

One of the peculiar features of this species is the prodigality with which it sacrifices its individuals when very young. The young larvæ that feed in the glumes are to be numbered by the dozens in some of the infested heads, yet as far as the study of the species can determine, but one of these can survive in the course of the season. Several often find their way into the stem centre by separate openings, but invariably only one of these appears to survive. Several times one larva in a stem has been found feeding on a half-eaten rival. And it is certain that when winter comes there is but a single individual within each infested stem. Some explanation for this apparently useless expenditure of life may be discovered during future studies of this species, but at present it is an enigma. The reason why a single larva occupies an entire stem is clear, since a single stem affords nourishments for but one borer and self preservation compels the destruction of all competitors by the individual possessing the most vigour or the commanding position.

The parenchyma in the upper stem is unbroken and the gallery there is continuous. Farther down, the larva occasionally takes advantage of lesions in the parenchyma and passes sometimes for several inches with no sign of a mine. The nodes are, of course, solid and these are of necessity bored. Near the base of the stem there are few lesions, the larva is much larger, and the gallery is continuous.

The larva enters the stem during August, and by the middle of October, its progress depending upon the character of the season, it usually reaches the stem base. From lack of vitality or for some other reason a few of the larvæ always fail to reach the base before winter, and many of these belated individuals perish during the winter. Those in the hibernation chamber underground appear to survive almost without exception. This chamber is merely the portion of the gallery at the very base of the stem. It is cleared of frass, often but not always lined with delicate, transparent silk, and here the larva hibernates until the middle of the following May. For two years the writer supposed this was also the pupation chamber, but before the end of May the stems are for the most part vacated, the guests disappearing through an opening eaten through the stem about ground level. A fortunate discovery solved the