

# Middlebury Area Land Trust

## News



Conserving Land for Our Community's Future  
Serving the Communities of Addison County

Fall 2011

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### Vermont Rivers After Irene

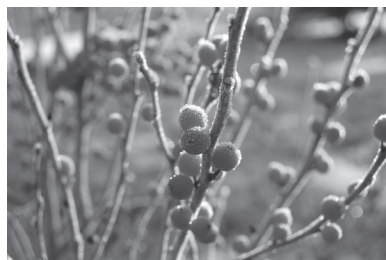
by Amy Sheldon, River Scientist and Natural Resource Planner

The Vermont River Management Program (RMP) started assessing the physical state of our rivers and streams approximately a decade ago when they realized that the costs of conventional river management, in both dollars and ecological impacts, were very high. Conventional river management includes dredging and channelization of our rivers so that they are straight and deep and function primarily as conduits to move floodwaters out of the area as quickly as possible.

Over the past twenty years or so, there has been a growing awareness that not only was this practice expensive, it was likely counter to the goals of protecting public and private property located in and adjacent to the river channel. Channelizing a river is like putting your thumb over the end of your garden hose – it takes what was once a trickle and constricts the opening it is traveling through, increasing its power and ability to scour. Additionally, a river that is channelized loses habitat heterogeneity – which reduces friction in the channel bed (helping to speed floodwaters) and reduces interesting places for fish and benthic macro invertebrates to live. A river that is allowed to maintain access to floodplain during high flow events will dissipate its energy, by spreading out across the valley, depositing sediment on the stream banks, ultimately doing less damage to nearby bridges, roads and homes.

The State of Vermont has been working over the last decade to build a database of stream geomorphic assessment (SGA) for all of the major rivers and streams in the state. The SGA is broken into two phases – Phase 1 deals primarily with the compilation and analysis of existing sources of data in a watershed. It divides the river into reaches that share common physical characteristics of slope, valley width and planform or sinuosity. These features define the “reference condition” or stream type that would exist in the absence of human impacts in the watershed. The Phase 1 assessment also inventories changes that humans have made in the watershed and quantifies the impacts. For example, the Phase 1 assessment includes how much development exists in a watershed, how many wetlands have been lost and how much land is cleared for agriculture.

The Phase 2 Assessment is done on a selection of the Phase 1 reaches in a watershed and it provides on the ground field measurements and observations of the current state of the river channel. It will also tell



Winter berries at Otter View Park  
Photo Credit: Joni Osterhauudt

Middlebury Atea Land Trust



Working with our community to conserve natural and productive landscapes, and to enhance scenic, recreational, and educational opportunities.

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us if impacts to the river channel have led to a “departure from the reference condition” identified in the Phase 1 Assessment. The summation of the impacts and the current condition of the river channel add up to a sensitivity rating that helps watershed planners prioritize reaches for restoration and conservation. When a stream channel is disturbed such that it departs from reference condition, we know that it will seek to find its way back to that reference condition, also known as an equilibrium condition.

Rivers in Vermont were conventionally managed through channelization, dredging and berming until 1987 when the legislature passed a law banning the wholesale removal of gravel from river beds. Since that time, the rivers in Vermont have been evolving back to an equilibrium condition. Since the channels were historically “starved” of gravel through large scale gravel extraction, most of the recovery has been in the form of aggradation of sediment and channel widening.

Impacts from flooding in Vermont are typically caused by erosion as opposed to other parts of the country that mostly experience flooding in the form of inundation. During TS Irene, many communities experienced both inundation and erosion damages due to the size of the storm. In the days after Tropical Storm Irene, many communities were feeling pressed to clear large deposits of new sediment and tree jams from the channel to avoid more damages from forecasted storms. Most of this work was done with the best of intentions and removal of excessive sediment deposits and channel spanning log jams was necessary. In places where channels were over-zealously dredged and straightened, we run the risk of increasing damages in future storms. We have an opportunity in Vermont to use the extensive database of geomorphic information to guide our work as we go back and make permanent repairs to our infrastructure and streams. Work in the river that utilizes the natural physical tendencies of rivers, instead of opposing them, will insure that repairs last longer, require less maintenance and provide high quality in-stream habitat.

The Town of Middlebury is starting work on a project in East Middlebury Village that will improve flood resiliency by utilizing the principles of river science in developing a long term management plan for town structures and private property protection. This plan will also incorporate restoration of aquatic habitat that was lost during and after TS Irene. There will be a public meeting as part of this planning process that will include specific information on the Middlebury River Watershed. Please plan to attend this meeting if you would like to learn more.





Middlebury College students working on a gravel project on the 97 trail, just before the Trek.

The TAM has had a lot of volunteer help this year from various groups. Kids from the Counseling Service school program widened the Wright Park part of the trail and will continue next season.

