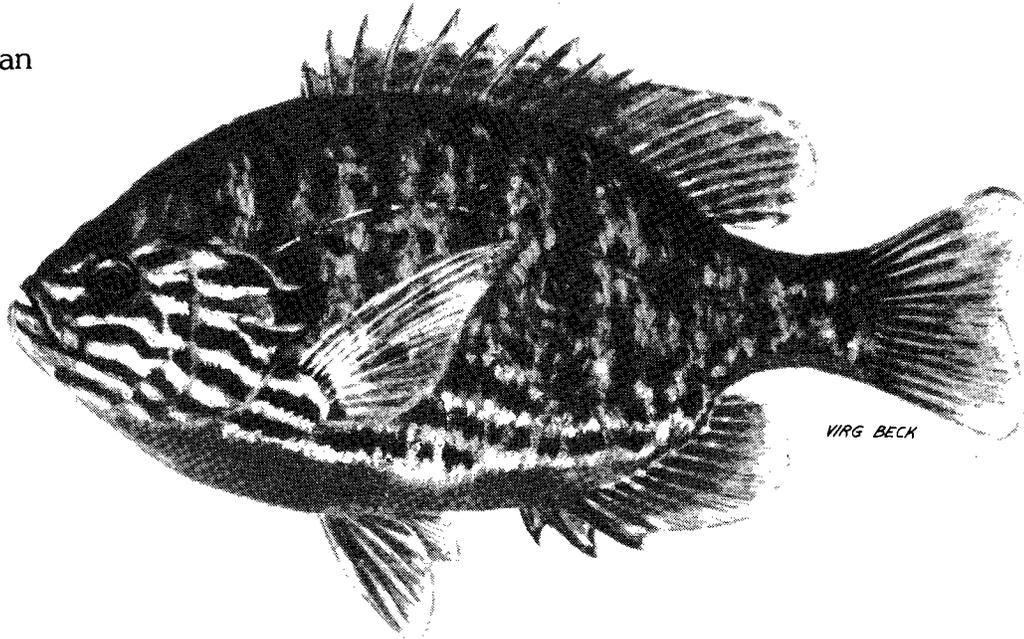


PUMPKINSEED

(*Lepomis gibbosus*)

By Paul Holtan



Common names:

Pumpkinseed – Common sunfish, sunfish, pumpkinseed sunfish, yellow sunfish, round sunfish

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*“A very beautiful and compact little fish,
perfect in all its parts, looking like
a brilliant coin fresh from the mint.”*

— David Jordan and Barton Evermann
American Food and Game Fishes, 1905

The pumpkinseed has traditionally been considered a “children’s fish” because it is small and because its fondness for shallow water makes it particularly vulnerable to anglers fishing from shore. Sit a youngster in a life jacket down along a lake bank, cane pole baited with a piece of worm in hand, and there is a good chance a pumpkinseed will be one of the first fish on the line.

And what better catch to pique a youngster’s interest in the aquatic world than the ornate pumpkinseed? Although it is sometimes called the common sunfish, there is nothing common about the appearance of this colorful member of the sunfish family (Centrarchidae). With spots and

stripes in a variety of hues, the pumpkinseed is one of the most distinctive fish species to inhabit Wisconsin waters.

The pumpkinseed is a close relative of the bluegill. The two species may even crossbreed, resulting in bluegill-pumpkinseed hybrids. Like bluegills, pumpkinseeds are fairly abundant in ponds, lakes and rivers; and like bluegills, pumpkinseeds may become too abundant, resulting in populations of **stunted** fish (shortened growth due to overpopulation).

Pumpkinseeds have the same narrow body shape as bluegills, allowing them to put up an aggressive fight at the end of a line — even though they rarely exceed 8 inches — by swimming at right angles, cutting through the water like a kite cuts through the wind. Another trait pumpkinseeds share with bluegills is excellent flavor. Pumpkinseeds are true panfish — delicious when lightly floured and pan fried. They are also nutritious, since they are high in protein and low in fat.

