

**Blight Sampling from Champion American Chestnut Tree
in Montgomery County, MD on January 13, 2004**

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On Tuesday, January 13, 2004, Dr. Nuss, accompanied by two Research Assistants, Lynn Geletka and Chris Root, came to Barbara Knapp's property in Germantown, Maryland, to sample the blight fungus attacking her champion tree, #4767.

After surveying the tree, Dr. Nuss and his team identified six blight cankers on the main trunk. Cankers on a limb were ignored because the limb will be girdled by the canker and will die and fall off.

Chris Root numbered each canker in a sketch of the tree. He then instructed Tommy Tamarkin, a volunteer, in the technique of using a bone marrow biopsy tool to retrieve a core sample of material from the tree at the 12, 3, 6, and 9 o'clock positions on each canker. The probe was sterilized in a lighter flame between samplings.

Tommy climbed an extension ladder and then the tree to obtain the desired 24 samples – all collected from about 20 to 30 feet off the ground. The samples were taken to the U MD laboratory to culture the fungus present in each sample and determine its characteristics.

All 24 samples produced blight fungus and the research team then compared all the fungus samples in pairs to determine how many vegetative compatibility types were present in those six cankers. Their results indicated the presence of three different types. The fungus pairings were shown and described by Dr. Nuss at the Maryland Chapter's Winter Meeting at Fox Haven on February 8. See the notes from the presentation under Fox Haven.

Dr. Nuss and his lab team prepared hypovirulent fungal strains corresponding to each of the three vegetative compatibility types represented in the six cankers. These fungal strains were then allowed to grow in Petri dishes to provide sufficient treatment material.

On April 4, 2004, Dr. Nuss returned to Barbara Knapp's property bringing the hypovirulent fungal strains. Using a cork borer, Jonathan Burnworth injected plugs of the appropriate fungal strain into the margin between the canker and healthy wood, completely circling each canker. The infected fungal strains in the plugs will fuse with the fungus present in the canker and weaken it, reducing the ability of the canker to grow and assisting the tree to remain healthy.

