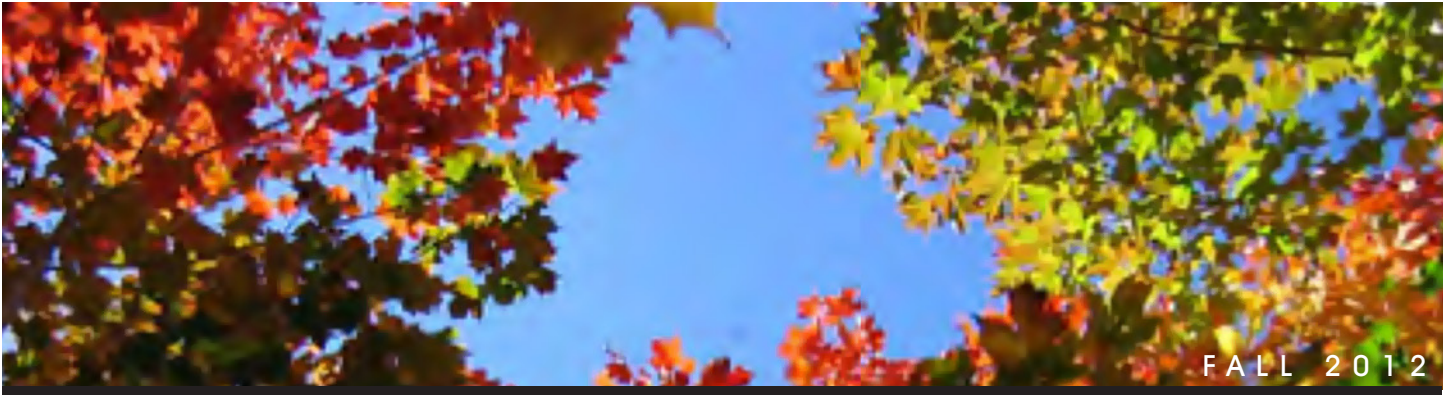


CONNECTIONS

THE NEWSLETTER OF COLD HOLLOW TO CANADA FOREST LINK



PHOTOS: CORRIE MILLER (TOP), JOANNE WAZNY (BOTTOM)

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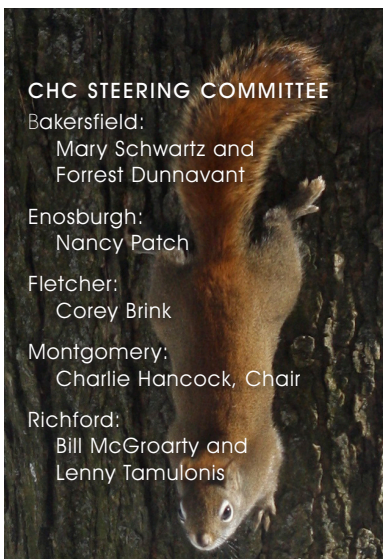
FALL GREETINGS FROM CHC

By *Charlie Hancock*

Hi Friends, and welcome to the Fall edition of our quarterly newsletter. We hope that this edition finds you ready for fall and enjoying the crisp nights that are starting to settle over our mountains and valleys. It's been a busy summer. Our Keeping Track Teams have completed their Summer transects and are gearing up for their Fall run between September 1st and October 15th. *CHC* is also hosting a Trackers Summit on September 22nd to bring together all those in our Monitoring and WildPaths projects, as well as our partners in Quebec for a day of fellowship, continuing education, great food, and music by the Missisquoi River Band. Interested in joining one of our tracking programs? Let us Know!

Congrats to our friends at the *Missisquoi River Basin Association* for hosting the third annual Riverfest, which was a huge success and helped secure funding for next year's programs. Speaking of rivers, check out the article in this edition on the *Enosburg Conservation Commission's* successful effort to conserve a public park and river access in Enosburg village. Other articles in this addition include Forest Management Strategies to adapt to Climate Change, an article on Buckthorn in the Invasive Species Corner, and the story on relationship between Coyote and Deer Populations in our region.

