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SOME LEAFHOPPERS FROM NEW GUINEA, AUSTRALIA AND THAILAND BELONGING TO THE SUBFAMILY JASSINAE AND A NEW GENUS FROM NEW GUINEA REFERRED TO A NEW SUBFAMILY, THE ACOSTEMMINAE

(Homoptera : Cicadellidae)[1]

By J. W. Evans[2]

Abstract : A new tribe of the Jassinae, the Hyalojassini, is proposed to contain two new monotypic genera from Thailand : *Hyalojassus*, type-species, *H. takensis* n. sp. and *Conojassus*, type-species *C. brunneus* n. sp. Within the Jassini, 12 n. spp. in *Batrachomorphus* are described : *B. szentivanyi*, *B. nabirensis*, *B. nervoviridis*, *B. aureus*, *B. bloetella*, *B. allopallidus*, *B. croceus*, *B. tenuis*, and *B. torensis* (New Guinea) ; *B. brooksi*, *B. samii* and *B. fasciatus* (N. Queensland, Australia), *B. sontiates* (Kirkaldy) is newly recorded from New Guinea. Also, two new monotypic genera from New Guinea are proposed : *Acojassus*, type-species *A. montanus* n. sp. and *Edijassus*, type-species *E. pallidus* n. sp. Within the Reuplemmelini, *Reuplemmeles maculata* n. sp., and *Siderojassus*, new genus, type-species *S. kaindii* n. sp. (both New Guinea) are proposed. The Krisnini is reorganized to contain *Krisna* Kirkaldy in the Krisninae, while the remainder of the genera are removed to a new subfamily, the Acostemminae *Acostemana* Evans, *Acostemma* Signoret, *Acostemmella* Evans, *Acropona* Melichar, *Dardania* Stål, *Eryapus* Evans, *Malicia* Evans and *Telopetulcus*, new genus, type-species *T. dubius* n. sp. (New Guinea). The tribes of the Jassinae are keyed.

Subfamily JASSINAE

Subfamily Description. The Jassinae comprise largely robust leafhoppers which are distinguished by having : strong antennal ledges ; laterally long pronota ; narrow tegmina frequently having R1 with more than a single branch and with the cell adjacent to the appendix usually taking part in the tegminal overfold ; hindwings in which Rs is apically fused with M_{1+2} ; male genitalia with the 9th sternum concealed by the sternum of the 8th segment with long, narrow, ventrally based pygophore processes.

In a recent paper, I stated, in the Jassinae, that the 9th sternum was never triangular (Evans, 1972). However, as may be seen in fig. 2B, it may be approximately this shape.

Of the 5 comprised tribes, the Jassini are of world-wide distribution ; the Platyjassini are confined to Madagascar, the Reuplemmelini to Australia and New Guinea, the Tro-

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cnadini to Australia and the Oriental region and the Hyalojassini, apparently, to southeast Asia. It is possible that the tropical African genus *Jassulus* Evans (1955) also merits tribal differentiation.

KEY TO THE TRIBES OF THE SUBFAMILY JASSINAE

1. In male genitalia, parameres and subgenital plates usually long and narrow and always extending well beyond posterior margins of pygophore..... 2
Parameres entirely concealed by pygophore; subgenital plates short, oblique ...**Hyalojassini**
2 (1). Crown of head flattened, considerably longer in center than against eyes; ocelli marginal, or nearly so; or on disc of crown..... 3
Crown, if developed, narrow, either of equal length throughout, or slightly widest, or narrowest, in center; ocelli ventrally situated..... 4
3 (2). Ocelli marginal, or if ventral, then closely adjacent to hind margin of face ..... **Reuplemmelini**
Ocelli on crown of head ..... **Platyjassini**
4 (2). Face of head, anterior to antennal ledges, at right angles to rest of head, posteriorly forming a continuous curved surface with the declivous pronotum ..... **Trocnadini**
Face of head not forming a continuous curved surface with a declivous pronotum ...**Jassini**

Tribe Hyalojassini nov.

This tribe is established to contain 2 aberrant species of Jassinae from Thailand. Each is referred below to a new genus and each is based on a single specimen. The reason for describing these species on the basis of such slender material, and for including their descriptions in a paper primarily concerned with New Guinea insects, is because they have unusual structural features which need to taken into account before a definition of the subfamily Jassinae is attempted.

Genus **Hyalojassus** Evans, new genus

The face of the head is wider than long and the short, narrow, labium bears fine hairs. The anterior apices of the broad maxillary plates are thickened and lack hairs, such as are present on the rest of the maxillary plates and on the lora. The convex anteclypeus is widest posteriorly. The frontoclypeus is convex and the transverse antennal ledges do not encroach onto it. The crown, which forms a continuous curved surface with the face of the head, is slightly longer in the center than at the sides and is transversely striated. The ocelli are visible in both facial and dorsal aspects. The convex pronotum, which is widest posteriorly and laterally carinate, is transversely striated, as is also the scutellum. The tegmina have a dense covering of microtrichiae and narrow appendices. In the hindwings Rs and M_{1+2} form a single vein apically. In the male genitalia the pygophore extends posteriorly beyond the apices of the parameres and the short, ventrally directed, subgenital plates.

Type-species : *Hyalojassus takensis* n. sp.

Hyalojassus takensis Evans, new species Fig. 1A, B, E.

Length, ♂, 7 mm. Greatest width, 2.8 mm. Face of head anteriorly, as far as the postfrontal suture and the antennal ledges, pale yellowish brown; posteriorly, dark brown shading to black. Pronotum very dark brown to black, laterally narrowly yellow. Tegmen vitreous, external claval margin narrowly black; veins pale brown. ♂ genitalia as in fig. 1E.

Holotype ♂ (British Museum), Thailand, Sam Ngow Tak, 31.V.1959.

