

NOTES ON SOME JAMAICAN CULICIDÆ.

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1. The larva and pupa of *Uranotenia Lowii*, Theobald (Fig. 23). Collected from a pool covered with *Marsilia polycarpa*, Hooker, near the bridge over the Rio Cobre Canal, Spanish Town, Jamaica. Found in association with *Culex fatigans*, Wied., and *Cellia albipes*, Theo., January 1st, 1905. Seen in the breeding-jar, the larvæ assumed a horizontal position, just below the surface film, the extremity of the siphon alone being in contact with the surface film. They moved forward in sharp jerks quite unlike any other Jamaican Culicid.

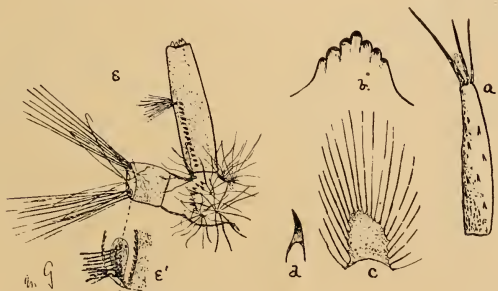


Fig. 23.—*a* antenna; *b* mentum; *c* scale of pecten; *d* scale of comb; *e* 8th and 9th abdominal segments; *e'* plate of origin of ventral tuft of hairs.

Head.—Very dark brown, almost black; antennæ short, no lateral tuft; shaft with a few short spines; terminal spines three, one somewhat longer than the others, about two-thirds the length of shaft; an ovate lamina between the spines; mentum with seven rounded teeth. Thoracic and anterior abdominal hairs feathered; posterior abdominal hairs simple; a number of tufted hairs on the abdominal segments in addition to the lateral hairs, no tufted hairs observed on the thorax. Rays of tufts few, long, slender.

Tube.—Subcylindrical, five times as long as broad; pair of tufted hairs at the middle of posterior border. Pecten of tube with double row of twelve to fifteen scales, scales very thin laminæ, bordered with many fine hairs (much longer than serrations figured by Felt, New York State

Museum, Bull. 79, Ent. 22, p. 344, 1904, in *U. sapphirina*, Osten Sacken). Row of pecten scales reach from the base of tube up to level of tufted hairs. Upper scales overlap one another. Comb of eighth segment, an irregular row of eight to nine simple curved spines springing from a chitinous plate. Chitinous collar completely encircling ninth segment. Dorsal and ventral tufts of hairs spring from oval chitinous plates attached to collar by narrow isthmuses (similar plates are figured by Felt in *U. sapphirina*, Osten Sacken). Anal papillæ long, slender, divergent.

Pupa.—Thorax and abdomen with scattered tufted hairs. Siphons subcylindrical, about eight times as long as broad; bases deeply chitinized. Fins acuminate, mid-rib not projecting beyond border. Borders deeply serrated; two halves of fins very unequal.

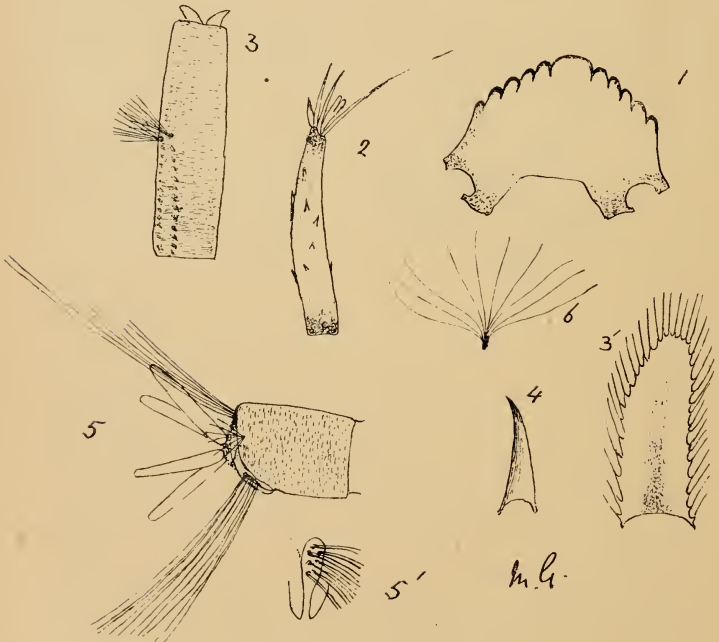


Fig. 24.—*Uranotænia Socialis*, n. sp., Theo.

