

Georgia Forestry Commission Forest Health Highlights

October 1, 2018 through September 30, 2019 Chip Bates – Forest Health Coordinator Mark McClure, Lynne Womack, Chris Barnes – Forest Health Specialists

Summary:

The Forest Health Management Section provides forest health advice to a wide variety of citizens in the state, including consulting firms, industry, natural resource managers, landowners, and Georgia Forestry Commission (GFC) personnel.

In 2019, Georgia Forestry Commission foresters incorporated insect, disease, or invasive species advice in 275 management cases involving 17,951 acres. Each Stewardship and Tree Farm plan written in the State of Georgia incorporates advice to landowners concerning forest health issues and insect and disease advice.

In an effort to extend our education program in Georgia, training was provided to 2,295 Georgia citizens during 85 training sessions. This training incorporated a wide variety of outreach methods, including field days, exhibits, demonstration plots, field training, hands-on education, and classroom presentations. In a broader outreach effort, two public outreach events were conducted at state and county fairs with an estimated 35,000 Georgia citizens reached, and 11 multimedia interviews were produced with an estimated audience of 95,000.

Special notes of interest:

Emerald Ash Borer

Emerald Ash Borer (EAB) was discovered in Georgia in July 2013, and trapping data shows it is now found in 33 counties: Barrow, Bartow, Carroll, Catoosa, Chattooga, Cherokee, Clayton, Cobb, Dade, Dawson, DeKalb, Douglas, Fannin, Fayette, Fulton, Gilmer, Gordon, Gwinnett, Habersham, Henry, Jackson, Lumpkin, Murray, Newton, Paulding, Rabun, Rockdale, Spalding, Union, Walker, Walton, White, and Whitfield Counties. Six new counties were detected in 2019 for the presence of EAB. A map of the quarantine area and a list of the counties positive for EAB can be found here: Emerald Ash Borer Counties

Asian Gypsy Moth

On September 25, 2015, a single, adult male Asian gypsy moth was identified in a trap directly outside the Port of Savannah. This federally regulated Asian gypsy moth initiated an intense systematic grid survey from 2016-2018 to determine if this moth was a single capture or if additional Asian gypsy moths were present. At the completion of the 2018 trapping survey, no additional Asian gypsy moths had been detected in Georgia. However with the continuous threat of Asian gypsy moth being brought in from the ports, we continued trapping around the area. In 2019 there were no Asian gypsy moths caught and only one North American gypsy moth was trapped and identified.

Hurricane Damage

Georgia was impacted by Hurricane Michael, October 10-11, 2018. Georgia experienced extreme winds (125-150 miles per hour) from southeast Georgia to near Dublin in the center of the state. Tropical storm winds and rain were experienced from central Georgia, through South Carolina and as far north as Virginia.

The Timber Damage Assessment survey showed that 2,368,226 acres of forestland were impacted by Hurricane Michael with 20,510,889 tons of pine and 17,178,721 tons of hardwood being damaged with an estimated value of \$762,683,909. Hurricane Michael Damage Assessment

Southern Pine Beetle Outbreak

Southern pine beetle was detected late in the season, after the end of the federal fiscal year. On October 25, 2019, an extensive outbreak of Southern pine beetle was reported in Screven County, Georgia (Near the Georgia / South Carolina border). Between October 25 and November 7, foresters flew another 425 miles and confirmed 91 SPB and 85 Ips beetle spots. Southern pine beetle spots in these areas totaled an additional 304 acres and Ips beetle spots totaled 111 acres.

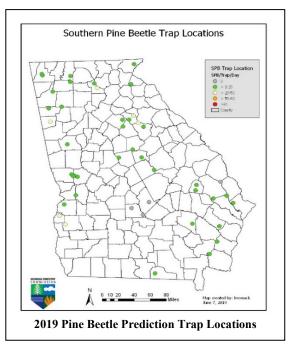
Air Potato Success

Air potato plant was introduced to the Georgia Forestry Commission as a pest of concern in Florida in 2015. Biocontrol releases of the Air potato beetle (*Lilioceris cheni*) were conducted in St. Mary's and Brunswick, Georgia to combat this threat, but due to the extremely mild winter of 2015/16 there were very few new beetles found and very little feeding activity on the sites and the project was abandoned as a failure. In the summer of 2019 the Air potato beetle was found on Saint Simons Island as a thriving population and apparently migrated to the area with no assistance. In 2020 additional observations will be conducted to see if the populations will continue to thrive.

