

vary a good deal in colour, probably the largest proportion of them being light green. When full grown the larva measures 3-8ths of an inch in length, and the body is widest at its

middle, tapering towards the head and tail ends. In Fig. 5 the two larvae are compared in regard to size and shape.

Danger in the Larval Stage

It is in the larval stage only that the two insects are destructive to crops, and it is at the conclusion of this stage that both, well fed at the farmers' expense, repair to a suitable spot to transform to the passive pupa or chrysalid. The butterfly larvae usually leave the plant on which they have been feeding, and seek some surrounding object on which to pupate. They will travel quite a distance to find a suitable place, although what the exact requirements are it is difficult to say, as they may be found on dried leaves near the host plant, on Scotch thistles, on the foliage of grass or other vegetation bordering a crop, on bulrushes 80 or 90 feet away from the nearest host plant, on fencing posts, on gates, on trees, on the weather boarding of houses, under the eaves or even in-

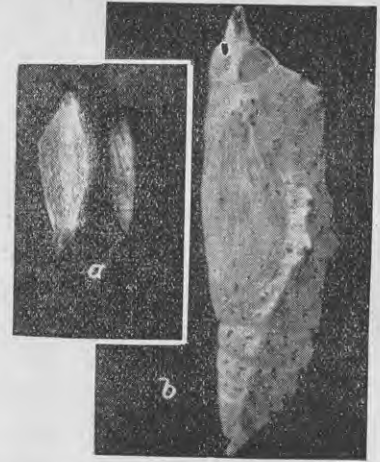


Fig. 7.—(a) Moth pupae (the one on the right removed from the network cocoon) and (b) butterfly pupa compared in regard to size, shape, and general appearance.

[W. C. Davies, photos.]

side the house itself. In fact, it would be difficult to say on which objects it would not pupate.

The chrysalid measures approximately 3/4-inch in length (Fig. 7b). It may be green or greyish in colour, and very frequently changes to a colour in harmony with its background. In contrast to the butterfly, the moth larva generally remains on the host plant to pupate, although it occasionally pupates on nearby objects. When about to pupate it first spins an open network cocoon (Fig. 7a), inside of which it transforms to the pupa or chrysalid form. The backs of leaves infested with the moth frequently have large numbers of these cocoons attached to them.

The times occupied in completing the egg, larval and pupal stages of both the moth and the butterfly are all very indefinite, as all are governed to a very large extent by prevailing climatic conditions, and in this respect, temperature in particular is important. For example, the egg, larval, or pupal stage of either the butterfly or the moth may be lengthened or shortened by prevailing temperature conditions. Low temperatures lengthen the cycle, while high temperatures shorten it. In the accompanying table the approximate minimum and maximum period for the development of each stage is given, and beyond these limits this range cannot be lengthened or shortened by any further temperature adjustment.



Fig. 6.—Moth larvae shown suspended from cabbage leaf by means of silken threads.

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