



"We are dedicated to promoting, protecting, and improving Ohio natural areas and preserves for educational and scientific purposes."

Johnson Woods State Nature Preserve

It was said that at the time of earliest settlement of Ohio, The Ohio Country was so heavily forested with huge trees, a squirrel could travel tree to tree, limb to limb, from the banks of the Ohio River to the shores of Lake Erie without ever touching the ground. It is hard to imagine how that early forested landscape must have appeared to the first settlers. Today, we only have historic accounts of this magnificent primeval forest for it was essentially timbered and converted to cropland



Johnson Woods State Nature Preserve

statutes, libraries, institutions; some useful, some not; some beautiful, many ugly. But somehow it never occurred to anyone to set aside a square mile, much less a township six miles square, of primeval vegetation for future generations to see and enjoy. Yet this could have been done for less than the cost of a single pile of stone of dubious artistic and cultural merit."

Well, there is a state nature preserve in Wayne County that does give visitors an idea of the appearance of the original primeval forest of early

long ago. Only a very few, tiny isolated remnants remain.

In 1953, the late nationally renowned Yale University professor of botany and ecology, Dr. Paul B. Sears, born and reared in Bucyrus, Ohio, wrote the following:

"The State of Ohio, containing about 40,000 square miles, was once a magnificent hardwood forest. The forest types, thanks to the records of early surveyors, have been largely mapped. Yet it is almost impossible to form an adequate picture, from any surveyor records, of the appearance of the forest. The state has its full share of memorials -----

Ohio. Formally known as Graber Woods, this 155 acre woodlot has never been cut. Many of the trees growing here rise 40-50 feet before the first limb. Several are estimated to be more than 400 years old. Some of these giants, largely white, red, and black oaks along with shagbark and bitternut hickories, are 120 feet tall with a diameter of 4-5 feet. In 1994, Mrs. Clela Johnson donate all 155 acres to the ODNR Division of Natural Areas & Preserves as a state nature preserve in honor of her late husband, Andrew Johnson. The appraised value of the standing timber alone was in excess of one million dollars. DNAP then purchase an addition 51 acres of old-growth forest just on the other side of Fox Lake Road using donations from the DNAP State Income Tax Check-off Program. The 206 acre preserve is now named Johnson Woods State Nature Preserve, honoring Andrew Johnson.

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Johnson Woods State Nature Preserve

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Johnson Woods State Nature Preserve is a wonderful place to visit in early spring, not only because of the beautiful array of spring wildflowers, but especially, because that is before the trees have totally leafed out so a visitor can get a much better view of the huge trees adorning this very special place; not unlike the view early settlers may have had of the primeval forests of Ohio. This preserve is located approximately 4 miles north of Orrville, Ohio on State



Johnson Woods State Nature Preserve

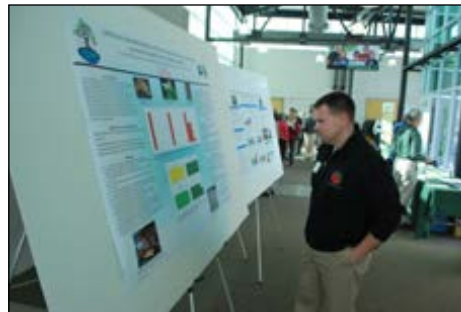
Route 57, then one mile east on Fox Lake Road. A paved parking lot is located on the north side of Fox Lake Road. Constructed with bond monies as one of Ohio's first NatureWorks projects, the one and a half mile recycled plastic boardwalk trail starts on the south side opposite the parking lot and traverses the heart of Johnson woods. Visiting this very special nature preserve offers a great family springtime adventure in the heart of Ohio Amish Country.

Guy Denny

An Interesting Conference

ONAPA and the Ohio Invasive Plants Council (OIPC) have much in common. Jennifer Windus, the president of OIPC, happens to be the vice president of ONAPA and co-chair of its Resource Protection Committee. The problem of invasive plants which is the focus of OIPC is also of great concern to ONAPA as well as the Division of Natural Areas and Preserves (DNAP). No wonder, then, that both ONAPA and DNAP were well represented at OIPC's latest triennial research conference held on The Ohio State University campus on February 11.

