

PIKES AND MUDMINNOWS

FAMILY ESOCIDAE

FAMILY OVERVIEW

Pike are long, slender, “duck-billed” predator fish, popular with anglers for the great size some species attain and for their sporting fight. Four species of the pike family live in the Northern Hemisphere. The Grass Pickerel and Redfin Pickerel (the two are closely related subspecies), the **Chain Pickerel**, the Northern Pike and the Muskellunge are native to North America and to Pennsylvania. The Northern Pike is one of the few fish whose natural range includes both North America and Eurasia.

The native pike family residents of Pennsylvania range from the small Redfin Pickerel of eastern Pennsylvania and its close cousin the Grass Pickerel of northwestern Pennsylvania, which seldom reach one foot in length, to the mighty Muskellunge, whose state angling record is over 54 pounds. Pike live in coolwater streams and large rivers, as well as lakes, from ponds to big impoundments, depending on the species. All pike are associated with submerged vegetation, although Muskellunge also frequent rocky lake shoals. The family name “Esocidae” is from “Esox,” an old European name for the pike.

IDENTIFICATION

The pikes are well-camouflaged to blend with their underwater surroundings. Markings and coloration vary among species, their concealment patterns ranging from oblique striping and broken horizontal bands to chain-link markings and beanlike spotting in light and dark tones. The pike family’s general coloration is green, from a dark yellow-green to olive-brown, with yellowish markings or shadings. The fins in some species are dull-red or orangish. The eye is large and yellow. The pike’s scales are cycloid, smooth, small and numerous, and embedded in a slimy mucous that makes the fish slick to the touch.

The pikes are slender, cylindrical fish. The pike family’s most distinctive characteristic is the long, flattened snout that looks something like a duck’s bill. The mouth is fitted with many strong, sharp teeth, and the forehead is like a bony plate. Pike have one dorsal fin that is placed far along the back, toward the tail, as is the opposing anal fin. The tail is forked, and may or may not be marked, according to the species. There is no adipose fin. Pike are built for their role as swift, aggressive predators.

LIFE HISTORY

The pikes spawn in early spring, when water temperatures reach about 50 degrees. The pikes don’t build nests. Several males spawn with a female, the fertilized eggs scattering over underwater plants, dead vegetation and other organic debris, in shallow sections of the lake or stream. Eggs are sticky at first and adhere to vegetation and objects above the silty bottom. Staying out of the mud appears to be necessary for successful egg-hatching. Pike eggs are abandoned by the parents and hatch in 10 to 12 days. The fry, or just-hatched fish, have an adhesive organ at the top of the snout, with which they attach themselves to submerged plants. They remain “stuck” there for about a week, while their nourishing egg sac is absorbed. Until they are about two inches long, young pike eat aquatic invertebrates. Then they switch to the main source of food for the rest of their lives—fish. In crowded conditions, pike even eat one another. Pike are top-level predators in their habitat, living solitarily and feeding on other fish, plus any birds, small mammals, snakes and frogs that happen into the water. They feed by ambush, waiting motionless in concealing cover until their prey approaches. Then they lunge swiftly to grab it. Prey is taken at the midsection, and then shifted in the pike’s mouth and swallowed headfirst. Pike are sight-feeders and are active by day, even continuing to feed during winter months, which makes them available to ice anglers. The pikes grow fast, with the young of the larger species reaching 12 to 18 inches their first year. The females grow fastest, live longer and attain larger sizes than the males.

CHAIN PICKEREL

Esox niger

SPECIES OVERVIEW

Chain Pickerel are the most abundant and widely distributed member of Pennsylvania's pike family. They are also the most often caught, biting the angler's bait or lure readily. The Chain Pickerel's original range was Atlantic and Gulf Coast tributaries, but the fish has been introduced elsewhere. In Pennsylvania, Chain Pickerel are restricted to the Delaware, Susquehanna and Potomac River watersheds. They are most common in the glaciated Pocono northeast.

IDENTIFICATION

Chain Pickerel can grow to more than 30 inches long, but one of 25 inches and four or five pounds is considered a trophy in Pennsylvania. The state record is an eight-pounder. Two-pound Pickerel are common where the fish have enough to eat. The Chain Pickerel hides easily in its weedy habitat, with its dark, greenish-yellow back, fading to lighter yellow-green along the sides. Over the sides is a pattern of dark chainlike markings that gives the fish its name. The belly is white. A dark mark, like a clown's painted tear, appears below each eye. The fins are unmarked and pale. As is typical of Pickerel, both the cheek and the opercle, or gill cover, are fully scaled. Chain Pickerel have a long snout. The distance from the tip of the nose to the front of the eye is greater than the distance from the back of the eye to the end of the gill cover.



