

NOTROPIS ARDENS

by Bruce Gebhardt, Philadelphia, Pennsylvania

The books have taken to calling Notropis ardens the "Rosefin Shiner," but that name is inappropriate, to say the least. Among the reasons:

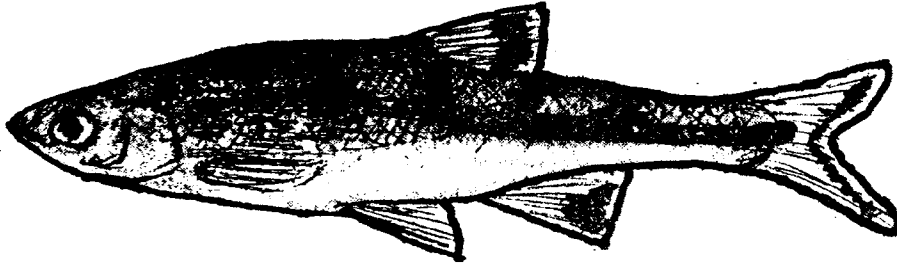
- \*while the male's fins are red-orange, they certainly aren't rose, which usually describes a color with a bit of pink or purple in it;
- \*there is no rose color anywhere on these fish;
- \*it is unwise to attempt to name this species after its ruddy fins, since so many shiners have ruddy fins;
- \*this species has distinctive features which would be more appropriate bases for a name; and
- \*the scientific name ardens means "burning" or perhaps "glowing like an ember"; this accurately describes the impression given by the most distinctive features of the male fish, the nose and eye as described below.

The eye of an adult male is brilliant red-orange, like that in a crossing guard's raincoat or a parking-lot pylon. The nose reflects this rather palely by comparison, but combines with the eye to produce the effect of an embrous matchstick. Red-orange also occurs on the male's lower lip and, according to Clay's Fishes of Kentucky, in a stripe up the back to the beginning of the dorsal fin.

Taking into account all this blazing distinction, a more appropriate name would be Red-eyed Shiner or even Red-nosed Shiner (Notropis rudolphus?). "Rosefin" is an unbelievably inept name. Nobody familiar with the live fish--or normal definitions of color--could have come up with it.

What do we find in the fins? The female's fins are colorless, though the tail may be somewhat dusky; nor does she have any red-orange anywhere else. The male has a half-radial, half-vertical, somewhat rectangular red-orange blotch paralleling the trailing edge of the dorsal fin (the edge is clear). The anal fin also has a red-orange blotch, near the tip. The tint is nowhere near the brilliance of the eye; it's typical of the fins of many another reddening shiner male in breeding season. There is also a slightly reddish line paralleling the rear margin of the caudal, forming a forward-pointing V. That line is as dusky as reddish, and the rest of the male's tail is somewhat dusky too.

The sexes share some black blotches which are fieldmarks for identifying the species. The most prominent is at the lower leading edge of the dorsal. Another lies atop the caudal



--Notropis ardens, m. Dark blotches in dorsal, anal fins represent red-orange, chevron in tail dusky, slightly orange. Eye brilliant red-orange. Straight cable-knit iridescent stripe from shoulder level to above basicaudal spot; steely iridescence below front half of stripe, overall blue-green to silvery on lower body. Back has dark saddles on tan ground.

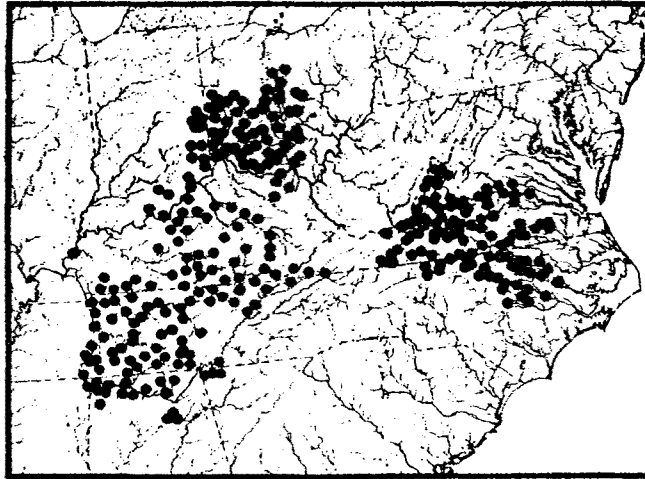
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peduncle. Then there is a basicaudal spot (end of the peduncle, middle of the side). There is a light area between the spot on the top and the spot at the midline of the peduncle, and another light area below the latter spot.

From shoulder level to just above the basicaudal spot is a cable-knit iridescent stripe that can be anywhere from gold to turquoise, depending on the angle of viewing and the angle of incidence of the light. Above that stripe, the back has a tan ground color marked with dark, blackish "saddles." These are not always prominent, but when they appear they are a useful fieldmark for identification. The Atlas page on N. ardens features a b&w photo of a male on which these saddles are thick and regular. On my specimens, they are thin and squiggly, randomly spaced.

