

## **Rare, tiny fish receive big help in survival**

Matthew Tresaugu, Houston Chronicle

Updated 12:59 a.m., Sunday, June 24, 2012

Two species of rare minnows have the terrible luck of living only in the Brazos River.

The longest river in Texas is shackled by dams, siphoned for use by cities and farms and plagued by toxic golden algae, a combination that has spoiled most of the historical habitat for smalleye and sharpnose shiners.

So, when the state's worst drought in decades reduced the Upper Brazos to isolated pools last fall, Texas biologists took the unusual step of pulling thousands of the tiny fish from the water and moving them to a nearby hatchery for safety. The shiners returned to the river recently, ready to spawn after a year of no reproduction.

"These are short-lived minnows, so you cannot have two or three years of no spawning," said Kevin Mayes, a Texas Parks and Wildlife Department biologist. "What happens between now and August is critical."

The wicked dry spell put entire lines of plants and animals at risk across Texas. As the state grows warmer and drier, as climatologists predict, such dramas, often played out on small stages, like a prairie or pond, could become more common, officials said.

The U.S. Fish and Wildlife Service now lists more than 90 species in Texas as endangered or threatened. Another 20 creatures, including the shiners, are candidates to receive special protection under the Endangered Species Act.

### **Food source**

The 2- to 3-inch-long minnows are unlovely but important to the Brazos as the food of choice for many of the river's top predators, including gar, largemouth bass and channel catfish.

"When the Brazos is going well, these are the two most abundant species in the river," said Gene Wilde, a biology professor at Texas Tech University who has studied shiners since 1996. "If you take them out, nothing is going to replace them. There will be a void at the base of the food chain."

The shiners require running water over about 100 miles to reproduce. Their semibuoyant eggs drift dozens of miles while they hatch and grow into small fry. Without enough moving water, the spawn sink to the river bed and die.

Over the decades, new reservoirs on the Brazos have reduced the species' range from the entire river to the upper reaches.

### **Shiners collected**

"Before the reservoirs, they could follow the river down when the upper part went dry," Mayes said. "Now they can't. That fragmentation has had an effect on them."

With the Upper Brazos again going dry because of the drought and talk of a drier 2012, Wilde urged state biologists to collect as many shiners as possible from the river last September. They used a large net that required two people to hold to scoop the silvery fish from pools about 150 miles west of Fort Worth.

The rescued minnows then were sent to the state's fish hatchery near Possum Kingdom Lake. The holding tanks are used typically to produce sport fish, such as striped bass and rainbow trout.

### **Stocking lower basin**

The human hand-holding ended in late May when the biologists returned the shiners to the river for spawning. This time, however, they stocked the minnows in the higher flows of the lower basin, where the fish have not been seen for a quarter-century.

Mayes and an aide transported about 700 ready-to-spawn fish to a crossing near Hearne, about 25 miles north of College Station. There, they carried the shiners from the hatchery truck to the river in buckets and an ice chest.

The hope is the fish re-establish themselves in the Lower Brazos and create a second distinct population because the upper basin often goes dry.

Wilde, meanwhile, took about 150 of each species to Texas Tech to study ways for the shiners to spawn in captivity.

"Right now, we have evidence of spawn" in the river, Wilde said. "Whether they will be as abundant as before, we won't know for at least another year."

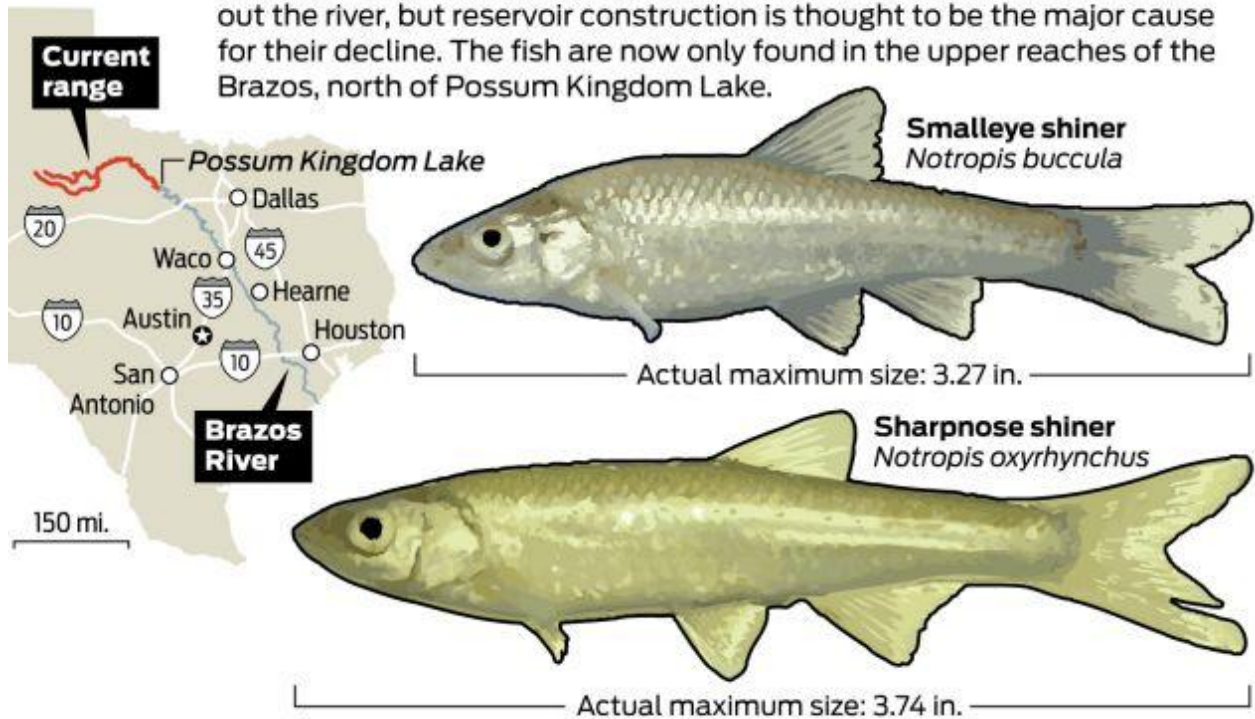
Mayes is optimistic. With adequate flows, "I think they'll make it through this year," he said. "Near-term success will depend on how long this drought lasts."

***matthew.tresaugue@chron.com twitter.com/mtresaugue***

(Continued)

## Endangered shiners

The smalleye shiner and sharpnose shiner are two small, silvery minnows native to the Brazos River. Historically, both occurred throughout the river, but reservoir construction is thought to be the major cause for their decline. The fish are now only found in the upper reaches of the Brazos, north of Possum Kingdom Lake.



Sources: U.S. Fish and Wildlife Service; Texas State University

Jay Carr / Houston Chronicle

<http://www.chron.com/news/houston-texas/article/Rare-minnows-survive-drought-in-captivity-return-3658099.php>

*FAIR USE NOTICE* This document contains copyrighted material whose use has not been specifically authorized by the copyright owner. The Texas Living Waters Project, which is a nonprofit undertaking, is making this article available in our efforts to promote comprehensive water planning in Texas. We believe that this constitutes a "fair use" of the copyrighted material as provided for in section 107 of the US Copyright Law. If you wish to use this copyrighted material for purposes of your own that go beyond "fair use", you must obtain permission from the copyright owner.