Notes on *Acridoidea* of Africa, Madagascar and Asia
(Orthoptera)

BY

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AFRICA

Family PNEUMORIDAE

PHYSOPHORINA Westwood 1874.

1874. *Physophorina* Westwood, Thesaurus Ent. Oxoniensis Orth.: 175, pl. 32, f. 5, 5a.
1916. *Shortridgea* Peringuey, Ann. S. Afr. Mus., *15* (5): 412 *(Syn. n.)*.

Study of the type of *Physorphorina livingstoni* Westwood, which is the type of the genus, revealed that it is a nymph (probably of the last stage), undoubtedly congeneric with *Shortridgea* Peringuey. It is probably conspecific with *Shortridgea absidata* (Karsch 1896), with which it shares the shape of pronotum and head, and all other characters common to nymph and adult.

Family CHARILAIDAE

PARACHARILAUS gen. nov.
(Figs. 1-6.)

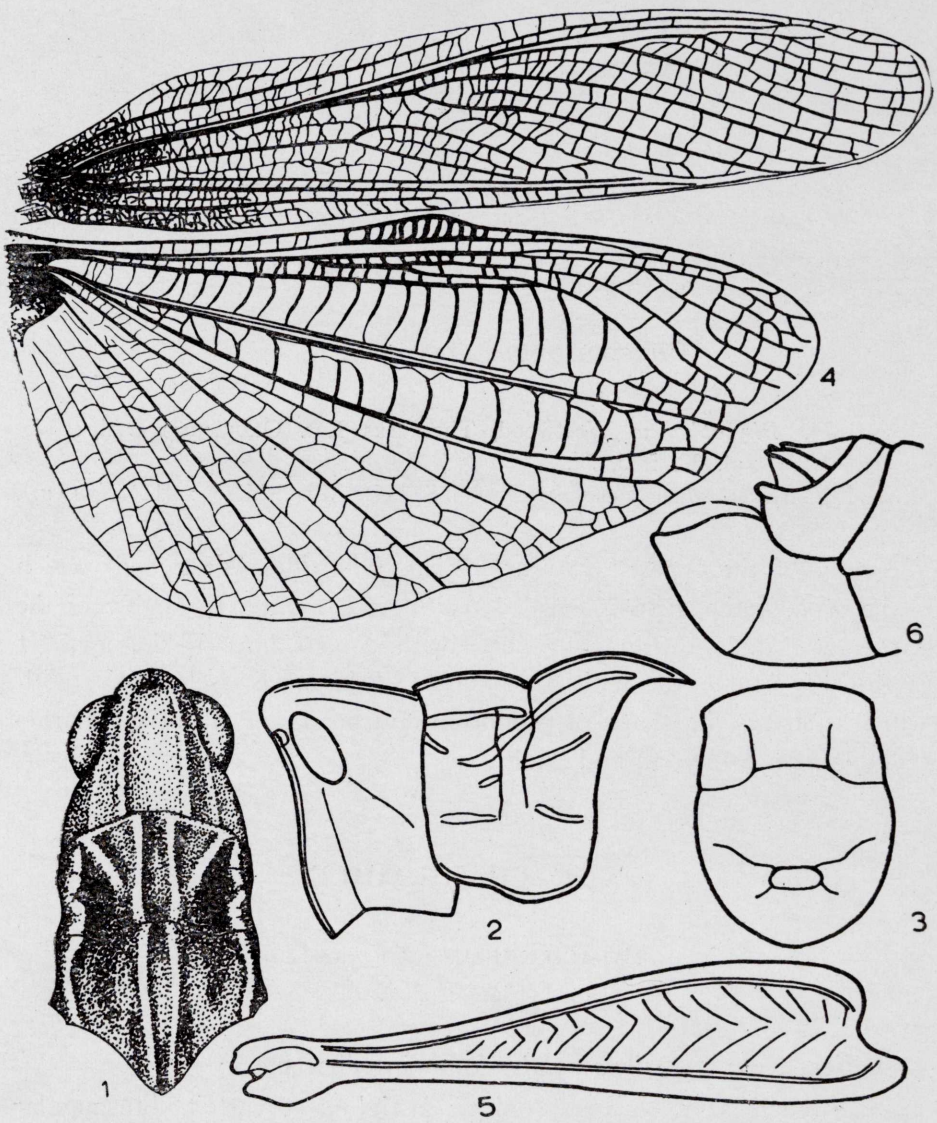
Differs from *Charilaus* by the following characters:

Size much larger. Head conical; fastigium of vertex obtusangular or rounded. Pronotum strongly saddle-shaped; posterior margin with angular, not attenuated apex. Male last abdominal tergite with stron-

(*) Anti-Locust Research Centre.

gly attenuated and acute lower lateral angle. Cercus long, downcurved. Epiphallus with incurved anterior and straight posterior margin.

Generic type: *Charilaus curvicollis* Karny 1910.



