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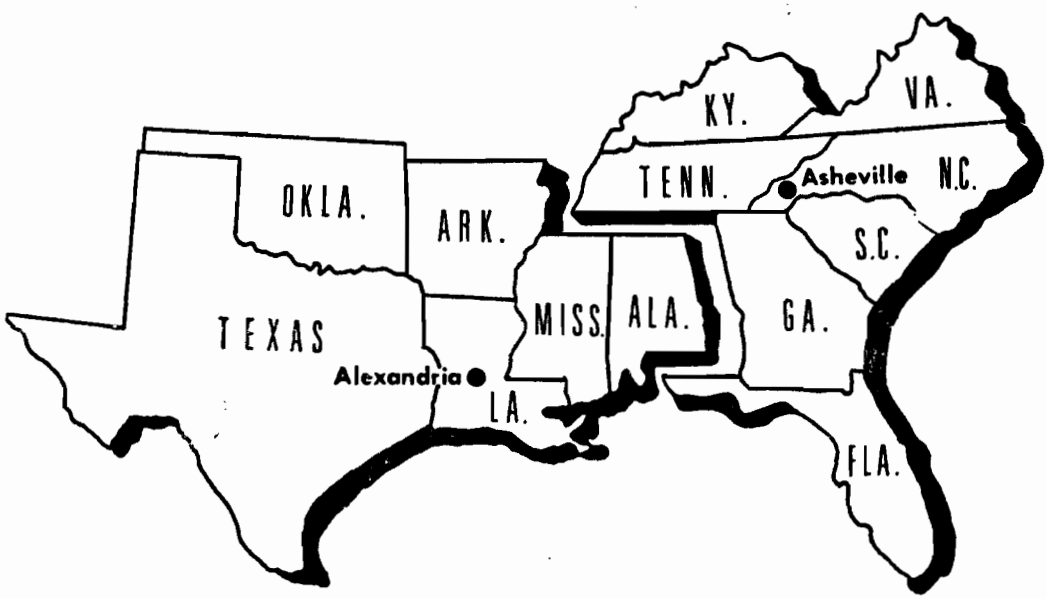
U. S. FOREST SERVICE
Pineville, Louisiana



U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
SOUTHEASTERN AREA, STATE AND PRIVATE FORESTRY
DIVISION OF FOREST PEST CONTROL

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FOREST DISEASE CONDITIONS AT ANNISTON ARMY DEPOT, ALABAMA

by

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U. S. Forest Service
Pineville, Louisiana

ABSTRACT

Loblolly and slash pine plantations thinned within the past five-seven years, at Anniston Army Depot, Alabama (14 M acres of forest land) are infected with Fomes annosus. *Slash pine plantations are most severely infected and in many cases mortality equals or exceeds annual increment. A decline of loblolly pine is present in both plantations and natural stands.*

INTRODUCTION

An evaluation of forest disease conditions on the Anniston Army Depot, located in northeastern Alabama, was conducted on January 27, 1970 at the request of Depot personnel. Anniston Army Depot was established in 1941 on marginal and submarginal farm and pasture lands. A considerable acreage was planted in loblolly and slash pines shortly after the Depot was established. Much of the remaining area regenerated back to pine and hardwood forests, and today a total of 14 M acres of land on the base is classified as commercial forest land. This acreage is managed by the Army Materiels Command primarily for sawtimber production.

Pine forests on the Depot have been plagued by disease problems for some time. Native shortleaf pine stands were severely threatened by littleleaf disease and have, for the most part, been replaced by loblolly pine. Annosus root rot, caused by *Fomes annosus*,

occurs in the pine plantations, most of which have been thinned within five-seven years. Recent extensive mortality due to annosus root rot was the primary reason this evaluation was requested.

Pat Buntin and Ben Woodham, Anniston Army Depot, Wm. M. Korman, Army Materiels Command, Rock Island Arsenal, Rock Island, Ill., and Kelton Huxford, Base Forester, Ft. McClellan, Alabama, participated with the author in the evaluation.

METHODS

Typical problem areas, in both plantation and natural pine stands, were examined. Dead or dying trees were examined to determine the insect or disease causal agent. Cursory observations on the degree of mortality and site related factors were made.

RESULTS

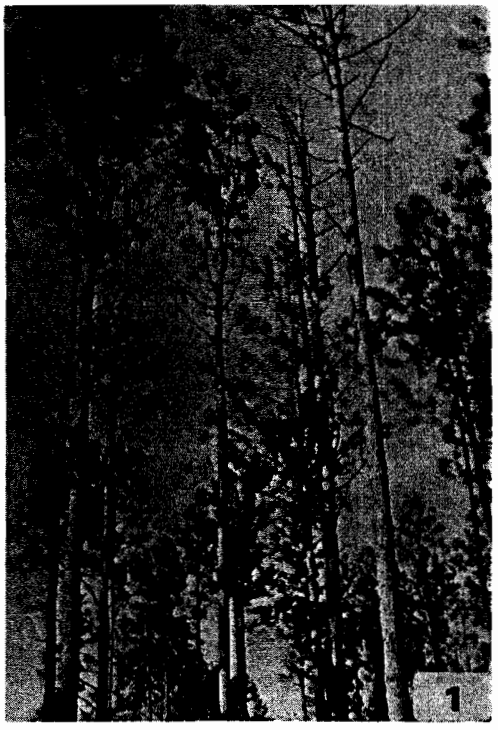
Annosus root rot occurred in all plantations examined. The most severe infection appeared in a slash pine plantation where centers encompassing up to 1/5 acre were observed (Figs. 1&2). Sporophores were abundant on living trees in 75% of the centers examined. Many trees also exhibited typical crown symptoms of sparse foliage and chlorosis. Data collected by Depot personnel indicates that mortality due to annosus root rot currently equals or exceeds annual growth in many of the slash pine plantations. Some plantations have been clearcut due to heavy annosus infection.

