



fish·o·pedia

Glossary

Adipose fin: Small fleshy, soft fin between the dorsal and tail fin.

Amphipods: Many-legged invertebrates that live on the bottom. Also called scuds. Diporeia is an important amphipod in the Great Lakes food web.

Anal fin: Single fin on the bottom of the fish, just in front of the tail.

Ballast: Weight added (usually water) to stabilize a boat when it is being unloaded. Ballast tanks on boats can accidentally transport species from other areas (like round gobies or quagga mussels).

Benthic: Associated with the bottom of the lake.

Benthivore: Diet is mainly from on or near the bottom, with body adaptations for feeding on the bottom (downturned mouth).

Biomass: A total mass of living plants and animals in an area.

Carnivore: Diet is a mix of animals (invertebrates, zooplankton, aquatic insects, terrestrial insects) and fish.

Dorsal fin: Main fin on the back (top) of the fish. Can be a single fin or pair of fins. May have sharp spines or soft rays.

Invertebrates: Animals without backbones (zooplankton and bugs).

Larval fish: A very small fish that has recently hatched and absorbed its egg sack.

Opportunistic: Will take advantages of available food sources, flexible feeder.

Pelagic: The water column between the surface and bottom on deeper parts of the lake.

Piscivore: Diet is mainly fish.

Planktivore: Diet is mainly zooplankton.

Predaceous: A word that describes animals or behaviors related to eating other animals.

Native species: A species that occurs within a geographic region through natural processes (not moved by people).

Non-native species: Species that have been introduced to areas outside their native range. They may have been released accidentally, intentionally, through shipping or from aquariums.

Smooth fin: A fin with soft fin rays.

Spawning: When fish deposit and fertilize eggs.

Spiny fin: A fin with sharp spines that help protect the fish from predators.

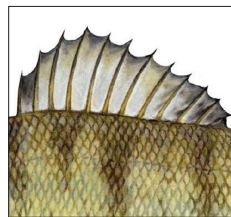
Stocking: Fish are grown from egg to juvenile size in a fish hatchery, then released in a body of water.

Tributaries: The rivers and streams that flow into the Great Lakes.

Trophy-size: A very large fish that would be considered by an angler to be a trophy or a fish that might be a record size.



Smooth fin



Spiny fin



Lake Trout

Salvelinus namaycush



Body features: Body elongate, somewhat rounded. Large mouth. Adipose fin.

Average length: 20-24 inches Average weight: 2.9-6.0 pounds

Trophy-sized lake trout (siscowet): 51.5 inches, 63.1 pounds, caught in Lake Superior, 1952.

Role: Piscivore

Eats: Diet is mainly fish. Will eat a variety of sizes and species.

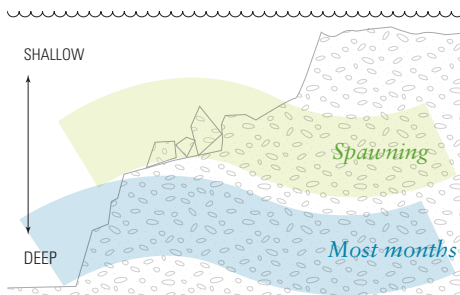
Habitat: Deepwater areas of cold freshwater lakes.

Eaten by: Other fish eat lake trout eggs and small lake trout. Adults have few predators other than sea lamprey and humans.



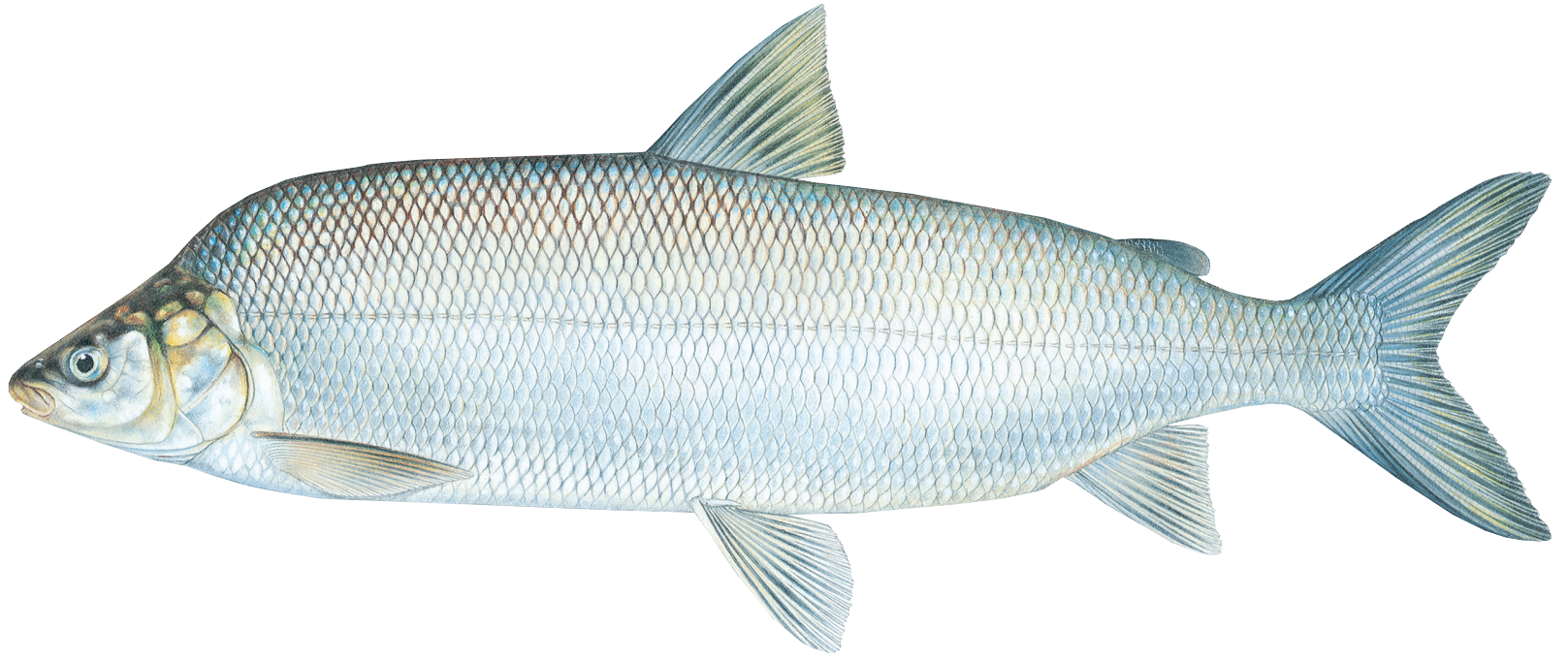
Native

Native Range: Northern North America.