Genus **Coriojassus** Evans, new genus

On the face of the head, which is wider than long, the apical segment of the short, broad, labium is widely distended and the anteclypeus is parallel sided. The frontoclypeus is almost flat as far as the antennal ledges ; posteriorly it is transversely ridged and, together with the vertex, forms a continuous curved surface with the declivous crown. The ocelli are visible only in facial aspect. The pronotum, which is anteriorly declivous, is laterally carinate and considerably wider posteriorly than anteriorly. The scutel-

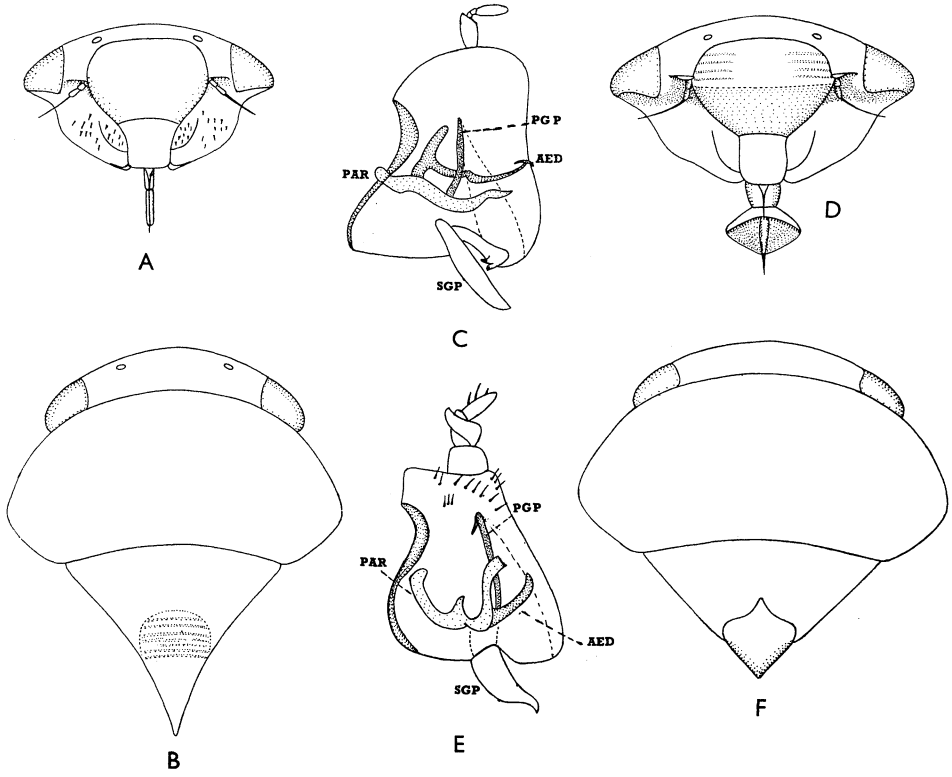

Fig. 1. A, *Hyalojassus takensis*, face of head ; B, same, head and thorax ; C, *Coriojassus brunneus*, ♂ genitalia ; D, same, face of head ; E, *H. takensis*, ♂ genitalia ; F, *C. brunneus*, head and thorax. AED, aedeagus ; PAR, paramere ; PGP, pygophore process ; SGP, subgenital plate.

lum is broad and short. The pilose tegmina have obscure venation and narrow appendices. The hind wings and male genitalia have the same characteristics as those described for *Hyalojassus*.

Type-species : *Coriojassus brunneus* n. sp.

Coriojassus brunneus Evans, new species Fig. 1C, D, F.

Length, ♂, 8 mm. Greatest width, 3.6 mm. General coloration, pale brown. Face of head pale brown with irregular dark brown markings posteriorly ; postfrontal suture dark brown. Pronotum pale brown with irregular small brown markings anteriorly and laterally ; remainder irregularly blotched with pale reddish brown. Scutellum pale brown, apically and laterally, dark brown. Tegmen pale hyaline brown; clavus anteriorly and posteriorly, dark brown ; veins pale brown. Male genitalia as in fig. 1C.

Holotype ♂ (British Museum), Thailand, Ban Yang, 3200 feet, 5.XI.1959.

Tribe Jassini

The face of the head is usually wider than long and the ventrally situated ocelli are adjacent to the usually retained, arched, postfrontal suture. The well-developed antennal ledges, which sometimes encroach onto the frontoclypeus, may be transverse or anteriorly, or posteriorly, curved. A narrow crown is usually, though not invariably, developed. The pronotum, which widely separates the eyes from the bases of the tegmina, may be transversely striated and laterally carinate. The tegmina sometimes have a covering of sparse, or dense, hairs, or microtrichiae, or scattered raised spots, and usually a wide appendix. In the male genitalia the 9th sternum may be distinct and triangular, or approximately rectangular, or else laterally continuous with the pygophore. The parameres and subgenital plates are long and narrow and the pygophore may be partially, or completely, separated into two parts by a vertical suture.

Genus **Batrachomorphus** Lewis

Batrachomorphus Lewis, 1834, *Trans. Ent. Soc. Lond.* **11** : 47.

Type-species : *Batrachomorphus irroratus* Lewis (England).

Batrachomorphus is abundantly represented in Australia and New Guinea. Up to the present 12 species have been described from Australia and 13 species from New Guinea. In both countries these numbers represent but a small part of the existing fauna. While more species probably occur in north-east Queensland than elsewhere in Australia, they are to be found also in Western Australia and as far south as Tasmania.

Twenty nine species from New Guinea are contained in the Bishop Museum collection. Of these 7 species have previously been described and 9 species are described below. The remainder are either represented by inadequate material or lack special interest.

Those previously described from New Guinea are as follows : *B. coriaceus* (Walker) (1870) ; *brunki* (Schmidt) (1930) ; *krusei* (Schmidt) ; *boschmai* Blöte (1964) ; *nitens* Blöte ; *notatus* Blöte ; *notulatus* Blöte ; *pictus* Blöte ; *pustulatus* Blöte ; *rex* Blöte ; *viridinervis* Blöte ; *blotei* Ghauri (1964) ; *szentivanyi* Ghauri.

Batrachomorphus szentivanyi Ghauri Fig. 2A, B, C.

Batrachomorphus szentivanyi Ghauri, 1964, *Ann. Mag. Nat. Hist.* (13) **7**: 635.
Bishop Museum specimens from Dimifa (Gressitt); Toromomburo (Gressitt); Upper Chimbu (Gressitt); Wau (Gressitt); Kulina (Maa).

This unusually large species has been chosen for illustrating the special features of the male genitalia of the Jassini. These consist of the overlapping of the 9th by the 8th sternum (fig. 2A); long, parallel sided subgenital plates and parameres (fig. 2A, B, C); marginal, ventrally based, pygophore processes (fig. 2C).

