states that in cross section each is seen to be composed of five canals, two pairs above and a single larger passage below, which opens below slightly before the tip. By inserting the appendages into the roots the larvæ are enabled to draw in the air found in the large vascular bundles, through this opening in this lower channel, which supposedly connects with the tracheal system. Concerning the two upper pairs of canals he says nothing except that they are highly chitinized to secure the firmness of the appendage, but concerning the lower, remarks: "How this formation —a chitinous tube opening at the end—came to pass histologically I was not able to ascertain till the present observations. It comes near calling to mind a tubular outgrowth of the hypodermis at the stigma. In accordance with this is the fact that the wall of this questionable canal, especially near to the base of the appendage, is not simple, but is double, and no cells are to be found between." (Free translation.) In support of this view he found that small pairs of scars which when cross-sectioned exactly correspond in size to the tips of the appendages, and are at the correct distance from the scars where the larva had been feeding, could be readily found, and these I have found on stems bearing the cocoons of *D. piscatrix*. Doctor Schmidt-Schwedt states, however, that in removing the roots of the food plant from the mud the larvæ always released their hold, and that when rearing them he did not find them with the appendages inserted until he darkened the breeding cage, and then that the *points* were found inserted, but that they were disturbed by the light and withdrew them in a short time. Perris states that he cut off these appendages at the base without injuring the larva. But as Dr. Schmidt-Schwedt says, he did not state how long they would live under water with them removed. On the other hand, neither does the latter writer state that he determined whether or no the larva would not live under water if entirely removed from the root.

I have not been able to study any live larvæ to determine the function and manner of use of these interesting appendages, though I hope to do so at an early date, but have made a very careful study of their structure, only, however, by means of free-hand sections. First, however, it may be noted that true spiracles occur on the cephalo-lateral angle of the mesa-thorax and upon the first seven abdominal segments, as in other Chrysomelid larvæ. The structure of the spiracles, however, is rather different from any others I have observed. I have not made any sections of them, but a lateral view is figured, showing them to be elongate and