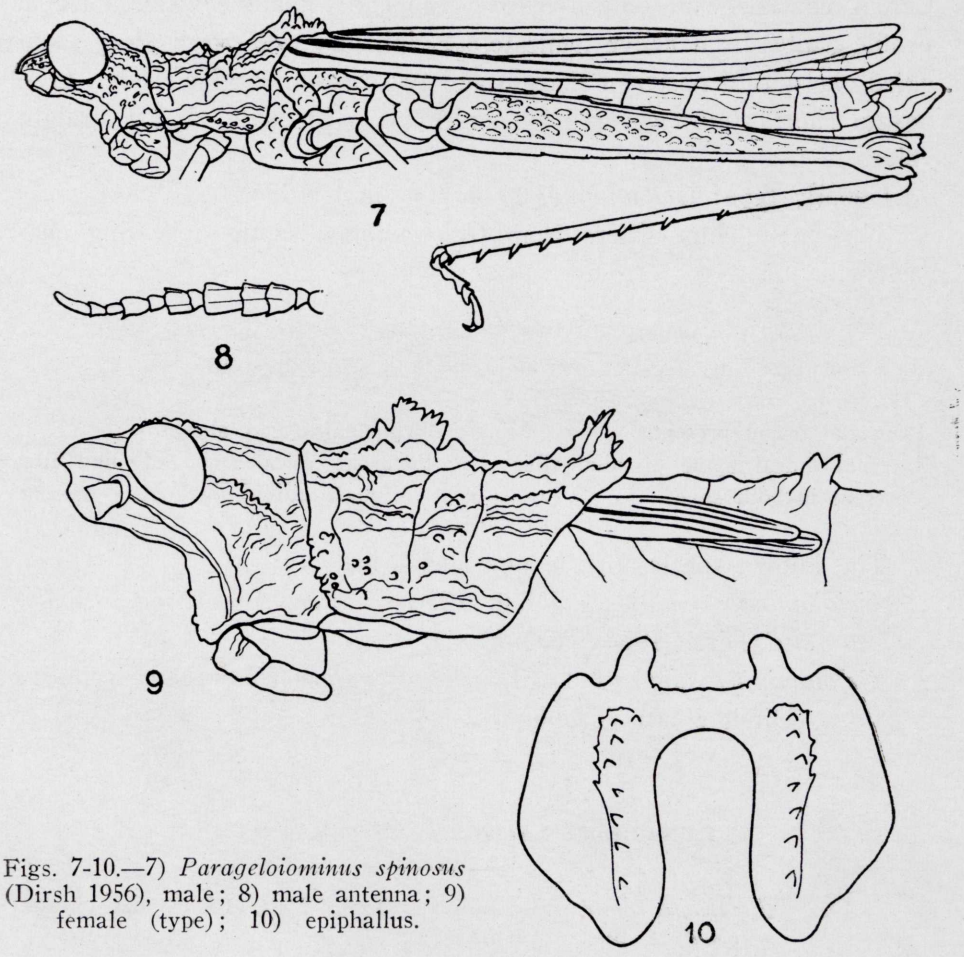
Figs. 1-6.—1) *Paracharilaus curvicollis* (Karny 1910) (type), head and pronotum from above; 2) ditto, lateral view; 3) meso-and metasternum; 4) elytron and wing; 5) hind femur; 6) end of male abdomen.

Family **PAMPHAGIDAE**

PARAGELOIOMIMUS gen. nov.

(Figs. 7-10.)

Of medium size, body strongly elongated, stick-like, cylindrical. Integument strongly rugose, carinulate and tuberculate. Antenna triangular in cross-section, with strongly serrated edges, shorter than head and pronotum together. Fastigium of vertex strongly projecting forwards, in profile with slightly incised apex; frons deeply incurved; frontal ridge narrow, sulcate, above ocellus lamelliform. Eyes small,



Figs. 7-10.—7) *Parageloiominus spinosus* (Dirsh 1956), male; 8) male antenna; 9) female (type); 10) epiphallus.

round, strongly convex. Pronotum subcylindrical, strongly ridged, with tooth-like median projections in prozona and metazona and with lateral projection in metazona; metazona shorter than prozona, its posterior margin obtusangular, with bifurcate apex. Prosternal process low, tubercle-like, with collar-like raising of anterior margin. Mesosternal interspace slightly longer than its width. Elytra and wings in male fully developed, in female lobiform, lateral; wing in folded position slightly longer than elytron in both sexes. Tympanum in male well developed, in female vestigial. Krauss's organ absent. Hind femur slender, narrow, elongated; external and internal lower carinae sparsely toothed. External apical spine of hind tibia present in both sexes. Arolium small. Abdominal tergites, in female only, with small preapical, dorsal projections. Male supra-anal plate elongate-angular. Cercus conical, with obtuse apex. Subgenital plate conical, apex in profile acute, from above truncate. Epiphallus with large, deep elongated excision of posterior margin and two rows of sparse teeth. Ovipositor short, almost covered by paraprocts, with wide, almost straight valves.

Generic type: *Geloiomimus spinosus* Dirsh 1956.

The new genus differs from *Geloiomimus* by the following characters:

Parageloiomimus	*Geloiomimus*
Male macropterous, female micropterous.	Both sexes apterous.
Tympanal organ present.	Tympanal organ absent.
External apical spine of hind tibia present in both sexes.	External apical spine of hind tibia in male absent, in female present.

The known species of the new genus are:

1. *Geloiomimus rugulosus* Dirsh 1956 = *Parageloiomimus rugulosus* (Dirsh 1956) *(Comb. n.)*.
2. *Geloiomimus spinosus* Dirsh 1956 = *Parageloiomimus spinosus* (Dirsh 1956) *(Comb. n.)*.

Eunapiodes latipes I. Bolívar 1912.

1912. *Eunapiodes latipes* I. Bolívar, Trab. Mus. Cienc. nat. Madr., no *6:* 5, 14.

1932. *Nadigia ifranensis* Werner, Zool. Anz., *100:* 124. *(Syn. n.)*.

E. latipes I. Bol. was described from the female, and *N. ifranensis* Wern. from the male; both of them from Morocco. The type of *N. ifranensis,* which was presumed lost, is preserved in the private collection of Dr. Ad. Nadig by whose kind co-operation I was able to study the type and compare it with a series of both sexes of *E. latipes,* the female type of which was previously studied by me. They proved to be conspecific.

The genus *Nadigia* Werner has been already synonymised with *Eunapiodes* by Dirsh 1958 on the basis of descriptions.

Family **PYRGOMORPHIDAE**

Stenoscepa Karsch 1896.

