# **PROCEEDINGS**

# BIOLOGICAL SOCIETY OF WASHINGTON

# NOTES ON WEST INDIAN FLATIDAE (HOMOPTERA: FULGOROIDEA)

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The following notes are intended to supplement those published five years ago (Proc. Ent. Soc. Wash. 1942, 44: 155-167), and refer to nephesine and selizine genera from the Antilles. Two new genera are established to receive new species, while six others are proposed for known species which are anomalous in the genera to which they are currently assigned. Further new species are added to the genera Antillormenis, Ilesia and Euhyloptera. The types, except where otherwise stated, are in the U. S. National Museum.

#### PSENOFLATA gen. nov.

Frons broader than long (1.3:1), median carina distinct on basal two thirds, absent from apical third, lateral carinae indicated at base, lateral margins carinate; no carinae on clypeus; vertex short, width of head with eyes equal to width of thorax. Pronotum smooth, a shallow depression on each side anteriorly; mesonotum with median carina feebly indicated at base and apex, lateral carinae at base. Post-tibiae with two spines. Tegmina expanding distally, costal and sutural margins slightly diverging, only very slightly curved, apical margin straight, abruptly truncate, apical angle about 80 degrees, sutural angle 90 degrees, very abrupt; apical line uneven but usually discernible, one or two rows of small irregular cells between apical line and the short, more even cells adjoining apical margin, nodal line absent or obscure; Sc simple to apex, R forking between a quarter and two fifths from base, M forking slightly basad of R fork, Cu forking level with or slightly basad of M fork. Wings with Sc and R simple to apex. Post-tibiae with two spines.

Anal segment of male deflexed distally through 75 degrees, deflexed apical part nearly twice as long as horizontal basal part; arising from ventral middle line below anal style and deepening anteriorly a vertical plate terminated by a transparent flat lobe directed posteriorly. Genital styles with an eminence on dorsal border near apex, posterior to this a slight excavation; apical process a rather thin spine, curved backward, upward and slightly forward.

Anal segment of female short, bluntly rounded, with a distinct notch at apex. Ovipositor with third valvulae broad and stout, armed distally with nineteen teeth in a double row; first valvulae with very broad flat-

topped teeth on lower margin and four very small pointed teeth on upper margin. Egg narrowly oval, in profile slightly more pointed at one pole; a long narrow operculum towards one pole.

Genotype, Ormenis brevis Van Duzee, 1907 Bull. Buff. Soc. Nat. 84, 5:38.

The writer has seen the types of Ormenis albipennis Van Duzee and its variety brevis, which is regarded as a good species separated by size, and by the shape of the sutural angle, medioventral process of the anal segment and periandrial spines. O. jamaicensis Fenn. (Proc. But. Soc. Wash. 1942, 44:162) is the same as O. brevis Van Duzee, and becomes a synonym.

#### FLATIRIS gen. nov.

Frons slightly broader than long (1.1 or 1.2:1), median carina distinct on basal two thirds, absent from apical third, lateral carinae ah. sent or obsolete on basal third, lateral margins carinate; clypens without carinae; vertex very short; width of head with eyes subequal to width of thorax. Pronotum with a slight depression anteriorly on each mide of middle line; mesonotum without carinae or lateral carinae indicated only at base. Post-tibiae with one or two spines before apex. Tegmina scarcely widened distally, costal margin very slightly convex, apical margin rounded-truncate, apical angle about 82 degrees, sutural angle about 98 degrees, both rounded, sutural margin straight; Sc strong, simple to apex, R forking slightly more than one-quarter from base, M forking basad of R fork, Cu forking level with or slightly basad of M fork. Apical line fairly even and distinct, nodal line parallel to apical margin, marked by irregular cross-veins and a slight depression from middle of apical quarter of tegmen to near apex of clavus. Wings with Sc simple at apex, R simple, M forked once.

Anal segment of male devoid of median ventral process; deflexed part of segment subequal to horizontal part. Genital styles expanding in width distally, apical process a long curved spine curved anteriorly.

