

Overview: Redbay Ambrosia Beetle Suppression Efforts on Jekyll Island, Georgia, January 2007

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The redbay ambrosia beetle was first trapped near Port Wentworth, Georgia in 2002. Subsequently it was discovered that this beetle is spreading a virulent fungal pathogen which is killing large numbers of redbay trees. The rapid spread of this new non-native, invasive ambrosia beetle and disease, now referred to as laurel wilt, amazed everyone who monitored its advance to the north in South Carolina and southward in Georgia. The rate of spread has been estimated to be 25 miles per year and redbay mortality has been found as far as sixty miles inland in Appling County. For three years Georgia Forestry Commission foresters monitored the spread of this disease, but until recently, no effort had been made to stop or slow its spread, either through mechanical or chemical treatments.

In September 2006, laurel wilt was detected on Jekyll Island, Georgia. We had hoped the fungus would not reach this final barrier island in Georgia so quickly, in order to give us time to form a contingency plan and prepare a proactive stand against the spread of this disease. But the rapid advance of this disease left us in a reactive stance, desperate to try any method available to slow or stop the spread across the island.

Jekyll Island is owned by the State of Georgia, which provided an opportunity to work on state owned lands and eliminated conflict of interest and liability issues. In October 2006, a proposal was made to the Jekyll Island Authority Board to perform a sanitation cut removing the dead and dying redbay trees from the infested area with trees being taken to the local landfill for burning. The original estimate was approximately 175 trees for removal, but by the end of the sanitation cut more than 450 trees had been cut. The sanitation cut was preformed on December 11-13, 2006.

Our overall goal for this project was to slow or stop the spread of the laurel wilt fungus on Jekyll Island by removing or reducing the vector of the pathogen. The main objective of the sanitation cut was to reduce redbay ambrosia beetle populations that could emerge in the spring of 2007 by removing existing brood trees from the forest. A follow-up cut may be required in April 2007 and this possibility will be evaluated in March 2007. At this point only time will tell if this effort will be successful.

The systemic insecticide imidacloprid was applied to two specimen redbay trees in the vicinity of the Horton House on Jekyll Island in an effort to prevent inoculation of the laurel wilt fungus by ambrosia beetles. A 41 inch diameter redbay located at the northwest corner of the Horton House and a 24 inch diameter redbay just to the east of The Horton House were treated by the Jekyll Island Authority in October of 2006 using a soil injection method. These two trees will be evaluated during the summer of 2007.