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CHC STEERING COMMITTEE

Bakersfield:

Mary Schwartz and
Forrest Dunnavant

Enosburgh:

Nancy Patch

Fletcher:

Corey Brink

Montgomery:

Charlie Hancock, Chair

Richford:

Bill McGroarty and
Lenny Tamulonis

FALL
2012

CONNECTIONS

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There are a lot of great events coming up in the next couple months, including a gathering of Conservation Commissions in northern Vermont, hosted by CHC. This is an opportunity to network with other Conservation Commissions and Conservation Partnerships at a pot-luck dinner and informal event where we can socialize, swap ideas, and learn how other conservation minded groups in and around northern Vermont are

incorporating innovative ideas in their towns and areas. Check out the details on other events in the Calendar at the end of this edition.

We hope you enjoy this edition of our newsletter.

Thanks, and Happy Equinox.



JOANNE WAZNY

CONSERVATION COMMISSION CORNER

ENOSBURG FALLS RIVER ACCESS
CONSERVED WITH HELP FROM ECC*By Nancy Patch*

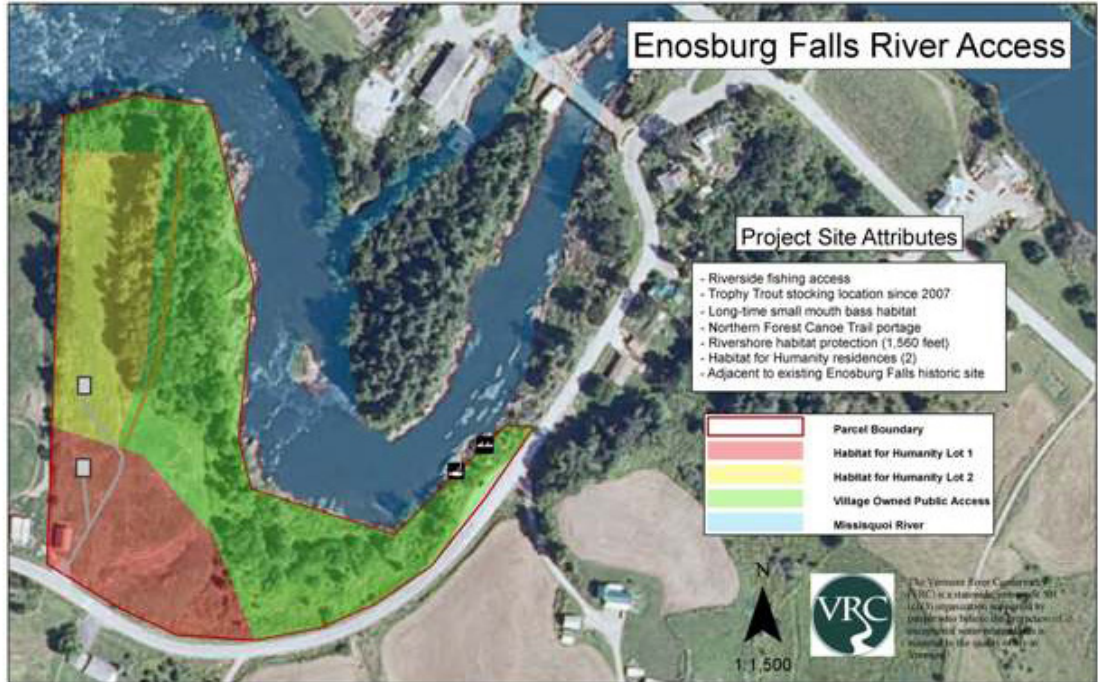
PAINTING BY JIM FOOTE

The Enosburgh Conservation Commission spearheaded an effort to establish a Conservation fund in the town of Enosburgh. This fund would be established by raising the tax rate by half a cent, which would raise approximately \$10,000 per year in each of the five years that the fund would exist. This effort was brought to the voters in 2010 and was defeated by a very narrow margin. It was brought back at the 2011 town meeting and won by a small but healthy margin. In 2012, the town Selectboard sought to repeal the fund. This effort to repeal was soundly defeated by a large margin. This suggests that a town needs to have a conversation over time to understand the importance of local conservation, and conservation advocates sometimes need to have patience.