With over 250 representatives of government agencies, park districts, academia and industry in attendance, the conference proved that invasive species have become a major concern. Among the interesting bits of information picked up by this attendee was that, while "sterile" cultivars of non-native plants developed by the nursery trade may not escape, their descendants often do; that building and maintaining roads in forested areas provide access routes for invading plants; and that removing bush honeysuckle must be



DNAP Manager Josh Deemer checks out a research poster—Tim Snyder.

combined with control of the deer population if native plant cover is going to increase. Dr. Sarah Reichard, the keynote speaker, presented some interesting thoughts on how industry, academics and government can work together to control invasive species.

A large poster session offered reviews of a number of research projects. One of them was the work of a young—very young—PhD candidate (it appears that universities are accepting students right out of grade school these days) sitting at my table whose area of interest was native bees, an important group of pollinators often ignored in favor of the non-native (one could say, "invasive") honeybee. ONAPA has made a sizeable contribution to OIPC's research program to help fund future researchers—one more bond these organizations share. Three years from now the next research conference will



Jennifer Windus chairs the OIPC business meeting.—Tim Snyder.

provide an opportunity to see what our money has wrought. It will be a conference well worth attending.

Tim Snyder

Phragmites, A Challenging Wetland Invasive Plant

Common reed grass or Phragmites (*Phragmites australis* ssp. *australis*) is one of the most difficult wetland invasive plants in Ohio to control. It has become well-established in many wetlands in northern Ohio and has slowly spread south to many counties. It is thought to have arrived in North America accidentally, most likely in ballast material in the late 18th or early 19th centuries. It established itself along the Atlantic coast and has spread across the continent.

Phragmites is a tall, perennial wetland grass, reaching 5-10 feet in height or taller. It forms a dense network of rhizomes with deep roots, and vertical stalks arising from the rhizomes. Stiff hollow stalks support 1-2-inch wide leaves. It flowers in late July through August with bushy, gray-brown panicles. Both native and non-native subspecies occur in Ohio, with the native one being much rarer and harder to identify. The native subspecies usually is not aggressive, has smooth, shiny, somewhat purple stems, and short ligules. A few sites which are known to harbor the native



Phragmites run amok. Photo by Jennifer Windus.

Phragmites include Cedar Bog and Resthaven Wildlife Area.

The non-native common reed grass can quickly invade a wetland and dominate the habitat, crowding out native plants and developing a monoculture. Its tall stems and dense growth habit block light to other plants and its rhizomes often spread 10-20 feet across the soil surface. It can spread to new areas by seed and vegetative rhizomes or even fragments of rhizomes. While it had been thought for many years that it produced little viable seed, research at The Ohio State University (Campbell 2010) showed that most seeds are viable and often germinate well in mudflat conditions. The germination conditions determine whether the plant reproduces mainly by seed or vegetative means at a specific site.

Control of Phragmites is difficult and requires multiple efforts to eliminate it or at least maintain it

at a low level in a wetland. Mechanical means may be used, such as cutting, pulling, or mowing in late summer, but they are labor-intensive and minimally effective. The use of a Marsh Master, a large piece of machinery which can access wetlands, to crush a stand has been effective in larger populations, such as at Ottawa National Wildlife Refuge. The Marsh Master can also be used for herbicide application in Phragmites stands. Water level control works well when populations are flooded at the right time of year and for the right time period. Combining herbicide application with mechanical methods or prescribed burning may be effective as well. For example, burning may be done to reduce standing plant biomass before or after herbicide application. Due to the extensive rhizome system, any control method must be repeated several times and must control the rhizomes.

