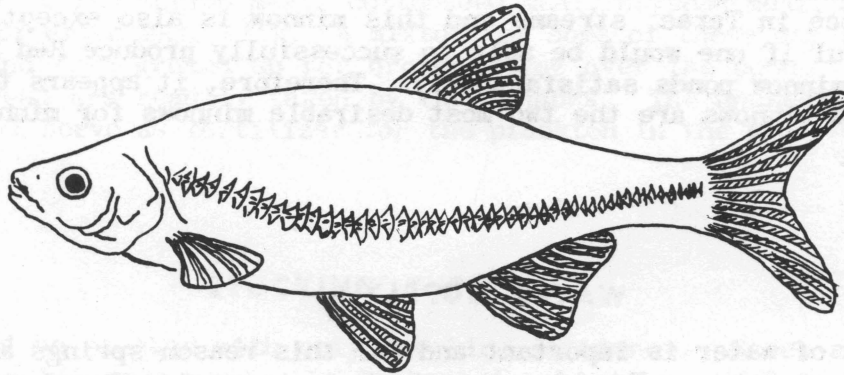


Raising Minnows

EDWIN H. COOPER, Specialist in Wildlife Conservation*

THE A&M COLLEGE OF TEXAS



Golden Shiner

Minnows are often stocked in fish ponds as food fish or forage fish for the other fishes. Minnows are also valuable as a bait fish. Bait minnows are usually taken from other waters by seining and then are held for use or distribution from minnow vats. The supply of minnows is often depleted in good fishing areas where the demand is heavy. Many miles are sometimes traveled in search for bait minnows. Lots of time and effort is required in searching for bait, and too often, no minnows.

Minnows can be raised by the thousands in small ponds where the pond is used exclusively for minnows. Pond owners and anglers find it very desirable to grow a supply in their own minnow pond. Some of the most successful dealers in bait minnows grow their own supply. They are always ready and easily taken when needed.

KINDS OF MINNOWS

Minnows are a definite family of fish. They are not the young, or immature stages of other fishes. The young of other fishes are sometimes mistaken for minnows. The young of undesirable fish should never be used for bait in farm ponds, or in other waters where such fish are not wanted. Rough and undesirable fish sometimes find their way into farm ponds by anglers dumping left-over bait fish into the pond after the fishing day is over.

Good bait minnows must be those that can be easily raised, hardy and with bright coloration. This combination is difficult to find. Among the most popular bait minnows in Texas are the Golden Shiner, Fathead, sometimes called Blackhead minnows, the Red Shiner (Redhorse), and the Parrot minnow (Bullhead). The Golden Shiner is

*Original manuscript was written by R. E. Callender, formerly extension game management specialist.

colorful and it may be easily raised in ponds. Golden Shiner stock minnows are available through the Texas Game and Fish Commission of Austin, Texas. The Game Commission is in charge of our state fish hatchery system.

The Fathead minnow is easily raised in ponds and brood stock of these minnows is available through commercial minnow growers. This minnow is exceptionally hardy but has not the coloration of the Golden Shiner. The Red Shiner (Redhorse) is probably the most abundant of all minnows in our Texas streams. It is highly colored during the breeding season in the spring and early summer. It is hardy on the hook. These minnows are usually seined from local waters. The Parrot minnow is probably second in abundance in Texas streams and this minnow is also exceptionally hardy. It is very doubtful if one would be able to successfully produce Red Shiners or the Parrot minnow in minnow ponds satisfactorily. Therefore, it appears that the Golden Shiner and Fathead minnows are the two most desirable minnows for minnow ponds.

WATER SUPPLY

A constant supply of water is important and for this reason springs afford the most desirable source of water. Enough water to keep the water level constant is all that is needed. Excess water should be by-passed as it is difficult to hold fertilizer and the natural food where an excess amount of water flows through the pond. Large amounts of cold water coming into the pond will hold the temperature too low for best minnow growth. Minnows grow faster in warm water. The minnow pond may be located on the watershed of spring branches so that water can be piped from upstream. It may be located so the water supply can be furnished by tapping the main fish pond. Sufficient water to maintain a constant water level is all that is required regardless of the water source.

THE POND

There is no particular size or shape for minnow ponds. They may range in size from 20 to 30 feet wide and 75 feet long up to 1/4 acre or more. The number of minnows produced will vary with the size of the pond. However, such ponds should not be larger than one acre for best operation. More than 100,000 minnows have been produced in a pond 40 x 80 feet in one season.

A series of small ponds is more desirable than one large one. Such a series of ponds may be arranged so that the water supply can be fed from one pond to the other through the entire series. Each pond in the series should be provided with a cut-off just in case disease should break out. This would assist in checking the spread to the other ponds. The ponds should have a depth of about one foot at the shallow end and slope to a depth of 4 or 5 feet at the other end. All outlets and overflow pipes should be screened. Since all ponds need to be drained at times, it is well to provide a drainpipe through the dam at the time the pond is constructed.

