



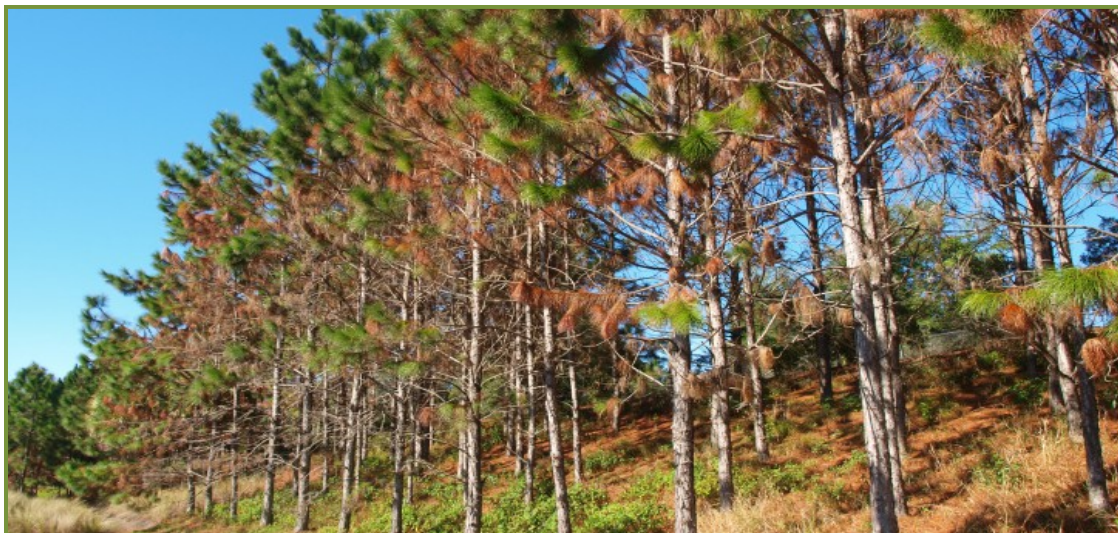
## Florida Forest Health Highlights 2015

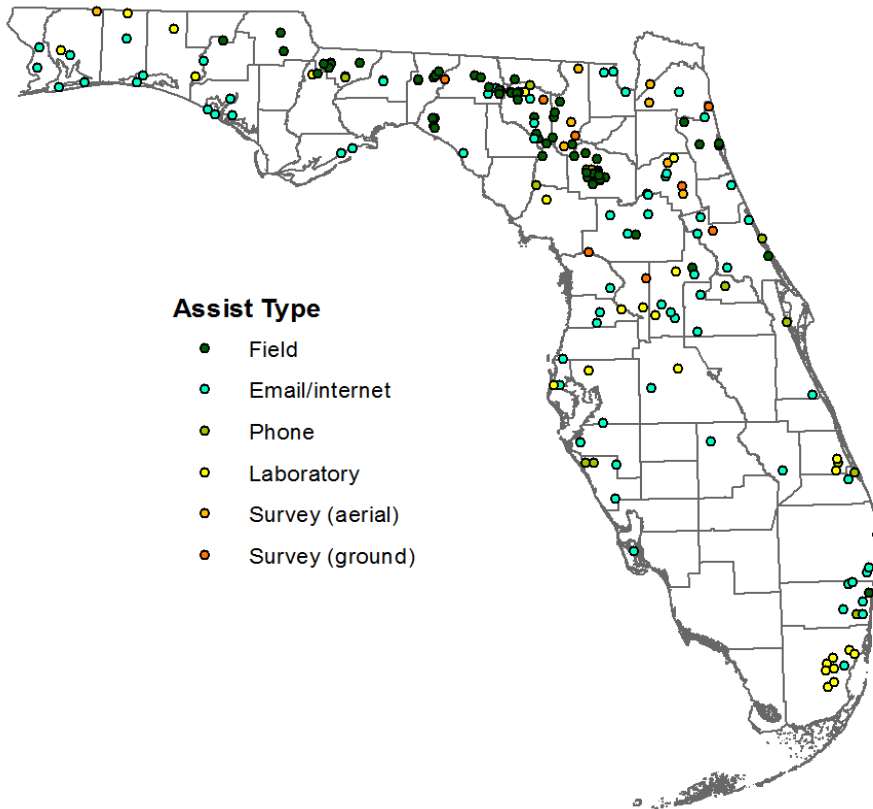
Florida's forests are expansive and diverse, ranging from subtropical systems to baldcypress wetlands, pine flatwoods, pine-oak scrubs, gum-cypress swamps, coastal mangroves, isolated hardwood hammocks, and more extensive upland hardwoods. The state's mild climate, tourism industry, and many ports of entry also make it particularly vulnerable to the introduction and spread of non-native invasive species. Challenges to forest health in the Sunshine State are therefore myriad and complex, and what follows are only a small sample of notable examples of Florida's forest pest and disease scenarios from 2015.

