

THE HABITS OF A GROUND-HORNET.

BY WM. T. DAVIS, TOMPKINSVILLE, STATEN ISLAND, N. Y.

Stizus speciosus is the largest native ground-hornet, and its formidable appearance and great activity generally secure it undisputed possession of the square rod where it happens to alight. It is from an inch to an inch and one-half in length; the head and thorax are brown, and the abdomen is black with six irregular yellow blotches. These markings are discernible as it flies swiftly about its business, and give it a particularly tiger-like appearance. It seems to be afraid of nothing, and if you walk near its burrow it flies with a menacing buzz in circles about you, and its brown, black and yellow body gleams in the sunlight.

In constructing its burrows, it usually selects a country roadside or a dry, barren hill, where a freedom from roots makes digging less laborious.

On the hill back of Richmond village, on Staten Island, I have seen them carrying heavy harvest-flies to these burrows, several of which are dug there nearly every summer. The task of carrying so great a burden as a *Cicada* is a particularly laborious one, and they do not fly very fast when thus heavily laden. Sometimes they drag the harvest-flies a distance along the ground, and sometimes they resort to an ingenious method to finally get them to their burrows.

In August, 1889, I observed a *Stizus* carrying a *Cicada*, and flying slowly up a hillside. It lit at the base of a black birch on the hill-top, and dragged the harvest-fly, holding the smooth dorsal surface to the bark, to the topmost branches, finally disappearing among the leaves. I did not see it leave the tree, for I was unable to command a view on all sides at the same time, and then there was a neighboring birch whose branches interlocked with the one where the hornet was. I satisfied myself that it did leave, by climbing up and violently shaking the branches and tree top. *Stizus* employs this method of transporting the heavy *Cicada*; it climbs the tree with the insect, and then flies from the branches, the excessive weight gradually bringing it to the ground again, but nearer to its burrow.

Professor Morse, in his annual address before the American Association in 1887, notices the following:—"Dr. Thomas Meehan describes a hornet that was gifted with great intelligence. He saw this insect struggling with a large locust in unsuccessful attempts to fly away with it. After several fruitless efforts to fly up from the ground with his victim, he

finally dragged it fully thirty feet to a tree, to the top of which he laboriously ascended, still clinging to his burden, and having attained this elevated position he flew off in a horizontal direction with the locust."

Commenting upon this, Mr. C. G. Rockwood, jr., in Science for August 19th, 1887, gives an account of "a large insect, evidently of the wasp family," that carried a *Cicada* for a distance of twenty feet up a maple tree and then flew away with it as described above.

Wishing to ascertain the relative weights of these insects, I had dried specimens, including pins, weighed in a druggist's scales. *Cicada tibicen* weighed thirteen grains and *Stizus speciosus* seven and one-half.

LIST OF LEPIDOPTERA TAKEN AT LITTLE METIS (RIMOUSKI CO.), P. QUE.

BY ALBERT F. WINN, MONTREAL.

My collecting at Little Metis having been confined to July and August, my knowledge of the forms occurring there is necessarily very incomplete; but as the insect fauna of the Lower St. Lawrence seems to differ considerably from that of Ontario and the western part of Quebec, I venture to give a list of the species I know to occur there, and hope that in the event of my not going there again, some other entomologist will give us a list of additions.

1. *Papilo turnus* Linn. Common inland; rarer on the shore; July.
2. " *asterias* Fabr. Rare; July; larva in August.
3. *Pieris oleracea* Bd. Very common; July and August.
4. " *rapæ* Linn. Very common; July and August.
5. *Colias philodice* Godt. Very common; July and August; Albino females sometimes as common as yellow ones, though not usually.
6. *Danais archippus* Fabr. Very rare; 1 specimen, August.
7. *Argynnis cybele* Fabr. Females common; July; no ♂'s seen.
8. " *atlantis* Edw. Very common; July and August.
9. " *myrina* Cram. Rare; July (commoner, no doubt, in June.)
10. " *bellona* Fabr. Very rare; July, in a swampy field.