

A CONTRIBUTION TO THE SYSTEMATICS OF  
ORIENTAL AND AUSTRALIAN BLISSINAE  
(Hemiptera : Lygaeidae)<sup>1,2</sup>

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*Abstract*: Two new genera, *Lucerocoris* and *Scintillademus*, and 9 new species, *Pirkimerus papuensis*, *P. philippinensis*, *Ischnodemus sordidus*, *Lucerocoris nigrotibialis*, *L. brunneus*, *Scintillademus gemmatus*, *Dentisblissus umbrosus*, *D. corniger* and *Iphicrates pseudolineatus*, are described. *Pirkimerus davidi* Slater & Ahmad is synonymized with *P. japonicus* Hidaka, & additional taxonomic information is given for *Pirkimerus parviceps* Bergroth & *P. esakii* Miyamoto & Hidaka. A key is given to the species of *Dentisblissus*, & additional locality data given for *D. venosus* (Breddin).

The recent collections of the B. P. Bishop Museum and other museums contain many new important specimens of Blissinae from Australia, New Guinea and the Philippines. In this paper two new genera and nine new species are described, *Pirkimerus davidi* Slater & Ahmad is synonymized with *P. japonicus* Hidaka, and additional taxonomic information is given for *Pirkimerus parviceps* Bergroth & *P. esakii* Miyamoto & Hidaka. The material includes the first true *Ischnodemus* Fieber known from Australia, the first occurrence of the Oriental genus *Pirkimerus* Distant in New Guinea, a remarkable new genus (*Lucerocoris*) related to *Spalacocoris* Stal from the Philippines, a new genus & species from New Guinea, two new species of *Dentisblissus* Slater, one from New Guinea & one from Australia, & a new species of *Iphicrates* Distant from Australia. Additional locality data are given for *Dentisblissus venosus* (Breddin).

***Pirkimerus papuensis* Slater, new species**

Head, pronotum, scutellar carina & lateral stripe on corium shining, remainder of scutellum and hemelytra dull pruinose; head, anterior half & narrow posterior margin of pronotum dark chocolate brown, posterior half of pronotum a contrasting bright yellow-brown; hemelytra chiefly rich brown, becoming dark on membrane and posterior half of corium, light yellow narrowly along basal one-half of lateral corial margin and as a small ellipsoidal yellow spot on membrane adjacent to each corial apex; legs uniformly light yellow, antennae dark brown becom-

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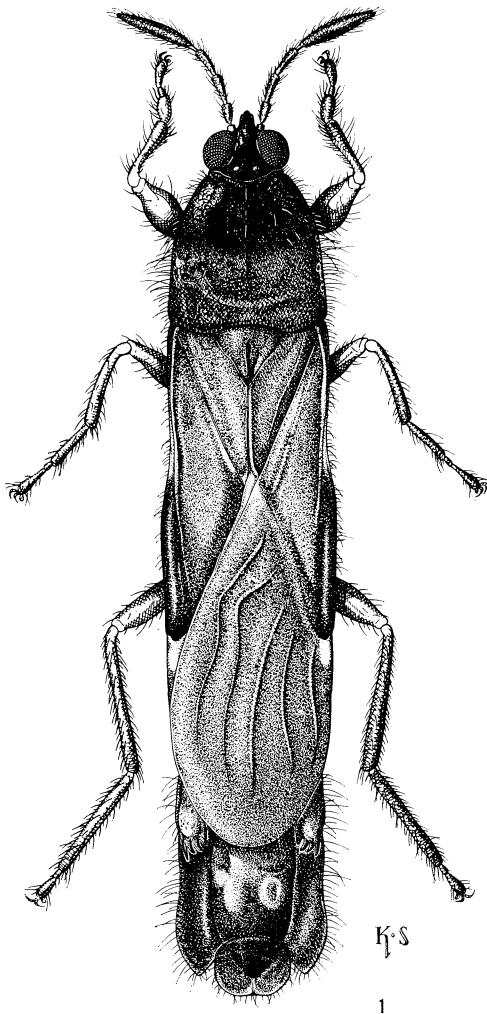


Fig. 1. *Pirkimerus papuensis*, dorsal view;

reflexed, 8th segment unique, nearly oval, laterally strongly flattened and expanded; scent gland orifice elliptical, rather typical for genus, but strongly angled anteriorly from base; fore femora strongly incrassate, nearly mutic, a very small protrusion showing a spine vestige midway along ventral surface; hind femur slender, mutic below, hind tibia terete, lacking spines or tubercles, hairs short, not as long as diameter of tibia; labium extending between fore coxa, 2nd segment very slightly exceeding base of head, length labial segments I .34 mm, II .30 mm, III .17 mm, IV .18 mm; antennae short, stout, segments II and III slightly clavate, but not prominently enlarged on distal 1/2 as in many species of *Pirkimerus*, segment IV elongate, thick, fusiform, length antennal segments I .19 mm, II .25 mm, III .23 mm, IV .68 mm; total length 8.40 mm.

ing paler at distal end of segments II and III; pronotum centrally with numerous well separated large shallow punctures; head & thorax uniformly pruinose below with a large shining central disc on mesosternum; pronotum & abdomen laterally with a number of elongate upstanding yellow hairs, dorsal surface appearing nearly glabrous with a few scattered hairs.

Head non-declivent, eyes strongly protuberant, very large, in contact with anterolateral pronotal angles, but extending prominently laterad, tylus extending midway to distal end of antennal segment I; length head .65 mm, width head .76 mm, interocular space .27 mm; pronotum evenly & convexly narrowing from humeral angles to anterior margin, lateral margins rounded for most of length, becoming carinate on anterior one-fourth, transverse impression absent, posterior margin shallowly concave, a distinct narrow median longitudinal carina present from anterior margin to posterior one-fifth, length pronotum 1.25 mm, width pronotum 1.42 mm; length scutellum .62 mm, width scutellum .61 mm; lateral corial margin straight to apex of claval commissure, then abruptly expanded laterad, membrane attaining base of 7th abdominal tergum, distance apex clavus - apex corium 1.67 mm, distance apex corium - apex abdomen 3.22 mm; posterior margin of 6th abdominal tergum uniquely modified (fig. 1, 2), produced over base of 7th tergum with margin irregularly & deeply serrate, 6th connexivum even further raised, deeply overlapping 7th connexivum & terminating in a series of heavy black tipped spines (fig. 1, 2), 7th connexivum greatly expanded laterad and

Holotype ♀. NEW GUINEA: Papua: Mt Dayman, Maneau Range, 1550 m, N. Slope No. 5,

30.VI-13. VII.1953, Geoffrey M. Tatey. In American Museum of Natural History.

This is one of the most bizarre members of the genus *Pirkimerus*. In most respects it is a typical member of the genus: indeed it is so in all features except for the peculiar modifications of abdominal segments VI, VII and VIII (fig. 1, 2). No other known member of the Blissinae has the posterior margin of segment VI projecting over tergum VII, & ending in teeth & crenulations as does *papuensis*, nor do any others possess the foliaceous expansions of segments VII and VIII. It seems likely that these developments are functional modifications for some unusual egg placement. Indeed the intersegmental membranes between sterna V and VI, and VI and VII (fig. 2) appear to be unusually large & thus to give the abdomen the ability to depress & bend down the distal segments to a much greater degree than in other Blissinae.

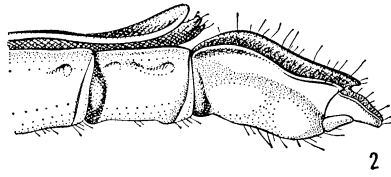


Fig. 2. *Pirkimerus papuensis*, lateral view abdominal segments V-IX.

While unique in the above features *papuensis* shows relationship to *sesquipedalis* Dist. in the shining lateral corial area, lack of elongate hairs on the hind tibia & completely shining head & pronotum, as well as in general size & habitus. The mutic & non-tuberculate hind femur and tibia separate *papuensis* from *sesquipedalis*. The median pronotal carina resembles that found in *parviceps* Bergr. from the Philippines.

This is the first species of *Pirkimerus* known from other than the Oriental Region & the presence of the genus in New Guinea is thus of considerable zoogeographic significance.

#### ***Pirkimerus japonicus* (Hidaka)**

*Ischnomorphus japonicus* Hidaka, 1961, Kontyû 29: 256.

*Pirkimerus davidi* Slater & Ahmad, 1965, Trans. R. Ent. Soc. Lond. 117. (10): 324. New synonymy.