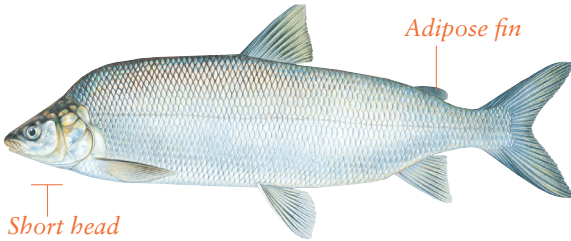
Reproduction: Broadcasts eggs over rocky habitat. Great Lakes populations supplemented by stocking.

Interesting Fact: There are many forms or types of lake trout that can be different sizes and colors. The siscowet is a fat, deepwater (300-600 feet) form found only in Lake Superior.



Lake Whitefish

Coregonus clupeaformis



Body features: Short head and slender body, but larger individuals may have a hump behind the head. Adipose fin present.

Average length: 15-18 inches **Average weight:** 1.1-2.0 pounds

Trophy-sized lake whitefish: 31 inches, 12.4 pounds, caught in Wisconsin.

Role: Benthivore

Eats: Feeds on the bottom on invertebrates, amphipods or quagga mussels. Larger whitefish will eat small fish.

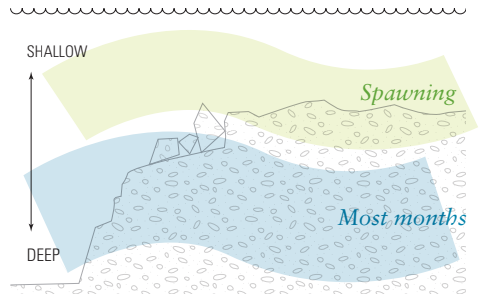
Eaten by: Sea lamprey, humans and large lake trout feed on adults. Predaceous fish eat young and eggs.



Native

Native Range: Northern North America.

Habitat: Schools of lake whitefish are found in deep water (80-120 feet) but move to shallower water in fall spawning season.



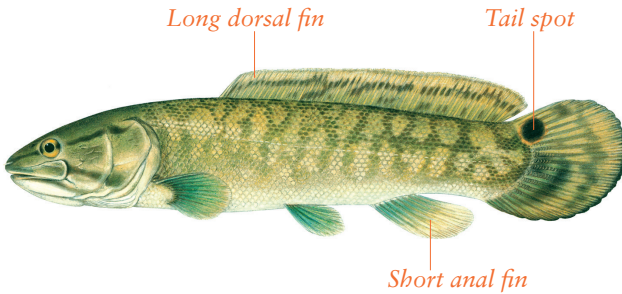
Reproduction: Spawns in November and December over hard or rocky bottom in less than 25 feet of water.

Interesting Fact: One of the most valuable commercially caught species in the Great Lakes. Lake whitefish are prized for their flaky white flesh and mild flavor. They are very good smoked.



Bowfin

Amia calva



Body features: Long, deep and robust body. Large head and mouth. Single long, low dorsal fin. Bony plate under and between lower jaw. Can be distinguished from invasive snakehead because the snakehead has a long anal fin and no bony plate on bottom of jaw.

Average length: 18-24 inches Average weight: 1.5-4.7 pounds

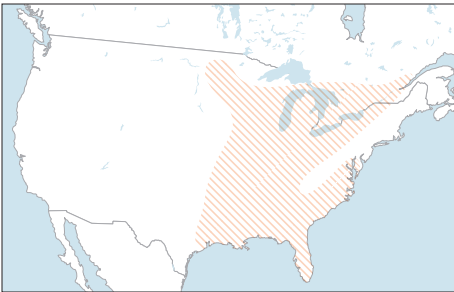
Trophy-sized bowfin: 31.6 inches, 13 pounds, caught in Wisconsin.

Role: Carnivore

Eats: Consumes fish, crayfish and frogs.

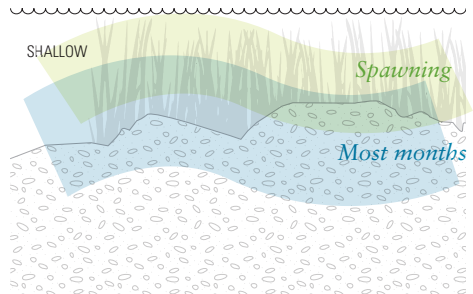
Eaten by: Occasionally eaten by birds and other fish. Adults have few predators.

Habitat: Wetlands and other vegetated areas. Bowfin can breathe air, allowing them to live in places where other fish cannot.