Below the iridescent stripe is a dusky, thicker, vaguely defined, occasionally invisible stripe; the forward half sometimes is overlain with a steely iridescence. Below that stripe, the lower part of the side can appear as nondescript straw or silvery, but sometimes it shows light blue iridescence.

Let us put it together. At its aesthetic best, the male N. ardens--let's call it the Ember-nose, to be poetic as well as accurate--shows brilliant red-orange in its eye, reflected on its nose and in vicinity; attractive red-orange on the dorsal and anal fins; iridescent light blue on the lower body and a bright gold-to-turquoise cable-knit stripe above. An attractive package, no? The female, to recap, is similar to the male but lacks any reddish color.



--N. ardens range map from Atlas

The males have retained their color in my tanks through fall and winter. This is quite a recommendation of N. ardens as an aquarium fish, since not that many shiners retain their best color for long periods.

I did not collect my Red-noses; I traded with the collector, who was very vague in his locality data. It's safe to say that the fish came from west-central Virginia, however. The species has two close but distinct ranges. One is a substantial rectangle, tilted  $45^{\circ}$  down to the right, extending through central Virginia to north-central North Carolina. The other range begins with a little eastward handle extending to southwestern Virginia. I have collected in the region, but never encountered this species there. This "handle" leads to a large, long north-south rectangle starting in central Ohio and southeastern Indiana and reaching all the way to the extremes of northeast Mississippi, Northern Alabama, and northwest Georgia. The Atlas's collecting records are especially concentrated in Ohio and immediately adjacent southeastern Indiana.

Considering the species' extensive range, it is not surprising that there are a couple of distinct variations that have won the status of subspecies: N. a. fasciolaris and N. a. matutinus. The latter subspecific name means "early-morning"; how about "Dawn-glow Shiner"? The author of the Atlas account, F. F. Snelson, Jr., does not think subspecific status is warranted for the above two types; nevertheless, collectors could find specimens or populations diverging from the general description given above.

Snelson writes that the species inhabits "small to medium-sized upland streams with moderate flow and usually gravel and rubble bottoms. Typically common." He summarizes an article by Raney, who wrote that N. ardens spawned in spring and early summer, often over nests of chubs. The chubs

aren't specified in the Atlas, but there are several in N. ardens' range and most build nests, I believe, so perhaps it doesn't matter.

I have kept mine in a crowded 20-gallon-low tank. In the initial stages, I lost two to ammonia poisoning, signalled by fin rot. The condition was reversed by frequent water changes and added ammonia-absorbing chips in the filter. Once acclimated, the fish became resistant to less than ideal conditions. Better to keep them in pure, well-filtered and -oxygenated conditions. They are, after all, fishes from fast, clean water. Other such species--for instance, Silverjaw Minnows (Ericymba buccata) from fast currents--often go through the same difficulties when introduced to an aquarium.

These Red-nosed, Red-eyed Shiners are allowed to grow to 70 mm Standard Length (i.e., without the tail), according to the Atlas account. Actually, many of the males I saw when I met the collector exceeded that length. Clay, in Fishes of Kentucky, writes of an average adult length of 65 mm, implying that many of those measured were larger. Snelson notes that females are smaller; this is true of those I have seen. Clay says N. ardens are likely to have attained 50 mm of their adult-average 65 mm in their first year. This implies a fairly fast growth, which may interest aquarists.

N. ardens are fast, continuous swimmers, though they are not as agile as some of the other truly fast shiners. They have relatively large shiner mouths, terminal and oblique. I have, however, never seen them attack non-N. ardens. They have large appetites for nearly anything (mine haven't cottoned to freeze-dried krill; maybe they will learn to like it).

As I write, it's about the end of winter. The N. ardens have shown only one sign of shifting into a spring mode: the males occasionally chase each other, stutter-swimming side by side with stretched fins. Unfortunately, my tanks are now all stuffed with fishes waiting to be photographed. But, as I photograph them, I'll be able to move some out, perhaps giving the Red-noses sufficient space to enjoy spring and spawning.

I can contribute nothing further to scientific or aquaristic knowledge of the species in this article. My purpose in writing is mainly to advertise Notropis ardens to all those members within reach of the species' extensive range. If you have the chance, by all means look for this fish. You'll know it by its very shiny nose--not by the rosy fins it doesn't really have.

#### References

- Clay, William D. The Fishes of Kentucky (Lexington: Kentucky Dept. of Fish & Wildlife Resources, 1975), 150-151.
- Snelson, F.F., Jr. 1978. Notropis ardens (Cope). Rosefin Shiner. p. 228 in D.S. Lee, et al., Atlas of North American Freshwater Fishes. N.C. State Museum Nat. Hist., Raleigh, 1980.