

Forest Health Highlights in Texas 2020

- Texas A&M Forest Service (TAMFS) through a partnership with USDA-APHIS, USFS Forest Health Protection and Texas Parks and Wildlife deployed 350 purple panel traps across Texas. Traps were baited with hexenol and concentrated in east Texas and in urban areas along the I-35 corridor from Dallas/Fort Worth to San Antonio. No new detections were observed during 2021 outside of current infected counties. Currently in Texas six counties have been confirmed for positive EAB infestations. Positive counties include Bowie, Cass, Denton, Harrison, Marion, and Tarrant. The counties of Denton and Tarrant are located within the Dallas Fort Worth metroplex while the other counties reside in Northeast Texas within the commercial timberlands of the state. State quarantines have been established for all counties restricting the movement of all ash material outside the county. TAMFS maintains a website (TAMFSweb.tamu.edu/eab) providing information about EAB and hosts workshops to educate Texans on how to properly identify EAB and how to manage infected trees.

- Oak wilt continues to occur in 76 documented counties in Texas, mostly counties west of I-35 from Dallas to San Antonio across I-20 to Lubbock. Texas A&M Forest Service personnel contribute technical assistance to landowners to help educate landowners and the public and to minimize the impact and spread of this disease. Technical information on oak wilt is made available via a web page devoted exclusively to oak wilt in Central Texas (texasoakwilt.org). Almost 165,000 users have consulted this web site for information regarding the identification and management of oak wilt. Workshops and trainings are held across many counties in the state with confirmed oak wilt disease present. During 2021, 39 trenches with a combined length of 62,527 feet or 11.8 miles were installed to help stop the spread of oak wilt as part of the federally funded Cooperative Oak Wilt Suppression Project. Since the inception of the program in Texas, more than 670 miles of oak wilt trenches have been installed to help control the spread of this deadly disease.

- The spring 2021 SPB prediction survey was conducted in 17 East Texas counties (Angelina, Houston, Cherokee, Hardin, Houston, Jasper, Liberty, Nacogdoches, Newton, Polk, Rusk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, and Tyler), and included four National Forests and The Big Thicket National Preserve (BTNP) covering about six million total survey acres. Results from this survey predicted continued low or no SPB activity in Texas for 2021. No SPB were collected from survey traps in East Texas in 2021, while 2,379 clerids were collected. This similar to the 2,402 clerid beetles collected in 2020. It should be added that 2 fewer counties were included in the 2021 survey. The prediction of low SPB activity (from 2020 trapping) proved to be accurate as **NO (0)** SPB infestations were reported in East Texas in 2021. Early indications are that southern pine beetle activity in 2022 will continue to be low to none.

- Texas A&M Forest Service continues to administer the Southern Pine Beetle Prevention Program in East Texas. During 2021, through funding from USFS-Forest Health Protection, TAMFS provided over \$195,000 to 58 landowners to assist in the thinning of overly dense pine forests

reducing their risk of an SPB attack. Also, during 2021 through the SPB Prevention Program more than 2,500 acres of overly dense pine stands were thinned on 31 East Texas forested properties. Since the inception of the program in 2003, more than 1,900 landowners have utilized over \$6.6 million to thin more than 125,000 acres of overly dense pine stands in East Texas.

- During 2021 TAMFS forest health staff continued to restore Ponderosa Pine forests in the Davis Mountains region. These forest over the past decade have been subjected to severe wildfires, extreme drought and subsequent mountain pine beetle infestations. This area is home to southern most extent of the Ponderosa Pine population and TAMFS working with USFS-Forest Health Protection, Southern Research Station and The Nature Conservancy has led the way for restoring Ponderosa Pine and working to improve the overall health of existing forested areas.
- Texas A&M Forest Service continues to participate in a USFS/UF joint study on the distribution of *X. glabratus*. Traps were placed in 18 counties (Angelina, Cass, Cherokee, Harrison, Houston, Jasper, Marion, Nacogdoches, Panola, Rusk, Sabine, Shelby, Smith, Trinity, Tyler, Upshur, Van Zandt and Wood Counties). Laurel wilt fungus has been identified from cultures taken in Angelina, Sabine, and Shelby Counties. New counties infected with laurel wilt fungus for 2020 include: Cherokee, Houston, Nacogdoches and Newton. Texas now has 14 counties infected with laurel wilt. Currently laurel wilt has only impacted a small area and number of trees but there is concern the disease could spread along the Texas coast into Mexico affecting the avocado industry (avocado trees are the largest commercially economic tree species impacted by laurel wilt to date).
- A perennial regeneration pest in east Texas, TLCA, continues to plague landowners. In 2018 TAMFS initiated a program to assist qualifying landowners by treating TLCA nests with PTM Insecticide (Fipronil). In 2021, 82 nests were treated in across the sandier regions of east Texas. Leaf Saver ant bait looks to be an acceptable alternative to PTM applications for TLCA control. LeafSaver has its limitations; especially the shelf life of the product once opened and the environmental conditions that need to exist for application. Moist soil and dewy conditions turn the bait to mush and make it unpalatable to the ants. TAMFS management plans have been revised to reflect the threat of TLCA to recommend treatment before planting. UAVs have been used with some success to identify and located mounds prior to treatment.
- Texas experienced a very wet spring followed by droughty conditions over the rest of 2021 resulted in widespread decline of Post Oaks (*Quercus stellata*). This weather pattern results in a root/shoot carbohydrate imbalance and causes rapid decline and eventual mortality. Older trees seem to be more susceptible. Mortality is scattered but occurs frequently across the range. Counties that exhibited higher mortality rates during 2020 included Grimes, Kaufmann and Walker Counties.
- During 2021 TAMFS staff made numerous recommendations for the treatment of typical pest/disease issues seen in Texas each year. These are minor in nature and usually do not pose any threats to the forests of Texas. Recommendations were made for fungal (mainly Tubakia and Anthracnose leaf spots) and bacterial foliage diseases, trunk rot, Pales weevils, twig girdlers,

forest tent caterpillars, oakworms, cottonwood leaf beetle, elm leaf beetle, webworms, red-headed ash borers, carpenter ants, carpenter bees, fusiform rust, smooth patch, hypoxylon canker, bacterial wetwood, aphids, mites, leaf miners, galls, bark lice, dogwood anthracnose. In addition, freeze damage was significant after the winter storm Uri in February; wood borers (ambrosia beetles and Ips engraver beetles) and other insects that thrive in stress conditions were common across Texas.