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NEW OR LITTLE-KNOWN WEST INDIAN KINNARIDAE (HOMOPTERA : FULGOROIDEA).

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The Kinnaridae have been separated by Muir from the Cixiidae by reason of their different male genitalia and the presence in the female of wax-bearing glands on the sixth, seventh and eighth abdominal tergites. In 1930 seven genera were listed in this family, and an eighth is added below. Five of these occur in the West Indies, as follows: *Atopocixius* Muir in Haiti, *Oeclidius* Van Duzee in Jamaica, *Paroeclidius* Myers in Cuba, *Prosotropis* Uhler and *Quilessa* (described below) in the Lesser Antilles.

Mr. W. E. China has kindly compared the Lesser Antillean genera with the closely allied *Eparmene* Fowler. His notes and drawings are incorporated in the present paper with grateful acknowledgment.

KEY TO THE GENERA OF KINNARIDAE.

(1)	(8)	No median carina on frons.....(2)
(2)	(3)	A subantennal process in form of a ridge across gena...*Kinnara* Dist.
(3)	(2)	No such ridge on gena.....(4)
(4)	(7)	Vertex extremely narrow, projecting not less than a quarter before eyes, lateral frontal carinae prominent.....(5)
(5)	(6)	Vertex produced not more than one-third before eyes....*Oeclidius* V. D.
(6)	(5)	Vertex produced fully one-half before eyes..... *Paroeclidius* Myers
(7)	(4)	Vertex not extremely narrow, lateral carinae of frons small..... *Paramicrixia* Dist.
(8)	(1)	Median carina on frons.....(9)
(9)	(10)	Median carina not nearly reaching apex of frons; clypeus as wide as frons at widest part, without a median carina..... *Eparmene* Fowl.
(10)	(9)	Median carina of frons reaching apex; clypeus narrower than widest part of frons, with a median carina.....(11)
(11)	(12)	Pronotum tricarinate on disc.....(13)
(12)	(11)	Pronotum with only median carina on disc ..... *Quilessa* gen. nov.
(13)	(14)	Scutellum rounded at apex; apex of clavus almost exactly bisecting commissural margin .....*Prosotropis* Uhl.
(14)	(13)	Scutellum pointed at apex; apex of clavus beyond middle of commissural margin.....*Atopocixius* Muir

Of the genera which have a median frontal carina, *Eparmene* has frontal margins parallel in the apical half, while the remainder have frontal margins sinuately expanded in the apical third, and narrowing thence to the apex. *Atopocixius* has a frons twice as long as wide, whereas in *Prosotropis* and *Quilessa* the

frons is scarcely a third longer than wide. In *Prosotropis* the base of the vertex is almost straight, in *Quilessa* it is usually angularly emarginate. The differences in tegminal venation between these four genera are well marked (for *Atopocixius* see Muir, Proc. Haw. Ent. Soc. VI, 2, 1926); less information is available concerning the wings, but *Prosotropis* differs from *Quilessa* in having the fourth apical cell bluntly triangular and much shorter than its stalk, the corresponding cell in *Quilessa* being elongate and exceeding the length of its stalk.

The holotypes or topotypes of species discussed in this paper have been deposited in the U. S. National Museum. Topotypes of *P. decorata* Uhl., and paratypes of all species except *P. rubiginosa* and *P. marmorata* have been sent to the British Museum (Natural History) and to the Museum of Comparative Zoology, Cambridge, Mass., U. S. A.

PROSOTROPIS Uhler.

1895, Uhler, Proc. Zool. Soc. Lond. p. 70. Genotype *P. decorata* Uhl.

