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

FOREST ENTOMOLOGY BRIEF 50.

December 5, 1923.

BRIEF INFORMATION ON INSECT DAMAGE TO GREEN GUM LOGS AND LUMBER
IN THE SOUTHERN ATLANTIC AND GULF STATES AND
SUGGESTIONS RELATING TO ITS PREVENTION.Character and Extent of Damage.

The principal damage to southern hardwoods is due primarily to attack by tiny wood-boring insects known as pinhole borers or ambrosia beetles, which make holes in the wood not much larger than the head of a pin. They bore holes or burrows in the wood for the purpose of rearing their young. The beetles are attracted to freshly cut trees, logs and lumber only when in a green or moist condition, because moisture is necessary for the growth of a so-called ambrosia fungus on the walls of the pinhole burrows on which the beetles and their young live. Therefore, any agency, or combination of them, which retards drying, such as leaving the green logs in moist, shaded places in the woods or placing freshly sawed lumber in close piles during the period of insect activity, will offer favorable conditions for insect attack. Under such conditions logs and lumber may be severely damaged in a few days time and in a few weeks reduced in value nearly 50 per cent.

Remedy.

Damage to infested logs and lumber can be checked, where practical, by submerging in water or saturating with a liberal solution of liquid orthodichlorobenzene.

Prevention.

The most practical way of protecting green gum logs and lumber from insect injury is to make such slight changes in the methods of management in the woods, in the storing of logs in the mill yard or lumber yard, as is necessary to produce unfavorable conditions for these insects. Such procedure is necessary since they are active from February 15 to November 1, causing the most serious damage during warm, damp days of the summer. Occasionally they will appear during mild days of an open winter.

Protection of green logs during the period of insect activity.When prepared for floating -

(a) Peeling method - to be used during the spring and summer months while the sap is up (April 1 to August 15):

(1) The cutting and peeling operations should be commenced as soon as the conditions of the swamps are favorable after the gum leaves are full grown.

December 2, 1927

BRIEF INFORMATION ON INSECT DAMAGE TO GREEN GUM LOGS AND LIMBS
IN THE SOUTHERN ATLANTIC AND GULF STATES AND
SUGGESTIONS RELATING TO ITS PREVENTION.

Character and Extent of Damage.

The principal damage to southern hardwoods is due primarily to the bark-boring insects known as pinhole borers or snout-borers, which make holes in the wood not much larger than the head of a pin. They bore holes or tunnels in the wood for the purpose of reaching their young. The borers are attracted to freshly cut trees, logs and lumber only when in a green or moist condition, because moisture is necessary for the growth of a so-called ambrosial fungus on the walls of the pinhole tunnels on which the borers and their young live. Therefore, any agency or combination of them which retards drying, such as leaving the green logs in water, shaded places in the woods or placing freshly cut lumber in close piles during the period of insect activity, will offer favorable conditions for insect attack. Under such conditions logs and lumber may be severely damaged in a few days time and in a few weeks rotting in water nearly 50 per cent.

Remedy.

Logs to infested logs and lumber can be checked, water practically by substituting in water or saturating with a liberal solution of 50 per cent formaldehyde.

Prevention.

The most practical way of protecting green gum logs and lumber from insect injury is to raise such slight changes in the methods of management in the woods, in the storing of logs in the mill yard or lumber yard, as is necessary to produce unfavorable conditions for these insects. Such procedure is necessary since they are active from February 15 to November 1, causing the most serious damage during warm, damp days of the summer. Occasionally they will appear during mild days of an open winter.

Protection of Green Logs during the period of insect activity.

When prepared for floating.

- (a) Peeling method - to be used during the spring and summer months while the sap is up (April 1 to August 15):
- (b) The cutting and peeling operations should be commenced as soon as the conditions of the woods are favorable after the gum has become full green.

(2) The logs should be peeled as soon as cut and their ends pulled apart to aid in rapid drying.

(3) The underbrush should be removed as the trees are felled, to admit sunlight.

(4) Logs not taken at once to the river bank should be removed from low, damp places until hauling is possible.

(5) Trees producing excessive shade on the river bank, where the logs are to be placed, should be removed.

(6) Cutting saplings or poles and placing them upon the bank to keep the gum logs from the ground, as is the common practice, will facilitate drying, and is also a good procedure to prevent insect damage.

The value of the above procedure lies in the facilities for rapid drying of the sapwood.

(b) Where not prepared by peeling - to be used during the summer and early fall months after the sap has started down and until the leaves turn (August 15 to October 15):

(1) Fell trees and leave tops on until the foliage dries (this aids rapid seasoning by drawing the sap quickly to the top of the tree), then log tree in the usual way.

When not prepared for floating -

(a) Rapid utilization (February 15 to November 1):

(1) Provide for as little delay as possible between the felling of the green timber and its utilization for lumber or submergence in water.