2. Adult larva of *Uranotania Socialis*, n. sp., Theo. (Fig. 24). Collected at Rockport, near Kinpta, Jamaica, in permanent pools, in association with *Cellia albipes*, Theo., and *Melanoconion atratus*, Theo. March and April, 1905.

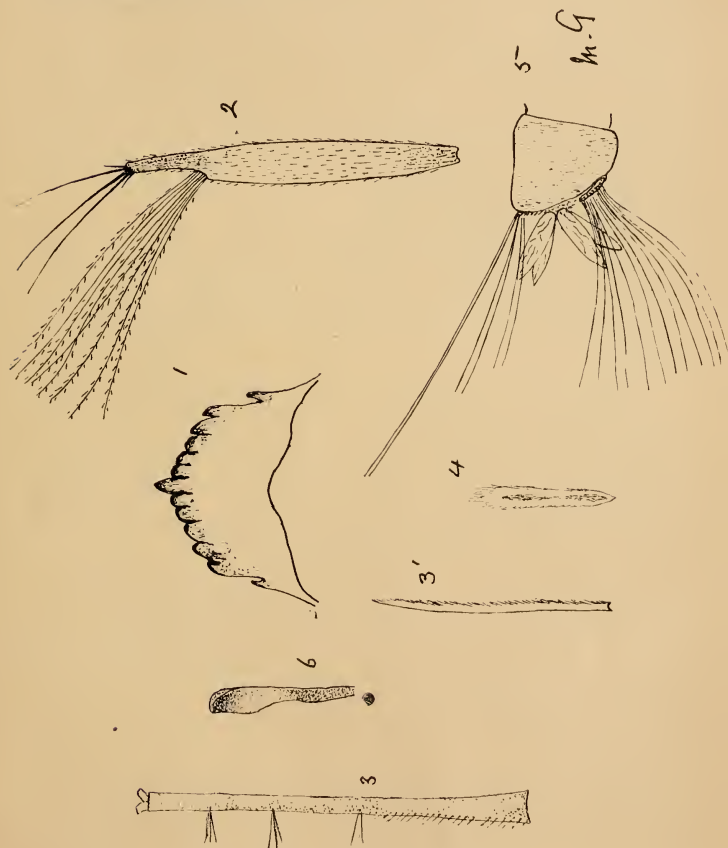


Fig. 25.—*Melanoconion atratus*, n. sp., Theo.

The adult larva at rest lies horizontally just under the surface film, and moves forward in spasmodic jerks. Thorax and abdomen sparingly covered with tufted hairs (6). Mentum stout, teeth eleven in number, apical tooth broad and flat (1). Antennæ with lateral hair tufts; three terminal hairs, innermost longest, ending in long thread; a lanceolate and a bilobed blade between hairs (2). Siphon nearly cylindrical, about four times as long as broad, a pair of tufted hairs at the middle of the posterior border. Pecten of 10-12 very thin scales bordered with fine hairs, each scale somewhat thickened in the centre. Row of scales reaches half way up tube (3.3'). Comb of 7 short, stout, curved spines, in a single curved row (4). Anal papillæ small. Ventral and dorsal tufts of hairs spring from spatulate processes attached to the main chitinous band by long, narrow isthmuses (5.5'). Chitinous collar complete.

