

**Some Orthoptera-Caelifera from the Philippine,  
Bismarck and Solomon Islands, with a few  
interesting records from New Guinea  
and the Moluccas.**

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The following is an account of the short-horned grasshoppers and their relatives, collected by members of the Danish "Noona Dan" Expedition (see Petersen, 1966). The number of species obtained is not great, but some very valuable series were brought back, together with lesser material of little-known, or previously unknown forms. Opportunity is also taken here to record certain miscellaneous specimens of interesting species from the area visited by the expedition, but which were not included in its collections. Originally it was intended only to include specimens in the writer's own instituton among such additional records, but, certain other relevant material from other sources being currently at hand, it was considered that it might be of interest to refer to this also. No attempt has been made, however, to extend the scope of the information presented by thoroughly investigating these other sources for additional material.

Specimens not collected by the expedition are indicated as follows: ☆ = B. P. Bishop Museum, Honolulu; † = Lyman Entomological Museum, McGill University, Macdonald College; ‡ = Academy of Natural Sciences of Philadelphia (mostly specimens bearing "M.C.Z." — Museum of Comparative Zoology, Harvard University — labels).

Superfam. **TRIDACTYLOIDEA**.Fam. **TRIDACTYLIDAE**.

## Subfam. TRIDACTYLINAE.

**Tridactylus pulex** Saussure.

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 20—25. VIII. 61, 3 ♂♂; Mantalingajan, Pinigisan, 600 m., 1—6. IX. 61, 3 ♂♂, 3 ♀♀, 3 juv. — TAWI TAWI: Tarawakan, 3. XI. 61, 1 ♀. — MINDANO: Curuan district, Sapamoro, 16. XII. 61, 1 ♀.

Superfam. **TETRIGOIDEA**.Fam. **TETRIGIDAE**.

## Subfam. CLEOSTRATINAE.

**Cleostratus monocerus** Stål.

Philippines. — TAWI TAWI: Tarawakan, 10. XI. 61, 1 ♂ (fastigium of vertex a little shorter than typical). — LUZON: Los Baños, Mt. Maquiling, 30. IV. 60, 1 ♀ (C. A. Corpuz) (fastigium very long, suggesting *C. helleri* Günther, but not otherwise agreeing well with that species) †. — LEYTE: Lagolago, Baybay (no date), 1 ♀ †.

## Subfam. CLADONOTINAE.

This subfamily is probably heterogeneous, but the genera here included are grouped in the section *Cladonotae* by Günther (1938a).

**Hymenotes triangularis** Westwood.

Philippines. — LUZON: Los Baños, 14. X. 61, 1 ♂ (Q. Gonzales). †

Gen. **Mysithus** Stål.

The following are all provisionally determined only, as the pronotal and other embellishments which have been used to distinguish species seem to be very variable in form and may not provide taxonomically reliable specific characters.

**Mysithus ensatrix** (Walker).

Philippines. — LUZON: Los Baños, 20. IV. 61, 1 ♀ (L. C. Cosico). †

***Mysithus banahao* Hebard.**

Philippines. — MINDANAO: Bunaguite, 1940, 1 ♂ (J. K. Chapman). †

***Mysithus mindanao* Hebard.**

Philippines. — MINDANAO: "Lake", 1940 1 ♀ (J. K. Chapman). †

***Mysithus securifer* (Walker).**

Philippines. — LUZON: Mt. Maquiling, 17. XI. 49, 1 ♂ (Uichanco). †

***Mysithus cristicornis* (Walker).**

Philippines. — LUZON: Tagkawayan, Quezon, 5. I. 51, 1 ♀ (S. M. Ondana). †

***Mysithus jubatus* Hebard.**

Philippines. — LUZON: Mt. Maquiling, 600 m., 21. II. 48, 1 ♀ (J. Gutierrez). †

***Diotarus pupus* I. Bolívar.**

The genus *Diotarus* is in need of revision, but the following appear to belong to *D. pupus*.

Philippines. — PALAWAN: Mantalingajan, Pinigisan, 600 m., 6—13. IX. 61, 2 ♀♀, 1 juv. (? this species); 16—20. IX. 61, 3 ♂♂, 1 juv. (? this species).

***Diotarus ikonnikovi* Bei-Bienko.**

Philippines. — LUZON: Mt. Maquiling, 1500 ft., 26. IV. 56, 1 ♀, (P. A. C. Galvez). †

Günther (1938a) suggests this species may be merely a form of the last, but it is distinctly more robust.

Subfam. TETRIGINAE.

Tribe *Scelimenini*.

The tribe is here restricted to the *Scelimenae Verae* of Günther (1938a), which all seem to be related (see Günther, 1955).

***Scelimena novaeguineae* (I. Bolívar).**

Bismarcks. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 12—20. V. 62, 5 ♂♂ 6 ♀♀; Cape Hoskins, Vaisisi, 9. VII. 62, 3 ♂♂, 3 ♀♀.

**Platygalvalidium kraussi** (I. Bolívar).

Philippines. — MINDANAO: Curuan district, Sapamoro, 18. XII. 61, 1 ♀.

**Tefrinda palpata** (Stål).

Philippines. — LUZON: Los Baños, 2. IV. 61, 1 ♀ (R. D. Manluco); 1 ♂ (N. J. Kalau). †

Tribe *Thoradonotini*, nov.

The divisions of the Tetrigenae are not at all clearly defined — in fact they are largely arbitrary. Günther (1955), however, has discussed the probable relationships of many genera and, for convenience, those grouped together by him with *Thoradonota*, together with other associated genera, are placed here in this tribe.

**Thoradonota palawanica** Günther.

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 20. VIII. 61, 1 ♂; Mantalingajan, Pinigisan, 600 m., 6—23. IX. 61, 2 ♂♂, 3 ♀♀ (and 1 juv., ? this sp., 1. IX. 61).

Gen. **Eucriotettix** Hebard.

The taxonomy of this large genus is in rather a chaotic state so that accurate determinations are virtually impossible.

**Eucriotettix** sp. aff. **molestus** Günther.

Bismarcks. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 21—22. V. 62, 1 ♂, 1 ♀.

**Eucriotettix** sp. aff. **peregrinus** Günther.

Bismarcks. — MANUS: Lorengau, 18—19. VI. 62, 1 ♂, 2 ♀♀. — NEW BRITAIN: Yalom, 1000 m., 19—22. V. 62, 3 ♂♂, 2 ♀♀.

**Eucriotettix** sp(p).

The following are small individuals, all rather similar, but probably representing two or more new species.

Bismarcks. — MANUS: Lorengau, 18. VI. 62, 1 ♂. — DYAUL: Sumuna, 4. III. 62, 1 ♂. — DUKE OF YORK: Manuan, 21. VII. 62, 1 ♂.

**Probolotettix**, n.sp.

Philippines. — LUZON: Mt. Maquiling, 2979 ft., 17. V. 58, 1 ♀ (S. Fontonika). †

A large, subulate form (pronotum 15 mm.) characterized by rather indistinct pronotal carinae, the anterior part of the pronotum evenly convex, its anterior margin convex.

**Xistrella dohrni palawanica** Günther.

Philippines. — PALAWAN: Mantalingajan, Pinigisan, 600 m., 7. IX. 61, 1 ♂.

**Bolivaritettix palawanicus** Günther.

Philippines. — PALAWAN: Mantalingajan, Pinigisan, 600 m., 5—16. IX. 61, 3 ♀♀.

**Rostella phyllocera guentheri**, n.sp.

*Rostella phyllocera* ssp., Günther, 1939, Abh. Ber. staatl. Mus. Tierk. Völkerk. Dresden, 20 (A) [N. F. 1]: 280, fig. 209.

Günther (1939) gave a brief description and figured what he regarded as a new subspecies of *R. phyllocera* (Haan), but, presumably because he had but two females before him (Palawan, Binaluan, XI, XII. 1913, Boettscher leg., Deutsch. Ent. Inst. Berlin), he declined to name it. The "Noona Dan" material contains four examples of what is unquestionably the same form, for which I propose the name *guentheri*, after its discoverer. It is quite probable that it represents a distinct species, but until the genus is revised, there would seem to be little purpose in recognizing it as such for the present.

As I have not had the opportunity to see Günther's specimens (and as they are both females), I have chosen one of the "Noona Dan" males, now in the Zoological Museum, Copenhagen to be the holotype of the new subspecies. It bears the following data: Philippines, PALAWAN: Mantalingajan, Pinigisan, 600 meter, 3 Sept. 1961, Noona Dan Exp. 61—62. It has the following measurements: length of body excluding pronotum 12.0, length of head 2.7, width across eyes 2.2, interocular width 1.2, pronotum 16.0, hind femur 6.9 mm.

A female from the same series may be regarded as the allotype. It bears the same data, except that the date is 8 Sept. and there is an additional label indicating that it was "caught in Malaise traps outside forest." It has the following measurements: length of body excluding pronotum, 15.0, length of head 3.0, width across eyes 2.5, interocular width 1.5, pronotum 17.4, hind femur 7.5 mm. There are also two male paratypes with the same data as the allotype except that they are dated 7 and 12 Sept. and were trapped "inside forest". With the exception of the first paratype which is now in the Lyman Entomological Museum, Macdonald College, McGill University, the specimens are in Copenhagen.

The placing of *Rostella* next to *Bolivaritettix* is in accord with the opinion of Günther (1955).

Tribe *Discotettigini*.

As understood here, this tribe includes all those genera from *Paraguelus* to *Macromotettix* grouped together by Günther (1955), as well as certain other associated genera. It thus includes not only the Sections *Discotettigiae* and *Tripetalocerae* of Günther (1938a) and earlier authors, but also the first several members and a few other genera of the *Amorphopi* (= *Metrodora*) of Günther (1939).

***Paraguelus palawanicus* Günther.**

Philippines. — PALAWAN: Mantalingajan, Tagembung, 1150 m., 19. IX. 61, 1 ♂.

? ***Paraguelus*, n.sp.**

Philippines. — LUZON: Mt. Maquiling, 100 m. [?] 23. IV. 58, 1 ♀ (O. Al. Galvez). †

This species has a longer and more pointed pronotum than the last. It may, in fact, represent a new genus close to *Threciscus* Stål, from which it differs chiefly in lacking spines on the lateral pronotal lobes.

***Spartolus longiceps* Stål.**

Philippines. — LEYTE: Mt. Panasugan, 400 m., 7. V. 52, 1 ♀ (C. L. Baltazar). †

***Discotettix (Mnesarchus) scabridus* (Stål).**

*Mnesarchus* differs from *Discotettix*, s.str., in that the subterminal segments of the antennae are little expanded; the two have previously been synonymized, but I prefer to recognize subgeneric status for the former.

Philippines. — MINDANAO: Curuan district, Sapamoro, 16—18. XII. 61, 4 ♂♂, 4 ♀♀, 1 juv.

? ***Amphinotus*, n.sp.**

Bismarcks. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 21. V. 62, 1 ♀.

Reminiscent of *A. grandis* Günther, from New Guinea, but even larger and with a much more "humped" dorsal profile to the anterior part of the pronotum and more prominent lateral pronotal lobes.

**Hydrotettix**, n. sp.

Bismarcks. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., old secondary forest, 20. V. 62, 1 ♂.

? **Lamellitettigodes**, n. sp.

Philippines. — MINDANAO: Curuan district, Sapamoro, 16. XII. 61, 1 ♂.

*Tribe Criotettigini*, nov.

This tribe is arbitrarily erected to contain heterogeneous genera of the section *Scelimenae Spuriae* of Günther (1938b) that have not yet been transferred to other groups.

Gen. **Loxilobus** Hancock.

This large genus is almost certainly heterogeneous and its taxonomy in rather a chaotic state. Few accurate determinations are possible.

**Loxilobus** ? **insidiosus** (I. Bolívar).

Philippines. — LUZON: Mt. Maquiling, 28. XII. 49, 1 ♀ (Uichanco). †

**Loxilobus** sp(p.) aff. **rugosus** (I. Bolívar).

Philippines. — BALABAC: Dalawan Bay, 7—12. X. 61, 1 ♂, 1 ♀. — TAWI TAWI: Tarawakan, 23. X. 61, 1 ♀.

**Loxilobus** ? **pullus** (I. Bolívar).

Philippines. — MINDANAO: Curuan district, Sapamoro, 18—22. XII. 61, 2 ♂♂, 1 ♀.

**Loxilobus novaebritanniae** Günther.

Günther (1938b) refers to the variability of this species, which apparently occurs in at least three distinguishable forms: the typical form; a somewhat similar form with more strongly produced and more acute lateral pronotal lobes; and a micropterous form. The typical form (*a*, below), as deduced from the original description and figure, is more elongate (subulate) and has less prominently angular lateral pronotal lobes, and hind wings extending appreciably beyond the end of the pronotum, whilst the second form (*b*) illustrated by Günther (1938b), in addition to the differences in the pronotal lobes mentioned, is a little shorter and stouter, with hind wings that barely (if at all) surpass the end of the pronotum. Günther (l. c.) does not explain what is meant by "micropterous," but it is conceivable that the condition is similar

to that of the third form (c) mentioned below, which is even stouter than form *b*, has even more prominent lateral pronotal lobes and an even shorter pronotum beyond which the hind wings do not project. It is possible, but not probable, that form *c* represents a distinct species. More extreme examples of form *a* tend to resemble *L. angulatus* Hancock.

Bismarcks. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 6—20. IV. 62, 2 ♂♂ (form *c*), 7 ♀♀ (2 form *a*, 5 form *c*). — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 9—23. V. 62, 4 ♂♂ (2 form *a*, 2 form *b*), 16 ♀♀ (10 form *a*, 6 form *b*); Cape Hoskins, Vaisisi, 9. VII. 62, 1 ♀ (form *a*).

***Loxilobus* ? n.sp. aff. *novaebritanniae* Günther.**

This is a slender species much like typical *L. novaebritanniae*, but is considerably smaller; the pronotal length is only 7.5—8.5 mm. in the male and 8.5—9.5 mm. in the female.

Bismarcks. — LUF (Hermit Islands): 26. VI. 62, 1 ♂, 1 ♀. — MANUS: Lorengau, 18—19. VI. 62, 7 ♀♀ (also 1 juv., ? this species, 24. VI. 62). — LAVONGAI: Banatam, 18—25. III. 62, 5 ♂♂, 2 ♀♀. — DUKE OF YORK: Manuan, 20. VII. 62, 1 ♂ (also 1 juv.? this species, 21. VI. 62). — NEW BRITAIN: Cape Hoskins, Valoka, 7. VII. 62, 1 ♂ (also 1 juv.? this species).

It is possible that the specimens from the last two localities are not conspecific with the others.

Tribe *Metrodorini*.

This arbitrary and heterogeneous tribe comprises those genera of Günther's (1939) Section *Amorphopi* (= *Metrodora*e of previous authors) that have not been removed to other groups.

***Systoloderus haani* I. Bolívar.**

Philippines. — LUZON: Los Baños, 18. IV. 61, 1 ♂ (C. G. Flores); 6. V. 61, 1 ♀ (T. D. Canatal). †

***Systoloderus* ? *affinis* Günther.**

Bismarcks. — MANUS: Lorengau, 19—22. VI. 62, 6 ♂♂, 4 ♀♀, 2 juv. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 12. V. 62, 1 ♂, 1 ♀.

