



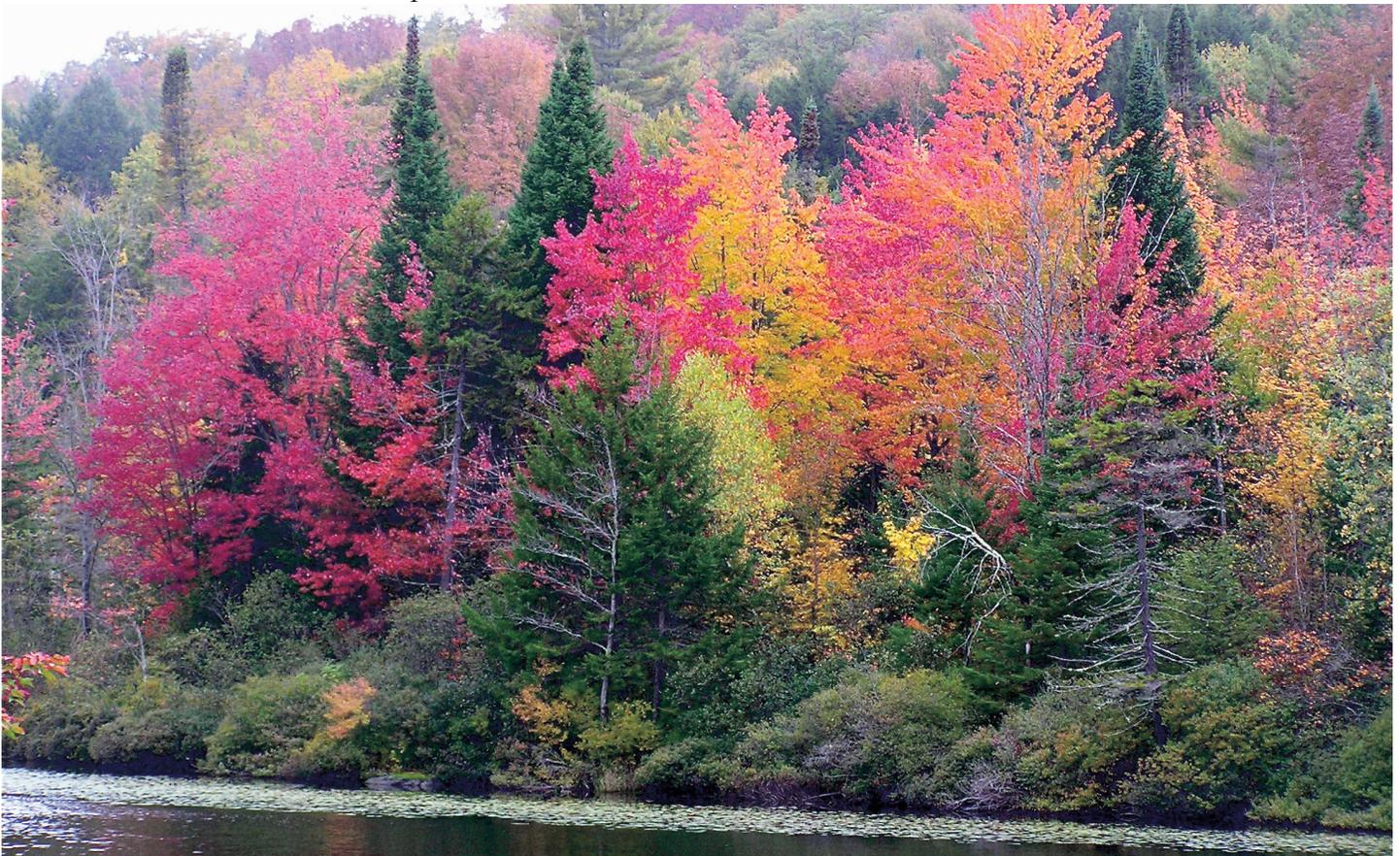
Buffers- An Appreciation for the Wild World at My Doorstep

“Methinks the reflections are never purer and more distinct than now at the season of the fall of the leaf, just before the cool twilight has come, when the air has a finer grain. Just as our mental reflections are more distinct at this season of the year, when the evenings grow cool and lengthen and our winter evenings with their brighter fires may be said to begin.”

From “Walden” by Henry David Thoreau October 17, 1858

A Small Personal Story

A few years ago a small maple near my camp was felled by the beavers at the edge of the pond. Its denuded branches have become the sentinel point which small birds choose for scouting the neighborhood. In its standing companion, unscathed by the beavers, live the hummingbirds. A succession of families has nested here for as long as I have been living along the shoreline. In the summer when I breakfast on the deck they buzz in my ear as they zip between flowers. More and more I have come to appreciate my small wild neighbors who live in the buffer beside the pond.