The very first year that money was put into the fund, we had an opportunity to show what good this fund could have. A piece of land below the falls in Enosburgh Falls had been posted and was being put up for sale. This property had long been a favorite fishing area and a spectacular viewscape of the village. Interested community members, including members of the Missisquoi River Basin Association approached the River Conservancy to see if this land could be purchased and protected. With the help of The River Conservancy and The Vermont Housing and Conservation Board (VHCB) the project was underway. The town of Enosburgh through the Conservation Fund donated \$10,000 to make this project happen. In the end \$189,250 was raised through VHCB funds, Community and Foundation grants and private donations.



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The project includes:

- 2 building lots where 2 Habitat for Humanity house will eventually be built
- A seven acre permanent public park on the remaining acres
- Permanent public access to the river

- Canoe access below the falls, enhancing river tourism in the area
- Fishing access (traditional small mouth bass, and trophy stocking since 2007)
- Protection of 1,500 feet of shoreline along the Missisquoi River

FIVE FOREST MANAGEMENT STRATEGIES TO ADAPT TO CLIMATE CHANGE

*An excerpt from Manomet Center for Conservation Sciences
(Wilkerson, Whitman, Galbraith and Balch, 2011)*

Successful forest management has long included strategies that minimize the effects of stressors such as disturbance events, invasive species, and pests. A new and important stressor, global climate change, has recently begun to exert its effects on New England's landscapes, and is having local impacts on how [Vermont's] forests grow, change, and need to be managed. To manage these resources successfully, we need to be able to *adapt* our management practices to the changing conditions. Adaptation to climate change consists of developing strategies and management options that will help landowners and forest managers plan and prepare for the changing climate to ensure that [Vermont's] forests continue to provide economic, ecological, and societal benefits for future generations. Climate change will alter many aspects of forests and forest management, and although managers and landowners cannot control the changes in climate (e.g., warmer temperatures, altered precipitation), we are not helpless in shaping the future condition of our forestland. Managing forests under climate change is a complicated undertaking as the timing and severity of anticipated changes are somewhat difficult to predict, and can vary across the landscape. The goal of climate change adaptation in working forests is not to stop changes in climate or preserve the current composition of plant and animal species as they exist today, but to safeguard the economic value, ecological functions and other diverse benefits provided by forestland.

Adaptation Strategy #1: Maintain species, structural, and age class diversity.

Sustainable management strategies that maintain species, structural, and age class diversity are

important in the face of climate change because they can create a mosaic of habitats for existing wildlife species and new species that may shift into the area, diversify stands with species and age classes that are less vulnerable to climate impacts, protect against wide-spread damage and financial loss due to disturbance events, and create economic opportunities by managing for species that are well-suited to changing climatic conditions.

Best Management Practices:

1. Create multi-aged stands
2. Plan to diversify species
3. Retain areas with no or limited harvesting

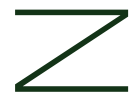
Adaptation Strategy #2: Conduct sustainable timber harvests.

A shortened winter logging period, extended mud season, and increasingly frequent and severe storm events are likely to reduce the number of days with conditions favorable for low-impact logging, increase logging costs as machinery sits idle during marginal and unfavorable conditions, and increase pressure on managers to operate during marginal or unfavorable conditions, risking damage to soil and water quality.

Best Management Practices:

1. Continue to apply best management practices (BMPs) and sustainable forestry practices
2. Create infrastructure that can withstand a variety of weather conditions
3. Track and respond to changing soil and weather conditions

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Adaptation Strategy #3: Maintain and increase red oak and white pine on site.

