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Cover: Electrofish crew samples a small stream in Shenandoah National Park.

Shenandoah National Park Adopts New Fisheries Management Policy

By David A. Haskell

In 1936, when Shenandoah National Park was established, only a handful of the better trout streams still contained populations of native brook trout. The stripping of the forest cover, heavy grazing, frequent wild fires, and subsequent soil erosion had put an end to the centuries old Appalachian strains of brook trout, which had evolved in many of the small headwater mountain streams. However, protected within the boundaries of the new National Park, the forests, watersheds, and streams began to recover.

During the early years of Park management, the CCC's and later Park maintenance crews, gave nature a helping hand by constructing erosion control devices to help hold the remaining soil in the areas where damage was most severe. By the early 1950s most of the Park streams were capable of supporting brook trout once again. Unfortunately, during the mid-1950s a severe drought caused many of the newly-recovered streams to go nearly dry.

The U.S. Fish and Wildlife Service (USFWS) was working with the National Park Service (NPS) at that time in an effort to assess the condition of the Park's trout streams. Following the drought, all of the stable Park streams that did not contain native trout were stocked with fish taken from other Park streams or with young native brook trout taken from streams in the Great Smoky Mountains NP. Most of the trout from the Smokies did not survive; however, the fish taken from local streams did well.

In the earlier years of the Park, although few anglers were interested in fishing for the rather small native trout, the newly-recovered streams were recognized as a valuable resource. A set of regulations was adopted which would serve to protect these new populations from excessive harvest. Fishing with bait was prohibited; all Park streams are open to fishing; a five fish limit was imposed, and all fish under eight inches had to be released. The fishing season was set so that it ended before the fall spawning season (late October), thus protecting spawning trout. The Park Superintendent was given authority to close a stream

to angling should the trout be seriously threatened.

In the early 1960s, two streams were selected to be managed as catch and release (locally known as fish-for-fun) streams. These streams have become increasingly popular because of the larger-sized fish and the year-round season. From the late 1950s until the early 1980s, stream habitat in the Park continued to improve and the native brook trout flourished.

Even though the South is best noted for its warm water fishing, more and more anglers began to discover the thrill of fishing for these feisty little trout in the Park's clear mountain streams. Today hundreds of anglers regularly fish the 30 major Park trout streams and thousands of 8- to 11-inch brook trout are harvested each year.

In an effort to assess the impact of angling and other "anthropogenic perturbations" on native trout (don't ya love those \$100 words?), an intensive monitoring program was initiated in 1982. The initial phase of this work was to evaluate the intensity of the suspected impacts, so that an appropriate long-term monitoring strategy could be developed. The results of the first year's evaluation showed that some Park streams were being subjected to severe impacts from poaching, heavy angling pressure, and acid deposition, along with natural influences such as drought and flood. Data collected between 1983 and 1986 substantiated this initial finding and further quantified the impacts. It was determined that a Fisheries Management Plan was needed to specify what management, monitoring, and research projects were needed to properly protect and manage the Park's fisheries resources and aquatic ecosystems.

The Park's first Fisheries Management Plan was approved in June 1987. The plan describes two major changes in management philosophy that have significantly increased the Park's ability to properly manage these resources. They are: (1) brook trout are an integral part of the aquatic ecosystem and have a value that exceeds their contribution to angler harvest; and (2) fishing will only be permitted in those Park streams for which monitoring data clearly show that the trout population can withstand the impact without

significantly altering the function of the aquatic ecosystem.

These are viewed by some as somewhat radical ideas. However, they are rooted deep in long-standing NPS tradition and policy. For most National Parks, the only living things (other than some fruits and berries) that can be killed or removed are fish. Since the Service is charged with the protection of wildlife and the function of ecosystems in general, one would question why fish can be harvested at the same time that all other natural resources are so diligently protected. This question is not brought up to start controversy, but simply to point out the underlying factors that shaped the development of the Park's Fisheries Management Plan.

Revised fishing regulations were published in the Federal Register in October 1986 and approved by the Department of Interior in May 1987. Major changes from the old regulations include: (1) all Park streams are closed to fishing except those listed as open in the Park's Fisheries Management Plan (a list that is subject to change each year); (2) the North Fork Moorman's River was added to the fish-for-fun program making a total of three catch and release streams; and (3) species of game fish other than trout may also be harvested in accordance with state law.

Development of the Fisheries Management Plan, the annual trout population monitoring program, and the changes in the fishing regulations have resulted in a clearer understanding of the Park fisheries resources and have led to a more responsive and effective management program. Some difficult problems remain to solve, but the Park staff now has the tools available to better address these issues.

Haskell is a Resource Management Specialist at Shenandoah National Park.



Native brook trout like the one shown here now flourish in 30 major trout streams that run through Shenandoah NP. The stream on the right is typical of the setting in which hundreds of anglers harvest thousands of brook trout each year.