**Gen. *Hyboella* Hancock.**

The limits of this large and probably heterogeneous genus are ill-defined; the systematics of the genus are chaotic and accurate determinations are virtually impossible.



**Hyboella** sp. aff. **similis** Günther.

Philippines. — PALAWAN: Brooke's Point, Makagwa, 18. IX. 61, 1 ♂.

There are also three nymphs that may perhaps belong to the same species from PALAWAN: Mantalingajan, Pinigisan, 600 m., 6—21. IX. 61.

? **Hyboella** sp. indet.

Bismarcks. — NEW IRELAND: Danu, Kalili Bay, 30. IV. 62, 1 juv.

Tribe *Tetrigini*.

This very large tribe is at present in a state of great confusion. Some of the genera at present relegated to it may have to be excluded. The limits of several of the genera, particularly of *Paratettix* and *Euparatettix* are virtually impossible to define. Only provisional determinations, some of which may eventually prove to be erroneous when the group is revised, are attempted here.

**Coptotettix** ? **maesoi** I. Bolívar.

Philippines. — LUZON: Mt. Sto. Tomás, 7500 ft., 28. V. 58, 1 ♂ (B. Cariaso). †

**Coptotettix** **fuscus** I. Bolívar.

Philippines. — LUZON: Los Baños, 18. IV. 61, 1 ♀ (C. G. Flores). †

**Coptotettix** ? n.sp.(p.) aff. **insularis** Günther.

The following may include two or three very similar species.

Bismarcks. — MUSSAU: Talumalaus, 2—7. II. 62, 3 ♂♂, 1 ♀, 1 juv.; Boliu, 4—7. VI. 62, 3 ♂♂, 4 ♀♀, 2 juv. — LAVONGAI: Banatam, 18—25. III. 62, 4 ♂♂, 2 ♀♀, 4 juv. — DYAUL: Sumuna, 4. III. 62, 1 ♂. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 6. IV. 62, 1 ♂; 19. IV. 62, 1 ♀. — DUKE OF YORK: Manuan 19—21. VII. 62, 2 ♀♀.

Specimens from Mussau and Dyaul are smaller than the others, which are approximately the same size as *C. insularis*.

**Tetrix** sp.

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 11. IX. 61, 1 ♂.

A moderate-sized, rather subulate species with the anterior margin of the pronotum angulate.

**Tetrix** sp.

Philippines. — MINDANAO: Curuan district, Sapamoro, 16—20. XII. 61, 2 ♂♂.

A small, brachypterous form reminiscent of the *bipunctatus* group.

**Paratettix ? amplus** (Sjöstedt).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 14—25. VIII. 61, 3 ♂♂, 6 ♀♀; Mantalingajan, 28. VIII. 61, 1 ♀ [rather large and pale]; 9. IX. 61, 1 ♀ [almost as large, and very dark]. — TAWI TAWI: Tarawakan, 26. X. 61, 2 ♀♀ [1 rather small]; 14. XI. 61, 1 ♂. — MINDANAO: Catabato, Buluan, 4. IV. 56, 1 ♀ (S. N. Cedaña) †.

**Paratettix** sp. aff. **amplus** (Sjöstedt).

Philippines. — TAWI TAWI: Tarawakan, 4. XI. 61, 1 ♂.

**Paratettix** sp. aff. **histricus** (Stål).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 5—20. IX. 61, 2 ♂♂, 1 ♀.

**Paratettix ? histricus** (Stål).

Bismarcks. — MUSSAU: Talumalaus, 18. I.—7. II. 62, 27 ♂♂, 14 ♀♀, 1 juv.; Taletassi Lake, 4—6. VI. 62, 5 ♂♂, 9 ♀♀; Boliu, 5. VI. 62, 2 ♂♂, 1 ♀, 1 juv. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 15—17. IV. 62, 3 ♂♂, 6 ♀♀.

**Paratettix ? vexator** Günther.

Bismarcks. — NEW BRITAIN: Cape Hoskins, Valoka, 10. VII. 62, 1 ♀.

**Paratettix pullus** I. Bolívar.

Bismarcks. — MANUS: Lorengau, 17. VI. 62, 1 ♀. — MUSSAU: Talumalaus, 1. II. 62, 1 ♀; Malakata, 15. II. 62, 2 ♂♂, 2 ♀♀, 1 juv.; Boliu, 7. VI. 62, 2 ♀♀. — LAVONGAI: Banatam, 21. III. 62, 1 ♀.

Solomons. — GUADALCANAL: Honiara, 27. VI.—4. VIII. 62, 1 ♀.

**Euparatettix ? personatus** (I. Bolívar).

Philippines. — BALABAC: Dalawan Bay, 5—11. X. 61, 2 ♂♂, 3 ♀♀, 2 juv. (? this species). — PALAWAN: Brooke's Point, Uring Uring, 16—25. VIII. 61, 4 ♂♂, 3 ♀♀, 1 juv. (? this species); Mantalingajan, Tagembung, 1150 m., 16—20. IX. 61, 6 ♂♂, 15 ♀♀, 1 juv. (? this species). — TAWI TAWI: Tarawakan, 12. XI. 61, 1 ♂.

The last specimen may not be conspecific with the others.

**Euparatettix** sp. aff. **tricarinatus** (I. Bolívar).

Philippines. — BALABAC: Dalawan Bay, 4—5. X. 61, 7 ♂♂, 5 ♀♀. — PALAWAN: Brooke's Point, Uring Uring, 15—20. VIII. 61, 7 ♂♂, 6 ♀♀; Brooke's Point, Makagwa, 22. VIII. 61, 1 ♂. — TAWI TAWI: Tarawakan, 25. X.—14. XI. 61, 8 ♂♂, 4 ♀♀. — MINDANAO: Curuan district, Sapamoro, 16—22. XII. 61, 5 ♂♂, 5 ♀♀.

Bismarcks. — MANUS: Lorengau, 24. VI. 62, 1 ♂. — MUSSAU: Talumalaus, 7. II. 62, 2 ♂♂, 3 ♀♀, 1 juv. (? this species). — LAVONGAI: Banatam, 18. III. 62, 1 ♀; NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 15. IV. 62, 1 ♂.

Possibly more than one species is involved.

**Euparatettix pacificus** Günther.

Solomons. — GUADALCANAL: Honiara, 27. VI.—4. VIII. 62, 1 ♂.

**Indatettix** sp. aff. **novaeguineae** (I. Bolívar).

Philippines. — MINDANAO: Curuan district, Sapamoro, 18. XII. 61, 1 ♀.

Superfam. **EUMASTACOIDEA**, nov.

The assemblage now included in the single family Eumastacidae differs widely from the Acridoidea, with which it has, till now, been associated. This is particularly true of the phallic structures (Dirsh, 1961), but it is also evident in the female genital apparatus. In this latter character there is some similarity to the anomalous South American family Proscopiidae (Randell, 1963). Dirsh (op. cit.) also notes that the two families may be distantly related, so that both may for the present be included in the same superfamily. It may be noted that they also share a further morphological peculiarity: most members of each group possess a small, ventral tubercle on the penultimate or antepenultimate antennal segment (the antennal organ). Uvarov (1966) tentatively suggested superfamily rank for both families.

Fam. **EUMASTACIDAE**.

Subfam. **ERUCIINAE**.

**Erucius bifasciatus** Stål.

Philippines. — PALAWAN: Mantalingajan, Tagembung, 1150

m., 17. IX. 61, 1 ♂ (also 2 juv., ? this species, 19. IX. 61); Mantalingajan, Pinigisan, 600 m., 11. IX. 61, 1 ♀. — MINDANAO; Curuan district, Sapamoro, 19. XII. 61, 1 ♂.

Subfam. CHOROTYPINAE.

**Erianthus erectus** Karsch.

Philippines: LUZON: Los Baños, Mt. Maquilung, 26. I. 58, 1 ♂, 1 ♀. †

**Mnesicles saussurei** C. Bolívar.

New Guinea. — WESTERN: Biak I., Mangrowowa, 50—100 m., 30. X. 1959, 1 ♀ (J. L. Gressitt). ☆

This species was described from "Bivak Eiland" (a camp on the Eilanden Rivier, S. W. New Guinea).

Subfam. BIROELLINAE.

**Biroella wollastoni** C. Bolívar.

New Guinea. — NORTH-EAST: Daulo Pass (Asaro-Chimbu div.), 2500 m., 12 VI. 55, 1 ♂ (J. L. Gressitt); Daulo Pass, 2500 m., 2. V. 59, 1 ♂. ☆ †

**Biroella kuthyi** C. Bolívar.

New Guinea. — WESTERN: Vogelkop, Manokwari, 75 m., 20. —23. VI. 57, 1 ♂, 1 ♀ (D. E. Hardy). ☆

**Biroella ornata** C. Bolívar.

New Guinea. — WESTERN: Wisselmeren, Okaitadi, 1800 m., 7. VIII. 55, 1 ♀ (J. L. Gressitt). ☆

The specimen appears to belong to this species, but the arrangement of the hind tibial spines is atypical.

**Biroella papuana** C. Bolívar.

New Guinea. — PAPUA: S. Highlands, Dimifa, S.E. of Mt. Giluwe, 2200 m., 12. X. 58, 1 ♂ (J. L. Gressitt); NORTH-EAST: Wum, Upper Jimmi Valley, 840 m., 16. VII. 55, 1 ♂ (J. L. Gressitt). ☆

Superfam. ACRIDOIDEA, s. str.

Fam. TRIGONOPTERYGIDAE.

Subfam. TRIGONOPTERYGINAE.

**Styella philippensis** (Walker).

Philippines. — MINDANAO: Agusan, S. Francisco 10 km. S.E.,

13—16. XI. 59, 1 ♂, 1 ♀, 1 juv. (C. M. Yoshimoto); Zamboanga del Norte, Masauan-Gundawan, rain forest, 1260—1350 m., 3. VII. 58, 1 ♂ (H. E. Milliron); Zamboanga del Norte, Manucan, 25 km S., 500 m., 18. I. 59, 1 juv. (L. W. Quate); Z. del Sur, 24 km. N.W. of Milbuk nr. Lebak, 450—900 m., 6—7. VIII. 58, 2 ♂♂ (H. E. Milliron); Bukidnon, Mt. Katanglad, 1480 m., 27—31. X. 59, 1 ♀ (C. M. Yoshimoto); Sibulan, E. of Mt. Apo, Davao Province, 1000 ft., 17. XI. 46, 1 ♂ (F. G. Werner); Todaya, E. edge of Mt. Apo, Davao Province, 2800 ft., XI. 46, 1 juv. (H. Hoegestraal); Misamis Or. as follows: Balason, 1. IV. 60, 1 juv. (H. Torrevillas); Mt. Empagatao, 1050—1200 m., 19—30. IV. 61, 4 ♂♂ (H. Torrevillas); Hindangon, 20 km. S. of Gingoog, 500—700 m., 20—24. IV. 60, 1 ♂ (H. Torrevillas); Mt. Kibungol, 20 km. S.E. of Gingoog, 700—800 m., 9—18. IV. 60, 1 ♂, 1 juv. (H. Torrevillas); Mt. Bala-tukan, 15 km. S.W. of Gingoog, 1000—2000 m., 27—30. IV. 60, 1 ♀ (H. M. Torrevillas); Minalwang, 1050 m., 24. III—4. IV. 61, 1 ♂, 2 ♀♀, 3 juv. (H. Torrevillas). — BOHOL: Sierra Bullones, IV—V. 62, 1 ♀ (A. C. Alcata). — LEYTE: Dagami, Mt. Lobi, 29. VII. 45, 1 ♀. — BUCAS: no further data, 1 ♀. — SIARGAO: 11. XI. 1911, 1 ♂ (W. Boettcher). — LUZON: Sorsogon (no further data), 1 ♂. ☆ †

## Fam. PYRGOMORPHIDAE.

### Tribe *Nereniini*.

Kevan and Akbar (1964) have recently indicated that the Solomon Island genus *Modernacris* Willemse, recently transferred to the Pyrgomorphidae by Dirsh (1964), belongs to the *Nereniini*. They also suggested that certain New Guinea genera, then unstudied, should probably be transferred to the same tribe. Kevan (1966 c) has recently investigated the questionable genera and has found that, on the basis of their phallic and female subgenital structures, and the form of the fastigium of the vertex, the following New Guinea genera, previously placed in the Acridid subfamily Catantopinae (*sensu lato*), belong to the *Nereniini*: *Megra* Campion, *Kapaoria* I. Bolívar (of which *Toxopeusiocris* Willemse = *Toxopeusia* Willemse must be regarded as a synonym<sup>1</sup>), *Buergersius* (originally proposed as *Bürgersius*) Ramme, *Paratarbaleus* Ramme, *Tarbaleopsis* Ramme (of which *Musciacris*

<sup>1</sup>) *Toxopeusia flavomaculata* Willemse, 1956 = *Toxopeusiocris flavomaculata* (Willemse) = *Kapaoria flavomaculata* (Willemse).

Willemse must unfortunately be regarded as a synonym<sup>2)</sup>, *Fusiacris* Willemse, and *Oxytarbaleus* Ramme. It may also be noted that the Philippine "catantopine" genera, *Meubelia* Willemse and *Spinacris* Willemse, have also been found to belong to the Pyrgomorphidae (tribe Verduliini, not Nereniini) — see Kevan (1966 b).

The "Noona Dan" material contains no specimen belonging to the above genera, but there is included a single specimen of a new genus of Nereniini. Another species of the same genus was also discovered almost simultaneously among the other material considered herein. It was intended that the original descriptions should be those given here, but differential rates of publication have resulted in short diagnoses already appeared (Kevan, 1966c).

#### Gen. **Noonacris**.

Body cylindrical with a very short head, apterous and without a tympanum; external morphology showing close relationship to *Paratarbaleus* Ramme, but differing as follows: head not broader than long, less strongly narrowed towards the pronotum; frons subhorizontal, scarcely sloping; middle segments of antennae at most one-and-a-half times (not about twice) as long as wide; middle coxae and mesepisterna without distinct tubercles; anterior and middle femora, without spine-like tubercles below; segments of hind tarsus not subequal, the second the longest; male subgenital plate elongate; epiphallus more typical for Pyrgomorphidae (of the form illustrated in Fig. 2H); endophallus very narrow with peculiar elongate wing-like structures associated with the aedeagal sclerites<sup>3)</sup>. Type species, *N. pusilla*.

Two species of this genus are known, both only from single specimens, one a male and the other a female. It is possible, but scarcely probable, that they are conspecific. They may be more fully described, as follows:

#### **Noonacris pusilla**, Kevan. (Fig. 1, 2 H).

H o l o t y p e ♂, Bismarck Isl. — MUSSAU: Malakata, 15. Fe-

<sup>2)</sup> The type species of *Tarbaleopsis* is *T. tuberculata* Ramme, 1930; that of *Musciacris* is *M. tuberculata* Willemse, 1956. The generic synonymy thus also involves homonymy, so that Willemse's species had to be renamed *Tarbaleopsis willemsi*. The second species of *Musciacris* has become *Tarbaleopsis brunnea* (Willemse, 1956).

<sup>3)</sup> The phallic structures and female subgenital armature and spermatheca are more fully discussed and illustrated by Kevan (1966c).

bruar, 1962, Noona Dan Exp. 61—62 (Zoological Museum, Copenhagen).