1896. *Stenoscepa* Karsch 1896, Stettin. ent. Ztg., *57:* 271.
1956. *Afrosphena* Kevan, Publ. Cult. Comp. Diam. Angola, *29:* 110, 121, f. 7-9. *(Syn. n.).*
1956. *Parasphenoides* Kevan, l. c.: 111, 119, f. 5 *(Syn. n.).*
1956. *Parasphenula* Kevan, l. c.: 111, 115, f. 2. *(Syn. n.).*

Revising apterous and micropterous genera of *Pyrgomorphidae,* Kevan (1956) remarked "... generic distinctions are rather fine and probably artificial; further study may permit a reduction in the number recognised".

When the genera listed above were studied, it was found that the characters used for separating them are not sufficient and they can all be grouped with the genus *Stenoscepa* Karsch.

Parasphenoides, according to Kevan, differs from *Stenoscepa* mainly by posterior margin of pronotum "somewhat angularly excised" and by "ovipositor valves unusually long", while in *Stenoscepa* "posterior margin of pronotum bi-arcuate" and "ovipositor valves not unusually long".

Parasphenula, according to Kevan, differs from *Stenoscepa* (see Kevan's key) mainly by "inferior margis of lateral lobes somewhat sinuous, dorsum in profile and in section, slightly, sometimes, distinctly, convex" while in *Stenoscepa* "... inferior margins of lateral lobes and dorsum, in profile, more or less straight, the latter slightly tectiform in section".

The main difference between *Afrosphena* and *Stenoscepa,* according

to Kevan, is that in the former "Pronotum above strongly, and laterally somewhat, convex in section; lateral carinae virtually absent". In *Stenoscepa* "Pronotum not, or less, strongly convex, dorsally in section; lateral carinae present (sometimes faint)".

Neither of the synonymised genera can be very well differentiated by the mentioned characters and other secondary ones. All the characters may be regarded as only specific.

The following species are referred to the genus *Stenoscepa* at present.

1. *Parasphena abyssinica* Uvarov 1934 = *Stenoscepa abyssinica* (Uvarov 1934) *Comb. n.*
2. *Parasphena boranensis* Salfi 1939 = *Stenoscepa boranensis* (Salfi 1939). *Comb. n.*
3. *Parasphena dubia* I. Bolívar 1904 = *Stenoscepa dubia* (I. Bolívar 1904) *Comb. n.*
4. *Afrosphena fusiformis* Kevan 1956 = *Stenoscepa fusiformis* (Kevan 1956). *Comb. n.*
5. *Cawendia gallae* Rehn 1901 = *Stenoscepa gallae* (Rehn 1901). *Comb. n.*
6. *Afrosphena gracilis* Kevan 1956 = *Stenoscepa gracilis* (Kevan 1956). *Comb. n.*
7. *Cawendia granulata* Karsch 1888 = *Stenoscepa granulata* (Karsch 1888). Generic Type.
8. *Parasphenula grandis* Kevan 1956 = *Stenoscepa grandis* (Kevan 1956). *Comb. n.*
9. *Parasphena iavellensis* Kevan 1948 = *Stenoscepa iavellensis* (Kevan 1948). *Comb. n.*
10. *Parasphena maxima* Kevan 1948 = *Stenoscepa maxima* (Kevan 1948). *Comb. n.*
11. *Parasphenoides meridionalis* Kevan 1956 = *Stenoscepa meridionalis* (Kevan 1956). *Comb. n.*
12. *Parasphena montana* Uvarov 1934 = *Stenoscepa montana* (Uvarov 1934). *Comb. n.*
13. *Parasphena picta* I. Bolívar 1884 = *Stenoscepa picta* (I. Bolívar 1884). *Comb. n.*
14. *Parasphena picticeps* I. Bolívar 1904 = *Stenoscepa picticeps* (I. Bolívar 1904). *Comb. n.*

15. *Afrosphena rhodesiensis* Kevan 1956 = *Stenoscepa rhodesiensis* (Kevan 1956). *Comb. n.*

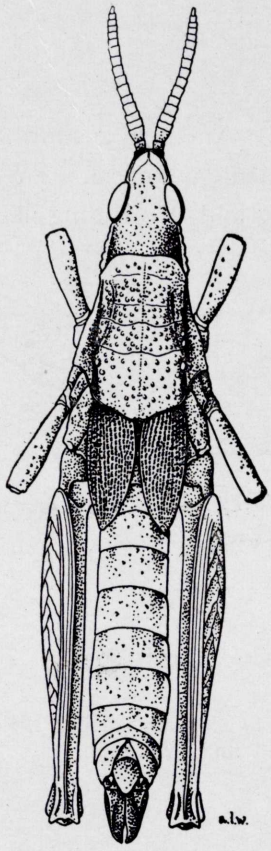


Fig. 11.—*Plerisca peringueyi* I. Bolívar 1904, Female type.

Plerisca I. Bolívar 1904.

The type of *Plerisca peringueyi* I. Bolívar 1904 was studied by me. It differs from the genus *Pyrgomorphella* by the excurved posterior margin of pronotum. According to the shape of posterior margin of pronotum, the following species ought to be transferred from the genus *Pyrgomorphella* I. Bolívar 1904 to the genus *Plerisca* I. Bolívar 1904.

Pyrgomorphella rubripennulis Key 1937 = *Plerisca rubripennulis* (Key 1937) *(Comb. n.)*.

Pyrgomorphella senecionicola Key 1937 = *Plerisca senecionicola* (Key 1937) *(Comb. n.)*.

Phyteumas purpurascens (Karsch 1896).

Phyteumas was described by I. Bolívar 1904 as a subgenus of *Phymateus* Thunberg 1815, with two characters: the presence of vena intercalata and uniformly coloured hind wing, while in *Phymateus* vena intercalata was supposed to be absent or very weak, and hind wing possessed a characteristic tesselated pattern.

