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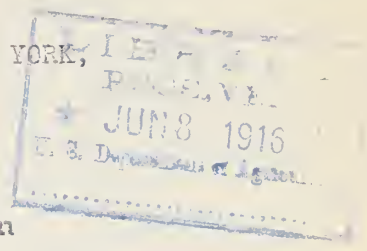
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UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF ENTOMOLOGY,
WASHINGTON, D. C.

June 1, 1916.

Brief IV. THE DYING HICKORY TREES ON LONG ISLAND, NEW YORK,
CAUSED BY THE HICKORY BARKBEETLE.



Evidences of Attack and Infestation
and How to Mark the Trees.

In late spring and early summer the first evidence of the presence of the beetles in destructive numbers is found in the fading and dying and falling of some of the leaves of the living hickory trees which is the result of the beetles feeding on the young twigs at the base of the leaf stems.

The presence of numbers of dead hickory trees from which the beetles have emerged will also indicate the relative abundance of the beetle and the number of trees that may be expected to die from their attack during the summer.

The next evidence to look for is in the fading and dying of the leaves of the tops and branches of the trees during the period from July to October. In some cases only the tops die which indicates that the attack is confined to the top branches and that the remainder of the tree may live and not be attacked until the next season, or not attacked at all if the beetles are sufficiently reduced in number by natural or artificial means.

If the foliage on the entire tree fades, withers and dies, it will indicate that the entire trunk as well as the larger branches are infested. Positive evidence will be found in the presence of oblique entrance burrows through the outer bark from which boring-dust is ejected by the parent beetles; also by removing a section of the bark and revealing the beetles at work or their characteristic egg-galleries and radiating larval mines.

Marking the Infested Trees.

Whenever during the summer or fall trees are found that show the conditions described, they should be marked by cutting off a strip of bark, about breast high, from the side of the tree exposed to a path or roadway, or much better a ring should be made around the trunk with whitewash or white paint. This is to indicate that the entire tree is dead and infested and to facilitate the location of such trees after the foliage has fallen in the fall and winter when the control work is in progress. Some distinguishing mark should also be made before the leaves change color in the autumn to indicate that only the top or a portion of the branches are dead. A partial ring will serve to indicate an entire dead top and a spot above this will indicate a partial dead top. Thus many trees so marked may be saved by cutting out the infested tops and branches and leaving the remainder to grow.

Owing to the different stages of very young to matured larvae which pass the winter in the bark, the development to the adult and the emergence extend over a long period. This fact, in connection with the length of time the beetles are active after they emerge, provides for a period of attack extending through the entire summer from June until September. Therefore August and September are the best months in which to locate and mark infested trees. See Brief III, for Remedies.

A. D. HOPKINS,
Forest Entomologist.

May 26, 1916.

1915

THE STATE OF TEXAS

IN SENATE,
January 15, 1915.

REPORT
OF THE

COMMISSIONERS OF THE GENERAL LAND OFFICE,
IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE
MAY 11, 1914, AND A RESOLUTION PASSED BY THE HOUSE OF REPRESENTATIVES
MAY 11, 1914, RELATIVE TO THE LANDS BELONGING TO THE STATE OF TEXAS,
AND TO THE PROCEEDINGS OF THE COMMISSIONERS OF THE GENERAL LAND OFFICE
DURING THE YEAR 1914.

REPRODUCED FROM THE ORIGINAL

REPORT OF THE COMMISSIONERS

OF THE GENERAL LAND OFFICE,
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