HABITAT

Chain Pickerel live in and around weedbeds and sunken stumps and logs in natural lakes, swampy ponds and manmade impoundments. They can also be found in the sluggish parts of clear streams and in the naturally acidic, tannin-stained waters that drain boggy wetlands, as in northeastern Pennsylvania. Chain Pickerel are commonly shallow-water dwellers, but they can live in deep lakes. They don't travel far from their selected home areas, and they tolerate a wide temperature range.

LIFE HISTORY

Chain Pickerel spawn in early spring, when water temperatures are in the high 40s to low 50s. The spawning period lasts about one week. Chain Pickerel are also reported to spawn in the fall, but the survival rate of eggs and young is suspected to be low. The sticky eggs, 6,000 to 8,000 typically deposited by each female, are scattered over underwater weeds. Chain Pickerel have been known to hybridize in the wild with Redfin Pickerel, because their spawning site choices and breeding times overlap.

Just-hatched Chain Pickerel fry attach themselves to plant stems during the absorption of the yolk sac. Young Chain Pickerel eat aquatic insects and crustaceans, and are eaten by larger fish. As they grow, Chain Pickerel increasingly consume fish, which become the mainstay of their diet. At one year old, Chain Pickerel are about seven inches long. After four years, they are about 15 inches. Their natural lifespan is eight to 10 years.

Chain Pickerel are solitary predators, feasting on fish, which they stalk through the underwater weedbeds, as well as crayfish, large aquatic insects, frogs and other small animal life that gets into the water. They feed during the day, especially at dawn and dusk, and are active through the winter, under the ice, so they can be caught by ice anglers. In ponds where they overpopulate and outstrip their food source, Chain Pickerel may become stunted “pencil pike,” or “hammer handles,” small in size and thin.

NORTH AMERICAN CATFISHES

FAMILY ICTALURIDAE

FAMILY OVERVIEW

The Ictaluridae Catfish family is also known as the North American freshwater Catfishes. Of the 40 species found north of Mexico, 13 are known to live in Pennsylvania. These include three commonly called “Bullheads” and three called “Catfish.” The rest, much smaller species, are called “Madtoms.” The **Yellow and Brown Bullheads** are found around the state. The Black Bullhead is known from a few counties in western Pennsylvania, in the Ohio River watershed. The White Catfish, Channel Catfish and Flathead Catfish are medium-sized to very large fish and are avidly sought by anglers.

The Madtoms belong to the genus *Noturus*. They are not as likely to be seen as often as the other Catfishes because of their miniature size, their secretive nature, and their rarity or scattered distribution. Two Madtoms are endangered species in Pennsylvania and are found only in French Creek, in the northwest corner of the state: The Mountain Madtom, which grows to just two or three inches, and the Northern Madtom, which grows to about four inches. The Northern Madtom is also endangered. The Brindled Madtom is a threatened species. At the other end of the Catfish family scale are the Blue Catfish and Flathead Catfish, which can grow to more than 100 pounds and four to five feet long. Catfishes are popular sport fish. Some species are raised commercially for human consumption, and the tiny ones are part of the forage base of small fishes in their home lakes or streams. Some Madtoms are considered indicators of water quality.

GENERAL IDENTIFICATION

Catfish are scaleless, with a tough, smooth skin. All species have eight appendages on the head called “barbels,” four on the upper jaw and four on the chin. The barbels are sometimes called “whiskers.” They are fleshy, supple projections that narrow to a tip. The barbels don’t inflict the notorious sting of the Catfish. That’s done by the strongly developed pectoral fin spines, one on each side of the fish, and the dorsal fin. The species have variously developed poison glands at the base of these spines, which can inflict a mild to beelike sting. The Madtoms are especially known for their stinging spines.

There is disagreement among scientists whether it’s the gland at the base of the spine or the membrane around the spine that has the poison. Catfish also have a stout spine at the leading edge of the dorsal fin. On Madtoms, the adipose fin, a fleshy lobe between the dorsal fin and the tail fin, is joined with the tail fin. On other Catfish, the adipose fin is separate. Some Catfish have moderately to deeply forked tails. Albinism, which results in a white colored, pink-eyed Catfish, is known to occur.

