



Invasive Species Fact Sheet

Gar, Family *Lepisosteidae*

General Description

Gars are large, freshwater fish belonging to the Lepisosteidae family, which consists of 7 species of gar: alligator, Cuban, Florida, longnose, shortnose, spotted, and tropical. Gars have long, cylindrical bodies covered in hard, shiny, diamond-shaped scales. Their dorsal and anal fins sit far back on the body, near the tail. They have slender snouts with sharp, needle-like teeth. Gars are generally green to brown in color on their top and sides and white to yellow on their bellies; some species have spots on their bodies and/or fins. The different species of gar can be distinguished by snout length, number of rows of teeth, and the amount and location of spots. Depending on the species, adult gar range from 1 to over 9 feet long. The largest species of gar, the alligator gar, has been reported to grow up to 10 feet and weigh 350 lbs.



Alligator gar (*Atractosteus spatula*)

Photo by South Carolina Department of Natural Resources

Current Distribution

Gars are not currently found in California. Alligator gars have been collected in California waters on a few occasions, but these fish were likely the result of aquarium releases. Five of the seven gar species are native to the United States. Gars are currently found within and outside of their native ranges in the United States from the Great Lakes basin in the north, south through the Mississippi River drainage to Texas, Mexico, and Florida. Florida gars are only found in Florida and Georgia. Cuban gars are native to Cuba and tropical gar are native to southern Mexico, and Central and South America.



Spotted gars (*Lepisosteus oculatus*) confiscated by CDFW wardens

Photo by CDFW

Habitat Preference

Gars prefer warm, shallow, well-vegetated freshwater habitats in slow-moving rivers and lakes. Some gars also frequent brackish water. Gars have a primitive swim bladder that they can use as a lung to breathe air, which allows them to survive in waters with low levels of dissolved oxygen.

Pathways

Gars have some economic value in the aquarium trade and aquaculture industry (both for native stock restoration and as a food fish) however they generally have little commercial value in the United States. Gars are also a popular sport fish. Current pathways for the introduction of gars into new areas include escapement from aquaculture facilities, intentional release by fisherman, and, most commonly, release by pet owners. Gars are on California's list of restricted animals and cannot be imported, transported, or possessed without a permit.

Impacts

Gars are top predators in the aquatic environment that lay and wait and ambush prey. Gars primarily eat fish, but will consume crabs and other crustaceans, waterfowl and other birds, small mammals, turtles, and carrion. Gars have few natural predators, such as alligators, large fish and birds, and cottonmouth snakes. Where introduced, gars may prey upon and out-compete native species and subsequently disrupt local ecosystems. If gars were to become established in California, they could threaten native fish populations such as salmon and trout. Additionally, although the flesh of gars is edible, their eggs are poisonous to humans, birds, and other mammals.

Actions Taken if Found

If this species is found in California, **do not release it**. Preserve (freeze) the specimen and immediately contact the CDFW Invasive Species Program at (866) 440-9530 or Invasives@wildlife.ca.gov. If found for sale, please report to 1-888-DFG-CALTIP (888-334-2258).