The high school diversified ed program has worked Friday mornings this fall spreading gravel and we were fortunate to have them.

This summer we had a Middlebury college student Collene Carroll working in a shared paid position with the college GIS program on gravel and brush and rebuilding boardwalks.

And this fall, Samatha Perry, a college student, has been employed to work on the trail a few hours a week around her study schedule. The trail use continues to grow and therefore takes more time for upkeep.

Thanks for the support of our members.



MUHS diversified education program spread gravel on the Means Woods part of the TAM November 18.



This year's TAM Trek was even more fun than normal. Over a hundred Cub Scouts, college students, cross-country runners, and hiking enthusiasts previewed fall foliage and experienced fantastic weather at the 8th annual TAM Trek held on Sunday, Sept. 25th. This year's trek focused on the 3.5 mile trail segment that starts at the Middlebury College Organic Garden on Route 125, meanders through fields with lovely views to the woods of the Johnson trail, and ends at Morgan Horse Farm Rd.

The Middlebury Muffintops swim team raised the most money, totaling \$480. The Cub Scouts, led by Harty Heffernan, were back in force, and the Frost Mountain Nordic Team elected to run a relay, each with different segments of the trail to complete. Mia Allen, Lisa Bernardin, Bill Eichhorn, David Tier, Chris Anderson, and Jennifer Franceour ran the whole 16 mile trail. The Middlebury College Cross-Country Team ran a large portion of it as well.

The event raised almost \$7000 this year. TAM trail volunteers do the work of maintaining and repairing the Trail Around Middlebury; however, proceeds from the TAM Trek pay for gravel, mowers, saws, shovels, wood, and reinforcing rods.



For sale at the MALT office! MALT organic cotton T-shirts and stickers. T-shirts are \$15 each, while the stickers are \$1. Both have the TAM logo on them (above). Stop by sometime and see! Various other merchandise is available through our website, or at [www.cafepress.com/malt](http://www.cafepress.com/malt).

# MALT Summer Camp 2011

This summer, MALT was able to host a nature camp! Thanks to our counselors Katie McEachen and Mo Bissonette, for the first time in years, MALT offered four weeks of different camps for 6-9 year olds, and 10-13 year olds. The camps taught outdoor skills while letting children explore with their own sense of fun. Each took place at Otter Creek Gorge Preserve.



“Oh, ahh! Oh my gosh!” One of the kids in MALT’s week long summer day camp yells with laughter and exuberant surprise. “I thought that was a rock. It’s a turtle!” She is the only one of the nine of us that noticed a great old Eastern Snapping Turtle with algae growing on its rough shell. She calls everyone over. We tell everyone to keep a good distance and to come one at a time. Everyone is leaning over and leaning back at the same time. For a minute we wonder if it is dead. It’s not moving; even its slit of a pupil. We lean closer, looking for some sign of life and then it moves! Just its little



dragon-eye peers back at us and we all jump back laughing and chatting with each other. Off in the north, the local Barred Owl gives out a call. “Who Cooks For You - Who Cooks For You All?” We look at our watch and it’s the end of the day; time to meet the parents, time to leave the woods. Every day has been full of adventure and learning. Exploring the streams, fields and woods. We tracked animals, listened to bird language. We made shelters from rocks, sticks and leaves. We played games and built connections to nature that you can hold in your hand. The four-week camp focused on adventure, nature connection, survival and most of all, fun. If you enjoyed this story and want to find out more information about next year’s camps check out the MALT web page or visit Living Forest Summer Camp on Facebook. There you will find pictures from this year and description of the camps. It was a wonderful summer. Thank you all and thank you MALT!

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## SUPPORT OTTER VIEW PARK

Our board walk planks are engraved by Don Mason, of Vermont Laser Products. This is a great way to show your support of this in-town gem. You may choose to honor a family member, pet, civic group, or quote poetry on multiple planks! 25 character limit per plank, \$250 each.



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## MALT HAS MOVED!

The MALT office is still in the Marbleworks, but is now located in the northernmost building (Kubota) along with 92.1 WVTM, Vermont Stained Glass Crafters, and Dog Gone Styles by Pilar. It’s a much more efficient space, with a much reduced rent. Feel free to stop in and see us Mondays through Thursdays, 9am to 5pm.

## YOU MAY HAVE NOTICED...

There are two new empty signposts at Otter View Park, patiently awaiting displays. Our summer intern Colleen Carroll created the designs, and we will have them printed on fade-resistant boards.