The first character is very unstable in *Phyteumas* and specimens with the same degree of development of vena intercalata are found in *Phymateus*. Therefore this character cannot be considered as a valid generic one. On the other hand the tesselated pattern is stable in *Phymateus*. According to this character *Phymateus purpurascens* without such pattern is transferred to the genus *Phyteumas*.

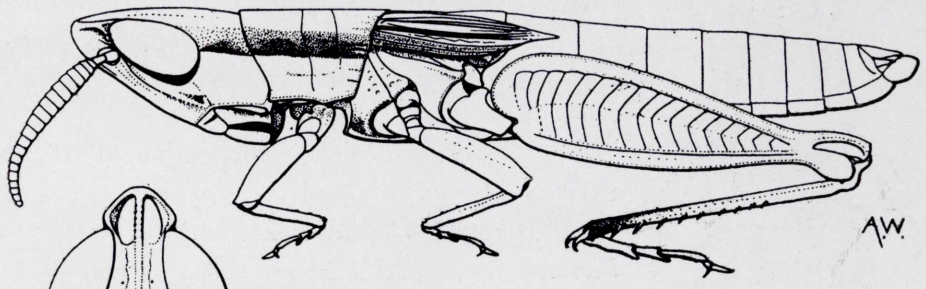
Phymateus purpurascens Karsch 1896 = *Phyteumas purpurascens* (Karsch 1896) *(Comb. n.)*.

Family **ACRIDIDAE**

Pseudotristria gen. nov.

(Figs. 12-13.)

Small and slender. Integument finely dotted. Antenna ensiform, shorter than head and pronotum together. Head acutely conical. Fastigium of vertex wide, angular, with obtuse apex and protruding la-



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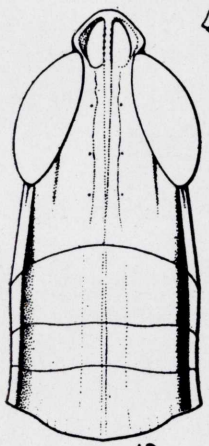

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Figs. 12-13.—12) *Pseudotristria manicae* (Miller 1949), male type; 13) Head and pronotum.

teral angles, above convex, with median carinula which is continuing to base of occiput; frontal ridge above ocellus with deep narrow sulcus; interocular distance about three times as wide as basal antennal segment. Upper surface of head with several irregular, low, parallel ridges. Pronotum cylindrical, with weak hardly noticeable median and without lateral carinae; dorsum with several longitudinal, parallel wrinkles, crossed by two sulci; metazona much shorter than prozona, with widely obtusangular posterior margin. Prosternal process very wide, strongly curved backwards, touching or almost touching mesosternum, its anterior and apical surface strongly convex, posterior apical margin bilobate. Elytra almost reaching end of abdomen or lobi-

form lateral. Hind femur moderately robust; third from the apex internal spine of hind tibia missing. Male supra-anal plate angular. Cercus straight, conical. Subgenital plate short, with rounded apex. Valves of ovipositor short, slender, strongly curved; external margin of lower valve with large angular projections.

Generic type: *Tristria manicae* Miller 1949.

The new genus differs from *Tristria* by the following characters:

Pseudotristria	*Tristria*
Antenna ensiform.	Antenna thick filiform, in basal half compressed.
Head acutely conical.	Head conical.
Frontal ridge above ocellus with deep, narrow sulcus.	Frontal ridge flat.
Pronotum cylindrical, without lateral carinae.	Pronotum with flattened dorsum, with lateral carinae.
Third, from the apex, internal spine of hind tibia missing.	All spines on internal side of hind tibia present.

The position of the new genus is somewhere between *Tristria* Stål 1873 and *Musimoja* Uvarov 1953.

Two species referred to this new genus are:

1 *Tristria manicae* Miller 1949 = *Pseudotristria manicae* (Miller 1949) *(Comb. n.)*.

2. *Tristria cylindrica* Uvarov 1953 = *Pseudotristria cylindrica* (Uvarov 1953) *(Comb. n.)*.

ZULUA Ramme 1929.

1929. *Zulua* Ramme. Mitt. zool. Mus. Berlin, *15:* 327, pl. 7, f. 3, 4; f. 44.

Beside the only known species of the genus *(Z. glabra* Rme.) two more species are transferred to *Zulua* from the genus *Oxya*. They share with the genus *Zulua* cylindrical pronotum, presence of the median carinula of fastigium of vertex and acute head. In *Oxya* the dorsum of pronotum is flattened, median carinula of vertex absent and head is less acute.

Oxya cyanoptera Stål 1873 = *Zulua cyanoptera* (Stål 1873), *(Comb. n.)*.

Oxya oxyura Uvarov 1953 = *Zulua oxyura* (Uvarov 1953), *(Comb. n.)*.

Tylotropidius Stål 1873.

1873. *Tylotropidius* Stål, Rec. Orth. 1: 74.
1893. *Metaxymecus* Karsch, Entom. Zeitschr., Berlin, *38:* 104. *(Syn. n.)*.

When describing the new genus *Metaxymecus,* Karsch compared it with the genus *Eyprepocnemis,* from which it strongly differs, while from the genus *Tylotropidius, Metaxymecus* differs only by strongly shortened elytra, all other characters being the same in both genera.

As species with shortened elytra are known in the genus *Tylotropidius,* it is not possible to regard *Metaxymecus* as a separate genus. *T. lanceolatus* Ramme 1929 represents an intermediate species between two extremes, short-winged *Metaxymecus patagiatus* Karsch and other long-winged species of the genus *Tylotropidius.*

Tylotropidius gracilipes Brancsik 1895.

