

FishBusters

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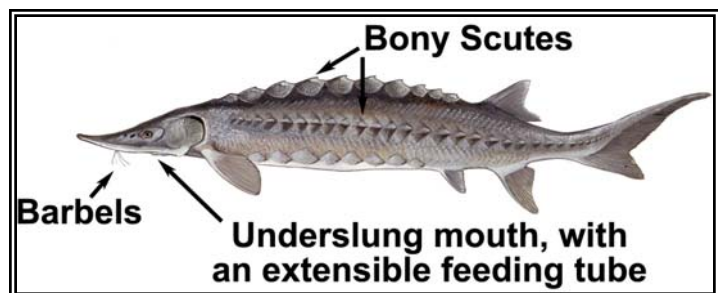
Surgin' Sturgeon

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To a fisheries biologist every fish species has a unique appeal, but the sturgeon's prehistoric attributes create a fascination for almost every outdoor enthusiast. The gulf sturgeon is a subspecies of Atlantic sturgeon, which along with the shortnose sturgeon, are native to Florida. This season gulf sturgeons have again made headlines for their millions of years old antics of jumping out of the water. During the spring and summer of 2006 at least eight boaters were injured by incidental collisions with these amazing high flyers that can leap six feet out of the water. As a result, the Florida Fish and Wildlife Conservation Commission posted advisory signs cautioning boaters to go slow in areas where gulf sturgeon are known to congregate and jump.

Gulf sturgeon have been federally listed as a threatened species since 1991 and protected by Florida law since 1984. These protections were needed to counter the effects of habitat loss caused by river damming and commercial overharvesting. Development, surface mining and declining water quality continue to threaten gulf sturgeon today.

According to Alan Huff who conducted some of the pioneering research, gulf sturgeon can live for more than 40 years, weigh in at 200 pounds and approach 8-feet in length. Sturgeon can't be mistaken



for any other family of fish due to their five rows of armor-like scutes (large bony scales), cartilaginous endoskeleton (like a shark they don't have calcified bones in their

skeleton), whisker-like barbels, extensible under-slung sucking mouth, and shark-like tail.

Female gulf sturgeon don't mature or spawn until they are at least seven years old, males when they are five years old. When females mature, they can produce a million eggs per season – a 200 pound female can produce 40 pounds of eggs that are the raw material for highly valued caviar. This high fecundity is offset by “skip spawning” where mature females skip a year or more between reproductive events. When all is aligned in early spring – proper river water temperature, flows and levels – the million eggs that a female can eject to be fertilized by males will result in a strong year class that sustains the population over time.



FWC freshwater fisheries biologist Jerry Krummrich was recently accompanied by *National Geographic* photographer Stefan Lovgren, FWC Law Enforcement Officer Rodney Boone and FWC Public Information Coordinator

Karen Parker on a trip to photograph the jumping behavior of the sturgeon. The 200-mile long Suwannee River contains the largest concentration of gulf sturgeon, but they occur and reproduce in other rivers around the Gulf of Mexico to the Mississippi River. While residing for nearly eight months in the rivers where they were spawned, sturgeon either don't feed at all or scarcely feed. When Thanksgiving rolls around and Gulf of Mexico water temperatures cool some very hungry sturgeons move off shore to go on a feeding and growth binge. They consume worms, small crustaceans, mollusks and other invertebrates as they cruise along the Gulf of Mexico's bottom. They use their barbels to sense concentrations of food and extend their suction-hose like mouth to suck up enough food to survive their next foray into Florida's Gulf coast rivers the following spring, when they again pretty much stop eating.

For a recent article and an upcoming *National Geographic* television show, Lovgren asked numerous experts “why sturgeon” jump. Among the speculative answers he and others have received are:

- For joy
- For social interactions and to communicate with other sturgeon
- To knock off pesky parasites
- To flush muck out of their mouth and gills after bottom feeding
- To avoid perceived predators (though what other than gators and manatees might be big enough to startle them is unclear)

Gulf sturgeon spawn in several panhandle rivers as well as the Suwannee. In the Apalachicola River, since the mid 1950s, the Jim Woodruff Lock and Dam and diminished water flows coming from Georgia have cut off one of the major reproductive grounds for this threatened species. The U.S. Fish and Wildlife Service recently issued a biological opinion related to operation of Federal Reservoirs by the U.S. Army Corps of Engineers to help ensure continued existence and recovery of the Apalachicola River sturgeon. Meanwhile, the debate over how much water is released into the Apalachicola River from upstream is the subject of continuing lawsuits and negotiations between Alabama, Georgia and Florida. Populations appear to be increasing in the Suwannee and Choctawhatchee Rivers, with the Apalachicola River population appearing to have a more cyclical increase and decrease in year classes, perhaps related to the dam’s water release schedule and water flow rates.



Note the whisker like sensory barbels and the biologist’s thumb is in the extensible, sucking mouth of the sturgeon.

Sturgeons have a long fossil record, arising during the Jurassic period that lasted from 204 to 144 million years ago. The continents we know now had just begun to break apart from the supercontinent Pangaea. At the time, ocean species included giant squid, ichthyosaurs and long-necked plesiosaurs and other dinosaurs roamed the earth. After the continents split and moved to their present configurations, sturgeon species were confined to the northern hemisphere. The much more recent geological persistence of the Florida peninsula in the last 20,000 or more years has created a physical barrier to gene flow between Atlantic and Gulf of Mexico sturgeon populations. This geographic barrier and the gulf sturgeon's consistent behavior of returning to the river of their birth to spawn maintains the sub-species that we see today.

From 100,000 years ago when Paleoindians first arrived in Florida, people and sturgeon have been interacting. Historically sturgeon flesh and eggs provided an important source of food and early commerce. Today, our interactions with gulf sturgeon are restricted to observation and research. Taking and harvest is prohibited. If you find a dead sturgeon, please report it to 1-800-367-4461 (or e-mail TagReturn@MyFWC.com), especially if there is a tag on it, so our scientists can learn more about this species' life habits and distribution. To report collisions with jumping sturgeon, call 1-888-404-FWCC (3922). Hopefully, conservation stewardship will enable us to coexist with gulf sturgeon for millennia to come, by which time maybe we'll really know why they jump.

This article relies in part on information from FWC research, FishBase.org, news.nationalgeographic.com, fws.gov/endangered, and pgap.uchicago.edu. See MyFWC.com/fishing/updates for more FishBuster columns.