Head, with eyes, scarcely two-thirds width of pronotum. Vertex longer than wide, expanding to base, which is shallowly excavated; median and lateral carinae well developed, curving uninterruptedly on to frons; no transverse carina. Frons longer than its widest part (1.4 to 1), base about half as wide as apex; sides expanding to six-sevenths from base, then smoothly converging to apical margin; lateral and median carinae distinct. Clypeus at base four-fifths as wide as widest part of frons; tapering acutely to apex; median and lateral carinae present. Clypeus and apical half of frons convex, basal part of frons sloping smoothly posteriorly into vertex. No median ocellus. Genae somewhat tumid below antennae; antennae with basal segment very short, second segment slightly longer than broad; no subantennal process. Eyes abruptly emarginate ventrally. Pronotum slightly longer than vertex, anterior margin shallowly excavated behind eyes, posterior border scarcely emarginate, curving anteriorly at sides. Median carina distinct, two weak lateral carinae on disc diverging posteriorly; a strong carina at each lateral margin, between eye and tegula. Mesonotum feebly convex, tricarinate, the carinae feebly elevated, apical region strongly concave, tip of scutellum bluntly rounded. Hind tibiae unarmed. Anal segment of male deeply bifid, aedeagus with a ventral keel and two sclerotised rods, genital styles with a lateral setigerous eminence. Ovipositor incomplete. Egg bluntly ovoid.

Tegmina with sides expanding apically for two-thirds of length, almost symmetrically rounded at tip, length two and a quarter times greatest width; margin bordered all round, border widening at stigma, transversely rugose distally. Clavus not granulate. Costal cell wide, slightly expanding apically; Sc+R joined to near stigma; common stalk Sc+R+M half as long as basal cell. Typically seven or eight apical cells, the first trapezoidal with inner side curved, the second triangular with inner angle acutely curved, the third smaller, triangular, the fourth long, rectangular, occupying apex of tegmen;

the following one, two, or three triangular, the penultimate long, curved, almost wedge-shaped, the last triangular with two sides curved, one point touching apex of clavus; an ante-apical series of three cells, two with curved sides; claval vein joining commissural margin before apex; apex of clavus almost exactly bisecting posterior margin. Wing with fourth apical cell shorter than its basal stalk.

Prosoptropis decorata Uhl.

Male.—Length, 1.6 mm.; tegmen, 1.8 mm. *Female.*—Length, 1.9 mm.; tegmen, 2.1 mm.

Vertex testaceous, a dark spot on each side of middle line. Frons fuscous basally, becoming paler towards apex; clypeus and genae pale fuscous; eyes red; second joint of antennae very pale yellow. Pronotum fuscous with testaceous patches; mesonotum dark, almost piceous, scutellum pale cream, often edged posteriorly with white. Pro- and mesocoxae and angles of hind femora fuscous, legs otherwise very pale. Abdominal sclerites and genitalia fuscous, membrane red. Tegmen hyaline, costal cell crossed obliquely by three fuscous areas, the middle largest; a broad undulate dark band from base of clavus to stigma, narrowly produced posteriorly to apex of clavus; a trapezoidal dark area at apical margin, anterior to middle. Vein M3 forking into two before apex. Wings hyaline, smoky towards base.

Anal segment of male bifid into two processes curving inward distally; telson a broad horizontal plate with posterior margin setose; aedeagus composed of a crescentic keel-like plate ventrally, two long spines directed posteriorly and curving slightly upwards distally, and a transparent tube, similarly curved, truncate at apex; genital styles irregularly pitted along dorsal margin, with a shallow cup-like indentation near apex; a triangular flange near middle, curving outward, densely beset with short setae on anterior margin; basad of this a small setigerous eminence curved outwards and downwards.

Anal segment of female short with small lobes laterally at apex; telson as in male. Lateral styles tapering to slender upturned point, with a setigerous lobe below; ventral styles abruptly tapering distally, with straight inner margin. Pregenital plate equilaterally triangular with angles almost equally truncate.

Genus and species redescribed from 26 male and 23 female topotypes collected by the writer in Petit Bordel Valley, St. Vincent, B. W. I. (Aug. 23, 1941) on *Tabernaemontana* sp. Specimens from this material were compared with Uhler's female type by Mr. W. E. China and were found to agree perfectly. As far as is known the species is endemic in St. Vincent, where it is the only representative of the genus.

Prosotropis trinervosa, sp. n.

