

Atlantic Sturgeon | Ark of Taste Nomination Form

PRODUCT NAME

Atlantic Sturgeon
Acipenser oxyrinchus oxyrinchus

CATEGORY

Fish

COUNTRY

United States of America

PRODUCT DESCRIPTION

Description from the National Oceanic and Atmospheric Administration

“The Atlantic sturgeon is a long-lived, estuarine dependent, anadromous fish. Atlantic sturgeon can grow to approximately 14 feet (4.3 m) long and can weigh up to 800 lbs (370 kg). They are bluish-black or olive brown dorsally (on their back) with paler sides and a white belly. They have five major rows of dermal "scutes". They are distinguished by armor-like plates and a long protruding snout that is ventrally located, with four barbels crossing in front.

“Atlantic sturgeon have been aged to 60 years. There is generally faster growth and earlier age at maturation in more southern populations. For example, Atlantic sturgeon mature in South Carolina rivers at 5 to 19 years of age, in the Hudson River at 11 to 21 years, and in the Saint Lawrence River at 22 to 34 years.

The Atlantic sturgeon has two subspecies — one simply designated the Atlantic sturgeon that populates eastern coastal waters; the second, designated the Gulf sturgeon (*Acipenser oxyrinchus desotoi*), populates the Gulf coast rivers from Tampa to the Mississippi. The Gulf Sturgeon was listed as threatened in 1991. This nomination treats only *Acipenser oxyrinchus oxyrinchus*.

“Spawning adults migrate upriver in spring, beginning in February-March in the south, April-May in the mid-Atlantic, and May-June in Canadian waters. In some areas, a small spawning migration may also occur in the fall. Spawning occurs in flowing water between the salt front and fall line of large rivers. Atlantic sturgeon spawning intervals range from 1 to 5 years for males and 2 to 5 years for females. Fecundity of female Atlantic sturgeon is correlated with age and body size and ranges from 400,000 to 8 million eggs. The average age at which 50% of maximum lifetime egg production is achieved is estimated to be 29 years, which is approximately 3 to 10 times older than for other bony fish species.

“Following spawning, males may remain in the river or lower estuary until the fall; females typically exit the rivers within four to six weeks. Juveniles move downstream and inhabit brackish waters for a few months and when they reach a size of about 30 to 36 inches (76-92 cm) they move into nearshore coastal waters. Tagging data indicate that these immature Atlantic sturgeon travel widely once they emigrate from their natal (birth) rivers.

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“Atlantic sturgeon are benthic feeders and typically forage on invertebrates (e.g. crustaceans, worms, mollusks).²

PRODUCT TASTE

As with other oily fish, the flavor inspired a difference of opinion, some being avid devotees, others indifferent. The distaste may have derived, however, from trepidation at the rather monstrous size and appearance of the fish. Its firm-textured flesh resembled salmon sufficiently to give rise to market misrepresentation. In the early 1880s Captain Andrew Berkman who fished the Combahee River, shipped sturgeon to the New York market with their heads and tails cut off, disemboweled, skinned where they were processed and canned. It was sold as salmon. [“Sturgeon-Salmon,” Macon Weekly Telegraph, February 27, 1880].

Sturgeon roe invariably inspired consumer interest, given the legendary status of caviar in European cuisine. In the 1890s W. R. Capehart laid mile long seines in Albemarle sound in North Carolina, with the express purpose of harvesting roe to export to Russia for processing. [Charlotte Observer, January 8, 1896]

Brunswick, Georgia, too began an depot for the outshipment of roe and sturgeon steaks to northern markets in the early 1890s. In 1892 the Macon Telegraph reported that from fifty to sixty adult sturgeon weighing from 250 to 300 lbs. a piece were landed weekly in the Satilla River. [Macon Telegraph, March 12, 1892] In 2012, the most robust breeding population of any southern river, the Altamahata, is estimated to have 343 adult fish. [Federal Register, Vol. 75, Friday, October 6, 2010; FR-61906].