With substantial support from the USDA Forest Service's Cooperative Forest Health Protection Program, the Florida Forest Service's Forest Health Section staff is constantly involved in countless technical assistance requests from a wide variety of recipients. This recipient list includes (but is not limited to) The International Society of Arboriculture, The University of Florida and the Cooperative Extension Service, The Division of Plant Industry, FFS personnel, Forest Industries, the Society of American Foresters, The Florida Forestry Association, Florida A&M University, Private Landowners, and others. The FFS Forest Health Section staff provided identifications, diagnoses, and management recommendations regarding more than 258 forest health-related incidents statewide.

### **Forest Health Staff:**

Jeffrey Eickwort (Supervisor); (352) 395 4689; [Jeffrey.Eickwort@FreshFromFlorida.com](mailto:Jeffrey.Eickwort@FreshFromFlorida.com)  
Christopher Pearce (Survey Coordinator); (352) 395-4690; [Christopher.Pearce@FreshFromFlorida.com](mailto:Christopher.Pearce@FreshFromFlorida.com)  
Anthony Ayers (OPS Forester); (352) 395-4652; [Anthony.Ayers@FreshFromFlorida.com](mailto:Anthony.Ayers@FreshFromFlorida.com)  
Rebecca Strom (Staff Assistant); (352) 395-4691; [Rebecca.Strom@FreshFromFlorida.com](mailto:Rebecca.Strom@FreshFromFlorida.com)



