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Forest Health Highlights 2008

Outreach to Landowners and Resource Professionals

The Forest Health Unit provided statewide leadership and guidance to consulting, industry, and GFC foresters and other natural resource managers on a wide range of forest health related issues. GFC foresters incorporated insect and/or disease advice on 1,785 management plans involving 118,601 acres for the year. Statewide, forest health training was provided to foresters, resource managers, loggers, public works departments (state and county), nurserymen (& regulatory), landowners and field days on 116 occasions (7,995 attendees) involving most of the program areas listed in this report.

Southern Pine Beetle

Southern pine beetle activity was very low for 2008 with only 54 spots detected on state and private lands. In addition, another 61 spots occurred on the Oconee National Forest. Areas in central Georgia that experienced severe problems in 2007 didn't suffer southern pine beetle problems this year. Periodic rainfall in this region in the fall 2007 (increasing the trees natural defenses), and a drastic increases in the predator beetle populations (noted by the Forest Service) apparently were major factors for lower levels of damage. GFC foresters conducted the southern pine beetle pheromone-trapping program – 20 counties were trapped in 2008. Baldwin County projected moderate southern pine beetle problems for the year but this was not revealed during the survey. Very isolated SPB problems were noted by the end of the season, but a great deal of ips beetle damage did occur throughout the coastal plain and piedmont regions. A new fact sheet for pine bark beetles in urban areas was developed due to the high number of homeowner calls:

<http://gatrees.org/ForestManagement/PineBarkBeetles.cfm>

Annosum Root Disease

Widespread damage in recently thinned pine plantations (Slash and Loblolly) was first detected in 2005, and the disease continues to cause ongoing damage with new sites reported in 2008. The primary region with the highest incidence and most severe mortality is a zone from Augusta to Columbus and south for about 75 miles (correlating to our sandhills and upper coastal plain regions). Assistance was given to Dr. Sara Covert (UGA forest geneticist) with her ongoing genotype investigations of *Phloeobiosis gigantea* (as a suppression tool to combat annosum). UGA was relying on forest industry to provide sites, but ownership of these lands became an issue, and the GFC helped locate private sites suitable for the ongoing research. The principal reason for this disease outbreak (in our opinion) is the extremely high number of acres that have been thinned over the past 5-7 years in this region (initial CRP plantations along with ongoing forest regeneration), and the wetter summers of 2004-05 created ideal conditions for Annosum to infect these pine stands. Several counties with the highest number of Annosum infections had in excess of 25,000 acres planted during the 1986-89 CRP period. For more information:

<http://gatrees.org/ForestManagement/AnnosumRoot.cfm>

Red Oak Decline

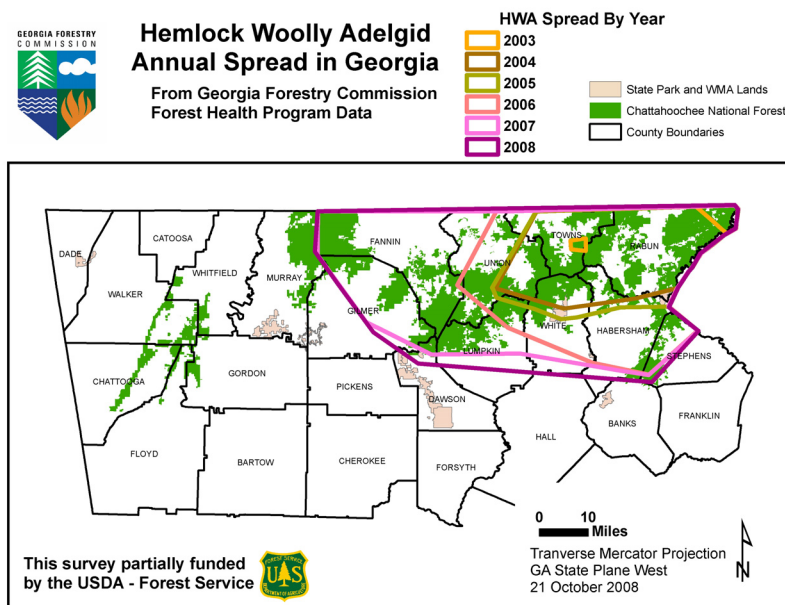
This phenomenon continued to cause problems throughout most of the state by late summer (2008). The ongoing drought is to blame for most of this decline, and species within the red oak group are most susceptible. The most commonly observed species suffering this decline are water, willow, scarlet, southern red, and black. For more information:

<http://www.na.fs.fed.us/spfo/pubs/fidls/oakdecline/oakdecline.htm>

Hemlock Woolly Adelgid

(<http://gatrees.org/ForestManagement/HemlockWoollyAdelgid.cfm>)