Pine Beetle Pheromone Trapping / Pine Beetle Aerial Survey / Ips Engraver Beetle Outbreak:

In 2019, the Georgia Forestry Commission followed the new SPB Prediction Trapping protocol set up by Texas A&M. 45 traps were placed across the state and six weekly samples were collected from each trap. These traps containing three lures, Frontalin, Sirex and the endo-brevicomin flexlure. Trap collections showed six of the 38 counties had moderate numbers of SPB caught during the trapping period. These include Clarke, Dawson, Greene, Haralson, Quitman and Randolph Counties. No counties had high numbers of beetles per day

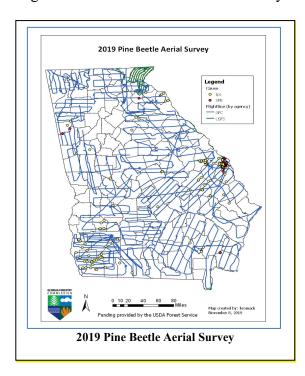
Across the state, the probability of having any spots ranges from a 0-80%. Rabun County has this highest probability of having any spots, at 80%. Habersham, Jasper, Jones and Putnam Counties have the next highest probability of having any SPB spots, between 60-80%. Bartow, Chattooga, Clarke, Dawson, Greene, Haralson, Lumpkin, Quitman and Randolph Counties have a 20-40% chance of having SPB spots. The remaining 24 counties have a less than 20% chance of having any SPB spots.



From April 17 – October 1, GFC employees flew 9,791 miles of aerial surveys with visual observations on approximately 10,557,000 acres (approximately 28% survey) with only 11 SPB spots detected on approximately 4.5 acres. Early in the season the majority of infestation reported were Ips emgraver beetles in Hurricane Michael areas, with GFC foresters reporting 80 spots on approximately 44 acres.

In late October Southern Pine Beetles was detected in Screven County. Foresters flew another 425 miles and confirmed another 91 SPB and 85 Ips beetle spots. These were concentrated in northern Screven and southern Burke Counties. Southern pine beetle spots in these areas totaled an additional 304 acres and Ips beetle spots totaled 111 acres.

The overall total for Southern Pine Beetle and Ips Engraver beetle from January 1 – November 7, 2019 is as follows: 102 SPB spots on 310 acres and 158 Ips spots on 154 acres. Monitoring in 2020 will begin with the areas that had SPB activity in 2019.



Southern Pine Beetle Prevention and Restoration Grant Report (2003-2016):

The USDA Forest Service has provided federal grants in this program area for 17 consecutive years. These grants are primarily utilized for direct cost share payments to Georgia landowners to implement several prevention practices to treat high risk stands and forest restoration practices. Of these grants totaling \$12.28 million, \$7.54 million has been obligated towards direct landowner payments under cost share practices treating approximately 323,400 acres. SPB cost share funds for 2019 were obligated towards southern pine beetle prevention and restoration practices.

Program Overview - Landowners work directly with their county GFC forester for all phases of the program. This process has been favorably accepted as it seeks to streamline the procedures from start to finish. During 2019, GFC foresters serviced 292 contracts covering 18,904 acres.

Sugarberry Mortality:

In 2009, dying sugarberry (Celtis laevigata) was reported in the Columbia, South Carolina area. This mortality was thought to be associated with urban mortality and there was very little movement to determine the cause. In September 2015 Sugarberry mortality spread to the Augusta Country Club golf course in Augusta, Georgia. The same thinning canopy, yellowing leaves, and widespread mortality was seen across Augusta. Partners with the Southern Research Station in Athens Georgia (Mike Ulyshen, Scott Horn, Steve Fraedrich, and Michelle Cram) met with Chip Bates, (Georgia Forest Commission, Forest Health Coordinator) in August to evaluate the Sugarberry mortality and to form a cooperative partnership to find a cause for the mortality. In the winter of 2015, numerous theories were presented, and scientist followed leads and ideas that moved the team forward, but no conclusion was found.

In July 2019, Sugarberry Mortality was observed as a widespread problem in Savannah. In August 2019, a partnership was formed with USDA Forest Service, National Park Service, the University of Georgia, the Georgia Forestry Commission, Tybee Island, and the City of Savannah to continue field evaluation of Sugarberry mortality. The group met in Savannah to discuss possible causes for the mortality, share information know about the disease, collect tissue samples, and to establish three survey plots for research in 2020. These survey areas were established along the Savannah River from Screven County Georgia (30 miles north of Savannah), Across the Savannah River from downtown Savannah, and on Tybee Inland in preparation for studies in 2020.

