

## Fishery Region D

### Controlling Invasives

Region D biologists spent a great deal of effort to prevent the movement of invasive species into new waters or to minimize the impacts of established populations on coldwater fisheries:

- Spencer Lake is a remote water north of Flagstaff Lake in Somerset County that provides coldwater fisheries for lake trout, salmon, and brook trout. A barrier dam was constructed at the outlet in 2006 to prevent illegally introduced smallmouth bass from invading the lake by in-migrating from Little Spencer Stream. In addition to preventing bass from reaching the lake, the dam provides wetlands restoration, reconnection of tributaries to the lake, and enhanced boat access from Fish Pond to Spencer Lake. This was a Florida Power and Light wetlands mitigation project that had significant involvement from Inland Fisheries and Wildlife.



- A vertical ledge barrier was excavated on the Dead Cambridge River, Oxford County, in October 2007 to prevent invasive species from moving upstream into C Pond. Smallmouth bass have already moved into the pond and extensive removal trials involving electrofishing and trapnetting failed to capture all the bass. A feasibility study to reclaim the pond (eliminate the bass with the use of a piscicide) is currently underway. Inland Fisheries and Wildlife oversaw this project but construction costs were funded by grants.



- Magalloway River brook trout were radio-tagged to study their seasonal movements and habitat use downstream of Aziscohos Lake. This was a cooperative study with New Hampshire Fish & Game, and part of broader effort to assess and monitor riverine trout populations threatened by illegal smallmouth bass introductions.



### Habitat Restoration

Thanks to funding provided by a number of grants, several brook trout stream habitat restorations were completed and are being monitored to determine their effectiveness in improving habitat:

- Research throughout the country has shown that large woody debris (i.e., trees falling into streams) contributes greatly to stream stability, moderation of flows, and creation of brook trout habitat. Many of our streams are deficient in wood because it was removed prior to log driving and because many of the large streamside trees have been cut, leaving only smaller trees that are less likely to influence channel formation. Wood in streams also provides much of the organic material that produces insect life. Accordingly, large woody debris was added to several reaches of the Sunday River and Bemis Stream in 2007 to determine whether this technique will be effective in slowing the rate of runoff and improving brook trout habitat through the creation of pools and

enhanced nutrient enrichment. This work was funded by a grant from the US Fish and Wildlife Service and the Upper/Middle Dams Relicensing Settlement Fund and is being conducted in conjunction with the University of Maine.

- Three reaches of South Bog Stream, a tributary to Rangeley Lake, have been restored with different treatments to determine which methods are most effective in restoring brook trout habitat. The most promising (and most dramatic) technique used to date is construction of v-shaped rock weirs, which scour pools several feet in depth. The stream is being monitored annually to determine the efficacy of this work. This work has been funded with mitigation funding from the Maine Department of Transportation, Trout Unlimited, the FishAmerica Foundation, the US Fish and Wildlife Service, the Upper/Middle Settlement Fund, The Rangeley Region Guides' and Sportsmen's Association, and with cooperation from Wagner Forest Management and the Rangeley Lakes Heritage Trust.
- Work conducted on the Sandy River and Cupsuptic River within recent years is being monitored annually to determine its effectiveness in improving brook trout habitat. Several rock weirs were constructed on the Sandy River upstream of Smalls Falls. On the Cupsuptic, grade control structures were built to trap sediment that was filling in pools downstream.



### **Rangeley Lake**

Rangeley Lake, which has historically depended on stocked salmon to provide a fishery, has an ever-increasing number of wild fish. Many older salmon now survive to spawning age because of the one salmon limit imposed in 1988. However, the large number of wild fish is taking its toll on smelts, their primary food source, to the extent that their growth has slowed. In response, we have stopped stocking all together, and may request that the two-salmon limit be reimposed (effective 2009) if growth rates don't recover soon. Although salmon growth rates still approximate the statewide average, Rangeley Lake has historically grown trophy-size fish, and we'd like to restore those growth rates as soon as possible. In nearby Mooselookmeguntic Lake, which suffered a similar over-abundance of salmon, liberalized regulations helped turn the situation around, and larger salmon are now being caught.

Region D biologists wrote two new books on Maine landlocked salmon and brook trout:

- An update of the salmon management book, *Maine Landlocked Salmon: Life History, Ecology, and Management*, written by David P. Boucher and the late Kendall Warner, was printed in 2006.
- A book on brook trout, *Squaretails, Biology and Management of Maine's Brook Trout*, by Forrest Bonney, was printed in 2007.
- Both books provide information specific to Maine on these two important fish species, and both are available from the Department's web site.

By Fishery Division Personnel