

most other congeners. The colour is a pale pinkish hue, and with the large size is productive of an individuality pronounced with this species. Length, when full grown, 50 mm.; breadth, 7 mm.

The gallery is abandoned for pupation, dates Aug. 1 to 15; emergence of forty specimens range Sept. 1 to 23. The pupa is correspondingly robust, the anal extremity armed with two curved hooks. Length 28, breadth 8 mm.

The larval characters further accentuate the relationship with *inquasita* and *stenocelis*. Like these species, the slightly enlarged posterior spiracle indicates these larvae have had a super-abundance of moisture to contend against, and is a modification that is yet needed.

### **Papaipema furcata Sm.**

The larva of this species seems to have been first encountered by Mr. Jacob Doll in the vicinity of New York City, but the general habitat is that of the central Mississippi valley. It bores the terminal twigs of Ash, and an instance of economic record against the species is cited by Prof. Washburn in his State Report as entomologist of Minnesota for 1907-08. The mature larva is there described, and a case of damage to nursery stock noted, with suggested remedy for such chance occurrences. My own searchings for this borer from Pittsburg, Pa., eastward have born negative results. Recently the species has been found as a larva in some numbers, by the Chicago collectors, particularly Messrs. A. Kwiat and E. Beer, and I am indebted to the former for these further details of the life history as well as a fine series of larval and perfect specimens.

The larval period extends from May 15 to July 30, considering early emergencies and tardy maturities. The soft, newly grown tip is entered at the base of one of the terminal leaves and the larva works in this portion for a short time. They then leave their burrow here and go back and enter the harder, last season's growth, usually a short distance below the point of the wintering bud. Why they do not continue their first gallery down into the old wood is not clear, for a considerable pith exists in both. However, the move to a new burrow in harder wood seems very general.