## LIFE-HISTORY.

As cutworms vary eonsiderably in the time of their appearance in the different stages—egg, larva, pupa, and adult—and as such appearance, too, is often irregular from year to year, it is not possible to state their life-history in general. Some pass the winter in the pupal state, or as half-grown eaterpillars, and others in the egg or adult state. The moths of the chief injurious species appear in June, July and August.



Fig. 3.-Green tomatoes eaten into by the Variegated Cutworm. (Original).

The eggs of eutworm moths, as a rule, are laid in clusters or masses on the leaves of trees, shrubs, weeds, grasses, etc. They have even been found on window panes and on the putty, as well as on clothes which had been hung out to dry. In the ease of the Variable Cutworm, *Mamestra atlantica* Grt., we have found the eggs on the upper surface of a honeysuckle leaf, in a compact heap of three layers. Another species (in confinement) laid eggs singly or in elusters of from three to twenty. The number of eggs laid by a female varies considerably. In some elusters there will be less than 100 eggs, in others, over 700; in fact, a female of one species is known to have laid over 1,000 eggs. The eggs of most of these moths are laid in early or midsummer. Those of some species, however, may be deposited as early as the end of April.



Fig. 4.—Earthen cocoon made by cutworm, in which it pupates. (Original).

Fig. 5.—Pupæ of cutworms: a, ventral aspect; b, lateral aspect. (Original).

When a eutworm becomes full-grown, it enters the earth and makes an earthen eell in which it changes to a brownish or dull reddish pupa, and when this happens in June or July the moth usually emerges in about two weeks' time. Some eutworms, however, do not change to pupæ immediately they complete their earthen cell, but remain as larvæ for some days, the actual period often varying, and the moths in such cases do not emerge for three or four, or even more, weeks, from the time the eaterpillar became full-grown and entered the earth.