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Southern  
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Aquaculture  
Center

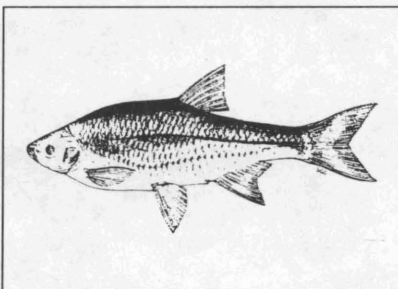


## Baitfish

D. Leroy Gray \*

### Golden shiner (*Notemigonus crysoleucas*)

The bright, flashing appearance of the golden shiner has made it popular with the fisherman. Its body is deep and compressed laterally and covered with large gold- or silver-colored scales which are rather loosely attached. The loosely attached scales create a problem when harvesting, grading, and loading because when scales are lost the salability is drastically reduced. The lateral line is curved downward and there is a fleshy, scaleless keel just anterior to the anal opening. Female golden shiners grow faster



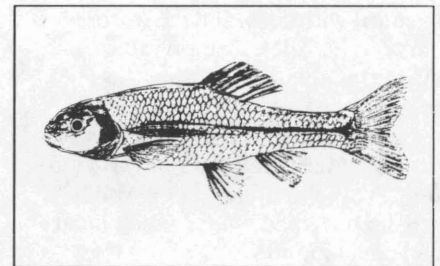
*Golden shiner*

and larger than males. In the southern United States they become sexually mature at 1 year of age at a length of approximately 2.5 inches. Some have been known to live 8 years and attain a length of over 10 inches. Domesticity has been bred into golden shiner broodstock. This factor makes broodfish easier to handle. Wild stock should be avoided.

### Fathead minnow (*Pimephales promelas*)

The fathead minnow has a cylindrically-shaped body, small scales and dull color. The mouth is not overhung by the snout as others in this genera. It has a light dusky stripe along the midside from head to the base of the tail fin. The lateral line is incomplete, not extending from the head to the base of the tail.

Adult males grow larger than females. This characteristic may create a problem when a mechanical grader is used to select broodstock. Grading for large fish may result in a preponderance of males. Breeding males assume a very dark color about the head and may exhibit dark vertical bands on the body. Numerous horn-like projections called breeding tubercles develop on the



*Fathead minnow*

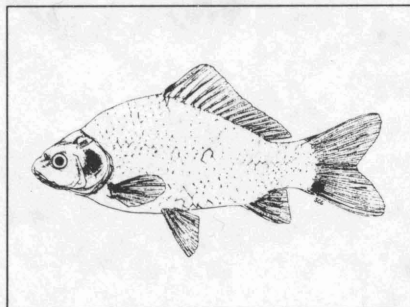
head of the adult males during breeding season. A pad also develops on the back just posterior to the head. This pad is used in preparing the nest site and caring for the eggs. Sexual maturity is reached at 1 year of age.

### Goldfish (*Carassius auratus*)

The goldfish is a heavy-bodied fish which resembles the carp. It has a stout, sawtoothed spine at the front of both dorsal and anal fins. It has no barbels on the upper jaw. The color of cultured goldfish varies from dark olive-brown, gold, white, red, black, or some combination of these. Body contour and color may be improved by selecting the broodstock with the desired characteristics.

\* Arkansas Cooperative Extension Service.

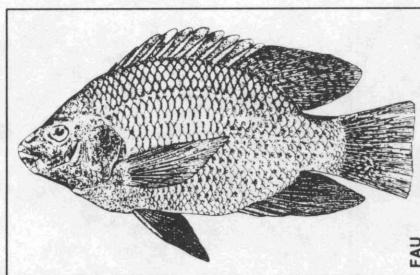
The food habits of the goldfish are very similar to those of the golden shiner and goldfish grow well on artificial feed. They are easy to seine, handle and transport.



Goldfish

### Blue tilapia (*Tilapia aurea*)

Adult blue tilapia are blue to silver in color, with several dark, vertical bars on the sides. The paired fins may turn aqua-blue during the breeding season, giving the fish its common name. The dorsal and tail fins of mature males are edged with red. Tilapia that have been well fed are deep-bodied, with a small head and small mouth.



Blue tilapia

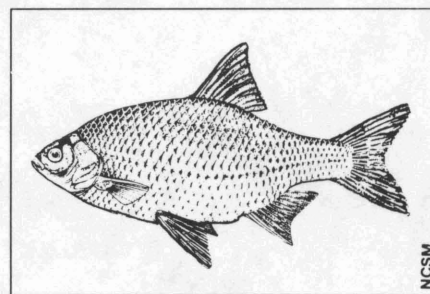
Young blue tilapia are difficult to distinguish from small native sunfish, such as the bluegill. The dorsal fin of the tilapia is longer than that of most sunfish, and it also has a dark "tilapia spot" which disappears as the fish grows larger.

Blue tilapia cannot survive water temperatures colder than 45° F. This susceptibility to low temperatures causes some inconvenience for fish culturists but it makes the tilapia an "ecologically safe" fish.

### Rudd (*Scardinius erythrophthalmus*)

The back is brownish green, with sometimes a reflection of purple. The sides and belly are silver. Fins are bright red except for the dorsal fin which is a reddish brown. The iris of the eye is gold. The size varies

from 4.75 to 12 inches. Rudd is an elongated fish with the nape and back having a gentle slope upward to the point of origin of the dorsal fin. The origin of the dorsal fin is behind the origin of the pelvic fin. The lateral line has a downward curve between the origin of the pelvic fin and the anal fin. At the anal fin it ascends and continues to the caudal fin in a straight line.



Rudd

Spawning occurs in the temperature range of 64° F to 80° F. The female lays from 100 to 200,000 eggs which adhere to vegetation and hatch in 3 to 10 days depending on water temperature. They are reddish brown in color. The rudd is an omnivore feeding on insects, larvae of insects, zooplankton, algae and aquatic plants.

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