LIFE HISTORY

Catfish spawn in spring to early summer. Both males and females may contribute to nest construction and care of eggs and young, but usually that duty is just the male’s. Nests can be in holes in river or lake banks, in the open, or under rocks and other submerged objects. The female is clasped by the male and is

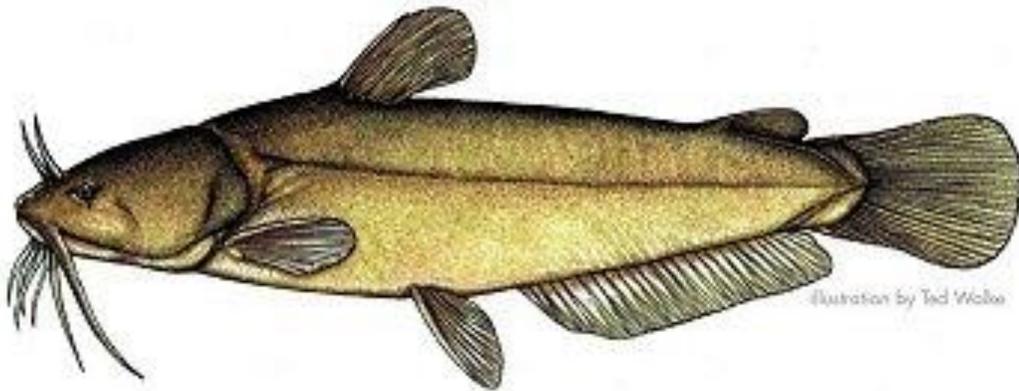
stimulated to deposit a mass of sticky eggs. The male or both parents guard the nest and protect the young for a time. Young Catfish form tight schools and separate individually only to hide when they have been frightened. Adult Catfishes are most active at night. When they are active in daytime, it is generally in muddy, clouded water. They have poor vision and use the sense of smell and the taste buds on the skin, lips and barbels to find food.

YELLOW BULLHEAD CATFISH

Ameiurus natalis

SPECIES OVERVIEW

The North American Catfish family includes species known as the “Bullheads.” They are the Brown Bullhead, Yellow Bullhead and Black Bullhead. All are similar in appearance, with some anatomical differences and different coloring. The Yellow Bullhead’s natural range is the Atlantic and Gulf Coast watersheds from New York to northern Mexico. It is also native to the St. Lawrence River and Great Lakes system and the Mississippi River watershed. Yellow Bullheads have also been widely stocked. Although it is found in all of Pennsylvania’s watersheds, the Yellow Bullhead is not as plentiful as the Brown Bullhead.



IDENTIFICATION

Yellow Bullheads may grow 18 or 19 inches long, but most are much smaller. The back is yellow-olive to a slate-gray, shading to a lighter yellow-olive on the sides. The belly is bright-yellow or whitish. The chin barbels are white or yellow. Yellow Bullheads have a long anal fin with 24 to 27 rays. Like the Brown Bullhead, there are five to eight sawlike teeth on the back edges of the pectoral spines. The rear edge of the tail fin is nearly straight or rounded.

HABITAT

The Yellow Bullhead is tolerant of low oxygen and highly silted water. It can withstand pollution that many other fishes cannot tolerate. Yellow Bullheads prefer backwaters and slow currents in streams and rivers. They also live in ponds and reservoirs, especially where there is a mucky bottom and dense aquatic vegetation. Where logs, stumps and water weeds are removed, the number of Yellow Bullheads decreases.

LIFE HISTORY

Yellow Bullheads spawn in spring, usually May, with both males and females helping to excavate a nest. The nest can range from a shallow depression in the muddy bottom to a two-foot-deep burrow in the stream or lake bank, usually near protective rocks or stumps. The females produce from 1,700 to 4,300 eggs, depositing up to 700 at each spawning. The care of the sticky, yellowish-white eggs and the hatched fry is the duty primarily of the male, which guards the young fish until they are about two inches long. Yellow Bullheads are omnivores and eat aquatic insect larvae, snails, freshwater clams, crayfish, small fish

and other underwater animal life, as well as plant material. They have an excellent sense of smell, which helps them locate food in muddy water.