Being easily caught from shore, putting up a tough fight at the end of a line, and looking like a jeweled treasure from the watery depths, the pumpkinseed does have what it takes to endear itself to children. But find a lake where pumpkinseeds are biting, and you may find it also has what it takes to bring out the child in anyone, as even seasoned anglers will crowd the banks trying to cash in on these "brilliant coins fresh from the mint." (Fig. 1).

Identification

Its unique configuration of different colored spots and stripes makes the pumpkinseed stand out from other members of the sunfish family, which along with bluegill includes black and white crappies, largemouth and smallmouth bass, and other sunfish. The breast and belly of the pumpkinseed are orange to red-orange, and its back and sides are brown to olive. The sides and back are speckled with orange, yellow, blue and emerald spots, also found on the **anal** (rear, bottom) and **caudal** (tail) fins of some individuals. The pumpkinseed has seven to eight dark vertical bands on its sides. The bands are irregular and are fainter than those found on the bluegill. In addition, the pumpkinseed has several narrow wavy stripes, alternating orange-brown and emerald or light blue, radiating back from the snout along the head and over the **operculum** (gill cover). Breeding males are the most colorful.



Figure 1. Pumpkinseed are easily caught from shore.

The pumpkinseed can be distinguished from the bluegill by the opercle flap on the rear of the operculum. Both species have black opercle flaps but the pumpkinseed's has a distinctive, crimson spot in a half-moon shape on the rear edge.

Pumpkinseeds have spiny-ray dorsal fins that are joined and appear as one fin. The front fin has 10 or 11 **spines** (sharp, rigid fin supports) and the rear 10 to 12 **rays** (soft, flexible fin supports). The anal fin has three spines and 10 to 11 rays. Be careful of the sharp spines when handling a pumpkinseed (Fig. 2).

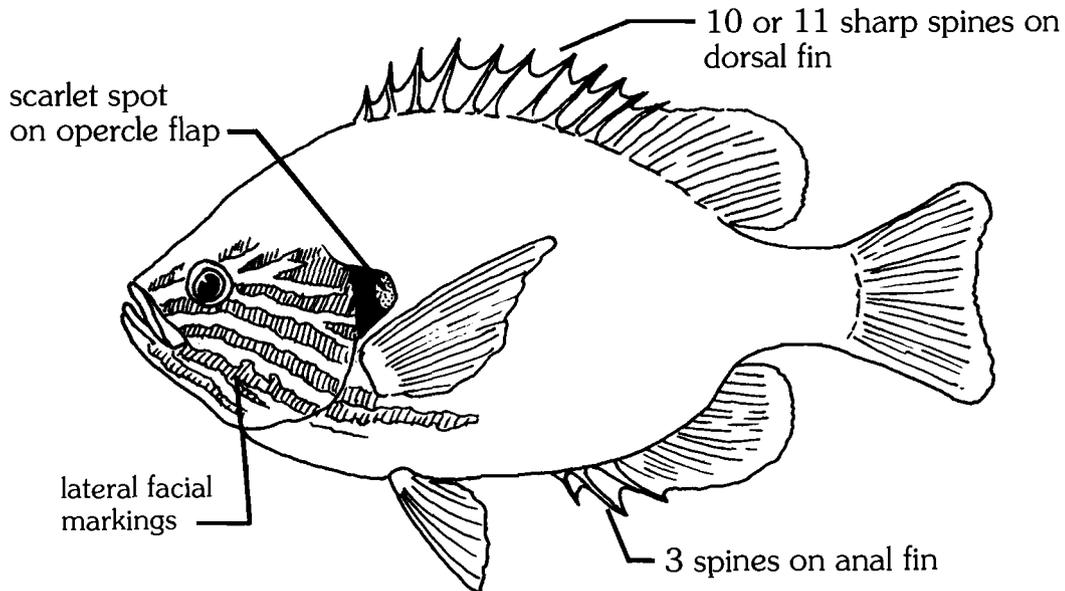


Figure 2. Some of the distinguishing features of the pumpkinseed.