Male.—Length, 1.7 mm.; tegmen, 1.8 mm. *Female.*—Length, 1.8 mm.; tegmen, 2.1 mm.

Vertex piceous; frons piceous basally, fuscous at apex; clypeus and genae pale fuscous; eyes red; second joint of antennae pale fuscous. Pronotum and mesonotum fuscous, scutellum white or pale. Pro- and mesocoxae and part

of hind femora pale fuscous, legs otherwise very pale. Abdominal sclerites fuscous, membrane red to pallid. Tegmina hyaline, costal cell crossed obliquely by three mottled fuscous bands, a broad sinuate band heavily mottled with fuscous from base of clavus to stigma, produced broadly posteriorly to apex of clavus, a large fuscous area occupying apex of tegmen. Vein M3 three branched before apex. Wings hyaline, smoky towards base.

Anal segment of male bifid into two processes curving inward distally; telson a broad horizontal plate with posterior margin setose; aedeagus with a crescentic keel-like plate ventrally, two long spines directed posteriorly, and a transparent tube, curved upward distally, truncate at apex; genital styles irregularly pitted along dorsal margin, with a long shallow crescentic indentation near apex; a triangular flange directed outward near middle, densely beset with short setae; basad of this a small setigerous lobe curved outward and downward.

Anal segment of female short with small lobes laterally at apex. Lateral styles tapering to a slender point, ventral styles tapering abruptly. Pregenital plate equilaterally triangular with angles almost equally truncate.

Described from 45 males and 37 females collected by the writer on Morne Fortunée, St. Lucia, B. W. I. (Nov. 21, 1939) on *Tabernaemontana* sp. and other shrubs. This species is extremely close to *P. decorata*. The genitalia are all but identical. A difference has been noted in the shape of the crescentic indentation near the apex of the male genital styles, that of *P. trinervosa* being shallower. In *P. decorata* M3 forks into two; in 82 specimens of *P. trinervosa*, 6 were found with the veinal condition of *P. decorata*, 74 had three brancehs to M3, and 2 specimens had four branches to M3. Two specimens possessed an extra vein dividing the first apical cell. The tegminal patterns of the two species are quite distinct; both are very stable and not a single intergrade has been found. The differences in the colour of the vertex and pronotum are also constant.

Prosotropis rubiginosa, sp. n.

Female.—Length, 2.4 mm.; tegmen, 2.6 mm.

Vertex stramineous, with a dark spot on each side basally; frons, clypeus, genae and antennae stramineous; eyes red. Pronotum testaceous; mesonotum pale ferruginous anteriorly, testaceous medially, scutellum pale to white. Abdominal sclerites ferruginous, membrane pale. Legs stramineous. Tegmina hyaline, costal area crossed by three rusty-brown oblique lines, the middle of which is connected posteriorly with a band passing to base of tegmen; a narrow band from stigma to apex of clavus; a large patch occupying apex; a spot between claval vein and commissure, and an irregular spot between claval veins. Vein M3 two-branched apically. Wings hyaline, brownish towards base.

Anal segment of female short with a minute lobe on each side of apex. Lateral styles tapering sinuately to slender point. Pregenital plate, large, scoop-shaped with a horizontal lip posteriorly.

Described from one female collected by the writer at 1,000 ft. in mountain forest near the Imperial Road, Dominica, B. W. I. (June 19, 1939). This species differs from all others in colour and in tegminal markings, and from *P. decorata* and *P. trinervosa* in the shape of the pregenital plate.

Prosotropis marmorata, sp. n.

Male.—Length, 1.9 mm.; tegmen, 2.0 mm.

Vertex piceous, frons piceous basally, fuscous apically, carinae testaceous; clypeus, genae, basal segment of antennae fuscous, second segment of antennae very pale; eyes red. Pronotum and mesonotum piceous, scutellum very pale or white. Pro- and mesocoxae and hind femora pale fuscous, apex of metatibiae fuscous, legs otherwise very pale. Abdominal sclerites fuscous, membrane pale. Tegmina hyaline, costal cell with three dark areas, the middle broad, connected by a broad band to apex of clavus; Sc+R+M fork hyaline; an irregular band from stigma to apex of clavus; a broad band inside apical margin. Vein M3 three-branched apically.

