Gulf sturgeon

*Acipenser oxyrinchus desotoi*

(Photo courtesy of Noel Burkhead, USGS, Gainesville, FL)

**Taxonomic Classification**

- **Kingdom:** Animalia
- **Phylum:** Chordata
- **Class:** Actinopterygii
- **Order:** Acipenseriformes
- **Family:** Acipenseridae
- **Genus/Species:** *Acipenser oxyrinchus*
- **Subspecies:** *Acipenser oxyrinchus desotoi*
- **Common Name:** Gulf sturgeon

**Listing Status**

- **Federal Status:** Threatened
- **FL Status:** Federally-designated Threatened
- **FNAI Ranks:** G3T2/S2 (Globally: Rare, Sub sp. Imperiled/State: Critically Imperiled)
- **IUCN Status:** NT (Near Threatened)

**Physical Description**

The Gulf sturgeon, also known as the Gulf of Mexico sturgeon, is one of seven species of sturgeon found in North America. Sturgeons are prehistoric species that date back to the time of dinosaurs. Sturgeons are popular in the food industry as a source of caviar. They have physical
features that separate them from other kinds of fish, such as a spiral valve stomach and cartilaginous skeleton (like sharks and rays); however, they have scutes (hard, protective, large individual body plates) instead of shark’s denticles or bony-fish’s scales. Gulf sturgeon have barbels located on the underside of the snout, no teeth, rubbery lips, and a suctorial mouth for vacuuming food off the bottom. The sturgeon's coloring typically is dark brown along the upper (dorsal) side shading to a creamy white-colored belly (Wakeford 2001). Gulf sturgeon are large fish that can exceed a length of eight feet (2.4 meters), a weight of over 300 pounds (137 kilograms), and possess strength to leap nine feet (2.7 meters) into the air.

(Young Gulf sturgeon picture courtesy of Noel Burkhead, USGS, Gainesville, FL)

**Life History**

Sturgeons are benthic feeders – they feed on organisms located in or on the bottom, such as crabs, grass shrimp, lancets, brachiopods, and marine worms. Gulf sturgeon typically gorge themselves during the fall-to-spring period when they are in brackish and saltwater habitats; they appear to fast during the spring-to-fall period when they are in freshwater.

Gulf sturgeons are considered homestream-spawners, which means they usually will return to the freshwater river that they were born in to spawn. Sturgeons spawn during the spring in freshwater rivers, when temperature, flow, and pH are optimum. If conditions are not optimum for a successful spawn, sturgeons will skip that spawning season and absorb their eggs, often waiting three years before spawning again. When sturgeons do spawn, the eggs are ejected, fertilized, and rapidly stick to objects that are located in or near the bottom of the river (Wakeford 2001). The egg mass for a mature female Gulf sturgeon ranges between 250,000 to 1,000,000 eggs. Eggs hatch roughly four days post-spawn when water temperatures range from 61°F-64°F (16.1-17.8°C). Most larvae do not survive due to reasons such as deformity, disease, fungus, predation, lack of food, and ill-timed floods or droughts (Jeffrey Wilcox, pers. comm. 2011).

**Habitat & Distribution**

Gulf sturgeon can be found from the Mississippi River in Louisiana, east to the Suwannee River in Florida where they inhabit both salt and fresh water habitats, annually cycling between the two. Gulf sturgeon migrate into brackish and salt water during the fall and
feed there throughout the winter months. In the spring, they migrate into fresh water rivers and remain there through the summer months (Wakeford 2001).

**Threats**

Now that rampant overharvest has been stopped, the main threat to Gulf sturgeon survival is the dams located on Gulf seaboard rivers, which prevent sturgeon from reaching historic spawning areas, therefore decreasing the spawning rate of the species. Habitat destruction is also a threat to the sturgeon population. Gulf sturgeon habitat has increased vulnerability because they inhabit areas that are at risk of dredging. The dredging of river channels is a practice that can destroy or suffocate sturgeon eggs located on objects in the river. Dredging of rivers also affects the food source of sturgeons as they are bottom feeders. Other threats to the sturgeon population include lethal by-catch and declining water quality. Water quality can be affected by pollution reaching the floodplains of the river, and excessive water withdrawals from the rivers. Sturgeons are slow breeders, which makes any loss of breeders or spawning habitat a serious problem for the species (Wakeford 2001).

**Conservation & Management**

Gulf sturgeon are protected as a Threatened species by the Federal Endangered Species Act and as a Federally-designated Threatened species by Florida’s Endangered and Threatened Species Rule. Gulf sturgeon habitat is also protected by the Federal Clean Water Act.

-Federal Recovery Plan

**Other Informative Links**

FWC Gulf Sturgeon Profile
FWC Facts About Gulf Sturgeon
FWC Living With Gulf Sturgeon
Florida Museum of Natural History
Florida Natural Areas Inventory
International Union for Conservation of Nature
National Oceanic & Atmospheric Administration
U.S. Fish and Wildlife Service
U.S. Geological Survey

**References**