Anal segment of female bluntly rounded. Ovipositor with third valvulae stout, armed on apical margin with 17 to 20 teeth in two rows, with an additional two teeth on an eminence on inner face of each valvula.

Genotype, Ormenis plumbea Fenn., 1941, Proc. Ent. Soc. Wash. 43:198. O. silvestris Fenn. also belong to this genus, which is known only from St. Lucia and Dominica, B. W. I. Its members are distinguished by the frontal proportions, the shape and venation of the tegmina, as well as by the general characters of the male and female genitalia. The difference in the number of post-tibial spines between the two species does not justify the recognition of two sub-genera in view of the agreement of the remaining characters.

#### RICULIFLATA gen, nov.

Frons broader than long (nearly 1.2:1), median carina present on basal two thirds, absent from apical third, lateral carinae absent, margins symmetrically arcuate about a line transversely through middle of frons. Post tibiae bispinose. Tegmina very slightly expanded distally, 2.1 times as long as wide, costal area at level of humeral callosity equal to costal cell, distally rather broader; apical margin rounded-truncate.

apical angle about 75 degrees, broadly rounded, sutural angle about 105 degrees, rounded, not prominent; apical line distinct and fairly even, nodal line obscure, the majority of apical veins not forked; Sc simple, R forking at basal third, M forking slightly basad of R fork, Cu<sub>1</sub> forking slightly basad of M fork. Wings with Sc simple, R simple to apex.

Anal segment of male devoid of median ventral process, smoothly curved downward in distal half through about 30 degrees. Genital styles with dorsal and ventral margins subparallel, apical margin strongly convex, almost semicircular, apical process rather broad, laminate, twisted inward in distal half.

Anal segment of female slightly longer than third valvulae, rather narrow. Ovipositor with third valvulae stout, somewhat elongated and tapering distally, each armed with four teeth on distal margin; first valvulae exceptionally long, pointed at apex, with three teeth both on lower and upper margins near apex. Pregenital sternite with a distinct knob like eminence in middle of posterior margin.

Genotype, Poeciloptera perpusilla Walker, 1851 List Hom. II:467, 61. The genus is known at present only from Jamaica, B. W. I., and is distinguished by the characters of the frons, tegmina and genitalia.

#### ANTHOFLATA gen. nov.

Frons broader than long (1:3, 1), median carina distinct on basal twothirds, absent or only indicated on apical third, lateral carinae absent, lateral margins carinate; clypeus devoid of carinae; vertex very short; head with eyes as wide as pronotum. Pronotum with an impression anteriorly on each side of middle line; mesonotum with median carina present feebly at base and indicated at apex, lateral carinae slightly indicated at base. Post tibiae bispinose. Tegmina expanding distally, costal margin very slightconvex, apical margin rounded-truncate, sutural margin slightly concave, apical angle rounded, about 65 degrees, sutural angle rounded, about 87 degrees, costal area generally wider than costal cell, though subequal to it one quarter from base, not much expanding distally; nodal and apical lines even and distinct, both joining costa anteriorly, apical line parallel to apical margin, nodal line slightly concave basad near its middle, apical areoles subequal to subapical areoles, longer than veins of costal area, a few veins distad of apical line forked, some of the subapical veins with an ovate callus; Sc simple to apex, R forking just basad of middle of tegmen, M forking basad of R fork, about two fifths from base, Cu forking slightly basad of M fork, or at same level. Wings with Sc and R simple, M forked once, Cu1 with five branches.

Anal segment of male short, thin, apical margin bluntly rounded, only slightly deflexed distally, devoid of a median ventral process. Genital styles slightly expanding distally, apical process a long spine curved anteriorly towards apex.

Anal segment of female short, bluntly rounded. Ovipositor with third valvulae broad and stout, armed distally with about 17 curved teeth, rather long, in two rows; a patch of setae on inner face of each valvula; first valvulae with three rectangular notches near apex on ventral margin, apex pointed, two minute teeth on upper margin.