Slater & Ahmad (1965) in their revision of the genus *Pirkimerus* reduced Hidaka's *Ischnomorphus* to synonymy but were unable to satisfactorily place the type species *japonicus*. It was mentioned in the latter paper that *japonicus* & *davidi* might "ultimately be shown to be conspecific," but also pointed out that there were a number of features in Hidaka's figures and description of *japonicus* that differed from *davidi*, & furthermore that there were a number of serious discrepancies between Hidaka's figures and description (see Slater & Ahmad, *ibid.*, pp.324-325). During Dr P. D. Ashlock's recent trip to Japan he was able to obtain for study a male of *P. japonicus* from "Noborito (Kanagawa) 19. IV-1954 coll A. Kato." This specimen differs from Hidaka's description in having the pronotum considerably broader than long, in having the basal metatarsal segment only slightly longer than segments II and III combined (instead of slightly shorter than twice the length of II and III combined), in having the membranal veins matching the background (dark where membrane is dark - pale where membrane is pale), in having the apical margin of the membrane black, and in possessing hind tibial hairs considerably longer than the diameter of the tibia. There are two to three large ventral spines on the hind femur. All of these were ambiguous features or apparent differences between *japonicus* & *davidi*. There are no differences of significance between the specimen examined & the type series of *davidi* and the latter is therefore reduced to junior synonymy. I have recently examined a

very long series (100+) of this species in the Bishop Museum from Shaowu: Tachulan, Fukien, S. China, collected by T. C. Maa.

***Pirkimerus esakii* Miyamoto & Hidaka**

*Pirkimerus esakii* Miyamoto & Hidaka, 1960, Kontyû **28**: 44-45.

This species was also unknown to Slater & Ahmad at the time of their 1965 revision. The original authors' statement of the presence of three distinct rows of claval punctures and several color characteristics led Slater & Ahmad (p. 321) to believe that *esakii* was quite distinct within the genus. Dr Ashlock has been fortunate enough to obtain a female from the type locality, and Dr Wygodzinsky has forwarded to me a female present in the Museum of Comparative Zoology (Harvard) from "Kanna, Okinawa, VIII-27-1946 (C. T. Parsons)" which makes possible additional analysis of the species. In the Slater & Ahmad 1965 key *esakii* will run to *sesquipedalis* at couplet eleven. Thus it passes through couplet six where it had been segregated on the basis of the three distinct rows of claval punctures. *P. esakii* actually has only an incomplete row of punctures mesally on the basal portion of the clavus & at most a vague indication of a few punctures elsewhere, and in fact is quite similar in this character to other species of *Pirkimerus*. *P. esakii* is distinct from *sesquipedalis* in a number of ways. *Sesquipedalis* has the entire lateral third of the corium strongly shining; in *esakii* the radial vein is shining on the basal half but there is a dull area between it and the very narrow shining lateral margin, the latter extending as a fine line to the apex of the corium. In *sesquipedalis* the hind femur possesses a group of very elongate, strong spines ventrally near the middle; in *esakii* these are relatively much smaller and much less conspicuous. *Esakii* is a much smaller more slender species and has a relatively shorter labium that does not extend between the fore coxa. Actually *esakii* is more closely related to such minute species as *parviceps* and *nicobarensis* Dist. From the former *esakii* is readily separable by its lack of a median longitudinal ridge on the anterior one-half of the pronotum. The eyes of *esakii* are set close together so that the length of antennal segment II is greater than the interocular distance in contrast to both *parviceps* and *nicobarensis*. In addition *nicobarensis* has a broad lateral shining corial band in contrast to the extremely slender shining area of *esakii* as described above. In coloration *esakii* is also quite distinct. In contrast to the nearly uniformly dark membrane of *nicobarensis* and *parviceps*, with only an elongate pale spot adjacent to the apex of the corium, *esakii* has a large although obscure dark central macula and a semi-darkened area basally, but the entire lateral area is broadly pale yellow with a completely pale transverse band across the membrane a short distance anterior to the corial apices. The general effect of the fore wing of *esakii* is that of a pale coloration with darkened corial apices and diffuse infuscated areas on the membrane, while in *nicobarensis* and *parviceps* the effect is that of a dark wing with pale spots and maculae on the corium and membrane. *P. esakii*, therefore, is a distinct species within the genus.

***Pirkimerus philippinensis* Slater, new species**

Elongate, slender, subcylindrical; head and pronotum shining black to dark brown; marked with dark brown as follows: scutellum, basal three-fifths of clavus, basal fifth and distal half of corium, membrane except narrowly at extreme base and a broad irregular lunate band between

and immediately beyond apical portion of corium, entire ventral surface and antennal segment IV; antennal segments I, II and III, labium, pale areas on corium and membrane, entire fore legs, middle tibia and hind tarsus light testaceous yellow; hind femur and hind tibia dark red-brown, middle femur (and sometimes antennal segment III) somewhat infuscated; scutellum dull with a shining median elevation, corium with a complete broad shining band on lateral third; dorsal surface very sparsely clothed with short upstanding hairs to give a nearly glabrous general appearance, below with somewhat longer hairs; conspicuously but shallowly and irregularly punctate on pronotum with area across calli completely smooth.

Head moderately convex, eyes flattened against head, tylus blunt, extending well forward of juga, attaining distal one-fourth of antennal segment I, length head 4.4 mm, width head .43 mm, interocular space .19 mm; pronotum elongate, subcylindrical, only slightly but evenly narrowing from humeral angles to anterior margin, lacking a well developed carina mesally on anterior half, transverse impression absent, posterior margin evenly and moderately concave, length pronotum .72 mm, width pronotum .68 mm; scutellum relatively elongate, length scutellum .38 mm, width scutellum .30 mm; hemelytra with lateral margins expanded laterally adjacent to apex of claval commissure, membrane attaining anterior margin of 7th abdominal connexivum, distance apex clavus - apex corium 1.06 mm, distance apex corium - apex abdomen 1.56 mm; metathoracic scent gland orifice ovoid, typical for genus; fore femur incrassate, mutic, hind femur armed below with 3 elongate sharply curved spines, distal spine largest; all tibiae short and stout with short sharp spines scattered on shaft, hind tibiae most strongly so, segment I of hind tarsus more than twice length of segments II and III combined; labium surpassing fore coxa, attaining or approaching posterior margin of prosternum, 2nd labial segment surpassing base of head by much more than one-half its length, length labial segments I .23 mm, II .19 mm, III .15 mm, IV .15 mm; antennae short and stout, segments II and III conspicuously clavate, segment IV broadly fusiform, length antennal segments I .11 mm, II .17 mm, III .19 mm, IV .36 mm; total length 4.37 mm.

Holotype ♂. PHILIPPINE Is.: Palawan: Mantalingajan Tagembung, 1150 m, 19.IX.1961 (Noona Dan Exp. 61-62). In Copenhagen Museum. Paratypes: 3 ♂♂, 1 ♀, same data as holotype except 16.IX.1961 and 20.IX.1961. PHILIPPINE Is.: 1 ♀, Culion I., 6 km W. of Culion, 10. VI. 1962, light trap, H. Holtman (Copenhagen Mus., Bishop and J. A. Slater coll.)

In both habitus and general characteristics this species is closely related to *parviceps* and *nicobarensis*. *Philippinensis* is readily separable from *parviceps* by lacking a median carina on the anterior portion of the pronotum and by the possession of a shining lateral third to the corium. The relationship of *philippinensis* to *nicobarensis* is actually much closer. From the latter *philippinensis* may be distinguished most readily by the more elongate labium which extends posteriorly well beyond the fore coxa with segment II exceeding the base of the head for considerably more than one-half its length. In *nicobarensis* the labium is very short, with segment II scarcely attaining the base of the head and the labium not, or scarcely, attaining the anterior margin of the fore coxa. In *philippinensis* the pronotal length and width are subequal: in *nicobarensis* the pronotum is considerably longer than broad. The scutellar length relative to the pronotal length is also noticeably greater in *philippinensis*. The latter is a more elongate species with more strongly developed hind femoral spines. The coloration, eye shape, and shining lateral corial stripe are very similar in the two species.

There is some variation that may be of sexual significance in the type series. All of the males possess a broad transverse pale lunate band across the wing membrane near the apices of the corium. The two females, however, have the membrane completely dark with

the exception of an elongate pale lateral spot immediately adjacent to the corial apex. This latter condition is exactly like that found in the known specimens of *nicobarensis*. The eyes of the females are larger than those of the males as is already known to be the case in many other species of *Pirkimerus*.

### ***Pirkimerus parviceps* Bergroth**

*Pirkimerus parviceps* Bergroth, 1918, Phil. J. Sci. **13**:67-68.

Slater & Ahmad (1965) note that only 2 male specimens of *parviceps* were known, one from Mt. "Makiling" (USNM) and one from Los Banos. The latter was designated as Lectotype. Dr G. G. E. Scudder had apparently borrowed three specimens of the syntype series from the Helsinki Museum prior to my visit to that institution and has kindly made these available to me for examination. There are 2 females from Mt. "Makiling" and one specimen without abdomen from Los Banos. They do not differ from the previously described material and certainly constitute part of the original syntype series and are consequently designated as paralectotypes and appropriate labels attached.

