus jacobii* (Cixiidae) and in 1934, *Eocenchrea albipennis* (Derbidae). In 1964, I described *Ugyops taranis*, *U. atreces* and *U. menelaus*, thus bringing the total of nominal species reported from these islands to 24. Of the genera to which these had been referred by their authors, two, *Aulacocephala* and *Gastererion*, were recognised only from New Caledonia.

As a result of the present study, it has been possible to add 16 new genera, 1 new subgenus,

1. Specimens on loan from the Bishop Museum were collected during fieldwork supported by grants from the U.S. National Institutes of Health (AI-01723) and the U.S. National Science Foundation (G-2127, 4774, 10734, and GB-518).

This monograph was published with partial financial assistance of the U.S. National Science Foundation (GN-745).

68 new species and a new subspecies, and 24 new records of the occurrence of known species, making, with some new synonymy, a total of 56 genera and 117 species. These are listed below.

### ZOOGEOGRAPHY

New Caledonia and the Loyalty Is. extend between 19° and 23°S and 163° and 169°E. New Caledonia is 397 km (248 mi.) long and an average of about 48 km (30 mi.) wide, and lies on a NW-SE axis about 1440 km (900 mi.) from Australia. The small Isle of Pines lies some 48 km (30 mi.) to the south-east. The Loyalty Is. comprise three small islands—Lifu, Maré and Ouvéa—and are strung out parallel to the east coast of New Caledonia and about 96–112 km (60–70 mi.) from it, and are separated by about 272 km (170 mi.) from the nearest islands of the New Hebrides, which extend NW towards the Solomon Is.

Comparatively little has been published on the fulgoroid faunas of New Guinea, the Solomon Is. and the New Hebrides. Much of the information by which I have been guided in reaching the few conclusions discussed below has been obtained from a cursory examination of unworked collections from these areas in the British Museum (Nat. Hist.). A detailed consideration of the New Caledonian Fulgoroidea must await fuller knowledge of the faunas of the adjacent areas.

The most evident point to emerge from the available data is the presence in New Caledonia of genera that do not occur in the island groups to the north-east, and the absence of genera that are a normal component of the faunas of these islands. For example, the widespread derbids *Swezeyia* (Otiocerinae) and *Lamenia* (Cenchreini), which occur in Indonesia, the Philippines, New Guinea, Queensland, all western Pacific island groups, including Fiji, and of which at least the latter is found also in the New Hebrides, are absent from New Caledonia and the Loyalty Is. These two genera, though extensively distributed, are usually represented in each island group by only a single species, and only occasionally by two or three, but the genus *Phaciocephalus* (Cenchreini), which occurs in Fiji, Samoa, and Micronesia, and is recorded in New Guinea, Borneo and the Philippine Is. has been found to speciate abundantly in Fiji and Samoa. *Phaciocephalus* does not occur in New Caledonia. The only cenchreine genus in New Caledonia, *Eocenchrea*, has speciated freely in New Caledonia and Queensland, and is represented by a single species in New Zealand, and I have seen a species from New Guinea. The other derbid genera of New Caledonia occur in Queensland and Indonesia. The Otiocerini do not appear to be represented. The single specimen of *Zoraida* (*Zoraidini*) in the present collection agrees precisely with a subspecies of *Z. essingtonii* found in SE Queensland. This record needs confirmation, but if it is forthcoming it is reasonable to regard this subspecies as a very recent arrival in New Caledonia. The kind of contrast that exists between the New Caledonian Derbidae and those of the western Pacific Islands appears again in the Cixiidae and the Issidae. The cixiids *Gelastocephalus* and *Cixius* are both present in Australia and New Guinea, but not in western Pacific islands including, apparently, the Solomon Is. and the New Hebrides. Both occur in New Caledonia, and an appreciable degree of speciation has occurred in the latter genus. The absence of any species of *Dystheatis* is as striking as that of the derbid *Lamenia*. Similarly, the issids are represented by *Lipocallia* and *Cotylana*, the former known only from Australia, and the latter Australian and perhaps Papuan also. Here, it is the absence of *Lollius* that is surprising, as this genus occurs in Australia, Indonesia, the Philippines, New Guinea, the Solomon Is. and Fiji.

The foregoing examples are sufficient to establish that there is an abrupt discontinuity in the composition of the fulgoroid fauna between New Caledonia and the islands to the north-east. This may have been more pronounced in the past than at present, as much of the evidence of immigration

Cixiidae	N. Caledonia Loyalty Is. I. of Pines	Other areas
1. <i>Aselgeoides aurora</i> *	+	† Seychelles Is., Madagascar, 1 sp. Africa
2. <i>Gelastocephalus jacobii</i> (Muir)	+	† Australia, Papua
3. <i>Cixius aragoensis</i> Distant	++	† Palaearctic Region
4. <i>montaguei</i> Dist.	+	
5. <i>varicolor</i> Dist.	+	
6. <i>apicemaculatus</i> Dist.	+	
7. <i>Ithma charondas</i> *	+	
8. <i>cebrenis</i> *	+	
9. <i>sacrator</i> *	+	
10. <i>Myndus rumina</i> *	+	† Papuan and western Pacific, Palaearctic Region
11. <i>Oliarus ariston</i> *	+ +	† Widespread
12. <i>ocyrhoe</i> *	+	
13. <i>lubra</i> Kirkaldy	+	Australia
14. <i>felis</i> Kirk.	+	Australia, Samoa
15. <i>elvina</i> *	+	
16. <i>orbona</i> *	+	
Delphacidae		
17. <i>Ugyops nemestrinus</i> *	+	† Pacific Is., Oriental Region, Australia, Seychelles, Neotropical Region
18. <i>taranis</i> Fennah	+	
19. <i>menelaus</i> Fenn.	+	
20. <i>houadouensis</i> Distant	+	
21. <i>inermis</i> Dist.	+	
22. <i>lato</i> *	+	
23. <i>alecto</i> *	+	
24. <i>manturna</i> *	+	
25. <i>arestor</i> *	+	
26. <i>butleri</i> Muir	+	
27. <i>lifuanus</i> *	+	
28. <i>atreces</i> Fennah	+	
29. <i>planguncula</i> *	+	
30. <i>Notuchus risioides</i> *	+	
31. <i>Tropidocephala eximia</i> (Kirk.)	+	Australia, Oriental Region
32. <i>Tarophagus proserpina</i> (Kirk.)	+	Australia
33. <i>Sardia rostrata</i> Melichar	++	Australia, Ceylon
34. <i>melichari</i> (Kirk.)	+	Australia
35. <i>Sogatodes eupompe</i> (Kirk.)	+	Australia, Philippines, western Pacific
36. <i>placitus</i> (V.D.)	+	Western Pacific, SE Polynesia
37. <i>Sogatella geranor</i> (Kirk.)	+	Australia
38. <i>longifurcifera</i> (E. & I.)	+	Australia, western Pacific
39. <i>kolophon</i> (Kirk.)	+	Australia, almost tropicopolitan
40. <i>Terthron anemonias</i> (Kirk.)	+	Australia, Philippines
41. <i>Nilaparvata albostrigata</i> (Kirk.)	+	Australia, Guam

	N. Caledonia Loyalty Is. I. of Pines	Other areas
42. <i>Cemus nigromaculosus</i> (Muir)	++	Oriental Region, western Pacific
43. <i>Phacalastor pseudomaidis</i> Kirk.	+	Australia, Fiji, Malaya, Papuan Subregion
44. <i>Horcoma lacteipennis</i> (Muir)	+	Fiji, Formosa, Java
45. <i>Syndelphax matanitu</i> (Kirk.)	+	Australia, western Pacific, South Africa
46. <i>Peregrinus maidis</i> (Ashm.)	++	Tropicopolitan
47. <i>Nycheuma cognatum</i> (Muir)	+	Australia, Philippines, some W. Pacific Is.
48. <i>Toya dryope</i> (Kirk.)	+++	Australia, western Pacific, New Zealand
49. <i>Coronacella kirkaldyi</i> (Muir)	+	Australia, New Hebrides, Philippines, Formosa
50. <i>Corbulo dodona</i> Fennah	+	Australia, Samoa
51. <i>Harmalia anacharsis</i> *	+	
52. <i>ostorius</i> (Kirk.)	+	Australia, Papuan Subregion
53. <i>Falcotoya aurinia</i> *	+	
54. <i>citipes</i> *	+	
55. <i>Perkinsiella rattlei</i> Muir	+	Oriental Region, Australia
56. <i>Nemeter sabinus</i> *	+	
Meenoplidae		
57. <i>Suva albonotata</i> Dist.	+	† Fiji, Samoa, Ceylon
58. <i>Eponisia fugax</i> *	+	† Formosa, Uganda
59. <i>matuta</i> *	+	
60. <i>lysis</i> *	+	
61. <i>bolanus</i> *	+	
62. <i>theophane</i> *	+	
63. <i>tomyris</i> *	+	
64. <i>Nisia atrovenosa</i> *	+	Old World tropics, Oriental Region to Samoa
Derbidae		
65. <i>Zoraida essingtonii</i> (Westwood)	+	
65a. <i>Zoraida essingtonii porphyriion</i> *	+	Australia (Queensland)
66. <i>Eocenchrea albipennis</i> Muir	+	† Australia, New Guinea, New Zealand
67. <i>derceto</i> *	+	
68. <i>galanthis</i> *	+	
69. <i>butes</i> *	+	
70. <i>zaleucus</i> *	+	
71. <i>favonius</i> *	+	
72. <i>feretrius</i> *	+	
73. <i>muta</i> *	+	
74. <i>medon</i> *	+	
75. <i>pardus</i> *	+	
76. <i>Basileocephalus kirbyi</i> (P. & M.)	+	† Australia, Papuan Subregion
77. <i>Decora lalage</i> *	+	† Australia, Indonesia, New Guinea, Philippine Is.
78. <i>Saccharodite casca</i> *	+	† Australia, Java, Papuan Subregion



	N. Caledonia Loyalty Is. I. of Pines	Other areas
79. <i>Saccharodite thia</i> *	+	
80. <i>Sikaiana lycotas</i> *	+	† Queensland, Fiji, Philippine Is., Papuan Subregion, Seychelles, Ghana
Achilidae		
81. <i>Gongistes alcander</i> *	+	
82. <i>pisander</i> *	+	
83. <i>asbolus</i> *	+	
84. <i>Mahuna battis</i> *	+	† Australia
85. <i>Isodaemon cyllarus</i> *	+	
86. <i>sirona</i> *	+	
87. <i>orontes</i> *	+	
88. <i>Horcomotes damoetas</i> *	+	
89. <i>ocrisia</i> *	+	
90. <i>Tangina sirius</i> *	+	† Australia, Ceylon, Philippine Is.
91. <i>bambalio</i> *	+	
92. <i>Clidonisma serapis</i> *	+	
93. <i>Cenophron aesar</i> *	+	
Tropiduchidae		
94. <i>Montrouzierana oxycephala</i> (Mont.)	++	
95. <i>Scenoma glabrio</i> *	+	
96. <i>beroe</i> *	+	+
97. <i>palaemon</i> *	+	
98. <i>Teramnon stenopteryx</i>	+	
Issidae		
99. <i>Lipocallia spurinna</i> *	+	† Australia
100. <i>Cotylana viridis</i> (Montr.)	++	† Australia, Papuan Subregion
101. <i>gyas</i> *	+	
102. <i>caledonica</i> (Mel.)	+	
103. <i>gorgon</i> *	+	
104. <i>drymo</i> *	+	
105. <i>Scalabis harpalyce</i> *	+	† Ceylon, New Guinea, Philippines, Solomon Is.
106. <i>Gastererion signoreti</i> P. & M.	+	
Flatidae		
107. <i>Cromnella doto</i> *	+	
108. <i>pales</i> *	+	
109. <i>sancus</i> *	+	
110. <i>farinosa</i> (Montr.)	+	+
111. <i>limbata</i> (P. & M.)	+	
Ricaniidae		
112. <i>Piromis translucida</i> (Montr.)	++	† New Hebrides, Solomon Is., New Guinea
113. <i>Plestia marginata</i> (Montr.)	+	
114. <i>Plestia oceanica</i> (P. & M.)	+	† Fiji, Samoa, New Hebrides
115. <i>Aliscella fidelis</i> *	+	
116. <i>napaea</i> *	+	
117. <i>Scotinax nero</i> *	+	

\* Described as new below.

† Denotes genus only.

from the Solomon Is. or the New Hebrides suggests that it has taken place comparatively recently. For example, *Cemus nigromaculosus* (Muir) is widespread in the south-western Pacific, and was described from Luzon; it does not occur in Australia, where its place is taken by *C. kirkaldyi* (Muir). Again, the ricaniid genus *Plestia* occurs in the New Hebrides, but not in Australia, and has been in New Caledonia and the Loyalty Islands sufficiently long to develop two endemic species. The common Australian *Scolypopa*, by contrast, does not occur in New Caledonia.

A substantial part of the fauna, at generic level in most families but also at specific level in Delphacidae, is represented in Australia, New Guinea, and much of the insular areas of the Oriental Region. This element need not be discussed here, though it is perhaps worth noting that only 6 genera—*Cixius*, *Oliarus*, *Myndus* (modified to *Tiriteana*), *Ugyops*, *Toya* and *Eocenchrea* and 1 species (*Toya dryope*)—are also found in New Zealand. The occurrence of the Mascarene genus *Aselgeoides* is at present rather puzzling. It is represented by a species in the Seychelles, two in Madagascar and a damaged specimen has been reported from Africa. The New Caledonian species is not far removed from the remainder, and it would seem possible that this cixiid genus has had a travel history similar to that of the Tongine Issidae, which also occur in New Caledonia and the Mascarene Is. Unlike these issids, however, which occur in the Pacific and the islands of SE Asia, including Australia and New Guinea, the New Caledonian species of *Aselgeoides* is geographically very isolated.

It is expected that most of the 16 genera described below as new will be found to be represented outside New Caledonia, where this is not already known, but there are a few that may prove to be endemic. I surmise that these will be found to include *Notuchus*, *Clidonisma* and the tropiduchids *Scenoma* and *Teramnon* as all these stand far apart from other genera of their respective families, and, as so far studied, offer no clear evidence of their origin. The genus *Gastererion* was apparently based on a nymph, and only broad nymphal characters have been used to define the genus. It was referred by its author to Issidae, but the description is equally suggestive of the nymph of a flatid. However, among the nymphal material of these and other families that was available I did not find any example that agreed with the description of *signoreti*, the only included species, even with allowance for post-mortem color changes.

#### Family CIXIIDAE Spinola

#### Genus *Aselgeoides* Distant

*Aselgeoides* Dist., 1917: 125. (Haplotype: *A. insularis* Dist. 1917: 125).

#### 1. *Aselgeoides aurora* Fennah, new species Fig. 1-9.

Vertex longer in middle line than wide at transverse carina (about 4: 1), basal margin anterior to level of middle of eyes, anterior (subvertical) portion of vertex longer than broad; frons longer in middle line than broad (1.5: 1); median ocellus absent; rostrum reaching almost to 6th abdominal segment, subapical segment longer than apical. Post-tibia with a single spine laterally and about 7 minute denticles along margin basad of it, 8 spines at apex, basal metatarsal segment with 7 teeth apically, 2nd segment with 8-10 teeth, all but the outer pair being scale-bearing.

Light yellowish brown; intercarinal areas of mesonotum, abdominal tergites except for a few spots, and apical segment of tarsi, fuscous, or reddish brown; disc and posterior angles of anterior compartment of vertex, and a diffuse line on sides of head above eyes, dark fuscous; frons in fresh examples with lateral margins and median carina pale green, intercarinal areas orange red. Tegmina milky-hyaline, veins and margin ochraceous, interrupted with dark fuscous; sometimes a band from costa to commissural margin just basad of middle, a diffuse band from stigma to middle of tegmen and a few irregular spots in apical cells, dilute fuscous. Wings grayish hyaline, with veins dark fuscous.

♂. Anal segment relatively short and broad, in lateral view with ventral margin shallowly convex. Pygofer short dorsally, long ventrally, dorsolateral angles not at all produced, lateral margins convex, me-

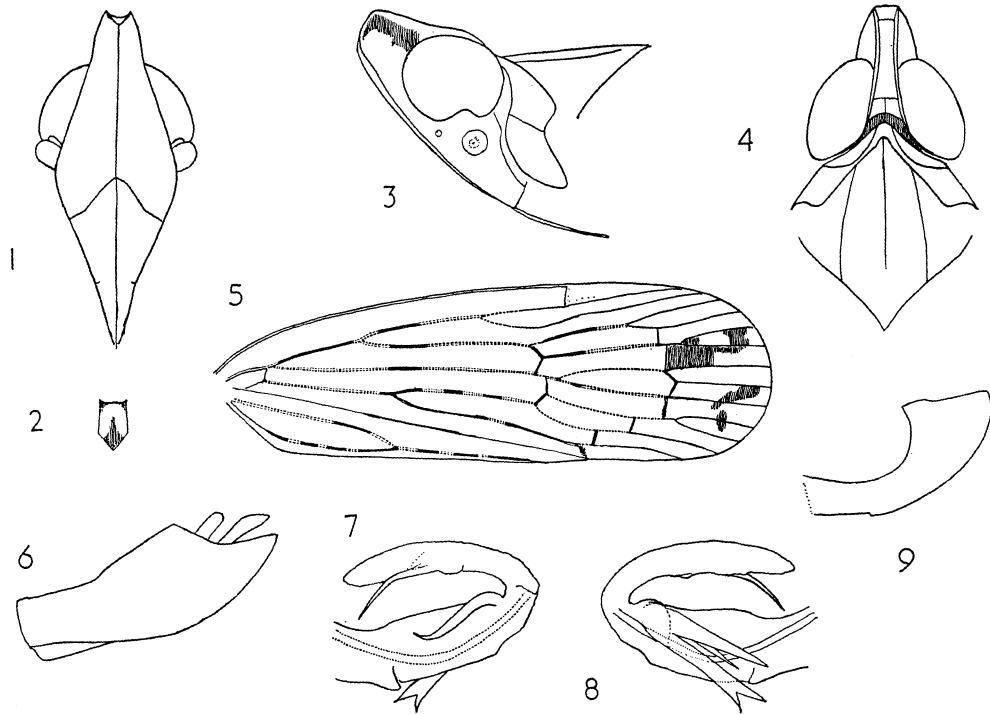


Fig. 1-9. *Aseigeoides aurora*, n. sp.: 1, frons and clypeus; 2, apical areolet of vertex; 3, head, pronotum and mesonotum, lateral view; 4, vertex, pronotum and mesonotum; 5, tegmen; 6, ♂ anal segment, left side; 7, aedeagus, left side; 8, aedeagus, right side; 9, left genital style.

dioventral process convex, broader at base than long. Aedeagus moderately long, distal portion reflected cephalad in a membranous flagellum. A stout sinuate spinose process arising on dorsal surface at base of flagellum, and extending to left; a deeply bifurcate process arising on right near apex, directed ventrocephalad, each ramus compressed, parallel sided and shortly forked distally. Genital styles moderately long, rather narrow in basal 1/2, curved dorsad and expanding in distal 1/2, abruptly horizontally truncate at apex. Length, 5.5 mm, tegmen, 6.3 mm.

♀. Ovipositor moderately long, ensiform, shallowly curved upward distad. 1st valvifers tumid, with a shallow longitudinal groove between them, not ceriferous. Length, 6.4 mm, tegmen, 7.2 mm.

Holotype ♂ (ВІСНОР 7642), New Caledonia, Mt. Koghi, 900 m, XII. 1963, R. Straatman. Paratopotypes: 1 ♂, 2 ♀♀, same data.

This species, the 4th to be described in the genus, differs from *A. insularis* Distant in the anterior compartment of the vertex being markedly longer than broad and with its disc much less deeply impressed, as contrasted with the tunnel-like impression of the disc in *A. insularis*, in the vertex being relatively shorter, and the post-tibia with a single lateral spine, as compared with 2 spines in *A. insularis*. The two species differ also in the shape of the genital styles. From *A. quinquespinosus* Synave and *A. trispinosus* Synave it differs in the absence of a median ocellus on the frons, and in the number of spines on the post-tibia.

The form of the head, which is the most striking feature of members of this genus, has arisen more than once in Cixiidae (e.g. in *Rhamphixius*) and accordingly a close comparison of other bodily features has been made of specimens of both sexes with the type series from the Seychelles Is. The

structure of the 2nd and 3rd antennal segments agrees well, as does also the tendency of the post-tibia to have denticles at the margin, in addition to the spines. The general pattern of the male genitalia and the structure of the female genitalia is similar in both series. There is no morphological ground for doubting that the New Caledonian population belongs to this genus, however strictly interpreted.

#### Genus *Gelastocephalus* Kirkaldy

*Gelastocephalus* Kirk., 1906: 402. (Haplotype: *G. ornithoides* Kirk. 1906, *loc. cit.*)

*Tarberus* Jacobi, 1928: 37. (Orthotype: *T. semicarinatus* Jac., 1928, *loc. cit.*) **New Synonymy.**

Jacobi separated *Tarberus* from *Gelastocephalus* by the presence of lateral carinae on the clypeus and the position of the forks of Sc + R and Cu 1 in the tegmen. However, his illustrations of the head of *Tarberus semicarinatus* agree with the shape of the head in *Gelastocephalus ornithoides*, and it is evident that in his description he has attributed the distal portion of the lateral carinae of the frons to the clypeus. The position of the fork of Sc + R in relation to that of Cu 1 is at most of only specific significance, and the position of Cu 1 in *G. ornithoides* is as in *T. semicarinatus*.

The Australian fauna contains species which combine the supposedly diagnostic features of *Carolus* and *Gelastocephalus*, and justification to continue to regard them as separate is still under investigation. In this report I provisionally accept *Gelastocephalus*, but consider the above synonymy as necessary.

#### 2. *Gelastocephalus jacobii* (Muir), n. comb. Fig. 12-14.

*Tarberus jacobii* Muir, 1931: 67.

Frons medially ecarinate, a small tumescence near base. Basal metatarsal segment with 9 teeth, 2nd segment with 8 or 9, in both segments all except the outermost teeth being scale-bearing. Sc + R fork, Cu 1 fork and union of claval veins at same level; stigma ill-defined, merged with cell behind it, with about 16 granules in this area anterior to vein Sc.

6 ♂♂ and 2 ♀♀. NEW CALEDONIA: Dzumao Mts., 1-4.IX.1940, F. X. Williams; above Plum, 29.X.1958; Mtn. stream up Boulari River, 3.XI.1958; Tontouta R., 7.XI.1958, C. R. Joyce; Mt. Koghi, III.1959; La Coulée, 23.I.1963, N. L. H. Krauss.

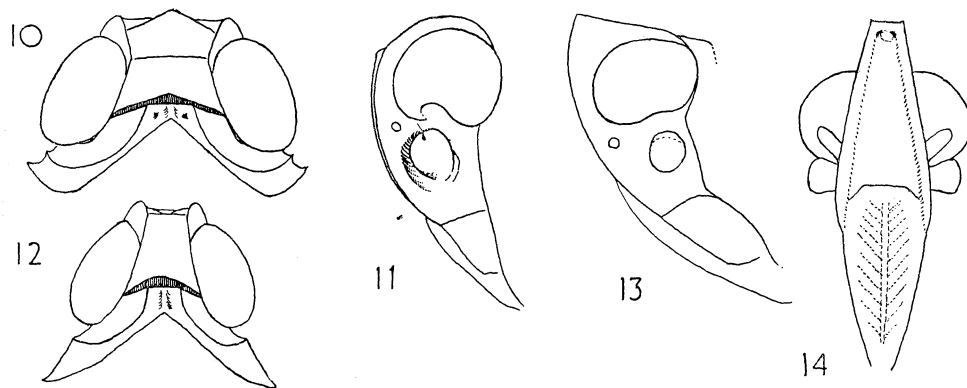


Fig. 10-14. *Cixius montaguei* Distant: 10, vertex and pronotum; 11, head in profile. *Gelastocephalus jacobii* Muir: 12, vertex and pronotum; 13, head in profile; 14, frons and clypeus.

#### Genus *Cixius* Latreille

*Cixius* Lat., 1804: 310. (Logotype: *Cicada nervosa* Latr. 1758: 437).

## KEY TO NEW CALEDONIAN SPECIES OF CIXIUS.

1. Transverse veinlets of tegmen rather broadly overlain with fuscous, 3 spots between M and union of claval veins; lateral fields of mesonotum concolorous with intercarinal areas, more or less infuscate .....3  
 Transverse veinlets of tegmen not overlain with a fuscous suffusion, and no spots on corium or clavus; lateral fields of mesonotum not fuscous, or if so, darker than intercarinal areas.....2
2. Transverse carina of vertex straight; tegmen with stigma broad, markedly wider at base than cell Sc at same level.....**varicolor** Distant  
 Transverse carina of vertex arcuate; tegmen with stigma narrow, little wider at base than cell Sc at same level.....**aragoensis** Dist.
3. Anterior margin of vertex distinctly angulate.....**montaguei** Dist.  
 Anterior margin of vertex transverse.....**apicemaculatus** Dist.

3. **Cixius aragoensis** Distant Fig. 15-21.

*Cixius aragoensis* Dist., 1920: 461.

Aedeagus with a rather small spinose process arising on right 1/4 distance from apex, directed cephalad; a longer stout sinuate spinose process arising at apex, extending cephalad along left side to middle of aedeagus; a deeply rounded lobe dorsally on left in apical quarter; flagellum rather narrow, extending basad for 2/3 of length of aedeagus, a minute tooth ventrally on right at base of membranous portion.

15 ♂♂, 12 ♀♀. NEW CALEDONIA: Nouméa, 19.X.1940, F. X. Williams; in mountains up Boulari River, 3-4.XI.1958, C. R. Joyce; Plaine des Lacs, 2.II.1963, J. L. Gressitt; Yahouè, 22.I.1963, 6 km N of Paita, 25.I.1963, Col des Rousettes, 450-550 m., 4-6.II.1963, La Coulée, 23.I.1963, C. M. Yoshimoto; Montagne des Sources, VIII.1950, La Coulée-Yaté Road, VI.1950; Bourail, III.1959, N. L. H. Krauss. LOYALTY IS: Lifou I., Wé, 16-18.II.1963, Yoshimoto.

4. **Cixius montaguei** Distant Fig. 10, 11.

*Cixius montaguei* Dist., 1920: 461.

7 ♀♀. NEW CALEDONIA: Nouméa, 25.VII.1940, F. X. Williams; Bourail, III.1959, N. L. H. Krauss; La Crouen, 16.III.1961, J. Sedlacek; Yahoué, 22.I.1963, C. M. Yoshimoto; Mt. Koghi, about 600 m, 30.XI.1963, R. Straatman.

5. **Cixius varicolor** Distant Fig. 22-28.

*Cixius varicolor* Dist., 1920: 462.

Aedeagus with a long taeniate process arising ventrally on right apically, directed cephalad, slightly expanded near apex then abruptly narrowing to a point; a long sinuate taeniate process arising on left at

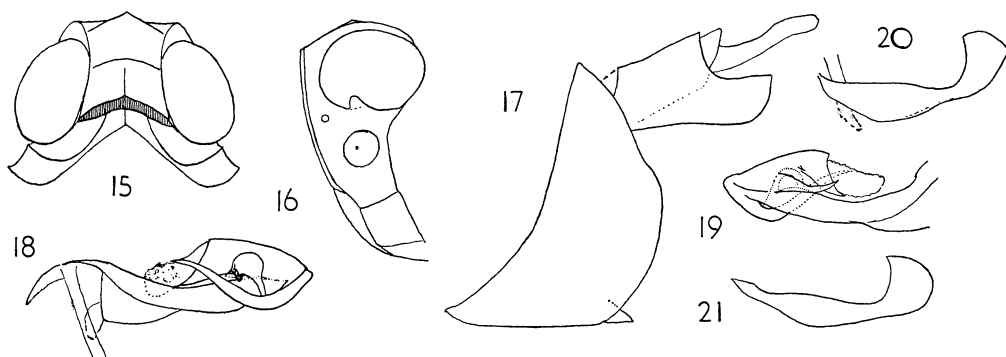


Fig. 15-21. *Cixius aragoensis* Distant: 15, vertex and pronotum; 16, head in profile; 17, pygofer and anal segment, left side; 18, aedeagus, left side; 19, aedeagus, right side; 20, genital style, lateral view; 21, genital style, dorsolateral view.

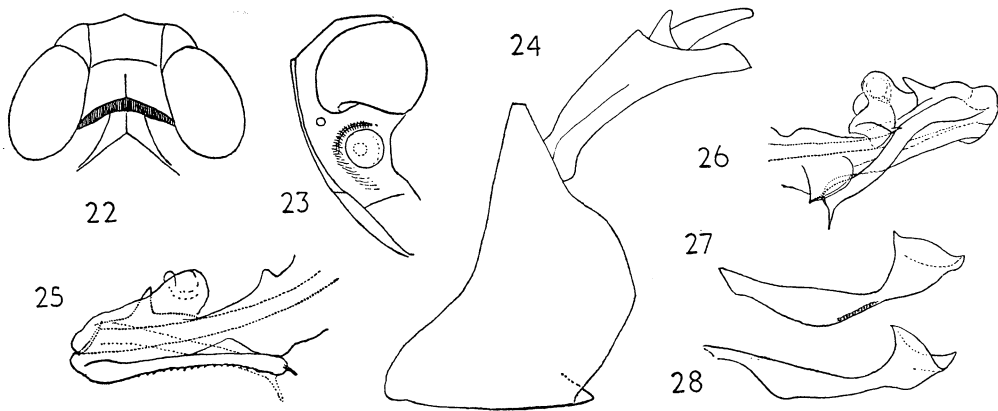


Fig. 22-28. *Cixius varicolor* Distant: 22, vertex and disc of pronotum; 23, head in profile; 24, pygofer and anal segment, left side; 25, aedeagus, right side; 26, aedeagus, left side; 27, genital style, ventrolateral view; 28, genital style, lateral view.

apex directed ventrocephalad, narrowing at apex; a short stout spinose process arising dorsally in apical 1/3 directed dorsad.

2 ♂♂. NEW CALEDONIA: On heights between Thio and Nakety, 12.XI.1958, C. R. Joyce.

6. ***Cixius apicemaculatus*** Distant

No specimens of *apicemaculatus* were examined.

Genus ***Ithma*** Fennah, new genus

Posterior compartment of vertex broader at level of middle of posterior margin than long in middle line (2 : 1), wider between basal angles than at transverse carina (2.4 : 1), posterior margin subrectangulately concave, disc strongly depressed to form a round pit medially; anterior compartment of vertex strongly declivous, almost in same plane as frons, anterior margin rather feebly defined, obtusely angulate; frons longer in middle line than broad (1.4 : 1), lateral margins obtusely convex, foliately produced anterolaterad, disc depressed in basal 1/2, median ocellus distinct, frontoclypeal suture impressed, clypeus tricarinate, with lateral carinae continuing those of frons without interruption, rostrum reaching to level of middle of abdomen, antennae with 2nd segment subglobose, lateral ocelli distinct, eyes only slightly emarginate below, pronotum short, tricarinate, with lateral carinae not quite attaining hind margin, curving behind eyes; mesonotum a little broader than long, tricarinate, with lateral carinae diverging caudad; post-tibia with 5 or 6 teeth and a spine apically, basal metatarsal segment with 6 or 7 teeth, 2nd segment with about 8 teeth. Tegmina with Sc and R forming a common stem basally, M arising separately from basal cell, forking at level of stigma, with 5 or 6 branches at margin, Cu<sub>1</sub> forking at about 1/3 of length of tegmen from base, near level of union of claval veins, R with 3-5 branches at apex, M with 5 branches, Cu 1 with 2, R-M crossvein about level with base of stigma, M-Cu crossvein basad of R-M crossvein by full length of latter.

♀ with pregenital sternite posteriorly transverse. Valvifers of 3rd valvulae laterally tumid, meeting medially, forming a shallow subvertical depression. Ovipositor ensiform, curved upward; 1st valvulae in ventral view each broadly triangulate at base.

Type species: *Ithma charondas* n. sp.

This genus is similar to *Notocixius*, but is separable by the strongly developed median frontal carina, the foliaceous lateral margins of the frons and clypeus, the relatively more basal position of the M-Cu cross-vein, and the relatively more distal union of the claval veins, as figured. It differs from *Koroana* in the shape of the head, the absence of spines laterally on the post-tibia, and the curved

ovipositor. The weakly developed anterior compartment of the vertex recalls the condition in *Diastrocixius*, but *Diastrocixius* differs amply from the present genus, having a rostrum that just attains the posttrochanter, a mesonotum with carinae that are virtually parallel, post-tibia with 6 teeth apically in 2 groups of 3 and tegmina with a costa that is not sinuate near base, and with  $Cu_1$  simple as far as nodal line, and claval veins that unite in basal 1/3 of the clavus. If little weight is attached to the condition of the anterior compartment of the vertex, this genus has much in common with *Pintalia*, but differs in the position of the M-Cu cross-vein in the tegmina, in the absence of a lateral spine on the post-tibia, and in the number of spines at their apices, and in the broadly triangular shape of the basal portion of the 1st valvulae. In Muir's key (*Pan-Pacif. Ent.* 1: 104, 1925) it runs to *Cubana*, from which it differs in the presence of a median ocellus, the less prominent median carina, the sinuate costal margin of the tegmina, and the shape of the female genitalia. From *Cubanella* it differs strongly in the proportions of the vertex, the position of the M-Cu cross-vein and the shape of the stigma, which in *Cubanella* is lenticular, not triangular.

7. ***Ithma charondas*** Fennah, new species Fig. 29–38.

Posterior compartment of vertex broader at level of middle of posterior margin than long in middle (1.7: 1), wider between basal angles than at transverse carina (3: 1), frons longer in middle line than broad (about 1.3: 1). Tegmina with apical cell  $M_3$  not parallel-sided.

Reddish-brown; marginal areas of vertex, frons and clypeus, genae, rostrum, pleura and legs, light yellowish brown. Tegmina hyaline, powdered grayish white, an oblique band, darker anteriorly, from C basally to basal 1/3 of clavus, 3 small spots in distal 1/2 of costal cell and a larger spot, extending from costal margin to R just basad of stigma, stigma, all transverse veinlets, a suffusion, widest posteriorly, in apical 1/2

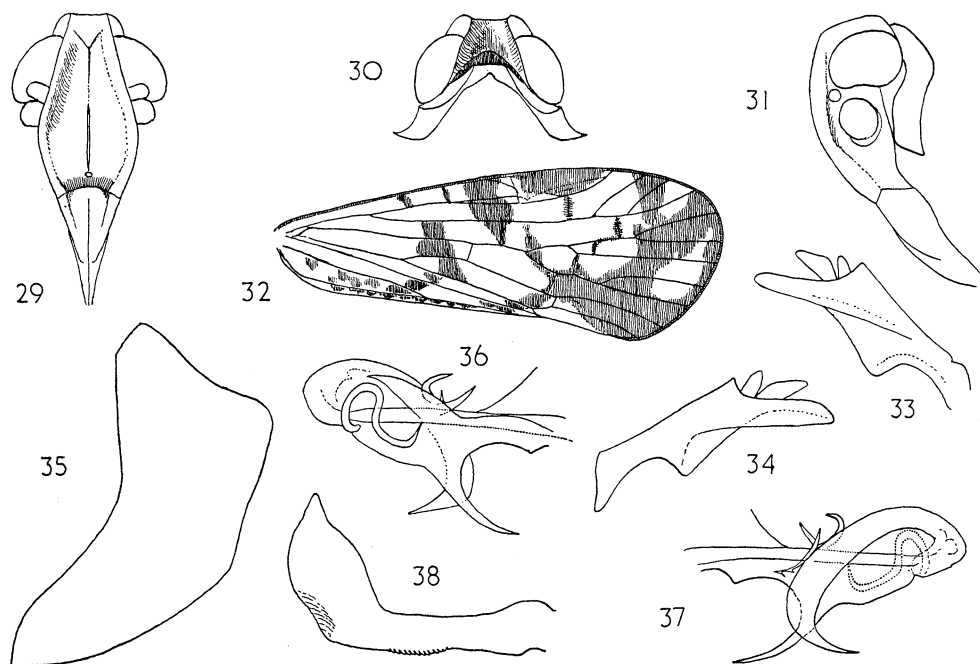


Fig. 29–38. *Ithma charondas*, n. sp.: 29, frons and clypeus; 30, vertex and pronotum; 31, head and pronotum; 32, tegmen; 33, ♂ anal segment, right side; 34, ♂ anal segment, left side; 35, pygofer, left side; 36, aedeagus, right side; 37, aedeagus, left side; 38, genital style, lateral view.

of membrane, and small irregular spots along posterior claval vein, fuscous; claval margin at point of entry of common claval vein, dark fuscous; longitudinal veins concolorous except at junction with apical margin, where they are dull yellow. Wings hyaline, powdered gray, veins fuscous.

♂. Genitalia as figured. Anal segment moderately long, in dorsal view with sides subparallel, apical margin convex, anal foramen 1/3 from apex, lateral margins at middle each produced ventrad in a deeply convex lobe. Pygofer bilaterally symmetrical, medioventral process in ventral view triangular. Aedeagus with 2 processes dorsally on right, 1 spinose, directed dorsocephalad, the other flattened, tapering distad to acuminate apex, directed caudad, a long weakly curved process ventrally in basal 1/3 directed ventrocephalad, a strongly sinuate spinose process arising on right ventrally near apex, extending cephalad; on left side of aedeagus an oblique ridge bearing about 4 minute spines, a stout spinose process arising dorsally on left near middle of aedeagus, directed dorsocaudad then curving to right; flagellum parallel-sided, tapering distally to acuminate apex, curving ventrocephalad across left side. Genital styles near middle curved dorsad through about 60°, apical margin acutely produced. Length, 3.4 mm; tegmen, 4.8 mm.

♀. Length, 4.8 mm.; tegmen, 6.1 mm.

Holotype ♂ (Bishop 7643), New Caledonia: Mt. Panié trail, 8-9.II.1963, N. L. H. Krauss. Paratypes: 2 ♂♂ and 6 ♀♀, Mt. Koghi, 500 m, 26-30.I.1963; Bourail, III.1959, N. L. H. Krauss; 10 km S of Koh, C. M. Yoshimoto.

8. ***Ithma cebrenis*** Fennah, new species Fig. 39-48.

Margins of head overlapping pronotum behind eyes.

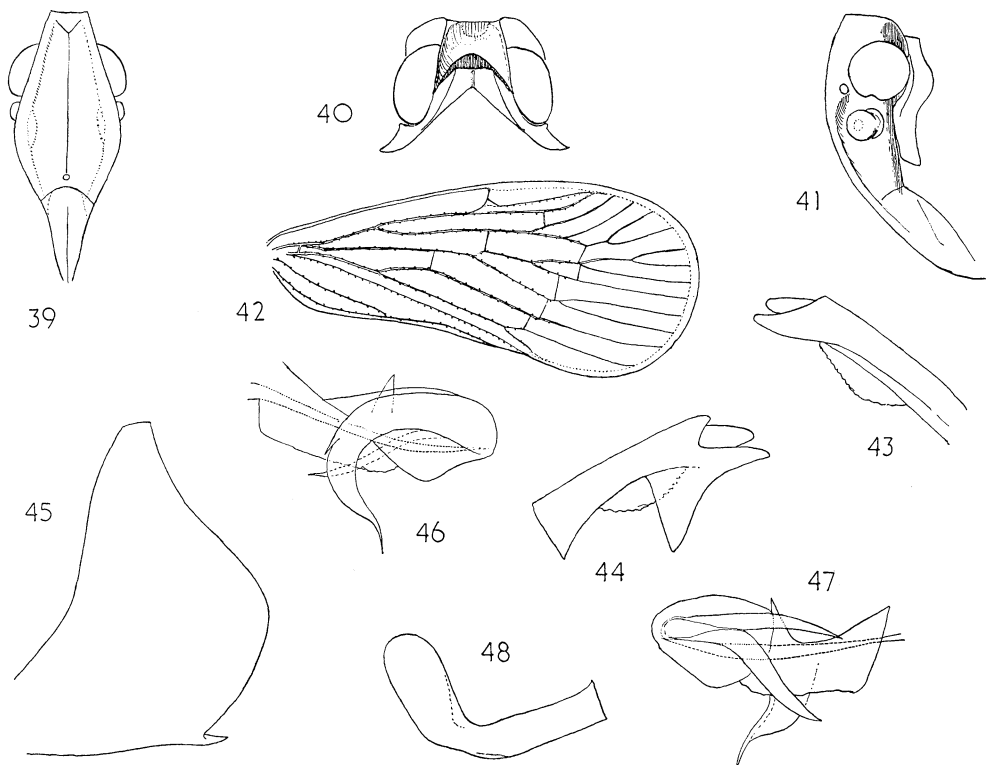


Fig. 39-48. *Ithma cebrenis*, n. sp.: 39, frons and clypeus; 40, vertex and pronotum; 41, head and pronotum; 42, tegmen; 43, ♂ anal segment, right side; 44, ♂ anal segment, left side; 45, pygofer, left side; 46, aedeagus, left side; 47, aedeagus, right side; 48, genital style, lateral view.



Posterior compartment of vertex broader at level of middle of posterior margin than long in middle (2 : 1), wider between basal angles than at transverse carina (about 2 : 1), frons longer in middle line than broad (about 1.7 : 1). Tegmina with apical cells long and parallel-sided distad of transverse line.

Reddish brown; vertex, sides of head above eyes, rostrum, legs, metapleura and pregenital sternite distally, light yellowish brown; genae posteriorly and clypeus laterally, dark fuscous. Tegmina hyaline, powdered grayish white, an oblique band from costa basally to apical 1/3 of clavus, 3 small spots in distal 1/2 of costal cell and a band from apex of costal cell to fork of M, a narrower band at basal 1/3 of tegmen from R to union of claval veins, stigma, all transverse veinlets, a suffusion over distal 1/2 of membrane, except at apical angle and middle of apical margin, and small irregular spots in posterior 1/2 of clavus, fuscous; claval margin at point of entry of common claval vein, dark fuscous; longitudinal veins concolorous except at junction with apical margin, where they are dull yellow; corium sometimes more or less generally suffused with fuscous. Wings dilute fuscous with paler areas, veins fuscous.

♂. Genitalia as figured. Anal segment moderately long, in dorsal view parallel-sided, truncate apically, anal foramen 2/5 from apex, lateral margin of left side strongly produced ventrad distad of middle in an acutely triangular lobe, lateral margin of right side shallowly concave. Pygofer bilaterally symmetrical, medioventral process in ventral view triangular. Aedeagus with a stout spinose process, directed dorsad, on right dorsal margin near middle, a large bifurcate process arising apically on right, the upper limb directed cephalad, the lower ventrocephalad, lying against right side of aedeagus and reaching to its basal 1/4; flagellum curving cephalad then ventrocaudad across left side of aedeagus, acuminate apically, small spinose process dorsally near base and another near middle. Genital styles near middle curved dorsad through 90°, apical margin rounded. Length, 4.0 mm; tegmen, 6.0 mm.

♀. Length, 4.5 mm; tegmen, 6.0 mm.

Holotype ♂ (BISHOP 7644), New Caledonia, Bourail, III.1959, N. L. H. Krauss. Paratypes: 3 ♂♂, 1 ♀, on heights between Thio and Nakety, 12.XI.1958, C. R. Joyce; Mt. Koghi, 600 m, 25.XII.1963, J. L. Gressitt, 27.I.1963, C. M. Yoshimoto.

This species is distinguishable from *I. charondas* by the coloration of the tegmina and the elongate

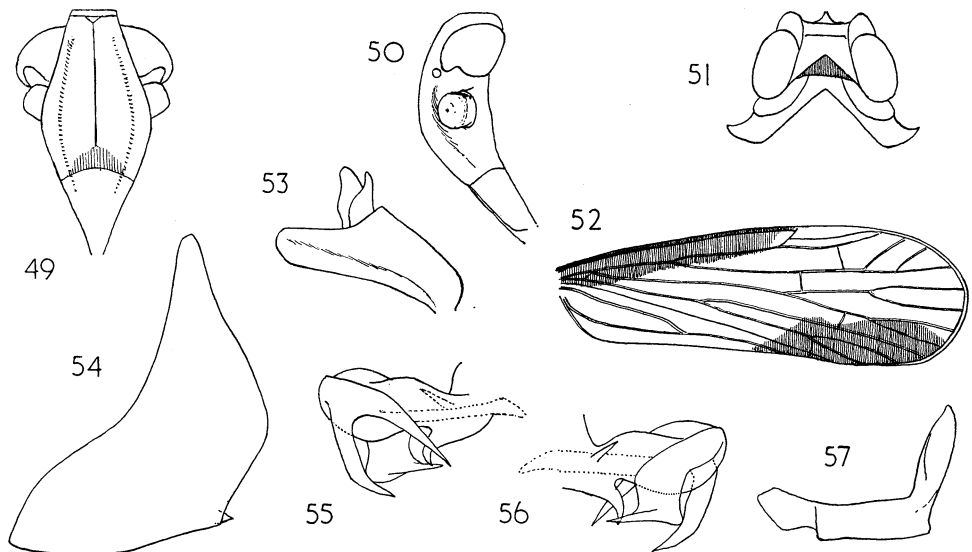


Fig. 49-57. *Ithma sacrator*, n. sp.: 49, frons and clypeus; 50, head in profile; 51, vertex and pronotum; 52, tegmen; 53, ♂ anal segment, right side; 54, pygofer, left side; 55, aedeagus, right side; 56, aedeagus, left side; 57, genital style, lateral view.

apical cells in M which result from the forking of this vein (with the exception of branch 1a) at the transverse line of veinlets, and by differences in ♂ genitalic structure.

#### 9. *Ithma sacrator* Fennah, new species

♂. Vertex broader at level of base of middle line than long in middle (1.7: 1), and wider between basal angles than at anterior margin (1.6: 1), anterior margin transverse, lateral margins shallowly concave, posterior margin obtusely angulately excavate, disc depressed in both compartments; frons longer in middle than broad (about 1.3: 1), lateral margins foliaceous, produced anterolaterad, median carina forked close to base, median ocellus obsolete; postclypeus slightly longer in middle than broad at base (nearly 1.1: 1), rostrum amply surpassing post-trochanter. Pronotum with anterior margin of disc transverse, posterior margin obtusely angulately excavate, disc depressed, median carina weak, lateral carinae not attaining hind margin, curving laterad behind eyes, a weak marginal carina at level of tegulae, mesonotum tricarinate, with lateral carinae markedly diverging basad; legs slender, profemur and mesofemur rather compressed, post-tibia unarmed laterally and with a spine and 5 teeth apically, basal metatarsal segment with 7 teeth apically, 2nd segment with 8 teeth apically. Tegmina longer than broad (3: 1), Sc + R forking at about 1/4 from base, Cul forking at about 1/3 from base, R-M cross-vein at level of stigma, M-Cu cross-vein at middle of tegmen.

Light brownish yellow; pronotum behind eyes, mesonotum except near middle line, fuscous; mesonotum near middle line, yellowish brown. Tegmina subtranslucent, suffused dull yellow; a broad band from basal cell to stigma, lying submarginally in its basal 3/4, apical margin, and a suffusion from anal angle to clavus in its distal 1/5, interrupted at claval apex, dark fuscous, veins concolorous, stigma stramineous. Wings dilute fuscous in basal 1/2 and in apical 1/4, dull yellow elsewhere, veins concolorous in paler portion, dark fuscous in fuscous portion.

♂. Genitalia as figured. Anal segment moderately long, in side view with ventral margin almost straight. Pygofer with posterior margin moderately convex. Aedeagus in side view sinuate, 2 large stout spinose processes on right apically, united at base and directed ventrocephalad, a short spinose process, directed dorsocaudad, dorsally on left at base, a stout curved spinose process arising ventrally in basal 1/3, directed ventrad, flagellum submembranous, broad, truncate distally and with 1 apical angle acutely produced. Genital styles moderately long and narrow, angulately bent dorsocaudad in distal 2/5, acute at apex. Length, 3.0 mm; tegmen, 4.8 mm.

Holotype ♂ (BISHOP 7645), New Caledonia, Vallée d'Amoa, 7.II.1963, C. M. Yoshimoto.

This species stands apart from *I. charondas* and *I. cebrenis* in the structure of the anterior compartment of the vertex, which is bounded anteriorly by a distinct transverse carina, and by bodily and tegminal coloration. The position of the M-Cu crossvein in the tegmen, and the general structure of the genitalia appear to justify the present generic assignment, though it may have to be reconsidered when more species of the genus have been seen.

#### Genus *Myndus* Stål

*Myndus* Stål, 1862: 307 (Logotype: *Flata musiva* Germar, 1825: pl. 21).

At various times genera of broadly Myndine facies have been proposed for species-groups in different zoogeographical regions, as, for example, *Haplaxius*, *Paramyndus*, *Nymphocixia*, *Tiriteana*, *Colvanalia*, and *Myndorus*. Some, such as the 2nd mentioned, have been suppressed, and the remainder need reevaluation. *Tiriteana* can be separated by the combined characters of lateral pronotal discal carinae that do not nearly reach the posterior margin, but curve laterad, a costal cell that is not bounded apically by a transverse callus, a stigma that is narrow and not at all callused, and a relatively large and broad depressed wax-bearing area above the ovipositor. In *Brixia concinnula* Wlk., the type of *Colvanalia*, the lateral pronotal lobes are acute at their exterior angle, the legs are relatively short, and the femora and tibiae of the fore and middle pairs of legs are moderately compressed, the post-tibia is laterally unarmed and has 6 spines apically, the basal

metatarsal segment has 8 teeth, 1 set a little basad of the remainder, and the 2nd segment has 6 teeth; Sc + R forks at 1/3 from base, M forks at the nodal line, and Cul at the middle of tegmen; claval veins unite at about 2/3 from base of clavus; stigma broad and callused, and with no callus at distal edge of costal cell; R is 2-branched apically, M 5-branched, and Cul 2-branched, and the R-M and M-Cu crossveins situated at level of nodal line. The 3rd valvifers shallowly hollowed along their line of junction above ovipositor, which is curved upward. Pregenital sternite narrow, and in its median portion transverse. The 1st valvulae are each flattened and broadly triangular at base.

Apart from slight differences in the number of post-tarsal teeth, and in the position of the forks in the tegminal venation, these characters are found in all the Pacific insular species that have been placed in *Myndus* or *Myndorus*. It is accordingly necessary to suppress *Myndorus* under *Colvanalia*. The question whether *Colvanalia* is separate from *Myndus* is still under consideration. For the purpose of this report I propose to regard *Colvanalia* as a subgenus of *Myndus*, defined by the broad callused form of the stigma and the broadly triangular and flattened form of the base of the 1st valvula of the ovipositor.

Subgenus **Colvanalia** Muir, new status.

*Colvanalia* Muir, 1925: 162. (Orthotype: *Brixia concinnula* Walker 1870: 110).  
*Myndorus* Metcalf, 1954: 3. **New synonym** of subgenus.

10. **Myndus (Colvanalia) rumina** Fennah, new species Fig. 58-67.

♂. Vertex scarcely longer in middle than broad at base of middle line, broader between basal angles than at apex (1.7: 1), anterior compartment longer than posterior compartment, both measured along middle

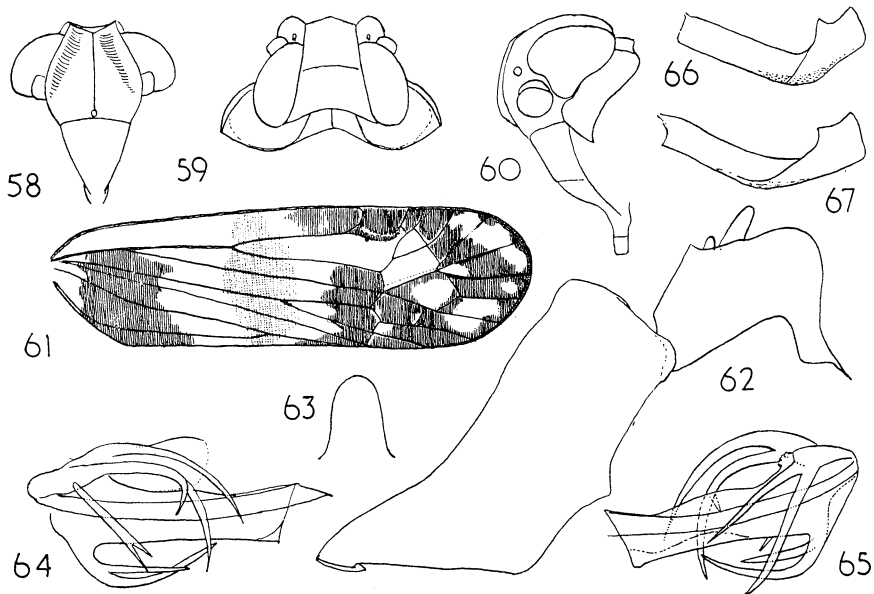


Fig. 58-67. *Myndus rumina*, n. sp.: 58, frons and clypeus; 59, vertex and pronotum; 60, head and pronotum, side view; 61, tegmen; 62, pygofer and anal segment, left side; 63, medioventral process of pygofer; 64, aedeagus, right side; 65, aedeagus, left side; 66, genital style, ventrolateral view; 67, genital style, lateral view.

line (1.2: 1). Rostrum reaching to protrochanter. Post-tibia with 9 teeth apically, basal metatarsal segment with 8 teeth, 2nd segment with 6. Tegmina with M united with Sc + R in basal 1/4. Fuscous; frons lateroapically, lateral margins of vertex, and an area in middle of mesonotum, tawny; rostrum, antennae, lateral fields of pronotum, tegulae in part, post-tibia basally and in distal 1/2, and post-tarsus, pallid stramineous. Tegmina hyaline, in basal 1/2 suffused with dilute yellowish brown, in distal 1/2, grayish, a diffuse band from costal margin at base to inner angle of commissural margin, a fainter band from costa to commissural margin across middle of tegmen, costal cell distally, stigma, a broad band between R and apex of clavus, adjoining nodal line of transverse veinlets basally, and a suffusion between M and posterior margin adjoining nodal line distally, a curved band in membrane parallel to apical margin, M1 + 2 and M2 from nodal line to apical margin, and a spot at junction of each vein with apical margin, fuscous; veins concolorous, transverse veinlets mostly stramineous. Wings dilute fuscous, with dark fuscous veins.

Anal segment of ♂ hood-like, apical angles each strongly produced ventrad, and abruptly acuminate at tip. Pygofer moderately long, posterior margin produced caudad at middle in a small triangular lobe, medioventral process longer than broad, deeply rounded apically. Aedeagus moderately long, shallowly sinuate, produced ventrally at apex in a stout process from which arise 3 long spinose branches, one directed cephalad, the others laterocephalad to right and to left; 2 long straight spinose processes, united at their bases, arising dorsally on left at apex of aedeagus, directed ventrocephalad; flagellum with a straight, distally forked, spinose process near base, directed ventrocephalad, and a long slender spinose process arising dorsally near base, directed cephalad and curving ventrad; 2 spinose processes distally, 1 short, directed ventrocaudad, the other long, directed ventrad. Genital styles as figured. Length, 3.0 mm; tegmen, 3.5 mm.

Holotype ♂ (BISHOP 7646), New Caledonia, Mt. Koghi, 500 m, I.1963, N. L. H. Krauss.

This species is distinguished by the proportions of the vertex, coloration and structure of the ♂ genitalia. The shape of the vertex is not unlike that of the Fijian *Myndus anterior* Fenn. but the 2 species differ markedly in coloration.

#### Genus *Oliarus* Stål

*Oliarus* Stål, 1862: 306. (Logotype: *Cixius walkeri* Stål, 1859: 272).

