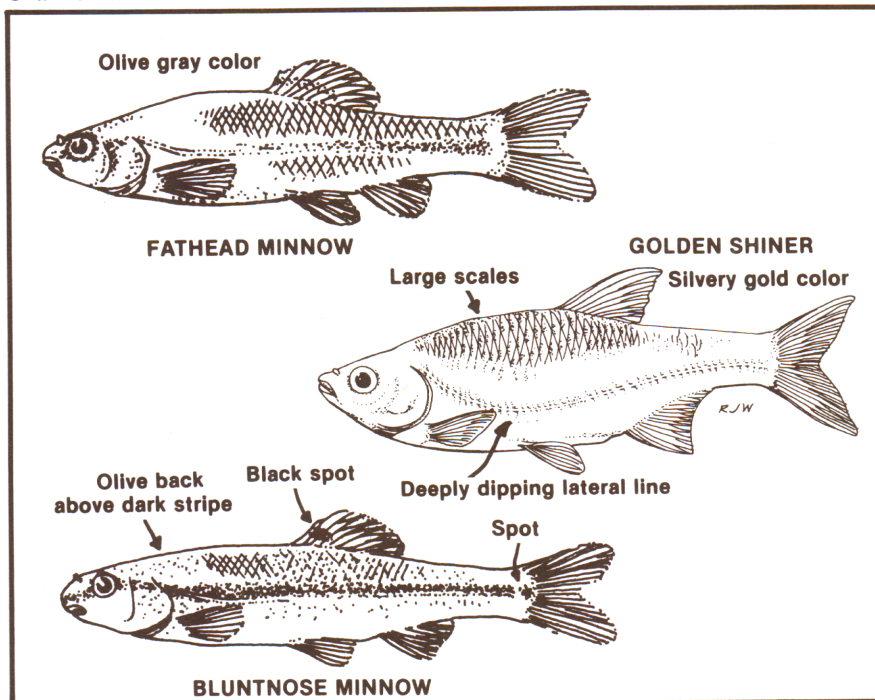


Channel catfish and bullheads.



undercut banks or in hollow logs when water reaches 75°F (24°C). The male guards the eggs and fry until they school and leave the cavity.

Forage Fishes

Small fishes, such as minnows and shiners, can be stocked in ponds to provide forage for bass and catfish, although it will not always be necessary to do so. NEVER STOCK FORAGE FISH FOR TROUT. Trout don't need them, and the small fishes will compete for the food that the trout do eat.

The most suitable bass forage fishes in Michigan are the fathead minnow (*Pimephales promelas*) and the bluntnose minnow (*P. notatus*). The golden shiner (*Notemigonus crysoleucas*) can often also be used with success. These all feed on plankton and insects and will reproduce in Michigan ponds if there is suitable spawning habitat.

Bluntnose minnows seldom exceed 4 inches (10 cm), and fatheads 3 inches (7.5 cm). Golden shiners attain a maximum length of about 10 inches, and if many in the pond reach 6 inches (15 cm) or larger, this may create competition for the food of young bass. This is a disadvantage of golden shiners, and for this reason, fathead minnows are usually preferable as bass forage.

All 3 species will spawn when 2-3 inches long and normally several times throughout spring and summer. Spawning starts when the water warms to 65°F (18.5°C) in areas which are 1-2 feet (30-60 cm) deep. Golden shiners deposit their eggs on aquatic plants. Fathead and bluntnose minnows lay eggs on the underside of rocks, tile, boards or logs. Adult fatheads usually die shortly after spawning.

Fishes Not Recommended for Pond Management

Some fish are not recommended for stocking in Michigan ponds if

Forage fishes for bass or catfish in Michigan ponds. NEVER stock minnows or other forage fishes in trout ponds!