

Homoptera: Fulgoroidea Delphacidae from Ceylon¹

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Abstract

In a collection of Delphacid Fulgoroidea made by the Lund University Expedition to Ceylon (1962), 69 species were found to be represented. These are listed with their provincial distribution. Most of them occur also in south India, or are

widespread in SE Asia; the remainder are known only from Sri Lanka. Nine new genera, twenty-five new species and one new subspecies are erected, sixteen names are re-combined and new synonymies are established.

This report is concerned with a collection of Delphacidae made in Sri Lanka in 1962 by members of the Lund University Ceylon Expedition, and made available to the writer for study. For this privilege he is most deeply indebted to Dr. Per Brinck.

The collection comprised about 3000 specimens, and consisted in great part of species that are widespread in the Indian sub-continent or in South-east Asia. The remaining material comprised examples of species known only from Sri Lanka and of twenty-five others that are described below as new. The high degree of repetition in the catches in a few localities suggests that at these points sampling was adequate, but the absence of certain species described from Sri Lanka by Motschulsky, Melichar and Distant indicates gaps in the collection and suggests that additional species await discovery.

The present study is not monographic, and species already recorded in the country but not represented in the present collection are only listed if their appropriate generic position is known. However, the descriptions of the known species are so scattered, and usually so incomplete, that it has been thought justifiable to describe the male genitalia of all but the best-known or most easily identifiable of these. The type specimens of all new species are in the Zoological Museum of Lund University.

In 1863, de Motschoulsky described nine species from Sri Lanka, and further species

were described or recorded by Kirby, 1891 (2 spp.), Kirkaldy, 1901 (1 sp.), Melichar, 1903 (13 spp.), Distant, 1906, 1916, (15 spp.) and Muir, (1 sp.). Species not represented (or not recognised) in the present collection, and unknown to the writer, include *Delphax marginalis* Motsch., *D. unistrigosus* Motsch., *Delphacodes kahavalu* Kirk., *Liburnia unistrigosa* Mel. (not Motsch.) and *L. flavida* Mel. The last-mentioned may well be a *Sogata*.

The provincial distribution of the species recognised is tabulated below, but the records almost certainly understate the position.

Subfamily ASIRACINAE

Genus *Eodelphax* Kirkaldy

Kirkaldy 1901, *Entomologist* 34: 39. Type species, *Eodelphax serendiba* Kirkaldy.

1. *Eodelphax serendiba* Kirkaldy

Eodelphax serendiba Kirkaldy 1901, *Entomologist* 34: 40.

Central Prov.: Stream 20 mi E of Kandy, alt. 250 m. 12.III.62. Loc. 135. 1 ♀.

In this species the basal segment of the antennae is broadly triangular and flattened, and the second segment widest at the base and tapering distad. There is a rather broad triangular facet on each side between the base of the frons and the apex of the vertex, and ocelli

¹ Report No. 32 from the Lund University Ceylon Expedition in 1962 (Per Brinck, Hugo Andersson, Lennart Cederholm)

	Province								
	W	C	S	NW	NC	E	N	Saba- raga- muwa	Uva
<i>Eodelphax serendiba</i> Kirk.	-	+	-	-	-	-	-	-	-
<i>Paranda globiceps</i> Mel.	+	+	-	-	-	-	-	-	-
<i>Pundaluoya simplex</i> Kirby	+	-	-	-	-	-	-	-	-
<i>Pundaluoya ernesti</i> Kirby	-	-	-	-	-	-	-	-	-
<i>Epeuryssa nawaii</i> Mats.	-	+	-	-	-	-	-	-	-
<i>Tropidocephala festiva</i> Dist.	-	+	-	-	-	-	-	-	-
<i>Tropidocephala brunnipennis</i> Sign.	-	-	-	-	+	+	-	+	-
<i>Troidocephala festiva</i> Dist.	+	-	-	-	-	-	-	-	-
<i>Tropidocephala marginepunctata</i> Mel.	-	+	-	-	-	-	-	-	-
<i>Tropidocephala butleri</i> Muir	-	-	-	-	-	-	-	+	-
<i>Tropidocephala saccharivorella</i> Mats.	-	-	-	-	+	-	-	-	-
<i>Tropidocephala serendiba</i> Mel.	-	+	-	-	-	-	-	-	-
<i>Purohita cervina</i> Dist.	-	-	-	-	-	-	-	-	-
<i>Mestus morio</i> Motsch.	-	+	-	-	-	-	-	-	+
<i>Arcofacies truncatipennis</i> *	+	-	-	-	-	-	-	-	-
<i>Peliades nigropunctatus</i> (Motsch.)	+	+	-	-	+	-	-	-	-
<i>Cemus pulchellus</i> (Dist.)	+	+	-	+	+	+	-	+	+
<i>Cemus sauteri</i> (Muir)	+	+	+	+	-	+	-	+	+
<i>Peregrinus maidis</i> (Ashm.)	+	+	-	-	-	-	-	+	-
<i>Nycheuma cognatum</i> (Muir)	-	-	-	-	+	+	-	-	+
<i>Euidellana celadon</i> *	-	-	+	-	+	+	-	-	-
<i>Hagamiodes meator</i> *	+	-	-	+	+	+	+	-	-
<i>Phacalastor anaxarete</i> *	-	-	-	-	-	-	-	+	-
<i>Euconon astarte</i> *	+	-	+	-	-	-	-	-	-
<i>Sardia rostrata</i> Mel.	+	+	+	+	+	-	+	+	+
<i>Matutinus melichari</i> (Kirk.)	+	+	-	-	-	-	-	-	-
<i>Sogatella furcifera</i> (Horv.)	+	+	+	+	+	-	+	+	+
<i>Sogatella kolophon</i> (Kirk.)	-	+	+	-	+	-	-	+	+
<i>Sogatodes pusanus</i> (Dist.)	+	+	-	+	+	+	+	+	+
<i>Sogatodes sternalis</i> (Dist.)	+	+	-	-	+	+	+	+	+
<i>Sogatodes candiope</i> *	+	-	-	-	-	-	-	-	+
<i>Stenocranus oroba</i> *	-	+	-	-	-	-	-	-	-
<i>Stenocranus polenor</i> *	-	-	-	-	-	-	-	+	-
<i>Sogata vatrenus</i> *	-	-	-	-	-	+	-	-	-
<i>Nilaparvata lugens</i> (Stål)	+	+	+	+	+	+	-	+	+
<i>Nilaparvata bakeri</i> Muir	-	+	-	-	+	-	-	+	-
<i>Nilaparvata chaeremon</i> *	+	-	-	+	-	-	-	-	-
<i>Nothokalpa salome</i> *	-	-	-	-	-	+	-	-	-
<i>Harmalia thoracica</i> (Dist.)	+	+	-	-	+	+	-	+	-
<i>Harmalia anacharsis</i> Fenn.	+	+	+	+	-	+	-	+	+
<i>Harmalia tiphys</i> Fenn.	+	+	+	+	-	+	-	+	+
<i>Harmalia heitensis</i> (M. & I.)	+	-	-	+	-	+	-	-	-
<i>Harmalia tarasco</i> *	+	-	-	-	-	-	-	-	-
<i>Coronacella sinhalana</i> (Kirk.)	+	-	-	-	-	-	-	+	+
<i>Terthron albomarginatum</i> (Mel.)	+	+	+	+	+	+	+	+	+
<i>Syndelphax disonymos</i> (Kirk.)	-	-	-	+	+	-	+	+	-
<i>Syndelphax euonymus</i> (Fenn.)	+	-	-	-	+	-	-	-	-
<i>Syndelphax agameter</i> *	+	-	-	-	+	-	-	-	-
<i>Syndelphax euroclydon</i> *	+	+	-	+	+	+	+	+	+

	Province								Uva
	W	C	S	NW	NC	E	N	Saba- raga- muwa	
<i>Opiconsiva dodona</i> (Fenn.)	+	+	-	+	+	+	+	+	+
<i>Opiconsiva albicollis</i> (Motsch.)	+	+	+	-	-	+	-	+	+
<i>Horcoma colorata</i> (Motsch.)	+	+	+	+	+	+	-	+	+
<i>Falcotoya citipes</i> Fenn.	+	-	+	-	-	-	+	+	-
<i>Toya attenuata</i> Dist.	+	+	+	-	+	-	+	+	-
<i>Toya propinqua</i> (Fieb.)	+	+	+	+	+	+	+	+	+
<i>Toya tuberculosa</i> Dist.	+	+	-	+	-	-	+	+	+
<i>Toya minutula</i> (Mel.)	+	+	+	-	-	-	+	-	-
<i>Toya cularo</i> *	+	-	-	-	-	-	-	-	-
<i>Toya beninu</i> *	+	-	-	-	-	-	-	-	-
<i>Toya peruda</i> *	-	-	-	-	-	-	-	+	-
<i>Toya siaka</i> *	-	+	-	-	-	-	+	+	+
<i>Toya larymna</i> *	+	-	+	+	-	+	+	+	+
<i>Rhombotoya pseudonigripennis</i> (Muir)	-	-	-	-	-	-	-	-	+
<i>Altekon charcamis</i> *	-	-	-	-	-	-	-	-	+
<i>Ulanar muiri</i> (Metc.)	+	-	+	-	-	-	-	+	-
<i>Smicrotatodelphax stasander</i> *	+	-	-	-	-	-	-	-	-
<i>Smicrotatodelphax maenobora</i> *	+	-	-	-	-	-	-	-	-
<i>Smicrotatodelphax iota</i> *	-	-	-	+	-	-	+	-	-
<i>Anectopia mandane</i> Kirk.	-	+	-	-	-	-	-	+	-
<i>Necodan zimara</i> *	-	+	-	-	-	-	-	-	-
<i>Indozurriel samiator</i> *	-	-	-	+	+	-	-	-	-
<i>Nanotoya alboguttata</i> (Mel.)	+	+	-	-	-	-	-	-	-

* Described below as a new species

are present, though non-functional. In the South Indian *Punana annulata* (Distant) (Distant 1916: 137) the basal antennal segment is cylindrical, though widening distad, and the second segment is flattened, compressed, and widest near its base; no lateral facets are present between the frons and the vertex, and the ocelli are absent. The writer has seen a female of a species of *Punana* from Viet Nam (♀, 5.VI.1966 Cue-Phuong Province, Ninh Binh, Bielawski & Picarski, in Institute of Zoology DAN, Warsaw) in which a latero-apical triangular callus is present on each side of the vertex apically and the antennae are as in *P. annulata*. It is evident that *Eodelphax* and *Punana* are very close, and that the difference between them in the form of the antenna may be no greater than between species in the Delphacine genus *Perkinsiella*.

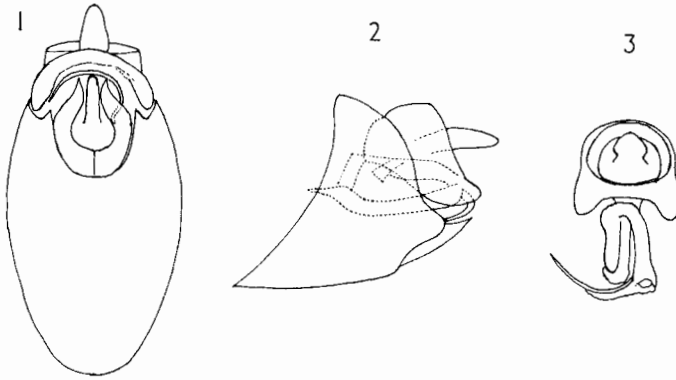
Genus *Paranda* Melichar

Melichar 1903 Homopt.-Fauna von Ceylon: 92.
Type species, *Paranda globiceps* Melichar.

2. *Paranda globiceps* Melichar (Figs. 1-3)

Paranda globiceps Melichar 1903, Homopt. Fauna von Ceylon: 93.

Anal segment relatively large, moderately long and relatively broad, with sides deep, apical margin rather long, transverse, latero-apical angles each moderately produced ventrad in a rounded lobe. Pygofer in profile much longer ventrally than dorsally, with posterior margin produced caudad at middle in a rounded lobe; in posterior view with opening U-shaped in its ventral half, diaphragm moderately broad, membranous. Aedeagus long, tubular, sclerotised and porrect caudad in basal



Figs. 1-3. *Paranda globiceps* Mel.: 1, male genitalia, posteroventral view; 2, the same, left side; 3, anal segment and aedeagus, posterodorsal view.

half, flagellum partly sclerotised, partly membranous, reflected cephalad above left side of aedeagus, then recurved caudad as far as apex of aedeagus, then abruptly bent to left and tapering, curving laterocephalad, to a narrowly acuminate apex. Genital styles moderately long, simple, tapering distad, diverging strongly from base then recurving in middle third and becoming subparallel in apical third, acute at apex.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 19.I.62. Loc. 4. 1 ♀.

P. globiceps stands well apart from *Eodelphax* in the ecarinate, inflated and strongly curved head and shape of the antennae, which are slender and cylindrical, with the second segment much longer than the first. There is an abrupt cleft in the anterior margin of the tegmen at the node, where the corium, which is rigidly sclerotised at this point, meets the membrane, which is thin and flexible. The description and figure of the male genitalia are based on a male in the British Museum (Nat. Hist.).

Subfamily DELPHACINAE

Tribe TROPIDOCEPHALINI

Genus *Pundaluoya* Kirkaldy

Kirkaldy 1902, J. Bombay nat. Hist. Soc. 14: 52.

Type species, *Delphax ernesti* Kirby 1891, J. Linn. Soc. (Zool.) 24: 140.

The two species reported from Ceylon may be separated as follows.

Pronotum distinctly longer than vertex, both measured along middle line; tegmina dilutely infusate in anterior half between node and apex of second branch of M, or devoid of pigmentation *simplex* Kirby.

Pronotum medially as long as vertex; tegmina deeply infusate in an oblique transverse band in corium and an arcuate band in membrane, and hyaline between first fork of Sc and first branch of M *ernesti* Kirby.

They were synonymised by Muir (1921: 484) in the belief that *simplex* was the female of *ernesti*. However, females of *ernesti* in the British Museum (Nat. Hist.) have the same colour-pattern as the males.

3. *Pundaluoya simplex* (Kirby) sp. resurrect.

Delphax simplex Kirby 1891, J. Linn. Soc. (Zool.) 20: 141.

Western Prov.: Alawala, 26 mi NE of Colombo, alt. 25 m. 6.III.62. Loc. 14: 1. 1 ♀.

Genus *Epeuryssa* Matsumura

Matsumura 1900, Ent. Nachr. 26: 261. Type species, *Epeuryssa nawaii* Matsumura.

Upachara Distant 1906, Fauna of India 3: 469. Type species, *Upachara stigma* Distant. Syn. n.

4. *Epeurysa nawaii* Matsumura (Figs. 4-7)

Epeurysa nawaii Matsumura 1900, Ent. Nachr. 26: 261.

♂. Anal segment short, ring-like, apical margin narrow medially, lateroapical angles each developed as a shallowly convex lobe, directed ventrad, on distal margin. Pygofer much longer ventrally than dorsally, latero-dorsal angles not produced caudad; diaphragm moderately deep with dorsal margin shallowly convex; ventral margin of pygofer with a minute lobe on each side of a shallow median excavation, a distinct knob-like medioventral process present, about twice as long as broad. Aedeagus moderately long, comprising a tubular limb directed caudad and deflexed ventrad in apical quarter, blunt at apex, and a rather more slender limb arising basally and passing mesocaudad to left above the former, tapering, slender in its distal half, which is deflexed, and acuminate at apex. Genital styles moderately long, in posterior view bifurcate near base, with outer branch stouter than inner branch and about twice as long, both directed dorsad, outer branch rather knob-like at apex, inner branch acute.

Central Prov.: Menickwalla Ela, 4 mi NW of Hatton, alt. 1000 m, 18.III.62. Loc. 154, 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m, 18.III.62. Loc. 156, 1 ♂ 1 ♀. - Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m, 19.III.62. Loc. 163, 6 ♂ 4 ♀.

In this population, the outer branch of the genital style is unpigmented, whereas the inner is black. In Japanese and Taiwanese populations both branches are deeply pigmented.

5. *Epeurysa stigma* (Distant) comb. n. (Figs. 17, 18)

Upachara stigma Distant 1906 Fauna of British India 3: 469.

♂. Anal segment relatively large, short, ring-like, lateroapical angles widely separated, each produced ventrad in a rather short curved slender spinose process. Pygofer rather short dorsally, long ventrally, in profile with dorso-lateral angles evenly rounding into lateral margins, ventral margin a little produced caudad; in posterior view with opening narrow, longer than broad, dorsolateral angles

coarse and thickened, inflected mesad, lateral margins excavate in lower half, rather polished, diaphragm transverse, deep, its dorsal margin shallowly concave; ventral margin produced caudad in three small lobes, the middle one almost equilaterally triangular. Genital styles moderately long, rather narrow, each broadest at base, narrowing to distal two-thirds, then expanding into an oblique polished subquadrate lobe directed laterodorsad, and slightly recurved at extreme apex.

This species is apparently still known only from the male type in the British Museum (Nat. Hist.).

Central Prov.: Peradeniya, II.1905.

Genus *Tropidocephala* Stål

Stål 1853, Öfvers. K. VetenskAkad. Förh. Stockh. 10: 266. Type species, *Tropidocephala flaviceps* Stål 1855, Öfvers. K. VetenskAkad. Förh. Stockh. 12: 93.

6. *Tropidocephala brunnipennis* Signoret (Figs. 8-10)

Tropidocephala brunnipennis Signoret 1860 Anns Soc. ent. Fr. (3)(3)8: 185.

North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 13 ♂ 4 ♀. Eastern Prov.: Kandekademadu Aru stream 15 mi SSW of Batticaloa, alt. 20 m. 8.III.62. Loc. 123. 3 ♂. Sabaragamuwa Prov.: Butkanda, 8 mi SE of Rakwana, alt. 850 m. 28.II.62. Loc. 104. 1 ♂ 1 ♀.

7. *Tropidocephala festiva* (Distant)

Smara festiva Distant 1906, Fauna of British India 3: 478.

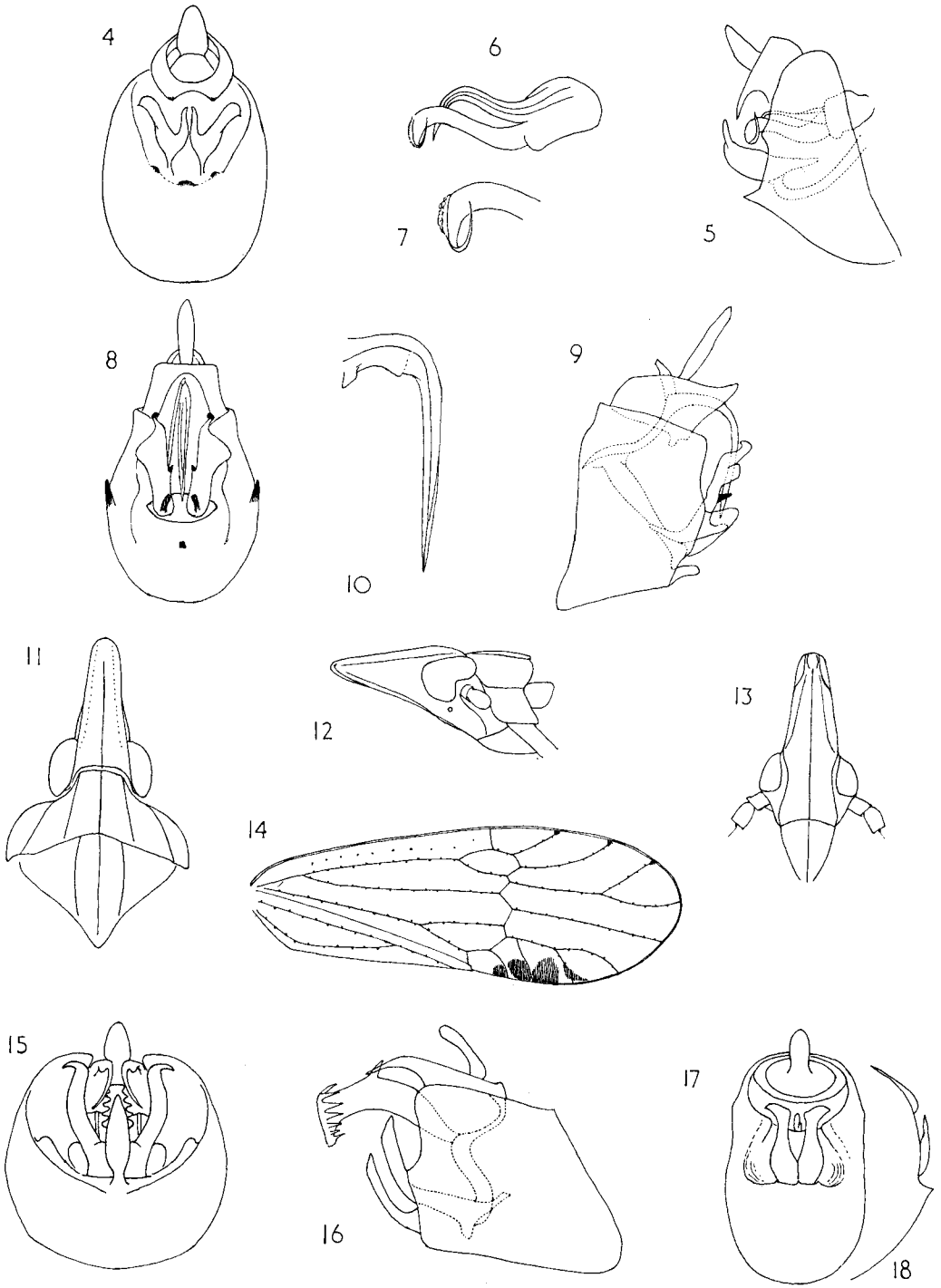
Western Prov.: Alawala, 26 mi NE of Colombo, alt. 150 m. 17.I.62. Loc. 13: II. 1 ♂ 1 ♀.

8. *Tropidocephala butleri* Muir (Figs. 11-14)

Tropidocephala butleri Muir 1921, Proc. Hawaii. ent. Soc. 4: 481.

Sabaragamuwa Prov.: Nonpareil Estate, 3 mi NE of Belihul-Oya, alt. 1000 m. 1.III.62. Loc. 108. 1 ♂.

In the typical population (from Kodaikanal,



S. India) the vertex is longer than broad in the proportion 3.7 : 1 in males and 3.25 : 1 in females. The ratio in the male from Ceylon is only 2.4 : 1.

9. *Tropidocephala saccharivorella* Matsumura

Tropidocephala saccharivorella Matsumura 1907, Anns hist.-nat. Mus. natn. hung. 5: 65.

North Central Prov.: Kantalai, 15.VI. 1964, CIE A.12945, 1 ♂ 7 ♀.

This species has been reported from China, Taiwan and the Philippine Is., and there is a specimen from S. India in the collection of the British Museum (Nat. Hist.).

10. *Tropidocephala serendiba* (Melichar)

Orchesma serendiba Melichar 1903 Homopteren Fauna von Ceylon: 95.

Orchesma signata Distant 1912 Ann. Mag. nat. Hist. (8)9: 192. Syn. n.

Central Prov.: Peradeniya.

Both species were described from specimens from the same locality, and were collected in III.1902 and VI.1910, respectively.

Genus *Mestus* Motschulsky

Motschulsky 1863, Bull. Soc. Nat. Moscou 36: 111. Type species, *Mestus morio* Motschulsky.

11. *Mestus morio* Motschulsky (Figs. 15, 16)

Mestus morio Motschulsky 1863, Bull. Soc. Nat. Moscou 36: 111.

Mestus testaceus Motschulsky 1863, Bull. Soc. Nat. Moscou 36: 112. Syn. resurrect.

Anectopia atrata Muir 1917 Proc. Hawaii ent. Soc. 3: 326. Syn. n.

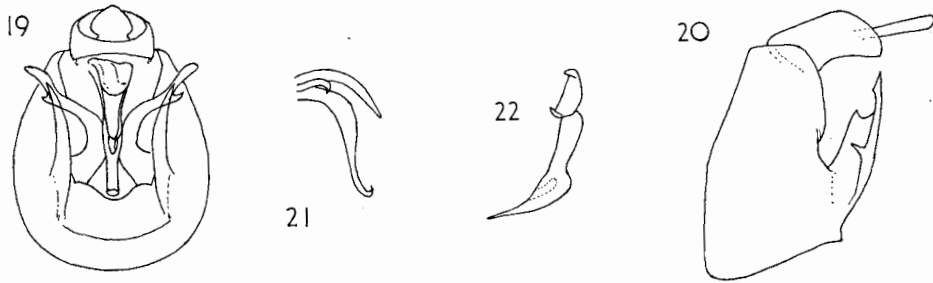
♂. Anal segment moderately long, ring-like,

deeply sunk into dorsal emargination of pygofer, lateroapical angles rather closely approximated, each produced ventrolaterad in a slender curved spinose process. Pygofer long, in profile slightly longer ventrally than dorsally, dorsolateral angles not or scarcely produced, subacutely rounded, lateral margins oblique, slightly produced in a small angulate lobe at middle; in posterior view, opening broader than long, lateral margins concave, with a slight eminence just below middle, diaphragm rather narrow; a long acute process present medioventrally, shallowly upcurved, widening in basal third then tapering to acuminate apex. Aedeagus moderately long, very stout, widest at apex, a short spinose process, directed dorsocephalad, on upper margin at middle, a ring of about 10 stout teeth, directed laterocephalad, at apex. Genital styles relatively long, moderately diverging distad, each rather narrow, with outer margin convex and inner margin almost correspondingly concave, weakly tapering to apex, strongly curved laterad near apex.

Prov. of Uva: Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145. 2 ♂. Central Prov.: Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163. 1 ♀.

Melichar was undoubtedly correct in regarding *M. testaceus* Motsch. as the female of *M. morio*, but, as Muir surmised (1917: 316), he was wrong in interpreting *Anectopia mandane* Kirkaldy as *M. morio*. Motschulsky describes *M. morio* as having a strong median frontal carina, and his figure shows that the tegmina are not ornamented. *A. mandane*, by contrast, has no median carina on the frons and the tegmina have a bold fuscous pattern of an oblique stripe in the membrane near the node and an arcuate band from the transverse veinlets to and beyond the anal angle. When erecting the species *atrata* (on the basis of Philip-

Figs. 4-18. - 4-7. *Epeurysa nawaii* Mats.: 4, male genitalia, posterior view; 5, the same, right side; 6, aedeagus, right side; 7, apex of lower limb of aedeagus, right side. - 8-10. *Tropidocephala brunnipennis* Sign.: 8, male genitalia, posterior view; 9, the same, left side; 10, aedeagus, left side. - 11-14. *Tropidocephala butleri* Muir: 11, head and thorax, dorsal view; 12, head and pronotum, left side; 13, frons and clypeus; 14, tegmen. - 15-16. *Mestus morio* Motsch.: 15, male genitalia, posterior view; 16, the same, right side. - 17-18. *Epeurysa stigma* (Dist.): 17, male genitalia, posterior view (freehand sketch from undissected type); 18, the same, left side.



Figs. 19–22. *Arcofacies truncatipennis* sp. n.: 19, male genitalia, posterior view; 20, anal segment and pygofer, left side; 21, aedeagus, left side; 22, left genital style, lateral view.

pine Island material) Muir correctly described the toothless post-tibial spur, but did not explain why he assigned this species to *Anectopia*, a genus in which the spur is densely toothed.

Genus *Arcofacies* Muir

Muir 1915, Can. Ent. 47: 319. Type species, *Arcofacies fullawayi* Muir 1915, loc. cit.: 320.

12. *Arcofacies truncatipennis* sp. n. (Figs. 19–22)

Vertex pentagonal, wider at base than long medially (about 1.4 : 1), and than at apex (about 1.9 : 1), lateral margins straight, anterior margin shallowly convex, disc depressed; frons longer than broad (2.5 : 1), in profile shallowly curved, widest at apex, where it is 1.8 times as wide as at base, median carina forked at extreme base; clypeus at base as wide as frons at apex, tricarinate, in profile with post-clypeus in same plane as frons, anteclypeus strongly curving caudad; rostrum reaching to mesotrochanters; antennae reaching to level of frontoclypeal suture, cylindrical, basal segment slightly widening distad, second segment longer than first (about 1.3 : 1), ocelli distinct. Pronotum with median disc shorter in middle line than broad at anterior margin (about 1.2 : 1), lateral carinae shallowly curved, reaching hind margin. Tegmina with costal margin weakly sinuate, apical angle acute, apical margin straight, oblique, anal angle obtusely rounding.