Head: about as wide as long, distinctly wider than pronotum, virtually without a median carinula; antennae depressed, smooth, cylindrical, no longer than head and pronotum together, with 16 short segments (none more than  $1\frac{1}{2}$  times as long as wide) in addition to scape and pedicel; eyes large, oval, but not very

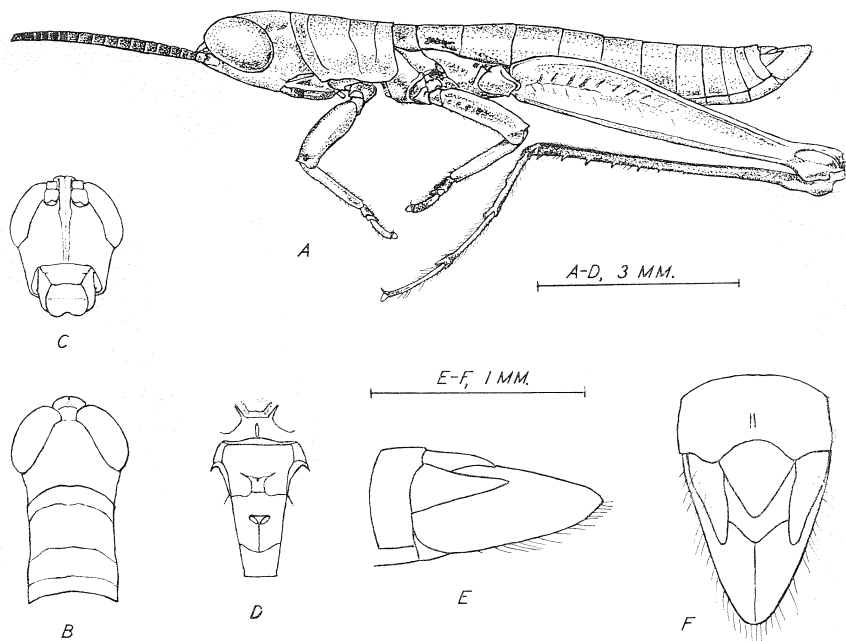


Fig.1. *Noonacris pusilla* Kevan. A, ♂ holotype, lateral; B, ♂ head and pronotum, dorsal; C, ♂ frons; D, ♂ sternal lamina; E, ♂ abdominal terminalia, lateral; F, the same, dorsal.

strongly protuberant; vertex descending steeply between the eyes to the fastigium; latter also descending, about three times as wide as long, rounded apically with a slight median furrow, dorsal impressions transverse, their posterior margins not very distinct; frons almost horizontal, median costa weak, not reaching the clypeus, more or less parallel-sided, but slightly expanded in the region that would be occupied by the median ocellus (were it developed) and between the antennae, weakly furrowed throughout; lateral frontal carinae obsolescent; cheek tubercles lacking.

**Thorax:** depressed; pronotum smooth, subcylindrical, as wide in front as behind, anterior margin of disc evenly convex, posterior margin very slightly concave, median and lateral carinae lacking, all three transverse sulci strong and evenly curved, following the contours of the anterior and posterior margins of the disc, anterior sulcus placed at about one-sixth of the distance from the anterior margin, median sulcus placed behind the middle of the disc so that the distance between it and the anterior sulcus is about equal to that between it and the posterior margin of the disc, posterior transverse sulcus at about five-sixths of the pronotal length; lateral pronotal lobes much longer than deep, anterior margin strongly oblique, convex, posterior margin almost vertical and nearly straight, inferior margin more or less horizontal, slightly sinuous, infero-posterior angle obliquely truncated, anterior and posterior sulci running parallel with the anterior and posterior margins of the lobe, middle sulcus oblique, subparallel with the anterior sulcus and at a distinct angle to the posterior sulcus; meso- and metanota sparsely and weakly punctured, former about half as long as latter, both together about twice as long as pronotum; pleura without tubercles; prosternal tubercle large, quadrate and flattened, with extensions running obliquely forward to the anterior margin of the prosternum; mesosternal lobes and interspace all subquadrate, the latter a little smaller than a lobe; metasternal pits large, oval, open, oblique and contiguous apically, connected anteriorly by a short, straight suture, metasternal lobes contiguous throughout.

**Legs:** anterior and middle femora moderately compressed, former short and somewhat incrassate, without spines or tubercles below; middle coxae with a small, rounded, external tubercle; posterior femora with dorsal lobe projecting anteriorly a little beyond the basal one, external face of hind femur very smooth, with a very weak pattern; hind tibiae with both external and internal apical spines and 9 inner and 7 outer spines in addition; hind tarsus very long, about three-quarters of the length of the hind tibia, second segment slightly longer than metatarsus, both longer than the apical segment, arolia rather large and disc-like.

**Abdomen:** slightly depressed at the base, compressed beyond this; first tergum a little longer than metanotum to which it is similarly punctured; tympanum absent; tenth tergum broadly emarginate in the middle; epiproct very short and broadly triangular; cerci stout, conical, extending distinctly beyond the



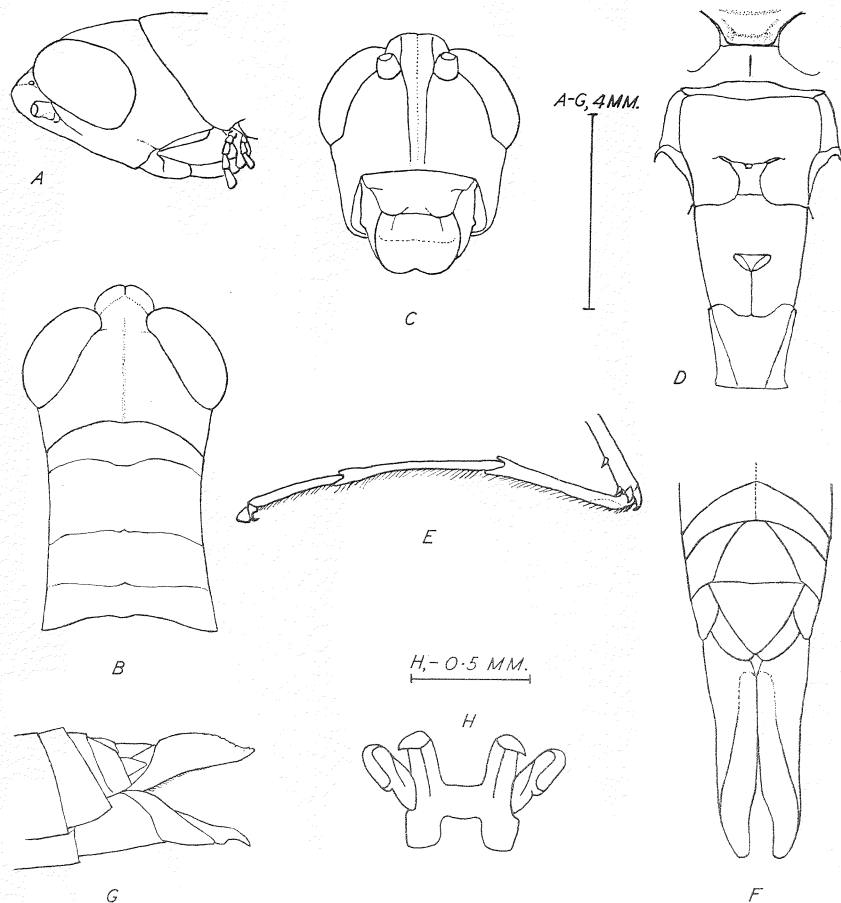


Fig. 2. A—G, *Noonacris novahibernica* Kevan; H, *Noonacris pusilla* Kevan. A, ♀ head, lateral; B, ♀ head and pronotum, dorsal; C, ♀ frons; D, ♀ sternal lamina; E, ♀ right hind tarsus; F, ♀ abdominal terminalia, dorsal; G, the same, lateral; H, epiphallus, dorsal.

apex of the epiproct; subgenital plate long, narrow and pointed; epiphallus as illustrated (Fig. 2H).

**COLORATION:** rather uniformly light olive-green, except as follows: eyes light brown, antennae blue, the segments each narrowly annulated apically with grey, the subgenital plate and ventral faces of the hind femora also blue, hind tibiae bluish-lilac with brown-tipped spines, hind tarsi bluish-grey above, grey-lilac below.

**MEASUREMENTS:** length of body 12.6, antenna 4.25, head 2.0, pronotum 2.25 hind femur 7.0 mm.

The type is unique.

**Noonacris novahibernica** Kevan (Fig. 2 A—G).

H o l o t y p e ♀, [Bismarck Isl.] — NEW IRELAND (S.W.): Ridge above "Camp Bishop", 15 km. up Kait R., 250—750 m., 13. VII. 1956, J. L. Gressitt Collector (B. P. Bishop Museum, Honolulu). ☆

Very similar to *N. pusilla*, but differing as follows: size larger (allowing for difference in sex); head proportionately broader and shorter; fastigium of vertex sloping more evenly to the frontal ridge; latter very distinctly widened from the vicinity of the antennae to the fastigium, not merely slightly widened where the median ocellus would be situated (if present); front and middle femora strongly compressed (probably a sexual difference, cf. *Paratarbaleus*); second segment of hind tarsus proportionately a little longer; posterior margin of first four abdominal terga each raised in a short, blunt, spine-like process (possibly only a sexual difference); epiproct (allowing for sexual difference) somewhat longer. Ovipositor as illustrated (Fig. 2 F, G).

C o l o r a t i o n : very similar to *N. pusilla* except as follows: abdomen bluish ventrally, hind tibiae yellowish on their outer faces, otherwise light blue, with brown-tipped spines; hind tarsi ochreous, bluish dorsally.

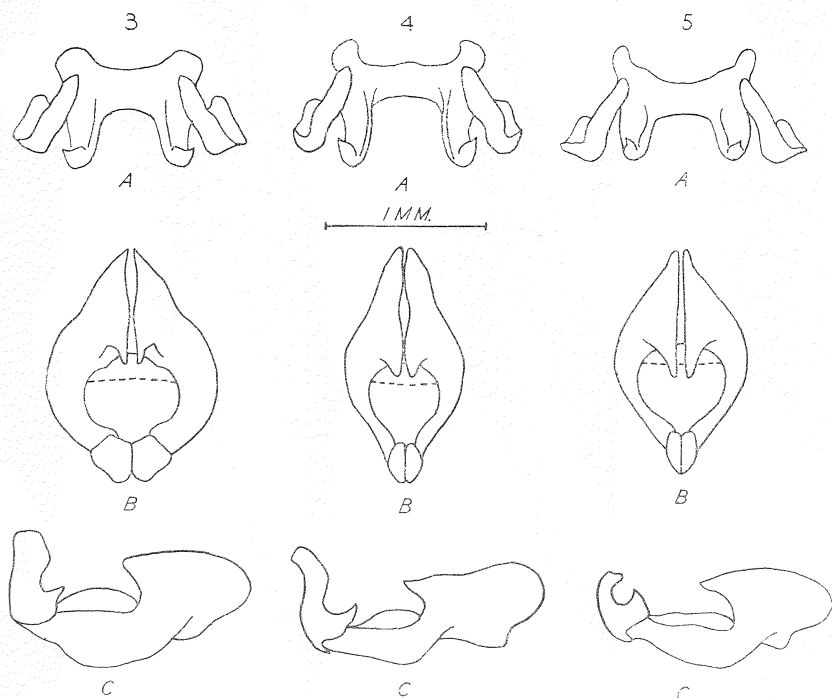
M e a s u r e m e n t s : length of body 26, antenna — (lacking), head 3.1, pronotum 4.0, hind femur 12.5 mm.

The type is unique. It is just possible that this may represent the female of *N. pusilla* (some of the differences indicated are probably sexual only), but even allowing for sexual dimorphism and the great variability in size in many Pyrgomorphidae, other characters, such as those of the head, seem to preclude this. That both species are apterous with widely separated and isolated type localities tends to corroborate this conclusion.

Tribe *Desmopterini*.<sup>4)</sup>**Desmopterella dahl** Ramme. (Fig. 3).

The genus *Desmopterella* is in process of revision, but the mate-

<sup>4)</sup> As already noted by Kevan (1966a), there is an error in nomenclature in this tribe. Kevan and Akbar (1964) proposed a new subgenus of *Desmoptera*, *Desmopterula*, with *D. degenerata* L. Bolívar as its type species; *D. truncatipennis* Sjöstedt was also included. The latter, however, is the type species of *Platydesmoptera* Ramme, currently regarded as a synonym of *Desmoptera*. *Desmopterula* Kevan and Akbar thus falls as a synonym of *Platydesmoptera* which now has the status of a subgenus of *Desmoptera*. Misprints in Kevan (1966a) should also be corrected. The correct spelling of the new species of *Doriaella* should be *D. cheesmanae*.



Figs. 3—5. Epiphalli (A) and endophalli, dorsal (B) and lateral (C) of *Desmopterella* spp. 3. *D. dahli* Ramme, holotype; 4. *D. prasina* (I. Bolívar); 5. *D. biroi* (I. Bolívar).

rial listed below belongs to the above species. The phallic structures of the males have been compared with those of the holotype (Fig. 3).

Bismarcks. — NEW BRITAIN: Cape Hoskins, Vaisisi, 9. VII. 62, 1 ♂, 2 ♀♀, and Valoka, 10. VII. 62, 3 ♂♂, 1 ♀.

The following specimens may also be recorded from NEW BRITAIN: Movehafen, 1930, 1 ♂, 1 ♀ (H. Hediger); Akanglo I., nr. Kandrian, S. Coast, 18. IV. 56, 1 ♂, 3 ♀♀ (J. L. Gressitt); Bialla, N. Coast, 4—9. VIII. 56, 1 ♂ (E. J. Ford Jr.); Ti, Nakanai Mts., 29. VII. 56, 1 ♂ (E. J. Ford Jr.); Gisiluve, Nakanai Mts., 1050 m., 26. VII. 56, 2 ♀♀ (E. J. Ford Jr.); Silanga, Nakanai Mts., 150 m., 2. VIII. 56, 2 ♀♀ (E. J. Ford Jr.); and from the Gazelle Peninsula, as follows: Kerawat [=Keravat], 60 m., 20—25. XI. 59, 1 ♀ (T. C. Maa), 29. VIII. 56, 1 ♂, 3 ♀♀ (J. L. Gressitt), 11. IX. 56, 3 ♂♂ [1 in light trap] (J. L. Gressitt), 23. X. 56, forest clearing, 2 ♀♀ (J. L. Gressitt); Kerawat, 135 m., 20—25. XI. 59, 2 ♀♀ (T. C. Maa);

Vundal, S.W. of Keravat, XII. 59, 1 ♂; 13. XII. 59, 1 ♂ (T. C. Maa); Vunabakan, 10 km. E. of Keravat, 180 m., 16—20. XI. 59, 1 ♂, 1 ♀, 1 juv. (T. C. Maa); Vunabakan, on Ipomoea, 5. V. 56, 1 juv. (J. L. Gressitt); Bainings, St. Paul's, 560 m., light trap, 4. IX. 56, 9 ♂♂, 8 ♀♀ (J. L. Gressitt); the same, 350 m., 5—9. IX. 56, 19 ♂♂, 21 ♀♀ (J. L. Gressitt); Puktas, Baining Mts., 22. XI. 57, 1 ♂ (J. Smart); Gaulim, 140 m., 19—27. X. 62, 8 ♂♂, 5 ♀♀, 2 juv. (J. Sedlacek); 16 km. S. of Gaulim, 300 m., light trap, 29. X. 62, 1 ♂, 2 ♀♀ (J. Sedlacek); Mt. Sinewit, 900 m., 7—16. XI. 62, 1 ♂, 5 ♀♀ (J. Sedlacek); Warongoi Val., 100 m., 24. V. 56, 1 ♂, 1 ♀ (J. L. Gressitt); Upper Warongoi, 250—600 m., 28—30. XI. 62, 1 ♀ (J. Sedlacek); the same, 1250—1450 m., 1—5. XII. 62, 1 ♂, 1 ♀ (J. Sedlacek); the same, Illugi, 230 m., 8—15. XII. 62, 1 ♂, 7 ♀♀, 1 juv. (J. Sedlacek). ★ †

***Desmopterella prasina* (I. Bolívar). (Fig. 4).**

The unique female holotype of *Desmoptera prasina* I. Bolívar was collected in 1900 from the Bismarck Archipelago (without more precise locality) by Biró. The location of this specimen is not stated in the original description (Bolívar, 1905). It is not in Bolívar's collection in Madrid, nor in any other collection known to me, so it is possible that it was returned to Budapest with other Biró specimens. In that case, it would have been destroyed by the fire of a decade ago that demolished the whole of the Orthoptera collection in that Museum. It must be presumed lost.

