Species
- Marine Mammals
  - Cetaceans
  - Pinnipeds
- Marine Turtles
- Marine & Anadromous Fish
- Marine Invertebrates & Plants
- Species of Concern
- Threatened & Endangered Species
  - Critical Habitat Maps

Contact OPR
Glossary
OPR Site Map

Search OPR

Shortnose Sturgeon *(Acipenser brevirostrum)*

Status | Taxonomy | Species Description | Habitat | Distribution | Population Trends | Threats | Conservation Efforts | Regulatory Overview | Key Documents | More Info

Status
ESA Endangered – rangewide

Shortnose sturgeon
(Acipenser brevirostrum)
Photo: Nancy Haley, NOAA

Taxonomy
Kingdom: Animalia
Phylum: Chordata
Class: Osteichthyes
Order: Acipenseriformes
Family: Acipenseridae
Genus: *Acipenser*
Species: *brevirostrum*

Species Description
The sturgeon family is among the most primitive of the bony fishes. The shortnose sturgeon shares the same general external morphology of all sturgeon. The body surface contains five rows of bony plates or "scutes." Sturgeon are typically large, long-lived fish that inhabit a great diversity of riverine habitat. Sturgeon are found from the fast-moving freshwater riverine environment downstream and, for some species, into the offshore marine environment of the continental shelf.

The shortnose sturgeon is the smallest of the three sturgeon species that occur in eastern North America, having a maximum known total length of 4.7 feet (1.4 m) and weight of 50.7 pounds (23 kg). Growth rate and maximum size vary with latitude, with the fastest growth occurring among southern populations. Maximum known age is 67 years for females, but males seldom exceed 30 years of age. Sex ratio among young adults is 1:1 but changes to a predominance of females (4:1) for fish larger than 90 cm fork length.

Males and females mature at the same length (45 to 55 cm fork length) throughout their range. However, age of maturation varies from north to south due to a slower growth rate in the north. Males may mature at 2 to 3 years of age in Georgia, at age 3 to 5 from South Carolina to New York, and at age 10 to 11 in the St. John River, Canada. Females exhibit a similar trend and mature at age 6 or younger in Georgia, at age 6 to 7 from South Carolina to New York, and at age 13 in the St. John River. Age of first spawning in males occurs 1 to 2 years after maturity, but among females is delayed for up to 5 years. Approximate age of a female at first spawning is 15 years in the St. John River, 11 years in the Hudson and Delaware Rivers, 7 to 14 years in the South Carolina rivers, and 6 years or less in the Altahama River, Georgia. Generally, females spawn every three years, although males may spawn every year.

Did You Know?

- Shortnose sturgeon occur in most major river systems along the eastern seaboard of the U.S.
- The shortnose is the smallest of the 3 sturgeon species that occur in eastern North America.
- Shortnose sturgeon have been known to reach a length of 4.7 ft (1.4 m) and weight of 50.7 lbs (23 kg).
- Shortnose sturgeon females have been known to reach 67 years of age! But males seldom exceed 30.
- Adult shortnose sturgeon primarily eat mollusks and large crustaceans.

Habitat
Shortnose sturgeon inhabit rivers and estuaries. It is an anadromous fish that spawns in the coastal rivers along the east coast of North America from the St. John River in Canada to the St. Johns River in Florida. It prefers the nearshore marine, estuarine and riverine habitat of large river systems. Shortnose sturgeon, unlike other anadromous species in the region such as shad or salmon, do not appear to make long distance offshore migrations. They are benthic feeders. Juveniles are believed to feed on benthic insects and crustaceans. Mollusks and large crustaceans are the primary food of adult shortnose sturgeon.

Distribution

The shortnose sturgeon is anadromous, living mainly in the slower moving riverine waters or nearshore marine waters, and migrating periodically into faster moving fresh water areas to spawn. One partially landlocked population is known in the Holyoke Pool, Connecticut River, and another landlocked group may exist in Lake Marion on the Santee River in South Carolina.

Shortnose sturgeon occur in most major river systems along the eastern seaboard of the United States. In the southern portion of the range, they are found in the St. Johns River in Florida; the Altamaha, Ogeechee, and Savannah Rivers in Georgia; and, in South Carolina, the river systems that empty into Winyah Bay and the Santee/Cooper River complex that forms Lake Marion. Data are lacking for the rivers of North Carolina. In the northern portion of the range, shortnose sturgeon are found in the Chesapeake Bay system, Delaware River from Philadelphia, Pennsylvania to Trenton, New Jersey; the Hudson River in New York; the Connecticut River; the lower Merrimack River in Massachusetts and the Piscataqua River in New Hampshire; the Kennebec River in Maine; and the St. John River in New Brunswick, Canada.

Population Trends

No estimate of the historical population size of shortnose sturgeon is available. While the shortnose sturgeon was rarely the target of a commercial fishery, it often was taken incidentally in the commercial fishery for Atlantic sturgeon. In the 1950s, sturgeon fisheries declined on the east coast which resulted in a lack of records of shortnose sturgeon. This led the Fish and Wildlife Service (FWS) to conclude that the fish had been eliminated from the rivers in its historic range (except the Hudson River) and was in danger of extinction. FWS believed the population level of the shortnose sturgeon had declined because of pollution and overfishing, both directly and incidentally in shad gillnets.

Threats

Construction of dams and pollution of many large northeastern river systems during the period of industrial growth in the late 1800's and early 1900's may have resulted in substantial loss of suitable habitat. In addition, habitat alterations from discharges, dredging or disposal of material into rivers, or related development activities involving estuarine/riverine mudflats and marshes, remain constant threats. Commercial exploitation of shortnose sturgeon occurred throughout its range starting in colonial times and continued periodically into the 1950's.

Conservation Efforts

Placing the species on the endangered species list resulted in a great deal of research on the species in the northern river systems. NMFS published a recovery plan in December 1998 outlining actions that need to be taken in order to recover the species.

Regulatory Overview

The shortnose sturgeon was listed as endangered throughout its range on March 11, 1967 under the Endangered Species Preservation Act of 1966 (a predecessor to the Endangered Species Act of 1973). NMFS later assumed jurisdiction for shortnose sturgeon under a 1974 government reorganization plan (38 FR 41370).

Key Documents

(All documents are in PDF format.)

Title	*Federal Register*	Date
Recovery Plan	63 FR 69613	12/17/1998
ESA Listing Rule	32 FR 4001	03/11/1967

More Information

- Moser, M. L.; Bain, M.; Collins, M. R.; Haley, N.; Kynard, B.; O'Herron II, J. C.; Rogers, G.; Squiers, T. S. 2000. "A protocol for use of shortnose and Atlantic sturgeons". NOAA Tech Memo NMFS-OPR-18.
- Dadswell, Michael J., Bruce D. Taubert, Thomas S. Squiers, Donald Marchette, and Jack Buckley. 1984. Synopsis of Biological Data on Shortnose Sturgeon, *Acipenser brevirostrum* LeSueur 1818. NOAA Technical Report NMFS-14, FAO Fisheries Synopsis No. 140, 45p.