B. blötei Ghauri, 1964, *Ann. Mag. Nat. Hist.* (13) **7**: 638. Wau (Samuelson, Sedlacek).
B. krusei (Schmidt), 1930, *Wien. Ent. Ztg.* **47**: 122. W. Sentani, Cyclops Mts. (Maa); Bainyik, S of Maprik (Maa).
B. boschmai Blöte, 1964, *Zoöl. Meded.* **39**: 467. Wau (Sedlacek).
B. rex Blöte, 1964, *Zoöl. Meded.* **39**: 467. Wau (Sedlacek); Eliptamin Valley (Brandt).
B. pustulatus Blöte, 1964, *Zoöl. Meded.* **39**: 469. Wau (Sedlacek); Gazelle Peninsular, New Britain (Sedlacek); Malgi, Mt Giluwe (Gressitt, Sedlacek); Saidor, Finisterre Range (Brandt).

Batrachomorphus nabirensis Evans, new species Fig. 2D.

Length, ♂, 4 mm, ♀, 4.2 mm. Greatest width, ♂, ♀, 1.5 mm. Coloration, pale yellow, pronotum and scutellum, dark brown or black. Face of head yellow; antennal ledges not extending onto frontoclypeus. Crown yellow. Pronotum and scutellum dark brown or black. Tegmen pale hyaline yellow, with, or without, a narrow transverse brown fascia and a brown apical area and with sparse microtrichiae. Thorax and abdomen, ventral surface, and legs, pale yellow. ♂ genitalia as in fig. 2D.

Holotype ♂ (BISHOP 9766), NW New Guinea, Nabire, 25.VIII.1962, H. Holtmann, light trap. Allotype ♀, NE New Guinea, Wau, 1200 m, 17.IX.1964, J. Sedlacek, light trap. Paratypes, 1 ♂, 2 ♀♀, same data as allotype; 3 ♂♂, Tsenga (Gressitt); 1 ♀, Eliptamin Valley (Brandt). *B. nabirensis* may be distinguished by its size and coloration and the shape of the apex of the pygophore process.

Batrachomorphus nervoviridis Evans, new species Fig. 2E.

Length, ♂, 8.5 mm. Greatest width, 2.5 mm. General coloration, dull olive green. Face of head yellow, pinkish posterior to slightly arched antennal ledges which continue onto frontoclypeus. Crown pinkish with 2 circular black markings, sloping steeply towards pronotum posteriorly. Pronotum transversely striated, pale brown anteriorly with numerous small brown markings; posteriorly grayish brown. Scutellum dull yellow, transversely striated posteriorly. Tegmen dull green, apical cells and appendix brown; clavus rugose, punctate; veins in relief. Spines on one row on hind tibia alternately black and pale yellow. ♂ genitalia as in fig. 2E.

Holotype ♂ (BISHOP 9767), SE New Guinea, Mt. Gilwe, 255 m, 27.V.1963, J. Sedlacek, Malaise trap.

