

CURRICULUM VITAE

Name: William L. MacDonald
Professor of Forest Pathology

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EDUCATIONAL BACKGROUND

B.A. Miami University, Oxford, Ohio
Ph.D. Iowa State University, Ames, Iowa

POSITIONS HELD

1970-71 Post-Doctoral Fellow; Department of Plant Pathology, University of Wisconsin, Madison
1971 Assistant Professor (1971-76); Associate Professor (1977-82); Professor (1983-present), Division of Plant and Soil Sciences, West Virginia University

RESEARCH INTERESTS

Research training and interests are in plant pathology with emphasis in forest pathology, particularly diseases of hardwoods. Previous doctoral and post-doctoral research at WVU was with vascular wilt diseases (Dutch elm disease and oak wilt). Current research is with the biological control of chestnut blight using transmissible hypovirulence, a phenomenon associated with fungal viruses (hypoviruses) that diminish the virulence of the chestnut blight fungus. These studies include examining the biology of virulent and hypovirulent strains to determine the factors that regulate the effectiveness of hypoviruses as biological control agents. Studies also now include combining the use of the hypovirulence phenomenon with chestnut trees that have been bred for increased resistance to chestnut blight thereby taking a two-pronged approach to blight control. Other research is with beech bark disease, a devastating disease of American beech that is caused by a fungus and scale insect complex. The goal of this research is to understand the ecological factors that influence the occurrence and severity of the disease.

SELECTED PUBLICATIONS

F. Hebard, M. Double and W. MacDonald. A pathogen without rival. In *Mighty Giants*,

An American Chestnut Anthology, Pages 171-177. C. Bolgiano and G. Novak, eds. The American Chestnut Foundation, Bennington, VT, 2008.

D. Short, M. Double, D. Nuss, C. Stauder, W. MacDonald and M. Kasson. Multilocus PCR assays elucidate vegetative incompatibility gene profiles of *Cryphonectria* in the United States. *Applied Environmental Microbiology*. Doi: 10.1128/AEM.00926, 2015.

M. Double and W. MacDonald (Eds.) Proceedings of the Fifth International Chestnut Symposium (Eds.) which included papers by both authors (International Society of Horticultural Science-ISHS Press, Leuven, Belgium), 2014.

J. Juzwik, D. Appel, S. Burke and W. MacDonald. Challenges and successes in managing oak wilt. *Plant Disease* 95:888-900, 2011.

J. Eggers, Y. Balci and W. MacDonald. Variation in *Phytophthora cinnamoni* isolates from oak forests in the eastern United States. *Plant Disease* 96:1608-1618, 2012.

D. McCann and W. MacDonald. A preliminary report of the ecological factors influencing incidence and severity of beech bark disease in the Appalachians. In: Proceedings of the 18th Central Hardwood Conference. Morgantown, WV, 2012.

J. Juzwik, T. Harrington, W. MacDonald and D. Appel. The origin of *Ceratocystis fagacearum*, the oak wilt fungus. *Annual Review Phytopathology* 46:13-26, 2008.

PROFESSIONAL MEMBERSHIPS

The American Phytopathological Society (APS)
Phi Kappa Phi
Gamma Sigma Delta
The American Chestnut Foundation

RECENT PROFESSIONAL ACTIVITIES AND HONORS

Member of the Board of Directors-The American Chestnut Foundation
Member -USDA Board on Invasive Species
Member-Forest Pathology Committee (APS)
Benedum Distinguished Scholar Award (1998)
Enshrinee-West Virginia Agriculture and Forestry Hall of Fame (2010)