A survey for the hemlock woolly adelgid (HWA) was conducted for a sixth year. One temporary employee worked on this survey, concentrating on the western front of the spread. HWA continues to spread at a rapid pace and is now found throughout almost all of our native hemlock range in Georgia. The counties with HWA include Rabun, Towns, Union, White, Habersham, Stephens, Lumpkin, Fannin, Murray and Gilmer. The GFC continued to assist the UGA predator beetle rearing lab by supplying infested branch material. GFC survey employees were used to scout for suitable collection sites. Loads of infested branches were delivered as needed from December through early June. GFC also served as a site locator for the release of predator beetles raised by Georgia labs and the Clemson University lab. The GFC continued to work with the Georgia Department of Natural Resources to help survey and protect hemlocks on state lands. This partnership continued regarding the treatment of hemlocks that were classified as highly visible or significant using pesticides. The fruits of this effort were great with 1070 trees (total DBH of 12,707 inches) treated in 2008. The GFC has been directly involved in the selection of predator beetle release sites and the actual releases on DNR lands.



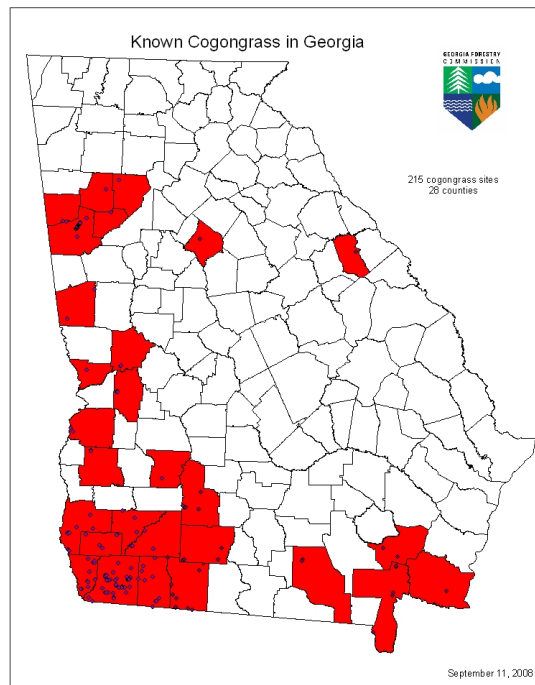
The GFC has assisted numerous cities, communities, homeowner associations and individuals regarding HWA. Public awareness of the kioritz injectors available at GFC offices in Habersham, Union, Lumpkin and Fannin Counties has increased. Most counties reported frequent usage of the tool with some counties having to use a waiting list. At least 13 presentations were made to the public on HWA. GFC public website posting were added and updated in an effort to relay current information.

Invasive Weeds & Cogongrass

(<http://gatrees.org/ForestManagement/Cogongrass.cfm>)

Although many invasive plants cause problems within Georgia, most of our efforts have focused on Cogongrass and Chinese Privet. Our “Cogongrass Task Force” continues their mission in Georgia to address the threat this plant has toward our environment. Training has been given to resource professionals throughout the state, and an educational campaign is underway to help landowners identify the plant. Once landowners find suspect plants, they then notify the GFC to verify the

identification, and if confirmed is treated by the GFC. All known cogongrass infested sites are being treated by either the GFC, APHIS, or in a few cases the landowners.



The GFC spearheaded an effort to bring all concerned groups and agencies into this umbrella of detecting cogongrass. A total of 23 state, federal and private partners signed an agreement to establish the entire state of Georgia as a Cooperative Weed Management Area for cogongrass. The combined effort of this group should have far reaching impacts to help educate the public about cogongrass as well as help locate all infested sites. All information regarding this noxious weed has been assembled at this web site: <http://www.cogongrass.org/>. The GFC continues to treat the majority of sites with herbicide at no cost to landowners (through the assistance of an ongoing grant with the USDA Forest Service). This noxious weed has now been found in 28 Georgia Counties, involving over 215 sites.

The forest health staff has begun a widespread effort to test various herbicides, timing and rates to eradicate Chinese Privet. This is likely the most widespread and harmful non-native invasive plant to Georgia's forests. Field trials will continue for at least one more year before results and recommendations are published. A major test of aerially treating Chinese privet in a hardwood understory during the dormant season is being planned and will be executed in the winter of 2008-09. Results of this field trial will also be documented for effectiveness of privet control as well as any collateral damage to the overstory hardwoods.

Sudden Oak Death

The sudden oak death monitoring program continues and 10 watersheds were chosen in northeast Georgia to detect the presence of the pathogen to blame for west coast tree mortality (*Phytophthora ramorum*). Stream baiting sites targeted watersheds near the positive nursery sites in the metro Atlanta area with the belief that many of these plants were sold and planted locally and could be causing further *P. ramorum* infections in the landscape undetected. All stream-baiting samples were negative.