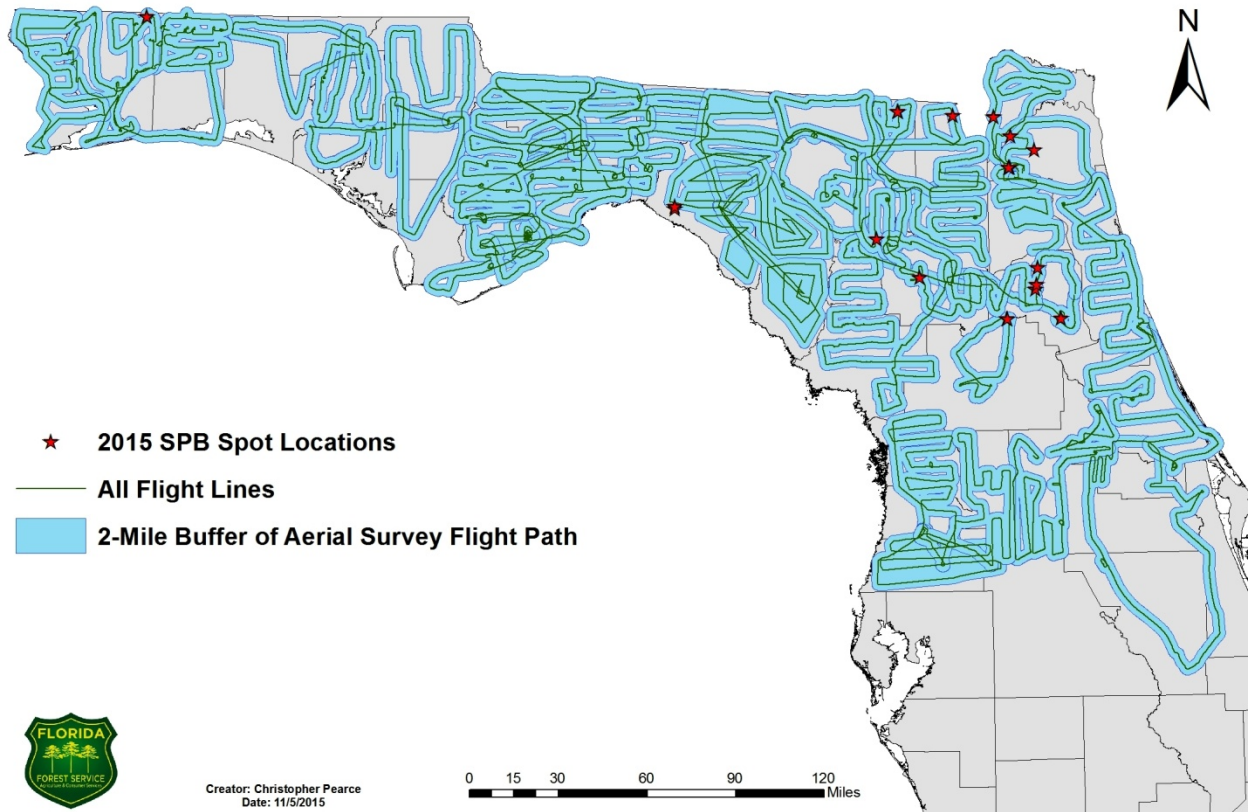


### Southern Pine Beetle Aerial Survey

The Southern Pine Beetle Aerial Surveys were conducted from May through September in 36 counties in northern and central Florida. Due to the destructive potential of this forest pest, at least one annual precautionary survey for SPB activity is warranted in each county per year. Counties which were chosen for surveillance were based on historical occurrences of SPB in Florida.