### ***Ischnodemus sordidus* Slater, new species**

Moderately elongate, parallel sided; head, pronotum and scutellum uniformly black; clavus and corium nearly uniformly dark reddish brown, the latter pale along lateral margins, membrane pale brown, veins and basal margin concolorous with clavus and corium; black below with abdominal connexivum red-brown; antennae black, becoming red-brown on distal portion of segment IV; femora and hind tibia dark chocolate brown, other tibiae red-brown tarsi testaceous; head, pronotum and scutellum uniformly pruinose including humeral region of pronotum, corium dull with exception of a very narrow inconspicuous shining stripe along basal two-thirds of radial vein; calli marked with a pair of irregular granulate shining patches; pronotum with well separated very small inconspicuous obsolete punctures in area of transverse impression, scutellum transversely rugulose with small punctures basally and laterad; clothed with short semi-erect well separated hairs becoming more elongate and upright laterally on pronotum.

Head non-declivent, convex across vertex, ocelli small, eyes small and set on short shelf-like head extensions, well away from anterolateral pronotal angles, antenniferous tubercles truncate, tylus parallel sided, considerably exceeding juga, nearly attaining distal end of antennal segment I, length head .68 mm, width head .95 mm, interocular space .61 mm, pronotum with transverse impression absent or obsolete, a broad shallow median longitudinal depression on anterior two-thirds, lateral margins shallowly sinuate, only moderately tapering anteriorly, posterior margin with moderately produced lobes laterad of base of scutellum, very slightly sinuately concave mesally, length pronotum 1.10 mm, width pronotum 1.25 mm; scutellum with a weak mesal elevation on distal half, swollen basally, length scutellum .61 mm, width scutellum .68 mm; hemelytra with lateral corial margins nearly straight, very slightly expanded caudad of end of claval commissure, membrane evenly rounded, extending to anterior margin of abdominal tergum VII, leaving abdominal connexivum exposed laterally, distance apex clavus - apex corium 1.33 mm, distance apex corium - apex abdomen 2.47 mm; mesosternum with a deep median longitudinal furrow; mesothoracic scent gland orifice conventionally narrowly lobate; fore femur moderately incrassate, mutic; labium extending well onto mesosternum, attaining or nearly attaining mesocoxa, length labial segments I .44 mm, II .42 mm, III .46 mm, IV .46 mm; antennae terete, segment IV prominently fusiform, length antennal segments I .19 mm, II .46 mm, III .38 mm, IV .86 mm; claspers (Pl. I, fig. 13, 18) with outer knob located subbasally, inner subbasal projec-

tion possessing a pair of short projecting lobes; sperm reservoir (Pl. I, fig. 3, 8) with a distally enlarged median bulb with a thick base and a pair of broad comma-shaped lateral sclerites or plates; total length 7.20 mm.

Holotype ♂ (A. N. I. C.) W. AUSTRALIA: S. of Pemberton, 6. I. 1961, on *Gahnia*, J. L. Gressitt. (Type exchange to Canberra). Paratype: 1 ♀, same data as holotype; 1 ♂, 1 ♀, Windy Harbour, 2 m, S. of Pemberton, 6. I. 1961, (Bishop and J. A. Slater coll.)

This is the first species of "true" *Ischnodemus* known from Australia. It is a very conventional appearing species, probably most closely related to the Oriental *noctulus* Distant as evidenced by the dark coloration, lack of shining humeral pronotal areas and the general nature of the male genitalia. It is tempting to consider the combination of characters found in this species as a generalized blissine condition & it is true that related conditions are represented in the Oriental, Ethiopian and Palearctic Regions. However, it is equally likely that *sordidus* is derived from recent Oriental stocks as are a number of other Australian blissines. It is most interesting to find a typical *Ischnodemus* present in Australia where this widespread genus had previously been thought to be absent. The male genitalia are somewhat similar to the condition found in the type species of *Ischnodemus* (*sabuleti*) but quite different from that found in Western Hemisphere and some African members of the genus.

#### Genus *Lucerocoris* Slater, new genus

Head, pronotum, corium laterad of cubital veins for entire length, apical third of membrane and area adjacent to apex of corium strongly shining, the membranal shining area forming a broad U-shaped terminal area to membrane; scutellum, clavus, inner portion of corium & basal central area of membrane strongly contrasting dull pruinose; antennae stout, subclavate, segment II extremely short, subequal to or shorter than segment I, III & IV longer, IV robustly fusiform; head relatively small, convex, with very large conspicuous ocelli, antenniferous tubercles truncate; fore coxal cavities strongly closed; apical corial margin straight; fore femur strongly incrassate, armed ventrally with numerous short stout spines, fore tibiae short, expanded and fossorially toothed at apex; labium extending onto mesosternum; metathoracic scent gland orifice strongly curved anteriorly, external lobate portion lying nearly parallel to long axis of body, entire external orifice area forming a strong right angle; middle and hind femur elongate, slender, unarmed, both tibiae and femora bearing elongate hairs, those on femora and some tibial hairs considerably exceeding diameter of femora and tibiae, tibiae rounded, nonexpanded; genitalia shortened and reduced as in *Spalacocoris*, with ovipositor not completely dividing abdominal sternum VII, claspers presumably short, lobate and rounded.

*Lucerocoris* is one of the most beautiful genera of Blissinae. Despite the rather different habitus, it is most closely related to the genus *Spalacocoris* with which it agrees in the possession of reduced genitalia, very large ocelli, short thick clavate antennae, and shining lateral portion of the corium. *Lucerocoris* species are less cylindrical insects than are species of *Spalacocoris*, are quite distinctive in having a two-textured hemelytral membrane, and have rather flattened pronota without a distinct median longitudinal furrow. The head and pronotal shapes resemble those of *Chelochirus pirkimeroides* Slater & Ahmad, which genus is also closely related to *Lucerocoris* and *Spalacocoris*.

Type-species: *Lucerocoris nigrotibialis*, n. sp.

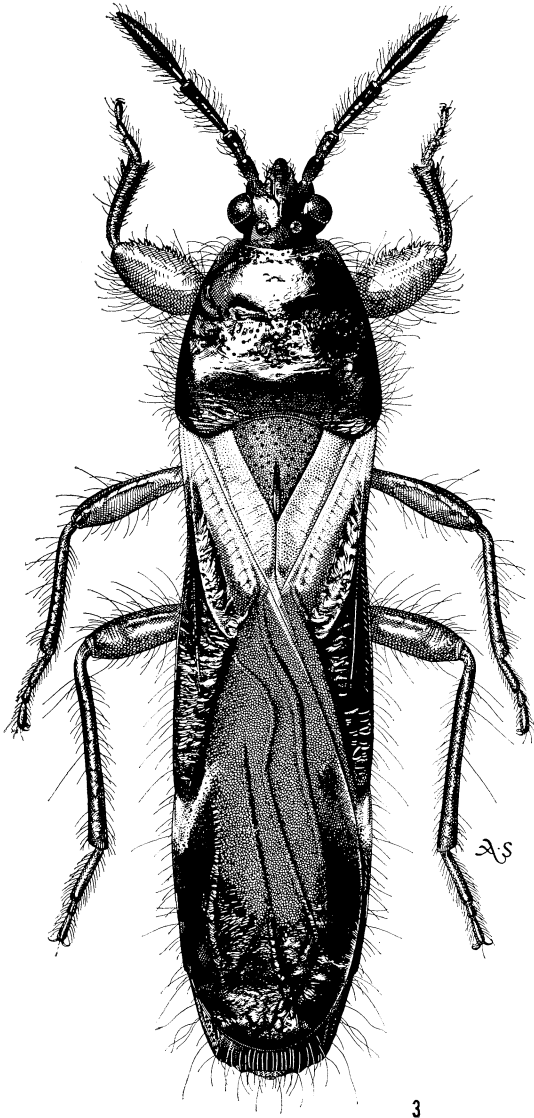
**Lucerocoris nigrotibialis** Slater, new species

Fig. 3. *Lucerocoris nigrotibialis*, dorsal view.

about one-half femoral length, armed at apex with a group of divergent short, thick, hook-like spines; mesosternum with a shallow median furrow; labium extending well onto mesosternum but not attaining mesocoxa, length labial segments I .57 mm, II .57 mm, III .61 mm, IV .57 mm; antennae thick and heavy, segments II and III slightly swollen at apex, segment IV evenly fusiform, length antennal segments I .28 mm, II .28 mm, III .65 mm, IV .95 mm; total length 9.12 mm.

