A Note from Tierney Rosenstock

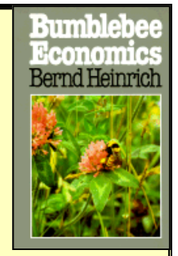
In late July 2015, I joined the Winnakee Land Trust staff as your new Land Projects Manager. I am very excited to be a part of such an amazing organization, leading conservation in northern Dutchess County.
I spent the previous year or so working for the New York State Dept. of Environmental Conservation as a Fish & Wildlife Technician, working on habitat management for grassland-nesting birds and pollinator conservation strategies. In 2013, I earned my Master of Science in Environmental Studies with a concentration in Conservation Biology from Antioch University New England. During that time I was a Park Ranger for the Massachusetts Department of Conservation and Recreation.

I am blown away by the beauty of Rhinebeck, Red Hook, Milan, and all of northern Dutchess County. I look forward to the upcoming monitoring year when I can meet each of you and become familiar with your unique conservation easement property.

Sincerely yours,

Tierney R. Rosenstock
Land Projects Manager

Suggested Reading:
Bumblebee Economics
by Bernd Heinrich



Bumblebee Economics is an amazing synergy of scientific discovery and enjoyable reading. Author Bernd Heinrich, who has been recommended in these pages before, has masterfully blended his observations and research of bumblebee behavior, physiology, ecology, and evolution in a piece of literature everyone can enjoy. If you have ever watched a bumblebee flitting around your garden and wondered at the mystery of its natural history, this is a book for you!

Dutchess County Trails Roundtable Has a Seat for Everyone

On October 10th, 2015, Winnakee Land Trust hosted the second Dutchess County Trails Conference at Marist College's Cornell Boathouse, with the support of a powerful, passionate Steering Committee and the support of the Hudson River Valley Greenway.

During the conference, Winnakee Land Trust announced the formation of a Dutchess County Trails Roundtable Series to meet quarterly, to further the goals of trails projects all across the County. The forums are open to all. The support and participation of Dutchess County Dept. of Planning and Development is a key part of the Roundtable's success.

Our first meeting was well attended in early December at the Wallace Center at the FDR Historic Site. The second Trails Roundtable will be March 17, location TBD. Please call Karissa Stokdal at 845-876-4212 x2 for information.

Tierney's Tip: Make Your Own Bee Box

Mason bee box

With approximately 4,000 species of native bees in North America, it is no wonder these industrious little insects are among our most important pollinators. Without them, we would not have some our favorite fall crops, such as apples, pumpkins, and squash. However, our habit of 'tidying up' our landscape removes the bare ground, dead trees, and grass thatch these insects require for nesting habitat. Fortunately, you can have your neat and tidy yard *and* save the bees! Unlike the European honeybee, the majority of our native bees are solitary, meaning they do not create communal nests or hives. These bees may nest in hollow, dead stems or reeds, or they may create tunnels in the ground. Female bees create a series of chambers, placing one egg and a sack of pollen in each chamber. When the egg hatches the young eat the pollen as they develop, then they emerge from the chamber as adults and go about their normal bee business of pollinating your fruits and vegetables. Bees, unlike wasps, are *not* aggressive and will only sting as a last resort.

For cavity nesting bees you can either build or buy bee boxes and place them around your garden. There are even bee boxes for bumblebees, which do create small communal nests. For ground nesting bees, be sure to leave some open, bare ground in your garden.

You can read more about bee conservation and get your own nest box ideas at:*www.xerces.org/wp-content/uploads/2008/10/nest_factsheet1.pdf.*

Solitary bee exiting a nesting cavity

Well Grounded

A Newsletter for Winnakee Land Trust's Partners in Land Protection

Fall/Winter 2015-16

Cultivating Conservation in the Next Generation

Your conservation easement ensures that the scenic beauty, natural resources, and habitat value of your land will be protected in perpetuity. All future generations who inherit or purchase your land will acquire the preserved acreage and, with that, a responsibility to land conservation. The binding legality of an easement ensures that the land will never be developed, but Winnakee Land Trust needs your help in passing conservation values on to our future generations.

To ensure the long-term success of land preservation in northern Dutchess County, we need to instill conservation values in our children, to foster a deep appreciation for the natural world. Time spent playing out of doors can cultivate a lifelong love of nature. Take your children, grandchildren, nieces, or nephews to local park to participate in guided hikes, kayaking, wildlife tracking, bird watching, and plant identification. Encourage eco-friendly habits, and stress the importance of maintaining a healthy outdoor environment.