#### KEY TO SPECIES OF OLIIARUS IN NEW CALEDONIA

1. Basal segment of hind tarsus with about 16 teeth on apical margin (subg. *Nesopompe* Kirk.).....**felis**  
Basal segment of hind tarsus with not more than 7 teeth.....2
2. Genae abruptly and deeply impressed immediately below ocelli. Pre-antennal fenestrae absent or very small and obscure.....3  
Genae not abruptly and only rather shallowly impressed immediately below ocelli. Pre-antennal fenestrae distinct, elongate-oval.....4
3. Median carina of frons forking broadly close to base.....**ariston**  
Median carina of frons forking narrowly near middle.....**lubra**
4. Intermediate carinae of mesonotum farthest apart near anterior end, gradually converging basad.....5  
Intermediate carinae of mesonotum evenly arcuate, farthest apart at middle.....**ocyrrhoe**
5. Tegmen with stigma narrowly triangular; transverse vein at base of clavus between claval suture and 1st claval vein pigmented, distinct.....**elvina**  
Tegmen with stigma rather broadly triangular; transverse vein between claval suture and first claval vein not pigmented, indistinct.....**orbona**
11. ***Oliarus ariston*** Fennah, new species      Fig. 68-77.

Vertex longer in middle line than broad at middle of posterior margin (nearly 1.3: 1), lateral margins moderately elevated in posterior 1/2, almost parallel, lateral compartments each longer than broad at apex (about 2.4: 1), sublateral carinae uniting with lateral margins at middle, median carina distinct in basal 1/2; frons broader at widest part than long in middle (1.4: 1), in profile straight from base to median ocellus,

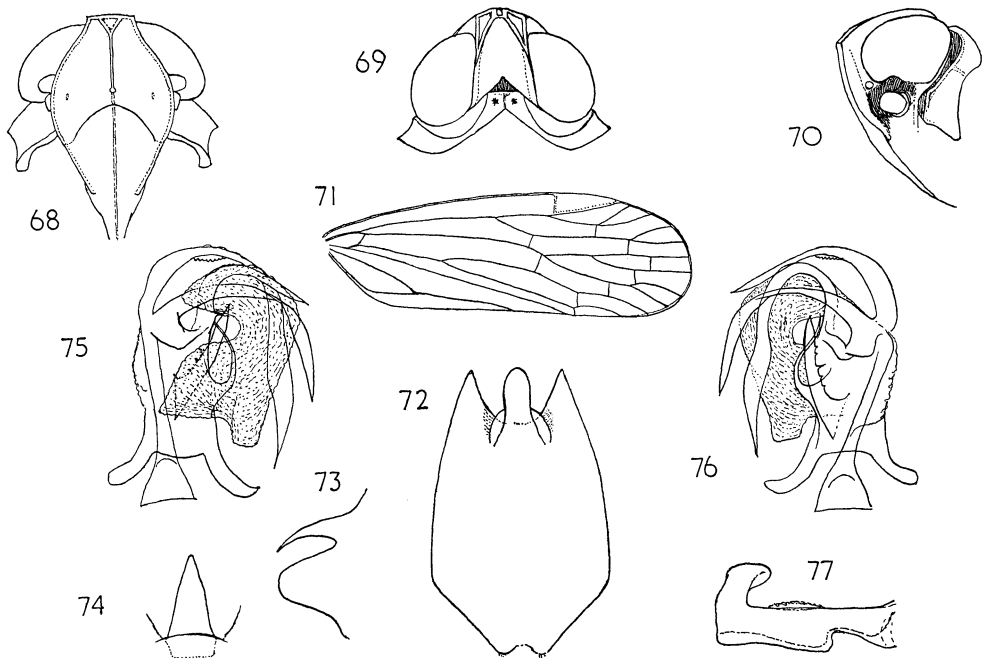


Fig. 68-77. *Oliarus ariston*, n. sp.: 68, frons and clypeus; 69, vertex and pronotum; 70, head in profile; 71, tegmen; 72, ♂ anal segment; 73, lateral margin of pygofer, right side; 74, medioventral process of pygofer; 75, aedeagus, dorsal view; 76, aedeagus, ventral view; 77, genital style, lateral view.

disc shallowly concave towards lateral margins, lateral margins moderately produced laterad, pre-ocular fenestrae obscure, pre-antennal fenestrae distinct, median carina prominent, but not subfoliate, simple on disc, forked broadly at about 1/5 from base, median ocellus distinct; post-clypeus in profile shallowly convex, anteclypeus also shallowly convex; rostrum a little surpassing mesotrochanters. Post-tibia with 3 spines laterally, six apically; basal metatarsal segment with 7 teeth, 2nd segment with 5 teeth.

Dark reddish brown; margins and carinae of head, pronotum, mesonotum and mesopleura, and tegulae entirely, fulvous; basal segment of rostrum, legs, genital styles and mesonotal disc between lateral and intermediate carinae, yellowish brown. Tegmina hyaline, faintly tinged brownish yellow, veins and stigma yellowish brown with granules darker. Wings hyaline, with veins fuscous.

♂. Genitalia as figured. Anal segment large, in dorsal view broadest at 1/4 from base, gradually tapering distad, apical margin deeply concave. Pygofer with right posterior margin produced caudad in a narrow, acute, almost spiniform process, and a deeply rounded lobe a little below it, left posterior margin produced caudad in a subtriangular lobe; medioventral process rather narrow, acute, thick and laterally compressed. Aedeagus distally with 3 long stout processes, subequal in length, acuminate apically, and curved from right to left, and then cephalad or laterocephalad, a stout ensiform process arising ventrally near base, directed laterocaudad, a broadly based but slender sinuate spinose process arising laterally on left, directed caudad. Genital styles rather small, shallowly sinuate and with dorsal and ventral surfaces parallel in basal 4/5 rectangularly bent upwards in apical 1/5, tapering and recurved cephalad. Length, 4.0 mm; tegmen, 4.8 mm.

♀. Pregenital sternite convex, weakly excavate at middle. Length, 5.0 mm; tegmen, 5.8 mm.

Holotype ♂ (VISHOP 7647), New Caledonia, hills behind Nouméa, VIII.1940, ex *Casuarina*, F.X. Williams. Paratypes: 20 ♂♂, 10 ♀♀: New Caledonia, Nouméa, VIII, 1940, swept off grass and yellow *Ipomoea* plants; near Nouméa, 28.VIII.1940, F.X. Williams; Ansé Vata, 6, 30.III.1961, from *Acacia*, Sedlacek, 23.X., 9, 22.XI.1958, Joyce; Thio, III.1959, Krauss; Bourail, 4-6.II.1963,

Yoshimoto & Krauss; Vallée d'Amoa, 7.II.1963, Krauss; Plum, 23.I.1963, Krauss. 2 ♀♀, Isle of Pines, III.1959, Krauss.

This species is distinguished by the characters given in the key, by the shape of the distal margin of the ♂ anal segment, and of the posterior margin of the pregenital sternite. It differs from the Fijian *O. tasmani* Kirkaldy in the relatively longer lateroapical areolets of the vertex and in the number of teeth on both segments of the hind tarsus.

12. ***Oliarus ocyrrhoe*** Fennah, new species

♀. Vertex longer in middle line than broad at middle of posterior margin (1.3: 1), lateral margins moderately elevated in posterior 1/2, moderately converging distad as far as junction with sublateral carinae, lateral compartments each only a little longer than broad, sublateral carinae uniting with lateral margins at about 1/3 of their length from apex, median carina feebly present in basal 1/2 of disc; frons broader at widest part than long in middle (about 1.6: 1), in profile straight from base to median ocellus, disc shallowly sulcate towards sides, lateral margins rather strongly produced anterolaterad, pre-ocellar fenestrae each indicated only by a depression, pre-antennal fenestrae distinct, median carina prominent, fine, simple on disc, broadly forked at about a 1/4 from base, median ocellus distinct; post-clypeus in profile shallowly convex, anteclypeus sinuate-convex. Rostrum surpassing post-trochanter, attaining level of Sc + R fork in folded tegmen. Post-tibia with 3 or 4 spines laterally, 6 apically, basal metatarsal segment with 7 teeth apically, 2nd segment also with 7.

Stramineous to ochraceous; a suffusion on vertex between eyes, apical areolets of vertex, a diffuse band across frons at level of ocelli, a spot on each side of clypeus basally, sides of head above eyes, and around ocelli, side of anteclypeus, pronotum behind eyes (with exception of carinae and margins), mesonotum laterally and on each side of middle line, rostrum apically, mesopleura, postcoxa, 2 diffuse transverse bands on profemur, 2 transverse bands on protibia and mesotibia, tarsi, abdominal segments except at hind margin, and ♀ genitalia, yellowish brown to dark fuscous. Tegmina hyaline, longitudinal veins interruptedly, a broad irregular fascia from stigma to margin just distad of apex of clavus, transverse veinlets, 5 spots at apical margin, clavus basally and between common vein and commissural margin, fuscous. Wings hyaline, powdered white, veins fuscous.

7th sternite of ♀ with posterior margin shallowly convex, not at all excavate medially. Length, 5.0 mm; tegmen, 5.7 mm.

Holotype ♀ (BISHOP 7648), Loyalty Is, Lifu I., Wé, 16-18.II.1963, C.M. Yoshimoto. Paratypes: 2 ♀♀, same data.

This species is recognisable by the characters given in the key, and by the shape of the posterior margin of the pregenital sternite. This species bears some resemblance to the Australian *O. doddi* Muir, but differs in having the intermediate carinae of the mesonotum more strongly arcuate, and in the tegmen, in Sc + R forking nearer to the base and in vein Sc (from the base of the stigma to the apical margin) being less strongly curved.

13. ***Oliarus lubra*** Kirkaldy Fig. 83-94.

*Oliarus lubra* Kirk., 1906: 400.

Vertex longer in middle line than broad at middle of posterior margin (1.2: 1), lateral margins moderately elevated in posterior 1/2, slightly concave, lateral compartments each longer than broad at apex (about 2.5: 1), sublateral carinae uniting with lateral margins distinctly basad of middle, median carina distinct in basal 3/4; frons broader at widest part than long in middle (1.4: 1), in profile shallowly convex; disc a little impressed distally on each side of middle line, lateral margins slightly produced laterad, pre-ocellar fenestrae each indicated only by a depression, pre-antennal fenestrae weakly present, median carina prominent, rather coarse, simple in distal 1/2, narrowly forked in basal 1/2, median ocellus distinct; postclypeus in profile straight, anteclypeus shallowly convex. Rostrum a little surpassing mesotrochanters. Post-tibia with 3 or 4 spines laterally, and 6 at apex; basal metatarsal segment with 7 teeth apically, 2nd segment with 5 teeth.

Dark yellowish brown; carinae and margins of head and thorax, entire tegulae, legs, abdominal segments

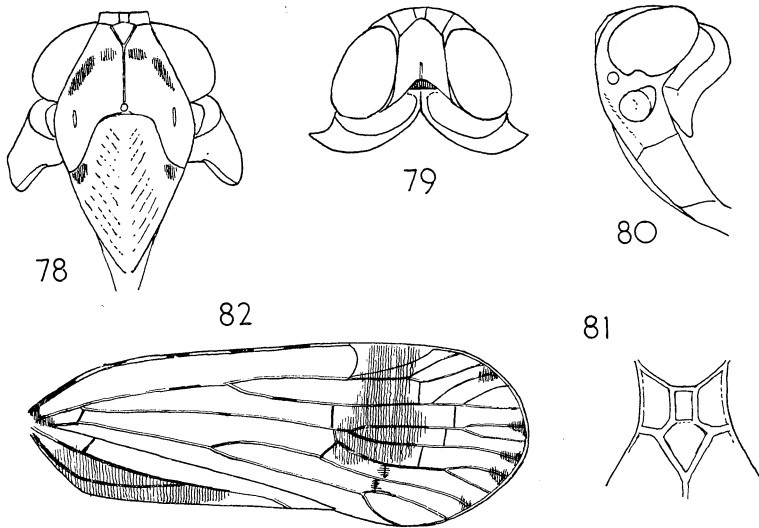


Fig. 78-82. *Oliarus ocyrrhoe*, n. sp.: 78, frons and clypeus; 79, vertex and pronotum; 80, head in profile; 81, carinae at apex of head; 82, tegmen.

along posterior margin, and ♂ genitalia, light yellowish brown. Tegmina yellowish hyaline, stigma light yellowish brown, veins concolorous apart from transverse veinlets and apical veinlets which are fuscous. Wings hyaline, with fuscous veins.

♂. Anal segment broadly subovate, apical margin shallowly concave, anal foramen near apex. Pygofer with lateral margins each produced caudad in a broad lobe, shallowly excavate as figured. Aedeagus with a short stout spinose process ventrally at about 1/3 from base, directed caudad; a stout process arising dorsally on left near apex, dividing into 2 unequal spinose processes, 1 directed laterad to left, the other very sinuous, extending across aedeagus to right side then decurved; a stout process arising on right at apex, dividing into 3 unequal spinose processes that extend above aedeagus to left; flagellum broad. Genital styles approximately L-shaped, widest at 1/3 from base, curving laterad distally, and anteriorly at apex, as figured. Length, 4.4 mm; tegmen, 5.0 mm.

♀. Length, 6.0 mm; tegmen, 7.5 mm.

15 ♂♂, 40 ♀♀. NEW CALEDONIA: Nouméa, 2.VII, 20.VIII, 30.X.1940, swept off *Lantana*, ex *Acacia laurifolia*, F.X. Williams; hills behind Nouméa, VIII.1940, Williams; Bourail, 4-6.II.1963, C. Yoshimoto and N. Krauss; Ansé Vata, 8.XI.1958, C.R. Joyce; St. Louis, III.1959, Krauss; Ouaco, 20.X.1950, Joyce; Tontouta R., 7.XI.1958, Joyce.

14. ***Oliarus (Nesopompe) felis*** Kirkaldy Fig. 95-99.

*Oliarus felis* Kirk., 1906: 399.

5 ♂♂. NEW CALEDONIA: Ansé Vata, 25.X.1958, C.R. Joyce.

The ♂ genitalia illustrated are those of a specimen from Brisbane, Queensland. No differences were observed between the genitalia of the Australian and New Caledonian populations.

15. ***Oliarus elvina*** Fennah, new species Fig. 100-106.

♀. Vertex narrower at level of middle of posterior margin than long in middle line (about 1: 1.2), lateral margins rather strongly elevated, moderately converging distad as far as junction with sublateral carinae, lateral compartments declivous anteriorly, each about as long as broad, sublateral carinae uniting with lateral margins at about 1/4 of their length from apex, median carina weakly present in basal 1/2 of vertex; frons broader at widest part than long in middle line (about 1.2: 1), in profile very shallowly concave,

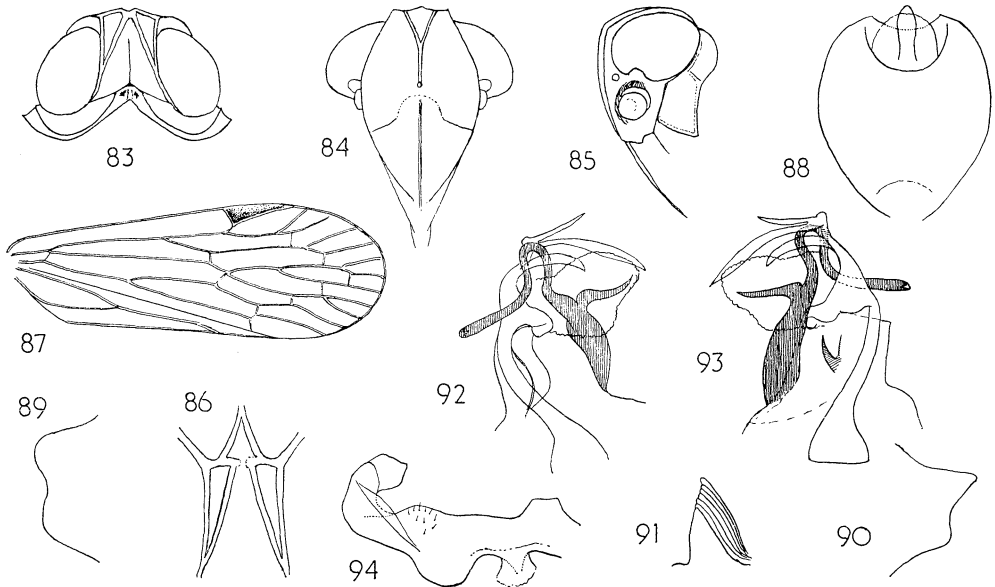


Fig. 83-94. *Oliarus lubra* Kirkaldy: 83, vertex and pronotum; 84, frons and clypeus; 85, head and pronotum, lateral view; 86, carinae at apex of head; 87, tegmen; 88, ♂ anal segment; 89, lateral margin of pygofer, right side; 90, the same, left side; 91, medioventral process of pygofer, ventrolateral view; 92, aedeagus, dorsal view; 93, aedeagus, ventral view; 94, genital style, lateral view.

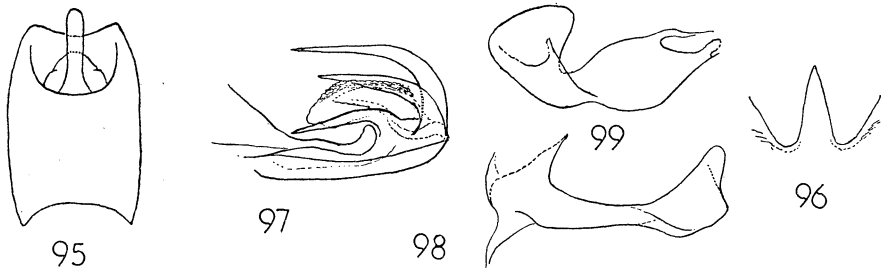


Fig. 95-99. *Oliarus felis* Kirkaldy: 95, ♂ anal segment, dorsal view; 96, medioventral process of pygofer; 97, aedeagus (with lobe of right side detached) ventral view; 98, lobe of right side of aedeagus, ventral view; 99, genital style, ventrolateral view.

almost straight, from base to median ocellus, disc broadly sulcate near lateral margins, lateral margins rather strongly produced anterolaterad, pre-ocellar fenestrae present, pre-antennal fenestrae distinct, median carina prominent, rather fine, simple in distal 3/4, broadly forked in basal 1/4, median ocellus distinct; post-clypeus in profile markedly convex, anteclypeus very shallowly convex, rostrum surpassing post-trochanters, and attaining level of Sc + R fork in folded tegmen. Post-tibia with 6 spines laterally and 6 at apex, basal metatarsal segment with 7 teeth apically, 2nd segment with 5 to 7 teeth. Tegmina with stigma narrowly wedge-shaped; R-M cross-vein in tegmen not nearly in line with M-Cu.

Light yellowish brown; margins and carinae of head, pronotum except on lateral lobes, pale ochraceous; a suffusion on disc of vertex, areolets at apex of vertex, frons basally, clypeus adjoining frontoclypeal suture, distal 2/3 of apical segment of rostrum, a diffuse transverse band on profemur and mesofemur distally, and



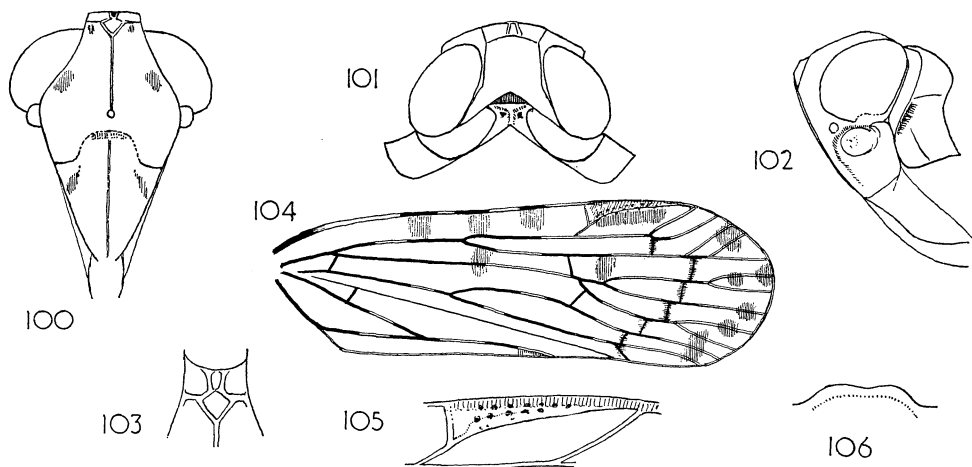


Fig. 100–106. *Oliarus elvina*, n. sp.: 100, frons and clypeus; 101, vertex and pronotum; 102, head and pronotum, lateral view; 103, carinae at apex of head; 104, tegmen; 105, stigma; 106, posterior margin of ♀ pregenital sternite.

on protibia and mesotibia apically and basally, and all tarsi distally, dark fuscous. Tegmina yellowish hyaline, stigma yellowish brown, veins ivory white interrupted with fuscous, distal transverse veinlets and about 4 spots near apical margin, fuscous. Sc + R infuscate immediately basad of fork. Wings hyaline, faintly infumated distally, veins fuscous.

Anal segment of ♀ relatively large, broader than long (about 1.3: 1), broadly subtriangular. 7th sternite produced caudad in its median 1/3 in a short rectangulate lobe with obtusely rounded lateral angles. Length, 6.5 mm; tegmen, 7.0 mm.

Holotype ♀ (BISHOP 7649), New Caledonia, Mt. Koghi, 500 m, 26–30.I.1963, N.L.H. Krauss. Paratype: 1 ♀, New Caledonia: 10 km S of Koh, 31.I.1963, C.M. Yoshimoto.

In addition to the characters given in the key, this species is recognisable by the boldly-marked veins, with white alternating with dark fuscous, and by the shape of the hind margin of the pregenital sternite. *O. elvina* differs from the Australian *O. hackeri* Muir and *O. incerta* Distant in the relatively shorter frons and clypeus, the markedly less acute profile of the head, the more basal position of the fork of Sc + R, and the fewer teeth on the basal segment of the metatarsus.

#### 16. *Oliarus orbona* Fennah, new species Fig. 107–118.

Vertex narrower at level of middle of posterior margin than long in middle line (about 1: 1.2), lateral margins strongly elevated, converging distad as far as junction with sublateral carinae, lateral compartments declivous anteriorly, each about as long as broad, sublateral carinae uniting with lateral margins at about 1/4 of their length from apex, median carina weakly present in basal 1/2 of vertex; frons broader at widest part than long in middle line (about 1.3: 1), in profile very shallowly concave, almost straight, from base to median ocellus, disc broadly sulcate near lateral margins, lateral margins rather strongly produced antero-laterad, pre-ocellar fenestrae absent or obscure, pre-antennal fenestrae distinct, median carina prominent, rather fine, simple in distal 3/4, moderately broadly forked in basal 1/4, median ocellus distinct; postclypeus in profile shallowly convex, anteclypeus also shallowly convex; rostrum surpassing post-trochanter, and surpassing level of Sc + R fork in folded tegmen. Post-tibia with 4 to 6 spines laterally and 6 at apex, basal metatarsal segment with 7 teeth apically, 2nd segment also with 7. Tegmina with stigma rather broadly wedge-shaped, R-M crossvein in tegmen almost in line with M-Cu.

Light yellowish brown; margins and carinae of head, pronotum except on lateral lobes, and sometimes

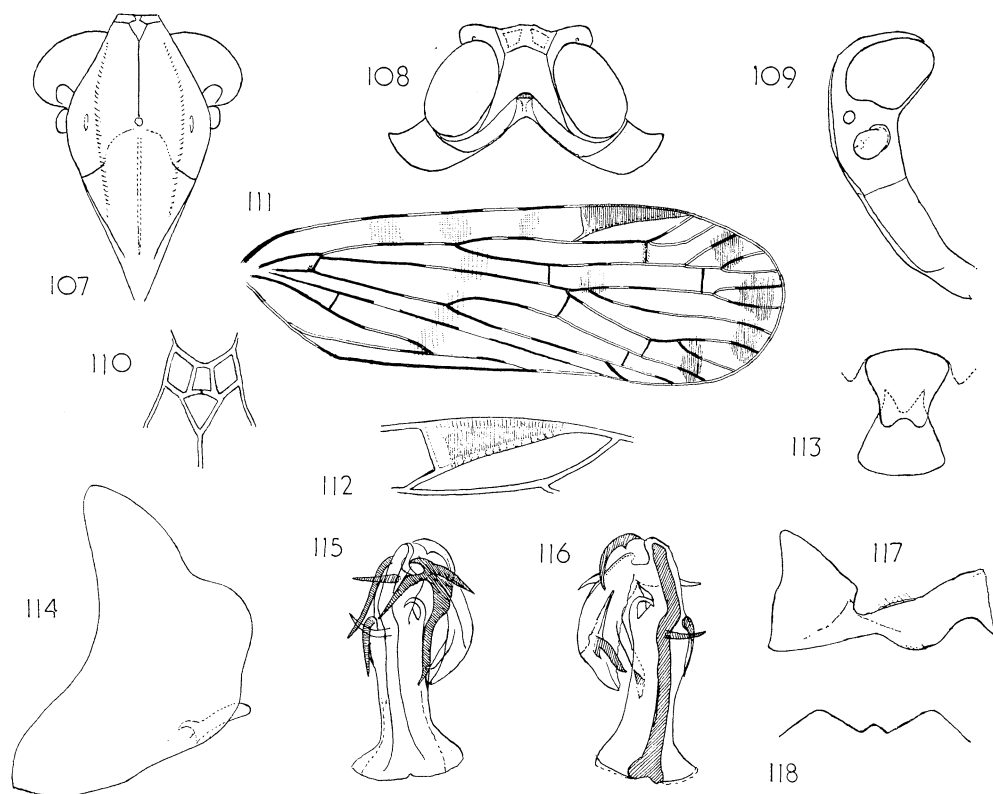


Fig. 107-118. *Oliarus orbona*, n. sp.: 107, frons and clypeus; 108, vertex and pronotum; 109, head in profile; 110, carinae at apex of head; 111, tegmen; 112, stigma; 113, ♂ anal style, dorsal view; 114, pygofer, left side; 115, aedeagus, dorsal view; 116, aedeagus, ventral view; 117, genital style, ventrolateral view; 118, posterior margin of ♀ pregenital sternite.

margins of mesopleura, pale ochraceous; a suffusion on disc of vertex, areolets at apex of vertex, frons basally, frontoclypeal suture, apical segment of rostrum, a diffuse transverse band on profemur and mesofemur distally, and on protibia and mesotibia apically and basally, and all tarsi distally, dark fuscous. Tegmina yellowish hyaline, stigma ochraceous at edges, otherwise yellowish brown, veins ivory white interrupted with yellowish brown or dark fuscous, distal transverse veinlets and about 4 spots near apical margin, fuscous. Sc + R pale immediately basad of fork. Wings hyaline, faintly infumed distally, veins fuscous.

♂. Anal segment rather elongate-ovate, apical margin short, transverse, anal style distally flattened, subtriangular, its distal margin transverse. Pygofer with lateral margins each produced caudad in a broadly convex lobe, medioventral process rather long and narrow. Aedeagus comparatively narrow, a short stout spinose process, directed caudad, on left at middle, a spinose process, incurved distally, arising dorsally on left at 1/4 from apex, a long stout spinose process arising on right at 1/3 from base, directed caudad, then curved dorsad and cephalad, a shorter stout spinose process arising ventrally just distad of middle directed to right, a long spinose process on right at apex, directed cephalad, this being crossed dorsally near its base by a shorter spinose process directed laterad to right; a rather short stout curved spinose process apically, curving cephalad; flagellum armed with 3 short stout spinose processes basally and 2 longer processes, directed anteriorly, near middle, as figured. Genital styles almost bulbous in basal 1/3, then strongly excavate dorsally, and abruptly expanding distally in a trapezoidal lobe, as figured. Length, 6.0 mm; tegmen, 7.1 mm.

♀. Length, 6.1 mm; tegmen, 7.5 mm.

Holotype ♂ (BISHOP 7650), New Caledonia, near stream up Boulari River, 3.XI.1958, C.R. Joyce. Paratypes: 1 ♂, 5 ♀♀, New Caledonia, Mt. Koghi, 500 m, I.1963; Col de la Pirogue, 14. II.1963, Krauss; Sarraméa, 12.II.1963, Yoshimoto; Forêt de Thy, 530 m, 8.III.1961, Sedlacek.

This species is closely similar to *O. elvina*, but differs in the narrower fork at the base of the median carina of the frons, in the almost complete absence of the pre-ocellar fenestrae, the relatively broader stigma in the tegmen, and the near alignment of cross-veins R-M and M-Cu. Females are readily separable by the shape of the posterior margin of the pregenital sternite. This species differs from *O. hackeri* Muir and *O. incerta* Distant in the same way as does *O. elvina*.

Family DELPHACIDAE Leach

Genus **Ugyops** Guérin-Ménéville

*Ugyops* G.-M., 1834a: 477. (Haplotype: *U. percheronii* G.-M. 1834, *ibid.*)

KEY TO NEW CALEDONIAN SPECIES OF UGYOPS

1. Post-tibia with 3 spines laterally.....2  
Post-tibia with 2 spines laterally.....8
- 2 (1). Frons marginally spotted with orange, red or fuscous.....3  
Frons not so marked.....5
- 3 (2). Tegmina narrowly rounded apically; frons transversely banded with dark fuscous (New Caledonia) .....4  
Tegmina broadly rounded apically; frons not transversely banded with fuscous (Lifu) .....**lifuanus**
- 4 (3). Pronotum with lower lateral marginal carina bordered with fuscous throughout its length. Wings reaching to apex of abdomen, and tegmina amply surpassing it.....**atreces**  
Pronotum with lower lateral marginal carina only feebly bordered with fuscous on lower side. Wings not reaching to anal segment, and tegmina only a little surpassing it .....**planguacula**
- 5 (2). Frons with 2 submedian carinae, united at base and apex.....6  
Frons with a single median carina.....7
- 6 (5). Tegmina with claval suture complete (Lifu) .....**arestor**  
Tegmina with claval suture obsolete distally (New Caledonia) .....**lato**
- 7 (5). Tegmina with claval suture distinct, attaining posterior margin; line of transverse veinlets well-developed, straight (New Caledonia).....**manturna**  
Tegmina with claval suture obsolete, not reaching posterior margin, transverse veinlets obscure, not forming a straight line (New Caledonia) .....**taranis**
- 8 (1). Vertex only as wide at apex as at base of middle line; frons more than 2 × as long as broad .....9  
Vertex wider at apex than at base of middle line; frons not more than 2 × as long as broad.....10
- 9 (8). Basal segment of antenna 5 × as long as broad at apex; intercarinal areas of frons with only a faint fuscous longitudinal band (New Caledonia).....**nemestrinus**  
Basal segment of antenna nearly 6 × as long as broad at apex; intercarinal areas of frons with a dark fuscous longitudinal band (Maré) .....**butleri**
- 10 (8). Head in profile with eyes ovate, sides of head scarcely elevated above them (New Caledonia) .....**houadouensis**  
Head in profile with eyes almost circular, obliquely truncate behind, sides of head moderately elevated above them.....11
- 11(10). Fore and middle tibiae transversely banded with fuscous; frons wider at widest part than

- at base (at least 1.8: 1); tegmina with R uniting with Sc at about a 1/4 of length of tegmen from base.....12
- Fore and middle tibiae not banded with fuscous; frons wider at widest part than at base (1.7: 1); tegmina with R uniting with Sc only close to base, or uniting with M near base (New Caledonia) .....**menelaus**
- 12(11). Frons 1.8 × longer than broad, with a red stripe down each intercarinal area (New Caledonia).....**inermis**
- Frons 1.9 × longer than broad, without a red stripe down each intercarinal area (New Caledonia).....**alecto**

17. **Ugyops nemestrinus** Fennah, new species      Fig. 119–126.

Head in profile deeply rounded apically. Vertex longer medially than broad at base (nearly 1.5: 1), as wide at apex as at base, sublateral carinae parallel to apex, where they are fused in a common callus, transverse carina distinct, about level with distal 1/5 of eye, posterior margin truncate, apical margin shallowly convex with fused submedian carinae broadly projecting, basal compartment wider at hind margin than long to transverse carina (1.7: 1); frons in middle line longer than wide at widest part (nearly 2.3: 1), widest at 3/4 from base, lateral margins almost straight in basal 1/2, shallowly convex in apical 1/2, submedian carinae united in a broad common eminence in basal 1/5, then narrowly separating and meeting again at frontoclypeal suture; rostrum amply surpassing post-trochanter; genae a little tumid, antennae reaching beyond apex of clypeus, basal segment longer than broad at apex (5: 1), 2nd segment longer than 1st (nearly 1.9: 1), ocelli absent. Pronotum with a single carina at lateral margins between eye and tegula, post-tibia with 2 spines laterally, 2nd metatarsal segment with 4 teeth apically. Tegmina covering anal segment of ♂, Sc + R forking at about 1/4 of length of tegmen from base, claval suture distinct to commissural margin, a weakly curved and slightly irregular line of transverse veinlets in apical 1/5. Wings almost as long as tegmina.

Stramineous to ochraceous; frons on each side at base, carinae finely, sides of clypeus in posterior 1/2,

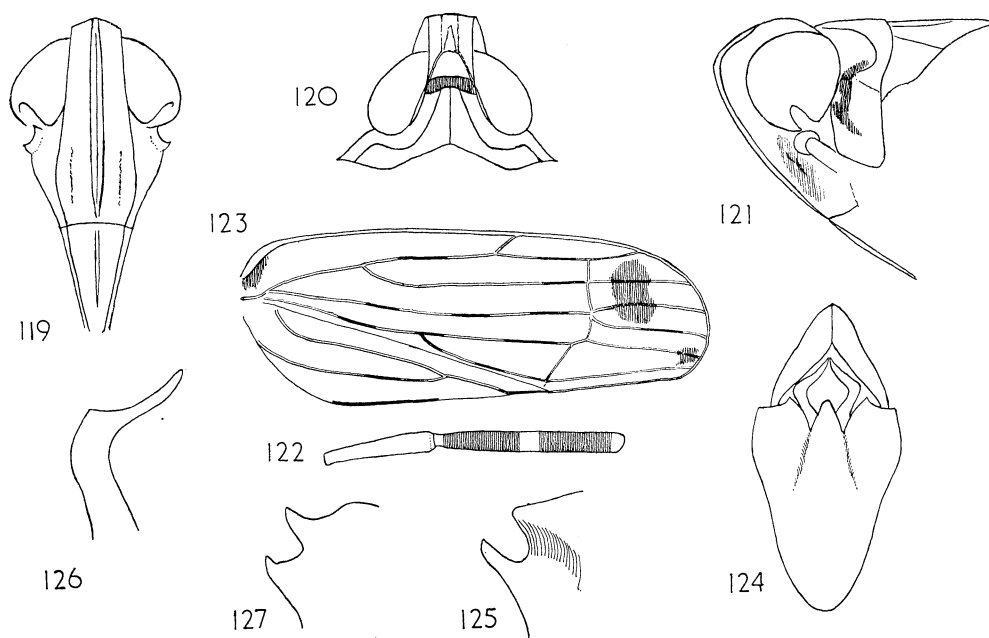


Fig. 119–127. *Ugyops nemestrinus*, n. sp., 119, frons and clypeus; 120, vertex and pronotum; 121, head in profile; 122, antenna; 123, tegmen; 124, ♂ genitalia; 125, margin of pygofer, ventrolateral view; 126, distal portion of genital style; 127, *Ugyops butleri* Muir, margin of pygofer, ventrolateral view.

2nd antennal segment except at middle, fore and middle legs with 2 diffuse bands on femora and 3 well-defined bands on tibiae, all tarsi, linear markings on pronotum behind eyes, some suffusion on lower surface of thorax, abdomen except at base, and ♂ genitalia, fuscous; margins of head and carinae of frons and clypeus, and a suffusion on genae below eyes, red. Tegmina yellowish hyaline, veins stramineous or green, sparsely interrupted with fuscous, a cloud near apical angle, a smaller spot at anal angle, and posterior margin of clavus except at level of union of claval veins, dark fuscous. Wings fuscous, with darker veins.

♂. Anal segment of ♂ bilaterally symmetrical, tectiform, lateral margins in dorsal view convex, meeting acutely at apex. Pygofer with lateral margins in side view oblique, straight or feebly sinuate, extending caudad lateroventrally in an acutely angulate lobe; medioventral process about as long as broad, deeply convex apically, basally uniting with a broad shallow ridge that extends basad. Genital styles in distal half as figured. Length, 7.5 mm, tegmen, 6.0 mm.

♀. Length, 9.5 mm; tegmen, 6.8 mm.

Holotype ♂ (BISHOP 7651), New Caledonia, Mt. Koghi, II.1963, N.L.H. Krauss. Paratypes: 2 ♂♂, 1 ♀, Col des Roussettes, 550 m, II.1963, Gressitt; Mt. Panié trail, II.1963, Krauss.

This species is clearly the New Caledonian counterpart of *U. butleri* Muir, from Maré, but is undoubtedly distinct. Apart from the characters mentioned in the key, the two species differ in the shape of the excavation in the lateral margins of the pygofer that lies on each side of the medioventral process, as can be judged from the figures, which were made from the same viewpoint (fig. 125, 127). In *U. butleri*, the margins, carinae and a line down each of the intercarinal areas of the frons are equally infuscate, so that the frons appears longitudinally 6-striped, whereas in *U. nemestrius* the carinal infuscation is much less evident, and the intercarinal areas, at least in the ♂, are almost devoid of markings.

18. ***Ugyops taranis*** Fennah, 1964: 141.

NEW CALEDONIA: 1 ♂, 1 ♀, Mt. Koghi, XII.1963, J.L. Gressitt.

19. ***Ugyops menelaus*** Fennah, 1964: 142.

NEW CALEDONIA: 1 ♂, 1 ♀, Poindimié, II.1963, N.L.H. Krauss.

20. ***Ugyops houadouensis*** Distant, 1920: 469.

NEW CALEDONIA: 1 ♀, Vallée d'Amoa, II.1963, C.M. Yoshimoto.

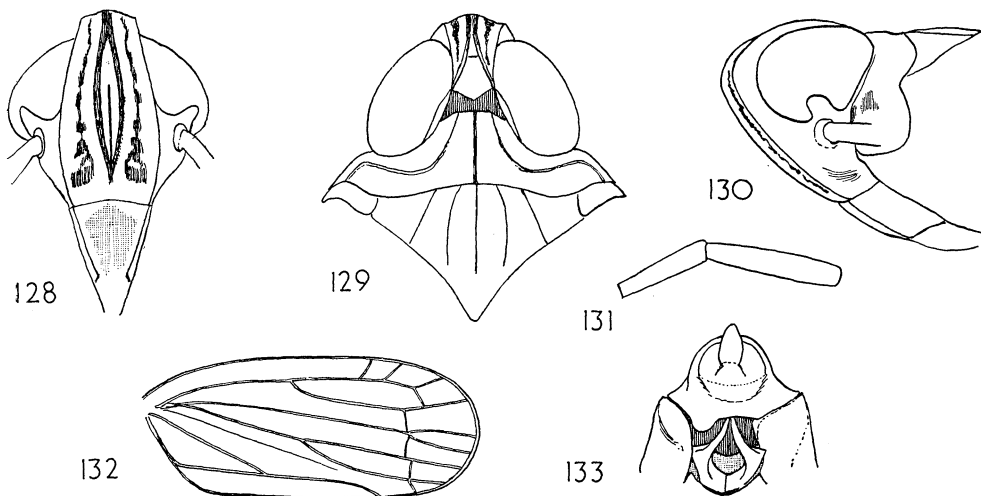


Fig. 128-133. *Ugyops lato*, n. sp.: 128, frons and clypeus; 129, vertex, pronotum and mesonotum; 130, head, pronotum and mesonotum, lateral view; 131, antenna; 132, tegmen; 133, ♂ genitalia.

21. **Ugyops inermis** Distant Fig. 145-146.

No specimens of *inermis* were examined.

22. **Ugyops lato** Fennah, new species Fig. 128-133.

Head in profile deeply rounded apically. Vertex longer medially than broad at base (2 : 1), wider at apex than base (2 : 1), sublateral carinae contiguous at apex, transverse carina very weak, about level with distal 1/3 of eye, posterior margin truncate, apical margin convex with submedian carinae slightly projecting, basal compartment almost as long to transverse carina as wide at hind margin, frons in middle line longer than wide at widest part (1.6 : 1), widest at 3/4 from base, lateral margins convex, more strongly so in distal half, submedian carinae contiguous basally and apically, not quite attaining frontoclypeal suture, rostrum reaching to post-trochanter; genae a little tumid, antennae reaching to apex of clypeus, basal segment longer than broad at apex (3.6 : 1), 2nd segment longer than 1st (nearly 1.6 : 1); ocelli absent or indicated only by a weak pustule. Pronotum with a single, very obscure, carina at lateral margin; post-tibia with 3 spines laterally, 2nd metatarsal segment with 4 teeth apically. Tegmina not covering anal segment of ♂, Sc + R forking at about middle of tegmen, claval suture distinct basally, absent apically, a distinct line of transverse veinlets close to apex. Wings reduced.

Tawny yellow to ochraceous; carinae of frons and a band along middle of intercarinal areas except in distal 1/7, and a suffusion on pronotum behind eyes, and greater part of abdominal tergites, fuscous. Tegmina subhyaline, stramineous, a few small spots in apical cells, brown.

♂. Anal segment not quite bilaterally symmetrical, lateral margins in dorsal view shallowly convex, apical margin truncate, apical angle of left side rounded, more strongly produced ventrad than that on right. Pygofer with lateral margins in side view oblique, on left side produced caudad in lower 1/2 in a deeply rounded lobe, on right side produced caudad in an obtusely angulate lobe; medioventral process broader than long, scooplike, with its apical margin shallowly concave and its distal angles abruptly rectangulate. Genital style in distal 1/2 as figured. Length 4.0 mm; tegmen, 2.7 mm.

Holotype ♂ (BISHOP 7652), New Caledonia, Thio, III.1959, N.L.H. Krauss.

This species is distinguishable from other local species by the characters given in the key. It belongs to the *samoensis* group but differs from its allies in the combination of bodily proportions and ♂ genitalic characters described.

23. **Ugyops alecto** Fennah, new species Fig. 134-144.

Head in profile subrectangulately rounded apically. Vertex longer medially than broad at base (2 : 1), sublateral carinae contiguous at apex, transverse carina distinct, about level with distal 1/4 of eye, posterior margin truncate, apical margin convex, with submedian carina not projecting, basal compartment as long to transverse carina as wide at hind margin; frons in middle line longer than wide at widest part (1.9 : 1), widest at 3/4 from base, lateral margins straight to level of antennae, thence shallowly convex, submedian carinae immersed, contiguous, though indistinct, at base and apex, and obscurely attaining frontoclypeal suture; rostrum distinctly surpassing post-trochanter; genae rather tumid; antennae reaching beyond apex of clypeus, basal segment longer than broad at apex (4 : 1), 2nd segment longer than 1st (1.7 : 1); ocelli indicated by a weak pustule. Pronotum with lateral carinae strongly developed behind eyes and a single distinct carina at lateral margin; post-tibia with 2 spines laterally, 2nd metatarsal segment with 4 teeth apically. Tegmina not covering anal segment in either sex, Sc + R forking at about 1/4 from base, claval suture distinct throughout, a nodal line and an incomplete subapical line of transverse veins present, 2 or 3 transverse veinlets in region of stigma, and up to 5 transverse veinlets between claval suture and anterior claval vein. Wings almost as long as tegmina.

Stramineous, suffused with pale green; intercarinal, and usually interpustular, areas of frons, a spot on genae before antennae, clypeus apically, 2 bands on 2nd antennal segment, 2 spots on each side of pronotum behind eyes, and a small suffusion on each side of middle near posterior margin, a round spot in lateral fields of mesonotum adjoining base of lateral carinae, metapleura, 2 transverse bands on profemur, and on all tibiae, and a single diffuse transverse band on mesofemur and postfemur, all tarsi, and abdominal tergites at posterior margin, fuscous, frequently dark. Tegmina ochraceous-hyaline, veins green on corium and apically, brown

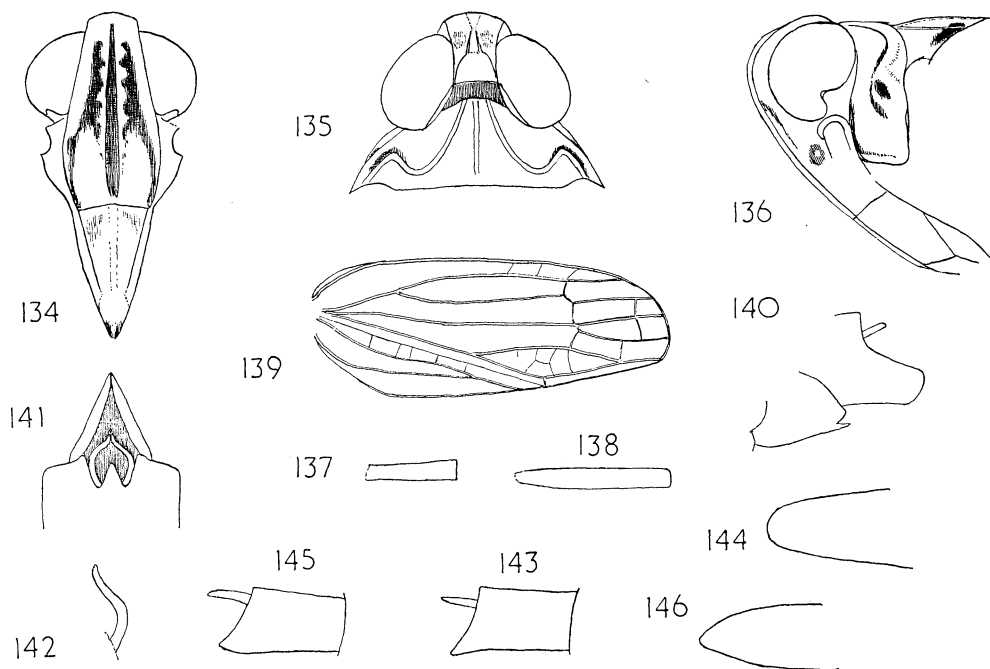


Fig. 134-144. *Ugyops alecto*, n. sp., 134, frons and clypeus; 135, vertex and pronotum; 136, head, pronotum and mesonotum, lateral view; 137, basal segment of antenna; 138, 2nd segment of antenna; 139, tegmen; 140, ♂ genitalia, lateral view; 141, the same, ventral view; 142, distal portion of genital style; 143, ♀ anal segment; 144, apex of 3rd valvula of ovipositor; 145, *Ugyops inermis* Distant, ♀ anal segment; 146, apex of 3rd valvula of ovipositor.

or red between the 2 rows of transverse veinlets, a few spots on veins in corium and clavus, brown; posterior margin at apex of clavus, and sometimes an ovate area at middle of costal margin, piceous. Wings infusate distally.

♂. Anal segment in dorsal view tapering distad and acute at apex; bilaterally symmetrical and bluntly rounded distally, as figured. Pygofer with lateral margins oblique; medioventral process triangular, apically narrowly rounded. Genital styles slender, sigmoid. Length, 6.3 mm; tegmen, 4.8 mm.

♀. Anal segment in side view distally obliquely truncate as figured. Ovipositor with 3rd valvulae broadly rounded apically, as figured. Length, 7.3 mm, tegmen, 5.1 mm.

Holotype ♂ (BISHOP 7653), New Caledonia, Mt. Koghi, 500-700 m, 1.XII.1963, R. Straatman. Paratypes: 1 ♀, Yahoué, gallery forest, 22.I.1963, G. Kuschel.

This species is very close to the sympatric *U. inermis*, and is most readily distinguished by its greater size and pale greenish-yellow ground color. On closer comparison, it differs in the proportions of the frons, in the stronger development of the lateral marginal carinae of the pronotum, in the relatively longer anal segment of the ♂ distad of the basal margin of the anal foramen, as seen in profile, and in the anal segment of the ♀ and the tip of the 3rd valvulae of the ovipositor, as figured.

#### 24. *Ugyops manturna* Fennah, new species Fig. 147-152.

Head in profile subrectangulately rounding apically. Vertex longer medially than broad at base (about 2.3 : 1), wider at apex than at base (1.5 : 1), sublateral carinae very weak, meeting before anterior margin of eyes, transverse carina moderately distinct, about level with distal 1/3 of eye, posterior margin truncate, slightly excavate on each side of middle, apical margin shallowly convex, basal compartment as long to

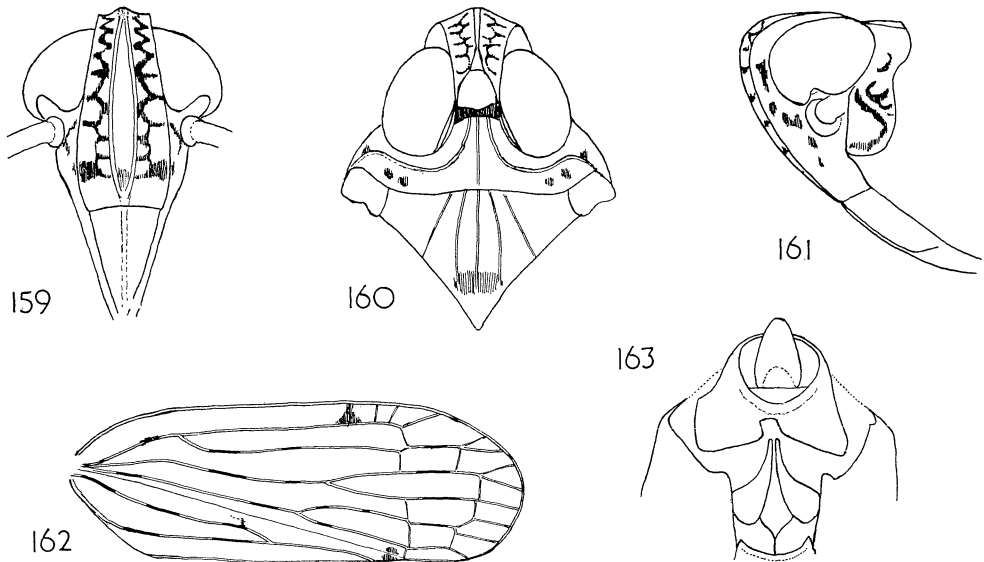


Fig. 159–163. *Ugyops lifuanus*, n. sp.: 159, frons and clypeus; 160, vertex, pronotum and mesonotum; 161, head and pronotum, lateral view; 162, tegmen; 163, ♂ genitalia.

level with distal 1/4 of eye, posterior margin very slightly convex caudad, apical margin convex, with submedian carinae prominent, basal compartment almost as long to transverse carina as wide at hind margin; frons in middle line longer than wide at widest part (2 : 1) widest at 3/4 from base, lateral margins convex, more strongly so in distal 1/2, submedian carinae contiguous basally and apically, attaining frontoclypeal suture; rostrum reaching to post-trochanter; genae tumid; antennae surpassing apex of clypeus, basal segment longer than broad (4 : 1), 2nd segment longer than 1st (1.6 : 1); ocelli absent. Pronotum with 2 weak carinae on each side between eye and tegula, the lower carina being conspicuous by reason of its infuscate bordering; post-tibia with 3 spines laterally, 2nd metatarsal segment with 4 teeth apically. Tegmina just surpassing abdomen, covering anal segment of ♂, Sc + R forking at 1/4 or 1/3 from base, claval suture distinct, complete, a line of transverse veinlets from stigma to apex of clavus and an irregular line of subapical transverse veinlets. Wings almost as long as tegmina.

Ochraceous, with some dilute fuscous marbling dorsally; zig-zag ornamentation in intercarinal areas of frons, markings on lateral fields of pronotum as figured, and 2 transverse bands on tibiae of fore and middle legs, dark fuscous; some small irregular spots on genae, and 2nd antennal segment at base and apex, light reddish brown. Tegmina ochraceous-hyaline, a spot at stigma and 1 at apex of clavus, dark fuscous; veins concolorous, interrupted with light orange brown. Wings milky hyaline.

♂. Anal segment not quite bilaterally symmetrical, lateral margins in dorsal shallowly convex, apical margin convex, obliquely incised at middle, apical angle of left side more strongly produced ventrad than that of right side. Pygofer with lateral margin of left side in side view obtusely angulately rounded, that of right side more definitely obtusely angulate, both shortly acutely produced at edge of ventral excavation, medioventral process scoop-like, with its apical margin truncate and its distal angles rounded. Genital styles stout, in distal 1/2 as figured. Length, 5.6 mm; tegmen, 5.0 mm.

Holotype ♂ (BISHOP 7656), Loyalty Is., Lifu I., Wé, 30–31.I.1962, N.L.H. Krauss.

This species differs from *U. arestor* in its greater size, shape of the male genitalia and in the color pattern of the frons and lateral pronotal lobes, as well as in the light color of the microsetae on the basal segment of the antennae.



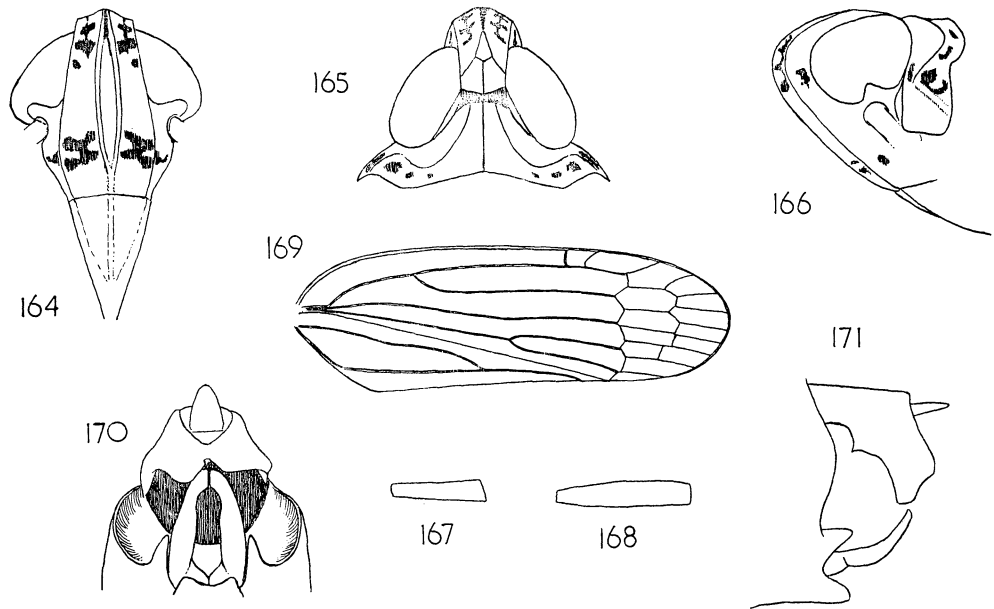


Fig. 164–171. *Ugyops planguncula*, n. sp.: 164, frons and clypeus; 165, vertex and pronotum; 166, head and pronotum, lateral view; 167, basal segment of antenna; 168, 2nd segment of antenna; 169, tegmen; 170, ♂ genitalia, posterior view; 171, ♂ genitalia, lateral view.

## 28. *Ugyops atreces* Fennah

No specimens of *atreces* were examined.