This search for a solution to Sugarberry Mortality will continue in the Spring of 2020.

Heterobasidion root disease (Formerly known as annosus root disease):

Reports of *Fomes annosus*, or annosus root disease, began in 2005 with identification of widespread mortality in recently thinned pine plantations (slash and loblolly). The incidence of Heterobasidion root disease has declined with landowner education programs, and improvements in application products and techniques to combat this disease.

Michelle Cram, Plant Pathologist, USDA Forest Service, worked diligently to insure labeling of *Phlebiopsis gigantea* for control of annosus root disease. On October 6, 2016, the label for Rotstop was approved in the United States. This new label provides an additional tool to control Heterobasidion root disease, and removes the rigid time constraint of 24 hour treatments.

The Georgia Forestry Commission continues to recommend this treatment to landowners across the state and will continue to work closely with Ms. Cram to educate landowners about this new treatment option.

The Heterobasidion Root Disease brochure can be found at: Heterobasidion Root Disease brochure.

Hemlock Woolly Adelgid:

The Georgia Forestry Commission provided assistance to the predator beetle rearing labs at the University of Georgia, University of North Georgia and Young Harris College. Activities included scouting for and collecting foliage for rearing, surveying and preparing beetle release locations, and releasing beetles. The GFC played a critical role in the logistics of delivering foliage to the labs and getting beetles to the selected release areas.

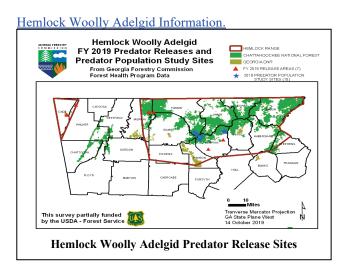
In 2019, GFC scouted 14 sites, and fout predator beetle release areas were selected: three in the Chattahoochee National Forest and one on a land trust property. The GFC conducted 17 predator beetle releases on these sites. *Laricobius nigrinus (Ln)* and *Sasajiscymnus tsugae (St)* were released on these sites. Four of these release areas represent excellent potential for field insectary sites and will continue to be a major focus in 2020.

Predator population studies will be a major part of this program moving forward. In 2019, three new sites were selected for recovery research this year, and last year's sites were sampled for predator spread for a total of nine study sites. On all sites, it had been two years or more since beetle releases were made, and each site had two or three species of predator beetles released over the last decade: *Sasajiscymnus tsugae*, *Laricobius nigrinus* and *Scymnus coniferarum* (*Scw*).

The Georgia Forestry Commission continued to serve in an advisory capacity, working with the Georgia Department of Natural Resources to help survey and protect hemlocks on state lands. This year, the GFC provided chemicals for treatment of hemlocks in the Wildcat Tract of the Dawson Forest WMA. On Lula Lake Land Trust properties, the GFC continues to work with staff and a contractor to delineate current and future predator beetle release areas and to coordinate releases with chemical treatment.

The GFC assisted numerous cities, communities, homeowner associations and individuals with HWA issues. The soil injector loan program continues to be extremely popular with homeowners. During peak application times, there is a waitlist in several counties for use of the injectors. The total number of injectors available to landowners is now 16, and injectors are now available in the following counties: Dade, Dawson, Fannin, Gilmer, Habersham, Lumpkin, Murray, Pickens, Rabun, Union and Walker.

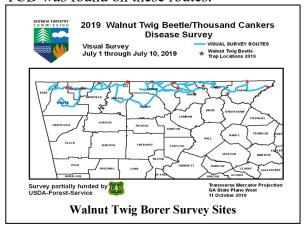
The GFC public website postings are continuously updated in an effort to relay this information.



Thousand Cankers Disease:

The Georgia Forestry Commission Forest Health staff has been concerned about the spread of the walnut twig beetle (*Pityophthorus juglandis*) and the associated thousand cankers disease since its introduction near Knoxville, Tennessee in 2009. GFC deployed pheromone traps for WTB in north Georgia counties from 2012 to 2017 with no positive samples. GFC resumed trapping in 2019, placing traps in 15 locations in counties bordering Tennessee and North Carolina.

