but which, in fact, will almost certainly prove to be a new endemic species or subspecies.

In 1895 Uhler described three species of pintaliine Cixiidæ from St. Vincent, B.W.I., which he referred to two new genera (*Cotyleceps decorata*, *Cubana tortrix* and *Cubana irrorata*). The former has since been suppressed under *Pintalia* Stål and in the present report the species *irrorata* is removed from *Cubana* and made the type of a new genus.

The collection examined is evidently far from complete, but is sufficiently representative to indicate that the faunistic symmetry between the islands which is evident in other families is maintained in the distribution of the Pintaliini.

The more or less equal degrees of difference which separate corresponding species from different islands afford ground for believing that the Lesser Antilles were colonized by a single immigrant species of each of the genera discussed. As all three genera occur in the Greater Antilles, while only *Pintalia* is known from Trinidad, where, moreover, it is represented by species not closely resembling those in the Lesser Antilles, it would appear very probable that the route of immigration into the Windward Islands lay through the Greater Antilles.

The prosotropine Kinnaridæ, though few both in genera and species, are remarkably diverse, and it is of interest that their peculiarities and specializations parallel similar modifications in other families. In *Quilessa*, for instance, the development of asymmetrical lateral processes on the hind margin of the pygofer resembles that found in the tropiduchid *Vanua*; in *Microissus* the male genital styles (harpagones) are fused into a single broad curved plate which is produced in processes on its margin; a similar modification is found in certain Tettigometridæ (e.g., *Hilda*) and in a group of tropiduchid genera centred on *Vanua*. Reduction of mesonotal carinæ and depression of the disk occurs in *Prosotropis*, partially or completely, and in its most advanced stage recalls the condition found in certain Issidæ.

In *Prosotropis*, moreover, the basal portion of the tegmina is reduced in relation to the membrane, and the apex of the clavus occurs at the middle of the tegmen.

These areas are found in similar proportion in certain tropiduchid genera such as *Arenasella* and *Neommatissus*. A more striking tegminal modification is the thickening and darkening of the corium, accompanied by marked irregularity of the distal venation, found in *Microissus*. This line of development would appear to be similar to that which produced the leathery-winged species of Dictyopharidæ and Tropiduchidæ, Acanaloniidæ and Issidæ. A new subspecies of *Quilessa nigrigena* Fenn. (described below) furnishes an example of a sexual pigmentary difference developed in the distal portion of the tegmina. This, as far as the writer is aware, cannot quite be matched in other families, though fairly constant pigmentary differences between male and female occur on the head and thorax in the tropiduchid genus *Chasmacephala*.

Family Cixiidæ Spinola.

Pintalia Stål.

Stål, 1862, Bidr. Rio Janeiro-trakt. Hemipt. ii. p. 4.
Logotype, *Pintalia lateralis* Stål.
Cotyleceps Uhler, 1895, Proc. Zool. Soc. Lond. v. p. 63.

Pintalia decorata (Uhler.) (Fig. 1.)

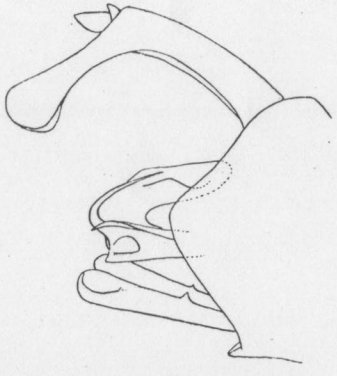
Cotyleceps decorata Uhler, 1895, Proc. Zool. Soc. Lond. v. p. 64.

Tegmina hyaline with faint brown suffusion; three marginal spots in costal cell, not reaching across to *Sc*, one or two faint spots in all cells of corium, a linear mark near base of clavus and an oblique spot at middle, distal half of membrane except for a narrow crescentic band between apical veins of R and M_4 brown; stigma dull yellow, veins pallid to concolorous, not brown in corium, distinctly granulate, concolorous in membrane but pallid and margined pallid close to apical margin; wings hyaline, faintly suffused fuscous, veins dark brown.

The writer has examined the male holotype together with a female taken by him on Mt. St. Andrews, St. Vincent, B.W.I. (Sept. 12, 1941). As far as Lesser Antillean species are concerned, the distinctive features of *P. decorata*, apart from the male genitalia, are the presence of intervenal brown sublinear spots between the veins of the corium, the relatively clear basal portion of the membrane, and the pallid bordering of the pallid submarginal portion

of the apical veins. These characters are approached in other species, but they are not matched in degree or in combination.

Fig. 1.



Pintalia decoraia (Uhl.).

Male genitalia, right side.

Pintalia sanctæ-luciæ, sp. n. (Fig. 2.)