No matter what age your children are, sit down with them and explain the commitment you made to conservation and why it is important to you. Your conservation easement is a legal agreement with accompanying documents and paperwork. Make sure that your children know where these documents are and that they take your pledge to conservation seriously. We at Winnakee Land Trust will always be here to help. Come along to one of our No Child Left Inside events or bring the kids out on one of our trails. Check out Facebook.com/winnakeeland/ to see what we have planned.

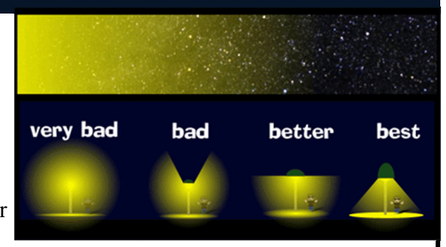
Monitoring: The Annual Check-Up

Annual monitoring is integral to keeping track of the health of your conservation easement land. An easement baseline report documents all the unique aspects of your protected land at the time the easement is established; annual monitoring will track the changes in those features over time.

Easement monitoring is comparable to an annual physical with a doctor. When a doctor detects a change within a patient, he or she will make recommendations to ensure that patient's optimal health. Similarly, annual monitoring tracks changes in the landscape and compares those to baseline and subsequent monitoring information. From here, any potential problems can be detected, and methods for solving those problems can be devised. Monitoring can help landowners maintain their property boundaries by protecting against aggressive invasive species or neighbor encroachment.

Monitoring is conducted on an annual basis in late fall or early spring when trees are bare and snow is scarce. Bare trees ensures the best sightline visibility across a property, especially on heavily forested land. It is much easier to navigate a forest when the understory vegetation is dormant! Similarly, too much snow can preclude the detection of unique habitats such as vernal pools or miss key problem areas such as historic dumpsites, or worse, new dumpsites. We look forward to meeting with you every year to hear about your observations and plans for your property. Through this shared information, we can provide the best stewardship service and document your property for posterity.

The Dark Side of Light Pollution



The annual transition to earlier sunsets and longer nights is over, but we will be living mostly in the dark for months to come. You may be tempted to offset the darkness with bright outdoor lighting around your home. Yes, that may seem safe and comfortable for humans, but it takes a serious toll on surrounding wildlife.

The transitions from fall to winter and again from winter to spring are bird migration seasons, and many birds depend on the moon and stars for navigation. Brightly lit areas can disorient birds, causing them to crash into objects or circle an area until they drop from exhaustion. For ground-roaming nocturnal animals, light pollution can radically alter their diets. Studies have documented that smaller mammals eat less in areas flooded with artificial light. Artificial lighting can also affect the natural flowering and dormancy cycles of wildflowers, shrubs, and trees.

Artificial lighting has been shown to extend the day of diurnal species and shorten the day of nocturnal species, which not only reduces the time nocturnal animals have to find food, but puts time constraints on mating. If not mitigated, light pollution has the potential to cause a decline in nocturnal animal populations.

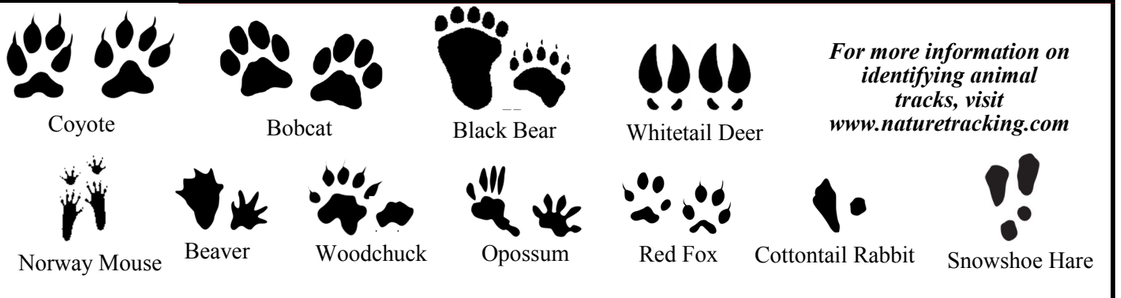
Be mindful of the animals that depend on long winter nights. Install motion sensors that automatically turn on lights when there is activity outside your home. When installing light bulbs, the highest available wattage is not always necessary. Modest lighting is sufficient for finding your way at night. Only install cut-off light fixtures that shine light directly on the ground, rather than across the yard or into the sky. Most importantly, turn off any lights when they are not in use, whether they are indoors or outside. These tips will not only help maintain the day and night cycles of wildlife, but will reduce your carbon footprint and take some of the sting out of electric bills! Besides, isn't it nice to see the stars?