Invasive Species Fact Sheet – Family *Lepisosteidae*

References

- Becker, G.C. 1983. *Fishes of Wisconsin*. Madison, WI: University of Wisconsin Press. Retrieved 2 August 2012 from the University of Wisconsin Digital Commons Website: <http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?id=EcoNatRes.FishesWI>.
- Berry, C., Jr. and B. Young. 2004. *Fishes of the Missouri National Recreational River, South Dakota and Nebraska*. Great Plains Research 14(1):89-114. Retrieved 2 August 2012 from the University of Nebraska Center for Great Plains Studies Website: http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1690&context=greatplainsresearch&seir=1&referer=http%3A%2F%2Fscholar.google.com%2Fscholar%3Fstart%3D50%26q%3Dfamily%2Blepisosteidae%26hl%3Den%26as_sdt%3D0%2C5#search=%22family%20lepisosteidae%22.
- Bester, C. *Florida Gar*. Retrieved 26 September 2012 from the Florida Museum of Natural History Ichthyology Department Website: <http://www.flmnh.ufl.edu/fish/Gallery/Descript/FloridaGar/FloridaGar.html>.
- Cuba Naturaleza Biodiversity Website. *Cuban Gar (Atractosteus tristoechus), a rare gar endemic to Cuba*. Retrieved 27 September 2012 from <http://www.cubanaturaleza.org/en/landscapes-biosphere-bioscapes/-rivers/21-cuba-natural>.
- Dill, W.A. and A.J. Cordone. 1997. *History and Status of Introduced Fishes in California, 1871-1996*. C.W. Haugen (Ed.). California Department of Fish and Game Fish Bulletin 178.
- Fuller, P. 18 April 2006. *Atractosteus spatula*. Retrieved 1 August 2012 from the U.S. Geological Survey Nonindigenous Aquatic Species Database: <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=755>.
- Fuller, P. 19 August 2010. *Lepisosteus oculatus*. Retrieved 1 August 2012 from the U.S. Geological Survey Nonindigenous Aquatic Species Database: <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=756>.
- Fuller, P., J. Larsen, and A. Fusaro. 29 May 2012. *Lepisosteus platostomus*. Retrieved 1 August 2012 from the U.S. Geological Survey Nonindigenous Aquatic Species Database: <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=757>.
- Goddard, N. *Alligator Gar*. Retrieved 1 August 2012 from the Florida Museum of Natural History Ichthyology Department Website: <http://www.flmnh.ufl.edu/fish/gallery/descript/alligatorgar/alligatorgar.html>.
- Indiana Division of Fish and Wildlife Website. *Gar Family (Lepisosteidae)*. Retrieved 2 August 2012 from http://www.in.gov/dnr/fishwild/files/Gar_animal_info_series_for_web_2012.pdf.
- Kraft, C.E., D.M. Carlson, and M. Carlson. 2006 *Inland Fishes of New York (Online)*, Version 4.0. Department of Natural Resources, Cornell University, and the New York State Department of Environmental Conservation. Retrieved 2 August 2012 from <http://fish.dnr.cornell.edu/nyfish/Lepisosteidae/lepisosteidae.html>.
- Lee, D.S., S.P. Platania, and G.H. Burgess. 1983. *Atlas of North American freshwater fishes: 1983 supplement (Occasional Papers of the North Carolina Biological Survey; 1983-6)*. Raleigh, NC: North Carolina Museum of Natural History. Retrieved 26 September 2012 from FishBase (Froese, R. and D. Pauly, eds.) website page for *Atractosteus tristoechus*, Cuban gar: <http://www.fishbase.org/Summary/SpeciesSummary.php?ID=1074#>.
- Perschbacher, P. *Atractosteus tropicus – Tropical gar*. Retrieved 26 September 2012 from the University of Arkansas Division of Agriculture Cooperative Extension Service Website.
- Southern Division of the American Fisheries Society, Alligator Gar Technical Committee. *Alligator Gar Life History and Descriptions*. Retrieved 1 August 2012 from http://www.sdafs.org/alligar/AGar_History.html.
- Texas Parks and Wildlife Website. *Longnose Gar (Lepisosteus osseus)*. Retrieved 26 September 2012 from <http://www.tpwd.state.tx.us/huntwild/wild/species/lng/>.
- Texas Parks and Wildlife Website. *Shortnose Gar (Lepisosteus platostomus)*. Retrieved 26 September 2012 from <http://www.tpwd.state.tx.us/huntwild/wild/species/sng/>.

Invasive Species Fact Sheet – Family *Lepisosteidae*

References

Texas Parks and Wildlife Website. *Spotted Gar (Lepisosteus oculatus)*. Retrieved 26 September 2012 from <http://www.tpwd.state.tx.us/huntwild/wild/species/spottedgar/>.

U.S. Geological Survey Nonindigenous Aquatic Species Database. *Lepisosteus platyrhincus*. Retrieved 1 August 2012 from <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=2263>.

U.S. Geological Survey Nonindigenous Aquatic Species Database. *Lepisosteus sp.* Retrieved 1 August 2012 from <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=758>.