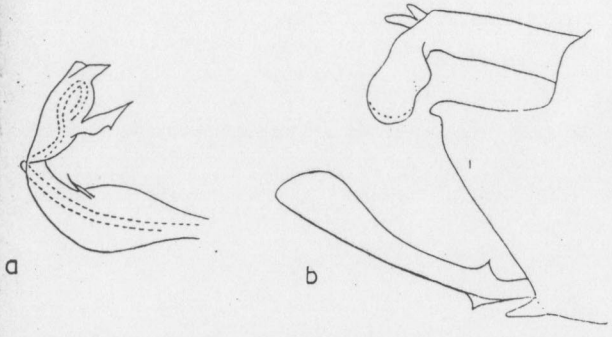
Male.—Length 4·8 mm.; tegmen 5·5 mm. *Female.*—Length 4·9 mm.; tegmen 5·5 mm.

Testaceous-brown. Tegmina hyaline faintly suffused brown, three spots in costal cell and one at apex of clavus, stigma and membrane except for three subequal round areas brown, a spot at apex of clavus and another just distad of it yellowish, veins brown, concolorous in pale areas, slightly pallid near apical margin. Wings hyaline, suffused brown, veins fuscous.

Anal segment of male bilaterally asymmetrical, deflexed in distal two-fifths through 50° and abruptly dilated into two lobes, one on each side of middle, that of right slightly larger. Pygofer with laterodorsal angles produced, abruptly narrowed and obliquely truncate at apex. Ædeagus laterally flattened, dilated dorsoventrally near middle, a small spine at apex of right dorsal margin directed laterocaudad, a similar spine on left side slightly larger, directed laterad; flagellum membranous with two

short membranous processes dorsally and a longer bladder-like process medially, directed obliquely downward. Genital styles as in *P. decorata*.

Fig. 2.



Pintalia sanctæ-luciæ Fenn.

(*a*) Ædeagus, right side; (*b*) anal segment, lateral margin of pygofer, genital style, right side.

Described from four males and five females taken by the writer at 1000 ft. in mountain forest, Quilesse, St. Lucia, B.W.I. (Feb. 22–24, 1941). This species is distinguished by the genitalia and by the colour-pattern of the tegmina.

Pintalia grenadana, sp. n. (Fig. 3.)

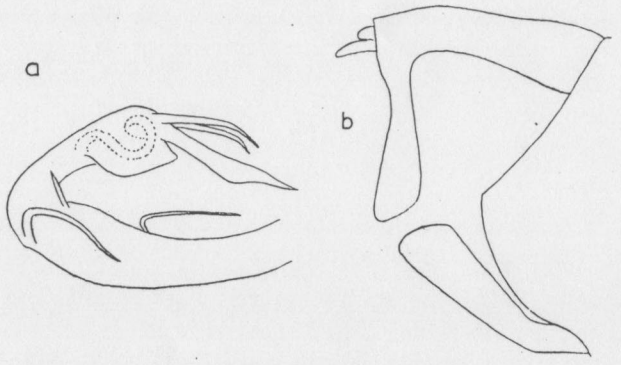
Male.—Length 4·3 mm.; tegmen 5·5 mm.

Testaceous; posterior and lateral margin of pronotum, mesonotum except carinæ, sclerites of abdomen and genitalia yellowish brown. Tegmina hyaline, generally suffused yellowish brown, costal and apical margin, stigma, a spot in middle and at apex of clavus darker yellowish brown, veins yellowish brown. Wings almost hyaline, veins pale fuscous.

Anal segment of male bilaterally symmetrical, deflexed through 100° at middle, anal foramen at point of flexure. Pygofer with laterodorsal angles broadly rounded, not produced. Ædeagus tubular, distally reflected in a flagellum, a short spine near apex of right dorsal margin, directed caudo-laterad, a longer curved spine arising laterally below it, directed cephalad, a curved spinose

process arising at middle of left dorsal margin directed cephalad ; flagellum distally tapering into a membranous lanceolate lobe ; a pair of sclerotized spinose processes at base of this lobe, directed cephalad and decurved distally. Genital styles narrow, elongate, expanding distally and rounded at apex, as in *P. decorata*.

Fig. 3.



Pintalia grenadana Fenn.

(*a*) Ædeagus, right side ; (*b*) anal segment, lateral margin of pygofer, and apical portion of right genital style.

Described from a single male taken by the writer at Grand Etang, Grenada, B.W.I. (Oct. 27, 1943). This species is distinguished by the ædeagal armature and by tegminal coloration.

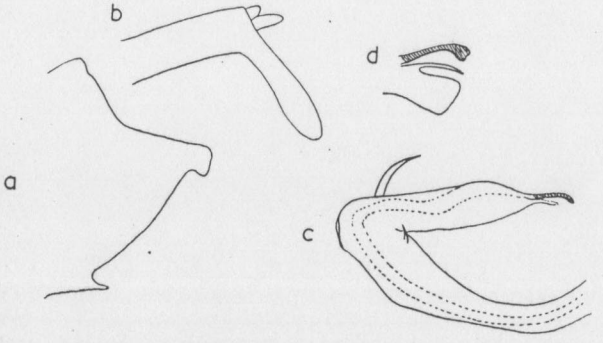
Pintalia dominicana, sp. n. (Fig. 4.)

