



Namekagon Barrens Wildlife Area

Our mission is to develop programs and activities that educate and promote the importance of conserving Wisconsin's Northwest Sands pine-oak barrens habitat.

The Namekagon Bridge 1863–1941

By Jerry McAllister

Several articles on the Namekagon Barrens Wildlife Area with my byline have appeared in *The Outdoorsmen Magazine*, *Flandreau*, *South Dakota* and in the *Friends of the Namekagon Barrens Newsletter*. They were mainly about sharp-tailed grouse and pine/oak barrens habitat.



These two were prominent denizens of millions of Wisconsin acres before the Europeans settlement got serious about 1900. Now, they are making their last stand in Wisconsin, successfully so far, at the NBWA. There are two other reasons for NBWA fame. The six-thousand-acre wildlife area is at the confluence of the Namekagon and St. Croix Rivers. Together, the rivers form the St. Croix National Scenic Riverway. Second, within the NBWA is the remains of the Namekagon Bridge which for a time was an important cog in the Bayfield Road which was the only connection of the Great Lakes to St Paul, Minnesota and the Mississippi River. The wagon/stagecoach road went through Northwest Sands barrens for about 90 miles because the habitat was flat and sandy with few trees, swamps, or large streams. For the first seven years of the Bayfield Road's existence, beginning in 1856, a ferry was used to get across the Namekagon, and it too is in the current NBWA footprint.

The Bayfield Road and the Namekagon Bridge were surveyed and constructed by logging and stage line interests which opened up NW Wisconsin in the 1850s and 60s. The most prominent was Senator Henry M. Rice from St. Paul Minnesota. The logger most closely associated with construction was Albert C. Stuntz; the bridge was known in the early years as the Stuntz Bridge. A railroad from St Paul to Duluth/Superior ended the Bridge's importance after a couple of decades. The Bridge virtually disappeared from public knowledge sometime after WWII.

Donald Monson retired from a career in the Wisconsin DNR Forestry Program and wrote a history of the bridge (I appropriated his title for mine in this article) in 2008. Monson has self-published limited copies of his book. A prominent local historian, Brian Finstad joined the Friends of the Namekagon Barrens about ten years ago and with Mark Nupen, our then-president, began searching for the Namekagon Bridge remains. For a couple of years, they thought a site a few hundred yards upstream was the location. Mark was never sure, got better input from Monson, and re-discovered the actual site with abutments, stone piers, and a wing dam in 2020.

Over the past winter our Friends Group decided to pursue a Wisconsin State Historical Marker for the Namekagon (or Stuntz) Bridge. Nupen and Finstad organized the first step in the project—clearing the bridge site on the north bank of the Namekagon River so we can show it to interested parties. I, who had never seen the site, was enlisted into the work party. Nupen got permission from the Park Service and the Burnett County Forest to clear the site.

On Sunday, April 25, five of us spent four hours accomplishing the task. Although a short task, it was monumental. The roads leading to the site are about five miles of sand; the last mile is a completely unmaintained logging road. Twenty yards from the site in any direction rendered it completely invisible.

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I'm Liken my Lichens and Mosses!

By Mark Nupen

The Namekagon Barrens is ALWAYS such an amazing place to see and to study. It is of course quite different from the surrounding forested lands and the varieties of plants you see are quite different in so many ways. Then I started to look more closely at the ground and noticed this layer of lichens and mosses covering the entire ground 'blanket', I will call it the "Barrens Carpet"! Sometimes a footprint will split this cover and you will see the bare sand beneath! You don't quite see this dominance on the ground in the forests. So, I thought I need to study this 'newfound' habitat of ground lichens and mosses which can vary from site to site. Also, I found out that this Lichen/Moss Barrens Carpet held the first living organisms on the Northwest Sands after the last glaciers left about 10,000 years ago. This carpet set the stage for the introduction of new plants and the animals associated with the Barrens habitat! What we are seeing is truly an Ancient Carpet!

The photo top, right, was taken just north of St Croix Trail and Gomulak Fire Lane, demonstrating this carpet sitting as a relatively thin layer over the Barrens Sand! In the photo you can see the carpet was stepped on leaving a bare spot in the sand with the barrens carpet surrounding. You can see the diversity of vascular plants, flowers along with some grass, plus the moss and lichens of different varieties. When you get down close the variety is quite stunning! You don't see this in the forests usually but it is all over the Barrens. That layer literally creates an environment so that the other plants you see can survive and reproduce. The layer stores water and reduces evaporation and provides other nutrients that the other plants can use. It really is a remarkable symbiosis going on. All right under your feet. This carpet even survives fires, amazing!

