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BURLINGTON, VT.

CIRCULAR No. 2

March, 1909

THE GYPSY AND BROWN TAIL, MOTHS

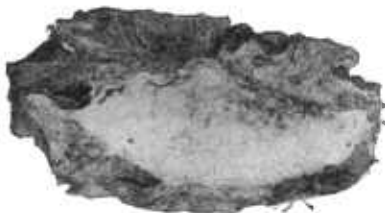
WM. STUART, HORTICULTURIST

The Gypsy and Brown Tail moths have spread from Massachusetts to New Hampshire and other New England States. Immense sums of money have already been spent in an attempt to prevent further devastation. These facts quite naturally have caused alarm in Vermont, especially near the Massachusetts and New Hampshire borders; alarm manifested during the last year or two by the large numbers of insects sent to the Station, believed to be either the Gypsy or the Brown Tail moth. In no instance were the fears of the sender warranted. The writer has no personal knowledge of their invasion of Vermont. How long this statement may hold true cannot be foretold; but it is clear that the chance of infestation increases with their greater spread. *The earlier the State is informed of their arrival, the easier, the less costly and the more certain their extermination. Hence the residents of counties bordering on Massachusetts or New Hampshire territory should be especially observant of all unfamiliar caterpillars or moths.* When doubt exists they should be at once forwarded to the Station for identification. The Station will at once notify the Commissioner of Agriculture if as a matter of fact the specimen sent is of either species¹. It is suggested that inasmuch as the present incumbent of that office is not an entomologist specimens be submitted to the Station rather than to him, in the interests of saving time and obviating the necessity of their transshipment. Place name and

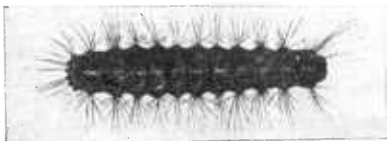
¹ Acts of 1908, No. 11, Sec. 8 (in part): Sec. 8. "Said commissioner may use such means as in his judgment are necessary to exterminate or prevent the introduction of the San Jose scale, the gypsy moth, the brown tail moth and any other threatening and unusual insect pest found to be injuring vegetable growth."

THE STAGES AND LIVES OF THE GYPSY MOTH
STAGES. GYPSY MOTH.

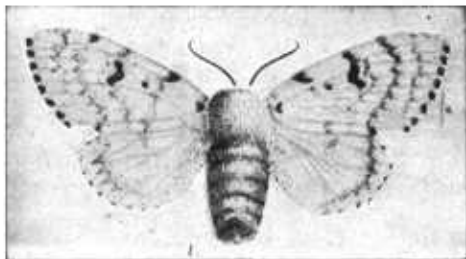
Egg Cluster..... Usually on bark of tree; very rarely on leaf. Robust, $1\frac{1}{2}$ to 2 inches long. Light yellow or creamy. From August to May.



CATERPILLAR. Full grown..... Dark grayish or sooty. Double row of five pairs of blue, followed by six pairs of red spots along back.



MOTH. Female..... Wings spread $2\frac{1}{4}$ in. Dingy-white, lightly streaked and blotched with blackish. No brush of brown hairs at tip of abdomen.



Does not fly, crawls.

WINTER PASSED..... In egg stage—see above. Never as a caterpillar.

IRRITATION OF HUMAN SKIN..... Not caused by any stage.

MOST EFFECTIVE MEANS OF CONTROL.

Soak eggs with creosote in fall, winter, or spring.



AND BROWN-TAIL MOTH CONTRASTED.

BROWN-TAIL MOTH.

STAGES.

Always on under side of leaf.

Smaller and more slender.

Dark or golden brown.

July.

EGG CLUSTER.



Bright tawny or orange.

A conspicuous row of pure white spots or dashes along each side of body. Only two bright red spots on middle line at lower end of back.

CATERPILLAR.



Wings spread $1\frac{1}{2}$ inches. . . .
Pure snow white.

MOTH, Female.

A conspicuous, sharply contrasted, thick tuft or patch of golden or brownish hairs at tip of abdomen. A swift, strong flyer, by night, and attracted to lights.



As small caterpillars in a silken web or nest on tips of twigs, from which they crawl out in spring.

WINTER PASSED.



IRRITATION.

Hairs from caterpillars, which are often transferred to cocoons and moths, cause an annoying and painful irritation of the skin.

MOST EFFECTIVE MEANS OF CONTROL.

Cut off and burn webs in winter.



postoffice address on packages. Specimens sent through the mail should be carefully enclosed in a package which is not easily broken or crushed, such as a wooden or tin box¹.

The food plants of these caterpillars in badly infested areas include the foliage of practically all deciduous trees. The Gypsy caterpillars usually attack forest and shade trees, while the Brown Tail prefers the foliage of the pear and apple.

The most marked difference in the life histories of these two insects, as noted in these illustrations², is shown in their winter habits. The Gypsy passes the winter in the egg, the Brown Tail as a young caterpillar. The distinct and characteristic markings of the full grown caterpillars and moths enable one to determine identities fairly well.

Methods of Distribution. The Brown Tail moth is best adapted by nature to spread over a wide area, for the female moth can fly to considerable distances, whereas the female Gypsy moth has very slight use of its wings. The usual methods whereby the latter are distributed are by the falling of the caterpillars onto passing vehicles (horse, automobile, trolley), they being thus borne considerable distances. The same means, of course, serve the Brown Tail as well.

Be on the watch for Gypsy and Brown Tail moths, especially in Windsor and Windham Counties, along the lower Connecticut River towns and the Massachusetts border.

Every New England State but Vermont now harbors these pests. The earlier they are combated, the shorter and more successful the battle.

Study the illustrations and descriptive matter and compare with specimens you may find.

Notify the Experiment Station, Burlington, Vt., if you think you have found either. Send specimens enclosed in a secure package, bearing name and address of sender.

¹ Sending insects by mail improperly packed is an offense against postal laws.

² Furnished through the courtesy of the New Hampshire Experiment Station.