

**FOREST HEALTH INSECTS AND DISEASES CONDITIONS  
TEXAS  
2013**

By  
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Texas A&M Forest Service (TFS, formerly Texas Forest Service) Forest Health staff was involved in numerous activities related to insects, diseases, and invasive species in Texas during 2013. Carryover effects from the 2011 drought that increased activity of pine engraver beetles and hypoxylon canker continue to contribute to the forest health picture in Texas in 2013. Forest pest conditions in Texas for 2013 are listed and discussed below.

**Pest:** Drought (not an insect or disease, but the 2011 drought had a tremendous impact on the forests of Texas)

**Region/State/County(ies):** Texas, the entire state

**Host(s):** All species of trees

**Survey Date:** January through August 2013

**Survey Method:** Ground survey and general observation

**Damage Type(s):** Mortality

**Setting(s):** Rural forest and urban

**Origin:** Native

**Acres Affected:** Unknown; the 2011 Texas drought contributed to the death of an estimated 301 million trees across the state (excluding urban areas), which is 6.2 percent of the total number of trees alive prior to the drought.

**Narrative:** The record-setting drought of 2011 continues to contribute to widespread tree mortality and predisposition to secondary insects and diseases. Across East Texas, mortality is still common in hardwood species. Pines weakened by the drought are succumbing to engraver beetles. In West Texas, the Sky Islands (mountainous regions) continue to record catastrophic pine mortality due to drought and subsequent attack by bark beetles. Surveys by the Regional Forest Health Coordinator for West/Central Texas offer a dismal outlook for Ponderosa Pine (*Pinus ponderosa*). Lack of regeneration and intermediate aged trees in conjunction with mortality from drought, fire and bark beetles may eliminate many Ponderosa Pine stands.

**Pest:** Pine engraver beetles (*Ips avulsus*, *I. grandicollis*, *I. calligraphus*)

**Region/State/County(ies):** East Texas and Lost Pines area (Bastrop County)

**Host(s):** Loblolly pine (*Pinus taeda*) and shortleaf pine (*Pinus echinata*)

**Survey Date:** May through October 2013

**Survey Method:** Call-in verified, general observation, and ground survey.

**Damage Type(s):** Mortality

**Setting(s):** Rural forest and urban

**Origin:** Native

**Acres Affected:** Unknown, but pine tree mortality was scattered over all East Texas forested counties from Bowie County (Texarkana) in northeast TX to Harris County (Houston) in southeast TX. In addition, many pine trees in Bastrop County that survived the devastating fire of September 2011 were attacked and killed by *Ips* beetles in 2013.

**Narrative:** Pine engraver beetle (*Ips* spp.) activity in East Texas in 2013 declined from the extremely high levels of 2011/2012. However, beetle activity continued at higher than "normal"

levels in drought-stressed trees. Engraver beetles continue to kill pines in Bastrop County though at much reduced levels compared to 2012. Even with more normal rainfall in 2013, residual drought stress continued into 2013. The Texas A&M Forest Service district offices as well as Forest Health staff in Lufkin took numerous calls from homeowners and landowners concerned about dying pine trees. Volume losses have been impossible to estimate because of the scattered mortality pattern.