Egg rectangular-ovate, tapering towards one pole, heavily beset with

minute spinose papillose chorionic processes at narrower pole and on one side near it.

Epidermal secretion of nymphs reddish-brown.

Genotype, Ormenis fortunata Fennah, 1941, Proc. Ent. Soc. Wash., 43:198.

#### Anthofiata ingae n. sp.

Male. Length, 6.8 mm.; tegmen, 6.6 mm. Female. Length, 6.6 mm.; tegmen, 7.8 mm.

Ochraceous clouded fuscous; basal part of front, pronotum, fore and middle legs, post tibiae and tarsi and abdominal sclerites rather more infuscate; mesonotum brown, fuscous laterad of discal margins; tegmina dull brown, corium mainly semi-transparent in basal two thirds, a large clear round transparent spot in M just basad of nodal line, corium between this spot and apical third of clavus fuscous; costal area, membrane and clavus fuscous, a round piceous spot in middle of clavus; veins concolorous, Sc, R and M at base narrowly lined fuscous. Insect in life powdered light brown.

Aedeagus tubular, slightly curved upward distally, apex in profile very obliquely subtruncate, a pair of long spines arising at apex, directed forward ventrally, the spine on left exceeding three-quarters length of aedeagus, slightly incurved, the spine on right shorter and more strongly incurved, posterior ventral margin of periandrium sinuately tapering to a point.

Ovipositor with second valvulae in profile with ventral margin straight, dorsal margin inflated at base, tapering to apex with a slight transverse ridge or step upward at apical quarter.

Described from 12 males and 10 females taken by the writer at Dudmar (Oct. 20, 1943) and Grand Etang (Oct. 28, 1943), Grenada, B. W. L. on Inga laurina. This species differs from A. fortunata in the left spine of the aedeagus which is fully twice as long as that in fortunata, and in the tegminal pattern, the position of the distal spot being more posterior, and whereas an oval transparent spot is present near the base of the corium in fortunata (giving the tegmen a resemblance to a face mask) the corresponding area of the corium in ingae is only semi-transparent and not clearly defined.

#### ALCAXOR gen. nov.

Frons slightly longer than broad, median carina distinct in basal half, absent in apical half, lateral carinae absent, lateral margins carinate, diverging gradually to below level of antennae thence incurved to suture; clypeus devoid of carinae; vertex short, scarcely half as long as pronotum. Pronotum with disc flat, anteriorly convex, a short impressed horizontal ridge behind eyes, posterior margin shallowly rounded; mesonotum not much swollen anteriorly, devoid of carinae, disc almost flat. Post-tibiae with one spine. Abdomen in profile conical. Tegmina 1.8 times as long as broad at widest part, expanding distally, costal margin slightly convex, apical margin rounded-truncate, apical angle 80 degrees, rounded, sutural angle 98 degrees, rounded, commissural margin straight or very slightly concave; costal area rather broader than costal cell distad of humeral elevation, Sc simple to apex, R forking at middle of tegmen, M forking in basal quarter, Cu forking slightly basad of M

fork; apical line fairly even and distinct, apical areoles scarcely longer than width of costal area, nodal line represented by a few irregular transverse veins, subapical areoles fewer than apical and twice as long as them, three or four longitudinal veins forked once between nodal and apical lines, no veins forked distad of apical line; few transverse veinlets on corium. Wings with Sc simple to apex, R once forked, lower branch joining first branch of M.

Anal segment of male elongate, narrow, deflexed through 55 degrees distad of anal foramen, apical quarter further deflexed through 60 degrees, expanded laterally and produced in a finger-like lobe on each side near apex. Pygofer with anal angles not produced, posterior margin oblique, slightly convex. Genital styles broad, expanding distally, with a large U-shaped excavation at apex bounded by a pointed eminence on each side.

Genotype, Alcaxor pallidus n. sp.

### Alcaxor pallidus n. sp.

Male. Length, 5.5 mm.; tegmen, 7.0 mm.

Pallid green; eyes red, tips of post-tibial spines black. Insect in life powdered very pale grey.