Distribution

Pumpkinseeds are found throughout Wisconsin, though they are less common in the driftless region of the southwest because it lacks the glacial lakes that provide prime habitat for the species.

Pumpkinseeds prefer cool to moderately-warm water, and are most prevalent in small lakes and ponds. They are also found in Mississippi River backwaters, impoundments of smaller rivers and streams, and in bays of both Lake Michigan and Lake Superior.

The pumpkinseed's native range was originally limited to eastern North America, from Manitoba, Canada, east to the Atlantic seaboard, south as far as Georgia, and west through the Ohio Valley. Stocking has extended its range west of the Mississippi Valley as far as the West Coast (Fig. 3).

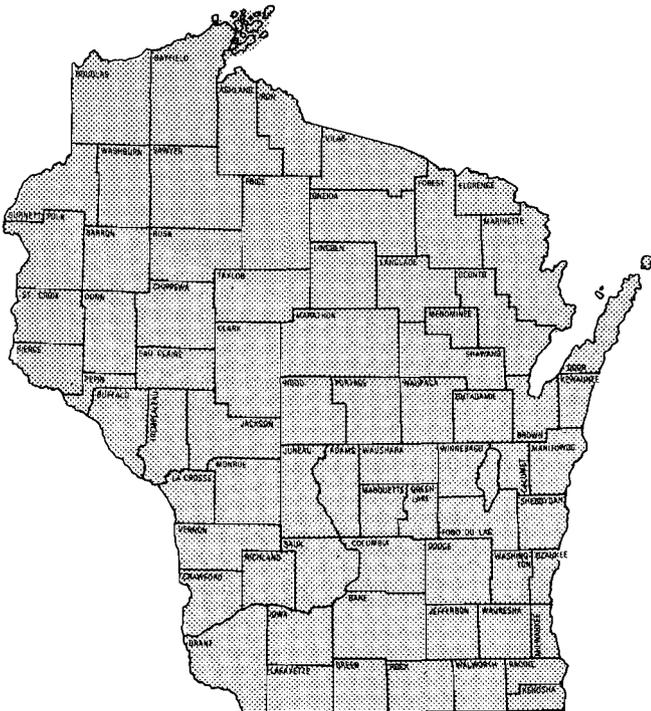


Figure 3. Generalized distribution of pumpkinseed in Wisconsin.

Habits and habitat

A small fish with a small mouth, the pumpkinseed eats small food. The menu from which the pumpkinseeds eats, however, is rather large, including insects, insect larvae, mollusks, snails, other crustaceans and small fish. Pumpkinseeds should win the praise of all summertime outdoor lovers as research has shown the species is effective at destroying mosquito larvae. Pumpkinseeds feed at all water levels from the surface to the bottom. Without **canines** (sharp, conical teeth), pumpkinseeds rely on small

blunt teeth on brushlike pads along their jaws, and a few large, molarlike teeth in the back of their mouths to capture and consume food. They also have small **gill rakers** (comblike structures on gills) for filtering small food particles out of the water. These active fish feed throughout the day, with heaviest feeding during the afternoon.

Pumpkinseeds like cover, such as aquatic vegetation or submerged brush, and therefore are not often found in open water. They exhibit a strong instinct for a home range. Pumpkinseeds have a remarkable ability to find their way back to a familiar location. In fisheries studies, pumpkinseeds that have been captured, marked, and then released in another part of the same lake, are often recaptured near the location where they were first caught.

The pumpkinseed is more tolerant of low oxygen levels than the bluegill, but less tolerant of warm water. It is still a warmwater fish, thriving in temperatures between 75 and 89 degrees Fahrenheit.

While young pumpkinseeds will form fairly large schools that stay close to shore, adults rarely school, traveling instead in pairs or loose aggregations of just three or four individuals. Adults will move to slightly deeper water, but still prefer being near submerged vegetation.