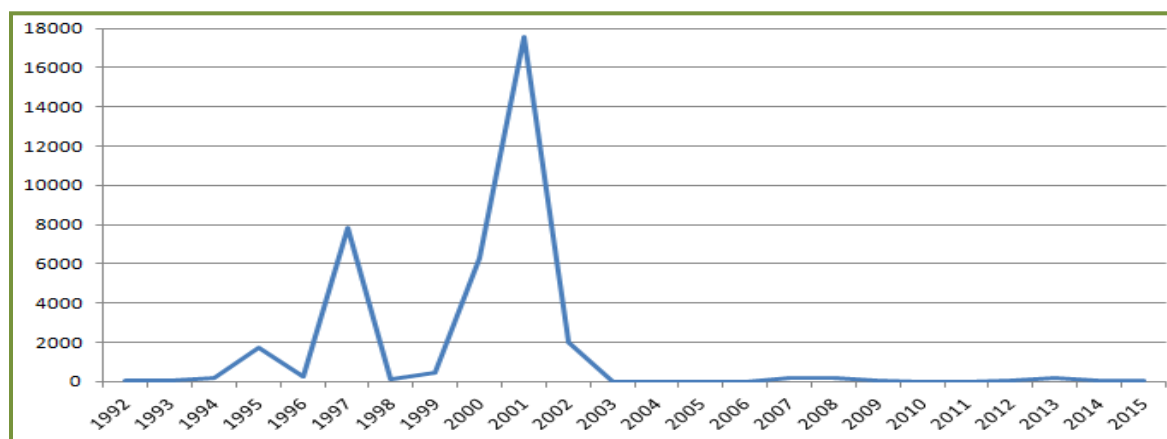
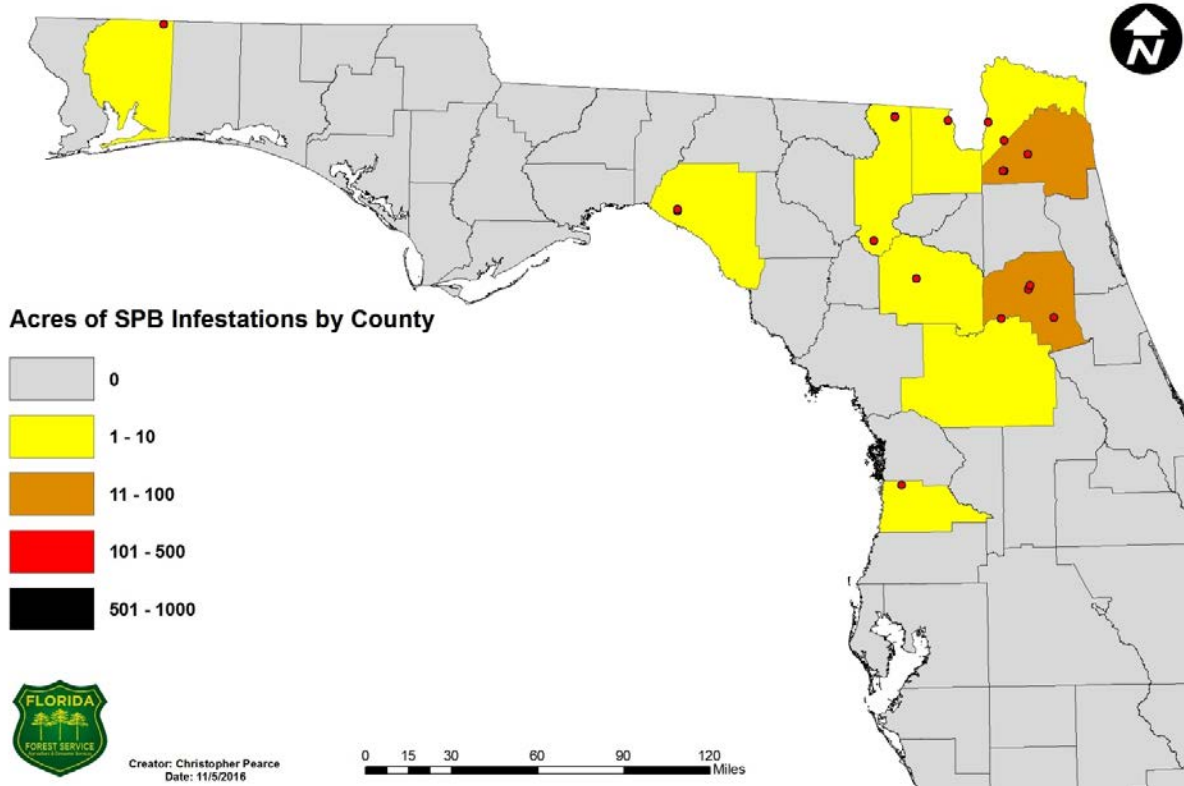
Early and rapid detection (and subsequent control) of SPB spots is critical to preventing the development of outbreaks, and for minimizing damage when outbreaks do occur. SPB infestations have a remarkable potential to grow rapidly and cause extensive pine mortality under certain conditions. Florida Forest Service aerial surveyors are trained to detect and locate SPB infestations from the air so they can notify landowners/managers via ground checks soon after their flights have been completed.

The 2015 annual aerial survey to detect southern pine beetle infestations was conducted over 36 flights totaling 8,501 linear miles (to observe an estimated area of 42,015 square miles). Nineteen infestations, covering approximately 74 acres, were detected and surveyed.



### 2015 Southern Pine Beetle Activity:

Southern pine beetle activity was low in 2015, with 19 confirmed infestations (spots), in 10 counties totaling an estimated 75 acres. Putnam and Duval Counties experienced the most activity, with 6 spots totaling 57 acres. A majority of SPB spots in other counties were around 1 acre or less. Southern pine beetle activity in 2015 continues a trend of low activity that Florida has experienced since 2003. Southern pine beetle infestations occurred within both natural and plantations stands of mostly loblolly and slash pines, and were located on private, state, and federal lands.



Acres of pine forest killed by SPB in Florida from 1992 to 2015. SPB activity has remained relatively low in the state since 2003.