Aedeagus tubular, curved upward distally, a pair of short spines dorsally at apex directed anteriorly, on each side ventrally near apex a stout bifurcate spine directed anteriorly, both branches shallowly curved, one half as long as other; on each side at base of the bifurcate spine an oval callus.

Described from one male taken by the writer at 800 ft. in mountain forest near Saltoun, Dominica, B. W. I. (June 18, 1939) on Miconia sp.

#### ANTILLORMENIS Fennah

Fennah, 1942, Proc. Ent. Soc. Wash., 44, 8:157.

Orthotype, Ormenis contaminata Uhler, Proc. Zool. Soc. Lond. 1895: 71.

Uhler's description was based on a series of insects that included both A. contaminata Uhl. and A. sancti-vincenti Fenn., as his specimens in the British Museum and U. S. National Museum plainly reveal. The holotype agrees with the redescription of contaminata Uhl. given by the writer (Proc. Ent. Soc. Wash., 1942, 43:202).

#### Antillormenis martinicensis n. sp.

Male. Length, 6.2 mm.; tegmen, 6.5 mm. Female. Length, 6.4 mm.; tegmen, 6.7 mm.

Pale testaceous; disc of clypeus, mesonotum, abdominal tergites and genitalia fuscous. Tegmina tawny, a broad piceous band overlying costa basally, and between Sc and R to apex; veins distad of apical line fuscous, membrane fuscous, base of clavus clouded fuscous. Wings slightly infuscate. Insect in life powdered pearly grey or pale fawn.

Anal segment of male with medioventral process almost square, ventral margin straight. Aedcagus with a pair of dorsal spines arising at apex and directed anteriorly for more than half length of aedeagus, ventrally a pair of shorter and stouter spines arising one fifth from apex, curved anteriorly and turned outwards at tip; ventral posterior margin

of periandrium cleft in middle with lateral eminences scarcely pointed.

Medio-ventral notch on posterior margin of pregenital sternite of
female twice as broad as deep, the eminence below it roundly convex, not
at all angulate.

Described from one male and one female collected by the writer at Fort de-France, Martinique (March 25, 1944) on West Indian lime. This species is close to A. sanctaliciensis Fenn., but the dorsal spines of the aedeagus are longer and the ventral spines are slightly longer and not nearly as twisted laterally as in sanctaliciensis. The female differs from sanctaliciensis in having the notch on the posterior margin of the seventh sternite wider, and the prominent swelling in the middle of the sternite broadly rounded on its posterior margin in ventral view, whereas in the St. Lucian species it is bluntly rectangulate.

It is almost certainly this species which Melichar has illustrated in Pl. 5, fig. 8 of his Monograph, as he quotes Martinique as a locality for Antillean specimens of what he considered *Poeciloptera pallidicosta* Wik.

#### ILESIA Fennah

Fennah, 1942, Proc. Ent. Soc. Wash., 44:160.
Orthotype, Ormenis septempunctata Fennah, 1941, Proc. Ent. Soc. Wash., 43:196.

#### Ilesia falcata n. sp.

Male. Length, 4.9 mm.; tegmen, 5.4 mm. Female. Length, 4.6 mm.; tegmen, 5.8 mm.

Testaceous or pale fuscous; mesonotum brown, suffused fuscous, abdominal sclerites pale fuscous. Tegmina fuscous, darker on corium, paler between costal margin and Sc, in apical arcoles and along claval suture, a piceous spot at apex of clavus. Wings smoky, veins darker.

Aedeagus tubular, curved upward distally, a short stout curved spine laterally near basal third, a bifurcate spine arising ventrally below apex, one branch slender, subequal to aedeagus in length and curved below it, the other stouter, half as long as the preceding, equally curved but turned outward at tip.

Seventh sternite of female with median notch on posterior margin ventrally nearly twice as broad as deep.

Described from 42 males and 53 females collected by the writer at Cades Bay and Half moon Bay, Antigua, B. W. I. (Aug. 13, Sept. 10, 1943) on Coccoloba uvifera, Caesalpinia bundac, and Acacia sp. This species is distinguished by the shape of the aedeagal spines and of the medio-ventral notch in the pregenital sternite.