1895. *Tylotropidius gracilipes* Brancsik, Jh. naturw. Ver. (Mus. Ver.) Trencsin, *17-18:* 256, pl. 8, f. 8.
1896. *Metaxymecus laxus* Karsch, Stettin. ent. Ztg., *57:* 324, f. 38. *(Syn. n.)*.

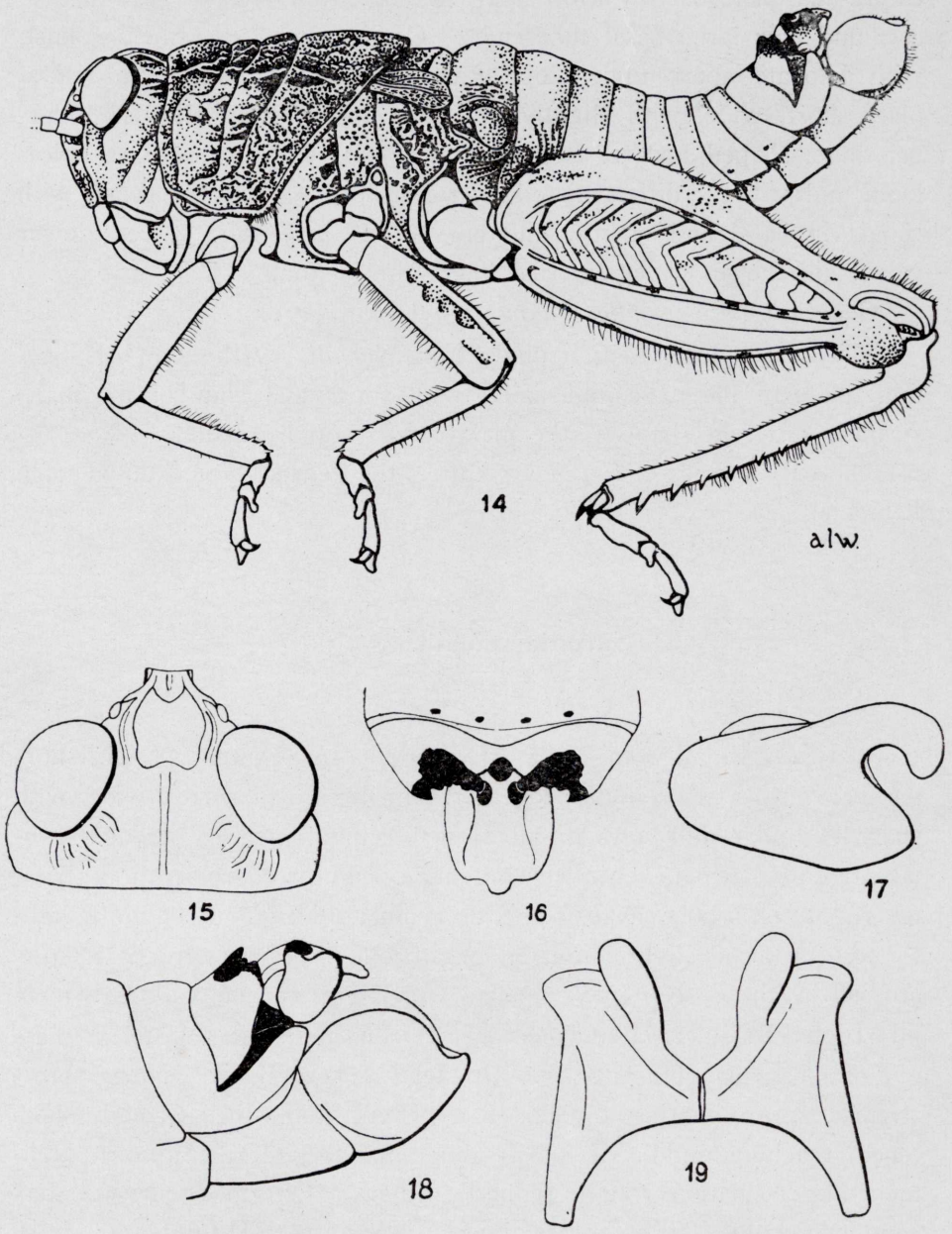
The types of these two species were compared and found identical.

Kevanacris gen. nov.

(Figs. 14-19.)

Of medium size, robust. Integument rugose. Antenna filiform, shorter than head and pronotum together. Fastigium of vertex wide, concave, with high lateral carinulae; occipital carinula present; frontal ridge shallowly sulcate, with obtuse lateral carinulae. Pronotum tectiform, strongly tuberculate; median carina high, lateral carinae callous; all carinae widely interrupted by sulci; metazona shorter than prozona,

its posterior margin obtusangular. Prosternal process low, widely conical, depressed, with obtuse apex. Elytra vestigial, not covering tympanum. Hind femur robust, widened, with expanded marginal areas;



Figs. 14-19.—14) *Kevanacris squamiptera* (Kevan 1956), male; 15) head, from above; 16) end of abdomen, from above; 17) left cercus; 18) end of abdomen lateral view; 19) epiphalus.

upper carina serrated. Arolium large. Male last abdominal tergite with wide marginal sclerotization, pair large, incurved, tooth-like lateral and one median projections and roughly serrated posterior margin. Supra-anal plate narrow with upturned sides, short rounded apical process and pair large basal tubercules. Cercus short, extremely robust, with bilobate apex, upper lobe finger-like downcurved. Subgenital plate short, wide, with slightly attenuate apex. Epiphallus with large, finger-shaped ancore, large lateral plates, with truncate at apices lophi and without differentiated lateral plates. Ovipositor short, with robust in basal and narrow and curved in apical part valves; lower valve with large, wide, external lateral projection.

Generic type: *Surudia squamiptera* Kevan 1956.

