

KEEPING SILVERSIDES ALIVE

The Jul/Aug '84 NANFANEWS asked for contributions on how to do this. Responding were John R. Shute, Knoxville, TN; Sue Ann Slotterback, McKee City, NJ; & David L. Hall, Lohman, Mo. Included is a set of citations from an article by Clark Hubbs, Austin, TX

I.

Tips on Collection and Handling of Silversides

by John R. Shute

If you've ever tried to collect and transport silversides, you've probably ended up with a cooler of dead fish before you've even put them in your car. These fishes are extremely delicate, and require special handling. If you are able, however, to get them to your tank at home in good condition, they can be an attractive and reasonably hardy addition to your collection. The trick is in the handling. I worked with fishes in Lake Waccamaw, North Carolina, one of which is a silverside, Menidia extensa. After many unsuccessful attempts to bring these fishes back to the lab alive for study, we finally hit on the answer.

First, of course, you seine the fish. As you come to the end of your seine haul, lift the seine's lead line, forming an enclosure so that the fish cannot escape, but DO NOT lift the seine out of the water! Inspect your catch to see if you have what you want, silversides in this case. If you have some in the net (still swimming around), use a small pail or plastic bowl and dip the fish out of the water. Next, transfer the fish to a cooler already filled with water. Never, even for a second, let the fish come out of the water. Be equally careful when transferring the fish from cooler to aquarium or shipping bag. If the fish are to be kept in the cooler for any length of time, it is best to aerate them.

Silversides are best maintained in a tank with plenty of surface area and unimpeded swimming space. We usually fed our specimens live, newly hatched brine shrimp, but they would probably adapt to other small living or non-living foods. They are plankton feeders by nature.

With this kind of care, our silversides flourished for many months. A school of these fishes in a large aquarium is an attractive sight.

My experience is limited to this one species, but I suspect the same procedure would work on any silverside. Some minnows can be difficult to handle as well, and I feel that this kind of treatment would probably improve the chances of any fish making it back to your tank alive and healthy.

####

Continued next page.

SILVERSIDES, cont'd.

II.

Care and Keeping of Silversides

by Sue Ann Slotterback

Yes, I've kept silversides. Here along the South Jersey coast, they are considered trash fish or bait. They are very plentiful. While seining this summer, each netful contained at least a couple thousand! What a nuisance! In the small public aquarium in Atlantic City where I volunteer, we have put them in tanks with other fish--primarily as food; however, we have had them live for at least a few weeks to a month or more; and I've kept them about six months or more in another tank I used to take care of in the college bio lab. Due to their abundance, they are rather neglected as prized display fish.

I have noticed a few things about them. First, they live longer in highly oxygenated, cool water. The water in the tanks where they have lived successfully never rose above the very low 70s. Also important is extremely minimal handling (i.e., seine to bucket to tank, the faster the better).

In the aquarium, they have been fed what every other type of fish has received--finely chopped clam or blue mussel three times a week; a little flake food in between; nibblings of algae we allow to grow on tank sides; and seaweed plopped in every once in a while.

I will obtain some silversides and pay particular attention to their care. I will let NANFA members know if anything different from what I've reported here occurs. As it is, silversides are no problem, but I've had trouble keeping newly seined anchovies alive. Has anybody had any luck with them?

###

III.

Collecting and Keeping the Brook Silverside

by David L. Hall, Lohman, Missouri

I have been collecting fish here in Missouri for almost three years and I love it. In spite of my ignorance, I have had very good luck collecting and keeping Missouri natives (I suspect that much of the credit should go to the fish themselves). I have kept several species which, according to many sources, need live foods, or, at the very least, frozen foods, and all of these fish have done quite nicely when fed a diet of flakes and an occasional treat of frozen brine shrimp. This is not a recommendation of my methods, but merely an attempt to present my undistinguished credentials.

With the above taken into consideration, let us move on to the subject of this article, "Collecting and Keeping the Brook Silverside." My interest in the Brook Silverside

(Labidesthes sicculus) was sparked by a picture I ran across in An Introduction to Missouri Fishes by William Pflieger and Lawrence C. Belusa. This booklet showed a translucent fish with a beaklike snout. It wasn't the most beautiful fish I had seen, but it was intriguing.