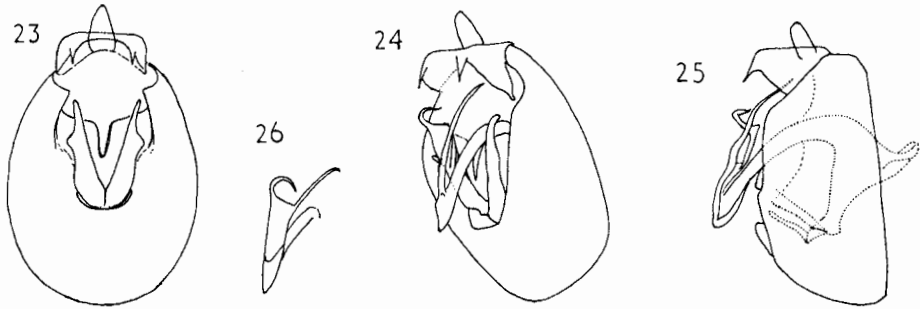
Pale greenish brown, a narrow stripe from apex of head to apex of scutellum, white, nar-

rowly edged fuscous; apex of first antennal segment, and two bands on second, fuscous; frons, clypeus, sternum and legs pallid, almost white. Tegmina with a suffusion overlying basal half of corium, and a V-shaped band in membrane from node to anal angle and along apical margin dilute yellowish-brown, Cu 1 interruptedly and a spot at its fork, and a spot on Sc, R, M 1, and the posterior branches of Cu at margin, dark fuscous. Wings hyaline.

Anal segment of male relatively long, apical margin moderately narrow, lateroapical angles not produced. Pygofer in profile much shorter dorsally than ventrally, laterodorsal angles obtusely rounded, not produced caudad, lateral margins excavate at middle, each very strongly produced dorsad in lower half in a large, distally acuminate, lobe with a spinose process on its outer margin; posterior opening distinctly longer than broad, diaphragm deep, ventral margin shallowly concave, medioventral process absent. Aedeagus comprising a tubular limb decurving and tapering distad and recurving at apex, a much shorter limb overlying the former basally, and curving to right distally, acute at apex, and a relatively long, decurved tapering process overlying both the preceding. Genital styles long, narrow, widely separated basally, converging to meet at one third from base, thence strongly diverging laterad and slightly narrowing, each very unequally bifurcate apically.

Male: length, 2.0 mm, tegmen, 2.5 mm.

Holotype ♂. Western Prov.: Alawala, 26 mi NE of Colombo, alt. 25 m. 17–18.I. or 6.III.1962. Loc. 14: I, in Zoological Museum, Lund University.



Figs. 23-26. *Cemus sauteri* (Muir): 23, anal segment, pygofer and genital styles, posterior view; 24, male genitalia, posterolateral view from right; 25, the same, right side; 26, apical portion of aedeagus, in almost posterior view.

The most distinctive feature of this species is the sharply truncate apical margin of the tegmen. The form of the vertex and the profile of the head bear more resemblance to those of *Columbisoga campbelli* Muir and *Bambusibatus albolineatus* Muir than those of *Arcofacies fullawayi*, but in all other bodily features, including size, *A. truncatipennis* resembles the last, and for this reason the species is provisionally assigned to *Arcofacies*.

Tribe DELPHACINI

Genus *Cemus* Fennah

Fennah 1964, Trans. R. ent. Soc. Lond. 116: 147.

Type species, *Cemus leviculus* Fennah 1964, loc. cit.: 147.

13. *Cemus pulchellus* (Distant)

Pundaluoya pulchella Distant 1912, Ann. Mag. Nat. Hist. (8)9: 190.

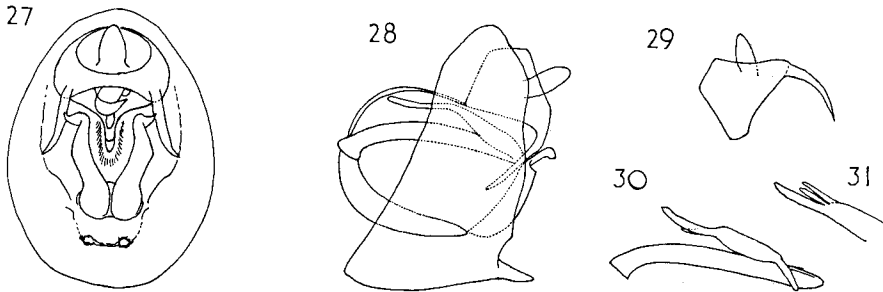
Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 1 ♂ 1 ♀. Eastern Prov.: Inginiyagala, alt. 75 m. 8-9.III.62. Loc. 126. 1 ♂.- Dry forest 13 mi NW of Trincomalee, alt. 30 m. 10.II.62. Loc. 63. 5 ♂ 6 ♀. Prov. of Uva: Wellawaya, 18 mi S of Badulla, alt. 175 m. 21.III.62. Loc. 167: 1. 1 ♂. - Beauvais Estate, 5 mi WNW of Haputale, alt. 1400 m. 3.III.62. Loc. 112. 1 ♂. - Kudu Oya, river 15 mi S of Wellawaya, alt. 80 m. 22.III.62. Loc. 168. 1 ♂. Central Prov.: Rangala, Knuckles Mts. 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 1 ♀. - Dry forest, 5 mi SW of Habarana, alt.

180 m. 11.II.62. Loc. 68. 1 ♂ 1 ♀. North Western Prov.: 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 1 ♂. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 1 ♂. Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 2 ♂ 1 ♀.

14. *Cemus sauteri* (Muir) (Figs. 23-26)

Phyllodinus sauteri Muir 1917, Proc. Hawaii. ent. Soc. 3: 319.

Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 4 ♂ 3 ♀. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. 1 ♂ 1 ♀. Western Prov.: Colombo, Colpetty, alt. 10 m. 5-13.I.62. Loc. 2. 1 ♂. - Negombo Lagoon, 17 mi N of Colombo, alt. 1-5 m. 11.I.62. Loc. 8. 1 ♂ 1 ♀. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 20.I.62. Loc. 16: 1. 2 ♂. Prov. of Uva: Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 1 ♂. - Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145. 1 ♂. - Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 1 ♂. Central Prov.: Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. Loc. 156. 2 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 1 ♂. Southern Prov.: Hikkaduwa, 11 mi NW of Galle, alt. 1-10 m. 25-26.I.62. Loc. 22. 1 ♂. Eastern Prov.: Kandekademadu Aru, 15 mi SSW of Batticaloa, alt. 20 m. 8.III.62. Loc. 123. 2 ♂. - Vayiriuttu, 5 mi W of Trincomalee, alt. 15 m.



Figs. 27–31. *Peliades nigropunctatus* (Motsch.): 27, male genitalia, posterior view; 28, the same, left side; 29, anal segment, left side; 30, aedeagus, left side; 31, apex of aedeagal flagellum, dorsal view.

9.II.62. Loc. 59. 1 ♂. North Western Prov.: Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40. 1 ♂.

Genus *Peliades* Jacobi

Jacobi 1928, Mjöberg's Exp. Australia: 43. Type species, *Platybrachys platypoda* Bierman 1910, Notes Leyden Mus. 33: 42.

15. *Peliades nigropunctatus* (Motschulsky) (Figs. 27–31) comb. n.

?*Mestus nigropunctatus* Motschulsky 1863, Bull. Soc. Nat. Moscou 35: 112.

Dicranotropis nigropunctatus Melichar 1903, Homopteren-Fauna von Ceylon: 106.

♂. Anal segment moderately long, collar-like, with sides oblique, apical margin rather long, narrow, transverse, lateroapical angles each strongly produced ventrad in a stout shallowly-curved spinose process. Pygofer markedly longer ventrally than dorsally, in profile with laterodorsal angles not produced, and ventral margin strongly produced caudad, in posterior view with opening markedly longer than broad, lateral margins not strongly defined, ventral margin with a slight angulate eminence on each side at level of base of genital styles, medioventral lobe quadrate, with apical margin deeply excavate, and the outer angles acute, diaphragm deep, dorsal margin almost transverse, but abruptly and deeply incised medially, the entire dorsal median area being distinctly produced caudad. Aedeagus long, tubular, slightly decurved near base, flag-

ellum reflected cephalad above aedeagus for about three-quarters of its length, moderately broad in basal half, forking into three spinose processes in distal half, that on left side distinctly longer than those on right. Genital styles rather long, weakly diverging from base, tapering distad, each with inner margin concave, outer margin sinuate, abruptly bent laterad near apex, with upper margin concave, apex acute.

Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14–24.I.62. Loc. 10. 1 ♂. Central Prov.: 3 mi NW of Hanguranketa, 10 mi SE of Kandy, alt. 575 m. 15.III.62. Loc. 148. 1 ♂. North Central Prov.: Polonnaruwa, alt. 60 m. At light in garden. 10.II.62. Loc. 66. 1 ♂. Southern Prov.: Stream, 6 mi NW of Hulandawa, 20 mi NE of Galle, alt. 30 m. 29.I.62. Loc. 35. 1 ♂.

Genus *Peregrinus* Kirkaldy

Kirkaldy 1904, Entomologist 37: 175. Type species, *Delphax maidis* Ashmead.

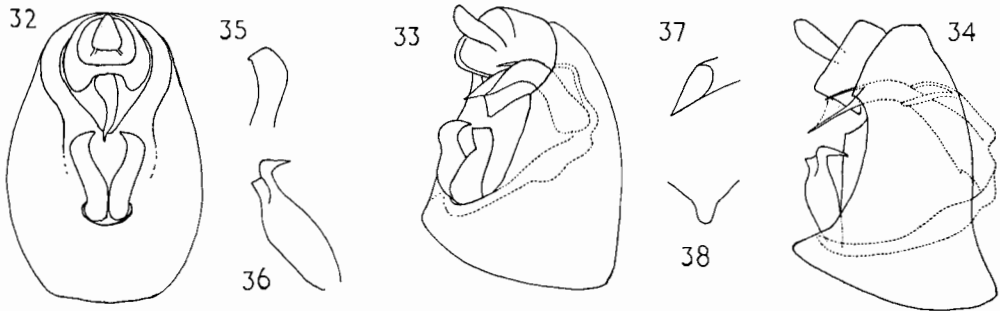
16. *Peregrinus maidis* (Ashmead)

Delphax maidis Ashmead 1890, Psyche 5: 323.

Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 1 ♂. – Rakwana, alt. 450 m. 27–28.II.1962. Loc. 100. 1 ♂. Central Prov.: 3 mi NW of Hanguranketa, 10 mi SE of Kandy, alt. 575 m. 15.III.62. Loc. 148. 1 ♂.

Genus *Nycheuma* Fennah

Fennah 1964, Trans. R. ent. Soc. Lond. 116: 145.



Figs. 32-38. *Euidellana celadon* sp. n.: 32, male genitalia, posterior view; 33, the same, posterolateral view from right; 34, the same, right side; 35, apex of genital style, postero-dorsal view; 36, right genital style, lateral view; 37, apex of aedeagus, with dorsal spine omitted; 38, median portion of dorsal margin of diaphragm.

17. *Nycheuma cognatum* (Muir)

Dicranotropis cognata Muir 1917, Proc. Hawaii. ent. Soc. 3: 317.

Prov. of Uva: Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 1 ♂. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, 8.II.62. Loc. 56. 1 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 1 ♂.

In this population, the central member of the three spinose processes on the ventral margin of the pygofer is distinctly shorter than in the typical population from Queensland, and in Micronesian populations.

Genus *Euidellana* Metcalf

Metcalf 1950, B. P. Bishop Mus., Occ. Pap. 20(5): 61. Type species, *Euidellana carolinensis* Metcalf 1950, *ibid.*

18. *Euidellana celadon* sp. n. (Figs. 32-38)

Vertex as long as broad at base, posterior compartment broader than greatest length (1.7 : 1) and than median length (1.9 : 1), frons in middle line longer than broad at widest part (about 2.3 : 1), about as wide at apex as at base, frontoclypeal suture slightly angulate, clypeus at base scarcely wider than frons at apex, postclypeus longer than broad at base (nearly 1.3 : 1), rostrum attaining posttrochanters; antennae with second segment

longer than first (1.4 : 1), ocelli present. Pronotum with disc as long in middle line as broad at anterior margin between lateral carinae.

Yellowish brown, varying between specimens from light to rather dark; intercarinal areas of vertex and thorax, and abdomen dorsally, darker yellowish brown; antennae and metapleura, dark fuscous. Tegmina milky yellowish hyaline, veins reddish brown, except anterior claval vein and transverse veinlets, which are concolorous.

Anal segment rather long, cylindrical, apical margin transverse, moderately long, lateroapical angles not produced. Pygofer markedly longer ventrally than dorsally, in profile with laterodorsal angles not produced, and lateral margin curving caudad at level of base of genital styles, in posterior view with opening about twice as long as broad, lateral margins weakly defined, entire ventral margin moderately produced caudad, no medioventral process present, diaphragm deep, dorsal margin broadly V-shaped. Aedeagus rather long, tubular, decurved distad, a little laterally compressed, with a dorso-apical spine, orifice dorsal at apex. Genital styles short, simple, weakly divergent, each with inner margin convex in basal half, concave in distal half, and outer margin straight or nearly so, apical margin oblique, inner apical angle acute, directed mesodorsad, outer apical angle obtusely rounded.

Male: length, 2.6 mm, tegmen, 3.1 mm; female: length, 2.6 mm, tegmen, 3.6 mm.

Holotype ♂: North Central Prov.: Polonnaruwa, alt. 60 m. At light in garden. 10.II.62. Loc. 66 in Zool. Mus., Lund University.

Other material: North Central Prov.: Polonnaruwa, 10.II.62. Loc. 66. 2 ♂ 2 ♀. Southern Prov.: Telwatta sanctuary, 6.5 mi SSE of Ambalangoda, alt. 5 m. 26.I.62. Loc. 25. 1 ♂. Eastern Prov.: Inginiyagala, alt. 75 m. 8-9.III.62. Loc. 126. 1 ♂.

In the Ceylonese fauna, this species can only be confused with *Nilaparvata lugens* (Stål), but can readily be distinguished by the coloration of the veins on the corium of the tegmen, as these in *N. lugens* are concolorous, not dark reddish brown. Venational colour also serves to separate it from *Euidellana carolinensis* Metcalf and *E. ucalegon* Fenn., from which it also differs markedly in the shape of the genital styles.

Genus *Hagamiodes* nov.

Head with eyes narrower than pronotum. Vertex longer than broad at base (about 1.2 : 1), lateral margins slightly convergent distad, apical margin transverse, submedian carinae not meeting on vertex, posterior compartment broader than greatest length (about 1.4 : 1), frons in middle line longer than broad at widest part (about 2.3 : 1), wider at apex than at base, widest a little below level of ocelli, median carina forking at level of lower margin of eyes, clypeus at base as wide as frons at apex, in profile continuing line of frons, postclypeus longer than broad at base, rostrum reaching to post-coxae, subapical segment longer than apical; antennae cylindrical, basal segment longer than broad (about 2 : 1), second segment longer than first (about 2 : 1), ocelli present. Pronotum with disc about as long in middle as broad between lateral carinae at anterior margin, lateral carinae not attaining posterior margin.

Anal segment short. Pygofer relatively long, dorsally and ventrally, posterior opening broader than long; diaphragm moderately deep, with dorsal margin concave; medioventral process absent. Aedeagus long, cylindrical, decurved distad, without a flagellum, orifice terminal. Genital styles relatively large.

Type species, *Dicranotropis fuscicaudata* Muir 1917, Proc. Hawaii. ent. Soc. 3: 318.

Members of this genus are distinguishable

by the proportions of the vertex in combination with an anal segment with processes laterobasally, a large broad pygofer and an aedeagus with a prominent dorsoapical orifice and a subterminal dorsal spine.

19. *Hagamiodes meator* sp. n. (Figs. 39-42)

Vertex longer than broad (nearly 1.2 : 1), posterior compartment broader than greatest length (1.4 : 1) and than median length (about 1.6 : 1), frons in middle line longer than broad (nearly 2.3 : 1), widest a little below middle; antennae with basal segment longer than broad (2 : 1), second segment longer than first (2 : 1).

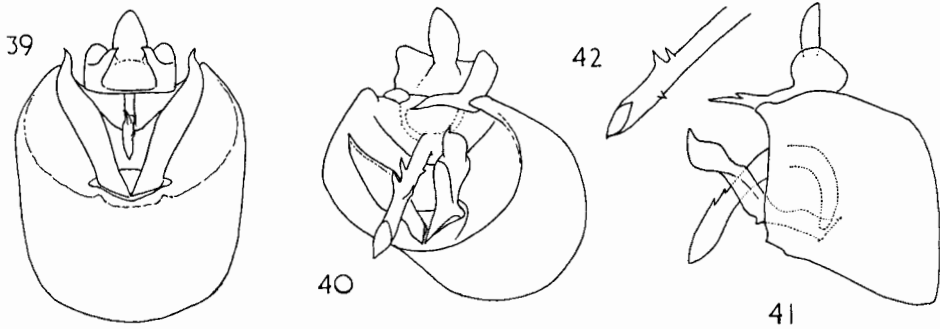
Light yellowish brown; carinae of head and thorax distinctly paler; posterior half of pronotum, metathorax and abdomen light reddish brown, pygofer and genital styles darker reddish brown. Tegmina yellowish-hyaline, veins concolorous.

Anal segment short, deeply sunk in dorsal emargination of pygofer, apical margin broad, membranous, a stout spinose process, directed ventrad, arising laterobasally on each side. Pygofer almost as long dorsally as ventrally, in profile with laterodorsal angles moderately and rather narrowly produced caudad; in posterior view with opening broader than long, lateral margins well-defined, evenly concave, ventral margin shallowly excavate medially, a slight angular eminence at each end of excavation; diaphragm rather broad, its dorsal margin concave. Aedeagus long, tubular, decurved distad, two short stout spinose processes dorsally slightly distad of middle, directed dorsad, a single short spinose process on right nearer to apex, directed laterad; orifice terminal, ventral margin extending further than dorsal margin. Genital styles long, moderately diverging from base, each with inner basal angle narrowly acute, gradually widening to about middle, then twisted and tapering to apex, which is acute and slightly inflected.

Male: length, 2.0 mm, tegmen, 2.5 mm.

Holotype ♂: Western Prov.: Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17, in Zoological Museum, Lund University.

Other material: Western Prov.: Labugama, 24 mi ESE of Colombo, 21.I.62 and 9.III.62. Loc. 17. 2 ♂. North Western Prov.: 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 2 ♂. -



Figs. 39-42. *Hagamiodes meator* sp. n.: 39, male genitalia, posteroventral view; 40, the same, posterolateral view from right; 41, the same, right side; 42, distal portion of aedeagus, dorsolateral view.

10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45. 1 ♂. North Central Prov.: Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. 4 ♂. Northern Prov.: Paranthan, 32 mi SE of Jaffna, alt. 10 m. 13.II.62. Loc. 73. 1 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 1 ♂.

This species differs from *fuscicaudatus* (Muir) in the shorter and broader laterobasal anal spines, the differently ornamented aedeagus (which is distally stouter and denticulate in *fuscicaudata*) and in the rather differently shaped genital styles.

Genus *Phacalastor* Kirkaldy

Kirkaldy 1906, Bull. Hawaiian Sug. Plrs' Ass. Expt. Stn. Ent. Ser. 1(9): 408. Type species, *Phacalastor pseudomaidis* Kirkaldy 1906, *ibid.*

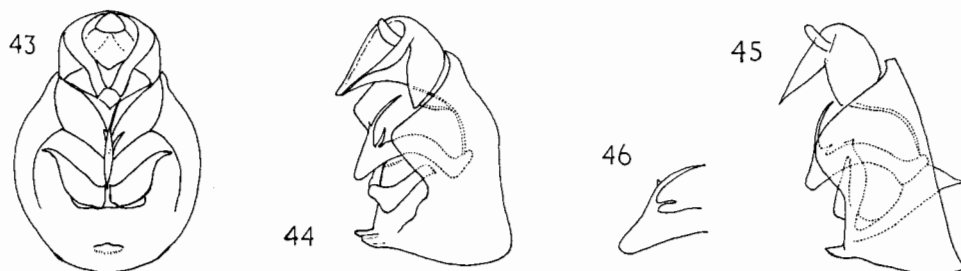
20. *Phacalastor anaxarete* sp. n. (Figs. 43-46)

Vertex as long as broad at base, slightly narrowing to apex, lateral margins straight, apical margin transverse, Y-shaped carina moderately distinct, submedian carinae uniting on frons, basal compartment of vertex wider at hind margin than greatest length (1.7 : 1) and than median length (2.0 : 1), frons in middle line longer than broad at widest part (2 : 1), wider at apex than at base (nearly 1.6 : 1), median carina forked slightly above level of lower margin of eyes, clypeus at base very slightly wider than frons at apex, post-

clypeus longer than broad at base (1.2 : 1), in profile slightly convex, continuing line of frons, rostrum reaching to post-coxae, apical segment about as long as subapical, antennae cylindrical, with first segment longer than broad (1.7 : 1), second segment longer than first (2.3 : 1), ocelli distinct, blemmata present. Pronotum with disc slightly longer in middle line than broad at anterior margin between carinae, lateral carinae straight, not quite attaining hind margin; post-tibial spur with about 39 teeth.

Pale brownish yellow; carinae of pronotum and mesonotum, and all tibiae at apex, pallid stramineous or sordid white; intercarinal areas of pronotum and mesonotum, and lateral fields of pronotum except for four pustules, and abdomen dorsally, darker yellowish brown; pygofer, except dorsally, reddish brown. Tegmina yellowish hyaline, apical cell between M and Cu 1, and all veins at apex, fuscous.

Anal segment relatively long, strongly produced distad, tapering and deflexed in distal half, apical margin extremely short, latero-apical angles closely approximated, distinct but not produced. Pygofer in profile much longer ventrally than dorsally, posterior margin in upper half strongly convex, straight in ventral half, in posterior view, opening longer than broad, laterodorsal angles acute, slightly inflected mesad, lateral margins concave, ventral margin produced caudad at middle in a short broad lobe with its apical margin tridentate, the middle tooth longest. Aedeagus moderately long, tubular, moderately decurved distad, a



Figs. 43-46. *Phacalastor anaxarete* sp. n.: 43, male genitalia, posterior view; 44, the same, posterolateral view from right; 45, the same, right side; 46, distal portion of aedeagus, right side.

short spinose process on left in distal half and a longer spinose process dorsally nearer apex, directed dorsocephalad, with a short slender spine arising near its base, directed to right and cephalad. Genital styles short, produced caudad at base, thence more or less strongly diverging, each broad in basal half and rapidly tapering in distal half, narrow apically and directed laterad.

Male: length, 2.4 mm, tegmen, 3.2 mm.

Holotype ♂: Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100 in Zoological Museum, Lund University.

Other material: Sabaragamuwa Prov.: Rakwana, 27-28.II.62. Loc. 100. 1 ♂.

The unusual shape of the male anal segment and the trifold form of the medioventral process of the pygofer, in conjunction with genital styles that are not evidently denticulate apically serve to identify males of this species.

Genus *Euconon* nov.

Vertex longer than broad at base (about 1.2 : 1), basal compartment of vertex wider at hind margin than greatest length (about 1.5 : 1), frons in middle line longer than broad at widest part (about 2 : 1), postclypeus slightly longer than broad at base, in profile moderately convex, rostrum reaching post-coxae, antennae cylindrical, first segment longer than broad, second segment longer than first (about 2 : 1), ocelli present. Pronotum with disc approximately as long in middle line as broad at anterior margin between carinae, lateral carinae straight. Pygofer with posterior opening longer than broad, lateral margins pro-

duced caudad in lower half, ventral margin produced at middle in a lobe; diaphragm moderately deep. Aedeagus tubular, exceptionally long and slender, without a flagellum, decurved distad.

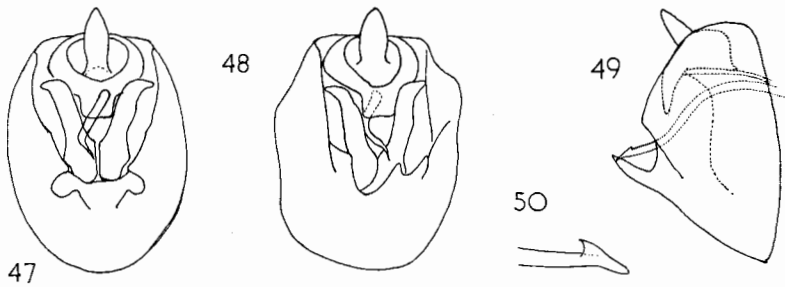
Type species, *Euconon astarte* sp. n.

This genus can be distinguished from *Thriambus* by the form of the aedeagus.

21. *Euconon astarte* sp. n. (Figs. 47-50)

Vertex longer than broad at base (1.2 : 1), slightly narrowing to apex, lateral margins straight, apical margin very slightly convex, Y-shaped carina only moderately distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1) and than median length (1.8 : 1), frons in middle line longer than broad at widest part (2 : 1), widest just below level of ocelli, a pair of percurrent submedian carinae, gradually converging distad to meet at apex, clypeus at base as wide as frons at apex, postclypeus slightly longer than broad at base (1.1 : 1), in profile moderately convex, rostrum reaching post-coxae but not post-trochanters, antennae cylindrical, with first segment longer than broad (1.6 : 1), second segment longer than first (2 : 1). Pronotum with disc slightly longer in middle line than broad at anterior margin between carinae (1.1 : 1), lateral carinae straight, almost reaching posterior margin; post-tibial spur with about 24 teeth. Brachypterous tegmina with apical margin slightly oblique, anal angle acute.

Pale yellowish brown; a spot at lateral margins of each abdominal segment, pygofer laterally, anal segment of male and genital styles,



Figs. 47-50. *Euconon astarte* sp. n.: 47, male genitalia, posterior view; 48, the same, posterolateral view from left; 49, the same, right side; 50, apex of aedeagus.

reddish brown. Brachypterous tegmina with a sublinear reddish-brown spot at apical and anal angles.

Anal segment short, its sides sloping obliquely, sunk in a wide dorsal emargination of pygofer, lateroapical angles closely approximated and jointly produced ventrad in a single broad lobe with its distal margin transverse. Pygofer in profile much longer ventrally than dorsally and with posterior margin angulately produced caudad; in posterior view with opening distinctly longer than broad, anal emargination broad, laterodorsal angles not produced, lateral margins shallowly concave, abruptly inflected in lower half, ventral margin excavate, but strongly produced caudad at middle in a broad, distally bifurcate lobe; diaphragm narrow, with dorsal margin subangulately concave. Aedeagus tubular, long, slender and sinuate, moderately descending distad, subacute at apex and with a small triangular lobe subapically on right. Genital styles relatively long, diverging dorsad, broadest at base and slightly tapering distad, each abruptly curved laterad near apex, with inner apical angle broadly rounding and outer apical angle acute.

Male (brachypterous): length, 1.7 mm.

Holotype ♂: Southern Prov.: Hiniduma, 20 mi NNE of Galle, alt. 30 m. 27.I.62. Loc. 29 in Zoological Museum, Lund University.

Other material: Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 10 m. 14-31.I.62. Loc. 10. 2 ♂ 1 ♀.

This species is most readily recognisable by the paired submedian carinae on the frons.

Genus *Sardia* Melichar

Melichar 1903, Homopt.-Fauna von Ceylon: 96.

Type species, *Sardia rostrata*.

22. *Sardia rostrata* Melichar

Sardia rostrata Melichar 1903, Homopt.-Fauna von Ceylon: 96.