### Diplodia Pine Tip Blight:

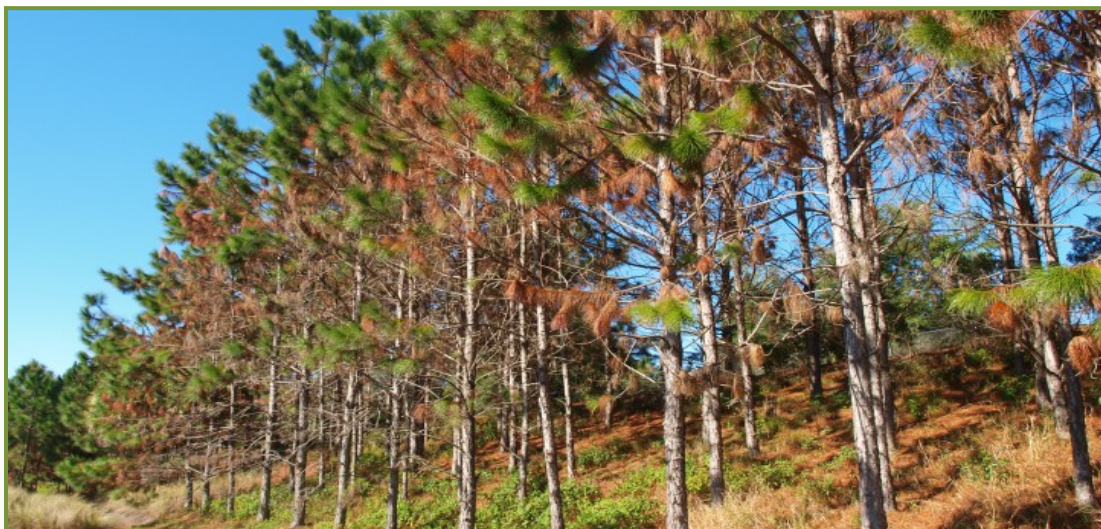
The FFS Forest Health section is assisting Dr. Jason Smith at the University of Florida with surveys to evaluate the distribution and severity of Diplodia tip blight (caused by *Diplodia pinea* and related fungi), a disease that was not known to be present in Florida prior to 2012. Diplodia blight in Florida was first reported in 2012 by way of significant dieback and mortality occurring in slash pines that were used as roadside buffers along the Orange County expressway system in Orlando. Since then, at least 30 samples have been collected by Forest Health Section staff, other FFS field personnel, and collaborators statewide. The pathogens have been confirmed to be present in symptomatic slash pines in the following counties: Alachua, Collier, Columbia, Hernando, Orange, Pasco, and Pinellas. Further field and laboratory work is underway to determine the distribution and severity of Diplodia blight throughout Florida.

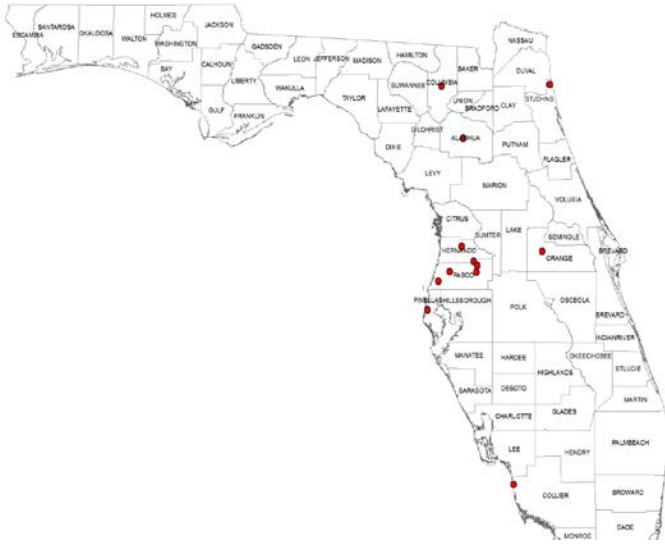
Diplodia tip blight has been found to affect slash pine (*pinus elliottii var elliottii*) and South FL slash pine (*P. elliottii var densa*). No other pines have yet been found affected in Florida. One frequent characteristic of Diplodia blight is the browning of the inner needles, with the tips of these branches remaining green. Initial symptoms are often more evident in the lower portion of the crown. Eventually the entire branch will often die. Further inspection of affected branches will reveal resinous bleeding cankers.