## 29. *Ugyops planguncula* Fennah, new species Fig. 164–171.

Head in profile deeply rounded apically. Vertex longer medially than broad (1.8 : 1), wider at apex than at base (nearly 1.2 : 1), sublateral carinae contiguous for some distance before apex, transverse carina distinct, about level with distal 1/3 of eye, posterior margin angulately convex caudad, apical margin convex with submedian carinae not projecting, basal compartment as long to transverse carina as wide at hind margin; frons in middle line longer than wide at widest part (2 : 1), widest at 3/4 from base, lateral margins almost straight to level of antennae, thence shallowly convex, submedian carinae contiguous basally and apically, just attaining frontoclypeal suture; rostrum reaching to post-trochanter; genae rather tumid, antennae surpassing apex of clypeus, basal segment longer than broad at apex (5 : 1), 2nd segment longer than 1st (about 1.5 : 1), ocelli absent. Pronotum with 2 rather weak carinae at lateral margin, post-tibiae with 3 spines laterally, 2nd metatarsal segment with 4 teeth apically. Tegmina covering anal segment in ♂, Sc+R forking at about 1/4 from base of tegmen, claval suture distinct throughout, a complete line of transverse veinlets between node and apex of clavus, and an irregular line between this and apical margin. Wings reaching to base of pygofer.

Ochraceous; intercarinal areas of frons at base and a transverse band subapically, interpustular areas of pronotum dorsolaterally and tarsi of fore and middle legs, dark fuscous; 2nd antennal segment at base and apex, and 2 transverse bands in basal 1/4 of protibia and mesotibia, light brown. Tegmina ochraceous-hyaline, a few markings on longitudinal veins, light brown.

♂. Anal segment not bilaterally symmetrical, lateral margins at middle each produced ventrad in a small triangular lobe, apical margin bilobate, with lobe of left side rather larger than that on right. Pygofer with lateral margins convex, each produced caudad at edge of median excavation in an acute lobe; medio-ventral process scoop-shaped, with its distal angles rounded. Genital styles narrow, rather sickle-shaped, meeting at apex. Length 4.9 mm, tegmen 4.0 mm.

Holotype ♂ (BISHOP 7657), Loyalty Is., Lifu I., Wé, 16.II.1963, near beach, C.M. Yoshimoto.  
Paratypes: 3 ♂♂, same data.

This species is close to *U. atreces*, but differs markedly in details of structure of the anal segment and the ♂ genitalia. In *U. atreces* the lateral margins of the anal segment are slightly concave, not produced ventrad on each side in a lobe, and the scoop-shaped medioventral process of the pygofer is incised medially, whereas it is entire in *U. planguncula*; moreover, the genital styles in *U. atreces* narrow evenly to the apex, whereas in *U. planguncula* there is a marked constriction a little before the apex. As regards to other bodily features, *U. atreces* has relatively longer tegmina and is a little larger.

#### Genus **Notuchus** Fennah, new genus

Head in profile acutely angulate. Vertex broader than long, posterior margin transverse, anterior margin angulately convex, anterolateral carinae leaving lateral margins a little basad of anterior margin of eyes, Y-shaped carina distinct. Frons longer than broad (about 1.1 : 1), widest below level of antennae, a pair of sublateral carinae arising from basal margin and joining lateral margins, and a pair of percurrent arcuate carinae on disc; clypeus tricarinate; rostrum long, with subapical segment surpassing post-trochanter; ocelli absent; antennae reaching to middle of clypeus, basal segment longer than broad (about 2 : 1), flattened on dorsal surface, 2nd segment only slightly longer than 1st, terete. Pronotum much wider than head with eyes, anterior margin shallowly convex between eyes, excavate behind eyes, lateral margins oblique, carinate, posterior margin shallowly concave, disc with median carina distinct, lateral carinae concave, reaching hind margin near sides, a deep longitudinal impression behind each eye; mesonotum about 2 × as broad as long, tricarinate. Tegmina brachypterous, only a little longer than broad, coriaceous, costal margin in basal 1/2 strongly inflected below, in dorsal view shallowly convex, apical margin truncate, longitudinal veins almost obscured by a dense reticulum of coarse irregular veinlets; femora and tibiae of fore and middle legs a little compressed, post-tibia laterally trispinose, and with 4 spines apically, spur subulate, moderately long; basal metatarsal segment 1/2 as long as post-tibia, with about 4 teeth apically and further tooth at 1/4 from apex, 2nd metatarsal segment with about 3 teeth apically; abdomen strongly depressed, terga medially carinate and with 2 or 4 supernumerary carinae as figured, 9th tergum and anal segment roofed over by 8th tergum. Anal segment short, with lateral margins deep. Pygofer rather short.

Type species: *Notuchus risioides* n. sp.

In my key to Australasian genera (1956: 83) this genus runs to *Ostama*. From *Ostama*, however, and also from *Ugyops*, it differs in the tricarinate pronotum, the relatively smaller head, broader vertex and frons, shorter antennae, the dorsally flattened basal antennal segment, and the depressed bodily form. From *Livatiella* and *Melanesia* it differs in the carination of the frons, and from *Punana* and *Pentagramma* in the tricarinate mesonotum.

The gender of the generic name is masculine.

The bodily form of the type species of this genus recalls that of members of the South African Dictyopharid *Risius*, and, with much less precision, that of a Peloridiid. It would seem possible that it has been developed in response to the same type of environmental factors that have influenced the evolution of form in the latter family.

#### 30. **Notuchus risioides** Fennah, new species Fig. 172-177.

♂. Vertex broader at base than long in middle (1.4 : 1), frons longer in middle line than broad (1.1 : 1), sublateral carinae uniting with lateral margins below level of antennae, submedian carinae each equidistant between middle line of frons and lateral margins, antennae with basal segment longer than broad at apex (2 : 1), 2nd segment longer than 1st (1.1 : 1); tegmina not covering 4th abdominal segment; basal metatarsal segment with 4 teeth apically, and a single tooth distinctly basad of these; 2nd segment with 3 teeth.

Dark reddish brown; 6 spots at each lateral margin of frons, and 4 or 5 similar spots on submedian carinae of frons, a narrow transverse band at frontoclypeal suture, metapleurites and dorsolateral angles of pygofer ochraceous or pallid ochraceous; clypeus distally, rostrum, legs, pygofer except at dorsolateral angles, and anal

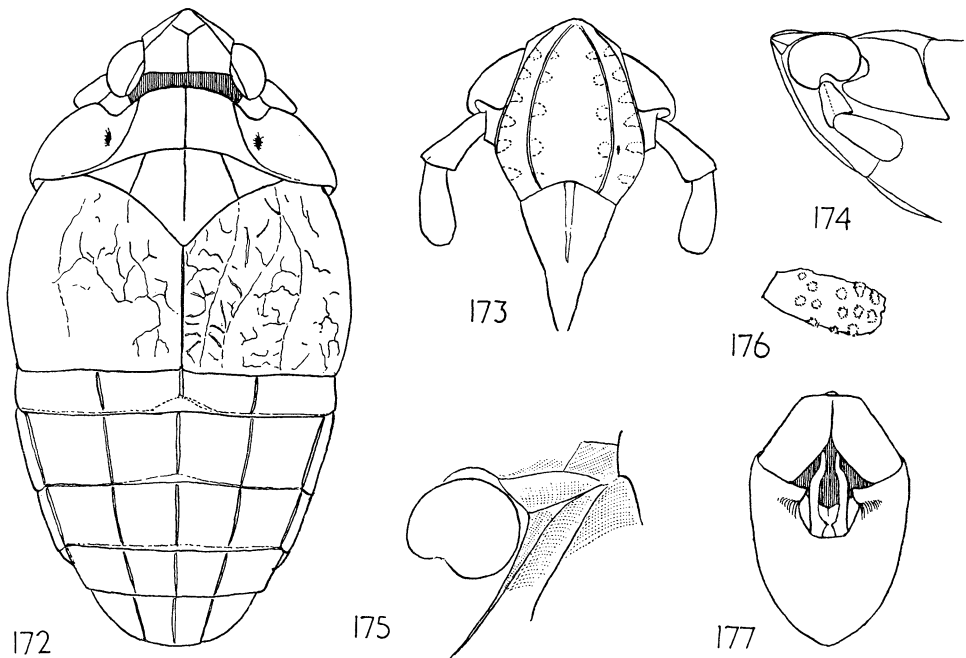


Fig. 172-177. *Notuchus risioides*, n. sp.: 172, dorsal surface of body; 173, frons and clypeus; 174, head and pronotum, lateral view; 175, carinae at apex of head, laterodorsal view; 176, 2nd segment of antenna; 177, ♂ genitalia.

segment, sordid ochraceous, suffused unevenly with fuscous; a suffusion on genae apically, a spot on mesopleura, and intersegmental membrane of abdomen, red. Tegmina dark reddish brown with reticulum of veinlets lighter, either ochraceous or red.

Anal segment of ♂ about as broad as long, lateral margins decumbent. Pygofer rather short, lateral margins a little produced in a subacute angle, ventral margin short, transverse. Genital styles in ventral view narrow, broadest near base where each is produced mesad, thence parallel-sided to middle, and sinuate and tapering in distal 1/2. Length, 4.5 mm.

Holotype ♂ (BISHOP 7658), New Caledonia, Col des Roussettes, 450-550 m, II.1963, J.L. Gressitt.

It is possible that, as in other Fulgoroidea in which the intersegmental membranes and other parts of the integument are tinged with red, this color will be found to vary in intensity between individual specimens, or even to be absent.

#### Genus *Tropidocephala* Stål

*Tropidocephala* Stål, 1853: 266 (Haplotype: *T. flaviceps* Stål 1855: 93).

#### 31. *Tropidocephala eximia* (Kirkaldy)

*Ectopiopterygodelphax eximius* Kirk., 1906: 412.

NEW CALEDONIA: 17♂♂, 5♀♀, in mts. above Ouaco, X.1958, Dumbea R., X.1958, Joyce; St. Louis, III.1959, Krauss; La Crouen, III.1961, Sedlacek.

#### Genus *Tarophagus* Zimmerman

*Tarophagus* Zimm., 1948: 245. (Orthotype: *Megamelus proserpina* Kirkaldy).

32. **Tarophagus proserpina** (Kirkaldy)

*Megamelus proserpina* Kirk., 1907: 147.

NEW CALEDONIA: 3 ♂♂, 3 ♀♀, Bourail, II.1963; Tao, II.1963, Gressitt.

Genus **Sardia** Melichar

*Sardia* Mel., 1903: 96 (Haplotype: *S. rostrata* Mel.).

33. **Sardia rostrata** Melichar

*Sardia rostrata* Mel., 1903: 96.

NEW CALEDONIA: 9 ♂♂, 5 ♀♀, Bourail, III.1959, Krauss; Ansé Vata, X.1958, Joyce. LOYALTY Is.: 1 ♀, Lifu I., Wé, II.1963, Yoshimoto.

34. **Sardia melichari** (Kirkaldy), new comb.

*Delphacodes melichari* Kirk., 1906: 156.

*Hadeodelphax persephone* Kirk., 1907: 141. **New synonymy.**

*Sardia pronotalis* Distant, 1916: 141.

NEW CALEDONIA: 1 ♀, Dumbea R., X.1958, Joyce.

Genus **Sogatodes** Fennah

*Sogatodes* Fen., 1963: 71. (Orthotype: *Sogatodes molinus* Fen. *op. cit.*: 72).

35. **Sogatodes eupompe** (Kirkaldy)

*Delphax eupompe* Kirk., 1907: 162.

NEW CALEDONIA: 9 ♂♂, 1 ♀, Ansé Vata, X–XI.1958, C.R. Joyce; Rivière Bleue (Yaté), 35 km SE of Nouméa, 160–180 m; Nouméa, XI.1963, R. Straatman.

36. **Sogatodes placitus** (Van Duzee), n. comb.

*Sogata placita* V. Duz., 1937: 120.

*Chloriona (Sogatella) euterpe* Fennah, 1956: 118.

NEW CALEDONIA: 1 ♂, Plateau de Dogny, 20.XI.1958, C. R. Joyce; 1 ♂, Mt. Koghi, 600 m, 6–30.I.1963, C. Yoshimoto & N. Krauss; 1 ♂, La Crouen, I.1963, N. L. H. Krauss.

Through the kindness of Dr Paul Hurd I have been able to examine the type of this species, which is in the collection of the California Academy of Sciences, and I am satisfied that it is conspecific with *S. euterpe*.

37. **Sogatodes geranor** (Kirkaldy)

*Delphax geranor* Kirk., 1907: 158.

NEW CALEDONIA: 1 ♂, near stream up Boulari River, light trap, XI.1958; 1 ♂, Poindimié, 26.XI.1958, C. R. Joyce.

The opportunity is taken here of listing points of difference between this species and the generally similar *S. nicias* Fennah. In the latter, the median frontal carina is simple, and the 2nd antennal segment is shorter, both actually and relatively in relation to its width; the vertex, pronotal disc and mesonotal disc (the area between the lateral carinae), are relatively broader than in *S. geranor* and the dark portions (which are dark fuscous) are more deeply infuscate; moreover, the pale dorsal stripe is of a pallid biscuit color, and not white as in *S. geranor*.

Genus **Sogatella** Fennah

*Sogatella* Fennah, 1956: 471. (Orthotype: *Delphax furcifera* Horvath 1899: 372).

38. **Sogatella longifurcifera** (Esaki & Ishihara)

*Sogata longifurcifera* E. & I., 1947: 41.

NEW CALEDONIA: 2 ♂♂, Bourail, III.1959, Krauss; Nouméa, VII–VIII.1940, Williams.

39. **Sogatella kolophon** (Kirkaldy)

*Delphax kolophon* Kirk., 1907: 157.

NEW CALEDONIA: 8 ♂♂, Dumbea R., V.1958, Joyce; Canala, XI.1958, Joyce; Col des Roussettes, 450–550 m, II.1963, Yoshimoto; La Foa, IX.1940, Williams; hills behind Nouméa, VII.1940, Williams; Mt. Koghi, 500 m, I.1963, Yoshimoto & Krauss.

Genus **Terthron** Fennah

*Terthron* Fen., 1965: 55 (Orthotype: *Delphax anemonias* Kirkaldy).

40. **Terthron anemonias** (Kirkaldy)

*Delphax anemonias* Kirk., 1907: 159.

NEW CALEDONIA: 5 ♂♂, 4 ♀♀, Poindimié, XI.1958, C. R. Joyce; Tao, II.1963, Yoshimoto & Krauss; Col des Roussettes, 450–550 m, II.1963, Bourail, II.1963, Gressitt.

Genus **Nilaparvata** Distant

*Nilaparvata* Dist., 1906: 473 (Orthotype: *N. greeni* Dist. *op. cit.* = *Delphax lugens* Stal).

41. **Nilaparvata albotristriata** (Kirkaldy), n. comb.

*Delphax albotristriata* Kirk., 1907: 154.

NEW CALEDONIA: 1 ♂, 1 ♀, Nouméa, I.1962, N. L. H. Krauss; Ouano Beach, XI.1958, Joyce.

This species belongs to the same section of the genus as the New Zealand *N. myersi*. The brachypterous males of the 2 species differ strongly in the shape and coloration of the tegmina, that of the former being quadrate and fuscous with a broad pallid apical margin, whereas that of the latter is relatively longer, ovate and wholly stramineous. The macropterous female is placed here tentatively.

Genus **Cemus** Fennah

*Cemus* Fen., 1964 (Orthotype: *C. leviculus* Fen. *op. cit.*: 148).

42. **Cemus nigromaculosus** (Muir) Fig. 178–180.

*Phyllodinus nigromaculosus* M., 1917: 319.

NEW CALEDONIA: 5 ♂♂, 6 ♀♀, Nassirah, XI.1958, C. R. Joyce; near stream up Boulari R., XI.1958, light trap, Joyce; in mountains above Ouaco, X.1958, Joyce; La Crouen, III.1961, Sedlacek.

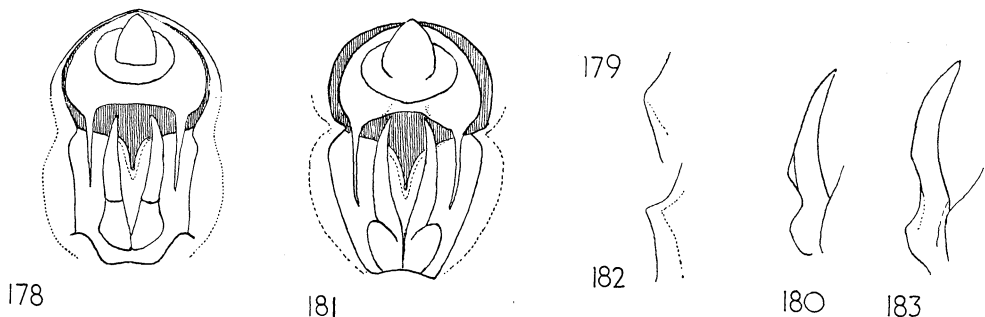


Fig. 178–183. *Cemus nigromaculosus* (Muir), 178, ♂ genitalia; 179, dorsolateral angle of pygofer; 180, genital style, posteromesal view; 181, *Cemus kirkaldyi* (Metc.) ♂ genitalia; 182, dorsolateral angle of pygofer; 183, genital style, posteromesal view.

This series was compared with the Australian *C. kirkaldyi* Metcalf, which is a distinctly larger species with a tegminal length of 3.6–4.1 mm. The differences in the male genitalia are shown in fig. 178–180 and 181–183.

#### Genus **Phacalastor** Kirkaldy

*Phacalastor* Kirk., 1906: 404 (Orthotype: *P. pseudomaidis* Kirk.).

#### 43. **Phacalastor pseudomaidis** Kirkaldy

*Phacalastor pseudomaidis* Kirk., 1906: 404.

NEW CALEDONIA: 4 ♂♂, Ansé Vata, X.1958; Dumbea R., X.1958, C. R. Joyce; Nouméa, VII.1960, Williams.

#### Genus **Horcoma** Fennah, new genus

Vertex as long as broad, basal compartment short, about 3 × as broad as long in middle, distal portion of vertex insensibly curving into frons, mediolateral carinae meeting on apparent frons, and abundantly visible in anterior view; apparent frons about 2 × as long as broad, widest in basal 1/2, median carina forked basally, postclypeus strongly convex, about as broad as long, rostrum just surpassing mesotrochanters, ocelli distinct, blemmata present, antennae short and stout, reaching to frontoclypeal suture, basal segment as long as broad at apex, or a little longer than broad, 2nd segment not quite 2 × as long as 1st, eyes reniform, deeply excavate below. Pronotum with disc a little broader at anterior margin than long in middle line, lateral carinae strongly diverging posteriorly, not attaining hind margin; post-tibial spur not as long as basal metatarsal segment, thin with 15–20 teeth on margin, apically unarmed, only a very narrow strip of minute setae along margin.

Anal segment of ♂ ring-like, with apical angles each produced ventrad in a spinose process. Pygofer strongly rounded, with posterior opening relatively small, longer than broad, diaphragm narrow. Aedeagus rather short, tubular, ascending distad, orifice at apex. Genital styles relatively short and stout.

Type species: *Delphacodes lacteipennis* Muir

This genus runs to *Delphacodes* in my key to genera of Pacific Delphacidae (1956: 83) and to *Toya* in my key to the genera of Australia and New Zealand (1965: 4). If, however, the number of teeth on the post-tibial spur is ignored in the latter key it runs to *Notogryps*, and in the form of the head it is very like *Notogryps*, and entirely unlike either *Toya* or *Delphacodes* sensu stricto. From *Notogryps* it differs in the presence of well developed ocelli, in the shorter rostrum, and in the number of teeth on the post-tibial spur. The principal difference, however, is in the form of the genitalia: the strongly rounded form of the pygofer is more suggestive of *Cemus*, to which, however, it is not at all closely allied.

#### 44. **Horcoma lacteipennis** (Muir), n. comb.

*Delphacodes lacteipennis* M., 1917: 337.

*Delphacodes celaeno* Fennah, 1956: 126.

NEW CALEDONIA: 4 ♂♂, Vallée d'Amoa, II.1963, C. M. Yoshimoto.

The veins in the tegminal membrane are normally dilute fuscous, not concolorous as given in the original description of *Delphacodes celaeno*.

#### Genus **Syndelphax** Fennah

*Syndelphax* Fen., 1963: 15 (Orthotype: *Delphax matanitu* Kirkaldy).

#### 45. **Syndelphax matanitu** (Kirkaldy)

*Delphax matanitu* Kirk., 1907: 155.

NEW CALEDONIA: 1 ♂, Mt. Koghi, 500 m, I.1963, in light trap, C. Yoshimoto & N. Krauss.

Genus **Peregrinus** Kirkaldy

*Peregrinus* Kirk., 1904: 175 (Orthotype: *Delphax maidis* Ashmead 1890: 323).

46. **Peregrinus maidis** (Ashmead)

*Delphax maidis* Ashm., 1890: 323.

NEW CALEDONIA: 8 ♂♂, 13 ♀♀, Ouano Beach, XI.1958; Ansé Vata, XI.1958, C. R. Joyce; Nepoui Valley, VIII.1940, Williams; Sarraméa, 100–200 m., III.1960, in light trap, Gressitt; Tao, II.1963, Yoshimoto; Bourail, II.1963, Gressitt; Mt. Koghi, 500 m, I.1963; La Crouen, I.1963, Yoshimoto & Krauss.

Genus **Nycheuma** Fennah

*Nycheuma* Fen., 1964: 145 (Orthotype: *Dicranotropis capensis* Muir, 1926: 28).

47. **Nycheuma cognatum** (Muir), n. comb.

*Dicranotropis cognata* Muir, 1917: 317.

NEW CALEDONIA: 1 ♂, 1 nymph, St. Louis, III.1959, N. L. H. Krauss; Nouméa, VII.1940, Williams.

Genus **Toya** Distant

*Toya* Dist., 1906: 472 (Orthotype: *T. attenuata* Distant, 1906: 472).

48. **Toya dryope** (Kirkaldy)

*Delphax dryope* Kirk., 1907: 154.

NEW CALEDONIA: 36 ♂♂, 31 ♀♀, Nouméa, VIII.1940, Williams, II.1959, Krauss; St. Louis, VIII.1940, Williams, III.1959, Krauss; hills behind Nouméa, VII.1940, Williams; Ansé Vata, Plaine des Lacs, Plateau de Dogny, Dumbea River, Ouaco, X-XI.1958, Joyce; Bourail, III.1959, Krauss; La Crouen, Mt. Koghi, 500 m, I.1963, Yoshimoto & Krauss. ISLE OF PINES, III.1959, Krauss. LOYALTY IS.: 1 ♂, Lifu, Wé, I.1962, Krauss.

Genus **Coronacella** Metcalf

*Coronacella* Met., 1950: 59 (Orthotype: *C. kirkaldyi* (Muir) 1917: 329 (= *C. bella* Met.).

49. **Coronacella kirkaldyi** (Muir)

*Kelisia kirkaldyi* M., 1917: 329.

*Coronacella bella* Metcalf, 1950: 59.

NEW CALEDONIA: 2 ♂♂, 2 ♀♀, Dumbéa River, X.1958, Joyce; St. Louis, III.1959, Krauss; Bourail, II.1963, at light, Krauss.

Genus **Corbulo** Fennah

*Corbulo* Fen., 1965: 48 (Orthotype: *Delphax dilpa* Kirkaldy 1907: 162).

50. **Corbulo dodona** Fennah

*Corbulo dodona* Fen., 1965: 48.

NEW CALEDONIA: 2 ♂♂, Pueblo, coast-450 m, IX.1949, L.E. Cheesman; near stream up Boulari R., XI.1958, light trap, Joyce.

Genus **Harmalia** Fennah, new genus

Vertex quadrate, longer medially than broad at base, apical margin transverse, submedian carinae uniting on vertex more or less basad of anterior margin, basal compartment of vertex short, broader than long, frons more than 2× as long as broad, widest distad of middle, median carina simple; antennae with basal

segment longer than broad (less than 2 : 1), 2nd segment longer than 1st (about 1.5 : 1); ocelli distinct; clypeus at base only a little wider than frons at apex; rostrum scarcely attaining postcoxa, or not quite doing so. Pronotum with median disc about as long in middle line as broad at anterior margin, lateral carinae curving laterad, not attaining hind margin, post-tibial spur large, thin, flattened, with more than 20 teeth, which in distal part are usually staggered in 2 rows.

Type species: *Sogata thoracica* Distant

The generic name is of feminine gender.

In my key to Pacific Delphacidae (1956: 83) this genus runs to *Sardia* by reason of the medio-lateral (submedian) carinae of the vertex uniting markedly basad of the anterior margin, but it differs from *Sardia* in not having the vertex prolonged anteriorly and in the relatively longer legs. In my key to Australian and New Zealand genera it runs to *Anectopia*, from which it differs in the shape of the frons, and of the head in profile, as well as in the structure of the pygofer. In general appearance it recalls *Coronacella*, but differs from this in the triangular areolet on the vertex being shorter (equilateral), in the lateral carinae of the pronotal disc not reaching the posterior margin, but curving laterad, and in the flattened foliaceous post-tibial spur with many teeth. In *C. kirkaldyi* (Muir) there is a small triangular medioventral process present on the pygofer. No such process occurs in *Harmalia*. From *Kakuna* it differs in the relatively shorter antennae and the smaller size of its included species.

In addition to the type species, *Harmalia* includes the Singhalese *Delphax albicollis* Motschulsky and *Delphacodes sameshimai* (Matsumura).

51. ***Harmalia anacharsis*** Fennah, new species Fig. 184–191.

♂. Vertex longer medially than broad (1.3 : 1), subrectangulately rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin truncate with median carina modera-

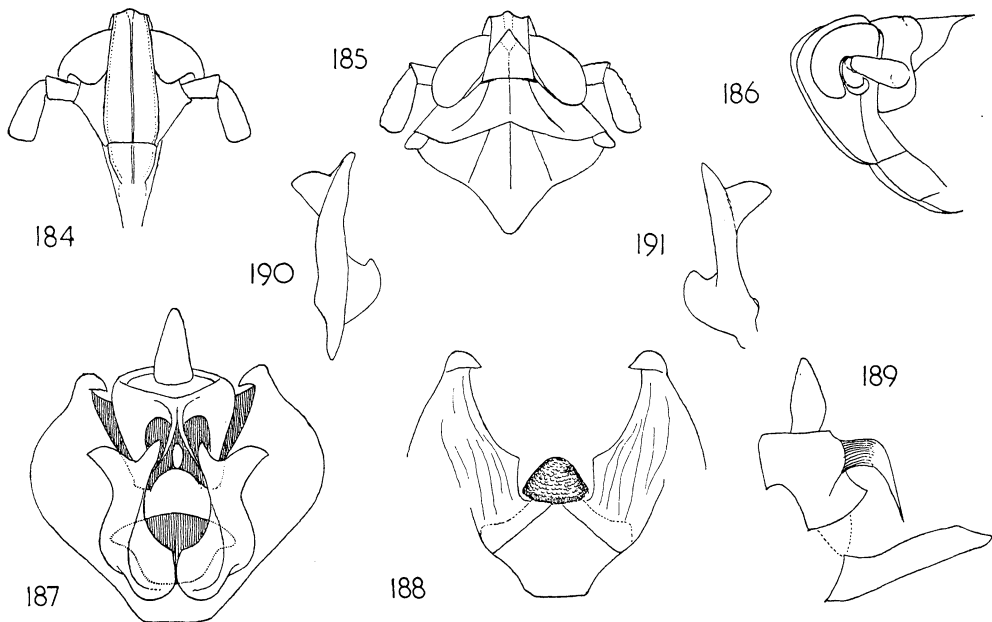


Fig. 184–191. *Harmalia anacharsis*, n. sp.: 184, frons and clypeus; 185, vertex, pronotum and mesonotum; 186, head, pronotum and mesonotum, lateral view; 187, ♂ genitalia, with margins of lower orifice of diaphragm shown in broken line; 188, diaphragm of pygofer; 189, ♂ anal segment and aedeagus; 190, genital style, anteromesal view; 191, genital style, posteromesal view.



tely prominent, Y-shaped carina moderately distinct, submedian carinae uniting at level of anterior margin of eyes, basal compartment of vertex wider at hind margin than greatest length (1.4 : 1); and than median length (1.6 : 1), frons in middle line longer than wide at widest part (2.3 : 1), widest at 3/4 from base, lateral margins feebly concave between eyes, thence feebly convex, median carina simple, clypeus at base a little wider than frons at apex, postclypeal disc as long as broad at base, in profile shallowly convex, anteclypeus in profile moderately convex; entire clypeus in profile moderately convex; rostrum attaining post-coxa; antennae reaching level of frontoclypeal suture, basal segment longer than broad (1.3 : 1), 2nd segment longer than 1st (2 : 1); ocelli distinct. Pronotum with disc slightly longer in middle line than broad at anterior margin (1.1 : 1), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.2 : 1), post-tibial spur with about 22 teeth.

Dark fuscous; carinae and margins of head and thorax and legs and posterior 1/2 of pronotum, pale ochraceous; antennae, rostrum and legs with dilute fuscous suffusion. Brachypterous tegmina subhyaline, uniformly tinged fuscous. Anal segment of ♂ short, lateroapical angles closely apposed, each produced caudad then ventrad in a long laterally compressed spinose process. Pygofer moderately long, posterior opening broader than long dorsoventrally, dorsolateral angles strongly produced caudad, inflected at apex; diaphragm with dorsal margin concave, median portion strongly produced in a subpyramidal or rounded lobe, with a granulate surface; medioventral process absent. Aedeagus rather short, porrect, tubular, devoid of ornamentation; orifice dorsal at apex. Genital styles moderately long, each produced mesad at base in a thin rounded setiferous lobe, then tapering to middle, where it becomes slightly twisted, then expanding distad and terminating in 2 lobes, the outer deeply rounded, the inner shorter, acute. Length (brachypterous): 1.8 mm.

Holotype ♂ (BISHOP 7659), New Caledonia, Poindimié, XI.1958, C.R. Joyce.

This species is distinguishable by the shape of the head in profile and by characters of the male genitalia.

## 52. *Harmalia ostorius* (Kirk.)

This species was not examined.

### Genus *Falcotoya* Fennah, new genus

Vertex as long as broad, or approximately so, subrectangulately or obtusely rounding into frons, as wide at apex as at base, apical margin truncate with submedian carinae slightly prominent, Y-shaped carina distinct, submedian carinae uniting on basal part of frons, basal compartment of vertex wider at hind margin than greatest length (1.5 — 2.0 : 1); frons in middle line longer than wide (about 2 : 1), widest near middle, median carina forked in basal 1/3 or nearer base; clypeus at base wider than frons at apex, postclypeal disc a little shorter than broad at base; rostrum short, not or scarcely as long as clypeus, reaching only to mesotrochanter, antennae reaching to frontoclypeal suture, basal segment a little longer than broad, 2nd segment approximately 2 × as long as 1st, ocelli and blemmata distinct. Pronotum with disc approximately as long in middle line as broad at anterior margin, sometimes rather less, lateral carinae not attaining hind margin; post-tibial spur shallowly tectiform, thin, with 14–18 small teeth.

Anal segment of ♂ short, ring-like, with a pair of long compressed sinuate spinose processes, rather closely apposed basally and directed ventrad. Pygofer long, with dorsolateral angles produced caudad, diaphragm narrow in middle 1/3, produced caudad in a vertical ridge or rounded lobe at middle, ventral margin excavate. Aedeagus tubular, approximately sickle-shaped, orifice terminal, laterally or dorsally. Genital styles moderately long, diverging, each produced mesad at base in a lobe, slightly widening distad, truncate apically, usually with inner angle acute or more deeply rounded than outer angle.

Type species: *Falcotoya aurinia*, n. sp.

The type species runs to *Toya* in my key to the genera of Delphacidae of Australia and New Zealand (Fennah 1965: 4). It is separated from *Toya* by relatively stouter build, a more transverse vertex and a relatively shorter rostrum. In the rostrum of *Toya attenuata* the subapical segment attains the mesotrochanter and the apical segment reaches the post-coxa, and in side view is about

4 × as long as broad at base, whereas in *Falcotoya* the subapical segment does not reach the mesotrochanter and the apical segment, which does so, is scarcely more than 2 × as long as broad at base in side view.

The genus includes *Falcotoya lyraeformis* (Matsumura), n. comb., (*Liburnia lyraeformis* Matsumura, 1900, *Ent. Nachr.* **26**: 267), *Falcotoya crawfordi* (Muir & Giffard), n. comb. (*Delphacodes crawfordi* Muir & Giffard, 1924, *Hawaii. Sugar Pl. Assoc. Ent. Bull.* **15**: 34) and *Falcotoya aglauros* (Fennah) n. comb. (*Delphacodes aglauros* Fen., 1958, *Bull. I.F.A.N.* **22**(A): 486).

The gender of the generic name is feminine.

53. ***Falcotoya aurinia*** Fennah, new species Fig. 192–199.

♂. Vertex shorter sub-medially than broad at base (1: nearly 1.4), obtusely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin truncate with submedian carinae prominent, Y-shaped carina distinct, submedian carinae uniting at base of frons, basal compartment of vertex wider at hind margin than greatest length (2:1); and than median length (nearly 2.3:1), frons in middle line longer than wide at widest part (2:1), widest at middle, lateral margins shallowly convex, almost parallel, median carina forked at level of middle of eyes; clypeus at base a little wider than frons at apex, postclypeal disc a little shorter than broad at base, in profile shallowly convex, anteclypeus in profile moderately convex; entire clypeus in profile moderately convex; rostrum attaining mesotrochanter, apical segment about as long as subapical; antennae reaching to frontoclypeal suture, basal segment longer than broad at apex (1.1:1), 2nd segment longer than 1st (2:1); ocelli and blemmata distinct. Pronotum with disc shorter in middle line than broad at anterior margin (1:1.7), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.6:1). Post-tibial spur with about 17 teeth.

Fuscous; all carinae and margins ochraceous; antennae dilute fuscous, post-tibial spur pale, almost ivory white. Tegmina milky hyaline, veins and margin very dilute fuscous. Wings hyaline with dilute fuscous veins.

Anal segment very short, ring-like, lateroapical angles closely approaching one another, each produced ventrad in a laterally compressed sinuate spinose process. Pygofer long, posterior opening broader than long dorsoventrally, dorsolateral angles strongly produced caudad and inflected mesad at apex; diaphragm narrow in middle 1/3 with dorsal margin produced dorsocaudad in a narrowly rounded lobe, ventral margin of pygofer excavate, medioventral process absent. Aedeagus tubular, approximately S-shaped, horizontal

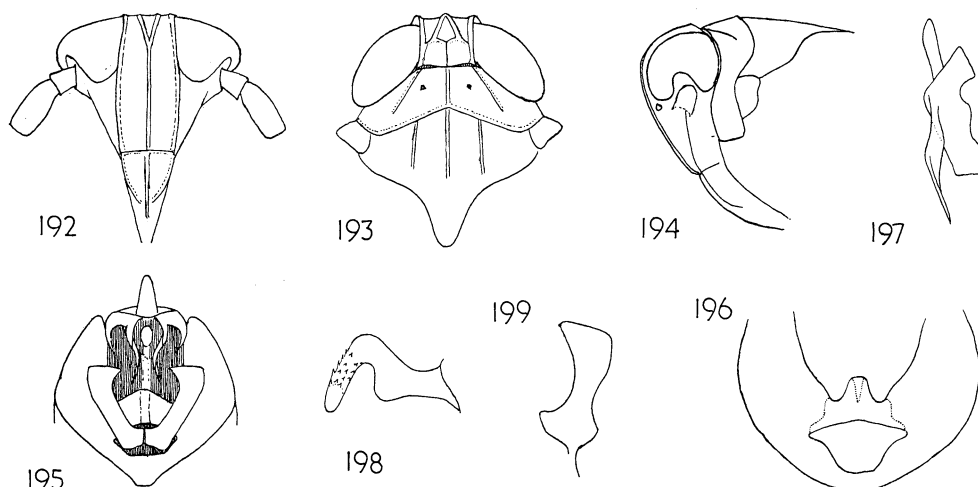


Fig. 192–199. *Falcotoya aurinia*, n. sp.: 192, frons and clypeus; 193, vertex, pronotum and mesonotum; 194, head, pronotum and mesonotum, lateral view; 195, ♂ genitalia; 196, diaphragm of pygofer; 197, ♂ anal segment; 198, aedeagus; 199, genital style.

in basal 1/3, then abruptly curved dorsad, and finally recurved ventrad, about 14 minute teeth in distal 1/3, distributed more or less irregularly, orifice dorsally at apex. Genital styles moderately long, each produced mesad at base in a curved subtriangular lobe, then moderately constricted and expanding distad to apex, apical margin truncate, outer apical angle rectangulate, a little rounded, inner apical angle acute. Length, 2.0 mm, tegmen, 2.2 mm.

Holotype ♂ (BISHOP 7660), New Caledonia, Ansé Vata, XI.1958, C.R. Joyce.

This species is distinguishable from *F. lyraeformis* by its dark ground color, and by the shape of the aedeagus. In the Micronesian population of *F. lyraeformis* the tegminal veins distad of the node are distinctly darker than those in the corium, whereas in the present species the veins are of the same hue throughout. A similar difference in tegminal coloration serves to separate *F. aurinia* from the American *F. crawfordi* (M. & G.), and the 2 differ also in the shape of the median lobe on the diaphragm of the pygofer and in that of the aedeagus. From *F. aglauros* Fennah the present species differs in the shape of the pygofer.

54. **Falcotoya citipes** Fennah, new species Fig. 200-207.

♂. Vertex as long medially as broad at base, subrectangulately rounding into frons, as wide at apex as at base, lateral margins concave, apical margin truncate with submedian carinae a little prominent, Y-shaped carina distinct, submedian carinae uniting in basal part of frons, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1); and than median length (about 1.7 : 1), frons in middle line longer than wide at widest part (2 : 1), widest at 1/3 from base, lateral margins shallowly convex, median carina forked at 2/7 from base; clypeus at base distinctly wider than frons at apex, postclypeal disc a little shorter in middle than broad at base, in profile shallowly convex; anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching to mesotrochanter; antennae scarcely reaching to frontoclypeal suture, basal segment longer than broad (1.3 : 1), 2nd segment longer than 1st (1.8 : 1); ocelli and blemmata distinct. Pronotum with disc about as long in middle line as broad at anterior margin,

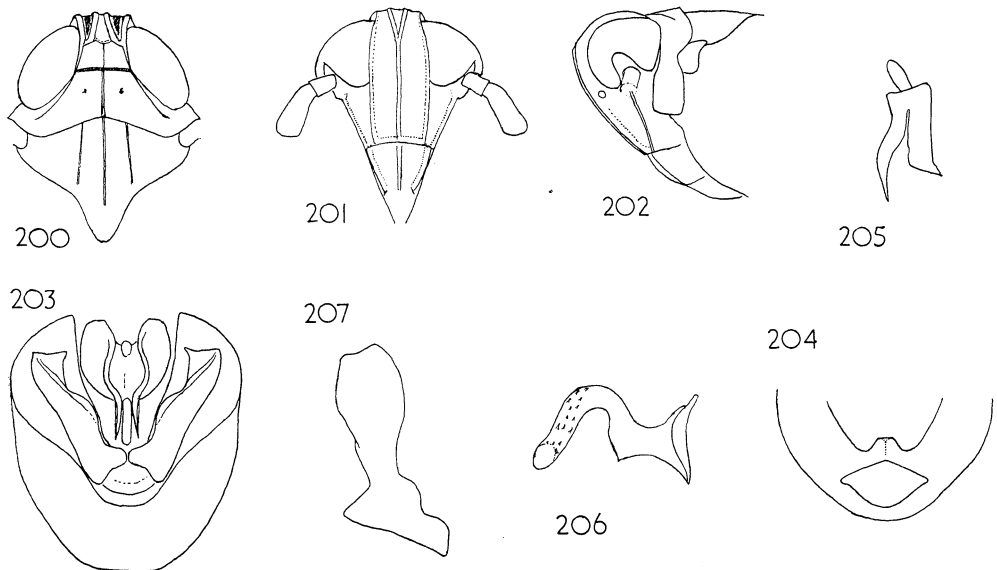


Fig. 200-207. *Falcotoya citipes*, n. sp.: 200, vertex, pronotum and mesonotum; 201, frons and clypeus; 202, head, pronotum and mesonotum, lateral view; 203, ♂ genitalia; 204, diaphragm of pygofer; 205, ♂ anal segment; 206, aedeagus; 207, genital style.

lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (about 2.3 : 1). Post-tibial spur with about 14 teeth.

Pale ochraceous; intercarinal areas of frons, fuscous; intercarinal areas of postclypeus, light reddish brown. Tegmina hyaline, veins of corium stramineous, veins of membrane and apical margin, fuscous. Wings hyaline, with veins stramineous basally, fuscous distally.

Anal segment of ♂ very short, only distal margin visible from above, lower surface almost facing caudad, lateroapical angles very closely apposed, each produced ventrad below level of diaphragm in a long twisted spinose process. Pygofer rather long, posterior opening broader than deep, dorsolateral angles each strongly produced caudad and inflected mesad at tip, diaphragm narrow at middle with dorsal margin strongly concave, elevated in a dorsoventral ridge in middle line, with its upper end farther caudad than lower end, ventral margin of pygofer excavate, medioventral process absent. Aedeagus long, tubular, horizontal at base then abruptly ascending, and finally strongly curved ventrocaudad, deflexed portion ornamented with about 18 teeth; orifice ovate, terminal. Genital styles moderately long, each produced mesad at base in a rounded lobe, rather constricted at middle, widening distad, truncate apically. Length, 1.4 mm tegmen, 2.0 mm.

Holotype ♂ (BISHOP 7661), New Caledonia, beach near La Foa, XI.1958, C.R. Joyce. Paratypes: 3 ♂♂, same data: Ansé Vata, X.1958, C.R. Joyce.

This species is apparently closely allied to *F. lyraeformis* (Matsumura) but differs in the relatively longer vertex, the longer fork of the median frontal carina, and the shape of the genital styles, and in the absence of infuscation in the lateral fields of the mesonotum. From the Micronesian population identified as *lyraeformis* by me (1956: 123) it differs in the even curvature of the distal 2/3 of the aedeagus.

#### 55. *Perkinsiella rattlei* Muir

No specimens of this species were examined.

#### Genus *Nemotor* Fennah, new genus

Vertex broader than long, basal compartment short, about 3× as broad as long in middle, distal portion of vertex obtusely rounding into frons, sublateral carinae meeting at apex; frons nearly 2× as long as broad, widest between eyes, median carina simple; postclypeal portion of clypeus about as long as broad, rostrum long, reaching to post-trochanter, antennae surpassing frontoclypeal suture, basal segment rather longer than broad, 2nd segment about 2× as long as 1st, ocelli small, indistinct, eyes reniform. Pronotum with disc broader at anterior margin than long in middle line, lateral carinae strongly diverging posteriorly, not attaining hind margin. Post-tibial spur about 3/4 of length of basal metatarsal segment, rather narrow, with about 15 teeth on margin.

Anal segment of ♂ short, ring-like. Pygofer rather short, ventrally strongly convex, posterior opening longer dorsoventrally than broad, diaphragm distinctly broad. Aedeagus slender. Genital styles moderately long.

Type species: *Nemotor sabinus* n. sp.

This genus runs to *Delphacodes* in my key to genera of Pacific Delphacidae (Fennah 1956: 83) and to *Toya* in my key to the genera of Australia and New Zealand (Fennah 1965: 4). In the form of the head it is quite unlike either genus, and in this feature resembles *Horcoma* and *Notogryps*. It differs from *Notogryps* very markedly, and from *Horcoma* distinctly, in the narrow post-tibial spur. In *Horcoma* the rostrum, as seen in side view, is about as long as the entire clypeus, whereas in *Nemotor* it is about as long as the frons and clypeus combined, and reaches to the post-trochanter; moreover, in the former genus, the legs are relatively short and thick, and the spur relatively broad, whereas in the latter the legs are relatively long and thin, and the spur narrow.

#### 56. *Nemotor sabinus* Fennah, new species Fig. 208-214.

♂. Vertex shorter medially than broad at base (1 : 1.3), obtusely rounding into frons, about as wide at apex as at base, lateral margins straight or shallowly concave, apical margin truncate, with united subme-

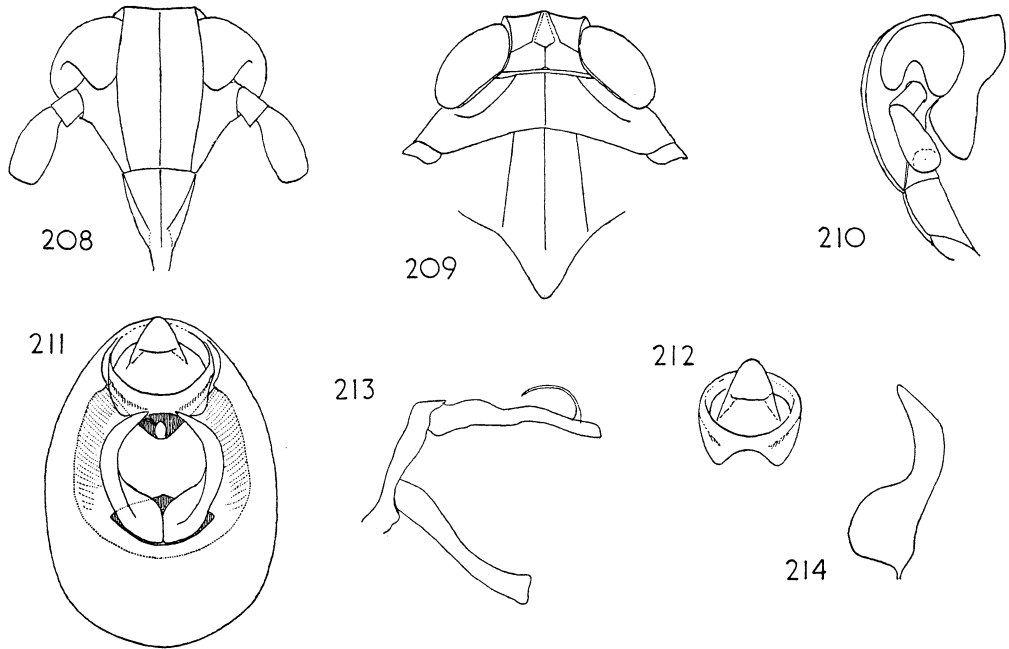


Fig. 208–214. *Nemator sabinus*, n. sp.: 208, frons and clypeus; 209, vertex, pronotum and mesonotum; 210, head and pronotum, lateral view; 211, ♂ genitalia; 212, ♂ anal segment, posterior view; 213, aedeagus and strut to base of genital styles, left side; 214, genital style.

dian carinae a little prominent, Y-shaped carina rather weak, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (3 : 1); and than median length (about 3.8 : 1), frons in middle line longer than wide at widest part (1.8 : 1), widest at 1/3 from base, lateral margins convex, median carina simple; clypeus at base distinctly wider than frons at apex, postclypeal disc a little shorter than broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum just reaching to post-trochanter, apical segment about as long as sub-apical; antennae extending beyond frontoclypeal suture, basal segment longer than broad (nearly 1.5 : 1), 2nd segment longer than 1st (2 : 1); ocelli small. Pronotum with disc shorter in middle line than broad at anterior margin (about 1 : 1.5), lateral carinae straight, not nearly attaining hind margin. Total length of mesonotum greater than that of scutellum (nearly 2.8 : 1), post-tibial spur with 15 or 16 teeth.

Fuscous; antennae, rostrum, legs, posterior margin of pronotum and of mesonotum narrowly, stramineous. Tegmina hyaline, lightly infusate except in cell Sc and cell R, veins fuscous. Wings hyaline with fuscous veins.

Anal segment of ♂ short, ring-like, lateroapical angles not clearly defined and not produced. Pygofer rather short, posterior opening longer dorsoventrally than broad, dorsolateral angles not at all produced, diaphragm very broad, with dorsal margin concave, devoid of ornamentation, medioventral process absent. Aedeagus moderately long, slender, shallowly sinuate, a slender spinose process arising on left at about 1/5 before apex, directed to left then curving cephalad. Genital styles moderately long, each broad at base, then abruptly narrowing to near middle, then parallel-sided, finally curved mesad and tapering to acuminate apex. Length: 1.5 mm, tegmen, 2.0 mm.

Holotype ♂ (Висноф 7662), New Caledonia, Tao, II.1963, C.M. Yoshimoto & N.L.H. Krauss.

## Family MEENOPLIDAE Muir

## KEY TO NISIINAE OF NEW CALEDONIA

1. Clypeus ecarinate; lateral carinae of frons terminating at frontoclypeal suture.....**Nisia**  
Clypeus carinate laterally.....2
2. An interruption at frontoclypeal suture between lateral carinae of frons and clypeus.....**Suva**  
No interruption at frontoclypeal suture between lateral carinae of frons and clypeus.....**Eponisia**

Genus **Suva** Kirkaldy

*Suva* Kirk., 1906: 428 (Haplotype: *S. koebelei* Kirk., 1906, *ibid.*).

57. ***Suva albonotata*** (Distant), n. comb. Fig. 215–219.

*Nisia albonotata* Dist., 1920: 463.

Vertex with occipital areolets broadly meeting in middle line; frons longer in middle line than broad (1.6 : 1), widest at middle, lateral margins concave in basal 1/2, almost parallel in distal 1/2; ocelli distinct, unpigmented. Post-tibia with 7 or 8 teeth apically, basal metatarsal segment with 7 teeth, 2nd segment with 6 teeth. Tegmina longer than broad (2.6 : 1), apical angle more strongly rounded than anal angle; venation as figured.

Stramineous, powdered white; sides of head before eyes, lateral fields of pronotum, and a suffusion on genitalia, fuscous; mesonotum brownish yellow, darker along middle, post-tarsi orange-brown. Tegmina hyaline, powdered white, a broad suffusion along middle of corium from base to line of transverse veinlets, dull yellow; a suffusion in membrane from middle of transverse line to apical angle in R, and at apex of all veins at junction with apical margin, fuscous.

♂. Genitalia with aedeagus rather stout, decurved distad and tapering to apex. Genital styles in ventral view broad at base, in side view each comprising 2 lobes, one directed dorsad, the other dorsocaudad, as figured.

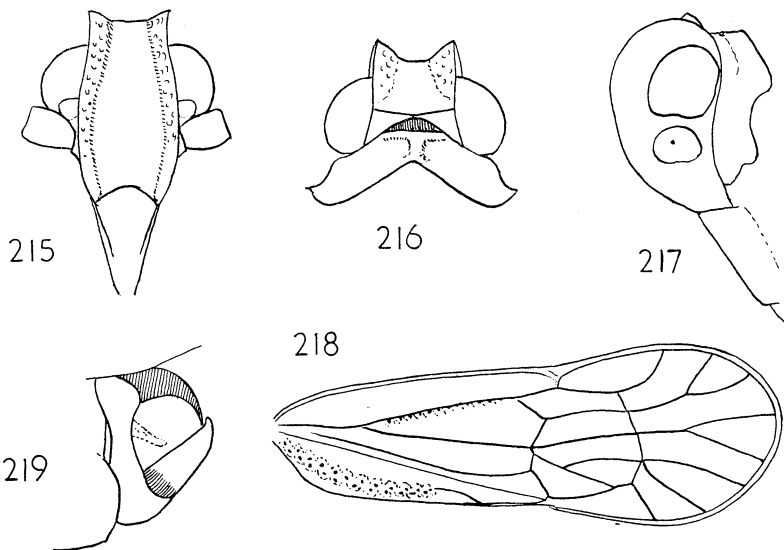


Fig. 215–219. *Suva albonotata* (Distant): 215, frons and clypeus; 216, vertex and pronotum; 217, head and pronotum, lateral view; 218, tegmen; 219, posterior margin of pygofer, left genital style, and distal portion of aedeagus (shaded).

3 ♂♂, 3 ♀♀. NEW CALEDONIA: Col de Ho, 11.II.1963, Yoshimoto & Krauss; Col des Roussettes, 450–550 m, 4–6.II.1963, Gressitt; Vallée d'Amoa, 7.II.1963, Yoshimoto; 7 km S of Koh, 31.I.1963, Yoshimoto.

This species is readily recognizable by the coloration of the tegmina, in which the corium between Sc + R and the claval suture is golden yellow, and the cells adjoining R in the membrane are mostly smoky-gray. The most distinctive feature, however, is the form of the ♂ genital styles, each of which consists of 2 rather narrow lobes which, in side view, appear set at about 45° to one another.

### Genus **Eponisia** Matsumura

*Eponisia* Mats., 1914: 285 (Orthotype: *E. guttula* Mats. 1914 *ibid.*: 286).

#### KEY TO NEW CALEDONIAN SPECIES OF EPONISIA

1. Tegmina with posterior subapical cell triangular.....2  
Tegmina with posterior subapical cell quadrate.....5
2. Occipital areolets<sup>2</sup> of vertex not nearly meeting in middle line of head.....**matuta**  
Occipital areolets of vertex meeting in middle line.....3
3. Tegmina white with posterior margin broadly infuscate.....**fugax**  
Tegmina not colored as above.....4
4. Occipital areolets narrowly meeting in middle line.....**tomyris**  
Occipital areolets broadly meeting in middle line.....**lysis**
5. Occipital areolets just meeting in middle line.....**theophane**  
Occipital areolets confluent medially.....**bolanus**

#### 58. **Eponisia fugax** Fennah, new species Fig. 220–224.

Vertex with occipital areolets just meeting in middle line; frons longer in middle line than broad (1.5 : 1), widest at 2/3 from base, lateral margins sinuate; ocelli represented by a scar. Post-tibia with 8 teeth apically, basal metatarsal segment with 6 teeth, 2nd segment with 5 teeth. Tegmina longer than broad (nearly 2.3 : 1), apical angle more strongly rounded than anal angle, venation as figured.

Stramineous, powdered white. Tegmina hyaline, powdered white, a faint suffusion in costal cell and subapical cell, and a darker suffusion along posterior margin, fuscous.

♂. Anal segment in side view moderately long and narrow, ventral margin produced ventrad in a shallow lobe just before apex. Pygofer with posterior margin produced caudad in a subquadrate lobe at level of aedeagus. Aedeagus rather short, narrow, spout-like, shallowly decurved distad. Genital styles rather long, moderately narrow in basal 1/2, gradually expanding in apical 1/2, apical angle acute, directed dorso-caudad. Length, 2.9 mm; tegmen, 4.0 mm.

♀. Length, 2.9 mm; tegmen, 4.0 mm.

Holotype ♂ (BISHOP 7663), New Caledonia, Mt. Koghi, 500 m, 15.II.1963, C.M. Yoshimoto. Paratypes: 21 ♂♂ and ♀♀, New Caledonia, Col de la Pirogue, II.1963, Krauss & Yoshimoto.

#### 59. **Eponisia matuta** Fennah, new species Fig. 225–229.

♂. Vertex with occipital areolets widely separated, not nearly approaching each other in middle line; frons longer in middle line than broad (1.5 : 1), widest at middle, lateral margins shallowly convex, foliaceous distally; lateral ocelli obscure, unpigmented. Post-tibia with 7 teeth apically, basal metatarsal segment with 5 teeth, 2nd segment with 5 teeth. Tegmina longer than broad (2.8 : 1), apical angle more strongly rounded than anal angle.

Pallid stramineous, powdered white; a suffusion on genae before eyes, dilute fuscous; mesonotum dull

<sup>2</sup>In many species of Meenoplidae the portion of the head that lies between the transverse carina of the vertex and the posterior margin becomes divided into 2 triangular areas as a result of the posterior margin reaching the transverse carina medially. These areas are here termed the 'occipital areolets'.