North Western Prov.: Swamps, 10 mi E of Puttalam, alt. 20 m. Loc. 45. A series of both sexes and nymphs. - Kadaimparu, 15 mi N of Negombo, alt. 1-5 m. 31.I.62. Loc. 36. 1 ♀. - Deduru Oya, 5 mi NE of Kurunegala, alt. 120 m. 7.II.62. Loc. 52. 4 ♂ 2 ♀. - 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 2 ♀. Central Prov.: Katumana, 3 mi SE of Nuwara-Eliya, alt. 1800 m. 21.III.62. Loc. 164. 1 ♀. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. 1 ♂. Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. - Maratenna, 7 mi N of Balangoda, alt. 1400 m. 22.II.62. Loc. 98. 1 ♂. - Bopathella Falls, 9 mi NNW of Ratnapura, alt. 40 m. 19.II.62. Loc. 91. A series of both sexes. - Belihul-Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. North Central Prov.: Maradan Maduwa, Wilpattu National Park, 23 mi W of Anuradhapura, alt. 80 m. 2-3.II.62. Loc. 48. 2 ♂. - Maha Bulankulama, 7 mi SW of Anuradhapura, alt. 80 m. 4.II.62. Loc. 50. 1 ♀. Northern Prov.: 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, 15.II.62. Loc. 82. A series of both sexes. - 2 mi E of Mankulam, alt. 20 m. 14.II.62. Loc. 75. A series of both sexes. - Kudattanai, 6 mi SE of Point Pedro, alt. 10 m. 13.II.62. Loc. 70. A series

of both sexes. - Giant's Tank, 10 mi SE of Mannar, alt. 10 m. 15.II.62. Loc. 83. 8 ♂. - Pali Aru, 20 mi NE of Mannar, alt. 3 m. 15.II.62. Loc. 87. - 2 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 75. A series of both sexes. - 7 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 76. 1 ♂. - Nanthi Kadal lagoon, 3 mi S of Mullaitivu, alt. 5 m. 14.II.62. Loc. 79. A series of both sexes. Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 15-31.I.62, 1-15.II.62, and 16-28.II.62. Loc. 11. 2 ♂ 1 ♀. Prov. of Uva: Mahaveli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 3 ♂. Southern Prov.: Yoda Wewa at Tissamaharama, alt. 20 m. 22.III.62. Loc. 169. 1 ♂.

Genus *Matutinus* Distant

Distant 1917, Trans. Linn. Soc. (Zool.) 17: 278.

Type species, *Matutinus opulentus* Distant 1917, *ibid.*

23. *Matutinus melichari* (Kirkaldy)

Delphacodes melichari Kirkaldy 1906, Can. Ent. 38: 156.

Western Prov.: Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17. 1 ♂.

Genus *Sogatella* Fennah

Fennah 1956, Proc. Calif. Acad. Sci. 28: 471. Type species, *Delphax furcifera* Horvath.

24. *Sogatella furcifera* (Horvath)

Delphax furcifera Horvath 1899, Term. Füzetek. 22: 372.

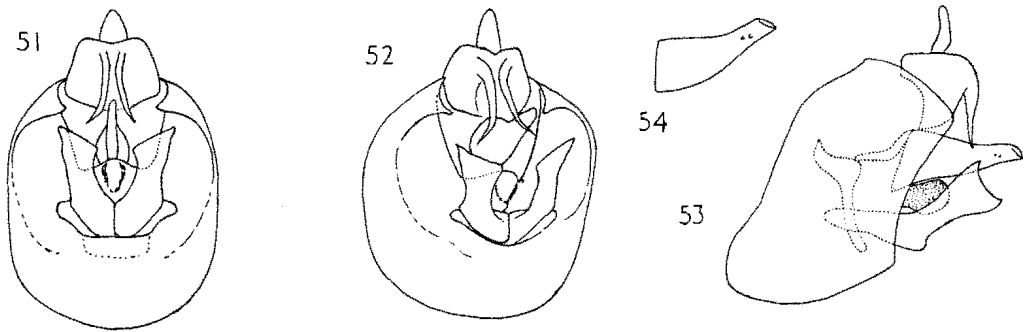
Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. - Belihul-Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. - Bopathella Falls, 9 mi NNW of Ratnapura, alt. 40 m. 19.II.62. Loc. 91. 2 ♂. Northern Prov.: 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 1 ♂. - Tharakundu, 4 mi NW of Mannar, alt. 5 m. 15.II.62. Loc. 85. 1 ♂. Prov. of Uva: Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. A series of both sexes. - Ury Estate, 6 mi SE of Badulla, alt. 1100 m. 14.III.62. Loc. 143: 1. 2 ♂. - Stream 2 mi NW of Haldummulla, alt. 1100 m. 2.III.62. Loc. 111. 1 ♂. Western

Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 3 ♂. - Ratmalana, 9 mi S of Colombo, alt. 1-5 m. 7 and 13.I.62. Loc. 6. 1 ♂. - Colombo, Colpetty, alt. 10 m. 5-13.I.62. Loc. 2. 1 ♂. - Negombo, lagoon 17 mi N of Colombo, alt. 1-5 m. 11.I.62. Loc. 8. 1 ♂. Southern Prov.: Hikkaduwa, 11 mi NW of Galle, alt. 1-10 m. 25.I.62. Loc. 22. 2 ♂. - Yoda Wewa at Tissamaharama, alt. 20 m. 22.III.62. Loc. 169. 1 ♂. Central Prov.: Rangala, Knuckles Mountains, 12 mi ENE Kandy, alt. 1100 m. 11.III.62. Loc. 130. 1 ♂. Talawakele, Mahaveli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 19.III.62. Loc. 159. A series of both sexes. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 2 ♂ 2 ♀. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. A series of both sexes. North Western Prov.: Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40. 1 ♂.

25. *Sogatella kolophon* (Kirkaldy)

Delphax kolophon Kirkaldy 1907, Bull. Hawaiian Sug. Plrs' Ass. Exp. Stn. Ent. Ser. 3: 157.

Prov. of Uva: Kuda Oya, 15 mi S of Wellawaya, alt. 80 m. 22.III.62. Loc. 168. 1 ♂. - Wellawaya, 18 mi S of Badulla, alt. 175 m. 21-22.III.62. Loc. 167. 1 ♂. - Ury Estate, 6 mi SE of Badulla, alt. 1100 m. 14.III.62. Loc. 143: 1. A series of both sexes. - Beauvais Estate, 5 mi WNW of Haputale, alt. 1400 m. 3.III.62. Loc. 112. A series of both sexes. - Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 1 ♂. Southern Prov.: Telwatta Sanctuary, 6.5 mi SSE of Ambalangoda, alt. 5 m. 26.I.62. Loc. 25. 1 ♂. Central Prov.: Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. A series of both sexes. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 3 ♂. - Kunundu Oya, 11 mi NE of Nuwara-Eliya, alt. 900 m. 15.III.62. Loc. 147. 1 ♂. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m. 12.III.62. Loc. 134. 2 ♂. - Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Hakgala, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 3.III.62. Loc. 114. 1 ♂. Sabaragamuwa Prov.: 6 mi NNW of Balangoda, alt. 900 m. 22.II.62. Loc. 97.



Figs. 51-54. *Sogatodes pusanus* (Dist.): 51, male genitalia, posterior view; 52, the same, posterolateral view from left; 53, the same, left side; 54, aedeagus, left side.

1 ♂. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 1 ♂.

Genus *Sogatodes* Fennah

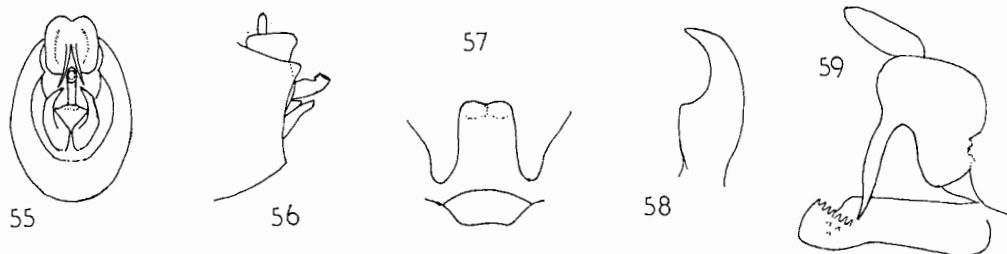
Fennah 1963, Bull. ent. Res. 54: 71. Type species, *Sogatodes molinus* Fennah 1963, loc. cit.: 72.

26. *Sogatodes pusanus* (Distant) comb. n. (Figs. 51-54)

Sogata pusanus Distant 1912, Ann. Mag. Nat. Hist. (8): 191.

North Western Prov.: Bangadeniya, 4 mi NNE of Chilaw, alt. 5-10 m. 1.II.62. Loc. 39. 1 ♀. - 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 1 ♂. - 10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45. 2 ♂. - Deduru Oya, 5 mi NE of Kurunegala, alt. 120 m. 7.II.62. Loc. 52. 1 ♂. Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 19.I.62. Loc. 4. 1 ♂. - River Ja Ela, 10 mi NNE of Colombo, alt. 1-5 m. 11.I.62. Loc. 7. 1 ♂. - Negombo Lagoon, 17 mi N of Colombo, alt. 1-5 m. 11.I.62. Loc. 8. 1 ♂ 1 ♀. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 17.I.62. Loc. 10. 2 ♂. - Same locality, alt. 30 m. 16-28.II.62. Loc. 11. 1 ♂. - Same locality, alt. 30 m. 20.I.62. Loc. 16: 1. 1 ♂. - Alawala, 10 mi ENE of Yakkala, 26 mi NE of Colombo, alt. 150 m. 6.III.62. Loc. 13: 1. 1 ♂. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62 and 9.III.62. Loc. 17. 2 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 1 ♂. - Inginiyagala, 25 mi E of Bibile, alt. 75 m. 8.III.62. Loc. 126. 1 ♂. -

Kokagala Mountain, 20 mi N of Bibile, alt. 50 m. 13.III.62. Loc. 139. 1 ♂. Sabaragamuwa Prov.: 6 mi NNW of Balangoda, alt. 900 m. 22.II.62. Loc. 97. 1 ♂. - Rakwana, alt. 450 m. 27.II.62. Loc. 100. 1 ♂. - Belihul-Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. Central Prov.: 5 mi SW of Habarana, alt. 180 m. 11.II.62. Loc. 68. 1 ♂. - Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Knuckles Mountains, 14 mi NE of Kandy, alt. 1200 m. 11.III.62. Loc. 131. 1 ♂. - Peradeniya, 5 mi SW of Kandy, alt. 300 m. 15.III.62. Loc. 150. 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. A series of both sexes. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. 1 ♂ 1 ♀. North Central Prov.: Maradan Maduwa, Wilpattu National Park, 23 mi W of Anuradhapura, alt. 80 m. 2-3.II.62. Loc. 48. 1 ♂. - Maha Bulankulama, 7 mi SW of Anuradhapura, alt. 80 m. 4.II.62. Loc. 50. A series of both sexes. - Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. A series of both sexes. - Kantalai, alt. 60 m. 8-9.II.62. Loc. 58. 3 ♂. - Yan Oya, 24 mi W of Trincomalee, alt. 50 m. 10.II.62. Loc. 64. 2 ♂. - Kahatagasdigiliya, 20 mi ENE of Anuradhapura, alt. 120 m. 10.II.62. Loc. 65. A series of both sexes. - Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. A series of both sexes. - 3 mi S of Minneriya, alt. 100 m. 11.II.62. Loc. 67. A series of both sexes. Prov. of Uva: Stream 2 mi NW of Haldum-mulla, alt. 1100 m. 2.III.62. Loc. 111. 2 ♂ 4 ♀. -



Figs. 55-59. *Sogatodes sternalis* (Dist.): 55, male genitalia, posterior view; 56, the same, left side; 57, median portion of diaphragm of pygofer; 58, genital style, lateral view; 59, anal segment and aedeagus, right side.

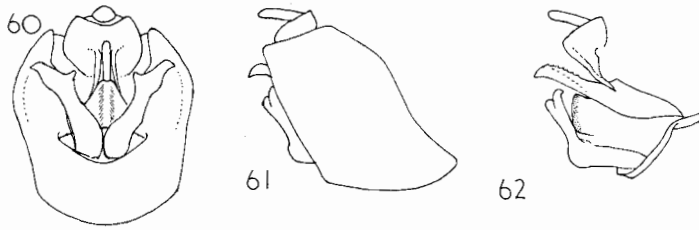
Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 2 ♂. - Lunugala, 10 mi ENE of Badulla, alt. 750 m. 13.III.62. Loc. 142. 1 ♂. Northern Prov.: 2 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 75. A series of both sexes. - 7 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 76. 1 ♂. - Nanthi Kadal lagoon, 3 mi S of Mullaitivu, alt. 5 m. 14.II.62. Loc. 79. 1 ♂. - 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 2 ♂.

27. *Sogatodes sternalis* (Distant) comb. n.
(Figs. 55-59)

Sogata sternalis Distant 1916, Fauna of British India 6: 139.

Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 3 ♂. - Loc. 11. 6 ♂ 1 ♀. - Same locality, alt. 30 m. 20.I.62. Loc. 16: 1. 3 ♂. - Alawala, 10 mi ENE of Yakkala, 26 mi NE of Colombo, alt. 150 m. 17-18.I.62. Loc. 13: II. 1 ♂. - Same locality, alt. 25 m. 6.III.62. Loc. 14: I. 2 ♂. - Labugama, alt. 100 m. 21.I.62. Loc. 17: X. A series of both sexes. Loc. 17: I, II. 2 ♂. - Negombo Lagoon, 17 mi N of Colombo, alt. 1-5 m. 11.I.62. Loc. 8. 1 ♂. - Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 7.I.62. Loc. 4. 1 ♂. Central Prov.: Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 3 ♂. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m. 12.III.62. Loc. 134. A series of both sexes. - Hakgala, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 3.III.62. Loc. 114. 1 ♂. -

Ramboda, 7 mi NW of Nuwara-Eliya, alt. 1000 m. 4.III.62. Loc. 118. 1 ♂. - Rambukpath Oya, 10 mi NW of Hatton, alt. 250 m. 18.III.62. Loc. 153. 1 ♂. - Menickwalla Ela, 4 mi NW of Hatton, alt. 1000 m. 18.III.62. Loc. 154. 5 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. 1 ♂. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 1 ♂. - Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163. A series of both sexes. - Katumana, 3 mi SE of Nuwara-Eliya, alt. 1800 m. 21.III.62. Loc. 164. 1 ♂. Sabaragamuwawa Prov.: Gilimale, 6 mi NE of Ratnapura, alt. 90 m. 20.II.62. Loc. 93. 1 ♂. - 6 mi NNW of Balangoda, alt. 900 m. 22.II.62. Loc. 97. 1 ♂. - Maratenna, 7 mi N of Balangoda, alt. 1400 m. 22.II.62. Loc. 98. 1 ♂. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. - Bulutota Pass, 2 mi SE of Rakwana, alt. 900 m. 28.II.62. Loc. 102. 7 ♂ 2 ♀. - Kahawatta, 15 mi SE of Ratnapura, alt. 150 m. 1.III.62. Loc. 106. 3 ♂. - Belihul Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. Prov. of Uva: Stream 2 mi NW of Haldummulla, alt. 1100 m. 2.III.62. Loc. 111. 2 ♂. - Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 1 ♂. - Lunugala, 10 mi ENE of Badulla, alt. 750 m. 13.III.62. Loc. 142. 5 ♂. - Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 1 ♂. - Diyatalawa, 3 mi N of Haputale, alt. 1200 m. 21.III.62. Loc. 166. 5 ♂ 6 ♀. - Kuda Oya, 15 mi S of Wellawaya, alt. 80 m. 22.III.62.



Figs. 60-62. *Sogatodes candiope* sp. n.: 60, male genitalia, posterior view; 61, the same, right side; 62, anal segment, aedeagus, median portion of pygofer and genital style, right side.

Loc. 168. 1 ♂. Northern Prov.: 2 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 75. 1 ♂. - 7 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 76. 4 ♂ 6 ♀. - 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 2 ♂. North Central Prov.: Ritigala Natural Reserve, 8 mi NW of Habarana, 8.II.62. Loc. 56. A series of both sexes. - Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 1 ♂. - Maradan Maduwa, Wilpattu National Park, 23 mi W of Anuradhapura, alt. 80 m. 2-3.II.62. Loc. 48. 1 ♂. - 3 mi S of Minneriya, alt. 100 m. 11.II.62. Loc. 67. A series of both sexes. Eastern Prov.: Kandekademadu Aru, 15 mi SSW of Batticaloa, alt. 20 m. 8.III.62. Loc. 123. A series of both sexes. - Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. A series of both sexes. - Kokagala Mountain, 20 mi N of Bibile, alt. 50 m. 13.III.62. Loc. 139. 1 ♂.

28. *Sogatodes candiope* sp. n. (Figs. 60-62)

Vertex longer than broad at base (1.5 : 1), in profile rectangulately rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae meeting at apex of head, basal compartment of vertex wider at hind margin than greatest length (1.2 : 1) and than median length (1.3 : 1), frons almost straight in profile, longer in middle line than wide at widest part (about 2.3 : 1), wider at apex than at base (1.4 : 1) and widest at middle, lateral margins almost straight below level of eyes, median carina simple, clypeus at base as wide as frons at apex, postclypeus slightly longer than broad at base, in profile straight, anteclypeus convex, rostrum reaching to mesotrochanters, antennae reaching to level of middle of postclypeus,

basal segment longer than broad (1.4 : 1), second segment longer than first (2.3 : 1), ocelli and blemmata present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (1.4 : 1), lateral carinae straight, almost reaching hind margin. Post-tibial spur with 18 teeth.

Pale brownish yellow; a band overlying posterior compartment of vertex, and median areas of pronotum and mesonotum, white or nearly so; lateral fields of mesonotum, orange brown; antennae and basal part of procoxae and mesocoxae, creamy-white, remaining parts of pro- and mesocoxae, dark reddish brown; abdomen dark orange brown with margins dark reddish brown. Pygofer basally orange, distally pale yellowish-white. Tegmina hyaline, slightly yellowish, slightly darker in posterior half of membrane. Wings hyaline, veins light brown.

Anal segment of male short, collar-like, apical margin short, lateroapical angles close together, each produced ventrad in a slender sinuate spinose process. Pygofer not as long dorsally as ventrally, in profile with latero-dorsal angles produced, acute, lateral margins shallowly convex or slightly sinuate, in posterior view opening about as long as broad, laterodorsal angles not inflected, lateral margins concave, diaphragm rather narrow, medially produced caudad, and with dorsal margin angulately convex, medioventral process absent. Aedeagus moderately long, tubular, straight, broadest in basal third, and with lower margin extending beyond upper margin at apex, a row of about 8 teeth on right side descending cephalad from upper margin at apex, a similar row, of about 9 teeth, on left, from upper margin at apex to middle of

lateral surface near base; orifice oblique at apex. Genital styles relatively long, contiguous at base, thence rather strongly diverging distad, each moderately broad, narrowest two-thirds from base with inner margin sinuately concave, outer margin shallowly sinuate, inner apical angle shortly produced mesodorsad, deeply subangulately rounded, outer apical angle more broadly and strongly produced laterodorsad, curving laterad at its apex.

Male: length, 1.8 mm, tegmen, 2.2 mm.

Holotype ♂: Prov. of Uva: Diyatalawa, 3 mi N of Haputala, alt. 1200 m. 21.III.62. Loc. 166, in Zoological Museum, Lund University.

Other material: Prov. of Uva: Diyatalawa, 21.III.62. Loc. 166, 2 ♂ 2 ♀. Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 20.I.62. Loc. 16: 1. 4 ♂. - Alawala, 26 mi NE of Colombo, alt. 150 m. 17-18.I.62. Loc. 13: II. 1 ♂.

This species resembles *Sogatella kolophon* (Kirk.) in the coloration of the tegmen, and *Sogatodes pusanus* (Dist.) in the shape of the genital styles. The ornamentation of the aedeagus is distinctive, but is sometimes only weakly developed. The laterodorsal angles of the pygofer are not curved mesad or ventrad, and this serves to separate this species from *Delphax albicollis* Motsch.

Genus *Stenocranus* Fieber

Fieber 1866, Verh. zool. bot. Ges. Wien 16: 519.

Type species, *Stenocranus minutus* Oshanin 1912, Kat. Paläarkt. Hemipt.: 118.

29. *Stenocranus oroba* sp. n. (Figs. 63-67)

Vertex longer than broad at base (1.5 : 1), broadly subrectangulately or subacutely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.4 : 1) and than median length (1.5 : 1), frons in middle line longer than wide at widest part (about 2.2 : 1), widest at middle, and about as wide at base as at apex, lateral margins very shallowly convex, median carina simple; clypeus at base as wide as frons at apex, postclypeus longer than broad at base, in profile almost straight; rostrum reaching to mesotrochanters; antennae reaching to frontoclypeal suture,

basal segment scarcely as long as broad, second segment longer than first (2.8 : 1), ocelli present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (1.4 : 1), lateral carinae straight, almost attaining hind margin. Post-tibial spur with about 11 teeth obscurely developed on a finely fringed margin.

Stramineous; intercarinal areas of frons and sublateral areas of apical half of vertex, rostrum and tarsi apically, fuscous; longitudinal stripes on all femora and pro- and mesotibiae, lighter fuscous. Tegmina hyaline, veins colorous.

Anal segment of male rather long, with sides deep, apical margin moderately broad, not much sclerotised, lateroapical angles moderately widely separated, each produced ventrad in a broad blade-like process bluntly rounded at tip. Pygofer much longer ventrally than dorsally, in profile with laterodorsal angles not at all produced, lateral margins shallowly convex, in posterior view with opening longer than broad, lateral margins not very prominent, ventral margin very shallowly excavate; diaphragm rather broad, only slightly narrowed at middle, dorsal margin shallowly concave. Aedeagus rather long, phallobase evenly tapering distad and strongly decurved ventrad in distal half, phallus a straight slender rod-like process arising on left at base, directed dorso-caudad. Genital styles moderately long, contiguous at base for a short distance, then abruptly diverging and recurving mesad, each tapering distad into a narrow sinuate spine.

Male: length, 3.0 mm, tegmen, 3.7 mm, female: length, 3.5 mm, tegmen, 4.0 mm.

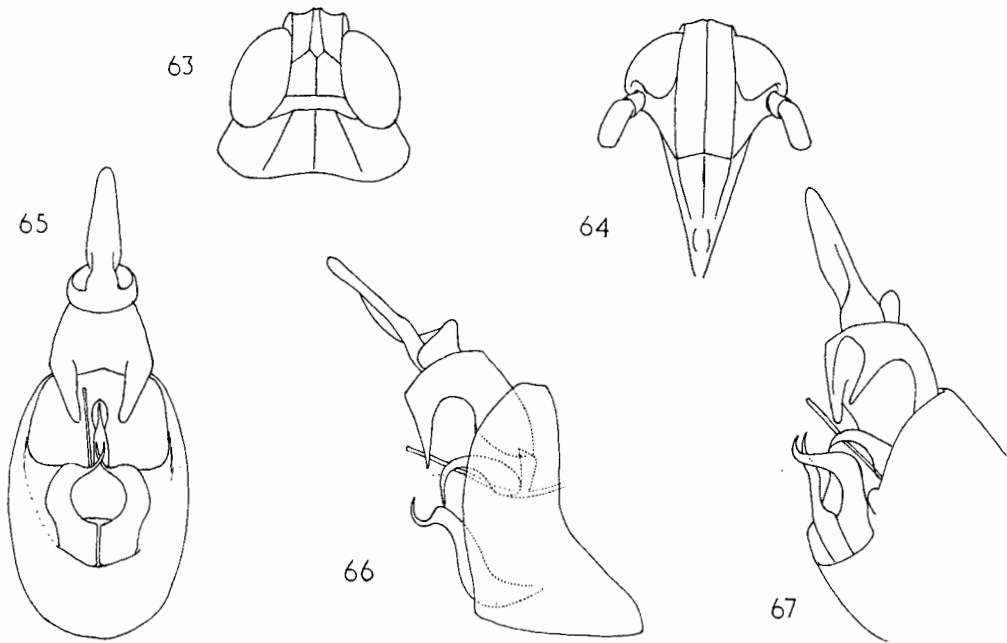
Holotype ♂: Central Prov.: Horton Plains, 11 mi SSE of Nuwara-Eliya, 19-20.III.62, alt. 2000 m. Loc. 162, in the Zoological Museum, Lund University.

Other material. Central Prov.: Horton Plains, 11 mi SSE of Nuwara-Eliya, 19-20.III.62. Loc. 162. 1 ♀.

This species is distinguished from all others by the form of the processes of the anal segment, and of the apical portion of the genital styles.

30. *Stenocranus polenor* sp. n. (Figs. 68-74)

Vertex longer than broad at base (1.3 : 1), subacutely rounding into frons, narrower at



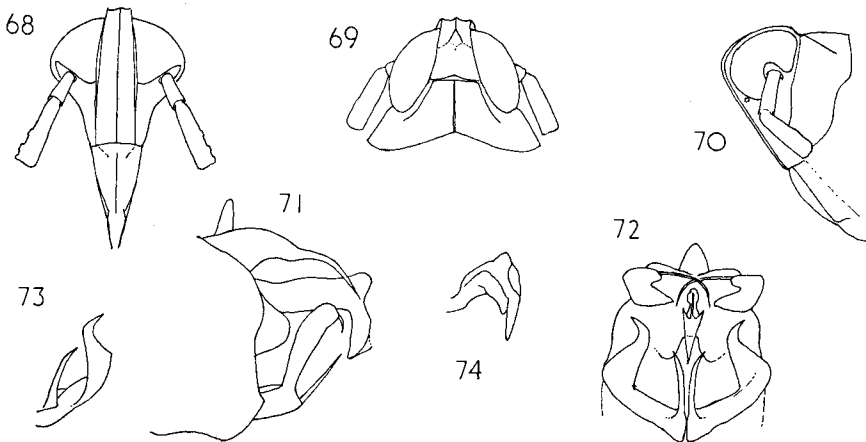
Figs. 63-67. *Stenocranus oroba* sp. n.: 63, vertex and pronotum; 64, frons and clypeus; 65, male genitalia, posterior view; 66, the same, right side; 67, the same, posterolateral view from right.

apex than at base (1:1.6), lateral margins straight, apical margin transverse, submedian carinae uniting at apex of head, basal compartment of vertex wider at hind margin than greatest length (1.3:1), frons in middle line longer than wide at widest part (3.2:1), narrow in basal quarter, of subequal width in distal three-quarters and wider at apex than at base (1.6:1), lateral margins elevated, almost straight, median carina simple; clypeus at base markedly wider than frons at apex (nearly 1.6:1), postclypeus longer than broad at base (nearly 1.2:1), in profile moderately convex, rostrum attaining post-trochanters, antennae reaching to level of middle of clypeus, first segment longer than broad (2:1), second segment longer than first (2.2:1), ocelli present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (2.3:1), lateral carinae straight, not nearly attaining hind margin. Post-tibial spur with 20-21 teeth.

Stramineous; vertex and intercarinal areas of pronotum and mesonotum, pallid, almost

white. Tegmina hyaline, lightly tinged yellow; commissural margin of clavus, white.

Anal segment of male short, apical margin broad, lateroapical angles strongly produced caudad, each tapering into a sinuate weakly decurved spinose process that almost meets its counterpart medially. Pygofer moderately long, longer ventrally than dorsally, laterodorsal margins not produced, lateral margins straight, diaphragm narrow medially, weakly sclerotised, with dorsal margin concave, medioventral process absent. Aedeagus rather long, tubular, strongly compressed laterally, a stout spinose process on ventral margin near middle, directed ventrad, a longer and much stouter subspini-form lobe on ventral margin near apex, directed ventrad, apex of aedeagus broadly rounded. Genital styles relatively large, in posterior view lyre-shaped when apposed, contiguous at base, each thence giving off a straight narrow limb vertically, the main limb S-shaped, curving laterad, moderately narrow, then recurving dorsomesad and finally curving dorsolaterad and tapering to apex, which is acute.



Figs. 68-74. *Stenocranus polenor* sp. n.: 68, frons and clypeus; 69, vertex and pronotum; 70, head and pronotum, left side; 71, male genitalia, left side; 72, the same, postero-ventral view; 73, genital style, ventrolateral view; 74, apical portion of aedeagus, postero-lateral view from left.

Male: length, 2.1 mm, tegmen 3.3 mm.

Holotype ♂: Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100, in the Zoological Museum, Lund University.

The male genitalia differ profoundly from all known members of this genus in the form of the anal segment, the armature of the aedeagus, and the bifid genital styles.

Genus *Sogata* Distant

Sogata Distant 1906, Fauna of India 3: 471. Type species, *Sogata dohertyi* Distant 1906, op. cit.: 471.