BROWN BULLHEAD CATFISH

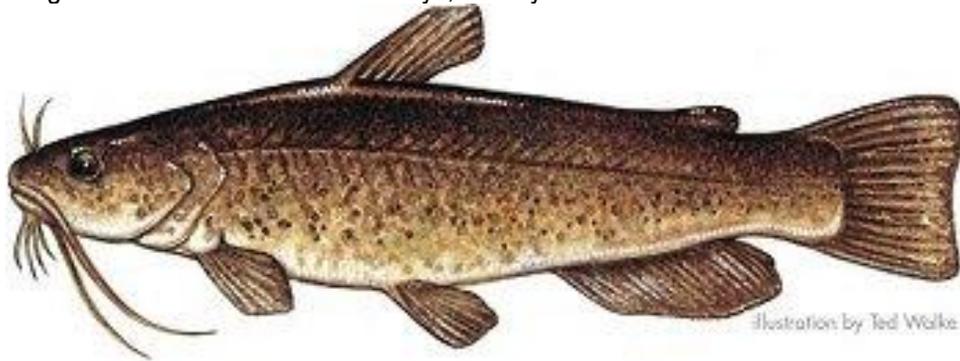
Ameiurus nebulosus

SPECIES OVERVIEW

The Brown Bullhead is the most widely distributed Bullhead, found across Pennsylvania in suitable habitat. It is native to Atlantic and Gulf Coast watersheds, from eastern Canada to Alabama. It was also originally found in the Great Lakes system, Hudson Bay and the Mississippi River watershed. It has also been widely introduced. Its species name “nebulosus” means “clouded,” referring to the fish’s mottled sides.

IDENTIFICATION

An 18-inch and three-pound Brown Bullhead is a trophy, and is near the size maximum of the species. Brown Bullheads average 12 to 15 inches. The upper part of the head, back and sides are dark to light yellow-brown or olive-brown, shading to grayish white or yellowish white on the belly. The sides have brown or black mottling. The Brown Bullhead’s chin barbels are dark, grayish black, but may have whitish color at the base. These help to distinguish the Brown Bullhead from the Black Bullhead, which is known from a few northwestern Pennsylvania counties. The Black Bullhead’s chin barbels are all black. The Brown Bullhead’s caudal fin is square-tipped, or slightly rounded. Its strong pectoral fin spines have five to eight sawlike teeth on their rear edges. The anal fin has 18 to 24 rays, usually 22 or 23.



HABITAT

Brown Bullheads live in several habitat types, but they are found mostly in ponds and the bays of larger lakes, and in slow-moving sections and pools of warmwater streams. They are bottom-dwellers, usually living over soft mud or muck, where there is plenty of underwater vegetation. Brown Bullheads can sometimes be found as deep as 40 feet. They are tolerant of very warm water temperatures, high carbon dioxide and low oxygen levels, and levels of pollution that other fish cannot tolerate.

LIFE HISTORY

Brown Bullheads spawn in late spring, May to June, when water temperatures reach 70 degrees. Both males and females participate in nest construction, which can be a shallow saucer on the bottom mud or sand, or among roots of aquatic plants, near the protection of stumps, rocks or downed trees. Nests can also be excavated holes or natural burrows. Spawning can also occur under sunken boards and logs, and in hollow stumps. The water depth for spawning ranges from six inches to several feet. The nests are usually around the shoreline or in coves, or in the mouth of a creek.

Brown Bullheads usually spawn in the daytime. Their courtship includes the male and female caressing each other with their barbels. They spawn beside each other, but facing in the opposite direction. The females produce from 2,000 to 13,000 cream-colored, mucous-covered eggs. Sometimes one or both

parents eat some of the eggs. Both male and female Brown Bullheads cooperate in protecting the nest, eggs and young. The parents fan and stir the eggs with their fins, aerating them. The parents have also been seen to take the eggs into their mouths, presumably cleaning them, and to blow the eggs back into the nest again. Hatched Brown Bullheads are pitch-black and may be mistaken for tadpoles. One or both parents shepherd the loose ball of fry for several weeks, until the young are about one inch long. Like other Catfish, Brown Bullheads are active mostly at night, when their sensitive barbels help them find food in the darkness. They are omnivorous bottom-feeders and eat a wide variety of plant and animal material, including aquatic insects and larvae, worms, minnows and other small fish, crayfish, snails, freshwater clams and even algae. Brown Bullheads are able to exist on atmospheric air for a time. They can remain alive for hours if kept moist when they are out of the water.

