Tagging For Answers

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Trout with the green spaghetti-like tags await stocking in the raceway at Spring Run Hatchery.

By Chris O'Bara and Tom Oldham

Anglers often ask fisheries biologists about fish harvest rates and fish movement. To gather information on these and other questions, DNR fisheries biologist are conducting tagging studies on the state's important game fish. Starting in 2001 with a study on the Ohio and Kanawha rivers and continuing to the present, Wildlife Resources Section biologists have been tagging sauger, walleye, hybrid striped bass, largemouth bass, smallmouth bass, channel catfish and rainbow trout to aid in the management of these important species. So why is this information important?

Well, that depends on the goal of each study. For instance, concern was expressed as to the potential limits of fish movement on the Ohio, Kanawha and Monongahela rivers, thus a fish tagging study of sauger, walleye and hybrid striped bass was conducted. Concern also has been expressed as to the number of largemouth bass being harvested, so a study was conducted on several West Virginia lakes. Lastly, anglers have expressed a concern as to the number of catchable channel catfish and rainbow trout being harvested and how long these fish are available to anglers after they are stocked. Consequently, DNR biologists initiated a study to answer these questions. Let's

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Trout stocking is underway at Spruce Knob Lake using trout tagged that day.

explore the results of the rainbow trout study.

Rainbow trout are one of the most sought-after game fish in West Virginia. This fishery is primarily maintained by stocking catchable-size fish into suitable waters during the winter and early spring. This is called a put-and-take management strategy. To examine the catch, harvest and availability of these important game fish following stocking, fisheries biologists implemented a tagging study in the spring of 2006. They tagged 2,000 rainbow and golden-rainbow trout with green spaghetti-like tags and released the fish into the North Fork of the South Branch of the Potomac River (North Fork), Spruce Knob Lake and Mountwood Lake using standard stocking procedures. Tagged fish were released on three occasions on differing days of the week into the North Fork and Spruce Knob Lake, and on one occasion into Mountwood Lake. Anglers were asked to report tagged fish which they caught and answer a short questionnaire concerning their angling experience.

Of the 2,000 tagged fish, 899 (45 percent) have been reported by anglers over a three-month period. As you might expect, a greater percentage of tagged fish were caught in the more readily accessible lakes (50 percent) than the North Fork (38 percent). Anglers kept more than 90 percent of the tagged trout they caught. Anglers did have a lesser tendency to harvest fish from the North Fork (84 percent), as compared to the Spruce Knob and Mountwood lakes fisheries (95 percent). The tagging study also gave us the opportunity to study the catch rate of golden rainbow trout versus regular rainbow trout. Anglers reported catching 46 percent of tagged regular rainbow trout, as compared to only 28 percent of the tagged golden rainbow trout. This really should be no surprise to the average trout angler who has been frustrated after casting repeatedly to these highly visible, uncooperative trout.

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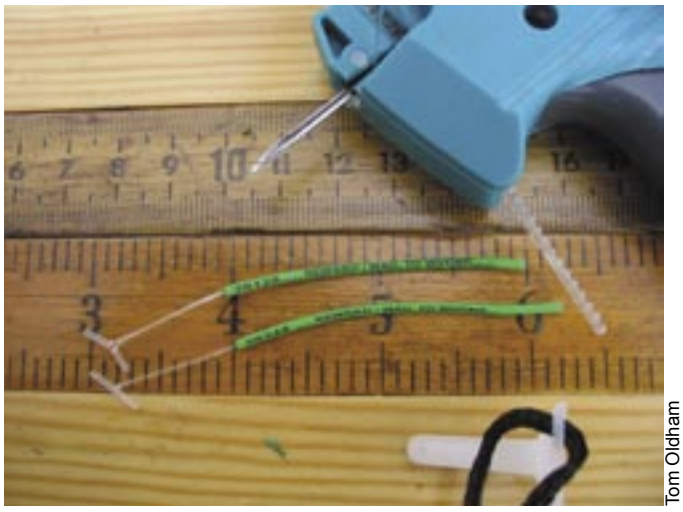

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DNR hatchery technicians Don Ketterman, left above, and Rick Pyle load up some tagged trout. At right, reward tags with application gun. The "T" end is embedded in the flesh of the trout.