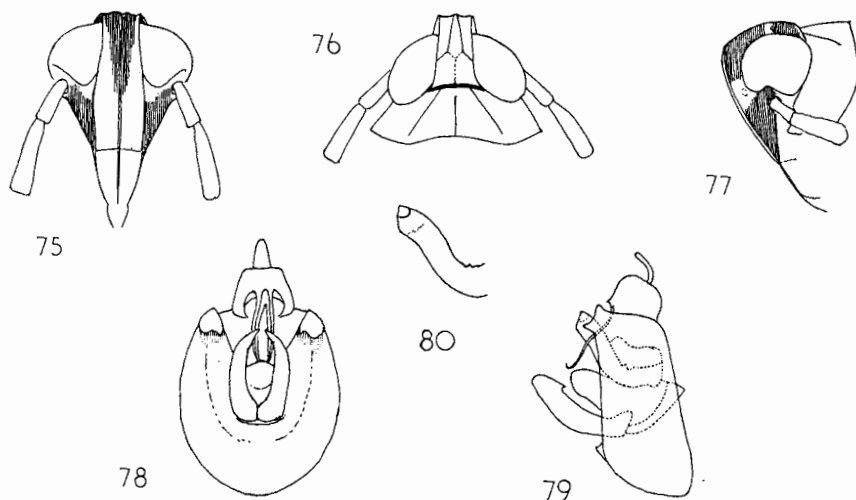
31. *Sogata vatrenus* sp. n. (Figs. 75-80)

Vertex longer than broad at base (about 1.6 : 1), in profile rather abruptly meeting frons at a slightly obtuse angle, narrower at apex than at base, lateral margins straight, apical margin transverse, submedian carinae not quite meeting at apex of head, basal compartment of vertex wider at hind margin than greatest length (1.2 : 1) and than median length (1.3 : 1), frons in profile slightly convex in middle line, longer than wide at widest part (2.5 : 1), wider at apex than at base (1.6 : 1) and widest at two thirds from base,

lateral margins almost straight distad of level of ocelli, median carina forked at extreme base, clypeus at base as wide as frons at apex, postclypeus longer than broad at base, in profile almost straight, anteclypeus more strongly convex, rostrum reaching to post-trochanters; antennae reaching almost to apex of postclypeus, basal segment longer than broad (about 2.5 : 1), second segment longer than first (1.7 : 1), ocelli present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (1.3 : 1), lateral carinae straight, not quite attaining hind margin. Post-tibial spur with 15-17 distinct teeth.

Yellowish brown; frons on each side of middle line in basal half, genae below ocelli, and sides of head above eyes except for an interruption at middle, dark reddish brown; legs pallid, almost sordid white, apical segment of fore and middle tarsi yellowish brown. Tegmina hyaline, veins concolorous.

Anal segment short, deeply sunk in dorsal emargination of pygofer, apical margin short, sides rather deep, lateroapical angles rather closely approximated, each produced ventrad in a long slender sinuate spinose process. Pygofer about as long dorsally as ventrally, in profile with laterodorsal angles rather strongly produced caudad in a shallowly bifurcate lobe, lateral margins straight; in posterior view with



Figs. 75-80. *Sogata vatrenus* sp. n.: 75, frons and clypeus; 76, vertex and pronotum; 77, head and pronotum, left side; 78, male genitalia, posteroventral view; 79, the same, right side; 80, aedeagus, right side.

opening distinctly longer than broad, lateral margins rather weakly defined, diaphragm moderately broad, strongly produced caudad at middle in a deeply-rounded eminence. Aedeagus rather short, tubular, sinuately ascending, thickened dorsally at base, devoid of ornamentation; orifice terminal. Genital styles relatively long, directed dorsad, almost parallel, each with inner margin very shallowly concave, outer margin correspondingly shallowly convex, inner apical angle acute, outer apical angle gently rounding.

Male: length, 2.1 mm, tegmen, 2.9 mm.

Holotype ♂: North Central Prov.: Ponnaruwa, alt. 60 m. 10.II.62. Loc. 66, in Zoological Museum, Lund University.

This species is distinguishable by the infuscation of the basal part of the frons and of the sides of the head. The distinctive feature of the male genitalia is the occurrence, in combination, of produced and bicuspidate laterodorsal angles of the pygofer and simple, straight acuminate and parallel genital styles.

Genus *Nilaparvata* Distant

Distant 1906, Fauna of British India 3: 473. Type species, *Delphax lugens* Stål.

32. *Nilaparvata lugens* (Stål)

Delphax lugens Stål 1854 Öfvers. K. VetenskAkad. Förh., Stockh. 11: 246.

Western Prov.: Colombo, Colpetty, alt. 10 m. 5-13.I.62. Loc. 2. A series of both sexes. - Yonammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 19.I.62. Loc. 4. A series of both sexes. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10 and ditto loc. 11. A series of both sexes. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 9.III.62. Loc. 17. A series of both sexes. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 1 ♂. - Inginiyagala, 25 mi E of Bibile, alt. 75 m. 8.III.62. Loc. 126. 1 ♂. Southern Prov.: Hikkaduwa, 11 mi NW of Galle, alt. 1-10 m. 25-26.I.62. Loc. 22. 1 ♂ 1 ♀. - Polhunnawa, 5.5 mi ESE of Ambalangoda, alt. 40 m. 26.I.62. Loc. 23. 1 ♂. - Haycock Mountain, 21 mi NNE of Galle, 27.I.62. Loc. 30. 2 ♂ 2 ♀. Sabaragamuwa Prov.: Malwala, 3 mi NE of Ratnapura, alt. 40 m. 20.II.62. Loc. 92. 1 ♂. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. - Belihul-Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. Central Prov.: Pidurutalagala, 2 mi N of Nuwara-Eliya, alt. about 2000 m. 4.III.62. Loc. 116. 1 ♂. - Tel-

deniya, 8 mi E of Kandy, alt. 425 m. 10.III.62. Loc. 127. 1 ♂. - Knuckles Mountains, 15 mi NE of Kandy, alt. 1400 m. 11.III.62. Loc. 132. 1 ♂. - Madugoda, 16 mi E of Kandy, alt. 800 m. 11.III.62. Loc. 133. 1 ♂. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. A series of both sexes. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 1 ♂. North Central Prov.: Habarana, alt. 175 m. 7-8.II.62. Loc. 55. 1 ♀. - Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 1 ♂. North Western Prov.: Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40. 1 ♂ 1 ♀. - 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 1 ♂. - Puttalam, alt. 5 m. 1.II.62. Loc. 44. 1 ♂. - Prov. of Uva: Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 1 ♂.

33. *Nilaparvata bakeri* (Muir)

Delphacodes bakeri Muir 1917, Proc. Hawaii. ent. Soc. 3: 336.

North Central Prov.: Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. 1 ♂. Central Prov.: Katumana, 3 mi SE of Nuwara-Eliya, alt. 1800 m. 21.III.62. Loc. 164. 1 ♂. Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. 2 ♂.

34. *Nilaparvata chaeremon* sp. n. (Figs. 81-89)

Head including eyes markedly narrower than pronotum. Vertex longer than broad at base (nearly 1.3 : 1), lateral margins straight, slightly converging distad, apical margin transverse, posterior compartment broader than greatest length (1.7 : 1) and than median length (1.8 : 1); frons longer than broad (2.3 : 1), widest at two thirds from base, and wider at apex than at base (1.3 : 1), lateral margins sinuate, convex below level of eyes; median carina forking in basal quarter; clypeus at base slightly wider than frons at apex, postclypeus as broad as long, in profile shallowly convex, anteclypeus in profile rather strongly convex, rostrum reaching to post-coxae, apical segment markedly shorter than subapical, and spindle-shaped in anterior view; antennae with basal segment longer than broad (2.5 : 1), second segment only a little longer than first (1.2 : 1), ocelli present, but inconspicuous. Pronotum as long in middle line as broad at anterior margin

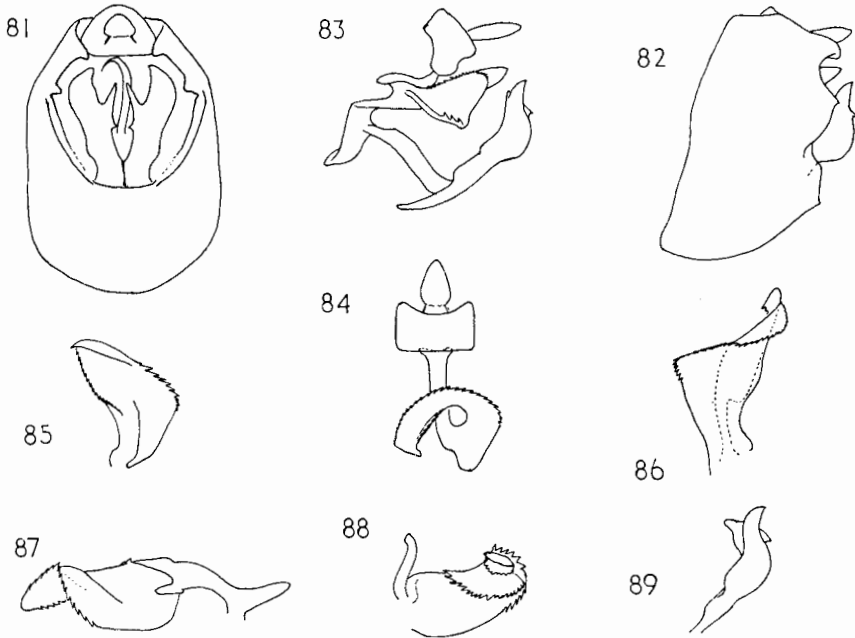
between lateral carinae. Post-tibial spur with about 18 teeth. Light yellowish brown; antennae, lateral lobes of pronotum and intercarinal areas of mesonotum darker yellowish brown; frons and clypeus near lateral margins, genae and sides of clypeus, posterolateral margins of mesonotum, apex of mesoscutellum and pro-tarsi and mesotarsi pallid sordid yellow; posterior half of pronotum sordid white or grey. Tegmina hyaline, uniformly tinged dull yellow. Anal segment of male short, apical margin concave, lateroapical angles not produced. Pygofer longer ventrally than dorsally, with dorsolateral angles each produced in a small bluntly triangular lobe directed mesocaudad, and with a second, smaller lobe slightly above middle of lateral margin, ventral margin without a medioventral process; diaphragm narrow medially, with dorsal margin deeply concave. Aedeagus short, very broad and twisted laterally through 180°, coarsely denticulate on right and left margins, apex bluntly rounded or subangulate. Genital styles rather long, contiguous at base, moderately diverging dorsad, slightly widening distad, outer margin weakly sinuate, inner margin shallowly concave in basal half, and produced mesad in a small triangular lobe at middle, and in a long finger-like lobe, directed dorsad, at two-thirds from base, apex of style acute, outer apical angle obtusely rounding into lateral margin.

Male: length, 2.5 mm, tegmen, 2.8 mm; female: length, 3.4 mm, tegmen, 3.4 mm.

Holotype ♂: North Western Prov.: Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40, in Zoological Museum, Lund University.

Other material: North Western Prov.: Mundel, Mundel Lake, 1.II.62. Loc. 40. 1 ♀. Western Prov.: River Ja Ela 10 mi NNE of Colombo, alt. 1-5 m. 11.I.62. Loc. 7. 1 ♂ (brachypterous).

This species is very evidently related to *N. albotristriata* (Kirkaldy), but differs in the more uniform coloration of the body and in structural details of the male genitalia. Of the latter, the most conspicuous are the form of the aedeagus, which resembles the basal portion of that of *albotristriata*, but lacks the long tapering apical portion found in that species, and the genital styles, in which the apical part does not form a deeply and evenly rounded



Figs. 81-89. *Nilaparvata chaeremon* sp. n.: 81, male genitalia, posterior view; 82, the same, left side; 83, anal segment, aedeagus and left genital style, left side; 84, anal segment and aedeagus, posterior view; 85, aedeagus ventral view; 86, the same, dorsal view; 87, the same, right side; 88, the same, ventrolateral view from left; 89, genital style, lateral view.

lobe, and the process on the inner margin is stouter and directed more dorsad.

Genus *Nothokalpa* nov.

Head with eyes narrower than pronotum. Vertex longer than broad at base (about 1.4 : 1), posterior compartment broader at base than greatest length (about 1.5 : 1), anterior margin transverse, lateral margins straight; frons longer than broad (about 2.3 : 1), wider at apex than at base, lateral margins shallowly sinuate, convex below level of eyes, median carina forked near base; clypeus at base wider than frons at apex, slightly longer than broad, postclypeus in profile in approximately same line as frons, antennae cylindrical with basal segment longer than broad (about 1.5 : 1), second segment longer than first (about 2 : 1); rostrum reaching to post-coxae. Pronotum as long in middle line as wide at anterior margin between lateral carinae, lateral carinae not

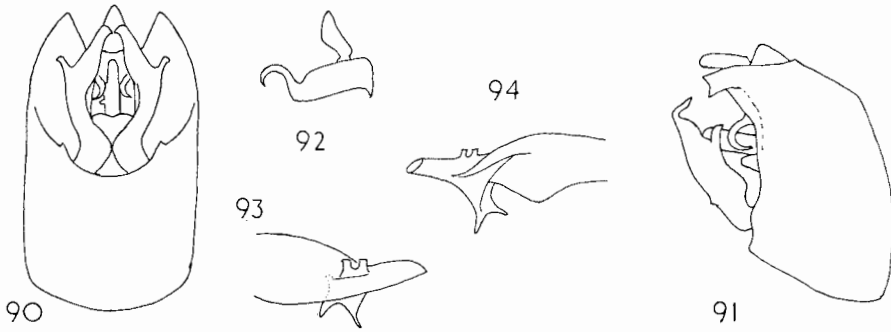
reaching hind margin. Post-tibial spur with about 23 teeth. Anal segment of male short, with lateroapical angles each produced in a spinose process. Pygofer with posterior opening about as broad as long, diaphragm narrow medially. Aedeagus short. Genital styles relatively long and stout.

Type species, *Nothokalpa salome* sp. n.

The typical species of this genus, in size and general appearance, resembles a *Nilaparvata*, but differs in the relatively longer and anteriorly narrowing vertex and the absence of spines on the basal segment of the hind tarsus. From *Afrokalpa*, it differs in its relatively longer head, the form of the aedeagus, and the absence of a third process on the genital styles.

35. *Nothokalpa salome* sp. n. (Figs. 90-94)

Vertex longer than broad at base (nearly 1.4 : 1), in profile subrectangulately rounding



Figs. 90-94. *Nothokalpa salome* sp. n.: 90, male genitalia, posteroventral view; 91, the same, right side; 92, anal segment, right side; 93, aedeagus, left side; 94, the same, right side.

into frons, slightly wider at base than at apex, lateral margins straight, apical margin transverse, Y-shaped carina feeble, basal compartment of vertex wider at hind margin than greatest length (about 1.5 : 1) and than median length (about 1.8 : 1), frons in middle line longer than wide at widest part (2.3 : 1), widest just distad of middle, wider at apex than at base (nearly 1.2 : 1), lateral margins shallowly convex, median carina forked narrowly in basal fifth; antennae with basal segment longer than broad (1.5 : 1), second segment longer than first (2.2 : 1), ocelli distinct, blemmata present. Pronotum as long in middle line as broad at anterior margin between lateral carinae, lateral carinae curving laterad not attaining hind margin. Mesonotum with median carina fine and rather obscure. Post-tibial spur with about 23 distinct irregular teeth. Yellowish brown; slightly darker over distal part of vertex and base of frons; lateral spines on post-tibiae and basal metatarsal segment a little paler than ground colour. Tegmina yellowish hyaline, veins concolorous in corium, slightly tinged with yellowish-brown in membrane. Wings hyaline with veins light brown.

Anal segment very short, ring-like, deeply sunk in dorsal emargination of pygofer, apical margin short, lateroapical angles closely approximated, each produced ventrad and laterad in a moderately long, stout, spinose process. Pygofer about as long dorsally as ventrally, in profile with laterodorsal angles rather strongly produced caudad, each bicuspidate apically, lateral margins shallowly concave; in posterior

view with opening as broad as long, lateral margins shallowly concave, ventral margin shallowly excavate, a minute tooth at each end of excavation; diaphragm narrow, its dorsal margin shallowly undulate. Aedeagus relatively short, in profile broad in basal half, with dorsal and ventral margins convex, narrowing distad, two small peg-like processes on left in distal half, directed laterodorsad, a broad quadrate lobe extending ventrolaterad, at same level on right, its apical angles acutely produced, a shallow sinuate flange dorsally curving slightly to right distally, orifice terminal, oblique. Genital styles long, contiguous near base, each widening distad, with inner margin concave, outer margin convex, apical margin strongly oblique with outer apical angle thumb-like, produced dorsolaterad, inner apical angle more broadly produced mesad and deflexed at apex.

Male: length, 2.5 mm, tegmen, 2.8 mm.

Holotype ♂: Eastern Prov.: Inginiyagala, 25 mi E of Bibile, alt. 75 m. 8-9.III.62. Loc. 126, in Zoological Museum, Lund University.

Genus *Harmalia* Fennah

Fennah 1969, Pacif. Ins. Monogr. 21: 37. Type species, *Sogata thoracica* Distant.

36. *Harmalia thoracica* (Distant) (Fig. 104)

Sogata thoracica Distant 1916, Fauna of British India 6: 140.

Western Prov.: Yakkala, 18 mi NE of Colombo (Dambuwa Estate), alt. 30 m. 14.I.-26.III.62. Loc. 10. 1 ♂. - Same locality. Loc. 11. 2 ♂. North Central Prov.: Habarana, alt. 175 m. 7-8.II.62. Loc. 55. 1 ♂. - Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. 1 ♂. Sabaragamuwa Prov.: Ratnapura, alt. 60 m. 22.II.62. Loc. 95. 1 ♂. Eastern Prov.: Inginiyagala, 25 mi E of Bibile, alt. 75 m. 8.III.62. Loc. 126. 1 ♂. Central Prov.: Katumana, 3 mi SE of Nuwara-Eliya, alt. 1800 m. 21.III.62. Loc. 164. 1 ♂.

37. *Harmalia anacharsis* Fennah

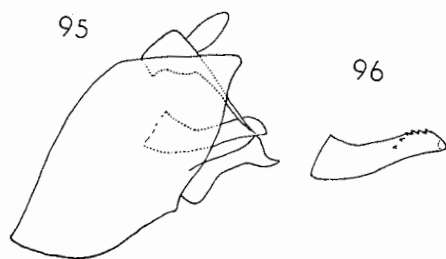
Harmalia anacharsis Fennah 1969, Pacif. Ins. Monogr. 21: 38.

Western Prov.: Yakkala, 18 mi NE of Colombo (Dambuwa Estate), alt. 30 m. 16.I.62. Loc. 10. 1 ♂. - Same locality, 20.I.62. Loc. 16: 1. 2 ♂; 20.I.62. Loc. 16.II. 1 ♂. North Western Prov.: Andapolakanda, 3 mi NE of Melsiripura, alt. 225 m. 7.II.62. Loc. 53. 1 ♂. Central Prov.: Peradeniya, 5 mi SW of Kandy, alt. 300 m. 15.III.62. Loc. 150. 1 ♂. - Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163. 1 ♂. Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 1 ♂. Prov. of Uva: Lunugala, 10 mi ENE of Badulla, alt. 750 m. 13.III.62. Loc. 142. 2 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 1 ♂. - Kokagala Mountain, 20 mi N of Bibile, alt. 50 m. 13.III.62. Loc. 139. 1 ♂. Southern Prov.: Gilcroft, 7.5 mi SE of Ambalangoda, alt. 10 m. 26.I.62. Loc. 24. 1 ♂.

38. *Harmalia tiphys* Fennah (Fig. 95-96)

Harmalia tiphys Fennah 1971, Ins. of Micronesia 6 No. 8: 582.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 19.I.62. Loc. 4. 1 ♂. - Yakkala, 18 mi NE of Colombo (Dambuwa Estate), alt. 30 m. 25-31.I.62. Loc. 10 and same locality, loc. 16.I. A series of both sexes. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: III, 17: VI. 5 ♂. Central Prov.: 5 mi SW of Habarana, alt. 180 m. 11.II.62. Loc. 68. 1 ♂. - Teldeniya, 8 mi E of Kandy, alt. 425 m. 10.III.62. Loc. 127. 1 ♂. - Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. 1 ♂. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m.



Figs. 95-96. *Harmalia tiphys* Fenn.: 95, male genitalia, left side; 96, aedeagus, left side.

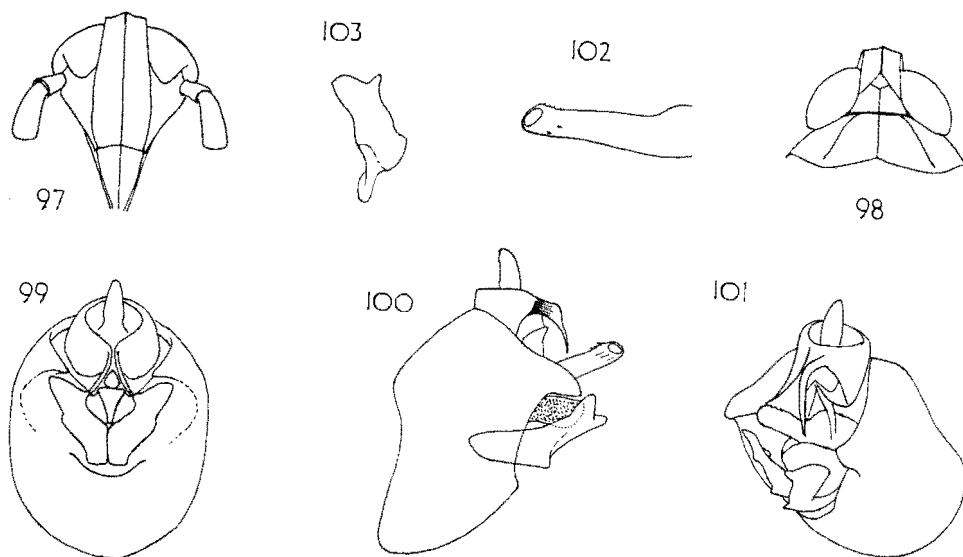
12.III.62. Loc. 134. 2 ♂. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. 2 ♂. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163. 1 ♂. Sabaragamuwa Prov.: Deerwood, Kuruwita, 6 mi NNW of Ratnapura, 17-32.II.62. Loc. 90. 1 ♂. - Bopathella Falls, 9 mi NNW of Ratnapura, alt. 40 m. 19.II.62. Loc. 91: II. 1 ♂. - Rakwana, alt. 450 m. 27.II.62. Loc. 100. 2 ♂. - Bulutota Pass, 2 mi SE of Rakwana, alt. 900 m. 28.II.62. Loc. 102. 2 ♂. - Kitulgala, 21 mi NE of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. North Western Prov.: Madampe, 20 mi N of Negombo, alt. 5 m. 31.I.62. Loc. 37. 1 ♂. Prov. of Uva: Stream 2 mi NW of Haldammulla, alt. 1100 m. 2.III.62. Loc. 111. 1 ♂. Southern Prov.: Galandala, 16 mi NNE of Galle, alt. 50 m. 27.I.62. Loc. 28. 1 ♂. - Hini-duma, 20 mi NNE of Galle, alt. 30 m. 27.I.62. Loc. 29. 1 ♂. Eastern Prov.: Kanniyai, 5 mi NW of Trincomalee, alt. 60 m. 10.II.62. Loc. 62. 1 ♂.

Harmalia heitensis (Matsumura and Ishihara) comb. n.

Sogata heitensis Matsumura and Ishihara 1945, Mushi 16: 66.

39. *Harmalia heitensis otho* subsp. n. (Figs. 97-103)

Vertex longer than broad at base (1.5:1), subacutely rounding into frons, almost as wide at apex as at base, lateral margins straight, apical margin transverse, with median carina prominent, submedian carinae uniting much before apex of head, basal compartment of



Figs. 97-103. *Harmalia heitensis otho* subsp. n.: 97, frons and clypeus; 98, vertex and pronotum; 99, male genitalia, posterior view; 100, the same, left side; 101, the same, posterolateral view from right; 102, aedeagus; 103, genital style, lateral view.

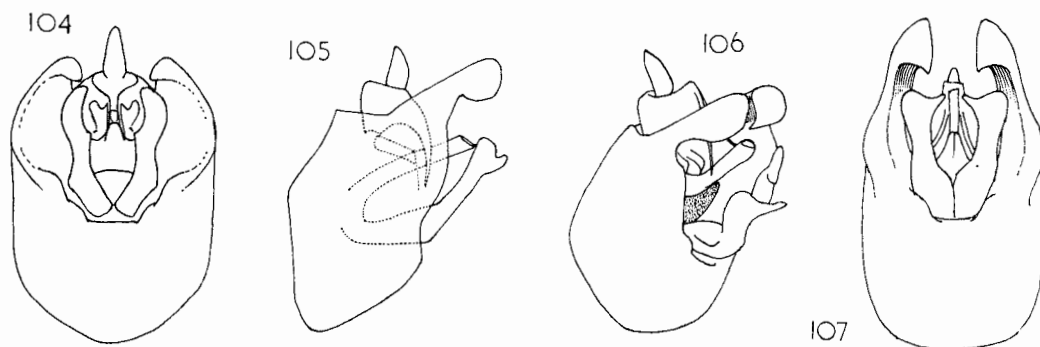
vertex wider at hind margin than greatest length (1.7:1) and than median length (1.9:1), frons in profile straight, longer in middle line than broad (2.8:1), widest at two thirds from base, slightly wider at apex than at base, lateral margins shallowly convex, median carina simple, clypeus at base as wide as frons at apex, postclypeus as long as broad at base, in profile straight, rostrum reaching almost to post-coxae, antennae reaching to level of frontoclypeal suture, basal segment slightly longer than broad, second segment longer than first (2.4:1), ocelli distinct. Pronotum longer in middle line than broad at anterior margin between lateral carinae (about 1.4:1), lateral carinae straight, not reaching hind margin; post-tibial spur with 21 teeth.

Chocolate brown; antennae and last two segments of post-tarsi pale, almost sordid white; legs and lower surface of thorax very dilute fuscous. Tegmina chocolate brown with concolorous veins, margin of membrane pale, almost sordid white. Wings dilute fuscous with darker veins.

Anal segment moderately long, with sides comparatively deep, lateroapical angles approximated in middle line, each produced ventrad, then ventrocephalad, in a slender

blade-like process. Pygofer in profile only slightly longer ventrally than dorsally, with laterodorsal angles strongly and acutely produced, and lateral margin below them oblique, straight or slightly concave; in posterior view with opening rather longer than broad, anal emargination rather broad, dorsolateral angles slightly inflected, lateral margins not well defined, ventral margin not or only shallowly excavate; diaphragm moderately broad, strongly produced caudad at middle in a vertical, almost wedge-shaped, lobe, with its surface minutely granulate. Aedeagus moderately long, tubular, porrect caudad, dorsal margin a little elevated at extreme base, four minute teeth dorsally near apex, and four slender parallel ridges just behind apex, each not quite ending basally in a tooth, orifice terminal. Genital styles moderately long and broad, diverging distad, inner margin angulate at one third from base, thence concave, outer margin sinuate, inner apical angle narrowly produced mesad, outer apical angle slightly produced in a broadly rounded lobe, which in lateral view is apically subacute.

Holotype ♂ of subspecies: Western Prov.: Yakkala, 18 mi NE of Colombo, 20.I.62, alt. 30 m.



Figs. 104-107. *Harmalia thoracica* (Dist.): 104, male genitalia, posteroventral view. *Harmalia tarasco* sp. n.: 105, male genitalia, left side; 106, the same posterolateral view from left; 107, the same, posteroventral view.

Loc. 16: I, in Zoological Museum, Lund University.

Other material: Eastern Prov.: Inginiyagala, 8-9.III.62, alt. 75 m. Loc. 126. 1 ♂. North Western Prov.: Swamp 10 mi NE of Puttalam, 2.II.62, alt. 20 m. Loc. 45. 1 ♂. - 5 mi NNE of Puttalam, 1.II.62. Loc. 42. 1 ♂.

This subspecies differs from the typical subspecies (from Taiwan) in its relatively longer vertex, the less sharply angulate ends of the median excavation of the ventral margin of the pygofer, and the less acute outer apical angles of the genital styles.