The scientists refer to this carpet as a biological soil crust, or biocrust, a major contributor to the biodiversity and ecosystem functions of deserts, semi-deserts, pine barrens, and grasslands worldwide.

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Viewing Shelter Update

By Mark Nupen

FNBWA received a Department of Natural Resources grant to build a viewing shelter at the corner of Dry Landing Road and St. Croix Trail.

We plan to begin construction this summer! Part of our grant match will include volunteer hours for construction. If you are interested in helping out on our work days, please let Mark Nupen know at

marknupen@gmail.com



The Phipps Center for the Arts — Hudson

By Mark Nupen

Last July, an artists' group from the Phipps, studied the Barrens beauty. The Phipps hosted an exhibition in March where those works were included. The artists very much enjoyed last year's three-day summer stay at the North Unit cabin and would like to do it again this summer! There is certainly plenty of art on the Barrens. They saw what a unique place it is and found the entire event a wonderful social gathering of artists in an unusual place.



More SNAPShot Benefits!

By Gary Dunsmoor

What happens after a wildland fire, or after a prescribed burn?

How long does it take for the land to rejuvenate, and life to be renewed?

Many people believe everything is destroyed and takes years to recover after fire.

SNAPShot can help us figure this out, and reveal how quickly life on the barrens gets back to normal after the flames pass through.

We know Native Americans used fire in the Northwest Sands Ecological Region to rejuvenate blueberries, ease travel, and even protect themselves from wildfire.

Government agencies now use fire to manage this globally significant pine-oak community to maintain the unique flora and fauna of the barrens.

The DNR carried out a NBWA prescribed burn on May 4th, 2021. Fortunately, someone forgot about the SnapShot camera being in the burn unit, and thankfully, the camera survived the fire to reveal not only the flames, but how quickly animals return to utilize the lush green growth that springs up soon after fire.

The SnapShot camera revealed a canid within days of the burn. The temporary lack of cover makes it easy to locate and pounce on small mammals that survived fire in their burrows. Same for avian predators that feed on little critters.



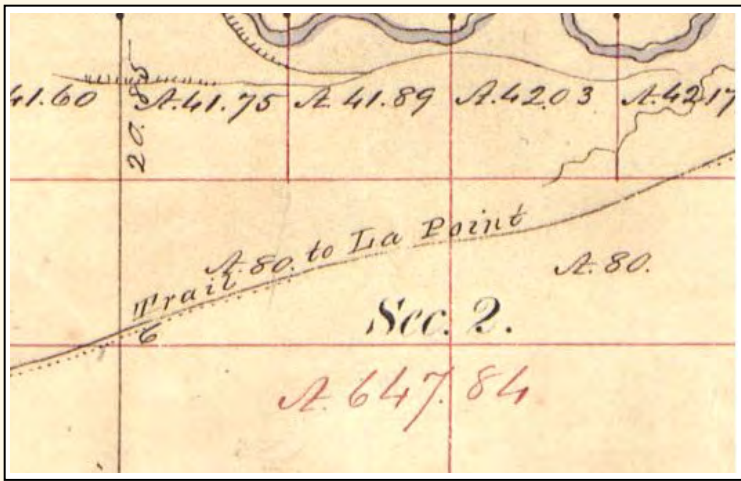
The five turkeys were foraging for the wide diversity of food they consume on May 26, just three weeks post burn. A Blue Jay, also in May, was finding its means of survival. On June 6th the camera captured two Sharp-tailed Grouse already utilizing the burned over, but already lush, green landscape. They have even been observed in burned areas a day after the area was turned black. Again, maybe the ease of locating food, such as (roasted?) seeds brings them in.

Also in June were the leaping bucks. Very happy with the DNR controlled fire? A fawn, 'captured' on June 30th, was also receiving the nourishment needed to grow big and healthy before having to survive a northern Wisconsin winter. An omnivorous Raccoon seemed to be enjoying a stroll through the new growth too.

