



12/19/2005

Researchers getting to the root of Rita's trees

By: BETH GALLASPY , The Enterprise

BIG THICKET NATIONAL PRESERVE - Chainsaws hummed through these normally quiet woods last week.

The people wielding the saws were not lumbermen clearing the detritus of Hurricane Rita. They were scientists hoping to sort through the wreckage and learn about the forest's past.

Jodi Sparks, a graduate student at Indiana State University, donned a hardhat with matching protective chaps in a shade of orange well known to Southeast Texas hunters. She cut across the trunk of an uprooted pine about 2 feet across to separate a slice about 2 inches thick.



Scott Eslinger/The Enterprise
Hardin-Simmons University biology professor Herb Grover of Abilene uses a sander Thursday at the Big Thicket Field Research Station in Saratoga to polish a cross section sliced from a large loblolly pine tree downed by Hurricane Rita.

Advertisement

Assigned an identifying number with a Sharpie, the cross section and dozens more

collected in this week of field work in Southeast Texas were destined for a laboratory at the Terre Haute, Ind., school. By studying the tree rings under a microscope, these researchers will learn about fires, droughts and other environmental stresses the trees faced before Hurricane Rita dealt them a final blow.

Chris Gentry, who led the team of five students Thursday, plans to study these fallen trees and the rebound of Southeast Texas forests from Hurricane Rita as his project in pursuit of a doctoral degree in the field of tree-ring research, known as dendrochronology.

The hurricane that ravaged Southeast Texas homes and businesses left ample opportunities. D.W. Ivans, prescribed burn

specialist at the Big Thicket National Preserve, said the 100,000-acre federal property lost about 15 percent of its trees, or about 2 million. The wealth of materials meant other problems, though.

"There's actually so much devastation that it's hard to get in and get the samples," Gentry said as fellow team member Josh Frizzell tried to decide how to reach a pine standing in the bear hug of a fallen magnolia.

Frizzell pulled a multi-purpose tool from his pocket and sawed through a limb with a 4-inch blade. With the magnolia out of the way, he could remove a core from the living pine with a tool called an increment borer.

Frizzell placed the base of the T-shaped tool against the bark and rotated the top like he was removing the lugs from a flat tire. As the metal of the borer pushed into the tree, squeaks and groans emanated from the trunk as if some strange duck were nearby. Frizzell pulled a piece of wood about the width of a pencil from the middle of the tree and slipped it into a paper straw for study later. He then repeated the process on the opposite side with the samples overlapping at the tree's center.

Ivans said information provided on the Big Thicket's history by this tree-ring research can help manage the land properly in the future.

Historically, the Big Thicket was made up of swaths of long-leaf pine savannah with a diversity of grasses, orchids and other

small flora at ground level, Ivans said. The land depended on fire to remain healthy. As fire has become more controlled and less frequent, yaupon and other brush have become common, choking out the diversity that once thrived, Ivans said.

"A lot of people think that the Big Thicket has always been thick," Ivans said. With more evidence of the area's fire history, Ivans said it could be easier to return to managing the land for the long-leaf pines that once thrived there. Today, loblolly pines are more common.

Gentry said he and his team had been unable to find great numbers of really old trees as they hoped, "but we found pockets of really old trees." The team also collected cross sections of stumps in the Big Thicket they suspected of predating some of the trees that surrounded them. Logging in the early 1900s and again in the 1930s left few trees around that stood then, Ivans said.

Among the significant cross sections the Indiana group collected were pieces of a massive oak felled in Beaumont's Old Town, known as the Compton Oak, and a state champion river birch from Village Creek State Park, the largest river birch in Texas.

Both the Compton Oak and the river birch represent marriages of a sort. Even an untrained eye can see what appear to be two centers to each tree. In each case, two trees grew together into one, a phenomenon that is fairly common in many species, Gentry said. That contributed to the girth of the trees, which led to speculation that the Compton Oak might predate the city of Beaumont.

In fact, ring counts by Gentry and two of his colleagues date the Compton Oak to 1924, making it 81 years old.

After days in the field, the Indiana team spent evenings at the Big Thicket Field Research Center in Saratoga polishing the slabs of trees they collected with belt sanders, using ever-finer grades of sand paper. Gentry planned to leave polished cuts of some of the trees collected in Southeast Texas with the City of Beaumont, the Big Thicket and Village Creek State Park.

bgallaspy@beaumontenterprise.com

(409) 833-3311, ext. 425



©The Beaumont Enterprise 2005