40. *Harmalia tarasco* sp. n. (Figs. 105-107)

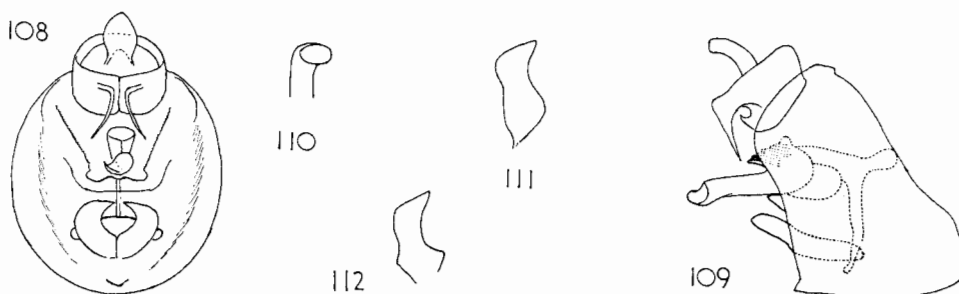
Vertex longer than broad at base (nearly 1.3 : 1), subacutely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae uniting before apical margin of head, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1) and than median length (1.8 : 1), frons in profile almost straight, longer in middle line than broad (2.5 : 1) widest at middle, slightly wider at apex than at base, lateral margins almost straight, median carina simple; clypeus at base as wide as frons at apex, postclypeus about as long as broad at base, in profile almost straight; rostrum reaching to post-coxae; antennae reaching to level of base of postclypeus, basal segment longer than broad (about 1.7 : 1), second segment longer than first (nearly 1.9 : 1); ocelli relatively large. Prono-

tum longer in middle line than broad at anterior margin between lateral carinae (1.2 : 1), lateral carinae convex, not attaining hind margin. Post-tibial spur with about 16 teeth.

Light yellowish brown; carinae of head, rostrum, antennae, posterior half of pronotum and hind margin of mesonotum, whitish; legs and underside of thorax pale yellowish brown, mesonotum light orange brown; abdomen and male genitalia, reddish brown. Tegmina hyaline, veins concolorous.

Anal segment short, collar-like, lateroapical angles contiguous at middle, each produced ventrolaterad in a curved spinose process. Pygofer longer dorsally than ventrally, in profile with laterodorsal angles exceptionally strongly produced caudad in a narrow lobe expanded at its apex, lateral margins sinuate; in posterior view with opening rather longer than broad, laterodorsal angles a little inflected and truncate apically, lateral margins sinuately concave, ventral margin shallowly concave, diaphragm very narrow, its dorsal margin strongly produced caudad at middle in a narrowly triangular lobe, with its surface roughened. Aedeagus long, tubular, porrect caudad, devoid of ornamentation, orifice terminal. Genital styles contiguous basally, thence moderately diverging, each slightly narrowed in middle portion, with inner margin concave, outer margin sinuate, expanding distally, with outer apical angle broadly rounded, inner apical angle acutely produced mesad.

Male: length, 2.1 mm, tegmen, 2.6 mm.



Figs. 108–112. *Coronacella sinhalana* (Kirk.): 108, male genitalia, 109, the same, right side; 110, apical portion of aedeagus, dorsal view; 111, genital style, lateral view; 112, genital style of specimen from Rewa, Fiji, lateral view.

Holotype ♂: Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14–31.I.62. Loc. 10, in Zoological Museum, Lund University.

Other material: Western Prov.: Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: X. 1 ♂.

This species differs from *H. thoracica* (Dist.) and *H. anacharsis* Fenn. in the shape of the genital styles, and from all species of this genus in the length and shape of the laterodorsal angles of the pygofer.

Genus *Coronacella* Metcalf

Metcalf 1950, Occ. Pap. Bishop Mus. 20 No. 5: 59.

Type species, *Kelisia kirkaldyi* Muir (= *Coronacella bella* Metcalf 1950, loc. cit.).

41. *Coronacella sinhalana* (Kirkaldy) comb. n. (Figs. 108–112)

Liburnia frontalis. Melichar 1903, Homopt. Fauna von Ceylon: 100.

Delphacodes sinhalanus Kirkaldy 1906, Can. Ent. 38: 156.

Kelisia kirkaldyi Muir 1917, Proc. Hawaii. ent. Soc. 3: 329. Syn. n.

Sabara gamuwa Prov.: Rakwana, alt. 450 m. 27–28.II.62. Loc. 100. 1 ♂. – Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 1 ♂. Prov. of Uva: Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 1 ♂.

Genus *Terthron* Fennah

Fennah 1965, Bull. Brit. Mus. (Nat. Hist.) 17. No. 1: 55. Type species, *Delphax anemonias*

Kirkaldy 1907, Bull. Hawaii. Sug. Plrs. Ass. Ent. Div. 3: 159.

The three species of this genus so far described may be separated as follows:

1. Tegmina with veins concolorous; a broad white band down middle of head and thorax; pygofer without a medioventral process; genital styles with lower process of inner margin minute, but reaching farther mesad than upper process *albovittatum* (Mats.)
- Tegmina with veins infuscate at least in part; the white dorsal stripe narrow at least in anterior half. Pygofer with a small triangular medioventral process 2
2. Tegmina with veins of corium infuscate. Median white stripe on mesonotum very narrow, of equal width throughout, abruptly widening at mesoscutellum; genital styles with lower process of inner margin almost obsolete, apical margin truncate, outer apical angle abruptly rounding *anemonias* (Kirk.)
- Tegmina with veins of corium not infuscate. Median white stripe on mesonotum gradually widening basad, as wide as mesoscutellum before attaining it; genital styles with inner process distinct, apical margin shallowly convex, outer angle broadly rounding *albomarginatum* (Mel.)

42. *Terthron albomarginatum* (Melichar) comb. n.

Liburnia albomarginata Melichar 1903 Homopt.-Fauna von Ceylon: 103.

Western Prov.: Yongammulla, 3 mi E of

Yakkala, 18 mi NE of Colombo, 7.I.62. Loc. 4. 1 ♂ 1 ♀. - River Ja Ela, 10 mi NNE of Colombo, alt. 1-5 m. 11.I.62. Loc. 7. 1 ♂ 1 ♀. - Yakkala, 18 mi NE of Colombo (Dambuwa Estate) alt. 30 m. 15-31.I.62. Loc. 10. A series of both sexes. - Same locality, loc. 11. 3 ♂. - Alawala, 10 mi ENE of Yakkala, 26 mi NE of Colombo, alt. 150 m. 17-18.I.62. Loc. 13: II. 1 ♂; 6.III.62. Loc. 13: I. 2 ♂. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: III. 1 ♂. - Kalutara, 25 mi SSE of Colombo, alt. 1 m. 25.I.62. Loc. 19. 1 ♂. Central Prov.: foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1200 m. 11.III.62. Loc. 130. 1 ♀. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m. 12.III.62. Loc. 134. 2 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. 1 ♂. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1800 m. 19.III.62. Loc. 160. - Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163. Prov. of Uva: Stream 2 mi NW of Haldummulla, alt. 1100 m. 2.III.62. Loc. 111. 1 ♂. - Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. - Ury Estate, 6 mi SE of Badulla, alt. 1100 m. 14.III.62. Loc. 143. 2 ♂. - Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145. 2 ♂. - Wellawaya, 18 mi S of Badulla, alt. 175 m. 21-22.III.62. Loc. 167. 1 ♂. Sabaragamuwa Prov.: Deerwood, Kuruwita, 6 mi NNW of Ratnapura, 17-23.II.62. Loc. 90. 1 ♂ 3 ♀. - 6 mi NNW of Balangoda, alt. 900 m. 22.II.62. Loc. 97. 1 ♂. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. Southern Prov.: Telwatta Sanctuary, 6.5 mi SSE of Ambalangoda, alt. 5 m. 26.I.62. Loc. 25. 2 ♂. - Hiniduma, 20 mi NNE of Galle, alt. 30 m. 27.I.62. Loc. 29. 2 ♀. - 6 mi NW of Hulandawa, 20 mi NE of Galle, alt. 30 m. 29.I.62. Loc. 35. 1 ♂. Northern Prov.: Nakarkoyil, 10 mi SE of Point Pedro, alt. 5 m. 13.II.62. Loc. 71. 1 ♂. - Nay Aru at Pallamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. A series of both sexes. Eastern Prov.: Kandekademadu Aru, 15 mi SSW of Batticaloa, alt. 20 m. 8.III.62. Loc. 123. A series of both sexes. North Central Prov.: Maha Bulankulama, 7 mi SW of Anuradhapura, alt. 80 m. 4.II.62. Loc. 50. 1 ♂. - Kandurukanda, 20 mi NE of Habarana, alt. 90 m.

8.II.62. Loc. 57. 1 ♂. - Yan Oya, 24 mi W of Trincomalee, alt. 50 m. 10.II.62. Loc. 64. A series of both sexes. - Kahatagasdigiliya, 20 mi ENE of Anuradhapura, alt. 120 m. 10.II.62. Loc. 65. 4 ♂. North Western Prov.: Madampe, 20 mi N of Negombo, alt. 5 m. 31.I.62. Loc. 37. 3 ♂. - Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40. 3 ♂. - 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 1 ♂.

Genus *Syndelphax* Fennah

Fennah 1963, Proc. R. ent. Soc. Lond. (B)32: 15.
Type species, *Delphax matanitu* Kirkaldy.

43. *Syndelphax disonymos* (Kirkaldy)

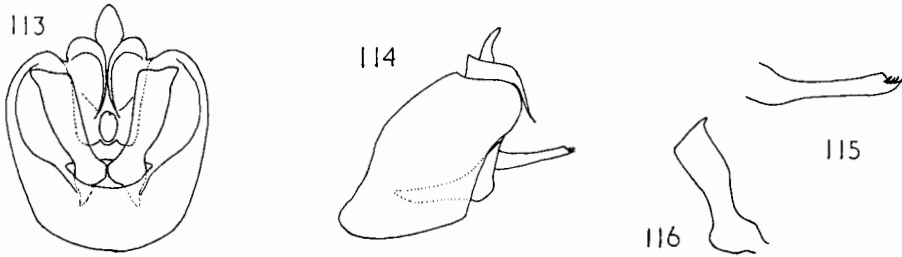
Delphax disonymos Kirkaldy 1907, Bull. Hawaii Sug. Plrs. Ass. Ent. Ser. 3: 151, 156.
Delphax matanitu Kirkaldy 1907, *op. cit.* 151, 155.

North Western Prov.: 10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45. 1 ♂. North Central Prov.: Maradan Maduwa, Wilpattu National Park, 23 mi W of Anuradhapura, alt. 80 m. 2-3.II.62. Loc. 48. 1 ♂. Northern Prov.: 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 2 ♂. Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. 1 ♂. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 1 ♂.

44. *Syndelphax euonymus* (Fennah) (Figs. 113-116)

Toya euonymus Fennah 1965, Bull. Brit. Mus. (Nat. Hist.) 17 Ent. (1): 57.

Anal segment of male very short, ring-like, lateroapical angles rather closely approximated, each produced ventrad in a long slender spinose process. Pygofer moderately long, posterior opening as broad as long, dorsolateral angles deeply rounding into oblique lateral margins, diaphragm with dorsal margin very narrow at middle, where it is produced dorso-caudad in a short, almost M-shaped lobe, medioventral process not developed. Aedeagus moderately long, tubular, in lateral view almost twice as wide in basal as in distal part, a row of four minute spines ventrally at apex, directed caudad, orifice terminal. Genital styles long, flattened and rather broad, constricted below middle, thence almost parallel-sided, only very slightly widening distad, apical



Figs. 113-116. *Syndelphax euonymus* (Fenn.): 113, male genitalia, posterior view; 114, the same, left side; 115, aedeagus, left side; 116, genital style, lateral view.

margin oblique with outer angle obtusely rounded, inner angle acute.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 18-25.III.62. Loc. 4. 1 ♂. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 1 ♂. - Same locality, loc. 11. 1 ♂. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. A series. - Kantalai, alt. 60 m. 8-9.II.62. Loc. 58. 1 ♂. - Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. 1 ♂.

In the original description of this species it was stated that the dorsolateral angles of the pygofer are not produced, and that the lower lip of the orifice of the aedeagus is produced caudad in an acuminate lobe. However, the conformation of the pygofer is as in other members of the genus, with the entire upper half of the lateral margins being produced caudad in a broadly rounded lobe. Re-examination of the holotype has shown that there is a row of four minute spine-like processes at the lower margin of the orifice: as they lie in the same plane, they appear in lateral view as a single process.

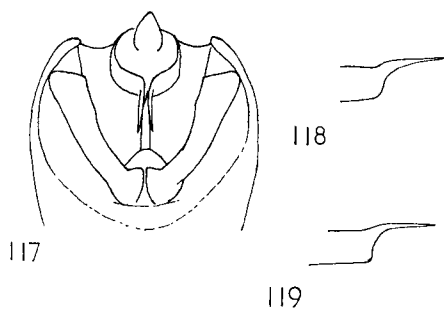
45. *Syndelphax agamator* sp. n.
(Figs. 117-119)

Vertex as long submedially as broad at base, subrectangulately rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin truncate, with submedian carinae very weakly prominent, Y-shaped carina moderately distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than

greatest length (2 : 1) and than median length (2.5 : 1); frons in middle line longer than wide at widest part (2.3 : 1), widest at two-fifths from base, lateral margins very feebly convex, median carina simple; clypeus at base distinctly wider than frons at apex, postclypeal disc scarcely longer than broad at base, in profile moderately convex; rostrum surpassing meso-trochanters; antennae distinctly surpassing frontoclypeal suture, basal segment longer than broad (1.5 : 1), second segment longer than first (2.3 : 1); ocelli distinct. Pronotum with disc longer in middle line than broad at anterior margin between lateral carinae (1.4 : 1), lateral carinae not attaining hind margin. Post-tibial spur with about 25 teeth.

Stramineous; abdomen, pygofer and posterior margin of pronotum, reddish brown. Tegmina hyaline, veins concolorous. Wings hyaline, with veins concolorous.

Anal segment short, collar-like, apical margin very short, lateroapical angles closely approximated, each produced ventrad in a rather long, slender spinose process. Pygofer about as long dorsally as ventrally, in profile with laterodorsal angles broadly and strongly produced caudad, and posterior margin shallowly concave, in posterior view with opening broader than long, lateral margins well-defined, concave, ventral margin shallowly concave, no medioventral process developed; diaphragm narrow, dorsal margin at middle produced dorsocaudad in a broadly triangular lobe. Aedeagus long, tubular, straight, with a short acuminate process dorsally at apex; orifice terminal. Genital styles large, rather strongly diverging, each slightly widening distad, with inner margin shallowly concave, outer margin



Figs. 117-119. *Syndelphax agamator* sp. n.: 117, male genitalia, posterior view; 118, apex of aedeagus, laterodorsal view from left; 119, the same, left side.

shallowly convex, apical margin oblique, almost truncate, inner angle obtuse, outer angle broadly rounding.

Male: length, 2.3 mm, tegmen, 2.8 mm.

Holotype ♂: Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10, in Zoological Museum, Lund University.

Other material: Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 15-31.I.62. Loc. 11. 2 ♂. North Central Prov.: Wilpattu National Park, Maradan, Maduwa, 23 mi W of Anuradhapura, alt. 80 m. 2.II.62. Loc. 48. 1 ♂. - Yan Oya, 24 mi W of Trincomalee, alt. 50 m. 10.II.62. Loc. 64. 1 ♂.

Males of this species are distinguishable by the subtriangular form of the middle part of the diaphragm, and by the presence of an acuminate process dorsally at the apex of the aedeagus.

46. *Syndelphax euroclydon* sp. n.
(Figs. 120-124)

Vertex longer than broad at base (about 1.2 : 1), obtusely rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin truncate, with submedian carinae weakly prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1) and than median length (1.8 : 1); frons in middle line longer than wide at widest

part (2.0 : 1), widest at middle, lateral margins very feebly convex, median carina simple; clypeus at base distinctly wider than frons at apex, postclypeal disc as long as broad at base, in profile moderately convex, anteclypeus in profile shallowly convex, so that entire clypeus in profile is shallowly convex; rostrum surpassing meso-trochanters; antennae distinctly surpassing frontoclypeal suture, basal segment longer than broad (1.4 : 1), second segment longer than first (2.2 : 1), ocelli small. Pronotum with disc longer in middle line than broad at anterior margin between lateral carinae (about 1.2 : 1), lateral carinae not attaining hind margin. Post-tibial spur with about 12 teeth.

Head and thorax sordid pale brownish yellow; distal half of frons, clypeus, rostrum and legs slightly paler; abdomen dorsally, anal segment and upper half of pygofer, clear pale yellow; a round spot on metapleura, transverse bands overlying abdominal tergites 3 and 4, lower half of pygofer, and genital styles, reddish brown. Brachypterous tegmina translucent, yellowish hyaline, apical margin weakly convex, concolorous.

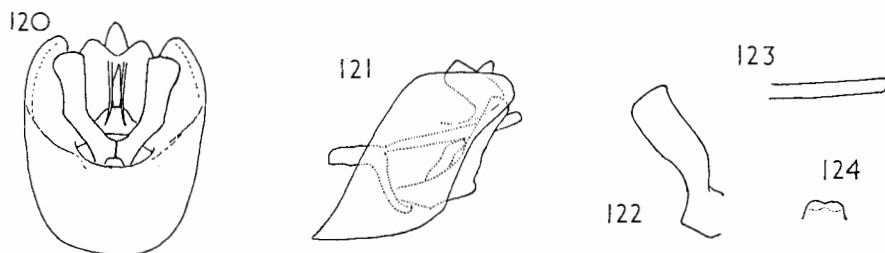
Anal segment short, collar-like, lateroapical angles rather closely approximated, each produced ventrad in a long slender spinose process. Pygofer moderately long, posterior opening as broad as long, dorsolateral angles broadly produced, diaphragm with dorsal margin deeply concave, very narrow at middle, where it is produced in a small quadrate lobe with its angles rounded; medioventral process absent. Aedeagus moderately long, tubular, porrect caudad, devoid of ornamentation, orifice terminal. Genital styles large, rather strongly diverging, each widening slightly to middle, thence almost parallel-sided to apex, apical margin very shallowly convex, almost transverse, inner angle more sharply rounded than outer.

Male (brachypterous): length, 1.8 mm.

Holotype ♂: Eastern Prov.: Dry forest 13 mi NW of Trincomalee, alt. 30 m. 10.II.62. Loc. 63, in Zoological Museum, Lund University.

Other material: North Central Prov.: Yan Oya, 24 mi W of Trincomalee, alt. 50 m. 10.II.62. Loc. 64.

Members of this species are distinguished by the bold coloration of the abdomen, the di-



Figs. 120–124. *Syndelphax euroclydon* sp. n.: 120, male genitalia, posteroventral view; 121, the same, left side; 122, genital style, lateral view; 123, aedeagus, left side; 124, median portion of diaphragm, posterior view.

minutive size, the relatively few teeth on the post-tibial spur, and, in the male, by the quadrate form of the middle portion of the diaphragm.

Genus *Opiconsiva* Distant

Distant 1917, Trans. Linn. Soc. Lond. Zool. 17: 301.

Type species, *Opiconsiva fuscovaria* Distant 1917, op. cit.: 301.

47. *Opiconsiva dodona* Fennah comb. n.

Corbulo dodona Fennah 1965, Bull. Brit. Mus. (Nat. Hist.) 17, No. 1. (Ent.): 48.

Western Prov.: Alawala, 10 mi ENE of Yakkala, 26 mi NE of Colombo, alt. 150 m. 17–18.I.62. Loc. 13. 2 ♂. North Western Prov.: 10 mi E of Puttalam, 2.II.62. Loc. 45. 1 ♂. North Central Prov.: Wilpattu National park, intermediate zone, 29 mi NE of Puttalam, alt. 75 m. 2.II.62. Loc. 47. A series of both sexes. – Maradan Maduwa, Wilpattu N.P., 23 mi W of Anuradhapura, alt. 80 m. 2–3.II.62. Loc. 48. 2 ♂. – Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 4 ♂. – Kantalai, alt. 60 m. 8–9.II.62. Loc. 58. 2 ♂. – Kahatagasdigiliya, 20 mi ENE of Anuradhapura, alt. 120 m. 10.II.62. Loc. 65. 3 ♂. – Polonnaruwa, alt. 60 m. 10.II.62. Loc. 66. A series of both sexes. Northern Prov.: 2 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 75. 5 ♂. – 7 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 76. 3 ♂. – River Per Aru, 9 mi E of Mankulam, alt. 25 m. 14.II.62. Loc. 77. 1 ♂. – 2 mi E of Paraiyanankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 2 ♂. – Giant's Tank, 10 mi SE of Mannar, alt. 10 m. 15.II.62. Loc. 83. 1 ♂. – Nay Aru at Pallamadua, 10 mi E of Mannar, alt.

5 m. 15.II.62. Loc. 86. 1 ♂. Sabaragamuwa Prov.: Ratnapura, alt. 60 m. 21–23.II.62. Loc. 95. 1 ♂. – Belihul Oya, alt. 575 m. 1–2.III.62. Loc. 109. 1 ♂. – Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 2 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 2 ♂. Prov. of Uva: Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 2 ♂. – Diyatalawa, 3 mi N of Haputale, alt. 1200 m. 21.III.62. Loc. 166. 1 ♂. – Wellawaya, 18 mi S of Badulla, alt. 175 m. 21–22.III.62. Loc. 167. 3 ♂. Central Prov.: Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. – Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18–19.III.62. Loc. 159. A series of both sexes. – Diayagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. 1 ♂. – Horton Plains, 12 mi SSE of Nuwara-Eliya, alt. 2100 m. 19.III.62. Loc. 163.

48. *Opiconsiva albicollis* (Motschulsky) comb. n. (Figs. 125–127)

Delphax albicollis Motschulsky 1863 Bull. Soc. Nat. Moscou 36: 110.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 19.I.62. Loc. 4. 1 ♂. – Yakkala, 18 mi NE of Colombo, 14–24.I.62. Loc. 10. 4 ♂. – Same locality, loc. 11. 2 ♂. – Same locality, loc. 16: I. 2 ♂. – Labugama, 24 mi ESE of Colombo, 21–22.I.62. Loc. 17: X. 1 ♂. Southern Prov.: Hikkaduwa, 11 mi NW of Galle, 25–26.I.62. Loc. 22. 1 ♂. – Telwatta Sanctuary, 6.5 mi SSE of Ambalangoda, 26.I.62. Loc. 25. 2 ♂ 1 ♀. Eastern Prov.: Kanniyai, 5 mi NW of Trincomalee, alt. 60 m. 10.II.62. Loc. 62. 2 ♂. Sabaragamuwa Prov.: Carney,

8 mi NE of Ratnapura, alt. 300 m. 20.II.62. Loc. 94. 1 ♂. - Ratnapura, alt. 60 m. 22.II.62. Loc. 95. 1 ♂. - Maratenna, 7 mi N of Balangoda, alt. 1400 m. 22.II.62. Loc. 98. 2 ♂. - Butkanda, 8 mi SE of Rakwana, alt. 850 m. 28.II.62. Loc. 104. 1 ♂. Central Prov.: Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. 1 ♂. Prov. of Uva: Beauvais Estate, 5 mi WNW of Haputale, alt. 1400 m. 3.III.62. Loc. 112. 1 ♂. - Diyatalawa, 3 mi N of Haputale, alt. 1200 m. 21.III.62. Loc. 166. 2 ♂.

The writer previously assigned this species to *Harmalia* (Fennah 1969: 21), but the form of the aedeagus suggests that it is better placed here.

Genus *Horcoma* Fennah

Fennah 1969, Pacif. Ins. Monogr. 21: 36. Type species, *Delphacodes lacteipennis* Muir.

The gender of this name is regarded as feminine.

49. *Horcoma colorata* (Motschulsky) comb. n. (Figs. 128-131)

Delphax coloratus Motschulsky 1863, Bull. Soc. Nat. Moscou 36: 110.

Western Prov.: Yakkala, 18 mi NE of Colombo (Dambuwa Estate), alt. 30 m. 14-31.I.62. Loc. 10. 1 ♂. - Same locality, 1-15.III.62. Loc. 11. A series of both sexes. - Alawala, 10 mi ENE of Yakkala, 21 mi NE of Colombo, alt. 150 m. 17-18.I.62. Loc. 13: I, 1 ♂; Loc. 13: II, 1 ♂. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 20.I.62. Loc. 16: I, 1 ♂. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: X, 2 ♂. Southern Prov.: Telwatta Sanctuary, 6.5 mi SSE of Ambalangoda, alt. 5 m. 26.I.62. Loc. 25. 1 ♂. North Western Prov.: Madampe, 20 mi N of Negombo, alt. 5 m. 31.I.62. Loc. 37. 2 ♂. - North Central Prov.: Wilpattu National Park, intermediate zone, 29 mi NE of Puttalam, alt. 75 m. 2.II.62. Loc. 47. 1 ♂. - Ritigala Natural Reserve, 8 mi NW of Habarana, 8.II.62. Loc. 56. 1 ♂. - Kahatagadigiliya, 20 mi ENE of Anuradhapura, alt. 120 m. 10.II.62. Loc. 65. A series of both sexes. Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. - Bulutota Pass, 2 mi SE of Rakwana, alt. 900 m. 28.II.62. Loc. 102. 5 ♂. - Butkanda, 8 mi

SE of Rakwana, alt. 850 m. 28.II.62. Loc. 104. 2 ♂. - Allerton, 1 mi SW of Rakwana, alt. 500 m. 28.II.62. Loc. 105. 1 ♂. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. Prov. of Uva: Stream 2 mi NW of Haldummulla, alt. 1100 m. 2.III.62. Loc. 111. 1 ♂. - Beauvais Estate 5 mi WNW of Haputale, alt. 1400 m. 3.III.62. Loc. 112. 1 ♂. - Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. A series of both sexes. - Diyatalawa, 3 mi N of Haputale, alt. 1200 m. 21.III.62. Loc. 166. 2 ♂. Eastern Prov.: Kokagala Mountain, 20 mi N of Bibile, alt. 50 m. 13.III.62. Loc. 139. 1 ♂. Central Prov.: Hakgala, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 3.III.62. Loc. 114. 1 ♂. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m. 12.III.62. Loc. 134. A series of both sexes. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. A series of both sexes. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Hakgala Gardens, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 21.III.62. Loc. 165. 1 ♂.

Horcoma colorata lacteipennis Muir stat. n.

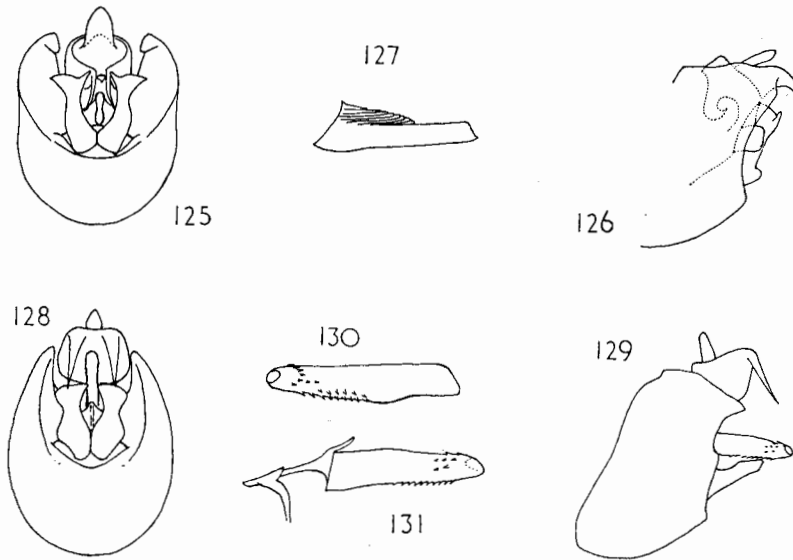
Delphacodes lacteipennis Muir 1917, Proc. Hawaii. ent. Soc. 3: 337.

Aedeagus on left side with a row of three widely-spaced teeth descending ventrocephalad from upper margin apically, and a single tooth basad of the lowest of these; a row of four teeth along ventral margin; on right side, with a row of three teeth along upper edge of orifice (which is on this side) and an approximately horizontal row of four widely-spaced teeth just below middle; a close row of 7-8 teeth along lower margin, basally fusing with ventral row of left side. Genital styles with outer margin convex at middle, not subangulate.

This supplementary description is based on a genitalic mount in the British Museum (Nat. Hist.) prepared by Muir from a male in his type series from Rewa, Fiji. The two subspecies are most conveniently separable by the form of the genital styles.

Genus *Falcotoya* Fennah

Fennah 1969, Pacif. Ins. Monogr. 21: 39. Type species, *Falcotoya aurinia* Fennah 1969, *ibid.*: 40.



Figs. 125-131. - 125-127. *Opiconsiva albicollis* (Motsch.): 125, male genitalia, posterior view; 126, the same, left side; 127, aedeagus, left side. - 128-131. *Horcoma colorata* (Motsch.): 128, male genitalia, posterior view; 129, the same, left side; 130, aedeagus, right side; 131, the same, left side.

50. *Falcotoya citipes* Fennah

Falcotoya citipes Fennah 1969, Pacific Ins. Monogr. 21: 41.

