

tard and turmeric as soon as it commences to boil.

After it is boiled, the vinegar must be covered closely, to keep in its strength, until quite cold, when it may be poured over the vegetables arranged nicely in rather large jars. The spices should not be removed.

The longer piccalilli is kept the better ; any way, it should remain untouched for quite a month.

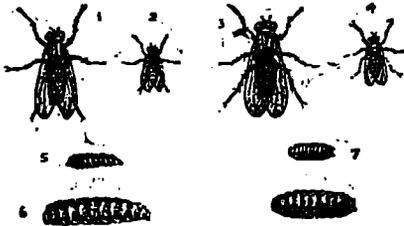
The Garden and Orchard.

(CONDUCTED BY MR. GEO. MOORE).

INSECTS INJURIOUS TO VEGETATION.

(Continued).

MANGEL WURZEL FLY, (*Anthomyia betæ*, Curtis).



1. Male, magnified.
2. Male, natural size.
3. Female, magnified.
4. Female, natural size.
5. Larva, natural size.
6. Larva, magnified.
7. Pupa, natural size.
8. Pupa, magnified.

Serious injury is often caused to mangel wurzel plants in June and July by the attacks of the mangel wurzel fly. "*Anthomyia betæ*," whose larvae, or maggots, form burrows within the tissues of the leaves, and live upon the juices, weakening and exhausting the plants, and sometimes killing them. After the mangel plants have been singled and begin to show vigorous growth, they sometimes suddenly droop and present a withered appearance. Upon examination, it will be found that there are white blotches, like blisters, upon the leaves, caused by maggots lying within their tissues, from which they have exhausted the juices and extracted the chlorophyll, or green colouring.

Having regard to the harm that is frequently done by this insect to the mangel crop, the following description of the fly in its various stages has been prepared, with information as to remedies that have been found efficacious against it, and precautions that should be taken to prevent its increase.

DESCRIPTION AND LIFE HISTORY.

The mangel wurzel fly is about the size and shape of a common house fly. It is dark grey, with black hairy legs, having yellow feelers, or palpi, with black tips. The femora (thighs) of the female are yellow. The fly is first seen towards the end of May, when it deposits its eggs in groups of two, three, or four, upon the under surface of the leaves of the mangel plants.

Maggots come out from the eggs in fine days, and immediately bore their way through the outer skin, or cuticle, into the leaf tissue, feeding thereon, and moving to another leaf when food fails.

The maggot is about the third of an inch long. In colour it is of a transparent dirty-white, so that the food in the intestines is visible. It has no legs. Its tail end is cut square, but the head is sharp pointed, and furnished with a pair of hooked appendages which serve for boring and cutting into the tissues of the leaves.

The maggot continues in that form for about a month, and during this period does active mischief ; it then changes into a pupa, in which case the red, or reddish brown, pupa may be seen, apparently fastened to the leaves, or embedded in their tissues ; or the maggot falls to the ground and forms its pupa therein.

From these, the flies come out in about ten days. They are usually three broods. The pupae from the last breed, from which the first generation of flies appear in the spring, pass the winter in the ground, or in decaying leaves and rubbish, or on the roots of weeds and mangels.

REMEDIES.

In the first place, dress the infested plants with nitrate of soda and common