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1976 OAK WILT SURVEY IN SOUTH CAROLINA

by

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ABSTRACT

Aerial and ground surveys in 11 central South Carolina counties, covering 2,238,600 acres of woodland, discovered no new oak wilt centers outside the known infestation area.

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INTRODUCTION

Oak wilt caused by the fungus Ceratocystis fagacearum (Bretz) Hunt was discovered for the first time in South Carolina in 1968. Surveys from 1969 through 1971 revealed the disease in 5 counties (Chesterfield, Kershaw, Lancaster, Lee and Richland). Slow spread, difficulty in locating infection centers, and minor impact on resources, lead to the policy of no public control effort but a continuation of periodic aerial surveys. The periodic aerial surveys at 3-5 year intervals are to monitor the spread of the disease. These aerial surveys are made adjacent to the known infestation area. Continuous ground observations in other sections of the state are relied on to pick up new disease centers far removed from the known infestation area.

SURVEY METHOD

The 1976 survey consisted of a systematic aerial sketch mapping of suspected spots of dying hardwoods followed by ground checking of these recorded spots. Aerial photographs were used by aerial observers to record declining hardwood trees that might be oak wilt suspects.

During the period June 14 to 25, portions of 11 counties were flown as shown in Figure 1. The 2,238,600 acres of woodland were observed along north-south flight lines every two miles. Two crews were used, each consisting of a pilot, a tracker, and two observers. The aircraft maintained an altitude of 800 - 1,000 feet at 85 to 100 miles per hour airspeed. Observers surveyed a 1/2 mile area on each side of the aircraft for 50% coverage.

Commission foresters examined all aeriually recorded spots to determine if they were oaks suspected of having oak wilt. Foresters were also alert to spots of declining oaks that were not recorded during the aerial portion of the survey.

Culturing of specimen was done in the Pathology and Physiology Laboratory of Dr. Wesley Witcher at Clemson University.

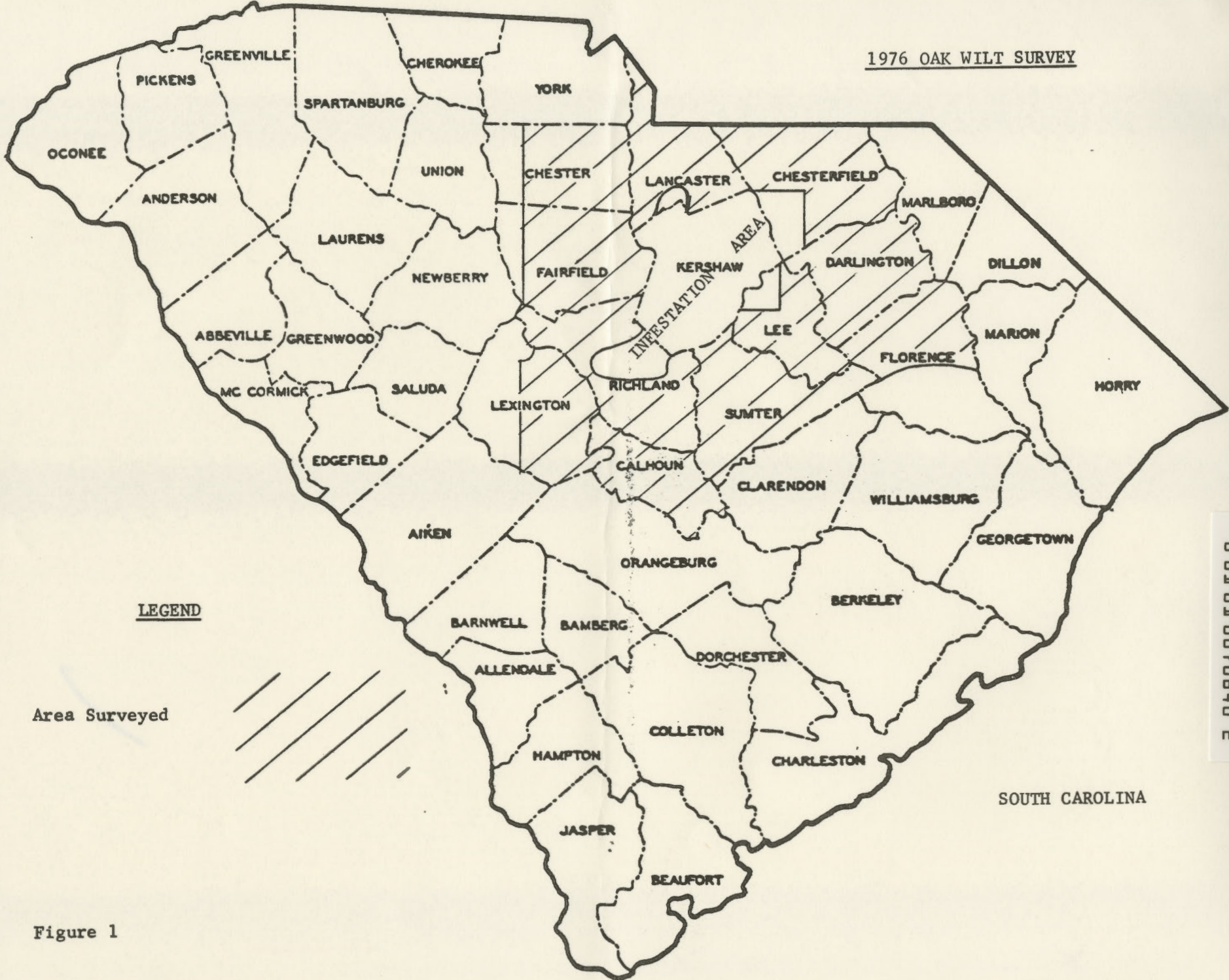
RESULTS AND DISCUSSION

Aerial observers recorded 60 spots of dead or dying trees. None of these spots were suspected of being oak wilt infection centers. Samples were taken at or near two spots, but were not confirmed as oak wilt. Survey results do not indicate that oak wilt has spread from the infestation area determined by surveys through 1971.

RECOMMENDATIONS

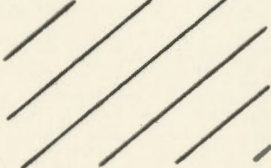
Another aerial survey for oak wilt should be made in 3 to 5 years covering approximately the same area of 1976 survey. Meanwhile foresters should sample declining oaks that are suspected of having oak wilt. Specimen should be sent to Dr. Wesley Witcher, Plant Pathology and Physiology Department, Clemson University for culturing.

1976 OAK WILT SURVEY



LEGEND

Area Surveyed



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Figure 1