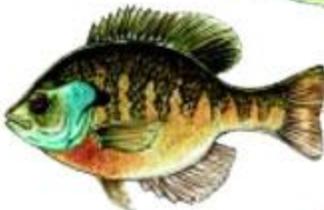
Panfish		Identification	
<p>White crappie <i>Pomoxis annularis</i></p> 	<p>Black crappie <i>Pomoxis nigromaculatus</i></p> 	<p>White crappie has head, back and upper sides dark green with 8 to 10 vertical bars. Dorsal fin has 5 to 6 spines.</p> 	<p>Black crappie has scattered spots and 7 to 8 dorsal spines.</p> 
<p>Yellow perch <i>Perca flavescens</i></p> 	<p>Bluegill <i>Lepomis macrochirus</i></p> 	<p>Yellow perch has separate spiny rayed and soft-rayed dorsal fins. Sides have 6 vertical bars.</p> 	<p>Bluegill has a dark spot at base of dorsal fin. Spiny rayed and soft-rayed dorsal fins are joined. Black spot on gill flap. Dark vertical bars on body.</p> 
<p>Pumpkinseed <i>Lepomis gibbosus</i></p> 	<p>Other sunfish</p> 	<p>Redbreast sunfish <i>Lepomis auritus</i> Long gill cover, short, rounded pectoral fin.</p>	<p>Rock bass <i>Ambloplites rupestris</i> Red or orange eye, 5 to 7 spines on anal fin, dark mottling over light belly.</p> 

Illustration-Ted Walke

SUNFISHES FAMILY CENTRARCHIDAE

FAMILY OVERVIEW

The little Bluegill in the local farm pond and the tackle-busting Largemouth Bass of the big lake are both members of the sunfish family. The two have plenty of “cousins” in Pennsylvania, because 17 sunfish species live in the state. The black basses (genus *Micropterus*), are represented by the Largemouth Bass, Smallmouth Bass and Spotted Bass. The sunfishes (genus *Lepomis*) include the Redbreast Sunfish, Green Sunfish, Pumpkinseed, Warmouth, **Bluegill**, Longear Sunfish and Redear Sunfish. Others in the sunfish family include the Black Crappie and White Crappie (genus *Pomoxis*), the Rock Bass (genus *Ambloplites*),

the Mud Sunfish (genus *Acantharchus*), and the little sunfishes of the genus *Enneacanthus*, which are the Blackbanded, Bluespotted and Banded Sunfish (additional illustrations at the bottom of this page).

The sunfish family (with one non-Pennsylvania exception) was originally confined to the fresh waters of North America east of the Rocky Mountains. Some of them, especially the basses, have been widely stocked for sport across the United States and in other countries. In many places, sunfishes are the dominant fishes of warmwater habitats. They typically live in warm, rocky, weedy lakes, ponds and slow-moving streams. In Pennsylvania the sunfishes are distributed across the state, although a few species have restricted ranges.

The rare Blackbanded and Banded Sunfishes are known to be present only in the lower Delaware River watershed, near Philadelphia. The small Bluespotted Sunfish is found in sluggish water or weedy ponds in the Delaware and Susquehanna River watersheds, but it is absent from the rest of the state. The Warmouth is widely distributed in the eastern United States. It has been documented in Pennsylvania in the Allegheny River watershed. Longear Sunfish are found throughout the Midwest. They have been occasionally seen in northwestern Pennsylvania. Redear Sunfish are also very restricted here, having been introduced into some waters in the central and southwest parts of the state. Other sunfishes are common, or their home localities are described in the species section.

GENERAL IDENTIFICATION

Many species of the sunfish family are beautifully colored and patterned. As a whole, the smaller family members are “pan” shaped, narrow when viewed head on and wide when viewed from the side (laterally compressed). The nickname “panfish” is well-deserved for body shape as well as for popularity of many of the family in the fisherman’s frying pan. The eyes of the sunfish are large. The fish have no sharp spine near the back of the gill covers. The dorsal fin of sunfish has two sections, the front section with five to 14 sharp, spiny rays, and a back section, which is soft-rayed. The two dorsal fin sections are joined a little or a lot, depending on the species, so they may look like two fins or one continuous fin. The pectoral fins are relatively high on the side of the body. The pelvic fins have a leading spine and five soft rays. The anal fin also has spines on its leading edge. The sunfishes have ctenoid scales, which means that each scale has a toothed rear edge that makes the scale, and the whole fish, feel rough to the touch.