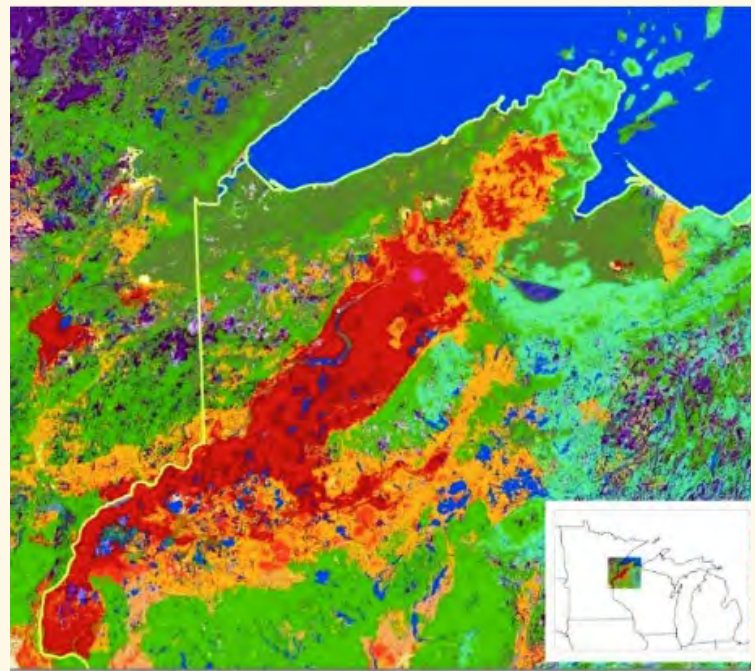
The benefits of fire are many: set back succession, release nutrients, stimulate lush new green growth, and provide food and cover for wildlife. Not destroying, but supplying new life.

And the SNAPShot camera helped reveal it all...





Trail to La Pointe Map



The Great Lakes region features some of the most fire-dependent vegetation in the United States. The red areas in this LANDFIRE map of pre-settlement vegetation had surface fires every 5–10 years.



Gordon's Stage Station



The Auto Trail

By Brian Finstad

The Northwest Sands Auto Trail project is a back roads exploration of the Northwest Sands Ecological Landscape, a large area of glacial outwash that extends on a trajectory from just outside of Bayfield, Wisconsin to Wolf Creek, just north of St. Croix Falls. This drought prone landscape, prior to settlement and fire suppression, was frequently swept by wildfire, maintaining a unique and globally significant “barrens habitat.” Barrens habitat is characterized by a shifting mosaic of open grassland prairie, brush prairie, and young regenerating forest, which is ever changing due to the frequency of wildfire. Being high, dry, and open land, as well as extending on a trajectory between the Lake Superior and St. Croix watersheds, the Northwest Sands were utilized as a conduit of travel for Native people and early European settlers, prior to the coming of the railroads. The auto trail experience will connect together the various barrens habitat wildlife areas as well as interpret geological, ecological, historical, and cultural points of interest in between. Wildlife areas include Fish Lake, Crex Meadows, Namekagon Barrens, Five Mile Barrens, Douglas County Wildlife Area, Mott's Ravine, Barnes Barrens, and Moquah Barrens. An organizing feature of the route is utilizing modern roads that most closely approximate the historic travel route across the Northwest Sands, which began as an indigenous footpath and evolved into a segment of the St. Paul to Bayfield Stage Coach line. Project planning has been made possible through a grant from the Wisconsin Humanities Council.



Photos courtesy of Brian Finstad

The Namekagon Bridge...

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Approach to the north abutment from the west side gives no clue of its location even while standing right on it. The south abutment and the piers appear to be small overgrown islands. The principal problem in finding and viewing the site was hundreds of aspen, birch, and hazel saplings under a canopy of wrist-sized alder. Five people with loppers plus a chain saw corrected these problems and brought back to life an 1863 construction marvel. The abutments on both river banks, two stone piers in the water, and a rock wing dam to protect the south abutment are still in place. The site is certainly worthy of a historical marker and also offers viewers fascinating intact remains.

The photos were taken by Jerry McAllister. They show the author standing on the cleared north abutment with the Namekagon River and a pier in the background. The other two photos are of a close-up of the north abutment where all our work took place and of a better view of the river and the stone pier (shown on page 1).



Photos courtesy of Jerry McAllister

I'm Liken my Lichens and Mosses!

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Biocrust communities contain a diverse assemblage of lichens with cyanobacteria (which used to be called 'blue green algae' other algae, and bryophytes (nonvascular plants e.g. mosses) as well as bacteria, archaea (another weird bacteria-like organism without a cell wall), fungi, and other associated soil organisms. It really is quite a complicated layer on the sandy ground. Even the scientists studying this environment don't quite understand it all and even keep changing the names of these particles. I'll describe below how vital this carpet is to the survival of the other plants on the Barrens AND of course the animals that prefer the Barrens environment!



