

Forest Tree Diseases of Virginia

October 1971

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Pitch Canker of Pine

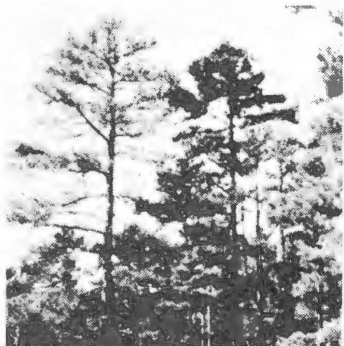
by

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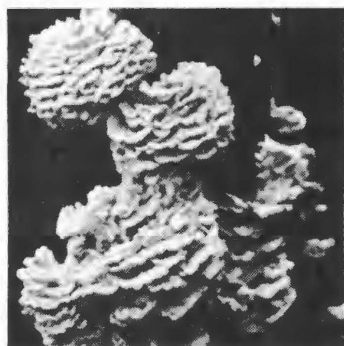
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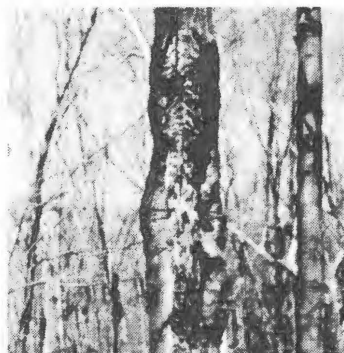
RUST



DECLINE



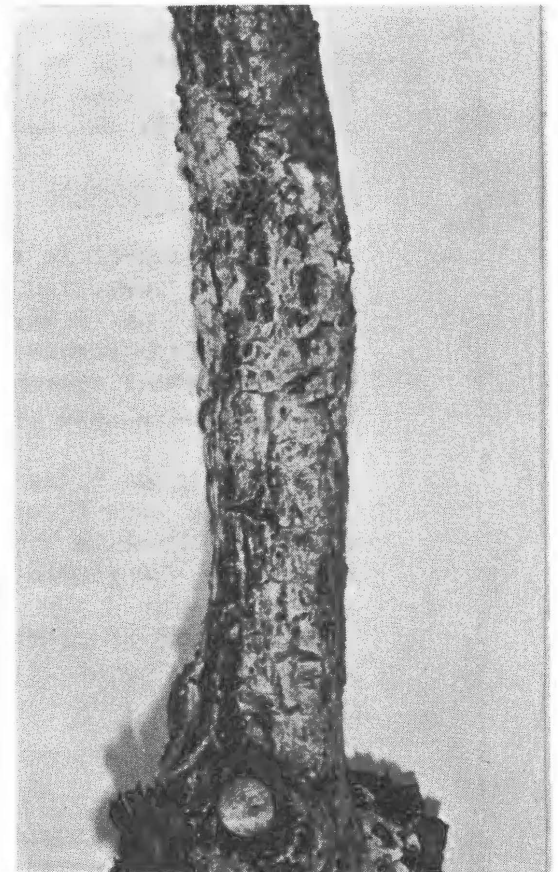
DECAY



CANKER

Pitch canker is a disease caused by the fungus *Fusarium lateritium* f. *pini* that occurs very sporadically on several pine species throughout Virginia. It seldom causes economic loss but it is the only disease that causes rapid death of Virginia pines, *Pinus virginiana*, in the state. The disease is easily confused with insect damage, sapsucker damage or other diseases such as fusiform rust and limb rust. The abundant pitch flow associated with infection by the causal

Figure 1. Copious resin flow and a rough, cracked bark surface are two indicators of pitch canker. Note normal bark at top of stem section.



fungus makes the tree extremely flammable and during forest fires such trees have been known to explode from the intense heat generated by rapid burning.

Although this disease was first found in 1945 and its causal organism described in 1949, it has caused little economic loss in Virginia. Substantial losses have, however, been reported in Florida and other southern states. Hence, pitch canker could become a major disease; foresters and woodland owners should be able to recognize this disease and promptly implement control measures.

In some instances, such as in the production of naval stores, increased resin flow is desirable after wounding. Recent studies have indicated that *F. lateritium* f. *pini* may be of benefit to such industries if kept under control.

Range:

Pitch canker occurs in Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida, and Tennessee. It is found throughout the state of Virginia particularly in stands of Virginia pine.

Suscepts:

Virginia, Scotch, slash, longleaf, pitch, and Table Mountain pines have been shown susceptible to the attack of the causal fungus. Virginia pine is particularly susceptible, often being girdled in one or two years. Slash pine is the most susceptible of the species named.

Symptoms and signs:

Pitch canker is characterized and named for the copious resin flow associated with fungus infection (Figure 1). Initial infection takes place through small broken branches, insect or sapsucker wounds or other injuries to the stem. Most often the bark remains tightly attached to the canker surface and irregular swollen areas of callus tissue develop about the canker. The wood behind the canker surface is pitch soaked and red in color; a very good diagnostic tool.

Many times several branches of a whorl and the main stem are cankered all at once giving rise to excessive pitch exudation that may flow several feet down the stem. In Virginia pine, canker development may occur rapidly and the entire stem dies above the girdled area.

Symptoms of pitch canker are often confused with those as caused by sapsuckers (Figure 2), insect attack, Fusiform rust galls or other agents that wound the tree causing pitch flow.

Control:

In the forest situation, infected trees should be removed during normal thinning operations. Infected branches on crop trees may be pruned depending upon the economics involved. Trees should be removed from the stand to reduce fire hazards as well as to release healthy trees for increased stand production and to reduce fungus inoculum.



Figure 2. Sapsucker damage to Virginia pine is often confused with pitch canker. Note concentric lines of holes characteristic of sapsucker attack.