*D. prasina* is the only species other than *D. dahli* that has been recorded from the Bismarck Archipelago. The type specimen is described as being green, the antennae annulated with green, the elytra olivaceous, paler in the middle and with brown spots on the veins, the hind wings very faintly blue at the base with greenish veins, "pedes" (? tibiae and tarsi) olivaceous, abdomen variegated brown below. Green coloration, however, is rare in Desmopterini and, when present, only partial (e. g. in *Stenoxyphus*). It is not known in any other *Desmopterella* specimen, so that there is a suspicion that true *prasina* might not belong to that genus. However, apart from the coloration, the rest of Bolívar's (l. c.) description, so far as it goes, fits *Desmopterella* and one must assume that he had an unusually coloured (or discoloured) specimen before him. I have also had reason previously to consider Bolívar's sense of colour somewhat unconventional, so that I am not inclined to give too much weight to the matter of colour.

Some of the specimens listed below, all of which are greyish or brownish, variously mottled, have, in fact, an olive-greenish sheen on the tegmina when these are viewed in certain lights (although not more so than in some other species, including *B. dahli*). Irridescence on the bases of the hind wings may indeed make these appear bluish in that region, and the veins may sometimes be olivaceous, although they are usually fuscous. Some specimens have somewhat olive-green hind tibiae; others have these brownish or even obscurely violet. All have two or more widely spaced, very distinct, pale, usually yellowish or orange (but not green), annulations on the antennae. This last character is consistent and separates the series below from all other species (including *D. dahli*), which may sometimes have slightly variegated, or even irregularly, but never distinctly, annulated antennae. Since Bolívar (l. c.) also remarks on such annulations, I feel reasonably confident that the material below belongs to his *prasina*, the holotype of which was probably unusually coloured. The male phallic structures of this species somewhat resemble those of *D. dahli*, but are distinctive (Fig. 4).

Bismarcks: LAVONGAI: Banatam, 22. II. 62, 1 ♀, 1 ♂. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 14. IV. 62, 1 ♀.

The following may also be recorded from NEW IRELAND: Lavalai, 1 ♀ (Bühler); Majom, 1 ♀ (Bühler); Lelet Plateau, 1 ♀ (Bühler); Kavieng, X. 36, 1 ♀<sup>5)</sup>, 2 juv. (L. E. Cheesman); S. W. Ridge above "Camp Bishop", 12 km. up Kait R., 240 m., 9. VII. 56, 1 ♂, 1 juv. (E. J. Ford Jr.); the same, but 15 km. up, 250—270 m, 13. VIII. 56, 2 ♂♂ (J. L. Gressitt); S.W., Gilingi Pl'n., 2 m., 4—17. VII. 56, 4 ♂♂, 3 ♀♀ (J. L. Gressitt); 5—50 km from Kavieng, 1—2 m., 2. VII. 59, 1 ♂ (J. L. Gressitt); Kavieng, 2. VII. 59, 3 ♂♂, 1 ♀ (all but 1 ♂ J. L. Gressitt); Lower Kait R., 19. VIII. 56, 1 ♂ [+ 1 juv. 7. VII] (E. J. Ford Jr.); Schleinitz Mts., Lelet Plateau, X. 1959, 2 ♂♂ (W. W. Brandt); Kandan, 24—27. XII. 59, 2 ♂♂, 6 ♀♀ (W. W. Brandt). ☆ †

<sup>5)</sup> This specimen is selected to be the **neotype** of *D. prasina*. It is the property of the British Museum (Natural History), London, as are the associated nymphs. Data label reads: NEW IRELAND (Bismarck arch.), Kavieng, x, 1936, L. E. Cheesman, B.M. 1936—271. Colour: generally brownish-testaceous (including tibiae and tarsi); numerous fuscous maculations; hind wing veins light fuscous. Measurements: body 30, pronotum 6, tegmen 29.5, hind femur 13.6 mm.

**Desmopterella biroi** (I. Bolivar). (Fig. 5).

Philippines. — MINDANAO: Agusan, S. Francisco, 10 km. S.E., 13. XI. 59, 1 ♂, 1 ♀ (L. Quate and C. Yoshimoto); Zamboanga del Sur, Lemeshan, 600 m., light trap, 7. IX. 58, 1 ♀ (H. E. Milliron).<sup>☆†</sup>

No species of *Desmopterella* has previously been recorded from the Philippines. It is notable that these two southern localities are the same as those recorded for *Atractomorpha crenaticeps crenaticeps* (p. 403), which was also previously unknown from the Philippines. As both are typically New Guinea species, these records should be of considerable zoogeographical interest. Unfortunately there is good reason to suspect that the Agusan material, at least, may have been mislabelled as some specimens of another genus that could only have come from New Guinea bear similar data. However, the above records cannot be entirely discounted as there is also material of *Systella philippensis* bearing the same data (see p. 387), and these could not have come from New Guinea. Both *Desmopterella* and *Atractomorpha* can fly well, besides which, two localities, two dates and different collectors were involved, so that the records must be given the benefit of the doubt, although they certainly require confirmation.

It is also interesting to note that a male of the same species, in the Bishop Museum, Honolulu, is labelled: BORNEO, Sarawak, Kapit District, Merirai V., 30—300 m., sandy forest, 1—6. VIII. 1958, T. Maa. If the data are correct, the species is much more widely distributed than was previously believed, and this would be the first good record of Desmopterini from the region. *Desmoptera novaeguineae* (Haan) was described in part from Borneo, but apparently erroneously (see Kevan, 1963 for discussion). If *D. biroi*, in fact, occurs in Borneo and Mindanao, there would also be less reason to doubt the correctness of Gilolo (Halmahera) as a locality for *D. angustata* Ramme, another species known otherwise only from New Guinea (see Kevan, l. c.).

**Gen. Apodesmoptera** Rehn.

The type species of this genus is *A. mira* Rehn from the southern Philippines. Kevan (1963) described a subspecies, *A. m. luzonica*, from a very distinctive female from Luzon. Subsequently the male of *luzonica* has been discovered, as well as a new species of the same genus. An investigation of the phallic structures has shown that, not only is *luzonica* specifically quite distinct from *A. mira*,

but also that these structures differ to such an extent that it would scarcely be possible to retain the two in the same genus were the phallic structures the only criteria to be used. Since overall similarities, as well as differences, must be considered, a new subgenus only is proposed:

**Brachydesmoptera**, n. subgen.

Resembles *Apodesmoptera*, s. str., very closely indeed, but differs most obviously in being strongly brachypterous, the tegmina as a result, lacking apical points. [The tegmina and hind wings of *Apodesmoptera*, s. str., may be somewhat abbreviated so as to expose the apex of the abdomen, but they are not strongly reduced and the tegmina retain at least an indication of the apical points]. The male abdominal terminalia are compressed not broad. The phallic structures (as illustrated for the type species, Fig. 6) differ especially in the great elongation and narrowing of the distal part of the cingulum, of the aedeagal valves, and of the aedeagal sclerites which are also unusual among Pyrgomorphidae in projecting well beyond the valves to which they are more or less fused. Further, the aedeagal apodemes lack the very large dorsal inflexions and the "hairy" covering found in *Apodesmoptera*, s. str. (cf. Figs. 7 and 8), and the zyoma of the cingulum is considerably larger and wider.

Type species (here designated): *Apodesmoptera mira luzonica* Kevan, 1963 = *Apodesmoptera (Brachydesmoptera) luzonica* Kevan.

Even allowing for the fact that the phallic structures in Desmopterini vary considerably within genera, it is impossible to consider *Brachydesmoptera* as having less than subgeneric status.

**Apodesmoptera (Brachydesmoptera) luzonica** Kevan, stat. nov.

(Fig. 6, Pl. I figs. a, c, d, Pl. II fig. h).

Philippines. — ? LUZON: "Philippine Islands" [no further data], 1 ♂. †

Although the specimen bears such uninformative data, it is nevertheless of very great importance, for it is upon it that the new subgenus is based. There is little to add to the brief description of the female holotype given by Kevan (1963), except to state that it is of an almost uniform brown colour, very like the allotype of the next species, and to illustrate its subgenital armature and spermatheca (Fig. 6). The male here recorded is very

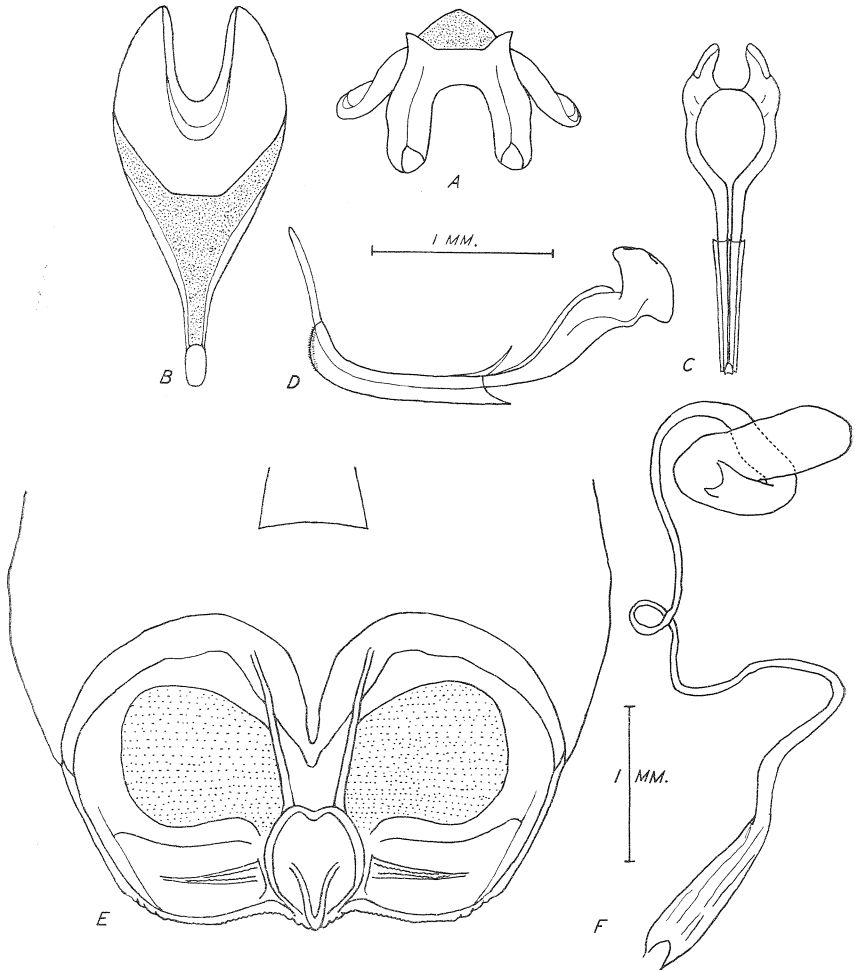
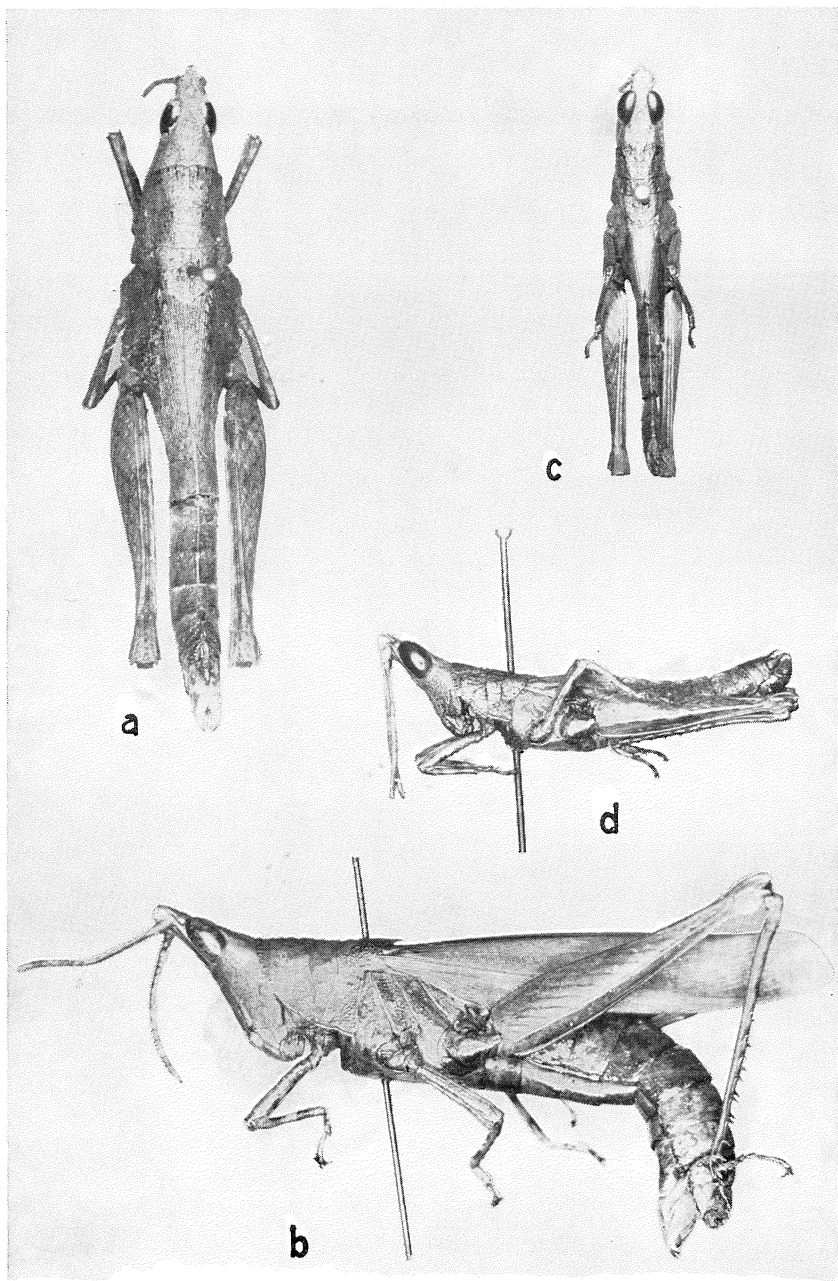


Fig. 6. *Apodesmoptera (Brachydesmoptera) luzonica* Kevan. A, epiphallus, dorsal; B, cingulum, dorsal; C, endophallus, dorsal; D, the same, lateral; E, ♀ subgenital armature, dorsal; F, spermatheca.

