

by Ken Burton

# New Hope for the Pallid Sturgeon



**Adult pallid sturgeon**  
Photo by Steve Krentz/USFWS

The first known reproduction of the pallid sturgeon (*Scaphirhynchus albus*) in the Lower Missouri River in at least the last 50 years has been confirmed by U.S. Fish and Wildlife Service biologists, who point to the startling discovery as evidence that the fish, whose ancestors date to the days of the dinosaurs, may have a better chance at recovery than many people previously believed.

“This is wonderful,” said Steve Krentz, leader of the Pallid Sturgeon Recovery Team in Bismarck, North Dakota. “Until these tiny sturgeon specimens were found, the only young pallid sturgeon we have seen were products of hatchery spawning operations.”

The pallid sturgeon, which can attain a weight of 100 pounds (45 kilograms), a length of 6 feet (1.8 meters), and a lifespan of 60 years, has been listed as an endangered species since 1990, indicating a concern that the species was headed for extinction.

Aside from the pallid sturgeon’s importance as a natural inhabitant of the Missouri and Mississippi river systems, it also has economic benefits; some anglers consider it one of America’s premier gamefish. Eventual full recovery for the sturgeon would make it available once again to sportfishing enthusiasts.

The sturgeon is also considered an indicator species whose abundance and distribution are directly related to the quantity and quality of suitable habitat and river hydrology. The fact that these specimens were collected at a habitat restoration project on a unit of the Big Muddy National Fish and Wildlife Refuge indicates that efforts to put back some of the 500,000 acres (200,000 hectares) of habitat lost to channelization can produce dramatic results.

Jim Milligan, project leader for our Fisheries Resources Office in Columbia, Missouri, said the specimens were found along a restored sandbar in a side channel of the Lower Missouri River that had been cut by the flood of 1993 and expanded to a chute-island-sandbar complex by more flooding in 1995 and in 1996. It is the first new habitat of its kind the river has been allowed to create in more than 50 years.

“We acquired the land for the refuge and gave the river some freedom to re-create some lost habitat through natural processes of erosion, deposition and succession,” Milligan said. “And the area

became nursery habitat for juvenile pallid sturgeon. The most significant aspect of this find is that it clearly demonstrates that we can use the river's energy to restore habitat for the benefit of threatened, endangered, and declining fish species. More than 40 other Missouri River fish species have also been documented using the restored habitat."

Pallid sturgeon populations began to drop with the advent of dams, and also when their habitat was altered from shallow, silty rivers with sand and gravel bars to deeper clear channels favored by commercial river traffic. The side channel where the sturgeon were found is not a part of the navigation channel.

An adult pallid sturgeon is a rare find today in any segment of the Missouri River system. In the early 1990's, the Service and its state partners began a hatchery reproduction program and stocked the Missouri River with at least 3,000 hatchery sturgeon.

"We know the fish found in Missouri are not the result of our stocking efforts," said Steve Krentz, leader of the Pallid Sturgeon Recovery Team in Bismarck, North Dakota. "The juvenile fish we placed in the river were 8 to 10 inches long and the specimens collected in August were less than an inch long."

Pallid sturgeon historically inhabited rivers and tributaries in Arkansas, Iowa,

Illinois, Kansas, Kentucky, Louisiana, Missouri, Mississippi, Montana, North and South Dakota, Nebraska, and Tennessee. Some sturgeon still inhabit some of those areas, Milligan said, but the populations are far below what they were in the 1950's and 1960's.

The Missouri Department of Conservation lists the pallid sturgeon as exceedingly rare and confined to the Missouri and Mississippi Rivers, penetrating only a few miles into the Mississippi upstream from the mouth of the Missouri. The species is somewhat more abundant in the Missouri River upstream of Iowa, but nowhere in its range is it common.

Compared to most other fish species, the pallid sturgeon has an unusual appearance. It is distinguished by pale, bony plates instead of scales, a reptile-like body, a sucker-type mouth, and large whisker-like growths that help it sense its surroundings. It is similar in appearance to the shovelnose sturgeon (*Scaphirhynchus platorhynchus*) but is much lighter in color and has a longer, sharper snout.

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***In addition to efforts aimed at restoring pallid sturgeon habitat, Fish and Wildlife Service biologists have been working to spawn and raise pallid sturgeons in hatcheries such as the Gavins Point National Fish Hatchery in South Dakota.***

***An adult female pallid sturgeon may produce 170,000 eggs or more, but the hatchlings (shown at left) are tiny, fragile creatures that must fend for themselves. Miniature barbels or "whiskers" on each side of the mouth help the young sturgeon seek out the insect larvae, worms, and other bottom-dwelling organisms on which it feeds, while minuscule bony scutes provide some protection from other small predators. In the wild, few would live to attain the eight-inch length of the individual shown above, and only a handful, if any, would survive the 7-10 years necessary to reach sexual maturity.***

***By spawning and raising pallids in a protected environment, Gavins Point NFH and others help to increase the number of sturgeon that survive the hazards of early life. Releasing hatchery-raised fish into restored habitat may provide just the boost needed to help put the pallid sturgeon on the road to recovery.***

*Photo above and left by Gavins Point National Fish Hatchery*