Diplodia blight can easily be confused with pitch canker disease, a common pine disease in the Southeast caused by the fungus *Fusarium circinatum*. A noticeable difference is that pitch canker tends to initially affect the tips of shoots near the top of the crown, while with Diplodia on slash pines, the dieback occurs more from the inside portion of the branch and the lower crown, moving upwards and outwards. Diplodia and pitch canker both produce bleeding cankers on affected branches; however pitch canker seems to bleed resin more profusely.

### How to Submit Samples:

The University of Florida's Forest Pathology lab and the FFS Forest Health section is requesting help with identifying the distribution of Diplodia in Florida. For more information on Diplodia tip blight and how to submit a sample for analysis contact the Forest Health Section or visit the UF Forest Pathology Laboratory website at the [UF Forest Pathology Laboratory Homepage](#).





Locations of confirmed cases of *Diplodia* tip blight in Florida.

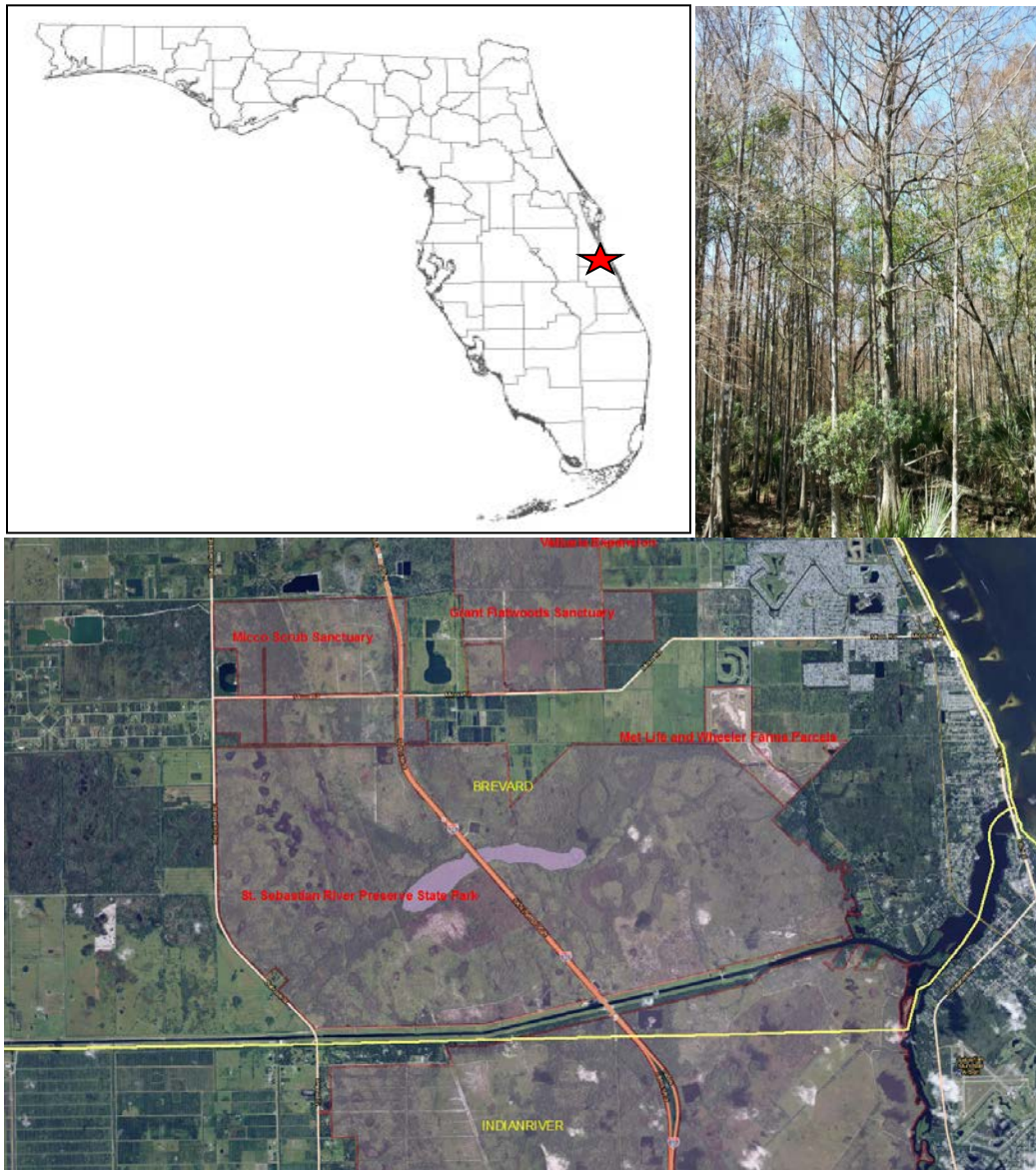