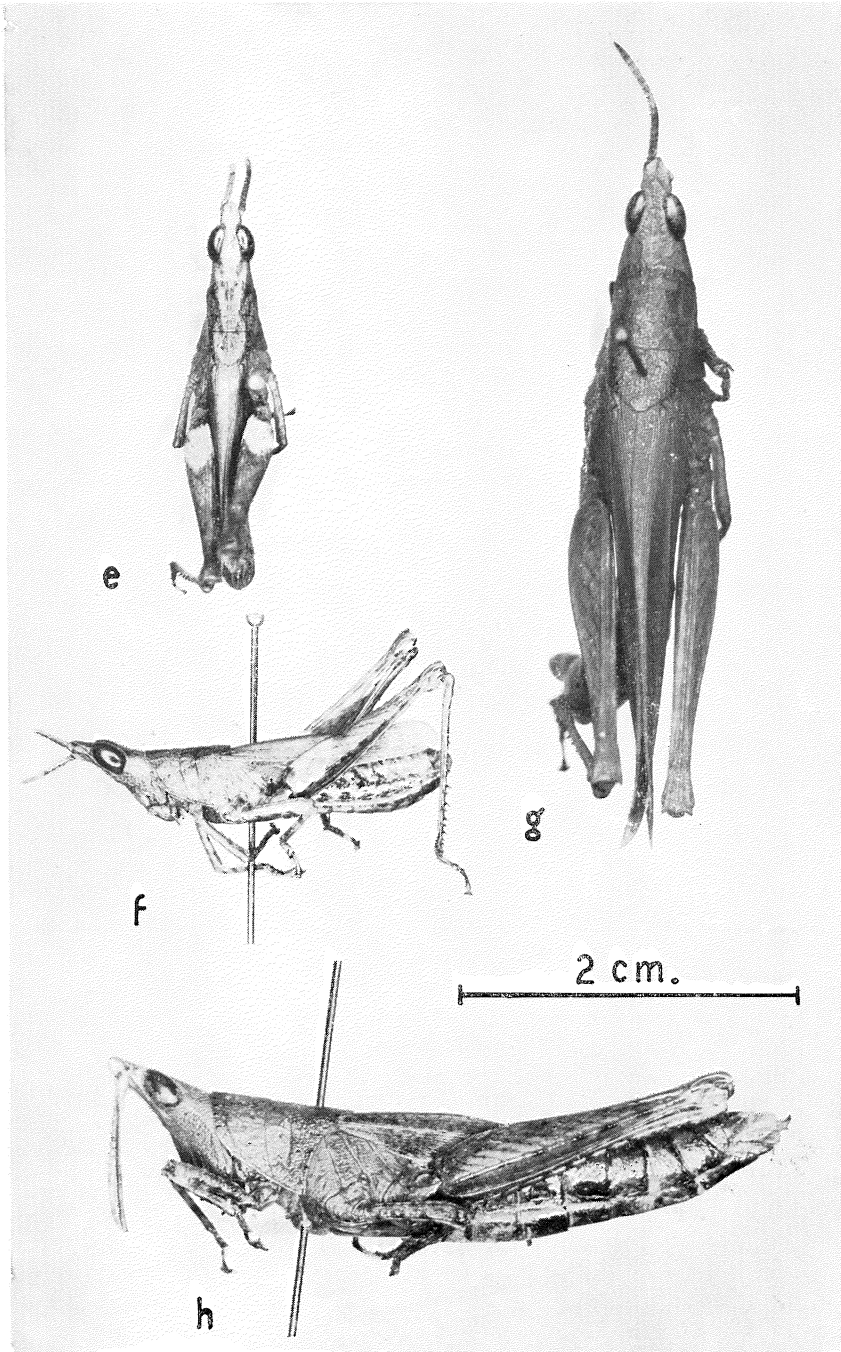
similar to the holotype, but is smaller and more slender. In coloration it is generally brownish-testaceous with the dorsal surface of the head, the pleura and the hind femora somewhat paler. It is also very similar to the male of the next species, except for the characters indicated in the subgeneric description. Its measurements are as follows: length of body 25, pronotum 5.0, tegmen 5.5, hind femur 12.0 mm.



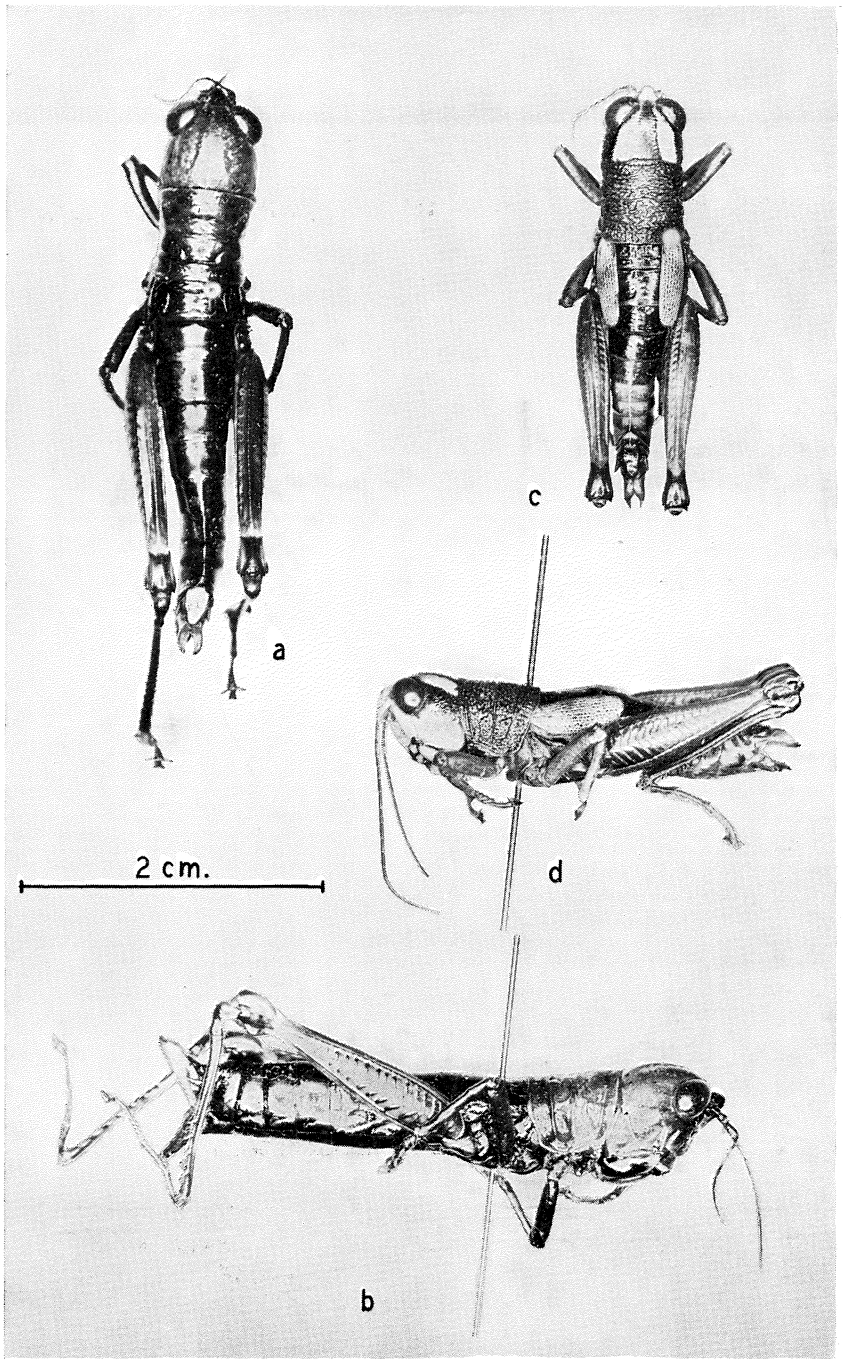
PLATES I-III



Pl. I. (a), (c), (d), *Apodesmoptera (Brachydesmoptera) luzonica* Kevan. (a), ♀ holotype of *A. mira luzonica*; (c), (d), ♂. (b), *Apodesmoptera (A.) curtipennis*, n. sp., ♀ allotype.



Pl. II. (e), (f), (g), *Apodesmoptera* (A.) *curtipennis*, n.sp. (e); (f), ♂ holotype; (g), ♀ allotype. (h), A. (*Brachydesmoptera*) *luzonica* Kevan, ♀ holotype of *A. mira luzonica*.



Pl. III. *Opiptacris* and *Cranaella*, new species. (a), (b), *O. castanea*, n. sp., ♀ holotype; (c), (d), *C. multicolor*, n. sp., ♀ holotype.

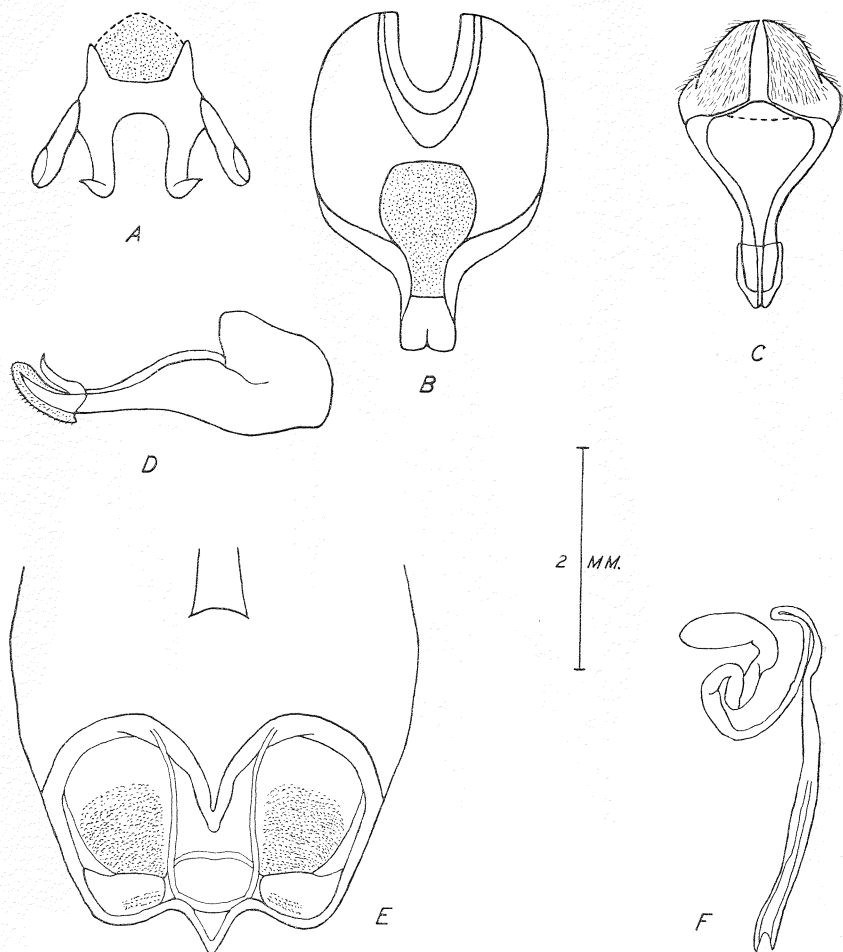


Fig. 7. *Apodesmoptera (Adopesmoptera) curtipennis*, n.sp. A, epiphallus, dorsal; B, cingulum, dorsal; C, endophallus, dorsal; D, the same, lateral; E, ♀ subgenital armature, dorsal; F, spermatheca.

***Apodesmoptera (Apodesmoptera) curtipennis*, n. sp.**

(Fig. 7, Pl. I fig. b, Pl. II figs. e—g).

**H o l o t y p e :** ♂, Philippines. — [LUZON]: Ca[ra]marines sur, Mt. Isarog, 800—1200 m., 27. IV. 1963, H. M. Torrevillas Collector (B. P. Bishop Museum, Honolulu). ☆

This is so similar to the male of *A. (A.) mira* as to make a detailed description unnecessary, but it differs as follows: smaller, with somewhat reduced, narrower tegmina and wings which extend

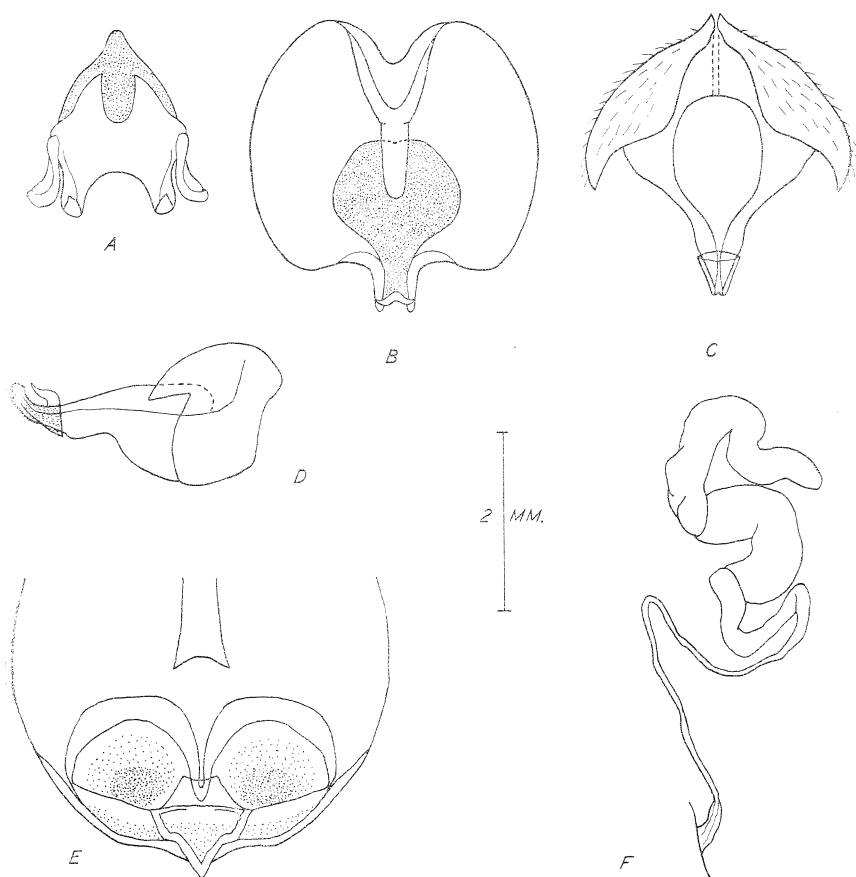


Fig. 8. *Apodesmoptera (Apodesmoptera) mira* Rehn. A, epiphallus, dorsal, B, cingulum, dorsal; C, endophallus, dorsal; D, the same, lateral; E, ♀ subgenital armature, dorsal; F, spermatheca.

well beyond the middle of the abdomen and hind femora, but do not reach their apices; apical points of tegmina indicated but not very distinct; hind femur slightly shorter than in *A. (A.) mira*; abdominal terminalia comparatively smaller and less broad, cerci shorter and stouter; phallic structures basically similar but narrower and less highly specialized (cf. Figs. 7 and 8).

