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trite. It is one of the most beautiful and remarkable genera among the sedentary Annélides; but the species now described differs from the typical species, in having more than two tentacular filaments at the mouth; so that the generic character of Cuvier and Lamarck will require some modification in order to the reception of it.

Berwick on Tweed, May 28. 1833.

ART. VII. *A Notice of the Ravages of the Cane Fly, a small winged Insect, on the Sugar Canes of Grenada, including some Facts on its Habits; by a SUBSCRIBER in Grenada: with additional Observations, by J. O. WESTWOOD, Esq. F.L.S. &c.*

Sir,

FOR these last six months [back from March 13. 1833] this island has been infested with a species of insect that threatens not only great injury to the present crop of sugar cane, but also to render the labours of the planter entirely abortive for the next crop. The Aphis, puceron, vine-fretter, blight, or cane fly, as the insect is here termed by the planters, has long afforded an interesting study to the naturalist, and been a pest to the husbandman and gardener, and is too well known to require particular description. I am not aware that any species of insect hitherto noticed has been found so formidable, either in number or destructive qualities, as the cane fly, which is now propagating, and so rapidly overrunning the sugar plantations in this colony. I therefore hope the following particulars respecting it will not be altogether uninteresting to your readers, and that these particulars will draw forth some useful observations from those who may have had opportunities of witnessing the habits and ravages of this tiny destroyer of the cane, and who may, consequently, be able to throw some light on the most effectual method of extirpating it. The insect, formed with a snout and beak ending in a bristle, no doubt for the double purpose of depositing its eggs and extracting its food, attacks the cane in all the stages of its growth; but is more particularly injurious to plants or ratoon when they are young and tender. The under surface of the leaf, and towards the midrib, or the course of the larger sap-vessels, is selected by the insect for the scene of its operations. There it makes an oblique puncture, resembling that which would result from a lancet introduced in the same direction. Into

each of these punctures from five to fifteen eggs are deposited; and each egg is placed transversely with respect to the direction of the fibre of the cane, which serves to overlap them, and thus afford a protection from the many enemies they have among the insect race. The aperture is then covered by a very light substance resembling that which protects the eggs and young of various species of spider (*Arànea*). This substance is always observed to be attached to the posterior part of the body of the insect, and to cover the two spines placed there, and which are characteristic of the genus. When the insect appears on the surface of the leaf after its first transformation, it seems dull and inactive, and is generally covered with a light floss of the substance already mentioned; but having changed its skin, which it leaves perfect and attached to the leaf, it becomes lively, active, and voracious, and joins in the work of propagation and destruction.

There can be no doubt, or at most but little, that the *Aphides* do not select the sugar cane merely as a medium for the deposition of their eggs, but that, like millions of other creatures, they also regale themselves with its sweets, and, from their numbers, literally bleed the plant to death. The *Aphis sacchari*, for such it ought to be called according to Linnæan nomenclature, like most of the tribe, produces in great abundance the substance called honey-dew, so much so, that the upper surface of the leaf infected is covered over with it. This substance, when dry, becomes black and of a light texture, which, being nearly insoluble in water, destroys or interrupts the action of the atmosphere, and aids in the general destruction of the plant.

This destructive insect, which might have, at first, been easily exterminated, has now overrun a great part of this island, and has baffled every attempt made to destroy its countless offspring. There is no doubt that, although they are new in this colony, they must have been known in many other parts of our tropical regions; and information on this point and on any other point of the subject will be much valued. Accompanying this, I send you specimens of the full-grown insect, with a specimen of the diseased leaf, and a magnified sketch (*fig. 54. b*) of the insect, in case of the loss of the insect itself. Although this species of the *Aphis* generally confines itself to the sugar cane (*Saccharum officinarum* L.), like as other species of *Aphis* severally addict themselves to distinct species of plants, yet it may be worthy of notice that I have found it on the *Paspalum distichum* L., a grass of so opposite a nature, that it has here obtained the

name of sour grass, although the taste is more that of a bitter with a slight acidity, and, being avoided by cattle, horses, &c., is considered poisonous.

I am, Sir, yours, &c.
Grenada, March 13. 1833. A SUBSCRIBER.

Additional Observations upon the Insect which infests the Sugar Canes in Grenada. By J. O. WESTWOOD, Esq. F.L.S. &c.

Sir,

As the circumstances detailed in the preceding communication, although here and there somewhat obscure, are of much interest in a commercial point of view, and as they add another species to a catalogue, already too extensive, of insect destroyers of the sugar cane, I trust that the following observations thereupon will not be deemed unacceptable.

The insect forming the subject of the preceding account, submitted to me for examination, proves, both from your correspondent's sketch, and from various specimens contained in the box of cotton accompanying his remarks, to be a Homopterous insect belonging to the Linnæan genus *Cicada*, and to the subgenus *Délphax* as restricted by Latreille. Consequently your correspondent is in error in assigning to it the scientific name of an *Aphis*, although it is not improbable that persons unacquainted with entomology in the West Indies may have bestowed upon it, from its resemblance to the common plant lice, the French vernacular name of the *Aphides*, *pucceron*. So also your correspondent appears to have gratuitously furnished the insect, in his description of it, with two spines, which, as to place, he has assigned to the posterior part of the body, but which, although characteristic of the genus *Aphis*, are not found in the specimens which he has himself forwarded of the insect in question, nor, indeed, in any of the *Cicadidæ*.

It does not appear quite clear in what manner the insect attacks the plants. Your correspondent, indeed, mentions "a snout and beak ending in a bristle," which he considers may be for "the double purpose of depositing its eggs and extracting its food." As, however, it is of absolute necessity that we should be perfectly acquainted with the peculiar modes of attack of our insect depredators, before we can think of proposing any effectual remedy for their destruction, it may be allowed me to endeavour, from the peculiar anatomy of these insects, from analogy, and from your correspondent's notes, to show the real cause of the mischief. Now, the