The new genus differs strongly from *Surudia* by the simple subgenital plate of the male, unusually small supra-anal plate of the male, strongly different shape of the male cercus and epiphallus.

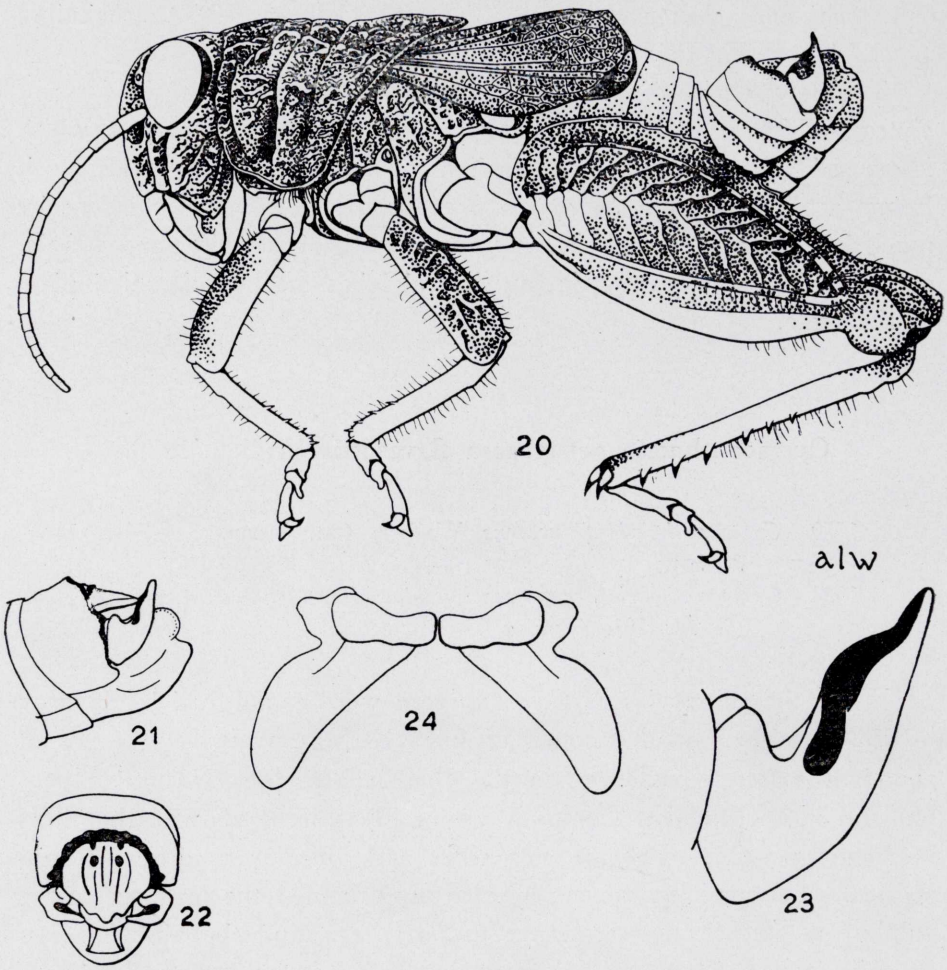
The only species of the new genus is the generic type, known from Ethiopia.

Surudia somalica sp. nov.

(Figs. 20-24.)

♂ type. Small, robust and strongly rugose. Antenna thick, shorter than head and pronotum together. Fastigium of vertex wide, with sharp carinulae and rows of tubercles; occipital carinula strong; frontal ridge low, widened between antennae, slightly depressed and strongly rugose on whole surface; lateral carinulae obtuse. Pronotum slightly tectiform and slightly inflated in prozona; dorsum strongly rugose, crossed by three deep sulci; median and lateral carinae callous, widely interrupted by sulci; lateral ones in metazona indistinct; posterior margin of metazona obtusangular. Prosternal process low, widely obtusangular, approximating to collar-like. Elytra and wings strongly shortened, reaching middle of fourth abdominal tergite; membrane parchment-like; venation rough, reduced; anterior margin excurved, apex rounded; wings slightly protruding under elytra. Hind femur short, wide, slightly inflated; lower marginal area expanded; upper carina serrated. Arolium large. Posterior margin of last abdominal tergite

roughly undulated. Supra-anal plate with widely rounded sides, obtusangular apical margin and short, attenuate apex; in middle with longitudinal sulcus and two pairs small, black tubercles. Cercus large,



Figs. 20-24.—20) *Surudia somalica* sp. nov., male type; 21) end of abdomen, lateral view; 22)) ditto, from above; 23) left cercus; 24) epiphallus.

wide, strongly curved, with tooth-like narrowed apical part. Subgenital plate short, obtuse, with high, sharp lateral lobes. Epiphallus with large, elongated, with rounded apices lophi.

General colouration grey-brownish. Internal and lower side of hind femur red, with black preapical spot. Hind tibia yellow.

♀ paratype. As male but larger. Ovipositor short, robust, with

curved valves; lower valve with large, rounded, external lateral projection. Subgenital plate shallowly trilobate.

Length of body ♂ 14.3, ♀ 23-24; pronotum ♂ 5, ♀ 6.5; elytron ♂ 4.5, ♀ 5.7; hind femur ♂ 9.9, ♀ 12 mm.

Somaliland. Erigavo Scarp, 2,500 ft., 11.1.1953, 2 ♂ (including type), 4 ♀. G. Popov and D. Greathead.

The new species differs from *Surudia loboptera* Uv. by the form of elytron, which in *loboptera* is strongly widened towards the apex, which is excised, by a less prominent median carina of pronotum and a much larger arolium. From *S. aptera* Kevan, the new species differs by much larger elytra, which in *aptera* are vestigial; by the shape of the cercus and by the less projecting lateral lobes of the subgenital plate of the male.