In Virginia in the latter 1870s fisherman began smoking sturgeon meat, heeding the call of an 1873 correspondent to the Richmond Whig. Smoked sturgeon remained a regional dish into the 1930s. Yet the three most common southern treatments of the meat of the fish were to bake it, boil it, or roast its steaks. The characteristic recipes were as follows:

Virginia Baked Sturgeon

A piece of sturgeon weighing five or six pounds is enough for a handsome dish; skin and put in salt and water for thirty minutes; parboil to remove oil; prepare a dressing of bread crumbs, fine bits of fat salt pork, sweet herbs and butter; gash upper end of fish quite deeply and rub this force meat well in; place in baking dish with it little water to prevent burning and bake for an hour. Serve with a sauce of drawn butter, in which has been stirred a spoonful caper sauce and one of walnut catsup or anchovy sauce. Dixie Cook-Book (Atlanta: L. A. Clarkson, 1885), 378. 378.

Boiled Sturgeon

Prepare as for baking, leaving the skin on, rub with salt and let it lie an hour. Then dredge it with flour and put it on the fire in cold water, with some salt and a few cloves of garlic. Skin carefully, while boiling, and when done, dish garnished with parsley. Serve with a sauce made of melted butter, a large spoonful of mushroom catsup and one each of lemon juice and pepper vinegar. The sturgeon being a dry fish, a rich sauce is always necessary. Baltimore American (4-29-1909), 4.

Sturgeon Steaks

Skin steaks carefully and place in cold salt water for an hour to remove the oily taste; wipe each steak dry, salt and broil over hot coals on a buttered gridiron. When cooked, butter and pepper, serve in a very hot dish, garnished with parsley; send to table accompanied by a small dish of sliced lemons, or sauce prepared thus: Put a tablespoon of butter into a frying pan stirring until it browns, not burns; wet with cold water a tablespoon

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of brown flour, then stir in a half tea cup boiling water and add to butter, season with salt, a teaspoon of Worcestershire or anchovy sauce, juice of a lemon, and when boiled pour over steaks. A simple way to prepare anchovy sauce is to add a tablespoon anchovy paste or the extract to a cup of drawn butter, mix and warm in stew pan, or soak eight anchovies in cold water for several hours; cut up and stew in very little water twenty minutes, strain into a cup of drawn butter, heat all in stew pan until boiling hot; pour in tureen, add a little cayenne pepper, tea spoon lemon juice and serve. Dixie Cook-Book (Atlanta: L. A. Clarkson, 1885), 378.

PRODUCT HISTORY

Harvesting sturgeon has been a practice in the major southern rivers since the colonial times. Caught by seine rather than by hook, the sturgeon run followed immediately upon the shad run in most estuaries from the Potomac to the St. John's. Newspapers from 1800 onward reported gaffed fish of seven feet or more in length periodically. Sturgeon was harvested for both meat and roe. The meat was steaked, iced, and shipped fresh to market; some was processed for canning. In the 1880s it began to be smoked for local consumption. Roe was harvested as caviar.

HISTORICAL PRODUCTION AREA

The American habitat for the Atlantic Sturgeon ranges from St. Croix, Maine to the St. John's River in Florida. The fish have been found in 38 coastal rivers within this range and is known to spawn in 35 of these rivers. The populations have been discriminated into five groups, three of which fall within the geographic scope of the Ark of Taste Southeastern region: 1 Gulf of Maine, 2 New York Bight, 3 Chesapeake Bay, 4 Carolina DPS (from the Roanoke River south to the Cooper River), and 5 South Atlantic DPS (from the ACE Basin south to the St. John's River). The species is currently listed as being threatened in the Gulf of Maine and endangered in New York, the Chesapeake, Carolina and the South Atlantic DPS. Within these river systems the Atlantic sturgeon operates as an anadromous fish, spawning in freshwater during the spring and early summer, then migrating to deep river and marine waters for the remainder of the year.

FOR WHAT REASON IS THIS PRODUCT OR BREED AT RISK OF DISAPPEARING?

In 1998 a total moratorium on the taking of the Atlantic Sturgeon was enacted, caused by the reduction of populations to 1% to 3% of historic levels by overfishing by commercial harvesters from the 1950s to the 1990s. At the time of the enactment, fishery experts believed a 40 year minimum moratorium would have to be enforced, given the slow maturing of the species. A ruling of 2012 regarding the South Carolina population confirmed that populations remain depressed in both the Carolina and South Atlantic DPS [Federal Register, Vol. 77, No. 24, Monday, February 6, 2012 ; FR-5914] and that the moratorium should remain in place. Though breeding populations were found in rivers of these regions, the low level of population recovery caused by habitat degradation, boat strikes, and bycatch warranted the maintenance of their protected status, the continuation of the moratorium on harvesting, and the perpetuation of their endangered listing.