Male.—Length 4·1 mm. ; tegmen 5·4 mm. *Female.*—Length 4·2 mm. ; tegmen 5·5 mm.

Testaceous ; posterior and lateral margins of pronotum, mesonotum and sclerites of abdomen and genitalia brownish fuscous. Tegmina hyaline, lightly suffused fuscous, three faint spots in costal cell, one in middle of clavus and membrane except for three clear areas in *R* and *M* brownish fuscous, a spot in clavus near apex and another in membrane just distad of apex pale yellow ; veins fuscous, concolorous where membrane is yellow. Wings slightly suffused brown, veins brown.

Anal segment of male bilaterally symmetrical, deflexed through 80° in distal two-fifths, anal foramen at point of flexure. Pygofer bilaterally symmetrical with latero-dorsal angles produced in a quadrate lobe, distally truncate. Ædeagus tubular, distally reflected in a flagellum ; a small spine directed dorsocaudad at apex of right dorsal margin, a similar spine on left side ; flagellum with a stout curved spinose process near its base, subtruncate at apex with right apical angle produced in a sclerotized narrow lobe. Genital styles as in *P. decorata*.

Fig. 4.



Pintalia dominicana Fenn.

(*a*) Lateral margin of pygofer, left side ; (*b*) anal segment of male ; (*c*) ædeagus, right side ; (*d*) apex of flagellum, ventral view.

Described from twelve males and nine females taken by the writer at 800–1000 ft. in mountain forest near Saltoun, Dominica, B.W.I. (June 11 to July 8, 1939). This species is distinguished by the shape of the male genitalia and by the pattern on the tegmina. The latter are more suffused with brown than in *P. decorata*, while the apical veins are brown or concolorous submarginally, and not bordered pallid.

CUBANA Uhler.

Uhler, 1895, Proc. Zool. Soc. Lond. v. p. 62.
Logotype, *Cubana tortrix* Uhler.
Bothriocerodes Fowler, 1904, B.C.A. Hom. i. p. 84.

A comparison of the holotypes of the type species has shown the above synonymy to be necessary.

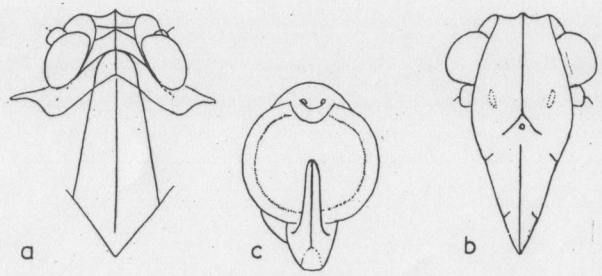
Vertex broader at level of transverse carina than long in middle line (1·4 : 1), median carina present, anterior margin transverse ; frons abundantly visible from above, longer than broad (1·2 : 1), medially and laterally carinate, carinæ foliate. Rostrum with subapical joint longer than apical (1·44 : 1). Mesonotal disk to apex of scutellum longer than wide at base of lateral discal carinæ (2 : 1). Post-tibiæ trispinose. Wings with stalk of cell R_1 not exceeding cell, stalk of M_{1+2} much shorter than cell. Anal segment of female short, ventral margin in profile deflexed apically. Ninth segment not tumid at sides, posteriorly flattened in a circular plate covered with wax pores. Each ovary comprising 28 ovarioles. Egg elongate-ovoid.

Cubana tortrix. (Figs. 5, 6.)

Uhler, 1895, *loc. cit.* p. 62.

Anal segment of male rather elongate, deflexed through 90° in apical fifth, anal foramen at middle. Ædeagus tubular, distally reflected in a flagellum, a rather long spinose process on right at apex of tubular portion and a similar and slightly longer process subapically on left,

Fig. 5.



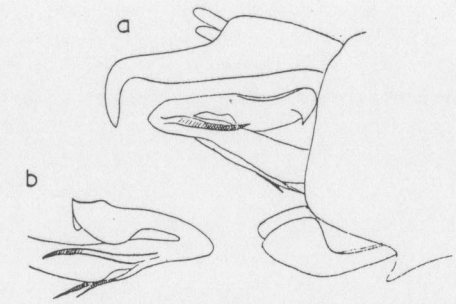
Cubana tortrix Uhl.

(*a*) Vertex, pronotum and mesonotum ; (*b*) frons and clypeus ; (*c*) female genitalia, posterior view.

both directed cephalad ; a pair of long unequal spines, more or less united at their base, arising ventrally near apex and directed cephalad, lying adpressed to ventral surface of ædeagus ; flagellum membranous, distally expanded, with a small lobe at apex on right, short,

distally pointed. Genital styles rather short, narrow basally, lower margin curving dorsad through 45° at middle, upper margin through 85°, apical margin shallowly convex.

Fig. 6.



Cubana tortrix Uhl.

(*a*) Male genitalia, right side ; (*b*) ædeagus, left side.