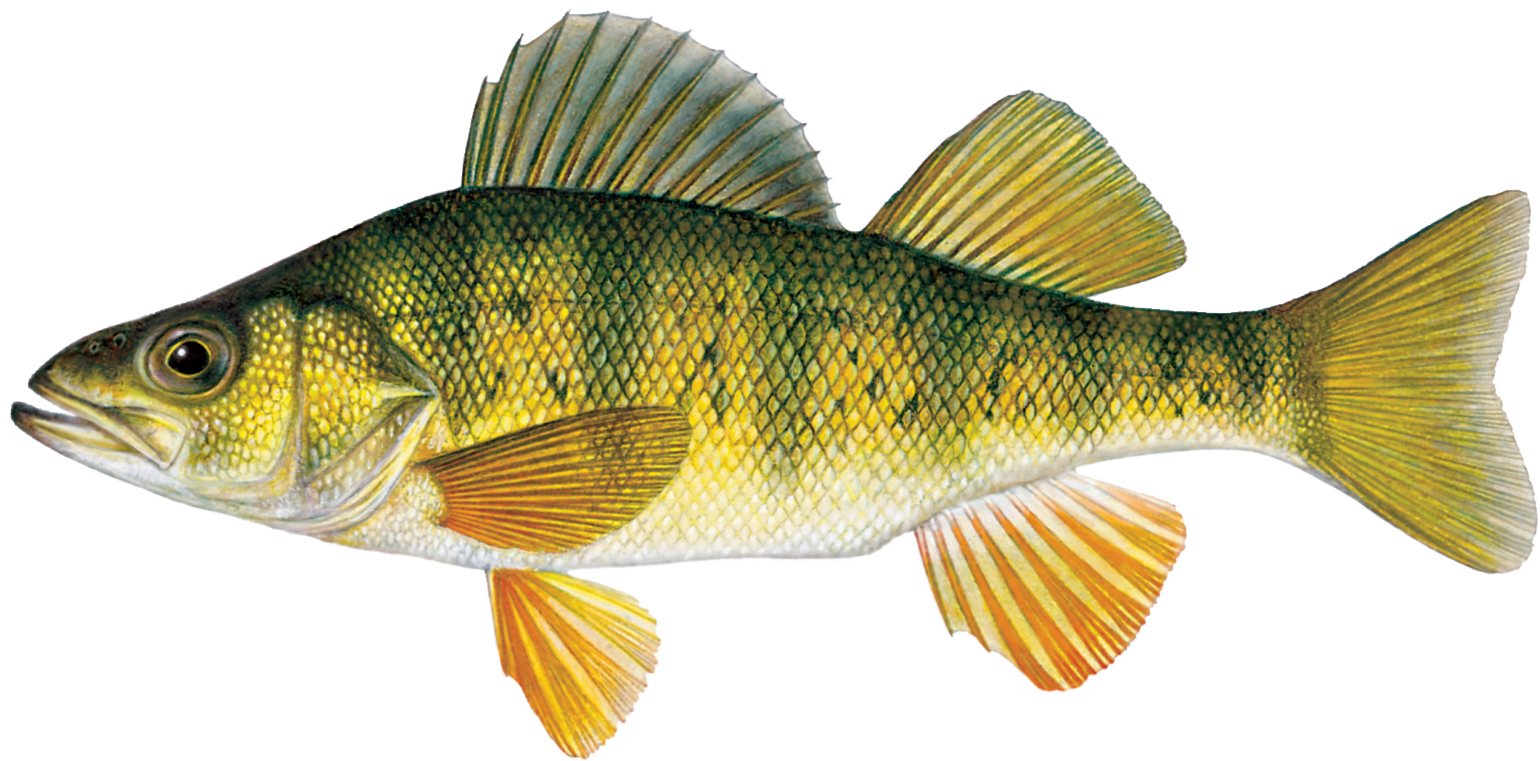
Native

Native Range: Eastern United States and Great Lakes drainage.



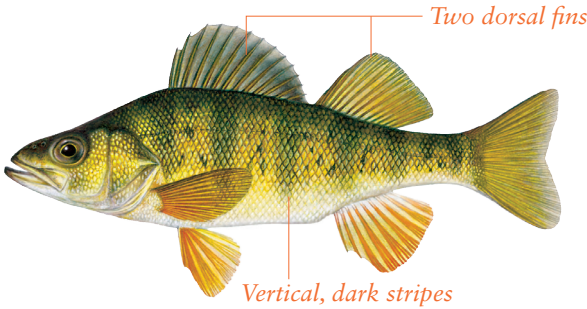
Reproduction: Spring spawner in shallow, vegetated areas of lakes. Males build nests and then guard a cloud of baby bowfins.

Interesting Fact: The sole remainder of a once-diverse group; bowfins (order *Amiiformes*), have been around for more than 150 million years and outlasted the dinosaurs.



Yellow Perch

Perca flavescens



Body features: Elongate body with blunt, long snout. Body is yellow with darker vertical stripes. Two dorsal fins, one spiny and one soft.

Average length: 6-10 inches Average weight: 0.1-0.4 pounds

Trophy-sized yellow perch: 15.75 inches, 2.9 pounds, caught in Lake Erie.

Role: Carnivore

Eats: Immature insects and invertebrates; larger perch also eat small fish.

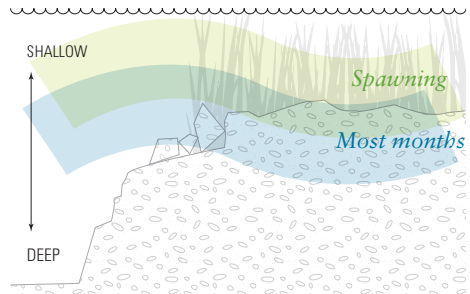
Eaten by: Predatory fish and waterbirds eat yellow perch, as do humans.

Habitat: An adaptable species that uses a variety of habitats in warm to cool water in lakes. Yellow perch like shallow areas with clear water and aquatic plants.



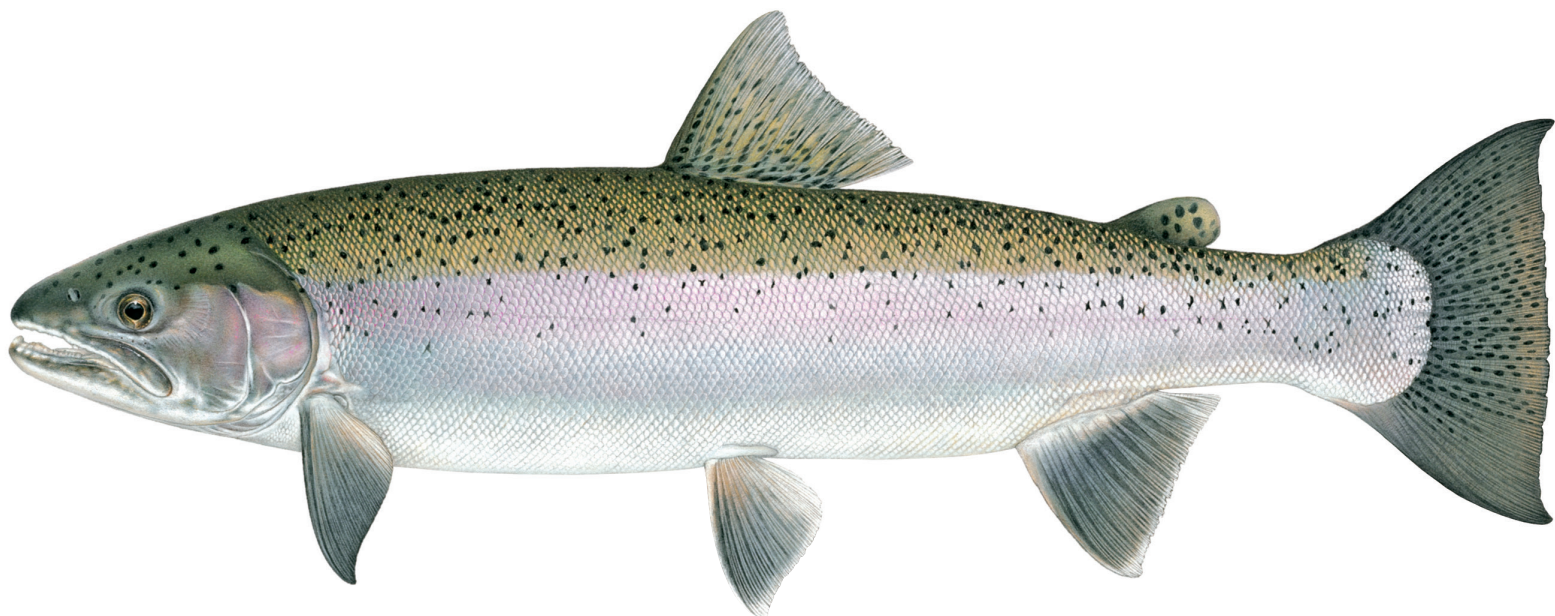
Native

Native Range: Central and northern North America.