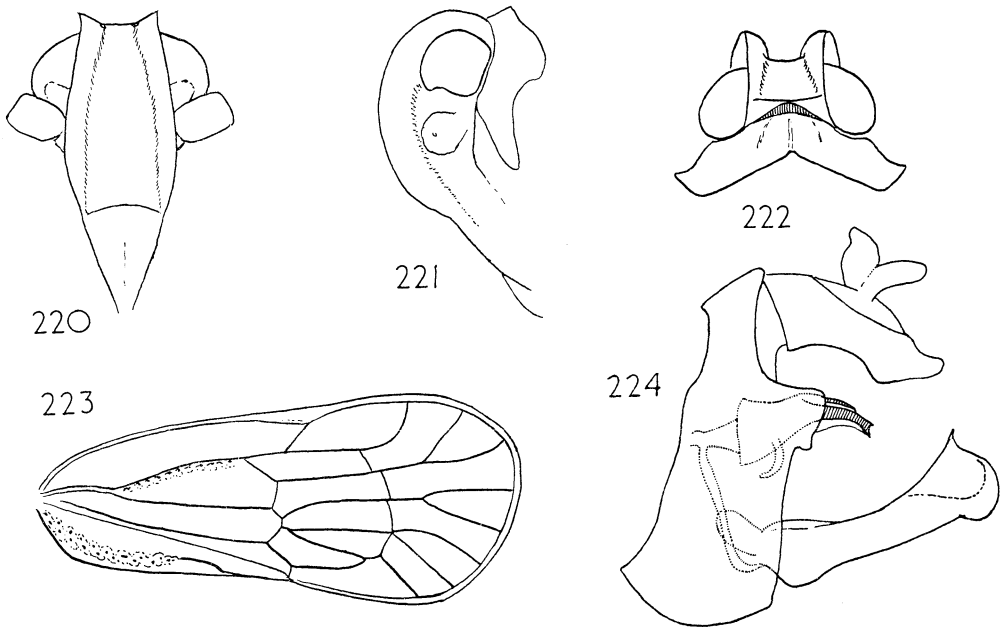


Fig. 220–224. *Eponisia fugax*, n. sp.: 220, frons and clypeus; 221, head and pronotum, lateral view; 222, vertex and pronotum; 223, tegmen; 224, ♂ genitalia.

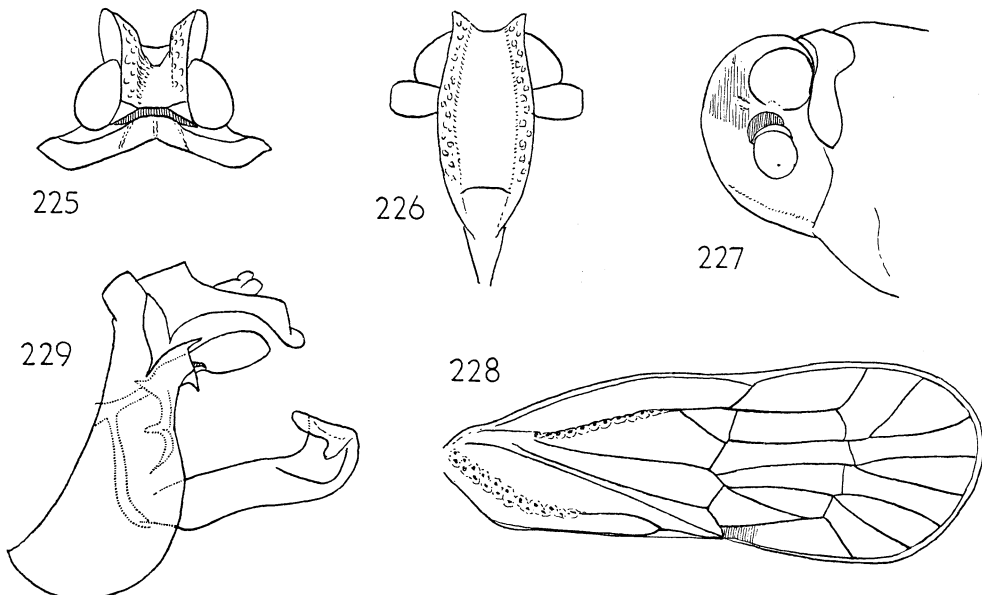


Fig. 225–229. *Eponisia matuta*, n. sp.: 225, vertex and pronotum; 226, frons and clypeus; 227, head and pronotum, lateral view; 228, tegmen; 229, ♂ genitalia.



yellow. Tegmina hyaline, powdered white, a dilute fuscous spot at margin just distad of claval apex, veins concolorous or almost white. Wings hyaline, powdered white, veins concolorous.

Anal segment of ♂ in profile with ventral margin concave. Pygofer with posterior margin at level of aedeagus broadly produced caudad in a quadrate lobe, with acute distal angles. Aedeagus pigmented in basal 1/2, with a small shallowly curved spinose process laterally, directed laterad, submembranous and spatulate in distal 1/2. Genital styles moderately long, in side view with dorsal and ventral margins subparallel, semi-circularly impressed in upper 1/2 near apex, apical process deeply rounded, obliquely inflected dorsolaterad. Length, 3.3 mm; tegmen, 4.4 mm.

Holotype ♂ (BISHOP 7664), New Caledonia, Col des Roussettes, 450–550 m, 4–6.II.1963, J.L. Gressitt.

This species is allied to *E. fugax*, but can be distinguished from this and other species by its coloration, the shape of the occipital areolets, the almost foliaceous distal lateral margins of the frons, and the structure of the male genitalia.

60. ***Eponisia lysis*** Fennah, new species Fig. 230–234.

♂. Vertex with occipital areolets confluent medially; frons longer in middle line than broad (1.9 : 1), widest at middle, lateral margins weakly diverging in basal 1/2, sinuate and almost parallel in distal 1/2, lateral ocelli distinct, unpigmented. Tegmina longer than broad (2.6 : 1), apical angle more strongly rounded than anal angle; venation as figured.

Stramineous, slightly suffused with fuscous, powdered white; sides of head before eyes, pronotum behind eyes, and lateral fields of mesonotum fuscous or reddish brown. Tegmina subhyaline, sordid white, a spot at apex of cell Sc + R and a broad suffusion bordering all veins in distal 1/2 of tegmen, dilute fuscous, veins yellowish, except at apical margin, where they are infuscate. Wings sordid white with dilute fuscous veins.

Anal segment short, in profile deep, with a tumescence laterally on each side, ventral margin strongly convex, excavate near apex. Pygofer with posterior margin produced caudad in a rectangulate lobe, distally acute, at level of aedeagus. Aedeagus small, narrow, sinuately tapering distad. Genital styles moderately

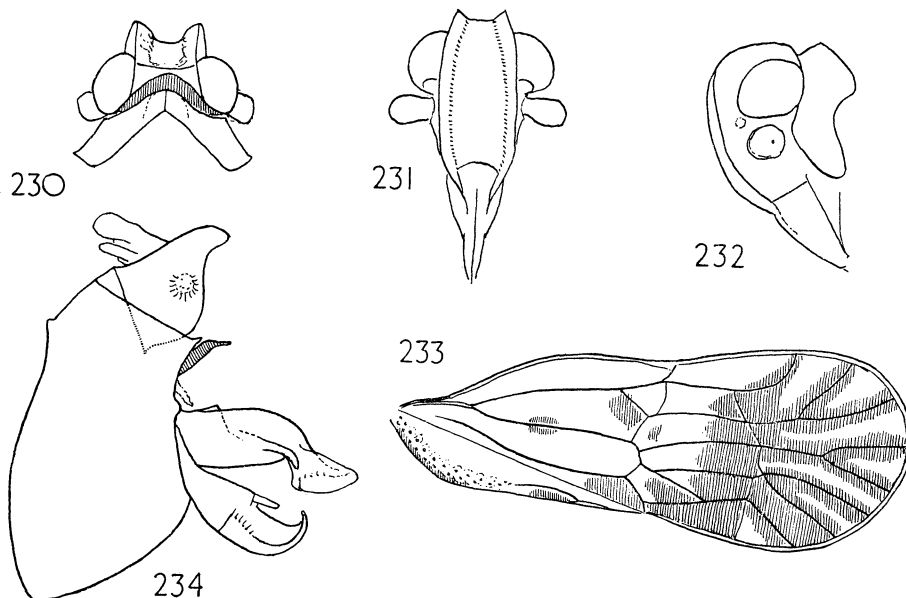


Fig. 230–234. *Eponisia lysis*, n. sp.: 230, vertex and pronotum; 231, frons and clypeus; 232, head and pronotum, lateral view; 233, tegmen; 234, ♂ genitalia.

long, broad, strongly curved, ventral margin produced caudad near middle in a finger-like process, distally setiferous, distal 1/3 of styles submembranous, curved mesodorsad, apical margin obliquely convex. Length, 3.8 mm, tegmen, 5.0 mm.

Holotype ♂ (BISHOP 7665), New Caledonia, Mt. Koghi, about 600 m., 30.XI.1963, R. Straatman.

This species closely resembles *Suva albonotata* Dist. in the shape of the head in profile. It differs from this species in the more infusate tegmina and wings, and markedly in the shape of the male genitalia.

61. ***Eponisia bolanus*** Fennah, new species Fig. 235-239.

♀. Vertex with occipital areolets confluent medially; frons longer in middle line than broad (1.7 : 1), widest at 3/4 from base, lateral margins shallowly sinuate, lateral ocelli prominent, unpigmented, median ocellus visible. Post-tibia with 8 teeth apically, basal metatarsal segment with 7 teeth, 2nd segment with 7 teeth. Tegmina longer than broad (2.6 : 1), apical angle more strongly rounded than anal angle; venation as figured.

Light yellowish brown; submarginal areas of frons, clypeus and pronotum, lateral fields of mesonotum, tegulae and pleurites except at margins, abdominal tergites except on posterior margin, and a dilute suffusion on ventrites, castaneous. Tegmina subhyaline, a suffusion at base of costal cell and another at apex, posterior 1/2 of tegmen, and apical areoles of R and M except along middle, dilute reddish brown, veins subconcolorous, paler than ground, Sc + R near middle, and pustules of anterior claval vein, castaneous; a clear area on basal 1/2 of M in corium. Wings dilute reddish brown, with dark reddish brown veins.

Seventh tergite of ♀ not much longer at lateral margins than medially, posterolateral angles a little incurved but not markedly produced caudad. Length, 4.3 mm; tegmen, 7.2 mm.

Holotype ♀ (BISHOP 7666), New Caledonia, Thi River Valley, 1.XI.1940, F.X. Williams.

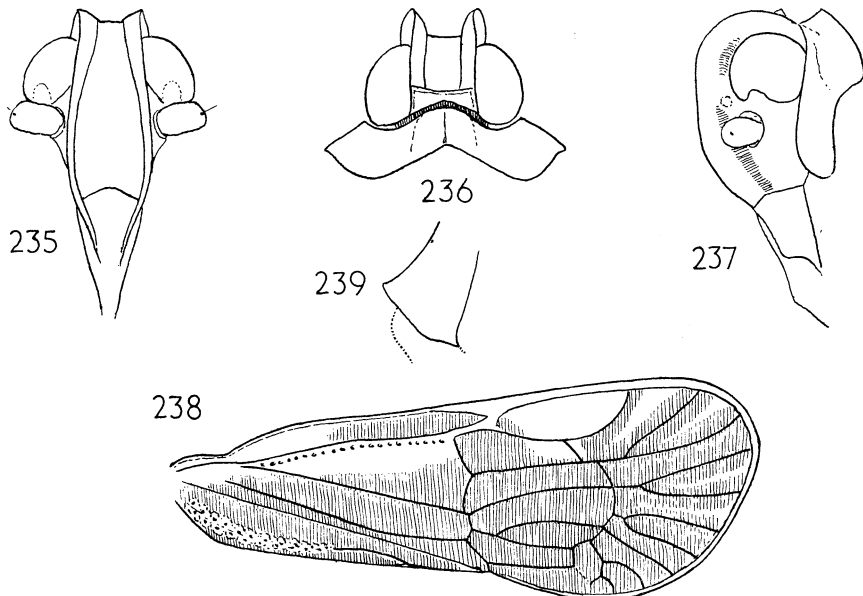


Fig. 235-239. *Eponisia bolanus*, n. sp.: 235, frons and clypeus; 236, vertex and pronotum; 237, head and pronotum, lateral view; 238, tegmen; 239, right side of last abdominal tergite.

This species is separable by tegminal venation from all species except *E. theophane*, and it differs from this in coloration and, in the ♀, in shape of the posterolateral angles of the 7th tergite, as well as in tegminal length.

62. ***Eponisia theophane*** Fennah, new species Fig. 240-244.

♀. Vertex with occipital areolets just meeting in middle line; frons longer in middle line than broad (nearly 1.9 : 1), widest very near apex, lateral margins shallowly sinuate; lateral ocelli prominent, unpigmented, median ocellus visible. Post-tibia with 8 teeth apically, basal metatarsal segment with 7 teeth, 2nd segment with 7 teeth. Tegmina longer than broad (almost 3 : 1), apical angle more strongly rounded than anal angle, venation as figured.

Light yellowish brown; lateral carinae of frons in basal 2/3 and a suffusion on sides of head above eyes, castaneous; intercarinal areas of mesonotal disc a little darker than carinae. Tegmina hyaline, with light yellowish-brown suffusion; an elongate spot near apex of costal cell and a suffusion bordering branches of R in apical cells, dilute fuscous; veins orange-yellow, Sc + R in basal 1/2 and pustules on anterior claval vein, dark fuscous or castaneous. Wings sordid white with reddish-brown veins.

Seventh tergite much longer at lateral margin than medially, posterolateral angles incurved. Length, 4.8 mm; tegmen, 5.0 mm.

Holotype ♀ (BISHOP 7667), New Caledonia, Yahoué, I.1963, N.L.H. Krauss. Paratypes: 2 ♀♀, New Caledonia, St. Louis Valley, 22.III.1945, H.E. Milliron.

The group of species to which this belongs is recognisable by the relatively large bodily size of its members and the tegminal venation in the posterior 1/2 of the membrane. The present species is distinguished by coloration and by the extent to which the posterolateral angles of the 7th tergite are produced caudad.

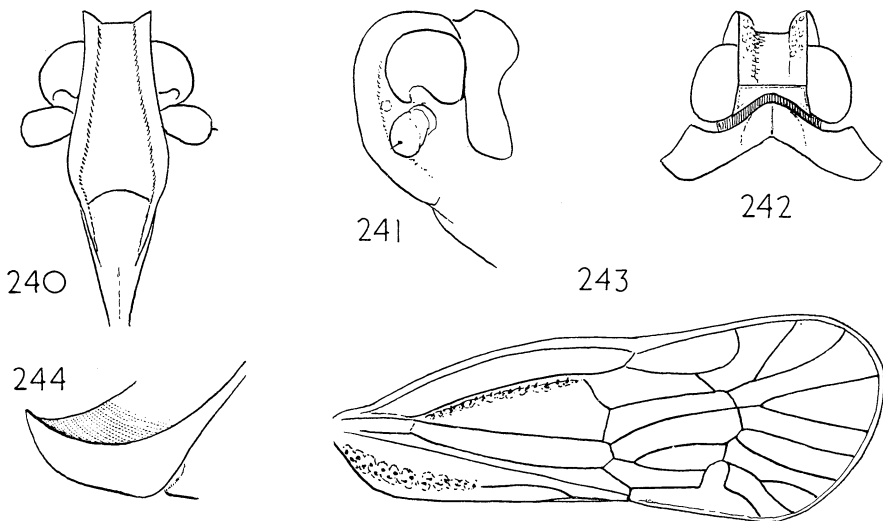


Fig. 240-244. *Eponisia theophane*, n. sp.: 240, frons and clypeus; 241, head and pronotum, lateral view; 242, vertex and pronotum; 243, tegmen; 244, right side of last abdominal tergite.

63. ***Eponisia tomyris*** Fennah, new species Fig. 245-249.

♂. Vertex with occipital areolets narrowly meeting in middle line; frons longer in middle line than broad (1.5 : 1), wider just distad of middle, lateral margins shallowly convex; lateral ocelli small, obscure. Post-tibia with 8 teeth apically, basal metatarsal segment with 6 teeth, 2nd segment with 5 teeth. Tegmina

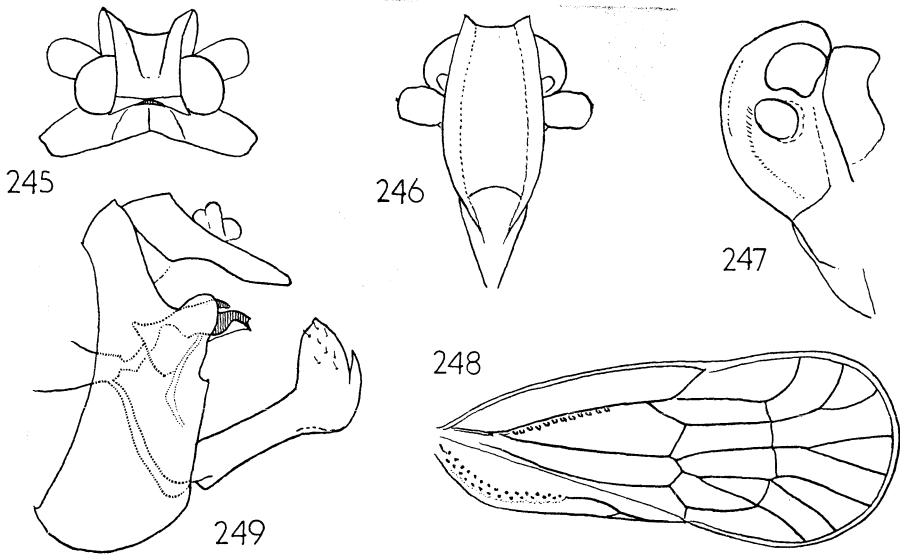


Fig. 245-249. *Eponisia tomyris*, n. sp.: 245, vertex and pronotum; 246, frons and clypeus; 247, head and pronotum, lateral view; 248, tegmen; 249, ♂ genitalia.

longer than broad (2.5 : 1), apical angle little, if any, more strongly rounded than anal angle; venation as figured.

Uniformly pale stramineous, powdered white. Tegmina subhyaline, powdered white, veins white or almost so.

Anal segment in side view rather long and narrow, ventral margin slightly concave in basal 1/2. Pygofer with posterior margin produced dorsocaudad in a rounded lobe at level of aedeagus. Aedeagus short, distally with sclerotised tubular portion spout-like and decurved. Genital styles relatively long, in side view parallel-sided in basal 2/3, rather abruptly expanding into an ovate lobe in apical 1/3, a deep vertical incision on distal margin. Length, 3.5 mm; tegmen, 4.5 mm.

Holotype ♂ (BISHOP 7668), New Caledonia, Mt. Koghi, about 600 m, 30.XI.1963, R. Straatman.

This species is allied to *E. fugax* but differs from this species in the narrowly confluent occipital areolets, in the absence of lateral tumescences on the ♂ anal segment, and in the shape of the genital styles.

#### Genus *Nisia* Melichar

*Nisia* Mel., 1903: 53. (Haplotype: *Meenoplus atrovenosus* Lethierry)

#### 64. *Nisia atrovenosa* (Lethierry)

*Meenoplus atrovenosus* Leth., 1888: 466.

14 ♂♂ & 13 ♀♀. NEW CALEDONIA: Poindimié, 26.XI.1958; mountain stream up Boulari River, 3, 17.XI.1958; Dumbea River, 28.X.1958; Ansé Vata, 9.XI.1958, C. R. Joyce; St. Louis, 1.VII.1940, F. X. Williams; Tao, 8-10.II.1963; La Crouen, 31.I.1963; Mt. Koghi, 600 m, 26-30.I.1963, C. M. Yoshimoto and N. L. H. Krauss; Bourail, 4-6.II.1963, J. L. Gressitt.

The structure of the genital styles is very close to that of the Australian population of this species.

#### 64a. *Nisia grandiceps* Kirkaldy, 1906: 427.

*Nisia grandiceps dammermani* Muir, new status.

*Nisia dammermani* Muir 1930: 34.

*Nisia grandiceps levuana* Fennah, new combination.

*Nisia atrovenosa levuana* Fennah 1950: 47.

There are no specimens of *N. grandiceps* in the present collection, but I wish to take this opportunity of revising the status of the concepts named above. The type locality of the typical subspecies is Queensland, that of *dammermani*, Sebesi, and that of *levuana*, Viti Levu.

#### Family DERBIDAE Spinola

#### Tribe ZORAIDINI

#### Genus *Zoraida* Kirkaldy

*Zoraida* Kirk., 1900: 242. (Orthotype: *Derbe sinuosa* Boheman 1838: 225).

65. ***Zoraida essingtonii*** (Westwood) Fig. 250-265.

*Derbe essingtonii* West., 1851: 210.

65a. ***Zoraida essingtonii porphyrior*** Fennah, new subspecies

Vertex with lateral margins narrow, disc depressed, a pair of weak carinae extending anteriorly from basal margin; frons with lateral margins apposed between eyes, and only just separate distad of eyes; head in profile with lateral margins of vertex only very slightly elevated above eyes; antennae cylindrical, longer than broad (about 6 : 1), and longer than frons (1.6 : 1); genae not at all tumid; rostrum with basal segment longer than apical (7.5 : 1), apical segment in side view longer than broad (1.3 : 1). Pronotum rather densely pustulate behind eyes and on lateral lobes (about 40 on each side). Tegmina with Sc giving off an oblique branch to margin soon after forking from R, and a 2nd oblique branch near stigma, transverse veinlets extending obliquely inward from claval apex forming a straight line. Wings almost 1/2 as long as tegmina.

Yellowish brown; carinae and margins of head and thorax, pustules on pronotum, rostrum, femora and tibiae, pale yellowish brown or ochraceous; abdomen and genitalia, except at margins, dark reddish brown, the former densely beset with pallid pustules. Tegmina hyaline, suffused with rather dilute fuscous, 3 or 4 ovate spots anterior to Sc + R and cells between R and anterior margin, except at stigma, 4 veinlets adjoining apical margin, colorless; Sc and R, and 1 or 2 linear marks on M and Cu 1 near base, pale reddish brown; anterior margin distad of stigma and apical margin narrowly, orange-red; stigma, transverse veinlets, 1st apical cell of R distally, and a row of round or crescentic spots, 1 on each vein entering apical margin, dark fuscous, almost piceous. Wings hyaline, dilute fuscous, with fuscous veins.

♂. Anal segment long and narrow, strongly deflexed at middle, apical margin oblique in posterior view, acutely produced laterad on right. Pygofer short, dorsolateral angles each produced caudad in an acute lobe, medioventral process subtriangular, with sides sinuate and apex deeply rounded. Aedeagus long, tubular, reflected cephalad distally, a spinose process, directed dorso-cephalad, on right in ascending portion. Genital styles as figured, left style terminating apically in a bluntly-rounded lobe, right style produced apically in a slender spinose process. Length, 5.5 mm; tegmen, 12.5 mm.

♀. Anal segment longer than broad (nearly 2 : 1), sinuately tapering to deeply rounded apex. Posterior margin of 1st valvifers produced caudad in a short acute lobe, sometimes with a small spine just below it. Posterior margin of pregenital 7th sternite shallowly convex, with a slight indication of a notch at middle. Length, 5.5 mm; tegmen, 12.5 mm.

Holotype ♂ of subspecies, Australia: Queensland, Brisbane, 14.III.1956, Kirkpatrick (in Queensland Mus.). Paratypes: 2 ♂♂, 9 ♀♀, Australia: Mt. Coot-tha, V.1951, D. G. Malloch; Oxenham, VI.1945, C. R. Boolture; Dimbulah, I.1941, W. J. Bissett; Beaudesert, III.1952, B. D. Brett; Biloela, I.1947, A. R. Bird; Brisbane, V.1947, R. Cullinane, I.1950, J. B. Ritson, IV.1958, R. Metcalf; Coringa, IX.1946, J. R. Barrett; Sunnybank, Brisbane, III.1957, W. H. Haseler.

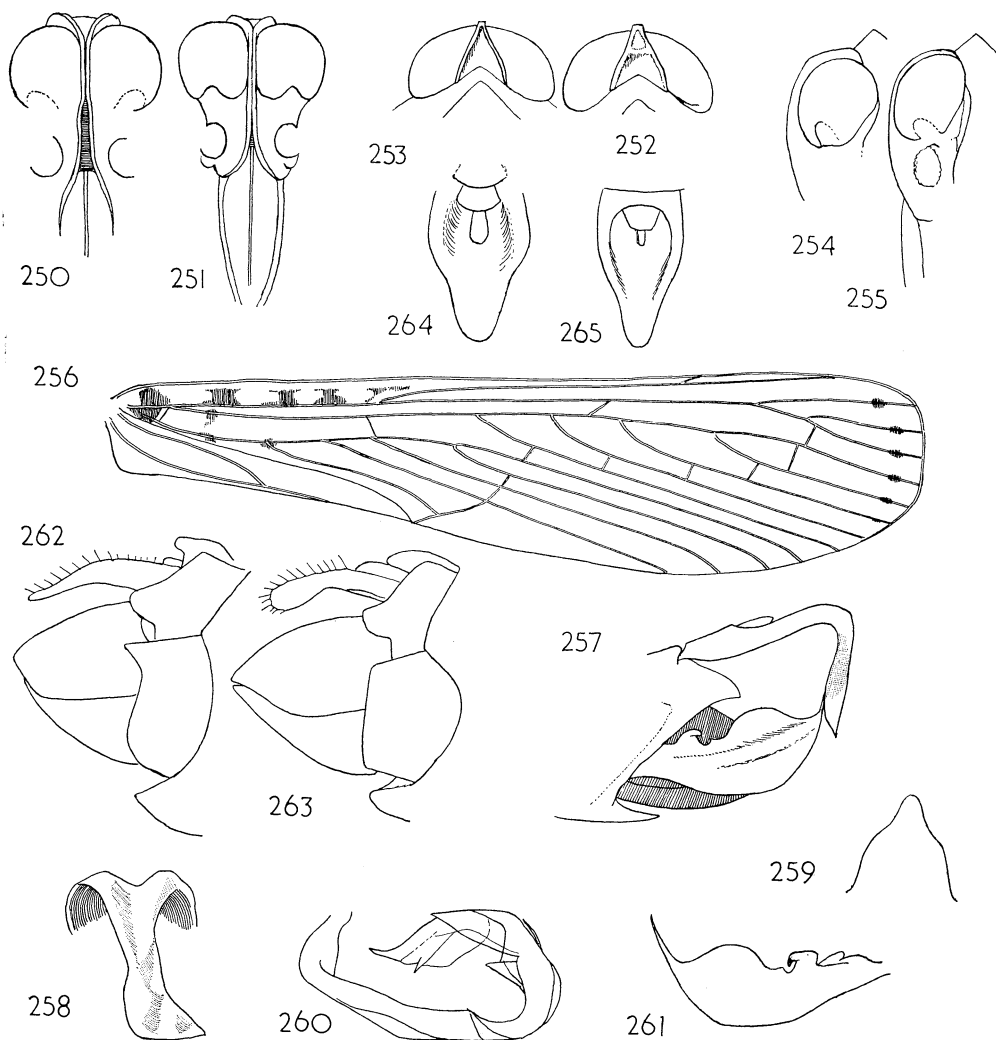


Fig. 250-265. *Zoraida essingtonii* (Westwood): 250 *Zoraida e. essingtonii*, frons; 252, vertex; 254, apex of head, in profile; 256, tegmen; 263, ♀ genitalia (specimen from Groot Eylandt); 264, ♀ anal segment (type specimen); *Zoraida essingtonii porphyrium*, n. sp.; 251, frons; 253, vertex; 255, apex of head, in profile; 257, ♂ genitalia, left side, with aedeagus shaded; 258, ♂ anal segment, posterior view; 259, medioventral process of pygofer; 260, aedeagus, left side; 261, left genital style; 262, ♀ genitalia; 265, ♀ anal segment.

1 ♂, New Caledonia, Dr Maileret, K50470.

This description embodies a redescription of the species. I have seen the ♀ type of *Z. essingtonii* (from Port Essington, Northern Territory) and a ♀ from Groote Eylandt, N.T. (III.1925, G. H. Wilkins), both in the B.M. (N.H.), and find that they agree between themselves, and differ from all the examples from Queensland and the ♂ from New Caledonia, as follows.

Lateral margins of frons markedly separate below level of eyes, sides of head more elevated above

eyes, antennae a little shorter (length: breadth 5.3–5.7 : 1), apical segment of rostrum not longer than broad and infuscation of tegmina darker; ♀ with anal segment relatively shorter, and upper angle of posterior margin of 1st valvifers not produced caudad.

These differences may prove to be of specific value, but *Z. essingtonii* is so well separated from all other Australasian species of the genus that, on present evidence, it seems more probable that the typical form of the species occurs in the coastal areas of the Northern Territory, and becomes modified in the eastern part of its range to the form here described as a geographical subspecies.

However this may be, there can be no doubt that the male labelled as being from New Caledonia is the same form as found in Queensland, and if the record is correct the species must be regarded as a very recent arrival in New Caledonia.

#### Tribe CENCHREINI

#### Genus *Eocenchrea* Muir

*Eocenchrea* M., 1913: 36 (Orthotype: *Cenchrea maorica* Kirkaldy, 1909: 80).

Muir (1934: 564) suppressed *Gonyphlepsia* Jacobi in synonymy under *Eocenchrea*. I have seen specimens of *E. maorica* and *G. montistympani* Jacobi (the type species of *Gonyphlepsia*), and have established that the range of variation between the different species in New Caledonia covers such differences as are to be found between these 2 species.

In this genus the subantennal process, as seen in a side view of the head, is sinuate or undulate. This results from its anterior portion, which is a ridge on the gena, being prominent and only slightly oblique from the horizontal. In genera such as *Cedusa*, this portion of the gena is less elevated and is strongly oblique. Moreover, in *Eocenchrea*, unlike *Cedusa*, there is a small ridge on the posterior margin of the gena and this extends to the lower posterior angle of the eye, where it forms a knob in the smaller species, but in the largest species is developed as a distinct concave lobe that forms part of the dorsal edge of the post-antennal fovea, which in *Cedusa* is composed entirely of an extension of the lateral carina of the pronotum. In all species of *Eocenchrea* so far examined, the lower edge of the lateral lobes of the pronotum is markedly thickened. The post-tibia has a spine and an oblique row of 5 teeth apically, the basal metatarsal segment has 5 or 6 teeth and the second segment also has five or six teeth, the numbers being sufficiently constant within each species to make them a useful taxonomic character.

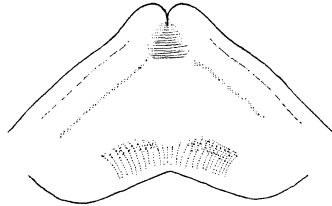
The South American genus *Goneokarella* at first glance is not unlike an *Eocenchrea*, but lacks a subantennal process, a post-genal ridge, and has 2 distinct carinae at the lateral margin of the pronotum.

#### KEY TO SPECIES OF *EOCENCHREA* IN NEW CALEDONIA

1. Apical segment of rostrum, in anterior view, as broad as long in middle.....**butes**  
Apical segment of rostrum longer in middle than broad.....2
2. Apical segment of rostrum at least 2× as long as broad.....6  
Apical segment of rostrum less than 2× as long as broad.....3
3. Vertex not less than 2× as broad as long.....5  
Vertex less than 2× as broad as long.....4
4. Tegmina almost uniformly fuscous, with costal cell, if pale, at least infuscate at base.....**feretrius**  
Tegmina pale with a fuscous band overlying M and Cu.....**galanthis**
5. Tegmen with costa pale except sometimes at base.....7  
Tegmen with costa entirely fuscous basad of stigma.....**muta**

6. Tegmen pale yellow, with about 18 fuscous spots, R-M and M-Cu almost at same distance from base.....**pardus**  
Tegmina mostly infusate, without such spots, R-M markedly distad of M-Cu.....9
7. Second segment of post-tarsus with 6 teeth.....**favonius**  
Second segment of post-tarsus with 5 teeth.....8
8. Tegmina with stigma at least  $3.5\times$  as long as broad, pallid; apical cells  $M_4$  and Cula not distinctly infusate .....**albipennis**  
Tegmina with stigma not more than  $3\times$  as long as broad, fuscous; apical cells  $M_4$  and Cula evidently infusate.....**derceto**
9. Tegmina with vein R pale stramineous.....**medon**  
Tegmina with vein R dark fuscous.....**zaleucus**
66. **Eocenchrea albipennis** Muir, 1934 : 565.

Vertex broader at base than long in middle line ( $2.3 : 1$ ), frons longer than broad ( $1.4 : 1$ ), median carina prominent throughout, rostrum with apical segment longer than broad ( $1.3 : 1$ ), subantennal process in side view undulate. Tegmina with Sc + R fork distinctly basad of Cu I fork, which is basad of union of claval veins; R-M cross vein markedly distad of M-Cu I cross vein; stigma longer than broad.



266

Fig. 266. *Eocenchrea montistympani* (Jacobi): ♀ pregenital sternite.

Pallid yellow; 2 subquadrate spots on vertex reddish-brown; mesonotum sometimes dull yellowish brown, apical segment of post-tarsus pale brown. "Tegmina milky-white, slightly opaque, fuscous along commissure", the infuscation extending slightly into claval cells and distinctly darker at apex of clavus; all apical cells very slightly fuscous, at least near apical margin, veins concolorous. Wings hyaline, powdered white, veins concolorous.

♂. Anal segment moderately long, with ventral margin, in side view, convex; apical margin short, shallowly excavate. Pygofer rather short, posterior margins produced caudad in upper  $1/2$  in a broadly rounded lobe, ventral margin a little produced caudad and obtusely angulate at middle. Aedeagus moderately long, shallowly curved upward distad, reflected cephalad at apex in a rather short broad flagellum that is devoid of spinose processes but has a subvertical ridge near base and lower distal angles a little more sclerotised than remainder. Genital styles of approximately equal width throughout, ventral margin convex, dorsal margin concave in basal  $3/4$ , straight and oblique in apical quarter. Length about 3.0 mm; tegmen, 4.5 mm.

♀. Pregenital sternite with anterior margin shallowly convex, and with a broad transverse sulcus just distad of it; a distinct transverse impression parallel to posterior margin, which is convex, though distinctly obtusely angulate at middle. Length, 3.2 mm; tegmen, 4.9 mm.

NEW CALEDONIA (2 ♀♀): Nouméa, VIII.1940, beaten from dwarf *Casuarina*, F. X. Williams; Sarraméa, 100-200 m, III.1960, Gressitt. The figure of the genitalia, and the bodily measurements, are based on the type specimen in the BM(NH).

67. **Eocenchrea derceto** Fennah, new species Fig. 275-284.

Vertex broader at base than long in middle ( $2.3 : 1$ ), frons longer than broad ( $1.4 : 1$ ), median carina



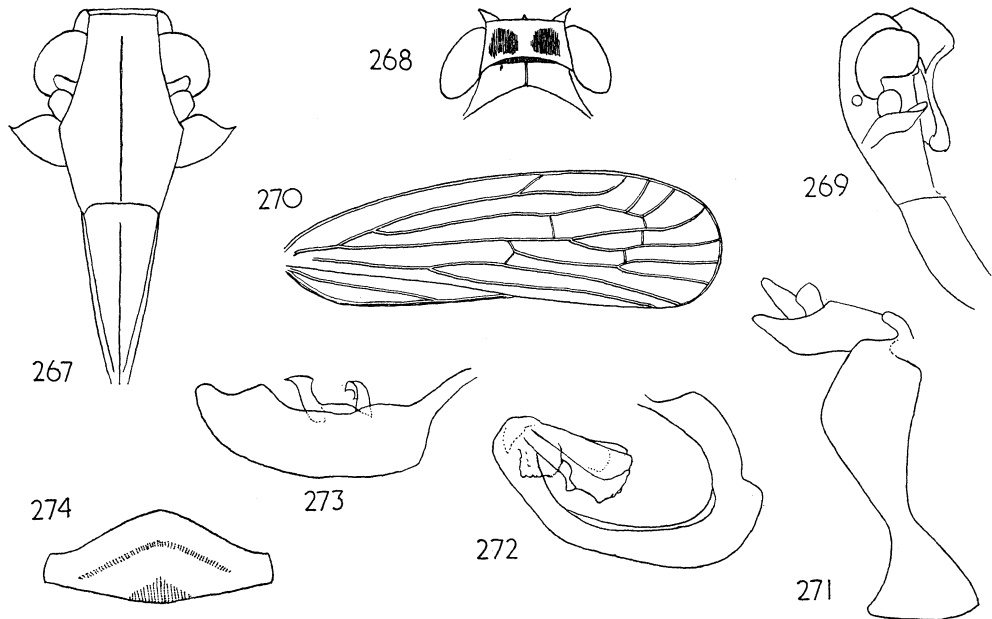


Fig. 267-274. *Eocenchrea albipennis* Muir: 267, frons and clypeus; 268, vertex and pronotum; 269, head and pronotum, lateral view; 270, tegmen; 271, ♂ anal segment and pygofer, right side; 272, aedeagus, right side; 273, right genital style; 274, ♀ pregenital sternite.

prominent in basal 1/2; rostrum with apical segment longer than broad (1.3 : 1), subantennal process in side view undulate. Tegmina with Sc + R fork markedly basad of Cul fork, which is a little basad of level of union of claval veins, R-M cross vein markedly distad of M-Cul cross vein, stigma longer than broad (2.9 : 1).

Stramineous or pale orange brown; a round spot in each compartment of vertex, sides of head above eyes, mesonotum immediately behind mesoscutellum, and distal segment of fore and middle tarsi, dark fuscous. Tegmina hyaline, powdered white, stigma, clavus along posterior margin (but not including veins), and a fascia from apex of cell Cula to apical cells  $M_4$  and Cula, fuscous; veins pale yellow. Wings hyaline, powdered white, veins stramineous.

♂. Anal segment relatively long, its lower margin almost horizontal. Pygofer short, lateral margins in dorsal 1/2 each moderately produced caudad in a broadly rounded lobe; ventral margin angulately convex. Aedeagus elongate, shallowly curved upward distad and reflected in apical 1/4 in a broad flagellum; a pair of unequal strap-like lobes arising at base of flagellum, that on right side much longer than that on left, both rounded apically; flagellum comprising a broad median lobe dorsally, V-shaped in section distally, a pair of short slender spinose processes on each side, arising near base and diverging distad, and a pair of broad asymmetrical lobes lateroventrally. Genital styles with ventral margin convex, dorsal margin shallowly concave, apical margin deeply rounded, not inflected, dorsal margin with 2 processes, as figured. Length, 4.0 mm.; tegmen, 5.5 mm.

♀. Pregenital sternite broader than long in middle (2 : 1), posterior margin rather strongly and almost evenly convex. Length, 4.1 mm; tegmen, 6.0 mm.

Holotype ♂ (BISHOP 7669), New Caledonia, Col de Mouirance, II.1963, C. Yoshimoto & N. Krauss. Paratypes: 2 ♂♂, 2 ♀♀, Col d'Amieu, 750 m, III.1960 Gressitt, 450 m, I.1963, Yoshimoto; Col des Roussettes, 450-550 m, II.1963, Gressitt; 7 km S of Koh, I.1963, Yoshimoto.

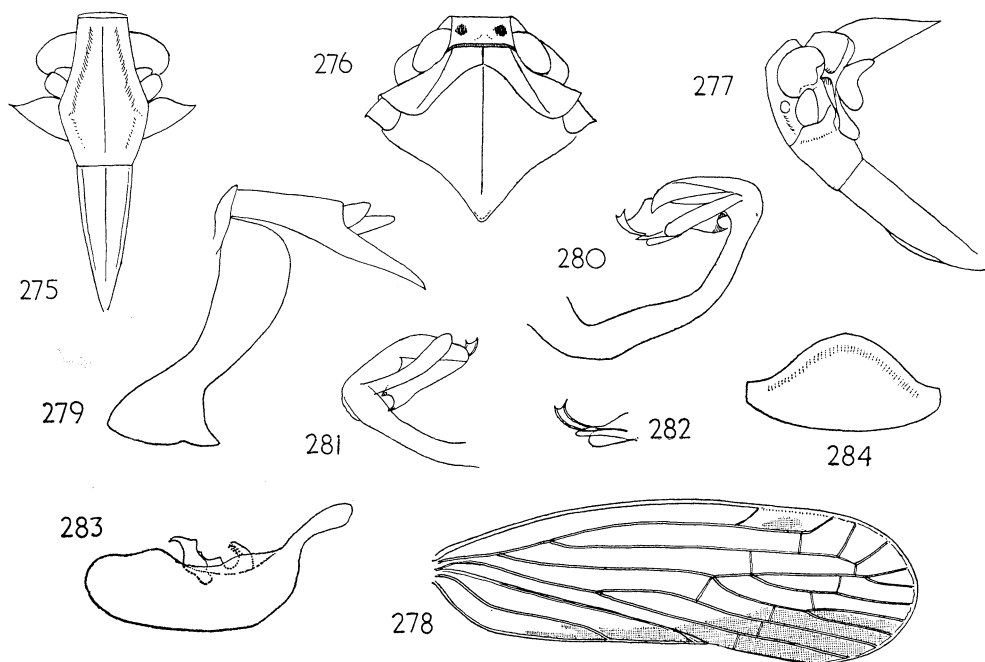


Fig. 275-284. *Eocenchrea darceto*, n. sp.: 275, frons and clypeus; 276, vertex, pronotum and mesonotum; 277, head, pronotum and mesonotum, lateral view; 278, tegmen; 279, ♂ anal segment and pygofer, left side; 280, aedeagus, left side; 281, apex of aedeagus, right side; 282, apex of aedeagal flagellum, right side; 283, right genital style; 284, ♀ pregenital sternite.

This species most closely resembles *E. albipennis* Muir and can most readily be distinguished from it by the infusate stigma and apical cells of M4 and Cula. On the basis of specimens so far examined, it would seem that the basal segment of the post-tarsus in *E. albipennis* usually has 6 teeth, and that in *E. darceto* has 5. Specimens of the latter species have been seen in which the number was 6 (if only on one side) and in one in which the post-tarsus was a little deformed the basal segment had 8 teeth, the 2nd segment 7, and a broad ridge connecting the 2 segments, a further 4 teeth. The 2 species are also separable by the form of the pregenital sternite, which is smoothly convex, transversely and axially, in *darceto*, as well as along the posterior margin, whereas in *E. albipennis* it is transversely impressed, and the posterior margin is obtusely angulate.

68. ***Eocenchrea galanthis*** Fennah, new species      Fig. 285-294.

Vertex broader at base than long in middle (1.6 : 1), frons longer than broad (nearly 1.4 : 1), median carina prominent throughout, rostrum with apical segment longer than broad (1.5 : 1), subantennal process in side view undulate. Tegmina with Sc + R fork basad of Cul fork, which is level with union of claval veins.

Pale orange to stramineous; vertex reddish brown; clypeus distally, rostrum, mesopleura and fore and middle legs distally suffused with fuscous; pronotum except at hind margin and on lateral lobes, mesonotum, abdomen and pygofer, dark reddish brown; genital styles pallid, faintly infusate near apex. Seventh sternite infusate except at margins. Tegmina subhyaline, pale orange yellow, a narrow band, widening distad, from costa at base to apical margin between anterior branch of M and Cul, dark reddish brown, becoming more dilute distad; veins orange to yellow, concolorous in infusate area. Wings soiled white, veins fuscous.

♂. Anal segment deflexed ventrocephalad in distal 1/2, acuminate at apex, anal style long. Pygofer rather short, lateral margins in upper 1/2 each moderately produced caudad in a broadly rounded lobe.

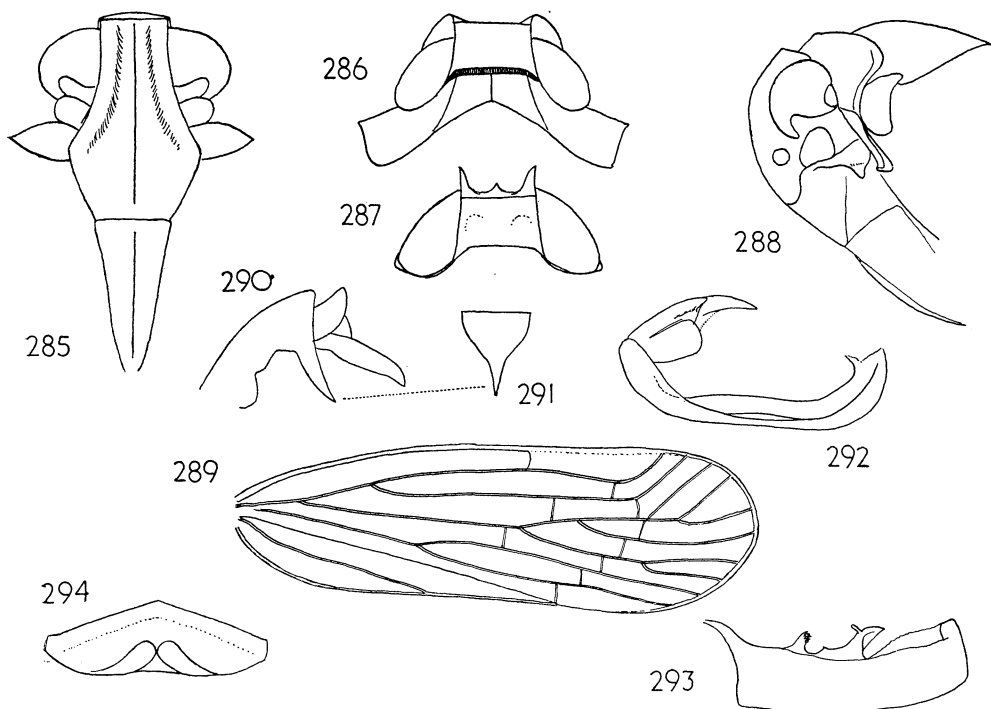


Fig. 285-294. *Eocenchrea galanthis*, n. sp.: 285, frons and clypeus; 286, vertex and pronotum; 287, vertex, viewed perpendicularly to surface; 288, head, pronotum and mesonotum, lateral view; 289, tegmen; 290, ♂ anal segment, left side; 291, distal part of ♂ anal segment (as indicated by broken line), posterodorsal view; 292, aedeagus, right side; 293, left genital style; 294, ♀ pregenital sternite.

Aedeagus elongate, U-shaped in basal 1/2, slightly curved upward distally, then reflected cephalad in a flagellum; flagellum tapering distad, slightly decurved and acute at tip; a small slender spinose process arising on each side near middle of flagellum, directed ventrocaudad.

Genital styles slightly upcurved distad, dorsal and ventral margins parallel, truncate apically, and a little inflected; dorsal margin with 2 processes, as figured. Length, 2.6 mm; tegmen, 4.1 mm.

♀. Seventh sternite with a pair of finger-like lobes, adpressed to surface and curving caudad to meet in middle line, arising at anterior margin; posterior margin very obtusely angulate at middle. Length, 3.0 mm; tegmen, 4.8 mm.

Holotype ♂ (BISHOP 7670), New Caledonia, Mt. Koghi, ca. 600 m, XI.1963, R. Straatman. Paratypes: 1 ♂, 1 ♀, Col d'Amieu, 750 m, III.1960, Gressitt; Mt. Koghi, 500 m, I.1963, Yoshimoto.

This species is distinguished by its coloration, as well as by the characters given in the key. The structure of the pregenital sternite is itself sufficient for identification.

69. ***Eocenchrea butes*** Fennah, new species Fig. 295-302.

Vertex broader at base than long in middle (1.5 : 1), frons longer than broad (about 1.2 : 1), median carina absent in basal 1/2, rather prominent in distal 1/2; rostrum with apical segment, in anterior view, as broad as long, subantennal process in side view undulate. Tegmina with Sc + R fork slightly basad of Cul fork, both markedly basad of union of claval veins, R-M crossvein a little distad of M-Cu.

Pallid stramineous; posterior margin of vertex and head above eyes, and mesonotum except at lateral

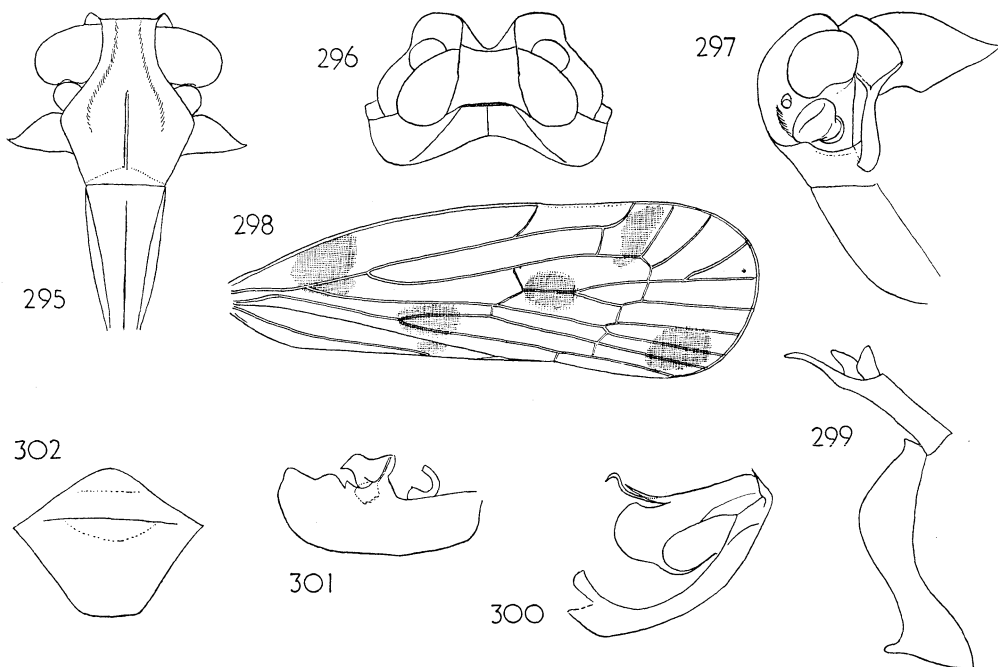


Fig. 295–302. *Eocenchrea butes*, n. sp.; 295, frons and clypeus; 296, vertex and pronotum; 297, head, pronotum and mesonotum, lateral view; 298, tegmen; 299, anal segment and pygofer, right side; 300, aedeagus, left side; 301, right genital style; 302, ♀ pregenital sternite.

angles, dark reddish brown; abdominal tergites orange-red in ♂, fuscous in ♀. Tegmina hyaline anteriorly and along claval suture, faintly tinged with dull yellow elsewhere, a faint cloud between C and Cul at 1/6 from base, another from union of claval veins to M near M-Cu crossvein, a round suffusion overlying fork of  $M_1$  and  $M_2$ , and an irregular spot partly covering apical cells of R, and a round spot occupying membrane near anal angle, dilute fuscous; veins concolorous or yellow. Wings white distally, soiled white basally, veins concolorous distally, dark fuscous basally.

♂. Anal segment relatively long, almost horizontal. Pygofer short, with lateral margins a little produced caudad in dorsal 1/2 in a shallowly convex lobe. Aedeagus moderately long, shallowly curved upward distad, reflected distally in a flagellum that extends basad for more than 1/2 length of basal portion, a pair of short, straight spinose processes arising at base of flagellum, directed dorsad; flagellum bilaterally symmetrical, a pair of spinose processes dorsally, directed cephalad, and a longer pair of spinose processes ventrally, broadly recurving caudad. Genital styles as figured, a little widening distad to apical 1/4, angulate and inflected at apex. Length, 2.7 mm; tegmen, 3.5 mm.

♀. Pregenital sternite with anterior margin strongly convex, a transverse sulcus across basal 1/3 of sternite, posterior margin strongly sinuately convex, but very shallowly so on middle portion. Length: 2.6 mm; tegmen, 4.4 mm.

Holotype ♂ (BISHOP 7671), New Caledonia, Col de la Pirogue, 330 m, II.1963, C. M. Yoshimoto. Paratype: 1 ♀, Mt. Panié trail, II.1963, Krauss.

In addition to the short apical segment of the rostrum, the characters that serve to distinguish this species are the obsolete basal 1/2 of the median carina of the frons, the coloration of the tegmina, the form of the ♀ pregenital sternite and of the ♂ genitalia. In the diamond shape of the pregenital

sternite, this species comes nearer to *E. maorica* than any other, and in the post-tarsus, the basal segment, with 6 teeth, has only 1 more than that of *E. maorica*, while the 2nd segment, with 5 teeth, has the same number.

70. ***Eocenchrea zaleucus*** Fennah, new species Fig. 303-309.

Vertex broader at base than long in middle (2.7 : 1), frons longer than broad (1.4 : 1), median carina prominent throughout, narrower in basal 1/2; rostrum with apical segment markedly longer than broad (2.8 : 1). Tegmina with Sc + R fork distinctly basad of Cul fork, which is basad of union of claval veins, R-M cross-vein distinctly distad of M-Cul, all veins of corium rather thick; a small spur extending from fork of Sc + R into costal cell.

Dull yellow; frons distally, except in middle line, and marginally near base, clypeus except at base, sides of head before eyes, antennae, pronotum except on lateral lobes, lateral carinae and posterior margin, tegulae, except near lower margin, mesopleura, procoxa and mesocoxa basally, abdomen dorsally, pregenital sternite except posteriorly and genitalia in part, dark fuscous; mesonotum darker, almost black; femora and tibiae of fore and middle legs yellowish brown. Tegmina dark fuscous, costal margin, except at base, stigma, claval suture and posterior margin of clavus narrowly, tawny; veins concolorous. Wings dilute fuscous, veins fuscous.

♂. Anal segment relatively short, in side view horizontal, apical angles a little produced caudad, apical margin shallowly excavate. Pygofer short, lateral margins in dorsal 1/2 rather strongly produced caudad in a broadly convex lobe. Aedeagus elongate, reflected dorsocephalad in its apical 1/4, a pair of broad subtriangular lobes arising at base of flagellum, one on each side, each with both its apical angles acuminate, the lower longer than the upper; flagellum bilaterally symmetrical, a pair of short upcurved spinose processes arising at middle, directed dorsad; flagellum apically terminating in 2 pincer-like lobes, closely apposed to each other. Genital styles relatively narrow, apically obliquely truncate, dorsal margin bearing 2 processes, as figured. Length, 3.5 mm; tegmen, 5.5 mm.

♀. Pregenital sternite with anterior margin shallowly convex, posterior margin evenly and broadly

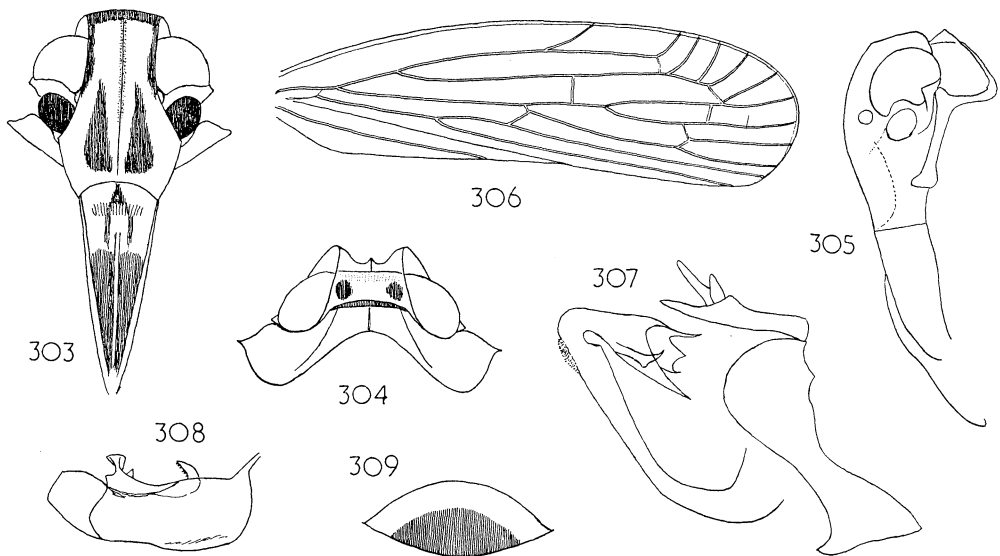


Fig. 303-309. *Eocenchrea zaleucus*, n. sp.: 303, frons and clypeus; 304, vertex and pronotum; 305, head, pronotum and mesonotum, lateral view; 306, tegmen; 307, ♂ genitalia, right side, with aedeagus shown slightly displaced to left; 308, right genital style; 309, ♀ pregenital sternite.

convex, sometimes a weak impression a little basad of margin and parallel to it. Length, 4.0 mm; tegmen, 6.2 mm.