#### EUHYLOPTERA Fennah

Fennah, 1945, Proc. U. S. Nat. Mus., 95:499. Orthotype, Euhyloptera corticalis Fenn., loc. cit.: 500.

#### Euhyloptera antillana n. sp.

Male. Length, 4.2 mm.; tegmen, 5.0 mm. Female. Length, 4.3 mm.; tegmen, 5.2 mm.

From as broad as long. Tegmina 2.3 times as long as wide in widest part, wider in basal half than in distal half, costal margin convex to

node, thence straight, apical margin slightly oblique and slightly convex, apical angle about 80 degrees, rounded, sutural angle about 100 degrees, rounded, commissural margin very slightly concave distad of apex of clavus.

Testaceous; vertex, pronotum, mesonotum, pleurites, abdominal sclerites and genitalia fuscous, membrane of abdomen pallid. Tegmina yellowish brown, basal part of costal area, Sc, forks of R, M, and Cu lined fuscous, membrane fuscous, veins paler. Wings slightly infuscate, veins darker. Insect in life powdered pale brown or mottled.

Anal segment of male long, narrow, deflexed distally, with a notch on apical margin extending half way to anal foramen. Pygofer with anal angles prominent in form of a semicircular lobe. Aedeagus tubular, curved upward distally, a pair of stout spines on upper margin at base directed caudad, and from the base of these on each side a sclerotised ridge curving ventrolaterally to near apex; apical lobes of aedeagus horizontal, paddle shaped in ventral view, with a minute tooth externally at base; a long spinose process on each side arising near apex and curved obliquely ventrally then somewhat angularly forward, at which point a very long slender filament is given off posteriorly and lies along ventral surface of aedeagus to apex. Genital styles with apical process in form of a curved sickle-shaped spine, distally rounded, with a minute tooth directed ventrad at base distally, the whole process lying adpressed to apex to form a groove or cleft.

Anal segment of female more than half as long as abdomen. Third valvulae of ovipositor oval in profile, one quarter length of anal segment. Egg bluntly oval, smooth, somewhat flattened on one side; 0.75 mm. long, 0.3 mm. wide.

Described from 12 males and 23 females taken by the writer near Bacolet, Grenada, B. W. I. (Nov. 12-14, 1943) on low bushes near forest. The writer recognizes two subspecies, grenadana and dentata. former is the typical subspecies and is recognizable in having an irregular linear spot parallel to the commissural margin in the middle of the clavus, and the apical process of the genital styles with the basal tooth extremely small or evanescent; dentata, which is represented in the writer's collection by 19 males and 28 females collected at Petit Bordel. St. Vincent, B. W. I. (Aug. 19-25, 1941) on Cordia sp. and low bushes, is distinguished by having a subrectangular spot parallel to the commissural margin in the middle of the clavus, while the apical process of the genital styles bears a stout and prominent tooth at its base on the distal side. Euhyloptera antillana differs from corticalis Fenn. in having the costal margin less convex in the basal half of the tegmen, the apical and sutural angles broadly rounded, not abruptly angulate, and the apical margin of the tegmina convex, not truncate; in the genital styles the apical process is narrower distally than in corticalis where the spine is 80 prominent as almost to form a flange; in the aedeagus the pair of stout basal spines is absent in corticalis, which, however, has a minute median spine dorsally at the base set on a slight membranous eminence and apically a pair of short dorsal spines which are absent in antillana; the caudad filament is twice as long in antillana as in corticalis.

This genus is of exceptional interest in occurring both in the mainland fauna of Trinidad and the very different island fauna of the Windward Islands. The fullest advantage has been taken of the writer's long series

to determine that the differences enumerated above are constant, and there is no room for doubt that the Windward Island insects are specifically distinct from the Trinidad species, and have split into warrantable subspecies. This is the only Flatine genus common to South America and to the Lesser Antilles, and its invasion of the islands would not appear to have been of very recent occurrence.