Anal segment of male bifid apically, with slender lateral lobes deflexed; telson a broad horizontal plate posteriorly fringed with setae. Aedeagus with a crescentic keel-like plate ventrally, one simple and one bifid spine curving upward distally; a transparent tube expanded and somewhat uncinate at tip overlying spines. Genital styles with dorsal margin not pitted, lateral lobe with projection on inner posterior border.

Described from one male collected by the writer at 1,500 ft. in the Central Hills, Montserrat, B. W. I. (May 21, 1941) on a low bush in mountain forest. The species is well distinguished by its tegminal pattern and the shape of the genitalia.

QUILESSA, gen. nov.

Head, with eyes, scarcely two-thirds width of pronotum. Vertex longer than wide, expanding to base, which is shallowly, and usually angularly, excavated; median and lateral carinae well developed, curving uninterruptedly on to the frons; no transverse carina. Frons longer than its widest part (1.2 to 1), base about half as wide as apex, sides expanding nearly to six-sevenths from base, then subangularly converging to apex, lateral and median carinae distinct. Clypeus at base three-quarters as wide as widest part of frons tapering acutely to apex, median and lateral carinae present; clypeus and apical half of frons somewhat convex, basal part of frons sloping smoothly posteriorly into vertex. No median ocellus; genae somewhat tumid below antennae; no subantennal process; antennae with basal segment very short, second segment slightly longer than broad; eyes widely emarginate ventrally. Pronotum as long as vertex, anterior margin shallowly excavated behind eyes; posterior border shallowly emarginate, curving anteriorly at sides; median carina distinct, lateral carinae of disc obsolete; a strong carina at each lateral margin between eye and tegula. Mesonotum feebly convex, the three carinae distinctly elevated, apical region strongly concave, tip of scutellum acute. Hind

tibiae unarmed. Anal segment of male bifid, often asymmetrically; aedeagus with a ventral keel, often containing a complex sclerotised rod, and often with a process overhanging dorsally. Pygofer with a lateral process. Ovipositor incomplete. Egg bluntly ovoid.

Genotype, *Quilessa lutea*, sp. n.

Quilessa lutea, sp. n.

Male.—Length, 2.3 mm.; tegmen, 2.4 mm. *Female.*—Length, 2.4 mm.; tegmen, 2.5 mm.

Vertex testaceous, frons, clypeus, genae and antennae pale stramineous; eyes red. Pronotum and mesonotum ferruginous, paler at scutellum; pleurites and legs very pale. Abdominal tergites fuscous, sternites paler, membrane pale. Tegmina uniformly transparent yellow. Wings hyaline, faintly clouded.

Vertex with posterior border shallowly emarginate in a very obtuse angle. Anal segment of male bifid, lobe of right side bluntly hooked at tip, that of left side incurved. Pygofer with a long slender process directed backward and upward on each side posteriorly. Aedeagus asymmetrical; a blunt knob-like lobe above base; ventrally a keel-like sheath enclosing a sclerotised rod ending in two large prongs with a fringe of minute teeth on right side basad of apex; on left side of crescentic rod curved upward and backward, ending in a distinct knob. Genital styles with two lobes at apex, the inner with a thickened posterior margin, resembling a hook; below this, between the lobes, a second similar hook; a setose tuft at base of inner lobe.

Anal segment of female short with a minute lobe at each side apically. Lateral styles falcate, a horizontal filament arising from dorsal edge, ventral styles tapering to a blunt point. Pregenital plate scoop-shaped, slightly tapering posteriorly, posterior margin slightly excavated.

Described from 39 males and 47 females collected by the writer near Quilesse, at 1,000 ft. in mountain forest, St. Lucia, B. W. I. (Nov. 24, 1939) on *Cyathea* sp. This species is distinguished by its pale genae and clear yellow tegmina from all except *Q. gladiolata* (see below), from which it is separated in the male by the genitalia and by the narrow rod-like process on the pygofer, and in the female by the scoop-shaped pregenital plate.