Holotype ♂ (BISHOP 7672), New Caledonia, La Crouen, 16.III.1961, J. Sedlacek. Paratypes: 5 ♀♀, Bourail, III.1959, Yahoué, II.1962, Col de Mourance, II.1963, Mt. Koghi, I.1963, Yoshimoto; Col des Roussettes, 550 m, II.1963, Gressitt.

Members of this species in life may be heavily powdered with white wax. *E. zaleucus* is the only large species of the genus in New Caledonia that in dorsal view appears almost entirely dark fuscous. It is separable from the closely allied *E. medon* by the more strongly elevated lateral margins of the frons between the eyes. In the ♀, it differs in the more shallowly convex anterior margin of the pregenital sternite, and in the ♂, in details of genitalic structure that are best appreciated from the figures.

71. ***Eocenchrea favonius*** Fennah, new species Fig. 310–318.

Vertex broader at base than long in middle (about 2.2 : 1); frons longer than broad (nearly 1.4 : 1), median carina more prominent in basal 1/2 than in apical 1/2; rostrum with apical segment longer than broad (1.3 : 1), subantennal process in side view undulate. Tegmina with Sc + R fork basad of Cul fork, which is level with union of claval veins. Sordid stramineous; head, pronotum and tegulae broadly orange yellow near margins, faintly suffused fuscous in middle; procoxa suffused fuscous; mesopleura and mesonotum except in middle line, dark fuscous; mesonotum medially yellowish brown. Tegmina dark fuscous, costa from basal 1/4 to stigma, stigmal cell, and claval suture pallid stramineous, veins concolorous. Wings dilute fuscous, veins darker.

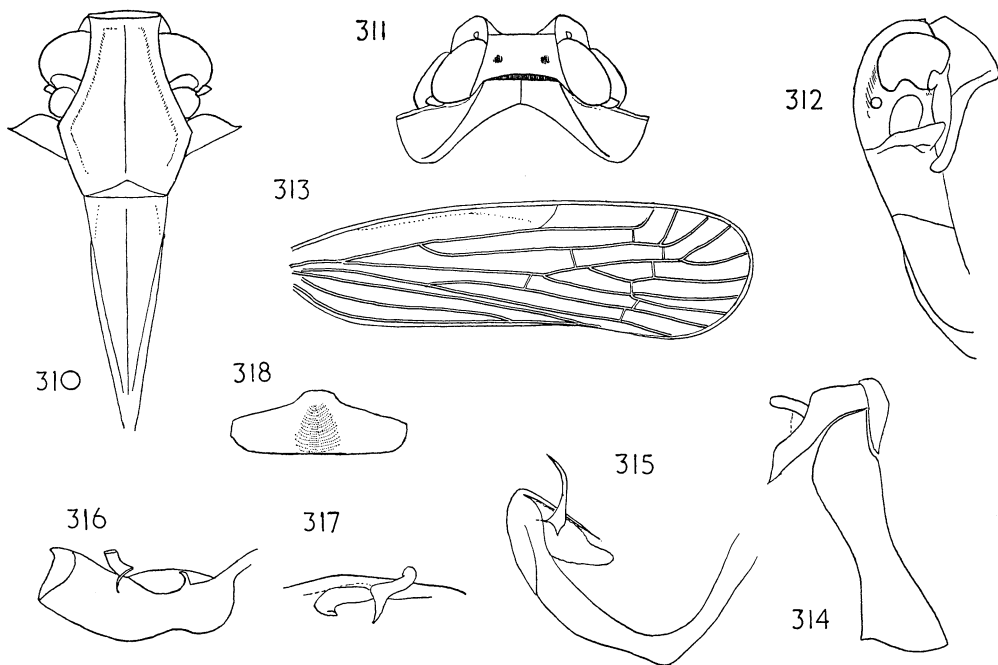


Fig. 310–318. *Eocenchrea favonius*, n. sp. 310, frons and clypeus; 311, vertex and pronotum; 312, head and pronotum, lateral view; 313, tegmen; 314, anal segment and pygofer, right side; 315, aedeagus, right side; 316, left genital style, mesal aspect; 317, processes on dorsal margin of genital style, dorsal view, caudad to right; 318, ♀ pregenital sternite.

♂. Anal segment moderately long, in side view deflexed through about 40° near middle, apical margin narrowly produced caudad at middle and rounded. Pygofer rather short, lateral margins in upper 1/2 each weakly produced caudad in a broadly rounded lobe. Aedeagus moderately long, shallowly curved upward distad, reflected cephalad at apex in a flagellum; a slender spinose process, directed cephalad, arising on each side at base of flagellum, a pair of spinose processes arising on each side of flagellum near its middle, directed dorsolaterad, markedly tapering distad and slightly recurved near apex, flagellum rather long, laterally compressed, evenly tapering distad to a blunt point at apex. Genital styles with ventral margin convex, dorsal margin shallowly concave, excavate near apex, styles angulate distally and strongly inflected mesad; 2 lobes, each directed mesad, on dorsal margin of each style, 1 at basal 1/3 and the other at 2/3 from base. Length, 2.8 mm; tegmen, 3.8 mm.

♀. Seventh sternite shallowly sulcate along middle and with posterior margin produced caudad and obtusely angulate at middle. Length: 3.0 mm; tegmen, 3.9 mm.

Holotype ♂ (BISHOP 7673), New Caledonia, Forêt de Thy, 550 m, III.1960, J.L. Gressitt. Paratypes: 2 ♂♂, 5 ♀♀, same data; Col de Mouirance, II.1963, Yoshimoto; St. Louis Valley, III.1945, Milliron; Col de Tongoué, VI.1960; Plum, 23.I.1963, Krauss.

This species in life is uniformly and thinly powdered grayish white. It is most readily distinguishable by the coloration of the head and tegmina.

72. *Eocenchrea feretrius* Fennah, new species Fig. 319–325.

Vertex broader at base than long in middle (nearly 1.6 : 1), frons longer than broad (about 1.4 : 1), median carina more prominent in basal 1/2 than in apical 1/2; rostrum with apical segment longer than broad (1.2 : 1), subantennal process in side view undulate. Tegmina with Sc + R fork only very little basad of Cul fork, which is distinctly basad of union of claval veins.

Dark fuscous; subantennal process, post-coxa, post-tibia and basal 2 segments of hind tarsus, pale ochraceous. Tegmina dark fuscous, most of anterior margin or at least a small spot at base of stigma, pale ochraceous; cell Cul (between Cu 1 and claval suture) dilute fuscous, veins concolorous except Sc in basal 1/2, which is almost black. Wings dilute fuscous, veins darker.

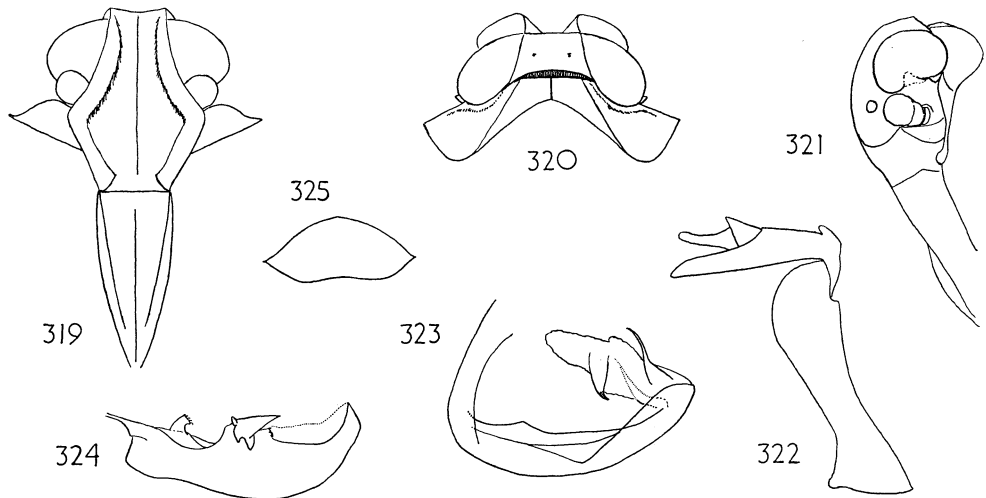


Fig. 319–325. *Eocenchrea feretrius*, n. sp.: 319, frons and clypeus; 320, vertex and pronotum; 321, head and pronotum, lateral view; 322, anal segment and pygofer, right side; 323, aedeagus; 324, right genital style, mesal view; 325, ♀ pregenital sternite.

♂. Anal segment relatively short, in side view horizontal, not at all deflexed, apical margin short, truncate. Pygofer rather short, lateral margins in upper 1/2 each weakly produced caudad in a broadly rounded lobe. Aedeagus moderately long, shallowly curved upward distad, reflected cephalad distally in a flagellum; a very small spinose process at base of flagellum on each side, directed laterad; a pair of moderately long slender spinose processes arising dorsally in basal 1/4 of flagellum, directed dorsocephalad; a pair of triangular lobes, each distally acuminate, arising ventrolaterally at middle of flagellum, directed ventrad, flagellum tapering a little distally, bluntly rounded at apex. Genital styles with ventral margin convex, dorsal margin shallowly concave, styles acutely angulate distally and strongly inflected mesad; 2 processes, each directed mesad, on dorsal margin of each style, 1 at 1/4 from base, the other at middle, as figured. Length, 3.1 mm; tegmen, 4.0 mm.

♀. Pregenital sternite with basal margin a little elevated, posterior margin broadly convex with a minute point at middle, a feeble and narrow transverse impression a little basad of this margin. Length, 2.5 mm; tegmen, 5.0 mm.

Holotype ♂ (BISHOP 7674), New Caledonia, Col de Ho, II.1963, C.M. Yoshimoto & N.L.H. Krauss. Paratype: 1 ♀, Mt. Mou, 1200 m, II.1963, Yoshimoto.

This species is close to *E. favonius*, but differs in the proportions of the vertex, tegminal coloration, and shape of the male genitalia. This species superficially is not unlike *Gonyphlepsia montistympani*, but is well separated by the shape of the posterior margin of the pregenital sternite, which in the latter species is rather strongly convex, and medially bilobate (fig. 266).

73. ***Eocenchrea muta*** Fennah, new species Fig. 326-329.

♀. Vertex broader at base than long in middle (2.2 : 1), frons longer than broad (1.3 : 1), median carina prominent throughout, rostrum with apical segment longer than broad (1.4 : 1), subantennal process in side view sinuate. Tegmina with Sc + R fork slightly basad of Cul fork, which is slightly basad of union of claval veins.

Dark fuscous, almost piceous; margins of frons and clypeus, subantennal process, lateral lobes and posterior margin of pronotum, pallid yellow; subapical segment of rostrum, metapleura, hind legs, and posterior margin of abdominal sternites and ovipositor, sordid yellow. Tegmina dark fuscous, a little lighter along claval suture and in membrane; stigma pale, veins concolorous. Wings dilute fuscous, with veins darker.

Seventh abdominal sternite with a shallowly convex transverse callus on anterior margin; sternite shallowly sulcate along middle line, and rather narrowly depressed inside posterior margin; posterior margin shallowly convex. Length, 2.6 mm; tegmen, 4.1 mm.

Holotype ♀ (BISHOP 7675), New Caledonia, Col des Roussettes, 550 m, II.1963, J.L. Gressitt.

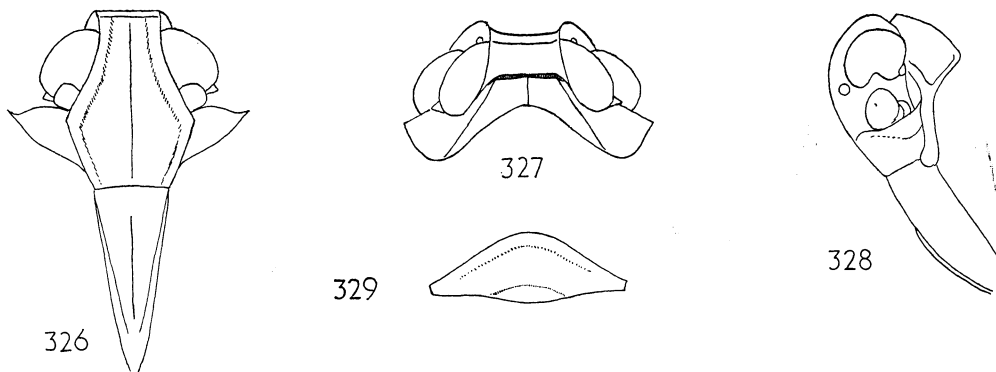


Fig. 326-329. *Eocenchrea muta*, n. sp.: 326, frons and clypeus; 327, vertex and pronotum; 328, head and pronotum, lateral view; 329, ♀ pregenital sternite.



This species in life is powdered with a white waxy secretion. It is distinguishable by the combination of characters given in the key, and by the shape of the pregenital sternite. Superficially, it is not unlike *E. montistympani*, which runs to the same point in the key, but has a relatively broader vertex and differs also in the pallid posterior margin and lateral lobes of the pronotum and in the shape of the posterior margin of the pregenital sternite.

74. ***Eocenchrea medon*** Fennah, new species Fig. 330-338.

Vertex broader at base than long in middle (nearly 2.6 : 1), frons longer than broad (nearly 1.5 : 1), median carina a little more prominent in basal 1/2 than distally; rostrum with apical segment longer than broad (2.1 : 1), subantennal process in side view sinuate. Tegmina with Sc + R fork markedly basad of Cul fork, which is level with or a little basad of level of union of claval veins; 3 small venal spurs extending from Sc into costal cell.

Pale orange-yellow; 2 round spots on vertex, a suffusion on pronotum behind eyes, tarsi of fore- and middle legs, lateral portions of last 3 abdominal ventrites, fuscous; mesonotum dark reddish brown, a little lighter in a broad band along middle. Tegmina subhyaline, pale yellow; an irregular fascia from costal cell at base broadly overlying Sc + R to near stigma, a suffusion over M basally, and a more diffuse fascia beginning between M and Cula little basad of Cul fork, widening distad until it covers entire membrane between apex of R and apex of Culb; a fascia in clavus between claval suture and posterior claval vein, fuscous; veins concolorous. Wings sordid white or dilute fuscous, veins fuscous.

♂. Anal segment moderately long, in side view slightly deflexed beyond middle, lower margin sinuate, apical angles produced, subacute, apical margin concave. Pygofer short, lateral margins in dorsal 1/2 rather

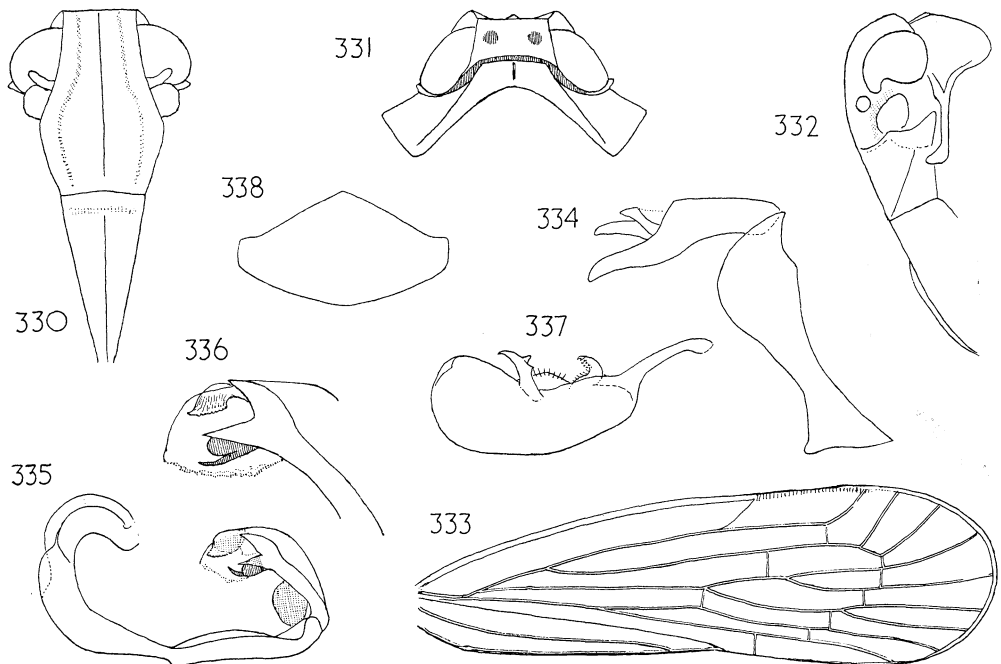


Fig. 330-338. *Eocenchrea medon*, n. sp.: 330, frons and clypeus; 331, vertex and pronotum; 332, head and pronotum, lateral view; 333, tegmen; 334, anal segment and pygofer, right side; 335, aedeagus, left side; 336, apex of aedeagus, with lower median lobes slightly displaced; 337, right genital style; 338, ♀ pregenital sternite.

strongly produced caudad in a broadly rounded lobe. Aedeagus elongate, horizontal for middle 1/2 of its length, narrow and weakly sinuate, reflected dorsocephalad in its distal 1/4 in a flagellum; flagellum with a flattened process on each side, gradually widening distad, and expanding apically into 2 broad lobes of which the dorsal member is acuminate; mesad and level with apex of these lobes, a pair of small broad pigmented lobes each produced cephalad in a stout curved spinose process. Genital styles as figured, widening to apical 1/4 and with apical margin rather deeply rounded and apical angle not conspicuous; dorsal margin with 2 processes, as figured. Length, 3.6 mm; tegmen, 5.1 mm.

♀. Pregenital sternite with anterior margin convex, a shallow transverse sulcus extending across basal 1/4, between lateral angles of sternite; posterior margin broadly convex. Length, 3.5 mm; tegmen, 6.0 mm.

Holotype ♂ (VISHOP 7676), New Caledonia, Forêt de Thy, 550 m, III.1960, J.L. Gressitt. Paratypes: 7 ♂♂, 7 ♀♀, Bâ Bay, VII.1914, Montague, B.M. 1918-87; La Coulée-Yaté Rd., VI.1950, Bourail, III.1959, Krauss; Sarraméa, 100-200 m III.60, Gressitt; Col des Roussettes, 450-550 m, II.63, Gressitt; Mt. Koghi, 500 m. I.1963, Yoshimoto; Col de la Pirogue, II.1963, Krauss; 7 km S of Koh, I.1963, Yoshimoto; Poindimié, II.1963, Yahoué, II.1963, Yoshimoto; Tao, II.1963, Krauss.

In addition to the characters given in the key, this species is distinguished by the presence of 3 incomplete supernumerary veinlets extending from Sc into the costal cell.

75. ***Eocenchrea pardus*** Fennah, new species Fig. 339-346.

Vertex broader at base than long in middle (2.3 : 1), frons longer than broad (nearly 1.7 : 1), median carina prominent throughout; rostrum with apical segment longer than broad (2.1 : 1), subantennal process in side view undulate. Tegmina with Sc + R fork at about same level as Cu1 fork, which is basad of union of claval veins; 3 small rounded eminences on Sc extending into costal cell.

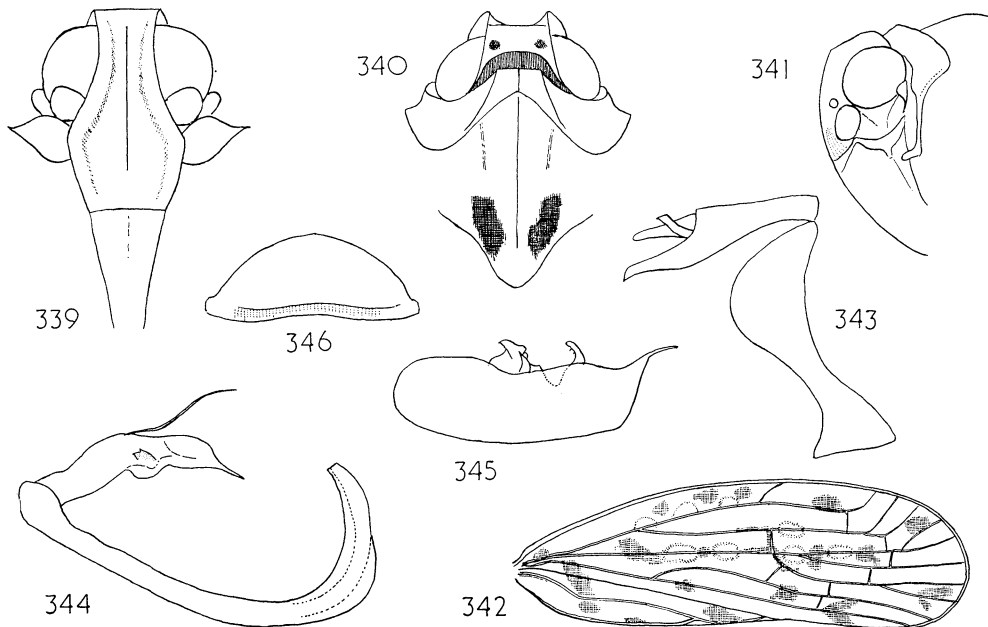


Fig. 339-346. *Eocenchrea pardus*, n. sp.: 339, frons and clypeus; 340, vertex and pronotum; 341, head and pronotum, lateral view; 342, tegmen; 343, anal segment and pygofer, right side; 344, aedeagus, right side; 345, right genital style; 346, ♀ pregenital sternite.

Pale orange or yellowish brown; a round spot in each compartment of vertex, genae near ocelli, sides of clypeus basally, antennae, intercarinal areas of mesonotum anteriorly, and a spot on each side near base, dark fuscous; a spot on profemur near base, and on all tibiae basally, and a suffusion on all legs distally, dilute orange-brown; median carinae of frons, vertex, and mesonotum, sometimes red. Tegmina pale yellow, with 3 spots in costal cell, 1 in stigma distally, 1 between Sc + R and Cu at basal 1/4, 1 at R-M crossvein, 1 on M basad and 1 distad of fork, a suffusion over fork of Cul, more distinct where it overlies the veins, 5 irregular spots in membrane, 3 spots in basal 1/2 of clavus and 1 near its apex, fuscous; costal margin sometimes tinged with red. Wings hyaline, powdered white, veins concolorous or pale yellow.

♂. Anal segment relatively long, horizontal, its ventral margin shallowly sinuate. Pygofer with lateral margins in dorsal 1/2 distinctly produced caudad in a broadly rounded lobe. Aedeagus elongate, shallowly curved upward in its middle 1/2, reflected dorsocephalad distally in a relatively long flagellum; flagellum bilaterally symmetrical with a pair of very long and filamentous spinose processes arising dorsally near base, directed cephalad, a short bicuspidate lobe ventrally on each side at 1/3 from apex, these lobes extending dorsocaudad, a pair of broad lobes laterally at apex, each rather abruptly tapering to a point at apex, a 2nd, and shorter, pair of lobes mesad of these, each narrowly spinose at apex. Genital styles long, of subequal width throughout, apically deeply rounded, not inflected, dorsal margin with 2 processes, as figured. Length, 4.1 mm; tegmen, 5.4 mm.

♀. Seventh sternite with posterior margin obtusely angulate, minutely pointed at middle, disc shallowly impressed in distal 1/3. Length, 5.6 mm; tegmen, 7.0 mm.

Holotype ♂ (BISHOP 7677), New Caledonia, Col des Roussettes, 450–550 m, II.1963, J. L. Gressitt. Paratypes: 1 ♂, 4 ♀♀, Col des Roussettes, 450–550 m, II.1963, 25 km from Col des Roussettes, II.1963, Gressitt; Col de Ho, II.1963, Yoshimoto and Krauss; up Boulari R., XI.1958, C. R. Joyce.

This species is readily distinguishable by its unusual coloration.

#### Genus **Basileocephalus** Kirkaldy

*Basileocephalus* Kirk., 1906: 429. (Haplotype: *B. thaumatonotus* Kirk., 1906: 294.)

*Aulacocephala* Metcalf, 1945: 181. (Orthotype: *Aulacocephala kirbyi* Perroud & Montrouzier) **New Synonymy.**

76. **Basileocephalus kirbyi** (Perroud & Montrouzier), n. comb. Fig. 347–354.

*Aulacocephala kirbyi* P. & M. 1864: 242.

Post-tibia with 6 teeth apically, basal metatarsal segment with 8 teeth, 2nd segment with 7.

NEW CALEDONIA: 6 ♂♂, 12 ♀♀, La Coulée, I.1963; Mt. Koghi, 500 m, I, II.1963, Col de Ho, II.1963, C. M. Yoshimoto; Nouméa, II.1963, Sarraméa, II.1963, Plum, I.1963, Tao, II.1963, La Crouen, I.1963, Yoshimoto & Krauss; Col de Mouirance, II.1963, Krauss.

#### Tribe RHOTANINI

Members of this tribe have post-tibia with 1 larger spine and 3 small spines apically, a basal metatarsal segment with 5 teeth, less commonly 4, and a 2nd metatarsal segment usually with 4 teeth, but sometimes 3.

#### KEY TO GENERA OF RHOTANINI

1. Subantennal process distinctly touching, or fusing with, lateral margins of frons; post-coxal process aciculate, usually porrect.....2  
Subantennal process not uniting with lateral margins of frons; post-coxal process submembranous, flattened, often twisted.....**Saccharodite**
2. Tegmina with Sc + R fork basad of M fork or at most only slightly distad, 4 to 6 cells adjoining margin; heavily powdered, often dark grayish brown.....**Sumangala**  
Tegmina with Sc + R fork distad of M fork; fewer than 4 cells adjoining anterior margin; if powdered, not in sombre hues.....3

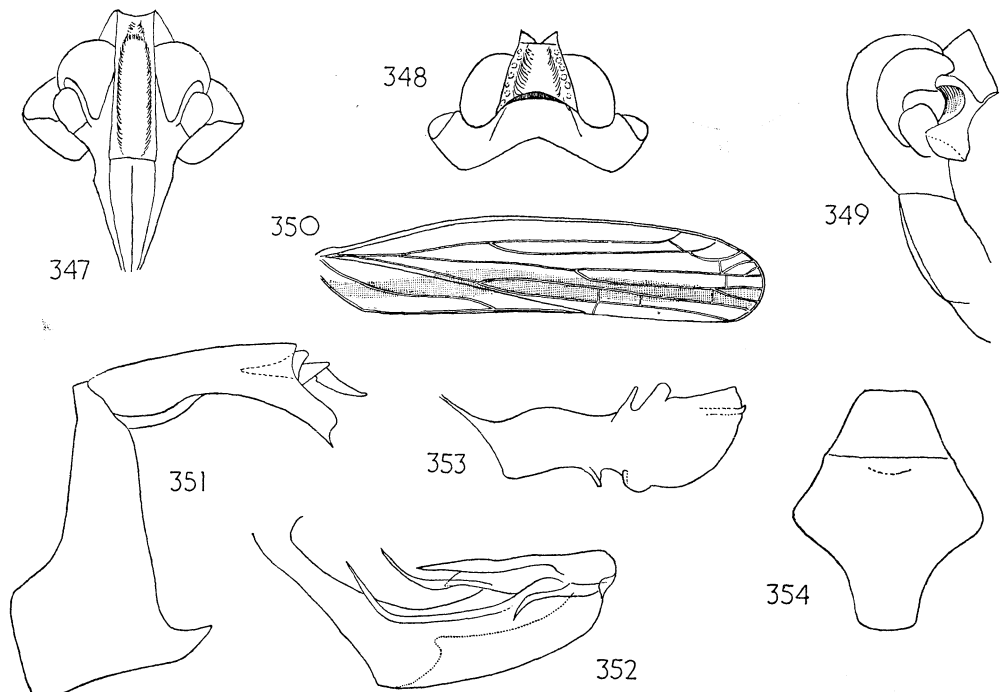


Fig. 347-354. *Basileocephalus kirbyi* (Montrouzier): 347, frons and clypeus; 348, vertex and pronotum; 349, head and pronotum, lateral view; 350, tegmen; 351, anal segment and pygofer, left side; 352, aedeagus, left side; 353, right genital style, mesal aspect; 354, ♀ pregenital sternite.

3. Lateral margins of frons not meeting in middle line of head.....**Decora**  
 Lateral margins of frons meeting at least basally.....4
4. Lateral carinae of pronotum not or only weakly elevated; lateral carinae of frons short and inconspicuous distad of junction with subantennal process; tegmen with basal cell of M about 2 × as long as broad.....**Rhotana**  
 Lateral carinae of pronotum strongly elevated; lateral carinae of frons moderately long and foliaceous distad of junction with subantennal process; tegmen with basal cell of M nearer 3 × as long as broad.....**Levu**

Stål (1858: 450) synonymised his genus *Genestia* with *Rhotana* Walk. Melichar (1903: 62 and Pl III, fig. 9, 9a) described and figured what he believed to be *vitriceps* Stål, the haplotype of *Genestia*. Muir (1913: 83), on the basis of Melichar's description and figure, stated that *vitriceps* could not be placed in *Rhotana*.

There is, however, no reason to question the original synonymy of the two genera. *Genestia vitriceps* Stål is a species with white tegmina, lightly infuscate on and near the principal veins, hyaline subantennal processes and frontal margins, feebly elevated lateral pronotal carinae, and a distinctive fuscous mesonotum on which the carinae are conspicuous by reason of being broadly overlain by dull pale yellow. There are no dark spots on vein Sc + R. The generic features and the venation are shown in fig. 362--366, and, as Stål recognised, this species belongs in *Rhotana*.

Melichar's figures and description of what he believed to be *vitriceps* clearly refer to a member of the group of *opalina* Distant (with 4 dark spots on Sc + R) and are not of a *Rhotana* but of a *Saccharodite*, of which I have seen 2 species from Ceylon.

Genus **Sumangala** Distant

*Sumangala* Dist., 1911: 642. (Haplotype: *S. delicatula* Dist. 1911: 643).

*Alara* Dist., 1911: 643. (Haplotype: *A. dux* Dist. 1911: 643). **New Synonymy**

Muir (1918: 231) synonymised *Alara* Distant with *Levu*. But the presence of a row of cells along the anterior margin of the tegmen and the basal position of the fork of Sc + R in *A. dux*, the only species of *Alara*, are characters not found in *Levu*, but common in *Sumangala*. The type of *Alara dux* is separated from the type of *Sumangala delicatula* Distant by its relatively longer antennae and the presence of a weakly-defined triangular cell in the tegmen at the base of the 1st sector of M (a feature not mentioned or figured by Distant). I have found that a difference in the length of the antennae as found between these 2 species, and the presence or absence of a weakly-defined triangular cell, are of only specific value in this group of Rhotanini, and accordingly see no reason to regard *Alara* as distinct from *Sumangala*.

Genus **Decora** Bierman

*Decora* Brmn., 1910: 19. (Haplotype: *D. pavo* Brmn., 1910: 20).

77. **Decora lalage** Fennah, new species Fig. 355-361.

♂. Vertex longer on lateral margin than broad at anterior marginal carina (3.4 : 1), this carina level with anterior margin of eyes; dorsal margin in profile horizontal, not declivous, distally gently rounding into frons. Tegmina with cells Sc + R narrow, at its widest part 1/2 as wide as costal cell at same level.

Stramineous; frons, clypeus, genae, and mesonotum, yellow; lateral margins of frons basally, vertex and middle portion of pronotum, orange; tarsi distally, brown. Tegmina hyaline, strongly tinged with yellow in corium and broadly over transverse veinlets and all apical veins; costal cell, except for a narrow oblique fuscous stripe at its apex, 1st cell of Sc (on anterior margin) and middle portions of apical cells of R and M, colorless, very faintly powdered with white; a short line at apical angle of tegmen, apical margin and a submarginal line parallel to it from apical margin to M, and a diffuse edging to colorless areas of apical cells, fuscous; 2 small spots a little distad of claval apex in subapical cells of M, piceous; veins concolorous, but red where they traverse infuscate areas and in Cu 1 near the piceous spots; apical margin red. Wings subhyaline, powdered white, veins concolorous. Length: 3.5 mm; tegmen, 5.8 mm.

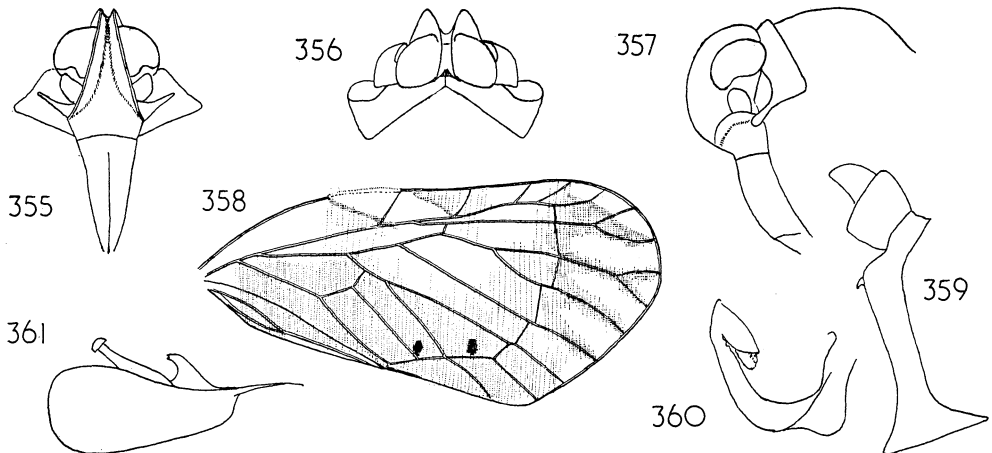


Fig. 355-361. *Decora lalage*, n. sp.: 355, frons and clypeus; 356, vertex and pronotum; 357, head, pronotum and mesonotum, lateral view; 358, tegmen; 359, anal segment and pygofer, lateral view; 360, aedeagus; 361, genital style.

Holotype ♂ (Висноф 7678), New Caledonia, Mt. Koghi, 500 m, 29.XI.1963, R. Straatman.

This species is separable from *D. ramentosa* Distant and *D. septemmaculata* Distant by its proportionately much narrower vertex, and from *D. quadrimaculata*, to which it is apparently nearest, in the narrower cell of Sc + R in the tegmina, as well as by the color pattern and the presence of two piceous spots in the tegmina.

#### Genus *Saccharodite* Kirkaldy

*Saccharodite* Kirk., 1907: 127. (Haplotype, *sanguinea* Kirk. 1907: 127).

Vertex short, narrow, basal margin angulately incised, lateral margins elevated, in dorsal view meeting at or basad of anterior margin of eyes; head in profile usually with vertex meeting frons abruptly at an angle, but sometimes imperceptibly curving into frons; frons with lateral margins foliaceous, meeting at least in their basal part, disc triangular, antennae a little longer than broad, subantennal process separated from lateral margins of frons, sometimes a short thick ridge or a longer fine carina connecting them; clypeus as long as frons, rostrum about as long as clypeus; ocelli absent or very obscure. Pronotum with posterior margin rectangularly or obtusely angulately excavate, lateral carinae moderately foliaceous, lower margin of lateral lobes slightly inclined forward; mesonotum strongly convex, median carina sometimes more prominent than lateral carinae, mesoscutellum large, flattened, triangular, turbinate, or broadly rounded; post-coxal process slender, submembranous, often twisted and decurved at apex. Tegmina relatively broad, with Sc + R forking at or a little distad of middle of tegmen, M forked at about 1/3 from base, a triangular cell often present at base of 1st fork of M; basal cell of M sometimes less than 2 × as long as broad, sometimes nearly 3 × as long as broad, a few pustules on R and M in subapical cells; cells of tegmen hyaline, not powdered with wax or only very lightly so. Tegminal span usually not exceeding 10 mm. Abdomen pale stramineous, sometimes, excluding genitalia, bright red.

Notwithstanding the paucity of characters given in the original description, the combination of diminutive size, a distinctly angulate profile of the head, virtually colorless hyaline tegmina, and a bright red body is sufficient to enable this genus to be recognised. A few species of *Levu* have a red body, but their heavily and uniformly powdered tegmina at once set them apart from Kirkaldy's generic concept. All species of *Saccharodite* appear to have 4 small piceous spots on the basal 1/2 of Sc + R where it lies in front of the basal cell of M.

In addition to the type and the species described here as new this genus includes *Saccharodite*

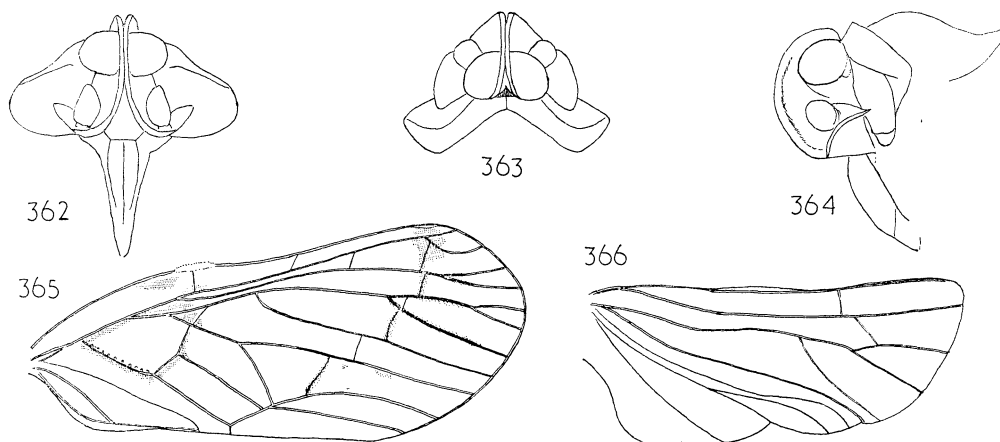


Fig. 362-366. *Rhotana vitriceps* (Stål): 362, frons and clypeus; 363, vertex and pronotum; 364, head, pronotum and mesonotum, lateral view; 365, tegmen; 366, wing.

*opalina* (Distant), n. comb., (*Rhotana opalina* Dist. 1907: 410), *Saccharodite transversa* (Distant), n. comb. (*Rhotana transversa* Dist. 1907: 410), *Saccharodite iridipennis* (Melichar), n. comb. (*Rhotana iridipennis* Mel. 1903: 62) and *Saccharodite chrysonoe* (Kirkaldy), n. comb. (*Rhotana chrysonoe* Kirk. 1906: 435). Muir (1913: 84) placed the last mentioned species in his genus *Dichotropis*, the type of which (*D. amboinensis* Muir) he subsequently recognised as belonging in *Decora* (1915: 133).

On the basis of my present knowledge of specific variation within this genus, I consider it logical to recognize 2 subgenera, as follows.

Tegmina with Sc and R uniformly diverging distad after forking, without a transverse vein near the fork.

Costal margin evenly shallowly convex, costal cell of equal width throughout.....**Genestiella** n. subgen.

Tegmina with Sc and R either lying rather close together, or subparallel, after forking, then rather abruptly diverging; or, if not, with a short transverse carina near Sc + R fork; most commonly forking narrowly at first and with a transverse carina at point whence they more strongly diverge. Costal margin very obtusely angulate near middle, costal cell not of equal width throughout.....**Saccharodite**

78. **Saccharodite (Saccharodite) casca** Fennah, new species Fig. 367-371.

♂. Vertex short, its lateral margins meeting basad of anterior margin of eyes, in profile almost evenly rounding into frons; frons with lateral carinae meeting at level of lower margin of eyes; subantennal process subquadrate, its outer margin almost straight, oblique, setiferous throughout, a short stout ridge between base of this process and lateral margins of frons; post-clypeus with disc impressed; rostrum slightly surpassing post-trochanter. Pronotum with lateral marginal carinae moderately foliaceous, and with lower margin of lateral lobes bent forward; mesonotum with median carina a little more prominent than lateral carinae, mesoscutellum triangular, narrowly rounded apically. Tegmina with basal cell of M longer than broad (nearly 1.4 : 1), an almost equilaterally triangular cell at base of 1st sector of M, 2 groups of 6-7 pustules on Cu1 on hind margin of basal cell of M, Sc and R parallel distad of fork as far as transverse vein, then moderately strongly diverging; cells hyaline, slightly opalescent.

Stramineous; margins of frons basally and a dilute suffusion on pronotum dorsally, orange red; mesonotum in posterior 1/2, and mesoscutellum, bright red. Tegmina with a faint yellowish tinge, a diffuse cloud from fork of Sc + R and M to apex of clavus, another from about middle of costal margin to middle of tegmen, and a 3rd overlying transverse veins, dilute yellowish brown; 1st apical veinlets of Sc and adjoining margin, orange-red; 3 or 4 spots on anterior margin of Sc + R in basal 1/2, piceous.

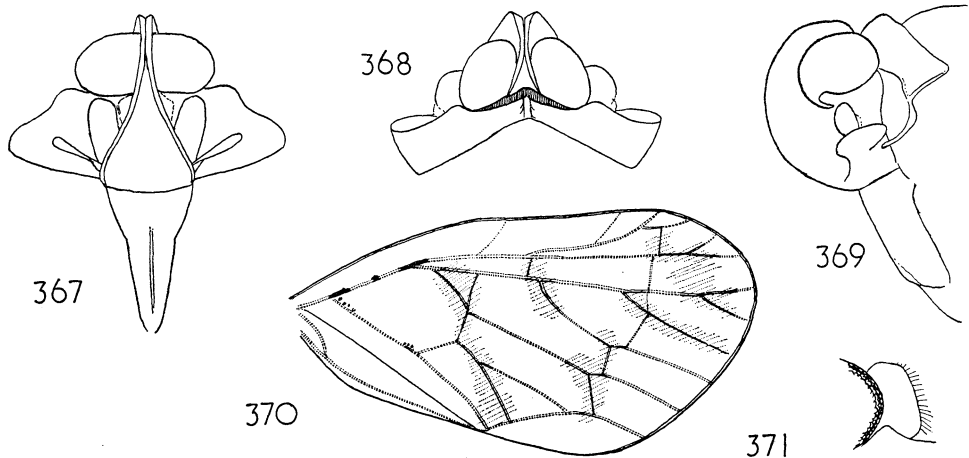


Fig. 367-371. *Saccharodite casca*, n. sp.: 367, frons and clypeus; 368, vertex and pronotum; 369, head and pronotum, lateral view; 370, tegmen; 371, margin of right subantennal process, dorsal view.

Anal segment in dorsal view almost  $2\times$  as broad as long, wider at base than at apex, anal style arising at apex. Pygofer short, dorsolateral angles obtusely angulate, slightly produced.

Genital styles in side view longer than broad ( $2.5 : 1$ ), ventral margin shallowly convex, dorsal margin straight or feebly convex, apical margin rounded, a rod-like process arising inside dorsal margin near middle, directed dorsocaudad and mesad, and recurved laterad at tip. Length, 3.1 mm; tegmen, 4.8 mm.

Holotype ♂ (BISHOP 7679), New Caledonia, Mt. Koghi, 500 m., 29.XI.1963, R. Straatman.

This species is distinguishable from *S. iridipennis*, *S. opalina*, *S. transversa*, and *S. chrysonoe* by the yellowish tinge of the tegminal cells and the distinctly bolder black spots on Sc + R. The bodily size is greater than in *S. chrysonoe*, and the transverse veinlets are arranged step-wise, not in a single line as in *S. opalina* and *S. transversa*.

#### Subgenus **Genestiella** Fennah, new subgenus

Tegmen relatively broad, with costal margin very shallowly convex, costal cell of equal width throughout, Sc + R forking at about middle of tegmen, then diverging uniformly, without a transverse veinlet in this fork; M forked at about  $1/3$  from base, a triangular cell apparently usually absent; basal cell of M more than  $2\times$  as long as broad at its widest part, a group of subequidistant wax-secreting pustules along posterior margin of this cell; an obscure row of minute pustules on R and M in subapical cells; cells of tegmen subhyaline, powdered with wax.

Type species of subgenus: *Saccharodite (Genestiella) thia*, new species

Whereas members of the typical subgenus at first glance resemble a small *Rhotana*, that of the subgenus *Genestiella* resembles a small *Levu*, chiefly by reason of the powdering of the tegmina and the uniform divergence of Sc and R from their point of forking. I have seen no species, other than the type, that can be referred to this subgenus, and it may ultimately prove to be no more than a local offshoot.

#### 79. **Saccharodite (Genestiella) thia** Fennah, new species Fig. 372-375.

♂. Head in profile with vertex meeting frons at an angle of  $90^\circ$ , lateral margins of vertex strongly elevated; frons with lateral margins contiguous to level of lower margin of eyes; eyes not emarginate below; rostrum reaching almost to base of genital segments. Tegmina  $2\times$  as long as broad at widest part.

Pale stramineous; lateral margins of frons basally and a linear mark on sides of head above eyes, red; protibia and tarsi, orange; pygofer light orange brown. Tegmina subhyaline, uniformly and thinly powdered with white; 3 linear marks on costal margin red; apical margin and apical branches of Sc, orange-red; 3 faint

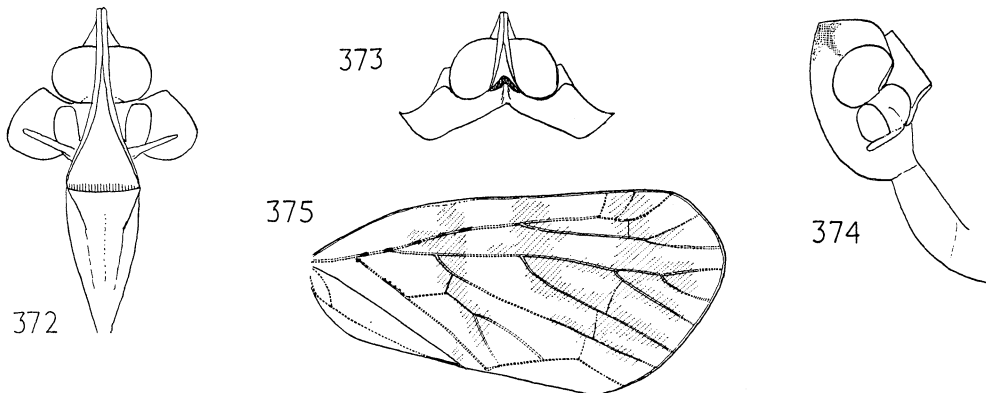


Fig. 372-375. *Saccharodite (Genestiella) thia*, n. sp.: 372, frons and clypeus; 373, vertex and pronotum; 374, head and pronotum, lateral view; 375, tegmen.



diffuse clouds, each beginning at a red mark on costa and extending broadly over forks and transverse veins to apex of clavus, 2nd sector of M, and distal line of transverse veinlets, respectively, dilute yellowish brown; 4 small spots along Sc + R in basal 1/2 of tegmen, dark fuscous or piceous, veins concolorous. Wings subhyaline, powdered white, apical margin tinged with orange; veins concolorous.

Anal segment short, broader than long, hoodlike, anal style arising at apex. Pygofer short, with lateral margins shallowly sinuate, dorsolateral angles not produced, broadly convex.

Genital styles in side view longer than broad (2.4 : 1), ventral margin convex, dorsal margin straight, apical margin straight and oblique, a slender rod-like process arising inside dorsal margin near middle, directed dorsad then curved dorsolaterad near apex. Length, 2.2 mm; tegmen, 3.5 mm.

Holotype ♂ (BISHOP 7680), New Caledonia, Mt. Koghi, 500 m, 29.XI.1963, R. Straatman.

This species amply differs from all other known species of Rhotanini in the rectangular profile of the apex of the head.

### Tribe SIKAIANINI

#### Genus *Sikaiana* Distant

*Sikaiana* Dist., 1907: 398. (Orthotype: *S. hyalinata* Dist. *op. cit.*: 399).

Post-tibia with 7 even teeth distally, basal metatarsal segment with 5 teeth and 2nd segment normally with 4.

#### 80. *Sikaiana lycotas* Fennah, new species Fig. 376, 377.

♂. Vertex almost equilaterally triangular, width at level of junction of posterior marginal carina with lateral margins equal to length from middle of this line to meeting point of lateral carinae at apex of head; posterior margin concave, rather elevated; in profile dorsal margin horizontal, subangulately meeting lateral margin of frons at an obtuse angle. Tegmina with largest apical cell of M longer along greatest diagonal than broad at apical margin (1.6 : 1), posterior apical vein of Cu strongly and evenly curved, meeting posterior margin at right angles, or even a little recurved basad. Wings with reduced venation, as figured.

Stramineous; abdominal ventrites entirely and posterior 3 tergites, fuscous; a minute spot on side of head above eyes, a suffusion anteriorly on pronotum, intersegmental membrane of abdomen, and anal segment distally, red. Tegmina hyaline, a linear oblique mark near basal fork of Cu1, and a small spot on M at same level, a spot at base of each sector of M, M-Cu cross-vein, and 2 transverse veinlets nearest to it, a suffusion between anterior margin of tegmen and M near apical angle, and a cloud over posterior marginal cell of Cu, grayish fuscous; anterior margin distally and associated veinlets, apical margin narrowly and posterior margin narrowly and interruptedly, red. Wings hyaline, faintly powdered, principal veins tinged orange-red, branches pale yellow, bordered with grayish fuscous. Length, 2.7 mm; tegmen, 4.6 mm.

Holotype ♂ (BISHOP 7681), New Caledonia, Mt. Koghi, 500-700 m, XII.1963, R. Straatman.

This species differs from *S. hyalinata* Kirkaldy and *S. maculosa* Distant in the equilaterally trian-

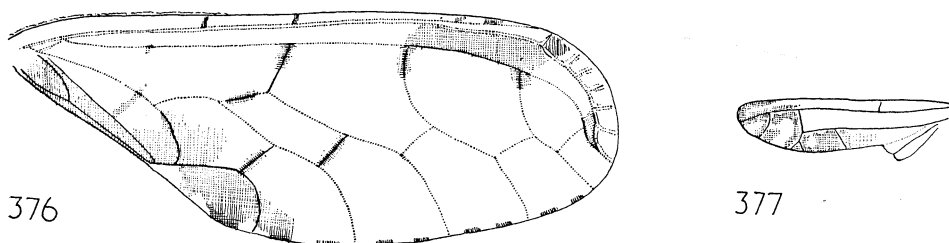


Fig. 376, 377. *Sikaiana lycotas*, n. sp.: 376, tegmen; 377, wing.

gular vertex, which is markedly narrower in these species, and in the obtusely angulate profile of the head, as contrasted with a deeply rounded profile. It differs from *S. africana*, in the less acutely angulate profile of the head and in the relatively longer apical cells in M in the tegmen, and from all these species in wing venation. It is apparently closest to *S. nesiope*, but differs in the relatively longer apical cells of M in the tegmina and in the less extensive infuscation.

### Family ACHILIDAE Stål

#### KEY TO NEW CALEDONIAN GENERA OF ACHILIDAE

1. Pronotum behind eyes almost completely overlapped by eyes; head with eyes as wide, or almost as wide, as pronotum.....5  
 Pronotum behind eyes not almost completely overlapped by eyes; head relatively narrower.....2
2. 2nd metatarsal segment with about 12 teeth on apical margin, procoxa and profemur foliaceous, broadly ovate.....**Clidonisma** n. gen.  
 2nd metatarsal segment with less than 8 teeth apically, procoxa and profemur not foliately expanded.....3
3. Tegmina with M united basally in a common stem with Cu1.....**Cenophron** n. gen.  
 Tegmina with M not forming a common stem with Cu1.....4
4. Frons with a fairly well defined pair of triangular areolets laterobasally, disc of vertex not or very little depressed, strongly medially carinate.....**Tangina** Melichar  
 Frons devoid of areolets laterobasally; disc of vertex markedly depressed, not medially carinate.....**Mahuna** Distant
5. Lateral carinae of pronotal disc only weakly diverging caudad, vertex with disc not hollowed or depressed.....**Isodaemon** n. gen.  
 Lateral carinae of pronotal disc strongly diverging caudad, especially in their basal 1/2, vertex with disc more or less depressed .....6
6. Vertex declivous, disc markedly depressed.....**Gongistes** n. gen.  
 Vertex horizontal, disc slightly and evenly depressed between carinae.....**Horcomotes** n. gen.

#### Genus **Gongistes** Fennah, new genus

Head in dorsal view transverse, base of frons visible. Vertex declivous, more than  $2 \times$  as broad at base of middle line as long, posterior margin shallowly concave, lateral margins parallel, anterior margin truncate or very obtusely angulate, disc depressed; frons a little longer than broad, lateral margins shallowly sinuate, moderately produced anterolaterad, disc smooth, shallowly depressed on each side of middle, median carina percurrent, frontoclypeal suture impressed; post-clypeal part of clypeus tricarinate, rostrum reaching to post-trochanter, with apical segment distinctly longer than subapical. Pronotum short, laterally almost completely covered by eyes, posterior margin shallowly concave or very obtusely angulately excavate, median disc not more than  $2 \times$  as wide at anterior margin as long in middle, tricarinate, depressed between carinae, with lateral carinae curving laterad behind eyes, not attaining posterior margin; mesonotum tricarinate, with lateral carinae weakly diverging caudad. Tegmina with Sc + R forking near middle of tegmen; nodal cell triangular, rather smaller than each of following 2 marginal cells, sometimes immersed in callus. Post-tibia normally with 1 spine laterally, 7 or 8 apically.

Pygofer with medioventral process relatively large, as long as broad at base, rounded distally and cleft medially.

Type species: *Gongistes alcander*, new species

The type of this genus runs to *Hemiplectoderes* in my key to Plectoderine genera, or if the paired markings on the frons are interpreted as 'bands', to *Benella*. It differs from the former in the shape of the frons and from both in the strongly depressed disc of the vertex.

81. **Gongistes alcander** Fennah, new species Fig. 378-387.

Vertex broader at base of middle line than long (about 2.5 : 1), disc strongly depressed, median carina absent or feeble; frons only a little longer in middle line than broad (less than 1.1 : 1), basal margin straight, lateral margins diverging to below level of antennae then strongly incurved, median carina percurrent, well-developed throughout, disc not granulate. Pronotum with disc broader at anterior margin than long in middle line (about 1.1 : 1); mesonotum with lateral carinae only weakly diverging caudad; post-tibia with 1 spine laterally, 8 apically, basal metatarsal segment with 8 teeth, 2nd segment with 7 teeth. Tegmina with Sc + R forking slightly basad of middle, level with Cu1 fork, Sc uniformly diverging from R, anterior branch of M uniting with R for a short distance just beyond level of node, some supernumerary pustule-like transverse veinlets in corium, anterior claval vein with a spur.

Yellowish brown; clypeus, procoxa, lateral fields of mesonotum, and mesopleura darker; margins of vertex, 2 spots at base of frons and 2 at apex, carinae, posterior margin and basal 1/2 of lateral fields of pronotum, tegulae, carinae of mesonotum and 4 spots, 1 in each lateral angle and 1 at middle of each lateral carina, ochraceous; abdomen and ♂ genitalia castaneous, intersegmental membrane at least sometimes red. Tegmina subopaque, dull brownish yellow, membrane infusate, supernumerary transverse veinlets in corium and clavus, ivory white; veins, including claval sutural vein (Cu 2), distinctly paler than ground. Wings dilute fuscous, veins dark.