General coloration black, strongly shining; clavus, base and inner half of corium to just beyond claval commissure, legs, except tibiae, and labium bright yellow; all tibiae dark brown to black; a pair of triangular white spots on membrane adjacent to apices of coria; surface generally smooth and glabrous with scattered irregular punctures on pronotum in central area and at anterior margin, transversely rugulose across shining area of corium; pronotum laterally, abdomen, antennae and legs with elongate upstanding hairs, corium laterally with short hairs, clavus with scattered short setigerous hairs.

Body elongate, linear; head convex, non-declivent, jugs very small and inconspicuous, tylus rounded distally, attaining or slightly exceeding distal end of antennal segment I, eyes large, rounded, non-stalked, set slightly away from anterolateral pronotal angles, length head .87 mm, width head .99 mm, interocular space .55 mm; pronotum very slightly convex, lateral margins evenly and convexly narrowing from humeral angles to anterior margin giving an ellipsoidal appearance, produced anteriorly as a short blunt tubercle, posterior margin deeply concave, transverse impression wide, shallow, coarsely and irregularly rugose, length pronotum 1.62 mm, width pronotum 2.0 mm; scutellum mutilated; corium elongate, strongly tapering, lateral margins sinuate, hemelytra covering abdomen laterally, membrane broadly rounded, almost attaining apex of abdomen, distance apex clavus - apex corium 2.10 mm, distance apex corium - apex abdomen 2.69 mm; abdomen nearly linear, slightly tapering to apex, the latter subtruncate; metathoracic scent gland orifice "L-shaped," apex pointed and directed anteriorly; fore femur short, strongly incrassate, armed below with numerous short sharp spines, fore tibia thick, only



Holotype ♀ (BISHOP 7902). PHILIPPINES: Mindanao, Mt. Katanglad, Bukidnon, 1480 m, 27-31. X.1959, L. W. Quate. In Bishop Museum.

This striking species is closely related to *brunneus* described below, but readily distinguishable by the coloration and structural differences as discussed under the latter species.

Included with the holotype of *nigrotibialis* are five nymphs, four in the fifth instar and one probably of the second instar. These nymphs are unusual in the Blissinae in that they lack the series of dark sclerotized "plates" both above and below on the distal abdominal segments. The second instar nymph is completely pale yellow over the entire body surface including the appendages. The fifth instar nymphs have the head, pronotum, scutellum, wing pads and antennae infuscated with light red-brown coloration. The abdomen of the fifth instar nymph has the distal half of the 7th and the terminal segments dark brown, but lacks distinct plate-like sclerotization. The remainder of the abdomen is uniformly pale yellow with no indication of the red, black, white and yellow variegated pattern so frequently found in blissine nymphs. Structurally the nymphs resemble the adult in possessing short stout clavate antennae, multispinose fore femora, apically spinose fore tibiae and elongate hairs on the dorsal surface.

**Lucerocoris brunneus** Slater, new species                      Fig. 4.

General coloration, including antennae, rich red brown, strongly shining; corium with distal half of lateral shining area dark brown, entire basal half of corium light yellow, clavus, posterior half of dull portion of corium, and membrane chocolate-brown; legs and labium yellow, tibiae somewhat infuscated; a pair of narrow white areas on membrane adjacent to corial apices; dorsal surface generally smooth and shining with distinct round punctures on pronotum scattered over anterior portion of posterior lobe; glabrous mesally with elongate hairs on fore femur and laterally on pronotum and abdomen, shorter hairs on legs, antennae and laterally along corial margin.

Body very elongate and slender; head evenly convex across vertex, non-declivent, eyes sessile, angled cephalolaterad from posterior to anterior margin, tylus attaining or very slightly exceeding distal end of antennal segment I, length head .84 mm, width head .91 mm, interocular space .49 mm; pronotum extremely elongate, only slightly and evenly narrowed anteriorly, posterior margin very deeply concave, transverse impression obsolete, shallowly depressed laterally, anterior lobe moderately and evenly convex, length pronotum 1.62 mm, width pronotum 1.60 mm; scutellum with a wide low median elevation, deeply and coarsely punctate laterally, length scutellum .67 mm, width scutellum .57 mm; hemelytra elongately tapering, sinuate laterally, distance apex clavus - apex corium 1.82 mm, distance apex corium - apex abdomen 2.69 mm; abdomen only slightly tapering caudad, apex truncate; metathoracic scent gland orifice "L-shaped" as in *nigrotibialis*, mesosternum with a median furrow; fore femur very strongly incrassate, multispinose below, fore tibia thickened, with a series of short thick spines along shaft and apex with short thick hook-like spines; labium extending well onto mesosternum, not quite attaining mesocoxa, length labial segments I .53 mm, II .72 mm, III .70 mm, IV .57 mm; antennae very short and thickened, segments II and III very much shortened, IV robustly fusiform, length antennal segments I .25 mm, II .22 mm, III .42 mm, IV .88 mm; total length 8.52 mm.

Holotype ♀ (Helsinki Mus. no. 3094). PHILIPPINES: Malinao, Tayabas, Baker.

This species is closely related to *nigrotibialis* but readily recognizable by the bright red-brown rather than black head and pronotum, by the very different antennal proportions where antennal segment III is relatively much shorter in *brunneus*, perhaps best expressed

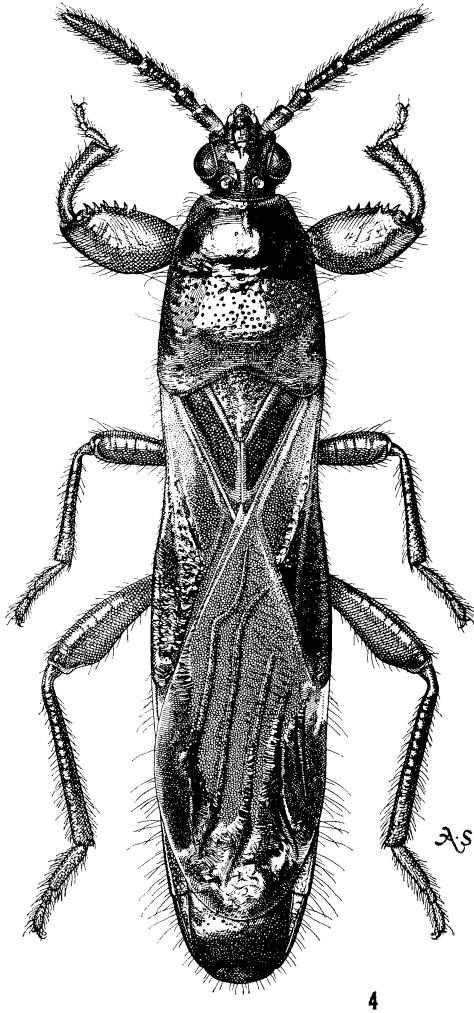


Fig. 4. *Lucerocoris brunneus*, dorsal view.

as segment III being shorter than segments I and II combined in *brunneus* (.42 mm-.47 mm), but longer in *nigrotibialis* (.65 mm-.56 mm), by the relatively more elongate pronotum (length-width subequal in *brunneus*, 1.62 mm-1.60 mm, as against 1.62 mm-2.0 mm in *nigrotibialis*), and by the more elongate eyes in *brunneus*.

#### Genus *Scintillademus* Slater, new genus

Robust, elongately elliptical; strongly shining on head, pronotum, median area of scutellum, distal half of clavus except along claval suture, entire corium except for a marginal stripe along claval suture; entire membrane, lateral area of scutellum, base and lateral margins of clavus, venter of head and prosternum before acetabula a strongly contrasting pruinose; surface glabrous or nearly so; eyes protruding, small, ocelli small and inconspicuous; apical corial margin straight for most of length, becoming noticeably concave before apex of claval commissure; antennae slender, terete; metathoracic scent gland orifice elongate, expanded moderately and irregularly at distal end; fore coxal cavities closed; fore femur incrassate, armed below on distal third with a large bifid spine (fig. 5a), the small secondary spine arising from and directed at right angles to the larger, a small additional spine at nearly distal end of femur; fore tibia short, slightly swollen distally but non-fossorial; middle and hind femora mutic; genal area with a short thick blunt projection present in both sexes (fig. 5a); ovipositor elongate, completely dividing abdominal sternum VII.

The affinities of this distinctive genus are somewhat obscure. The toothed genal projections may indicate relationship to *Dentisblissus*: however, the projections in both sexes are short as in females of *Dentisblissus* and some species of *Patritius* Distant. The shape of the metathoracic scent gland orifice is also similar to that of *Dentisblissus*. It is possible that *Scintillademus* represents a generalized condition from which the highly specialized species of *Dentisblissus* have evolved. The peculiar bifid femoral spine configuration is very similar to the condition found in *Aradademus* (Madagascar) (Slater 1967), and some species of *Patritiodemus* (South America) (Slater & Ahmad in press). This fore femoral configuration, however, is almost certainly the result of evolutionary convergence rather than an indication of actual close relationship.