3. Adult larva of *Melanoconion atratus*, n. sp., Theo. (Fig. 25). Small transparent hairy larvæ, with very delicate elongated siphons, abounding in pools in mangrove swamps. Collected all the year round. Mentum of 13 teeth; apical tooth elongated (1). Antennæ proportionately large; lateral hair tuft of many long feathered hairs; terminal hairs long and stout (2).

Siphon many times longer than broad, slightly constricted in the middle, with several pairs of tufted hairs along the posterior border. Row of pecten occurring along lower third. Scales about 20, long and delicate, with many fine hairs along the concave border (3.3'). Comb of numerous flattened elongated scales bordered with fine setæ (4). Anal papillæ small. Ventral tuft of hairs springing from separate plate (5). Chitinous collar complete. Siphons of pupa deeply chitinized at apices (6).

4. Adult larva of *Culex confirmatus*, Arr. (Fig. 26). Dark brown (nearly black), very active, voracious larvæ found in fresh water pools at the Rio Cobre Canal Dam, near Spanish Town, Jamaica, January 17th, 1905. Abdomen and thorax thickly covered with small spines (1). Mentum a wide angle of about 40 teeth (2). Antennæ short and stout; lateral tuft at the middle, of three hairs. Terminal hairs three in number, several shorter spines and a wedge-shaped lamella (3). Siphon about $1\frac{1}{2}$ times as long as broad; a tufted hair at the posterior border near the apex. Row of pecten 15-20 strong spines, each with several smaller teeth at the base (4.4'). Comb of 20-25 short oval scales in a triangular patch; each scale bordered with numerous fine setæ (5). Anal papillæ lanceolate, nearly as long as the ventral tuft (6). Hairs of the ventral tuft spring from a separate plate. Chitinous collar of ninth segment complete.

Eggs elongated, laid separately on the surface of the water, papillæ narrow, long, flattened, parallel cells (7.7').

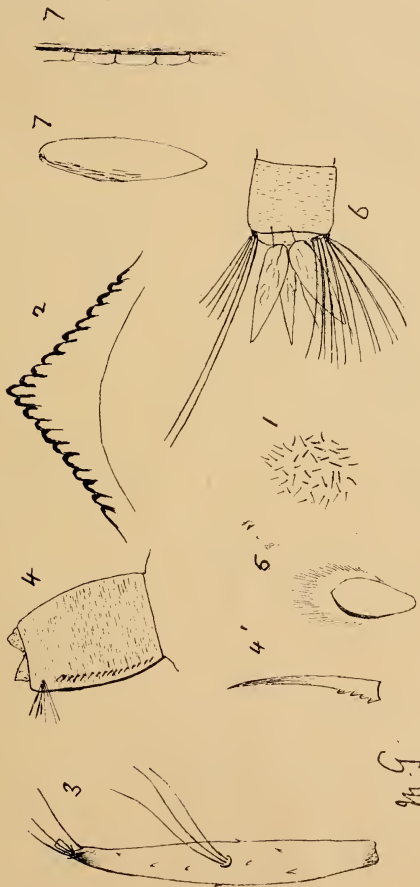


Fig. 26.—*Culex confirmatus*, Arr.

Adult larvæ of *Culex janitor*, Theo. (Fig. 27). Collected with *Deinocerites cancer*, Theo., from crab holes along the sea shore. The