**Pest:** Southern pine beetle, *Dendroctonus frontalis*

**Region/State/County(ies):** East Texas

**Host(s):** Loblolly pine (*Pinus taeda*) and shortleaf pine (*Pinus echinata*)

**Survey Date:** March and April, 2013

**Survey Method:** Pheromone traps and aerial survey

**Damage Type(s):** No activity

**Setting(s):** Rural forest, primarily

**Origin:** Native

**Acres Affected:** Zero

**Narrative:** The spring 2013 SPB prediction survey was conducted in 14 East Texas counties (Angelina, Hardin, Houston, Jasper, Montgomery, Nacogdoches, Newton, Polk, Sabine, San Augustine, Shelby, Trinity, Tyler, and Walker), and included four National Forests and The Big Thicket National Preserve (BTNP) covering about seven million total survey acres. The trapping area excluded northeast Texas due to the anticipated low level of SPB activity. Results from this survey predicted continued low or no SPB activity in Texas for 2013. Not a single SPB was collected from survey traps in East Texas in 2012, while 13,810 clerids were collected (USFS = 9,005; BTNP = 241; TFS = 4,564 clerids). The prediction of low SPB activity proved to be accurate as **NO (0)** SPB infestations were reported in East Texas in 2013. Early indications are that southern pine beetle activity in 2014-2015 will continue to be low to none. TFS district personnel conducted detection flights in July and August over parts of 32 East Texas counties covering 5.9 million acres.

**Pest:** Nantucket pine tip moth (*Rhyacionia frustrana*)

**Region/State/County(ies):** East Texas

**Host(s):** Loblolly pine (*Pinus taeda*) and shortleaf pine (*P. echinata*)

**Survey Date:** Summer 2013

**Survey Method:** Ground survey

**Damage Type(s):** Tip dieback

**Setting(s):** Rural forest

**Origin:** Native

**Acres Affected:** Unknown

**Narrative:** Pine tip moth activity occurs every year with some years having more activity than others. Tip moth activity in 2013 was typical of a "normal" year. Activity usually begins at fairly low levels in the spring, but increases through the year to peak in the fall.

**Pest:** Hypoxylon canker (*Hypoxylon* spp.)

**Region/State/County(ies):** Texas

**Host(s):** Oaks, *Quercus* spp., and many other hardwood species

**Survey Date:** Continuous

**Survey Method:** Call-in verified, general observation, and ground survey

**Damage Type(s):** Mortality and dieback

**Setting(s):** Rural forest and urban

**Origin:** Native

**Acres Affected:** Unknown

**Narrative:** During and following the 2011 drought, hypoxylon canker became very common over most of Texas, impacting hundreds of thousands of trees. The Texas A&M Forest Service provided information to landowners and homeowners through the internet, e-mail, phone, and news releases. Hypoxylon canker mortality has diminished throughout East Texas though it is still fairly common.

**Pest:** Oak wilt (*Ceratocystis fagacearum*)

**Region/State/County(ies):** 72 counties in Texas

**Host(s):** Oaks, *Quercus* spp.

**Survey Date:** Continuous

**Survey Method:** Call-in verified, general observation, and ground survey

**Damage Type(s):** Mortality and dieback

**Setting(s):** Rural forest and urban

**Origin:** Non-native, according to many pathologists

**Acres Affected:** Unknown

**Narrative:** Oak wilt continues to occur in 72 documented counties in Texas, mostly between Dallas and San Antonio. Texas A&M Forest Service personnel contribute technical assistance to landowners to help minimize the impact of this tree disease. Technical information on oak wilt is made available via a web page devoted exclusively to oak wilt in Central Texas ([texasoakwilt.org](http://texasoakwilt.org)). No aerial detection surveys were conducted in 2013. During 2012, 54 trenches were installed to halt the spread of oak wilt as part of the federally-funded Cooperative Oak Wilt Suppression Project. The combined length of these trenches was 71,730 feet (13.6 miles).

**Pest:** Soapberry borer, (*Agrilus prionurus*)

**Region/State/County(ies):** 50 Texas counties

**Host(s):** Western soapberry (*Sapindus saponaria* var *drummondii*)

**Survey Date:** Calendar Year 2013

**Survey Method:** Call-in verified, general observation, ground survey

**Damage Type(s):** Mortality and dieback

**Setting(s):** Rural forest and urban

**Origin:** Exotic -- Mexico

**Acres Affected:** Unknown

**Narrative:** Soapberry borer (SBB) was confirmed for the first time in Grayson County, Texas in October 2013. This is significant because it represents a new County record for SBB and because Grayson County borders Oklahoma. Contact with Oklahoma Forest Health staff was made to alert them to the possible presence of SBB in Oklahoma. Mortality was observed on several Soapberry trees with a live adult taken from the bark. Bolts from a sample tree were brought back to the Forest Health Laboratory and placed in rearing cages. Adult SBB and associated predators and parasites continue to emerge.

