

THE BEGINNER'S BUCKET

The Best Kept Secret in the Bait Shop

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The golden shiner has to be the best kept secret in the bait shop. People who are familiar with them know these seasonally colorful little fish as irresistible to bass, pike, pickerel, and virtually all of the larger sport fish. Recently, I learned from the NANFA e-mail list that the humble shiner will also clear unwanted hair algae and duckweed from an aquarium without bothering higher aquarium plants.

The golden shiner (*Notemigonus crysoleucas*) is a member of the minnow family and is native to the entire Atlantic and Gulf Coast drainages, from Nova Scotia through Texas. In the wild they tend to form tight shoals and graze on algae.

In bait shops they're usually sold at from 2-4 inches in length, although they're capable of reaching about 12 inches. The smaller ones are priced at about \$3-\$4 a dozen. Foot-long golden shiners are also available, especially in the south, where they are prized as bait for Florida largemouth bass.

Like many other minnows, golden shiners are thought to release fright chemicals when injured. These substances, called *Schreckstoff*, are released when the fish's skin is broken, and serve as a warning to other minnows in the area. Predatory fish are thought to be attracted to *Schreckstoff*. That may explain why golden shiners are such effective bait fish.

If you do purchase some from a bait shop, they'll need to be quarantined. Most bait dealers keep the fish in crowded tanks and don't bother to keep up with water changes. In fact, it's probably a good idea to buy a few more than you need as you may experience some heavy losses.

Although these fish are largely herbivores, they do appreciate meatier items when they can get them. Moreover, they shouldn't be kept in a tank with spawning fishes, as they will quickly make a meal of eggs and fry.

Most of the year, golden shiners are a gleaming, attractive

silver—something like a tinfoil barb. In the spring, however, males turn an attractive yellow gold, hence the name. Some populations may also have orange or red in the fins. The fish will spawn at a minimum size of 2-3 inches.

Golden shiners will breed in fish tanks, typically under conditions that simulate the arrival of spring. A cooling period of several weeks may help, especially with fish obtained from the northern part of their range. Similarly, a long photoperiod is also advisable—16 hours of light followed by eight hours of darkness.

In the wild, golden shiners tend to scatter their eggs among plants. To spawn them in an aquarium, provide lots of live plants or spawning mops. After spawning, the adults should be separated from the eggs to prevent their eating them. The eggs develop best with about 10 hours of light at about 75 °F. The fry are very small, and for about a week will need such diminutive fare as rotifers, green water, and infusoria. After the first week, switch them to brine shrimp nauplii.

In commercial bait ponds, shiners may be left to reproduce naturally in the weeds, or the eggs may be transferred to another facility to increase the yield. Usually, artificial spawning mats are added to the ponds when the water temperature reaches about 70 °F. These mats may be washable air conditioner filters or some similar material. After the fish spawn, the mats may be transferred to a "grow out" pond. The pond may have been fertilized in advance with manure or commercial fertilizers to promote weed and algae growth.

Home fishkeepers may opt for a similar method, housing the fish in outdoor tubs, and adding the mats when temperatures reach the 70s. Keeping the fish outdoors serves to condition them, as they feed on mosquito larvae and the larvae of other insects that spawn in the tubs. Keep the mats at a 45 ° angle and remove them to indoor tanks to hatch the fry. 