# John Elder Speaks at MALT Annual Meeting: Rachel Carson and the Poetry of Earth

by Katherine Branch



With the fiftieth anniversary of the publication of the classic environmental book, *Silent Spring*, occurring next year, it was very fitting that John Elder chose to speak about Rachel Carson at the annual MALT meeting held on November 9th at the Cornwall Town Hall. Professor Emeritus at Middlebury College, and winner of the 2008 Vermont Professor of the Year award, Elder has a long-time interest in land conservation, having served on both the boards of the Vermont Land Trust and Vermont Family Forests.

Elder discussed some aspects of Carson's life and work that are little-known including the fact that as she was being bitterly attacked by chemical industry for daring to publish the truth about the horrific effects of DDT, she herself was dying of cancer. In researching the life of Carson, Elder also recognized the early and strong influence that the children's magazine *St. Nicholas* had on her writing and her career. Although it was a children's magazine, *St. Nicholas* was truly a literary magazine and published a regular feature about nature and science for young folks. Well-known writers such as Eudora Welty, Stephen Vincent Benet, Edna St. Vincent Millay and Bennett Cerf all had their work published in *St. Nicholas*, as did Carson herself, winning several awards from the magazine.

With the popular image of Carson of a crusader, Elder also connected Carson to the English Romantic poets, such as Keats and Wordsworth, who fought against mechanization and industrialization, and who lauded the beauty and wholeness of nature. This connection is evident in the following quotation from *Silent Spring*: "Who has decided -- who has the right to decide -- for the countless legions of people who were not consulted that the supreme value is a world without insects, even though it be also a sterile world ungraced by the curving wing of a bird in flight?"

In closing the talk, Elder linked Carson directly to Robert Frost's poem "The Road Not Taken". He pointed out that the last chapter of *Silent Spring* is titled "The Other Road" and begins "We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster." Although these words of Carson's were written more than fifty years ago, they are as true and poignant as they were when written.

Elder's talk provided ample motivation to re-read *Silent Spring*, especially now at a time when global warming skeptics, funded and backed by the energy and chemical industries, ignore and distort scientific evidence. He also recommended the book *Courage for the Earth: Writers, Scientists, and Activists Celebrate the Life and Writing of Rachel Carson*, edited by Peter Matthiessen. The book included an essay by Elder, as well as other well-known environmental writers such as Terry Tempest Williams, E.O. Wilson, and Al Gore.



## **TOP TEN TIPS TO PREVENT CHRONIC LYME DISEASE**

by THE INTERNATIONAL LYME AND ASSOCIATED DISEASES SOCIETY

Chronic Lyme disease patients may face a long hard fight to wellness. People with chronic Lyme can have many debilitating symptoms, including severe fatigue, anxiety, headaches, and joint pain. Without proper treatment, chronic Lyme patients have a poorer quality of life than patients with diabetes or a heart condition.

The fact is Lyme is a complex disease that can be highly difficult to diagnose. Reliable diagnostic tests are not yet available which leaves many—patients and physicians alike—relying on the so called “telltale signs” of Lyme disease: discovery of a tick on the skin, a bull’s eye rash, and possibly joint pain. However, ILADS research indicates that only 50%-60% of patients recall a tick bite; the rash is reported in only 35% to 60% of patients; and joint swelling typically occurs in only 20% to 30% of patients. Given the prevalent use of over the counter anti-inflammatory medications such as Ibuprofen, joint inflammation is often masked.

Based on these statistics, a significant number people who contract Lyme disease are misdiagnosed during the early stages, leading to a chronic form of the disease which can prove even more difficult to diagnose and treat. Lyme disease is often referred to as the “great imitator” because it mimics other conditions, often causing patients to suffer a complicated maze of doctors in search of appropriate treatment. The following tips are designed to offer guidance and minimize the risk of contracting chronic Lyme disease.

### **1. Know that Lyme disease is a nationwide problem**

Contrary to popular belief, Lyme disease is not just an “East Coast” problem. In fact, in the last ten years, ticks known to carry Lyme disease have been identified in all 50 states and worldwide. Although the black legged tick is considered the traditional source of Lyme disease, new tick species such as the Lonestar tick and a pacific coast tick, have been found to carry *Borrelia burgdorferi*, the corkscrew-shaped bacterium that causes Lyme disease.

Avoiding a tick bite remains the first step in preventing chronic Lyme disease. One needn’t have been “hiking in the woods” in order to be bitten by a tick. There can be ticks wherever there is grass or vegetation, and tick bites can happen any time of year. Spraying one’s clothes with DEET-containing insecticide, wearing long sleeves and long pants, and “tucking pants into socks”, continue to be the best ways to avoid ticks attaching to the skin. But don’t forget the post-walk body check.

### **2. Check your tick facts**

Ticks can vary in size from a poppy-seed size nymphal tick to a sesame-seed size adult tick. The ticks can carry other infectious agents besides the spirochete that causes Lyme disease, including Ehrlichia, Anaplasmosis, Babesia, and Bartonella. Lyme disease can sometimes be hard to cure if these other infections are not treated at the same time.

