

NOTES ON SOME NEW MOSQUITOES FROM JAMAICA, WEST INDIES.

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The following are brief notices of three new species of mosquitoes, full accounts of which will be published in the second edition of "The Mosquitoes or Culicidæ of Jamaica," now in course of preparation.

Edes uncatas, n. sp.—Close to *Stegomyia mediovitata*, Coq., from Santo Domingo (CAN. ENT., Feb., 1906, p. 60), but the subdorsal thoracic lines are made up of light yellow scales throughout their whole length. Full-grown larva with six or seven separate comb scales, each scale with a simple stout curved spine arising from a pear-shaped base. (Fig. 1.)



FIG. 1.—Scale from comb of *Edes uncatas*.

The larvæ of this form, collected from hollow trees, have been sent to me from several localities near Kingston (Waverley Estate, Constant Spring: woods above Rockfort). In all the specimens examined the comb scales had simple spines unlike the Santo Domingan form, which has trifold spines (Dyar and Knab, Jour. N. Y. Ent. Soc., XIV, Pl. V, fig. 11). I am indebted to Dr. H. G. Dyar for comparing the larvæ and adults of these two species. Bred specimens vary greatly in size, the largest attaining about 6 mm. in length. The females bite blood without hesitation.

Mansonia Waverleyi, n. sp.—Close to *M. signifer*, Coq., but with an additional curved line of white scales on each side of the mesothorax. (Fig. 2.) This line is usually somewhat broken. I am likewise indebted to Dr. Dyar for examining the larvæ and adults of this species; he writes that the larvæ also differ in the arrangement of the abdominal plates. The larvæ were collected from thick coffee-like water found in hollow mango trees at Waverley Estate, Constant Spring, Jamaica. They are grayish-white in colour, and appear to be peculiarly inactive, lying at the bottom of the jar for long intervals. The pupa stage lasted five days. Length of adult 5.5 mm.



FIG. 2.—Thoracic ornamentation: *Mansonia Waverleyi*.

Howardina inæqualis, n. sp.—Near *H. aureostriata*, Gbm. (CAN. ENT., May, 1906), but with somewhat broader thoracic lines. The face hairs of the larva are as follows: Anteantennal hair 5- to 8-rayed, upper epistomal hair double, lower about 10-rayed. The compound hair of the dorsal group in the terminal segment is about

6-rayed. In *H. aureostriata* the upper epistomal hair is usually single, and the compound hair of the dorsal group on the terminal segment is 10-12-rayed. The most notable differences are to be observed in the anal gills, those of *H. inequalis* being broadly lanceolate and pigmented, the lower pair only one-half the length of the upper pair, which are one-third the length of the longest hairs of the ventral hair group, while in *H. aureostriata* they are nearly equal in size, narrow, slender and transparent, and about as long as the hairs of the ventral tuft. The larvæ collected from hollow trees (chiefly *Anona palustris*, L.) by the seashore, Kingston, have long, slender, pale red bodies, covered with rayed hairs; a pair of large air vessels in the thorax are seen as two conspicuous silvery spots. The females are troublesome blood-suckers in the woods. Length of adult, 2.5 mm.

NOTES ON THE SWARMING OF A SPECIES OF CRANE FLY.

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The swarming habits of various families of flies, notably the Chironomidæ and Culicidæ, have been known to the world probably for centuries, since even unscientific people must have often been interested in the phenomenon, perhaps, indeed, alarmed at it, so prodigious have sometimes been the numbers of flies involved in these gatherings. Accounts of extraordinary swarms have been current in print for more than a hundred years, but these stories deal for the most part with the size and actions of the mass of flies, and rarely attempt an adequate explanation of the peculiar gathering, from the view-point of the individual insect. A few species of the Tipulidæ have been noted as celebrating the same sort of air dance as the smaller forms, but I have been able to find nothing in print that describes in detail the mysterious performance. Having been fortunate enough recently to witness and study this feature of the life-history of one species of the Tipulidæ, *Trichocera bimaculata*, I venture to record the notes made at the time, in the hope that some more competent observer may write a more complete story than is possible for me.

Nov. 2nd, 1906, was a clear, cool day, with a fresh northwest breeze. Toward sundown the wind died away to an occasional, hardly-perceptible breath, and the mercury fell to a point where it was quite chilly, perhaps to between 45 and 50 degrees above zero, Fahr. The writer chanced to be returning to Washington from Arlington on foot, and the way led along the steam car track, which at one point skirts the bank of the Potomac,