

## What Else Is at Risk from the Redbay Ambrosia Beetle and Laurel Wilt?

Laurie Reid, South Carolina Forestry Commission

1/19/2007

Redbay is an important tree species in the coastal plain of the eastern United States. While the economic importance is limited to cabinet making, boatbuilding, veneer work, and locally for pulpwood and chips, the ecological and social importance is difficult to measure. In the urban landscape, redbay trees are often planted or are purposefully left in during construction.

Redbay are of ecological importance to many species of songbirds, bobwhite quail, and wild turkey, who all feed on the fruit. Deer frequently browse on the foliage and berries; it as been noted in North Carolina and Florida that black bear often feed on foliage and fruit.

The Palamedes swallowtail (*Papilio palamedes* (Drury)) depends on redbay for the completion of its lifecycle; the larvae feed primarily on redbay leaves. While this butterfly will complete its lifecycle on sassafras (*Sassafras albidum*), it is doubtful that the populations of Palamedes swallowtail will be sustained on sassafras. The spicebush swallowtail (*Papilio troilus* Linnaeus) also uses redbay for larval development, although it prefers to lay its eggs on spicebush (*Lindera benzoin*) and sassafras.

In its native countries, *Xyleborus glabratus* Eichhoff feeds on two species in the Lauraceae family (Asian spicebush, *Lindera latifolia*, Yellow litsea, *Litsea elongate*) and Sal, *Shorea robusta* (Wood and Bright 1992). Where this beetle has been introduced (South Carolina, Georgia, and Florida), it is known to attack two species in the family Lauraceae: redbay and, in Georgia, sassafras. In the southeastern United States, there are two species of *Lindera* (*Lindera benzoin* (L.) Blume and *Lindera melissifolia* (Walt.) Blume), one species of *Litsea* (*Litsea aestivalis* (Pondspice)), and another species of *Persea* (*Persea americana*) that may potentially be at risk due to this beetle and fungus. *Lindera melissifolia* is currently a federally endangered plant and *Litsea aestivalis* is currently a multi-state threatened plant.

The potential loss of redbay due to the exotic redbay beetle (*Xyleborus glabratus*) and the associated *Ophiostoma* (anamorph = *Raffaelea*) sp. fungus could be devastating to plants, animals, and to the coastal plain ecosystem.