### Cypress Looper:

In late August 2015, personnel at the St. Sebastian River Preserve State Park in southern Brevard County reported sudden and dramatic foliage browning of large areas (over 100 acres) of baldcypress (*Taxodium distichum*). The FFS Forest Health Section determined that the cause was an outbreak of cypress looper (*Anacamptodes* (or *Iridopsis*) *pergracilis*). This moth species feeds exclusively on cypress foliage in the larval stage, and the sudden browning of the crown (usually noticed in late summer) results from the wilting of partially-eaten leaves. It later pupates in chambers chewed into the trees' outer bark. Cypress looper may remain active year-round in South Florida, and has multiple generations per year.

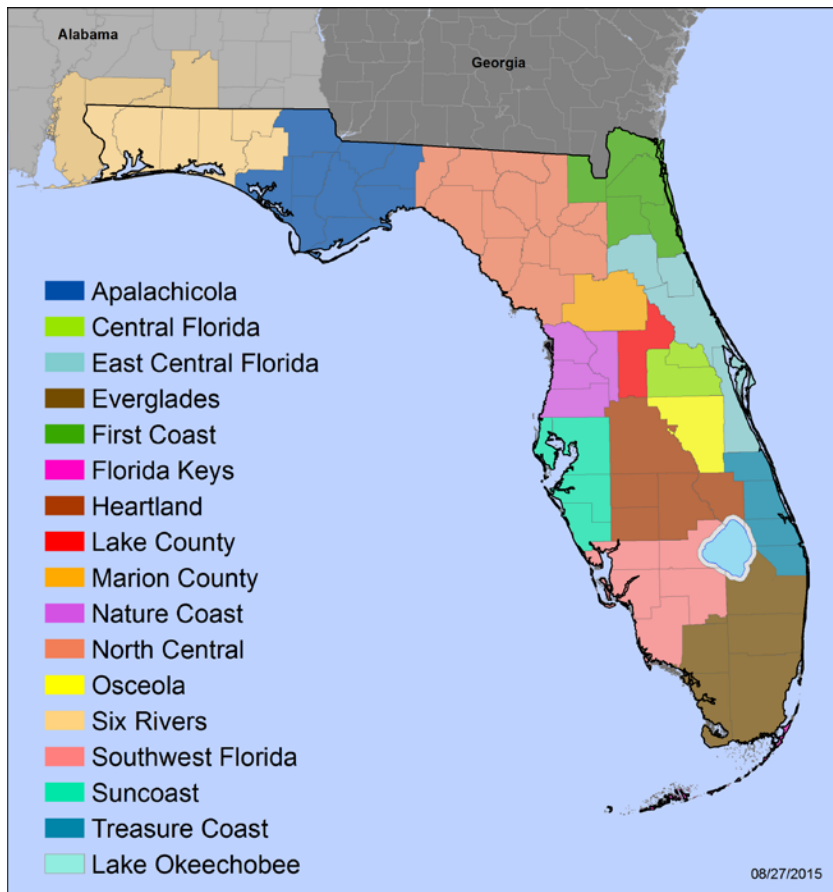
The appearance of affected trees can be alarming to land managers and the general public, but cypress looper feeding rarely kills trees. Severe defoliation can result in some branch dieback and reduced growth, but generally the trees will begin to grow new leaves within a few weeks, and gradually recover. Natural enemies (parasites and predators) will eventually control outbreaks, and insecticide management is impractical and unnecessary.





