



Atlantic Sturgeon

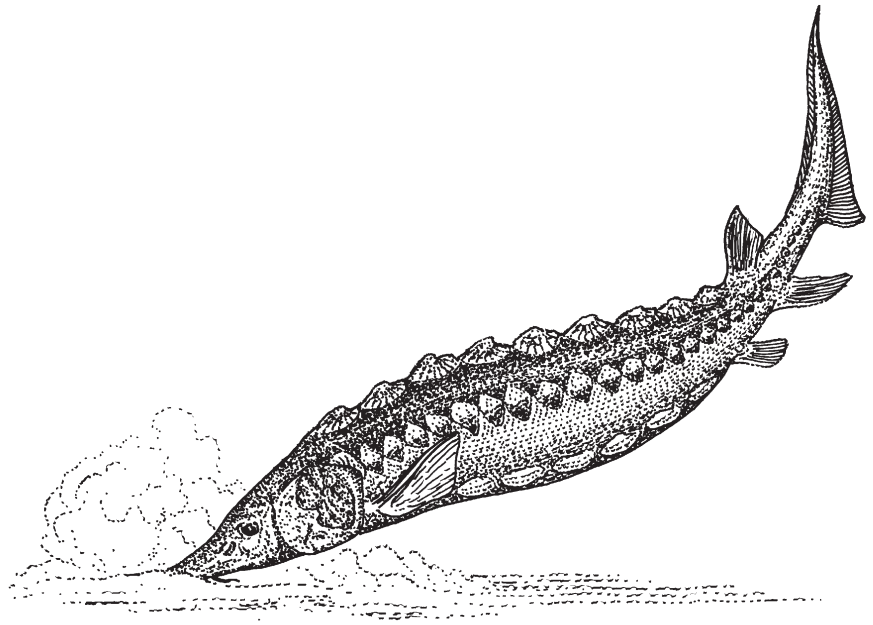
Acipenser oxyrinchus

Sturgeon have long been prized for their firm white flesh and eggs, or roe, which make excellent caviar. The Atlantic sturgeon is an intermediate cousin to the much larger North American Pacific coast white sturgeon, *A. transmontanus*, and the much smaller shortnose sturgeon, *A. brevirostrum*. There are two distinct subspecies of the Atlantic sturgeon—*Acipenser oxyrinchus oxyrinchus* and *Acipenser oxyrinchus desotoi*. Both the white sturgeon, which can grow to a length of 12 feet and exceed 1,000 pounds, and the Atlantic sturgeon, which may grow to about 9 feet in length and weigh over 500 pounds, are commercially harvested for their eggs. The shortnose sturgeon is a much smaller fish, usually less than 3 feet long.

Sturgeon are anadromous fish, which means they spend most of their life in salt water but migrate up freshwater rivers along the coast to spawn.

History and Status

Population sizes and ranges and fisheries of Atlantic sturgeon have declined drastically throughout the 20th century. Even though Atlantic sturgeon are much more abundant in North Carolina waters than the shortnose sturgeon, they do not appear to be as common as they are in other southeastern rivers such as the Altamaha and Savannah rivers in Georgia. Most of the East Coast landings of Atlantic sturgeon now come from North and South Carolina,



with the majority in North Carolina waters coming from either the lower Cape Fear River and adjacent ocean or from the Albemarle Sound areas.

Description

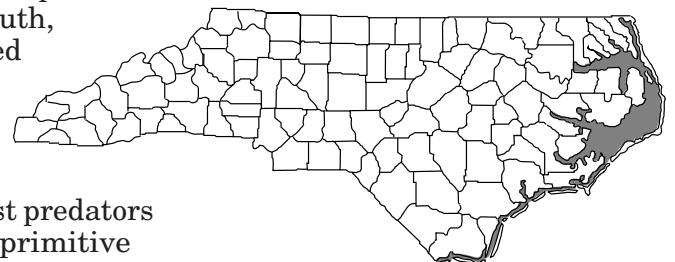
Even though the Atlantic sturgeon is more common in North Carolina waters than the shortnose sturgeon, they are often commonly confused with one another. Both have five rows of bony plates called “scutes” along the body. However, Atlantic sturgeon have two rows of prenatal shields, while the shortnose has only one. Also, the Atlantic sturgeon has a smaller mouth and a longer, more sharply pointed snout than the shortnose. Both also have a heterocercal (shark-like) tail. Unlike sharks, however, sturgeon have a much smaller dorsal (top) fin and are completely harmless. The Atlantic sturgeon has a protractile, suckerlike mouth, which it uses to feed along the bottom. The bony plates and thick, leathery skin protect it from most predators and give it a very primitive appearance. In fact, it is a member of one of the oldest families

of fishes, *Acipenseridae*, dating back to the dinosaur age.