Type-species: *Scintillademus gemmatus* n. sp.

***Scintillademus gemmatus* Slater, new species Fig. 5.**

Head, pronotum and mesal area of scutellum black, shining, becoming dark red-brown on apex of tylus and across posterior humeral areas of pronotum; clavus tan, somewhat darker on basal third; corium chiefly white or very light testaceous with terminal fourth and a large elliptical spot laterally adjacent to apex of corium, white; abdomen bright reddish brown, becoming nearly black mesally and basally on sternum; antennae and all femora dark chocolate brown; tibiae and tarsi a contrasting light testaceous; head rugosely punctate, pronotum with numerous distinctly separated punctures anteriorly and across a broad central area, basal one-third and area of calli smooth, glabrous, scutellum punctate basally and laterally, latter area coarsely so, a single line of punctures down center of clavus; entire dorsal surface glabrous or nearly so, venter with scattered declivent hairs, abdominal connexiva thickly clothed with short decumbent hairs.

Head non-declivent, only very slightly convex across vertex, tylus considerably exceeding juga, extending anteriorly midway to distal end of antennal segment I, antenniferous tubercles divergent and bluntly tapering, eyes produced laterad, non-stalked, length head .65 mm, width head .87 mm, interocular space .61 mm; pronotum slightly and evenly convex, transverse impression absent, lateral margins evenly convex, strongly narrowed from humeral angles to anterior margin, posterior margin strongly and evenly concave, length pronotum 1.25 mm, width pronotum 1.60 mm; scutellum with a broad low median elevation, length scutellum .57 mm, width scutellum .76 mm; hemelytra with lateral margins sinuate, broadened caudad of distal end of claval commissure, membrane broadly rounded, covering abdominal connexiva, extending onto abdominal tergum VII, distance apex clavus - apex corium .93 mm, distance apex corium - apex abdomen 2.84 mm; labium extending onto anterior portion of mesosternum, remote from mesocoxa, length labial segments I .46 mm, II .48 mm, III .34 mm, IV .42 mm; antennae slender, terete, segment IV narrowly fusiform, length antennal segments I .23 mm, II .49 mm, III .38 mm, IV .72 mm ( $\sigma$  paratype, New Guinea); claspers (Pl. I, figs. 14, 19) with shaft slender, without a produced inner subbasal lobe, outer lobe

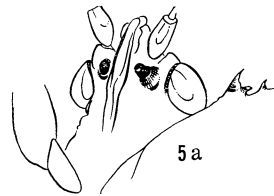
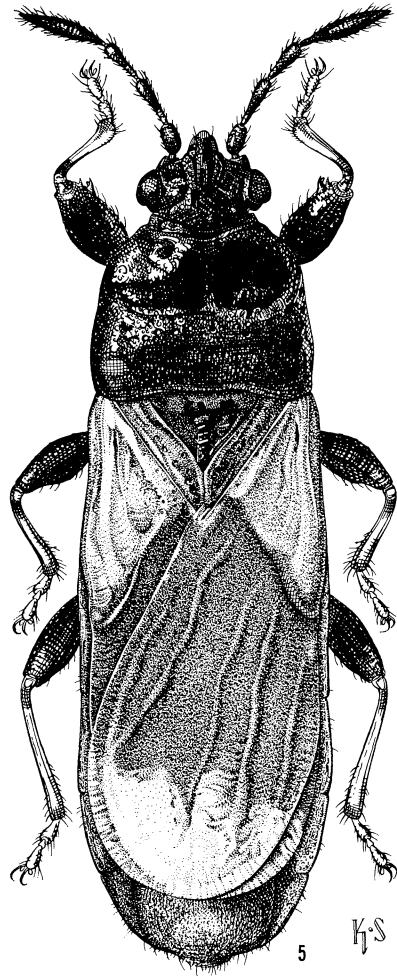
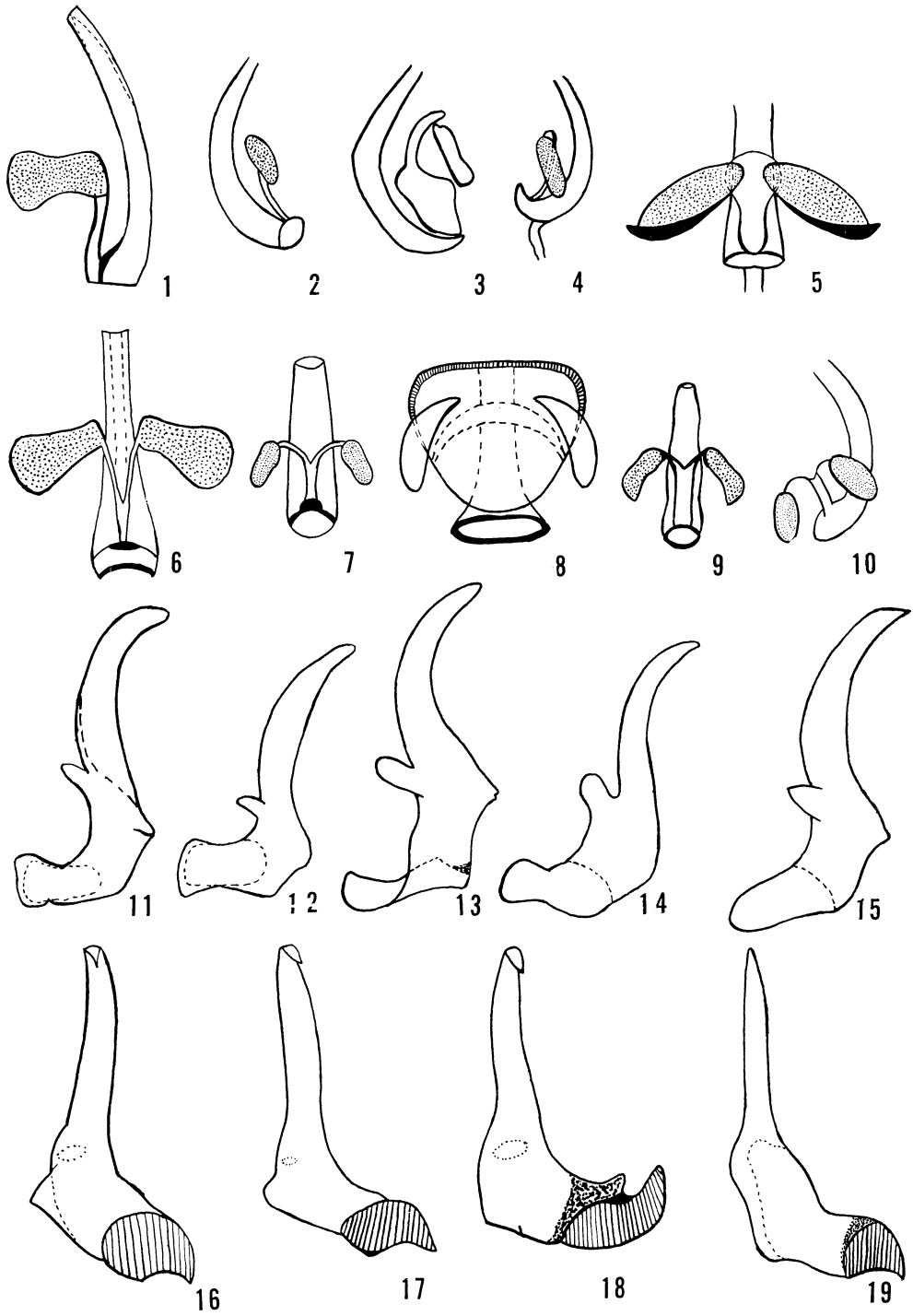


Fig. 5. *Scintillademus gemmatus*, dorsal view. Fig. 5a, *Scintillademus gemmatus*, under side of head, fore femoral spines.



directed obliquely away from base, rounded; sperm reservoir (Pl. I, fig. 5) with a median sclerotized bar that broadens distad, and a pair of very large elongately elliptical lateral wings; total length 6.96 mm.