Quilessa gladiolata, sp. n.

Male.—Length, 2.7 mm.; tegmen, 2.4 mm. *Female.*—Length, 2.9 mm.; tegmen, 2.7. mm.

Vertex testaceous, frons, clypeus, genae and antennae stramineous or very pale. Pronotum and mesonotum testaceous or ferruginous; pleurites and legs very pale, almost white. Abdominal tergites fuscous, sternites and membrane almost white. Tegmina uniformly transparent yellow; wings hyaline, faintly clouded.

Vertex with posterior border shallowly emarginate in a very obtuse angle.

Anal segment of male elongate, bifid apically, lateral lobes incurved. Pygofer with a long process, sinuately expanding from base and tapering to a point apically, on right side, a small sinuate lobe correspondingly on left side. Aedeagus with a blunt knob above base; ventrally a keel-like sheath, enclosing a sclerotised bar forking near apex, fork of right side spatulate, toothed, with a denticulate ramus basad, fork of left side pincer-like at apex. Genital styles with a setigerous eminence on dorsal margin, sides terminating in a broad rounded lobe; apex a very shallow cup.

Anal segment of female short with a minute lobe on each side apically. Lateral styles bifid, a rounded lobe below, a tapering filament above. Ventral styles flat, tapering to a blunt point. Pregenital plate deeply bifid into two large rounded foliaceous lobes.

Described from 21 males and 11 females collected by the writer at 1,000 ft. in mountain forest near Saltoun, Dominica, B. W. I. (June 11-July 8, 1939) on low bushes and on ferns. This species is readily distinguished from all except *Q. lutea* by the pale genae and clear yellow tegmina; it differs from *Q. lutea* in the genitalia of both sexes.

Quilessa maculata, sp n.

Male.—Length, 2.2 mm.; tegmen, 2.3 mm. *Female.*—Length, 2.4. mm.; tegmen, 2.5 mm.

Vertex testaceous, frons, clypeus, genae and antennae very pale. Pronotum and mesonotum ferruginous sometimes suffused with fuscous, scutellum usually red at tip. Pleurites and legs very pale. Abdominal tergites fuscous, sternites and membrane almost white. Tegmina transparent, yellow, a round fuscous spot at stigma, a small smoky area beyond apex of clavus. Wings hyaline, faintly clouded.

Vertex with posterior border emarginate almost in a right angle.

Anal segment of male with deep lateral lobes, bifid beyond telson into two short incurved processes. Pygofer with a short upturned digitate process on right side, a smaller lobe correspondingly at left. Aedeagus with a ventral keel bifid apically, enclosing an elongated sheath covering a sclerotised plate denticulate ventrally and on left margin. Genital styles with a setigerous eminence on dorsal border near base, a shallowly deflexed hook directed posteriorly at apex.

Anal segment of female very short, truncate at posterior margin. Lateral styles tapering, somewhat sinuate. Ventral styles deep, with lower margin reflexed to form a broad trough basally, dorsal and ventral margins tapering abruptly to pointed apex. Pregenital plate broadly hexagonal.

Described from 18 males and 21 females collected by the writer at 1,000 ft. in mountain forest near Saltoun, Dominica, B. W. I. (June 11-July 8, 1939) on low bushes and ferns. This species is readily distinguished by the markings of the tegmina and by the genitalia of both sexes.

Quilessa nigrigena, sp. n.

Male.—Length, 2.4 mm.; tegmen, 2.6 mm. *Female.*—Length, 2.9 mm.; tegmen, 3.0 mm.

Vertex testaceous; frons piceous at base, pale distally; clypeus pale yellow; genae piceous below antennae, pale yellow in front of antennae, dark above ocelli; second joint of antennae piceous; eyes red. Pronotum testaceous; mesonotum testaceous on disc, suffused ferruginous laterally, tip of scutellum very pale. Legs pale. Abdominal sclerites and genitalia fuscous or ferruginous. Tegmina hyaline, veins yellow, stigma sometimes suffused yellow. Wings hyaline.

