

Guest Shot

## We Can and Must Manage Our Trout Streams Better

By Haviland Smith

With the traditional 1997 trout season over, Vermont anglers should look at their sport, draw some conclusions about how our trout fishing resources are being managed and decide whether or not they could be managed differently and more productively in the future. The Grand Isle fish hatchery is on line and producing larger trout than we are used to. Just where we should be putting those and other hatchery fish? What a lot of people don't know is that there is a substantial number of anglers here who do not want those fish put indiscriminately into our streams.

Thirty-five years ago Central Vermont's White River was one of the best wild rainbow trout streams in the country. Stream censuses at the time revealed that 80% of the rainbow trout in the White River were wild trout and 20% were hatchery trout. Today, solely as a result of stocking programs, those numbers have been reversed. Overall fishing quality has declined. What happened to so much of Vermont's wonderful stream trout fishing? Although no one can precisely pinpoint the cause, a number of factors are certainly involved. The stocking of hatchery trout, rising water temperatures caused by riparian tree removal, past gravel removal practices, stream bed channelizing, agricultural and municipal pollutants, increased fishing pressure, overly generous bag limits, habitat degradation, loss of access to spawning areas, and increasingly diverse water use have all had a negative impact.

A great deal of research has been done around the United States on the stocking of hatchery trout in streams that hold wild trout populations. The research, like our knowledge of what happened on the White, shows clearly that this approach to fishery management has a negative impact on the survival of wild populations. Over the eons, wild fish have evolved a set of rules that they follow. The largest trout get the best feeding stations, the smallest trout the poorest. There is little if any contesting of those rights. Fish need not waste energy fending off competition.

When hatchery-bred fish are introduced, those rules go out the window. Hatchery trout are dumped in the water and, unaware of the evolutionary rules of wild trout, immediately begin to encroach on the stream's established hierarchical feeding patterns. They crash about, contesting feeding stations, picking fights and wasting not only their own precious energy, but also that of their wild cousins. They completely disrupt the normal pattern of life that has evolved over the ages in the stream.

The big problem is that, unlike its wild cousin, it is a rare hatchery trout that will survive to reproduce in the stream the following year. They are such inefficient feeders that they starve to death. Unfortunately, not only have they been unable to maintain their own health since stocking, they have almost certainly depleted the strength and health of the wild fish whose lives and patterns they have disrupted. The hatchery trout diminish our wild populations and cannot survive themselves. So, our overall populations decrease.

The Fish and Wildlife Department has acknowledged in 1993 that even with the new Grand Isle hatchery, they could not conceivably produce enough trout to manage fishing wholly with stocked fish. That created a resource management dilemma. Streams were providing decreasing numbers of wild trout (at least partly because of our own stocking program) and the Department was unable to provide enough hatchery trout to either replace them or to satisfy Vermont anglers. Clearly, some other approach to trout management had to be considered.

During the past two decades, virtually every other state in the United States that is fortunate enough to have stream trout fishing has moved away from indiscriminate stocking. For the same reasons that currently plague Vermont, they have ceased stocking trout in streams that are well suited to natural reproduction, permitting the wild trout to become reestablished, reproduce and provide sustainable trout populations capable of satisfying anglers. In the interest of enjoying sustainable fisheries, anglers have accepted the new realities of lower bag limits and special regulations.

If we truly wish to see wild trout populations grow, we can enact a special regulation, as we have done on 3.2 miles of the White River, that permits the use only of artificial lures and flies. The reason for that is very simple. When a

trout takes bait (worm, corn, cheese, minnow, etc.) he tends to swallow it, with the result that he is hooked in the throat or even lower, in the stomach. Trout hooked that way and then released suffer a mortality rate in the 90% range. Trout hooked on lures or flies are almost invariably hooked in the mouth or jaw cartilage, which cuts the mortality of released trout to less than 10%.

Another management option is in force today on the Battenkill where trout between 8 and 12 inches must be returned to the water alive. All others may be kept. That way more trout of spawning age will be protected. As a result, the wild trout population in the Battenkill should increase. Again, because of mortality considerations, fishing is limited to lures and flies.

Vermont should stop putting hatchery trout in streams that can sustain wild trout populations and put them instead in ponds or lakes, or in streams that have little or no potential for establishing and maintaining populations of wild trout. In that context, sections of the Winooski, Black and Lamoille Rivers and of Otter Creek, which are poorly suited to natural reproduction, have been designated as two-fish limit streams, which began to receive stockings of large Grand Isle Hatchery trout beginning in 1994.

These steps are part of the 1994 Vermont Trout Plan and represent the first step in a concerted effort to maximize the benefit we can all get from this important natural resource. There will always be bait fishing in Vermont - it simply will not be legal in some waters. There will be liberal bag limits when appropriate and lower limits when we are trying to protect fish or increase their numbers. There will be slot limits where we wish either to create trophy fishing or simply raise wild fish populations. The bag of tricks available to fisheries managers is copious and we hope to see more and more of their techniques implemented on our waters.

If all of this isn't enough, Furnace Brook has relied on natural trout reproduction for decades. The Furnace typically has among the highest trout censuses of all Vermont streams. In 1992, it worked out to close to 4,000 fish per mile! In fact, Vermont's highest trout censuses are in streams in which hatchery fish are **not** stocked.

Thirty years ago Vermont trout fishing was the equal of any New England state. Why should we have to travel to Maine, New Hampshire, New York, Pennsylvania, Canada and the West (all of which have extensive special regulations) for our trout fishing when the potential for good fishing here in Vermont remains so high? Trout fishing can be greatly improved in Vermont, but unless we radically change both the way we manage this resource and angler attitudes toward this change, the quality of our stream fishing will continue to decline. Any insistence that the old rules remain unchanged, with high bag limits and no special regulations, will ruin what's left of this wonderful sport in our state. We need the educated support of the angling population.

*Haviland Smith was a Vermont Fish and Wildlife Board Member from 1989 to 1995 and is a Life Member of Trout Unlimited. This article originally appeared in the March 1998 issue of **Vermont Outdoors** and is reprinted here with the author's kind permission.*