

## Gar (*Lepisosteidae*)

Gar species found in Indiana waters:

- Longnose Gar (*Lepisosteus osseus*)
- Shortnose Gar (*Lepisosteus platostomus*)
- Spotted Gar (*Lepisosteus oculatus*)
- Alligator Gar\* (*Atractosteus spatula*)

### **\*Alligator Gar (*Atractosteus spatula*)**

Alligator gar were extirpated in many states due to habitat destruction, but now they have been reintroduced to their old native habitat in the states of Illinois, Missouri, Arkansas, and Kentucky. Because they have been stocked into the Ohio River, there is a possibility that alligator gar are either already in Indiana or will be found here in the future. Alligator gar are one of the largest freshwater fishes of North America and can reach up to 10 feet long and weigh 300 pounds. Alligator gar are passive, solitary fishes that live in large rivers, swamps, bayous, and lakes. They have a short, wide snout and a double row of teeth on the upper jaw. They are ambush predators that eat mainly fish but have also been seen to eat waterfowl. They are not, however, harmful to humans, as they will only attack an animal that they can swallow whole.



Photo Credit: Duane Raver, USFWS

## Other Names

-garpike, billy gar

-Shortnose gar: shortbill gar, stubnose gar

-Longnose gar: needlenose gar, billfish

## Why are they called gar?

The Anglo-Saxon word *gar* means spear, which describes the fishes' long spear-like appearance. The genus name *Lepisosteus* contains the Greek words *lepis* which means "scale" and *osteon* which means "bone."

## What do they look like?

Gar are slender, cylindrical fishes with hard, diamond-shaped and non-overlapping scales. The head and snout do not have scales but are hard and bony. Gars have long, sharply-toothed jaws and the dorsal (rear) and anal fins (last fin on bottom of fish) are far back near the rounded tail. The snout shape, coloration, and spot pattern differ between species.

Shortnose Gar



Spotted Gar



Longnose Gar



Photo Credit: Eugene Beckham, Kentucky Department of Fish and Wildlife Resources

### Longnose Gar

Longnose gar have a long, narrow snout that is more than twice as long as the rest of the head. They are olive-brown in color on the top and sides and white underneath. Longnose gar also have dark spots on the tail and fins and some on the body and head.

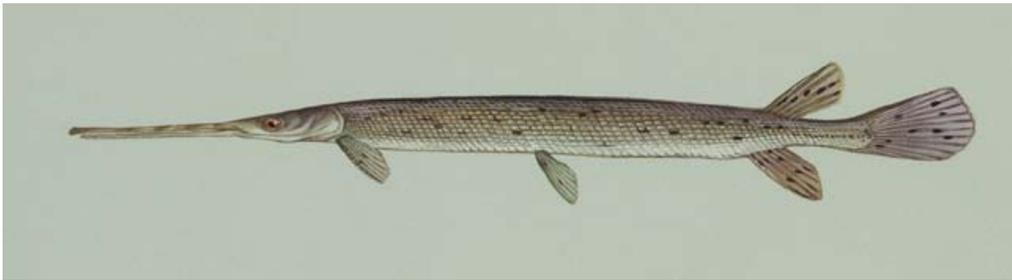


Photo Credit: Duane Raver, USFWS

### Shortnose Gar

Shortnose gar have a short, broad snout and are olive or brown in color on the top and sides and white on the bottom. Shortnose gar are very similar to spotted gar, however they only have spots on the tail and back fins.



Photo Credit: Duane Raver, USFWS

### Spotted Gar

Spotted gar have a moderately long snout and are olive-brown to black above and on sides with white to yellow underneath. Spotted gar are similar to shortnose gars but have many olive-brown to black spots on the body, head, and all fins.



Photo Credit: Duane Raver, USFWS

### **Where do they live in Indiana?**

Gar species are common in Indiana and can be found in rivers, streams, creeks, inland lakes, reservoirs, sloughs, and marshes.

Longnose gar are the most common throughout Indiana, while shortnose gar are common in the southern part of the state and occasional in the north. Spotted gar are found to be occasional in the southern part of the state and common in the north.

### **What kind of habitat do they need?**

Gar can live in almost any type of habitat due to a primitive swim bladder that is connected to the throat. Gar can fill this swim bladder with oxygen by sticking their snout out of the water. This gives them buoyancy and allows them to survive in waters with very low oxygen and even out of water for a few hours. They are usually found in slow, calm pools in the rivers and streams as opposed to fast-moving waters. They also use vegetation and branches as cover when they ambush their prey.

### **How do they reproduce?**

Gar generally spawn from early to mid-April until the end of May when water temperatures reach around 68 degrees Fahrenheit. Gar congregate during the spawning season and can become very numerous within an area. The female gar is larger and usually spawns with several males at once. Spotted and shortnose gar spawn over vegetation and other submersed objects. Longnose gar spawn over gravel areas along windswept shorelines and rocky points. The eggs hatch 8 days after they are laid. The gar fry (gar just hatched from the egg) will attach themselves to an object by an adhesive structure and remain there hanging vertically until the yolk-sac is

absorbed. When this happens the fry become more active and can rest horizontally, begin to feed, and take their first aerial breaths.

### **How old are they when they reproduce?**

Male gar mature within two to three years and females mature in three to four years.

### **How long do they live?**

A long-lived gar has a lifespan of up to 18 years old. However the average lifespan of a male is 8 years and a female is 10 years.

### **How fast do they grow in Indiana?**

Longnose gar can reach a maximum size of around 6.5 feet long. They grow about 20 inches in the first year with the males around 28 inches long in 3 to 4 years and the females 33 inches within 6 years. Shortnose gar can grow a maximum length of 2.5 feet. They grow over 7 inches within the first year and reach around 15 inches or more in 3 years. Spotted gar reach a maximum length of 3 feet and grow 10 inches in the first year and 20 inches within the third year. In all three species, the females are bigger than the males. This is called sexual dimorphism.

### **What do they eat?**

Gar are ambush predators, they lie very still near the surface and wait for a small fish to come near and then quickly grab the fish and swallow it head first. Young of the year gar eat insects, insect larvae, crustaceans and even small fish. Adult gar eat mostly fish: minnows and small forage fish.

### **What eats them?**

Gar have very few natural predators and are at the top of the food chain in their habitats. Young gar have more predators that include larger fish, snapping turtles, herons, kingfishers, and some snakes. Adult gar may be eaten by bigger fish, humans, and the occasional heron, osprey, or eagle. In other states like Florida, gar are also eaten by alligators, crocodiles, and cottonmouth snakes.

### **Are they safe to eat?**

Gar are safe to eat and are consumed regularly in many areas of North America. Gar eggs, however, are highly toxic to humans, birds, and other warm-blooded animals.

## **How do I fish for them?**

Gar are difficult to catch using a basic hook and line, however when they are hooked they are excellent fighting fish. Many methods have been developed to catch gar including a snare that has a hook centered in a thin wire loop which can be pulled closed around the gar's mouth when it takes the bait. Another method is to use a frayed nylon lure that gets tangled in the gar's teeth. Gar are also fished for by spearing and bow fishing.

## **How is Indiana managing gar?**

Gar are an ancient, native fish that go back to the Cretaceous period (65-100 million years ago) and are not stocked or managed by the state. They are called "trash" fish by many people; however, they play an important role in a natural, healthy ecosystem. Gar generally only eat small, forage fish, thereby preventing these populations from becoming overpopulated and stunted in growth. Gar can be useful to keep a fish population balanced in cases where gizzard shad are located or where bass are overharvested.

### Sources

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