♂. Anal segment slightly broader than long, lateral margins almost straight, only weakly converging distad, apical margin excavate. Pygofer not strongly depressed, lateral margins partly membranous and a little excavate at middle, medioventral process about as long as broad at base, narrowing distad and rather deeply cleft at apex. Aedeagus with suspensorial arms rod-like, not transverse; phallobase not quite bilaterally symmetrical, each apical lobe produced ventrally in 2 spinose processes; phallic appendages strap-like, moderately gradually tapering to acuminate apex, finely shagreened for most of their length. Genital styles

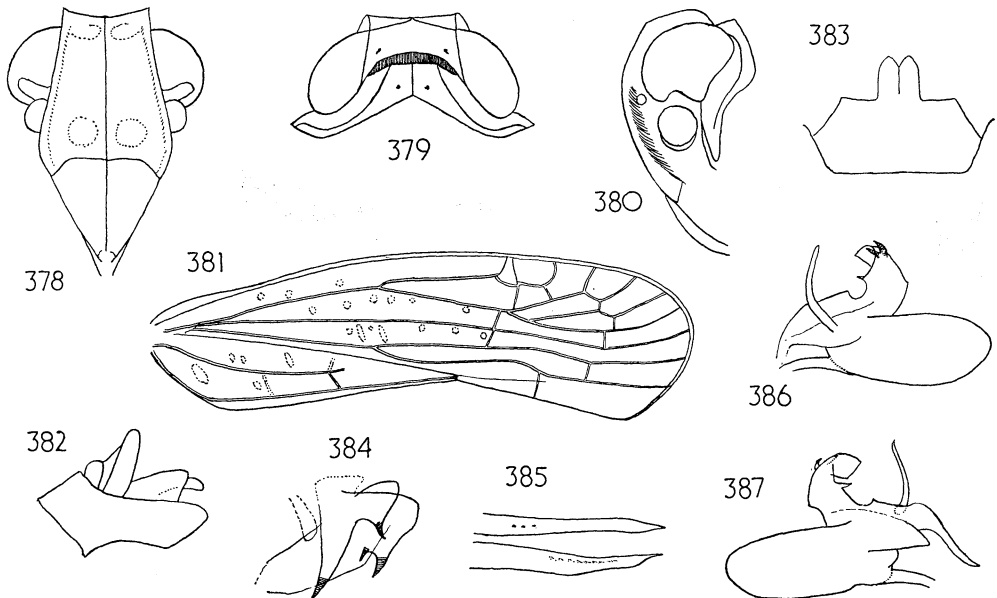


Fig. 378-387. *Gongistes alcander*, n. sp.: 378, frons and clypeus; 379, vertex and pronotum; 380, head and pronotum, lateral view; 381, tegmen; 382, ♂ anal segment, left side; 383, pygofer, ventral view; 384, phallobase of aedeagus; 385, distal portion of aedeagal appendages; 386, right genital style, mesal aspect; 387, right genital style, ventrolateral view.

with dorsal and ventral margins parallel, apical margin rounded, a relatively large lobe at middle of each dorsal margin, bearing 4 small spines on its anteromesal margin; a slender spinose process on inner surface near base, directed dorsad and laterad. Length, 2.9 mm; tegmen, 4.4 mm.

♀. Seventh sternite with posterior margin transverse. Mesal margin of 1st valvifers almost rectangularly excavate. Length, 2.9 mm; tegmen, 4.3 mm.

Holotype ♂ (BISHOP 7682), New Caledonia, Montagne des Sources, VIII.1950, N.L.H. Krauss.

Paratype: ♀, Mountain stream up Boulari R., XI.1958, Joyce.

This species is most readily distinguishable by the proportions of the vertex and by coloration.

82. **Gongistes pisander** Fennah, new species Fig. 388–393.

♀. Vertex broader at base of middle line than long (2 : 1), anterior margin transverse, disc moderately depressed, median carina absent; frons as long in middle line as broad, basal margin straight, lateral margins diverging to below level of antennae then moderately strongly incurved to suture, median carina percurrent, well developed throughout, disc not at all granulate. Pronotum with disc broader at anterior margin than long in middle line (2 : 1), mesonotum with lateral carinae rather weakly diverging caudad, lateral margins of mesoscutellum feebly convex; post-tibia with a small and obscure spine laterally and 8 apically, basal metatarsal segment with 8 teeth, 2nd segment with 7 teeth. Tegmina with Sc + R forking slightly basad of middle of tegmen, and slightly basad of Cu1 fork, Sc uniformly diverging from R, anterior branch of M touching R only at level of node; interveinal areas of corium smooth, anterior claval vein with only a rudimentary spur.

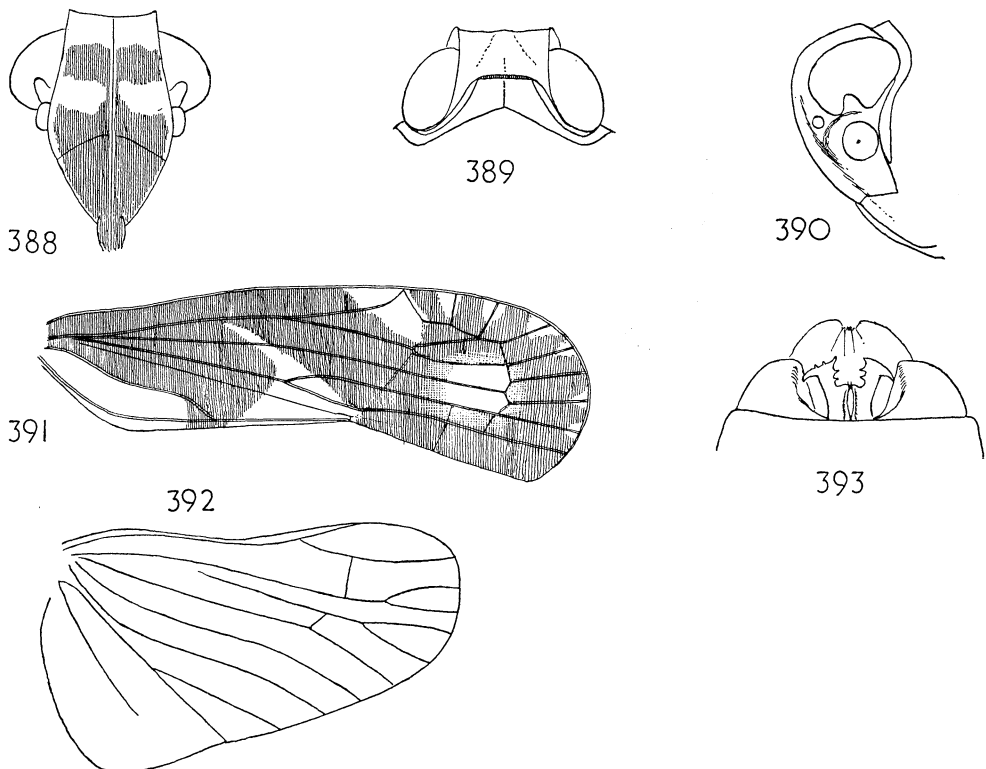


Fig. 388–393. *Gongistes pisander*, n. sp.: 388, frons and clypeus; 389, vertex and pronotum; 390, head and pronotum, lateral view; 391, tegmen; 392, wing; 393, ♀ genitalia.

Fuscous or reddish brown; basal 1/4 of frons and 2 large round spots near middle, vertex, sides of head above eyes, antennae, pronotum except behind eyes and in lower 1/2 of lateral lobes, tegulae in dorsal 1/2 and carinae of mesonotum anteriorly, pale yellow or yellowish stramineous; mesonotum orange-brown, mesoscutellum lighter; rostrum, mesepisternal carinae and legs except post-femur, pale stramineous. Tegmina subopaque, corium dull yellowish brown, clavus in basal 1/3 and apically, a fascia, widening posteriorly from Sc + R, at middle to apex of clavus, and a spot near node, sulphur yellow; membrane dark fuscous, though pale in part of subapical cells of M, veins concolorous, but those in paler part of membrane almost white; apical veinlets of Sc, R, and M pale bordered with pallid suffusion; apical margin orange. Wings smoky, apical margin red, veins dark fuscous.

Seventh sternite with posterior margin transverse. Mesal margin of 1st valvifers oblique, obliquely bevelled. First valvulae denticulate on mesal margin distally. Length, 2.1 mm; tegmen, 3.2 mm.

Holotype ♀ (BISHOP 7683), New Caledonia, Mt. Koghi, 500 m, I.1963, N.L.H. Krauss.

The bright color pattern of this species suffices to distinguish it from all other New Caledonian Achilidae, but it also stands apart in the quadrate vertex. It is referred to this genus only provisionally.

83. **Gongistes asbolus** Fennah, new species Fig. 394-398.

Vertex broader at base of middle line than long (3 : 1), strongly depressed, median carina feebly present in basal 1/2; frons longer in middle than broad (1.2 : 1), basal margin straight, lateral margins sinuately diverging to below level of antennae then moderately incurved to suture, median carina percurrent, well developed throughout, disc not granulate. Pronotum with disc as broad at anterior margin as long in middle, mesonotum with lateral carinae moderately diverging caudad; post-tibia with a minute spine laterally and 7 apically, basal metatarsal segment with 7 teeth, 2nd segment also with 7. Tegmina with Sc + R forking at middle of tegmen, slightly basad of Cu 1 fork, Sc almost uniformly diverging from R, anterior branch of M not uniting with R for a short distance beyond level of node, no supernumerary transverse veinlets in corium; anterior claval vein without a spur.

Yellowish brown; frons in distal 2/3, rostrum, legs and lower surface of thorax, lateral lobes of pronotum, tegulae, and carinae of mesonotum, pale ochraceous; frontoclypeal suture narrowly, and abdomen, fuscous. Tegmina subhyaline, tinged dilute brownish yellow in corium except in costal and subcostal cells, and cell

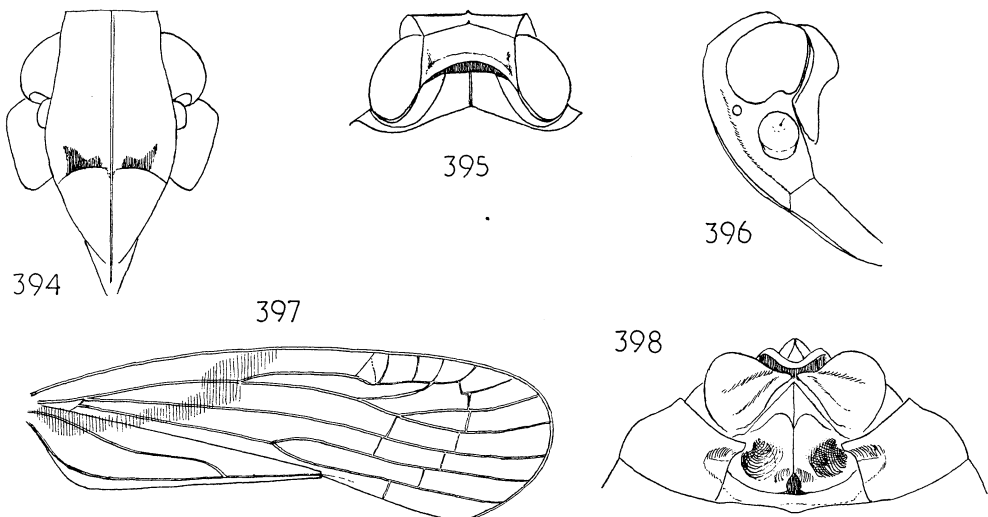


Fig. 394-398. *Gongistes asbolus*, n. sp.: 394, frons and clypeus; 395, vertex and pronotum; 396, head and pronotum, lateral view; 397, tegmen; 398, ♀ genitalia.

Sc + R near base; membrane dilute fuscous, veins dull yellowish in corium, concolorous in membrane. Wings faintly infuscate, with fuscous veins.

Seventh sternite of ♀ with posterior margin shallowly sinuate, slightly concave in middle 1/3. Mesal margin of 1st valvifers weakly angulately excavate. Length, 2.8 mm; tegmen, 4.3 mm.

Holotype ♀ (BMNH), New Caledonia, Houadou, X.1914, P.D. Montague 1918-87.

This species is distinguishable by the shape of the vertex, which is transverse and deeply transversely depressed, by the comparatively long frons, and by coloration.

#### Genus *Mahuna* Distant

*Mahuna* Dist., 1907 : 289 (Orthotype: *M. conspersa* Dist., *op. cit.*: 290).

#### 84. *Mahuna battis* Fennah, new species Fig. 399-404.

♀. Vertex approximately pentagonal, broader at base of middle line than long in middle (1.9 : 1), wider between basal angles than at apex (2 : 1), and about as wide at apex as long in middle; frons longer in middle than broad (about 1.2 : 1). Tegmina with apical margin shallowly convex, slightly oblique, with vein M1 + 2 forking only a little basad of transverse line, so that the latter cuts off a small triangular cell from the remainder of apical cell M1. Post-tibia with 8 teeth apically, basal metatarsal segment with 6 teeth, 2nd segment also with 6.

Pale ochraceous; a broad band across frons in basal 1/3 and a 2nd such band in distal 1/3, middle portion of pronotal areolets, 2 small spots anteriorly on mesonotal disc, and a spot outside each lateral carina basally, and on mesoscutellum, a suffusion on fore and middle legs and post-femur, and on 5th-8th abdominal tergites, light yellowish brown. Lateral lobes of pronotum, dark fuscous. Tegmina subhyaline, powdered grayish ochraceous, 2 spots in costal cell, stigmal cell, apical cells of R, a submarginal suffusion in each apical cell and irregular marbling, arranged approximately in 2 oblique bands and forming a crescentic mark in cell M just anterior to C<sub>1</sub> fork, fuscous; a small round spot at base of subapical cell M1 + 2, dark fuscous, almost pice-

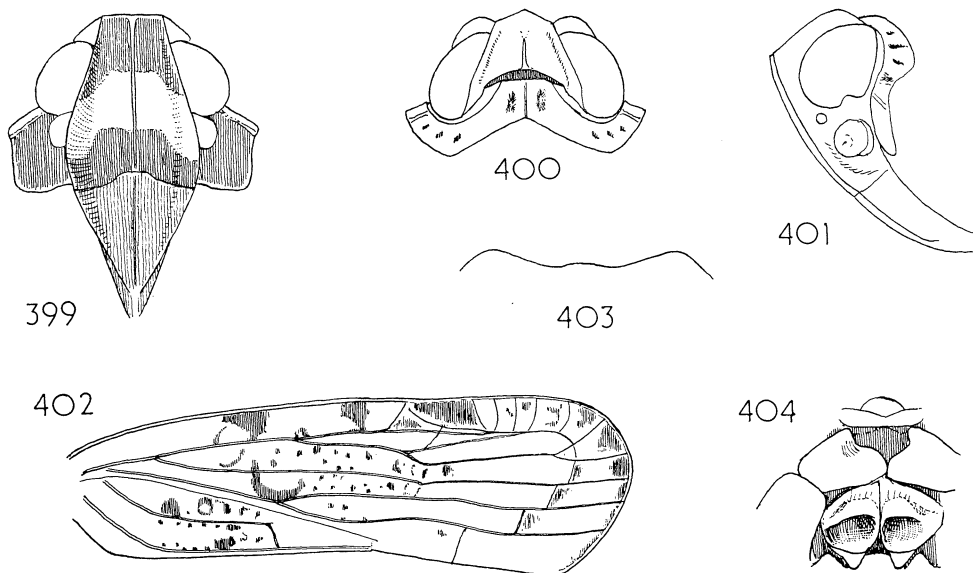


Fig. 399-404. *Mahuna battis*, n. sp.: 399, frons and clypeus; 400, vertex and pronotum; 401, head and pronotum, lateral view; 402, tegmen; 403, posterior margin of ♀ pregenital sternite; 404, ♀ genitalia, posteroventral view.

ous; veins concolorous. Wings subhyaline, powdered soiled white, veins light yellowish brown.

Seventh sternite with posterior margin transverse. Anal segment broader than long with posterior margin very shallowly convex, almost straight. Valvulae of ovipositor as figured. Length, 3.5 mm; tegmen, 4.5 mm.

Holotype ♀ (BISHOP 7684), New Caledonia, Forêt de Thy, 550 m, 1.III.1960, J.L. Gressitt. Paratype: ♀, New Caledonia: up Boulari River, 17.XI.1958, C.R. Joyce.

This species is distinguishable from *M. conspersa*, the only other species, by the shape of the vertex, which is  $1.6 \times$  as broad as long in *conspersa*, in the markedly less deeply rounded apical margin of the tegmina, and the relatively more distal position of the fork of  $M\ 1 + 2$ . In *M. conspersa*, the post-tibia has 7 teeth apically, the basal metatarsal segment 6 teeth, and the 2nd segment 5 teeth.

#### Genus *Isodaemon* Fennah, new genus

Head in dorsal view broader than long, base of frons visible. Vertex more or less declivous, broader at base of middle line than long (approximately  $1.5 : 1$ ), posterior margin shallowly concave, anterior margin convex, disc not depressed; frons about as broad as long, lateral margins distinctly produced laterad, disc granulate, shallowly transversely convex, not depressed in distal  $1/2$ , median carina percurrent, though sometimes weak at extreme base; frontoclypeal suture fine, not very distinct; postclypeal part of clypeus tricarinate; rostrum just reaching to post-trochanter, apical segment not longer than subapical. Pronotum short, laterally almost completely covered by eyes, posterior margin obtusely angulately excavate, median disc more than  $2 \times$  as wide at anterior margin as long in middle, tricarinate, with lateral carinae only slightly diverging caudad, and reaching posterior margin; mesonotum tricarinate. Tegmina with  $Sc + R$  forking very approximately near middle of tegmen; stigmal cell triangular, about as large as each of following 2 marginal cells.

Pygofer with medioventral process relatively large, about as long as broad at base, apical margin entire, truncate or shallowly convex. Aedeagus with suspensorial arms each broad, transverse, and stout; phallobase produced ventrad apically in a pair of stout spinose processes. Genital styles moderately narrow, strongly incurved distad, each with a large bicuspidate lobe at middle of dorsal margin; a rather long and slender spinose process arising on inner surface at base of each style, directed dorsad then curving laterad.

Type species: *Isodaemon cyllarus* n. sp.

Although the vertex is not  $2 \times$  as broad as long, this genus, by reason of other characters of the head, must be assigned to the 1st alternative in the 1st couplet of my key to Plectoderine genera (Fennah 1950: 47), and from this it runs to couplet 25, where it fulfills neither condition. It differs from *Amblycratus* in the distally widening frons and in the more distad position of the claval apex in the tegmen, and from *Hemiplectoderes* in the less transverse vertex and the relatively shorter lateral pronotal carinae. It is probably nearer to *Benella*, *Aristyllis* and *Pyrrhyllis*, but differs from the 1st in the shape of the frons and in the shape of the medioventral process of the pygofer, from the 2nd in the laterally shorter pronotum, and the absence of a depression in the distal  $1/2$  of the frons, and from the last in the much less transverse vertex, the laterally shorter pronotum and the less diverging lateral carinae. It differs from *Caffropyrrhyllis* in the distally widening frons and the relatively shorter pronotum and from *Momar* in the shape of the pronotal disc, of the medioventral process of the pygofer and of the genital styles.

#### 85. *Isodaemon cyllarus* Fennah, new species Fig. 405–415.

♂. Vertex broader at base of middle line than long (about  $1.5 : 1$ ), median carinae absent or obscure; frons a little longer in middle than broad ( $1.1 : 1$ ), basal margin straight, lateral margins diverging to below level of antennae then strongly incurved, median carina weak at base (on upper surface of head), disc finely granulate, more coarsely so in basal  $1/2$ ; shallowly convex transversely; frontoclypeal suture fine, not impressed; rostrum with subapical segment as long as apical segment. Pronotum with disc broader at anterior margin than long in middle ( $2.6 : 1$ ), mesonotum with carinae almost parallel; post-tibia with a small obscure spine laterally, and 7 apically, basal metatarsal segment with 7 teeth, 2nd segment with 6 teeth. Tegmina with

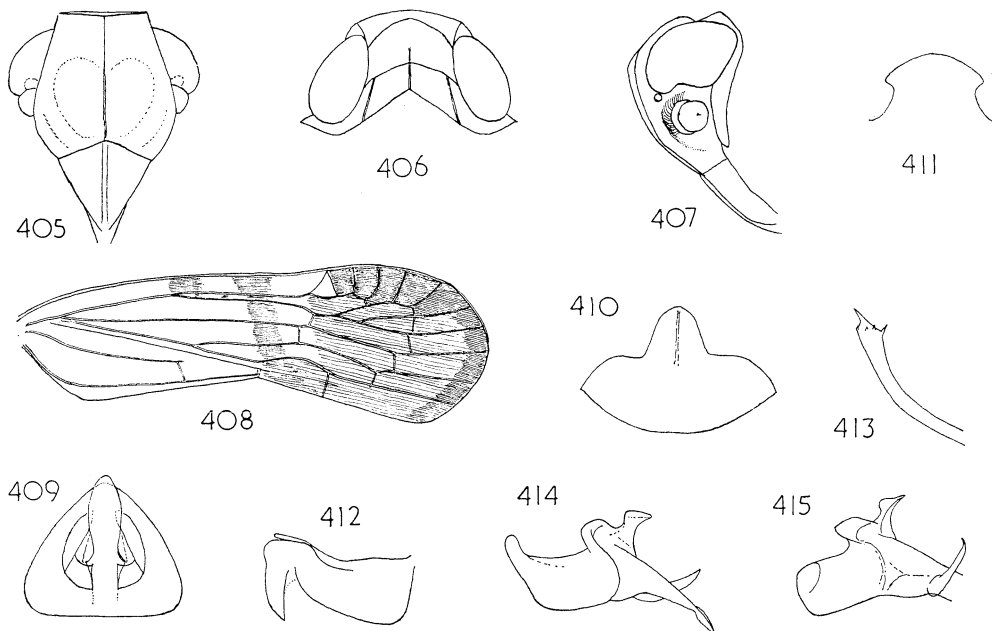


Fig. 405-415. *Isodaemon cyllarus*, n. sp.: 405, frons and clypeus; 406, vertex and pronotum; 407, head and pronotum, lateral view; 408, tegmen; 409, ♂ anal segment; 410, pygofer, ventral view; 411, medioventral process of pygofer (flattened in a mounted preparation); 412, phallobase of aedeagus; 413, distal portion of one of phallic appendages; 414, right genital style, ventrolateral view; 415, left genital style, dorsal view.

Sc + R fork rather indistinct, a little distad of Cul fork, Sc lying close to R, then rather abruptly curving to node.

Yellowish brown; disc of frons in distal 1/2, and lateral lobes of pronotum pale, yellowish; margins of frons suffused with orange; clypeus distally, procoxa, mesocoxa and mesopleuron and abdomen, dark reddish brown, legs dilute fuscous. Tegmina subhyaline, with dull yellow tinge; 2 spots in costal cell, 2 apical cells of Sc adjoining node, and a spot just distad of claval apex, dark fuscous; membrane suffused with more dilute fuscous; veins in basal 1/2 of tegmen concolorous, in distal 1/2, red.

Anal segment in dorsal view triangular, with sides very slightly convex and apex acute. Pygofer with medioventral process about as broad as long, about as wide at apex as at base, with sides concave and apical margin shallowly convex. Aedeagus bilaterally symmetrical, with phallobase (periandrium) relatively short; phallic appendages strap-like, each abruptly constricted near apex and terminating in a porrect spine. Genital styles as figured. Length, 3.0 mm; tegmen, 4.0 mm.

Holotype ♂ (BISHOP 7685), New Caledonia, Col des Roussettes, 450-500 m, II.1963, C.M. Yoshimoto & N.L.H. Krauss.

This species is distinguished by the structure and proportions of the head in combination with the details of the tegminal venation mentioned above.

86. ***Isodaemon sirona*** Fennah, new species Fig. 416-425.

♂. Vertex slightly declivous, broader at base of middle line than long in middle (1.6 : 1), median carina distinct, a pustule on each side of middle near basal margin, not quite attaining anterior margin; frons scarcely longer in middle than broad, basal margin slightly convex, lateral margins diverging to level of antennae then moderately incurved to frontoclypeal suture, median carina percurrent, distinct throughout, disc gra-



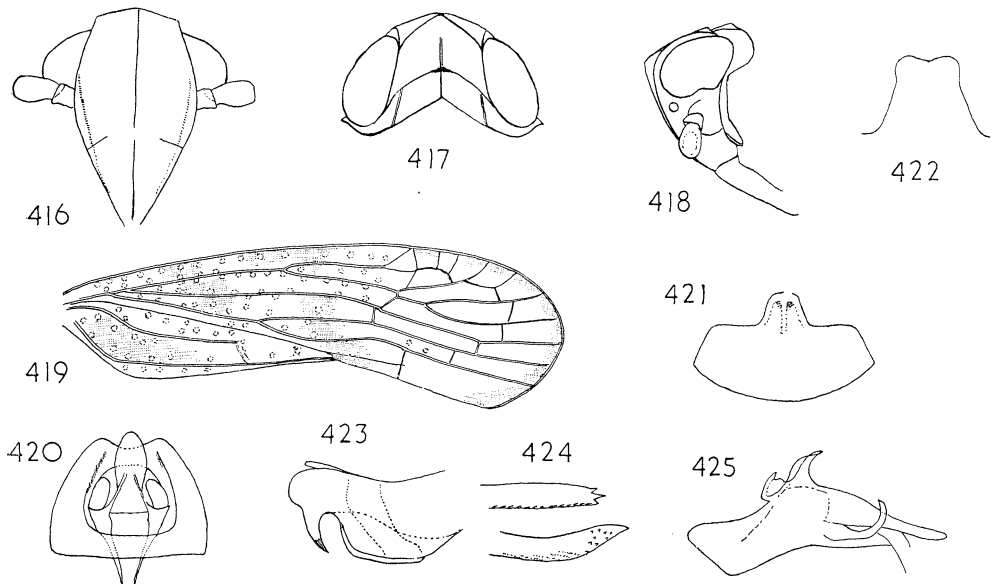


Fig. 416-425. *Isodaemon sirona*, n. sp.: 416, frons and clypeus; 417, vertex and pronotum; 418, head and pronotum, lateral view; 419, tegmen; 420, ♂ anal segment; 421, pygofer, ventral view; 422, medioventral process of pygofer (flattened in a mounted preparation); 423, phallobase of aedeagus; 424, distal portion of aedeagal appendages; 425, left genital style, mesal aspect.

nulate, an obscure indication of a transverse ridge, parallel to anterior margin of vertex, on each side basally; frontoclypeal suture finely, shallowly impressed; rostrum with subapical segment a little longer than apical. Pronotum with disc broader at anterior margin than long in middle (2.3 : 1) with lateral carinae only slightly diverging caudad and reaching posterior margin; mesonotum with lateral carinae diverging caudad; posttibia with a small spine at 1/3 from base and 7 apically, basal metatarsal segment with 6 teeth apically, 2nd segment also with 6. Tegmina with Sc + R fork at middle of tegmen, and basad of level of claval apex, Sc uniformly diverging from R.

Yellowish brown; disc of frons distally, lower margin of lateral pronotal lobes of pronotum and 4 crescentic marks on disc of mesonotum, pale yellowish brown; lower surface of thorax and legs only a little darker. Tegmina subhyaline, suffused sordid yellow; a faint cloud in basal 1/3, a patch slightly distad of Cu1 fork, membrane in basal 1/2 and apical cells submarginally, dilute yellowish brown; all these clouded areas with relatively large rounded clear spots, which near base of tegmen are developed as weak pustules; veins concolorous, in corium slightly darker than in membrane. Wings hyaline, very faintly infumed, veins a little darker than ground.

Anal segment a little broader than long, with lateral margins feebly convex, converging distad, apical angles rounded, apical margin concave. Pygofer with medioventral process not quite as long as broad at base, a little curved dorsad distally, lateral margins straight, slightly converging distad, apical margin truncate. Aedeagus bilaterally symmetrical, with phallobase relatively short; phallic appendages strap-like, each tapering distally and acuminate at tip, with a minute spinose process subapically. Genital styles as figured. Length, 3.0 mm; tegmen, 4.0 mm.

Holotype ♂ (BISHOP 7686), New Caledonia, Thio, XI.1958, C.R. Joyce.

This species is distinguished by the proportions of the head and by the mesonotal and tegminal coloration. In color pattern, it is not unlike an *Argelusa*, but the intensity of pigmentation is much

less. The male terminalia differ from those of *I. cyllarus* in the shape of the anal segment, of the medioventral process of the pygofer, and of the tip of the phallic appendages.

87. ***Isodaemon orontes*** Fennah, new species Fig. 426-436.

♂. Vertex moderately declivous, broader at base of middle line than long (2 : 1), not depressed, median carina weakly present throughout; frons broader than long in middle (1.1 : 1), basal margin straight, lateral margins diverging to below level of antennae then rather strongly incurved to suture, median carina percurrent, well developed throughout, disc granulate. Pronotum with disc broader at anterior margin than long in middle (2.5 : 1), lateral carinae rather strongly diverging caudad, but definitely uniting with posterior margin; mesonotum with lateral carinae virtually parallel in basal 1/2; post-tibia with a minute spine laterally, 8 apically, basal metatarsal segment with 7 teeth apically, 2nd segment with 6. Tegmina with Sc + R forking at middle of tegmen, level with Cu 1 fork, Sc uniformly diverging from R, anterior branch of M not uniting with R at or beyond level of node, a few pustules and incomplete transverse veinlets in corium; anterior claval vein with a well-developed spur.

Pale orange brown, almost stramineous, carinae a little lighter; vertex, pronotum, mesonotum, and mesepisterna sometimes tinged red in places; intersegmental membrane of abdomen sometimes red; legs stramineous. Abdomen fuscous dorsally, ventrally orange yellow near margins, fuscous in median portion. Tegmina subhyaline, lightly suffused with dull yellowish brown; 3 rather diffuse spots in costal cell, and all apical cells near margin, fuscous; veins and pustules a little paler than ground. Wings dilute fuscous, with dark fuscous veins.

Anal segment in dorsal view almost triangular, almost as long as broad at base, apical margin extremely short, shallowly excavate. Pygofer strongly depressed, medioventral process broader at base than long (about 1.6 : 1), narrowing distad, apical margin broadly rounded, a shallow longitudinal ridge along middle line. Phallobase with a pair of spinose processes arising dorsally at apex, directed ventrocephalad, ventral margin

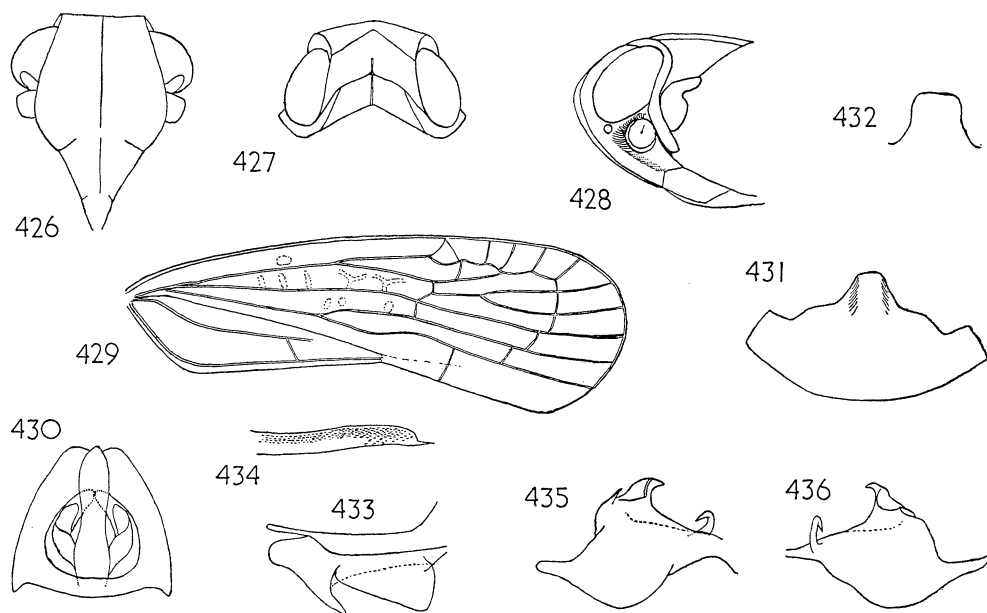


Fig. 426-436. *Isodaemon orontes*, n. sp.: 426, frons and clypeus; 427, vertex and pronotum; 428, head, pronotum and mesonotum, lateral view; 429, tegmen; 430, ♂ anal segment; 431, pygofer, ventral view; 432, medioventral process of pygofer; 433, phallobase of aedeagus; 434, distal portion of one of aedeagal appendages; 435, right genital style, lateral view; 436, right genital style, mesal aspect.

of phallobase narrowing caudad to an upcurved and acute apex; phallic appendages strap-like, each abruptly narrowed at apex and terminating in a short narrow spine; dorsal surface minutely denticulate near base of this spine. Genital styles subrhomboidal, a little incurved distally, apically deeply rounded, a relatively large lobe at middle of dorsal margin shaped as in figure. Length, 3.1 mm; tegmen, 4.2 mm.

Holotype ♂ (BISHOP 7687), New Caledonia, Col d'Amieu, 750 m, III.1960, J.L. Gressitt. Paratypes: 1 ♂, 2 ♀, Forêt de Thy, 550 m, III.1960, Gressitt; Col des Roussettes, 450–550 m, II.1963, Col de Mouirance, II.1963, Yoshimoto & Krauss.

This species is distinguished by the proportions of the head, by coloration and by structural details of the male genitalia.

#### Genus **Horcomotes** Fennah, new genus

Head with eyes almost as wide as pronotum. Vertex not declivous, broader at base than long in middle (1.4 to 2.2 : 1), base of frons visible from above, posterior margin shallowly concave, lateral margins slightly converging distad, anterior margin obtusely angulate, disc a little depressed; frons a little longer than broad, lateral margins diverging to below level of antennae then incurved to suture, median carina percurrent, well developed throughout, disc subgranulate at least in basal 1/2, frontoclypeal suture impressed. Pronotum with disc broader at anterior margin than long in middle line (about 1.6 : 1), mesonotum with lateral carinae only feebly diverging caudad, in side view horizontal. Tegmina with Sc + R forking near middle of tegmen; Sc uniformly diverging from R, nodal cell about as large as 2 following marginal cells. Post-tibia normally with 1 spine laterally and 7 or 8 apically.

Type species: *Horcomotes damoetas* n. sp.

The type of this genus runs to *Amblycratus* or *Hemiplectoderes* in my key to Plectoderine genera. It differs from members of both in the shape of the frons and in the venation of the tegmina distally in the region of Sc and R, and from *Gongistes* in the shape of the vertex and basic structural details of the male genitalia. In general appearance members of this genus resemble certain members of *Phenelia*, but can readily be separated by the absence of areolet laterally at the base of the frons, and by the horizontal vertex. From *Benella* it differs in the ecarinate vertex and the slight depression of its disc, and in the venation of the tegmina apically in Sc, R and M.

#### 88. **Horcomotes damoetas** Fennah, new species Fig. 437–446.

Vertex broader at base of middle line than long (nearly 2.2 : 1), base of frons visible from above, disc only very slightly depressed, median carina absent; frons longer in middle line than broad (1.1 : 1), basal margin straight, lateral margins a little sinuately diverging to below level of antennae, then rather strongly incurved to suture; median carina percurrent, well-developed throughout, disc subgranulate. Pronotum with disc broader at anterior margin than long in middle line (1.6 : 1), mesonotum with lateral carinae only feebly diverging caudad; post-tibia with 1 spine laterally and 8 apically, basal metatarsal segment with 7 teeth, 2nd segment with 6 teeth. Tegmina with Sc + R forking slightly distad of middle, and distad of Cu1 fork, Sc uniformly diverging from R, anterior branch of M uniting with R for a short distance just beyond level of node, a few weak pustules in corium and 2 or 3 supernumerary transverse veinlets in clavus; anterior claval vein with a spur.

Yellowish brown; frons sometimes diffusely across middle, clypeus basally and on median carina, carinae and posterior margin of mesonotum, tegulae near margins, carinae of mesonotum and edges of mesepisterna, ochraceous; legs dilute fuscous, lighter at apex of femora; abdomen dark fuscous. Tegmina subhyaline, grayish, a suffusion overlying most of clavus, 2 irregular and very incomplete transverse bands at 2/5 and 3/5 from base, and membrane rather unevenly, dilute fuscous; pustules and transverse veinlets in corium and clavus, and all veins in membrane, grayish white. Wings dilute fuscous, a little iridescent, veins fuscous.

♂. Anal segment broader than long (1.5 : 1), lateral margins convex, converging in distal 2/3, apical margin shallowly excavate. Pygofer depressed, lateral margins produced caudad at middle in a narrowly rounded lobe; medioventral process as long as broad, about as wide apically as at base, apical margin very shal-

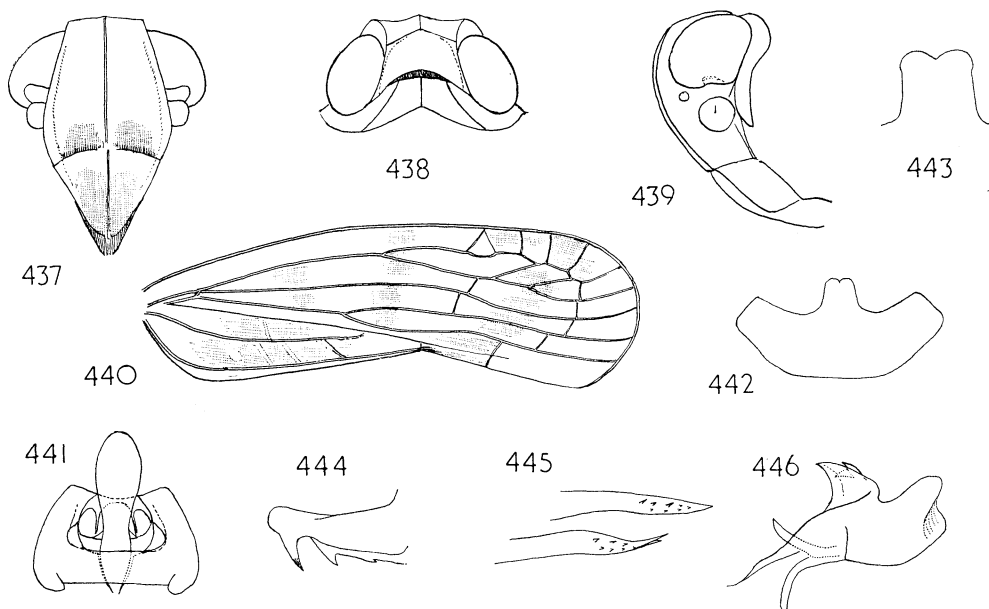


Fig. 437-446. *Horcomotes damoetas*, n. sp.: 437, frons and clypeus; 438, vertex and pronotum; 439, head and pronotum, lateral view; 440, tegmen; 441, ♂ anal segment; 442, pygofer, ventral view; 443, medioventral process of pygofer; 444, phallobase of aedeagus; 445, distal portion of phallic appendages; 446, left genital style.

lowly notched at middle. Aedeagus with suspensorial arms strongly sinuate, not transverse; phallobase with dorsoapical lobes symmetrical, deflexed distally and each produced in a short stout spine; ventral surface of phallobase in middle line produced ventrad in pair of stout spinose processes, 1 behind the other; phallic appendages moderately gradually narrowing to apex, which is acuminate or minutely bicuspidate. Genital styles upcurved distally, shallowly longitudinally sulcate in apical 1/2, a relatively large, unequally tricuspidate process on dorsal margin at middle, a slender spinose process on inner surface near base, directed dorsad and laterad. Length, 2.3 mm; tegmen, 3.0 mm.

♀. Length, 2.5 mm; tegmen, 3.5 mm.

Holotype ♂ (BISHOP 7678), New Caledonia, Thio, III.1959, N. Krauss. Paratype: ♀, 6 km N of Paita, I.1963, Yoshimoto.

89. ***Horcomotes ocrisia*** Fennah, new species Fig. 447-451.

♀. Vertex broader at base of middle line than long (about 1.4 : 1), base of frons visible from above, disc only slightly depressed, median carina present in basal 1/3; frons longer in middle line than broad (about 1.1 : 1), basal margin straight, lateral margins diverging to below level of antennae, then moderately strongly incurved to suture; median carina percurrent, well developed throughout, disc subgranulate in basal 1/2. Pronotum with disc broader at anterior margin than long in middle line (nearly 1.6 : 1), mesonotum with lateral carinae only feebly diverging caudad; post-tibia with 1 spine laterally and 7 apically, basal metatarsal segment with 7 teeth, 2nd segment with 6 teeth. Tegmina with Sc + R forking at middle of tegmen, about level with Cu1 fork, Sc uniformly diverging from R, anterior branch of M uniting with R for a short distance just beyond level of node, no pustules in corium, a supernumerary transverse veinlet in clavus; anterior claval vein with a spur.

Yellowish brown; vertex, except narrowly in middle line, mesonotum, except carinae and apex of meso-scutellum, rostrum at tip, and abdomen dark reddish brown. Tegmina subhyaline, unevenly suffused fuscous;

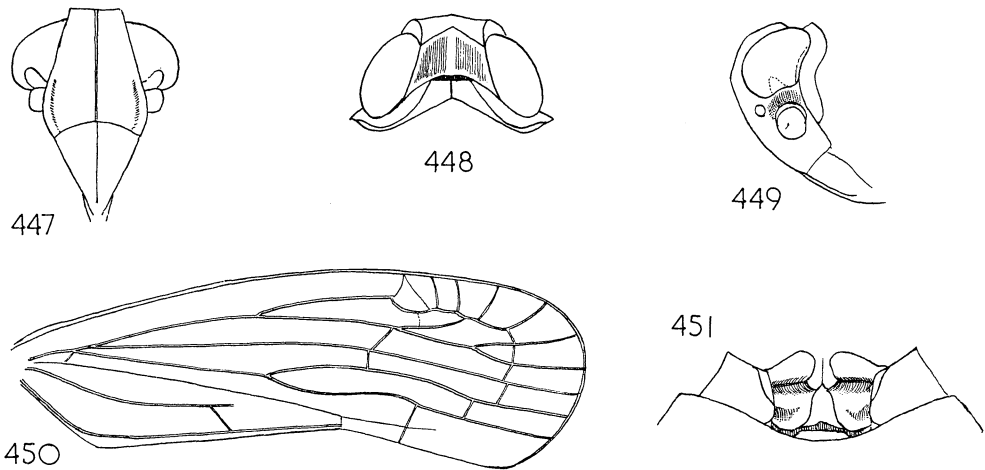


Fig. 447-451. *Horcomotes ocrisia*, n. sp.: 447, frons and clypeus; 448, vertex and pronotum; 449, head and pronotum, lateral view; 450, tegmen; 451, ♀ genitalia.

apical veinlets of Sc and R, transverse veinlets in membrane and distal portion of anterior claval vein, grayish white or pallid yellow. Wings fuscous, with veins darker.

Seventh sternite of ♀ with posterior margin shallowly sinuate, concave in its median 1/3. Mesal margin of 1st valvifers angulately convex. Length, 2.8 mm; tegmen, 4.2 mm.

Holotype ♀ (BISHOP 7689), New Caledonia, 6 km N of Paita, 25.I.1963, N.L.H. Krauss.

This species is distinguishable by the proportions of the vertex and its generally dark brown coloration. In the female genitalia the 1st valvulae are deeply transversely sulcate, and the meso-distal angle of the 1st valvifers is obtuse.

#### Genus **Tangina** Melichar

*Tangina* Mel., 1903: 44. (Haplotype: *T. bipunctata* Mel. *op. cit.*: 44).

#### 90. **Tangina sirius** Fennah, new species Fig. 452-461.

Vertex at level of base of middle line a little broader than long in middle (1.1 : 1), and as broad as anterior margin (measured between distal outer angles of lateroapical areoles), frons scarcely longer in middle line than broad, wider at widest part than at base (1.4 : 1). Tegmina with Sc + R forked at level of apex of clavus, Cul forked rather near to level of union of claval veins.

Stramineous ventrally, pale orange-yellow dorsally; middle line of vertex distally, and a spot in middle of frons near base, piceous; a suffusion on sides of head before eyes, pronotum behind eyes, mesonotum except carinae, a spot on mesopleuron, and abdomen, reddish brown. Tegmina subhyaline, an oblique band across costal cell at base, apical cells of Sc and a spot on hind margin just distad of claval apex, dark reddish brown; corium, except for greater part of costal cell, an area at Cul fork and another at union of claval veins, pale yellowish brown; veins concolorous in corium, paler than ground in membrane. Wings sordid white, veins dilute yellowish brown.

♂. Anal segment a little broader than long, with lateral margins feebly convex, converging distad, apical angles rounded, apical margin concave. Pygofer with medioventral process about as long as broad, broadly elevated along middle, slightly curved upward distally, deeply and narrowly cleft at middle of apical margin, apical angles acute. Phallobase produced laterad near middle in a pair of spinose processes directed laterocephalad and ventrad at apex in a slightly unequal pair of spinose processes. Genital styles moderately narrow,

weakly incurved distad, each with a large lobe at middle of dorsal margin and shaped as shown in figure; a slender spinose process arising on inner surface at base of each genital style, directed dorsad then curving laterad. Pregenital sternite of female with posterior margin transverse. Length, 3.2 mm; tegmen, 4.0 mm. ♀: Length, 3.0 mm; tegmen, 4.0 mm.

Holotype ♂ (BISHOP 7690), New Caledonia, Mt. Mou, V.1950, N.L.H. Krauss. Paratype, 1 ♀: on heights between Thio and Nakety, XI.1958, Joyce.

This species is distinguished by the proportions of the head and by coloration, and, in the male, by the shape of the genitalia.

91. **Tangina bambalio** Fennah, new species Fig. 462-466.

♀. Vertex at level of base of middle line broader than long in middle (1.1 : 1), and broader than at anterior margin (measured between distal outer angles of lateroapical areoles) (1.1 : 1); frons fully as broad as long in middle line, wider at widest part than at base (2 : 1). Tegmina with Sc + R forked slightly distad of level of apex of clavus, Cul forked near to level of union of claval veins.

Fuscous; middle line of vertex distally and basal 2/5 of frons, piceous, almost black; a broad pale yellowish crescentic spot in middle of frons; sides of vertex, and sides of frons distally, margins and carinae of pronotum and mesonotum, and legs, pale yellowish brown or sordid yellow. Tegmina yellowish brown, apical cells of Sc, dark fuscous, remaining apical cells a little darker than corium; 3 sublinear areas in costal cell, a small area at base of Cul, a small narrow area close to fork of Cul, and another at union of claval veins, subhyaline, colorless; veins of corium concolorous, those of membrane, pale yellow. Wings infusate, with veins concolorous or darker than ground.

Pregenital sternite with posterior margin transverse. Length, 2.5 mm; tegmen, 3.4 mm.

Holotype ♀ (BISHOP 7691), New Caledonia, Nouméa, II.1959, C. M. Yoshimoto & N. L. H. Krauss.

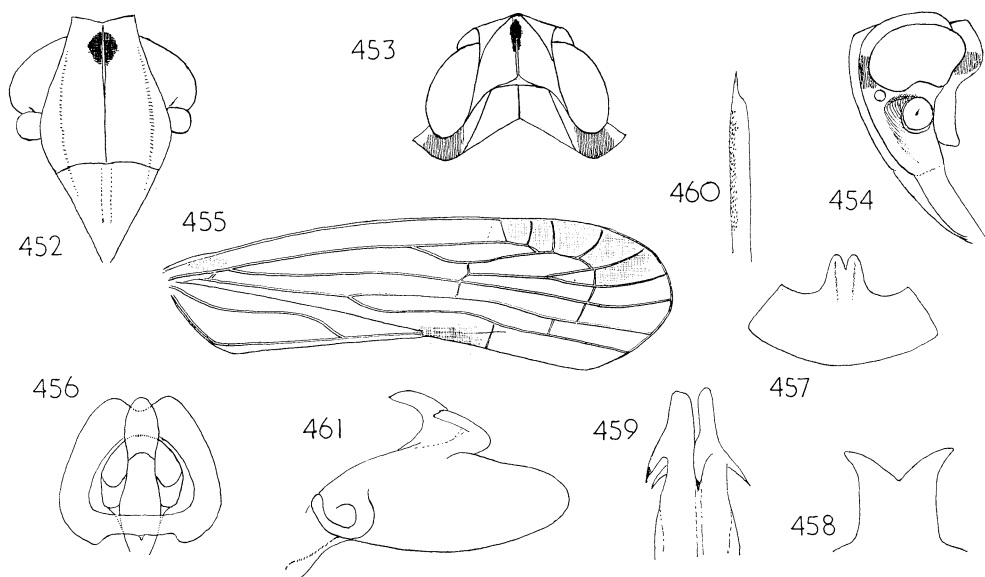


Fig. 452-461. *Tangina sirius*, n. sp.: 452, frons and clypeus; 453, vertex and pronotum; 454, head and pronotum, lateral view; 455, tegmen; 456, ♂ anal segment; 457, pygofer, ventral view; 458, medio-ventral process of pygofer (flattened in a mounted preparation); 459, phallobase of aedeagus, ventral view; 460, distal portion of one of aedeagal appendages; 461, right genital style, mesal aspect.

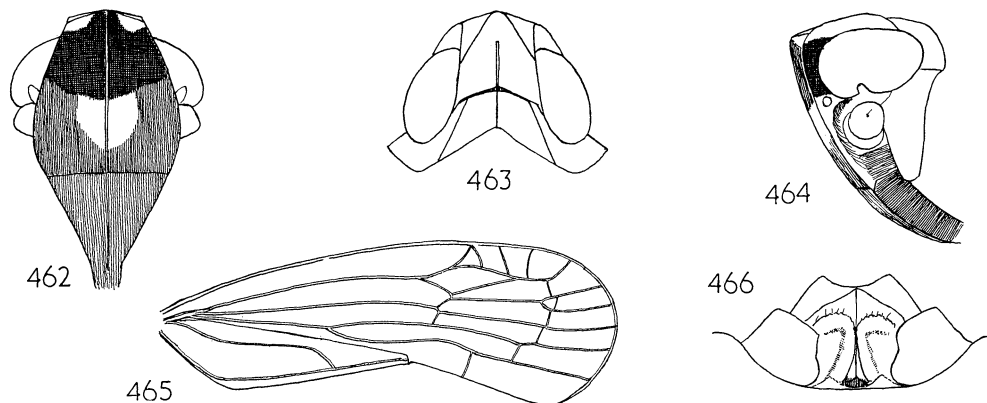


Fig. 462-466. *Tangina bambalio*, n. sp.: 462, frons and clypeus; 463, vertex and pronotum; 464, head and pronotum, lateral view; 465, tegmen; 466, ♀ genitalia.

This species differs from *T. sirius* in the proportions of the vertex, which is clearly wider at the base than at the apex in *bambalio*, and of the frons, which is at least as broad as long in the middle, and quite markedly in its generally fuscous hue and heavily marked frons. It is possible that its smaller size will also prove to be significantly less than that of *T. sirius*.

#### Genus *Clidonisma* Fennah, new genus

Head with eyes markedly narrower than pronotum. Vertex declivous, approximately as broad as long, basal margin shallowly concave, lateral margins converging distad, meeting angulately in middle at apex, median carina prominent except at apex, disc depressed; frons about as long in middle as broad, about  $2 \times$  as wide apically as at base, lateral margins strongly sinuate, median carina percurrent, no areolets developed laterobasally, disc a little depressed between carinae; postclypeal portion of clypeus fully  $\frac{3}{4}$  as long as broad at widest part, tricarinate; rostrum reaching almost to middle of abdomen, subapical segment about as long as apical segment, antennae with 2nd segment relatively large, extending laterad as much as eyes, slightly compressed; ocelli distinct, eyes subreniform, in side view obliquely truncate behind. Pronotum relatively long, not deeply overlapped by eyes, disc narrow, tricarinate, lateral carinae not much longer than median carina, not strongly diverging caudad, attaining hind margin, 2 carinae of each side between eye and tegula, lateral lobes of pronotum rather short, quadrate; mesonotum rather short, with lateral carinae distinctly diverging caudad; forelegs with procoxa and profemur foliaceous, 2nd metatarsal segment with a row of minute scale-bearing teeth apically. Tegmina with Sc + R forking at about middle, Sc uniformly diverging from R, M not uniting with R at or distad of level of node, apical cells shorter than subapical cells.

Type species: *Clidonisma serapis* new species

In my world key the type species runs to *Salemina*, but it differs in the apical areolets of M being much longer than broad. In general appearance this genus would seem to be nearer to *Callinesia* or *Nephelesia*, but it differs from both in the absence of areolets at the base of the frons and in the substantially greater number of teeth on the 2nd metatarsal segment.

#### 92. *Clidonisma serapis* Fennah, new species Fig. 467-477.

Vertex as broad at base of middle line as long, basal margin sinuately shallowly concave, lateral margins converging distad and meeting at an acute angle at apex, anterior margin of head transverse, with apex of vertex a little projecting at middle, median carina prominent in basal  $\frac{2}{3}$ , absent in apical  $\frac{1}{3}$ , disc depressed; frons as long in middle line as broad, broader at widest part than at base (about  $2.7 : 1$ ), basal margin shallowly angulately concave, lateral margins below level of antennae moderately incurved to suture, disc not granu-

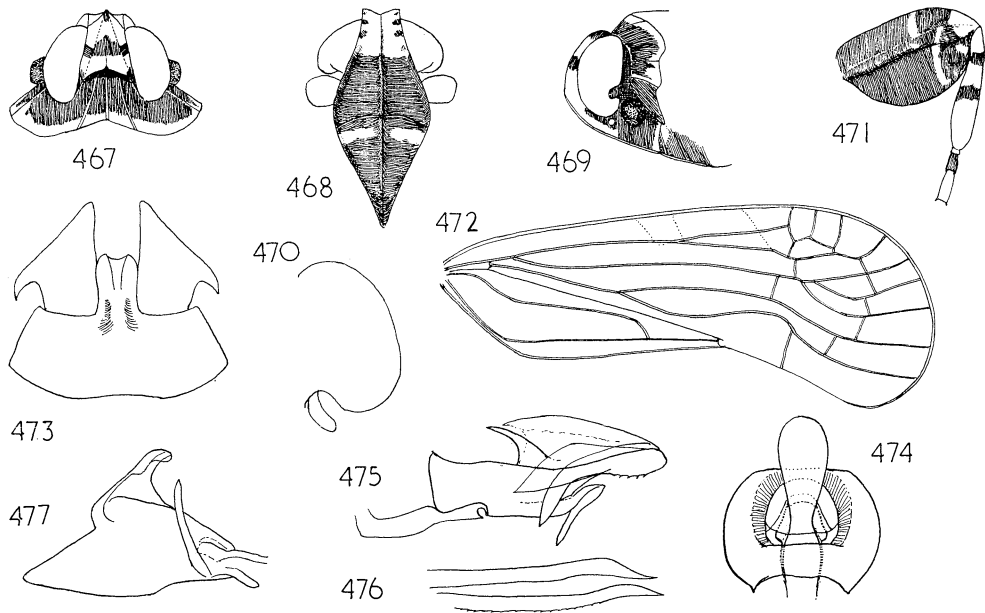


Fig. 467-477. *Clidonisma serapis*, n. sp.: 467, vertex and pronotum; 468, frons and clypeus; 469, head and pronotum, lateral view; 470, left procoxa and protochanter, anterior view; 471, femur, tibia and tarsus of left foreleg; 472, tegmen; 473, pygofer and genital styles, ventral view; 474, ♂ anal segment; 475, phallobase of aedeagus; 476, distal portion of aedeagal appendages; 477, left genital style, mesal aspect.

late, pronotum with disc longer in middle line than broad at anterior margin (1.8 : 1), twice as wide at base as at anterior margin. Procoxa and profemur foliately expanded laterad, broadly ovate, mesofemora distinctly compressed, but not foliate, post-tibia with a minute spine laterally (almost obsolete), and 7 stout spines apically, basal metatarsal segment with 8 teeth, 2nd segment with 12 teeth of which the middle 10 are smaller than the 2 outer teeth, and each bears a scale. Tegmina with costal and subcostal cells truncate apically at node, M forking slightly distad of R-M crossvein, Sc + R and R a little elevated from base to R-M crossvein, a lenticular vertical flange on Cu lb near level of claval apex and a similar flange on common claval vein at apex.