## Non-native Invasive Plants

Non-native invasive plant species represent a substantial threat to forests and other lands in Florida; they can reduce forest productivity and diversity, degrade the value of the land for wildlife habitat and recreation, and increase the risks and effects of wildfires. As invasive plant problems often cross property boundaries, the Florida Forest Service advocates a partnership approach, cooperating with other public agencies and private land managers to address invasive plant problems across the landscape. This is exemplified by Florida's Cooperative Invasive Species Management Areas (CISMAs), representing voluntary regional partnerships between many public and private stakeholders, with the common goal of reducing the distribution and future spread of invasive species. These groups are supported at the state level by the Florida Invasive Species Partnership ([www.floridainvasives.org](http://www.floridainvasives.org)).



Coverage of CISMA groups in Florida. Map provided by the Florida Invasive Species Partnership (FISP).

### Cogongrass (*Imperata cylindrica*):

Cogongrass is almost universally regarded as one of the most damaging invasive plants in the Southeast. Its rapid and aggressive growth (with rhizomes that can easily be moved in contaminated soil), tolerance of drought and poor soils, and fire-adapted traits have allowed it to invade into a wide variety of sites in Florida, greatly complicating land management. Once established on a site, cogongrass often requires multiple years of aggressive treatments to eradicate.



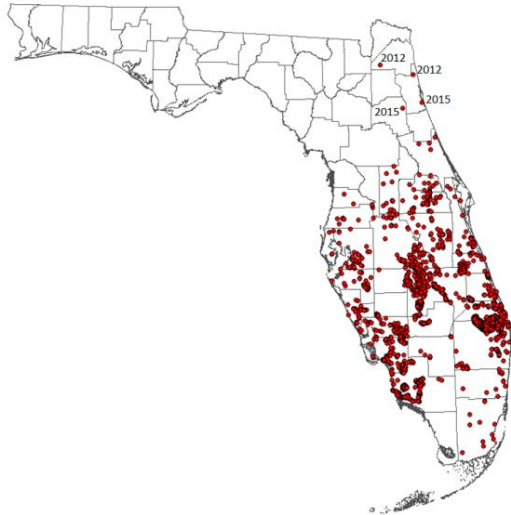
Although public conservation area managers are generally engaged in combating cogongrass, much of Florida's infested area is on private land. In 2009, The Florida Forest Service began offering a cost-share program to non-industrial private landowners, to assist with the cost of treating cogongrass infestations with herbicide. Funded by a grant from the USDA Forest Service's Landscape Scale Restoration Program, the FFS Cogongrass Treatment Cost-Share Program has continued to accept applications in 2014 and 2015. Since its inception, this program has approved more than 1,200 applications to treat over 4,500 acres of cogongrass infestations

Old World Climbing Fern (*Lygodium microphyllum*):



Old World Climbing Fern (OWCF) has been recognized as a pest plant in South Florida since the 1970s. This true fern (which can spread both vegetatively and by spores) is a climbing vine with very rapid growth, capable of climbing into and covering tree canopies. Like cogongrass, OWCF can increase the risk of damaging wildfires and disrupt natural communities. The Central Florida Lygodium Strategy

(CFLS) is a program managed by The Nature Conservancy with the cooperation of FFS and other agencies, with the goal of limiting the northward spread of OWCF by detecting and controlling infestations near or beyond the northern edge of the area where the plant is well-established. In 2012 and 2015, multiple OWCF infestations were detected in Northeast FL, well beyond the established range of the species. The CFLS and CISMA cooperators in that area have been aggressively treating these outlier populations, in an effort to prevent this plant from gaining a new permanent foothold from which it could continue to spread.



Old World Climbing Fern recorded locations, showing the detection year of outlier populations in NE Florida. Data provided by the Early Detection and Distribution Mapping System ([www.EDDMapS.org](http://www.EDDMapS.org)).

**For further information or assistance, contact:**

Florida Dept. of Agriculture and Consumer Services  
Florida Forest Service, Forest Health Section  
1911 SW 34<sup>th</sup> St.  
Gainesville, FL 32608  
352-395-4691  
[FFS Forest Health Website](#)

USDA Forest Service  
Forest Health Protection, Southern Region (R8)  
1720 Peachtree Road, NW  
Atlanta, GA 30309  
404-347-4095  
[USDA Forest Service, Region 8 Forest Health Website](#)