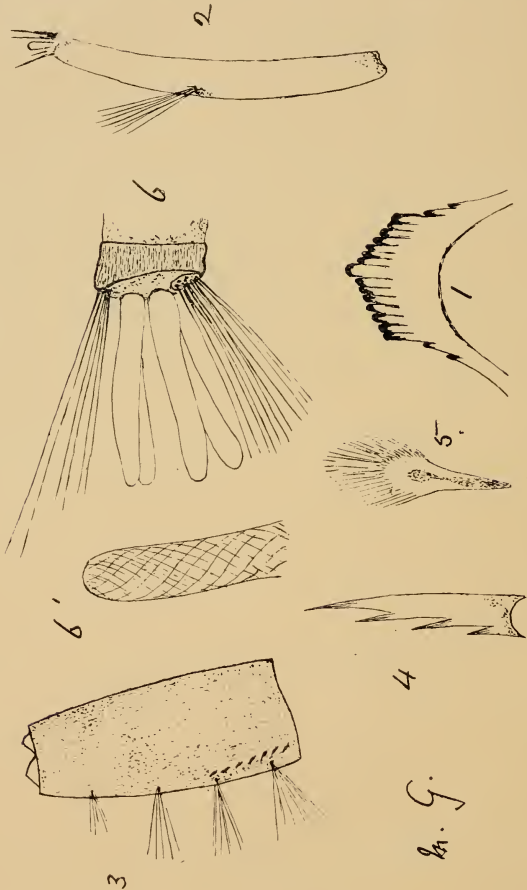


Fig. 27.—*Culex janitor*, Theo.

water in the holes is brackish. Larvæ abundant after seasonal rains in May and October. Mentum with steep sides; summit a wide angle of 15 rounded teeth (1). Antenna: shaft stout, quite smooth, devoid of spines; lateral hair tuft arising from the middle, composed of a few short, fine, simple hairs; terminal hairs short, three somewhat larger than the others, a flattened lamella between them (2). Siphon $2\frac{1}{2}$ times as long as broad; four pairs of tufted hairs along posterior border, lowest pair arising quite near base (3). Row of pecten of seven toothed spines (4). Comb of 70-80 small scales arranged in a triangle, scale bordered with many fine hairs, shaft thickened along the centre (5). Narrow chitinous collar completely encircling ninth segment (6). Basal tuft of hairs arising from a separate plate. Anal papillæ cylindrical, rounded at the free ends, thickened by spiral interlacing strands of chitin (6'). Eggs laid in rafts.

6. Adult larva of *Culex microsquamosus*, n. sp., Theobald (Fig. 28). Collected in algæ-covered pools at the Rio Cobre Canal Dam, near Spanish Town, Jamaica, January 17th, 1905. Mentum a wide angle of many teeth, one of the outer teeth on each side rising considerably above the others (1). Antennæ stout and relatively large, lateral tuft of many feathered hairs. Apical hairs simple, 2 long, 2 short, a wedge-shaped lamella at apex (2).

Siphon many times longer than broad, in adult larvæ as long as the thorax and abdomen, slightly curved forward in its upper half; row of pecten in lower third of 15-18 scales, each scale a flattened lamella with 5-6 terminal serratures and 2-3 basal ones. Four bifid hairs along posterior margin of tube increasing in size from above downwards (3.3'). Comb of 30-40 delicate scales in a rough triangle, each scale bordered with fine hairs along the free margin (4). Anal papillæ ovate, nearly as long as ventral hair tuft (5). Chitinous collar of ninth segment complete, broad. Eggs laid in rafts.

Mosquitoes bred from these larvæ were forwarded to Mr. Theobald, who has kindly sent me the following description:

"*Culex microsquamosus*, n. sp.—Thorax clear bright brown, unadorned, pleura pale gray. Proboscis indistinctly pale-banded in the middle. Abdomen deep blackish, with basal pale bands. Legs deep brown, unbanded; base and venter of femora gray; apex of hind tibiæ pale. Palpi of male acuminate, last two segments hairy, jet black, remainder mostly ochraceous brown. Male genitalia with three flattened spines and one foliate plate on the inner lateral process.