BLUEGILL

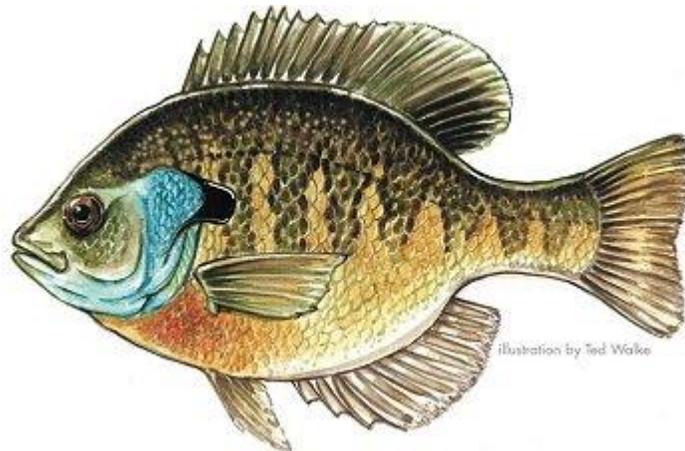
Lepomis macrochirus

SPECIES OVERVIEW

The Bluegill is what many people think of as a “sunfish.” It is what they usually catch when they go fishing for “sunnies.” The common name refers to the bluish color that curves from the lower jaw around the bottom of the gill cover. The scientific species name “macrochirus” means “large hand,” probably describing the fish’s body shape. The Bluegill is found throughout Pennsylvania nowadays. It is believed not to have been present originally in Atlantic Ocean watersheds.

IDENTIFICATION

The Bluegill has several characteristic markings, which are helpful because its colors vary so much. Generally, the Bluegill has an olive to brownish back, with sides that shade to brownish, orange and even pink. The sides have eight to 10 sets of double, bluish vertical bars that may look chainlike. The belly is white to yellow or coppery-orange. The sides of the head are greenish to blue-green, with lighter metallic-looking blue on the lower edge of the gill flap and under the lower jaw. Breeding males are darker, with rosy or lavender sheens. The pectoral fin is long and pointed.



The giveaway marking that distinguishes this sunfish from others is that the flap at the end of its gill cover is black with no red spot. Bluegills also have a dark spot or blotch on the lower part of the back section of the dorsal fin.

HABITAT

Bluegills prefer to live in habitats similar to those of Largemouth Bass. Bluegills are found in lakes, small farm ponds, and the slower parts of warmwater streams and rivers. Typical Bluegill habitat has aquatic weeds, where the fish can hide and feed. They can also be found near submerged stumps, logs and rocks. In the daytime, schools of small Bluegills can be found close to shore. Larger Bluegills prefer nearby deep water. In the evening and early morning, the bigger Bluegills move into the shallows to feed.

Dry flies and small poppers on a fly rod work well when Bluegills are on the feed. Small jigs, wet flies, nymphs and a variety of small baits, fished on small hooks to accommodate the Bluegill's small mouth, are also effective.

LIFE HISTORY

Bluegills spawn during a longer period than most sunfish, from May, when the water temperature reaches 67 degrees, until August. The males fan small, saucerlike depressions in sand and gravel as nests, and vigorously guard the eggs and hatched young. Large numbers of nests are often in the same area and form colonies. One female may deposit as many as 38,000 eggs in a nest. Bluegill eggs hatch in two to five days. Because several females have contributed, there may be more than 60,000 young fish produced from a single nest. Bluegills may overpopulate their habitat, resulting in smaller and slower-growing fish. As generalized feeders, Bluegills eat aquatic insects, crustaceans and minnows, and they have been known to eat aquatic plants. The Bluegill feeds only in the daytime and throughout the water column. It may grow to a foot long and up to two pounds, although nine inches is an average.

CARPS AND MINNOWS

FAMILY CYPRINIDAE

FAMILY OVERVIEW

Minnows are a huge family of fishes. About 2,100 species are distributed in North America, Eurasia and Africa. North America alone (north of Mexico) has over 230 species of minnows. In Pennsylvania, 39 native minnow species have been documented in recent years, in 13 groups, or genera. There are also introduced minnows, like Carp and Goldfish. Many minnow species may be present in the same water area. Fifteen or more may be found together in streams with high biodiversity, like the tributaries of the Allegheny River. In all, Minnows make up 25 percent of Pennsylvania's total fish fauna.

The young of most fish, including game fish, are sometimes incorrectly called "minnows," because of their small size. True minnows belong to the scientifically defined Cyprinidae family. They may be quite large, like a 50-pound Carp, or a scant three inches long, like the Blacknose Dace. The Carp is big enough to attract sport anglers. Other members of the minnow family provide fishermen's bait and are an important food source for game fish. In turn, minnows may eat the eggs and young of sport fishes and compete for available food. Nevertheless, all minnows and other nongame fish are an important part of Pennsylvania's aquatic life regardless of whether they provide food for "game fish."