Between July 1-10, 2019, GFC conducted windshield visual surveys for thousand cankers disease and over 425 miles across north Georgia was surveyed with 1,014 black walnut trees seen along the routes. Trees showing multiple twig or branch level die-back were inspected more carefully. No suspected TCD was found on these routes.

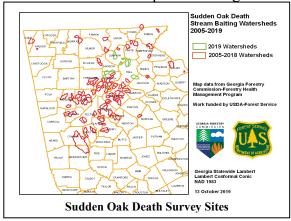


Sudden Oak Death:

2019 marks the 15th year Sudden Oak Death early detection program surveys have been taken. Ten north Georgia watersheds were chosen to monitor for the presence of the pathogen *Phytopthora* ramorum. In 2019, special focus was placed on sampling targeted watersheds that include Georgia's past positive nursery sites and watersheds in the metro Atlanta area that have abundant new residential development. Five new early detection watersheds that have had no early detection sampling to date were selected, and five early detection watersheds are being revisited.

In addition, stream-baiting continued in two watersheds that have produced multiple positive samples in past years. Both of these watersheds have nurseries that had positive plants and soil in the past.

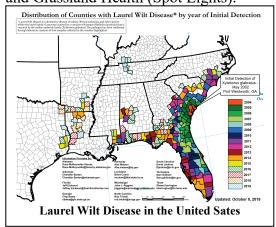
All stream sampling in 2019 was done using the bottle of baits method. Four samples were taken from April 1 through May 16, 2019 and two samples were completed in October and November 2019. Results from these samples were negative for *P. ramorum*.



Laurel Wilt Disease:

Laurel wilt disease was introduced at the Port of Savannah in solid wood packing material. The first redbay ambrosia beetle was detected in an Early Detection Rapid Response monitoring trap in Garden City, GA in 2002 and dead redbay trees were evident near the coast in GA and SC by 2004.

The spread of Laurel wilt disease throughout the southeastern United States has been charted since 2005 with updates made quarterly to the USDA Forest Service Southern Region website under Forest and Grassland Health (Spot Lights).

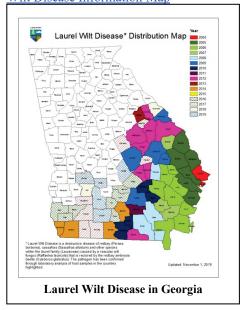


As of September 2019, Laurel wilt disease had been confirmed in 62 counties in Georgia. A positive laurel wilt disease detections was made in sassafras in Worth County.

The Georgia Forestry Commission continues to document the spread of this and other destructive nonnative invasive insects and diseases. Training will continue to prepare GFC foresters and technicians for conducting surveys and detection as laurel wilt disease moves into new areas.

The Forest Health Staff began assisting Dr. Bud Mayfield, USDA Forest Service, Southern Research Station, with his project "Monitoring Spread and Impact of laurel wilt in Sassafras Beyond the Gulf-Atlantic Plain". Sassafras sites were located in the Coastal Plain and Piedmont regions. A Lindgren funnel trap and triple-vane panel trap with wet-style cups were deployed on each site. Traps are being monitored every two weeks with insect specimens being sent to Dr. Mayfield for identification.

Additional information on LWD can be found at the USDA Forest Service Laurel Wilt website: <u>Laurel</u> Wilt Disease Information Map



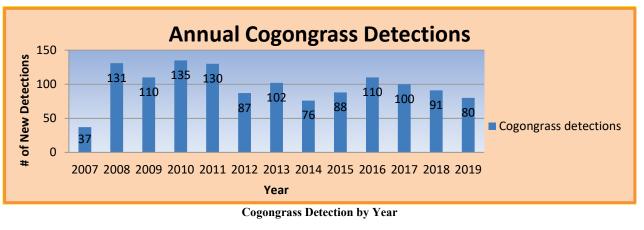
Invasive Weeds:

Cogongrass

Although many invasive plants cause problems within Georgia, the majority of our efforts have focused on cogongrass. All known cogongrass infested sites are being treated by the Georgia Forestry Commission.

