

# Channel Catfish



## Scientific Name

*Ictalurus punctatus*

## Family

Ictaluridae (bullhead catfishes) in the order Siluriformes (catfishes)

## Description

Channel catfish, like our other catfish, have smooth, scaleless skin and barbels ("whiskers") around the mouth. The channel and blue catfish both have a deeply forked tail fin, but the channel catfish can be distinguished by the following:

- It has scattered dark spots on the back and sides (the spots are often absent, however, in the smallest young and in large adults).
- The outer margin of the anal fin is rounded outward (convex) rather than straight.
- The anal fin usually has 24–29 rays (fewer than in the blue catfish).
- The base of the anal fin is relatively shorter than in the blue catfish.
- The profile of the back, from the dorsal fin forward, is gently sloping and slightly rounded outward, so the head and forward part of the body are less distinctly wedge-shaped than in the blue catfish.

The back and sides are olive brown or slate blue, usually with few to many roundish black spots. The belly is silvery white. The fins are yellowish or dusky, often with a narrow black fringe. Breeding males are a deep blue black on the back and sides, with the head swollen and knobby and the lips thickened and fleshy.

**Similar species:** The channel catfish is most likely to be confused with the blue catfish. The blue catfish is less widely distributed and occurs mostly in the Mississippi, Missouri, and Osage rivers. It occasionally is found in the lower reaches of those rivers' larger tributaries, including the Grand, Gasconade, and Salt rivers. The blue catfish never has dark spots on the back and sides, has a straight-edged (not rounded) anal fin with more rays (30–35) and a relatively longer base, and has a more distinctive wedge-shaped profile. Also, it reaches a much larger size than the channel catfish.

The channel catfish sometimes mate with blue and flathead catfish, producing hybrid offspring that blend traits of both parents.

Missouri's other catfish species do not have deeply forked tail fins.

#### Other Common Names

Spotted Cat

Blue Cat

Fiddler

Lady Cat

Chucklehead Cat

Willow Cat

Size

Adult length: commonly 12–32 inches; weight: commonly 1–15 pounds. Specimens as large as 45 pounds are uncommon in Missouri.

## Habitat & Conservation

The channel catfish is the most abundant and widely distributed large catfish in Missouri. It occurs over nearly all of the state but is especially characteristic of the Prairie region streams of north and west Missouri, the Mississippi and Missouri rivers, and the larger streams and ditches of the Bootheel lowlands. It is less abundant in the central Ozarks than elsewhere. It occurs naturally or as a result of stocking in artificial impoundments throughout the state.

The channel catfish occurs in a variety of habitats, but it is especially characteristic of large, rather turbid streams with low or moderate gradients. Adults are found in larger pools, in deep water, or around submerged logs and other cover. The young often occur in riffles or the shallower parts of pools.

During the day, adult channel catfish retire to deep water or lie about drift piles, submerged logs, or other cover. At night, they move onto riffles or into the shallows of pools to feed.

## Food

Channel catfish feed at night in shallow areas of pools and on riffles, using their sensitive barbels to locate food on the bottom by taste, smell, and touch. These omnivorous fish eat fish, insects, crayfish, mollusks, and plant material. One study found insects belonging to 50 different families in the stomachs of channel catfish in the Des Moines River, indicating an extremely variable diet.

The diet varies greatly by size. Channel catfish less than 4 inches long feed almost entirely on small insects, while larger individuals eat larger food items and have a more varied diet.

## Status

Game fish.

# Life Cycle

The channel catfish spawns in Missouri from about the last week of May, when water temperatures reach 75 F, and continues through the third week of July. Often there are two peaks of spawning activity during this period. Prior to spawning, the male catfish selects and cleans out a nest site. Natural cavities around piles of drift, logs, or undercut banks, and the burrows of muskrats and beavers are favored nest sites. Semidarkness and seclusion are major factors in the choice of nest sites. Females normally do not participate in the selection of nest sites or in the care of the eggs or young.

The eggs are deposited in the bottom of the nest as a gelatinous mass having the appearance and consistency of a large golden yellow mound of tapioca. They hatch in about a week, and the fry remain in the nest for 7 or 8 more days. The male guards the fry only until they leave the nest.

The survival of the young during the first year of life is much lower in clear ponds than in turbid ponds, and the same probably holds true in streams. The lower survival rate in clear waters apparently is a result from greater susceptibility to predation.

Channel catfish mature when they are about 4 or 5 years old, or are about 12 to 15 inches long. The lifespan usually does not exceed 6 or 7 years, but individuals may sometimes live more than 10 years.

# Human Connections

The channel catfish was established as the official Missouri state fish in 1997. It is one of the most sought-after fish in Missouri. Kansas, Iowa, Nebraska, and Tennessee have also declared the channel catfish their official state fish.

The channel catfish is one of Missouri's most highly prized game and food fishes. As a sport fish, it has no rival in the larger prairie streams of northwest Missouri, where other game fish are scarce. It figures prominently in the creel in streams and reservoirs elsewhere in Missouri and is widely stocked in farm ponds.

Catfish farming, the commercial propagation of channel catfish for sale as live or dressed fish, is an important industry in Missouri.

Channel catfish may be caught on set lines, by jugging, or by still-fishing with rod and reel. A variety of live, cut, or prepared baits, including fish, crayfish, worms, grasshoppers, liver, shrimp, chicken and chicken entrails, blood, cheese, stinkbait, and commercial concoctions, are used to catch this fish. Occasionally it is taken on spinners, small spoons, and other artificial lures retrieved slowly near the bottom. Fishing is best near dusk and in the early part of the night, or on a rise following a heavy rain.

# Ecosystem Connections

Catfish search stream bottoms, preying on creatures that will fit in their mouths, grazing on plants, and cleaning up dead animal matter.

When catfish die, they become food for other animals. And despite notably attentive parental care, their eggs and vulnerable young frequently are eaten by other animals, too.

Channel catfish are native to a wide range in North America, extending from southern Canada through the eastern United States east of the Rocky Mountains, and into northeastern Mexico. They have been introduced in many parts of the world.

The channel catfish has been called the "swimming tongue" because of the numbers of taste or taste receptors over the body surface as well as on the barbels and in the mouth and throat. These are perfect adaptations for life in murky water and nocturnal activity.

In addition to finding food by chemosensory (smell and taste) receptors, channel cats also can identify each other as individuals by smell or taste. They can detect age, size, reproductive status, territorial or fright status, and more by smell or taste alone.

When we people put our heads underwater, air in our ear canals prevents us from hearing well. But studies have found that many fish communicate with sound. Channel catfish are one of those species. They make sounds by clicking or grinding the pectoral fin bones within the pectoral girdle. Channel catfish can use this method to produce a sudden, loud sound to startle predators, causing their enemies to hesitate and allowing the catfish to escape. The sound may also alert nearby catfish of the danger. If you're interested in learning more about how fishes use sound, do an internet search on "acoustic communication in fish." It's a fascinating subject.