Who wouldn't want these in their front yard instead of lawn?

Over the last decade the open grass area in front of the camp has gotten smaller. The trees to the north and south have expanded reaching towards each other to close the gap in the canopy. The shoreline has been left to colonize with native plants. Sweet gale, which loves the sweet waters of Curtis Pond, has established itself in cloud-shaped masses of green whose branches stretch far out over the water's surface. Big daddy bull frogs have moved into this tiny patch of wild. Spring and summer nights are filled with their syncopated booms and rhythms.

But there is still a hole in the canopy that is begging to be filled. Since I have been working with the Lakes and Streams Committee, I have spent many an hour looking into the water at the shorelines. Where there are large trees--hemlocks, maples, spruces and birches--hanging over the water, the pond bottom below has few aquatic plants. Where the shoreline is grassed and the water is exposed to sun for most of the day, aquatic plants thrive and grow to compact and sometimes undesirable densities. It is not only nutrients that stimulate the growth of pond plants, but an abundance of sun provides the energy they need to thrive. It is time to complete the restoration of the buffer and provide more natural shade; to bring in the amelanchiers (shadbush) and the native viburnums that live in abundance on the wild west side of the pond; and to add a birch or two and maybe a hemlock.

Why do we hang on so tightly to these open grassy spaces? Some theorize that it is part of our makeup since we originated on the savannahs of Africa. Maybe it is the English tradition of long sweeping lawns. But life at the water's edge of ponds and streams benefits from a different landscape--one of trees and tangled undergrowth where shade and dappled light are the norm, not brilliant sunshine. It means learning to love a different landscape, one filled with trees abundant with song birds and understory thickets of plants that provide wildlife with food and shelter. It means learning to love a different kind of beauty--to exchange unbroken sunlight for the ever moving pattern of shadows and light that dance across walls and table tops as light is reflected from shimmering lake water through the tree branches.

Noreen Bryan, September 2012



Two examples of well buffered shorelines

**Do you have a stream running through your property?
Would you like to be able to protect the shoreline from erosion and make it welcoming to wildlife? The following article will give you informations on programs to assist you.**

Protecting Rivers and Streams through Conservation Programs

One of the best ways that individuals can contribute to the preservation of the rivers and streams of Calais is through conservation easements and restoration of riparian buffers. Various state agencies and private organizations have created programs that help to make this possible. Conservation easements afford property owners the opportunity to conserve specific portions of their land, in particular those tracts which border on rivers and streams. For property owners who are undecided about the future uses of their lands this allows them a way to protect certain areas of their holdings while leaving other areas for future decisions. Other programs help land owners restore and enhance riparian buffers. Preserving clean streams and lakes is a valuable legacy. All of the people and wildlife who dwell in Calais and downstream would be beneficiaries of this generosity for years to come. Every child deserves to grow up with water that is pure to drink, lakes safe for swimming, and rivers teeming with fish. It's about working together to embrace and support our way of life for future generations to enjoy.

Here is a brief summary of programs including references where you can obtain more information.

River Corridor Easement (RCE)

The River Corridor Easement is designed to promote the long term physical stability of the river by allowing the river to achieve a state of equilibrium (where sediment and water loads are in balance). River corridor easements are vital for a passive geomorphic restoration approach and can also be used for conserving rivers that are in good condition (equilibrium). Rivers that are in equilibrium have access to their floodplains and therefore experience less erosion and negative impacts from flooding events.

- Easements are in perpetuity, meaning the agreement stays with the land forever.
- A onetime payment is received by the landowner for transferal of channel management rights to a second party (a land trust).

- Transferal of channel management rights means that the landowner would no longer be able to rock line river banks or remove gravel for personal use.
- A RCE requires a minimum 50 foot buffer that floats with the river. No active land use is allowed within the buffer. The buffer can be actively planted or allowed to re-vegetate passively.
- The easement does not take away the agricultural land use rights, so the landowner could continue to crop or pasture the farm land mapped outside of the buffer, yet within the corridor, for as long as the river allows.

For more info: www.vtwaterquality.org/rivers/docs/rv_RiverCorridorEasementGuide.pdf

Ecosystem Restoration Program

The Ecosystem Restoration Program, formerly called the Clean and Clear Program, is a Vermont program designed to improve water quality by addressing one or more of the following areas: stream stability, protecting against flood hazards, enhancing in-stream and riparian habitat, reducing stormwater runoff, restoring riparian wetlands, and enhancing the environmental and economic sustainability of agricultural lands. Vermont municipalities, local or regional governmental agencies, non-profit organizations, and citizens groups are eligible to receive funding.

For more info: www.vtwaterquality.org/erp.htm

Conservation Reserve Enhancement Program (CREP)

The USDA Farm Service administers a program called the Conservation Reserve Enhancement Program that helps agricultural producers to take farmland out of production in sensitive areas, such as river corridors. This helps to improve water quality and restore wildlife habitat.

