

SEARCH FOR A RARE HUDSON RIVER FISH

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In 1974, a colleague of mine, Erik Kiviat, captured a Warmouth (Lepomis gulosus) with a fishing rod in the Saw Kill, an eastern tributary of the Hudson River entering the estuary about 99 miles north of New York Harbor. The Warmouth is a sunfish common through much of the southeast and midwest, but never before seen in the Hudson. C.L. Smith included the Warmouth in his new book Inland Fishes of New York State based on Erik's one specimen, which now resides in the fish collection of the American Museum of Natural History. If you look up the Warmouth in the Atlas of North American Freshwater Fishes, you will find that this record in eastern New York was missed when the map was compiled.

I've always been interested in the fate of introduced species in North America, so I was pleased when an opportunity arose to do a fish survey of the Saw Kill as part of a larger study on land use and recreation in the watershed. I secretly added a search for the Warmouth to my agenda.

The Saw Kill is a moderate-size stream, probably about 30-40 feet wide and mostly knee- to thigh-deep except in large pools. The stream winds through farmland, forest, and some small developments in Dutchess County, New York until it reaches the banks of the Hudson, where it falls over some steep clay cliffs. These cliffs are the remnants of a large glacial lake that existed about 10,000 years ago. Therefore the mouth of the Saw Kill has some very pretty waterfalls, as do many of the Hudson River tributaries. Presently, the Saw Kill has very good water quality, and it is used for drinking water by Bard College. We are all worried that future development in the county may affect the drinking-water supply.

Our survey took place on September 10, 1987, a less-than-propitious day, since it was raining. I met Jay Tashiro and Catherine Boehne at the Bard College Field Station at the mouth of the Saw Kill, and we proceeded into the stream. Neither of them had ever used an electroshocker before (yes, I cheat), and I'm still not sure how they feel about their experience that day.

We first tried to find some Brook Lamprey ammocoetes (Lampetra appendix), since they have been reported from the Saw Kill and are very rare in the Hudson. We could not, however, get into the soft mud bottom at the stream mouth because of a thick growth of water chestnut covering the embayment where the Saw Kill enters the Hudson estuary.

Ammocoetes set up housekeeping in very fine mud--just where water chestnut prefers to grow.

Next we moved upstream into a fast rapids at the base of the waterfall. Here the dominant fish is the American Eel (Anquilla rostrata). All of the tributary mouths in the Hudson River that I have ever sampled are loaded with eels. Most people would never see them because they hide in crevices and under rocks during the day, and are very difficult to dislodge using conventional collecting methods. The shocker is exceedingly effective at pulling eels out of their hiding places. We countered 132 in 100 feet of stream. We also picked up a few stream fish like Fallfish (Semotilus corporalis), Blacknose Dace (Rhinichthys atratulus), and Tesselated Darters (Etheostoma olmstedii).

When we got up close to the waterfall, there were a number of pools and shallow backwaters with very little current. They harbored dense populations of sunfishes, many of which were probably washed down from ponds upstream: Pumpkinseeds or Common Sunfish (Lepomis gibbosus), Redbreast Sunfish (L. auritus), Bluegill (L. macrochirus), Rock Bass (Ambloplites rupestris), and--yes--one Warmouth!

The rest of the day was somewhat of an anticlimax. We sampled nine more spots in the rain on the Saw Kill and ended up adding the following species to our list: White Sucker (Catostomus commersoni), Largemouth Bass (Micropterus salmoides), Cutlips Minnow (Exoglossum maxillina), Golden Shiner (Notemigonus crysoleucas), Common Shiner (Notropis cornutus), Redfin Pickerel (Esox americanus americanus), and Brown Trout (Salmo trutta). These are all typical inhabitants of the Hudson River tributaries.

We don't know how long Warmouths have lived in the Saw Kill; they are still here after 13 years, but have not established large populations. We do not know why they were introduced in the first place. There are plenty of instances of fishes being transported and released in new locations, an activity that is illegal and should be discouraged in any case. The Warmouth in the Saw Kill seems to be a case where the species hasn't done tremendous ecological damage and therefore is worthy of further study. Perhaps in the future we will look into this species to see how it fits into the Saw Kill ecosystem.

In the meantime, they are very attractive fish, and it's nice to be surprised on occasion.