Holotype ♀ (BISHOP 7903). NEW GUINEA (NE) : Mt Otto, 2200 m, 24. VI. 1955, J. L. Gressitt. Paratypes : NEW GUINEA (NW) : 2 ♀♀, Wisselmeren, Enarotadi, 1800-2000m, 22.VIII. 1962; 1 ♀, same locality, 1850-2050 m, 5-6. VIII. 1962, J. Sedlacek; 1 ♂, Netherlands New Guinea Exp., Star Range, 1240 m, "tussen Sibil en Ariemkop" 25. V. 1959. NEW GUINEA (NE) : 1 ♂, Mt Otto, 2200 m, 22. VI. 1955; 1 ♀, Mt Missim, 1600-2000 m, 21-24.IX.1964, M. Sedlacek; 1 ♀, Daulo Pass, 2400 m, (Asaro-Chimbu div.) 15.VI.1955, Gressitt; 1 ♂, Daulo Pass, 15.V.1963, J. Sedlacek; 1 nymph, Daulo Pass, 2400 m, 27. I. 1963; 2 ♀♀ (1 mutilated), Mt Kaindi, 2400 m, 27. I. 1963; 1 ♀, Kepilam, 2450-2600 m), 22. VI. 1963, J. Sedlacek; 1 ♂, Mt Kaindi, 2350 m, 7. IV. 1966, Gressitt; 1 ♂, same data but 23. III. 1966. NEW BRITAIN : 1 ♀, Vunabakan, 180 m, 10 km, E. of Keravat, 16-20.XI.1959, T. C. Maa. (BISHOP, Leiden Mus. and J. A. Slater coll).

The paratypes from Daulo Pass, Mt Otto, Mt Kaindi, Kepilam and New Britain are sub-brachypterous with the membrane extending only onto the anterior portion of abdominal tergum. These specimens have narrower pronota (perhaps associated with brachyptery) and have the posterior lobe red-brown laterally rather than uniformly black as in the rest of the New Guinea material.

#### Genus *Dentisblissus* Slater

The genus *Dentisblissus* was erected by Slater (1961) to include two species of large blissines with the genal area in the males projecting forward of the head as a pair of distally bifurcate tusks.

The presence of alternating shining and pruinose areas on the dorsal surface of the pronotum, while still an important generic feature, appears to be modified as a result of brachyptery. When the wings are reduced the posterior lobe of the pronotum is usually smaller and narrower (presumably due to the loss of flight muscles) and concomitant with this the pruinose area across the extreme base of the pronotum is lost (*divisus* (Walker)), or reduced to small lateral strips (*corniger* n. sp.). Thus this character is only of limited value in separating species.

The male genitalia of *Dentisblissus* species have a peculiarly developed sperm reservoir (Pl. I, fig. 1, 2, 4, 6, 7, 9, 10) consisting of a median sclerotized piece arising from the duct and splitting to form a laterally curving fork that then broadens into a pair of elliptical lateral sclerites. The claspers (Pl. I, fig. 11, 12, 15, 16, 17) are distinct for the various species but are rather conventional with a weakly produced inner sub-basal lobe and the outer lobe small and subacute at apex.

#### Plate I

Fig. 1-10. Sperm reservoir: 1. *Dentisblissus venosus*, 2. *D. divisus*, 3. *Ischnodemus sordidus*, 4. *D. corniger*, 5. *Scintillademus gemmatus*, 6. *D. venosus*, 7. *D. divisus*, 8. *I. sordidus*, 9. *D. corniger*, 10. *D. divisus*, Fig. 11-19, clasper: 11. *D. corniger*, 12. *D. divisus*, 13. *I. sordidus*, 14. *S. gemmatus*, 15. *D. venosus*, 16. *D. corniger*, 17. *D. divisus*, 18. *I. sordidus*, 19. *S. gemmatus*.

In the present paper two additional species of *Dentisblissus* are described and a revised key to the known species is given.

KEY TO SPECIES OF DENTISBLISSUS

1. Forewing uniformly dark brown to black, with at most a minute light streak at base of membrane ..... **umbrosus**  
Forewing with white areas present on clavus, corium and at least apex of membrane ..... 2
2. Antennal segment III relatively short (ratio interocular space/length segment III average 1.33); Ventral head tusk of ♂ long\* (ratio length tusk/ interocular space 1.40) ..... **corniger**  
Antennal segment III longer (ratio interocular space/length segment III average 1.06, range .94-1.20); tusk shorter (ratio length tusk/interocular space average 1.09, range .77-1.26)..... 3
3. Labium extending onto anterior margin of mesosternum, segment I nearly reaching base of head (ratio total length labium/interocular space average 3.11, range 3.02-3.85)..... **divisus** (Walker)  
Labium shorter, barely extending beyond fore coxa, segment II exceeding base of head by nearly one-half its length (ratio total length labium/interocular space average 2.64, range 2.40-2.84)..... **venosus** (Breddin)

*Dentisblissus umbrosus* Slater, new species      Fig. 6.

Body robust, linear; head and median scutellar elevation shining, pronotum with alternate shining and pruinose areas as follows: extreme anterior pronotal margin mesally shining with a narrow collarlike pruinose band immediately behind followed by a very large black shining area across calli, this complete mesally, transverse impression pruinose, a broad strap-like shining reddish-brown band across humeral area, followed basally by a narrow pruinose stripe; remainder of scutellum and forewing pruinose, the latter narrowly shining along basal half of radial vein and basal three-fourths of extreme lateral corial margin; head and anterior one-half of pronotum black, posterior one-half of pronotum, scutellum and entire forewing including membrane uniformly blackish brown; ventral head tusk, antennal segment I, bucculae, connexiva and all legs sordid yellow with bifid apices of tusks black and femora except apices darker brown, abdomen and antennal segments II, III and IV dark blackish brown; head deeply and irregularly punctate, pronotum and scutellum nearly smooth with only a few scattered shallow punctures; body appearing glabrous laterally with a few semi-erect sericeous hairs present.

Head broad, non-declivent, bucculae viewed from above curving concavely mesad, exceeding apex of tylus and reaching distal third of antennal segment I, tusks moderately elongate with only bifid apex extending beyond distal end of antennal segment I, antenniferous tubercles prominent, truncate, with anterolateral angles acute and slightly produced, eyes large, slightly produced laterally, set slightly away from anterolateral pronotal angles, length head .59 mm, width head .76 mm, interocular space .49 mm; pronotum with lateral margins nearly parallel from humeral angles to central area of calli, then evenly rounded to anterior margin, slightly sinuate in area of transverse impression, posterior margin very slightly concave, transverse impression broad, shallow, complete, length pronotum 1.12 mm, width pronotum 1.27 mm; scutellum with shining median elevation on distal two-thirds, length scutellum .46 mm, width scutellum .65 mm; hemelytra with lateral corial margins nearly parallel sided, narrowing evenly to broadly round-

\* Measured ventrally from posterior margin of eye to apex of tusk.

ed apex of membrane, reaching anterior margin of 7th abdominal tergum, apical corial margins concave at base, spiracles prominent with short tube-like projections, distance apex clavus - apex corium .76 mm, distance corium - apex abdomen 2.17 mm; metathoracic scent gland orifice elongate, widened distally, angled slightly posteriorly; all femora incrassate, fore femur armed below on distal one-third with a long curving spine with 2 shorter spines distad and 2 basad along ventral face, middle and hind femora with numerous very short denticulate tubercles; labium partially obscured, extending between fore coxa, length labial segments I .38 mm?, II .32 mm, III .23 mm, IV .19 mm?; antennae with segments II and III nearly terete, slightly enlarged at distal ends, segment IV narrowly fusiform, length antennal segments I .19 mm, II .38 mm, III .34 mm, IV .61 mm; total length 5.58 mm.

Holotype ♂ (BISHOP 7904). NEW GUINEA (NE): Torricelli Mts., Sugoitei Vill., 900 m, 24.I-5.I.1959, W.W. Brandt.

*D. umbrosus* is readily distinguished from other species of *Dentisblissus* by the nearly uniformly dark coloration with a complete lack of the light yellow, white and tan variegated coloring of the other species. It is also much smaller than any other known species of the genus.

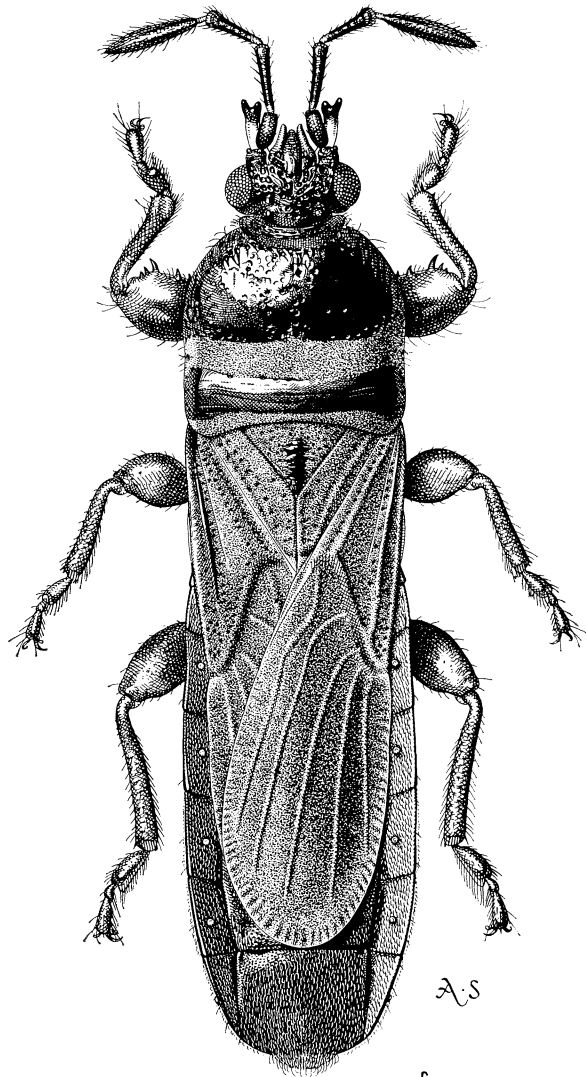


Fig. 6. *Dentisblissus venosus*, dorsal view.