Cyrtacanthacris aeruginosa flavescens Walker 1870.

1870. *Cyrtacanthacris flavescens* Walker, Cat. Derm. Salt. Br. Mus., *3:* 561.

1924. *Cyrtacanthacris aeruginosa unicolor* Uvarov, Ann. Mag. Nat. Hist., (9) *14:* 101. *(Syn. n.).*

When the subspecies of *C. aeruginosa* were established by Uvarov in 1924, only a small amount of material was available. Study of abundant material preserved in the British Museum (Natural History) and in the Belgian Congo Museum (Tervuren) showed that it is no longer possible to regard *flavescens* and *unicolor* as different subspecies. The main character for separating them is the presence of the sulphurous stripe on the elytron in *flavescens,* and the absence of it in *unicolor* is a matter of individual variability and is not confined to a definite geographical area or definite ecological conditions.

Paraxenotettix gen. nov.

Small, robust, integument finely or coarsely rugose. Antenna shorter than head and pronotum together, thin, filiform. Fastigium of vertex short and comparatively wide, only slightly projecting in front of eyes; roundly merging with frontal ridge, with which it forms upper

part of frons; slightly concave, almost flat. Interocular distance wider than first antennal segment. Frons vertical, convex; frontal ridge wide and high, flat, with small concavity below ocellus; facial carinae strong. Eyes small, moderately convex. Ocelli moderately small. Pronotum short, with flattened dorsum, widening backwards, with faint trace of median and without lateral carinae; crossed by three sulci; metazona longer than prozona, its posterior margin obtusangular. Prosternal process low, wide, transverse. Mesosternal interspace about twice as wide as its length, with straight apex. Anterior legs short, robust; tibia with widened apex and five very large, expanded spines. Medial legs slender, with normal tibia and only slightly enlarged spines.

Hind femur slender; tibia with moderately or very strongly enlarged spurs, internal being longer than external. Arolium large. Elytra and wings slightly exced end of abdomen. Tympanum small, open. Female supra-anal plate with angular apex. Cercus small, conical. Subgenital plate with obtusangular apex. Ovipositor short, slender, with slightly curved valves; lower valve with large, lateral, external tooth-like projection.

Generic type: *Xenotettix rugulosus* Dirsh 1956.

The new genus differs from *Xenotettix* by the following characters:

Paraxenotettix	*Xenotettix*
Interocular distance wider than the basal antennal segment.	Interocular distance much narrower than the basal antennal segment.
Frontal ridge flat.	Frontal ridge sulcate.
Apex of prosternal process straight.	Apex of prosternal process slightly bilobate.

Two species to be referred to the new genus:

1. *Xenotettix calcaratus* Uvarov 1925 = *Paraxenotettix calcaratus* (Uvarov 1925) *(Comb. n.)*.
2. *Xenotettix rugulosus* Dirsh 1956 = *Paraxenotettix rugulosus* (Dirsh 1956) *(Comb. n.)*.

Amphicremna flavipennnis I. Bolívar 1912.

1912. *Amphicremna flavipennis* I. Bolívar, Mem. Soc. ent. Belg., *19*: 76.
1932. *Amphicremna brevipennis* Miller, Trans. ent. Soc. Lond., *80* (1): 19, f. 1a, b. *(Syn. n.)*.

A. flavipennis was described on the basis of male and female, and the type was not designated. Now in the Belgian Congo Museum (Tervuren) only the female specimen remains, which I am designating here as the type.

A. brevipennis was described on the basis of the male. When both types and a series of the specimens were studied, they were found conspecific. In the series of specimens variability in length of elytra and wings was observed.

Machaeridia Stål 1873.

1873. *Machaeridia* Stål, Rec. Orth, 1: 90, 100.
1908. *Wilwerthia* I. Bolívar, Mem. Soc. ent. Belg., *16*, 96 *(Syn. n.)*.

The genus *Wilwerthia* I. Bol., according to the description, differs from *Machaeridia* only by slightly shorter elytra and by the apex being less gradually acuminate. Studying large series of all species of both genera showed that the above mentioned characters vary even in the same species and cannot be regarded as generic.

The following species are referred to the genus *Machaeridia* at present:

1. *W. acuminata* I. Bolívar = *M. acuminata* (I. Bolívar 1908) *(Comb. n.)*.
2. *M. bilineata* Stål 1873.
3. *M. coerulans* Karny 1907.
4. *M. congonica* Sjöstedt 1931.
5. *M. conspersa* I. Bolívar 1889.
6. *M. fragilis* Sjöstedt 1931.
7. *W. ugandana* Uvarov 1938 = *M. ugandana* (Uvarov 1938) *(Comb. n.)*.

Paralobopoma bugoiensis Rehn 1914.

1914. *Paralobopoma bugoiensis* Rehn, Wiss. Ergebn. dtsch. Zent. Afr. Exped., 1907-8. *5:* 73.

1929. *Sagonacris gracilis* Ramme, Mitt. Zool. Mus. Berlin, *15:* 263, pl. 3, f. 11, 12; f. 4. *(Syn. n.).*

Paralobopoma bugoiensis Rehn was described on females only. The type and a series of specimens of this species were studied and it was possible, without doubt, to establish the identity of the male of this species.

The type male and paratype female of *Sagonacris gracilis* were studied as well and compared with the type and a series of *P. bugoiensis*. They were found conspecific.

Plagiacris bimaculata Sjöstedt 1931.

P. bimaculata was described on the basis of male and female. The specific type was not designated by Sjösted. Here the male is designated as the type.

Gastrimargus volkensi Sjöstedt 1909.

1909. *Gastrimargus volkensi* Sjöstedt, Wiss. Erg. Schwed. Zool. Exp. Kilim., Meru. Masaist. Deutsch. O.—Afr., *17:* 171, 172, pl. 7, f. 6.