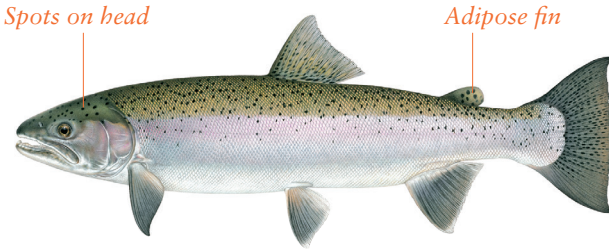
Reproduction: Spring spawner in shallow areas with vegetation or woody debris. In the Great Lakes, yellow perch spawn on rocky areas.

Interesting Fact: Yellow perch lay their eggs in long, sticky, gelatinous strands that become draped over vegetation. The strands can be up to 7 feet long and can contain up to 23,000 eggs!



Steelhead

(Rainbow Trout)
Oncorhynchus mykiss



Body features: Body streamlined and somewhat compressed. Large mouth. Fully spotted tail and dorsal fin, with spots also on the top of the head. Adipose fin present.

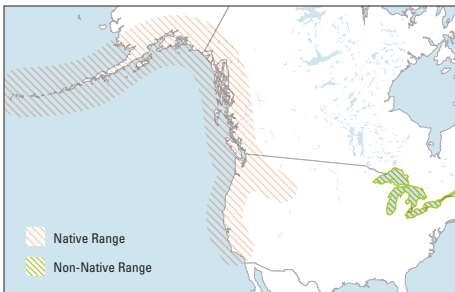
Average length: 25-27 inches Average weight: 5-7 pounds

Trophy-sized steelhead: 42.5 inches, 27.2 pounds, caught in Wisconsin.

Role: Carnivore

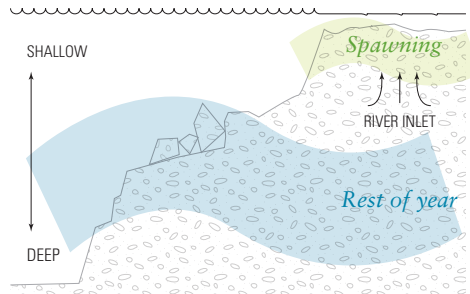
Eats: Insects and invertebrates when small, but larger fish mainly consume fish like smelt and alewife.

Eaten by: Fish and predaceous birds when small; adults have few predators other than sea lamprey and humans.



Non-Native: Native to northern Pacific Ocean and tributaries.

Habitat: Migratory species that uses a wide range of depths.



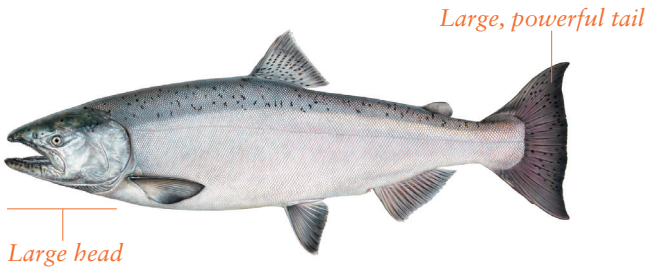
Reproduction: Spring spawner in rivers and streams. Great Lakes populations supplemented by stocking.

Interesting Fact: Steelhead and rainbow trout are the same species (*O. mykiss*), but steelhead spend most of their time in the ocean or one of the Great Lakes as adults. The more abundant food in the larger bodies of water allow steelhead to get much larger than stream-resident rainbow trout.



Chinook Salmon

Oncorhynchus tshawytscha



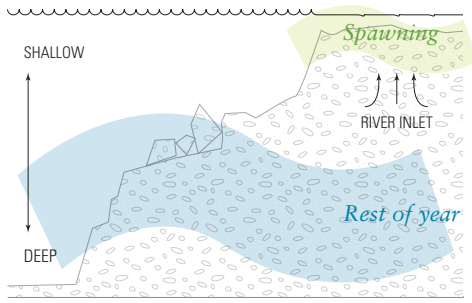
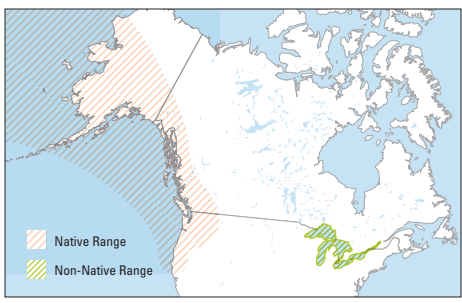
Body features: Streamlined body with large head and stiff, powerful tail. Spawning males develop long, hooked jaw. Inside of mouth and gums are black.

Average length: 30-34 inches Average weight: 10-15 pounds
Trophy-sized chinook salmon: 47.5 inches, 44.9 pounds, caught in Wisconsin.

Role: Piscivore

Eats: Mainly fish, especially alewife.
Eaten by: Predatory fish and waterbirds when small. Adults have few predators other than sea lamprey and humans.

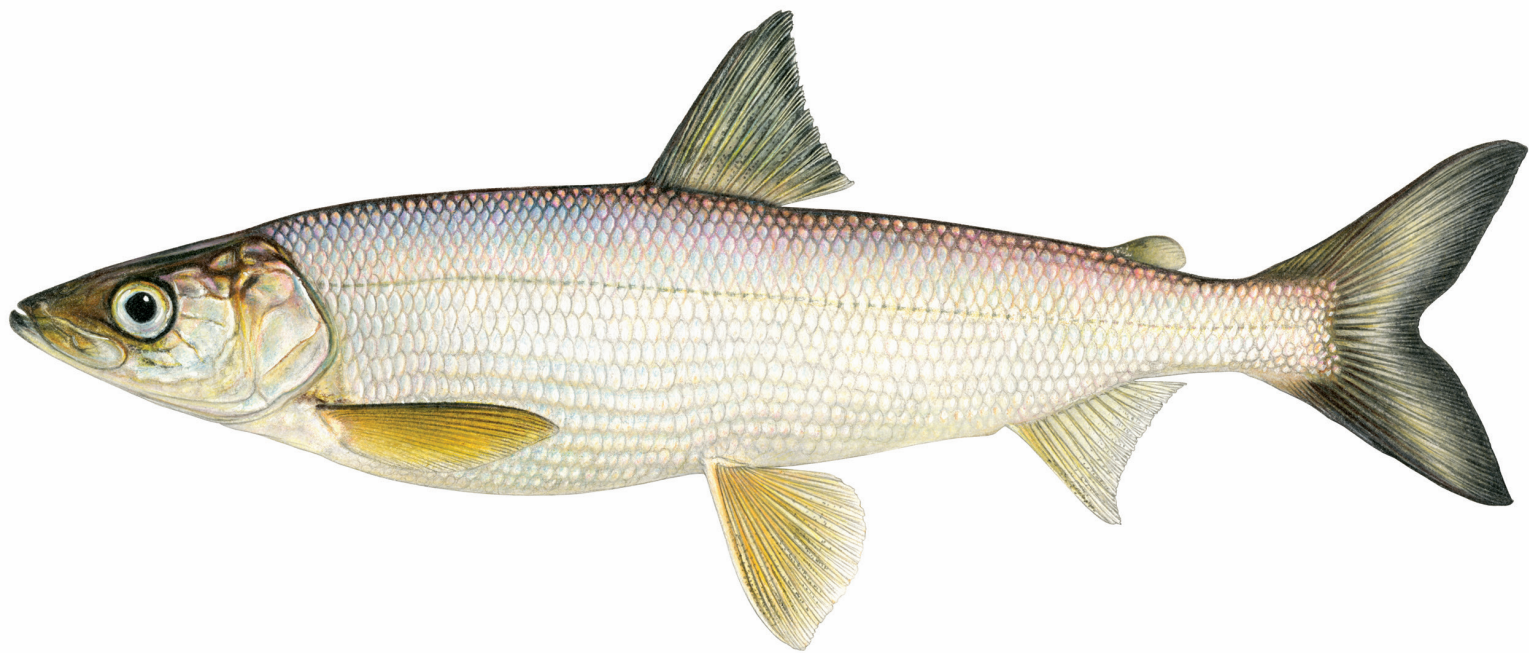
Habitat: Mid-water depths in Great Lakes, capable of moving great distances in search of food.