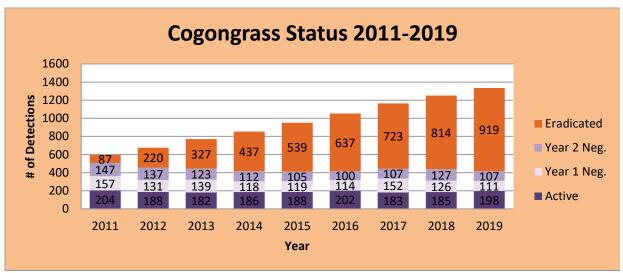
In 2008, the GFC coordinated 23 state, federal and private partners to sign an agreement to establish the entire state of Georgia as a Cooperative Weed Management Area for cogongrass. This "Cogongrass Task Force" lead to education efforts that have paid dividends in initial cogongrass reports across the state. Statewide, forest health training was provided to foresters, resource managers, loggers, public works departments (state and county), nurseries, regulatory agencies, landowners and at field days on 77 occasions with 31,660 attendees being reached.

There have been 80 new cogongrass infestation sites reported and treated by the GFC during this fiscal year.



The GFC continues to treat all new sites with forestry herbicides, normally imazapyr and/or glyphosate, at no cost to landowners.

Cogongrass has now been found in 65 Georgia counties, involving 1,335 sites. Coffee, Glynn, Hart and Washington counties were new counties in which cogongrass was detected for the first time in 2019. In Georgia, 338 acres of cogongrass have been treated with all known sites being sprayed at least once; most of the infestations in Georgia are between 1/20 - 1/4 acre in size. Based upon post-treatment inspections, approximately 85% of all known sites are being reported as negative for cogongrass. Three consecutive years of negative evaluation is required for a cogongrass site to be deemed as eradicated. There are 111 sites in Georgia that have shown one year of negative post inspection, 107 sites that have shown two years of negative post inspection and 919 sites have been declared eradicated.



The table above displays the number of cogongrass spots in each category annually from 2011-2019

The cogongrass epicenter in Georgia is located in the southwest corner of the state. The majority of all new detections over the past few years have been in this region, and the most active counties over the past several years are Decatur, Early, Grady, and Thomas.

In an effort to increase public awareness and education, an information newsletter is posted semiannually on the GFC website homepage and is e-mailed to landowners and partners across the Southeast. This newsletter contains reminders for landowners to be vigilant for new infestations of cogongrass, gives pictures for identification purposes, and provides an update on the current status of cogongrass infestations in Georgia.

Dirty Dozen List of Invasive Weeds:

2019 is our nineteenth year working with The Forest Inventory and Analysis (FIA) team developing data providing a defendable ranking of invasive plants. Since 2009 the "Targeted Watch List "of nonnative invasive plants did not change from year to year, and we are seeing increasing, decreasing, and stable trends in the total acres of our twelve worst nonnative invasive plant species that aggressively compete with and displacing native communities across Georgia.

The top 12 "<u>Dirty Dozen List</u>" continues to be a valuable tool in combating nonnative invasive weeds in Georgia.



2019 Dirty Dozen List

Top Nonnative Invasive Plants in Georgia

2009 - 2015

| Rank | Species | 2017 Acres | Average Acres | Percent Change | Trend |
|--|--|------------|--|----------------|------------|
| 1 | Nonnative privet | 644,317 | 679,897 | -5% | Stable |
| 2 | Nepalese browntop | 90,204 | 97,688 | -8% | Stable |
| 3 | Chinaberry | 47,757 | 59,659 | -20% | Decreasing |
| 4 | Nonnative lespedeza | 35,862 | 40,586 | -12% | Decreasing |
| 5 | Kudzu | 30,961 | 37,433 | -17% | Decreasing |
| 6 | Chinese tallowtree | 24,321 | 15,066 | 61% | Increasing |
| 7 | Japanese climbing fern | 19,978 | 19,428 | 3% | Stable |
| 8 | Nonnative olive | 19,456 | 19,248 | 1% | Stable |
| 9 | English Ivy | 12,981 | 8,581 | 51% | Increasing |
| 10 | Mimosa | 11,647 | 15,066 | -23% | Decreasing |
| 11 | Trifoliate Orange* *New addition in 2019 | 8,600 | 3,404 | 153% | Increasing |
| 12 | Wisteria | 7,874 | 8,498 | -7% | Stable |
| Cogongrass Control Efforts (Acres)(9/18/2019) 337 | | 337 | Decreasing - 261 Acres of the 337 acres of cogongrass, in Georgia, are reported as inactive or eradicated. | | |

The Georgia Forestry Commission documents all known cogongrass infestations. Since 2007, cogongrass has been detected in 65 counties, and 27 of those 65 counties are now free of cogongrass. Georgia's proactive treatment program assists landowners across the state, and 85% of all known cogongrass spots in Georgia are considered inactive or eradicated.