#### ORMENINA gen. nov.

Frons slightly longer than broad, median carina present in basal two thirds, lateral carinae indicated basally, lateral margins carinate; vertex short. Pronotum anteriorly convex, posteriorly concave; mesonotum with median and lateral carinae feebly indicated. Tegmina 2.3 times as long as broad, widening to apex; costal margin moderately convex, apical margin truncate or very slightly concave, sutural margin concave, apical angle 75 degrees abruptly rounded at tip, sutural angle 60 degrees, abruptly rounded; costal area as wide as costal cell, Sc simple to apex, R and Cu forked at about same level, M slightly more distally, nodal line distinct, subapical areoles twice as long as apical, veins mostly forked distad of cross veins. Post-tibiae unispinose.

Anal segment of male long, narrow, deflexed close to apex, apical margin distinctly notched, a small ventrally-directed process laterally on each side at about level of anus. Pygofer with lateral angles not prominent. Genital styles expanding distally, ventral margin convex curving upward to apex, dorsal margin convex distally, apical process narrow, angulately bent posteriorly to lie close to apical margin.

Anal segment of female long and fairly broad. Ovipositor with third valvulae ovate in profile, small and unarmed.

Genotype, Poeciloptera paupera Walker, 1858, List Hom. Suppl.: 119.

This genus is near to Euhyloptera Fenn. to judge by tegminal shape and characters of the genitalia. O. paupera Wlk. has a white transparent area on the tegmina at the level of the node which invades the costal margin; in the other species of this genus, O. coffeacola Dozier, the pale transparent spot is round and does not attain the costal margin. This genus is known only from Hispaniola.

#### ACANTHOFLATA gen. nov.

Frons slightly longer than wide, median carina present basally, lateral margins carinate; vertex almost twice as wide as long, disc depressed. Pronotum anteriorly convex, posteriorly concave; mesonotum twice as long as pronotum, feebly carinate. Tegmina three times as long as broad, costal margin strongly convex in basal half, slightly concave distally, sutural margin straight or slightly concave meeting costal margin distally in a narrow point; clavus long, gibbous at base.

Anal segment of male only slightly deflexed distally, twisted to form a median vertical plate distad of anal foramen. Genital styles with dorsal and ventral margins fairly straight, apical process in profile in form of a sinuate lobe with a sickle-shaped decurved spine at posterior extremity.

Anal segment of female large, ovate. Ovipositor with third valvulae small, ovate, devoid of teeth.

Genotype, Rhynchopteryx salina Dozier, 1927, Jour. N. Y. Ent. Soc.

In the shape of the costal margin, of the anal segment of the male, and to a lesser degree of the aedeagus and genital styles this genus is most nearly related **Euhyloptera**.

#### CAPISTRA gen. nov.

Frons as long as broad, median carina strongly present in basal half, absent from apical half, lateral carinae only indicated at base, lateral margins carinate, no carinae on clypeus, vertex broader than long (4:1). Pronotum slightly overlapping vertex anteriorly, somewhat emarginate behind eyes, deeply roundly excavated posteriorly; mesonotum broader than long, median and lateral carinae weakly present at base, obsolete on disc. Post-tibiae bispinose. Tegmina 2.5 times as long as wide, costal margin convex near base, slightly concave near node, tapering slightly to level of nodal line, symmetrically and almost semicircularly rounded at apex; costal area granulate, three times as broad as costal cell, Se simple to apex, R forking beyond middle of tegmen, M forking near basal third, Cu forking distad of M fork; nodal line somewhat irregular but distinct, apical line subparallel to apical margin, even and distinct, apical veins frequently shortly forked. Wings with R simple, M forked once.

Anal segment of male in profile with sides deep near base, narrowing apically; apical third of segment medially grooved and deflexed. Genital styles moderately broad, narrowing distally, apical margin rounded, apical process a stout vertical spine.

