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Shortnose Sturgeon (*Acipenser brevirostrum*)

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Status

ESA Endangered - throughout its range

CITES Appendix I - throughout its range

Taxonomy

Kingdom: Animalia

Phylum: Chordata

Class: Osteichthyes

Order: Acipenseriformes

Family: Acipenseridae

Genus: *Acipenser*

Species: *brevirostrum*



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

Species Description

Weight: up to 50 pounds (23 kg)

Length: up to 4.5 feet (1.4 m)

Appearance: bony plates called "scutes" along their back

Lifespan: average 30 years, but can live up to 67 years

Diet: adults: mollusks and large crustaceans
juveniles: benthic insects and small crustaceans

Behavior: spawn in fresh water

Sturgeon are among the most primitive of the bony fishes. Their 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, 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; they grow up to 4.7 feet (1.4 m) and weigh up to 50.7 pounds (23 kg). Their growth rate and maximum size vary, with the fastest growth occurring among southern populations. Female sturgeon can live up to 67 years, but males seldom exceed 30 years of age. Thus, the ratio of females to males among young adults is 1:1, but changes to 4:1 for fish larger than 3 feet (90 cm).

Males and females mature at the same length, around 1.5-1.8 feet (45-55 cm), throughout their range. However, the age at which they reach that length varies from north to south due to a slower growth rate in the north. Males may mature at age 2 in Georgia, at age 4 from South Carolina to New York, and at age 10 in the St. John River in Canada. Females exhibit a similar trend and mature at age 6 or younger in Georgia, at age 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

Did You Know?

• [5 foreign sturgeon species are candidates for ESA-listing.](#)

• Shortnose sturgeon occur in most major river systems along the eastern seaboard of the U.S.

• 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.

spawning is 15 years in the St. John River, 11 years in the Hudson and Delaware Rivers, ranges from 7 to 14 years in the South Carolina rivers, and 6 years or less in the Altamaha River in Georgia. Generally, females spawn every three years, although males may spawn every year.

Habitat

Shortnose sturgeon inhabit rivers and estuaries. They are "[anadromous](#)" fish; they spawn 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. They prefer 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, eating crustaceans, mollusks, and insects.

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
- Altamaha, Ogeechee, and Savannah Rivers in Georgia
- in South Carolina 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

- Chesapeake Bay system
- Delaware River
- Hudson River in New York
- Connecticut River
- lower Merrimack River in Massachusetts
- Piscataqua River in New Hampshire
- Kennebec River system, which includes the Androscoggin and Sheepscot Rivers, in Maine
- Penobscot River in Maine
- St. John River in New Brunswick, Canada

They have also been documented occasionally in some of the other rivers along the Maine coastline, which may be a result of increased coastal movements between the larger rivers in Maine and Massachusetts, including:

- Saco River
- St. George River
- Damariscotta River
- Medomak River
- Passagasawakeag River

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 because of pollution and overfishing, both directly and incidentally.

Threats

- construction of dams, mainly during the period of industrial growth (late 1800s-early 1900s) may have resulted in substantial loss of suitable habitat
- pollution of many large northeastern river systems
- habitat alterations from discharges
- dredging or disposal of material into rivers
- related development activities involving estuarine/ riverine mudflats and marshes



Atlantic sturgeon (top) and Shortnose sturgeon (bottom)
(*Acipenser oxyrinchus* and *Acipenser brevirostrum*)
Photo: Doug Cooke,
South Carolina Department of Natural Resources

Historically:

- commercial exploitation, which occurred throughout its range from Colonial times until the 1950s

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
Biological Assessment		11/2010
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.

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