A single female was taken by the writer at 1000 ft. in mountain forest above Three Rivers settlement, St. Vincent, B.W.I. (Sept. 4, 1941). The above description and figures are based on a paratype male in the British Museum, the holotype being female. The figures were kindly prepared by Mr. China. A single female from St. Lucia, B.W.I. (Choiseul, May 3, 1939, R. G. Fennah) is provisionally assigned to this species.

Cubana haruspex, sp. n. (Fig. 7.)

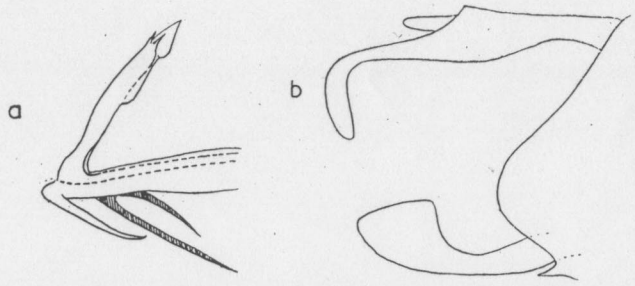
Male.—Length 4·0 mm. ; tegmen 4·7 mm. *Female*.—Length 4·0 mm. ; tegmen 4·9 mm.

Coloration as in *Cubana tortrix* Uhl.

Anal segment of male rather elongate, deflected through 98° in apical fifth, anal foramen at middle. Ædeagus tubular, distally reflected in a flagellum, a long spinose process on right at apex of tubular portion, two-thirds as long as flagellum, slightly curved at apex, directed cephalad, a pair of long unequal spines, united at their base, arising ventrally at apex and directed cephalad, lying adpressed to ventral surface of ædeagus ; flagellum membranous, slightly expanded distally, terminating in a point, with a pair of sclerotized short spines on upper surface near apex.

Described from three males and five females taken by the writer at 800–1000 ft. near Saltoun, Dominica, B.W.I. (June 11–16, 1940). This species is very close to the logotype but is distinguished by the degree of curvature

Fig. 7.



Cubana haruspex Fenn.

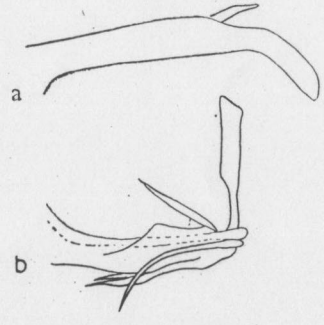
(*a*) Ædeagus, right side ; (*b*) anal segment, hind margin of pygofer and right genital style.

of the apex of the male anal segment and by the relative lengths of the ædeagal spines and the shape of the apex of the flagellum.

Cubana strix, sp. n. (Fig. 8.)

Male.—Length 4·0 mm. ; tegmen 4·7 mm.
Coloration as in *Cubana tortrix* Uhl.

Fig. 8.



Cubana strix Fenn.

(*a*) Anal segment of male, side view ; (*b*) ædeagus, left side.

Anal segment of male elongate, deflexed through 60° in apical fifth, anal foramen distad of middle. Ædeagus tubular, distally reflected in a flagellum, a moderately long spinose process on right at apex of tubular portion and a similar but longer process at apex on left, both processes directed cephalad, lying adpressed to ventral surface of ædeagus ; flagellum membranous, slightly expanded distally, apex in profile decurved ventrad.

Described from a male taken by the writer near Ottley's Level, St. Kitts, B.W.I. (Jan. 23, 1942). This species is distinguished by the shape of the male anal segment and by the relative lengths of the ædeagal spines and the shape of the apex of the flagellum.

CUBANELLA, gen. nov.

Vertex broader at level of transverse carina than long in middle line (1·5 : 1), very little produced before eyes, anterior margin carinate, obtusely angulate at apex (140°), lateral margins strongly carinate, diverging basad, disk markedly depressed, divided by a transverse carina, convex anteriorly between eyes, median carina absent, posterior margin broadly concave ; frons scarcely visible from above, longer than broad (1·2 : 1), medially and laterally carinate, carinæ subfoliate ; lateral margins diverging to level of antennæ thence incurved to suture, median carina broadly forked distally, median ocellus present ; clypeus shorter than frons (about 1·2 : 1), laterally and medially carinate. Rostrum with subapical joint longer than apical (1·2 : 1). Antennæ with second joint globose, eyes not excavated beneath. Pronotum short, disk small, short, tricarinate ; mesonotum relatively long, tricarinate, mesonotal disk to apex of scutellum longer than wide at base of lateral discal carinæ (about 1·75 : 1). Post-tibiæ minutely trispinose. Tegmina longer than broad (2·5 : 1), $Sc+R$ and M not forming a common stalk, $Sc+R$ forked about one-quarter from base, M simple to nodal line, $Cu1$ fork distad of $Sc+R$ fork, about level with union of claval veins, Sc two-branched at apex, R three-branched, M five-branched, $Cu1$ three-branched, apical areoles of M more than twice length of subapical. Wings with the stalks of cells R_1 and M_{1+2} distad of the cross-vein uniting them usually longer than or as long as the cell. Anal segment of male short, anal foramen near apex, ventral margin in profile not deflexed apically.

