

Indiana Division of Fish & Wildlife's Animal Information Series

Paddlefish (*Polyodon spathula*)

Do they have any other names?

Paddlefish are also called spoonbill, spoonbill cat, shovelnose cat, and boneless cat.

Why are they called paddlefish?

They are called paddlefish because of their paddle-like nose. *Polyodon* is Greek for “many tooth” in reference to the numerous long gill rakers and *spathula* is Latin for “spatula” or “blade.”

What do they look like?

Paddlefish are shark-like fish with long, paddle-shaped snouts. They have large mouths, without teeth, that are located far back on the underside of the head. Paddlefish have many gill rakers (filaments used to filter food from the water) that are long and slender. The eyes are small and just above the front edge of the mouth. The rear margin of the gill cover is long and pointed into a fleshy flap. The tail is deeply lobed with the upper lobe longer than the lower lobe. The skin is without scales and the skeleton is made of cartilage. Paddlefish are bluish-gray to black on the upper parts and light gray to white on the belly.



Photo Credit: Duane Raver, USFWS

Where do they live in Indiana?

Paddlefish are rare to occasional in Indiana and they live in large rivers.

What kind of habitat do they need?

A paddlefish needs very specific habitat conditions to meet its needs. During most of its life it lives in quiet or slow-flowing waters rich in the microscopic life (zooplankton) on which it feeds. However, it must have access to a large, free-flowing river with gravel bars that flood frequently during its spawning season.

In present day, much suitable paddlefish habitat has been destroyed due to dams, stream channelization, levee construction, and drainage of bottomland lakes. These structures can eliminate feeding habitats and block the fish from spawning areas.

How do they reproduce?

Paddlefish spawn in April or May when they migrate upstream great distances to find flooded, silt-free gravel bars. When the water reaches about 50 degrees F a female accompanied by several males makes a spawning rush over the gravel bars, at which time the eggs and sperm are deposited. The eggs sink to the bottom and attach to the first object they touch. Nine days later the eggs hatch at a water temperature of about 57 degrees F. The larvae begin a persistent swimming action immediately after they hatch and are swept from the gravel bar by currents.

How old are they when they reproduce?

Females are 9 to 10 years old when they can spawn and males are 7 years old.

How long do they live?

Paddlefish are very long-lived. Individuals 20 years old are common, and some live 30 years or more.

How fast do they grow in Indiana?

Paddlefish are one of the largest North American freshwater fishes and can reach a length of about seven feet and a weight of 160 pounds. Paddlefish can reach around 10 to 14 inches their first year and about 21 inches in their second year. A seventeen year old fish averages around 60 inches and 37 pounds.

What do they eat?

Paddlefish mostly feed on microcrustaceans and insect larvae that they filter from the water by their gill rakers when they swim through an area with high concentrations of these organisms. They also eat mayfly larvae that burrow in the bottom, but the method used to eat them is unknown because the paddle-like snout is not used to stir up the bottom. The snout is covered in elaborate sense organs and is thought to be used to locate concentrations of food organisms; however the function of the snout is still under debate.

What eats them?

Because of the paddlefish's large size it does not have many predators besides humans. However, one major predator is the chestnut lamprey. A single lamprey will not eat a whole paddlefish but it can wound it and in some cases when multiple lampreys are on one paddlefish they can cause death.

Are they safe to eat?

Paddlefish are edible and were a major commercial fish in the late 1800's for both its flesh and its caviar until overharvest created a major decline in paddlefish populations. Today it is illegal in Indiana to take a paddlefish from the water on a sport fishing license.

How do I fish for them?

Paddlefish may not be taken from any portion of Indiana waters of the Ohio River and it is illegal to take paddlefish from any Indiana waters on a sport fishing license.

How is Indiana managing paddlefish?

The paddlefish is an ancient, native fish that is not stocked by the state into Indiana waters. To protect the diminishing population it is illegal for sport anglers to take a paddlefish from state waters. Licensed commercial fishermen can take paddlefish from the Ohio River, but only if they first obtain a roe harvester's license. Indiana caps the number of Ohio River roe harvester's licenses to 15 each year. Licensed roe harvesters may only keep paddlefish over 32 inches (measured from the eye to the fork in the tail) and must keep and submit daily records of all harvested fish.

Additional facts about paddlefish

- The paddlefish swims continuously and often leaps clear of the water.
- The paddlefish is part of an ancient family of freshwater fishes that is represented by only two living species today. The other species is *Psephurus gladius* and is only found in the Yangtze Valley in China. This species can reach sizes of up to 23 feet, however none have been seen since 2003 and scientists fear that the endangered species may have gone extinct due to loss of habitat from dams.