Invasive Species: Any plant or animal that has been introduced and aggressively competes with and displaces local native communities; normally having no native enemies to limit reproduction and spread.

The Dirty Dozen List of Nonnative Invasive Species is ranked by the total acres occupied according to Forest Inventory and Analysis data. Honey suckle and fescue are not included in this list.

Stable (0 - 10% Change) / Increasing or Decreasing (>10% change)

September 1

2019 Dirty Dozen List of Nonnative Invasive Plants

Invasive Plant Species Control Program:

Strategies to address the onslaught of invasive species and their control is an escalating issue. The Forest Health staff continues to educate the public about the harm nonnative invasive plants can cause in Georgia. Regional and local programs have been conducted during the past year to bring relevant and current topics to the landowners of Georgia and our federal and state partners.

From 2011 to 2017, GFC's Invasive Plant Cost Share Program helped 284 landowners treat 8,368 acres. Georgia's efforts have focused on nonnative privet, Japanese climbing fern, Chinese tallow tree, chinaberry, and nonnative rose. The majority of the contracts have been for the control of nonnative privet.

In June of 2018, \$100,000 in funding was offered to landowners statewide for invasive species control. A change was made to the program in 2018, and Callery pear replaced nonnative roses on this list of invasive plant species to control. Georgia Forestry Commission foresters completed 36 contracts for a total of \$80,425 (1,608.5 acres). This included three Callery pear contracts totaling 85.5 acres. Again, the majority of the contracts were for controlling nonnative privets.

In June of 2019, another \$100,000 was offered to landowners for invasive species control with a dollar for dollar grant match to total \$200,000. This year, priority went to the 11-county Coastal Georgia Cooperative Invasive Species Management Area (CoGa CISMA) and the 28-county area declared a

State of Emergency from Hurricane Michael. Changes made to the program this year include increasing the cost share rate to \$60 per acre and increasing the maximum acres to 75 for a landowner maximum of \$4,500. As of October 2019, foresters collected 62 contracts for a total of \$176,196 (2,936.6 acres). These contracts are to be completed by April 1, 2020.

Early Detection Rapid Response:

During the annual warehouse survey, 12 sites were selected across the state to establish a total of 48 Early Detection Rapid Response traps and Cooperative Agriculture Pest Survey traps. Twelve Lindgren funnel trap sites (48 traps) were deployed in six geographic locations across Georgia at Brunswick, Macon, Cordele, Elberton, Crandall, and Savannah sites for the detection of nonnative exotic bark and ambrosia beetles around warehouse sites identified as high priority sites. The traps were inspected every other week for 12 weeks, with trapping concluding at the end of June 2019.

In 2019, 260 warehouses visits were conducted across the state, which included 18 new warehouse sites. There were no new suspect pests collected in 2019.



First Introduction to Georgia:

Insects identified as new first introduction to The United States, in recent years, are screened for and identified. Xyleborinus artestriatus, 2010, Ambrosiophilus peregrinus 2014, and Xyleborinus andrewesi 2018 were new introductions to the United States discovered through the warehouse surveys. These insects have been recovered in multiple traps since their introductions, suggesting these new exotic ambrosia beetles are established in Georgia. No damage has been documented on native vegetation around the initial discovery sites, and the preferred native plant hosts have not been determined.

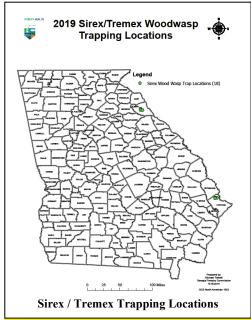
Sirex / Tremex Woodwasp

International cargo shipments containing solid wood packing material (SWPM) pose a severe and present threat to our forests in Georgia, due to the possibility of nonnative invasive pests being introduced to the United States.

The Sirex woodwasp trapping is conducted in conjunction with trapping for Tremex woodwasp (Tremex fuscicornis), which was identified during warehouse trapping in Elberton, Georgia in 2012 as a new first introduction to the United States. Trapping began in June, with 24 traps established (12)

Sirex traps and 12 Tremex woodwasp). Traps were inspected every two weeks and suspect catches were hand carried to Rick Hoebeke in Athens. Trapping was completed the first week of October.

No Sirex noctilio or Tremex woodwasp have been captured to date.