Western Prov.: Alawala, 26 mi NE of Colombo, alt. 25 m. 6.III.62. Loc. 14: 1. 1 ♂. Southern Prov.: Hikkaduwa, 11 mi NW of Galle, 25-26.I.62. Loc. 22. 1 ♂. Northern Prov.: Giant's Tank, 10 mi SE of Mannar, alt. 10 m. 15.II.62. Loc. 83. 2 ♂. - Tharakundu, 4 mi NW of Mannar, alt. 5 m. 15.II.62. Loc. 85. 1 ♂. - Nay Aru at Pallamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. A series of both sexes. Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, alt. 60 m. 17.III.62. Loc. 152. 1 ♂.

Genus *Toya* Distant

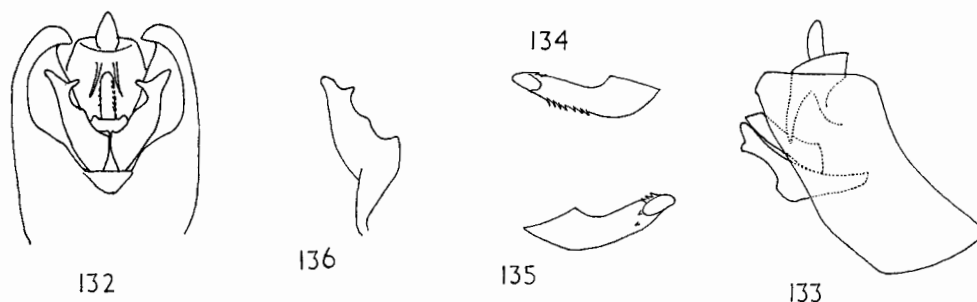
Distant 1906, Fauna of India 3: 472. Type species, *Toya attenuata* Distant.

51. *Toya attenuata* Distant (Figs. 132-136)

Toya attenuata Distant 1906, Fauna of British India 3: 472.

Anal segment short, deeply immersed in dorsal excavation of pygofer, apical margin short, lateroapical angles rather closely approximated, each produced ventrad in a moderately long slender spinose process. Pygofer in profile fully as long dorsally as ventrally and with posterior margin shallowly convex; in posterior view with opening as broad as long, laterodorsal angles produced, incurved mesad, lateral margins concave at middle and ventral margin shallowly excavate, diaphragm narrow with dorsal margin produced in a small eminence on each side of middle. Aedeagus only moderately long, tubular, moderately ascending distad, with seven teeth in a row ventrally, two teeth dorsolaterally on right near apex, and two teeth on margin of orifice on left in upper half. Genital styles moderately long, each broad basally and moderately tapering distad, outer margin convex, inner margin undulate, convex at middle, inner apical angle produced mesad in a small narrow lobe, outer apical angle broader, produced laterad, subacutely rounded.

Western Prov.: Yakkala, 18 mi NE of



Figs. 132-136. *Toya attenuata* Dist.: 132, male genitalia, posteroventral view; 133, the same, right side; 134, aedeagus, right side; 135, the same, left side; 136, genital style, lateral view.

Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 1 ♂ 1 ♀. - Same locality, 15-31.I.62 and 16-28.II.62. Loc. 11. 2 ♂. - Alawala, 10 mi ENE of Yakkala, 26 mi NE of Colombo, alt. 150 m. 6.III.62. Loc. 13: I. 2 ♂. - Kalutara, 25 mi SSE of Colombo, alt. 1 m. 25.I.62. Loc. 19. 1 ♂. Southern Prov.: Telwatta Sanctuary, 6.5 mi SSE of Ambalangoda, alt. 5 m. 26.I.62. Loc. 25. 2 ♂. - Hiniduma, 20 mi NNE of Galle, alt. 30 m. 27.I.62. Loc. 29. 1 ♂. - 6 mi NW of Hulandawa, 20 mi NE of Galle, alt. 30 m. 29.I.62. Loc. 35. 1 ♂. North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. Northern Prov.: 2 mi E of Paraiyanalankulam, 20 mi W of Vavuniya, alt. 20 m. 15.II.62. Loc. 82. 1 ♂. Sabaragamuwa Prov.: Deerwood, Kuruwita, 6 mi NNW of Ratnapura, alt. 240 m. 17-22.I.62. Loc. 90: I. 2 ♂. - 6 mi NNW of Balangoda, alt. 900 m. 22.II.62. Loc. 97. 1 ♂. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. - Nonpareil Estate, 3 mi NE of Belihul-Oya, alt. 1000 m. 1.III.62. Loc. 108. 1 ♂. - Belihul-Oya, alt. 575 m. 1-2.III.62. Loc. 109. A series of both sexes. - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 3 ♂. Central Prov.: Hakgala, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 3.III.62. Loc. 114. 1 ♂. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 2 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. A series of both sexes. - Diyangama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 4 ♂. - Horton

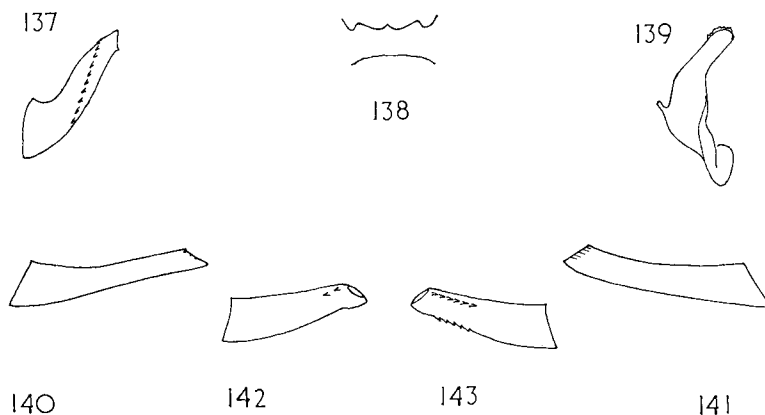
Plains, 12 mi SSE of Nuwara Eliya, alt. 2100 m. 19.III.62. Loc. 163. 1 ♂.

The most distinctive features of the male genitalia are the dorsolateral angles of the pygofer, which are produced and inflected mesad, but with the produced portion not visible in side view, the low-set dorsal margin and simple ornamentation of the diaphragm, and the undulate inner margin of the genital styles.

Muir's tentative assumption that this species is the same as *Toya propinqua* Fieber (Muir 1926: 24) cannot be supported.

52. *Toya propinqua* (Fieber) (Figs. 140-143)
Delphax propinqua Fieber 1866, Verh. zool.-bot. Ges. Wien 16: 325.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, 19.I.62. Loc. 4. 2 ♂. - Yakkala, 18 mi NE of Colombo (Dambuwa Estate), 14.I.62. Loc. 10. 2 ♂ 1 ♀. - Same locality, alt. 30 m. 16-28.II.62. Loc. 11. 1 ♂. North Western Prov.: Kadaimparu, 15 mi N of Negombo, alt. 1-5 m. 31.I.62. Loc. 36. 1 ♂. - Madampe, 20 mi N of Negombo, alt. 5 m. 31.I.62. Loc. 37. 1 ♂. - Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40. 1 ♂. - 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 2 ♂. - 10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45. 1 ♂. North Central Prov.: Maradan Maduwa, Wilpattu National Park, 23 mi W of Anuradhapura, alt. 80 m. 2-3.II.62. Loc. 48. 2 ♂. - Maha Bulankulama, 7 mi SW of Anuradhapura, alt. 80 m. 4.II.62. Loc. 50. A series of males and



Figs. 137-143. *Toya tuberculosa* Dist.: 137, aedeagus, left side; 138, median portion of pygofer; 139, genital style, lateral view. *Toya propinqua* (Fieb.): 140, aedeagus of specimen from Europe, left side; 141, the same, right side. *T. propinqua neopropinqua* Muir: 142, aedeagus, left side; 143, the same, right side.

females. - Kantalai, alt. 60 m. 8-9.II.62. Loc. 58. 1 ♂ - Kahatagasdigiliya, 20 mi ENE of Anuradhapura, alt. 120 m. 10.II.62. Loc. 65. A series of both sexes. - Polonnaruwa, alt. 60 m. At light in garden. 10.II.62. Loc. 66. A series of both sexes. - 3 mi S of Minneriya, alt. 100 m. 11.II.62. Loc. 67. A series of both sexes. Northern Prov.: 7 mi E of Mankulam, alt. 30 m. 14.2.62. Loc. 76. 1 ♂. - 2 mi E of Paraiyanalankulam, alt. 20 m. 15.II.62. Loc. 82. 1 ♂. - Giant's Tank, 10 mi SE of Mannar, alt. 10 m. 15.II.62. Loc. 83. 5 ♂. - Pali Aru, 20 mi NE of Mannar, alt. 3 m. 15.II.62. Loc. 87. 1 ♂. Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. - Nonpareil Estate, 3 mi NE of Belihul Oya, alt. 1000 m. 1.III.62. Loc. 108. 1 ♂. - Belihul Oya, alt. 575 m. 1-2.III.62. Loc. 109. 2 ♂ - Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. A series of both sexes. Eastern Prov.: Gal Oya, 14 mi E of Bibile, alt. 100 m. 8.III.62. Loc. 122. 3 ♂. - Inginiyagala, 25 mi E of Bibile, alt. 75 m. 8.III.62. Loc. 126. 2 ♂. Central Prov.: Teldeniya, 8 mi E of Kandy, alt. 425 m. 10.III.62. Loc. 127. 4 ♂. - Udawela, 8 mi E of Kandy, alt. 450 m. 11.III.62. Loc. 128. 2 ♂. - Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 1 ♂. - Stream 2 mi E of Madugoda, 18 mi E of Kandy, alt. 800 m. 12.III.62. Loc. 134. 1 ♂. - Maskeliya

Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. 2 ♂. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 2 ♂. Prov. of Uva: Beauvais Estate, 5 mi WNW of Haputale, 3.III.62. Loc. 112. 1 ♂. - Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 2 ♂. - Wel-lawaya, 18 mi S of Badulla, alt. 175 m. 21-22.III.62. Loc. 167. 2 ♂. - Kuda Oya, 15 mi S of Wel-lawaya, alt. 80 m. 22.III.62. Loc. 168. 3 ♂. Southern Prov.: Yoda Wewa at Tissamaharama, alt. 20 m. 22.III.62. Loc. 169. A series of both sexes. - Malala Oya, 5 mi NE of Hambantota, alt. 8 m. 22.III.62. Loc. 170. 1 ♂.

The Oriental populations of this species differ appreciably from the typical (European) population and from one another in the ornamentation of the aedeagus and the shape of the genital styles. In the European population, the aedeagus is relatively long and unarmed, though there are rudimentary teeth (about 8) around the upper edge of the orifice; in populations from Taiwan and the Philippines, the aedeagus is relatively shorter and is armed with 2-6 distinct teeth dorsally and 0-5 teeth ventrally. In the European population, the basal lobe of the genital styles is trapezoidal, with the angles sharply defined, whereas in

Taiwanese and Singhalese populations the lobe is deeply rounded, and in the Los Baños (Philippine Islands) population (*neopropinqua* Muir 1917: 335) more shallowly and symmetrically so.

53. *Toya tuberculosa* (Distant) comb. n.

(Figs. 137-139)

Liburnia tuberculosa Distant 1916, Fauna of British India 6: 145.

Delphacodes terryi Muir 1917, Proc. Hawaii. ent. Soc. 3: 334. Syn. n.

Western Prov.: River Ja Ela, 10 mi NNE of Colombo, alt. 1-5 m. 11.I.62. Loc. 7. 1 ♂. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 1-15.II.62. Loc. 11. 2 ♂. Northern Western Prov.: Madampe, 20 mi N of Negombo, alt. 5 m. 31.I.62. Loc. 37. 1 ♂. Northern Prov.: Giant's Tank, 10 mi SE of Mannar, alt. 10 m. 15.II.62. Loc. 83. 1 ♂. - Nay Aru at Pallamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. A series of both sexes. Sabaragamuwa Prov.: Ratnapura, alt. 60 m. In light trap in garden. 21-23.II.62. Loc. 95. 2 ♂. - Rakwana, alt. 450 m. 27-28.II.62. Loc. 100. A series of both sexes. Central Prov.: Hakgala, 5 mi SE of Nuwara-Eliya, alt. 1700 m. 3.III.62. Loc. 114. A series of both sexes. - Kandapola, 5 mi ENE of Nuwara-Eliya, alt. 1900 m. 4.III.62. Loc. 115. 1 ♂. - Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. A series of both sexes. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 1 ♂. - Kunundu Oya, 11 mi NE of Nuwara-Eliya, alt. 900 m. 15.III.62. Loc. 147. 1 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. A series of both sexes. - Talawakele, Mahaweli Ganga, 8 mi WSW of Nuwara-Eliya, alt. 1100 m. 18-19.III.62. Loc. 159. A series of both sexes. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Katumana, 3 mi SE of Nuwara-Eliya, alt. 1800 m. 21.III.62. Loc. 164. A series of both sexes. Province of Uva: Beauvais Estate, 5 mi WNW of Haputale, alt. 1400 m. 3.III.62. Loc. 112. 1 ♂. - Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 2 ♂. - Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145. 3 ♂. - Diyatalawa, 3 mi N of Haputale, alt. 1200 m. 21.III.62. Loc. 166. A series of both sexes.

The type specimen of *tuberculosa* is a

brachypterous female from Hakgala. The series from this locality listed above included several brachypterous females that agreed precisely with the type. They were accompanied by macropterous females and males that were unmistakably conspecific, and these males clearly represented *Delphacodes terryi* Muir.

54. *Toya minutula* (Melichar) comb. n.

(Figs. 144-148)

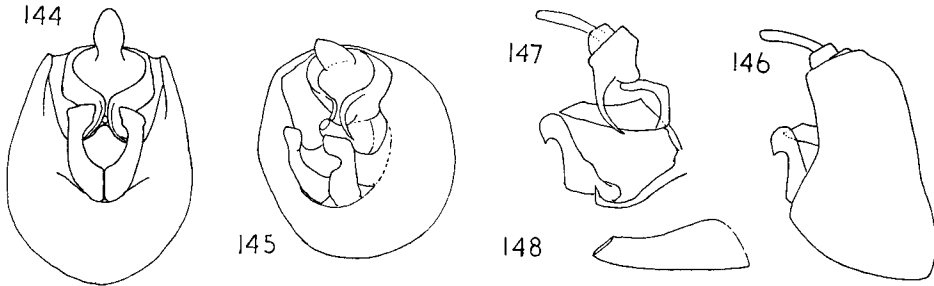
Liburnia minutula Melichar 1903, Homopt.-Fauna von Ceylon: 98.

Western Prov.: Yongammulla, 3 mi E of Yakkala, 18 mi NE of Colombo, alt. 30-90 m. 7.I.62. Loc. 4. 2 ♂. - Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 3 ♂ 1 ♀. Northern Prov.: Nay Aru at Pallamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. 1 ♂. Central Prov.: Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. 1 ♂. - 3 mi NW of Hanguranketa, 10 mi SE of Kandy, alt. 575 m. 15.III.62. Loc. 148. 1 ♂. - Maskeliya Oya, 6 mi SW of Hatton, alt. 1100 m. 18.III.62. Loc. 156. 1 ♂. Southern Prov.: 6 mi NW of Hulandawa, 20 mi NE of Galle, alt. 30 m. 29.I.62. Loc. 35. 1 ♂.

This species is readily recognisable by the reddish-brown patch on each side of the abdomen, together with the infuscate frons and genae.

55. *Toya siaka* sp. n. (Figs. 149-156)

Vertex longer than broad at base (1.1 : 1), obtusely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae uniting at apex of vertex, basal compartment wider at hind margin than greatest length (1.4 : 1) and than median length (1.7 : 1), frons in middle line longer than wide at widest part (2.3 : 1), widest at middle, wider at apex than at base, lateral margins very shallowly convex, median carina simple; clypeus at base slightly wider than frons at apex, postclypeus a little longer than broad at base, in profile shallowly convex, anteclypeus about equally convex, rostrum reaching to mesotrochanters, antennae reaching to clypeus, basal segment longer than broad (1.8 : 1), second segment longer than first (2.2 : 1), ocelli present. Pronotum longer in middle line than broad at anterior margin be-



Figs. 144-148. *Toya minutula* (Mel.): 144, male genitalia, posterior view; 145, the same, posterolateral view from right; 146, the same, right side; 147, anal segment, aedeagus and genital style, right side; 148, aedeagus, right side.

tween lateral carinae (1.4 : 1), lateral carinae diverging laterad, not reaching hind margin. Post-tibial spur with about 22 short weak teeth.

Pale ochraceous; paler along pronotum and mesonotum between carinae, abdomen reddish brown. Tegmina hyaline, veins concolorous. Wings hyaline.

Anal segment short, rather deeply immersed in dorsal excavation of pygofer, apical margin short, lateroapical angles rather closely approximated, each broadly produced at base but tapering into a relatively long blade-like process, acuminate apically. Pygofer in profile much longer ventrally than dorsally, and with posterior margin broadly convex; in posterior view, opening slightly longer than broad, laterodorsal angles not produced, lateral margins moderately concave and ventral margin slightly and narrowly excavate, with margin thickened at each end of excavation, diaphragm of moderate width, produced caudad in middle portion. Aedeagus only moderately long, tubular, slightly laterally compressed, slightly sinuate, tapering distad and acute at apex, with two pairs of coarse teeth on each side ventrally at middle and a small median tooth based of these; orifice ventrally at apex. Genital styles short, moderately diverging from base, outer and inner margins sinuate, concave in distal half, inner apical angle produced mesocaudad in a short narrow acute lobe, outer apical angle produced in a broad rounded lobe.

Male: length, 1.8 mm, tegmen, 2.6 mm; female: length, 2.1 mm, tegmen, 3.2 mm.

Holotype ♂: Central Prov.: Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155,

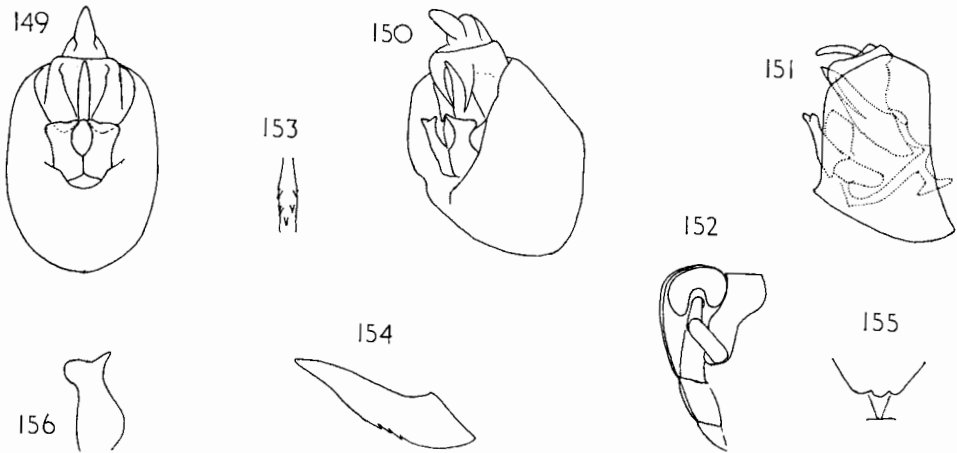
in Zoological Museum, Lund University.

Other material: Northern Prov.: Nay Aru at Pallamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. 2 ♂. Sabaragamuwa Prov.: Bopathella Falls, 9 mi NNW of Rathnapura, alt. 40 m. 19.II.62. Loc. 91. 1 ♂. - Nonpareil Estate, 3 mi NE of Belihul-Oya, alt. 1000 m. 1.III.62. Loc. 108. 1 ♂. Prov. of Uva: Ettampitiya, 6 mi SW of Badulla, alt. 1200 m. 14.III.62. Loc. 144. 4 ♂. Central Prov.: Foothills of Knuckles Mountains, 10 mi ENE of Kandy, alt. 1000 m. 11.III.62. Loc. 129. 5 ♂. - Rangala, Knuckles Mountains, 12 mi ENE of Kandy, alt. 1100 m. 11.III.62. Loc. 130. 1 ♂. - Peradeniya, 5 mi SW of Kandy, alt. 300 m. 15.III.62. Loc. 150. 1 ♂. - Menickwala Ela, 4 mi NW of Hatton, alt. 1000 m. 18.III.62. Loc. 154. 1 ♂. - Maskeliya, 5 mi SW of Hatton, alt. 1200 m. 18.III.62. Loc. 155. 1 ♂. - Diyagama West, 8 mi S of Nuwara-Eliya, alt. 1450 m. 19.III.62. Loc. 160. A series of both sexes. - Horton Plains, 11 mi SSE of Nuwara-Eliya, alt. 2000 m. 19-20.III.62. Loc. 162. 1 ♂.

This species is separable from all others by the short genital styles and the pair of thickenings bordering the median excavation in the ventral margin of the pygofer.

56. *Toya cularo* sp. n. (Figs. 157-165)

Vertex longer than broad (1.4 : 1), in profile broad and evenly rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin transverse, submedian carinae meeting at apex of head, basal compartment of vertex wider at hind margin than greatest length (2 : 1) and



Figs. 149-156. *Toya siaka* sp. n.: 149, male genitalia, posterior view; 150, the same, posterolateral view from right; 151, the same, right side; 152, head, left side; 153, diagram showing arrangement of teeth on ventral surface of aedeagus (upper end being posterior); 154, aedeagus, right side; 155, median portion of diaphragm, posterior view; 156, genital style, lateral view.

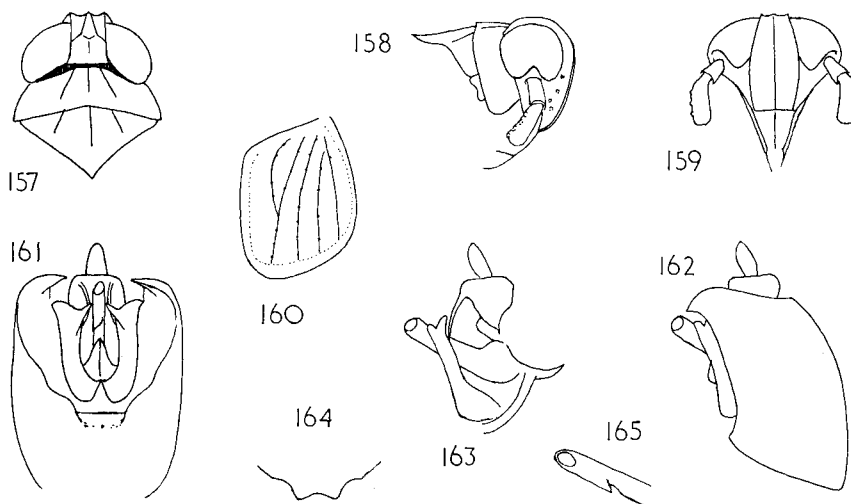
than median length (2.2 : 1), frons almost straight in profile, longer in middle line than wide at widest part (1.8 : 1), wider at apex than at base (1.2 : 1) and widest at middle, lateral margins convex, median carina simple, clypeus at base wider than frons at apex, post-clypeus longer than broad at base (1.5 : 1), in profile almost straight, anteclypeus more strongly convex, rostrum not quite surpassing post-coxae, antennae reaching to level of middle of postclypeus, basal segment longer than broad (1.1 : 1), second segment longer than first (2 : 1), ocelli present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (1.5 : 1), lateral carinae straight or slightly convex, not quite attaining hind margin. Brachypterous tegmen only slightly overlapping base of abdomen. Post-tibial spur with about 13 teeth.

Yellowish brown to dark reddish brown; carinae of head, antennae, rostrum, legs, lateral and posterior margins of pronotum broadly, margins of mesoscutellum, abdominal tergites in middle line, narrowly anteriorly, broader posteriorly, a spot on each side of middle of fifth and sixth tergites, and at posterior lateral angles of fourth, fifth and sixth tergites, pygofer dorsally and ventrally, and anal segment, sordid white to pallid brownish yellow.

Anal segment of male short, collar-like, apical margin short, lateroapical angles each produced ventrad in a spinose process directed ventrad and slightly laterad. Pygofer as long dorsally as ventrally, in profile with laterodorsal angles produced, lateral margins straight, oblique; in posterior view, opening as broad as long, laterodorsal angles inflected mesad and acuminate apically, lateral margins concave, diaphragm narrow, medially strongly produced caudad in a narrow vertical prow-like lobe, ventral margin shallowly excavate, its median portion transverse, but in ventral view with a shallowly triangular lobe at middle. Aedeagus moderately long, tubular, straight, a slight indentation on ventral margin at middle, bordered distally by a thickened transverse ridge, orifice on left at apex. Genital styles relatively long, narrowly contiguous at base and moderately diverging in basal third, thence subparallel, each with inner margin shallowly concave, outer margin shallowly convex, distally shallowly bifurcate, with inner apical angle narrowly produced mesodorsad, outer apical angle broadly produced laterad, acute at apex.

Male: length, 1.6 mm.

Holotype ♂: Western Prov.: Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.1.62. Loc.



Figs. 157-165. *Toya cularo* sp. n.: 157, head and thorax; 158, the same, right side; 159, frons and clypeus; 160, brachypterous tegmen; 161, male genitalia, posteroventral view; 162, the same right side; 163, anal segment, aedeagus and genital style, right side; 164, middle part of ventral margin of pygofer, ventral view; 165, distal part of aedeagus, ventrolateral view from right.

17: X, in Zoological Museum, Lund University.

Other material: Western Prov.: Labugama, 21.I.62. Loc. 17: X. 3 ♂.

This species, as represented by brachypterous specimens, is most easily distinguishable from others by its bold colour-pattern. In genitalic structure it is superficially like *Delphax albicollis* Motsch., but differs in the curvature of the laterodorsal angles of the pygofer and the structure of the aedeagus and of the spinose processes of the anal segment.

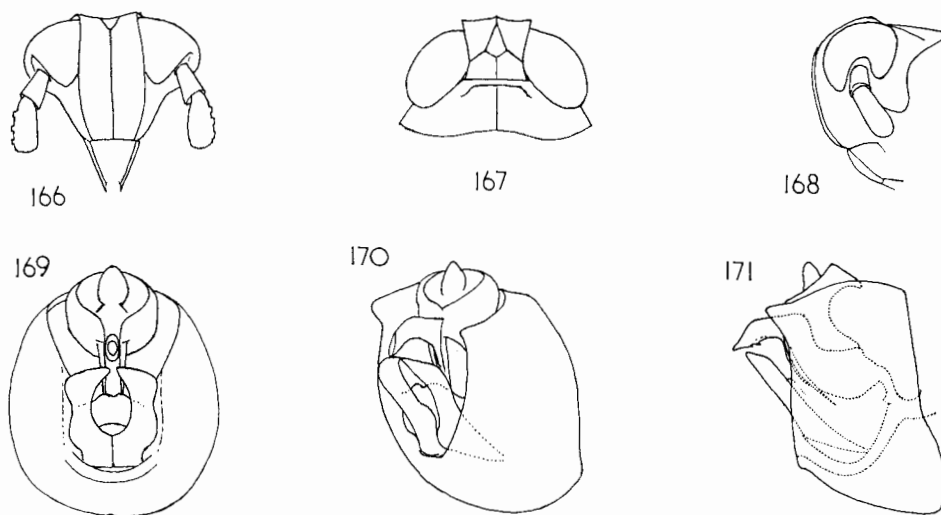
57. *Toya beninu* sp. n. (Figs. 166-171)

Vertex slightly longer than broad at base (nearly 1.1 : 1), very obtusely rounding into frons, slightly broader at apex than at base, lateral margins straight, apical margin transverse, submedian carinae uniting at apex of head, basal compartment of vertex wider at hind margin than greatest length (2 : 1) and than median length (2.4 : 1), frons convex in profile, longer in middle line than wide at widest part (nearly 1.9 : 1), widest at middle, wider at base than at apex (about 1.5 : 1), lateral margins convex, median carina simple;

clypeus at base slightly wider than frons at apex, postclypeus shorter than broad at base (1 : 1.3), in profile markedly convex; rostrum scarcely surpassing mesotrochanters, its apical segment only twice as long as broad; antennae reaching to level of middle of clypeus, basal segment longer than broad (1.5 : 1), second segment longer than first (1.6 : 1), ocelli present. Pronotum as long in middle line as broad at anterior margin between carinae, lateral carinae curving laterad, not attaining hind margin. Post-tibial spur with about 15 teeth.