To the left is a fun photo of lichens I took on the Barrens one frosty morning. Notice the red topped lichens, British Soldiers (*Cladonia cristatella*), and the cupped tops that are part of lichen (fungus) reproduction structures.

Biocrusts are communities of organisms at the intersection of soil and air that are recognized for their profound influence on dryland ecosystems, such as the Barrens sand environment. We see these biocrust communities in open areas where vascular plants (trees, bushes and grasses, etc.) aren't as productive, e.g. our Pine Barrens.

Now I will talk about those Lichens and the Mosses.

A lichen is really a fungus (mainly the part you can see) and literally woven within its body of fibers and pieces is a collection of algae and bacteria that are completely dependent on each other. The fungus part of the lichen comes in a variety of shapes as you can see in the first photo. Some are cupped pieces and others are red topped stems! There are several thousand lichen species in North America. They can be found in the deserts all the way up into the arctic lands. There are about 17,000 species of lichen worldwide.

Within the lichen as I mentioned are the algae and often bacteria. The algae and parts of the fungus provide the diversity of colors e.g. green, red, gold, purple or brown, which are the ancient dyes different cultures used. Lichens were used for foods and various medicinal uses historically. The fungus part of a lichen cannot photosynthesize nutrients, but the algae within the fungus structure can photosynthesize carbohydrates which are then rapidly absorbed by the fungus part of the lichen and transformed into a

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I'm Liken my Lichens and Mosses!

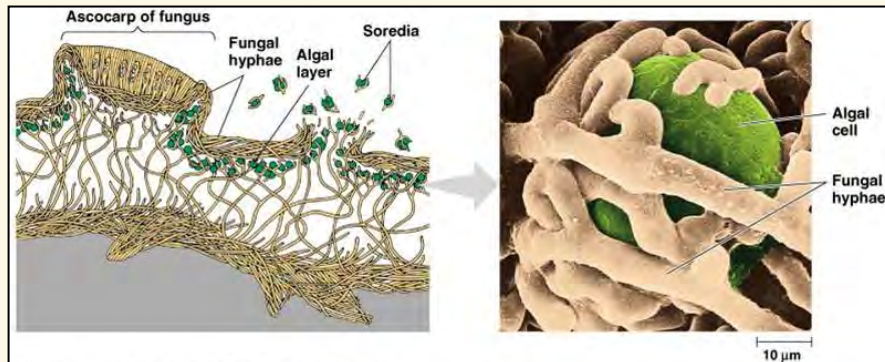
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variety of more complex carbohydrates.

Algae can absorb nitrogen from the air and the fungus can absorb newer nitrogen forms to make proteins etc.

The lichen is able to absorb water from the atmosphere thus protecting the algae and bacteria from dehydration.

The lichen parts can attach to rocks and over time gradually breakdown the stone's surfaces and use those minerals also.



What do these lichens look like up close?



Lichens attach to so many materials whether natural or man-made surfaces. They do help breakdown the rocks into minerals that are used by other plants as well as the lichens. You will often see the lichens mixed with mosses, such as you see on the barrens, and the mosses help trap water that lichens use. Lichens also absorb moisture from the air and that benefits the mosses during dry times. Scientists even collect lichens and test what air pollutants these lichens have absorbed. With a lot of air pollution, you won't see as many lichens. So, next time you are at a cemetery, which of course doesn't get a lot of traffic, check out the abundance of lichens and that gives some clues as to how clean the air is in that area!

Why does the 'fungus' part of a lichen need the algae/bacteria partners imbedded in their structures? In this amazing association the fungus benefits from the algae because fungi, having no chlorophyll, can't photosynthesize their own food. A lichen's fungal part is thus "fed" by its photosynthesizing algal part. The algae benefit from the association because the fungus is better able to find, soak up, and retain water and nutrients than the algae. Also, the fungus gives the resulting lichen shape, and provides the reproductive structures. This kind of relationship between two or more organisms, where both organisms benefit, is known as mutualism. The 'photobiont' is the algae or green bacteria part of the lichen. Its role is to undergo photosynthesis and provide food for all partners in the lichen relationship. The 'mycobiont' is the fungus portion of the lichen. Its role is to envelope and protect the photobiont from drying out and also absorb moisture for both partners in the lichen relationship.