Anal segment of female short and broad. Ovipositor with third valvulae beset distally with nine stout teeth, eight in a row and one tooth distinctly basad near dorsal margin; second valvulae tapering distally, first valvulae with three rounded teeth on lower margin and three minute teeth on upper.

Egg elongate-oval, 0.9 mm. long, 0.3 mm. wide, minutely reticulate at narrower pole.

Genotype, Capistra montana, n. sp.

# Capistra montana n. sp.

Male. Length, 5.5 mm.; tegmen, 6.4 mm. Female. Length, 5.6 mm.; tegmen, 6.8 mm.

Vertex, pronotum and mesonotum testaceous or fuscous, frons narrowly infuscate at base, otherwise stramineous; clypeus, sides of thorax and legs stramineous; abdominal sclerites and genitalia fuscous, membrane pallid. Tegmina stramineous, slightly clouded fuscous beyond nodal line, two small dark spots between M and fork of Cu, clavus dark at base. Wings clouded fuscous. Insect in life powdered pale tawny or fawn.

Aedeagus tubular, curved upward near apex, terminating on each side apically in a knob, denticulate posteriorly; ventro-laterally on each side a long curved process, slightly expanded and blade-like near tip, directed ventrally and anteriorly.

Ovipositor with second valvulae with ventral margin straight, apex pointed, dorsal margin convex near base, sinuately narrowing distally, a transparent dome-like eminence just before apex.

# 116 Proceedings of the Biological Society of Washington

Described from four males and five females taken by the writer in mountain forest near Ottley's Level, St. Kitts, B. W. I. (Sept. 10, 1943). Type in British Museum, allotype female and paratype male in U. S. N. M. This genus is readily recognizable by the shape of the tegmina and by their rather shallowly tectiform carriage.

#### EXPLANATION OF PLATE VI

- 1. Psenoflata brevis, Fenn., tegmen.
- 2. Flatiris plumbea Fenn., tegmen.
- 3. Riculiflata perpusilla Fenn., tegmen.
- 4. Anthoflata ingae Fenn., tegmen.
- 5. Alcaxor pallidus Fenn., tegmen.
- Antillormenis martinicensis Fenn., anal segment, (a) posterior view of process.
- 7. Idem, genital style.
- 8. Idem, aedeagus.
- 9. Idem, ventral margin of pregenital sternite of female.
- 10. Idem, ventral margin of pregenital sternite, profile.
- 11. Ilesia falcata Fenn., anal segment, pygofer and genital style.
- 12. Idem, aedeagus.
- 13. Idem, medial excavation in posterior margin of pregenital sternite.
- 14. Euhyloptera antillana Fenn., anal segment, pygofer and genital style.
- 15. Idem, aedeagus, (a, b) details of process with filament removed.
- 16. Idem, egg.
- 17. Anthoflata ingae Fenn., aedeagus.
- 18. Idem, egg.
- 19. Idem, second valvulae of ovipositor.
- 20. Flatiris plumbea Fenn., second valvulae of ovipositor.
- 21. Idem, egg (a) anterior view, (b) side view.
- 22. Alcazor pallidus Fenn., anal segment, pygofer and genital style.
- 23. Idem, aedeagus.
- 24. Capistra montana Fenn., anal segment.
- 25. Idem, aedeagus, (a) posterior ventral margin of periandrium.
- 26. Idem, second valvulae of ovipositor.
- 27. Idem, genital style.
- 28. Idem, tegmen.

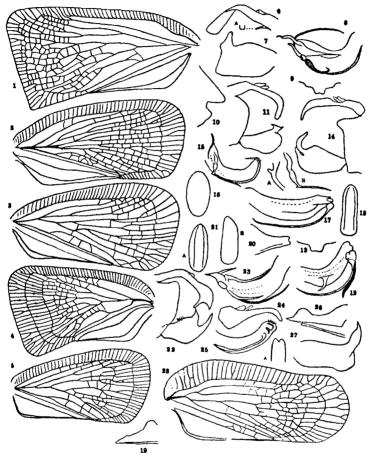


Plate VI. West Indian Flatidae