Red oak and white pine are well-suited for the warmer temperatures and altered precipitation patterns expected under climate change in [Vermont] and are highly valued for forest products.

Best Management Practices:

1. Increase red oak and white pine through management strategies or assisted migration (planting).

Order Red Oak Seedlings

You can assist with red oak migration, and help the forest adapt to climate change.

Red oak, 3 year old seedling, bare root, 2–3 feet tall Price \$1.50 per tree. Order delivered to one location in CHC region. You will have to pick up your own trees. Please send an e-mail to Nancy at nancy.patch@state.vt.us with how many you want by December 1st. Payment due at pick-up in the spring.

Plant in your yard or in forest openings in your woodlot. You may need to protect the trees from deer browse for the first few years.

Adaptation Strategy #4: Promote regeneration of native tree species.

Invasive plants are expected to thrive under a changing climate, allowing these species to outcompete native trees and quickly colonize forestland.

Best Management Practices:

1. Track existing and emerging threats of invasive species
2. Develop a modest but effective monitoring program for invasive species
3. Control invasive species at the early stages of infestation

Adaptation Strategy #5: Encourage deer management.

As winters warm and the depth and duration of snow cover decreases, herd size and deer density will increase. Increased deer herds can damage vegetation, interfere with forest generation, and increase the abundance of deer ticks and instances of Lyme disease.

Best Management Practices:

1. Continue to provide hunting opportunities

INVASIVE SPECIES CORNER

BUCKTHORN

By Nancy Patch

Buckthorn, *Rhamnus cathartica*, is a plant that was imported from Europe as a horticultural plant, often used as a hedge. The glossy leaved shrub produces prolific black berries that are spread widely by songbirds. The latin name of the species, cathartica, describes the dispersal mechanism for this plant. The fruit is a diuretic and passes through an animal's system very quickly with a viable seed. Wherever a bird flies, so goes the buckthorn.

The problem with birds eating this fruit is also related to this diuretic quality. Any nutrition that the fruit might posses is not absorbed by the bird. In the fall when the fruit is so abundant on the shrubs, the migratory songbirds are eating as fast as they can in an effort to accrue reserves for their long flights south. But they have been duped, this fruit won't help. It is as if they were eating potato chips or gummy bears to prepare for a marathon.

The shrub like many other invasive exotic plants also changes the soils chemistry and can compete better than native plants for resources. In addition the plant has no predators; no diseases, no insect defoliators, Deer won't touch it.

It is also tough to get rid of. Cutting it only makes it mad. The plant will both stump sprout and root sprout and the seed remains viable in the ground for a long time. Pulling it out of the ground when possible is a good way to manually control it. Cutting it repeatedly for several years may also work. This will at least prevent fruit growth and further spread. Often times, chemical control is needed to get rid of the plant. You can contact your County Forester for a list of certified pesticide applicators and recommendations on chemical control. The Nature Conservancy (TNC) uses chemical treatments to control invasive plants on properties they manage. TNC is also very active in providing information to the public about invasive species. But, organic maple operations cannot use chemicals and some people are opposed to using them, so the best answer is prevention. Monitoring, Early detection and eradication is what works best.

In the CHC region, populations of these plants still remain relatively low. We have the opportunity to keep these plants from becoming a problem, but the buckthorn is moving in. We must start to act now to learn how to identify these plants and take action.



Berries and leaves of buckthorn

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DEER VS. COYOTE IN THE NORTHERN FOREST