Habitat and Habits

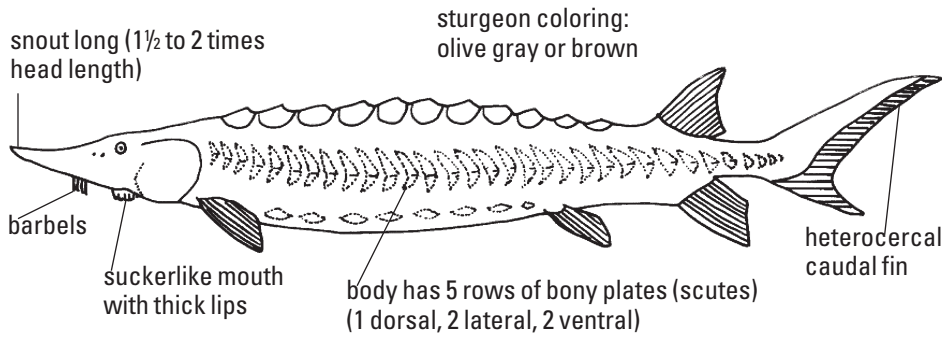
Atlantic sturgeon in North Carolina migrate upstream from estuaries to upriver spawning areas in January and February. They seem to prefer deep water with a hard or rough vegetated bottom. They remain in upriver areas during the summer months, feeding on a variety of bottom-dwelling organisms such as snails, worms, insects, crustaceans and, occasionally, small fishes, which they suck up with their suckerlike mouth. They feed mainly at night.

Sturgeon require clean, swiftly flowing freshwater swamps with rough bottoms in which to spawn. They are a long-lived species and are not sexually mature until they are between 7 and 10 years old, with males



Range Map:

Occupied range 



ATLANTIC STURGEON

Classification

Class: Osteichthyes (bony fishes)
Order: Acipenseriformes

Average Size

Length: Up to 9 ft.
Weight: Up to 500 lbs.

Food

Worms, crustaceans, insects, mollusks and small fishes.

Breeding

Promiscuous, males may breed with more than one female; spawning occurs in mid-river between February and July. Sturgeons remain in the river system during summer and return downriver in the fall.

Young

Hatch in about one week at water temperature of 64 degrees F. No parental care given to young. Sturgeons reach sexual maturity at between 7 and 10 years of age.

Life Expectancy

Up to 60 years.

possibly maturing earlier than females. They may attain an age of 60 years.

Peak spawning occurs in March and April in North Carolina at water depths of 36 to 43 feet and at water temperatures ranging from 55 degrees to 64 degrees Fahrenheit. Spawning occurs at night in the middle of the river channel, where the adhesive eggs attach to aquatic vegetation and stones. There is no adult care of the young, and the eggs hatch within a week at a water temperature of 64 degrees.

When they are about 4 years old, young Atlantic sturgeon return to the sea, where they undertake extensive migrations of up to 950 miles. Young sturgeon have been captured off the Georges and Browns banks of Nova Scotia.

Range and Distribution

The range of the East Coast subspecies of Atlantic sturgeon (*A. o. oxyrinchus*) extends from the Hamilton River in Labrador and from northern Quebec to southeastern Florida. However, no sturgeon have been recorded from Florida waters since 1900. Atlantic sturgeon have also been recorded from Bermuda, and at one time an isolated relic population may have lived off northeastern South America, where one specimen was recorded over 100 years ago.

People Interactions

Human-related activities—commercial fishing in particular—have led to a direct decline in Atlantic sturgeon populations

throughout the fish's range. In the past sturgeon were prized for their firm white flesh and eggs, which were used to make caviar, and were fished almost to extinction. Dams built for navigational or flood-control purposes on the larger coastal rivers restricted or even prevented sturgeon from reaching their traditional spawning grounds. Increasing levels of water pollution from increased development across the state resulted in degraded spawning sites and decreased reproduction by the species. Late maturation, periodic spawning and slow growth are also factors that contributed to the decline of Atlantic sturgeon.

References

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Smith, H.M. *The Fishes of North Carolina* (N.C. Geological and Economic Survey, 1907).

Credits

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