

NO ROOM TO GROW

Going green isn't always for the best at Caddo Lake

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Shannon Tompkins Chronicle

A choking blanket of giant salvinia, water hyacinth and hydrilla surround a portion of Big Green Brake on Caddo Lake.

On an overcast, near-freezing morning this past week, Paul Keith stood on the bow of his bass boat and fired a cast toward one of several swirls in the black water where a narrow cut entered the channel of Big Cypress Bayou on the upper end of Caddo Lake.

"They're in here feeding on shad," Keith said, nodding toward the spot where boils marked the fate of threadfin shad.

"The current has the shad pushed in here, and the fish are taking advantage of it. They know winter's coming," explained Keith, who grew up on the lake and now guides visiting anglers through his Caddo Lake Guide Service.

The fishing was simply outstanding, particularly considering the less-than-perfect weather conditions. In half a day on the water, we landed and released three-dozen gorgeously-colored, hard-fighting largemouth bass — some pushing 3 pounds or more — plus a bonus yellow bass. We could have caught more if we'd not spent much of the time marveling at the surroundings.

It was impossible not to stop and just stare at the walls of cypress trees around us. Bare of leaves but draped with sheets of Spanish moss, the bell-bottomed cypresses resembled giant silver Christmas trees trimmed with tinsel — thousands of them.

I was staring at the trees when, out of the corner of my eye, I caught movement in the air. It was a juvenile bald eagle, rowing its wings along the waterway, looking for a fish or perhaps an unwary coot or duck — flocks of them were rafted on the open water not far from us.

The moment underscored that just being on ancient Caddo Lake, the oldest public lake in the state and arguably its most visually, culturally, historically and ecologically rich, is something to savor and appreciate.

Caddo is a mystical wonderland. The shallow half-lake/half-swamp on the Texas/Louisiana border, created by natural forces at least 200 years ago, is unlike anything most folks imagine exists in this state.

"It certainly is unique in Texas," Tim Bister, district supervisor of Texas Parks and Wildlife Department's inland fisheries division, said of the 25,000-acre waterway. "It's one of those places that is so different that it makes an impression on everyone who sees it."

Walls closing in

Disturbingly, Caddo Lake also is one of the most threatened ecosystems in the state.

The lake, the life in it and the one-of-a-kind culture it has spawned faces being smothered by a blanket of invasive aquatic plants.

Because of its shallow depth (most of the lake is less than 10 feet deep), high nutrient content of its water, stable water level and swampy character, Caddo is the perfect place for invasive aquatic vegetation to thrive.

And it has, beyond anyone's wildest nightmares.

"I've used up all my adjectives," said Howard Elder, who heads TPWD's efforts to fight invasive aquatic plants, when asked how serious the threat these plants pose to Caddo.

The lake for decades has been plagued by water hyacinth, a floating plant that can cover large sections of the lake, hindering navigation and access.

About 15 years ago, hydrilla, a rooted invasive, exploded across the lake. Growing into mats that covered thousands of acres and were impenetrable by boats, it choked off access to much of the lake.

While those two invasives were major problems and annually cost tens of thousands of dollars to attempt controlling, they were just nuisances compared to what showed up in 2006.

"We first documented giant salvinia in Caddo back in 2004," Elder said. "At first, we heard there was about 150 acres of it in Jeems Bayou (a lobe of Caddo Lake in Louisiana). It turned out to be 600 acres or more."

Giant salvinia, a floating plant that grows and multiplies so quickly it can double the area it covers in as little as a week and creates mats so thick that it blocks the sun from the water, can kill a body of water. Beneficial aquatic vegetation is smothered. Dissolved oxygen levels under the salvinia mats fall too low to support fish or other aquatic life. Water under solid mats of giant salvinia are, quite literally, a dead sea.

From that original infestation, and despite lake-side residents building at their own expense a mesh fence across the lake to try stopping the plants from getting into Texas, giant salvinia spread across Caddo as plants were carried by wind and waves. The plants found their way back into the stands of flooded cypress on the Texas side, where they thrived.

Felt on all levels

This year, Texas fisheries managers estimated at least 3,000 acres (more than 4.5 square miles) of the Texas side of the lake is covered with salvinia.

Despite concerted efforts by local, state and federal agencies aided by incredibly active local residents, hundreds of thousands of dollars in funding for herbicide treatments and efforts to establish populations of a specific weevil that preys only on salvinia, the problem continues to grow.

Between salvinia, hyacinth and hydrilla, much of Caddo Lake outside the maintained "boat roads" is impassible, particularly during summer.

So far, Bister said, there is little hard evidence that Caddo lake's fishery, one of the most diverse in the state with at least 90 species, is suffering from the aquatic invasives. But negative impacts are inevitable if the infestation persists and expands.

Big Green Break is a huge stand of ancient cypresses water astride the Texas/Louisiana border. Almost every inch of the acres of water beneath the cypresses is covered by a carpet of salvinia so thick that sedges grow atop the mat.

"That's where our bream spawn — all back in there around those cypresses," said Sam Canup, mayor of the lakeside town of Uncertain and a passionate Caddo advocate, as he swept his hand across Big Green Brake. "At least that's where they *used* to spawn. Now, nothing can live under that.

"All this salvinia ... it's bound to hurt the fishing," he said, shaking his head.

It's already impacting waterfowl hunting on the lake. Once a major wintering area for ducks, Caddo has seen its ability to support mallards and canvasbacks and other waterfowl greatly diminished. In effect, its once-legendary waterfowl hunting withered as invasives replaced pondweed, smartweed and other native vegetation on which the birds feed.

Currently, front-line attacks on Caddo's invasive plants involve hideously expensive herbicide application funded by the government and at least some mechanical harvesting of the plants. But that almost certainly isn't the answer.

"It would take literally an army and a million dollars to make a difference (using herbicides)," TPWD's Elder said. "And, really, it's going to take more than money. Other things have to change."

Some of those changes are being discussed by a coalition of groups — among them, The Nature Conservancy, U.S. Army Corps of Engineers, Caddo Lake Institute, local navigation and water districts, citizen groups, government agencies and other partners — hoping, through the Cypress Basin Flows Project, to come up with a plan that would improve Caddo's health by manipulating the flow of water down Big Cypress Creek, the main artery feeding the lake.

Options to weigh

Manipulating the timing and amount of flow released through Lake O' The Pines, a Corps of Engineers' reservoir upstream from Caddo, to more closely mimic the natural, historical inflow into the lake could help with the management of invasives as well as regeneration of the cypress trees, reducing nutrient loading, help with siltation and other issues.

One of the main issues facing the group is Caddo's fairly constant water level. Dropping the water level of the lake to strand and kill salvinia, hydrilla and hyacinth is an effective way to attack the plants, and would have other benefits to Caddo's ecosystem, such as allowing regeneration of cypress trees, something that's not happening with a constant level.

A major modification of Caddo's weir dam would be necessary before the lake level could be dropped. And that would require a years-long series of complex, expensive and politically intense studies and actions before any changes in the dam are even considered.

And an extended draw-down of Caddo, perhaps the best hope the lake has of getting a handle on the multifaceted problems highlighted by the invasive plant crisis, would prove a blow to the already-fragile lake-side economy built on boating, fishing and general tourism on a "full" Caddo Lake.

But, those who understand the value of a healthy Caddo Lake say something has to be done. And quickly. At stake is nothing less than a piece of Texas' soul.

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