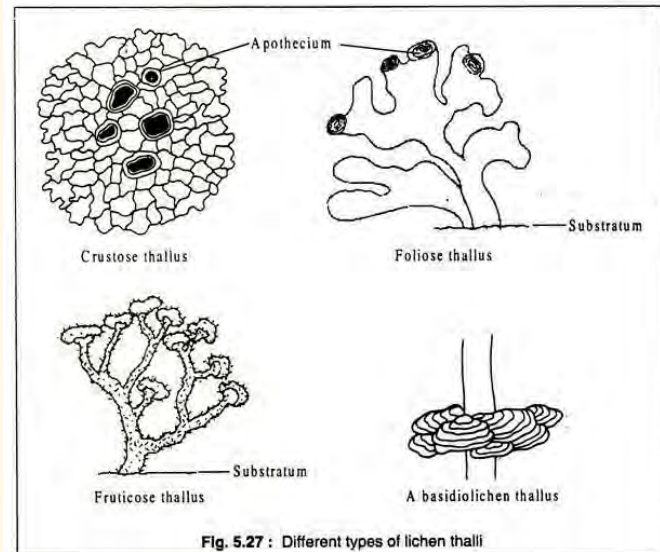


Fig. 5.27 : Different types of lichen thalli

So, the next time you are out on the NBWA, recognize that you are walking on that "BARRENS CARPET", that makes possible the creation and survival of all those other plants and barrens-loving animals. That layer creates a critical connection and partnership with the rest of the Barrens habitat and also stabilizes that sand layer from blowing away.

Mosses? Yes they seem to also play a common role with the presence of lichens. What is a moss? It is a primitive plant, non-seed producing, non-flowering, and a non-vascular plant. They reproduce by producing spores. They inhabit shady and moist places, but we can see they can inhabit the Barrens sheltered among the lichens! They can be quite tall or quite short as we seen on the Barrens. They contain chlorophyll and undergo photosynthesis. They lack roots, so they grow in low carpets or rounded or cushions in damper habitats. Normally the leaf-like structures of mosses are a single-cell thick! There are up to 12,000 moss species in the world.

You will often see the lichens mixed with mosses, such as you see on the barrens, and the mosses help trap water that lichens use. Lichens also absorb moisture from the air and that benefits the mosses during dry times.

Now, beware that many people see these open areas for motorized recreation e.g. ATVs etc. but you can understand how easily such an invasion of ATVs would soon destroy that 'Barrens Carpet', 'biocrust', and of course much of the rest of the Barrens that depend on that biocrust for survival. I bring this up, because it is a 'mechanically' fragile bio-environment that would not survive that physical destruction by off-road ATV use on the Barrens.

References:

1. (google) [Biology 2. Lichen Observation Lab](#)
2. Excellent reference is: [The Ecological Society of America—Temperate Biocrusts](#): mesic counterparts to their better-know dryland cousins , by Jeffrey D Corbin and Rachel K Thiet
3. (google) [Common Lichens of Wisconsin](#) (for some great photos of lichens in Wisconsin)

Barrens Birding Field Trip

By Jerry McAllister

This article is about the Eastern Towhee, Eastern Kingbird, and Brown Thrasher. With Bruce DeLong and Gary Dunsmoor, I have co-lead a birding field trip for the Wisconsin Natural Resources Foundation on the third Saturday of May for the past 10 years. The venue is the Wisconsin DNR's Namekagon Barrens Wildlife Area located in the state's far north, near Lake Superior. The attendance is splendid! We set a limit of 15 persons and are always full. Participants are from a 200-mile radius in both Minnesota and Wisconsin.

Serious birders come to see Sharp-tailed Grouse and Upland Plovers which are a difficult spot on their breeding grounds in Wisconsin and Minnesota. Casual birders come to see a magnificent 6500-acre remnant barrens habitat which has vanished before our eyes over the past century and has become globally rare. A barrens habitat arises from a very sandy zero-loam soil many feet deep. The choice of May's third Saturday coincides with peak songbird migration in the wildlife area's latitude. This draws the rest of the trip participants. I have come to appreciate three birds which are faithful nesters to our barrens and always are singing in great numbers in mid-May from their head-high, fire-stunted oak perches. The oaks along with native prairie grasses, blueberries, and a plethora of wild flowers form the basic barrens cover.

Eastern Towhees are a flashy bird with a jet-black hood contrasted by rufous sides and a white belly and with distinct white patterns on mostly black wings. When its clear resonant song is struck, at a "drink more tea" cadence, it is a fairly easy spot from up to several hundred feet away. In the nesting areas a birder can often simultaneously hear three or more males singing for females. Its principal breeding ground stretches across the Great Lakes region. It prefers shrubby areas with a dense ground litter in sandy soils which is another way to describe an oak barrens like ours.

