

disease spread very rapidly, and was no doubt contagious. I collected some fifty or sixty specimens, all apparently in a healthy condition, for the purpose of rearing them. These were placed in two separate boxes with a liberal supply of food. Within twenty-four hours a large number of them died, all apparently from this disease; they were frequently examined, the diseased and dead were separated from the living, but within three days only four remained alive; of these four only one survived to enter the chrysalis state, and this one did not mature the perfect insect, hence I am indebted to Mr. James Fletcher for the determination of the insect, who, being on the spot, succeeded in rearing several specimens of the moth.

A few days later complaints were made to me of the depredations of the caterpillar of another of our cut-worms, a species usually very common, the larva of a moth known to entomologists as *Hadena arctica*, which was very destructive to corn and other crops. A few days sufficed to mature the swarms of both these devastating armies, when those caterpillars which had escaped both disease and enemies buried themselves in the ground and changed to chrysalids, which subsequently produced the winged moth.

Every season these cut-worms are a source of great annoyance to gardeners and farmers, who find their young corn, cabbages, tomatoes, melons and other plants of succulent growth suddenly cut down by an unseen enemy and withered. Stalks of wheat and other grain are often cut in a similar manner by the same enemies, and they being universally distributed and extremely voracious, inflict enormous losses every year. They have received the name of cut-worms from their habit of cutting off near the base tender and succulent plants, and under this common designation there are included a number of species having similar habits, belonging chiefly to the genera *Agrotis*, *Hadena* and *Mamestra*, some of which possess striking points of difference in the moth state, although they much resemble each other while in the caterpillar condition. The general history of these cut-worms can be given in a few words. The eggs are laid by the parent moths during the latter part of the summer, sometimes on the ground about the roots of grass and other plants, and sometimes on the leaves near the ground. Within two or three weeks young larvæ hatch from these eggs, and by the time autumn sets in the caterpillars have attained the length of half an inch or more, when they burrow into the ground deep enough to protect them from injury by