

CULTIVATING A HOLIDAY TRADITION



Sixteenth century Germany is recognized as the birth place of the Christmas tree tradition, while Martin Luther is credited with decorating the first Christmas tree with lighted candles to demonstrate the beauty of the evergreens in the moonlight to his children in 1510.

Christmas trees in America most likely arrived with the troops from the German Hessian soldiers during the American Revolution in the late 18-century; however, the first Christmas tree market place appeared in Manhattan, New York as late as 1851 when Catskill farmer Mark Carr hauled two ox sleds of trees into town. The first Christmas trees to arrive in Texas came with the British Cattle Barons in the 19th century.

Christmas tree farms emerged during the depression when nurseries were unable to sell their evergreens for landscaping. Many consumers previously obtained their Christmas trees from the forests; however, the uniform shape of cultivated trees was becoming more desirable to consumers.

Once considered only an alternative for low quality farmland, Christmas tree cultivation has become a viable land use, and source of income for over 21,000 growers in the United States. Scotch Pine, Douglas Fir, Noble Fir, Fraser fir, Virginia Pine, Balsam Fir, and White Pine are the best selling varieties in the U.S.; however, the type of tree planted depends on the soil composition of the site. Virginia Pine grows best in the East Texas acidic soils, while alkaline soils in Central and West Texas grow Eldarica and Afghan Pine with better success. Leyland Cypress is being grown on both soil types with great success, and growing in popularity in the southeast.



For optimum growth, land should be flat or gently rolling, and relatively free of debris and undergrowth. The Texas Christmas Tree Growers Association recommends planting trees 8 feet apart, yielding 681 trees per acre. Most trees need to be sheared during growth to attain the Christmas tree shape. Christmas trees are generally harvested at 6 to 8 feet tall, a height generally reached after 4 to 5 years of growth.

Like all conifers, Christmas trees are susceptible to various pests including aphids and adelgids (more commonly known as pine or spruce aphids). Sudden oak death has also recently occurred in some California tree farms. Research into Christmas tree genetics has more recently produced better strains of tree seed, resulting in higher yields of quality trees in Canada and the U.S.

Approximately a half billion Christmas trees are currently growing on U.S. farms, which includes more than 12,000 cut-your-own farms. Cut-your-own farms are a popular source of cultivation; however, some farmers have recently started cultivating potted trees which can be used again the following year. Many farms have added hay rides, picnic areas, petting zoos, and pumpkin patches, making them great places to visit year round.

For additional information, or to find a Christmas tree farm near you, please visit the Texas Christmas Tree Growers Association website at: <http://www.texaschristmastrees.com/>.

Advanced Ecology, Ltd. 2009 Scholarship Recipient

Advanced Ecology, Ltd. has been fortunate enough to create a scholarship fund for deserving students pursuing degrees in natural resource disciplines, such as forestry, environmental science, and wildlife management. Our company feels that by nurturing and encouraging students to excel in the natural resource disciplines, we can facilitate sound natural resource stewardship.



This year AEL is proud to award Kelly Haile from Texas A&M University a \$2,000 scholarship. Kelly is a senior Rangeland Ecology and Management major with a minor in Wildlife and Fisheries in the Department of Ecosystem Science and Management. Kelly hails from Sisterdale, Texas in Kendall County where she was active in 4-H and Wildlife Conservation Camp. She is currently a member of the Plant Identification Team, and has been active in the Texas A&M Range Club, Texas Section of the Society for Range Management, the Texas Chapter of the Wildlife Society, and the Soil and Water Conservation Society. Ms. Haile has also interned with the Natural Resources Conservation Service in Alpine and Kerrville, Texas, as well as completed an internship with the U.S. Forest Service in Bridgeport, California. Kelly will graduate in May 2010 and plans to continue her education by pursuing a Master of Science degree under Dr. Stephan Hatch, studying vegetative communities in the Canyon Lands unit of the Big Thicket.

AEL would like to thank all of our wonderful applicants, and we encourage you to apply again next year. If you would like additional information on how to apply for AEL's 2010 scholarship, please contact Dan Johnson at djohnson@advancedecology.com.

EPA Declaration on Greenhouse Gases

On December 7, 2009, the EPA declared greenhouse gases a danger to human health, and the environment. With the declaration in place, the EPA has a clear path to regulate carbon emissions under the Clean Air Act. The official declaration by the EPA means that it will only take a signature to pass new rules.

It is anticipated that new language, possible a signed agreement, will come from this year's Climate Control Convention in Copenhagen (December 7-18th) that will also act as a stimulus to provide for cleaner, more sustainable energy sources, and reduce carbon emissions.