“ ♀.—Head deep brown, with narrow curved pale grayish scales and black and deep ochraceous upright forked ones, some small gray flat scales

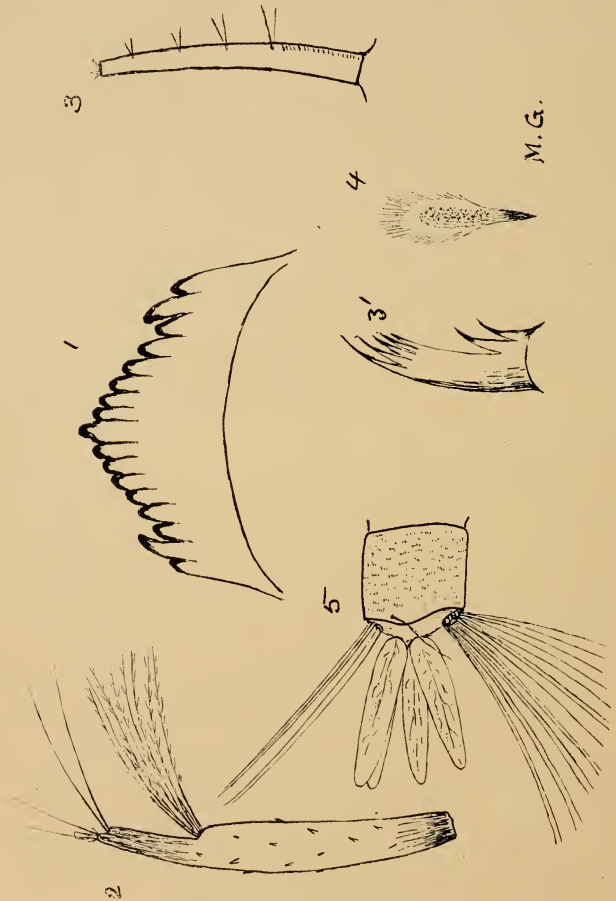


Fig. 28.—*Culex microsquamosus*, n. sp., Theo.

laterally. Clypeus brown. Proboscis black, showing a pale, indistinct median area in some lights. Palpi short, black-scaled, testaceous in the middle owing to a bare area. Antennæ deep brown. Thorax clear brown, scantily clothed with very small narrow curved pale bronzy scales (in some lights the metanotum is deeper brown); scutellum paler, gray in some lights, with small narrow curved bronzy-brown scales and rather long deep-brown border bristles, eight to the mid-lobe; metanotum ochraceous-brown to brown; pleura pale shiny gray, with some rows of small black bristles.

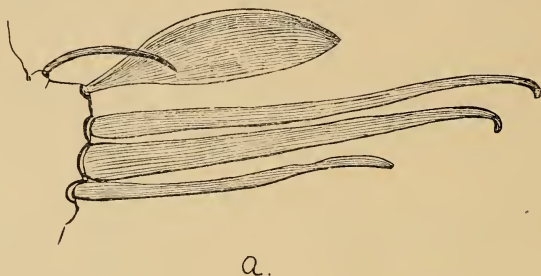
“ Abdomen deep blackish brown, with basal pale bands to the third, fourth, fifth and sixth segments, traces on the seventh, pronounced on the eighth; the first segment is nude, shiny, testaceous, with brown hairs and two small median patches of black scales, border bristles pale ochraceous.

“ Legs deep brown, unbanded; base and venter of femora gray, also to some extent the venter of the tibiæ and some pale scales beneath the tarsi. Apex of hind tibiæ with a pale spot, femoral and tibial hairs pallid; unguis small, equal, simple, much curved. Hind tibiæ and metatarsi about equal. Wings with typical *Culex* scales; first submarginal cell considerable longer and a little narrower than the second posterior cell, its base near the base of the wing, its stem one-third of the length of the cell; second posterior cell small, its stem about two-thirds the length of the cell; lower branch of the fork much curved; posterior cross-vein rather longer than the mid, not quite its own length distant from it; median vein-scales on the third rather large and dusky. Halteres with white stem and fuscous knob, sharply contracted. Length 4 mm.