**Coloration:** brown, with small thoracic tubercles black; areas in vicinity of longitudinal pronotal carinae and the upper region of the posterior part of the lateral pronotal lobe dark fuscous; costal field of tegmen blackish in basal third; hind femur

with a large, yellowish basal area, ventral face blackish-brown, ventral keels with dark maculations, inferior part of inner face reddish; hind tibiae and tarsi dirty brownish-testaceous with dark maculations.

**Measurements:** length of body 25.5, pronotum 5.2, tegmen 13.3, hind femur 12.5 mm.

**Allotype:** ♀, Alabat, Tayabas Prov., Luzon, P. I., R. C. McGregor Collector [Lyman Entomological Museum]. †

Very similar to *A. mira*, but differing in size, tegmina, hind femora and cerci in the same way as does the holotype; subgenital armature and spermatheca similar to *A. mira*, but differing as illustrated (cf. Figs. 7 and 8).

**Coloration:** almost uniform reddish-brown, except for slightly darker suffusion near the anterior margin and on the "shoulders" of the pronotum and dark maculations on the fore and middle tibiae.

**Measurements:** length of body (allowing for curvature of abdomen) ca. 42, pronotum 8.8, tegmen 28.5, hind femur 19.5 mm.

No further material is known.

**Apodesmoptera (Apodesmoptera) mira** Rehn. (Fig. 8).

Most of the known specimens have been listed previously (see Kevan, 1963), but the following is a further record, presumably of this species:

Philippines. — MINDANAO: Misamis Or., Mt. Empagatao, 1050—1200 m. 19—30. IV. 61, 2 juv. (H. Torre Villas).★

Tribe *Atractomorphi*.

**Atractomorpha psittacina** (Haan).

Philippines. — BALABAC: Dalawan Bay, 6—7. X. 61, 1 ♂, 1 ♀. — PALAWAN: Brooke's Point, Uring Uring, 14—18. VIII. 61, 1 ♂, 2 ♀♀; 11. IX. 61, 1 ♂; Brooke's Point, Makagwa, 22. VIII. 61, 1 ♂; Mantalingajan, Pinigisan, in the barrio, 500 m., 8—12. IX. 61, 2 ♂♂, 2 ♀♀, 2 juv. (♀). — MINDANAO: Curuan district, Sapa-moro, 18—22. XII. 61, 1 ♂, 2 ♀♀.

This species is known from many hitherto unrecorded localities in the Philippines, but these are too numerous to list here. The following from PALAWAN, however, are of interest in view of the paucity of records from that island: Tarumpatao Point, 16—

23. V. 58, 3 ♂♂, 4 ♀♀ (H. E. Milliron); 8 km. S.W. of same, Eran Point, 31. XII. 59—4. I. 60, 3 ♀♀ (L. W. Quate); Brooke's Point, Macagua [=Makagwa], 27—31. III. 62, 1 juv. (M. Thompson); 3 km. N.E. Tinabog, 14. V. 62, 1 ♂ (H. Holtmann). ☆†

Bismarcks. — NEW BRITAIN: Vunabakan, 10 km. E. of Keravat, 16—20. XI. 59, 2 ♀♀ (T. C. Maa). ☆

*Atractomorpha* is a very well known genus and *A. psittacina* is a common, widely distributed species, but the above record for New Britain represents a disjunct distribution. The species was hitherto unknown east of Mindanao, N. Celebes and the Takangbesi Is. — apart from "Moluccas". It is possible that the specimens have been mislabelled.

***Atractomorpha crenaticeps crenaticeps* (Blanchard).**

Bismarcks. — MANUS: Lorengau, 18—25. VI. 62, 3 ♂♂, 4 ♀♀. — MUSSAU: Talumalaus, 1. II. 62, 1 ♀ [very small]. — LAVONGAI: Banatam, 17—25. III. 62, 8 ♂♂, 3 ♀♀. — DYAUL: Kollipine, 12. III. 62, 1 ♂, 2 ♀♀. — NEW IRELAND: Kalili Bay, Danu, 30. IV. 62, 1 ♀; Lelet Plateau, Lemkamin, 900 m., 6—21. IV. 62, 10 ♂♂, 12 ♀♀. — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 10—23. V. 62, 6 ♂♂, 12 ♀♀, 1 juv.; Cape Hoskins, Kwakalakesi, 3. VII. 62, 2 ♂♂, 2 ♀♀; Vaisisi, 9. VII. 62, 1 ♀; and Valoka, 10. VII. 62, 2 ♂♂.

The following material from the Bismarck Archipelago may also be recorded here: MANUS: Lorengau, 1—75 m., 28. VI. 59, 1 ♂, 2 ♀♀ [small], (J. L. Gressitt); Rossum, 35—125 m., 29. VI. 59, 1 ♀ (J. L. Gressitt). — LOS NEGROS (*Admiralty Is.*): XI. 45, 1 ♂ (W. Wagner Jr. and D. Greether). — NEW IRELAND: Gilingi Plain, 2 m., 4—6. VII. 56, 1 ♂, 1 ♀ (J. L. Gressitt); Kavieng, 2. VII. 59, 1 ♀ (J. L. Gressitt); Schleinitz Mts., Lelet Plateau, X. 59, 2 ♀♀ (W. W. Brandt); Kandan, 23. and 24. XII. 59—1. I. 60, 1 ♂, 3 ♀♀ (W. W. Brandt). — NEW BRITAIN: Nakanai Mts., Gisiluva, 1060 m., 25. VII. 56, 1 ♂ (J. L. Gressitt); the same, Ti, 29. VII. 56, 2 ♂♂, (E. J. Ford Jr.); the same, Silanga, 150 m., 31. VII.—5. VIII. 56, 14 ♂♂, 8 ♀♀ (E. J. Ford Jr.); Barronga Island, nr. Lindenhafen, 28. IV. 56, 1 ♂ (J. L. Gressitt); Lindenhafen, 2 miles S. of coast, 24. IV. 56, 1 ♀ (J. L. Gressitt); Linga Linga Plain, W. of Willaumez Peninsula, 9—12. IV. 56, 2 ♂♂ [1 on sago palm], 1 ♀; Keravat, 135 m., 20—25. IX. 59, 1 ♂, 3 ♀♀ (T. C. Maa); Gazelle Peninsula as follows: Warongoi Valley, 100 m., 24. V. 56, 1 ♂ (J. L. Gressitt); Kerawa, primary bush, 60 m., 1. IX. 56, 4



♂♂, 1 ♀; Baining, St. Paul's, 360 m., 5—7. IX. 55, 10 ♂♂, 12 ♀♀ (J. L. Gressitt); Gaulim, 140 m., 21—27. X. 62, 1 ♂, 2 ♀♀ (J. Sedlacek); Mt. Sinewit, 900 m., 5—14. XI. 62, 1 ♀ (J. Sedlacek); Upper Warongoi, Illugi, 230 m., 8—21. XII. 62, 4 ♂♂, 6 ♀♀. ★†

Solomons. — BUKA: Gagan, 40 m., 16. VI. 56, 1 ♀ (very small) 1 juv. (♀) (J. L. Gressitt). — BOUGAINVILLE (S.): Mosigera, 25 m., 3. VI. 56, 1 ♀ (J. L. Gressitt); Mumurai, 6. VI. 56, 1 ♂ (J. L. Gressitt); Kokure, nr. Crown Prince Range, 900 m., 6. IV. 56, 1 ♂, 4 ♀♀ (J. L. Gressitt); the same, 690 m., 8. VI. 56, 3 ♂♂ (J. L. Gressitt); Guaba, 720 m. 19—21. VI. 56, 2 ♂♂, 4 ♀♀ (E. J. Ford Jr.); Simba Mission, 2. VII. 56, 1 ♀ (E. J. Ford Jr.); Kieta, 26. XI. 59, 1 ♂ (T. C. Maa). — KOLOMBANGARA (New Georgia Group): 1—12 m., 8. VII. 59, 1 ♂ (J. L. Gressitt). — MALAITA: Auki, 2—20 m., 21. IX. 57, 1 ♂ (J. L. Gressitt). — GUADALCANAL: 12. IX. 1920, 1 ♀ (J. A. Kusche); Metanikau, 21. V.—10. VI. 44, 2 ♂♂, 1 juv. (♀), (H. E. Milliron); Lunga River (mouth), 6. XI. 44, 1 ♂ (H. E. Milliron); Suta, 500—1200 m., 27. VI. 56, 1 ♂, 1 ♀, 1 juv. (J. L. Gressitt); Kolosulu, 20. V. 1960, 2 ♂♂ (C. W. O'Brien). — SAN CRISTOVAL: Napagiwae 19. VIII. 1960, 1 ♀ (C. W. O'Brien). ★†

Philippines. — MINDANAO: Zamboanga del Sur, 3.2 km. N.W. of Milbuk, 150 m., 4. VIII. 58, 1 ♂ (H. E. Milliron); Agusan, 10 km. S.E. of S. Francisco, 13. XI. 59, 5 ♂♂, 6 ♀♀, 1 juv. (♀) (L. Quate and C. Yoshimoto). ★†

This last material, if not mislabelled (see p. 396), is particularly interesting, as it extends the known range of the species to the southern Philippines, whence only *A. psittacina* was previously known (in spite of any records to the contrary). In view of certain doubts already expressed above regarding the data, confirmation of the occurrence of the species in the Philippines is much needed.

### Fam. ACRIDIDAE, s. str.

#### Subfam. OXYINAE.

#### *Oxya intricata* Stål.

Philippines. — LUZON: Mt. Maquiling, 21—26. VI. 62, 2 ♂♂, 1 ♀ (C. Nora). †

#### *Oxya chinensis* (Thunberg).

Philippines. — BALABAC: Dalawan Bay, 4. X. 61, 2 ♀♀. — PALAWAN: Brooke's Point, Uring Uring, 15. VIII.—8. IX. 61, 4

♂♂, 2 ♀♀, 2 juv.; Brooke's Point, Makagwa, 22. VIII. 61, 1 ♂; Mantalingajan, Pinigisan, in the barrio, 500 m., 31. VIII.—12. IX. 61, 32 ♂♂, 25 ♀♀, 7 juv. — TAWI TAWI: Tarawakan, 25. X.—4. XI. 61, 11 ♂♂, 8 ♀♀, 1 juv.; Coast N. of Tarawakan, 27. X. 61, 2 ♀♀. — MINDANAO: Curuan district, Sapamoro, 16—22. XII. 62, 11 ♂♂, 3 ♀♀, 5 juv.

The specimens from Mindanao are distinctly smaller than those from the other islands, somewhat resembling *O. intricata*, but they do not belong to that species.

#### *Oxya gavisa* (Walker).

If subspecies *aurantiaca* Willemse, from West New Guinea, is valid (which is doubtful), the following material should be referred to the typical subspecies. Many of the specimens recorded here are intermediate, at least in the colour of the hind legs. The series from each island seems to have a characteristic coloration, as indicated below.

Bismarcks. — LUF, Hermit Islands: 26—27. VI. 62, 8 ♂♂, 9 ♀♀ (specimens not very dark, rather greenish, hind femur yellow-green (♂) or green (♀), hind tibiae yellowish). — MANUS: Lorengau, 14—18. VI. 62, 3 ♂♂, 7 ♀♀ (rather dark, femora orange apically, yellow-green (♂) or green (♀) basally, tibiae orange). — LAVONGAI: Banatam, 18—22. III. 62, 4 ♂♂, 4 ♀♀ (hind legs mostly coloured as in Hermit I. series, but some with more orange tibiae; general coloration more brownish dorsally). — DYAUL: Kollepine, 12. III. 62, 5 ♂♂, 3 ♀♀ (coloration as Manus series, except stripes brighter). — NEW IRELAND: Nago Island near Kavieng, 13. I. 62, 4 ♂♂ (coloration very like Lavongai series, but generally browner); Lelet Plateau, Lemkamin, 900 m., 7—21. III. 62, 8 ♂♂, 14 ♀♀<sup>6)</sup> (coloration like Manus series); Kalili Bay, Danu, 30. III. 62, 3 ♀♀ (one rather large; coloration like Lavongai series). — DUKE OF YORK: Manuan, 19—21. VII. 62, 2 ♂♂, 4 ♀♀ (coloration as Hermit I. series). — NEW BRITAIN: Gazelle Peninsula, Komgi, 1000 m., 14. V. 62, 3 ♂♂, 2 ♀♀; Gazelle Peninsula, Yalom, 1000 m., 11—22. V. 62, 6 ♀♀ (these two series all very dark, brown above, testaceous laterally and ventrally (no green), hind femora and tibiae of ♀♀ almost completely orange-red (cf. subsp. *aurantiaca*, but with tegmina of normal

<sup>6)</sup> 1 ♀, 18. III. attached to grass stem and apparently infected by the fungus *Empusa grylli* (?).

length), ♂♂ and 1 ♀ with femora discoloured, dark with black streaks); Cape Hoskins, Valoka, 4. VII. 62, 1 ♂; S. of Cape Hoskins Aerodrome, 6. VII. 62, 1 ♀ (this and last coloured as Hermit I. series).

**Gesonula mundata mundata** (Walker).

Bismarcks. — MUSSAU: Talumalaus, 4. II. 62, 1 ♀.

**Gesonula mundata sanguinolenta** (Brunner von Wattenwyl).

Bismarcks. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 15—20. IV. 62, 2 ♂♂, 2 ♀♀ (1 ♀ almost without red on hind femur; other ♀ discoloured). — NEW BRITAIN: Gazelle Peninsula, Yalom, 1000 m., 17. V. 62, 1 ♂, 1 ♀; Cape Hoskins, Vaisisi, 9. VII. 62, 1 ♂ and Valoka, 10. VII. 62, 1 ♂.

Note: There is an overlap in the distribution of this subspecies and the last; also at least one female virtually lacks the red colour at the base of the hind legs; this suggests that this subspecies is not valid (compare leg-colour variation in *Oxya gavisa*).

**Gesonula mundata zonocera** (Navás).

Philippines. — BALABAC: Dalawan Bay, 12. X. 61, 1 ♀. — PALAWAN: Mantalingajan, Pinigisan, Barrio, 500 m., 12. IX. 61, 1 ♀. — TAWI TAWI: Tarawakan, 29. X. 61, 1 ♂, 1 ♀. — MINDANAO: Curuan district, Sapamoro, 16—21. XII. 61, 9 ♂♂, 5 ♀♀, 2 juv.

**Racilia femoralis** Stål.

Philippines. — MINDANAO: Misamis Or., Mt. Balatukan, 15 km. S.W. of Gingoog, 1000—2000 m., 27—30. IV. 60, 1 ♀ (H. Torrevillas). ☆

Note: The hind leg coloration is not in full agreement with the original description. The outer face of the femur is greenish-yellow, the inner face and the knees reddish, the hind tibiae are bluish and the hind tarsi reddish. Generally this coloration agrees more with the description of the next species, which is, however, micropterous. It may be that *R. multicolor* (Willemse) is merely a colour variant of *R. femoralis* and it might even be that the next species is merely a form of it also.