1928. *Gastrimargus femoralis* Sjöstedt, K. Sven. Vet. Akad. Hand., *6,* 1: 13, 45, pl. 11, f. 3. *(Syn. n.).*

The main difference between the two species, according to Sjöstedt, is that in *femoralis* "Hinterschenkel auffalend dick", while in *volkensi* it is "Hinterschenkel massig dick oder ziemlich schmal". When the type of *femoralis* and the paratype of *volkensi,* and also a series of material were studied, it was found that the difference represented no more than a range of individual variability.

Vosseleriana Uvarov 1924.

1924. *Vosseleriana* Uvarov, Tech. Bull. Minist. Agric. Egypt., *41:* 31.
1950. *Mistshenkoa* Bey-Bienko, Rev. Ent. U. S. S. R., *31,* 1-2: 202. *(Syn. n.).*

The cotype of *Helioscirtus fonti* I. Bolívar 1902, which is the generic type of the genus *Vosseleriana,* was studied. It was compared with the paratype of *Sphingonotus arabicus* Mistshenko, which is the generic type of the genus *Mistshenkoa* Bey-Bienko 1950. They were found so near that it is even doubtful whether they belong to different species. They are undoubtedly congeneric.

Phorenula I. Bolívar 1909.

1909. *Phorenula* I. Bolívar, Bol. Soc. esp. Hist. nat., *9:* 296.
1953. *Luenia* Uvarov, Publ. cult. Comp. Angola, *21:* 171. *(Syn. n.).*

The genus *Luenia* was described as "closely allied to *Aulacobothrus,* differing from it mainly by the strongly elongated habitus". Comparing all African species of the genus *Phorenula* (formerly referred to *Aulacobothrus),* it was found that the difference is too small to be regarded as generic. The genus *Luenia* contained only one species: *Luenia burri* Uvarov 1953 = *Phorenula burri* (Uvarov 1953), *comb. n.*

MADAGASCAR

Family PYRGOMORPHIDAE

Zonocerus elegans (Thunberg 1815).

1815. *Gryllus elegans* Thunberg, Mem. Akad. Sci. St.-Petersb. *5:* 226.
1899. *Zonocerus hova* Saussure, Abh. senkenb. naturf. Ges., *21:* 643. *(Syn. n.).*

The unique type of *Zonocerus hova* Saussure, preserved in the Geneva Museum, is strongly discoloured by previous preservation in spirit. In the original description it is stated to be a female, but the description and measurements agree with the specimen, which is a male.

There is no locality label on the type, the only label, written probably by Saussure, being: "*Z. hova* Ssr."

As *Zonocerus* has never since been found in Madagascar, it is most probable that Saussure's specimen is of African origin and that the locality quoted by Saussure as Madagascar is erroneous.

This suggestion may be supported by the admission of Saussure himself (l. c. 659) that in that particular paper many errors occur.

The comparison of the type of *Z. hova* with a series of *Z. elegans* Thunb. from the African continent showed no differences between them.

Gymnohippus Bruner 1910.

According to the structure of phallic complex, presence of fastigial furrow and structure of the hind femur, this genus described by Bruner as a member of the family "*Caloptenidae (Acridiidae)*", belongs to the family *Pyrgomorphidae*.

Dyscolorhinus squalinus Saussure 1899.

One of the female specimens which were used by Saussure for description and preserved in the Geneva Museum, a female with the label "Madagascar, Tananarive" is here designated as the type.

Geloius nasutus Saussure 1889.

The species was described from a male and female. Now only the female remains, and is preserved in the Geneva Museum. The male is probably lost. Here the female is designated as the type. It bears labels: "Madagascar" and "Grandid" (Glandidier).

Family **ACRIDIDAE**

Pternoscirtus calcaratus (Saussure 1884).

1884. *Conipoda calcarata* Saussure, Mem. Soc. Phys. Geneve, *28* (9): 193.
1918. *Acrotylus bicornis* Sjöstedt, Ark. Zool. *12:* 7. *(Syn. n.).*

The type of *A. bicornis* Sjös. was studied and compared with the type of *P. calcaratus* Sauss. They were found conspecific. Both were described from Madagascar.

Oedaleus virgulus (Snellan 1869).

1869. *Oedipoda virgula* Snellan van Vollenhoven, Rech. Faune. Madag., *5* (1): 11, pl. 2, f. 2.
1870. *Epacromia inclyta* Walker Cat. Derm. Salt. Brit. Mus., *4:* 773.
1884. *Oedaleus (Gastrimargus) madecassus* Saussure, Mem. Soc. Phys. Geneve, *28* (9): 110, 115.

This species was described from a single specimen, quoted as male. On the plate, however, the female is figured and the type preserved in Leiden Museum and studied by me, is a female.

ASIA

Family **ACRIDIDAE**

Paraconophyma polita Uvarov 1921.

1956. *Cercina mussoriensis* Prasad, Proc. Nat. Acad. Sci. (India), *26,* B. 1: 30, f. 1, 2, 3. Type ♀. Mussoorie, 7,000 ft., India. Allahabad Univ. Mus. *(Syn. n.).*

I have studied the type and paratypes of this species and compared them with the type, paratypes and a series of specimens of *Paraconophyma polita* Uv. and found them conspecific.

Acrida exaltata (Walker 1859).

1956. *Acrida lugubris astigmata* Prasad, Proc. Nat. Acad. Sci. (India), *26,* B. 1: 22, f. 1. Type ♂. Phaphaman, India. Allahabad Univ. Mus. *(Syn. n.).*

I have studied the type and paratype of the above new synonym. They are merely an individual variation of *Acrida exaltata* Walk. The author in describing the subsp. *astigmata* used the specific name *lugubris* Burr which was already synonymized with *A. exaltata* Walk.