

Saving Brook Trout in the Monocacy and Catoctin Watersheds

**-Submitted by Shannon Moore
Project Manager, Frederick County
Watershed Management Section**

CAMBI

The Monocacy, Catoctin and Antietam watersheds are lucky to support a native species of fish called the brook trout. People who love brook trout often call them brookies. Brookies are the only native trout in our region. They are treasured by fly fishermen and other conservationists, and they serve as a real indicator of the health of our waterways. Brookies have been on the decline for over a hundred years and they are in real danger of becoming locally extinct within the next several decades. A local initiative is giving local folks resources to protect and restore brookie populations and habitat in our area. This local effort is called the Catoctin, Antietam, and Monocacy Brookie Initiative (CAMBI). CAMBI efforts are part of the National Fish Habitat Action Plan (NFHAP) <http://www.fishhabitat.org/action.htm>.

What's so great about brook trout?

Brookies are a mascot for some of the most beautiful, pristine areas of our region-coldwater streams that have lots of tree cover and fast running water. Brookies are a prized fish for fly fishers, as they are really difficult to catch, are beautiful, and they have an excellent taste. Brookies have striking salmon and blue colored spots that make them easy to identify. Brookies are considered an umbrella species because their presence indicates a high-quality stream that can support other sensitive species.

Why are brook trout on the decline?

A number of studies have examined the conditions that brook trout need to survive and what stressors have contributed to their decline. Some of the greatest impacts are from:

- Historic forest clearing and agricultural operations;
- Urbanization and the creation of impervious surfaces (places like roads, houses, driveways where water can not percolate into the ground and runs off more rapidly into streams, increasing force, pollutants and temperatures);
- Groundwater withdrawals that lower the water table and decrease stream flows between rain events;
- Loss of streamside trees, known as "riparian" buffers;
- Stocking of exotic trout species.

Future threats from urbanization and global warming are predicted to wipe out brook trout populations in our region in the next few decades. This is especially sad because the brook trout subspecies that exist in our region don't exist anywhere else in the world.

What can be done to protect and restore brook trout?

CAMBI members believe that with restoration and protection, we can keep and maybe even expand our brook trout populations. The impacts from land uses can be reduced. Here are some examples of how:

- Plant buffers next to streams of native trees and shrubs. The buffers will help to shade the stream and reduce temperature. They will also filter pollutants, stabilize banks, provide instream habitat, and slow the force of water getting to streams. Almost anyone can plant trees, and there are lots of partners in CAMBI and the Monocacy and Catoctin Watershed Alliance who coordinate programs for people to get free trees. Participate in programs like CREP if you are a farmer, or in the Backyard Buffers program if you are a homeowner.
- To reduce impervious surface, limit the amount of area during development where water can't percolate. An imperviousness of greater than 0.5% will decimate brook trout populations. Prevent the construction of roads within 200 meters of a stream and minimize stream crossings. Have a smaller house or parking lot footprint.
- Install rain gardens to filter the water from your property before reaching the streams. Rain gardens are attractive landscaping features that filter pollution from developed areas- they are also called "bioretention areas".
- Limit exurban development. The Maryland Department of Planning has asked counties and municipalities to designate where most of their developments will go and to support this growth with water and sewer infrastructure. These urban boundaries are called Priority Funding Areas, because the state concentrates its funding of new development infrastructure, like roads and schools, in these areas. Developments outside of these urban boundaries have earned the nicknames of "exurban development" and, less pleasantly, "sprawl". Exurban development has an impact on groundwater supplies, impervious area, and tree cover.
- Upgrade your sewer to treat for nitrogen. Have your septic system pumped and inspected regularly to ensure it is not leaking.

What are CAMBI partners doing to help the brookies?

CAMBI members developed some project ideas in 2006 to help brook trout and a number of these projects are already underway. Here are a few:

- Septic Upgrades: The Canaan Valley Institute and Frederick County Government will be funding septic upgrades through the state's "Flush Tax" program. Upgrades will be prioritized in subwatersheds with known brook trout populations. For more information about the upgrades project, email Jared Bartley at jared.bartley@canaanvi.org.

- Land Conservation in Brook Trout Watersheds: The Catoctin Land Trust is focusing on properties adjacent to streams with known brook trout populations to target outreach for land conservation efforts.
- Partners have gotten funds to restore streams in brook trout watersheds and are considering several potential sites.
- The Potomac Conservancy conducted outreach in headwater areas with brook trout to encourage landowners to plant riparian buffers.
- Frederick County Government is evaluating vacant parcels to determine which would be suited to tree planting; a planting is already scheduled for Owens Creek in the spring of 2007.
- The Frederick News-Post has carried several features by Jim Gilford on efforts to support the National Fisheries Habitat Initiative through the protection of brook trout.
- Fly Fishing organizations have been active with outreach efforts to their members and to the public.

More projects will be coming as the group gets organized in the spring. To be part of the CAMBI effort, contact Shannon Moore at 301.600.1413.