“ ♂ similar to ♀. Palpi with acuminate apical segment, the last two and apex of the antepenultimate segment black, with black hair tufts, remainder of palpi brown. Proboscis deep brown, with an indistinct broad median pale band. Fork cells small, the first submarginal longer and narrower than the second posterior cell, its base nearer the base of the wing; the stem about two-thirds the length of the cell; stem of the second posterior nearly as long as the cell. Unguis of the fore and mid legs unequal, uniserrated; hind equal and simple. Genitalia with sickle-shaped claspers, internal prominence with three thick flat spines, the mid broadest, the smallest not hooked at the apex, foliate plate acute apically, with a prominent curved spine over its base (fig. 29). Length 4 mm.

“ *Observations.*—It comes very near *C. fatigans* and its allies, but the male genitalia differ, and the small thoracic scales at once separate it.

The form of the first fork-cell varies. A very marked *variety* occurs, in which the abdominal banding is almost absent. This variety shows a few pale scales on the apical borders of some of the segments, and the posterior border-bristles on the mid-lobe of the scutellum are seven in number. The characters are not sufficient to separate it as a distinct species, and the male sent with it exactly resembles that of the type. Another speci-



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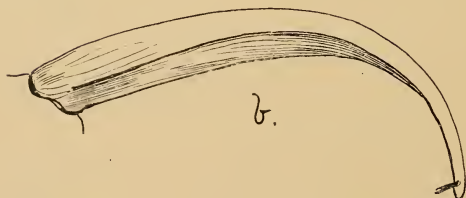


Fig. 29.—*Culex microsquamosus*, n. sp., Theo. a Internal lateral process of basal lobe; b clasper.

men differs from the type in the rather more elongate form of the wing, but resembles it in all other features, and cannot be separated."

Janthinosoma Johnstonii, n. sp.—Head covered with broad pale yellow and violet spindle-shaped scales; a cluster of black bristles between the eyes; a group of upright black forked scales at the back of the head. Eyes deep reddish-purple, bordered posteriorly by a row of white scales. Proboscis and palpi black, covered with black scales with violet reflections,

Clypeus black. Prothoracic lobes with white scales and long black bristles. Mesothorax covered with creamy white spindle-shaped scales on a black background; scales arranged more thickly on the lateral areas; a number of black bristles scattered over the mesothorax, especially abundant on the postero-lateral areas. Pleura with silvery scales and golden hairs. Scutellum with white scales and a median and two lateral groups of numerous long black bristles. Metathorax black.

Abdomen violet, basal segment with pearly-white scales and golden bristles; next five segments with lateral apical white-scaled areas; numerous black hairs scattered over the segments. Venter white scaled, with narrow basal bands of violet scales. Legs with metallic violet reflections, base and most of the venter of femora yellow scaled; knee spot white, small; third hind tarsus completely white except a few apical black bristles. Ungues all equal and uniserrate. Wings with the first submarginal cell a little longer and nearly as broad as the second posterior cell, its stem the same length as the cell; stem of the second posterior about as long as the cell; halteres with stem and knob pale yellow. Length 4.5 mm.

Observations.—Described from four ♀'s taken on a horse at the foot of the Red Hills, 5½ miles along the Molyne's Road, Kingston, Jamaica, early in July, 1905. Found in association with the brilliant *J. discrucians*, Walker. It is apparently closely allied to *J. Arribalzaga*, Giles, from which it may be distinguished by its wing venation, scutellar bristles and white third hind tarsus.

WHAT IS EUCHÆCA COMPTARIA, WALKER?

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In 1874 Dr. Packard¹ described two nearly allied species of Geometrid moths, one as *Larentia duodecimlineata*, the types being from California, and the other as *Larentia perlineata*, from New York. There can be no doubt, I think, as to the insect he had before him when describing *perlineata*. That species seems to be a distinct and easily recognized one, although there is a pretty and not uncommon variety of it which is sometimes confused with *Euchæca lucata* by those who are not very familiar with this group of moths.

We cannot so readily determine what the type of *12-lineata* was, because there are two species very similar in outward appearance, though belonging, it would seem, to different genera, occurring in California, whence

1. Proc. Boston Soc. Nat. Hist., XVI, 19, 1874.