Non-Native: Native to northern Pacific Ocean and tributaries.

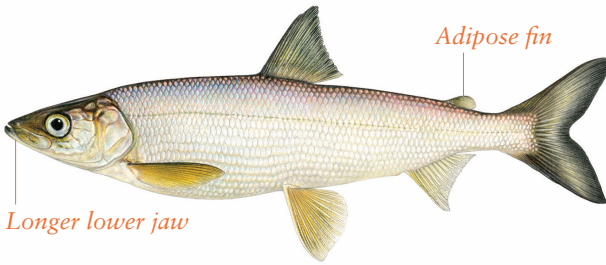
Reproduction: Fall spawner in Great Lakes, in clear water over gravel. Great Lakes populations supplemented by stocking.

Interesting Fact: Although still supported by stocking, a large proportion of Chinook salmon caught in Lake Michigan are spawned in rivers by naturalized Chinook salmon.



Bloater

Coregonus hoyi



Body features: Body elongate with flat and thin body. Lower jaw slightly longer than upper jaw.

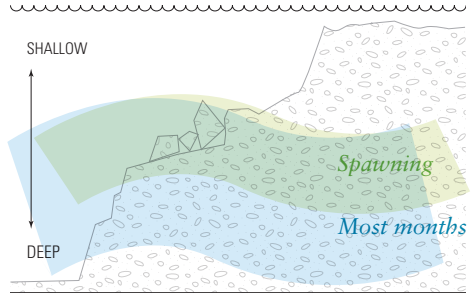
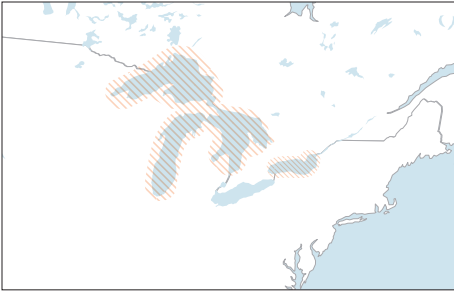
Average length: 8-10 inches **Average weight:** 0.1-0.3 pounds
Trophy-sized bloater: 14.4 inches, 0.7 pounds, caught in Wisconsin.

Role: Carnivore

Eats: Feeds near the bottom on invertebrates, mainly amphipods and opossum shrimp.

Habitat: Present in all depths from 125 to 400 feet deep.

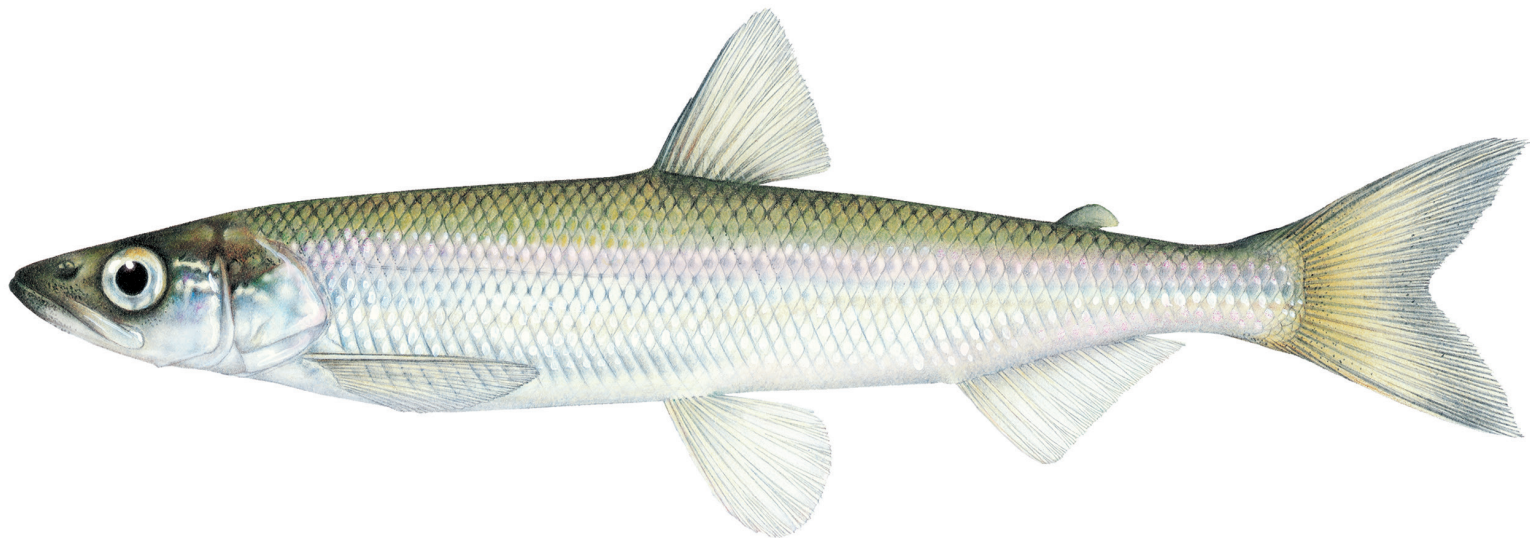
Eaten by: Lake trout and humans are the main predators of bloaters, although burbot also feed on them.



Native
Native range: Only found in the Great Lakes basin.

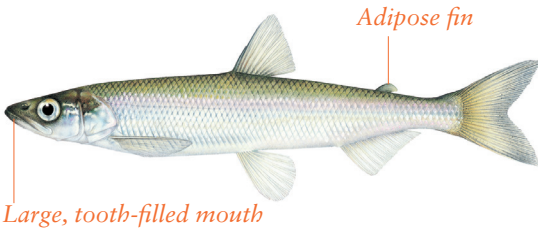
Reproduction: Spawns in February and March over any type of bottom from 120-300 feet deep.

