



THE CANOPY



Newsletter of Seno K/RLT Conservancy



Seno K/RLT Conservancy

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News and Events

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"Phenology is the study of periodic plant and animal life cycle events and how these are influenced by seasonal and interannual variations in climate, as well as habitat factors." For more information, go to Wisconsin Phenological Society at: www4.uwm.edu/wps/

Volunteer Spotlight – Mary Mirasola

"I would love to help with phenology at Seno." said Mary Mirasola very shortly after she enjoyed a summer 2016 Natural Resources Foundation field trip at Seno K/RLT Conservancy. That was music to our ears!

Since that day last summer, Mary has spent an enormous number of hours with her energy, expertise, and her camera and notebook at Seno on a weekly basis photographing and cataloging our native prairie, woodland and wetland plants as well as some photobombing insects. This is a project that our Education Director has been eager to get going.

Mary brings to Seno a wealth of experience. She is a Master Naturalist Volunteer who began engaging in phenology at Wehr Nature Center. She was eager to spread her wings and test her mettle on her own. She was inspired to do so at Seno because of something that was said during *Aster to Zizia – Native Plant Identification* NRF class. It had to do with the purposefulness of native plants and how everything in the natural world is connected for a reason.



Mary Mirasola in her first selfie.

The goal for all of Mary's work will first be to compile a user-friendly collection of pictures with text of all of the native plants she has identified and photographed. Visitors to Seno will be able to use it as they explore our habitats in either hard copy or on-line from the web site. Following that, as Mary goes through the seasons, it will not only be a native plant species list for Seno, but also a phenology journal detailing natural seasonal occurrences in our flora and fauna. A true phenological record and citizen science in action!

This is a big undertaking to say the least. Having a phenology group lead by Mary at Seno would be a welcomed and natural progression. If you are interested in participating in this effort, please contact Nan Calvert at **262-539-3222**. Training available. No experience required.

Hey, do you know that Seno is on the radio? Find us on WGTD on the second Thursday at 8 a.m. every month on the Morning Show with Gregory Berg.

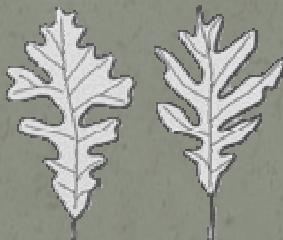
Here We Go Again!! Oak Wilt in Seno's Woodlands

by Mark Lesko, Board Director Seno K/RLT Conservancy

Having been a volunteer at the Seno K/RLT Conservancy (formerly Seno Woodland Management Center) for about two decades, I recognize that, at times, we keep fighting recurrent insults to our forestry stands. We now have an oak wilt pocket in our Northwest woods, which has a very nice composition of walnut, red oak, black cherry, and a few white oaks. This area was clearcut in 1978 according to Elvira Seno's records, producing a phenomenal harvest of 98,000 board feet of lumber. This forestry stand of hardwoods has regenerated quite nicely, growing vigorously, exhibiting the tallest, straightest, majestic trees on the property.....until September 2003, when perhaps a Nitidulid or Picnic beetle with fungal spore on its legs, was attracted to the sap of a recently injured red oak, thus infecting the tree upon contact.



Red Oak Group



White Oak Group

It's called "overland" spread, facilitated by the fungus-carrying Nitidulid sap beetles finding and "inoculating" exposed sap of injured trees. Once the ground zero or first tree is infected, the fungus spreads through the tree's conductive channels, clogging the conductive sap flow, causing wilting of leaves, canopy dieback, and eventually tree death.

In dense stands of red oaks, it is very likely that the underground root systems have "grafted", thereby allowing the close community of trees to move infected sap among shared roots underground.

In the winter of 2003, we dealt with the isolated oak wilt area that was limited to about $\frac{1}{4}$ of an acre, by removing dead red oaks, and by sacrificing some live red oaks at the periphery of the infection zone assuming some were already infected by root grafting. The cut live red oaks were chipped since the literature states that the fungus will not proliferate on quickly drying chips. The oak wilt battle of 2003 was won!

But, the summer of 2015 brought us into the fight again.



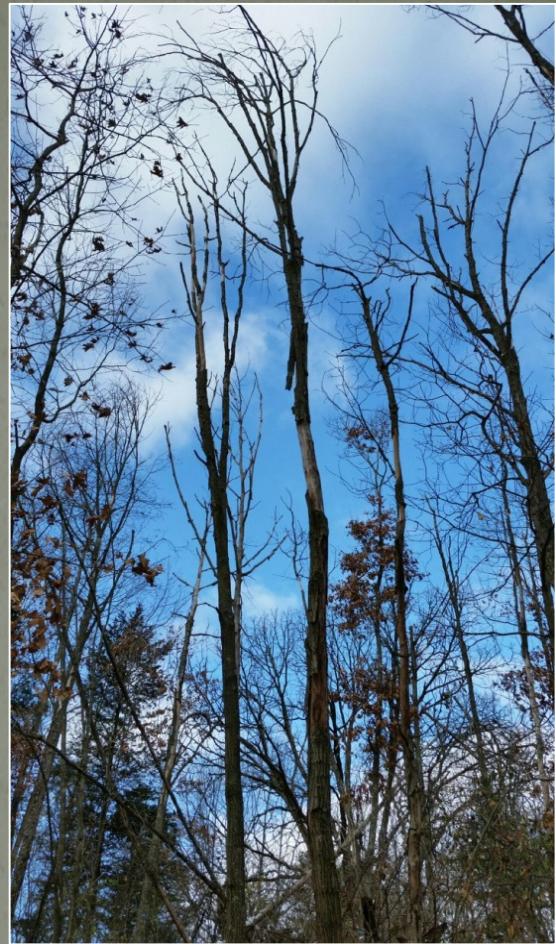
Nitidulidae species of beetle implicated in transmitting Oak wilt disease.

