



Friends of Thatcher State Park

Emma T Thacher Nature Center • 87 Nature Center Way • Voorheesville, NY 12186
September—October 2017 • Vol. 21 No. 5



Wondrous Monarchs!



Throughout the summer, the Nature Center has been fortunate enough to raise 7 Monarch caterpillars. The summer started off slow, we were all worried that it was going to be another bad year for the butterflies. However, that soon changed when we found our first caterpillar in late July. Since then we have been carefully looking under each milkweed leaf trying to locate more Monarch eggs. In early August, after the monarch program, the participants found a dozen eggs and caterpillars throughout our 2 main milkweed patches, close to the building and parking lot.

The caterpillars that are currently at the Nature Center are part of the generation of super Monarchs. This means that they will soon be undertaking an epic migration south to the mountains of central Mexico. There are 12 mountain tops that have the perfect habitat (high altitude and oyamel fir trees) to make it possible for Monarchs to roost for the winter months; until next March when they start their migration north once again. During their time in Mexico, scientists can estimate their population size. They have observed that the Monarch population has been in a sharp decline since the mid 90s.

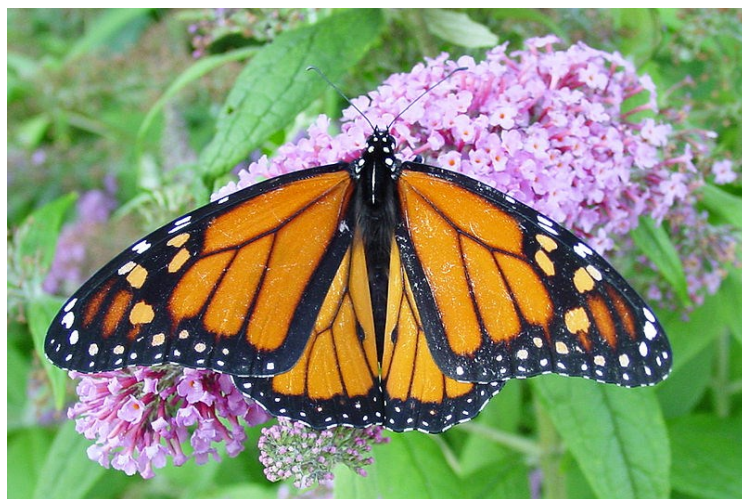
Their decline is mainly due to habitat loss and the wide use of pesticides. If you love seeing these butterflies every summer there are ways for you to help: plant native milkweed and a variety of native flowers that bloom from May –

October. Stop spraying pesticides in your yard, buy organic whenever possible, and join the Citizen Science projects. These projects help researchers collect data from around the country to better understand these butterflies.

The outlook is positive; people nationwide are becoming more aware of the issues facing this and many other overlooked species.

There are many great resources online to learn more about monarchs, how to create a habitat for them (<https://www.fws.gov/savethemonarch>), during the spring: check and see if the population has increased from last year (<https://monarchjointventure.org>), and get involved in the Citizen Science projects (<http://monarchwatch.org>).

- by Jenny Young



By Captain-tucker (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia



The Splendor of Fall

Soon it will be time again for our deciduous trees to don their dress of multicolored splendor! We are quite fortunate here in the Northeast to have a change of seasons (though some argue that the winter in New York State could be just a tad shorter), and that these seasons typically include a glorious fall. Leaf peeping is a popular entertainment and many people travel along the east coast to delight in the many hues of brilliant yellows, blazing crimsons, and flaming oranges of our fall forests.

Most coniferous trees keep their foliage in the winter—there is a reason they are called evergreens after all. Their leaves (needles) are adapted for our winters with small surface areas and thick waxy coatings. While conifers also have to renew their foliage, they do it on a more continuous basis, shedding only a fraction of their needles over a longer period of time. Depending on the species, it may take a few years for a conifer to renew all its needles, a process so subtle it is hardly noticeable. In contrast, our deciduous trees and shrubs in the Northeast shed all their foliage in one fell swoop in the fall in a blaze of glory. And that makes one wonder; why is it that some trees drop their leaves and some don't, and what exactly causes those different colors?