Leave the Leaves Where They Fall, Leave the Snow on the Leaves

The American tradition of raking leaves has become as commonplace in autumn as apple picking, but if you are raking your leaves to save your lawn from suffocating, you may be depriving it of nutrients. Leaves can form a natural mulch that helps suppress weeds and fertilize soil. Put down the rake, and when the leaves develop a "crunchy" texture, go over them with a mulching mower. Then allow the natural decomposition process to take over. Snow cover on the leaves will create an insulated environment for mammals, amphibians, insects, and plants to live through winter, and a nourished lawn will emerge in the spring!

If the thought of a lawn covered in leaves makes you cringe—if you MUST rake—then you might consider raking them into a compost pile. According to the United States Environmental Protection Agency, leaves and other yard debris account for as much as 13% of our nation's solid waste. Composting mitigates unnecessary waste and creates a nutrient-rich fertilizer to add to your garden. Such debris piles also serve as seasonal protection for hares, rabbits, and other ground-dwelling mammals.

Be on the Lookout: Mammal Tracks in the Snow



For more information on identifying animal tracks, visit www.naturetracking.com

The Plight of the Monarch

Monarch butterfly and caterpillar

Monarch butterflies (*Danaus plexippus*) are an icon of natural beauty and the amazing ability of a seemingly small and fragile creature. Every fall, monarch butterflies participate in a mass migration of up to 3,000 miles from Canada and the U.S. to wintering grounds in Mexico. These butterflies, however, do not return to the summer foraging grounds the following year. Instead, they mate in Mexico in late February, head north to Texas where they lay their eggs, and die. These eggs hatch into caterpillars, metamorphose, and continue the journey north where they live about 6 to 8 weeks, just enough time to mate and lay another round of eggs. This process continues throughout the summer until late August. The fourth generation of monarchs survives for 6-8 *months,* enabling them to migrate to Mexico and begin the cycle again.

Viceroy butterfly and caterpillar

Recently, this unique and fascinating migration phenomenon has come under threat. Although adult monarch butterflies feed on a variety of wildflowers, the caterpillars can only feed and develop on milkweed species. Because of the loss of habitat and the widespread use of herbicides that kill milkweed, there has been over a 90% decline in monarch populations in recent years.

Identifying monarchs is relatively easy due to their distinct colors, however, the viceroy butterfly (*Limenitis archippus*) is quite similar in appearance. While the caterpillars are distinctly different, the adult butterflies are much harder to tell apart. Examine the wings. If the butterfly is a viceroy, it will have a distinct black line crossing the postmedian hindwing. If you spot a monarch, please report it to *www.learner.org/jnorth/monarch/* to assist in tracking population changes. You can also help by creating monarch waystations by planting milkweed and nectar flowers.

Spring Planning: Water Conservation through Rain Gardens

The scarcity of clean, potable water has become a major global concern. Water may account for 70% of the earth's surface, but 96% of that supply is contained in oceans and is currently undrinkable. Fresh water accounts for only 3% of earth's water supply and *less than 1%* of that water is safe to drink. Paired with the impacts of climate change and human population increases, the water supply in many countries has come under severe threat.

The effects of a diminishing water supply can be mitigated through conservation efforts at home. Taking shorter showers, fixing a leaky faucet, and cutting back on garden and lawn watering are all great ways to conserve water. Visit *www.care2.com/greenliving/20-ways-to-conserve-water-at-home.html* for more ideas. For those who enjoy spending time outdoors, a rain garden is a great hobby and excellent strategy for water conservation!

In a rain garden, specific native plant species are grown in a constructed depression that captures water runoff from roofs, driveways, and other impervious surfaces. Once in the garden, the captured water is either taken up by the plant roots or slowly filtered into the soil, ensuring the water does not become surface run off. The native wildflowers of rain gardens are also beneficial to pollinators and other wildlife.

For more information on how rain gardens function, visit: *www.raingardennetwork.com.*

For garden design ideas and plant lists, visit: *www.lowimpactdesign/raingardens_design/whatisaraingarden.htm.*