

SHOWCASE SPECIES: MISSOURI

UPPER MISSOURI PALLID STURGEON



USFWS

The Issue

One of the oldest creatures on the planet, its lineage dating back 70 million years, the pallid sturgeon of the Upper Missouri has been spiraling

downward in number for at least the past half century as human development has studded its river and stream habitat with dams and other water diversions. Commercial fishing also may have played a role in the species' decline.

Natural History

This fish ranges throughout the Missouri and Mississippi rivers (some 3,550 river miles) and their larger tributaries, but only portions of this range serve as suitable habitat. Adapted for living close to the bottom of large, silty rivers with swift currents, the pallid sturgeon favors submerged sand flats and gravel bars. It feeds on aquatic insects, mollusks and small fish.

The pallid sturgeon grows to 80 pounds and more than 6 feet long, making it one of the largest fish species in the Upper Missouri.

Pallid sturgeon in the Upper Missouri spawn in May or June over gravel and other hard surfaces. Eggs hatch in five to eight days, and young reach sexual maturity in three years or more. Both males and females may go for three to ten years between spawnings, a slow reproductive strategy that over the eons has proved successful for a creature that lives 50 years or more.

Listing

The U.S. Fish and Wildlife Service in 1990 listed the pallid sturgeon as endangered.

Management

Stocking rivers in the fish's native range with hatchery-reared sturgeon has been the primary Fish and Wildlife Service activity on behalf of sturgeon recovery since captive rearing began in 1994. However, stocking is not a prescription for recovery and allows the Service only to maintain a certain number of pallid sturgeon in the wild. If stocking were halted today, the species would likely be extinct as early as 2018.

Having helped the sturgeon maintain a scant hold on existence, however, may soon pay off as the U.S. Army Corps of Engineers launches a major effort to restore the Missouri River.

How this project will affect the sturgeon is unknown. Presently, however, about 28 percent of likely sturgeon habitat long the Missouri and Mississippi rivers has been impounded, turning river habitat into unsuitable lakes. Another 51 percent of the fish's 3,350-mile range has been dredged into deep, relatively clear channels, and the remaining 21 percent lies below dams, which have reduced silt loads, changed runoff patterns and lowered water temperatures, all of which are probably harmful to sturgeon. To the extent that the Missouri River project restores lost habitat, the future for the sturgeon may be an improvement over the current holding pattern, with a potential for real progress. Biologists hope to be able to conduct research into whether hatchery-reared sturgeon are surviving to reproductive age and, if not, what environmental factors are keeping them from doing so. Data on sturgeon survival and habitat use is not currently available.

Funding

Funding from all government sources for pallid sturgeon recovery nationwide ranks the species at 14 out of 1,311 species, according to the U.S. Fish and Wildlife

PALLID STURGEON

Service fiscal year 2004 report (the most recent available) to Congress, *Federal and State Endangered and Threatened Species Expenditures*.^{*} Total recovery funding for the species from all government sources that year was about \$13.4 million, with \$1.3 million coming through the Service.



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The key to pallid sturgeon recovery may lie in the Corps' Missouri River Project.

Until recently, the project received funding only on the order of about \$2 million to \$3 million yearly, but in 2003 funding skyrocketed into the \$30 million range. During the next fiscal year, it is likely to reach \$55 million.

“Many of the recovery measures essential to species survival, such as captive breeding and stocking for the pallid sturgeon, require immense resources from the Fish and Wildlife Service,” says John Kostyack, director of Wildlife Conservation Campaigns at the National Wildlife Federation. “To ensure recovery for the pallid sturgeon and the rest of America’s imperiled wildlife, Congress needs to increase funding and ensure Fish and Wildlife has the resources it needs.”

Local Contacts

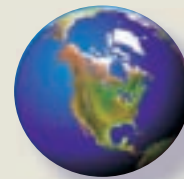
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Other Threats

Loss of river habitat to dam construction, annual operation of the dams and channelization persist as the threats to sturgeon along the Missouri River from the headwaters in Montana through the Dakotas. These problems will persist if river restoration is not accomplished and if more funding is not directed toward sturgeon recovery.

^{*} The U.S. Fish and Wildlife *Federal and State Endangered and Threatened Species Expenditures* report incorporates subjective estimates provided by regulated entities without any independent verification and without effort to segregate Endangered Species Act expenditures from other related expenditures. However, for most listed species, no other funding data is available.

THREATS FROM GLOBAL WARMING



Global warming is diminishing average snowpack in the mountain areas from which the Missouri River and some of its major tributaries spring. As global warming heightens, the entire water regimen for the Upper Missouri watershed will change in ways now difficult to predict. Those looming changes, acting in concert with water-diversion projects, put habitat along the Upper Missouri at the greatest risk it has faced since the heyday of dam building in the first half of the 20th century. “How the nation deals with the new challenge from global warming in combination with traditional sources of river degradation will play a critical role in the success or failure of the Missouri River project and of least tern, piping plover and pallid sturgeon recovery,” Kostyack says.