Brown Thrashers are notable singers, unequalled for the rich variety and volume of their song, according to the National Geographic Field Guide. The Brown gives a series of melodic phrases, repeating each three times before moving to the next. Appearance is reddish brown above; and heavy reddish streaking on white below. Breeding grounds are north of the Mason-Dixon Line to the Great Lakes. It inhabits dense thickets which is certainly another good descriptor of a barrens. Like the towhee, its appearance and call make it an easy spot at distances of two hundred feet away on the same stunted-oak perches. Singing males are more widely spaced than that of the towhee.

Eastern Kingbirds are easy to identify because they are tolerant of approaching birders and have a slate gray upper half, white undersides, and a black tail capped off with a conspicuous broad white terminal band. The latter is prominent from every direction. It breeds from the Rocky Mountains to the Atlantic Ocean. It is a flycatcher, and as such, sits high in the barrens fire-stunted oaks watching for passing bugs. Call is a harsh "dzeet" note, without a song. It is attracted to large openings near forest edges which is another way to describe our vanishing barrens. Before European settlement around the turn of the 20th Century our remnant barrens was a tiny part of the Northwest Sands barrens which stretched for almost 200 miles from near the Twin Cities to Bayfield Wisconsin. Calling this barrens a large opening would have been completely incorrect.

I like these three birds because they are robin-sized birds with beautiful conspicuous coloration. The thrasher and towhee have loud melodic songs. All three sit high and relatively still in nearby perches. When I have 15 customers standing on a sandy road trying unsuccessfully to spot an elusive sandpiper or grouse, or trying to identify one of the six species of brown sparrows scurrying in the sand or flitting in the brush, the towhee, thrasher, and kingbird provide my customers with constant success. The three are not uncommon but are not seen everyday by anyone.

The 2022 field trip participants identified thirty-nine species, including the three faithful nesters, the rare Upland Sandpiper and Sharp-tailed grouse, and numerous migrating warblers and sparrows.

The towhee, thrasher, and kingbird photos were taken by central Iowa's Larry Dau. He has a cabin near the Barrens and regularly donates stunning barrens bird photos to our Friends group for use in newsletters, website articles and calendars. Thank you, Larry!



Eastern Towhee

Photo courtesy of Larry Dau



Brown Thrasher

Photo courtesy of Larry Dau



Eastern Kingbird

Photo courtesy of Larry Dau

2022 Summer Field Days & Gatherings at the Barrens!

Each event begins at the FNBWA Cabin, 33174 Gomulak Fire Lane, 14-miles west of Minong. The Cabin driveway is just south of St. Croix Trail on Gomulak Fire Lane.

Registration is not required; signing up on [EventBrite on our website www.namekagonbarrens.org](https://www.namekagonbarrens.org) is appreciated.

1

Wednesday, July 13
8:30 am — 11:30 am

Scouting for Blueberries

Join us to search for the best patches in the Barrens and judge how good this season will be for these blue jewels!



2

Saturday, July 16
8:30 am — 12:00 pm

Blueberries on the Barrens

Join us at the cabin for our annual festival. The day kicks off with scouting for blueberries at 8:30 am, with presentations and fun things to do at the cabin throughout the morning. Lunch provided!



3

Saturday July 30
8:30 am — 11:30 am

How many Plant Species in a Square Meter of Barrens Habitat?

Come learn about plant identification and diversity. Compare different areas within the Barrens to see how many different species are present in a square meter of ground cover.



4

Thursday, August 18
8:30 am — 11:30 am

Sharp-tailed Grouse & Bird Dogs

Watch experienced bird dogs and their trainers work their way through the shrubs and ground cover to search for Sharp-tailed Grouse.

- > [Join the Friends](#)
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Get Involved!

Thank you to all that have renewed their membership! Because of you we are able to continue our education outreach regarding the importance of NBWA and barrens habitat.

It's never too late to contribute to the ongoing efforts of Barrens conservation. Follow one of the links at the left for more information, to join, or to donate!

Checks may be sent to FNBWA Treasurer:

Gary Dunsmoor
N4961 Beaverbrook Ave
Spooner, WI 54801

THANK YOU!!



FNBWA
BARRENS
CONSERVATION

[namekagonbarrens.org](https://www.namekagonbarrens.org)



Find us at www.namekagonbarrens.org