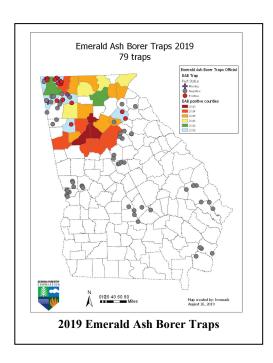


Emerald Ash Borer:

Emerald ash borer was first discovered in Georgia in DeKalb and Fulton Counties in July 2013, and additional insects/counties were detected in 2014, 2015, 2016, 2018 and 2019, bringing the total number of Georgia Counties to 33. In 2019, six new positive EAB identifications in Catoosa, Chattooga, Dade, Gordon, Jackson and Paulding Counties were found in 13 purple prism traps and one new positive EAB identification in Spalding County from bark sampling. The counties now known to have EAB are: Barrow, Bartow, Carroll, Catoosa, Chattooga, Cherokee, Clayton, Cobb, Dade, Dawson, DeKalb, Douglas, Fannin, Fayette, Fulton, Gilmer, Gordon, Gwinnett, Habersham, Henry, Jackson, Lumpkin, Murray, Newton, Paulding, Rabun, Rockdale, Spalding, Union, Walker, Walton, White, and Whitfield. With the implementation of a statewide quarantine in November 2017, funding for contractor-placed traps ended, but in 2019, 79 traps were hung by GFC employees.

The majority of the work GFC conducted in the 2018-2019 fiscal year was accomplished renewing and issuing compliance agreements with 19 compliance agreements remain active. This includes one hardwood sawmill, nine chip mills, one pulp mill, three mulch manufacturers and five firewood processors. With Georgia's decision to adopt a state-wide quarantine, the need was eliminated for many compliance agreements with companies that move wood locally or across state lines with existing quarantines in place.

Emerald ash borer will continue to be included in all Master Timber Harvester educational presentations in the upcoming year, as well as any presentations made by Forest Health staff.



Gypsy Moth Survey:

Gypsy moth is a serious forest pest capable of causing severe damage to hardwood trees, especially oaks. In cooperation with the USDA Animal and Plant Health Inspection Service (APHIS), the Georgia Forestry Commission deployed traps to detect the presence of gypsy moth. The Asian gypsy moth is not established in Coastal Georgia or any other location in the United States and this multiagency annual gypsy moth survey was conducted as a proactive effort to detect the presence of gypsy moth in the Savannah area.

On September 25, 2015, a single, adult male Asian gypsy moth was identified in an early detection trap near the Port of Savannah in Garden City, Georgia. This single detection of a federally regulated pest, Asian gypsy moth, in the vicinity of a port of entry, produced a partnership between federal and state cooperators to initiate an extended three year delimiting survey as a joint effort of the Georgia Forestry Commission (GFC), and the USDA APHIS Plant Protection and Quarantine. Its purpose was to determine if this moth was a single capture or if additional Asian gypsy moths are present. This joint detection plan follows USDA APHIS PPQ Asian Gypsy Moth Survey and Response Guidelines.

On September 12, 2018, the final year of the three years of delimit trapping was completed to determine if a population of Asian gypsy moth had established in Savannah, Georgia. The original 2015 Asian gypsy moth catch was considered to be a "hitch hiker" and no additional trapping was required. However, with the continuous threat of Asian Gypsy moth coming in through the Port of Savannah, 76 traps were installed around the outside of the port in May 2019. Our Forest Health staff monitored traps for new threats of gypsy moth every four weeks until the end of September 2019. There were no gypsy moths caught from any traps in the Savannah area in 2019.

In addition to trapping gypsy moth in the Savannah area, the Forest Health Management team also established limited pheromone-baited traps for gypsy moth inside the Port of Brunswick and on Jekyll Island. There are approximately 1,700 acres on the facility and 25 traps were established around the Port of Brunswick and on Jekyll Island. There was one European gypsy moth caught in 2019 at the campground on Jekyll Island, and no positive Asian Gypsy Moth trap detections in this area in 2019.

26 additional traps were installed at key campgrounds across the state along major interstates to catch possible "hitch hikers" coming from other states. There were also 11 additional traps installed at the

intermodal yard in Cordele, which receives containers from the port in Savannah. There were no Gypsy moths caught from any of these traps in 2019.

In May 2020, the GFC will establish approximately 100 traps in the vicinity of the Port of Savannah to continue monitoring for any possible Asian gypsy moth. These areas will be monitored, due to their high risk for pest introduction into the state.