Anal segment of female short. Ninth segment tumescent at sides, posteriorly flattened in an oval area elongate dorsoventrally, traversed in middle line of body by a carina forked ventrally, devoid of wax-pores. Each ovary comprising 15–17 ovarioles.

Type species, *Cubana irrorata* Uhler.

This genus is superficially like *Cubana*. The difference in the female genitalia is very striking. Apart from the preceding, *Cubanella* contains *Cubana trinitatis* Myers (' Studies on Cuban Insects,' p. 15).

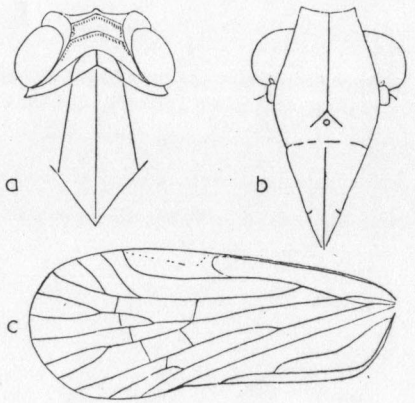
Cubanella irrorata (Uhler). (Figs. 9, 10.)

Cubana irrorata Uhler, 1895, Proc. Zool. Soc. Lond. v. p. 63.

Female.—Length 3·2 mm.; tegmen 4·4 mm.

Anal segment of male short, not markedly deflexed distally, anal foramen near apex. Pygofer with laterodorsal angles produced in a short triangular lobe pointed

Fig. 9.



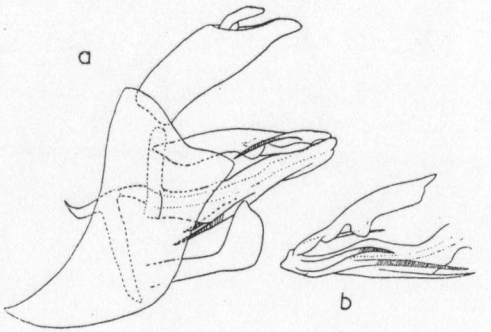
Cubanella irrorata (Uhl.).
(*a*) Vertex, pronotum and mesonotum; (*b*) frons and clypeus; (*c*) tegmen.

distally. Ædeagus tubular, distally reflected in a flagellum, a moderately long spinose process on each side at apex of tubular portion, a pair of unequal spines arising below at apex, directed cephalad below ædeagus, united at their base.

A single female taken by the writer at 1000 ft. in mountain forest near Three Rivers settlement, St. Vincent,

B.W.I. (Sept. 3, 1941). The figures are of the holotype and were prepared by Mr. China.

Fig. 10.



Cubanella irrorata (Uhl.).
(*a*) Male genitalia, left side; (*b*) ædeagus, right side.

Cubanella irrorata sortiaria, subsp. n. (Fig. 11.)

Of same colour and size as *C. irrorata*.

Pygofer with each laterodorsal angle produced into a semicircular lobe. Ædeagus as in *C. irrorata*, but with ventral pair of spines of equal length.

Fig. 11.

Cubanella irrorata sortiaria Fenn.
Lateral margin of pygofer.

Described from five males and seventeen females collected by the writer on Morne Fortunée and La Sorcière, St. Lucia, B.W.I. (Nov. 20, 1938) and on various dates in

1939 and 1940. This subspecies is distinguished by the two characters given in the description.

Family **Kinnaridæ** Muir.

Key to the Genera of Kinnarinæ.

(1)	(2).	A subantennal process in form of a ledge across gena ..... *Kinnara* Distant.
(2)	(1).	No such process on gena ..... (3).
(3)	(4).	Vertex extremely narrow, lateral frontal carinæ prominent ..... (5).
(4)	(3).	Vertex not extremely narrow, lateral carinæ not prominent near base .. *Paramicrixia* Distant.
(5)	(6).	Vertex produced fully one half of its length before eyes ..... *Paræclidius* Myers.
(6)	(5).	Vertex produced not more than one-third before eyes, if at all ..... (7).
(7)	(8).	Disk of vertex twice as long as broad, or almost so, tegmina with five subapical cells, legs relatively slender . *Œclidius* Van Duzee.
(8)	(7).	Disk relatively shorter, transverse carina basad of anterior margin of eyes..... (9).
(9)	(10).	First antennal segment prominent, relatively long, four subapical cells in tegmen..... *Southia* Kirkaldy.
(10)	(9).	First antennal segment not prominent, usually five subapical cells in tegmen ..... *Bytrois* Fennah.

It is of interest that although members of this subfamily occur in Trinidad and in the Greater Antilles, no representative has yet been found in the Lesser Antilles.

Key to the Genera of Prosotropinæ.

