Redbay trees lost to laurel wilt disease

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In a new study just published in the journal *Biological Invasions*, ecologists at Sewanee: The University of the South and James Cook University in Townsville, Australia, have documented the loss of yet another major tree species from North American forests.

Redbay (Persea borbonia) joins the ranks of chestnut, hemlock, and American elm as a tree whose populations have been decimated by the introduction of an exotic disease called laurel wilt.

A member of the avocado family, redbay was once a dominant species in southeastern coastal forests and served as the primary host plant for species such as the palamedes swallowtail butterfly.

Lead researcher Jon Evans and his colleagues were among the first in the country to begin tracking the ecological consequences of laurel wilt on redbay.

The disease is caused by an Asian beetle, Xyleborus glabratus, that bores within the tree and spreads a pathogenic fungus.

The researchers six-year study was conducted on the coast of Georgia and tracked the elimination of redbay trees from forests where it was once very abundant.

The authors of the study uncovered a unique twist to the fate of the tree species.

"We initially thought that redbay may survive because it can re-sprout very quickly following the initial die-off of the tree"

"What we didn't expect was that high level of browse from white-tailed deer was in some ways the nail in the coffin. Deer ate the new regrowth and prevented new trees from becoming established and thus accelerated the demise of the tree."

The authors suspect that given its formerly high abundance, the loss of redbay will likely have far reaching implications for biodiversity in coastal forest ecosystems of the southeastern United States.

"Sadly, we've lost yet another piece of our countries natural heritage due to the introduction of exotic species," said co-author James Cook University's Brett Scheffers.

Provided by James Cook University