

replied that he saw, last spring, a small green larva on the blossoms of *Cimicifuga racemosa* and a black ant attending it. "The ant directed strokes of its antennae upon the tail of the larva incessantly; larva moved a little; ant ran up and down and up other stems and returned; strokes renewed upon the tail; larva moves its head; strokes directed toward the head; larva moves round the stem; ant off, and in a moment returns, with strokes." He observed this proceeding from 10 a. m. to 12 m., and adds: "I am at a loss to explain these strange manipulations. My first idea was that the ant was seeking to tempt the larva to loosen its hold upon the plant and then seize it for food. But I soon found that the purpose was at least friendly." The plant, it will be noticed, is the same as that fed on by *pseudargiolus* in Virginia.

It is clear, therefore, that the larvae of several species of *Lycaena* have one or more special excreting organs, and that one species at least is regularly attended by formicidians for the sake of the excreted fluid. And it is probable that the quantity of this and perhaps its attractiveness depends on the nature of the food plant. Also that all the organs are generally concealed. I was not able to distinguish them upon any living larva even after my attention was called to them, though I saw the mark on 11th segment, which proved to be one of the openings. I took those on 12th segment for stigmata, which they resembled. But in one larva now in alcohol I find the two tubes partly protruding and easily to be seen with the naked eye. And as the ants were eagerly licking the surface in the vicinity of these organs, as well as just at them, the fluid may escape without their protrusion and overflow the surface. That either of these organs is used for defence is not shown by any evidence, and, as M. Gueneé intimates, the probability is all the other way. The secretion is attractive, not repulsive like that which poisons the air from the tentacles by the head of *Papilio*.\* Whether

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\* In the paper "On the Classification," &c., Mr. Scudder supports his argument for degradation of *Papilio* by this discovery of M. Gueneé. Mr. Wallace had claimed, and properly, that the possession of such a peculiar structure as the scent organ of *Papilio* larva, with tentacle, muscular apparatus, &c., for frightening away its enemies, is a mark of high development, and that its presence in one group and absence in every other is a proof of a very ancient origin and of very long-continued modification, Nat. Select. Am. Ed., 135. Mr. Scudder thus disposes of the whole matter: "*Extensive fleshy organs* do occur in other groups. Gueneé discovered them *on the abdominal segments of certain blues*," &c. . . . "yet nobody on that account claims for them a high rank."