



Largemouth and smallmouth bass. The latter is especially suitable where water temperature is a bit too cool for largemouth bass but too warm for trout.

fastest when the water is above 75°F (24°C). Although largemouth bass may live for 10 years, the average pond has very few older than 5 years.

Young bass eat water fleas, insects, and very small fish and crayfish. Adults prey on almost any available animal that fits in their mouth, such as fish (including their own offspring), crayfish, tadpoles, frogs, worms and insects. In Michigan, it's best to stock minnows as forage for largemouth bass. The bass prefer them by far to bluegills and other panfish.

Most female largemouth bass first spawn when 2-4 years old, or about 10 inches (25 cm) long in Michigan ponds. Spawning occurs in May or June when the water is between 60° and 75°C (15-24°C). To form a nest, the male sweeps a shallow circular depression in sand or organic bottom at a water depth of 2-6 feet (60-180 cm) and usually near hiding cover. He fertilizes the eggs as the female scatters them on the nest, and he guards them and the newly hatched fry until they leave the nest in a school. Numbers of largemouth fry hatched per nest vary considerably. An average of 4,375 was found in one Michigan study. Less than one percent of the eggs carried by each female will usually survive until the first autumn.

Survival may be reduced by sudden drops in water temperature, by predation on eggs and fry (particularly that of bluegills and other sunfish), and by competition for food with other fishes.

Smallmouth Bass (*Micropterus dolomieu*)

The smallmouth bass, another large member of the sunfish family, is suitable for ponds that have clean gravel beds for spawning and somewhat cooler water than is best for largemouth bass. For these reasons, old gravel pit ponds often furnish excellent smallmouth bass fishing. Smallmouths are sometimes classified as a "coolwater" fish rather than in the warmwater group. Many anglers like smallmouth bass better than largemouth because they fight harder. Their feeding, growth, reproductive habits, and management are roughly similar to those of largemouth bass.

Bluegill (*Lepomis macrochirus*)

The bluegill is probably the fish that is most frequently stocked in warmwater ponds, but it is often unsatisfactory in Michigan because of stunting. Pond owners who wish to stock bluegills should be cautioned that, although several years of good fishing will probably follow the initial stocking, intensive management

is required to maintain desirable body growth. This is because bluegills breed prolifically, overpopulate the pond, and severely overgraze the food supply, whereupon growth decreases. Despite stunted body size, they remain prolific.

Bluegills feed on a wide variety of organisms, including insects, water fleas, fish eggs, and very small fish. Some rooted aquatic plants and algae are also eaten.

Growth varies, depending largely on how crowded the bluegills are. Under favorable conditions, they reach 6 inches (15 cm) in 2-3 years but in many ponds, they reach this size only after 4-6 years.

In Michigan, female bluegills reach sexual maturity by the second to fourth summer of life and produce 6,000 to 27,000 eggs per year, depending on body size. Bluegills spawn over almost any type of bottom in water 1 to 3 feet (30-90 cm) deep, starting in May or June. As with bass, the male bluegill builds and guards the nest. Nests are usually 6-12 inches (15-30 cm) in diameter and close together. The average nest contains about 18,000 fry which may be from more than one female.

Bluegills have a long spawning season, generally lasting from late May to August. Females ripen at different times, and the eggs from a single fish mature gradually. A