Vertex slightly emarginate posteriorly.

Anal segment of male bifid beyond telson, process of right side expanded, that of left tapering, both incurved. Pygofer with a short rounded process on each side posteriorly. Aedeagus with a deep, flattened, cowl-like ventral keel, dorsally a sclerotised rod somewhat spatulate at apex directed backward. Genital styles shallowly grooved lengthwise below, directed upward and backward distally to a point at apex.

Anal segment of female short, terminating in a blunt lobe on each side. Lateral styles tapering sinuately to a narrow point; ventral styles very broad, in the shape of a blunt hook at apex. Pregenital plate short, scoop-like, convexly triangular in ventral view.

Described from 3 males and 2 females collected by the writer at 1,000 ft. in mountain forest near Saltoun, Dominica, B. W. I. (June 11-July 8, 1939) on low bushes. This species is readily distinguished by the clear yellow tegmina and the piceous area on the genae, as well as by the genitalia of both sexes.

Quilessa caerulea, sp. n.

Male.—Length, 2.0 mm.; tegmen, 2.2 mm. *Female.*—Length, 2.4 mm.; tegmen, 2.4 mm.

Vertex testaceous; frons pale fuscous at base, very pale distally, apical line narrowly fuscous; clypeus testaceous clouded with fuscous; genae fuscous below antennae, very pale in front of antennae, somewhat fuscous above ocellus; eyes red; basal segment of antenna pale, second segment piceous. Pronotum testaceous, sometimes infuscate; mesonotum ferruginous marked with fuscous apically, scutellum concolorous; pleurites and coxae somewhat fuscous, legs very pale yellow. Abdominal sclerites and genitalia fuscous, membrane red or pallid. Tegmina yellow, costal cell smoky near stigma, which is fuscous, apical cells smoky. Wings hyaline, faintly clouded. In life the tegmina are powdered dusky blue.

Vertex shallowly emarginate posteriorly.

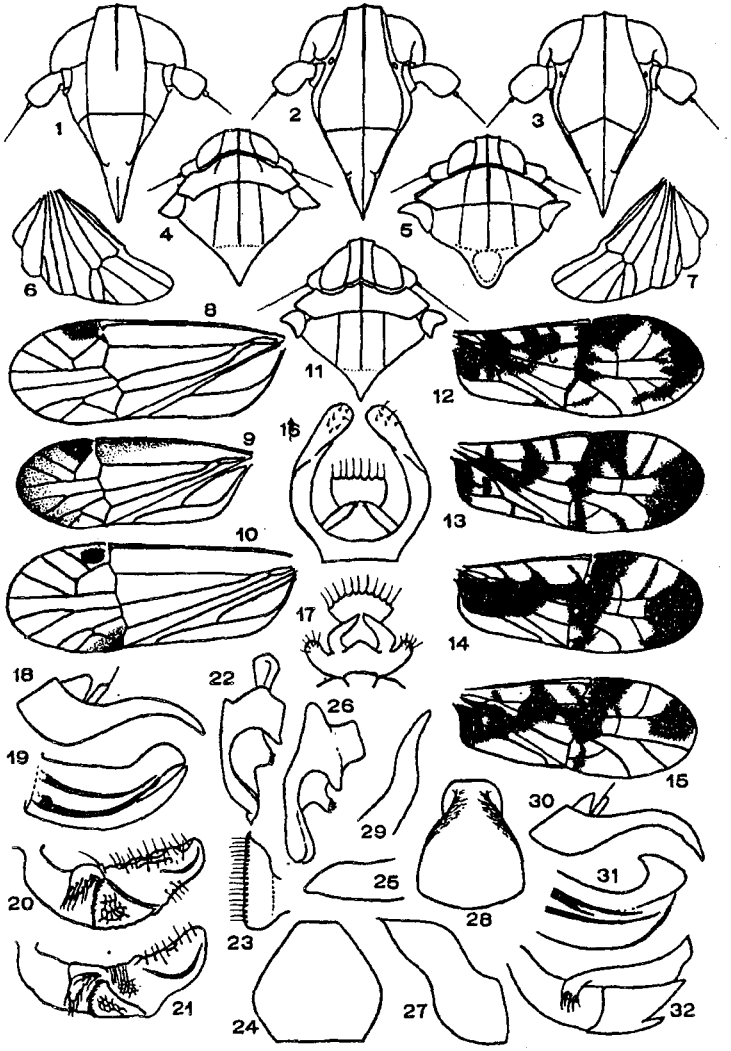
Anal segment of male bifid beyond telson, processes short, incurved. Pygofer with a somewhat pincer-shaped process laterally, directed posteriorly and inward. Aedeagus a shallow trough rounded at apex, with a percurrent sclerotised rod curved transversely near apex; a tongue-like eminence in middle of left dorsal margin. Genital styles shallowly grooved on inner surface, terminating in a recurved point apically.