B. nervoviridis may be distinguished by the shape of the apex of the pygophore process.

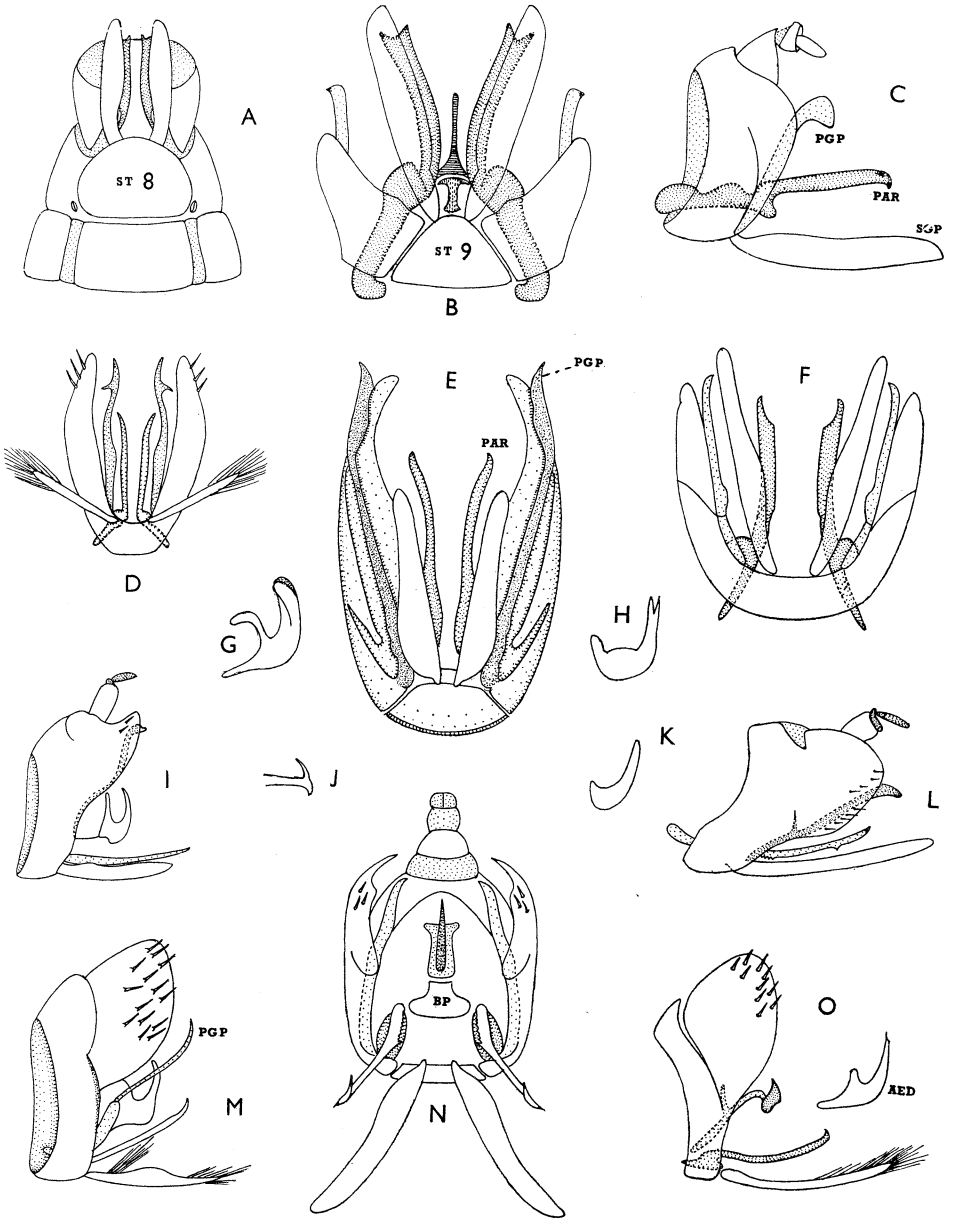

Fig. 2. A, B, C, *Batrachomorphus szentivanyi*, ♂ genitalia ; D, *B. nabirensis*, ♂ genitalia ; E, *B. nervoviridis*, ♂ genitalia ; F, *B. aureus*, ♂ genitalia ; G. *B. brooksi*, ♂ aedeagus ; H, *B. aureus*, aedeagus ; I, *B. bloetella*, ♂ genitalia ; J, *B. croceus*, apex of paramere ; K, *B. allopallidus*, ♂ aedeagus ; L, same, ♂ genitalia ; M, *B. sontiates*, ♂ genitalia ; N, *B. croceus* ♂ genitalia ; O, *B. samii*, ♂ genitalia. AED, aedeagus ; BP, basal plate ; PAR, paramere ; PGP, pygophore process ; SGP, subgenital plate.

Batrachomorphus aureus Evans, new species Fig. 2F, H.

Length, ♂, 8-9 mm, ♀, 10 mm. Greatest width, ♂, 2.9 mm, ♀, 3.5 mm. General coloration, pale to medium golden brown. Face of head golden brown ; frontoclypeus and vertex transversely striated, the former convex ; antennal ledges arched anteriorly, extending onto frontoclypeus ; hind margin of frontoclypeus well defined in ♂, obscurely in ♀. Crown shortest in center. Pronotum parallel sided, pale golden brown with irregular brown markings anteriorly. Scutellum concolorous with pronotum, lateral angles dark brown. Tegmen hyaline golden brown ; R1 with several branches ; clavus and sides of veins pitted. ♂ genitalia as in fig. 2F, aedeagus, fig. 2H.

Holotype ♂ (BISHOP 9768), NE New Guinea, Wau, Morobe District, 1200 m, 15.X. 1961, J. Sedlacek. Allotype ♀, NW New Guinea, Nabire, 25.VIII.1962, J. Sedlacek, light trap. Paratypes, 1 ♂, Japen I. (Holtmann) ; 1 ♂, Koitaki, 1500 m, (Pemberton) ; 1 ♀, same data as allotype ; 1 ♀, Torricelli Mts (Brandt) ; 1 ♀, Sentani (Gressitt).

B. aureus may be distinguished by the shape of the aedeagus and of the apices of the parameres.

Batrachomorphus bloetella Evans, new species Fig. 2I.

Length, ♂, 7 mm. Greatest width, 2 mm. Overall coloration reddish brown. Face of head pale brown, frontoclypeus and vertex transversely striated ; antennal ledges transverse. Crown well defined, transversely striated. Pronotum pale brown, laterally carinate, almost parallel sided, together with scutellum, transversely striated. Tegmen narrowing apically pale hyaline brown, sparsely punctate with fine spines arising from punctures ; veins brown, R_1 with accessory veins. ♂ genitalia as in fig. 2I

Holotype ♂ (BISHOP 9769), NE New Guinea, Wau, Morobe District, 1200 m, 21.I.1963, J. Sedlacek, Malaise Trap. Paratypes, 5 ♂♂, same data as holotype.

B. bloetella may be distinguished by characters furnished by the ♂ genitalia.

Batrachomorphus allopallidus Evans, new species Fig. 2K, L.

Length, ♂, ♀, 9 mm. Greatest width, 3 mm. Overall coloration, pale yellowish brown. Face of head pale yellowish brown ; frontoclypeus and vertex finely striated ; antennal ledges transverse, encroaching onto frontoclypeus. Crown well defined, finely transversly striated, pale yellowish brown. Pronotum parallel sided, laterally carinate and finely striated, pale yellowish brown. Tegmen pale hyaline brown ; veins greenish, punctate, especially in clavus and between the costal margin and R, which has more than 2 branches. ♂ genitalia as in fig. 2L, aedeagus, fig. 2K.

Holotype ♂ (BISHOP 9770), NE New Guinea, Wau, Morobe District, 1200 m, 31.I.1963, J. Sedlacek. Allotype ♀, NW New Guinea, Bodem, 100 m, 11 km SE of Oeberfaren, 7.VII. 1959, T. C. Maa.

B. allopallidus may be distinguished by ♂ genitalic characters.

Batrachomorphus croceus Evans, new species Fig. 2J, N.

Length, ♂, 4.8mm, ♀, 10 mm. Greatest width, ♂, 3 mm, ♀, 3.2 mm. Overall coloration yellowish. Face of head, including maxillary plates, transversely striated. Crown well defined,

transversely striated, yellowish, anteriorly and posteriorly narrowly margined with brown. Pronotum widest posteriorly, transversely striated and laterally carinate. Scutellum finely corrugated anteriorly, transversely striated posteriorly. Tegmen pale hyaline yellowish, punctate, especially on clavus ; veins green, R with a few accessory veins ; appendix narrower than adjacent cell. ♂ genitalia as in fig. 2N, apex of paramere, fig. 2J.

Holotype ♂ (BISHOP 9771), NE New Guinea, Finisterre Range, Saidor-Sibog Vill., 27.V. 1958, W. W. Brandt. Allotype ♀, same data as holotype. Paratypes, 1 ♀, Elliptamin Valley (Brandt) ; 1 ♀. Warongoi Val., Gazelle Pen. (Gressitt).

B. croceus may be distinguished by the shape of the apices of the parameres.

Batrachomorphus tenuis Evans, new species

Length, ♀, 6.8 mm. Greatest width, 1.8 mm. Coloration green and pink. Face of head anteriorly, as far as level of oblique antennal ledges, pale green ; posteriorly red with a cellular pattern. Crown well defined, transversely striated, red. Pronotum widest posteriorly, pale green. Scutellum pink, muscle impressions brown. Tegmen pale green, posterior and sometimes entire margin, pink ; appendix proximally black ; entire surface of tegmen with microsetae ; R with 2 branches.

Holotype ♀ (BISHOP 9772), NE New Guinea, Mt. Kaindi, 2400 m, 27.I.1963, J. Sedlacek. Paratypes, 3 ♀♀, same data as holotype, on *Nothofagus carri*, Gressitt.