Pumpkinseeds, especially small ones, are eaten by all predatory fish including yellow perch, smallmouth and largemouth bass, walleye, northern pike, muskellunge and other sunfish (Fig. 4). Adult pumpkinseeds are known to eat smaller members of their own species.

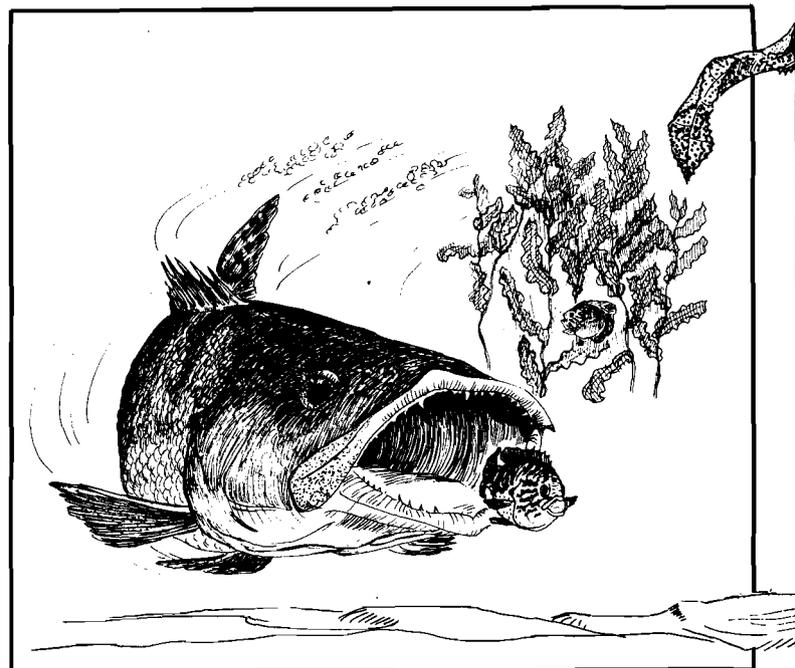


Figure 4. All predatory fish eat pumpkinseeds.



Pumpkinseeds like cover such as aquatic vegetation or submerged brush.

Life cycle

Like other members of the sunfish family, the pumpkinseed builds a nest in which to spawn (Fig. 5.) Males are responsible for nest building, a chore they take on in late spring or early summer when water temperature reaches 55 to 63 degrees Fahrenheit. Nest sites are generally in shallow water, anywhere from 6 inches to several feet deep, on sand or gravel bottoms. Using its caudal tail as a broom, the male will sweep out a shallow, saucer-shaped depression 4 to 15 inches in diameter (usually about twice the length of the fish). While sweeping, the male holds his sharp **pectoral** (side) fins out and pushes water forward to remain stationary. The male will remove stubborn objects from the nest by pulling them out with his mouth. The nests are built in colonies that may range from just a few to as many as 10 to 15 nests. Occasionally, pumpkinseeds will build nests in bluegill nest colonies (Fig. 5). Crossbreeding between pumpkinseeds and bluegills or other sunfish is fairly common. Once constructed, the nest is vigorously defended by the male, who chases off intruders by charging and occasionally biting. Females remain in deeper water until nests are completed and then move in toward colonies. A male will swim out from its nest as a female approaches and attempt to drive her into his nest.

If the male is successful, the pair begin swimming in circles, side by side, with the female inclined to one side and the bellies of both fish touching. The female then releases some eggs and the male some **milt** (sperm). Females may spawn in more than one nest and more than one female may use the same nest. Occasionally, more than one female will spawn with a male simultaneously. Depending on size and age, a female may produce between 1,500 and 7,000 eggs.

The small, amber-colored eggs adhere to gravel, sand or debris in the nest. The eggs hatch in two to three days, or longer depending on conditions. One nest may produce anywhere from 1,500 to almost 15,000 **fry** (newly hatched fish), with the average about 8,000. Females leave the nest after spawning but males stay and are highly protective of the eggs. Male pumpkinseeds will even nip at hands or feet that come close to their nests. This protective behavior may continue after the eggs hatch and in some cases, if a fry strays from the nest, a male may capture it in his mouth and return it to the nest.