**Racilia abbreviata** Ramme.

Philippines. — NEGROS: Negros Or., Mt. Talinas, in rain forest, 900 m., 29. VI. 58, 1 ♀ (H. E. Milliron). ☆

The female of this species has not hitherto been recorded. This

specimen agrees fairly well with the description of the male, but is larger (28 mm long) and brownish dorsally. The hind femora are red apically, otherwise green, hind tibiae and tarsi bluish (not red); the sternum is not red, but the ovipositor is so coloured. It is doubtful if the leg-colour will prove to be a good specific character in this genus, and it could also be that the degree of development of the wings is variable (see above), but the fastigium of the vertex appears to be shorter in this species than in the last (as mentioned in the original description).

**Bumacris flavomaculata** Willemse.

Solomons. — MALAITA: Auki (no date), 1 ♂. †

The phallic structures as well as external morphology confirm that *Bumacris* belongs to the Oxyinae.

**Bumacris** sp. ? nov.

Solomons. — SAN CRISTOVAL: Pamua (no date), 1 ♀ (W. N. Mann). ‡

This species is recorded here as no member of the genus has hitherto been reported from San Cristoval. It probably represents a new species, but it is related to the last. As there is an element of doubt and the specimen is a single, somewhat discoloured female I decline to describe it without further material.

**Caryanda flavomaculata** I. Bolívar.

New Guinea. — NORTH-EAST: Amok, 165 m., 6. I. 60, 1 ♂ (T. C. Maa). ☆

This species was known previously only by the type specimen and by a single female (both discoloured) — see Willemse (1956). The present specimen is well preserved and has the colour pattern strongly indicated. The body and tegmina are blackish-brown, the frons lighter. There are four prominent yellow maculae on the pronotal disc (one at each corner) and a yellow mark at each end of the lateral pronotal lobe; yellow marks are also present on the meso- and metapleura, and the dorsum of the meso- and metanota and abdomen bears a rather broad yellow stripe. The femora are all green with blue-green apices; the tibiae are all blue-green to blue; the hind knee-lobes are blackish. The antennae are dirty brownish.

The phallic structures as well as the hind femora indicate that *Caryanda* is a member of the Oyxinae. The same is true of *Tauchiridea*.

**Tauchiridea laeta** Ramme.

New Guinea. — NORTH-EAST: Adelbert Mts., Wancuna, 800—1000 m., 27. X. 58, 1 ♀ (J. L. Gressitt). ☆

**Tauchiridea adusta** I. Bolívar.

New Guinea. — NORTH-EAST: Baynyik, S. of Maprik, 150 m., 12. I. 60, 4 ♂♂, 1 ♀ (T. C. Maa); Nadsab, II. 44, 1 ♀. ☆ †

## Subfam. COPTACRINAE.

**Coptacra foedata** (Audinet-Serville).

Philippines. — PALAWAN: Mantalingajan, Pinigisan, in the barrio, 500 m., 6—23. IX. 61, 4 ♂♂, 7 ♀♀.

**Apalacris cingulatipes** (I. Bolívar).

Philippines. — MINDANAO: Curuan district, Sapamoro, 17. XII. 61, 1 ♂.

**Apalacris cyanoptera** (Stål).

Philippines. — LUZON: Los Baños, Mt. Maquiling, 21. VI. 62, 2 ♂♂, 1 ♀ (C. Nora). †

*A. cyanoptera* may prove to be a synonym of *A. contracta* (Walker).

## Subfam. EYPREPOCNEMIDINAE.

**Rectitropis brunneri** (I. Bolívar).

Bismarcks. — MANUS: Lorengau, 15—19. VI. 62, 11 ♂♂, 5 ♀♀, 1 juv.; NEW BRITAIN: Cape Hoskins, Valoka, 7—13. VII. 62, 2 ♂♂, 2 ♀♀.

The form of the phallic structures as well as the external characters confirm that *Rectitropis* belongs to the Eupreprocnemidinae.

## Subfam. CATANTOPINAE, s. str.

Gen. **Opiptacris** Walker.

This little-known genus is known chiefly from the Solomon Islands and, although no specimen is among the "Noona Dan" material, opportunity is taken to comment upon it and to describe a new species from New Britain.

The subgenus *Salomonacris* Willemse, 1931, cannot be regarded as valid, for there is no clear distinction between those species having minute, vestigial tegmina (*Opiptacris*, s. str.) and those that are completely apterous (*Salomonacris*). Most specimens,

even of allegedly apterous species, may be seen to have extremely minute vestigial tegmina, at least on one side, if they are examined closely enough.

**Opiptacris castanea**, n. sp. (Pl. III, figs. a, b).

**H o l o t y p e**: ♀, NEW BRITAIN: Gisiluve, Nakanai Mts., 1050 m., 25. VII. 1956, E. J. Ford Jr., collector (B. P. Bishop Museum, Honolulu). ☆

**H e a d**: large, round, a little longer than wide, wider than pronotum, vertex very convex; antennae filiform, about as long as head and pronotum together, with 14 segments in addition to scape and pedicel, first six segments of flagellum about twice as long as wide, remainder at least three times as long; eyes rather small, ovoid-hemispherical, prominent, interocular space about the same width as the diameter of an eye in dorsal view; fastigium of vertex marked off from the rest of the vertex and set at a lower level at about one-third the depth of an eye, horizontal, apex parabolic; frons wrinkled, shiny, median frontal carina obsolete except above median ocellus; cheeks smooth.

**T h o r a x**: with pronotal disc about equally wide at front and rear, sides concave, anterior margin slightly convex, posterior margin somewhat concave, median carinula indicated by a very faint, narrow furrow, four transverse sulci strong, more or less transverse, the distance between the typical and median sulci slightly the greatest, about one-quarter of the length of the pronotum, distances between the other sulci and the anterior and posterior margins of the disc all approximately equal; lateral pronotal lobe a little longer than deep, deepest near the posterior end where the inferior margin is strongly convex, anterior and posterior margins both slightly oblique and somewhat convex, converging toward the inferior margin, infero-anterior angle obtuse-angulate, infero-posterior angle broadly rounded; mesonotum almost concealed by pronotum; metanotum about as long as the pronotum between the median and typical sulci; prosternal tubercle strong, vertical, transverse, expanded laterally and truncated at apex; mesosternal lobes a little wider than long, their inner margins strongly convex and their interspace subquadrate, narrower than a lobe; metasternal interspace triangular.

**T e g m i n a l v e s t i g e s**: very short and broad, truncated, not quite reaching the posterior margin of metanotum.

**L e g s**: hind femora not quite reaching apex of abdomen,

moderately stout and with a very strong "arête", or herring-bone, pattern; hind tibia with four outer and 6 inner spines; first and second hind tarsal segments subequal, apical segment somewhat longer.

**Abdomen:** with tenth tergum broadly triangularly excised; epiproct twice as long as wide, tongue-like, narrowly parabolic apically; cerci conical, fairly long, rather straight, not quite attaining apex of epiproct; subgenital plate subtruncate laterally, curving medially into a long, narrowly-pointed egg-guide; ovipositor valves moderately stout, straight and smooth.

**Measurements:** length of body 37.5, antennae 12, head 7.0, pronotum 6.7, tegminal vestige 2.5, hind femur 16.8 mm.

**Coloration:** general body-colour dark chestnut-brown except as follows: head, pronotum and ovipositor rather lighter; antennae blackish; clypeus with a pair of yellowish spots near the base, mandibles each with a basal and a subapical yellow spot; infero-anterior and infero-posterior angles of lateral pronotal lobes yellow, this colour continued for a distance along the corresponding margins; tegminal vestiges black; epiproct yellowish-brown; hind femur with a pregenicular yellow ring and chestnut knee-lobes, but otherwise brownish-testaceous with all carinulae and raised pattern strongly indicated in black; hind tibiae and tarsi blackish-purple.

The holotype is unique, but it is sufficiently distinctive to warrant the erection of a new species, particularly since this is the first record of the genus from the Bismarck Archipelago. Of described species *O. castanea* is probably closest to *O. pictipennis* (Willemse) from Buru, but it is much larger and more darkly coloured.

#### ***Opiptacris bougainvillea* Ramme.**

Solomons. — BOUGAINVILLE (S.): Kokure, 690 m., 12. VI. 56 (E. J. Ford Jr.). — BUKA: Agric. Station, 6—10. XII. 59, 1 ♂ (T. C. Maa). ★†

The first specimen agrees reasonably well with the original description, except that the hind femora are bright red with black bases; the hind tarsi are also bright red. The second specimen is very similar to the first, but the thorax is yellow, not red, the abdomen is not such a bright red and the hind legs agree in colour with the description given for *O. salomona* Ramme, which is almost certainly a synonym and the otherwise unknown female

of *O. bougainvillea*. Both the males above have very minute vestigial tegmina. The genus badly needs revision since there is obviously a good deal of variation in the tegminal vestiges and, more especially, in the coloration which has previously been used as a specific character.

**Opiptacris ruficeps** (Willemse).

Solomons. — MALAITA: Tangtalan, 200 m. 23. IX. 57, 1 ♂ (B. Stone). ★

This agrees well with the original description, save that very minute tegminal vestiges are present. It is not improbable that *O. signata* (Willemse) represents the female of this species.

**Opiptacris uniformis** Willemse.

Solomons. — FULAKORA: (no date), 1 ♂. †

(A small, poorly preserved, discoloured, alcohol-shrivalled, possibly immature, female specimen without trace of tegminal vestiges, but apparently resembling this species from New Guinea is before me. It bears the data, D. N. G. Poue, Jobi Isl. (T. Barbour) ‡. It probably belongs to a new species, but it does not merit description. It is mentioned here because there appears to be no other record of the genus from New Guinea).

**Opiptacris** sp. aff. **hilaris** Walker.

Solomons. — FULAKORA: (no date), 1 ♀ (W. M. Mann). ‡

This specimen (which could conceivably be the female of the last species) is very distinctive in possessing a shiny black pronotum in contrast to the otherwise yellowish-testaceous body. In this (and in the black semilunar areas of the hind knees) it agrees with *O. hilaris*. That species was, however, described from the New Hebrides and has darker antennae and the front four femora black.

**Cranae** sp. aff. **patagiata** Stål.

New Guinea. — WOODLARK I. (Murua): Kulumadau Hill, 19—22. III. 57 (W. W. Brandt); NORMANBY I.: Wakaiuna, Sewa Bay, 11—20. XII. 56, 1 juv. (♂) (W. W. Brandt) [almost certainly the same species as from Woodlark I.]. ★

*C. patagiata* was described from Amboina, but was also recorded by Krauss (1902) from Papua. The present material is presumably the same as that from the latter region, but in view of the wide separation of the localities concerned from that of the type,



and of the limited powers of dispersal possessed by members of the genus, it seems likely that a new species may be involved. A revision of the genus would be necessary before this could be determined.

The adult male referred to above is 19 mm. long and very strikingly coloured, as follows: head and pronotum black with narrow dorso-lateral and lateral yellow bands; tegmina red with the anterior margins black; anterior and middle femora and bases of hind femora dark reddish, the last also with a median black fascia and a bright yellow subapical section; hind knees black; hind tibiae and tarsi black.

***Cranae patagiata coerulipes* C. Bolívar.**

Moluccas. — CERAM: Pim, 1906—07, 1 ♀ (T. Barlow). † ‡

***Cranae kuekenthali* Brunner von Wattenwyl.**

Moluccas. — HALMAHERA: [no further data] 2 ♂♂, 2 ♀♀ (T. Barbour), except for 1 ♂. † ‡

Since these specimens are all discoloured by alcohol, it is impossible to determine to which of the two subspecies they belong — if, indeed, the colour-form *annulata* Ramme, from the west of the island, is a valid subspecies.

***Cranae unistrigata* (Haan).**

New Guinea. — WESTERN: Sorong, 1 ♂, 2 ♀♀; Poue, Jobi Isl., 2 ♂♂; Roon I., 1 ♀ (all T. Barbour, without dates). † ‡

***Cranaella tuberculata* Ramme.**

Philippines. — MINDANAO: Misamis Or., Mt. Empagatao, 1050 m., 24. III.—4. IV. 61, 1 ♂ (H. Torrevillas); the same, 1050—1200 m., 19—30. IV. 61, 1 ♂, 1 ♀ (H. Torrevillas). ★ †

***Cranaella multicolor*, n.sp. (Pl. III, figs. c, d).**

**H o l o t y p e** ♀, Philippine Is. — MINDANAO: La Lun Mts. (Davao Prov.), 5800 ft., July, 1930 (Lyman Entomological Museum, Macdonald College, Province of Quebec). †

**H e a d**: slightly narrower than pronotum; antennae long, filiform extending back to the second abdominal tergum, with 23 segments in addition to scape and pedicel, all segments elongate, those at base and apex two to three times, remainder up to four times as long as wide; eyes round, a very little longer than deep; vertex moderately convex, rather smooth with several longitudinal

series of very fine, closely set, transverse impressions; frons slightly reclinate, somewhat granular; fastigium of vertex narrowly triangular, rather acute, slightly inclined downward; frontal ridge narrow between the antennae, about as wide as the fastigium of the vertex in the region of the median ocellus, obsolete below this; lateral frontal carinae straight, obsolescent; cheeks somewhat wrinkled.

**T h o r a x** with pronotum strongly and evenly granular, without longitudinal carinae, anterior and posterior margins of disc almost straight, typical transverse sulcus placed at about three-quarters of the pronotal length, median transverse sulcus at about the middle of the disc, more or less straight, anterior transverse sulcus lacking on the disc, lateral pronotal lobes about as deep as long, anterior and posterior margins oblique, straight, inferior margin sigmoid, infero-posterior angle obtuse; meso- and metanota together slightly shorter than pronotum, the former the shorter of the two; prosternal tubercle vertical, strong, thick, transversely compressed, quadrate in posterior view; mesosternal interspace about as wide as a mesosternal lobe at the base, sides concave, widely diverging, much wider than a lobe posteriorly, mesosternal lobes subquadrate, narrowed and rounded behind on their inner margins; metasternal lobes meeting behind, their interspace very widely triangular.

**W i n g s**: tegmina widely separated dorsally, ovate, about two-and-a-half times as long as wide, their apices rounded, extending almost to the posterior margin of the first abdominal segment; hind wings vestigial.

**L e g s**: hind femur rather stout, reaching apex of abdomen, carinulae of external face slightly, but not conspicuously, tuberculate; hind tibia stout, much shorter than hind femur; hind tarsus about two-thirds as long as hind tibiae, basal segment the shortest and apical segment the longest, claws strong, arolium large.

**A b d o m e n**: tenth abdominal tergum broadly excised; epiproct tongue-like, slightly longer than wide, rounded apically and with a pair of submarginal, sinuous carinulae bordering a median depression; cerci stout, conical, rather long, not quite reaching apex of epiproct; ovipositor valves rather short and stout, strongly hooked; subgenital plate strongly tridentate apically, the lateral "teeth" as long as, and broader than, the median point (egg-guide).

**M e a s u r e m e n t s :** length of body 28.5, antenna 16.5, pronotum 5.0, tegmen 6.5, hind femur 19.5 mm.

**C o l o r a t i o n :** antennae black except for scape and pedicel which are greenish-yellow; head yellow except for brown maculae on the clypeus, blackish streaks at the bases of the mandibles, an elongate, longitudinally triangular chocolate-brown patch extending from the base of the fastigium of the vertex to the occiput, and a brown stripe of the same colour behind each eye; eyes brown; pronotum chocolate brown, meso- and metanota sepia; first three abdominal terga blackish-brown, remainder, except for the black apical margins of the ninth and tenth, yellow; epiproct and cerci blackish; ovipositor valves dark green; tegmina green, yellowish at the base; anterior and middle femora light brown, their tibiae and tarsi olive-green, hind femora ochreous yellow, suffused blue-black on both faces in the basal one-third, small tubercles of carinulae unicolorous, hind knees black, semilunar areas dark brown; hind tibiae blue-black, spines black; hind tarsi blue-green.