This distinctive, slender, species has been described in the absence of ♂ specimens because of the interest of its apparent association with *Nothofagus*. It is probable, however, as with most cicadellids taken on these trees that this is a chance, and not a true, insect-plant association, or if it is, then not a long established one as is possibly the case with the ulopid, *Monteithia anomala* Evans (Evans, 1968).

Batrachomorphus torensis Evans, new species

Length, ♀, 4.2–5 mm. Greatest width, 1.8 mm. Coloration, black thorax and pale tegmina. Face of head, anteclypeus, lora and maxillary plates dark brown with pale microsetae ; frontoclypeus and vertex, pale brown ; antennal ledges oblique, not encroaching onto frontoclypeus ; postfrontal suture ill defined. Crown anteriorly pale brown, posteriorly black, or entirely brown. Pronotum and scutellum transversely striated, black ; pronotum slightly widest posteriorly. Tegmen pale hyaline brown, punctate ; R with 2 branches. Femora of all 3 pairs of legs, dark brown or black.

Holotype ♀ (BISHOP 9773), NW New Guinea, River Tor (mouth), Maffen, 2.VIII.1959, T. C. Maa. Paratypes, 5 ♀♀, Sentani (Gressitt & Maa) ; Torricelli Mts (Brandt) ; Finisterre Range (Brandt) ; Lae (Gressitt). This very distinctive species superficially resembles an African species, *Batrachomorphus ossana* (Distant).

Batrachomorphus brooksi Evans, new species Fig. 2G.

Length, ♂, 6 mm, ♀, 8 mm. Greatest width, ♂, 2 mm, ♀, 2.2 mm. General coloration, brown. Head pale brown, transversely striated, forming an even curved surface from the anterior to the posterior margin ; antennal ledges transverse ; postfrontal sutures more distinct in ♂ than ♀. Pronotum transversely striated, parallel sided, pale brown with irregular dark brown, to black, markings anteriorly. Scutellum brown, anterior angles darker than remainder.

Tegmen, ♂, dark, ♀, pale, brown, in part pitted, especially alongside veins ; veins prominent, pale yellow, sometimes a few supplementary ones in clavus and between M and CuA ; appendix narrower than adjacent cell. ♂ genitalia, aedeagus as in fig. 2G.

Holotype ♂ (Australian Museum K69247), N. Queensland, Kuranda, J. G. Brooks, light trap, XII.1969. Allotype ♀ (Australian Museum, K69248), same data as holotype. Paratypes 3 ♂♂, 3 ♀♀, same data.

B. brooksi may be distinguished by characters furnished by the tegmina and the aedeagus.

Batrachomorphus samii Evans, new species Fig. 2O.

Length, ♂, 5mm. Greatest width, 1.8 mm. Coloration, coffee brown spotted with black. Face of head pale brown, maxillary plates whitish ; vertex, including crown, transversely striated. Pronotum slightly widest posteriorly, laterally carinate and transversely striated, coffee brown mottled with differently shaped black spots. Tegmen, including veins, hyaline coffee brown with evenly distributed large black spots. ♂ genitalia as in fig. 2O.

Holotype ♂ (Australian Museum K69250), N. Queensland, Cairns, J. G. Brooks, XI. 1969, light trap. Paratypes 3 ♂♂, same data.

B. samii resembles *B. sontiates* (Kirkaldy) in general appearance but differs in the shape of the apex of the pygophore process and in the considerably longer, and differently shaped, subgenital plates.

Batrachomorphus sontiates (Kirkaldy) Fig. 2M.

Eurinoscopus sontiates Kirkaldy, 1906, *Bull. Hawaii Sug. Ass. Exp. Sta.* **1** (9) : 347.
Batrachomorphus sontiates: Evans, 1965, *Mem. Australian Mus.* **12** : 206.

A specimen of this species, which was originally described from north Queensland, from Port Moresby, is contained in the Bishop Museum collection. The male genitalia, which have not previously been figured are illustrated in fig. 2M.

Batrachomorphus fasciatus Evans, new species Fig. 3 A, B.

Length, ♂, 4 mm, ♀, 5-5.2 mm. Greatest width, ♂, 1.7, ♀, 1.8 mm. General coloration pale brown and white spotted with black. Face of head, ♂ pale brown ; ♀, frontoclypeus dark brown, remainder pale brown, or largely dark brown, and pale brown between eyes and frontoclypeus ; antennal ledges arched, not extending onto frontoclypeus. Pronotum transversely striated, sparsely covered with fine hairs, pale or dark brown spotted with dark brown. Scutellum dark brown with symmetrical yellow markings. Tegmen pale hyaline brown with, or without, one, or a pair, of whitish fasciae and a covering of fine hairs, densest on clavus, and with evenly distributed small circular black spots. Abdomen pink ; apex of 8th sternum in ♂, black. ♂ genitalia as in fig. 3B, with a bunch of fine, long hairs (not shown in figure) arising from margin of pygophore near base of subgenital plates.

Holotype ♂ (Australian Museum K69251), N. Queensland, Cairns, XI.1969, J. G. Brooks, light trap. Allotype ♀, (Australian Museum K69252), same data as holotype. Paratypes, 3 ♂♂, 3 ♀♀, same data, also 4 ♀♀, NE and NW New Guinea.

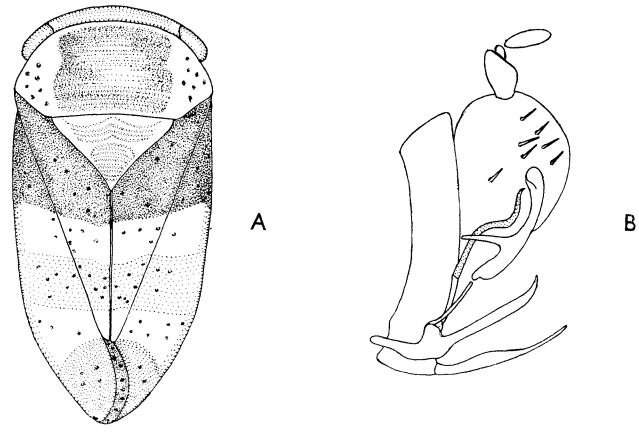

Fig. 3. A, *Batrachomorphus fasciatus* ; B, same, ♂ genitalia.

This species may be readily distinguished by its small size, coloration, hirsute condition, and the shape of the pygophore process in the male genitalia.