Dark fuscous; frontal carinae in basal half, vertex, pronotum in its anterior third, mesonotum and apical segment of rostrum, pale brownish yellow; pronotum in posterior two-thirds and extreme apex of mesoscutellum, white; basal segment of rostrum, femora and tibiae at base and apex, and all tarsi, sordid white. Tegmina hyaline, veins concolorous, with pale yellow granules. Wings hyaline, veins concolorous.

Anal segment of male short, collar-like, apical margin short, lateroapical angles each produced ventrad in a long slender spinose process. Pygofer in profile slightly shorter dor-



Figs. 166-171. *Toya beninu* sp. n.: 166, frons and clypeus; 167, vertex and pronotum; 168, head and pronotum, left side; 169, male genitalia, posterior view; 170, the same, posterolateral view from right; 171, the same, right side.

sally than ventrally, laterodorsal angles produced caudad, acute, lateral margins straight or very shallowly convex; in posterior view with opening distinctly longer than broad, diaphragm rather narrow, with dorsal margin shallowly bisinuate at middle; medioventral process absent. Aedeagus moderately long, tubular, distinctly broader in basal than in distal half, straight and directed caudad in basal third, then abruptly ascending dorsad in median third, and recurved caudad in distal third with about six minute teeth laterally on right, and about five on left, irregularly scattered, and a few on ventral margin near apex; orifice terminal, oblique. Genital styles moderately long, meeting in middle line in basal third, each thence with inner margin concave to inner apical angle, outer margin sinuate, outer apical angle obtusely rounding, only weakly produced, inner apical angle acute, more strongly produced mesad.

Male: length, 1.5 mm, tegmen, 1.7 mm.

Holotype ♂: Western Prov.: Alawala, 26 mi NE of Colombo, alt. 25 m. 6.III.62. Loc. 14: I, in Zoological Museum, Lund University.

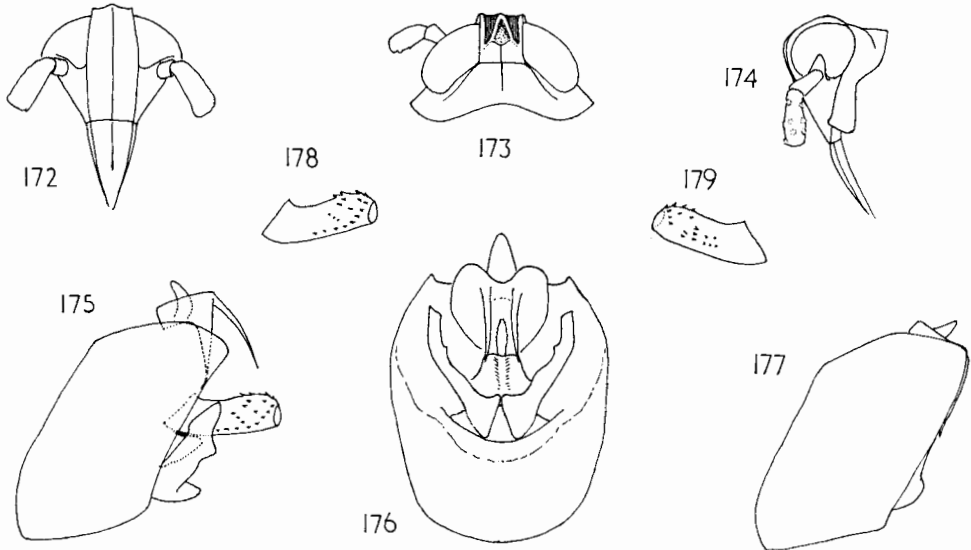
The shape of the aedeagus distinguishes this species from all members of *Toya* so far known, and shows some resemblance to that

found in members of *Falcotoya*. The teeth on the aedeagus are so minute that they might be better described as granules.

58. *Toya peruda* sp. n. (Figs. 172-179)

Vertex slightly longer than broad at base (1.3 : 1), subrectangulately rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae meeting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1) and than median length (1.6 : 1), frons in middle line longer than wide at widest part (2.3 : 1), widest at middle, and as wide at base as at apex, lateral margins very shallowly convex, median carina simple, clypeus slightly wider at base than frons at apex, postclypeus as long as broad at base, in profile moderately convex, rostrum reaching to post-coxae; antennae reaching to level of middle of postclypeus, basal segment longer than broad (1.6 : 1), second segment longer than first (2 : 1), ocelli distinct. Pronotum as long in middle line as broad at anterior margin between lateral carinae, lateral carinae curving behind eyes, not attaining hind margin. Post-tibial spur with about 20 teeth.

Fuscous; carinae of vertex, frons and clyp-



Figs. 172-179. *Toya peruda* sp. n.: 172, frons and clypeus; 173, vertex and pronotum; 174, head and pronotum, left side; 175, male genitalia, left side, with aedeagus extruded; 176, male genitalia, posterior view; 177, the same, left side; 178, aedeagus, left side; 179, the same, right side.

eus, white, pronotum and mesonotum sordid yellowish, fore and middle legs, post-femora and thoracic sternites dilute fuscous, with post-tibiae and post-tarsi, except at apex, paler; abdominal ventrites each narrowly margined white posteriorly. Tegmina hyaline.

Anal segment of male short, ring-like, apical margin short, lateroapical angles not widely separated, each produced ventrad in a rather long slender spinose process. Pygofer in profile shorter dorsally than ventrally, dorsolateral angles subrectangulate, not produced caudad, lateral margins sinuate, oblique; in posterior view, opening about as long as broad, laterodorsal angles not inflected, lateral margins concave, ventral margin slightly excavate, diaphragm rather narrow, but with dorsal margin strongly produced dorsocaudad at middle in a subquadrate and medially carinate lobe. Aedeagus rather short, laterally compressed, an oblique row of 7 teeth descending from upper edge of orifice, about 4 teeth dorsally and about 11 grouped irregularly on right side; orifice on left at apex. Genital styles contiguous near base, thence moderately divergent, each rather narrow, tapering distad, with outer margin convex, inner margin sinuate, a small

process, directed mesad, at about one third from apex, apical margin short, obliquely truncate.

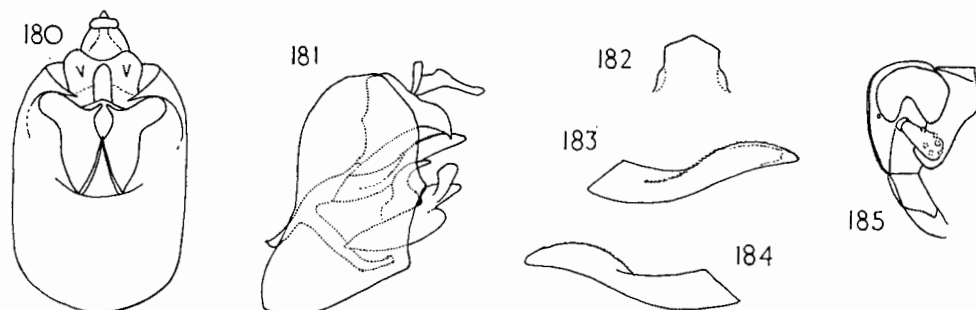
Male: length, 1.8 mm, tegmen, 2.7 mm.

Holotype ♂: Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27-28.II.62. Loc. 100, in Zoological Museum, Lund University.

The dentition of the aedeagus is like that in *S. stasander*, and the shape of the genital styles is in some degree like that in *T. attenuata*. From these, *T. peruda* differs in the laterodorsal angles of the pygofer not being produced and inflected.

59. *Toya larymna* sp. n. (Figs. 180-185)

Vertex longer than broad at base (1.2 : 1), broadly and slightly obtusely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin transverse, submedian carinae uniting at apex of head, basal compartment wider at hind margin than greatest length (1.7 : 1) and than median length (1.8 : 1), frons in middle line longer than wide at widest part (2.3 : 1), widest at



Figs. 180-185. *Toya larymna* sp. n.: 180, male genitalia, posterior view; 181, the same, left side; 182, median portion of diaphragm; 183, aedeagus, left side; 184, the same, right side; 185, head and pronotum, left side.

middle, a little narrower at base than at apex, lateral margins evenly convex, median carina simple; clypeus at base slightly wider than frons at apex, postclypeus as long as broad at base, in profile very shallowly convex, anteclypeus more strongly convex, rostrum surpassing mesotrochanters but scarcely attaining post-coxae, antennae extending to level of middle of clypeus, basal segment longer than broad (1.8 : 1), second segment longer than first (1.9 : 1), ocelli distinct. Pronotum about as long in middle line as broad at anterior margin between lateral carinae, lateral carinae sinuately curving laterad, not attaining hind margin. Post-tibial spur with 27-28 teeth.

Stramineous or pale ochraceous; intercarinal areas of frons pale ochraceous but darker near carinae on frons and along frontal margin of genae; antennae with first segment narrowly at apex, and second segment narrowly at base, fuscous; post-tibiae and tarsi paler than fore and middle legs; abdomen light reddish brown, armature of diaphragm yellowish brown.

Anal segment moderately short, narrowing distad, apical margin transverse, lateroapical angles slightly produced ventrad, acute. Pygofer in profile longer ventrally than dorsally, posterior margin produced caudad at middle in a small lobe; in posterior view, opening longer than broad, laterodorsal angles narrow, acute, inflected mesad, lateral margins concave, ventral margin not excavate; diaphragm moderately broad, dorsal margin weakly angulately convex, a pair of subvertical lobes ventrolaterally, extending caudad. Aedeagus moderately long, tubular, shallowly sinuate, a compact

row of fine teeth dorsally extending from apex to middle, then descending slightly on to left side. Genital styles rather short, broad, inner margins not widely separated, contiguous at middle, outer margin shallowly sinuate, convex in basal half, inner apical angle shortly and narrowly produced mesad, not quite meeting its counterpart, outer apical angle strongly produced laterad in a convex lobe.

Male: length, 2.0 mm, tegmen, 2.2 mm.

Holotype ♂: North Western Prov.: 10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45, in Zoological Museum, Lund University.

Other material: Western Prov.: Yakkala, 18 mi NE of Colombo (Dambuwa Estate), alt. 30 m. 14.I.62. Loc. 10. 2 ♂. - Labugama, 24 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: X. 1 ♂. Southern Prov.: Gilcroft, 7.5 mi SE of Ambalangoda, alt. 10 m. 26.I.62. Loc. 24. 1 ♂. North Western Prov.: 5 mi NNE of Puttalam, alt. 2-5 m. 1.II.62. Loc. 42. 1 ♂. - 10 mi E of Puttalam, alt. 20 m. 2.II.62. Loc. 45. 2 ♂ 1 ♀. Northern Prov.: 2 mi E of Mankulam, alt. 30 m. 14.II.62. Loc. 75. 1 ♂. Eastern Prov.: Rambukkan Oya, 25 mi NE of Bibile, alt. 25 m. 8.III.62. Loc. 125. 2 ♂. - Kokagala Mountain, 20 mi N of Bibile, alt. 50 m. 13.III.62. Loc. 139. 1 ♂. Prov. of Uva: Mahaweli Ganga at Alutnuwara, 24 mi E of Kandy, alt. 75 m. 12.III.62. Loc. 136. 3 ♂. - Diyatalawa, 3 mi NE of Haputale, alt. 1200 m. 21.III.62. Loc. 166. 1 ♂. Sabaragamuwa Prov.: Kitulgala, 21 mi N of Ratnapura, 17.III.62. Loc. 152. 1 ♂.

Males of this species are immediately rec-

ognisable by the broad T-shaped outline of the apposed genital styles in posteroventral view. Though less easily seen, the shape of the diaphragm and the dentition of the aedeagus are characteristic in combination. The dark borders of the frontal carinae are not unlike those in *T. propinqua*.

Genus *Rhombotoya* nov.

Species small (length of male about 2.0 mm). Vertex a little longer than broad at base, broadly curving into frons, submedian carinae meeting at apex of head, basal compartment of vertex wider at hind margin than its greatest length (about 1.6 : 1), frons longer than wide (about 2 : 1), slightly wider at apex than at base, lateral margins weakly convex, clypeus at base about as wide as frons at apex, post-clypeus approximately as long as wide at base, rostrum reaching to post-coxae, antennae with basal segment longer than broad (about 1.7 : 1) and second segment longer than first (about 1.7 : 1), ocelli small. Post-tibial spur with about 17 teeth.

Anal segment of male short, collar-like. Pygofer in profile longer ventrally than dorsally, in posterior view with opening very approximately as broad as long, lateral margins strongly concave at middle (at level of apex of genital styles), ventral margin excavate, diaphragm rather broad, with median portion strongly pigmented and with dorsal margin broadly produced dorsad or dorsocaudad, convex. Aedeagus moderately long, tubular, slightly ascending to near apex, then moderately deflexed. Genital styles rather long, strongly diverging, each simple, shallowly curved, and broadest in distal third.

Type species, *Delphacodes pseudonigripennis* Muir.

This genus at present includes two species, *Delphacodes pseudonigripennis* Muir and *Delphacodes nigriella* Ishihara. Its members are distinguished by their small size and the pattern of the male genitalia, in which the rhomboidal posterior opening, the heavily pigmented median portion of the diaphragm and the strongly divergent capitate genital styles form a characteristic pattern.

Rhombotoya pseudonigripennis (Muir)

comb. n.

Delphacodes nigripennis Muir 1917, Proc. Hawaii. ent. Soc. 3: 338.

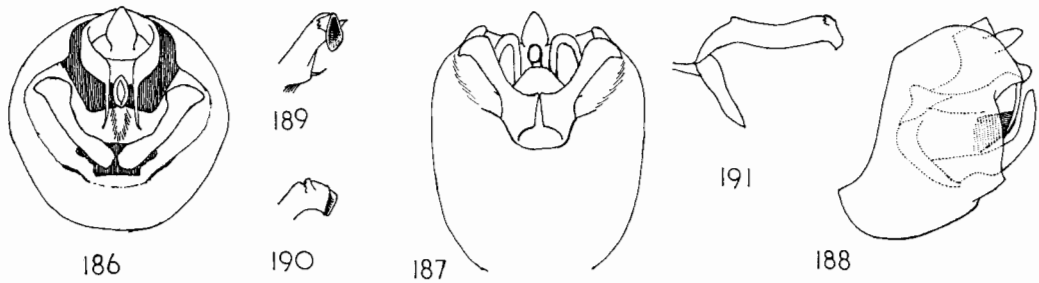
Delphacodes pseudonigripennis Muir 1918, Proc. Hawaii. ent. Soc. 3: 427.

60. *Rhombotoya pseudonigripennis calitas* subsp. n. (Figs. 186-191)

Vertex longer than broad at base (1.1 : 1), broadly subrectangulately curving into frons, lateral margins straight, apical margin transverse, submedian carinae meeting at apex of head, basal compartment of vertex wider at hind margin than greatest length (1.6 : 1), frons in profile straight, in middle line longer than wide at widest part (2 : 1), widest at middle, scarcely wider at apex than at base, lateral margins almost parallel below eyes, median carina simple, clypeus as wide at base as frons at apex, postclypeus as long as broad at base, in profile straight, anteclypeus strongly convex, rostrum reaching to post-coxae, antennae with basal segment longer than broad (1.7 : 1), second segment longer than first (1.7 : 1), ocelli small, with a red pigmented spot adjacent. Pronotum in middle line longer than broad at anterior margin between lateral carinae, lateral carinae curving laterad, not reaching hind margin. Post-tibial spur with 17 teeth.

Ochraceous; pronotum, mesonotum and last two tergites of abdomen, pallid ochraceous. Brachypterous tegmina reddish brown.

Anal segment short, collar-like, apical margin membranous, lateroapical angles each produced ventrad in a rather long slender spinose process. Pygofer in profile longer ventrally than dorsally and with posterior margin broadly sinuate; in posterior view with opening a little broader than long, lateral margins strongly concave at middle, dorsolateral angles slightly subangulately produced and inflected mesad, ventral margin excavate, with margin thickened at edges of excavation, diaphragm rather broad, with its dorsal margin broadly produced dorsocaudad, rather strongly convex in posteroventral view. Aedeagus only moderately long, tubular, very weakly ascending distad, rather laterally compressed, a slender spinose process, directed laterocaudad, on right at middle, apex deeply hollowed dorsally, trough-like, slightly



Figs. 186-191. *Rhombotoya pseudonigripennis calitas* gen. et subsp. n.: 186, male genitalia, posterior view; 187, the same, posteroventral view; 188, the same, left side; 189, apical portion of aedeagus, posteroventral view from left; 190, apex of aedeagus, sublateral view from left; 191, aedeagus, left side.

deflexed, a small acute process dorsally on right and a small broad lobe, with a tridentate margin, dorsally on left. Genital styles rather long, each with inner margin angulate near base thence shallowly concave distad, and outer margin subparallel to inner for most of its length, distinctly widened apically with apical margin shallowly convex, and apical angle subacutely rounded.

Male: length, 1.9 mm.

Holotype ♂ of subspecies (brachypterous): Prov. of Uva: Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145, in Zoological Museum, Lund University.

Other material: Prov. of Uva: Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145. 1 ♂.

This subspecies differs from the typical subspecies in having slightly stouter anal spines, a less narrowly produced median lobe of the diaphragm, less acute ventrolateral lobes at the edges of the median excavation of the ventral margin of the pygofer, and a less clearly defined inner apical angle on each genital style.

Genus *Altekon* nov.

Species small (length about 2 mm), vertex very approximately as broad as long, broadly rounding into frons, about as wide at apex as at base, apical margin transverse, submedian carinae meeting at apex of head or base of frons, basal compartment of vertex wider at hind margin than its greatest length (about

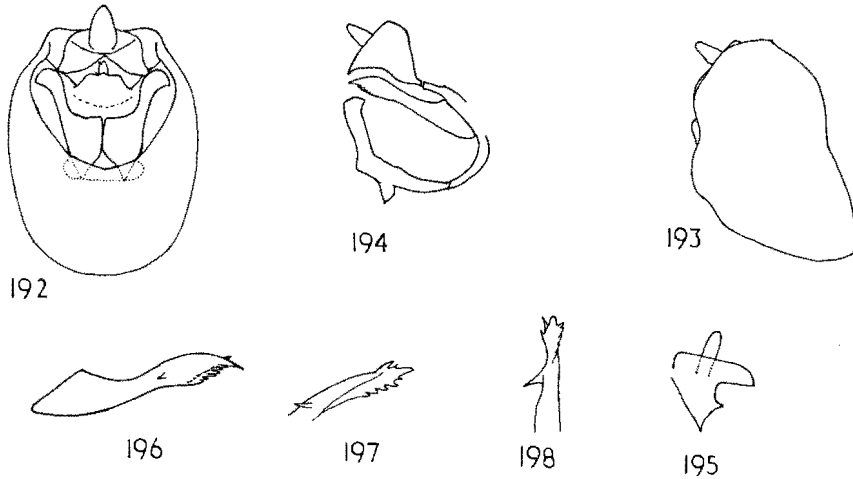
2 : 1), frons longer than wide (about 1.7 : 1), lateral margins convex, postclypeus as long as broad, antennae with basal segment not quite twice as long as broad, second segment twice as long as first or nearly so, ocelli small. Pronotum shorter in middle line than broad at anterior margin between lateral carinae, lateral carinae not reaching hind margin; post-tibial spur with 18-20 small teeth. Anal segment very short, deeply immersed in dorsal excavation of pygofer, apical margin short, lateroapical angles each feebly produced lateroventrad in a broad lobe. Pygofer longer ventrally than dorsally, in posterior view with opening as long as broad or slightly broader than long, laterodorsal angles broadly rounded or obtusely angulate, more or less inflected mesad, ventral margin excavate, diaphragm rather broad, dorsal margin broadly produced dorsad or dorsocaudad. Aedeagus short, tubular, with a few processes. Genital styles moderately long, rather strongly diverging laterodorsad, each simple, sigmoid and rather narrow.

Type species, *Delphacodes marpessa* Fennah 1956, Ins. Micronesia 6(3): 124.

Members of this genus are distinguishable by their comparatively small size, declivous vertex, and genitalic pattern, the latter in itself being wholly characteristic.

61. *Altekon charcamis* sp. n. (Figs. 192-198)

Vertex slightly broader at base than long (about 1.2 : 1), almost as wide at apex as at base, lateral margins straight, submedian ca-



Figs. 192-198. *Atekon charcamis* sp. n.: 192, male genitalia, posterior view; 193, the same, left side; 194, anal segment, aedeagus and genital style, right side; 195, anal segment, left side; 196, aedeagus, left side; 197, apex of aedeagus, ventrolateral view from left; 198, the same, ventral view.

rinae meeting at apex of head or base of frons, basal compartment of vertex wider at hind margin than greatest length (2.0 : 1) and than median length (2.5 : 1), frons in profile shallowly convex, in middle line longer than wide at widest part (1.7 : 1), widest at middle, as wide at base as at apex, median carina simple, clypeus at base slightly wider than frons at apex, in profile very shallowly convex, anteclypeus strongly convex, rostrum reaching to post-trochanters; antennae reaching to level of middle of clypeus, basal segment longer than broad (1.7 : 1), second segment longer than first (2 : 1), ocelli small, blemmata present. Pronotum shorter in middle line than broad at anterior margin between lateral carinae (1 : 1.2), lateral carinae straight, not attaining hind margin. Post-tibial spur with about 18 teeth.

Dark castaneous, almost black, polished; carinae of frons dark yellowish brown; antennae, rostrum and legs sordid white. Brachypterous tegmina uniformly dark castaneous.

Anal segment very short, deeply immersed in dorsal excavation of pygofer, apical margin short and almost membranous at middle, lateroapical angles each feebly produced latero-

ventrad in a subtriangular lobe. Pygofer in side view longer ventrally than dorsally, and with posterior margin broadly undulate; in posterior view with opening as long as broad, laterodorsal angles broadly rounded, not produced, slightly inflected mesad, ventral margin weakly excavate, diaphragm rather broad, dorsal margin broadly produced dorsocaudad in a subquadrate lobe. Aedeagus only moderately long, tubular, a little narrowed at middle, directed caudad, a small spinose process on left slightly distad of middle, directed laterad, a flange-like lobe, denticulate on its margin, lateroventrally on left near apex, and extending to apex, which is acuminate. Genital styles moderately long, each broad in basal third and with inner margin rectangulate near base, thence concave, outer margin concave for most of its length, style narrowest at middle, slightly widening and curving laterad apically, apical margin convex, apical angle acutely rounded.

Male (brachypterous): length, 1.8-1.9 mm; female (brachypterous): length, 2.1 mm.

Holotype ♂ (brachypterous): Prov. of Uva: Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145, in Zoological Museum, Lund University.

Other material: Prov. of Uva: Gampaha Estate, 9 mi W of Badulla, alt. 1700 m. 14.III.62. Loc. 145, 5 ♂ 2 ♀.

This species differs from *A. marpessa* (Fennah) in the shape of the genital styles and in the ornamentation of the aedeagus.

Genus *Ulanar* nov

Head with eyes narrower than pronotum. Vertex longer than broad (about 1.4 : 1), acutely rounding into frons, posterior compartment broader than greatest length (about 1.3 : 1), lateral margins straight, anterior margin transverse, submedian carinae meeting at or slightly before apex of head, Y-shaped carina distinct; frons longer than broad (about 2.4 : 1), a little wider at apex than at base, lateral margins shallowly convex, median carina simple, distinct. Clypeus slightly longer than broad at base, where it is a little wider than frons at apex, medially carinate; rostrum surpassing mesotrochanters; ocelli present; antennae surpassing level of frontoclypeal suture, cylindrical, basal segment about twice as long as broad at apex, second segment longer than first (about 1.7 : 1). Pronotum longer in middle line than broad at anterior margin between lateral carinae (nearly 2 : 1), lateral carinae attaining posterior margin. Post-tibial spur with about 24 teeth.

Anal segment of male short, ring-like, latero-apical angles moderately widely separated, each slightly or distinctly produced ventrad. Pygofer with dorsolateral angles produced, and a small lobe developed on lateral margin below each, diaphragm deep and heavily-pigmented medially, with dorsal margin slightly produced caudad, medioventral process absent. Aedeagus tubular, slender, rather short, decurved distad, armed with a few delicate short spinose processes. Genital styles short, strongly diverging, outer margin minutely serrate distally.

Type species, *Megamelus muiri* Metcalf.

This genus differs from *Tarophagus* in the position of the union of the submedian carinae of the vertex, and in smaller bodily size, and from this and *Megamelus* in the structure of the male genitalia. At present the only other species included is *Ulanar algebra* (Kirkaldy) comb. n. (*Delphax algebra* Kirkaldy 1907, Bull. Hawaii Sug. Plrs. Ass. Ent. Ser. 3: 161).

62. *Ulanar muiri* (Metcalf) (Figs. 199-204)

Megamelus muiri Metcalf 1943, Gen. Cat. Hemipt. 4(3): 209.

Megamelus albicollis Muir 1917, Proc. Hawaii. ent. Soc. 3: 327.

Western Prov.: Alawala, 10 mi E of Yakkala, 21 mi NE of Colombo, alt. 150 m. 6.III.62. Loc. 13: 1. 1 ♂; Loc. 13: II. 1 ♂. Labugama, 21 mi ESE of Colombo, alt. 100 m. 21.I.62. Loc. 17: X. 1 ♂. Southern Prov.: Haycock Mountain, 21 mi NNE of Galle, alt. 450 m. 29.I.62. Loc. 34: III. 1 ♂. Sabaragamuwa Prov.: Belihul Oya, alt. 575 m. 1, 2.III.62. Loc. 109. 1 ♀.

Genus *Smicrotodelphax* Kirkaldy

Kirkaldy 1906, Bull. Hawaii. Sug. Plrs. Ass. Ent. Ser. 1(9): 411. Type species, *Smicrotodelphax perkinsi* Kirkaldy 1906, op. cit.: 412.

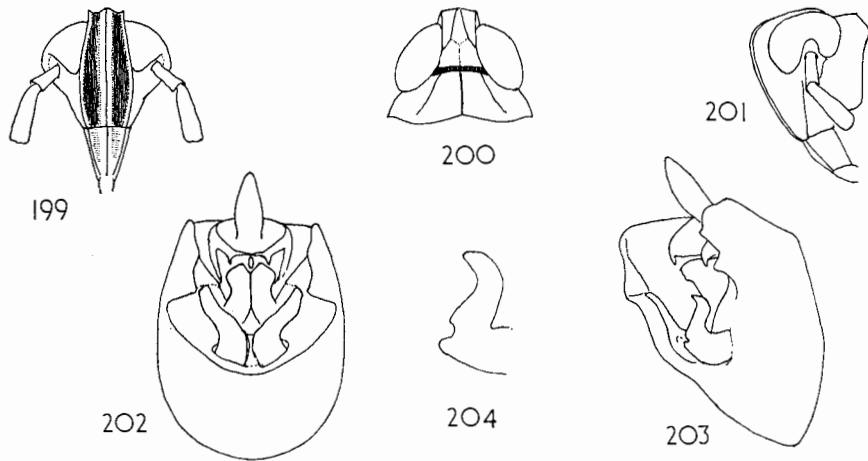
63. *Smicrotodelphax stasander* sp. n.

(Figs. 205-212)

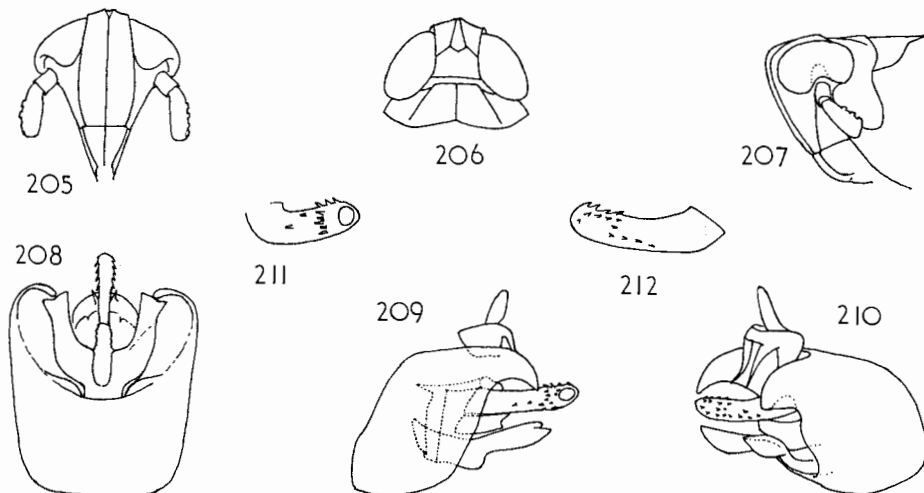
Vertex longer than broad at base (1.3 : 1), subacutely rounding into frons, slightly wider at apex than at base, lateral margins slightly concave, apical margin angulately convex, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.4 : 1) and than median length (1.6 : 1), frons in middle line longer than wide at widest part (2 : 1), widest at about two-thirds from base, and as wide at base as at apex, lateral margins shallowly convex, median carina simple; clypeus wider at base than frons at apex, postclypeus a little shorter than broad at base, in profile moderately convex; rostrum reaching to mesotrochanters; antennae reaching to level of middle of postclypeus, basal segment as long as broad, second segment longer than first (2.5 : 1), ocelli obscure or absent. Pronotum slightly shorter in middle line than broad at anterior margin between lateral carinae (1 : 1.1), lateral carinae straight, not quite attaining hind margin. Posttibial spur with about 13 teeth. Brachypterous tegmen quadrate, with apical margin straight, slightly oblique.