Dark fuscous; vertex, except at basal angles and across middle, frons in basal 1/3, (except for 2 or 3 spots at each side), and lateroapically, clypeus laterally at base, sides of head above eyes, posterior 1/3 of pronotum, 2 triangular marks at base of mesoscutellum, irregular marks on femora distally, 3 transverse bands on post-tibia and mesotibia, post-tibia except basally, apically and in a subapical band, pro- and meso-tarsi distally, and middle portion of basal segment of metatarsus, sordid or ivory white. Tegmina fuscous, 2 oblique bands in costal cell, costal and subcostal cells apically, transverse veinlets, and common claval vein in part, ivory white, apical margin faintly tinged orange. Wings fuscous, with darker veins, apical margin red.

♂. Anal segment in dorsal view almost circular, apical margin broad, convex. Pygofer not much depressed, lateral margins entire, medioventral process longer than broad at base, apical margin very deeply cleft medially. Phallobase with a pair of subvertical lobes dorsally, tapering cephalad, each with a smaller subspinose lobe on ventral margin, directed ventrocephalad; 3 spinose processes ventrally, directed ventrocephalad; phallic appendages straplike, sinuately tapering near apex and minutely subdentate on upper margin.

Genital styles subrhomboidal, weakly longitudinally striate, acute at apex, a large lobe on dorsal margin, shaped as in figure, a slender spinose process arising on dorsal margin near base, directed dorsad and laterad. Length, 2.5 mm; tegmen, 3.3 mm.



♀. Length, 3.4 mm; tegmen, (estimated) 4.0 mm.

Holotype ♂ (ВІСНОР 7692), New Caledonia, Col de la Pirogue, 14.II.1963, N. L. H. Krauss. Paratypes: 1 ♂, 1 ♀, New Caledonia, 6 km N of Paita, 25.I.1963, Yoshimoto; Col de Mouirance, 2.II.1963, Yoshimoto & Krauss.

Although the proportions of the head and thorax recall those of species of *Callinesia* and the shape and surface texture of the antennae are very like those found in *C. polita* Fenn., detailed comparison shows profound differences in points of detail normally not considered in formal descriptions. In the present species, for example, the pit in which each antenna is situated is relatively large, and extends close to the ocellus, from which, however, it is separated by a small but distinct laterally-projecting flange. The structure of the 2nd metatarsal segment is not unlike that of *Afrachilus*, but scale-bearing teeth also occur on this segment in *Mahuna*, though they are distinctly fewer. The great dilation of the procoxa and profemur found in *Clidomisma* is without parallel in the Achilidae.

#### Genus **Cenophron** Fennah, new genus

♀. Vertex slightly declivous, broader at base of middle line than long in middle, base of frons visible from above, posterior margin shallowly concave, lateral margins concave, anterior margin angulately convex, disc not depressed, median carina present; a pair of transverse laterobasal areolets on frons meeting at middle, and an indication of one or two further areolets distad of these; frons broader than long in middle, medially carinate, disc a little depressed in apical 1/2; postclypeal portion of clypeus short, about 2× as broad at base as long, rostrum reaching post-coxa, apical segment about equal to subapical, antennae with 2nd segment relatively large, extending laterad as much as eyes, slightly compressed, ocelli distinct, eyes reniform. Pronotum moderately long, not entirely overlapped by eyes, disc tricarinate, with lateral carinae moderately diverging caudad and attaining hind margin, pustules or supernumerary carinae behind eyes, 2 carinae on each side laterally between eye and tegula, mesonotum with lateral carinae moderately diverging caudad. Tegmina with Sc + R forking near middle of tegmen, Sc uniformly diverging from R, M united basally with Cul, apical cells relatively elongate, longer than subapical cells.

Seventh sternite with posterior margin shallowly concave or transverse, projecting well beyond 6th sternite. 1st valvifers of usual proportions, not greatly produced mesad.

Type species: *Cenophron aesar* n. sp.

This genus is distinguished by the combination of its head, prothoracic and tegminal characters. The head, with its supernumerary areolets, recalls that of *Eurynomella* and *Paraphypia*, or even *Haitiana*, which it resembles in the depressed distal 1/2 of the frons and the structure of the pronotum. From the last two, however, it differs in the presence of 2 carinae on each side between the eye and the tegula, and from the 1st in the 7th (pregenital) sternite of the female not being extensively overlapped by the 6th sternite and by the 1st valvifers not being produced to meet at middle. In superficial appearance it is a little like *Afrachilus*, but it differs in the structure of the pronotum, the apex of the post-tarsal segment, and the ♀ genitalia. From all these genera, and, indeed, from all Plectoderine Achilidae, it differs in the basal fusion of M with Cul in the tegmina.

The gender of the generic name is masculine.

93. **Cenophron aesar** Fennah, new species Fig. 478–482.

♀. Vertex broader at base of middle line than long (about 1.3 : 1), lateral margins converging to beyond middle of eyes, then diverging, anterior margin almost rectangulate at middle, an arcuate transverse carina distad of this, on base of frons, and joined to it at middle by a short carina, median carina distinct in basal 2/3; frons broader than long in middle line (nearly 1.2 : 1), basal margin straight, lateral margins diverging to below level of antennae then rather strongly incurved to suture, produced laterad distally, median carina percurrent, disc shallowly convex and subgranulate in basal 1/2, concave on each side of middle line in distal

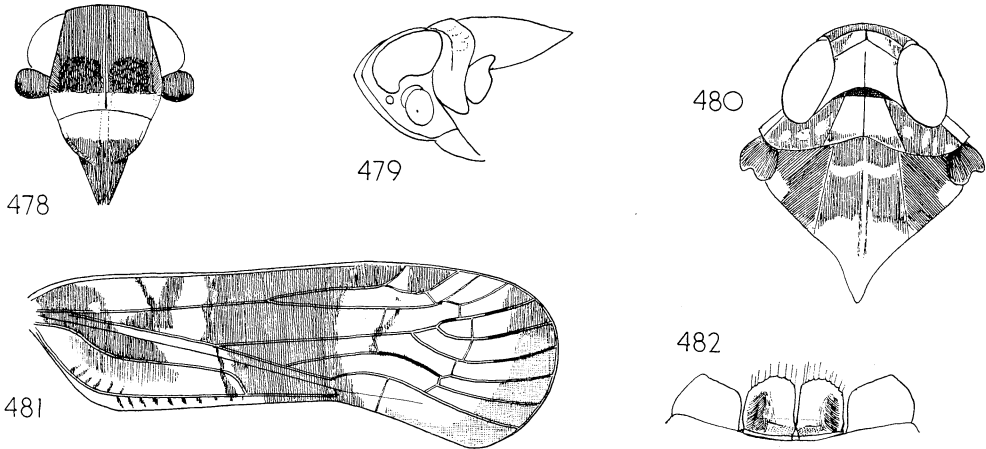


Fig. 478–482. *Cenophron aesar*, n. sp.: 478, frons and clypeus; 479, head, pronotum and mesonotum; 480, vertex, pronotum and mesonotum; 481, tegmen; 482, ♀ genitalia, ventral view.

1/2; an indication of 2 small areolets on each side laterobasally. Pronotum with disc as long at anterior margin as long in middle line, lateral discal carinae reaching hind margin, 3 weak pustules on each side behind eye, lateral lobes quadrate, shallowly impressed; post-tibia with 1 spine laterally, 6 apically, basal metatarsal segment with 6 teeth, 2nd segment also with 6. Tegmina with Sc + R forking at same level as union of claval veins, M united in a common stem with Cu 1 in basal 1/3 of tegmen, not uniting with R at level of node, inter-venal areas of corium finely transversely striate, anterior claval vein without a spur.

Dark reddish brown; vertex, disc and pustules on pronotum, hind margin of tegulae, 2 transverse linear marks at anterior 1/3 of mesonotal disc and mesoscutellum, light yellowish brown; a broad band across frontoclypeal suture and most of postclypeus, rostrum, all trochanters, 2 transverse bands on profemur and mesofemur and postfemur basally, and tibiae and tarsi sordid stramineous. Tegmina hyaline, some transverse marbling in basal 1/3, a broad band across middle, an oblique narrow line from stigma to Cula, a diffuse, oblique linear mark across middle of apical cells of M, and all apical cells near margin, fuscous, veins in corium fuscous, in membrane concolorous, Wings dilute fuscous, with dark fuscous veins. Mesal margin of 1st valvifers feebly sinuate, very broadly beveled. Length, 3.2 mm, tegmen, 4.1 mm.

Holotype ♀ (BISHOP 7693), New Caledonia, Col des Roussettes, 450–550 m, II.1963, C. M. Yoshimoto.

#### Family TROPIDUCHIDAE Stål

##### KEY TO NEW CALEDONIAN GENERA OF TROPIDUCHIDAE

1. Tegminal venation dense, with all longitudinal veins of corium forking close to base, anterior claval vein forked.....**Montrouzierana**  
Tegminal venation not dense, longitudinal veins not forked near base, anterior claval vein simple.....2
2. Tegmina relatively very narrow, venation much reduced; vertex with lateral margins strongly elevated, and median carina incomplete and rather weak.....**Teramnon**  
Tegmina not exceptionally narrow, venation not reduced; vertex with lateral margins not strongly elevated, and not more so than median carinae.....**Scenoma**

#### Genus *Montrouzierana* Signoret

*Montrouzierana* Sig., 1861: 72 (Haplotype: *Pseudophana oxycephala* Montrouzier).

94. **Montrouzierana oxycephala** (Montrouzier), n. comb. Fig. 483, 484.*Pseudophana oxycephala* Mont., 1861: 72.

Anal segment of ♂ in dorsal view longer than broad (about 4 : 1), anal foramen at 1/3 from apex, lateral margins a little produced ventrad beyond this point. Pygofer moderately long, lateral margins very shallowly convex, dorsolateral angles rounded, not produced. Aedeagus moderately long, shallowly sinuate, in dorsal view almost spatulate, a pair of spinose processes arising dorsally at middle, each curved laterad; an acutely angulate lobe, directed lateroventrad, on left apically. Genital styles fused together along middle line, and together forming a shallowly concave plate, dorsal margin strongly produced dorsad near middle in a triangular lobe that terminates in a blunt tooth directed mesad; a rather long spinose process arising on dorsal margin just basad of this lobe, directed dorsolaterad and curving cephalad.

The relationship between this genus and others is uncertain. It is possibly from the same stock as *Peltodictya* Kirkaldy.

NEW CALEDONIA: 2 ♂♂, 4 ♀♀, 6 km N of Paita, I. 1963, Krauss, Yoshimoto; Col de la Pirogue, I, II, 1962, Mt. Koghi, II. 1963, Krauss,



Fig. 483, 484. *Montrouzierana oxycephala* (Montrouzier): 483, ♂ genitalia, right side; 484, left genital style, lateral view.

Genus **Scenoma** Fennah, new genus

Vertex moderately produced before eyes, posterior margin subangulately concave, lateral margins rather strongly converging distad, apical margin convex, disc only very slightly depressed and median carina percurrent, frons longer in middle line than broad, basal margin more or less convex, lateral margins diverging to below level of antennae, disc transversely convex, almost straight in profile, median carina percurrent, this and lateral margins thickened, a line of about 10 obscure pustules inside lateral margin, sometimes almost obsolete, 2 intermediate carinae feebly present at apex, where they unite with median carina, clypeus short, with median carina thick; rostrum reaching postcoxa; ocelli very small, but fairly well defined, antennae with 2nd segment subglobose, eyes ovoid. Pronotum short, anterior margin angulately convex, posterior margin angulately concave, median carina distinct, lateral carinae curving laterad behind eyes, not approaching posterior margin, a single fine carina on each side between eye and tegula; mesonotum tricarinate, with lateral carinae almost parallel in their basal 1/2; post-tibia with 3 or 4 spines laterally, 7 or 8 apically, basal metatarsal segment with 5 to 7 teeth. Tegmina with costa submarginal, the narrow precostal area with 3 to 6 transverse veinlets, Sc + R and Cul forking in basal 1/2 of tegmen, at about same level as union of claval veins, M forking at about level of node, subapical cells about 1/2 as long as apical.

Pregenital sternite of ♀ with a fine median line or groove.

Type species: *Scenoma glabrio* n. sp.

The type species of this genus runs in my key to Pacific genera (Fennah 1956 : 184) to couplet 10, which includes *Daradacella* and *Swezeyaria*. It differs from the former in having a simple median carina on the pronotum and tegmina in which the apical cells are much longer than the subapical, and from the latter in the lateral carinae of the pronotum not reaching the posterior margin, in only a single carina being present between eye and tegula, and in Sc + R forking at about the same level as the union of the claval veins. It differs from *Lavora*, apart from the characters used in the key, in the relatively much narrower precostal area of the tegmen, the more basal position of the fork of Sc + R, and the relative lengths of the subapical and apical cells.

95. ***Scenoma glabrio*** Fennah, new species Fig. 485-489.

♀. Vertex as broad at base of middle line as long in middle, surpassing eyes by about length of an eye, median carina depressed at base and forming a small triangle at junction with posterior marginal carina; frons longer in middle line than broad (1.7 : 1), lateral margins basad of antennae straight, basal margin convex. Tegmina longer than broad (3 : 1).

Green; basal margin of frons and median carina of vertex tinged orange yellow. Tegmina hyaline, veins green, becoming greenish brown near apical margin. Wings hyaline, veins light yellowish green.

Seventh sternite with posterior margin shallowly sinuate, shallowly and obtusely angulately notched at middle. Length, 7.2 mm; tegmen, 8.0 mm.

Holotype ♀ (BISHOP 7694), New Caledonia, Mt. Koghi, II.1962, N. L. H. Krauss.

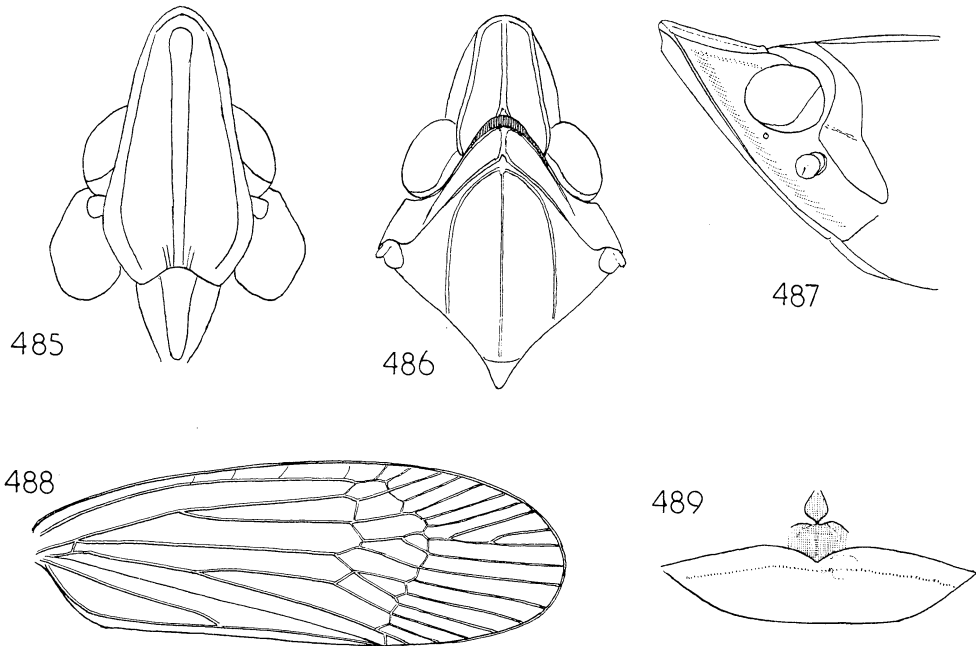


Fig. 485-489. *Scenoma glabrio*, n. sp.: 485, frons and clypeus; 486, vertex, pronotum and mesonotum; 487, head and pronotum, lateral view; 488, tegmen; 489, ♀ pregenital sternite and processes at base of ovipositor.

96. **Scenoma beroe** Fennah, new species Fig. 490-494.

♀. Vertex broader at base of middle line than long in middle (1.5 : 1), surpassing eyes by about 1/2 length of an eye, lateral margins convex, obtusely rounding into anterior marginal carina; median carina not depressed at base; frons longer in middle line than broad (about 1.4 : 1), lateral margins straight between eyes and antennae, basad of upper margin of eyes forming a smooth curve with basal margin. Tegmina longer than broad (nearly 2.7 : 1).

Light orange brown, almost certainly green in life. Tegmina hyaline, veins of corium orange yellow (probably green in life), apical veins except at base, and apical margin, dilute fuscous. Wings hyaline, veins stramineous.

Seventh sternite with posterior margin shallowly convex, minutely notched at middle. Length, 5.5 mm; tegmen, 6.5 mm.

Holotype ♀ (BISHOP 7695), Isle of Pines, III.1959, N. L. H. Krauss.

This species stands apart from the others in its relatively shorter vertex, frons and tegmina, and from *S. palaemon* in coloration. The incision at the middle of the posterior margin of the pregenital sternite is small and abrupt, and unlike the corresponding feature in the other 2 species.

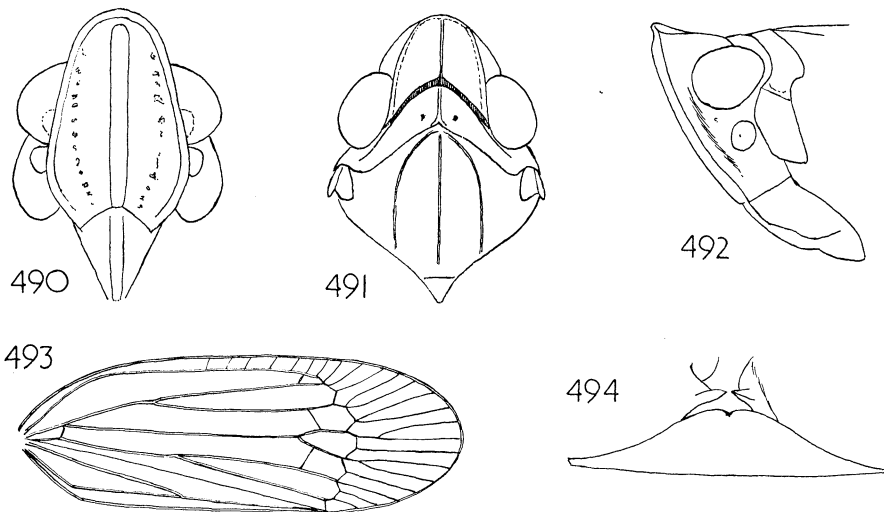


Fig. 490-494. *Scenoma beroe*, n. sp.: 490, frons and clypeus; 491, vertex, pronotum and mesonotum; 492, head and pronotum, lateral view; 493, tegmen; 494, ♀ pregenital sternite and processes at base of ovipositor.

97. **Scenoma palaemon** Fennah, new species Fig. 495-499.

♀. Vertex as broad at base of middle line as long in middle, surpassing eyes by about length of an eye, lateral margins slightly convex, curving smoothly into anterior marginal carina; median carina depressed at base to form a small triangle at junction with posterior marginal carina; frons longer in middle line than broad (1.6 : 1), lateral margins in basal 1/2 a little angulate near eyes, where they become more strongly convergent basad. Tegmina longer than broad (2.8 : 1).

Green, basal margin of frons, lateral margins of vertex, and median carinae of vertex, pronotum and mesonotum and mesoscutellum, orange-red; a band on each side of middle line of head, pronotum and mesonotum, dark fuscous, almost piceous; mesonotum except in middle, tinged yellowish brown. Tegmina hyaline, veins of corium green, a band between posterior claval vein and commissural margin, and all apical veinlets, dark fuscous. Wings hyaline, veins yellowish or green basally, fuscous distally.

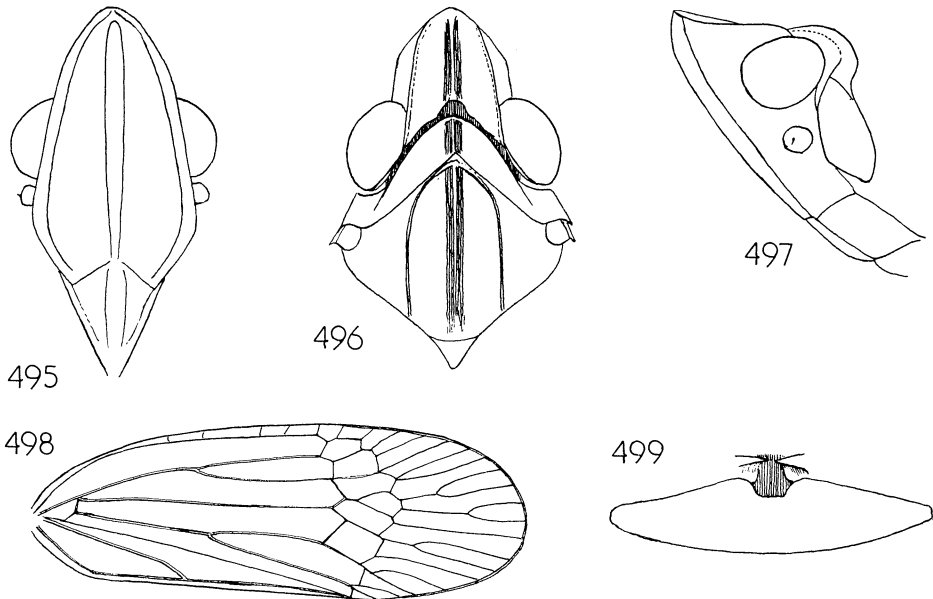


Fig. 495-499. *Scenoma palaemon*, n. sp.: 495, frons and clypeus; 496, vertex, pronotum and mesonotum; 497, head and pronotum, lateral view; 498, tegmen; 499, ♀ pregenital sternite and processes at base of ovipositor.

Seventh sternite with posterior margin convex on each side of middle line, subquadrately excavate medially. Length, 6.1 mm; tegmen, 7.5 mm.

Holotype ♀ (BISHOP 7696), New Caledonia, Mt. Koghi, I.1963, Yoshimoto & Krauss. Paratypes: 2 ♀♀, same data; Col de la Pirogue, I.1962, Krauss.

This species is close to *S. glabrio* but is readily distinguished by the bold red and dark brown line down the middle of the dorsal surface. The lateral margins of the vertex do not meet the apical margin abruptly as they do in *S. glabrio*, and the lateral margins of the frons are slightly but distinctly angulate at the level of the eyes, whereas in *S. glabrio* they are almost straight from the base to the level of the antennae. The median excavation at the middle of the hind margin of the 7th sternite is relatively larger in this species than in *S. glabrio*, where it is merely a broad notch.

#### Genus **Teramnon** Fennah, new genus

Vertex a little longer in middle line than broad at base of middle line, produced before eyes for about 1/2 length of an eye, posterior margin shallowly angulately excavate, lateral margins straight, strongly elevated, converging distad, apical margin strongly convex, disc depressed in basal 1/2, medially carinate only in this 1/2; frons longer in middle line than broad (about 2 : 1), basal margin truncate, lateral margins diverging to below level of antennae, then only weakly incurved, disc weakly transversely convex, almost straight in profile, median carina fine, prominent, percurrent; clypeus short, strongly bent caudad at apex of postclypeal portion, median carina fine; rostrum attaining post-trochanter, with subapical segment longer than apical; antennae with 2nd segment cylindrical-subglobose, ocelli apparently absent, eyes rounded, obliquely truncate postero-ventrally. Pronotum short, anterior margin convex, posterior margin correspondingly concave, median carina distinct, lateral carinae strongly diverging, not reaching posterior margin, a single carina on each side between eye and base of tegmen; mesonotum more than 2 × as broad as long, tricarinate, with lateral carinae

not strongly diverging in their distal 1/2, posterior margin of mesoscutellum broadly convex; post-tibia with 2 spines laterally, about 7 apically, basal metatarsal segment with about 8 teeth apically. Tegmina narrow, strap-like, broadest at base, tapering and usually twisted distad, venation much reduced, veins prominent. Wings absent.

Anal segment of ♂ short, cylindrical. Pygofer rather short. Genital styles in side view approximately ovate, about  $2 \times$  as broad as long, and with 2 processes on upper margin.

Pregenital sternite of ♀ with posterior margin broadly convex. Third valvulae of ovipositor with about 6 teeth evenly spaced along lower margin to apex.

Type species: *Teramnon stenopteryx* new species.

98. **Teramnon stenopteryx** Fennah, new species Fig. 500–506.

Vertex longer in middle line than broad at base of middle line (1.1 : 1), surpassing eyes by a little more than 1/2 length of an eye; frons longer in middle line than broad (1.9 : 1). Tegmina longer than broad at base (♂ 7 : 1, ♀ 6.4 : 1), anterior margin almost straight, posterior margin shallowly sinuately tapering distad, apex bluntly rounded, Sc + R + M reaching to apex, Cu terminating at about 3/5 of length of tegmen from base, claval vein reaching margin at about 2/5 from base; sparse transverse veinlets present in cells adjoining margins.

Green; tegmina with about 6 spots in costal cell, a broad band, interrupted with round spots, across middle, and apical 1/4, dark fuscous; veins in basal 1/4, and posterior margin of clavus, orange brown.

♂. Anal segment about as long as broad, cylindrical, apical margin concave. Pygofer rather short, lateral margins shallowly sinuate, dorsolateral angles not produced. Aedeagus about as long as genital style, tubular, slightly upcurved distad, a relatively large tubular process arising on right ventrally near middle tapering caudad and a little decurved at tip, a small slender spinose process arising ventrally at middle, directed cephalad.

Genital styles  $2 \times$  as long as broad, with 2 processes on dorsal margin as figured. Length, 2.5 mm; tegmen, 3.0 mm.

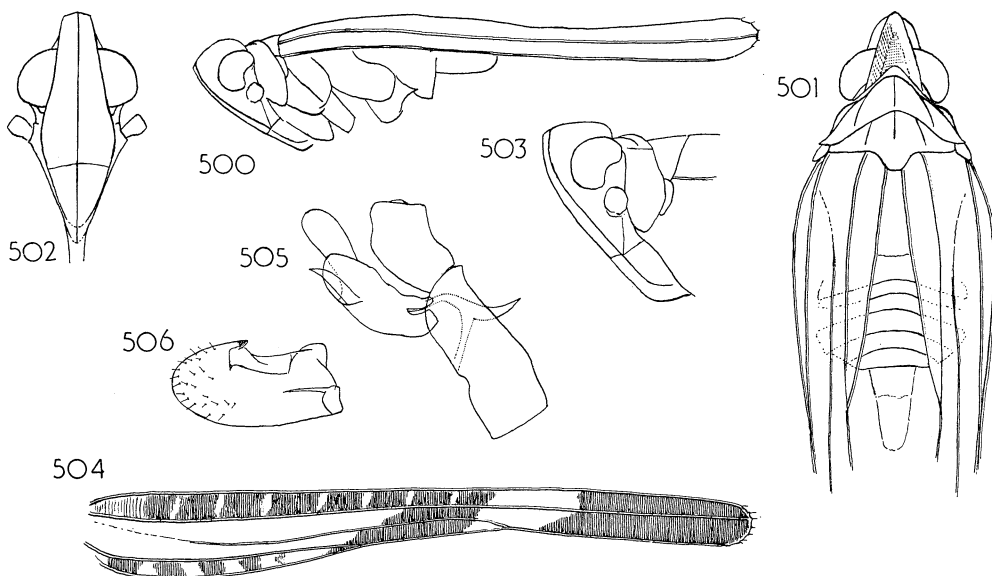


Fig. 500–506. *Teramnon stenopteryx*, n. sp.: 500, insect, except legs, lateral view; 501, dorsal view, distal part of tegmina omitted; 502, frons and clypeus; 503, head, pronotum and mesonotum, lateral view; 504, tegmen; 505, anal segment, pygofer and aedeagus, right side; 506, right genital style.

♀. Length, 3.0 mm; tegmen, 4.0 mm.

Holotype ♂ (BISHOP 7697), New Caledonia, Mt. Koghi, 500 m, I.1963, C.M. Yoshimoto. Paratypes: 20 ♂♂, 16 ♀♀ and 19 nymphs, same data; Yahoué, II.1963, Yoshimoto; Col de la Pirogue, II.1963, Krauss.

Family ISSIDAE Spinola

Genus **Lipocallia** Kirkaldy

*Lipocallia* Kirk., 1906: 440 (Haplotype: *L. australensis* Kirkaldy 1906: 441).

99. **Lipocallia spurinna** Fennah, new species Fig. 507–513.

Vertex much broader than long at sides (about 5.5 : 1), slightly declivous, anterior margin truncate, posterior margin shallowly concave; frons broader than long (1.2 : 1), widest just below eyes, broader at base than at apex (2 : 1), disc shallowly impressed in basal 1/3, transversely shallowly convex in distal 2/3, ecarinate or with median carina feebly indicated; clypeus in profile with anteclypeal portion prominent basally, rostrum surpassing post-trochanter; genae short, ocelli absent; pronotum with disc almost flat, ecarinate, anterior margin shallowly convex, posterior margin shallowly concave; mesonotum broader than long (2 : 1), disc flat, narrowly sulcate along middle, lateral discal carinae parallel; post-tibia with 2 spines laterally, 9 apically, basal metatarsal segment with 2 teeth apically, lower surface occupied by a setose pad. Tegmina subtrapezoidal, costal margin produced cephalad in a lobe below antennae, apical margin shallowly convex, commissural margin in profile straight, claval suture distinct, veins distinct but weak, a dense and rather even reticulum of secondary veinlets between longitudinal veins, extending up to apical margin. Wings absent.

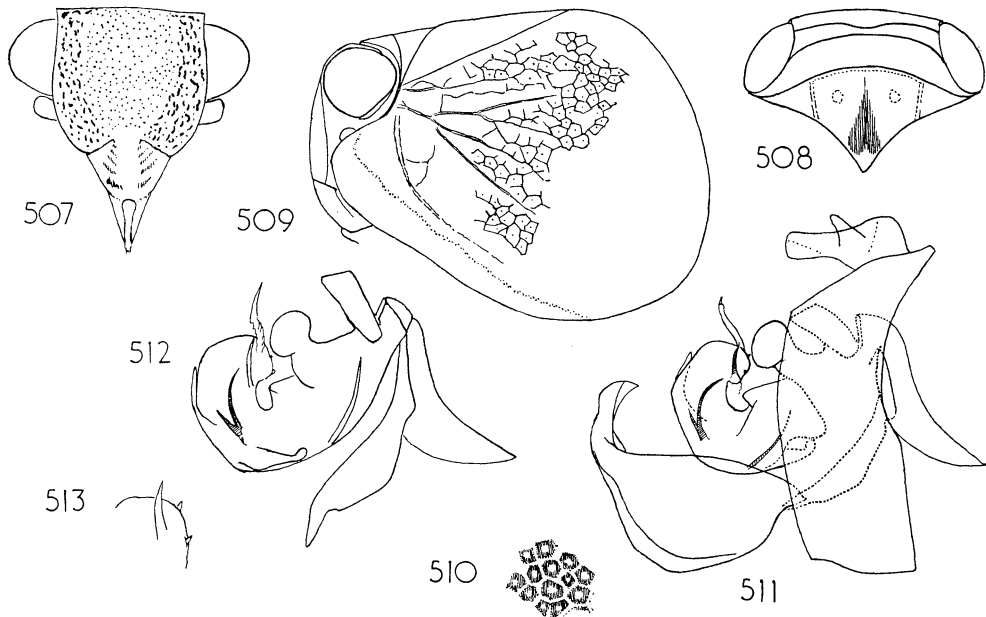


Fig. 507–513. *Lipocallia spurinna*, n. sp.: 507, frons and clypeus; 508, vertex, pronotum and mesonotum; 509, insect, lateral view (legs omitted); 510, portion of surface ornamentation of tegmen; 511, ♂ genitalia, right side; 512, aedeagus and strut to genital styles, right side; 513, processes on dorsal surface at apex of aedeagus.



Fuscous; frons closely speckled, and clypeus obliquely barred, with light yellowish brown; pronotum and mesonotum light orange-brown, speckled with lighter spots, a row of about 12 small spots along anterior margin of pronotum and a narrow wedge-shaped area along middle of mesonotum, dark reddish brown; fore and middle femora each with 2 stripes, post-femur apically, basal 2 segments of post-tarsus and genital styles distally, light yellowish brown. Tegmina fuscous, all veins and a spot in middle of each areole, yellowish brown, costal margin broadly from base to apical 1/3, white.

♂. Anal segment short, apical margin transverse. Pygofer rather short, dorsolateral angles obtuse, only very weakly produced caudad. Aedeagus rather short, U-shaped, broad and deep, a pair of lobes dorsally near base, each in profile rather mushroom-like, meeting its counterpart dorsally in middle line, 2 pairs of spinose processes arising dorsally near apex, one longer than the other, both directed dorsad; 2 pairs of processes arising ventrally near middle, one pair directed caudad, forked, with 1 short ramus directed caudad, the other curving dorsad, the 2nd pair lying below aedeagus, directed cephalad and dorsad. Genital styles broad, each almost scoop-like, in profile as figured.

Length 3.7 mm; tegmen, 3.1 mm.

♀. Length, 3.5 mm; tegmen, 3.8 mm.

Holotype ♂ (BISHOP 7698), New Caledonia, Ansé Vata, X.1958, C.R. Joyce. Paratypes: 33 ♂♂, 28 ♀♀ and 6 nymphs, Ansé Vata, X.1958, Joyce; Nouméa, VII.1940, ?*Wickstroemia*, nymphs swept off grass and yellow *Ipomoea* flowers, Williams, V.1950, Krauss, II.1960, Gressitt, XI.1963, Straatman, hills behind Nouméa, VII.1940, from *Casuarina*, Williams; Tontouta River, XI.1958, Joyce; beach near La Foa, XI.1958, Joyce.

This species differs from *L. australensis* Kirkaldy in the relatively wider vertex (4.6 : 1 in *L. australensis*), in its truncate anterior margin (slightly angulately convex in *australensis*), the partly depressed disc of the frons (markedly convex longitudinally and transversely in *australensis*), and the finely reticulate tegmina (coarsely reticulate in *australensis*).

#### Genus *Cotylana* Fennah

*Cotylana* Fen., 1954: 460 (Orthotype: *Lollius acutipennis* Kirkaldy 1906: 439).

#### KEY TO SPECIES OF COTYLANA IN NEW CALEDONIA

1. Tegmina with anal angle strongly produced, acute..... **gorgon**  
Tegmina with anal angle not produced.....2
2. Intermediate carinae of frons at their point of greatest separation distinctly nearer to lateral margins than to median carina.....3  
Intermediate carinae of frons at their point of greatest separation not nearer to lateral margins than to median carina..... **caledonica**
3. Frons longer in middle line than broad.....4  
Frons not longer in middle line than broad..... **drymo**
4. Vertex longer in middle line than broad at narrowest point between eyes..... **viridis**  
Vertex shorter in middle line than broad at narrowest part..... **gyas**

100. *Cotylana viridis* (Montrouzier), n. comb. Fig. 514-519.

*Issus viridis* Mont., 1861: 73.

*Tylana interpunctata* Melichar, 1906: 201. **New Synonymy.**

Vertex longer in middle line than broad at narrowest part between eyes (about 1.4 : 1), anterior margin angulately concave, further incised at middle, lateral margins shallowly concave, distinctly elevated, posterior margin concave, disc medially carinate in anterior 1/2, ecarinate posteriorly; frons longer in middle line than broad at widest part (1.5 : 1), median carina terminating distally in a narrow sulcus. Pronotum with lateral lobes not traversed obliquely by a distinct carina, inner margin not callused at level of antennae; post-tibia with 2 spines laterally, 8 apically, basal metatarsal segment usually with 9 teeth apically.

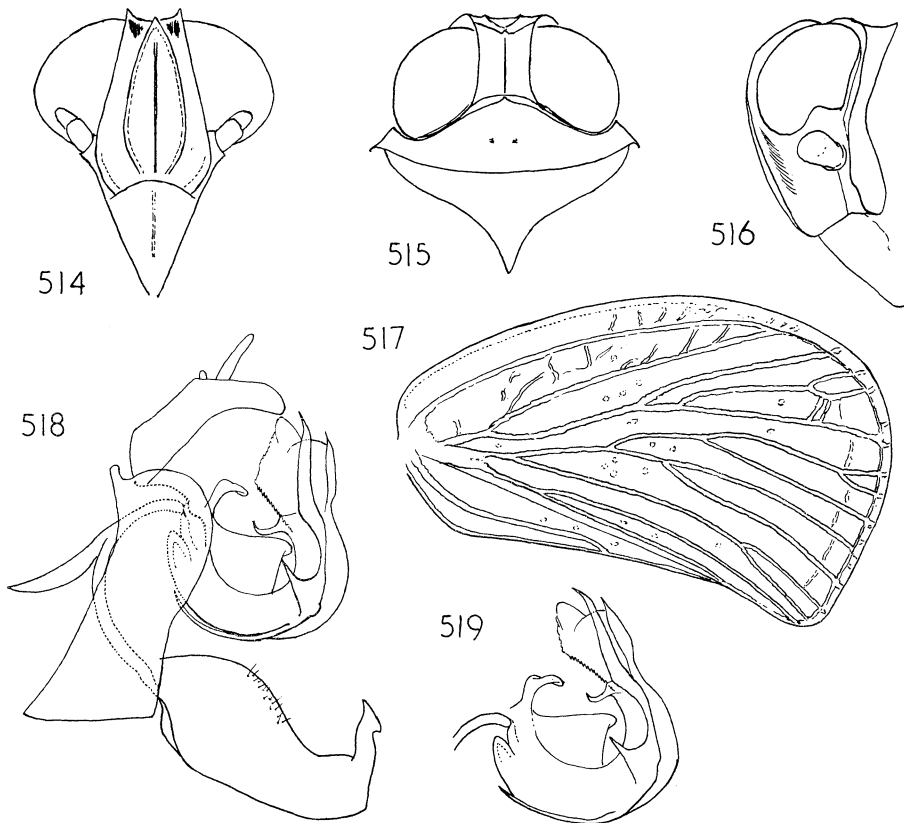


Fig. 514–519. *Cotylana viridis* (Montrouzier): 514, frons and clypeus; 515, vertex, pronotum and mesonotum; 516, head and pronotum, lateral view; 517, tegmen; 518, ♂ genitalia; 519, aedeagus, left side.

Light yellowish brown; frons laterobasally fuscous. Tegmina subopaque, yellowish brown, tinged with green; intervenal areas at anal angle, black; apical areoles fuscous; longitudinal veins green, sometimes sprinkled with red, clavus basally slightly tinged with pink. Wings hyaline with light brown veins.

♂. Genitalia as figured. Anal segment moderately long, in profile deflexed distad of middle. Pygofer with dorsolateral angles broadly rounded, not produced. Aedeagus approximately U-shaped, a pair of narrow lobes dorsally at base directed dorsocaudad, strongly bent downward at middle, a 3 pronged process on each side just distad of middle, dorsal margin of aedeagus with 2 pairs of processes, the more basal pair directed cephalad and rather sickle-shaped, the distal pair broad, convex on anterior and posterior margins and terminating in a short sinuate spine, membranous lobe in middle line of aedeagus in distal 1/3 minutely serrate along its basal edge; ventral margin of aedeagus distally produced in a pair of narrow lobes, each acuminate at apex. Length, 4.5 mm; tegmen, 5.0 mm.

♀. Length, 4.5 mm; tegmen, 5.3 mm.

NEW CALEDONIA: 4 ♂♂, 9 ♀♀, Ansé Vata, III.1961, on *Acacia*, J. Sedlacek; Thio, III.1959, Krauss; Forêt de Thy, 100–300 m, III.1961, Sedlacek; Col d'Amieu, 750 m, III.1960, Nouméa, 5–50 m, II.1960, Gressitt; La Crouen, III.1961, Sedlacek; 6 km N of Païta, I.1963, Krauss. LOYALTY IS.: 1 ♀, Lifu I., Wé, II.1963, Yoshimoto.

Members of this species vary in color from an almost uniform green to a dark brown variegated with yellowish brown.

101. *Cotylana gyas* Fennah, new species Fig. 520-524.

♂. Vertex between anterior angles broader than long in middle (1.5 : 1), anterior margin angulately concave, lateral margins elevated, straight or shallowly concave, posterior margin obtusely angulately concave, disc slightly depressed; frons in profile rather oblique, in anterior view longer than broad (nearly 1.5 : 1), broadest below level of antennae, tricarinate, with sublateral carinae as prominent as lateral margins, disc slightly transversely concave between carinae; clypeus ecarinate. Post-tibia with 2 spines laterally, 6 or 8 apically, basal metatarsal segment with 2 spines and 8 small teeth in a row between them.

Ochraceous, sprinkled with dilute fuscous; femora and tibiae of fore and middle legs each with 2 obscure transverse bands, post-femur suffused with dilute fuscous. Tegmina subtranslucent, pale ochraceous with even paler mottling, longitudinal veins narrowly and irregularly bordered with fuscous, a row of widely-spaced small fuscous spots along costal margin and anterior 1/2 of apical margin, veins in places minutely sprinkled with red. Wings sordid white, a little infuscate distally, veins concolorous.

♂. Anal segment short, apical margin transverse, lateral margins in side view strongly sinuate. Pygofer rather short, dorsolateral angles acute, distinctly produced caudad. Aedeagus U-shaped, a pair of short narrow lobes, directed caudad, dorsally near base, a pair of membranous lobes arising dorsally at apex, each lobe broadly produced cephalad into a small sclerotised tooth, then extending dorsad and terminating in a short membranous spine; distad of these membranous lobes, a pair of slender sclerotised spinose processes directed dorsad, and extending basally in a flange that is produced dorsad at middle in a spinose process, and produced also at base in a similar process; ventral margin of aedeagus produced distally in a pair of delicate membranous lobes, tapering distad and deeply inflected cephalad on inner margin, acuminate at apex.

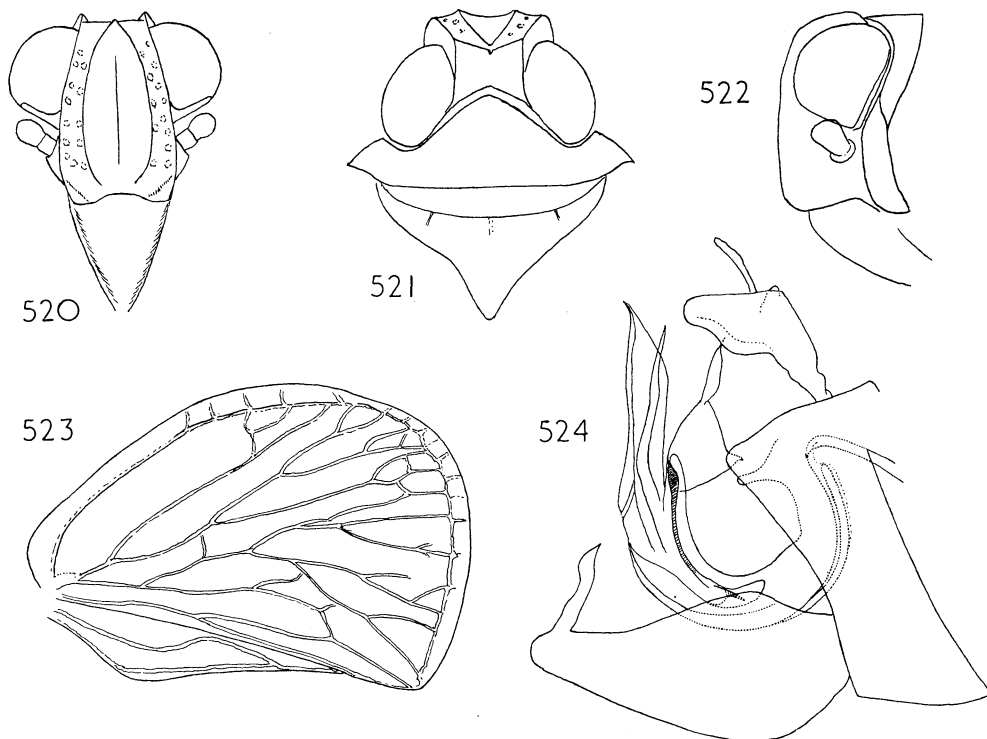


Fig. 520-524. *Cotylana gyas*, n. sp.: 520, frons and clypeus; 521, vertex, pronotum and mesonotum; 522, head and pronotum, lateral view; 523, tegmen; 524, ♂ genitalia.

Genital styles as figured, in profile strongly narrowing distad. Length, 5.2; tegmen, 5.8 mm.

♀. Length 5.0 mm; tegmen, 6.0 mm.

Holotype ♂ (BISHOP 7699), New Caledonia, Mt. Koghi, II.1963, N.L.H. Krauss. Paratype: 1 ♀, Mt. Koghi, XII.1963, Straatman.

This species is close to *Cotylana conspurcata* Melichar n. comb. (*Tylana conspurcata* Melichar 1906: 203) but differs in having a relatively broader vertex than in *conspurcata* (where it is broader between the anterior angles than long in middle (1.2 : 1) and in ♀, in the apical margin of the anal segment being deeply rounded, not subacute, as in *conspurcata*).

102. ***Cotylana caledonica*** (Melichar), n. comb. Fig. 525–530.

*Tylana caledonica* Mel., 1906: 201.

Vertex broader at narrowest point between eyes than long in middle line (1.25 : 1), anterior margin rectangulately excavate, lateral margins shallowly concave, converging distad, strongly elevated, posterior margin broadly concave, disc ecarinate; frons longer in middle line than broad at widest part (1.5 : 1), median carina reaching to frontoclypeal suture. Pronotum with lateral lobes traversed obliquely by a distinct carina, which does not attain lateral margin; inner margin with a callus at level of antennae; post-tibia with 2 spines laterally, 8 or 9 apically, basal metatarsal segment with 10 teeth apically. Light yellowish brown, intercarinal areas of frons (except distally), and of pronotum and mesonotum, except for a few pustules, more or less infuscate, fore and middle legs with 2 transverse bands on femur, 3 incomplete such bands on tibiae, and tarsi, fuscous or piceous, postcoxa, post-femur and basal 1/2 of post-tibia, reddish brown or fuscous. Tegmina subopaque, green, some transverse veinlets creamy-white, a diffuse band of small spots from base overlying Cul to apical 1/3, then curving to apical angle, and 3 or 4 spots on apical margin, dark fuscous or piceous, longitudinal veins

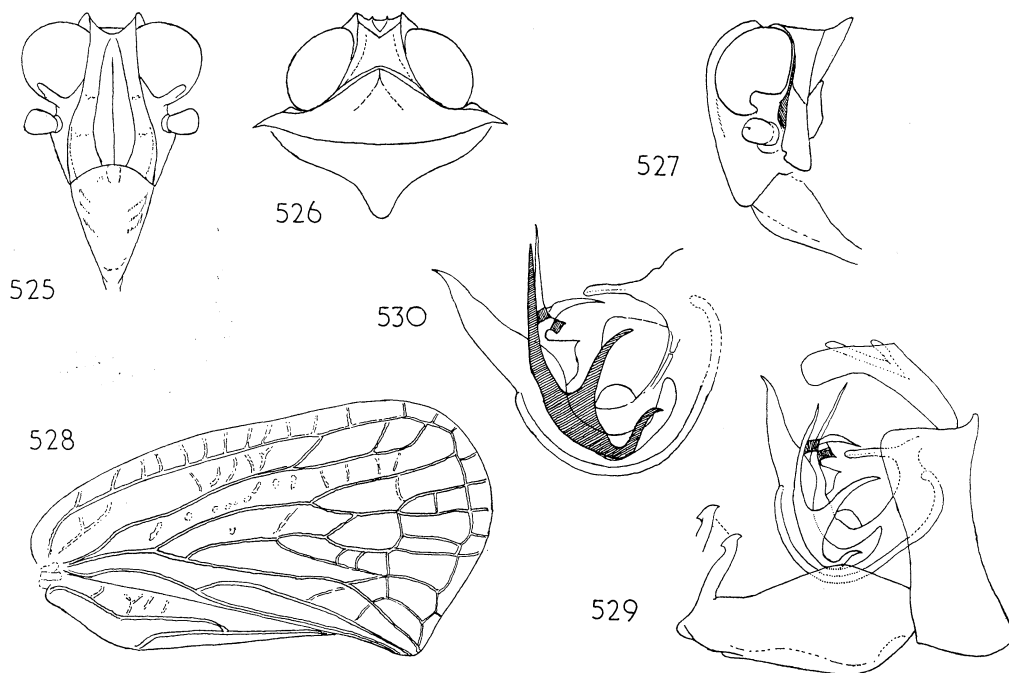


Fig. 525–530. *Cotylana caledonica* (Melichar): 525, frons and clypeus; 526, vertex, pronotum and mesonotum; 527, head and pronotum, lateral view; 528, tegmen; 529, ♂ genitalia, and apex of genital style from a slightly more dorsal viewpoint; 530, aedeagus, right side.

minutely sprinkled with red. Wings hyaline with reddish brown veins.

♂. Genitalia as figured. Anal segment moderately long, in profile deflexed distad of middle. Pygofer with dorsolateral angles slightly produced. Aedeagus approximately U-shaped, a pair of narrow lobes dorsally at base, directed caudad, a 3-pronged process on each side just distad of middle, dorsal margin of aedeagus with 3 pairs of processes, the most basal of these processes very small, merely a small tooth, the 2nd spinose, moderately long, directed dorsad, the 3rd arising close to middle line of aedeagus, spinose moderately long, directed laterocephalad; ventral margin of aedeagus distally produced in a pair of elongate triangular lobes, acute at tip. Length, 5.8 mm; tegmen, 6.6 mm.

♀. 7th (pregenital) sternite transverse, slightly thickened, not projecting beyond 6th sternite. Length, 7.0 mm; tegmen, 8.0 mm.

NEW CALEDONIA: 3 ♂♂, 3 ♀♀, Mt. Koghi, II.1963, N.L.H. Krauss; Mt. Koghi, 900 m, II. 1963, Krauss; XII.1963, Straatman; 10 km S of Koh, I.1963, 6 km N of Paita, I.1963, Yoshimoto; Yahoué, I.1963, Krauss.

This species is distinguishable by the trapezoidal vertex, its strongly elevated margins, the presence of a distinct callus at the inner angle of the lateral pronotal lobes, the shape of the aedeagus and, in the ♀, in the transverse posterior margin of the pregenital sternite.

103. *Cotylana gorgon* Fennah, new species. Fig. 531–536.

Vertex longer in middle line than broad between apical angles (1.6 : 1), anterior margin shallowly excavate, lateral margins shallowly concave, subparallel, strongly elevated, posterior margin angulately excavate, a little elevated, disc ecarinate basally, medially carinate in apical 2/3; frons longer in middle line than broad at widest part (2 : 1), median carina absent in basal 1/3, distally reaching frontoclypeal suture, lateral margins distally thickened, and rather strongly elevated. Pronotum with a feeble callus on lateral lobes immediately behind antennae, ventral margin of lobe subrectangulately incised, no oblique carina traversing

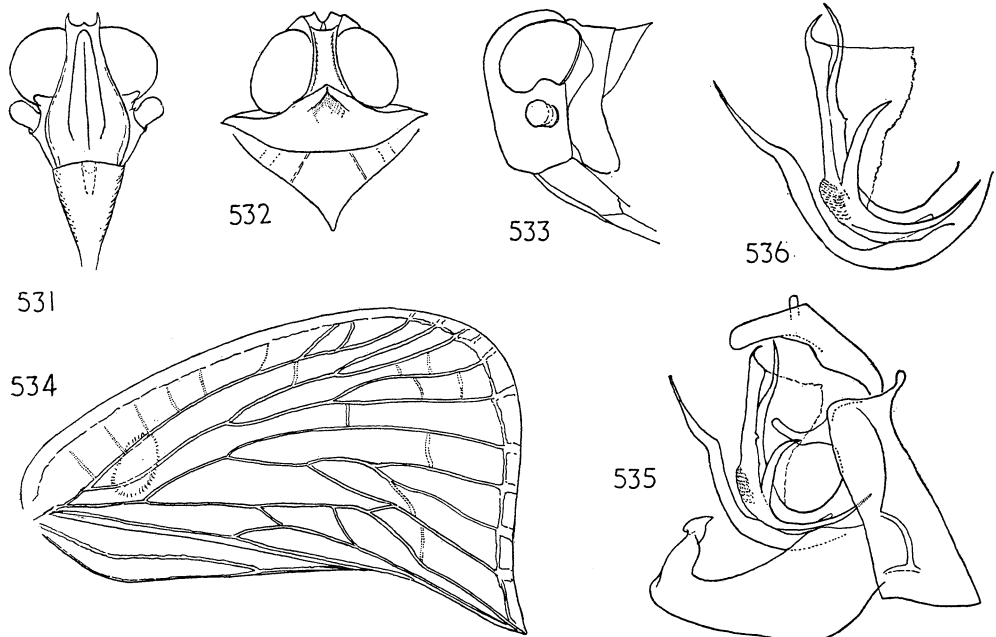


Fig. 531–536. *Cotylana gorgon*, n. sp.: 531, frons and clypeus; 532, vertex, pronotum and mesonotum; 533, head and pronotum, lateral view; 534, ♀ tegmen; 535, ♂ genitalia; 536, aedeagus, right side.

lobe, about 6 pustules near hind margin. Post-tibia with 2 spines laterally, 9 apically, basal metatarsal segment with 2 teeth laterally and 7 small teeth between them. Tegmina longer than broad (about 1.8 : 1), anal angle acutely produced, with a minute spine at tip; apex of clavus not nearly approaching apex of tegmen.

Pale greenish yellow; intercarinal areas of frons except for some round spots, clypeus except medially at base, posterior 1/2 of pronotum, mesonotum except on carinae, postcoxa, all trochanters, fore and middle femora in basal 1/2, fore and middle tibiae distally, protarsus, and abdomen, dark fuscous. Tegmina yellowish or brownish green, an irregular spot at humeral eminence, 2 or 3 irregular spots intervenally near middle of corium and in anal angle, fuscous. Wings dilute fuscous, with light brown veins.

♂. Genitalia as figured. Anal segment moderately long, in profile with ventral margin a little produced ventrad just basad of middle, thence concave. Pygofer with dorsolateral angles slightly produced dorsad and caudad, rounded. Aedeagus U-shaped, a pair of narrow, moderately long, finger-like processes dorsally at base directed caudad and slightly upcurved, a curved spinose process on each side of aedeagus arising laterally at middle, directed dorsad and cephalad; a spinose process on each side extending cephalad below aedeagus from middle; dorsal margin of aedeagus with a minute tooth near middle, and produced dorsad at apex in a pair of slender spinose processes; behind these a pair of membranous processes, each terminating in a narrow spine directed dorsocephalad, ventral margin of aedeagus distally produced in a pair of narrow spinose processes. Genital styles strongly narrowing distally, apical process with posterior margin sinuate. Length, 6.0 mm; tegmen, 6.0 mm.

♀. Pregenital sternite with posterior margin transverse or feebly convex, a little thickened, not surpassing margin of 6th segment. Length, 7.5 mm; tegmen, 7.8 mm.

Holotype ♂ (BISHOP 7700), New Caledonia, 10 km (6 mi.) N of Paita, I.1963, C.M. Yoshimoto. Paratypes: 1 ♂, 6 ♀♀, Col des Roussettes, 550 m, II.1963, Gressitt; Forêt de Thy, 100–300 m, III.1961, Sedlacek; La Crouen, III.1961, Sedlacek; Col de la Pirogue, II.1963, Yoshimoto.