Genus **Acojassus** Evans, new genus

On the face of the head, which is wider than long and almost flat, the labium does not extend as far as middle coxae. The ocelli are ventrally situated and nearer to the semicircular postfrontal suture than to the hind margin of the face. The crown is of equal length with the adjacent eyes and is sharply differentiated from the face in ♂ but not ♀ insects. The pronotum in males is parallel sided and widest posteriorly in ♀♀. The tegmina are rugose and in ♀♀ the venation is reticulate.

Type-species : *Acojassus montanus* n. sp.

Acojassus resembles *Batrachomorphus* in general cephalic, venational and ♂ genitalia characteristics. It differs in the extreme sexual dimorphism of the type species.

Acojassus montanus Evans, new species Fig. 4A–F.

Length ♂, 7–8.6 mm, ♀, 9.4–10 mm. Greatest width, ♂, ♀, 2.8 mm. Overall coloration green fading to yellowish brown. Vertex of head and fore and middle tibiae, pink. ♂ genitalia as in fig. 4F.

Holotype ♂ (BISHOP 9774), NW New Guinea, Wissel Lakes, Enarotadi, 1800 m, 3.VIII. 1955, J. L. Gressitt. Allotype ♀, NE New Guinea, main Finisterre Range, nr Freyberg pass, 2500 m, 1–21.X.1958, W. W. Brandt. Paratypes, 2 ♀♀, same data as allotype ; 1 ♂, Star Mts, Sibil Val. (Quate).

Genus **Edijassus** Evans, new genus

The face of the head, which is almost flat, is wider than long in ♂♂ and as wide as long in ♀♀ and the labium terminates at the apices of the middle coxae. The

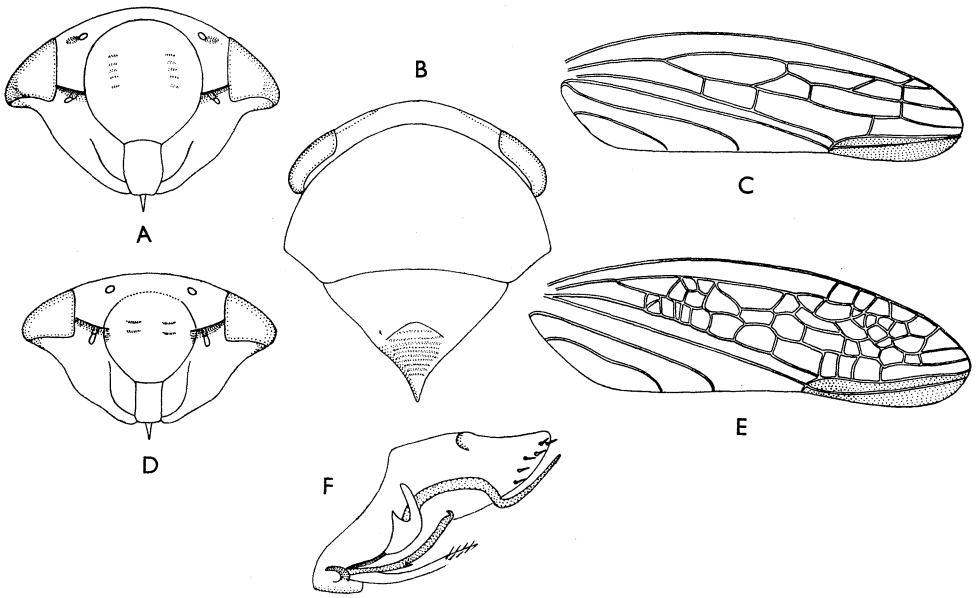

Fig. 4. A, *Acojassus montanus*, ♂, face of head ; B, ♀, head and thorax ; C, ♂, tegmen ; D, ♀, face of head ; E, ♀, tegmen ; F, ♂ genitalia.

oblique antennal ledges extend onto the frontoclypeus and the postfrontal suture is faintly discernible. The crown, which is of equal length with the adjacent eyes, slopes steeply towards the anterior margin of the pronotum. The latter is laterally wide, considerably broadest posteriorly and transversely striated. The scutellum is medially depressed and transversely striated. The tegmina which are, in part, corrugated, have prominent veins, R1 has 5 branches and there are numerous cross veins. The appendix is wide.

Type-species : *Edijassus pallidus* n. sp.

Edijassus resembles *Batrachomorphus* in general cephalic, venational, and ♂ genitalia characteristics. It differs in the more extensive and flattened face ; the posteriorly declivous crown ; in the shape of the pronotum and in the texture of the tegmina and the prominence of the veins.

Edijassus pallidus Evans, new species Fig. 5A, B, D.

Length, ♂, 8.8 mm, ♀, 10.5 mm. Greatest width, ♂, 3 mm, ♀, 3.1 mm. General coloration, pale parchment, with brown markings. Head pale parchment. Pronotum concolorous with the head and with brown markings anteriorly. Scutellum concolorous with pronotum, lateral angles and a pair of oblique markings, brown. Tegmen pale yellowish brown with irregular brown markings; apices of branches of R1, brown. ♂ genitalia as in fig. 5D.

Holotype ♂ (BISHOP 9775), NE New Guinea, 11km S of Mt Hagen (town), 2200 m, 21.V.1963, J. Sedlacek. Allotype ♀, NE New Guinea, Edie Creek, Wau, 5.X.1961, J. Sedlacek.

Tribe Reuplemmelini

Reuplemmeles maculata Evans, new species Fig. 5E, F, H.

Length, ♂, 6.8 mm, ♀, 7.8 mm. Greatest width, ♂, 1.5 mm, ♀, 2 mm. General coloration pale yellowish flecked with small brown spots (possibly green in life). Face of head wider than long, slightly convex, ocelli marginal, visible in ventral and dorsal aspects. Crown broadly produced anteriorly, longest in the center and more extensive in ♀ than in ♂. Pronotum and tegmen pale yellowish flecked with brown. ♂ genitalia as in fig. 5E.

Holotype ♀ (BISHOP 9776), SE New Guinea, Mt. Giluwe, 2550 m, 27.V-6.VI.1963, J. Sedlacek, Malaise trap. Allotype ♂, same data as holotype.

Reuplemmeles maculata differs from the type species of the genus, *R. hobartensis*, in the considerably less produced crown of the ♀, in coloration, particularly of the ♂ and in the lesser extent of sexual dimorphism.