Finding the Brook Silverside was a simple matter, since they are abundant in the Ozark region of Missouri where I live. The problem arose when I deposited my catch in the plastic bags which I brought along for transporting the fish. Within seconds of placing the silversides in the bag, they died. Discouraged but undaunted, I tried a second time, with the same results.

I finally despaired of ever keeping the silversides alive long enough to get them home. Occasionally I tried different methods, but I was unable to keep the fragile silversides alive. Eventually I gave up trying, but down deep I never lost my interest in them.

One of my favorite spots for collecting here in Mid-Missouri is the Moreau River. Since it is close to home, I go there quite often. One particular fall day, I decided to try to find the thus-far elusive Orangespotted Sunfish (Lepomis humilis). There had been a heavy rain a few days before and the river was turbulent and silty. I had tried under favorable collecting conditions and now wanted to try my luck under these less-than-favorable conditions.

I sought out a fairly quiet pool and began probing through leaves, plants, and other cover. At first, all that showed up were Blackspotted Topminnows (Fundulus olivaceus) and Green Sunfish (Lepomis cyanellus), but not Orangespotted. Then, on a whim, I moved a little deeper and to my surprise came up with a 2½-inch silverside. I was about to return it to the water when I decided to put it in the styrofoam container I had brought to transport my fish. I continued to search for the Orangespotted, but wasn't having much luck. I decided to try on the far end of the pool, and it was there that I found my first Orangespotted. When I went to place the Orangespotted in the styrofoam box, I was shocked to see the silverside was still alive. In my excitement, I forgot about looking for any more sunfish and began looking for more silversides. I managed to get two more of them before I had to leave.

I am not sure what the key to my successful collection was, but I think the styrofoam container with lid might have had something to do with it. William Pflieger's book The Fishes of Missouri says, "This species has a definite daily cycle.... In the daytime it is intensely active, darting about continuously and frequently leaping out of the water. It is also active on moonlit nights, but lies motionless at the surface if the night is dark." Maybe the darkness of the container calmed the fish. Another factor may have been the maturity of the individuals I caught. Brook Silversides spawn as early as May in Missouri, and the ones I had captured before were caught during the summer.

I house my silversides in a 15-gallon community tank which contains darters and topminnows as well as silversides. The silversides occupy the middle to upper strata of the aquarium

and are peaceful towards tankmates. I use an undergravel filter and keep some floating plants, mostly duckweed, as well as some anchored anacharis. The water is alkaline with a pH of 7.5 and--as with all my natives--I add one teaspoon of salt per gallon. They aren't fussy when it comes to eating, taking flake food and frozen brine shrimp with equal zeal.

The Brook Silverside makes a good addition to the native aquarium if you can get them home. I'm not sure I have the secret to success, but I have managed to keep the three individuals I caught alive. Who knows, maybe I'll attempt to spawn them. At least I'll attempt to bring home more silversides next fall.

Reference

Pflieger, William, The Fishes of Missouri, Missouri Dept. of Conservation, 1975, 240.

###

IV.

Silverside References

An article by member Clark Hubbs, U. of Tex., entitled "Changes in Fish Abundance with Time of Day and among Years at a Station in Lake Texoma," (OK) was published in the Annual Proceedings of the Texas Chapter, Amer. Fish. Soc. It contained the following references to Silversides:

Hubbs, C. 1982. Life history dynamics of Menidia beryllina from Lake Texoma. American Midland Naturalist 107:1-12.

Hubbs, C., & S.M. Dean. 1979. Growth and reproductive responses of Menidia beryllina (Atherinidae) inhabiting Lake Texoma. Southwestern Naturalist 24: 546-549.

Hubbs, C. H.B. Sharp, and J. F. Schneider. 1971. Developmental rates of Menidia audens with notes on salt tolerance. Transactions of the American Fisheries Society 100:603-610.

Mense, J.B. 1967. Ecology of the Mississippi Silversides, Menidia audens Hay, in Lake Texoma. Okla. Fisheries Research Laboratory Contribution 167. 32 pp.

###