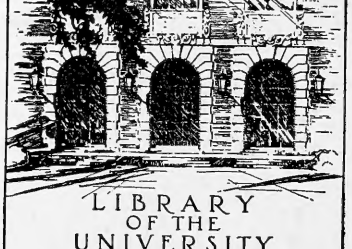
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ENTOMOLOGICAL SERIES
CIRCULAR 6

THE EUROPEAN CORN BORER

(A recently imported European insect injurious to corn)

BY W. P. FLINT AND J. R. MALLOCH

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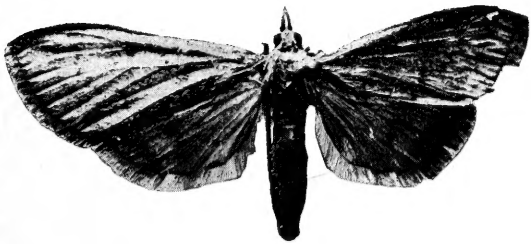
THE EUROPEAN CORN BORER

By W. P. Flint and J. R. Malloch

The European corn borer, a very destructive insect pest of corn, hops, millet, and a number of other cultivated crops in Europe, was found in eastern Massachusetts late in the summer of 1917. It is now known to be established in an area of about 1900 square miles in the eastern part of Massachusetts and southern New Hampshire, and in two smaller areas, one in central New York centering about Schenectady and the other in western New York in the counties bordering on Lake Erie.

Male

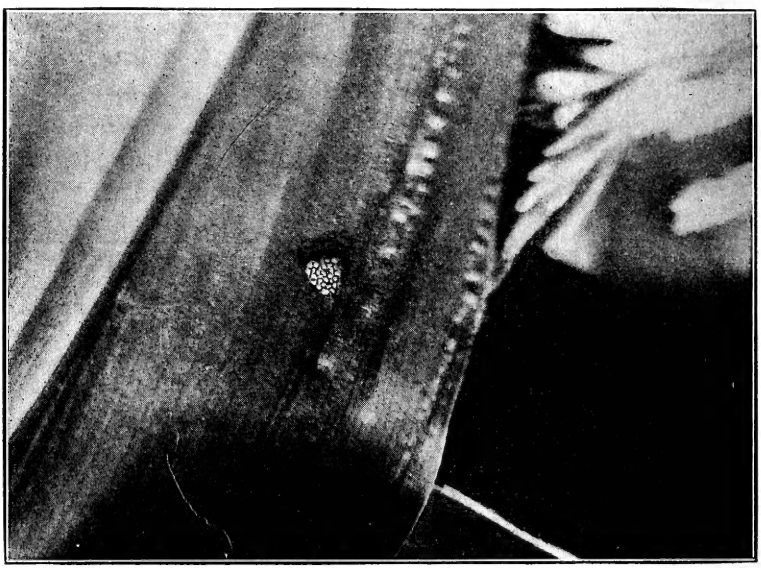


Female

European corn borer (*Pyrausta nubilalis* Hub.) Twice natural size.

The insect in its young or larval stage bores in all parts of the corn plant except the roots, causing the most serious injury by its attack on the tassel, stem of the ear, and ear. As many as 311 larvae have been

taken from a single hill of corn and 17 from a single ear. It has proven very destructive to sweet corn in Massachusetts, and from our present knowledge of its habits, it seems likely that it may become one of the most injurious corn insects in this country. Besides corn, it is known to infest, in greater or less degree, over a hundred other plants, including nearly all our cultivated crops.

