

30 YEARS OF THE ENDANGERED SPECIES ACT

SHORTNOSE STURGEON

Before the dinosaurs existed, the shortnose sturgeon filled rivers, estuaries, and coastal waters. The species continues to survive along the east coast of North America from New Brunswick, Canada to Florida. Over time, human activities have almost wiped out the shortnose sturgeon entirely, but Endangered Species Act protections are helping to recover this resilient species.

HISTORY OF ENDANGERMENT

Shortnose sturgeon are born in freshwater rivers and streams, migrate out to the ocean where they spend most of the year, and return upstream to spawn several times throughout their lives. Heavy damming of many spawning rivers has posed an impassible obstacle for migrating shortnose sturgeon, contributing most significantly to their decline. By altering the natural flow of streams, dams hinder the spawning journey and increase water temperatures, sometimes to lethal levels.

Development near the river and estuary habitat of the shortnose sturgeon has created several problems. Residential and commercial development, in addition to agricultural and forestry practices, have contributed to siltation and pollution in the sturgeon's waters.

Overfishing of the shortnose sturgeon was an additional factor in the species' initial decline, as its eggs were once a significant source of domestic caviar.

Shortnose sturgeon numbers declined so precipitously that they were first listed as endangered in 1967 and they subsequently received protections under the Endangered Species Act of 1973.

ROAD TO RECOVERY

Dams can so greatly alter river ecosystems that their costs can sometimes outweigh their benefits. As a result, more than 500 outdated dams have been removed from rivers since 1912. In addition to removing dams, which is most

likely the most efficient way to restore shortnose sturgeon to their historic levels, a recovery plan released in 1998 by the National Marine Fisheries Service closes the shortnose sturgeon fishery for two decades or more, seeks to reduce and eliminate the accidental catch of sturgeon, and protects spawning sites.

CONSERVATION TODAY

In 1999, the Federal Energy Regulatory Commission made the decision to deny the operating license for the Edwards



Edwards Dam



Kennebec River after dam removal

Dam on the Kennebec River, finding that the benefits from the small amount of energy generated by the dam were not great enough to allow the continued harm to the ecosystem.

With the removal of the dam, shortnose sturgeon are migrating to their historic spawning grounds, a journey that was impossible since the dam was commissioned in 1837. Federal authorities predict that removal of the Edwards Dam will boost the shortnose sturgeon population in the Kennebec to more sustainable levels.

ECOLOGICAL VALUE

Sturgeon are bottom feeders; they suck small plants and animals into their tube-like mouth. This reliance on the simplest building blocks makes them a good indicator of ecosystem health and viability. Given that shortnose sturgeon have lived successfully for millions of years, outlasting even dinosaurs, humans should be alarmed that we have nearly caused their extinction in a mere 200 years.

OUTLOOK FOR THE FUTURE

Even though removal of Edwards Dam greatly improved the chance of recovering shortnose sturgeon in the Kennebec River, the species is far from full recovery.

The shortnose sturgeon recovery plan developed under the Endangered Species Act calls for separate management of populations in different rivers. While focusing on rivers where shortnose sturgeon are already found—they have been extirpated from all but 16 rivers—fisheries managers can narrow their work. However, before settlers arrived in North America, the sturgeon were found in nearly all east coast rivers. Restoring habitat and reintroducing the fish throughout more of their historic range will further ensure that the shortnose sturgeon survives for future generations.

Fisheries managers will need to be patient in their recovery efforts. Because shortnose sturgeon can take between six and 18 years to reach sexual maturity, recovery of the species will be slow. In fact, the shortnose sturgeon recovery plan estimates that the species may not reach sustainable levels until 2024.



Juvenile Shortnose sturgeon. Univ. of Massachusetts



University of Massachusetts