Institute Helps Preserve the Natural Balance of Caddo Lake

By Tom Geddie

The more clearly we see how things work together, the better off we are, it seems. This is true for individuals, for families, for societies, and the whole planet. It's a sort of "oneness" created from the parts of the whole.

When it comes to a seemingly mystical or magical place like Caddo Lake, that "oneness" is, perhaps, harder to grasp. Some of us seem to grasp the whole intuitively, some of us learn through hard work, and some few of us don't ever realize that wholeness at all.

It's not true that time has forgotten Caddo Lake, but perhaps time does move in different ways through the colorful myths, mysteries, and whispers of this quiet, mostly natural refuge that is in some ways isolated from the 21st century. Covering nearly 27,000 acres of wetlands along the Texas-Louisiana border, it is the largest natural freshwater lake in the southern United States.

The Caddo Indians inhabited the area for a thousand years or so. Big Foot supposedly walks the area even today, wandering areas known as Eagle's Nest, Old Folks Playground, Alligator Bayou, Pine Bluff, Devil's Elbow, and Hell's Half Acre. Then there's the steamer Mittie Stephens sank to the lake bottom in 1869, spilling gold in the lake and turning 61 of its passengers into ghosts.

Both of those legends may be most valuable as some sort of tourist draw.

What's fact is that black bears and bobcats still live in remote parts of the lake alongside alligators, otters, mink, snapping turtles, and eastern big-eared bats, sharing the place with bald eagles, blue herons, egrets, ibis, peregrine falcons, and living humans. There are 250 or so species of birds, nearly 100 sorts of fish and reptiles, and 50 or so kinds of mammals in the area, plus nearly 200 kinds of tree and shrubs, 75 grasses, and 42 woody vines. Forty-four of those species are considered endangered, threatened, or rare including bald cypress trees as old as 400 years and the seven-foot-long paddlefish, which as a species existed before the dinosaurs.

This is one of the most diverse communities of plants in Texas, if not the entire United States.

A number of state, federal, and private agencies work to preserve and carefully improve the lake – none more involved, it seems, than the Caddo Lake Institute, founded in 1993 by musician Don Henley of The Eagles with help from Dwight K. Shellman. The institute works carefully with local residents to preserve and carefully improve the lake, which officially became a "wetland of international importance" in 1993 under the Ramsar Treaty, and became a national wildlife refuge in 2009 because of its unique mix of animal and plant life.

The Ramsar designation helps protect the lake long term, and to help and learn from others around the world. More than 160 nations have signed the treaty and agreed to protect wetlands within their boundaries. There are now more than 1,900 designated Ramsar sites around the world including 29 in the United States.

Henley, a Gilmer native, spent many early mornings fishing at the lake as a child growing up in Linden. As an adult, he's spent nearly 20 years and millions of dollars to protect the lake area that he calls his church. He learned from his father, and he's teaching his children.

"I want them to be stewards of this lake after I'm gone," he said. And, "There's always somebody trying to mess with the lake."

The Caddo Lake Institute's mission is to protect the ecological, cultural, and economic integrity of Caddo Lake, its associated wetlands, and surrounding plant and wildlife habitats with the support of local communities, organizations, and individuals.

The institute's director, Austin environmental lawyer Rick Lowerre, is leading a regional water planning process for adequate "environmental flows" for Caddo Lake. That includes battling giant salvinia, an invasive Brazilian water weed that first appeared at Caddo Lake in 2006, and high levels of mercury documented in the lake's food chain, including the highest level recorded in any snake on the planet. Much of the mercury traces to exhaust from nearby coal-burning power plants.

While the weeds and the mercury are relatively easy to identify – but not necessarily to defeat – other parts of the mission are, perhaps, harder to grasp and certainly involve willing and strong cooperation beyond the immediate area. Getting people with different interests and, in some cases, people who are just plain independent and wary, can be a task.

One of the goals is to bring good science to the communities "so they base their decisions on good science, and those decisions could be development for all kinds of things," Rick said.

"How do we deal with invasive species? We don't dump million of tons of herbicide if there are better ways to do it. We evaluate the best, most economical ways," he said. "You involve the community because these are decisions that have to be made by the people affected by the decisions. In the long term, it's the communities and their children who protect this amazing lake system. People have to understand and see the economic, recreational, cultural, and other reasons that help them."

The institute sponsors quarterly community meetings and has teamed up with the City of Uncertain, the Greater Caddo Lake Association of Texas, the Caddo Lake Area Chamber Commerce and Tourism, Friends of the National Wildlife Refuge, and others.

"It may take longer (to get things done), but it lasts longer, too," Rick said.

The institute also works with scientists and university professors to build models based on experiences at Caddo Lake that can help others. One result of that work was a meeting in Cambodia two years ago with the International Crane Foundation to exchange ideas on how to protect wildlife.

Locally, water quality remains vital.

"With farmers and timber interests trying to make a living and with people who have septic tanks, water from a dozen counties runs into Caddo," Rick said. "We want to find solutions. If a farmer doesn't understand how much fertilizer he needs, for example, he's likely to apply too much and the excess will run off into the creek. If we help create a little bit of understanding and a reason to care, we get good results."

Another example of how one part affects the whole is Lake O the Pines, which changed how the natural flow system worked when it was built in the 1950s.

"If you release 25 cubic feet of water 24 hours a day seven days a week, people used to think you were doing a good thing," Rick said, "but the natural system used to have fluctuation – pulses – to move sediments and help the drainage. And there are biological reasons for dry periods.

"What is it that we need? How can we best do our releases to restore the ecological mission downstream? The paddlefish, for example need a good pulse coming down the stream for a week or two to trigger their spawning. If you look at the system and get the science there, you can protect from flooding, provide water to all of the area, and save the paddlefish."

Providing natural resources for people who fish, water ski, boat, or otherwise enjoy the outdoors is part of the economic basis for the Caddo Lake area, too.

"Those communities wouldn't be there without the lakes, which provide a lot of employment and one of the few state parks in Texas that actually pays for itself," Rick said. "There's so much visitation that the park is always full and it's an amazing piece of what East Texas looked like 150 years ago. We're lucky to have something that has not suffered all of the impacts that many other properties have."

Helping save or restore the natural balance is a combination of decisions for the moment and for – and by – people to come.

"We are stewards of incredible places like Caddo Lake, and if we help future generations understand what they've got, they'll want to do it to," Rick said. "We've been lucky. Obviously, Don has been very generous. Other people have helped us, too.

"We need to think about the future. How are we going to set this institute up to help keep the mission of bringing good science and working with communities? Right now state and federal resources are very tight, and we have to think about some funding. Doing the things we do costs money," Rick said.

"Once people go to Caddo Lake, they get it," he said. "So many people tend to think of lakes as these things we've built in the last 50 years by damming up rivers and flooding land. Caddo Lake is not like that. It's the biggest flooded bald cypress forest in the world, with 8,000 acres of hundreds of cypress trees in a foot or two of water. If you don't have your GPS, you might not find your way out in a canoe."

Rick picked up on Don's "magical" theme.

"There's an area where, when you are in these dense cypress trees, you feel like you are in church," he said. "You won't find anything else like this in Texas or in the world."