

When a Trout is a Tiger!

by Mark A. Nale

One slide in my trout fishing programs always generates more interest than any others - a photograph of a wild tiger trout! The tiger trout is certainly the rarest of naturally reproduced trout specimens in the Keystone State. Pennsylvania Fish & Boat Commission biologists turn up only one or two each year during their summer stream surveys.

I have caught only one tiger trout in my lifetime, so I can attest to their rarity. In fact, I've caught enough trout since my wild "tiger" that it makes up less than 1/100 of 1% of my catch! My brother Frank, who fishes a bit more than I do, has ten wild tiger trout on his lifetime list. Nonetheless, since he catches a lot more trout than me, tiger trout still only occur at a rate of one for every 8,000 trout, or just a little over 1/100 of 1% of his catch.

So, what is a tiger trout, and why are they so rare? Tiger trout are the result of a wide cross or hybridization between two different species - the brook and the brown trout. Making this cross even more unique is the fact that brook and brown trout each belong in a separate genus - *Salvelinus* for brook trout and *Salmo* for browns. Although this cross can easily be performed by a fisheries biologist or a curious hatchery technician, it is rare in the wild. Experiments performed at the Benner Springs Research Station during the 1950s found that even in the controlled conditions of a hatchery, only about four to five percent of the fertilized eggs survived to the fry stage. The state of Wisconsin, more recently, has had survival rates as high as 25%. Some private breeders have done a little better, but the survival rate never approaches the normal rate of brook or brown trout.

According to Bill Willers in *Trout Biology*, this type of cross is most successful (and sometimes only successful) if the female species has the larger eggs and the shorter incubation period. With tiger trout, the female must be a brown and the male a brook trout. The body shape of a wild tiger trout is most like a male native brook trout, while their scales are larger, like those on a brown trout. A tiger trout's spotting pattern is considerably different from either parent and, as you can see from the photograph, quite striking. The normal vermiculations of a male brook trout seem to be enlarged and contorted into stripes (hence the "tiger" moniker), swirls, spots, and rings. Every one that I've seen also has a greenish cast, which lets you know that there is something different on the end of your line long before the fish is in hand.

Although tiger trout look like males, they are sterile. Charles Krueger, from Cornell University, states in the book, Trout, that the "infertility of the tiger trout may be caused by the dissimilarity between the chromosome numbers of the two parent species." Brook trout have 84 chromosomes and browns have 80.

Where To Catch One

Theoretically, a wild tiger trout could be swimming in any local trout stream that has naturally reproducing populations of both brook and brown trout. My brother Frank made the observation, and I concur, that almost all of our wild tigers have come from streams that have higher brook trout populations than they do browns. That narrows the playing field just a little more.

I caught my tiger on a small mountain stream in Centre County, and I had another almost in hand on a tiny northern Blair County stream. Frank's ten have come from eight different streams in Blair, Huntingdon, Mifflin, and Clinton counties. Two of Frank's tigers were the same fish! On October 21, 1990, he caught a small tiger trout in a remote section of a Blair County freestoner. Almost seven months later, on May 12, 1991, he landed the same fish (now about an inch longer) from the same pool!

Tiger trout are certainly unique, and I'm anxiously looking forward to catching my next tiger. Considering their rarity, however, actually hunting one could become an exercise in frustration. If you love exploring tiny mountain trickles for wild trout the way I do, some day you'll be surprised when the trout fighting on the end of your line looks a little odd. As it gets closer, you'll notice the green coloration and unique striping pattern. Soon you'll be admiring your first wild tiger - a true Pennsylvania trophy!



Mark Nale is a biology teacher and member of the Pennsylvania Outdoor Writers Association. He makes his home in the Bald Eagle Valley in central Pennsylvania.