Genus **Siderojassus** Evans, new genus

On the front of the head, which is wider than long, the frontoclypeus is depressed posteriorly in front of a marginal rim extending between the ocelli. The crown is flat, longest in the center and transversely ridged anteriorly. The ocelli are visible in ventral and dorsal aspects. The pronotum is considerably widest posteriorly. The long, narrow, tegmina have basic cicadellid venation and a covering of microtrichiae and the appendix is wider than the adjacent cell.

Type-species : *Siderojassus kaindii* n. sp.

Siderojassus resembles *Reuplemmeles* in the position of the ocelli but differs in having a wider head and a considerably less extensive crown.

Siderojassus kaindii Evans, new species Fig. 5C, G.

Length, ♂, 8 mm, ♀, 9 mm. Greatest width, ♂, 2 mm, ♀, 2.1 mm. Whole insect evenly pallid (possibly green in life). ♂ genitalia as in fig. 5G.

Holotype ♂ (BISHOP 9777), NE New Guinea, Mt Kaindi, 2200 m, 8.VI.1962, J. Sedlacek, light trap. Allotype ♀, W. New Guinea, Vogelkop, Kebar Valley, W of Manokwari, 55 m, 4.I.1962, S. & L. Quate. Paratypes, 2 ♂♂, 2 ♀♀, same data as holotype ; 1 ♂, 10km E of Bokondini (Quate).

Subfamily KRISNINAE

Several years ago I proposed a tribe of the Jassinae, the Krisnini (Evans, 1947). As well as the genus *Krisna* Kirkaldy, it included also *Acostemma* Signoret, *Acropona* Melichar, *Caelidoides* Signoret, *Dardania* Stål and *Korana* Distant. Subsequently, *Caelidoides* was transferred to the Coelidiinae and the genera *Acostemmella* Evans, *Acostemana* Evans, *Eryapus* Evans, and *Malicia* Evans, were added (Evans, 1953).

Ishihara has pointed out that *Krisna* spp. differ from leafhoppers in the other genera listed above in several characteristics, the most important of which is the continuation

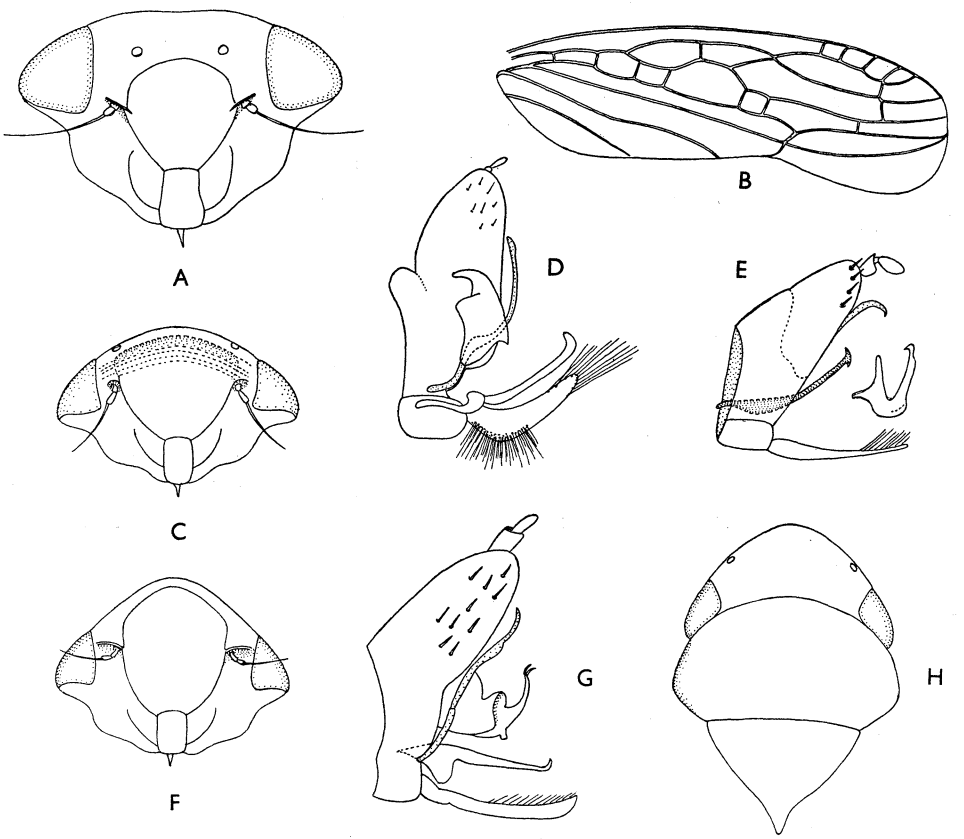

Fig. 5. A, *Edijassus pallidus*, face of head ; B, same, tegmen ; C, *Siderojassus kaindii*, face of head ; D, *E. pallidus*, ♂ genitalia ; E, *Reuplemmeles maculata*, ♂ genitalia; F, same, face of head; G, *S. kaindii*, ♂ genitalia ; H, *R. maculata*, head and thorax.

of the ambient vein of the hind wing onto the anal area (Ishihara, 1961). This feature occurs in only one other cidadellid group, the Tartessinae. Consequently, Ishihara proposed a separate category for *Krisna*, the Krisnidae. Although *Krisna* now lacks close classificatory association with genera comprised in the Jassinae I remain of the opinion that it has affinity with them, since species in the 2 subfamilies share certain cephalic, pronotal, tegminal and ♂ genitalia characteristics.

As well as lacking a marginal vein in the anal area of the hind wing, species in the other genera formerly referred to the Krisnini differ from *Krisna* in having : the ocelli more widely separated from the eyes ; the crown less anteriorly produced ; tegmina with narrow, instead of wide appendices, and frequently with a thickened costal margin ; ♂ genitalia in which the parameres do not reach as far as the hind margins of the pygophore and lacking specialised pygophore processes. Accordingly, a new group name is required to contain genera, other than *Krisna*, previously referred by me to the tribe Krisnini and the subfamily name Acostemminae is proposed.

Subfamily ACOSTEMMINAE nov.

The genus *Telopetulcus*, described below, is tentatively ascribed to this subfamily since it shares cephalic, thoracic and ♂ genitalia characteristics with *Acostemma*, *Eryapus* and other genera in the Acostemminae. While it is appreciated that this association may be an incorrect one it seems preferable to draw attention to possible relationships rather than to propose a new subfamily for every seemingly isolated genus of leafhoppers.