Unlike the winter-hardy needles of conifers, deciduous trees have broad leaves that are susceptible to damage from cold and don't withstand our winters. During spring and summer, leaves serve as factories for most of the tree's foods, capturing energy from sunlight and using it to turn carbon dioxide and water into carbohydrates (and oxygen) – a process known as photosynthesis. The main pigments responsible for light capture are the green chlorophylls, but leaves also contain small amounts of other photopigments that aid in photosynthesis, such as orange carotenes and yellow xanthophylls. Those pigments are usually masked by the huge amount of chlorophyll. When the nights get longer in the fall, leaves get ready for leaf-drop (also called abscission): at the juncture between leaf stem and branch a corky cell layer begins to form that eventually blocks transport of sugars out of and nutrients into the leaf. The green chlorophylls, which

are not very stable and have to be renewed constantly during the growing season now can't be replaced anymore; within a short amount of time they disappear from the leaf, leaving only orange carotenes and yellow xanthophylls. The relative amounts of chlorophylls versus xanthophylls and carotenes determines the shades of yellows and oranges in the fall leaves. But what about the red leaves, such as those of red maples and red oaks? Red and purple fall colors are caused by anthocyanins: these are pigments that are not normally present in leaves but are specifically manufactured by some trees in the fall. But why put energy into synthesizing special pigments shortly before getting rid of the leaf? There is some speculation as to why, but it seems that these red anthocyanins may protect the aging leaves from damage, providing them with some extra time to break down and reabsorb valuable nutrients from the leaf and store them in woody tissue until the next growing season. In most trees, the corky layer between leaf stem and branch dries out soon and the leaf drops off, though some trees such as beeches and some oaks retain their leaves well into winter. In these leaves, the yellow, orange and red pigments are eventually broken down as well and only brown tannins remain.



So it is because of complex biological and biochemical processes that we can enjoy this spectacular show, just before this season 'lets it all go' in preparation for winter. So come on up to Thacher Park, one of the capital region's best places to see fall foliage! Visit the Fall Fest on September 30, or join the Fall Foliage walk on October 14 for a peak foliage experience. Or just stop by the Overlook some time!

-by Christine Gervasi

Friends of Thacher Park Meeting Dates for 2017

September 13, and November 8, at 7:00 pm at Thacher Visitor Center. Come join us!

Linda Hodges

In our previous newsletter, I wrote about Jim and Bonnie Schaller who are two of our wonderful volunteers. I wrote that they are the salt of the Earth and this remains true. The same could be said for Linda Hodges who passed away suddenly about two weeks ago.

I knew Linda for about ten years or so. I first became acquainted with her at the nature center while she was volunteering. At first, I thought she was one of the staff since she was there so often. I soon found out that she enjoyed helping out at the park. Since she lived so close to the park, Thatcher was her backyard. For any job that needed to get done, Linda was a tireless volunteer, including becoming a trustee on the board of the Friends of Thatcher Park for several years. She often would walk over to the old office with Cookie, her beloved dog, and ask what needed to be done. This is a quality that is harder and harder to find nowadays.

Not only was she a volunteer at the park, she was part of many organizations on "the hill" and off of it.

Community and senior centers, churches and non-profits all benefitted from Linda. She dove into paperwork, assisted people, set things up, etc. Whatever the chore, Linda was there, smiling. No job was too menial or too big for her.

At her funeral service, a friend remarked to all of us gathered that Linda was like a little girl trapped within a big girl's body. By that, she meant that Linda didn't view the world with the jaded eyes of an adult. She still found the joy in being with and helping people. She found great joy in each new experience. That same joy that many children have.

I've written before that our life's goal should be to ensure that our piece of the planet is in better shape when we leave than when we entered it. Linda's life was too short. However, what she did with her short time on Earth made improvements to Thatcher Park, our community and the world.