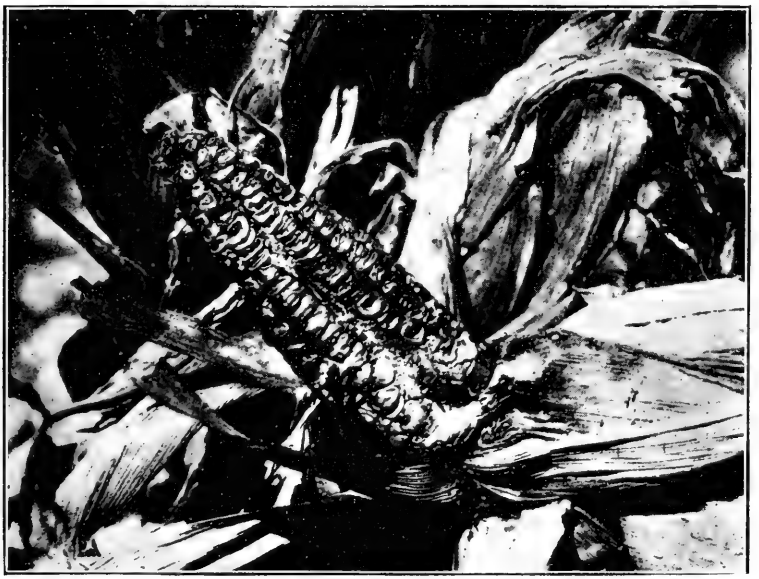


Egg-mass of European corn borer on leaf of corn; natural size.

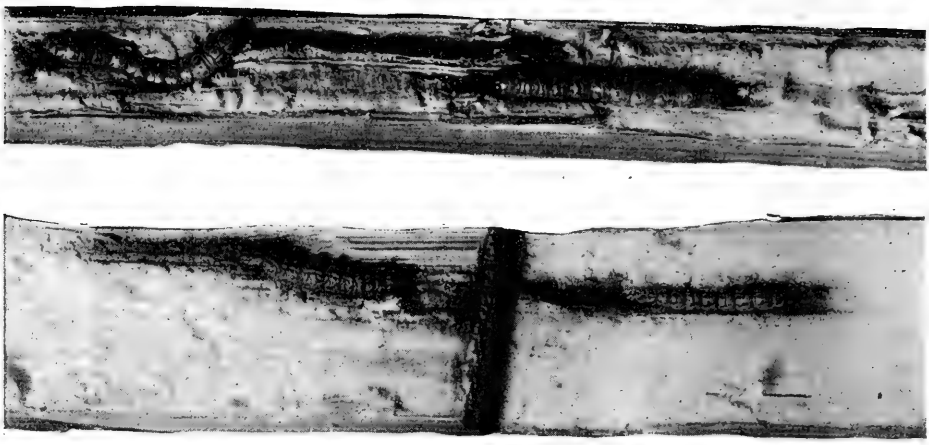
The insect was probably brought into this country in shipments of broom-corn, and as a number of shipments of imported broom-corn have been received by factories in the north central states, there is a slight possibility that it is already established in this part of the country.

There are a number of native borers which closely resemble the European corn borer, the most common of which is found in smartweed. This species, however, does not cause any damage to cultivated crops, altho it frequently winters in corn stalks and the stems of a number of our common weeds and grasses. Several other insects not closely related to the corn borer have somewhat similar habits in their manner of working in the stems of plants and may be confused with it.

Corn plants showing the characteristic breaking over of the tassel caused by the work of the European corn borer.



Ear of corn infested by European corn borer, showing the characteristic exudations of frass.



Larvae of the smartweed borer (*Pyrausta obumbratilis* Lederer) in stems of Amaranthus (upper) and corn (lower).

The distinguishing characters of these insects are briefly as follows:

The larvae or worms are greenish clay-colored and when fully grown are about an inch in length. The body has a number of small round blackish or brownish spots regularly arranged, each of which has upon it one or two minute hairs or bristles. Usually there is no very distinct stripe or other markings on the back. A good idea of the general appearance of the larva of the European corn borer and its nearest American ally, referred to above, may be obtained from an examination of the figures of the two species in this circular. Almost invariably they may be separated by the size and distance apart of the two larger spots on the back of each abdominal segment. In the European species these spots are much smaller and more widely separated than in the native species, their distance apart exceeding the width of one spot, while in the native species the distance between the spots is less than the width of one spot. Other characters by means of which the European species may be distinguished accurately are dealt with in a more

Larva of the
Smartweed borer | European corn borer

extensive paper which may be obtained upon application to the office mentioned below.

As several of our native borers closely resemble the European corn borer, and as it is highly important that we should have an early knowledge of the presence of this insect if it becomes established in the corn belt, any one finding borers attacking corn or other cultivated plants by boring in the stems or other parts, and which resemble the above species, is strongly urged to send the same at once to the Natural History Survey, Urbana, Illinois, for positive identification.

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