Genus **Telopetulcus** Evans, new genus

Sturdy sexually dimorphic insects. The head is approximately as wide as long and the labium terminates between the trochanters of the fore legs. The anteclypeus, which is widest anteriorly and narrowest medially, projects beyond the margins of the extensive maxillary plates and the lora, anteriorly, which do not reach as far as the edge of the maxillary plates, are widely separated posteriorly from the anterior tentorial pits. The antennal ledges are short and oblique and do not extend laterally as far as the eyes and the antennae are long and filiform. The smooth postclypeus is posteriorly arched

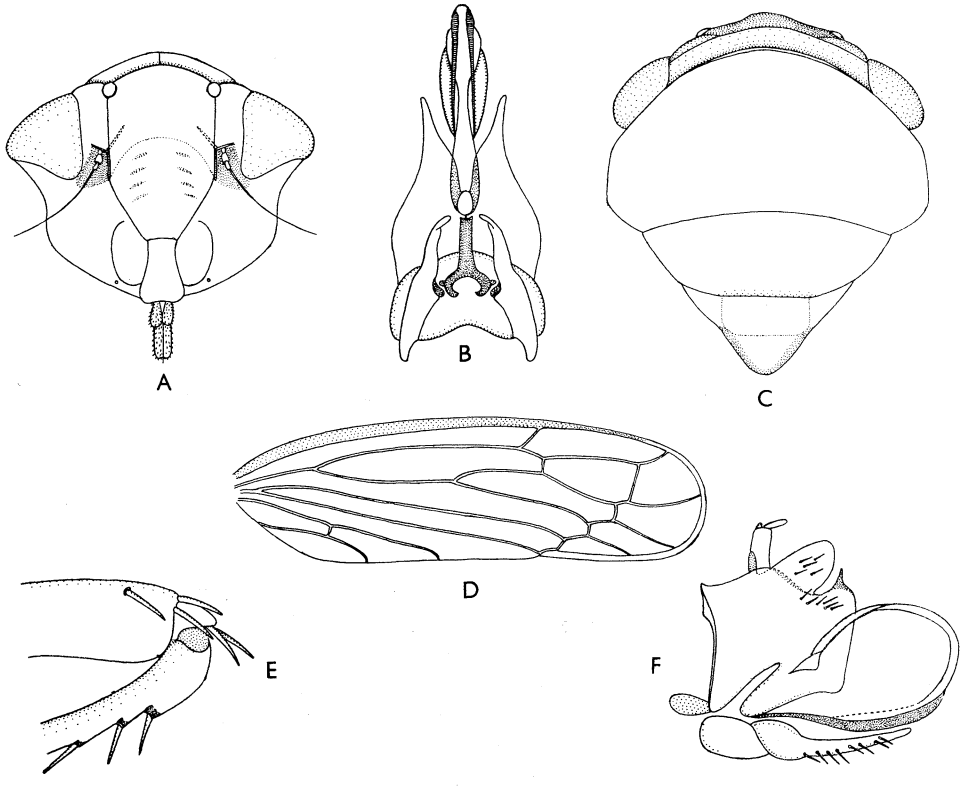

Fig. 6. *Telopetulcus dubius*, A, face of head ; B, ♂ genitalia ; C, head and thorax ; D, tegmen ; E, apex of hind femur and base of hind tibia ; F, ♂ genitalia.

in the frontal region, slightly beyond the level of the antennal ledges, the frons is obliquely corrugated and its sides, which are widely separated from the eyes and approximately parallel with the inner margins of the latter, terminate at the ocelli. The hind margin of the frons, which resembles a wide inverted V, is raised in the ♀, but not the male, above the level of the vertex and the ridge so formed continues laterally and is curved towards the posterior corners of the eyes. The facial part of the vertex, which consists of a transverse channel, is sharply separated in the ♀ from the crown of the head, which is of even length and narrower than the eyes laterally, and slopes steeply towards the pronotum. In the ♂ the crown is widest medially and the central portion, which is part consists of the frons, does not slope steeply towards the pronotum. The extensive pronotum, which is transversely striated and finely pitted and slopes anteriorly and laterally, is wide at the almost parallel sides. The scutellum is medially depressed and apically swollen. The tegmina are long, parallel sided and apically truncate and the appendix is narrow. The venation is of the basic cicadellid pattern with an additional cross vein linking the anal veins. The veins bear microsetae. The hind wings have normal cicadellid venation. The straight hind tibiae are heavily spined and the spines in one row are mounted on enlarged bases. In the ♂ genitalia the 9th sternum is approximately rectangular. The parameres are short and the subgenital plates narrow apically.

Type-species : *Telopetulcus dubius* n. sp.

Telopetulcus dubius Evans, new species Fig. 6A–F.

♂. Length, 8–9 mm. Greatest width, 2.2 mm. General coloration, pale brown. Face of head chestnut brown and black evenly mottled with yellow. Crown pale yellowish brown with a pair of black markings flanking the apex of the coronal suture. Pronotum and scutellum concolorous with the crown. Tegmen yellowish gray, irregularly mottled with ochreous brown ; veins pale brown with white spots. Thorax, ventral surface and legs, largely dark brown to black ; fore femora with 3 broad, transverse, pale brown markings. ♂ genitalia as in fig. 6B,F.

♀. Length, 10.5 mm. Greatest width, 3 mm. General coloration, dark brown. Face of head yellowish brown evenly mottled with brown ; hind margin of vertex with 3 dark brown markings. Crown dark brown with 6, approximately circular, yellowish markings. Pronotum yellowish brown mottled with chestnut brown. Scutellum medially concolorous with the pronotum, lateral angles chestnut brown ; apex with a dark brown cruciform marking. Tegmen pale chestnut brown mottled with gray ; veins brown. Thorax and abdomen, ventral surface, pale and dark brown. Fore femur pale brown with extensive dark brown markings. Hind tibia chestnut brown, bases of strongest spines, black. Sides of 9th tergum spinous.

Holotype ♂ (BISHOP 9778), NW New Guinea, Waris, S of Hollandia, 450 m, 1.VIII. 1959, T. C. Maa. Allotype ♀, NE New Guinea, Torricelli Mts, Mokai, 750 m, 16.XII. 1958, W. W. Brandt. Paratypes, 1 ♂, same data as holotype 3 ♀♀, same data as allotype ; 2 ♀♀, Finisterre Range, Saidor, Matoka (Brandt) ; 1 ♀, Sepik R, Pagwi area (Hardy) ; 1 ♀, Bodem, Sarmi Area (Maa).

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