

Atlantic sturgeon (*Acipenser oxyrinchus*)

Pennsylvania Endangered Fish Species

State Rank: S1 (critically imperiled) Global Rank: G3 (vulnerable)

Description

The Atlantic sturgeon is a large fish reaching a maximum length of about 4.3 meters. It is Pennsylvania's largest fish (Steiner 2000). It differs from the shortnose sturgeon by its longer and more sharply shovel-shaped mouth. It has a larger number of scutes (raised, plate-like scales) between the anal and caudal fin (4 v 1). The mouth is ventrally located and extends downward to reach its food items. The Atlantic sturgeon has large boney, white scutes on the head, back, and sides that contrast with its dark scales (natureserve.org).



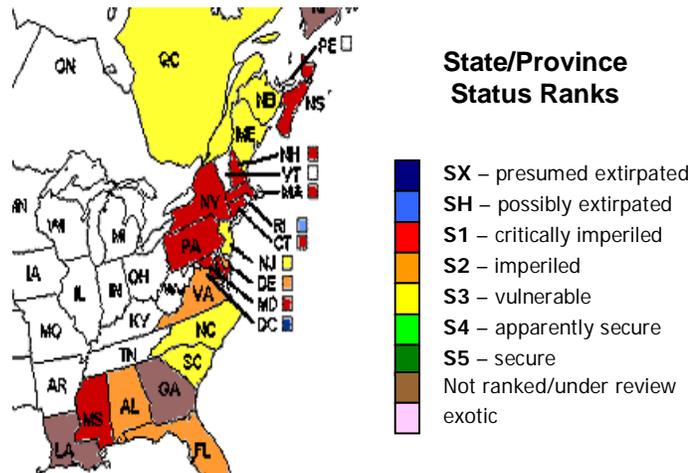
Photo:
Fishbase.org

Behavior

The Atlantic sturgeon is anadromous, migrating from open-ocean to rivers to spawn. The Atlantic sturgeon will spawn in either fresh or brackish waters over hard clay, rubble, gravel, or shell usually in fast moving water (natureserve.org). Adhesive eggs are scattered in the water column and there is no nest building or parental care (Cooper 1983). The young may spend up to four years in the rivers where they are born before going to sea. In the ocean, adults travel extensively; one tagged Atlantic sturgeon was found to move 900 miles in one summer (Cooper 1983).

North American State/Province Conservation Status

Map by NatureServe (August 2007)

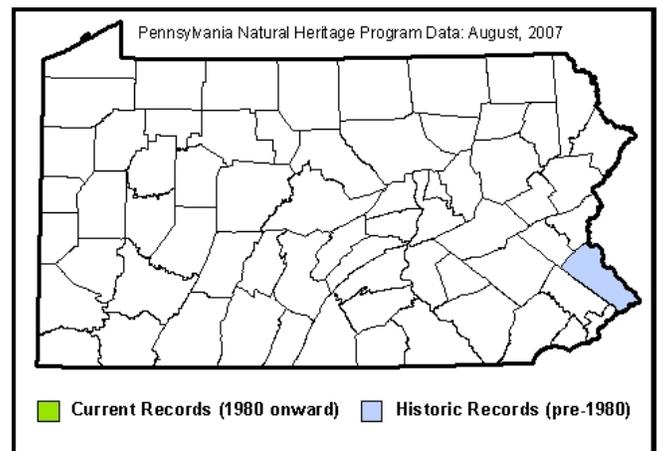


Diet

The Atlantic sturgeon is a benthic feeder and uses its snout to dig in the sand or mud for worms, shrimps, other marine invertebrates, and fishes (Cooper 1983).

Threats and Protection Needs

Sturgeons are long-lived species. The Atlantic sturgeon typically matures and breeds within 11 years. Spawning may be separated by intervals of several years. This makes it especially vulnerable to fluctuations in habitat conditions and water quality. The Atlantic sturgeon has been extirpated from a large proportion of their historic range. Re-colonization of the Atlantic sturgeon's habitats former habitats is a nearly monumental task, given its long maturation and low reproductive rate. Genetic differentiation among populations indicates this species has a low intrinsic rate of recolonization of rivers (natureserve.org).



The Atlantic sturgeon is valued as a smoked fish and for caviar; stocks along the Atlantic slope have been severely reduced due to over-fishing. Habitat loss due to dam construction and water pollution are thought to be major factors impeding full recovery of populations. Declines in water quality may hinder recovery by adversely affecting benthic prey species for the sturgeon. Harvest for the Atlantic sturgeon is now banned in all U.S. water inhabited by this fish, incidental by-catch, however, does still occur. Global protection include maintaining the U.S. moratorium on harvesting, improving water quality in rivers, restricting further habitat alteration, and protecting spawning sites could improve the population viability (natureserve.org). The Atlantic sturgeon is federally listed as threatened and is a considered a candidate. In Pennsylvania it is listed as endangered (www.naturalheritage.state.pa.us).

Habitat

The Atlantic sturgeon is found, as different subspecies, along the Atlantic coast from Labrador to the Gulf of Mexico. In recent years the Atlantic sturgeon has been taken in the lower Delaware River in Pennsylvania (Cooper 1983). It is, however, considered critically imperiled in Pennsylvania waters. The Atlantic Sturgeon is primarily a marine species but *is found close to shore when not breeding*. It can also be found in bays, estuaries, and large rivers (natureserve.org).

References



Pennsylvania Natural Heritage Program

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- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: September 4, 2007).
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