Anal segment of female short; truncate apically. Lateral styles spatulate, with a short filament projecting posteriorly from ventral margin; ventral styles tapering upward near apex to a blunt point. Pregenital plate broad, posterior margin indented medially, the left posterior lobe often larger than the right.

Described from 65 males and 60 females collected by the writer at 1,000 ft. in mountain forest near Saltoun, Dominica, B. W. I. (June 11-July 8, 1939) on low bushes. This species is readily distinguished by the dusky tegmina, by the dark frons, and by the genitalia of both sexes.

EXPLANATION OF PLATES 8 AND 9.

1. *Eparmene*, facial view of head (from drawing supplied by W. E. China).
2. *Quilessa*, facial view of head.
3. *Prosotropis*, facial view of head.
4. *Eparmene*, dorsal view of head and thorax (from drawing supplied by W. E. China).
5. *Prosotropis*, dorsal view of head and thorax.
6. *Prosotropis*, wing.
7. *Quilessa*, wing.
8. *Eparmene*, tegmen (from drawing supplied by W. E. China).
9. *Quilessa caerulea*, tegmen.
10. *Q. maculata*, tegmen.
11. *Quilessa*, dorsal view of head and thorax.
12. *Prosotropis marmorata*, tegmen.
13. *P. rubiginosa*, tegmen.
14. *P. trinervosa*, tegmen.
15. *P. decorata*, tegmen.
16. *P. decorata*, dorsal view, anal segment of male.
17. *P. decorata*, dorsal view, anal segment of female.
18. *P. decorata*, lateral view of anal segment of male.
19. *P. decorata*, aedeagus.
20. *P. decorata*, lateral view, genital style of male.
21. *P. trinervosa*, lateral view, genital style of male.
22. *P. decorata*, ventral view, genital style of male.
23, 25. *P. decorata*, ventral and lateral views of ventral process of ovipositor.
24. *P. decorata*, pregenital plate of female, ventral view.
26. *P. marmorata*, ventral view, genital style of male.
27, 28. *P. rubiginosa*, lateral and ventral views of pregenital plate.
29. *P. rubiginosa*, lateral view of lateral process of ovipositor.
30, 31, 32. *P. marmorata*, anal segment of male, aedeagus, genital style of male, lateral view.