Interesting Fact: An important commercial species when the population is large enough. Bloaters (called chubs) are delicious smoked and high in Omega-3 fatty acids, which have been linked to good health.



Rainbow Smelt

Osmerus mordax



Body features: Elongate, cylindrical body. Large mouth, with lower jaw extend beyond upper jaw with large teeth (even on the tongue). Adipose fin present.

Average length: 7-8 inches Average weight: 0.1 pounds

Trophy-sized rainbow smelt: 10.5 inches, 0.3 pounds, caught in Wisconsin.

Role: Carnivore

Eats: Smelt have large teeth and feed on invertebrates and larval fish.

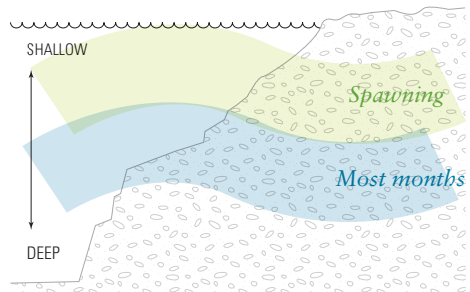
Habitat: Smelt are a schooling species that live in mid-water depths.

Eaten by: Lake trout, as well as other predators, such as humans.



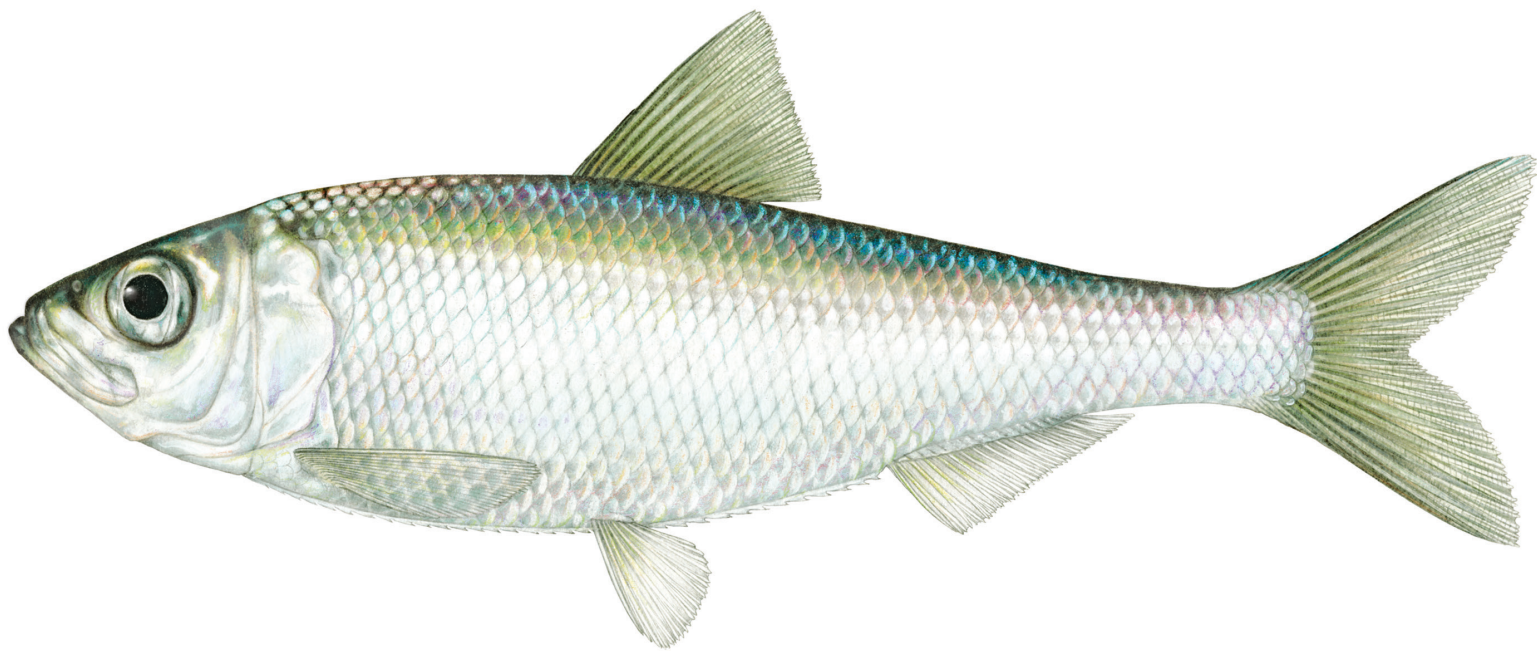
Non-Native

Native range: North Atlantic and Pacific Oceans and tributaries.



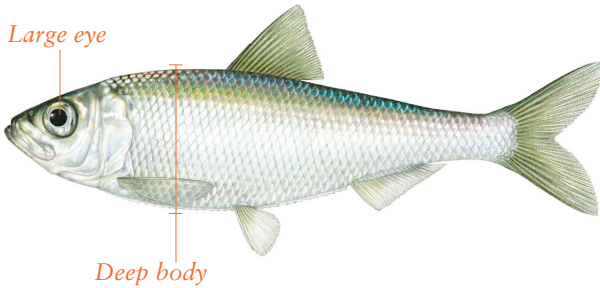
Reproduction: Smelt move into beaches and streams in the spring to spawn at night.

Interesting Fact: Abundant and accessible smelt during spawning led to social gatherings at night on the beach to dip smelt, a smelt carnival and even SMELT WRESTLING, which actually involves wrestling in piles of dead fish!



Alewife

Alosa pseudoharengus



Body features: Very flattened (strongly compressed laterally) with deep body (fairly tall). Large eye. Sharp scutes on bottom of fish give it a “sawbelly.”

Average length: 6-7 inches Average weight: 0.1 pounds

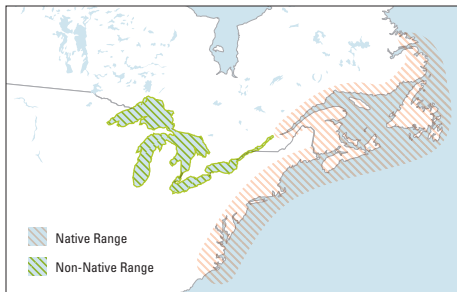
Trophy-sized alewife: 8.125 inches, 0.15 pounds, caught in Wisconsin.