(2) Remove logs from the woods as soon as cut, and transport to a place of safety.

Protection of green logs during the period the insects are least active (November 1 to February 15).

(a) Logs felled from late fall to the early spring months should be removed from the woods before the first flight of the beetles in the spring and either utilized at once for lumber or submerged in water.

(b) Logs submerged in water for several months that must be removed during the summer should be sawed as soon as possible after being taken from the water.

(c) When not possible to provide a millpond in which to store logs until utilized for lumber or to saw them as soon as they arrive at the mill, and they must remain in the yard until sawed, the following procedure is recommended.

(1) The logs should be placed as soon as they are cut and their ends pulled apart to the top of the log.

(2) The material should be removed as the logs are piled to about 100 ft.

(3) Logs not taken as soon as they are cut should be removed from the dump place as soon as possible.

(4) These protruding stumps should be removed as the logs are to be placed, should be removed.

(5) Existing openings or holes and planting them upon the bank to keep the logs from the ground, as in the section showing, will facilitate drying, and it will be good practice to remove these openings.

The value of the above procedure lies in the facilities for drying of the logs.

(6) There are no special precautions to be taken during the summer and early fall months when the logs are stacked down and until the leaves fall (about 15 to October 15).

(7) Logs should not be cut or split until the following winter (this also might be done by cutting the log partly to the top of the log), but for trees in the usual way.

When not prepared for floating

(a) Light material (February 15 to November 15)

(1) Provide for as little delay as possible between the fall of the green timber and the initiation for lumber or sawlogs in water.

(2) Remove logs from the woods as soon as they are cut, and transport to a place of storage.

Prevention of green logs during the summer and fall months (November 1 to February 15)

(a) Logs piled from late fall to the early spring months should be removed from the woods before the first light of the spring in the spring and other material as soon as lumber or sawlogs is ready.

(b) Logs stacked in water for several months that may be removed during the summer should be stacked as soon as possible after being taken from the water.

(c) When not possible to provide a millpond in which to store logs until floated for lumber or sawlogs as soon as they arrive at the mill, and they must remain in the pond until floated, the following procedure is recommended.

(1) Arrange a system of skids in mill yard so logs can be unloaded directly from cars or truck to skids.

(2) Do not pile logs more than two deep.

(3) Leave space between piles to allow logs to receive the maximum amount of sunlight and ventilation.

(4) As far as possible, avoid big stacks of logs in the yard waiting to be loaded on cars and taken to mill to be sawed.

Protection of green lumber.

Moist green lumber sawed during the summer months should be kiln-dried when possible; otherwise observe the following procedure:

(1) Rack lumber 7 to 10 days before piling during the summer.

(2) Cross-rack lumber during the spring and fall to aid rapid drying.

(3) Pile lumber with flue in center to aid rapid seasoning. (Care must be taken that it does not check by drying too fast.)

(4) Cut heavy dimension stuff, as far as possible, during the fall and winter months.

(5) End-pile lumber during the winter, if necessary, to hasten drying.

(6) Unless the trade requires it, avoid leaving bark on the edges of lumber sawed from green logs.

(7) Lumber yards located on flat, low, damp areas, where the water stands after heavy rains, should be drained by a system of trenches.

R. A. St. George,

Assistant Entomologist.

Approved:

F. C. Craighead,

Entomologist in Charge of Forest Insect Investigations.

(1) The purpose of this report is to provide information regarding the results of the investigation conducted by the Laboratory of Forensic Entomology, University of California, Los Angeles, California, on the remains of the individual identified as [Name Redacted] who was found on [Date Redacted] at [Location Redacted].

(2) The remains were found in a [Location Redacted] and were in a state of advanced decomposition. The body was [Description Redacted] and the [Description Redacted].

(3) The [Description Redacted] of the remains was consistent with the [Description Redacted] of the individual identified as [Name Redacted].

Protection of Human Remains

The following measures were taken to protect the remains from further decomposition and to ensure their proper handling and transport to the [Location Redacted].

(1) The remains were placed in a [Description Redacted] and sealed with [Description Redacted].

(2) The [Description Redacted] was placed in a [Description Redacted] and [Description Redacted].

(3) The [Description Redacted] was placed in a [Description Redacted] and [Description Redacted].

(4) The [Description Redacted] was placed in a [Description Redacted] and [Description Redacted].

(5) The [Description Redacted] was placed in a [Description Redacted] and [Description Redacted].

(6) Unless the [Description Redacted] is [Description Redacted] on the edges of [Description Redacted] from [Description Redacted].

(7) [Description Redacted] located on [Description Redacted] [Description Redacted] where the water [Description Redacted] should be [Description Redacted] by a [Description Redacted].

R. A. [Name Redacted]

Assistant Entomologist

Approved:

[Signature]

Entomologist in Charge of Bureau of Insect Investigation