

and adults, I suspect that the larval life will be found to extend over three years at least.

*Habits of the Larvæ.*—The early habits of the larvæ have not yet been discovered. The smallest specimens obtained by us dropped from the roots or stems, and their location could not be determined. All the larger larvæ were within the tunnels in the base of a stem, or in the main stem mass. Each larva cuts a tunnel, seldom over six or eight inches in length, nearly cylindrical, and of a diameter slightly larger than that of the larva. The tunnels of all the larger larvæ have the exit-hole, which is usually below the surface of the ground, already cut a year or more before the maturity of the larva. The tunnels end abruptly inwards, and are sharply angled just within the exit-hole.

The food of the caterpillar seems to be obtained entirely by enlarging the tunnel; short side tunnels are sometimes present. The relatively small amount of food to be obtained in cutting such a tunnel would indicate a long larval life.

The burrow seems to be kept perfectly clean until near the time of pupation. Then the larva frequently forms within the mouth of the burrow, or in the loose soil just below the surface of the ground, a cylindrical cocoon of pieces of decayed bark and roots fastened with silk, of which latter it has a copious supply. All the cocoons found were open at the ends, not over three inches in length, and usually somewhat larger at one end than the other. Several pupæ have been found within the tunnels without any trace of a cocoon.

The larvæ are extremely active, and wriggle vigorously when disturbed, emitting a large amount of dark brown saliva. They even attempt to bite one's fingers when held, and although not very successful in the attempt, their intentions are very evident. When disturbed in their burrows they move backwards or forwards very rapidly. When allowed to wander at will over a black cloth a thread of silk is seen to be spun wherever the larva goes. The head is waved from side to side, and the silk attached to the cloth at the end of each motion, thus leaving the silk attached in a zigzag line. When left in a box with fresh roots and rubbish, the latter is soon interwoven with a web of silk, and the roots are readily fed upon, an evident attempt being made to construct a tunnel.

When kept in a tin box a larva would frequently produce a sharp rattling sound, such as could be produced by a quick succession of blows