Advanced Ecology, Ltd.

Economic Development with Environmental Conscience

Bastrop County's Finest: The Houston Toad

The Houston toad (*Bufo houstonensis*) received its name from the historic range of its ancestors in the 1960s. The toad's numbers declined as development consumed the Houston area, which led to its subsequent listing on the endangered species list in 1970. Though the greatest threat to the toad is loss of habitat, additional vulnerabilities include automobiles, predators, pesticides, and drought. Reasons for loss of habitat includes development, fire suppression, and changes in hydrology regimes.

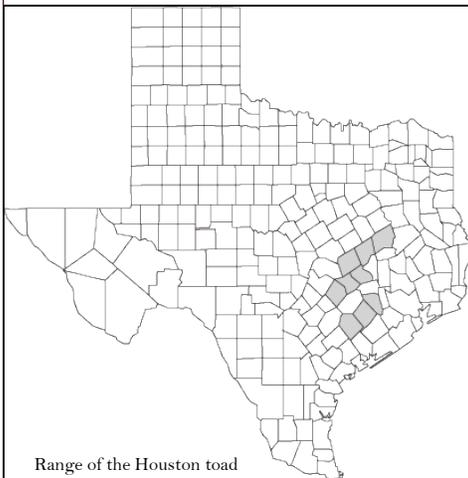
The toad's historic range is located between Austin and Houston; however, current ranges are estimated to only include a handful of counties in East Central Texas. Today, the largest population of Houston toads can be found within the confines of the Bastrop State Park. Along with state and federal agencies (Texas Parks and Wildlife and U.S. Fish and Wildlife), the Environmental Defense Fund (EDF) has been working to encourage landowners in Bastrop and Lee Counties to preserve the toad's habitat. Prime habitat for the toad consists of native grasslands with deep sandy soils (usually 40 inches deep) with a close proximity to slow flowing water for breeding.

The EDF has a 10 year goal of enrolling 115,000 acres in the program, including land from approximately 100 landowners. Restoration efforts will include the creation of breeding ponds, planting native trees and bunchgrasses, prescribed burning, rotational grazing systems, and reducing populations of the Imported Red Fire Ant. Over the next 10 years, the EDF will direct \$1.25 million in funds towards restoration efforts for the Houston toad.

Bob Long of Round Bottom Ranch enrolled his 540-acre ranch in 2004 in the program with assistance from EDF and Texas Parks and Wildlife (TPWD) under the Landowner Incentive Program (LIP), as well as partial funding from the Leopold Stewardship Fund. Jim Small also enrolled his Bastrop County property (836 acres) in 2007. Recovery efforts have spurred the creation of the Lost Pines Habitat Conservation Plan and the first conservation bank on the 4,848-acre Griffith League Ranch – Capital Area Council, Boy Scouts of America property.

Additional partnerships with the Houston Zoo, Texas State University, TPWD, and the EDF have proven to be instrumental in the recovery of the toad. The Houston Zoo began receiving egg strands from Texas State University in the spring of 2007. After the eggs were hatched, the adult toads were returned to the exact location as the egg retrieval. Since that time, three additional releases occurred in 2007 (May, July, and September); another in April 2008, and two recently in 2009. Though the Houston toad's numbers were down at Bastrop State Park this year, recovery efforts seem to be in full swing, giving the Houston toad every chance possible at survival.

For more information about the Houston toad please see www.edf.org, and www.tpwd.state.tx.us.



Range of the Houston toad



Image: Bruce G. Stewart; TPWD

Proposition 11 Passes Overwhelmingly with Texas Voters

Many voters turned out in support of Proposition 11, a constitutional amendment to protect landowners from the abuses of eminent domain, during the November election this year. The amendment was overwhelmingly approved by Texas voters 81-19 percent, the largest margin of any proposition on the ballot.

The Texas Wildlife Association was a leading member of a statewide coalition of property rights supporters in favor of the proposition. Proposition 11 adds the following language to the Texas Constitution:

- * Requires that any condemned home or private property must be for legitimate public use;
- * Prevents mass condemnation of homes and private properties;
- * Severely limits the legislature's ability to award the power of eminent domain to new entities; and
- * Leaves unaffected the existing state constitutional guarantee requiring fair compensation when eminent domain is for legitimate public use.



For more information on Proposition 11 and other news, please see the Texas Wildlife Association website at: <http://texas-wildlife-org>.

AEL has had another great year with the start of several wetland and stream mitigation banks across the state, and we continue to look forward to new adventures in 2010. We would like to thank everyone for your continued support, and we hope to see you all again next year. From our family to yours,

Merry Christmas and Happy New Year!

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