COLORADO'S TWO NATIVE KILLIFISH--*Fundulus zebrinus kansae* and *Fundulus sciadicus*

by Mike Wilson. Adapted from "Sortin' the Peat," *Colorado Aquarist*, November, 1972, which was reprinted in the Sept.-Oct. 1985 issue of the same publication. Following this article is another which appeared in the 1985 issue, updating the collecting advice.

How would you like some practically never seen killies for your collection? If I went further and said that the first species has beautiful chocolate brown bars on the sides and the males have creamy orange-yellow fins, you might start to wonder. If I say that the second species is powder-blue with crimson fins, and that both species are extremely hardy, you'll probably want some. I have the pleasure to announce that you are welcome to these fishes at no charge! In case you haven't caught on yet, I'm talking about Colorado's two native Fundulus species, jewels of the killies in their own right. All that is needed is a net and some time.

The first species, *Fundulus zebrinus kansae* (a subspecies of *F.z.*, which is officially called the Plains Killifish), grows to a length of about three inches (though I've read that they may grow at times to six). The males have wide, chocolate-brown stripes on their sides, and, in Colorado, orange-yellow fins. The females have about the same number of bars (15-20), but theirs are about one-third the width of the males'. Their fins are colorless or only slightly yellowish.

F.z.k. is found commonly in and around the Denver metro area in slow-moving streams, especially below spillways. They are reasonably easy to capture if one has a good-sized, deep net (diameter 12", depth 24"). Although these fishes are generally found in cool, well oxygenated water, they adjust very easily to the somewhat cramped quarters of aquaria. The only aquaristic problem with them so far is that they are difficult to spawn successfully. They go through the motions os spawning, and the females have periods of fullness followed by a deflated appearance. I suspect that they are eager eaters of their spawn, judging from the way they eat plenty of everything offered, then sift the gravel as does a goldfish or *Geophagus*. The fry I have collected seem to grow rather slowly, even for *Fundulus*, which are slow-growing killies. As adults, they eat anything offered and come back for more! *F.z.k.* are definitely not a soft-water fish; I have found them in 35 DH water with a pH of 9!

The second Colorado native killie is *Fundulus sciadicus* (official English name, confusingly, is Plains Topminnow). Length is about three inches, with females slightly smaller than males. Males are powder- to metallic blue (in the isolated

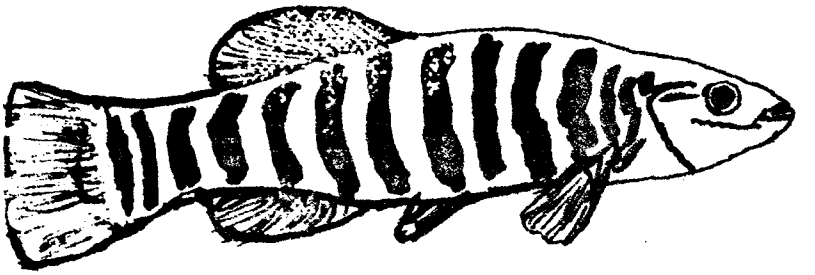
strain I have) with bright red fins. The red is most intense around the extremities. I have yet to see the "common" color variety of F. sciadicus, but it can't be an ugly fish, according to descriptions in literature (e.g., Sterba, Freshwater Fishes of the World). The female is quite pretty for a female killie when in good health. They are very light blue with yellowish fins. The only hint of striping is an indistinct longitudinal band from pectoral to the base of the tail. This pattern is only apparent when the fish are frightened or in very poor health.

The habitat of F. sciadicus is (at least in the strain I have) a spring-fed pond with hard (18-20 DH), alkaline (pH 8.2) water. Temperature along the sides, in those _____ weeds, can run about 80-85° during the day. I would assume the water along the shore gets down to about air temperature at night. The weeds the fishes are found with are something else (understatement of the year)! They seem to grasp one's legs, and if a particularly nice fish prompts you to step too far out into the clump, you will get a combination bath and mudpack (generally, the latter is much more prevalent!)

Of the two species, F.sciadicus is the better aquarium species from the standpoint that you can breed them without too much trouble. They generally prefer gravel to mops, and live plants to gravel. They aren't too prolific (5-10 eggs/day), but almost all eggs hatch, and the fry are very easy to raise. They eat all foods, but have a taste for tubifex and adult brine shrimp. This is a real community tank fish. A group of several pairs each of F. sciadicus and Pachypanchax playfairi in a planted tank is striking, to say the least. Each of the two species in this situation complements the other quite effectively

You'll notice that I've left out specific collection localities. This is due to my fears of each fish being over-collected. The F. sciadicus are especially rare in their spring. Besides, it's on private property (don't want to louse up public relations there!). The F. zebrinus kansae are fairly common, but they

Fundulus zebrinus kansae, male



Sketch exaggerates intensity of slate to brown bars on bluish background. Note somewhat bullet-headed look, look of "swollen" back. MT to MO, NM to TX.

could be exploited as bait fishes or as Oscar food! Besides, how many running streams can you think of in the Denver area? If you look in a few, you might be pleasantly surprised. This is not to insinuate that F. kansae is in every stream; they aren't. Several years ago, there were supposed to be F. zebrinus kansae in Bear Crek. This summer [1972] when I checked, I didn't turn up a single one. There were a variety of other goodies, though. Clear Creek was supposed to have F. sciadicus in it approximately five years ago. As Denverites know, however, Clear Creek is not. I have checked it several times and there is no visible aquatic life in any place I have looked. Do you wonder, as do I, why there is a dearth of life there, and what measures are being taken to improve conditions? [A 1985 editor's note states that Clear Creek is much cleaner now than at the time of writing, and credits the "Federal clean water standards."]