#### ***Dentisblissus corniger* Slater, new species**

Body stout, robust; shining and pruinose areas conventional for genus except pruinosity posterior to humeral transverse shining band reduced to a pair of small strips on either side of meson, shining areas of head and anterior pronotal lobe black, those on posterior pronotal lobe and scutellar elevation dark red-brown; antennal segment I, distal one-half of tylus, bucculae and ventral head tusks sordid yellow, tusks brown at apex, antennal segment II red-brown, III and IV darker chocolate brown, legs reddish brown, tarsi and apices of femora flavescent; heme-

lytra dull testaceous with radial vein and extreme lateral corial margin shining, clavus fuscus on basal one-third and narrowly along claval commissure, apical one-third of corium and nearly entire membrane including lateral margins chocolate brown with base narrowly and apical one-fourth of membrane flavescent; abdomen red-brown with a narrow yellow marginal connexival strip; head rugulose, pronotum and scutellum with scattered shallow punctures, posterior pronotal band and scutellar elevation smooth, glabrous, shining area on anterior lobe of pronotum striate; very sparsely clothed with a few scattered semi-erect sericeous hairs.

Head broad, non-declivent, bucculae exceeding apex of tylus, extending midway onto antennal segment I, eyes prominent, produced on short shelf-like lateral head extensions, set well away from anterolateral pronotal angles, ventral head tusks long, reaching nearly midway onto antennal segment II, antenniferous tubercles prominent, the anterolateral angle produced to form a blunt angle, length head .70 mm width head 1.00 mm, interocular space .65 mm; pronotum subquadrate, wider across anterior lobe than across humeri, transverse impression broad, very shallow, complete, posterior margin moderately and evenly concave, length pronotum 1.44 mm, width pronotum 1.44 mm; scutellum with a shining low median elevation on distal two-thirds, length scutellum .65 mm, width scutellum .76 mm; hemelytra with apical corial margins shallowly concave, lateral margins nearly parallel, membrane reaching anterior margin of abdominal tergum V, spiracles very prominent as short tube-like projections, distance apex clavus - apex corium .65 mm, distance apex corium - apex abdomen 3.08 mm; all femora strongly incrassate, fore femora armed below on distal third with a large "double" spine, and along greater part of length with a series of shorter spines, fore tibia thickened, clavate, tarsal segment I greatly enlarged, broader than greatest width of tibia and with a prominent tuft of hair, mid and hind femora bearing numerous tiny "tubercles" ventrally; metathoracic scent gland orifice elongate, broad, apex broadened posteriorly; labium extending beyond fore coxae but not attaining posterior margin of prosternum, length labial segments I .46 mm, II .44 mm, III .38 mm, IV .34 mm; antennal segments II & III moderately clavate, segment IV narrowly fusiform, length antennal segments I .27 mm, II .64 mm, III .49 mm, IV .84 mm; total length 7.20 mm.

Holotype ♂. AUSTRALIA: Somerset, I-75 (L. M. d'Albertis). In Museo Civico di Storia Naturale Genoa.

Paratype: ♀, same data as holotype (J.A. Slater coll.)

This species is very closely related to *divisus* Walker. We have described it with some hesitation in view of the lack of a comparative series. The genital characteristics are very similar. However, in addition to the differentiating characters given in the key, the claspers of *corniger* (Pl. I, fig. 11, 16) are heavier than those of *divisus* (Pl. I, fig. 12, 17) with the apical region of the shaft noticeably thicker, with a larger outer knob and a prominent ridge originating on the shaft somewhat distad of the base of the outer knob and running obliquely basally mesad across the face of the clasper. The lateral plates of the sperm reservoir (Pl. I, fig. 4, 9) are also relatively larger and subrectangular in contrast to the small nearly oval lateral plates of *divisus* (Pl. I, fig. 2, 7).

#### **Dentisblissus venosus** (Breddin)

*Ischnodemus venosus* Breddin, 1900, Ent. Nachr. **26**: 25.

*Macropes humboldti* Distant, 1903, Ann. Mag. Nat. Hist. ser 7, **12**: 251-2.

*Dentisblissus venosus* Slater, 1961, Pacific Ins. **3**(4): 482-4.

During the course of this work specimens from the following localities were examined:

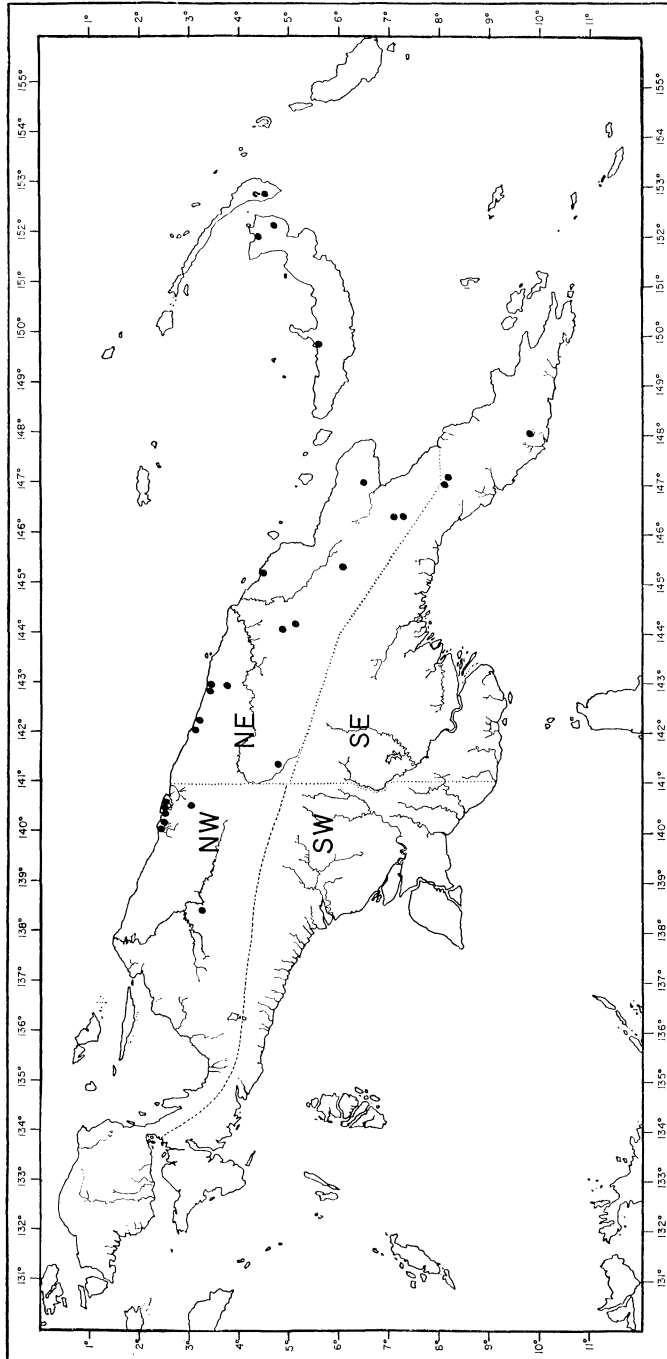


NEW GUINEA: Sepik: Maprik area, 160 m, 23.VIII.1957, D. Elmo Hardy; same data except 27. VIII. 1957, Light Trap; Adelbert Mts: Wanuma, 800-1000 m, 26. X. 1958, Grasses, J. L. Gressitt; same, "Sugar Cane" same, "Pit Pit"\*; Goroka, 1500 m, 22.V.1961, Light Trap, J. L. & M. Gressitt; same, 1550 m, 25. VI. 1955 m, J. L. Gressitt; Papua, Brown River, 5 m, 23. X. 1960, J. L. Gressitt; same, 24. V. 1956, E. J. Ford, Jr; Dreikikir, Sepik Distr., 350 m, 23. VI. 1961, Grasses, J. L. & M. Gressitt; Behind Kotanika, nr. Lake Sentani, 80 m, 17. X. 1957, *Saccharum*, J. L. Gressitt; Ifar, Cyclops Mts, 300-500 m, 23-25. VI. 1962, J. L. Gressitt; same, 450-500 m, 9. IX. 1962, J. Sedlacek; Hollandia area, W. Sentani, Cyclops Mts, 150 m, 16.VI.1959, Grasses, Gressitt; Papua, Tapini, 1100 m, 17. V. 1961, Grasses, J.L. & M. Gressitt; Torricelli Mts, Siaute, sea lev., 9-17. XI. 1958, W. W. Brandt; Torricelli Mts, Nengian Vill., 17-24.XI.1958, Brandt; Feramin, 150-120 m, (*sic*) 1-6.VI.1959, Brandt; Mt. Hagen, 1600 m, 23. V. 1961, Light Trap, J. L. & M. Gressitt; Hollandia-Binnen, 100 m, 2.XI. 1958, Grasses, J. L. Gressitt; Bainyik, 150 m, S. of Maprik, 12. I. 1960, T. C. Maa; Lae, VIII. 1944, F. E. Skinner; Madang, 5 m, 28. X. 1958, Sugar Cane, J. L. Gressitt; Lae Area: Lae, 6-20 m, 22. VII. 1959, *Saccharum*, J. L. Gressitt. W. Highlands: Hagen, SE of Kornfarm, 16. X. 1958, at Light, J. L. Gressitt; Swart Val., Karubaka, 1500 m, 11.XI.1958, J. L. Gressitt; Wau, Morobe Distr., 1250 m, 11. I.1963 and 1200 m, 3. XII. 1962 and 1200-1250 m, 15. III. 1963, J. Sedlacek; Bulldog Road, 680 m, 9. III. 1962, J. Sedlacek; Genjam, 40 km, W. of Hollandia, 100-200 m, 1-10.III.1960, T. C. Maa; Sepik R., Pagwi area, 5 m, 25. VIII. 1957, D. Elmo Hardy; Torricelli Mts, Sugoitei Vill., 900 m, 6-9. II. 1959, W. W. Brandt. W. Highlands: Baiyer R., 1150 m, 18.X. 1958, Grasses, J. L. Gressitt; Papua, Laloki, River, 13. VI. 1928, Sugar Cane, "in spindles with leafhoppers", Pemberton; Laloki, Papua, 1910, F. Muir; Waris, S. of Hollandia, 450-500 m, 16-23. VIII. 1959, 24-31. VIII. 1959 & 1-2. VIII. 1959, T. C. Maa; Maprik, 150 m, 29. XII-17.I.1960 T. C. Maa; Adelbert Mts: Wanuma, 800-1000 m, 24. X. 1958 & 25. X. 1958, Sugar Cane, J. L. Gressitt; Lake Sentani, 50 m, 12. VII. 1957, Grasses, J. L. Gressitt; Aitape, Papua, VIII. 1944, W. R. Enns; Mt. Kaindi, 2350 m, 6. IV. 1966, J. L. Gressitt; Papua, Kokoda, 350 m, 21. III. 1956, J. L. Gressitt; Manumbo Madong Distr.; Wareo, Finsch Haven, L. Wagner; 1 spec. "New Guinea," no locality. NEW BRITAIN: Linga Linga Pl'n W. of Willaumez Pen., 1 m, 9.IV.1956, "Pit Pit" = *Saccharum* sp. J. L. Gressitt; Gazelle Pen., Gaulim, 140 m, 21-27.X.1962, J. Sedlacek; Gazelle Pen., Kerawat, 60 m, 29. VIII. 1955, J. L. Gressitt. NEW IRELAND: Gilingil Pl'n, 2m, VII. 1917, E. J. Ford, Jr.; "Camp Bishop" 15 km, up Kait R., 125 m, 7. VII. 1956, J. L. Gressitt.

#### ***Iphicrates pseudolineatus* Slater, new species**

Elongate, robust, parallel sided; head, pronotum and central elevated area of scutellum black, shining, pronotum with anterolateral pruinose areas which narrowly meet along midline to produce a small triangular shining area in mesal region of anterior margin, scutellum pruinose laterally and basally; hemelytra testaceous, membrane opaque flavescent, veins conspicuously dark fuscous brown; abdomen uniformly red-brown; legs reddish brown, darker on femora, antennae very dark red-brown; head coarsely rugosely punctate, pronotum with large punctures across transverse impression and scattered over area of calli and along meson, smooth and glabrous across humeral area; dorsal surface nearly glabrous, a few very small inconspicuous minute hairs present.

\* Dr Peter Ashlock informs us that "Pit Pit" is a common name for a species of *Saccharum*.



*Dentisblossus venosus* distribution in New Guinea, New Britain and New Ireland.

Head with bucculae strongly produced anteriorly, in contact on meson basally, distally divergent, ending in a pair of sharp acute points, juga acute, pointed, strongly raised, slightly convergent to apices, extending anteriorly nearly to apex of tylus, eyes small, angulate, strongly produced on laterally directed head stalks, well removed from anterolateral angles of pronotum, antenniferous tubercles strongly produced laterally in acute anterolaterad directed points, not curving inward in a hook-like arc, length head .68 mm, width head .89 mm, interocular space .61 mm; pronotum robust, lateral margins sinuate, area across calli nearly as broad as area across humeri, strongly and evenly curving mesad anterior to area of calli, transverse impression broad, shallow, posterior margin shallowly concave, length pronotum 1.44 mm, width pronotum 1.41 mm; scutellum with a prominent median elevation broadening basally to form a T-shaped shining area, length scutellum .61 mm, width scutellum .76 mm; hemelytra evenly tapering posteriorly, apical corial margin strongly and conspicuously concave, membrane mutilated, apparently extending at least over abdominal tergum VI, distance apex clavus - apex corium .80 mm, distance apex corium - apex abdomen 2.66 mm; abdomen with very broad connexiva exposed aterad of membrane; all femora moderately incrassate, fore femur armed below on distal third with a pair of short obtuse spines; metathoracic scent gland orifice elongate, straight sided, not prominently curving anteriorly at distal end; labium extending at least to base of prosternum, length labial segments I .38 mm, II .40 mm, III .30 mm, IV .38 mm; antenna with segment II terete, III and IV missing, length antennal segments I .23 mm, II .49 mm; total length 6.60 mm.

Holotype ♂. AUSTRALIA: Queensland, Bellenden Ker (Mjöberg). In Stockholm Museum.

This species is a rather perplexing one because the bucculae, although somewhat larger, are very similar in shape to the type found in *lineatus* Slater, coming to sharp acute points and being basally in contact on the meson. This type of bucculae is completely different from anything else known in the genus *Iphicrates*, and at first it seemed that this specimen represented only a large somewhat melanistic form of *lineatus*. However, there are such striking differences between this specimen and the series of specimens of *lineatus* as to lead to the conclusion that this cannot possibly represent the same taxon. The eyes are quite different, being ovoid and produced in *pseudolineatus* and elongate, nearly parallel sided in *lineatus*. Furthermore the conformation of the hemelytra is extremely different. In *lineatus* the apical corial margin is straight and the membrane is completely hyaline with the veins nearly unicolorous. In *pseudolineatus* the apical corium margin is strongly concave with the membrane opaque white with very deep brown strongly contrasting membranal veins. The degree of difference in the shape of the apical corial margin is remarkable in *Iphicrates*, as straight or concave corial margin is of generic significance in other Blissinae. The antenniferous tubercles in *lineatus* are strongly hooked and recurved, whereas in *pseudolineatus* they project anterolaterally in nearly straight acute points. The juga of *pseudolineatus* are strongly developed and mesally curved, whereas in *lineatus* they project nearly straight forward as sharp points. Pruinosity of the anterior portion of the pronotum which is developed laterally in both species meets behind the central shining anterior area in *pseudolineatus*, whereas in *lineatus* this mesal anterior shining area is in contact with the overall shining surface of the pronotum so that the pruinosity forms two widely separated anterolateral patches. In *lineatus* the transverse shining portion of the scutellum reaches the lateral margins, whereas in *pseudolineatus* there is a pruinose lateral strip present on either side of the lateral end of the shining area.

I wish to extend my sincere appreciation to the following individuals for their kindness in allowing me to study material in their various institutions: Dr P. Wygodzinsky (Ame-

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My sincere thanks are due Miss Karen Stoutsenberger, Mr Arthur Smith and Mr Abdul Hamid for preparation of the illustrations. I wish to thank Mrs Darleen B. Wilcox (University of Connecticut) for important assistance throughout the entire course of the preparation of this contribution.

Thanks are due the Bernice P. Bishop Museum for the map and list of New Guinea localities which made it possible to plot the distribution of this species.

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