

Conserving the Warner River Watershed

By George Embley and Chris Connors of Basil W. Woods, Jr., Trout Unlimited, with Fisheries Biologist Ben Nugent

Recognizing that only 9% of the historical range (Georgia to Maine) of wild brook trout is estimated to still be intact, Concord-based Basil W. Woods Jr. Trout Unlimited (Basil Woods TU), the Warner Conservation Commission and the N.H. Fish and Game Department have actively been assessing aquatic habitat and wild brook trout populations within the Warner River Watershed. With a strong public involvement and outreach component, this program seeks to develop a better understanding of fish distribution and the cumulative effects on aquatic habitat condition at the watershed level.

The first step was to develop a baseline understanding of the status of wild brook trout in the Warner River Watershed. Electrofishing helped determine which fish species were present in each of 75 different assessment units, and the condition of local aquatic habitat was noted. Aquatic macroinvertebrates were inventoried to determine the condition of water quality. We were all encouraged by the results, which indicated high water quality and presence of wild trout in two-thirds of the survey locations.

One of the most surprising findings occurred on the campus of Kearsarge Regional High School, where 60 wild trout were found in a short stretch of stream between the two

driveways! The following year, the school adopted TU's Trout in the Classroom program

To learn the level of habitat fragmentation throughout the Warner River Watershed, Basil Woods TU initiated stream crossing assessment studies. Stream crossings (culverts and bridges) that are designed exclusively to accommodate the passage of water flow can alter stream habitat and aquatic communities. Crossings can have other negative impacts, such as increased scouring and sedimentation, blockage, undermining, road overtopping, failure and culvert "perching." When a culvert becomes perched (*see photo*), fish can be blocked from migrating to more desirable

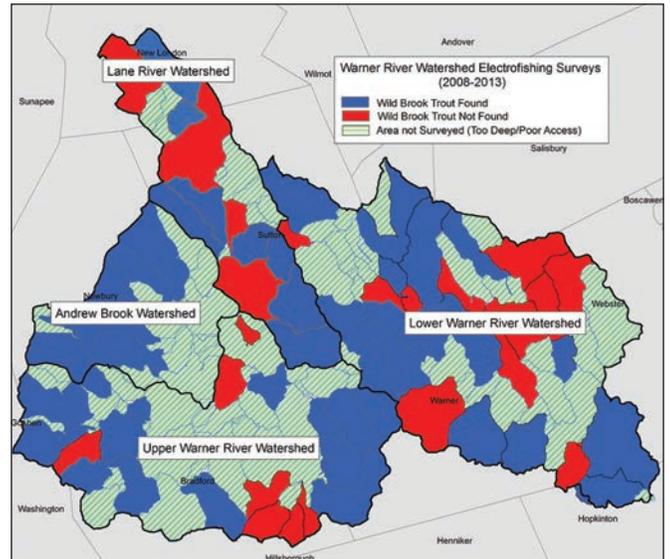


Eastern brook trout in spawning colors.

areas. Trained volunteers have evaluated about 150 stream crossings in the watershed. The remaining stream crossings will be assessed over the next two years.

Over the past four years, a great deal of information has been collected about this 149 square-mile area. Volunteers have donated over 1,000 hours helping with these assessments and promoting the results, which describe a high-quality watershed that is well worth preserving.

This productive watershed is predicted to face growing pressures, such as water quality degradation from a loss of woodlands as a result of future development. We need to be proactive and address land use alteration practices that impair both water quality and the resiliency of wild



Blue areas indicate where wild brook trout were documented in the Warner River Watershed.

brook trout populations. We will continue to promote the results of our efforts to local communities to increase the awareness of the value of sustainable populations of wild brook trout. They depend on good water quality as much as we do!

Last fall, Basil Woods TU applied for a Trout Unlimited (National) Embrace-A-Stream Grant to hire a full-time college intern to help coordinate our 2016 Stream Crossing Assessment & Outreach Campaign. This will help us more effectively engage with local communities and landowners in order to promote good stewardship and identify different opportunities to protect, restore and enhance aquatic habitat. The Warner campaign will help us refine strategies for landowner engagement efforts in other communities of the watershed in future years.

Our mission is to make local citizens and landowners more aware of how various land uses influence water quality and aquatic habitat, while promoting stewardship of their valuable streams. Keep up with the project at fishnh.com/fishing/warner-project. We will chronicle our progress within the watershed, educate local citizens about the value of our native brook trout streams and provide opportunities and resources to those interested in helping to preserve this valuable watershed. By sharing our story here, we hope to inspire and engage you in this rewarding conservation work! After all, these beautiful wild brookies are your state fish!



PHOTO BY DAVE PUSHEE

When culverts become "perched," like the ones above, fish cannot migrate to spawning areas or cooler water.