An O*phiostoma* (anamorph = *Raffaelea*) species and *Xyleborus glabratus* Threaten Redbay and Other Members of the Lauraceae Family in the Southeastern USA

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1/19/2007

Extensive mortality of redbay (*Persea borbonia* (L.) Spreng) has been observed in coastal plains forests of the southeastern United States since 2003. Trees exhibit wilt-like symptoms and a black discoloration of the sapwood. A fungus has been consistently isolated from the discolored xylem of symptomatic trees throughout the range of the problem. This fungus has been identified as an *Ophiostoma* sp. based on sequences of the ribosomal DNA and its tolerance of cycloheximide. The anamorph of the fungus is similar to species of ambrosia beetle symbionts in the genus *Raffaelea*. Field and growth chamber studies have determined that the fungus is pathogenic to redbay and causes a vascular wilt. A recently-introduced exotic ambrosia beetle, *Xyleborus glabratus* (Eichhoff), also has been consistently found in dead and dying redbay trees, and the *Ophiostoma* species has been isolated from the beetle. The beetle is native to Asia, where it is associated with plant species in the family Lauraceae.

As of January 2007, the disease has been confirmed in at least 30 coastal counties of South Carolina, Georgia and Florida. Most redbay trees are now dead in areas around Hilton Head Island, South Carolina, where the disease has been observed since 2003. Dead and dying sassafras (*Sassafras albidum* (Nutt.) Nees) with similar wilt symptoms have also been found in some Georgia counties affected by the wilt of redbay. The affected sassafras trees were infested with *X. glabratus*, and the *Ophiostoma* sp. was isolated from symptomatic sapwood. Pathogenicity tests have confirmed that sassafras and other members of the Lauraceae family (swamp redbay, *P. palustris* (Raf.) Sarg., and spicebush, *Lindera benzoin* (L.) Blume) are susceptible to wilt caused by the *Ophiostoma* sp.