The holotype is, unfortunately, unique, but the species is unlikely to be confused with any other, especially on account of its conspicuous colour pattern.

**Phalaca ikonnikovi** Ramme.

Philippines. — LUZON: Ca[ra]marines Sur, Mt. Isarog, 500—600 m., 15. IV. 63, 1 ♂ juv. (H. M. Torre Villas). ☆

Although the specimen is immature it almost certainly belongs to this species because of the characteristic arrangement of yellow maculae on the pronotum.

**Maga dichroa** I. Bolívar.

Philippines. — DINAGAT: 22. IV. 45, 1 ♀; Panamauan, 24. IV. 45, 1 ♂ (juv.) (H. Roberts). † ‡

The coloration is more uniformly green than in the typical form from the island of Samar. More material would be needed to determine if this has any significance.

**Paramaga olivacea** Willemsse.

Philippines. — BALABAC: Dalawan Bay, 9. X. 61, 1 ♀. — PALAWAN: Mantalingajan, Pinigisan, in the barrio, 500 m., 1. IX. 61, 1 ♂.

**Pseudocranae gracilis** Willemsse.

New Guinea. — NORTH-EAST: Nondugl, 2200—2700 m., 28. V. 59, 1 ♂ (C. D. Michener). ☆

**Pseudocranae loriai** I. Bolívar.

The specific name was originally spelt *loriae*, but Loria, after whom the species was named was a man, and the rules of nomenclature demand a terminal "i" for all modern male patronymics.

New Guinea. — PAPUA: Brown R. nr. Port Moresby, 10 m., 5. X. 58, 1 ♀ (J. L. Gressitt). ☆

**Bibracte bimaculata** Bei-Bienko.

Philippines. — LUZON: Los Baños, 100 m., 26. IV. 61, 1 ♀ (P. V. Flores). †

**Pseudogerunda willemsei** Bei-Bienko.

Philippines. — LUZON: Los Baños, Mt. Maquiling, 100 m., 21. VI. 62, 3 ♂♂, 3 ♀♀ (C. Nora). †

Los Baños is the type (and only known) locality for this species. Only the type series (3 ♂♂, 1 ♀) has previously been recorded.

**Stenocatantops splendens** (Thunberg).

Philippines. — BALABAC: Dalawan Bay, 5—7. X. 61, 2 ♂♂, 2 ♀♀. — PALAWAN: Brooke's Point, Uring Uring, 18. VIII. 61, 1 ♂; Brooke's Point, Makagwa, 22. IX. 61, 1 ♂; Mantalingajan, Pinigisan, in the barrio, 500 m., 8—23. IX. 61, 6 ♂♂, 3 ♀♀, 7 juv. — TAWI TAWI: Lapid Lapid, 23. XI. 61, 1 ♀; Tarawakan, 24. X. — 16. XI. 61, 11 ♂♂, 2 juv. — MINDANAO: Curuan district, Sapamoro, 21—22. XII. 61, 4 juv. — LUZON: Los Baños. 1961, 2 ♂♂ (C. Nora) †.

**Stenocatantops angustifrons** (Walker).

Bismarcks. — LUF (Hermit Islands): 26. VI. 62, 3 ♂♂, 2 ♀♀. — MANUS: Lorengau, 16—25. VI. 62, 18 ♂♂, 19 ♀♀. — MUSSAU: Talumalaus, 19. I.—10. II. 62, 2 ♂♂, 11 ♀♀; Boliu, 13. II. 62, 1 ♂, 3 ♀♀; same, 3. VI. 62, 3 ♂♂, 4 ♀♀; Tassital, 3. VI. 62, 2 ♀♀; Malakata, 10. VI. 62, 1 ♂, 1 ♀; Emananusa I. (near Mus-sau): 29. I. 62, 1 ♂. — LAVONGAI: Banatam, 18. III. 62, 3 ♂♂, 8 ♀♀. — DYAUL: Kollepine, 12. III. 62, 1 ♂, 1 ♀. — NEW IRELAND: Nago island near Kavieng, 13. I. 62, 2 ♂♂; Danu, Kalili Bay, 30. IV. 62, 1 ♂. — DUKE OF YORK: Manuan, 20. VII. 62, 1 ♂, 1 ♀. — NEW BRITAIN: Cape Hoskins, Kwalakessi, 3. VII. 62, 1 ♀; Valoka, 4. VII. 62, 3 ♂♂, 1 ♀; and Vaisisi, 9. VII. 62, 2 ♀♀.

Solomons. — Island unknown (no further data), 1 ♀. †

**Xenocatantops humilis humilis** (Audinet-Serville).

Philippines. — BALABAC: Dalawan Bay, 10. X. 61, 1 ♂, 1 ♀. — PALAWAN: Brooke's Point, Uring Uring, 14—25. VIII. 61, 4 ♂♂, 6 ♀♀, 1 juv.; Mantalingajan, Pinigisan, in the barrio, 500 m., 6—12. IX. 61, 9 ♂♂, 6 ♀♀, 12 juv. — MINDANAO: Curuan district, Sapamoro, 16—22. XII. 61, 9 juv. (? this species).

## Subfam. CYRTACANTHACRIDINAE, s. str.

**Melicodes tenebrosa tenebrosa** (Walker).

Philippines. — LUZON: Laguna Province, Maquiling National Park, 1937, 1 ♀. †

**Melicodes tenebrosa vitaticollis** (Stål).

Philippines. — LUZON: Los Baños, 20. XI. 58, 1 ♂ (Salanzo). †

This subspecies appears to have a more southerly distribution in the Philippines. As specimens apparently agreeing with the present concept of the two subspecies seem to occur almost in the same locality (Mt. Maquiling is near Los Baños), doubts as to the validity of the present one are raised. Intermediates between the two are known from southern Luzon (Rehn and Rehn, 1941; Willemse, 1957).

**Valanga gohieri** (LeGuillou).

Previously recognized differences between subspecies seem to be without significance — at least as far as subsp. *conspersa* Uvarov and the nominate form are concerned. Both occur together in many places and intermediates are frequent. Willemse (1957) reached the same conclusion in respect of most, if not all, of the so-called subspecies.

Bismarcks. — LUF (Hermit Islands): 26. VI. 62, 2 ♂♂, 5 ♀♀. — MANUS: Lorengau, 14—17. VI. 62, 9 ♂♂, 8 ♀♀. — MUSSAU: Talumalaus, 6. II. 62, 1 ♂, 1 ♀; Boliu, 6. IV. 62, 1 ♂; Tassital, 3. VI. 62, 2 ♂♂. — LAVONGAI: Banatam, 23. III. 62, 1 ♂. — DYAUL: Kollepine, 12. III. 62, 1 ♂, 1 juv. — NEW IRELAND: Kalili Bay, Danu, 30. IV. 62, 2 ♀♀. — DUKE OF YORK: Manuan, 21. VIII. 62, 1 ♀. — NEW BRITAIN: Cape Hoskins, Vaisisi, 9. VII. 62, 1 ♂.

**Valanga nigricornis fortis** (Walker).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 18. VIII.—4. IX. 61, 3 ♂♂, 5 ♀♀.

Rehn and Rehn (1941) state that they know of no specimen of this species with grey or grey-blue hind tibiae. This character is exhibited by the present series, however, most of which also have red coloration at the bases of the hind wings. This confirms that *fortis* occurs in the Philippines, in spite of the doubts expressed by Rehn and Rehn (op.cit.) regarding the type locality.

**Valanga ? geniculata** (Stål).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 10. IX. 61, 1 ♀.

This specimen appears to be faded and may belong to the last species, but it agrees with the description of *geniculata*.

**Patanga succincta** (Johansson in Linnaeus).

Philippines. — PALAWAN: Brooke's Point, Makagwa, 22. VIII. 61, 1 ♂.

Rehn and Rehn (1941) were unable to confirm the occurrence of this species in the Philippines, where its place is taken by *P. avis* Rehn and Rehn. Willemse (1957) also expressed doubts about the correctness of previous Philippine records of *P. succincta*. The present specimen, however, certainly belongs to that species.

**Austracris guttulosa guttulosa** (Walker).

Bismarcks. — MANUS: Lorengau, 17—25. VI. 62, 8 ♂♂, 6 ♀♀. — LAVONGAI: Banatam, 15—23. III. 62, 3 ♂♂, 3 ♀♀. — DYAUL: Kollepine, 12. III. 62, 1 ♀. — NEW BRITAIN: Cape Hoskins, Valoka 6. VII. 62, 1 ♀.

Solomons. — GUADALCANAL: Honiara, 4. VIII. 62, 1 ♂.

The Australian subspecies *cuspidata* (Finot) has been recorded from New Britain (see Willemse, 1957), but, if valid, that subspecies probably does not occur there. None of the present Bismarck specimens is referable to it. Willemse (op.cit.) recognizes only one other subspecies out of the eight described, namely, *talawensis* Sjöstedt from the Talaud Islands and the Philippines. He also notes the difficulty of separating *Austracris* from *Patanga*, and I concur with his suggestion that the two genera may have to be synonymized. The characters at present used to distinguish them are variable and unreliable. Like Willemse, however, I refrain from formal synonymy without a thorough investigation of phallic and other structures.

Subfam. ACRIDINAE, s. lat.

Tribe *Oedipodini*.

***Trilophidia annulata*** (Thunberg).

Philippines. — LUZON: Los Baños, 25. VI. 62, 1 ♀ (R. P. Panes); Bagnío, 19. XI. 48, 1 ♂ (Uichanco). †

Material from the Philippines has previously been referred to subspecies *cristella* Stål, but Hollis (1965), who has recently revised the genus, has not found it possible to recognize subspecies.

***Aiolopus tamulus*** (Fabricius).

Philippines. — BALABAC: Dalawan Bay, 7—12. X. 61, 4 ♂♂, 6 ♀♀. — PALAWAN: Brooke's Point, Uring Uring, 14—25. VIII. 61, 8 ♂♂, 5 ♀♀; Brooke's Point, Makagwa, 22. VIII. 61, 1 ♂, 2 ♀♀; Mantalingajan, Pinigisan, in the barrio, 500 m., 8. IX. 61, 1 ♂, 1 ♀. — TAWI TAWI: Tarawakan, 22. X.—13. XI. 61, 18 ♂♂, 22 ♀♀, 1 juv.; Lapid Lapid, 19—21. XI. 61, 2 ♂♂, 2 ♀♀. — MINDANAO: Curuan district, Sapamoro, 14—20. XII. 61, 9 ♂♂, 10 ♀♀.

***Gastrimargus marmoratus transversus*** (Thunberg).

Philippines. — MINDANAO: Curuan district, Sapamoro, 17—20. XII. 61, 1 ♂, 1 ♀. — LUZON: Los Baños, 23. VI. 61, 2 ♂♂ (H. B. Galaegae); 3. IX. 61, 1 ♀ (P. B. Flores). †

*Gastrimargus* is badly in need of a thorough revision. *G. transversus* is often regarded as a species distinct from *G. marmoratus* (Thunberg).

***Locusta migratoria manilensis*** (Meyen).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 15. VIII. 61, 1 ♀ (dark *transiens*-like specimen). — TAWI TAWI: Lapid, Lapid, 19. XI. 61, 1 juv. (green).

Bismareks. — LAVONGAI: Banatam, 17. III. 62, 1 ♀ (large green ph. *solitaria*).

? ***Pternoscirtus*** sp.

Philippines. — PALAWAN: Mantalingajan, Pinigisan, in the barrio, 500 m., 11. IX. 61, 1 juv.

***Heteropternis respondens*** (Walker).

Philippines. — BALABAC: Dalawan Bay, 6. X. 61, 1 ♂. — MINDANAO: Curuan district, Sapamoro, 21. XII. 61, 1 ♂.

**Heteropternis obscurella** (Blanchard).

Philippines. — TAWI TAWI: Tarawakan, 24—30. X. 61, 5 ♂♂, 2 ♀♀; Lapid Lapid, 19—21. XI. 61, 1 ♂, 1 ♀.

Bismarcks. — LUF (Hermit Islands): 26. VI. 62, 1 ♂, 1 ♀. — MANUS: Lorengau, 24—25. VI. 62, 3 ♀♀. — MUSSAU: Talumalaus, 10. II. 62, 1 ♂, 5 ♀♀; Boliu, 13. II. 62, 1 ♂; Malakata, 7. VI. 62, 1 ♂. — LAVONGAI: Banatam, 18—26. III. 62, 5 ♂♂, 2 ♀♀. — DYAUL: Sumuna, 6. III. 62, 1 ♀. — NEW IRELAND: Lelet Plateau, Lemkamin, 900 m., 6—23. IV. 62, 13 ♂♂, 20 ♀♀, 1 juv. — DUKE OF YORK: Manuan, 21. VIII. 62, 1 ♂. — NEW BRITAIN: Gazelle Peninsula, Komgi, 1000 m., 14. V. 62, 3 ♂♂; and Yalom, 1000 m., 18. V. 62, 1 ♀; Cape Hoskins, Valoka, 8. VII. 62, 1 ♀.

Tribe *Acridini*.? **Phlocoba aberrans** Willemse.

Philippines. — PALAWAN: Mantalingan, Tagembung, 1150 m., 15—19. IX. 61, 5 juv.

**Gonista bicolor** (Haan).

Philippines. — LUZON: Los Baños, 30 m., 20. VI. 62, 1 ♂ (H. Quimay). †

**Gelastorhinus macilentus** (Stål).

Philippines. — MINDANAO: Surigao, XI. 59, 1 ♀. †

**Acrida willemsei** Dirsh.

Philippines. — LUZON: Los Baños, 26. VI. 61, 1 ♂ (P. V. Flores); 24. VI. 62, 1 ♀ (B. Enriques); 28. VI. 62, 1 ♂ (S. E. Cuenca). †

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### Summary.

The Orthoptera-Caelifera collected by the Danish "Noona Dan" Expedition in the southern Philippines, the Bismarck Archipelago and the Solomon Islands (except Rennell I.) are listed, together with certain miscellaneous interesting or little known species from other sources but from same or adjacent areas. New forms include *Rostella phyllocera guentheri* (Tetrigidae) from Palawan, *Noonacris pusilla* and *N. novahibernica* (Pyrgomorphidae — preliminary diagnoses of which have previously been published elsewhere) from the Bismarcks, *Apodesmoptera (A.) curtipennis* (Pyrgomorphidae) from Luzon, *Opiptacris castanea* (Acrididae) from New Britain, and *Cranaella multicolor* (Acrididae) from Mindanao. Other new taxa are the superfamily Eumastacoidea, the tribes Thoradonotini and Criotettigini (Tetrigidae), and the subgenus *Brachydesmoptera* of the genus *Apodesmoptera*, the type species *luzonica* being elevated from subspecific status. A neotype for *Desmopterella prasina* is established. Several possible synonymies are suggested and numerous interesting records are discussed.

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