(1)	(2).	Median carina of frons not nearly attaining apex, clypeus as wide as frons at widest part or nearly so .. (3).
(2)	(1).	Median carina of frons reaching apex, clypeus distinctly narrower than widest part of frons ..... (5).
(3)	(4).	Clypeus devoid of median carina, fully as wide as frons, frons longer than broad (2·0 : 1)..... *Eparmene* Fowler.
(4)	(3).	Clypeus medially carinate, scarcely as wide as frons, frons longer than broad (1·5 : 1) ..... *Dineparmene* Fennah.
(5)	(6).	Disk of vertex and clypeus without a median carina ..... *Lomagenes* Fennah.
(6)	(5).	Vertex and clypeus medially carinate. (7).
(7)	(8).	Pronotum tricarinate on disk ..... (9).
(8)	(7).	Pronotum with only median carina distinct on disk ..... (11).
(9)	(10).	Mesoscutellum rounded at apex; tegmina with apex of clavus almost exactly bisecting commissural margin..... *Prosotropis* Uhler.

(10)	(9).	Mesoscutellum pointed at apex; apex of clavus beyond middle of commissural margin ..... *Atopocixius* Muir.
(11)	(12).	Tegmina with corium thickened, distal venation subreticulate and irregular, apical margin oblique, strongly bent at apex ..... *Microissus* Fennah.
(12)	(11).	Tegmina subhyaline, apical venation regular, apical margin widely and evenly rounded ..... (13).
(13)	(14).	Vertex distinctly longer than broad, M_{3+4} in tegmen simple to apex, species small with tegmen 2·0 mm. long..... *Eparmenoides* Fennah.
(14)	(13).	Vertex not longer than broad, M_{3+4} forked before apex, species with tegmina more than 2·2 mm. long.. *Quilessa* Fennah.

Prosotropis Uhler.

Uhler, 1895, Proc. Zool. Soc. Lond. p. 70.
Haplotype, *Prosotropis decorata* Uhl.

Paraprosotropis * *monensis* Ramos (J. Agric. Univ. P. R., xxx. p. 17, 1946) apparently differs from *decorata* only in the proportions of the frons and in the anterior portion of the mesonotum being ecarinate and not shallowly convex; subapical cell M_{1+2} is faintly differentiated in the tegmen of *decorata*, making four subapical cells, though the cross-vein is obsolete and hyaline; in other characters, even including details of the genitalia, *P. monensis* is close to species of *Prosotropis*, and beyond doubt is a Greater Antillean equivalent of the specific group of the Lesser Antilles. The status of *monensis* in relation to *Prosotropis* and to other West Indian genera may perhaps best be expressed by regarding *Paraprosotropis* as a subgenus of *Prosotropis*, being set apart from the typical subgenus *Prosotropis* by having an ecarinate mesonotum which is not at all convex, in contrast to Lesser Antillean *Prosotropis*, in which the anterior portion of the mesonotum is shallowly convex and tricarinate and the posterior portion is depressed.

Prosotropis marmorata Fenn.

Fennah, 1942, Proc. Ent. Soc. Wash. xliv. p. 103.

Material from St. Kitts and Antigua shows constant differences from the Montserrat type, but is undoubtedly

* *Nom. emend.* for *Paraprosoptropis* from *Prosoptropis* typographical error for *Prosotropis*.

very near to *marmorata*, and represents it geographically. The writer proposes three subspecies, separated as follows:

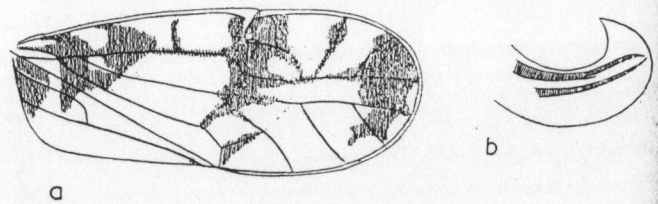
(1) (2). Tegmina with distal half of costal cell mainly hyaline ..... *antiguana*, subsp. n.
(2) (1). Tegmina with distal half of costal cell infuscate ..... (3).
(3) (4). Ædeagus in profile distally recurved dorsad, tapering to a point ..... [subsp. n. *montserratensis*,
(4) (3). Ædeagus in profile recurved dorsad, rounded at apex ..... [subsp. n. *sancti-christopheri*,

Prosotropis marmorata antiguana, subsp. n. (Fig. 12.)

Male.—Length 1·9 mm.; tegmen 2·0 mm. *Female*.—Length 2·2 mm.; tegmen 2·5 mm.

Testaceous-stramineous; vertex, pronotum and mesonotum and abdominal sclerites, post-tibiæ at apex and post-tarsal joints at apex fuscous, meso-scutellum and meta-scutellum pallid or white. Tegmina hyaline, marked fuscous as shown in figure, apical half of costal cell mostly pale.

Fig. 12.



Prosotropis marmorata antiguana Fenn.
(*a*) Tegmen; (*b*) ædeagus, left side.

Ædeagus tubular with a slightly curved spine, with a minute branch at middle, directed caudad on left; a simple spine of equal length or a little longer on right, directed caudad; dorsal margin reflected cephalad at apex and expanded into a hood, which in profile tapers to a point.