By Nancy Patch

Parts of the Northern Forest have undergone dramatic changes in the landscape over the last 200 years. In Vermont, settlers had clearcut 80% of the forest by the time of the civil war, with significant forest cover only in the high elevations. In the process of clearcutting for agricultural conversion wildlife populations were also decimated. White-tailed deer that were part of an ungulate diversity in pre-settlement times which also included moose, caribou and elk were eliminated from most of the New England landscape. Other species extirpated included woodland bison, as well as the great predators; the wolf and Mountain lion. But as the events of the war took effect, we saw in Vermont our first wave of farmland abandonment. Vermont lost more men per capita in the civil war than any other state and many of those that survived moved to the midwest where farmland was rich and the pine trees tall. Vermont saw additional waves of farm abandonment in the 1890's with the decline of the sheep industry. The forest was then cut again in the early 1900's mostly for wooden shipping boxes. In the 1920's more farms were going out of business. The introduction of tractors replaced horses for farm use, and in the 50's the new bulk milk tank caused a surge in the dairy business. These technological advances aided in the decline of subsistence farming and the hill farm disappeared.

White-tailed deer were re-stocked in Vermont in 1878 when 17 deer were brought from New York to restore the species where forests had come back. After each wave of farm abandonment the forest grew back. These early successional young forests are prime habitat for white-tailed deer, where there is abundant food and cover from predators. In addition, most of the predators of white tailed deer had also been eliminated. Humans had now become the only primary predator of the deer.

However, a new predator entered the Northern Forest in the 1940's. The western coyote had been

making its slow progress across Canada, mating with the Timber wolf along the way. The result is an eastern coyote that is larger than its western cousin. The term "coydog" comes from the fact that when the coyote first appeared on the scene there was some breeding between feral dogs and coyotes. Litter success of pups from these unions was very low and no longer exists today. Coyotes no longer need to seek dogs for mating when there are plenty of good looking Wile E.'s and Willomena's all around.

Deer populations are now at near all-time highs in many states. As forests have matured, the habitat does not provide the same food and cover for deer that younger forests provide. High deer populations and changing habitat can result in severe deer pressure on forest regeneration and herbaceous plants. At high populations deer can reach nuisance levels, posing hazards to human health and safety, and degrading forest ecosystems. Songbirds that nest in those regeneration layers are currently in decline. Maple, ash, oak saplings are preferred food sources for white-tailed deer and with high deer populations there are no young trees to replace the older ones when they die or are harvested. Forest understories are more and more frequently comprised of plants that deer do not eat, including exotic invasive species. Most foresters would like to see lower deer populations where impacts are causing regeneration failure. Having said this, deer populations may not always meet hunter expectations, and coyotes are often targeted as the enemy.

There is no doubt that coyotes do prey on fawn in the spring and adult deer in winter, but research has shown it is not a major controlling factor on deer numbers. Black bear and bobcat may also prey on deer. But all three of these animals have a very small impact on the deer population. Several scientific research projects have been conducted to determine the impact of predation by coyote on



JOANNE WAZNY

the deer population. It is sometimes a hard held belief in the hunting world that coyotes have a large impact. This is often reported as anecdotal evidence, but this belief does not generally hold out under scrutiny. The literature shows that fawn survival rate in the first year of life is naturally about 25%, with predation causing anywhere from 10–60% of the mortality depending on location. According to PA wildlife ecologist Duane Diefenback, increased numbers of coyotes has *not* led to a decrease in the PA deer population. Other studies in Maine, New Brunswick, Nova Scotia, New York and other states show the same results. In fact three National Blue Ribbon commissions have recommended against coyote control. Predator control has been proven to be a non factor in controlling deer population.

In Maine, coyote predation is currently having an impact on the deer population but this is more a response of recent large scale clearcutting of winter deer yards than coyotes alone. The elimination or reduction of traditional deer yards have concentrated the deer and limited their natural ability to escape predators, as well as limiting access to food. (A deer yard is a softwood forest where deer

congregate when snow gets deep. The softwood cover minimizes snow depth and traps heat.) Better timber harvesting practices would have a greater impact on deer populations than killing coyotes. “No scientific study anywhere has determined that coyotes by themselves are capable of limiting deer populations for any length of time.” (*Outdoor Life*) Any effect of predator control is short-lived as coyote populations quickly rebound. It may be noted here that deer populations also rebound very quickly, as evidenced by periodic large winter kill in Vermont during severe winters and the subsequent population recovery.

