

with no attempt at placing them, were this possible. In three days all the larvæ had hatched from eggs deposited by females on September 13th.

The larva, when newly emerged, is transparent and vitreous in appearance.

In the breeding experiments considerable difficulties were encountered owing to the prevalence of the entomophagous fungus, *Isaria farinosa* (Dicks) Fr., which repeatedly attacked the sawfly larvæ under observation. This caused the chalcid larvæ to cease feeding and leave the host usually one or two days before the fungus was observed. On this account no observations of a continuous nature could be made upon the same chalcid larvæ. Nevertheless, the observations were made upon larvæ which emerged from eggs all deposited on the same dates, namely, September 13th and 14th, on cocoons which were separated and kept under observation. They belonged, therefore, to the same series of larvæ, and the observations will be given as if they appertained to the same larvæ, which, under the circumstances, is permissible.

Sept. 18.—Two days after emerging from the eggs the larvæ were all feeding, being attached to the host larva by their heads in leech-like manner. For a day or two they did not appear to leave the place of original attachment.

Sept. 21.—Several larvæ had moved their positions, one being attached to the eye of the host larva.

Sept. 27.—Two larvæ from one of the cocoons left the cocoon and travelled one or two centimetres from the cocoon. They were replaced in the cocoon, but had evidently ceased feeding, although another larva in the same cocoon had its head still buried in the side of the host.

Subsequent observations and examination indicated that these larvæ were full grown. The larvæ may become mature, therefore, in about twelve days.

Oct. 9.—The larvæ were still in the cocoons, full grown and not feeding. They hibernate apparently as full-grown larvæ in the cocoons of the host.

Mar. 3.—Four of the hibernating larvæ had pupated, but several larvæ still remained unchanged.

Apr. 21.—Two adult chalcids emerged.

This would make the time of development of the over-wintering brood about seven months, under experimental conditions. Passing the