Role: Planktivore

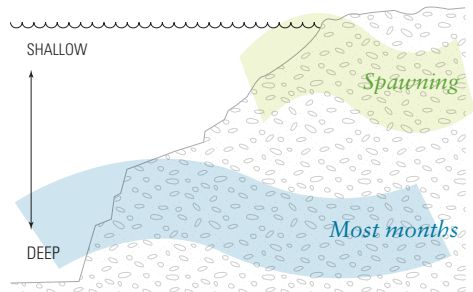
Eats: Mostly zooplankton along with some opossum shrimp.

Eaten by: As an abundant planktivore, the alewife is important in the diet of many fish, particularly stocked salmon and trout.

Habitat: A schooling species that winters in deep water but moves to shallower areas in the warm months.

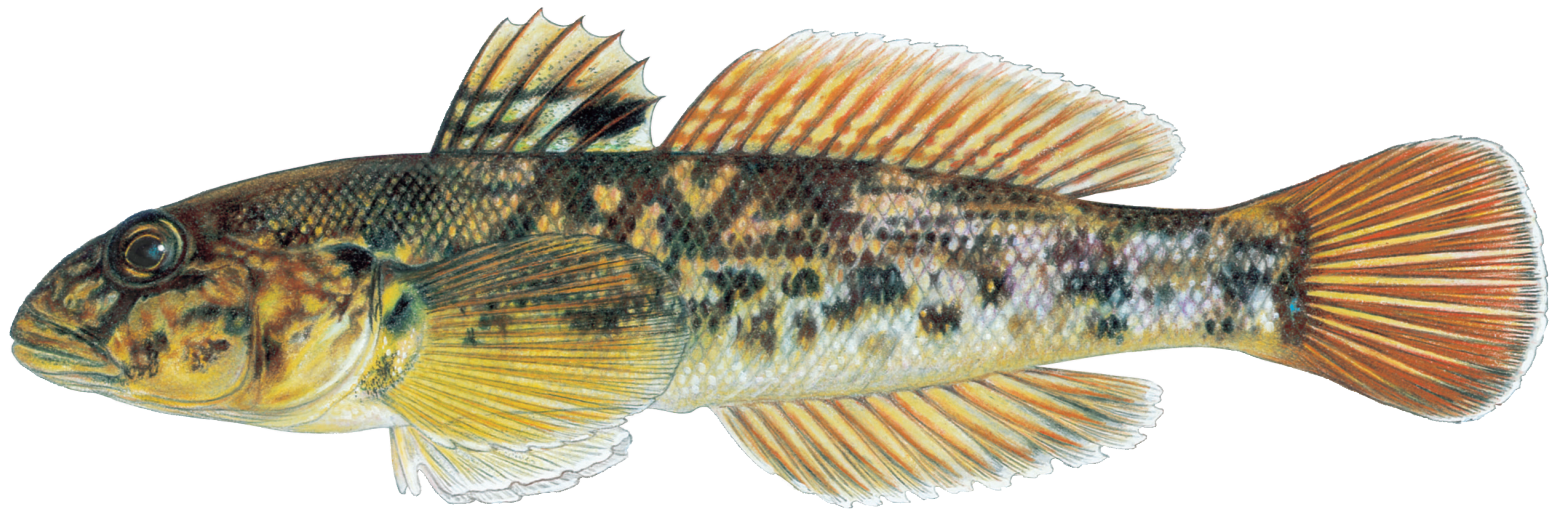


Non-Native: Native to mid- to north Atlantic and tributaries.



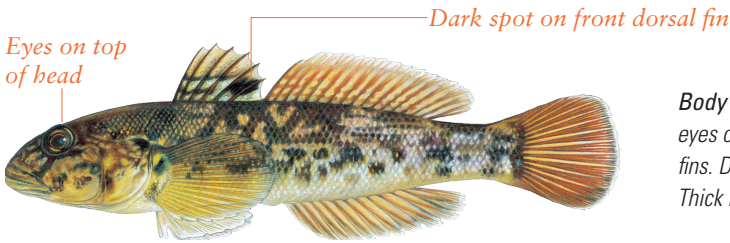
Reproduction: Move to shallow water in large groups to spawn in summer. Spawning occurs at night and fish move to deeper water during the day.

Interesting Fact: Alewives only arrived in Lake Michigan in 1949, but by the 1960s they constituted 90% of the fish biomass. Alewives often die in large numbers during their spawning time in the Great Lakes. When populations of alewives were abundant, beachgoers avoided mounds of dead alewives on the shore in summer — sometimes a tractor was required to remove the piles!



Round Goby

Neogobius melanostomus



Body features: Bulging, frog-like eyes on top of head. Two dorsal fins. Dark spot on front dorsal fin. Thick lips. Pelvic fins fused.

Average length: 5-6 inches Average weight: 0.1 pounds

Trophy-sized round goby: 8.5 inches, 0.33 pounds, caught in Wisconsin.

Role: Carnivore

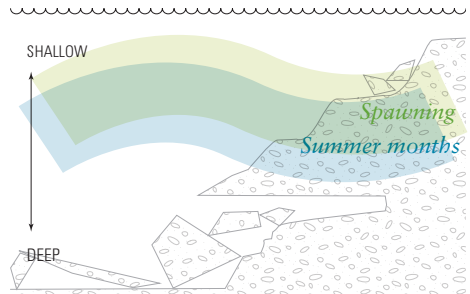
Eats: Invasive zebra and quagga mussels, invertebrates and fish eggs.

Eaten by: An important food source for species like smallmouth bass, lake whitefish and lake trout. Diving birds will feed extensively on abundant round gobies.