This recent study backed up an earlier, 1974 study indicating that a majority of stocked trout are still available to anglers five days after stocking.

One concern often expressed is that all of the fish are caught within the first few days following stocking. Let's examine this concern. Anglers caught 37 percent of the tagged fish reported within five days of stocking. The catch rate ranged from 60 percent for Mountwood Lake, to 33 percent for the North Fork, and 22 percent for Spruce Knob. If we consider that 45 percent of all tagged fish were reported caught, and of those only 37 percent of the 45 percent were caught in the first five days following stocking, that leaves over 80 percent of the stocked fish still available to anglers. After 10 days, only 50 percent of the tagged fish had been caught. Tagged trout were reported caught up to 100 days after stocking.

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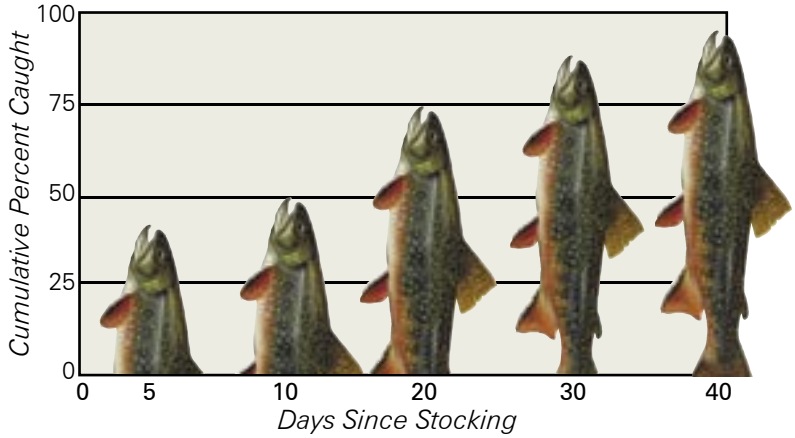
Top photo: The last of a load of tagged and untagged trout being stocked into the North Fork from a private bridge. Assistant manager, Eric Heavner signals to raise the dump bed. Lower photos:Signs are posted to inform anglers of the program.

The Percentage of Tagged Trout Caught By Number of Days After Stocking



In 1974, the Wildlife Resources Section conducted another tagging study on several waters, one of those being the North Fork, and found similar results. Fifty percent of the trout were still in the stream one week after being stocked. The recent trout study found the same to be true on the North Fork in 2006. Consequently, the DNR believes that stocked rainbow trout are still available to anglers over an extended period of time.

Let's explore some trends regarding our angling public. West Virginia anglers reported catching 90 percent of the tagged fish. Anglers residing in nine additional states did report catching tagged fish with one tag reported from a Minnesota angler. More than 95 percent of anglers reported that they were specifically fishing for trout when they caught a tagged fish, and that they had fished in several water bodies for trout during the last year. Finally, 75 percent of the anglers stated they were satisfied with their trout fishing experience. This level of satisfaction ranged from 89 percent for Spruce Knob Lake, to 75 percent for North Fork, and to 57 percent for Mountwood Lake.

So what did we learn from this study? An answer to one important question is that not all of the fish are caught in the first few days following stocking. Thus, anglers still have the opportunity to catch hatchery-reared rainbow trout for an extended period after stocking. We have seen again that the DNR's put-and-take fisheries are being used efficiently, with anglers keep the majority of trout they catch under this management technique. It appears that standard rainbow trout are easier to catch than their golden cohorts. Finally, we recognize that trout fishing is enjoyed not only by West Virginia anglers, but by anglers residing in several states and that the majority are satisfied with their overall angling experience.

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