VOX
MAGAZINE

Snapping into action: the recovery effort for declining species

Human activity has endangered numerous species that call the Missouri River home

SHARON MAI
MAY 3, 2018

Due to the size of the bottom portion of its shell, the snapping turtle cannot pull its head and legs fully inside its shell for protection. The animal makes up for this vulnerability with an aggressive temperament.

COURTESY OF CENTER FOR BIOLOGICAL DIVERSITY

"I observe a great alteration in the Current course and appearance of this pt. of the Missouri. In places where there was Sand bars in the fall 1804 at this time the main current passes, and where the current then passed it is now a Sand bar. Sand bars which were then naked are now covered with willow several feet high. The entrance [sic] of some of the Rivers & creeks changed owing to the mud thrown into them, and a layor of mud over some of the bottoms of 8 inches thick."– Captain William Clark, Aug. 20, 1806

The wild and scenic Missouri River once contained an abundance of thriving native species.

Today, the Big Muddy, appropriately named for the river's natural sediment-filled flow, has been affected by human activity, which has significantly reduced the natural habitats of plants and animals.

In 2002, a consesus study called The Missouri River Ecosystem: Exploring the Prospects for Recovery, was published. It listed two bird species that depend on the river for their habitat as endangered, 51 fish as rare, uncommon or decreasing in numbers, and one, the pallid sturgeon, as an endangered species.

The International Union for Conservation of Nature says 40 percent of turtle species are threatened. This drop in population is due to being hunted for sport and food, in addition to being caught for breeding and the pet trade. Some turtles are captured and exported from the United States to food and medicinal markets in Asia.

One species that was dangerously close to becoming endangered is the common snapping turtle. This is largely due to people harvesting them without regulations prior to 2017.

Like many other animals in the river, common snapping turtles were widely exploited for local, national and international consumption. This led to a severe population decline.

Snapping turtles in particular were in jeopardy due to urbanization in surrounding areas. Fish and wildlife are threatened by water pollution, drainage of water bodies and development of neighboring environments.

“When Lewis and Clark came through, the river was three times wider than it is now,” says David Galat, a river ecologist and retired professor at the University of Missouri. “It had higher and lower flows, but all of those had changed as the basins have developed.” Water levels fluctuate due to climate change, and rising temperatures can threaten vulnerable aquatic animals. Galat is involved in mitigation programs to lessen the impact of hundreds of years of human development.

Galat emphasizes that 305,000 acres have been lost from the river in the state of Missouri due to falling water levels.

To return the river to its natural habitat, the U.S. Fish and Wildlife Services promotes restoration projects to minimize the impact of federal construction projects on the ecosystem and to restore some of its ecological value.

In his career, Galat has worked on restoration and rehabilitation programs in rivers across the nation. Most of these rivers have been seriously affected, he says, and the Missouri River has been dammed and modified.

Over the past century or so, there has been construction of dams in the Missouri River basin, channelization of the lower 735 miles of the river and the building of levees to regulate water levels. This activity has dramatically diminished fish and wildlife communities.

Common snapping turtles
Size: 10–12 inches
Weight: 15–25 pounds
Food: Insects, birds, small mammals, amphibians, aquatic plants
Lifespan: 30 years

Within the past few years, there has been a national trend of ending unsustainable turtle hunting. Advocates hope this will help save the wild freshwater turtles living in the Missouri River. The trend culminated in the Missouri Department of Conservation’s decision to ban commercial turtle hunting in response to a petition filed in 2016.

“This ban saves thousands of turtles from trappers seeking to make a quick buck,” says Collette Adkins, a biologist and senior attorney at the Center for Biological Diversity.

“That’s a big victory for all of us who care about the health of the state’s wildlife and waterways.”

The efforts to end commercial hunting have been largely successful. Out of the eight states bordering Missouri, only Arkansas still allows the sport.

Banning commercial hunting is not enough on its own, though. Habitat restoration is a key factor in increasing the populations of turtles and other endangered species, according to the Missouri River Recovery Program. It is working to rehabilitate the ecosystem to prevent further declines of other native species.

Environmental plans must account for climate challenges the Missouri River and its basin will likely face, as identified by Reclamation’s 2016 SECURE Water Act Report. According to the U.S. Department of the Interior’s Bureau of Reclamation, warmer conditions could decrease fish populations and increase water demands for instream ecosystems and the potential for invasive species infestations.

Reclamation and recovery is a complicated issue to take on with a single project, but the Missouri River can once again be a haven for plants and animals if proper care is taken.