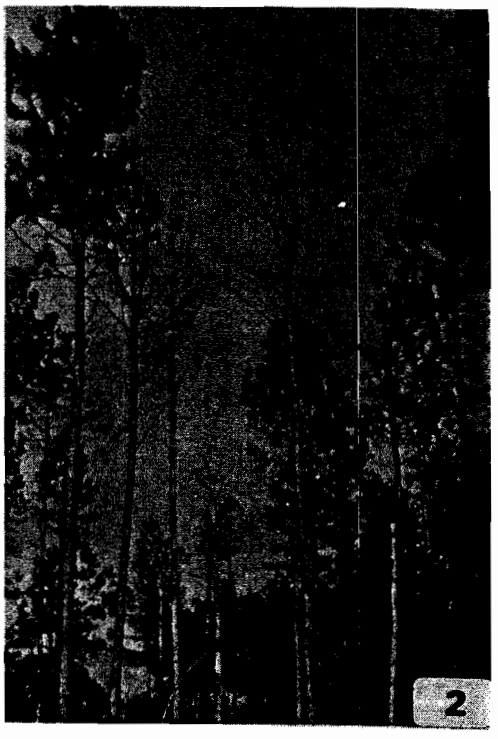
A decline of loblolly pine was observed in both plantations and natural stands. Symptoms include sparse, chlorotic foliage, abnormally heavy cone crops, and reduced increment (Figs. 3&4). Depot personnel indicated that this condition has persisted for several years and symptomatic trees have been salvaged. The causal agent responsible for this condition was not determined.

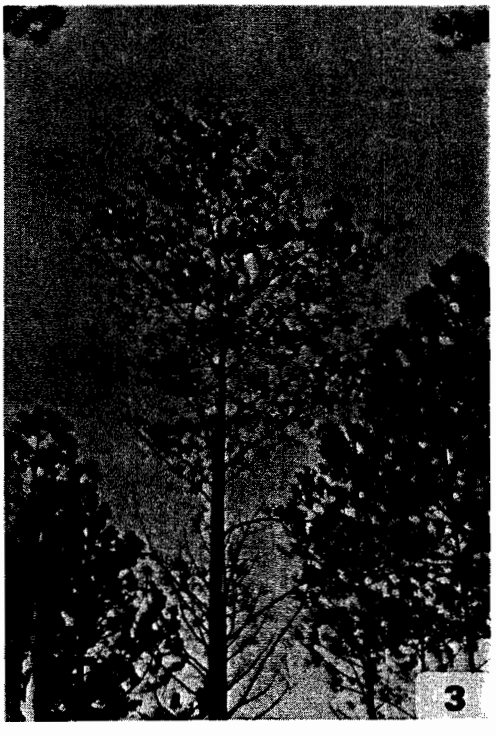
Insect activity was at a low level in the areas examined and was limited to scattered black turpentine beetle attacks in annosus infected trees and Ips engraver beetles invading lightning struck trees or trees in the last stages of decline from annosus infection.

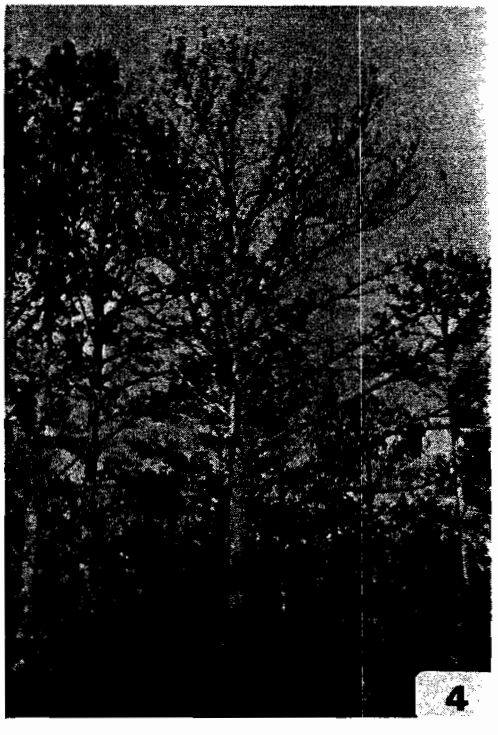
DISCUSSION

Annosus infection is considered severe in this area. Loss due to annosus equals or exceeds annual increment and some areas have already been clearcut due to the heavy losses. Recent thinning operations on plantations obviously provided the necessary infection court, freshly cut stumps, for the pathogen to become established.









Figs. 1 & 2 Typical annosus centers in slash pine plantation, Anniston Army Depot, Alabama.

Figs. 3 & 4 Loblolly pines with foliar symptoms of decline, Anniston Army Depot, Alabama.

There is no known control for annosus root rot once it becomes established in a pine stand. Infection may be prevented by applying borax to freshly cut stumps during thinning operations. If the disease becomes established and heavy losses occur, as has burning is necessary to reduce brush competition and suppress brown spot needle blight when managing this species. These practices are prohibitive in this area due to its military use.

For more detailed information, contact the Division of Forest Pest Control Field Office listed below or the Atlanta Office.

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