FOOD

Minnows feed upon the microscopic plant and animal life which together are known as plankton. The plankton growth may be increased by fertilizing the pond. Small quantities of cow or sheep manure at the rate of one bushel to a 1/4 acre pond may be applied at 10 day intervals with good results. The fertilizer will also furnish food for daphnia or water fleas, insect larvae and other tiny aquatic life in the pond.

The minnows may be fed shrimp meal, cottonseed meal, soybean meal, fishmeal, shorts, bran, tankage or dried skim milk. A mixture of some of these may be made up into a mash, dried, and then ground up for broadcasting over the pond. Bread scraps and stale light bread are readily taken by the minnows. The unused surplus of any of these foods will serve as fertilizer for the plankton in the pond.

STOCKING THE POND

The pond should be stocked with only one kind of minnow. Stock at rate of 200 to 400 minnows per 1/4 acre pond. It is best to obtain stock from State or Federal hatcheries if available. Otherwise, the minnows may be secured from other minnow raisers or taken from local waters. There is danger of including 'off type' minnows and sometimes the young of other fish when brood stock is taken from local waters due to mistaken identity. Exercise every possible precaution here.

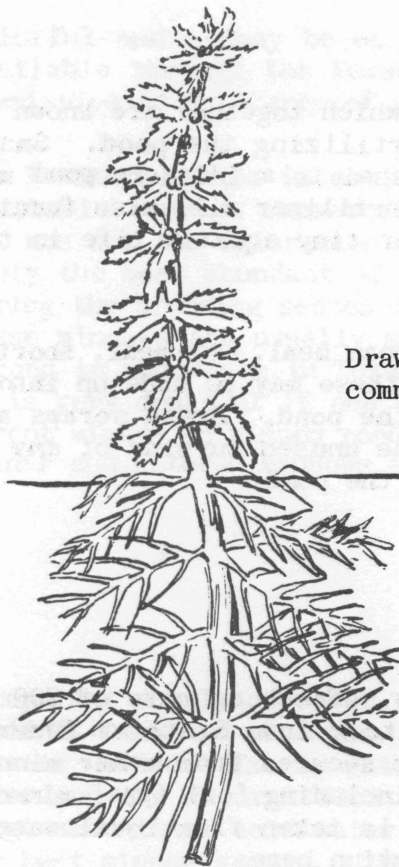
SPAWNING

Water plants are necessary for vegetation-spawning minnows such as the Golden Shiner. They scatter their eggs over the vegetation. Artificial spawning mats made of bundles of straw or fine roots may be used but aquatic vegetation is preferable. Some of the desirable types are waterweed, pondweed, muskgrass, parrot-feather, coontail and cabomba. These pond weeds should be kept under control and not be allowed to take more than one fourth of the pond. Excess vegetation is sometimes harmful to the fish.

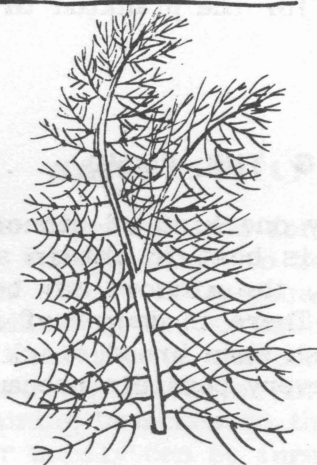
CARE OF MINNOWS IN PAILS

Minnow pails with aeration devices are best, otherwise the water should be dipped and poured back into the pail at frequent intervals. Oxygen is picked up from the air in this way. For long trips, ice should be put into the container sufficient to hold the temperature around 55 degrees. Cool water picks up more oxygen upon agitation and the minnows naturally breathe more slowly. The temperature of the water in the pail should be raised to pond temperature before using the minnows. The minnows will be more active when placed on the hook if sudden changes in temperature are avoided.

Drawings courtesy Texas Game and Fish
commission. Bulletin No. 24.



Parrot-Feather



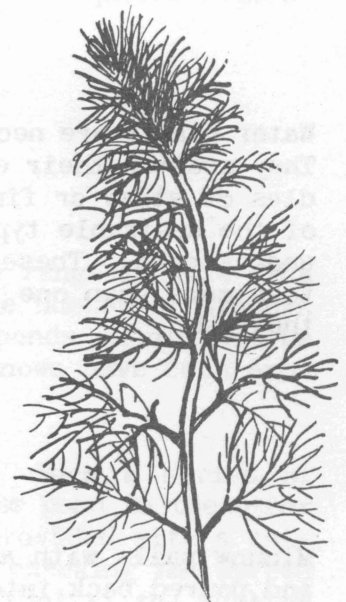
Bushy Pondweed



Coontail



Muskgrass



Cabomba