

in colour with a black head and indistinct lines. In their younger stages they loop when walking, as do our other species, on account of some of the pro-legs being abortive.

In 1900, large numbers of this cutworm became full-grown and entered the earth the latter week of July and during the first half of August, although other individuals did not pupate until later in August or in the beginning of September. Specimens which buried themselves on July 27, produced the moths on August 13 to 16, in others the pupal period was longer. In 1907, one moth from larva collected at Ottawa emerged on September 6. The pupa of this cutworm is of a mahogany-brown colour, and in size is about five-eighths of an inch long to about five-sixteenths of an inch in width at widest part; at the end are two short spines.

From present knowledge it would seem as if there were two broods of this insect in normal seasons in Canada, the moths appearing in June and again after the middle of August. It is not definitely known how the insect usually passes the winter in Canada. At Ottawa, moths have been captured as late as October 14, and about the middle of November pupæ, which later produced the moths, were dug up out-of-doors. The species, in some years, therefore, evidently hibernates, in the pupal state. It seems probable, however, that the eggs would be laid in August or September by the moths emerging during those months and larvæ would emerge from these soon afterwards and pass the winter in a partly grown condition. Hibernation may also possibly take place in the adult moth state.

#### THE DARK-SIDED CUTWORM, *Euxoa messoria* Harr.

**Appearance.** The chief characteristic of this cutworm is that the colour of the sides is noticeably darker than the skin of the rest of the body. The general colour of full-grown specimens is dull grayish, some having a pale-greenish or other light coloured tinge. The head and shield behind are shiny and of much the same colour as the body. The back is marked down the middle with a dark line and on each segment of the body are the usual number of blackish, single-haired, tubercles. The underside of the body is paler than the back, as are also the feet. In its younger stages, the sides are much darker.



Fig. 7.—The Dark-sided Cutworm and moth. (After Riley.)

The moths of this cutworm are very similar in appearance, there being no conspicuous variation in colour in a series of specimens. The upper wings are dark gray and are marked with dark brown, or blackish, transverse lines and shadings. The two spots near the centre are conspicuous, and in most specimens there is a pale patch at the apex of each of these wings. The hind wings are mostly pale, almost whitish, bordered with a brownish band.

**Habits and life-history.** The Dark-sided Cutworm is a very common species and occurs widespread. Its injuries, however, in the past have been confined largely to the eastern provinces, especially Ontario and Quebec, where it often occurs in large numbers in May and June. This cutworm has very wide feeding habits; it is not only particularly destructive to onions and other vegetables, as well as to almost all kinds of plants in flower gardens, but it also very frequently climbs small trees and shrubs, doing serious injury to the buds. Owing