



# History of Laurel Wilt Disease In Georgia

**First detection of the redbay ambrosia beetle – summer 2002.** A Georgia Forestry Commission (GFC) employee, funded under the U.S. Department of Agriculture Animal and Plant Health Inspection Service's Exotic Bark Beetle Survey, caught an unknown ambrosia beetle near Port Wentworth. Dr. Bob Rabaglia, entomologist with the USDA Forest Service, identified the specimen as *Xyleborus glabratus* and completed a threat assessment of the species (mostly unknown, but listed as a moderate risk).

**Redbay mortality first reported - summer 2004.** Unexplained redbay mortality was reported in the Savannah/Chatham County area in 2004. Initial diagnosis by GFC and others attributed this mortality to a combination of drought stress and the Asian ambrosia beetle (*Xylosandrus crassiusculus*) due to typical frass tubes being present on many samples. Insects were later recovered from samples and sent to Dr. Bob Rabaglia who confirmed the presence of *Xyleborus glabratus*.

**Georgia Redbay Task Force - July 2005.** The Georgia Redbay Task Force was convened by GFC Forest Health in July 2005 to bring industry, government and academia together to share information and further study the problem. Task Force participants included: Georgia Forestry Commission, USDA Forest Service - Southern Research Station & Forest Health Protection, Animal & Plant Health Inspection Service, University of Georgia, Georgia Forestry Association, forest industry, US Fish & Wildlife Service, Georgia Department of Natural Resources, The Nature Conservancy, National Park Service, and US Department of Defense at Fort Stewart, Georgia.

**Laurel Wilt County Distribution Map – 2005-present.** The advance of laurel wilt disease in the southeast U.S. has been documented on a county basis since 2005. The presence of the laurel wilt pathogen is confirmed through laboratory culture from specimens from new counties and reports from individual state forestry agencies are sent to the GFC Forest Health Coordinator who has compiled the information and updated maps at least annually since 2005. **See the Regional Distribution Map of laurel wilt disease.**

**Laurel wilt in sassafras –2005.** Chip Bates, GFC Forest Health Forester, discovered laurel wilt disease in sassafras in Liberty and McIntosh counties in 2005, which was confirmed in lab tests by Steve Fraedrich, USDA Forest Service, Athens, GA. Many infected sassafras trees subsequently have been confirmed in a number of additional counties in Georgia.

**Laurel wilt disease spread in Georgia.** Chatham was the only county in Georgia confirmed to have laurel wilt disease in 2004. By 2006 all the coastal counties were infected along with nine inland counties for a total of 15. In 2008 there were 21 positive counties, 29 in 2010, and 39 in 2012. Laurel wilt disease initially spread rapidly in the abundant redbay trees in the lower coastal plain. Substantial redbay remains in the southwest portion of the State and the disease is expected to continue advancing through these counties into Alabama. Laurel wilt has progressed more slowly inland to the west and north into areas with sparse and isolated host, often in sassafras, sometimes in the absence of redbay in the vicinity. The extent of spread in sassafras is still uncertain.

**Jekyll Suppression Projects - December 2006.** A suppression project on Jekyll Island, cutting and removing infested redbay, took place in mid-December 2006. Limited insecticide treatments on redbay trees also were tested for disease prevention in 2006. Both projects were met with disappointing results.

**Redbay Symposium - January 2007.** The “Redbay Symposium” was held January 18 and 19, 2007 on Jekyll Island hosted by the Georgia Forestry Commission. Presentations highlighted research and current information available on the redbay ambrosia beetle and the associated laurel wilt disease epidemic in coastal Georgia, Florida, and South Carolina. The meeting was jointly sponsored by the Florida Division of Forestry, Georgia Forestry Commission, South Carolina Forestry Commission, and USDA Forest Service and attended by over 80 participants. A half-day field trip was organized and hosted by GFC Forest Health.

