

“ Stepchild of the Hobby”:
Bob Goldstein’s Take
on Native American Fishes

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by

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In a rapid-fire, staccato presentation, veteran aquarium writer Bob Goldstein gave my local aquarium group a thorough introduction to North American native fishes. Dr. Goldstein spoke last October in Alexandria, Virginia, at the Fall meeting of the Potomac Valley Aquarium Society, a club in the Washington D.C. area.

“Natives have been the stepchild of the hobby, through no fault of their own,” he said. He began by explaining that the aquarium hobby was first defined by William T. Innes’s book *Exotic Aquarium Fishes*, first published early in this century. For the native American species which he later included in his book, Innes had to rely on a friend in the Wilmington, North Carolina area, who could only collect such staples as the bluefin killifish, the least killifish, the mosquitofish, and the blackbanded sunfish.

“So if it wasn’t around Wilmington, then it didn’t get into the hobby,” Goldstein said.

Goldstein, who recently completed a book on North American natives (in press), first became interested in them when he was visiting his wife’s family in the Ozarks. Looking for something to do, he began crunching through the ice of a local stream.

“I had no idea that there was a place in the United States that had so many fish,” he said. “The Ozarks is one of the major areas for diversity in the country.”

Today, he goes collecting wherever he speaks. Typically, he stores the fish he collects in styrofoam containers. Goldstein said he transports the fish in a mixture of water from the collecting site, together with a little sea water, to kill any unwanted microbes that the fish may harbor.

The best place to collect, he said, is at a bridge over a shallow stream, in water knee-deep or less. He recommended staying away from deeper streams and rivers. Although those waters may contain interesting species, it’s more difficult and dangerous to find

them. He also recommended not spending a lot of time at streams that don't seem to have many fish in them. "If you don't find any good stuff right away, move on," he said. "Don't waste your time. Go where there's some action."

Goldstein advised against using waders. If you trip or fall in a fast moving stream, waders will quickly balloon out with water, dragging you under in the process. He also cautioned first time collectors to be wary of game fish that may turn up in their nets.

"If you ever catch a trout, throw it back," he said. "The fish and game people have no sense of humor."

In his slide presentation, Goldstein introduced his audience to all the major groups of native fishes. He began with darters of the genus *Percina*, which, he said, are mostly nondescript. Next, he moved on to the genus *Etheostoma*, showing slides of greenside darters trying to spawn in broken plant stems that had become lodged in the filter intake tube. Greensides, he said, are found in shallow streams having algae covered rocks.

Other darters in the presentation included rainbow, orangethroat, Missouri saddle, and Kanawha darters. Goldstein showed a slide of a gravel-filled flowerpot, placed directly under the filter outflow, which he has used for gravel spawners like rainbows and orangethroats. After the darters had spawned, he would empty the flowerpot into a bucket of clean water, swirl the gravel around, scoop the eggs out with a dipnet, and place them into petri dishes. An alternate strategy is to remove the adults after spawning has taken place. If the gravel is clean and doesn't contain any uneaten food particles, most of the eggs should hatch.

The johnny darter, a cave spawner, can be bred in a five gallon tank. After the female spawns on the underside of a large, flat, rock, the male johnny darter will groom them with swellings that appear on the tips of his dorsal rays. For feeding the baby darters, newly hatched brine shrimp will do just fine, and infusoria isn't necessary.

For adult darters—as well as for the majority of other natives—Goldstein recommended a diet of mostly live foods. He said that blood worms make up about 90 percent of the diet of fish in the wild, and so

should be a large part of the diet of captive fish. Other live or frozen foods, like brine shrimp or black worms, can round out the diet.

Next, Goldstein showed slides of the eastern mudminnow, a primitive fish inhabiting quiet pockets of slow-moving streams on the East Coast. These, he said, are unusual as the female has more color than the males. Both sexes, however, tend to move very little and spend all their time hiding in the vegetation.

"You could spawn these and then you'd have a whole tank full of fish that don't do anything."

Goldstein also showed numerous slides of the North American minnows, including rosyside dace (which he said could be bred over marbles or pebbles, like zebra danios), rainbow shiners, redbelly dace, red shiners (which were once sold in aquarium stores as the "Asiatic Fire Barb"), and crescent shiners.

Goldstein quickly reviewed the sunfishes, showing slides of pumpkinseeds, longears, and redbreasts, among other species. These larger *Lepomis* species, although often colorful, tend to be aggressive.

More suited to aquarium life is the blackbanded sunfish, which will breed in soft, acid, water over a fine substrate such as children's play sand, in a tank thickly planted with vallisneria or other plants.

The *Elassoma*, or pygmy, sunfishes are also easy to keep and breed in soft, acid, water. These can be kept in a gallon jar filled with Java moss, a few snails, and some daphnia. He advised against feeding them brine shrimp, as uneaten shrimp would soon die and foul the water. The jar should be kept in a window, so that the water will turn green. The newly hatched fry will eat the algae in the water. As soon as the fry can be seen, the adults should be removed.

Other fish he described in his presentation included sticklebacks, buffalofish (too big and ugly for the aquarium), sturgeons (which quickly outgrow the aquarium), and pirate perch. Sculpins, Goldstein said, are another interesting group. Would-be darter keepers should beware of sculpins, however, which like to make a quick meal of darters. Sculpins, he said, are voracious and will try to eat any other live creatures they can swallow. They will not survive temperatures above 70 degrees.