- CREP can be either a 15 or 30 year contract to plant trees.
- 90% of the practice costs are covered with

the remaining 10% either resting with the participants or the US Partners for Fish and Wildlife. Examples of the practice costs include fencing, livestock watering facilities, and trees. There are some costs that are capped, but generally all the practice costs can be paid through the program.

- To provide additional incentives to enroll in CREP, the program offers upfront and annual rental payments for the land where agricultural production is lost during the contract period.

For more info: www.vt.nrcs.usda.gov/programs/crp/

Wildlife Habitat Incentives Program (WHIP)

WHIP is a voluntary program offered to landowners to improve wildlife habitat on their land from the Natural Resources Conservation Service (NRCS) of the US Department of Agriculture. Owners of agricultural land, non-industrial private forest land, and Native American land are eligible. Technical assistance and up to 75 percent cost-share is available to improve fish and wildlife habitat.

For more info: www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/whip



Cyanobacteria (Blue-green Algae)

Pond life is always changing and is subject to subtle environmental shifts. Spring flooding and Hurricane Irene in 2011 and the mild winter and early spring melt-off in 2012 have been some recent less-than-subtle events. In the midst of these environmental changes and increased usage of our waterways, two organizations, Vermont Invasive Patrollers and the Vermont Lay Monitoring Program, train volunteers to monitor changing conditions in our ponds, lakes and streams. Their goal is keeping our waterways healthy and available for recreational usage. In Calais, Lay Monitors collect data (often on a weekly basis) on water quality. Vermont Invasive Patrollers (VIPs) regularly check ponds for invasive species. Both report the information collected to state agencies and both are

important to the health of our waterways.

In the late summer of 2011 during a routine VIP inspection of Curtis Pond, patrollers discovered a small quantity of cyanobacteria, sometimes called blue-green algae. Patrollers notified health officials and the VT Department of Health and sent samples to the Water Quality Division of the VT Department of Environmental Conservation (DEC) The blooms were identified as cyanobacteria but deemed in too small a proportion to be harmful and disappeared as quickly as they came. At no time was there any danger to swimmers in the pond.

So far this summer and fall of 2012, there have been no reports of cyanobacteria on any of the Calais ponds, (or, according to VIP trainers this fall, anywhere else in Vermont except for isolated areas of Lake



Cyanobacteria in Curtis Pond 2011

Champlain). This raises the question: Why bring this issue to public attention? In recent years there have been numerous articles in local papers. We heard about dogs that had gotten sick. While there are not stories of people who have been made seriously ill, some people worry that swimming in local ponds might be unsafe or they might not recognize the danger. Since pond plant life is extremely sensitive to changes in the environment and since we expect an increase in climatic pressures and more intense use of our ponds in coming years, it is important to clarify what cyanobacterial bloom is, why it occurs and how to identify and report it.

Cyanobacteria are common and natural single-celled microscopic aquatic organisms, present in many surface waters, fresh, salt, or brackish. Under most conditions, the organisms are too small to be seen by the human eye and are harmless. Because the bacteria, like plants, use sunlight to make food and energy, it is likely

that increased water and air temperatures as well as increased nutrient content, often from runoff from roads, farmlands, building sites, and septic systems, cause an increase in the occurrence of blooms. The common name, blue-green algae, best describes what appeared briefly in Curtis Pond last summer: floating bits of what looked like blue-green paint chips. In fact, however, the blooms are not algae but bacteria and can be blue, green, brown, or red, and can appear as a mat-like accumulation on the surface of the water instead of individual “chips.”

Discussions with representatives of the Water Quality Division of DEC have indicated that cyanobacterial bloom is not a risk to humans or dogs unless the bloom is a dense mat that covers the surface of the water. When this occurs, most

people are repulsed by the appearance alone and are not tempted to go swimming in the clogged water. Dogs are not as fussy. They are willing to stop for a drink or go for a swim. Large accumulations of blooms can also have adverse effects on the ecosystem by blocking the sunlight and using up oxygen needed by other plants and animals in the water body.

If you wish to report blooms or have questions about health effects or test results, contact the VT Department of Environmental Health, 1-800-439-8559 or download the document “Cyanobacteria“ on the DEH website: healthyvermont.gov.



We do not have enough monitors or patrollers for all of the water bodies in Calais. If you wish to learn about volunteer opportunities contact: Bethany Sargent: bethany.sargent@state.vt.us (802) 338-4819

Our Wildlife Neighbors



Loon



Squirrel-proof bird feeder?



Widow Skimmer



Slaty Skimmer



Painted Turtle



Calais Lakes and Streams COMMITTEE

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Calais Lakes and Streams COMMITTEE

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