-by John Kilroy



Hannaford Cause Bag Program!



Our local Hannaford has chosen **Friends of Thatcher Park** as the October recipient of the **Hannaford Cause Bag Program!** For every reusable "Helps" bag you buy at the Hannaford in Voorheesville (5 Maple Road), **\$1** will be donated to the Friends of Thatcher Park. This program runs the entire month of October! So next time you are in the Voorheesville Hannaford, consider buying a reusable bag to support the Friends!

Friends - Roadside Cleanup - Rte. 157 September 9, 2017



Meet at 9am at the Hop Field Picnic area (parking fees waived) and help us clean up summer's litter! Must be 18 years of age and able to walk about 3 miles downhill. Limited to 10. To register and for details please call Thatcher Nature Center at 518-872-0800.

Thacher Garden Gang remembers Linda Hodges

November 10, 1960 – August 22, 2017

Fall Festival at Thacher Park Saturday, September 30, 10am - 4pm



A day of fun for the entire family! Come and go on a hayride, test your talents at archery, experience live birds of prey, enjoy children's crafts, face painting and old fashioned games. There will be local artisans with handcrafted items, and locally grown vegetables and flowers. Musical entertainment will be provided by the Knox Traditional Strings, Oobleck, and Night Train. Entrance fee is \$6 per car. Call 518-872-0800 for more information.

Check for updates at www.friendsofthacherpark.org

Officers of the Friends Board of Trustees

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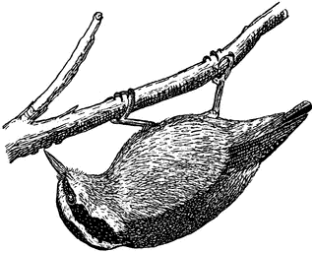
As always, call 872-0800 or 872-1237 to verify activity times and dates.

Please feel free to call any board member with questions or suggestions.

Many thanks to Jenny Young, Bonnie Schaller, John Kilroy, Sigrin Newell and Nancy Engel for their contributions to this newsletter.

Want to contribute? Please email me at cgervasi@albany.edu
Christine Gervasi—Editor

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Next:

Wednesday, September 13, 2017
Board Meeting
7:00 pm at the new Thacher Visitor Center !

A Year of Abundance

Squirrels and chickadees are predators. Surprising, but true. From the perspective of spruce, hemlocks, and white pines, these predatory creatures eat up their seeds and therefore there are destroying their babies. There will be no new generation of these trees if there are no seeds.

The trees, however, are not helpless. Over eons of evolution they have devised a strategy. In some years, the trees put forth a bumper crop of seeds. There are so many seeds that the predatory herbivores only make a small dent in the seed population. There are plenty of seeds leftover to sprout and begin a new generation.

This year at Thacher Park and in our region, the spruce and pine trees have an incredible number of cones. This phenomenon is known to scientists as a mast year. Mast is an Old English word meaning food for animals. In a mast year there is abundant food. These years only happen every 2 to 7 years and in the intervening years there are very few cones. The predatory herbivores go through cycles of boom and bust. In years of scarce food, only a few young survive whereas in mast years young animals are plentiful.

Vertebrate cone seed predators found at Thacher include red squirrels, red-backed voles, cedar waxwings, black-capped chickadees, red-breasted nuthatches, common redpolls, white-throated sparrows, and pine siskins. In a mast year, a single white spruce tree may produce 10,000 or more cones. In each cone there are two seeds per scale for a total of approximately 130 seeds per cone. Multiply this by the number of spruces in the Park. It is easy to imagine that even after all the predators have eaten their fill, there will be plenty of seeds left to begin a new generation.

Take a hike under the conifers at Thacher Park this fall. When you feel your feet crunching abundant cones, be aware that you are observing an amazing phenomenon of life.

-by Sigrin T. Newell



As always, you can find a color version of the newsletter at www.friendsofthacherpark.org