33, 34. *Quilessa gladiolata*, dorsal and lateral views of anal segment of male.
35, 36. *Q. gladiolata*, processes of pygofer of right side and left side.
37. *Q. gladiolata*, lateral view of male genital style.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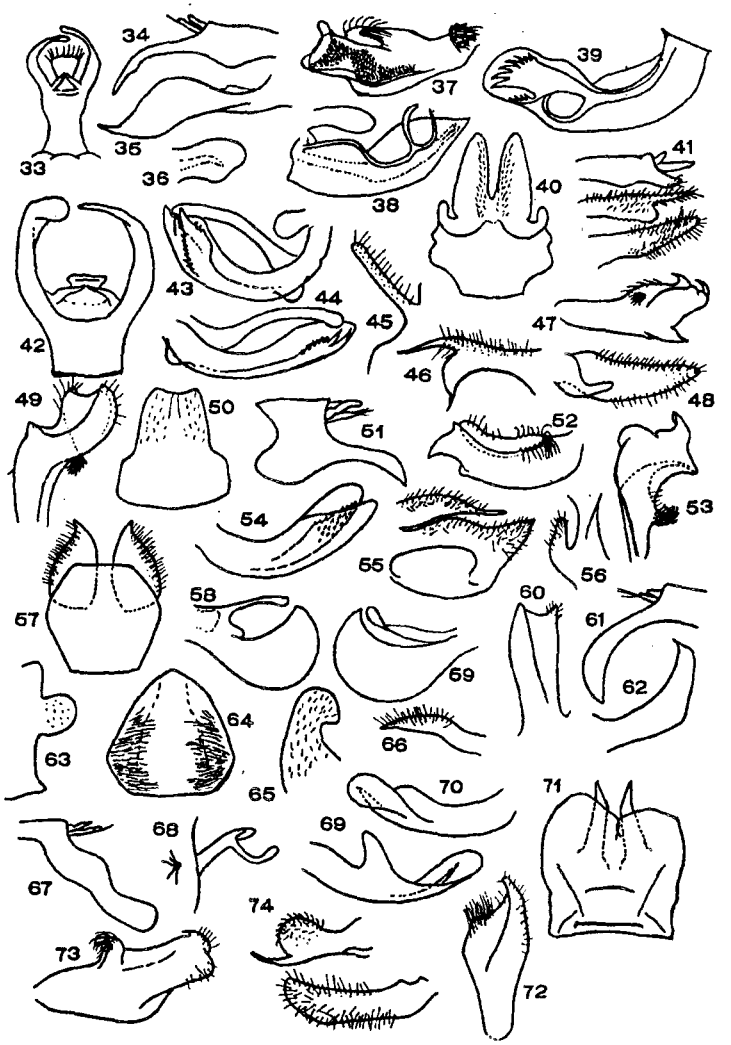
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38, 39. ♀. *gladiolata*, left side and right side of aedeagus.
40. ♀. *gladiolata*, pregenital plate of female.
41. ♀. *gladiolata*, lateral view of anal segment and processes of ovipositor.
42. ♀. *lutea*, dorsal view, anal segment of male.
43, 44. ♀. *lutea*, right side and left side of aedeagus.
45. ♀. *lutea*, right lateral process of pygofer.
46, 48. ♀. *lutea*, lateral view, processes of ovipositor.
47, 49. ♀. *lutea*, lateral and ventral views of male genital style.
50. ♀. *lutea*, ventral view, pregenital plate of female.
51. ♀. *maculata*, lateral view, anal segment of male.
52, 53. ♀. *maculata*, lateral and ventral views of male genital style.
54. ♀. *maculata*, aedeagus.
55. ♀. *maculata*, lateral view, processes of ovipositor.
56. ♀. *maculata*, right lateral process of pygofer.
57. ♀. *maculata*, ventral view, pregenital plate.
58, 59. ♀. *nigrigena*, left side and right side of aedeagus.
60, 62. ♀. *nigrigena*, ventral and lateral views of male genital style.
61. ♀. *nigrigena*, lateral view, anal segment of male.
63. ♀. *nigrigena*, lateral process of pygofer.
64. ♀. *nigrigena*, ventral view of pregenital plate of female.
65, 66. ♀. *nigrigena*, processes of ovipositor.
67. ♀. *caerulea*, lateral view, anal segment of male.
68. ♀. *caerulea*, lateral process of pygofer.
69, 70. ♀. *caerulea*, left side and right side of aedeagus.
71. ♀. *caerulea*, ventral view, pregenital plate of female.
72, 73. ♀. *caerulea*, ventral and lateral views of male genital style.
74. ♀. *caerulea*, lateral view, processes of ovipositor.

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