

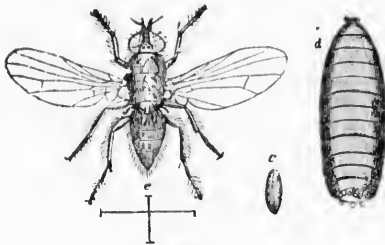
THE ONION FLY.—*Anthomyia Ceparum*.

Fig. 1.

IN travelling through the county of Essex, N. Y., a short time since, particularly along the beautiful plains in the vicinity of the Au-Sable River, I had my attention repeatedly attracted to the withered and sickly appearance of nearly all the fields of onions, through which I passed. Upon inquiring the cause, I was invariably told that it was the effects of a worm, and that it was extremely doubtful if a single tuber in a healthful condition would be obtained in a hundred plants. This excited my curiosity, and on raising the bulbs from the earth, I had little difficulty in recognizing the larva of a Dipterous (two-winged) insect, belonging to a species which in England, as well as in many other parts of Europe, for the last twenty years, have almost entirely destroyed the onion crops, upon the cultivation of which so considerable an amount of labor and experience have been expended. To such a degree have their ravages extended in those countries,



Fig. 2.



Fig. 3.

that the husbandmen have been driven to the necessity of abandoning the culture of this important vegetable, not having yet met with any efficient remedy for the destruction of their enemy.

Much uncertainty still seems to prevail among entomologists respecting the peculiar habits and instincts of this little predator, and we greatly fear that they will long remain in ignorance, unless some interested and intelligent individual, residing on the spot, and having daily access to the plants, shall establish a series of practical observations on their habits, and in

this manner trace them through their various stages of existence, up to the perfect fly. Until this is accomplished, and not till then, will we with any degree of certainty be able to suggest any reasonable method for effectually removing them. If it be not done speedily, a knowledge of the prolific manner of their increase, makes it probable that they will, in the course of but a few years, spread over the whole country, and almost, if not entirely, obliterate this highly useful vegetable from our gardens.

This insect depredator is, I think, undoubtedly the *Anthomyia ceparum*, of Meigen, or a species so closely allied, as to differ but little from it in any of its habits.

It is shown at *c*, fig. 1, somewhat magnified, the actual length being indicated by the perpendicular, and the spread of the wings by the horizontal line, below the cut of the fly; *c* and *d*, same fig., show the pupa, from which the insect emerges, *c* being the natural size, and *d* magnified. It belongs to the second general division of the *Muscides*, that of the *Anthomyzides*, which is composed of species, all of whom have greatly the appearance of common flies.

The larva of this insect, *a* in fig. 2, is about $\frac{1}{4}$ of an inch in length, fleshy, and of a white color. It is of a conical form, with a smooth and shining surface, and entirely free from any external superficial appendages. The incisions are finely granulate, and the last and largest segment is obliquely truncated at its base, upon which is placed a surrounding border of eight small knots, or projecting points, as seen at *b*, fig. 2, representing the larva magnified.

The female fly deposits its eggs on the base of the stem near the surface of the ground, which in a few days become hatched, the larvæ immediately penetrating between the leaves to the bulb, upon which it preys unseen; but the effects soon become visible, for



Fig. 4.



Fig. 5.

the leaves turn yellow, fall prostrate on the ground, and quickly wither away. These are shown in figs. 3 and 4. In the course of about two weeks they arrive