Some minnows are plentiful in Pennsylvania. Other minnows are sensitive to pollution and are indicators of water quality. The gravel Chub is so rare, it is an endangered species in the state. In 2000, Fish & Boat Commission biologists identified the first known occurrence of the Pugnose Minnow in PA waters.

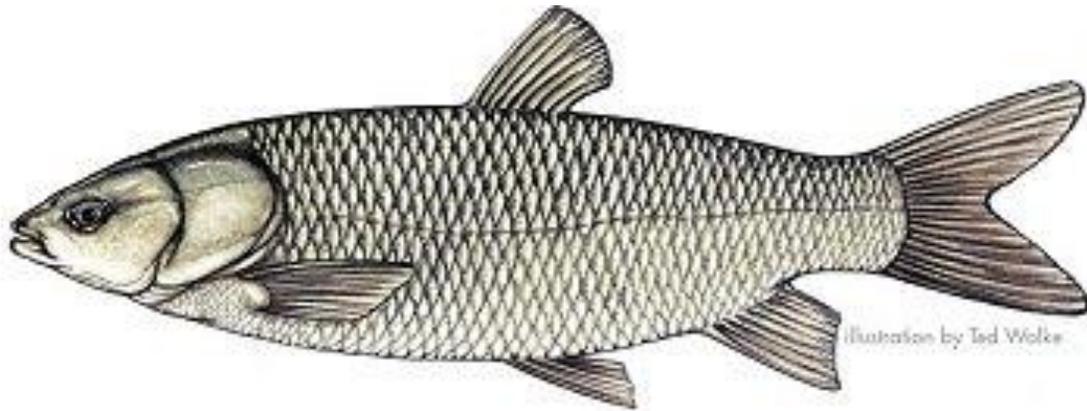
GRASS CARP

Ctenopharyngodon idella

SPECIES OVERVIEW

The Grass Carp, or white amur, was introduced into the United States from East Asia in the 1960s as a potential food fish and to control aquatic vegetation. By 1976, the Grass Carp had been stocked in or spread to, by traveling rivers, 35 to 40 states. Grass Carp are voracious feeders on aquatic vegetation, eating many pounds in a single day. Because of this double-edged trait, they are an option for pond owners as a non-chemical control of aquatic vegetation and algae. However, Grass Carp are also prolific spawners, and fisheries managers view their introduction with caution. Their release into the wild could have devastating effects on aquatic ecology, removing underwater vegetation that other water life depends on for food and cover.

In Pennsylvania, introducing Grass Carp into the state's waters, or possessing them without a permit, is prohibited. However, a reproductively sterile version of the fish, called the Triploid Grass Carp, is allowed under a tightly regulated permit, available through the Pennsylvania Fish & Boat Commission. The triploid is created by physical alteration of Grass Carp eggs. The U.S. Fish & Wildlife Service tests each fish before it is sold or stocked to make sure it is sterile. The triploid then may answer the need for aquatic vegetation control on small waterways, without the potential problems of the fertile Grass Carp.



Grass carp

IDENTIFICATION

The Grass Carp looks somewhat like the Common Carp. Its color is olive to silvery-white, and it has large scales that are dark edged, with a black spot at the base. The fins are clear to gray-brown, and the body is relatively slender and compressed-looking for a Carp. Unlike the Common Carp, Grass Carp do not have spiny modified rays at the leading edge of the dorsal and anal fins. Grass Carp also do not possess barbels around the mouth.

HABITAT

The natural habitat of the Grass Carp is lakes, ponds, pools and the backwaters of large rivers. In Pennsylvania it is allowed only by permit in ponds.

LIFE HISTORY

Unaltered Grass Carp are highly fertile. Each female produces one million or more eggs. The eggs must remain suspended in the current for several days before hatching, so Grass Carp need long stretches of flowing water for successful reproduction. They grow rapidly, to more than 10 pounds in just two years. They are not readily taken by anglers, because they feed almost entirely on aquatic vegetation, algae and some small bottom-dwelling invertebrates. They can grow to 50 pounds or more and about four feet long.