This species is distinguishable by the combined characters of a narrow vertex and tegmina with an acute anal angle ending in a minute spine. It is probable that in life the ground color of the body and tegmina is green.

104. **Cotylana drymo** Fennah, new species      Fig. 537–540.

♀. Vertex broader between apical angles than long in middle line (1.6 : 1), anterior margin transverse, incised at middle, lateral margins almost parallel, rather strongly elevated, posterior margin angulately excavated, slightly elevated, disc slightly hollowed, medially ecarinate; frons longer in middle line than broad at widest part (1.1 : 1), median carina almost percurrent, attaining frontoclypeal suture, lateral margins distally slightly elevated. Pronotum with only a very weak callus on lateral lobes immediately behind antennae, ventral margin of lobe shallowly excavate on inner 1/2, no oblique carina traversing lobe, about 6 pustules near hind margin. Post-tibia with 2 spines laterally, 9 or 10 teeth apically, basal metatarsal segment with 2 outer spines and an arcuate row of 8–10 small teeth between them. Tegmina longer than broad (1.8 : 1). Anal angle subrectangulately rounded; apex of clavus not nearly approaching apex of tegmen.

Pale yellowish brown, in places suffused with green or red; intercarinal areas of frons, a suffusion on clypeus, femora of fore and middle legs at middle and at apex, and a general suffusion on post-femur, 3 transverse bands on fore and middle tibiae, pronotum except on lateral lobes, mesonotum, and 3rd to 5th ventrites in posterior 1/2, heavily mottled or speckled with fuscous; protarsus and mesotarsus with distal segment piceous. Tegmina light yellowish brown suffused with green, most of cells between M and claval suture suffused with fuscous; veins concolorous or green, more or less sprinkled with red. Wings dilute fuscous, veins concolorous.

Pregenital sternite with posterior margin produced caudad at middle in a convex lobe. Length, 8.5 mm; tegmen, 9.0 mm.

Holotype ♀ (BISHOP 7701), New Caledonia, Mt. Mou, 3.II.1963, G. Kuschel.

This species is distinguishable by the proportions of the frons, the shape of the tegmina, and that

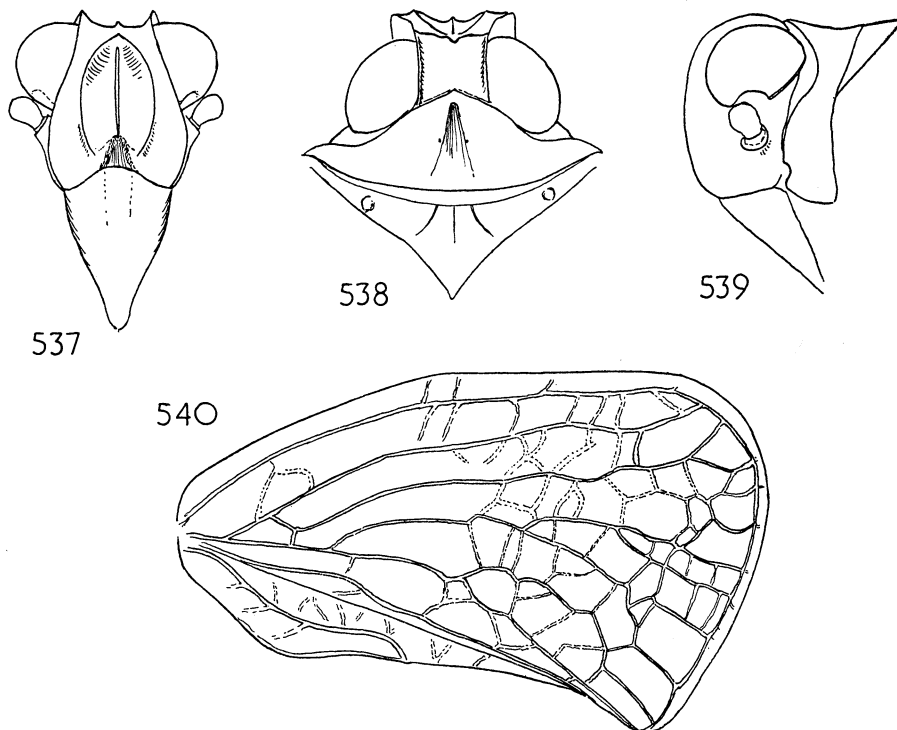


Fig. 537-540. *Cotylana drymo*, n. sp.: 537, frons and clypeus; 538, vertex, pronotum and mesonotum; 539, head and pronotum, lateral view; 540, tegmen.

of the hind margin of the pregenital sternite. It is probable that the ground color of the body and tegmina in life is green, not pale yellowish brown.

#### Genus *Scalabis* Stål

*Scalabis* Stål, 1870: 762. (Logotype: *Tylana* (*Scalabis*) *philippina* Stål *ibid.*).

#### 105. *Scalabis harpalyce* Fennah, new species Fig. 541-546.

Vertex between anterior angles broader than long in middle, (1.8-1.9 : 1), anterior margin transverse, lateral margins subparallel, posterior margin shallowly concave, disc transversely concave; frons broader than long in middle (1.1-1.3 : 1), transversely concave in basal 1/3, weakly transversely convex in distal 2/3, widest below level of antennae, in profile almost vertical, median carina absent, lateral carinae rather feeble, sinuately convex, about 8 pustules adjoining each lateral carina externally, disc moderately polished, minutely punctate; frontoclypeal suture shallowly convex; clypeus smooth, polished. Post-tibia with 2 spines laterally, 6 apically, basal metatarsal segment usually with 8 teeth apically.

Ochraceous, suffused with fuscous; vertex, except posterolaterally, frons basally and apically, and clypeus in basal 1/2 except for 3 rounded spots on basal margin, and mesonotum, except carinae, castaneous; median area of frons, lateral carina, and pustules that adjoin them, mesonotum, pronotum near hind margin, and abdomen, fuscous. Pronotum anteriorly near middle line, red. Tegmina in ♂ yellowish fuscous with super-numerary veinlets a little lighter, in ♀ reddish fuscous marbled with piceous, principal veins tinged with green, clavus tinged with pink at base and apex.

♂. Genitalia as figured. Anal segment rather short, in dorsal view with apical margin transverse, in

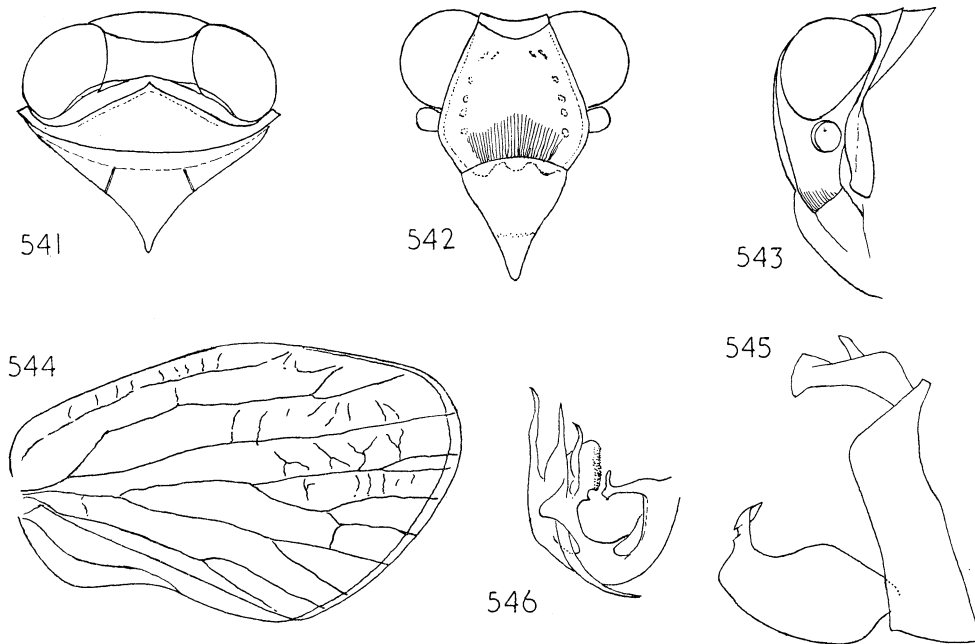


Fig. 541-546. *Scalabis harpalyce*, n. sp.; 541, vertex, pronotum and mesonotum; 542, frons and clypeus; 543, head and pronotum, lateral view; 544, tegmen; 545, anal segment, pygofer and genital style, right side; 546, aedeagus, right side.

profile with ventral margin shallowly concave, apical angles a little produced ventrad. Pygofer with dorso-lateral angles obtusely angulate, only a little produced. Aedeagus approximately U-shaped, a pair of narrow lobes dorsally at base, directed caudad then angulately reflected dorsad, a pair of subsensiform processes arising laterally at middle, directed ventrocephalad; a rounded triangular lobe, extending ventrad, just distad of middle, each of these lobes extending dorsally into a sinuate spinose process, directed dorsad; a pair of spinose processes caudad of these, directed caudad; dorsal surface of aedeagus distally minutely denticulate, with a transverse groove; ventral margin of aedeagus distally produced in a pair of narrow lobes, each acuminate and a little recurved at apex. Length, 3.8 mm; tegmen, 4.5 mm.

♀. Pregenital sternite of ♀ with posterior margin produced caudad at middle in a triangular lobe. Length, 4.8 mm; tegmen, 5.0 mm.

Holotype ♂ (BISHOP 7702), New Caledonia, Mt. Koghi, 1000 m, XII.1963, J.L. Gressitt. Paratypes: 1 ♂, 2 ♀♀, Mt Koghi, 500 m, I.1963, Yoshimoto, Kuschel; 6 km N of Païta, I.1963, Yoshimoto.

This species is distinguishable by the dark frons and clypeus, and by the rather high polish of these areas, notwithstanding the fact that the surface of the frons is minutely rugulose, and by details of male genitalic structure.

106. **Gastererion signoreti** Perroud and Montrouzier

No specimens of this species were examined.

Family FLATIDAE Spinola

Genus **Cromnella** Fennah, new genus

Vertex triangularly produced, about as long as pronotum, slightly ascending distad, devoid of median and



lateral marginal carinae, very feebly transversely convex, frons longer than broad, strongly transversely convex, medially carinate at least in basal  $2/3$ , lateral margins in profile obtusely angulate below level of antennae, ocelli distinct, antennae with 2nd segment cylindrical, about  $1.5 \times$  as long as broad, rostrum surpassing mesotrochanter; pronotum ecarinate, a slight transverse sulcus behind anterior margin, mesonotum tricarinate; post-tibia with 1 spine laterally, 7 at apex, basal metatarsal segment with 8 or 9 teeth apically. Tegmina very approximately  $2 \times$  as long as broad, anterior margin weakly convex in basal  $1/3$ , then straight to apex, apical angle acute, apical margin straight, more or less oblique, anal angle usually obtusely angulate, sometimes slightly acute, precostal area as wide as costal cell at level of middle of latter, Sc and R united in a common stem basally, M forked rather near base, Cu1 simple or forking about middle, claval veins not uniting until near apex of clavus, no distinct line of transverse veinlets, about 6 irregular ranks of such veinlets in distal  $1/3$  of tegmen, apical cells rather short and narrow, subequal in length.

Anal segment of ♂ moderately long and narrow, its apical margin transverse. Pygofer with dorsolateral angles not produced caudad. Genital styles rather broad.

Anal segment of ♀ longer than broad, parallel-sided, subtruncate at apex. Ovipositor with 3rd valvulae in side view with apical margin distinctly convex, each armed with 7–10 large teeth more or less alternating with smaller teeth. Posterior margin of pregenital sternite excavate.

Type species: *Cromnella doto* n. sp.

This genus is distinguished by the characters, in combination, of a conically produced vertex, about as long as the pronotum, ecarinate and slightly transversely convex, a transversely convex frons with a strong median carina, at least in basal  $1/2$ , triangular tegmina with the apical and anal angles sharply defined, and apical margin oblique, post-tibia with 1 spine laterally and 7 apically, a basal metatarsal segment with 8 or 9 apical teeth, and an ovipositor with the 3rd valvulae armed with sparse stout teeth. In Melichar's key (1923) the genus runs to *Salurnis* but differs in the form of the head, the spinose ornamentation of the hind legs, and in the shape of the ovipositor. The form of the head resembles that of *Colgar*, but the two genera differ entirely in the form of the ♀ genitalia. I have considered the possibility that this generic concept may be the same as *Gastererion* Montrouzier, which was founded on a late nymphal instar. Three late instars of species of *Cromnella* were examined, but did not agree with the description of *Gastererion signoreti* Mont., the monotype of the genus.

107. ***Cromnella doto*** Fennah, new species Fig. 547–553.

Vertex broader between eyes than long in middle line (about  $1.3 : 1$ ). Frons with median carina reaching almost to apex. Tegmina longer than broad ( $2.4 : 1$ ), costal and commissural margins parallel, apical angle acute, anal angle obtuse, apical margin strongly oblique.

Pale green; clypeus, rostrum, and legs pale orange yellow, eyes reddish brown, apex of head tinged with orange-yellow. Tegmina pale green, distinctly paler and powdered white between veins, precostal area colorless, powdered white, a narrow band at margin from apex of costa to apex of clavus, orange, this band sometimes extending narrowly basad along anterior margin. Wings powdered white, veins concolorous.

♂. Anal segment rather elongate, narrow, weakly decurved distad, anal foramen situated in basal  $1/3$ . Pygofer moderately long, dorsolateral angles not produced, obtusely rounding, lateral margins convex, vertical. Aedeagus stout, rather deep in lateral view, with dorsal margin shallowly concave, ventral margin and apical margins convex, a pair of short peg-like lobes dorsally at apex, each with a slender sinuate pigmented spinose process,  $1/2$  as long as aedeagus, attached to its anterior margin, these sinuate processes directed cephalad and crossing each other at middle of aedeagus; a transparent shallowly triangular lobe at middle of dorsal margin. Genital styles in side view longer than deep dorsoventrally ( $1.7 : 1$ ), dorsal margin horizontal, feebly excavate before apex, apical process stout, spinose, directed dorsad; ventral margin of style weakly convex, apical margin very feebly sinuate.

Length: 5.1 mm; tegmen, 7.1 mm.

♀. Anal segment longer than broad ( $1.6 : 1$ ), apical margin excavate. Length: 5.0 mm; tegmen, 7.0 mm.

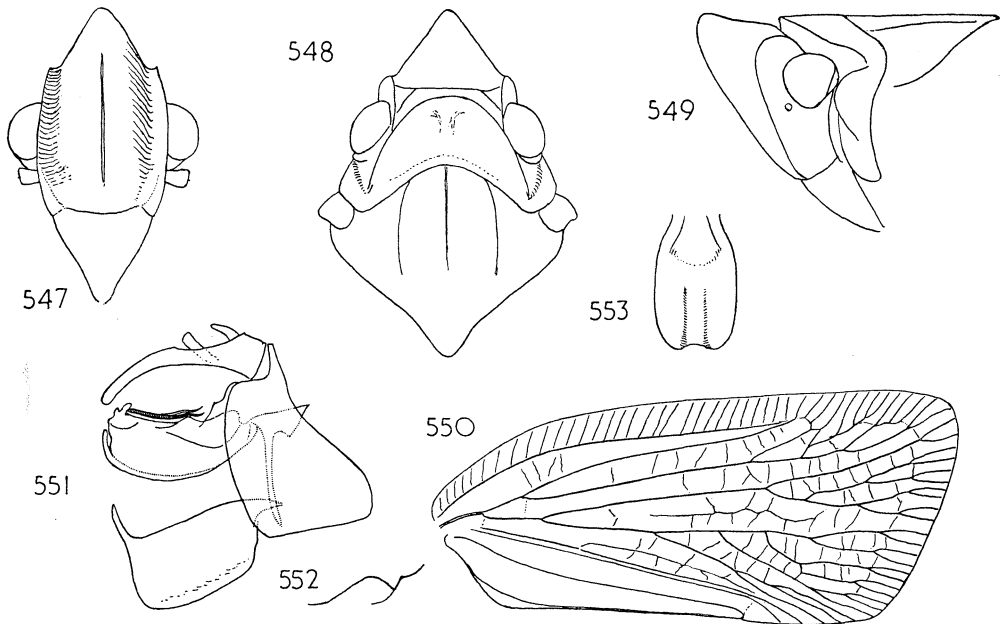


Fig. 547–553. *Cromnella doto*, n. sp.: 547, frons and clypeus; 548, vertex, pronotum and mesonotum; 549, head, pronotum and mesonotum, lateral view; 550, tegmen; 551, ♂ genitalia; 552, lobes on dorsal surface at middle of aedeagus, lateral view; 553, ♂ anal segment.

Holotype ♂ (BISHOP 7703), New Caledonia, Col de Mouirance, II.1963, N.L.H. Krauss. Paratypes: 10 ♂, 4 ♀, New Caledonia, Forêt de Thy, 550 m, III.1960, Gressitt; Thio, III.1959, Krauss; Mt. Koghi, III.1959, Krauss; Plaine des Lacs, II.1914, Montague, III.1959, II.1963, Krauss; Mt. Mou, VIII.1940, probably ex *Casuarina* (? Williams), 1220 m., II.1963, Yoshimoto; 1 ♂, Mouirance Pass., I.1962, Krauss; Rivière Bleue (Yaté), 35 km SE of Nouméa, 160–180 m, Straatman; La Coulée, I.1962, Krauss; 6 km N of Paita, I.1963, Krauss.

This species is easily recognisable by the tegmina, which do not widen distally and have a strongly oblique apical margin.

108. ***Cromnella pales*** Fennah, new species      Fig. 554–558.

♂. Vertex broader between eyes than long in middle line (about 1.6 : 1). Frons with median carina extending almost to apex, prominent as far as distal 1/3. Tegmina longer than broad (about 1.8 : 1), widening distad, apical angle acute, anal angle rectangulate, apical margin oblique.

Pale green; clypeus, rostrum and legs stramineous, fore and middle legs with tibiae distally and tarsi, orange-red. Tegmina pale green or pale yellowish green, translucent and powdered white between veins, anterior margin, apical margin and commissural margin from anal angle to apex of clavus, narrowly orange-red. Wings powdered white, veins concolorous.

Anal segment rather long, narrow, moderately decurved distad, anal foramen situated in basal 1/2. Pygofer moderately long, dorsolateral angles not produced, obtusely rounding, lateral margins almost straight. Aedeagus stout, rather deep in lateral view, with dorsal margin shallowly concave, ventral margin convex, a pair of short peg-like processes dorsally at apex, each with a rather slender spinose process, about 1/2 as long as aedeagus, attached to its anterior margin, these processes slightly convex, tapering distad, more markedly

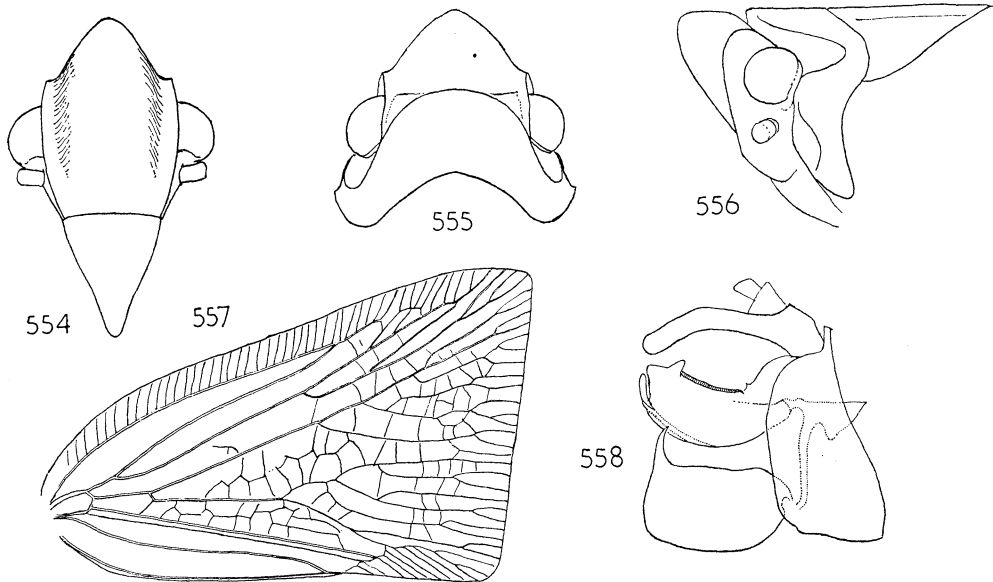


Fig. 554-558. *Cromnella pales*, n. sp.: 554, frons and clypeus; 555, vertex and pronotum; 556, head, pronotum and mesonotum, lateral view; 557, tegmen; 558, ♂ genitalia.

incurved at apex; a minute triangular lobe dorsally on each side at basal 1/3 of aedeagus. Genital styles in profile longer than deep dorsoventrally (2.3 : 1), dorsal margin shallowly sinuate, apical process moderately stout, spinose, directed dorsad, ventral margin of style convex, apical margin convex. Length, 7.0 mm; tegmen, 9.6 mm.

Holotype ♂ (BISHOP 7704), New Caledonia, Mt. Koghi, I. 1963, C.M. Yoshimoto.

This species is distinguished by the proportions of the head and by the distal widening of the tegmina in combination with an obtuse anal angle. From *C. doto* it may be distinguished also by the shape of the dorsal processes of the aedeagus.

109. ***Cromnella sancus*** Fennah, new species Fig. 559-562.

♀. Vertex broader between eyes than long in middle line (about 1.5 : 1). Frons with median carina extending as far as distal 1/3. Tegmina longer than broad (about 1.5 : 1), widening distad, apical and anal angles both slightly acute, apical margin straight.

Pale green; head slightly tinged with orange brown; clypeus, rostrum and legs stramineous, fore and middle legs with tibiae distally and tarsi, orange-red. Tegmina pale green, powdered white between veins, precostal area pale, almost white, in anterior 1/2, transverse veinlets orange-yellow in corium, green in membrane, anterior margin distally, apical margin, and commissural margin distad of claval apex, narrowly orange-red. Wings powdered white, veins concolorous.

Length, 7.0 mm; tegmen, 9.7 mm.

Holotype ♀ (BISHOP 7705), New Caledonia, Vallée d'Amoa, II.1963, N.L.H. Krauss. Paratype: 1 ♀, La Crouen, III.1961, J. Sedlacek.

This species is distinguished by the proportions of the head and the acute anal angle of the tegmina.

110. ***Cromnella farinosa*** (Montrouzier), n. comb. Fig. 563-566.

*Flata* (*Phyllyphanta*) *farinosa* Mont., 1861: 73

♀. Vertex broader between eyes than long in middle line (about 1.5 : 1), frons with median carina extending almost to apex. Tegmina longer than broad (about 1.6 : 1), widening distad, costal margin shal-

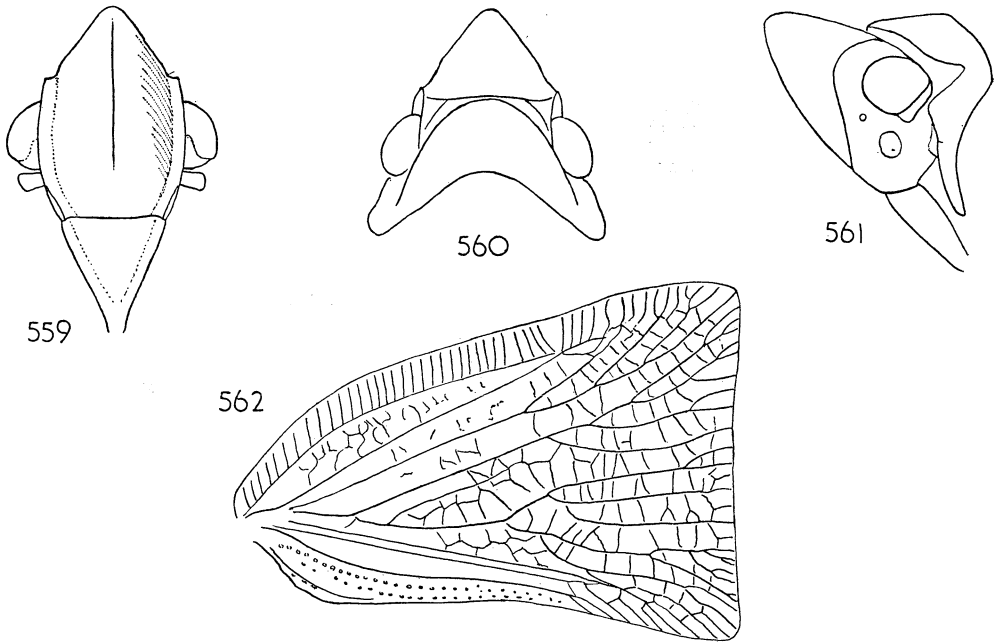


Fig. 559–562. *Cromnella sancus*, n. sp.: 559, frons and clypeus; 560, vertex and pronotum; 561, head and pronotum, lateral view; 562, tegmen.

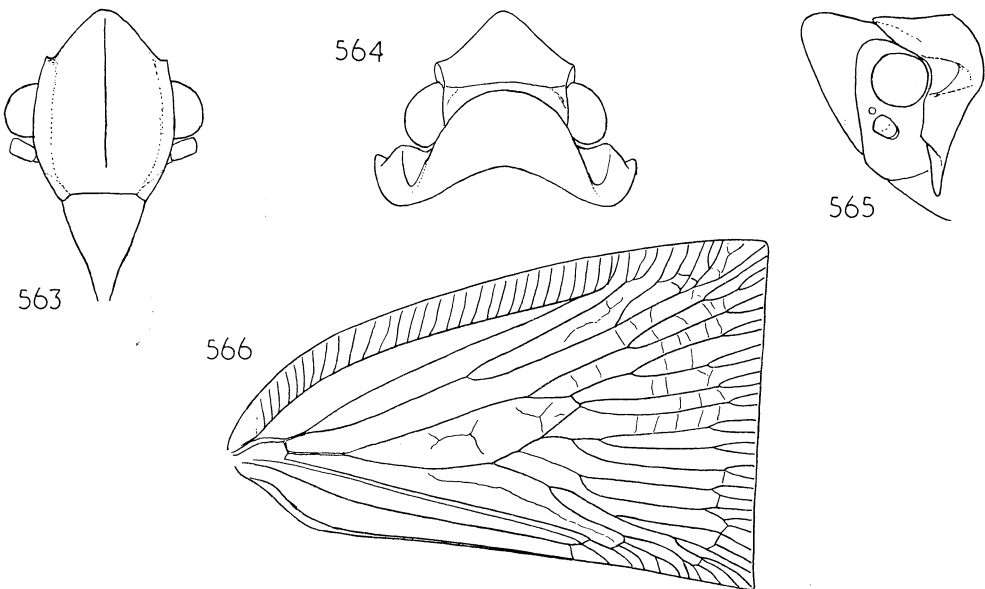


Fig. 563–566. *Cromnella farinosa* (Montrouzier): 563, frons and clypeus; 564, vertex and pronotum; 565, head and pronotum, lateral view; 566, tegmen.

lowly convex throughout, apical angle slightly acute, apical margin straight, anal angle slightly acute; vein R forking near middle of tegmen.

Pale stramineous, powdered white; fore and middle legs with tarsi light reddish brown. Tegmina subhyaline, powdered white, anterior and apical margins narrowly, and commissural margin between claval apex and anal angle rather broadly, pale ochraceous, veins with a faint orange brown tinge. Wings subhyaline, powdered white, veins concolorous.

Length, 6.0 mm; tegmen, 7.8 mm.

1 ♀, Isle of Pines, III.1959, N.L.H. Krauss.

111. **Cromnella limbata** (Perroud & Montrouzier), n. comb. Fig. 567-572.

*Phyllyphanta limbata* P. & M., 1864: 243.

Vertex broader between eyes than long in middle line (about 2 : 1). Frons with median carina extending almost to apex. Tegmina longer than broad (about 1.5 : 1), widening distad, costal margin shallowly convex throughout, apical angle rectangularly rounded, apical margin straight, anal angle slightly acute.

Pale green; apex of head and median carina, orange red; fore and middle legs with tibiae and tarsi reddish brown. Tegmina pale green, lightly powdered with white, a complete marginal band, 1/2 as broad as precostal area, from base of anterior margin to apex of clavus, posterior claval vein and commissural margin of clavus narrowly, orange or orange-red. Wings subhyaline, powdered white, veins concolorous.

♂. Anal segment rather long, narrow, moderately decurved distad, anal foramen situated in basal 1/2. Pygofer moderately long, dorsolateral angles not produced, obtusely rounding, lateral margins convex. Aedeagus stout, rather deep in lateral view, with dorsal margin shallowly concave, ventral margin convex, a pair of short peg-like processes dorsally at apex, each with a stout, almost sickle-like, spinose process, about 1/2 as long as aedeagus, attached to its anterior margin, these processes directed cephalad and strongly curved mesad distally; 2 small transparent lobes dorsally on each side near middle of aedeagus. Genital styles in side view longer than deep dorsoventrally (2 : 1), dorsal margin shallowly sinuate, apical process stout, spinose, directed dorsad, ventral margin of style weakly convex, almost straight, apical margin feebly sinuate. Length,

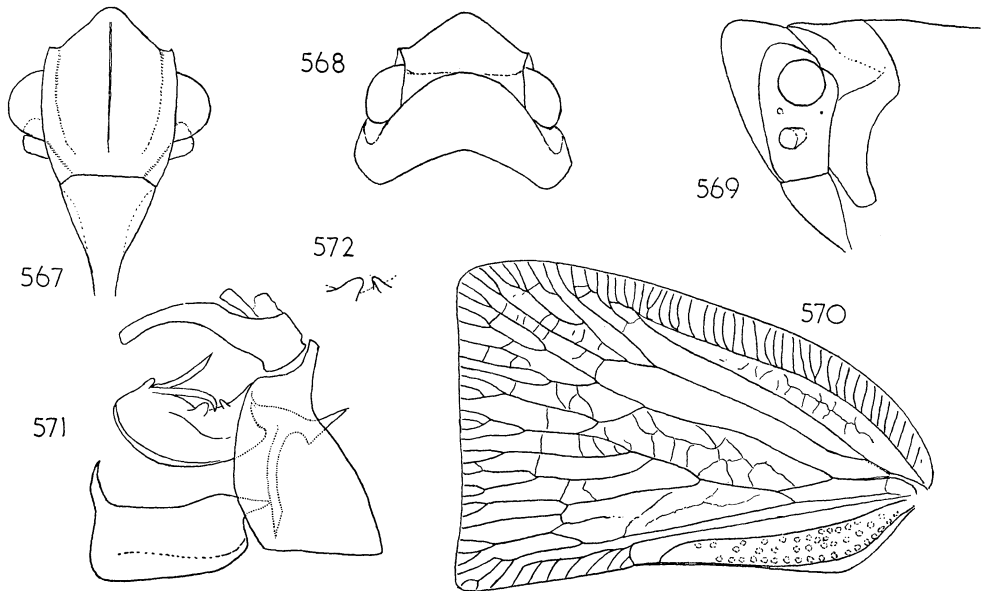


Fig. 567-572. *Cromnella limbata* (Montrouzier): 567, frons and clypeus; 568, vertex and pronotum; 569, head and pronotum, lateral view; 570 tegmen; 571, ♂ genitalia; 572, lobes on dorsal surface of middle portion of aedeagus.

5.6 mm; tegmen, 7.8 mm.

♀. Length, 6.0 mm; tegmen, 7.5 mm.

NEW CALEDONIA: 1 ♂, Sarraméa, II.1963, Krauss; 6 km N of Paita, I.1963, Yoshimoto.

### Family RICANIIDAE Amyot and Serville

#### Genus *Piromis* Fennah, new genus

Frons broader than long in middle (about 1.5 : 1), widest just below level of ocelli, tricarinate in basal 2/3, a transverse carina present distally, frontoclypeal suture impressed, shallowly convex, clypeus ecarinate, rostrum not surpassing mesotrochanter, truncate at apex, mesonotum with lateral carinae weakly sinuately converging anteriorly and narrowly rounding to meet in middle line, anterolateral carinae almost straight, uniting with lateral carinae at middle; tegulae with process broad at base, narrow in distal 2/3, curved, basal process of tegmen narrow, deeply rounded apically, tegmina broadly triangular, costal margin moderately convex in basal 1/4, otherwise almost straight, apical margin very shallowly convex, not as long as claval suture, precostal area at middle broader than costal cell, with transverse veinlets dense, Sc and R united as far as basal 1/4 of costal cell, R then separating, uniting with anterior sector of M, then weakly converging towards Sc, not quite parallel to it, as far as node, M leaving basal cell as a single stem but forking in less than length of basal cell, Cul simple basally, forking about level with Sc + R fork, basal cell longer than broad (about 1.9 : 1), most basal point of transverse fold separated from basal cell by length of latter; 2 rows of transverse veinlets in distal 1/2 of tegmen, the distal row even, the more basal row stepwise and rather irregular, claval veins uniting near middle of clavus, common claval vein entering commissural margin; wings with anterior margin strongly sinuate, transverse veinlets including only R-M and M-Cu. Post-tibia with 2 spines laterally, usually 6 apically, basal metatarsal segment longer than broad at apex (about 1.7 : 1), with 2 outer teeth and about 6 smaller teeth between them. Anal segment of ♀ relatively long, with lateral margins explanate. Ovipositor with 3rd valvulae short, rather tumid, in profile with apical margin almost straight, in posterior view with inner margins each furnished with 2-3 rows of pale, rather narrow teeth; the margin overlain with rather sparse long incurved setae. Pregenital sternite with posterior margin concave at middle. Anal segment of ♂ about as large as united genital styles. Genital styles in side view 2.1 × as long as broad at middle, in ventral view with inner margins contiguous in basal 1/2, then gradually diverging to near apex where they curve mesad.

Type species: *Ricania translucida* Montrouzier.

In Melichar's key to the genera of Ricaniidae (Melichar 1923: 120) the type species runs to *Euricania* Melichar. It differs from *Euricania* in the presence of a transverse carina distally on the frons, in the relatively broader precostal area in the tegmina, the parallelism of Sc and R and the greater subdivision of the principal veins, and in the more strongly elevated lobe on the anterior margin of the wings.

112. *Piromis translucida* (Montrouzier), n. comb. Fig. 573.

*Ricania translucida* Mont., 1861: 73.

*Euricania translucida*: Melichar, 1898: 393.

Frons broader than long (1.5 : 1), lateral carinae parallel to lateral margins, lateral carinae and median carinae sometimes not attaining transverse carina. Vertex 4 × as broad as long at lateral margins, anterior margin shallowly convex. Pronotum with median carina distinct. Tegmina with 28-30 areoles at apical margin.

♂. Anal segment with apical margin short, truncate; in side view with lower margin concave. Pygofer moderately long, in profile with posterior margin oblique, weakly sinuate. Aedeagus with about 12 short spines ventrally in distal 1/2, 2 pairs of processes dorsally at apex, the inner pair spinose, rather slender and moderately sinuate, the outer pair narrowly tubular and weakly sinuate in basal 3/7, membranous in the succeeding 3/7, and sclerotised and acuminate apically. Genital styles as figured. Length, 5.6 mm; tegmen, 8.0 mm.

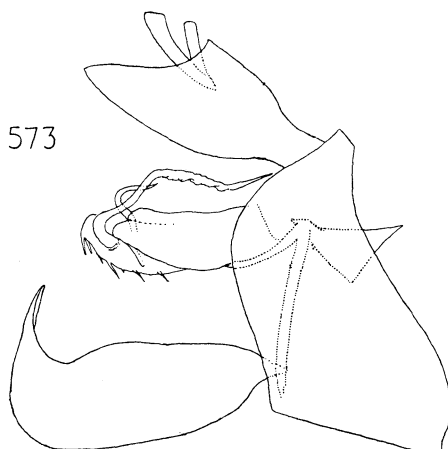


Fig. 573. *Piromis translucida* (Montrouzier): ♂ genitalia.

♀. Ovipositor with apical margin of 3rd valvulae pallid stramineous. Pregenital sternite tricarinate, with posterior margin concave, not thickened. Length, 6.0 mm; tegmen, 8.7 mm.

LOYALTY Is.: 21 ♂♂, 26 ♀♀, Lifu, Wé, II.1963, C. M. Yoshimoto; Maré, La Roche, III.1959, Krauss. Ouvea, Fayoue, II.1963, Krauss.

NEW CALEDONIA: 24 ♂♂, 28 ♀♀, Thio, III.1959, Krauss; Tao, II.1963, Kellen; Hienghene, 23.XI.1958, Joyce; at beach near Ponerihouen, XI.1958, Joyce; Nouméa, II.1963, Yoshimoto.

There appear to be small but fairly constant differences in distribution of tegminal pigmentation and powdering between local populations. The dark brown form which Melichar recognised as a variety and named *concolor* appears in both the Loyalty Is. and New Caledonian populations. A comparison of the bodily proportions and of the male genitalia of this form and of the typical form revealed no differences to suggest that they represent distinct species.

#### Genus *Plestia* Stål

*Plestia* (subgen.) Stål, 1870: 768 (Orthotype: *Ricania marginata* Montrouzier, 1861: 73)

113. ***Plestia marginata*** (Montrouzier), n. comb.

*Ricania marginata* Montr., 1861: 73.

LOYALTY Is.: 1 ♂, Maré I, La Roche, III.1959, N. L. H. Krauss.

Melichar (1898a: 295) includes Fiji in the distribution of this species. The Fijian species that most closely resembles *P. marginata* is *P. circe* Fennah. Both are doubtless from the same ancestral stock, but they differ in the proportions of the frons, the maximum width being  $1.75 \times$  the median length in the former and  $1.9 \times$  in the latter, and in the shape of almost every cell in the tegmina, the contrast being particularly evident in the apical marginal cells and the apical angle of the tegmen, those of *P. marginata* being distinctly longer than broad, whereas those of *P. circe* are broader than long.

114. ***Plestia oceanica*** (Perroud & Montrouzier), n. comb.

*Ricania oceanica* P. & M., 1864: 244.

*Plestia inornata* Melichar, 1898: 295. **New Synonymy.**

NEW CALEDONIA: 3 ♂♂, 3 ♀♀, Hienghene, X.1940, beating trees and shrubs, F. X. Williams;

Nouméa, 5–50 m, II.1960, Gressitt; La Crouen, III.1961, Sedlacek; Mt. Koghi, I.1963, Yoshimoto & Krauss; Col de la Pirogue, II.1963, Yoshimoto.

This species was tentatively assigned by Melichar to *Sassula* or *Varcia*, though he did not give any reason for his action. A male and a female of the present series agree well with the original description, and the length of the female, from head to apex of folded tegmina, is 12 mm, as given for *oceanica*. There is no record of the occurrence of either *Sassula* or *Varcia* in New Caledonia.

#### Genus *Aliscella* Fennah, new genus

Frons broader than long in middle (about 1.5 : 1), tricarinate in basal 1/2, no transverse carina present; clypeus not carinate, its basal margin weakly convex; rostrum slightly surpassing mesotrochanters, transversely truncate at apex; mesonotum with lateral carinae narrowly rounding anteriorly, anterolateral carinae extending to middle, obscurely uniting with lateral carinae; tegulae with process moderately narrow. Tegmina rather elongate-triangular, apical margin markedly shorter than claval suture, costal and apical margins each shallowly convex, apical angle broadly rounded, precostal area scarcely wider than costal cell, with transverse veins rather dense, Sc and R united at base or for some distance from base in a common stem, M leaving basal cell as 2 branches, apical cells each only a little longer than broad, basal cell longer than broad (about 1.6 : 1), most basal point of transverse fold separated from basal cell by about  $2.2 \times$  length of cell, claval veins uniting at middle of clavus, common claval vein entering commissural margin. Wings with anterior margin very feebly sinuate. Post-tibia with 2 spines laterally, about 6 apically, basal metatarsal segment about  $2 \times$  as long as broad apically, with 2 outer teeth and 4 or 5 small teeth between them, ventral surface with rather sparse setae, without a dense pad. Genital styles of ♂ in side view  $3 \times$  as long as broad at middle, in ventral view with inner margins contiguous only at extreme base, thereafter moderately concave.

Anal segment of ♀ short, lateral margins narrow, not explanate. Ovipositor with 3rd valvulae rather short, apical margin shallowly convex in profile, toothed throughout its length.

Type species: *Aliscella fidelis* n. sp.

In Melichar's key this genus runs to couplet 21, from which it is excluded by the presence of more than 3 longitudinal veins on the corium. If the tegmina are not regarded as broad, it runs to couplet 27, from which it is excluded by the tegmina not being  $2 \times$  as long as broad. The type species slightly resembles a *Scolytopa*, but is immediately distinguishable by the relatively broader pre-costal area. From *Alisca* it is separated by the weakly sinuate anterior margin of the wing, and by the apical margin of the tegmina being shorter than the claval suture.

#### 115. *Aliscella fidelis* Fennah, new species Fig. 574–579.

♂. Vertex broader than long in middle (9 : 1), frons broader than long in middle (1.4 : 1); tricarinate, with lateral carinae reaching scarcely as far as lower margin of eyes, median carina extending to level of antennae, rostrum slightly surpassing mesotrochanter. Tegmina with Sc + R fork at 1/3 from base, Cul simple to transverse line.

Dark reddish brown; margins of head and pronotum ferruginous, antennae, rostrum, post-coxa and legs, light yellowish brown; abdomen dorsally at base, creamy white. Tegmina hyaline, precostal area and costal cell and distal cells of Sc distinctly tinged with dull yellow; an oblique band from basal cell to middle 1/3 of precostal area, a broad band overlying nodal line of transverse veinlets, and another band overlying the incomplete row of transverse veinlets just distad of this, apical cells except those of Sc, and sutural margin as far inward as posterior claval vein, dark fuscous; a small round spot at node, colorless, veins fuscous, except transverse fold in Sc, which is colorless. Wings hyaline, apical margin broadly infuscate, veins fuscous.

Anal segment  $2 \times$  as long as broad, lower margin straight. Pygofer moderately long with dorsolateral angles each produced caudad in a narrow acute lobe. Aedeagus stout, slightly curved upward distad, with a pair of rather long sinuate spinose processes arising laterally at apex, directed cephalad above aedeagus, a pair of moderately long spinose processes arising ventrolaterally at apex, curving cephalad and closely adpressed to sides of aedeagus. Genital styles contiguous at base, thence separating to enclose an ovate space almost



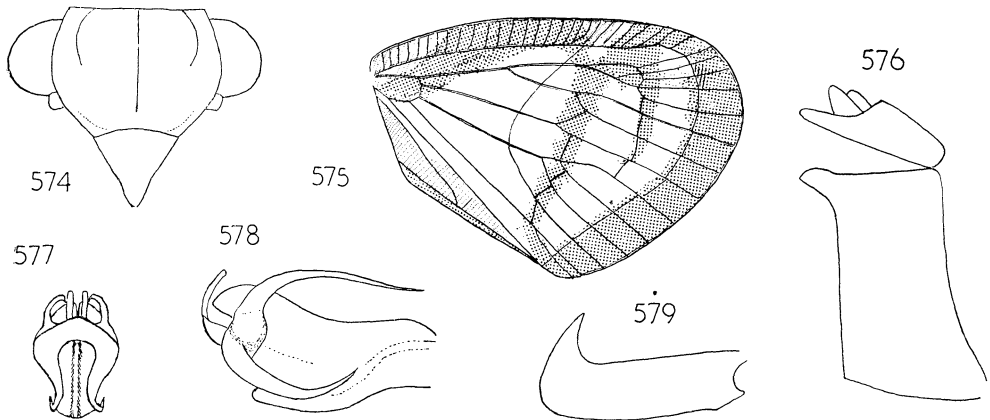


Fig. 574–579. *Aliscella fidelis*, n. sp.: 574, frons and clypeus; 575, tegmen; 576, anal segment and pygofer; 577, aedeagus, posterior view (semi-diagrammatic); 578, aedeagus, lateral view (freehand sketch from undissected genitalia); 579, right genital style.

3× as long as broad, each style longer than broad (3.4 : 1), in side view with dorsal and ventral margins parallel, apical margin oblique, its dorsal angle produced dorsocephalad in an acute process. Length, 4.5 mm; tegmen, 6.0 mm.

Holotype ♂ (BISHOP 7706), Loyalty Is, Lifu I., Wé, II.1963, C. M. Yoshimoto.

116. *Aliscella napaea* Fennah, new species Fig. 580–582.

♀. Vertex broader than long in middle (9 : 1), frons longer than broad in middle (1.3 : 1), tricarinate, with lateral carinae scarcely reaching to level of lower margin of eyes, median carina extending to level of antennae, rostrum amply surpassing mesotrochanter, almost attaining post-trochanter. Tegmina with Sc and R united only at extreme base, Cul forked at 1/4 from base of tegmen.

Light orange brown; disc of mesonotum, abdomen and genitalia, fuscous; abdomen dorsally at base stramineous. Tegmina hyaline, faintly suffused with fuscous, precostal area, costal cell and distal cells of Sc tinged with dull yellow; an oblique band from basal cell to middle 1/3 of precostal area, a triangular suffusion at node extending from anterior margin to M, a suffusion narrowly overlying all transverse veinlets except

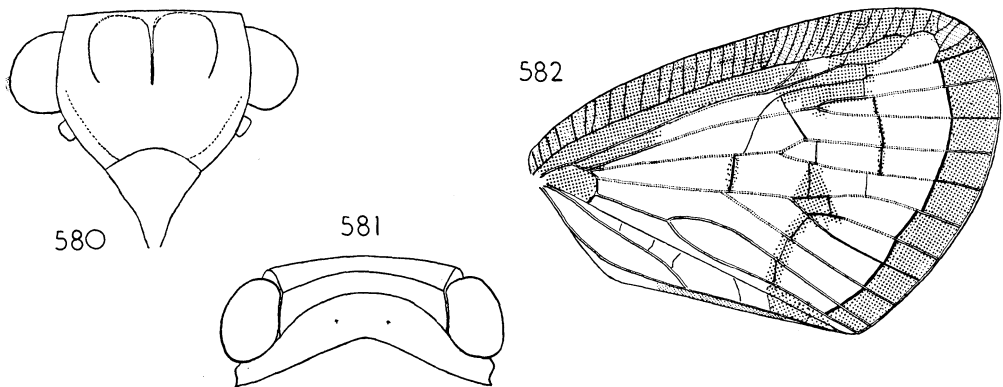


Fig. 580–582. *Aliscella napaea*, n. sp.; 580, frons and clypeus; 581, vertex and pronotum; 582, tegmen.

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## GENERAL INDEX

New names are indicated in **bold face** type, synonyms by *italics*

- Achilidae .....72  
**acesar** .....87  
africana .....72  
Afrachilus .....87  
aglauros .....40  
*Alara* .....67  
albicollis .....38  
albipennis .....1, 54, 56  
albonotata .....1, 44, 48  
albotriariata .....35  
**alcander** .....73  
**allecto** .....24, 26  
Alisca .....110  
**Aliscella** .....110  
Amblycratus .....77, 81  
**anacharsis** .....38  
anemonias .....35  
antenor .....16  
apicemaculatus .....9, 10  
aragoensis .....1, 9  
**arestor** .....23, 28, 30  
Argeleusa .....79  
**ariston** .....16  
Aristyllis .....77  
**asbolus** .....75  
Aselgeoides .....6  
atreces .....1, 23, 31, 32  
atrovenosa .....50  
attenuata .....39  
**aurinia** .....40  
Aulacocephala .....1, 65  
**aurora** .....6  
australensis .....95  
**bambalio** .....84, 85  
Basileocephalus .....65  
**battis** .....76  
*bella* .....37  
Benella .....72, 77, 81  
**beroe** .....91  
**bolanus** .....45, 48  
**butes** .....53, 57  
butleri .....1, 23, 25, 29  
Caffropyrrhyllis .....77  
caledonica .....1, 95, 98  
Callinesia .....85  
Carolus .....8  
**casca** .....69  
**cebrenis** .....12, 14  
Cedusa .....53  
*celaeno* .....36  
Cemus .....35  
Cenchreini .....2, 53  
**Cenophron** .....72, 87  
**charondas** .....11, 13, 14  
chrysonae .....69  
**citipes** .....41  
Cixiidae .....1, 6  
Cixius .....2, 6, 8  
**Clidonisma** .....72, 85, 87  
cognatum .....37  
Colgar .....103  
Colvanalia .....14, 15  
concinula .....14  
conspersa .....77  
conspurcata .....98  
Coronacella .....37  
Corbulo .....37  
Cotylana .....2, 95  
crawfordi .....40, 41  
**Cromnella** .....102  
Cubana .....11  
Cubanella .....11  
**cyllarus** .....77, 80  
**damoetas** .....81  
Daradacella .....90  
Decora .....66, 67  
delicatula .....67  
Delphacidae .....1, 23  
Delphacodes .....36, 42  
Deraulax .....112  
Derbidae .....1, 51  
**derceto** .....54  
Diastrocixius .....11  
Dichotropis .....69  
doddi .....18  
dodona .....37  
**doto** .....103  
**drymo** .....95, 100  
dryope .....37  
dux .....67  
Dystheatias .....2  
**elvina** .....16, 19, 23  
Eocenchrea .....2, 6, 53  
Eponisia .....44, 45  
essingtonii .....2, 51  
essingtonii **porphyrion** .....51  
eupompe .....34  
Euricania .....108  
*euterpe* .....34  
Eurynomella .....87  
eximia .....33  
**Falcotoya** .....39  
farinosa .....1, 105  
**favonius** .....54, 60  
felis .....16, 19  
**feretrius** .....53, 61  
**fidelis** .....110, 112  
Flatidae .....1, 102  
**fugax** .....45, 47, 50  
Gastererion .....1  
**galanthis** .....53, 56  
Gelastocephalus .....2, 8  
*Genestia* .....66  
**Genestiella** .....69, 70  
geranor .....34  
**glabrio** .....90  
Goneokarella .....53  
**Gongistes** .....72, 81  
Gonyphlepsia .....53  
**gorgon** .....95, 99  
grandiceps .....50  
**gyas** .....95  
hackeri .....21, 23  
Haitiana .....87  
Haplaxius .....14  
**Harmalia** .....37  
**harpalyce** .....101  
Hemipteroderes .....72, 77, 81  
**Horcoma** .....36, 42  
**Horcomotes** .....72, 81  
houadonensis .....1, 23, 25  
hyalinata .....71  
incerta .....21, 23  
inermis .....1, 24, 26, 27  
*inornata* .....1, 109  
insularis .....6, 7  
*interpunctata* .....1, 95  
iridipennis .....69  
**Isodaemon** .....72, 77  
Issidae .....1, 94  
**Ithma** .....10  
jacobii .....1, 8  
kirbyi .....1, 65  
kirkaldyi (Cemus) .....36  
kirkaldyi (Coronacella) .....37  
kolophon .....35  
Koroana .....10  
lacteipennis .....36  
**lalage** .....67  
Lamenia .....2  
**lato** .....23, 26, 29  
Levu .....66, 67, 70  
**lifuanus** .....23, 29  
limbata .....1, 107  
Lipocallia .....2, 94  
Livatiella .....32  
longifercifera .....34  
lubra .....16, 18  
**lycotas** .....71

lyraeformis .....	40, 41, 42	Ostama .....	32	Sardia .....	34
<b>lysis</b> .....	45, 47	ostorius .....	39	Sassula .....	110
maculosa .....	71	Otiocerinae .....	2	Scalabis .....	101
Mahuna .....	76, 87	oxycephala .....	89	<b>Scenoma</b> .....	6, 88, 89
maidis .....	37	<b>palaemon</b> .....	91	Scolypopa .....	6, 110
<b>manturna</b> .....	23, 27	<b>pales</b> .....	104	<b>Scotinax</b> .....	112
maorica .....	53	Paramyndus .....	14	semicarinatus .....	8
marginata .....	1, 109	Paraphypia .....	87	septemmaculata .....	68
matanitu .....	36	<b>pardus</b> .....	54, 64	<b>serapis</b> .....	85
<b>matuta</b> .....	45	peloridiid .....	32	signoreti .....	1, 102, 103
<b>medon</b> .....	54, 60, 63	Pentagramma .....	32	Sikaiana .....	71
Meenoplidae .....	1, 44	Peregrinus .....	37	Sikaianini .....	71
Melanesia .....	32	<i>persephone</i> .....	34	<b>sirius</b> .....	83
melichari .....	34	Phacalastor .....	36	<b>sirona</b> .....	78
menelaus .....	1, 24, 25	Phaciocephalus .....	2	Sogatella .....	34
Momar .....	77	Phenelia .....	81	Sogatodes .....	34
montaguei .....	1, 9	Pintalia .....	11	<b>spurinna</b> .....	94
montistympani .....	53, 62, 63	<b>Piromis</b> .....	108	<b>stenopteryx</b> .....	93
Montrouzierana .....	88	<b>pisander</b> .....	74	Sumangala .....	65, 67
<b>muta</b> .....	53, 62	placitus .....	34	Suva .....	44
Myndus .....	6	<b>planguncula</b> .....	23, 31	Swezeyia .....	2
myersi .....	35	Plestia .....	6, 109	Swezeyaria .....	90
<i>Myndorus</i> .....	14, 15	polita .....	87	Syndelphax .....	36
Myndus .....	14	<b>porphyron</b> .....	51	Tangina .....	72, 83
<b>napaea</b> .....	111	<i>pronotalis</i> .....	34	taranis .....	1, 23, 25
<b>nemestrinus</b> .....	23, 24	proserpina .....	34	<i>Tarberus</i> .....	8
<b>Nemator</b> .....	42	protea .....	112	Tarophagus .....	33
Nephelesia .....	85	pseudomaidis .....	36	tasmani .....	18
<b>nero</b> .....	112	Punana .....	32	<b>Teramnon</b> .....	6, 88
nesiope .....	72	Pyrrhyllis .....	77	Terthron .....	35
Nesopompe .....	16	quadrimaculata .....	68	<b>theophane</b> .....	45, 49
nicias .....	34	quinquespinosus .....	7	<b>thia</b> .....	70
nigromaculosus .....	6, 35	ramentosa .....	68	Tiriteana .....	6, 14
Nilaparvata .....	35	rattlei .....	42	<b>tomyris</b> .....	45, 49
Nisia .....	44	Rhampixius .....	7	Toya .....	6, 36, 37, 39
Nisiinae .....	44	Rhotana .....	66	translucida .....	1, 108
Notocixius .....	10	Rhotanini .....	65	transversa .....	69
Notogryps .....	36, 42	Ricaniidae .....	1, 108	trispinosus .....	7
<b>Notuchus</b> .....	6, 32	<b>risioides</b> .....	32	Tropidocephala .....	33
Nycheuma .....	37	Risius .....	32	Tropiduchidae .....	1, 88
Nymphocixia .....	14	rostrata .....	34	Ugyops .....	6, 23, 32
oceanica .....	1, 109	<b>rumina</b> .....	15	Varcia .....	110
<b>ocrisia</b> .....	82	<b>sabinus</b> .....	42	varicolor .....	1, 4
<b>ocyrrhoe</b> .....	16, 18	Saccharodite .....	65, 68	viridis .....	1, 95
Oliarus .....	6, 16	<b>sacrator</b> .....	14	vitriceps .....	66
opalina .....	66, 69	Salemina .....	85	<b>zaleucus</b> .....	54, 59
<b>orbona</b> .....	16, 21	Salurnis .....	103	Zoraida .....	2, 51
ornithoides .....	8	sameshimai .....	38	Zoraidini .....	2, 51
<b>orontes</b> .....	80	<b>sancus</b> .....	105		

### PLANT INDEX

Acacia .....	17	Casuarina .....	17, 54, 95	Lantana .....	19
laurifolia .....	19	Ipomoea .....	17, 95	Wickstroemia .....	95