### **3. Show your doctor every rash**

The bull’s eye rash is the most famous, but there are many other types of rashes associated with Lyme disease. In fact, Lyme disease rashes can be mistaken for spider bites or skin infections. Take photos and make sure a medical professional sees the rash before it fades.

### **4. Don’t assume that you can’t have Lyme disease if you don’t have a rash**

Lyme disease is difficult to diagnose without a rash, Bell’s palsy, arthritis, or meningitis, but you can still have Lyme and not have any of those signs or symptoms. Many people react differently to the infection and experience fatigue, headaches, irritability, anxiety, crying, sleep disturbance, poor memory and concentration, chest pain, palpitations, lightheadedness, joint pain, numbness and tingling.

## **5. Do not rely on test results**

Currently there is no reliable test to determine if someone has contracted Lyme disease or is cured of it. False positives and false negatives often occur. In fact, some studies indicate up to 50% of the patients tested for Lyme disease receive false negative results. As a result, the CDC relies on physicians to make a clinical diagnosis based on a patient's symptoms, health history, and exposure risks. Doctors who are experienced in recognizing Lyme disease will treat when symptoms typical of the illness are present, even without a positive test, in an effort to prevent the development of chronic Lyme disease.

## **6. Be aware of similar conditions**

Chronic Lyme disease is called the "great imitator" because it is often misdiagnosed as another condition such as Multiple Sclerosis, Fibromyalgia, chronic fatigue, or anxiety. Misdiagnosis is a common experience for patients with chronic Lyme disease. Treatments that work for these other illnesses are not appropriate for treating Lyme disease. Currently, the only effective treatment for Lyme disease is antibiotics. Ask your doctor to carefully evaluate you for Lyme disease even if your tests are negative.

## **7. "Wait and See" approach to treatment may be risky**

Up to fifty percent of ticks in Lyme-endemic areas are infected with Lyme or other tick-borne diseases. With odds like that, if you have proof or a high suspicion that you've been bitten by a tick, taking a "wait and see" approach to deciding whether to treat the disease has risks. The onset of Lyme disease symptoms can be easily overlooked or mistaken for other illnesses. Once symptoms are more evident the disease may have already entered the central nervous system, and could be hard to cure. This is one case in which an ounce of prevention really is worth a pound of cure.

## **8. Don't be afraid to get a second opinion**

Recognize that opinions on how to diagnose and treat Lyme disease vary widely among physicians. It is worth getting a second or even a third opinion, especially if you are symptomatic and your doctor advises not to treat, or symptoms recur after treatment. Keep in mind that your physician may focus too narrowly on diagnosing and treating a single symptom. For example, a physician may diagnose a pain in your knee as "arthritis", and not see this as just one part of Lyme disease, which requires different treatment.

## **9. Know your treatment options**

Work with your doctor to identify the appropriate treatment option if your symptoms persist. There is more than one type of antibiotic available. Longer treatment is also an option. You should also work with your doctor to make sure you don't have another condition.

## **10. Expect success**

You should expect to get better. You should not accept "watchful waiting" - the practice of stopping antibiotic treatment before you are well and then waiting for symptoms to clear on their own. Some doctors advocate stopping Lyme treatment while the patient is still symptomatic and then hoping that he or she will eventually recover without further treatment. Government trials have identified a number of individuals whose symptoms did not clear when treatment was cut off prematurely.

Support by Turn the Corner Foundation - Turn the Corner Foundation (TTCF) is dedicated to the support of research, education, awareness and innovative treatments for Lyme disease and other tick-borne diseases.

About ILADS - ILADS is a nonprofit, international, multidisciplinary medical society, dedicated to the diagnosis and appropriate treatment of Lyme and its associated diseases.



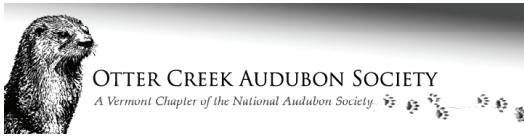
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In collaboration with:

Upcoming Outings



**M**arsh, Meadow, and Grassland Wildlife Walks

Join us as we survey birds and other wildlife of Otter View Park and the Hurd Grassland. All walks start at Otter View Park in Middlebury on Pulp Mill Bridge Rd and Weybridge St. Shorter and longer routes possible. OVP is universally accessible. Walks start at 8 am.

Saturday, December 10  
 Thursday, January 14  
 Saturday, February 9



Eastern turkeys.  
 Credit: nwtf.org



**C**oming Soon:  
 Snowshoe hike in Ripton with Nola Kevra.  
 Stay tuned!