Uniformly pale ochraceous. Brachypterous tegmen hyaline, faintly tinged ochraceous.

Anal segment short, ring-like, apical margin short, transverse, lateroapical angles each



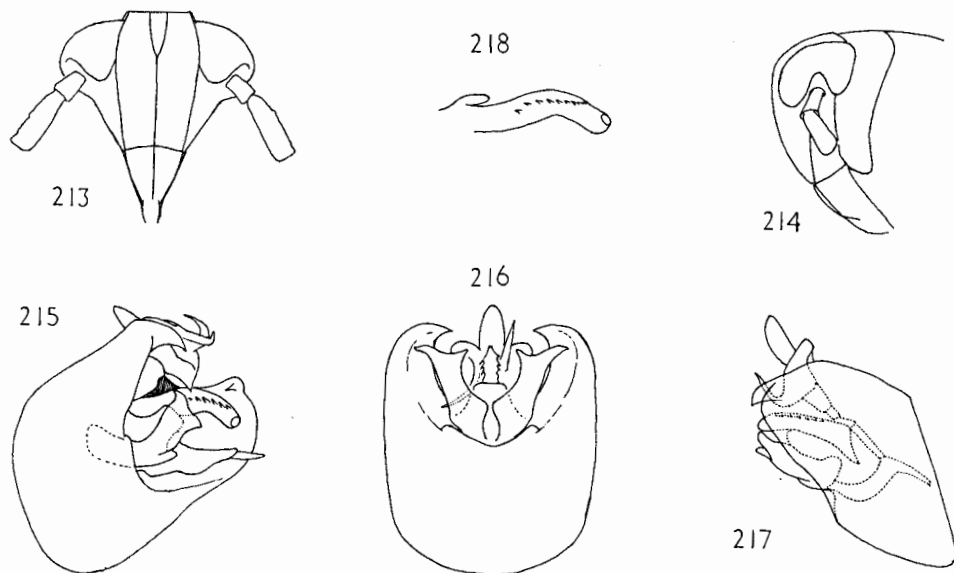
Figs. 199–204. *Ulanar muii* (Metc.): 199, frons and clypeus; 200, vertex and pronotum; 201, head and pronotum, left side; 202, male genitalia, posteroventral view; 203, the same, ventrolateral view from right; 204, genital style, lateral view.



Figs. 205–212. *Smicrotatodelphax stasander* sp. n.: 205, frons and clypeus; 206, vertex and pronotum; 207, head and pronotum, left side; 208, male genitalia; 209, the same, left side; 210, the same, posterolateral view from right; 211, aedeagus, posterolateral view from left; 212, the same, right side.

strongly produced ventrad in a tapering spinose process slightly curving laterad. Pygofer in profile longer dorsally than ventrally, lateral margins strongly oblique; in posterior view, opening broader than long, laterodorsal angles strongly produced, inflected mesad, subacute, lateral margins concave, ventral margin not or

only very slightly excavate; diaphragm rather narrow, strongly produced caudad at middle in a prow-like lobe with its surface granulate. Aedeagus comparatively short, tubular, slightly ascending distad, with about eight teeth on right and about three teeth dorsally, and five laterally near apex and a further two laterally



Figs. 213-218. *Smicrotatodelphax maenobora* sp. n.: 213, frons and clypeus; 214, head and pronotum, left side; 215, male genitalia, ventrolateral view from left; 216, the same, posteroventral view; 217, the same, right side; 218, aedeagus, left side.

farther basad on left; orifice on left at apex. Genital styles moderately long, each widest at one third from base, where inner margin is almost rectangularly bent, and slightly tapering to near apex, apical margin shallowly sinuate, oblique, outer apical angle slightly produced and acute.

Male (brachypterous): length, 3.0 mm.

Holotype ♂: Western Prov.: Ratmalana, 9 mi S of Colombo, alt. 1-5 m. 7-13.I.62. Loc. 6, in Zoological Museum, Lund University.

This species is distinguishable by the combination of characters exhibited by the proportions of the vertex, the direction of the pronotal carinae, the profile of the head, and the elements of the male genitalia. Of the latter, a feature almost peculiar to this species is the U-shaped space between the genital styles near their base.

64. *Smicrotatodelphax maenobora* sp. n.
(Figs. 213-218)

Vertex broader at base than long (1.2 : 1), obtusely rounding into frons, as wide at apex as at base, lateral margins straight, apical

margin transverse, submedian carinae not uniting on vertex, basal compartment wider at hind margin than greatest length (about 2.1 : 1) and than median length (about 2.3 : 1), frons in middle line longer than wide at widest part (1.6 : 1), widest between eyes, a little wider at base than at apex, lateral margins straight and converging distad below eyes, median carina forked slightly below level of middle of eyes; clypeus at base as wide as frons at apex, postclypeus a little shorter than broad at base, in profile very shallowly convex, anteclypeus more strongly convex, rostrum short, just surpassing mesotrochanters, antennae reaching to level of middle of post-clypeus, basal segment longer than broad (1.4 : 1), second segment longer than first (2.3 : 1), ocelli small. Pronotum slightly shorter in middle line than broad at anterior margin between lateral carinae (1 : 1.2), lateral carinae strongly diverging basad, not reaching hind margin. Post-tibial spur with about 18 slender teeth, only slightly projecting from the basal tissue; no apical tooth present.

Uniformly pale ochraceous; diaphragm of pygofer distinctly darker. Tegmina and wings hyaline, with concolorous veins.

Anal segment very short, ring-like, deeply sunk in dorsal emargination of pygofer, apical margin short, lateroapical angles rather closely approximated, each produced in a moderately long spinose process, that on left side directed ventrad, that on right abruptly curved dorsad. Pygofer as long dorsally as ventrally, in profile with laterodorsal angles rather strongly produced caudad, lateral margins almost straight, oblique; in posterior view with opening as broad as long, laterodorsal angles strongly inflected mesad and acuminate apically, lateral margins concave, ventral margin concave, with a shallow lip; diaphragm moderately broad, strongly produced dorsad at middle in a broad pigmented trapezoidal lobe, with its upper margin feebly sinuate. Aedeagus moderately long, tubular, shallowly ascending from base to middle then shallowly decurved, a row of about 9 teeth in upper distal half on right, and a corresponding row of about 7 teeth on left, orifice rather small, subdorsally terminal. Genital styles relatively long and broad, contiguous just above base then rather strongly diverging, each with inner margin shallowly concave, outer margin almost straight, inner apical angle acutely produced mesad, outer apical angle acutely produced laterad and slightly decurved distad.

Male: length, 1.9 mm, tegmen, 2.2 mm.

Holotype ♂: Western Prov.: Alawala, 10 mi ENE of Yakkala, 25 mi NE of Colombo, alt. 25 m. 17-18.I.62. Loc. 13: II, in Zoological Museum, Lund University.

The most distinctive features of this species are the spiniform apex of the laterodorsal lobes of the pygofer and the flattened quadrate form assumed by the median lobe of the diaphragm. It also differs from *S. perksini* Kirkaldy and *S. kirkaldyi* Muir in the shape of the distal margin of the anal segment.

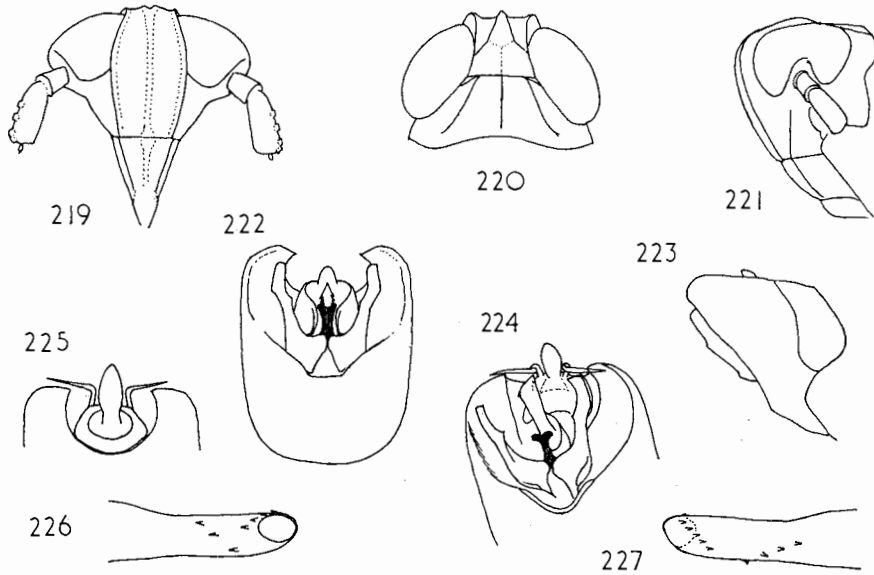
65. *Smicrotadelphax iota* sp. n.
(Figs. 219-227)

Vertex as long as broad at base, subrectangulately rounding into frons, as broad at apex as at base, lateral margins straight, apical margin transverse, submedian carinae uniting at apex of head, basal compartment wider at hind margin than greatest length (1.6 : 1) and than median length (1.8 : 1); frons slightly

convex in profile, longer in middle line than wide at widest part (nearly 1.8 : 1), widest near lower margin of eyes, as wide at base as at apex, lateral margins convex, median carina simple; clypeus at base slightly wider than frons at apex, postclypeus as long as broad at base, in profile moderately convex, anteclypeus more strongly convex, rostrum not quite attaining post-trochanters, antennae a little surpassing level of frontoclypeal suture, basal segment longer than broad (about 1.2 : 1), second segment longer than first (2 : 1), ocelli and blemmata present. Pronotum longer in middle line than broad at anterior margin between lateral carinae (about 1.2 : 1), lateral carinae slightly concave, not reaching hind margin. Post-tibial spur with about 15 teeth.

Stramineous or pale ochraceous; frons and anterior half of genae sometimes dilute yellowish brown, the former with intercarinal areas slightly paler and two small pale spots near middle of each lateral margin; antennae, except distal half of second segment, laterodorsal angles of pygofer at apex, median lobe of diaphragm, and, more dilutely, genital styles, fuscous; all tibiae at base and post-tibiae subapically, dilute yellowish brown. Brachypterous tegmina hyaline.

Anal segment of male short, collar-like, deeply sunken into emargination of pygofer, lateroapical angles not widely separated, each produced ventrolaterad in a slender strongly curved spinose process. Pygofer in profile longer dorsally than ventrally, laterodorsal angles broadly produced caudad, inflected mesad and acute at apex, lateral margins straight, oblique; in posterior view, opening broader than long, lateral margins concave, ventral margin slightly excavate at middle, no medioventral process present; diaphragm with dorsal margin strongly and narrowly produced dorsad at middle, slightly widening apically. Aedeagus rather short, broadest at base, almost straight, on right with an oblique row of four teeth near middle and an oblique row of five teeth near apex, on left with about four teeth along upper margin of orifice, and three widely spaced teeth near middle, orifice on left at apex. Genital styles long and relatively slender, moderately diverging distad, each broadest at base and produced mesad in a shallowly rounded lobe, then tapering to slightly beyond middle, where a small acute eminence projects mesad from inner margin,



Figs. 219–227. *Smicrotatodelphax iota* sp. n.: 219, frons and clypeus; 220, vertex and pronotum; 221, head and pronotum; 222, male genitalia, posterior view; 223, the same, right side; 224, the same, posterolateral view from right; 225, anal segment (elevated) and laterodorsal angles of pygofer, dorsal view; 226, aedeagus, left side; 227, the same, right side.

thence slightly curved dorsad, apical margin short, shallowly convex.

Male (brachypterous): length, 1.7 mm; female: length, 2.1 mm.

Holotype ♂: North Western Prov.: 5 mi NNE of Puttalam, alt. 2–5 m. 1.II.62. Loc. 42, in Zoological Museum, Lund University.

Other material: North Western Prov.: 5 mi NNE of Puttalam, alt. 2–5 m. 1.II.62. Loc. 42. 1 ♂ 4 ♀. Northern Prov.: Paranthan, 32 mi SE of Jaffna, alt. 10 m. 13.II.62. Loc. 73. 1 ♂. – 2 mi SW of Pesalai, 10 mi NW of Mannar, alt. 5 m. 15.II.62. Loc. 84. 1 ♂. – Nay Aru at Pal-lamadu, 10 mi E of Mannar, alt. 5 m. 15.II.62. Loc. 86. 2 ♂.

This species is readily recognisable by the angulate and elongate genital styles, which are much narrower than those in *S. perkinsi* (Kirk.). The colour combination of a pale yellowish-brown body and dark fuscous antennae, of which the second segment is relatively pale in its distal half, is also distinctive.

Genus *Anectopia* Kirkaldy

Kirkaldy 1907, Bull. Hawaii. Sug. Plrs Ass. Ent. Ser. 3: 143. Type species, *Anectopia mandane* Kirkaldy.

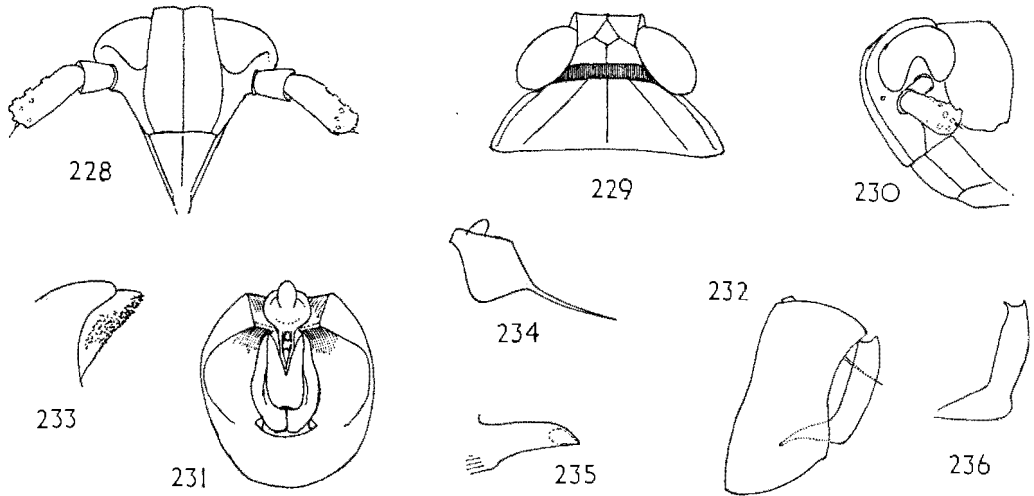
66. *Anectopia mandane* Kirkaldy

Anectopia mandane Kirkaldy 1907, Bull. Hawaii. Sug. Plrs Ass. Ent. Ser. 3: 144.

Sabaragamuwa Prov.: Rakwana, alt. 450 m. 27–28.II.62. Loc. 100. 1 ♂.

Genus *Necodan* nov.

Head narrower than pronotum. Vertex broader than long, broadly rounding into frons, about as wide at apex as at base, posterior compartment about twice as broad at base as greatest length, apparent anterior margin transverse, lateral margins concave, submedian carinae meeting at apex of head, frons longer than broad (about 1.6 : 1), widest below level of ocelli, about as wide at apex as at base, lateral margins shallowly convex, median ca-



Figs. 228-236. *Necodan zimara* gen. et sp. n.: 228, frons and clypeus; 229, vertex and pronotum; 230, head and pronotum, left side; 231, male genitalia, posterior view; 232, the same, left side; 233, laterodorsal angle of pygofer, posteroventrolateral view from left; 234, anal segment, left side; 235, aedeagus, left side; 236, genital style, lateral view.

rina simple, clypeus at base wider than frons at apex, slightly recessed below apical margin of frons, postclypeus convex, in profile in approximately same plane as frons, anteclypeus in profile convex; antennae reaching almost to level of apex of postclypeus, cylindrical, basal segment longer than broad, second segment about twice as long as first, ocelli present, rostrum surpassing mesotrochanters. Pronotum longer in middle line than vertex, and than wide between lateral carinae at anterior margin, tricarinate, lateral carinae straight, almost attaining hind margin. Post-tibial spur with teeth small. Anal segment of male short, with lateroapical angles each produced in a spinose process. Pygofer moderately long, with posterior opening broader than long, diaphragm moderately deep, medioventral process absent. Genital styles relatively long.

Type species, *Necodan zimara* sp. n.

The bodily form is characteristic.

67. *Necodan zimara* sp. n. (Figs. 228-236)

Vertex broader at base than long (about 1.3 : 1), in profile broadly rounding into frons, as wide at apex as at base, lateral margins shallowly concave, apical margin transverse,

Y-shaped carina evident, submedian carinae united a little before apex of vertex, basal compartment of vertex wider at hind margin than greatest length (2.3 : 1) and than median length (2.6 : 1), frons in middle line longer than wide at widest part (about 1.6 : 1), widest just distad of middle, lateral margins shallowly convex, median carina simple; antennae with basal segment longer than broad (about 1.5 : 1), second segment longer than first (2 : 1); ocelli obscure or absent. Pronotum longer in middle line than broad at anterior margin between lateral carinae (about 1.7 : 1), lateral carinae straight, strongly diverging, not quite attaining hind margin. Post-tibial spur with about 16 small teeth. Brachypterous tegmen as broad as long, apical angle obtusely rounding, anal angle subacutely rounding.

Reddish brown; clypeus, second antennal segment, lower side of thorax and legs, lighter.

Anal segment of male relatively small, short, ring-like, lateroapical angles not widely separated, each produced ventrocephalad in a slender spinose process. Pygofer short, longer ventrally than dorsally, posterior opening as broad as long, dorsolateral angles slightly produced caudad, and extending mesad in a horizontal ridge to end of diaphragm; dia-

phragm deep, dorsal margin narrowly incised at middle. Aedeagus relatively short. Genital styles relatively long, contiguous at base, then moderately separating and extending dorsad, subparallel, each tapering distad to apex which is inflected mesocephalad.

Male: length 1.7 mm.

Holotype ♂: Central Prov.: Pidurutalagala, 2 mi N of Nuwara-Eliya, alt. 2000 m. 4.III.62. Loc. 116: I, in Zoological Museum, Lund University.

Genus *Indozuriel* nov.

Species small (length of male about 2 mm). Vertex about as long as broad, obtusely rounding into frons, as wide at apex as at base, apical margin slightly convex, submedian carinae not meeting on vertex, basal compartment wider at hind margin than greatest length, frons in middle line about 1.5 times as long as wide, wider at base than at apex, lateral margins convex, median carina furcate, clypeus at base wider than frons at apex, postclypeus about as long as broad, antennae with basal segment not quite twice as long as broad, second segment about twice as long as first, ocelli minute. Pronotum about as long in middle as broad at anterior margin between lateral carinae. Post-tibial spur with about 11 teeth. Anal segment short, apical margin transverse. Pygofer longer ventrally than dorsally, posterior opening markedly longer than broad, ventral margin excavate, diaphragm large, occupying most of posterior opening. Aedeagus long, simple, tubular, strongly deflexed. Genital styles short, only weakly diverging distad.

Type species, *Indozuriel samiator* sp. n.

Males of this genus are distinguishable by their relatively small size, the form of the frontal carination, the dentition of the post-tibial spur and the structure of the male genitalia. The last resembles that found in Tropidocephaline genera such as *Columbisoga*, but the other characters establish the genus as Delphacine.

68. *Indozuriel samiator* sp. n. (Figs. 237-244)

Vertex slightly longer than broad at base (1.1 : 1), obtusely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin slightly convex, submedian carinae not meeting on vertex, basal compartment

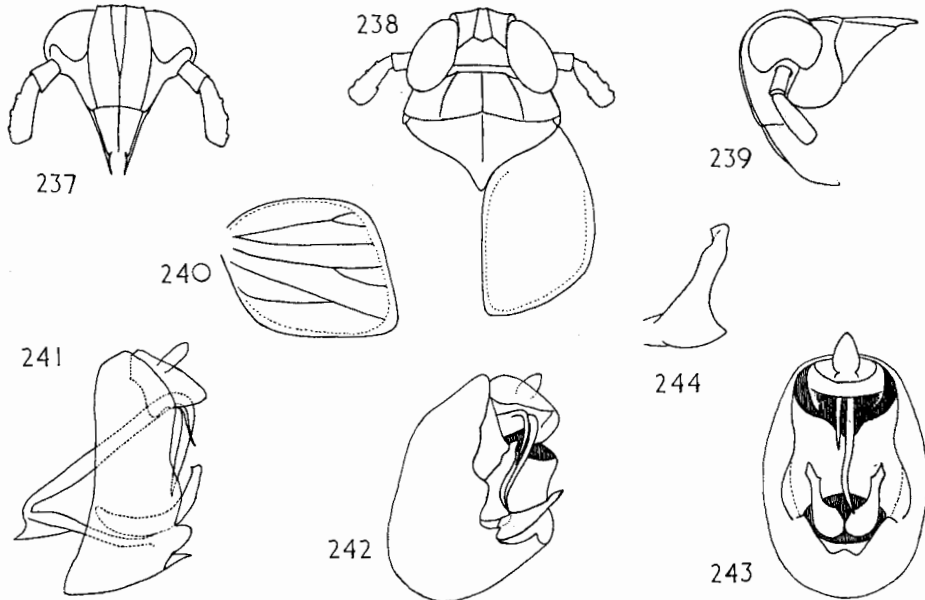
wider at hind margin than greatest length (1.8 : 1) and than median length (2.0 : 1), frons convex in profile, in middle line longer than wide at widest part (1.5 : 1), widest at middle, wider at base than at apex (about 1.3 : 1), lateral margins markedly convex, submedian carinae feeble, uniting at about three-fifths from base to form a single carina in distal two-fifths; clypeus at base wider than frons at apex, postclypeus as long as broad, in profile shallowly convex, anteclypeus more strongly convex, rostrum reaching to post-trochanters, antennae reaching to level of middle of cypeus, basal segment longer than broad (1.8 : 1), second segment longer than first (2.0 : 1), ocelli minute. Pronotum as long in middle line as broad at anterior margin between lateral carinae, lateral carinae convex, reaching hind margin. Post-tibial spur with 11 teeth. Brachypterous tegmina slightly overlapping base of abdomen.

Yellowish brown, polished; head and legs and last two abdominal tergites pale yellowish brown. Tegmina dark reddish brown.

Anal segment short, narrowing distad, apical margin transverse, lateroapical angles not produced. Pygofer in profile distinctly longer ventrally than dorsally, lateral margin straight and vertical in upper half, strongly sinuate in lower half; in posterior view with opening longer than broad (about 1.5 : 1), rather broadly emarginate dorsally, lateral margins shallowly sinuate, ventral margin strongly excavate, W-shaped, with a small eminence at each end of excavation and a small triangular lobe at middle; diaphragm large, dorsal margin weakly concave, and further slightly excavate at middle, a broad vertical ridge from dorsal to ventral margin along middle line. Aedeagus very long, simple and tubular, straight in its basal half and ascending to dorsal edge of diaphragm, then abruptly curved ventrad and tapering gradually to acuminate apex, a slender spinose process arising on left at point of curvature of aedeagus, directed ventrad and lying close to aedeagus. Genital styles short, broad at base and tapering distad, inner margin angulate at one third from base, thence concave to apical third, where it bends laterad obliquely, outer margin more or less straight, apical margin short, oblique.

Male: length, 2.0 mm.

Holotype ♂: North Western Prov.:



Figs. 237-244. *Indozuel samiator* gen. et sp. n.: 237, frons and clypeus; 238, vertex and pronotum; 239, head, pronotum and mesonotum, left side; 240, brachypterous tegmen; 241, male genitalia, left side; 242, the same, posteroventrolateral view from left; 243, the same, posterior view; 244, genital style, lateral view.

Mundel, Mundel Lake, 16 mi N of Chilaw, alt. 5 m. 1.II.62. Loc. 40, in Zoological Museum, Lund University.

Other material: North Central Prov.: Kandurukanda, 20 mi NE of Habarana, alt. 90 m. 8.II.62. Loc. 57. 1 ♂.

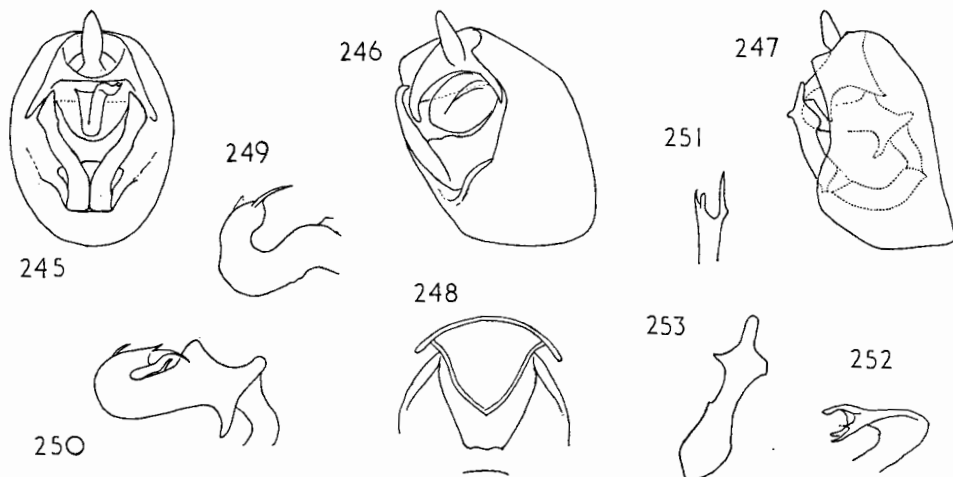
Genus *Nanotoya* nov.

Species small (length of male about 1.4 mm). Head not as wide as pronotum. Vertex declivous, obtusely rounding into frons, broader than long (about 1.5 : 1), narrower at apex than at base, apical margin concave on each side of middle line, submedian carinae meeting at apex of head, basal compartment wider at hind margin than greatest length (about 2 : 1), frons in middle longer than broad (about 2 : 1), slightly wider at apex than at base, lateral margins shallowly and evenly convex, median carina simple; clypeus at base slightly wider than frons at apex, postclypeus almost as long as broad, antennae extending beyond

middle of postclypeus, with basal segment longer than broad (2.2 : 1 in type species), second segment longer than first (about 1.8 : 1), ocelli minute. Pronotum longer in middle than broad at anterior margin between lateral carinae (about 1.2 : 1), lateral carinae straight, not reaching hind margin. Post-tibial spur with about 18 teeth. Anal segment relatively large, short, broad, apical margin transverse. Pygofer longer ventrally than dorsally, posterior opening about as long as broad, ventral margin distinctly excavate, diaphragm narrow at middle. Aedeagus short, tubular, reflected distally. Genital styles long, simple.

Type species, *Liburnia alboguttata* Melichar.

This genus so far includes only the type species, and is characterised by diminutive size, a relatively short vertex, relatively long antennae, and a distinctive genitalic structure. It differs from the almost equally small *Smicrotatodelphax* in the head (with eyes) not being as wide as the pronotum, and the vertex being relatively shorter.



Figs. 245-252. *Nanotoya alboguttata* (Mel.): 245, male genitalia, posterior view; 246, the same, without right genital style, posterolateral view from right; 247, the same, right side; 248, anal segment (elevated) and upper half of pygofer; 249, aedeagus, ventral view; 250, the same, right side; 251, apex of aedeagus, posterior view; 252, aedeagus, ventrolateral view from left; 253, genital style.

69. *Nanotoya alboguttata* (Melichar) comb. n. (Figs. 245-252)

Liburnia alboguttata Melichar 1903, Homopt.-Fauna von Ceylon: 99.

Western Prov.: Yakkala, 18 mi NE of Colombo, alt. 30 m. 14-31.I.62. Loc. 10. 2 ♂. - Alawala, 26 mi NE of Colombo, 21.I.62. Loc. 17.III. 1 ♂. Central Prov.: Peradeniya (*vide* Melichar).

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