The coyote plays an important role in the ecosystem. It is one of Vermont’s major large mammalian predators. The relationship between a predator, such as the coyote and its prey is complex. Predator populations tend to fluctuate in response to periodic changes in prey densities. Prey species in New England have evolved with predators such as wolves, mountain lions, and humans and are therefore well adapted to predation. In Vermont, the highest coyote densities are in agricultural areas, where prey populations are high and varied. Studies have shown that deer mortality is less in agricultural areas as food sources are greater for both deer and coyote. In PA studies show deer survival rate doubled in agricultural areas.

Deer habitat needs to be a part of a larger landscape conservation strategy, and featuring deer as the main target management species does not make biological sense. As David Schmidt editor of *Deer and Deer Hunting* states “If your main purpose of shooting a coyote is to *remove it from the landscape*, let it walk. Wanton waste of game is not only illegal it is immoral.”

For Clarification: The Vermont hunting season for coyote is open year round and there is no bag limit. Trapping season is October 25 through December 31st and there is no bag limit.



UPCOMING EVENTS

BAKERSFIELD CONSERVATION COMMISSION

Meets the last Thursday of every month at 7:00 PM in the Town Hall Building, 40 East Bakersfield Rd, Bakersfield.

ENOSBURG CONSERVATION COMMISSION

Meets the fourth Monday of every month at 7:30 PM in the Emergency Services Building, 83 Sampsonville Rd (Rte 105), Enosburg Falls.

MONTGOMERY CONSERVATION COMMISSION

Meets the first Wednesday of every month from 5:30 to 7:30 PM at the Montgomery Town Office, 98 Main St (VT Route 118), Montgomery Center.

RICHFORD CONSERVATION COMMITTEE

Meets the fourth Monday of the month at 6:00 PM in the upstairs conference room of the Arvin A. Brown Public Library, 88 Main St, Richford.

WILD AND SCENIC RIVER STUDY COMMITTEE

Meets the third Thursday of every month from 7:00 PM to 9:00 PM. Locations vary so visit www.vtwsr.org for up-to-date information.

**Don't forget to check coldhollowtocanada.org for updated Upcoming Events*

Bug Off! Invasive Insects: Emerald Ash Borer, Asian Long Horn Beetle and Hemlock Woolly Adelgid.

September 26th 6:30–8:30pm

Join the **Montgomery Garden Club** for a presentation on harmful invasive insects that are on our door step. Learn about their potential impact on our landscape, how to identify them, and management strategies to help slow their spread and impact to our communities. Montgomery Library/Public Service Building. Free and open to the public.

Richford Town Forest Walk, Richford

October 13th 1–3pm

Join the **Richford Conservation Commission** on a walk of the Town Forest led by Nancy Patch, Franklin County Forester, who will discuss ecology, interior forest songbird habitat, forest conservation, and bears. Meet at the parking/Farmer's Mkt. lot across from Mac's Mkt. on Main St. Carpool to site. Free and open to the public.

Conservation Commission Gathering, Montgomery, October 13th 4–7pm

An opportunity to network with other Conservation Commissions and Conservation Partnerships in Northern Vermont. **Cold Hollow to Canada**, hosted by the **Montgomery Conservation Commission** with generous support from the **Upper Missisquoi and Trout River Wild and Scenic River Study Committee** would like to invite the members of your Conservation Commission to pot-luck dinner and informal event where Conservation Commissions can socialize, swap ideas, and learn how other conservation minded groups in and around northern Vermont are incorporating innovative ideas in their towns and areas.

The American Chestnut, Montgomery
October 24th 7–8:30pm

Join Kendra Gurney, regional coordinator for the American Chestnut Foundation, for a discussion on the history of the tree, how to identify it, the onset of the blight which threatens it's future, and the restoration efforts going on to restore it in our landscape. Sponsored by the **Montgomery Conservation Commission**. Location: Montgomery Grange Hall