

DESCRIPTIONS OF THE THREE COMMON BUD-MOTHS.

THE EYE-SPOTTED BUD-MOTH.

Tmetocera ocellana D. & S.

PAST HISTORY.

In Bulletin No. 50, "The Bud-Moth," by M. V. Slingerland, issued from Cornell University Agr. Exp. Station, we find the following account of the past history of this pest:—

"This insect has been known for more than half a century in Europe, before it was recorded in this country. The bud-moth, therefore, like many of our insect pests, was no doubt an importation from Europe. The insect is common in nearly all parts of Europe, and there became of economic importance about 1840, or about the same time as it was recorded here as injurious by Dr. Harris."

"Dr. Harris' account (1841) seems to be the first notice we have of the appearance of the pest in this country. It had probably been imported, while in hibernation, from Europe, upon nursery stock some years before. After 1841, we have no record of the insect having been injurious until 1869. Then Dr. Packard (Rept. Mass. Bd. Agr. for 1869) found it to be 'the most injurious enemy of the apple tree, next to the canker-worm, that we have in this (Mass.) State.' In the same year the pest did some damage in Pennsylvania. (Am. Ent., 1, 251). In 1870, the insect damaged plums in Ontario, Canada. Although Dr. Fitch mentions the insect as an apple tree pest in his Third Report (1856), he does not record it as found in our State. And it is not until 1880 that we find any record of the occurrence of the pest in New York State. Then Prof. Comstock, while United States entomologist, received the insect from nurserymen at Union Springs, N.Y. In the previous year, as the notes of the Department at Washington show, Professor Comstock found the pest had reached Nova Scotia, where Dr. Fletcher found it hibernating on the twigs. (Rept. Dept. Agr. of Canada for 1885)."

"Dr. Lintner records the pest as quite injurious near Rochester, N.Y., in 1887. In 1888 Prof. Harvey (An. Rept. Maine Expt. Sta. for 1888, p. 169) found the pest doing considerable damage to apple buds in Maine, and in his report for 1890 he records a very serious attack of the insect upon blackberry buds at Rockland, Me. Throughout Massachusetts, New York and Canada the pest appeared in increased numbers, and was very destructive in 1892. (4th. An. Rept. Mich. Agr. Expt. Station, 1891) December 17, 1892. Dr. Riley wrote us regarding the distribution of the pest as follows: 'In the last two or three years I have received it from several localities in New England and the Middle States, and the labels upon the specimens show that it has also been received from Missouri.'"

"It is thus seen that this pest which seems to have first appeared in this country in Massachusetts about 1841, has now become widely distributed over the New England, Middle States and Canada, and it has spread southward to Washington, D.C., and westward to Missouri."

LIFE HISTORY AND HABITS IN NOVA SCOTIA.

Without doubt this is the most common and destructive bud-moth found in Nova Scotia, where it annually does an incredible amount of damage to the fruit crop, by boring into the buds and destroying the blossoms, in addition to causing a limited amount of foliage injury in both early summer and fall.

A typical bud-moth, winters over in the characteristic manner, as an immature larva, concealed under bud scales or other convenient shelter at the base of, or near a dormant bud. The nests of hibernacula are $\frac{3}{16}$ in. in length, and vary greatly in shape,