COMMON CARP

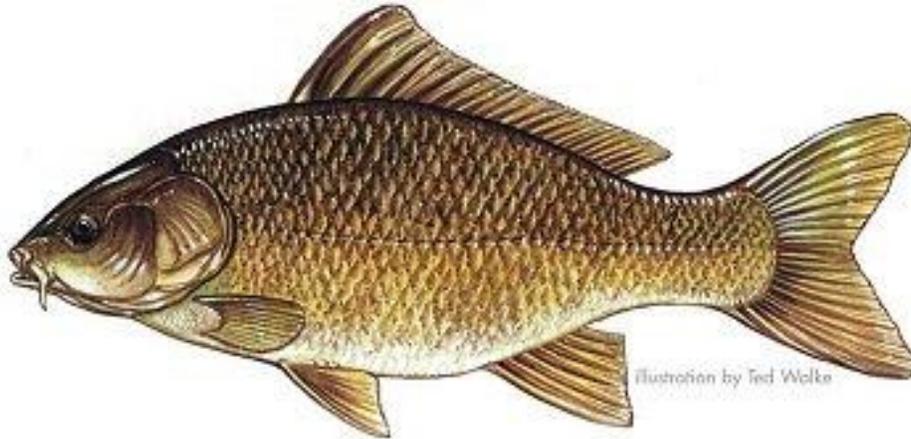
Cyprinus Carpio

SPECIES OVERVIEW

Pennsylvania's biggest minnow is not a native of this continent, or this hemisphere. It was originally distributed throughout Europe and Asia. It is not known exactly when Carp were brought to the United States from Europe, probably the mid-1800s to late 1800s. Some earlier reports by European settlers of "Carp" in North America are thought to be misidentifications of the Quillback. By 1880, the U.S. Fish Commission had distributed more than 12,000 Carp to people in 25 states and territories to establish the fish in this country. Today, Carp are found not only throughout the United States, where they are especially abundant in the fertile waters of the Mississippi River watershed, but they occur in all 67 Pennsylvania counties. Young Carp are an important part of the aquatic food base. Larger Carp are a fisherman's challenge because of their tackle-testing weight. Carp are also pursued by bow fishermen, especially when the fish move into shallow water to spawn. The genus name "Cyprinus" is the old-world name for Carp. "Carpio" is a Latinized word meaning "Carp."

IDENTIFICATION

Carp can be confused with feral (wild) Goldfish, except that the Carp grows much larger and has two pairs of soft, fleshy barbels around its mouth. Goldfish don't have these barbels. The Carp's body is robust, deep and thick, and arched toward the dorsal fin. It has large scales that are dark-edged, with a black spot at the base. Most Carp are heavily scaled, but two genetic mutants show either few, extremely large scales (the "Mirror Carp") or no scales at all (the "Leather Carp"). Carp have a lengthy dorsal fin, with nearly 20 soft rays. The dorsal fin extends well along the back. The dorsal and anal fins have a sharp "spine," actually, a hardened soft ray, on the front edge. The typical Carp's back is olive-brown to reddish brown, with the sides becoming silvery-bronze, brassy, or olive-gold. The belly is yellow or yellow-white. The caudal and anal fins are usually tinged with red. Carp generally grow to about 30 inches and 10 to 15 pounds. The Pennsylvania state record is over 50 pounds.



HABITAT

Carp tolerate a variety of habitats, even heavily silted water or polluted water that most other fish cannot tolerate. They can also be found in clean streams, including the larger trout streams. When Carp live in rivers, they inhabit the slower-flowing sections. They are also in ponds, lakes and reservoirs. Carp prefer shallow areas with plenty of underwater weed growth. But they can be found over any type of bottom, including mud, sand or gravel. Carp create their own turbidity, muddying the waters during their bottom-rooting feeding. They have been blamed for contributing to the decline of clean-water native fish, because their silt-stirring activities decrease light penetration. This inhibits plant growth, and causes mud to settle on and suffocate developing fish eggs.

LIFE HISTORY

Carp spawn in late spring to early summer, over aquatic vegetation. They may choose a shallow, weedy bay. After rains have swelled their home river over its banks, they may move into flooded fields to deposit eggs on submerged plants. The splashing of their spawning commotion in shallow water can often be seen and heard. Several males may spawn with a female, which can release up to two million tiny eggs. The Carp parents abandon the eggs. The eggs adhere to submerged vegetation and to the bottom. They hatch in four or five days. Carp grow to four or five inches their first year. They mature in three or four years, and they can live to be about 20 years old. The Carp is an omnivore, eating a wide variety of aquatic plants, algae, insect larvae and other invertebrates, and even small fish. Its usual feeding method is to disturb the bottom material with its snout and pick up the food it dislodges, usually kicking up clouds of silt. Carp have a well-developed sense of taste and a sensitive mouth. Their pharyngeal "teeth," located in the throat, are adapted for crushing. The larger ones look like human molars.