

**Atlantic Sturgeon**  
*Acipenser oxyrinchus*



Sturgeons are ancient fish, dating back to before the days of the dinosaurs. They even look prehistoric with their thick, tough skin covered with rows of bony plates or scutes. Sturgeons are found only in the Northern Hemisphere. Of the 26 types that exist, three live in our area: the shortnose sturgeon, the lake sturgeon (exclusively freshwater) and the Atlantic Sturgeon. The Atlantic Sturgeon is the largest of the three. In the Hudson River, where it is the largest fish overall, it has been known to weigh in at as much as 200 pounds and grow up to eight feet long.

The region's Native American tribes worshipped the once plentiful Atlantic Sturgeon for its size and strength. They relied on an annual harvest of the fish for food and for its leather-like hide. During colonial times, the Atlantic Sturgeon was so plentiful in the Harbor Estuary that it was considered a trash or nuisance fish. During spawning times for instance, there would be so many coming into the Estuary making their way to their freshwater spawning grounds that navigation would become difficult. The ones that were caught, generally by accident, were discarded, fed to pigs, or used as fuel or fertilizer. In the mid to late 1800's people began to become aware of the value of this fish. Its meat was delicious, especially when smoked, and Europeans considered its roe or eggs, which can be processed to make caviar, a delicacy. Demand for sturgeon exploded. People caught large numbers of the huge fish; even their swim bladders were made into gelatin (Jell-o was made in LeRoy, New York from 1900-1964) and isinglass (used in pottery-making, waterproofing and for clarifying wine and beer). In the Hudson Valley, Atlantic Sturgeon became a major food source, sold under the name "Albany Beef." The slow-growing Atlantic Sturgeon could not keep up with the intense demand. By the 1980's, their populations fell to very low numbers. Over-fishing, along with pollution and the building of dams that prevented these fish from reaching their freshwater spawning grounds jeopardized the existence of this once plentiful and ancient fish. As a result, their historical range from Canada's St Lawrence River to Florida's St. John's River was reduced to just the Hudson River, Delaware River and a few South Carolina locations, which is still the case to this day.

The Atlantic Sturgeon is anadromous, living most of its long life (up to 50 years is not uncommon) in the ocean but travelling into freshwater to spawn. Details regarding their specific activities within the New York/New Jersey Harbor Estuary and the Hudson River are poorly understood but it is generally believed that the juveniles live in the riverine to estuarine environment for one to six years then move out to the ocean, returning only to spawn. Likewise, little is known regarding the migratory behavior, distribution, habitat needs of mature Atlantic Sturgeon after leaving fresh-water systems. It is generally held that Atlantic Sturgeons in our area migrate into the Estuary and then head into the Hudson River going just upstream of the salt front to spawn from April to June. Mature females may remain in the Estuary for 4 to 6 weeks prior to the spawning run. Females can begin to reproduce as early as 7 years old or as late as 30 with males maturing between ages 5 to 24. A mature female can lay up to 2.4 million eggs, but she does not

necessarily spawn every year, sometimes going up to four years before spawning again. Eggs hatch one week after they have been fertilized.

In 1990, the Atlantic States Marine Fisheries Commission (ASMFC) adopted a multi-state management plan for Atlantic Sturgeon. States like New York and New Jersey with open fisheries began to monitor their Atlantic Sturgeon harvest and as a result, New York State regulated fishing for Atlantic Sturgeon fishery with size limits, seasons, area closures, and when data became available that made it clearer that the Hudson River Atlantic Sturgeon were being overfished, New York declared a harvest moratorium in 1996. New Jersey followed suit in the same year. In 1998, the Atlantic States Marine Fisheries Commission adopted Amendment 1 to the Interstate Fishery Management Plan for Atlantic Sturgeon. This amendment banned possession of Atlantic Sturgeon in all US Atlantic coastal states. It also recommended that states with spawning populations sample adults every five years and identify by-catch losses in state waters.

Although harvest of Atlantic Sturgeon from the Harbor Estuary has ended, threats to this fish remain. Within the Estuary, habitat loss and disturbance, dredging for navigation and occasional oil spills all pose potential threats to spawning. In the ocean, mature Atlantic Sturgeon are potentially threatened by dredge spoil dumping and as by-catch from other commercial fishing ventures. Attempts to lessen the Atlantic Sturgeon's vulnerability to these threats are hampered by just how much is still not understood about this fish. Since 1997, the commercial fishery for Atlantic Sturgeon has been closed in United States waters. This was initiated by the Atlantic States Marine Fisheries Commission. Atlantic Sturgeon are therefore protected and cannot be harvested until the spawning populations have had 20 protected years of female spawning, which could take approximately 38 years. There is also an Atlantic States Marine Fisheries Commission Fishery Management Plan for Atlantic Sturgeon. New York and New Jersey are included in this plan to conserve and protect Atlantic Sturgeon. The plan includes identifying and protecting spawning and nursery areas; identifying oceanic and staging areas; determining optimal environmental conditions; and determining the effects of contaminants on Atlantic Sturgeon.



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