The Ark of Taste should board the Atlantic Sturgeon not to promote its consumption but to raise consciousness of the risk of extinction face by this traditional food source of America's eastern coastal waters.

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POTENTIAL FOR SUSTAINABLE HARVEST OR PRODUCTION SHOULD THE SPECIES REACH A STABLE POPULATION

Restoration Efforts: Because the Atlantic Sturgeon is federally protected as an endangered species, the full weight of federal penalties will fall upon anyone trafficking in, harvesting, and injuring them. In the various southern states agencies have put the creature off limits (SC in 1985, North Carolina in 1991, Georgia in 1998). The question federal protection has given rise to is what alterations might be required for fishing gear in order to minimize bycatch. Discussions have been intensive in the various state governments since 2012.

There has not been much evidence of illicit poaching of Atlantic sturgeon in the region for caviar, a practice the bedevils wild sturgeon populations in Europe, Michigan, and Oregon, and has troubled the efforts to protect Paddlefish. Because of the success since 2009 of Dr. Doug Peterson of the University of Georgia in farming the Siberian White Sturgeon for caviar production, the temptation to poach wild Atlantic Sturgeon may decline in the region. North Carolina's aquaculture business Atlantic Caviar & Sturgeon [<http://www.atlanticcaviarandsturgeon.com>] has succeeded in farming the Atlantic, Russian, and Siberian varieties and is the only North American production center for ostressa caviar. It also meets the demand for sturgeon meat with an apparently sustainable mariculture system.

IS THE PRODUCT FOR SALE ON THE MARKET?

Produced in limited quantities.

Wild Atlantic Sturgeon by Federal Law cannot be marketed in the United States. Historically a commercial harvest widely available in regional fish markets, the Atlantic Sturgeon was never a product for home consumption exclusively. The southern foodways associated with sturgeon may be able to be preserved using farmed sturgeon during the period when the wild populations recover. Names of the two pioneering sturgeon farms of our region appear in the preceding paragraph.

NAME OF PERSON SUPPLYING THE APPLICATION

Dr. David S. Shields, Columbia South Carolina chapter

PERSONAL MOTIVATION

In 1984 before that general moratorium on fishing Atlantic Sturgeon I tasted smoked sturgeon artisanally produced by a fisherman in Darien, GA. I thought it a unique and highly evocative product. During my historical researches into the creation of southern cuisine I became increasingly conscious of the place of sturgeon on the Spring table. Marine biologists at my University — the University of South Carolina — working on sustainable fish populations alerted me to the problems attending the consolidation of the Atlantic sturgeon breeding stock in the coastal rivers of the south. Consequently, I became concerned that protections be enacted and that regional foodways be preserved by means of mariculture alternatives to wild harvest.

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ADDITIONAL INFORMATION

Supporting documentation.

General Sources (specific citations appear parenthetically in the text above):

“Atlantic Sturgeon,” NOAA Fisheries website profile:

<http://www.nmfs.noaa.gov/pr/species/fish/atlanticsturgeon.htm>

Carolina Sturgeon Population, Federal Register filing 77-5914, Feb. 6, 2012

<http://www.nmfs.noaa.gov/pr/pdfs/fr/fr77-5914.pdf>

Sturgeon Population Assessment, Southeast DPS, Federal Register filing 74-61904, 2010

<http://www.nmfs.noaa.gov/pr/pdfs/fr/fr75-61904.pdf>

T. L. J. Smith and J. P. Clugston, “Status and Management of Atlantic Sturgeon, *Acipenser oxyrinchus* in North America,” in *Sturgeon Biodiversity and Conservation*, eds. V. J. Birstein, J. R. Waldman and W. E. Bemis (Dordrecht: Kluwer Academic Publishers, 1997), 335-46.

Chair, Nominating Committee Southeastern Region, Ark of Taste, USA