THE BLUE SHINER IN ALABAMA

by Bruce Gebhardt, Philadelphia, Pennsylvania

One of the highlights of the April, 1986 publication Vertebrate Animals of Alabama in Need of Special Attention was a striking photograph of the Blue Shiner (Notropis caeruleus). To the writer's knowledge, the species has received no mention in American Currents, so he had not known of the species except as one of the numberless shiners in the Atlas. The photograph, by J. Malcolm Pierson, made it clear that this species did not deserve its anonymity.

Fins were pink, with blue trailing edges to the pelvic and anal. The tail appeared less highly colored. There was a bluish mid-lateral stripe with a pink stripe laid on top. The eye appeared pinkish. The scales were strongly outlined. A look at the Atlas revealed the species to belong to the subgenus Cyprinella, which includes such better-known species as the eastern Satinfin Shiner (N. analostanus), the eastern-midwestern Spotfin Shiner (N. spilopterus), the midwestern-western Red Shiner (N. lutrensis), and the Whitetail Shiner of the Appalachians (N. galacturus). Shape reveals kinship; all Cyprinella have beautifully streamlined bodies, strongly marked scales, and pearly colors. They are fast, athletic swimmers, too. They would be a joy to watch even if colorless.

The writer's impression is that some of the photos in the book are super-colored, the result of overenthusiastic printing. This seems mostly evident in fishes sporting blue-green; nevertheless, a check with NANFA member John S. Ramsey, who wrote the fish section of the Alabama book, seemed advisable. This was his response:

> **The Blue Shiner is really blue when high! Thus, upon reviewing Malcolm Pierson's picture (in the Ala. rare verts book), and comparing it with my impression of spawning fish, I must differ with you--the color in the photo is not exaggerated! In fact, it is a little dim. (It is rare to see the opalescent-amber supralateral stripe portrayed in photos.) The highest of high males is a true blue knockout, not unlike the blue of the Spotfin Chub (also not exaggerated, and falling short of the beautiful sky-blue metallic sheen one sees on these fishes!) As they used to say in the old Innes magazine, 'Printer's inks can only approximate the colors of this beautiful fish!'**

Thus, assuming John wasn't a little "high" himself when he wrote the above, the Blue Shiner must be something to see!

Unfortunately, that may take a bit of work. The species is found only in the Mobile Bay drainage--specifically, the Cahaba River system in Alabama and the Coosa River system, which, besides the northeast quadrant of Alabama, takes in the southeast corner of Tennessee (Conasauga River), and northwestern Georgia. According to the Atlas account, it is "seldom common, and now apparently extirpated over much of its former range"; but "good populations still exist in a few tributaries of the Coosa drainage in Alabama." The Blue Shiner was last officially reported from the Cahaba River drainage in 1971. According to Pierson, however, there are "successful populations in Weogufka and Choccolocco creeks and in the lower reach of Little River. A large, stable population...continues to exist in the upper Conasauga River in Georgia and Tennessee." According to the Atlas account, the Blue Shiner "Typically inhabits medium to large clear cool streams having gravel-rubble-small boulder substrate." It is described by Pierson (relying on Krotzer) as an "opportunistic drift feeder." Not only does it like the expected "pelecypods, dipteran larvae and fish eggs," but, surprisingly, it ingests plant seeds.

Pierson and Krotzer, who work for the Alabama Power Company, have been undertaking a thorough study of the species for the Alabama Nongame Advisory Committee--range, population stability, and life history. They have looked for development and land-use patterns that could threaten the fish. "Life history" often implies wholesale "sacrifice" of hundreds of specimens in order to check things such as stomach contents and ovaries. We were told that the rarity of the fish in Alabama persuaded Pierson and Krotzer to forgo that type of study--at least in Alabama populations. That's praiseworthy indeed; restraint is not universal in ichthyology. One reason many species decline is repeated collections by the hundreds when it is claimed that they are declining. These efforts help put fishes on special-protection lists. Then the same collectors can obtain grants and positions to study why the species are so rare.

AC spoke with Pierson shortly before (AC) press time. He said a final report was due later this spring. Summarizing the main findings, he said that stable populations remain in the Little River and the Choccolocco and Weogufka Creeks. No new populations turned up, though the Choccolocco one extends for a longer distance than once thought. Blue Shiners occur in short stretches. Pierson has not definitely pinpointed the reason, but siltation elsewhere may be a factor. He discovered that a pond newly constructed by beavers supported an impressive population of Blues.

Pierson, by the way, supported Ramsey's contention that Blue Shiners can easily outshine the one in the published slide.

The Blue Shiner is listed as special-concern in Alabama, but is not listed in either Georgia or Tennessee, according to NANFA's Endangered, Threatened, and Special-Status Fishes of North America. Obviously it would not be fitting to collect large numbers of this fish wherever it is found even if legally permitted. Nevertheless, since the species does not appear to be critically endangered yet, NANFA members with access to the species might consider taking one or two pairs for live study where state regulations permit. The most responsible and efficient strategy would be to ignore the Alabaman populations and head for the Conasauga in Tennessee and Georgia; the Conasauga's a legendary collecting river for all sorts of fishes. The species is obviously quite attractive; Cyprinellas are always great aquarium specimens; and one can often learn more from live fishes than from dead ones.

References

Gilbert, C.R., H.T. Boschung, and G. H. Burgess, "Notropis caeruleus (Jordan), Blue Shiner," in D.S. Lee et al., Atlas of North American Freshwater Fishes (Raleigh: N.C. State Mus. Nat. Hist., 244.

Krotzer, R.S. The Ecological Life History of the Blue Shiner, Notropis caeruleus (Jordan), from the Upper Conasauga River, Georgia, master's thesis, Samford University, Birmingham, Alabama, 1984.

Pierson, J. Malcolm and R. Stephen Krotzer. The Distribution, Relative Abundance, and Life History of the Blue Shiner, Notropis caeruleus (Jordan) (Birmingham: Alabama Power Company G.S.C. #8, 600 N. 18th St., March 6, 1985).

Ramsey, John S., "Freshwater Fishes" in Robert H. Mount, ed., Vertebrate Animals of Alabama in Need of Special Attention (Auburn, Ala.: Ala. Agricultural Experiment Station, Auburn University, 1986), 1-22.

----------, "Freshwater Fishes" in Vertebrate Wildlife of Alabama (Auburn, Ala.: Ala. Agricultural Experiment Station, Auburn University, 1984), 1-14.

Schmidt, Konrad. Endangered, Threatened, and Special-Status Fishes of North America. Special Issue of AMERICAN CURRENTS, prob. Feb. '87.

[And phone conversations with William Smith-Vaniz & J. Malcolm Pierson]