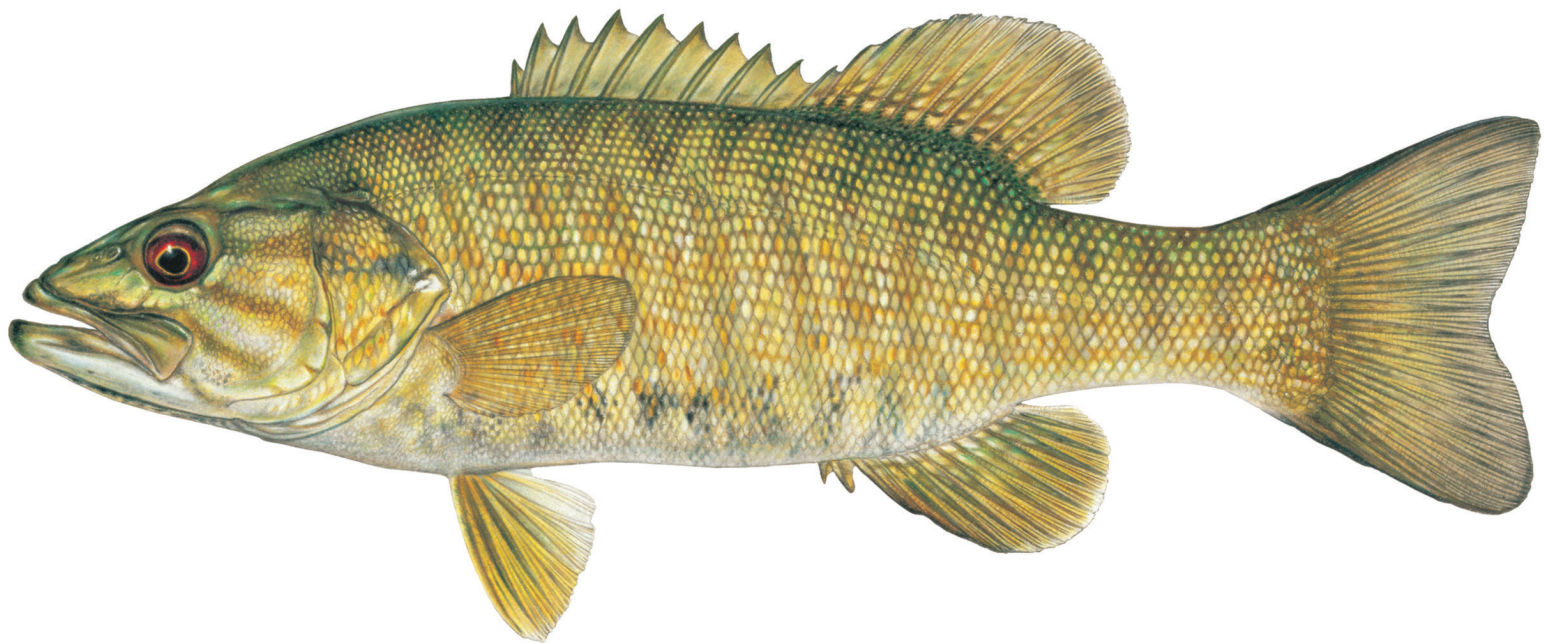
Non-Native: Native to Eurasia including the Black Sea, Caspian Sea and Sea of Azov and tributaries.

Habitat: A bottom-dwelling species, the round goby prefers rocky habitats where it can hide from predators. They live in water shallower than 60 feet in summer and move to 100 feet in winter.



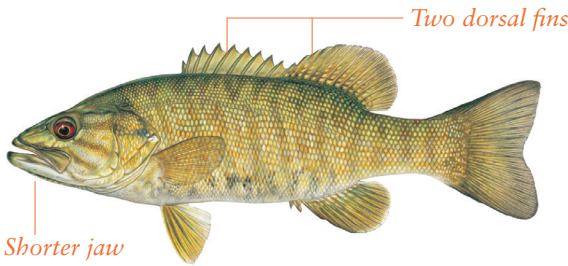
Reproduction: Can spawn multiple times in a year. Aggressively defends nesting sites, pushing native species from their preferred spawning areas.

Interesting Fact: Introduced to the Great Lakes through ballast tanks in ocean-going ships. Round gobies vocalize a lot. Males call in females and “bark” at other males to defend their eggs.



Smallmouth Bass

Micropterus dolomieu



Body features: Robust fish, less compressed body than other sunfish. Back of jaw only reaches to middle of eye (largemouth bass jaw reaches past eye). Spiny and soft dorsal fins that are joined.

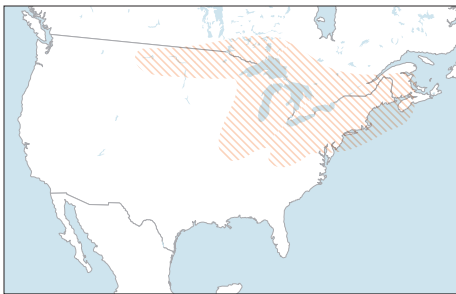
Average length: 9-14 inches Average weight: 0.4-1.4 pounds

Trophy-sized smallmouth bass: 27.25 inches, 9.3 pounds, caught in Michigan.

Role: Carnivore

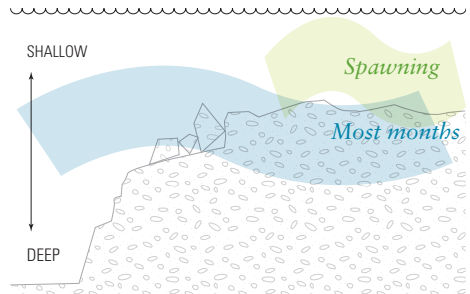
Eats: Insects, crayfish and fish. Opportunistic feeders, they will also eat frogs, tadpoles and fish eggs.

Eaten by: Eggs are a popular food for schools of rock bass. Young will be eaten by predator fish and birds.



Native

Native Range: Eastern central North America.



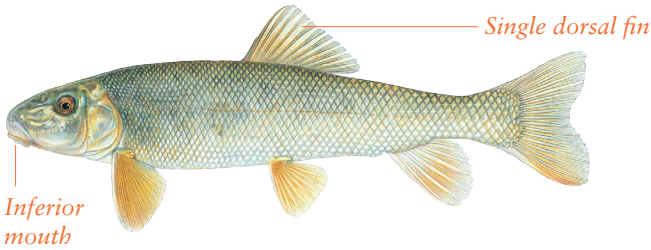
Reproduction: A spring spawner, males build gravel nests in shallow water and will guard the eggs, larvae and juveniles for as long as a month.

Interesting Fact: The smallmouth bass is a member of the sunfish family (*Centrarchidae*) and has been one of the more successful species to include the invasive round goby in its diet. Round goby also eat smallmouth bass eggs.



White Sucker

Catostomus commersonii



Body features: Robust, cylindrical, torpedo-shaped fish. Single dorsal fin. Overhanging fleshy upper lip and no teeth.

Average length: 12-20 inches Average weight: 0.7-3.1 pounds

Trophy-sized white sucker: 23.1 inches, 6.1 pounds, caught in Wisconsin.

Role: Benthivore

Eats: Has an “inferior” mouth (turned down or located on the underside of the head), making it easy to feed on invertebrates on the bottom.

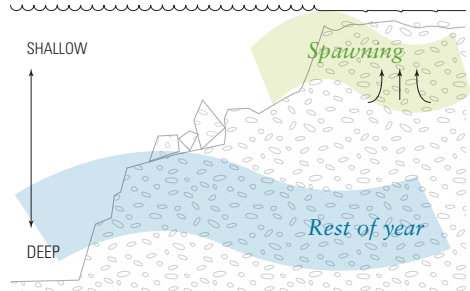
Eaten by: An important food source for many predator fish and waterbirds — also sometimes eaten by humans.



Native

Native Range: South-central to northern North America.

Habitat: Found near the bottom over a range of depths, with temperature influencing where they are in the lake.



Reproduction: Spring spawner that migrates upstream, right after ice-out, to areas over gravel.

Interesting Fact: White suckers are an important native migratory species that can bring Great Lakes nutrients into small headwater streams. They are easy to catch during the spawning run and are commonly canned or pickled to soften their numerous bones.