Sirex Woodwasp

The sirex woodwasp poses a threat to all of Georgia's southern yellow pines. Fifty insect traps are deployed throughout the state from May through November to detect any *Sirex noctilio* that might

be present. These traps are checked twice each month and any suspect siricids are screened for ID by the forest health staff. No *Sirex noctilio* have been caught in our traps. The GFC forest health staff continues to partner with researchers (UGA and Cornell University) in their quest for additional biology on the native woodwasps, and suppression techniques that could be used in the event this non-native insect invades Georgia. Huge losses of both loblolly and slash pine have occurred on other continents due to this insect.

Redbay Ambrosia Beetle/Laurel Wilt Disease

Laurel wilt disease (LWD), caused by the fungus *Raffaelea lauricola*, is a new disease of plants in the Lauraceae family in the United States, vectored by an introduced Asian ambrosia beetle, *Xyleborus glabratus*. This disease has spread rapidly through the abundant redbay in the maritime and coastal plain forests northward in South Carolina and south well into Florida, killing most of the large redbay trees in its path. Other plants in the laurel family known to be susceptible to varying degrees include: camphor tree (*Cinnamomum camphora*), sassafras (*Sassafras albidum*), avocado (*Persea americana*), pondspice (*Litsea aestivalis*), and pondberry (*Lindera melissifolia*).

Laurel wilt disease continues moving rapidly across Southeast Georgia. To date **21** counties are confirmed for Laurel Wilt Disease and three new counties (Toombs, Ware, and Clinch) were added as positive counties during the 2008 Laurel Wilt Survey. The majority of the reports of LWD come from redbay (*Persia borbonia*) but sassafras infestations are being more frequently reported in the northern counties (Bulloch and Screven) on the leading edge of the laurel wilt infestation. To date, LWD been documented on Sassafras in six counties in Georgia (Liberty, McIntosh, Effingham, Screven, Bulloch and Evans Counties).

Research has still produced no viable, large scale, protection from LWD and there is no mechanical or chemical treatment that can be used to slow or stop the spread of The Redbay ambrosia Beetle or the associated fungus *Raffaelea lauricola*. The Georgia Forestry Commission has and will maintain a working relationship with the US Forest Service, Georgia Southern University, the University of Georgia, and our many other partners to document the spread, study the biology, and possibly find a solution to this nonnative invasive insect. More info on LWD can be found at: <http://www.gatrees.org/ForestManagement/LaurelWilt.cfm> . This includes our comprehensive two-year report for our evaluation monitoring grant for our survey and field work.

For the 2008-09 evaluation monitoring grant, we have begun the process of site selection for our long-term plots and determining field protocol for information we will gather, and maintain. These plot locations are carefully selected based upon the current infestation levels (or perhaps out in front of the leading edge of LWD), and the species composition on each site. Plots for redbay, sassafras, camphor tree, pondspice and pondberry will all be utilized as we track the spread and disease levels on these sites. We anticipate field surveys will actually begin later in the fall of 2008.

Exotic Wood Borer / Bark Beetle Survey

The GFC surveys approximately 100+ warehouse locations that import cargo using Solid Wood Packing Material (SWPM) from foreign countries. Each location is checked monthly (May through September) bringing the number of inspections to around 500 for the season. Insects found within these sites are identified and appropriate action is taken by USDA if warranted.

Emerald Ash Borer

The emerald ash borer has devastated ash trees in the northeast U.S. and could have significant impacts in Georgia if it is introduced and becomes established. Seventy-five traps were deployed throughout the state from June through October to detect any emerald ash borers (EAB) that might be present in Georgia. The traps are checked once a month for any suspect EAB, but none have been caught in Georgia through our trapping efforts. Numerous native buprestids have been caught but no suspects.

Light Brown Apple Moth

The light brown apple moth (LBAM) was confirmed in California in March 2007, and it has a host range of 120+ plants and trees. Many of the favored host trees are native to Georgia. Thirty traps have been deployed throughout the state in stands with preferred host trees. This is a partnership with a larger trapping program headed up by the Georgia Department of Agriculture. Trapping occurs from July-November in efforts to detect any LBAM that might be present in Georgia. The traps are checked every two weeks and no LBAM have been found in the traps this year.

Gypsy Moth Trapping

Five contract workers and GFC personnel deployed traps in 16+ counties in 2008.

- The following counties were trapped: Morgan, Madison, Franklin (1/2), Dawson, Hall, Forsyth, Coweta, Towns, Rabun, Pickens, Gilmer, Dade, Haralson (1/2), Walker, Catoosa, and Stephens. A total of 3055 traps were placed in these counties. One positive catch was made in south Morgan County and the area will be delimited in 2009.
- Delimiting surveys were done in Gwinnett, Clarke and Jackson Counties. A total of 60 traps were placed. No positive catches were made. This was the last year for the Gwinnett site, but Clarke and Jackson will be delimited in 2009.
- GFC forest health personnel placed a total of 40 additional traps around high risk areas in their work areas. No positive catches were made.
- APHIS placed traps near Macon along the interstate and one moth caught (Bibb County)
- A grand total of 3,155 traps were deployed with one positive catch.

Forest Health Assistance in Georgia

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