**Pest:** Cogongrass (*Imperata cylindrica*)

**Region/State/County(ies):** Tyler County, Texas

**Host(s):** NA

**Survey Date:** The site has been known since the 1950s

**Survey Method:** Ground survey

**Damage Type(s):** Competitor of native vegetation

**Setting(s):** Rural roadside

**Origin:** Exotic from Southeast Asia

**Acres Affected:** Approximately one

**Narrative:** The only known active cogongrass site in Texas is located in Tyler County near the community of Spurger. The area has been treated with herbicide and fire in past years, and it was retreated with herbicide again in early August 2013 in continued attempts to eradicate the grass. The original infestation of 4-5 acres has been reduced to a few isolated spots of cogongrass that encompass less than one acre. The area will continue to be monitored and additional treatments applied until the grass is eradicated. Over the past 50 years, the grass at this site has spread only through rhizomes.

**Pest:** Emerald ash borer (*Agilus planipennis*)

**Region/State/County(ies):** Texas

**Host(s):** Ash trees, *Fraxinus* spp.

**Survey Date:** March through September, 2012

**Survey Method:** Emerald ash borer (EAB) purple panel pheromone traps

**Damage Type(s):** NA; no EAB were collected

**Setting(s):** Urban and rural

**Origin:** Exotic; Asia

**Acres Affected:** Not applicable

**Narrative:** The emerald ash borer (EAB) is not known to exist in Texas and we hope to keep it that way. Alerts about this invasive exotic have been posted on the [Texas invasive webpage](#) and presented to the public through news releases and articles in forestry newsletters. Firewood movement has been viewed as a likely method for transport of this unwanted alien to Texas. Between March and September 2013, Texas A&M Forest Service, Texas A&M AgriLife Extension Service and Sam Houston State University (Huntsville, TX) installed and monitored about 373 purple EAB survey traps in 71 counties across Texas. Lures containing Z3-Hexene-1-ol and manuka oil were placed in each of the traps and the traps were placed in or near ash trees. Traps were monitored in June at which time fresh lures were added. Finally, in late August or September, traps were monitored again and removed from the field. All trap data was entered into the IPHIS national database. Zero EAB were collected.

**Biological Control Agent:** Saltcedar beetle (*Diorhabda* spp.)

**Region/State/County(ies):** Pecos, Rio Grande and other river systems of Texas

**Host(s):** Invasive saltcedar trees (*Tamarix ramosissima*) along water courses

**Survey Date:** Ongoing

**Survey Method:** Ground and air

**Damage Type(s):** Defoliation of saltcedar and athel trees

**Setting(s):** Urban and rural

**Origin:** Exotic; introduced into the United States in 2004 to defoliate invasive saltcedar trees

**Acres Affected:** Unknown; vast strips along the Pecos, Rio Grande, Canadian and other Texas rivers and streams

**Narrative:** The intentionally-introduced saltcedar beetles (four species) have become established along several river systems in western Texas and are beginning to have an impact on the invasive saltcedar trees over large acreages. On the Rio Grande the beetles have spread to at least El Paso while those on the Pecos River have reached to Carlsbad, NM. Defoliation has been heavy and widespread while the extent of mortality is still unknown.

## TEXAS

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### THE TEXAS A&M FOREST SERVICE AND USDA FOREST SERVICE

The relative health of the forests in Texas is good, with most areas in the process of recovering from the devastating 2011 drought. However, a variety of insects, diseases, exotic invasive pests, drought, fire, and human impacts cause concern. Drought, pine engraver beetles, and hypoxylon canker caused major impacts to Texas' forests in 2011 and 2012. To deal with this changing mix of challenges, the Texas A&M Forest Service and the Forest Health Protection unit of the US Forest Service cooperate to prevent, detect, evaluate, suppress, and manage this multitude of threats. The partnership between the two agencies has worked successfully for nearly five decades to maintain and improve the health of Texas' forests.

#### For additional information, contact:

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