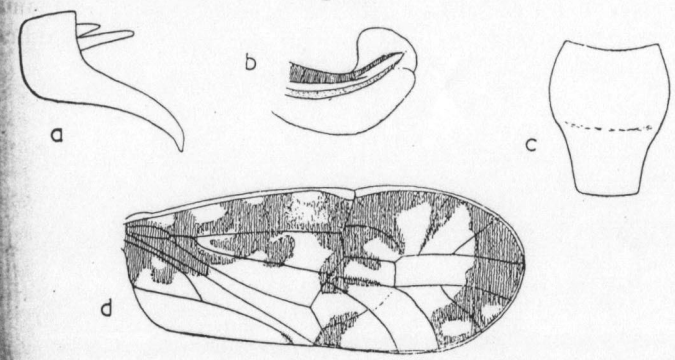
Described from six males and three females taken by the writer in Christian Valley, Antigua, B.W.I. (Aug. 30, 1943). This subspecies is distinguished by the shape of the apical portion of the ædeagus and by the extent of infuscation of the tegmina.

Prosotropis marmorata sancti-christopheri, subsp. n. (Fig. 13.)

Male.—Length 1·9 mm.; tegmen 2·0 mm. *Female*.—Length 2·1 mm.; tegmen 2·4 mm.

Brown to fuscous; vertex, pronotum and anterior half of mesonotum fuscous, with a dark green iridescence, meso-scutellum and meta-scutellum pallid or white. Tegmina hyaline, marked fuscous as shown in figure, apical half of costal cell mostly infuscate.

Fig. 13.



Prosotropis marmorata sancti-christopheri Fenn.
(*a*) Anal segment of male, side view; (*b*) ædeagus, left side; (*c*) pregenital sternite of female; (*d*) tegmen.

Ædeagus armed as in preceding subspecies; dorsal margin reflected cephalad at apex and expanded into a hood, which in profile is broadly rounded.

Described from five males and four females taken by the writer at Brimstone Hill, St. Kitts (Sept. 19, 1943). This subspecies is distinguished by the shape of the apical portion of the ædeagus and by the extent of infuscation of the tegmina.

QUILESSA Fennah.

Fennah, 1942, Proc. Ent. Soc. Wash. xliv. p. 103.
Orthotype, *Quilessa lutea* Fenn.

Quilessa nigrigena Fenn.

Fennah, 1942, *loc. cit.* p. 106.

A geographical representative of this species has been found in Antigua, B.W.I., but with some striking differences. It is accordingly proposed to recognize two

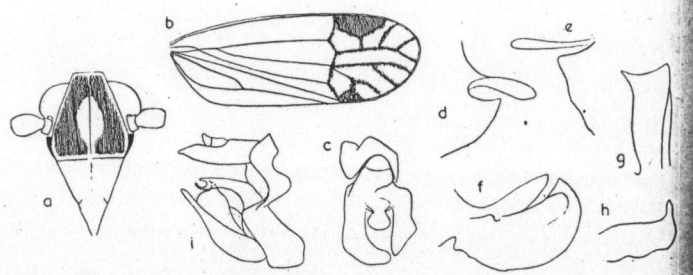
subspecies, *nigrigena*, subsp. n., from Dominica, and *nigrifrons*, subsp. n., from Antigua.

Quilessa nigrigena nigrifrons, subsp. n. (Fig. 14.)

Male.—Length 2·4 mm.; tegmen 2·5 mm. *Female.*—Length 2·8 mm.; tegmen 2·9 mm.

Yellowish testaceous; frons, except for a narrow area over median carina, genæ below antennæ, anterior half of second antennal joint piceous; mesonotum yellow-orange, slightly infuscate anteriorly; abdominal tergites fuscous. Tegmina of male yellowish hyaline, a round spot at stigma fuscous-piceous, veins concolorous; tegmina of female yellowish hyaline, stigma and veins of nodal line and membrane heavily clouded fuscous or piceous.

Fig. 14.



Quilessa nigrigena nigrifrons Fenn.

(*a*) Frons and clypeus; (*b*) tegmen of female; (*c*) anal segment of male; (*d*) left lateral lobe of pygofer; (*e*) right lateral lobe of pygofer; (*f*) ædeagus, left side; (*g*) genital style, ventral view; (*h*) same, lateral view; (*i*) female genitalia, right side.

Anal segment of male asymmetrical, left lateroapical lobe longer than right and curved mesad. Pygofer with an unequal pair of elongate spatulate processes arising from dorsal margin, directed caudad. Ædeagus bilaterally symmetrical, laterally compressed, in profile as shown in figure, a small flap-like lobe on each side near apex. Genital styles as figured.