**Laurel Wilt Working Group – 2007.** The Laurel Wilt Working Group (LWWG) was organized in 2007 to bring together research and educational institutions, public agencies, non-profit organizations, and private interests and to advocate a comprehensive and unified approach for laurel wilt and redbay ambrosia beetle research, monitoring, management, and education in the southeastern United States. Scott Cameron, GFC Forest Health Specialist, developed objectives, organized the steering committee and subcommittee participants, and served as coordinator. The Working Group met at the SFIWC on Jekyll Island in July 2007 and held a conference call in November 2007, after which the participants continued to cooperate on an ad hoc basis. Significant accomplishments include drafting the document entitled “Opportunities for Reducing the Spread and Impact of Laurel Wilt Disease” in October 2007, supporting the development of Laurel Wilt website hosted by the USDA Forest Service, Forest Health Protection, and organizing the 2009 Laurel Wilt Conference held in Savannah.

**Laurel Wilt Website 2007, 2010 – present.** The Laurel Wilt website was developed and launched on the USDA Forest Service, Forest Health Protection, Southern Region website in 2007. It is jointly sponsored by the Georgia Forestry Commission, Florida Division of Forestry, South Carolina Forestry Commission, USDA APHIS, and USDA Forest Service. Scott Cameron, GFC Forest Health Specialist, Albert (Bud) Mayfield, Florida Department of Agriculture and Consumer Services, Division of Forestry, and Anthony Elledge, Information Systems Analyst, USDA Forest Service, were the key developers of this website, which provides comprehensive information on laurel wilt, organized by disease topic. Additional resources include: 1) the latest map of counties with laurel wilt disease by year of initial detection, 2) frequently asked questions, 3) photo gallery, 4) publications, and 5) contacts, conveniently accessed from the home page. An extensive update of the information on the website was completed in 2010 by Scott Cameron.

**Laurel Wilt Conference in Savannah – 2009.** A Laurel Wilt Conference was held on February 26-27, 2009 in Savannah, GA, jointly hosted by the Georgia Forestry Commission and the USDA Forest Service. A field trip focusing on Laurel Wilt and other invasive species was organized and conducted by Chip Bates, GFC Forest Health Forester, during the afternoon of February 26 and a formal indoor session was held the following day from 8 AM to 2 PM. Invited speakers provided a broad review of recent developments and current activities related to the laurel wilt pathogen (*Raffaelea lauricola*) and its vector (*Xyleborus glabratus*).

**Fungicide plus penetrant preventative bark treatments – October 2009.** Chip Bates installed a trial applying fungicide plus penetrant mixes to the trunks of apparently healthy redbay trees on Jekyll Island in October 2009 to determine if this treatment could be used to prevent laurel wilt disease in individual trees. The treatments may have delayed infection somewhat, but treated trees eventually were killed by the disease.

**Systematic laurel wilt disease surveys - 2006-2008.** Systematic surveys were conducted in 2006/2007 by Jessie Beck and 2007/2008 by Scott Cameron for the Georgia Forestry Commission supported by the USDA Forest Service, Forest Health Protection to track the geographic distribution, intensity, and rate of spread of laurel wilt disease in Georgia. Plots distributed on a grid pattern were surveyed to document: 1) the incidence of laurel wilt disease in redbay over the area known to be infected and beyond the apparent advancing front, 2) the rate and direction of spread, and 3) the incidence and symptoms laurel wilt in sassafras and other hosts in Georgia. Results were detailed in the report “Distribution and Spread of Laurel Wilt Disease in Georgia – 2006-2008 Survey and Field Observations.”

**Georgia Laurel Wilt Monitoring Project - 2008-2012.** A multiple-year laurel wilt monitoring project was initiated in late 2008 jointly funded by the USDA Forest Service, Forest Health Monitoring program, USDA Forest Service Forest Health Protection, and the Georgia Forestry Commission. Objectives of the project included: 1) continue following the expansion of the disease into new counties in Georgia through targeted ground surveys, 2) monitor the progression of the disease within redbay and sassafras fixed plots, and 3) assess the fate of redbay regeneration and recurrence of disease after the primary disease wave moved through the coastal plain. Plots were established in 2009 and revisited twice a year by Scott Cameron to assess the progress of the disease. Results have been documented in a progress report, “Evaluation of Laurel Wilt Disease in Georgia: Progression in Redbay and Sassafras – 2008-2010,” a poster, “Progression of Laurel Wilt Disease in Georgia: 2009-2011,” and a summary article, “Progression of Laurel Wilt Disease in GA: 2009-2011” in the USDA Forest Service, Forest Health Monitoring 2012 National Technical Report. A final document summarizing results from data collected in the fixed plots is in preparation.