

Forest Service American Chestnut  
Cooperative Research Program

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Though the economic and ecological impacts are impossible to assess, there is little doubt that the single greatest plant tragedy to occur in this country was the loss of the American chestnut tree. Efforts to control chestnut blight and reestablish American chestnut trees have been futile. Recently there has been a discovery in Europe that may eventually provide the basis to successfully reintroduce American chestnut trees in this country: Certain less pathogenic (hypovirulent) strains of the chestnut blight were reported to inhibit growth of more virulent strains of the blight, and many of the European chestnut trees have recovered from the blight.

In 1978, the U.S. Forest Service, through the efforts of Senator Robert C. Byrd and his associates, provided funding for American chestnut research. To date, approximately \$300,000 has been obligated by the U.S. Forest Service for this research program. Because of the European situation, the U.S. Forest Service decided to select cooperators to evaluate the hypovirulence phenomenon as a possible biological control for the chestnut blight. Presently the Forest Service has seven cooperators conducting 11 studies. These cooperators and the major responsible researchers include:

Concord College - Department of  
Physical Sciences  
John Elkins and Bruce Given (West  
Virginia Department. of Agriculture)

Duke University - Department of  
Forest Pathology  
William Stambaugh and Bruce Nash

University of Kentucky - Department  
of Plant Pathology  
Louis Shain, Gerald Nordin, and  
John Russin

Virginia Polytechnic Institute  
and State University - Department  
of Plant Pathology  
Gary Griffin, Fred Hebard, and John  
Weidhaas, Jr.

Utah State University - Department of  
Biology  
Neal Van Alfen, James Bowman, and  
John Simmons

West Virginia University - Department  
of Plant Pathology  
William MacDonald, Dale Hindal, and  
Walt Kaczmarczyk

Southeastern Forest Experiment  
Station  
George Kuhlman

The cooperative research effort involves a variety of research interests in hypovirulence, as indicated in the accompanying abstracts. Nutritional and vegetative compatibility studies of virulent and hypovirulent isolates of *Endothia parasitica* are being evaluated in laboratory and field tests. The transmission and survival of chestnut blight and the dissemination and natural occurrence of chestnut blight on American chestnut trees and other hardwood tree species are also being evaluated. Forest Service cooperators are evaluating biochemical characteristics of the chestnut blight and learning more about the mechanism of hypovirulence. Also, a number of other researchers have been involved in this Forest Service cooperative research program by providing re-

views of study proposals and suggestions for future research. They include Richard Jaynes, John Elliston, and Sandra Anagnostakis of the Connecticut Agricultural Experiment Station; Rave Houston, Fred Berry, and Robert ?hares, Northeastern Forest Experiment Station; George Kuhlman and Sam Gingrich, Southeastern Forest Experiment Station; and Ed Wicker and Gerald Anderson, U.S. Forest Service, Washington Office.

Cooperators have initiated field studies on public lands including the Jefferson, Monongahela, Natahala, Pisgah, George Washington, and Daniel Boone National Forests. Also study areas are established at the Coweeta Hydrological Lab in Franklin, North Carolina, Bent Creek Experimental Forest in western North Carolina, and Fernow Experimental Forest, Parsons, West Virginia, and on private lands in West Virginia, Virginia, North Carolina, and Kentucky.

The following abstracts from West Virginia, University, Duke University, Concord College, Virginia Polytechnic In Utah State University, University of Kentucky, and Southeastern Forest Experiment Station report current cooperative research being funded by the U.S. Forest Service. Much of this research is just beginning and plans are to have another cooperators' meeting in 3 or 4 years to assess the status of the research and provide future direction for the program. Since results and data trends will be more definite, papers will be presented and published at that meeting. In the meantime, we will all keep abreast of developments in the various American chestnut research programs throughout the country.