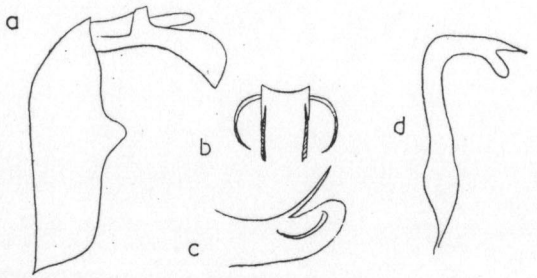
Pregenital sternite of female six-sided, subtriangular. Ovipositor with first valvulæ broad, terminating in a point distally; third valvulæ rather elongate, of subequal width throughout, decurved distally, with upper and lower angles at apex markedly produced, the lower curved upward.

Described from two males and three females taken by the writer in Christian Valley, Antigua, B.W.I. (Aug. 30, 1943). This subspecies is well distinguished by the shape of the processes on the pygofer, the valvulæ of the ovipositor and by the coloration of the frons. The sexual difference in the pigmentation of the tegmina is remarkable, and as yet unparalleled in the family.

Quilessa grenadana, sp. n. (Fig. 15.)

Male.—Length 2·4 mm.; tegmen 2·6 mm. *Female.*—Length 2·7 mm.; tegmen 2·8 mm.

Fig. 15.



Quilessa grenadana Fenn.

(*a*) Anal segment and lateral margin of pygofer; (*b*) ædeagus (distal portion), dorsal view; (*c*) ædeagus, lateral view; (*d*) right genital style, dorsal view.

Testaceous; a longitudinal narrow stripe on each side of median carina of vertex, anterior portion of mesonotum except carinæ fuscous; two impressions on disk of pronotum and most of mesonotum except carinæ and hind margin, metanotum and abdominal sclerites brown or pale fuscous. Tegmina hyaline, faintly suffused yellow, a round fuscous spot at stigma.

Anal segment of male short, bilaterally symmetrical, lateral lobes decurved distally. Pygofer bilaterally symmetrical, laterodorsal angles produced in a blunt lobe. Ædeagus bilaterally symmetrical, relatively short and broad, a pair of spines arising at middle of dorsal margin directed dorsocaudad, a pair arising near apex directed laterad, then curving cephalad and dorsad. Genital styles narrow, curved laterad through 90° near apex, unequally bilobed distally.

Pregenital sternite of female subquadrate, posterior margin shallowly angulately produced. Ovipositor with first valvulæ very short, bluntly conical, third valvulæ relatively large, triangular, with a finger-like lobe on inner face lying alongside dorsal margin.

Described from nineteen males and twenty-two females taken by the writer at 250 ft., St. George's, Grenada, on shrubs (June 21, 1947). This species is distinguished by coloration, in which it is nearest to *Q. maculata* Fenn. and by the shape of the genitalia.

The eggs of this species, 0·35×0·22 mm., bluntly ovoid, are laid singly in humic soil at a depth of one to two inches. They are translucent grey at first, changing later to yellow-orange, and hatch in 12 days. The nymph feed on small rootlets of shrubs and of *Sanseveria*.

Family **Tropiduchidæ** Stål.

Tangidia Uhler.

Uhler, 1895, Proc. Zool. Soc. Lond. v. p. 59.
Haplotype, *Tangidia alternata*. Uhler, *loc. cit.* p. 60.

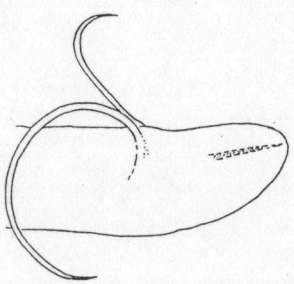
Tangidia montana, sp. n. (Fig. 16.)

Male.—Length 4·6 mm.; tegmen 5·1 mm.

Vertex broader than long in middle (1·9 : 1).

Tawny; base and sides of frons, an elongate triangular area overlying most of median carina of frons, intercarinal areas of vertex and a zig-zag pattern across pronotum, mesonotum except near carinæ, post-femora at apex and abdominal tergites reddish brown to fuscous.

Fig. 16.



Tangidia montana Fenn.
Ædeagus, left side.

Tegmina hyaline, *Sc+R* fork, three sections of *M* and on *Cu* distad of fork on corium, node and transverse veins fuscous, veins otherwise concolorous or pallid. Wings hyaline, veins brown.

Ædeagus laterally compressed, dorsal and ventral margins subparallel, rounded at apex, a slender spine arising near middle on left side of periandrium curved dorsad, cephalad, ventrad and caudad through 180°, a spine at same level on right directed obliquely dorsad and cephalad, widely curved caudad distally; penis with a moderately short slender spine near apex, porrect caudad.

Described from a single male taken by the writer in mountain forest near Grand Etang, Grenada, B.W.I. (Aug. 17, 1947). This species is distinguished by the shape of the ædeagal armature.

The types of all new species and subspecies described above are in the U.S. National Museum.

XXXIV.—*Observations on the Ecology of Arachnids in North-West Iceland.*

By J. L. Cloudsley-Thompson, Department of Zoology, University of Cambridge.

[Plates V and VI.]

Contents.

1. Introduction.

The North-West Peninsula of Iceland was among the regions least thoroughly investigated from an arachnological and entomological point of view, until Fristrup's