Young pumpkinseeds live on or near the shallow breeding ground and grow rapidly, reaching about 2 inches in the first year. Most pumpkinseeds mature and begin reproducing in their second or third year. Maximum age of the species is between 8-10 years. Growth rates and weights can vary



Figure 5. Like other members of the sunfish family, the pumpkinseed builds a nest in which to spawn.

considerably depending on water quality and temperature, population density and other factors. Generally, mature pumpkinseeds average 5-8 inches and weigh from 8-12 ounces. Stunted pumpkinseeds may grow no longer than 2 1/2 inches. The world record pumpkinseed, caught in South Carolina in 1997, weighed 2 pounds, 4 ounces. The Wisconsin record pumpkinseed, caught in Ozaukee County in 1997, weighed 1 pound, 1 ounce.

Age (yr.)	Length (in.)
1	2.1
3	4.6
5	6.2
8	7.8

Fishing for pumpkinseeds

With their fondness for hanging out in shallow water and their tendency to remain active throughout the day, pumpkinseeds are truly a species that anyone can pursue. Anglers don't need boats or special equipment to fish prime pumpkinseed habitat. A simple cane pole, or an inexpensive rod and reel are sufficient for getting bait into the shallow weed beds preferred by pumpkinseeds. Garden worm makes an excellent bait, but pumpkinseeds will bite at almost any small bait, such as insects, leeches or pieces of fish. Pumpkinseeds will also hit small artificial lures and can be fished for with a fly rod with wet flies or dry flies. Pumpkinseeds are particularly active in the spring and summer when they are aggressively defending their nests. Pumpkinseeds will hit at grubs — the larvae of insects — early in the winter, but they are less active from mid to late winter.

Pumpkinseeds are included in the panfish classification which has a liberal daily bag limit and no size limit. Check current Wisconsin fishing regulations for up to date information.

Management

The pumpkinseed's diverse diet, based primarily on basic food sources such as zooplankton, insect larvae and crustaceans, allows the species to proliferate in small water bodies that lack significant predator populations. This may lead to pumpkinseed overpopulation, and the fish end up competing for food and habitat, a situation conducive to stunting. Stocking predator fish like northern pike and walleye in lakes with stunted fish can reduce populations, providing aquatic vegetation is not too thick in the lake. Removing panfish by seining or netting can temporarily reduce populations and may increase fish size for several years. Lakes can also be chemically

treated to eliminate entire populations, although this method removes all fish and requires expensive restocking efforts..

Another technique to control stunting is to draw down lakes before they freeze. This will reduce populations by increasing winterkill conditions, make it easier for predators to prey on pumpkinseeds by concentrating them in the remaining water, and freeze out aquatic vegetation that provides pumpkinseeds shelter from predators during the summer. This technique usually requires landowner agreement and is only applicable to bodies of water on which the water level is easily controlled.

Stunted pumpkinseed populations often occur in lakes that have abundant amounts of aquatic vegetation. The dense cover makes it difficult for predator fish to prey on them. Controlling aquatic plant growth by limiting the nutrients flowing into lakes and rivers from sewage effluent, leaking septic systems, and agricultural and lawn fertilizers helps limit aquatic plant growth and helps control stunting problems.

In lakes without suitable pumpkinseed or other sunfish habitat, fish managers will sometimes construct artificial shelters of logs, brush or other materials to place on lake bottoms. The cover provides shelter from predators for pumpkinseeds and other sunfish.

Environmental concerns

Because pumpkinseeds are low on the aquatic food chain, have a low fat content and live relatively short lives, they do not accumulate toxic chemicals or metals in their flesh to the extent that larger, longer-living predator fish do.

Intensive shoreline development can harm pumpkinseed spawning grounds. Increased siltation in lakes from shoreline erosion can cover spawning sites with sand or silt and heavy lake use can stir up water and disrupt spawning activities.

Additional reading

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