Trees in the Red oak group are most susceptible to the Oak wilt fungus. It is postulated that these beetles will detect exposed sap and find it within minutes of the wound opening, no different than the expediency at which they raid your summer picnic foods. That's one classic manner in which the oak wilt fungus spreads.



Root grafting – the root systems of individual trees fuse and thereby transmit or share anything that can move through the trees' phloem and xylem.

Recent photos of the new oak wilt zone at Seno K/RLT Conservancy.



Juan Gomez, our astute property manager first noticed the new oak wilt zone in the summer of 2015. Trees with delaminating/peeling bark are no longer considered infectious. The most conservative guidelines on oak wilt management strongly recommend that no susceptible trees or infected trees be cut, pruned, or otherwise injured between April through October. This is to avoid the known sap beetle vector activity. In the near future on the winter landscape, volunteers at the Seno woodlands intend to cut the dead and dying red oaks. In addition, a concentric zone of healthy-appearing red oaks will be sacrificed (as assumed root grafted to infected trees) and the logs will not be removed off site until they have dried and the bark has peeled. After removal of the red oaks, we can potentially replant seedlings (not red oak of course), or we can let nature takes its course from random regeneration from the nearby crop or seed/nut-producing trees in this forest.

We remain ever vigilant and responsive to oak wilt in our woodlands. To read the State of Wisconsin's publication on oak wilt, go to <http://dnr.wi.gov/topic/foresthealth/oakwilt.html>.

If you have questions, feel free to contact us at **262-539-3222**. If you are interested in helping us with land management, we'd love to have you! Training is available. Call or send us an email at nan@senokrlt.org.

Volunteer Land Management Opportunities at Seno, Drumlin Farm and the other lands we own – removing invasive plants, trail maintenance, fence flagging, mowing, planting native plants including trees and special projects. There is something for just about everyone. 3 Students, Scouts, Community Groups – need volunteer hours? Call us!!

Land and Climate – LTA Leading the Way by Nan Calvert, Director of Education and Outreach

Why land trusts? That is a frequently asked question and a good one. Once people understand what land trusts do they want to know why, what is the purpose of all that land preservation. The reasons are many. Some are obvious. When people visit Seno or Drumlin Farm or Jean McGraw Nature Preserve, (all Seno K/RLT Conservancy lands), they have the opportunity to immerse themselves in miles of trails, flora and fauna, and cherished endeavors like bird watching, photography, botanizing or just simply hanging out in order to refresh and replenish their spirits. Because land held in trust is preserved in perpetuity; it will be there not only for the present, but for years to come. Land trusts are about legacy. And, they are about quality of life for current and future generations.

They also are so much more. Open space is an essential tool in combatting climate change and the Land Trust Alliance is at the forefront of this effort. In January of 2017, the LTA embarked on a new program known as the Land Trust Climate Change Initiative. The purpose of the Initiative is to advance the field of knowledge and practice in the land trust community to mitigate and adapt to climate change. The Open Space Institute and The Nature Conservancy are major partners in this important project. And, The Doris Duke Charitable Foundation provided a significant catalyst grant to fund the work.

From the Land Trust Alliance web site:

"The land trust community has a moral obligation to address the climate crisis. And we can help mitigate change by doing what we've always done: conserving more land and stewarding it effectively. In doing so, we'll definitively demonstrate our relevance to people and their wellbeing, while simultaneously bringing home significant financial resources to power our land conservation efforts. This new initiative will enable the land trust community to vigorously go down this path."

It is all about climate resilient sites and empowering land trusts by providing them with the resources, training and tools to incorporate climate science into their plans for land acquisition and management plans. What is a climate resilient site, you may ask? A climate resilient site contains the following characteristics: physical diversity, local connectedness, regional connectivity and an intact biological condition. Physical diversity means landform diversity as in varying topography. Local connectedness refers to the ease of species movement within that topography. Regional connectivity is the flow within and between the various land forms on the site. Biological condition is concerned with the degree of ecosystem disturbance. The more resilient a site is, the less vulnerable it is to flooding, drought and species decline.



Our Tamaracks through the seasons. Photo by
Mary Mirasola.

As a real life example, think of the Tamarack wetland at Seno K/RLT Conservancy. There is definitely landform diversity – slopes, hummocks, wet and dry places. Its faunal residents can move freely within and outside of it. There are no major barriers to accessing the woodlands or prairies further afield. Biological condition – well, it is pretty good. Of course Glossy buckthorn threatens to take over and that decreases overall diversity. That can be remedied.

This initiative is a great boon to land trusts. It will enhance their ability to focus on land that should be preserved, improve stewardship practices and position land trusts everywhere to join in the effort to combat the effects of climate change.

For more information go to
www.landtrustalliance.org/topics/climate-change