Herbicide application using Rodeo, Accord, Glypro, AquaNeat, or Habitat/Polaris (depending on the site) is most effective in the late summer or early fall when the plants will best transport the product to the roots. Any herbicide used should be labelled for wetland or aquatic use as there may be standing water in Phragmites stands. Herbicide can be applied with a backpack sprayer, ATV-mounted sprayer, or aurally in large populations. Application method and herbicide should be chosen carefully depending in the site and other species present in the wetland.

For more information on Phragmites and its control, there are numerous websites. We recommend the factsheet on the OIPC (Ohio Invasive Plants Council) website at www.oipc.info, MIPN's control database at www.mipn.org, and Cornell University's website at www.invasiveplants.net. In addition, OIPC often conducts invasive plant workshops each year to help improve awareness of invasive plants and their control techniques.



Phragmites.

Jennifer L. Windus

How Not to Be A Tick Magnet

It was a chilly fall day. I was hiking in a wooded Mohican area with a friend. My knee socks were sagging around my ankles and my legs were cold, so I started to pull up my socks. Whoa, what is that? In the process of pulling up my socks I noticed a tick making haste up my beige pants. It was a small never-before-seen-by-me type of tick. My hiking buddy and I immediately knew it was a blacklegged or deer tick (*Ixodes scapularis*). The first clue was that it was out patrolling in the cold weather. Blacklegged ticks can be out and about all winter even if there is snow on the ground. They prefer the ground to not be frozen though. The second clue was its size and color, including, of course, its black legs.

It turned out that this specimen was a female. It was black around its head and the rear was brown. We discovered six more ticks on my friend's dog, and they appeared to be entirely black and the size of sesame seeds. Just imagine black sesame seeds with eight legs. These were the males. The female was a little larger than the male and sported two distinct colors.

Deer ticks have now been found in 33 of Ohio's 88 counties. We can definitely count the Mohican area in Ashland County, as these Lyme disease-carrying ticks continue their march across the U.S. There are more than 300,000 new cases of Lyme disease every year in the U.S. This number has tripled since 1996. Lyme disease been found on every continent except Antarctica. Different *Ixodes* species spread the disease in Europe and the western U.S.

During my childhood, the greatest threat from ticks was Rocky Mountain spotted fever. It has been supplanted by Lyme disease, an insidious illness that is spread by blacklegged ticks. It is often misdiagnosed, and the repercussions of not treating Lyme disease can continue for a lifetime.

Amy Tan's essay about her experience with Lyme disease (www.humanthology.com/lyme-disease) is what truly brought home its threat and potential severity to one's health and well-being. "I wish I knew ten years ago all of the things I've just mentioned," she says. "If I had, I might have avoided getting bitten. I would not have let a treatable disease turn into a permanent, disabling, and life-changing one."

I've been most frightened of Lyme disease, but

the Lyme Disease Association lists seventeen diseases you can get in the U.S. from tick bites if the tick happens to be carrying the right pathogens. For example, the blacklegged tick can spread Anaplasmosis/Erllichiosis, Babesiosis, Bartonella, Borrelia miyamotoi, Lyme disease, Tick paralysis, and Powassan encephalitis. One bite can transmit several diseases.

(www.lymediseaseassociation.org) Diseases are also carried by dog ticks (*Dermacentor variabilis*) and lone star ticks (*Amblyomma americanum*), both of which are found in Ohio. And it's not just humans that are affected: a Scioto County friend's dog had Erllichiosis, most likely from a lone star tick bite.

Okay, back to the unnerving hike. What to do: give up hiking in Mohican? Give up being outdoors altogether? Certainly not — there is just too much to see and discover in wild Ohio. One can look for gear that prevents ticks from setting up residence on one's person. Luckily for us, manufacturers have answered our distress calls, and there are now products that will arm us against these creepy crawly carriers of a varied array of diseases and a variety of methods to keep them at bay.

Here are some of them:

Double-sided duct tape — tape around the thigh area of your pants at staggered heights (so your legs won't

stick together!).

Permethrin — for clothes and shoes only, do not spray on skin. Follow the directions carefully; it's toxic to fish and cats.

DEET (for skin), picaridin, or lemon eucalyptus oil.

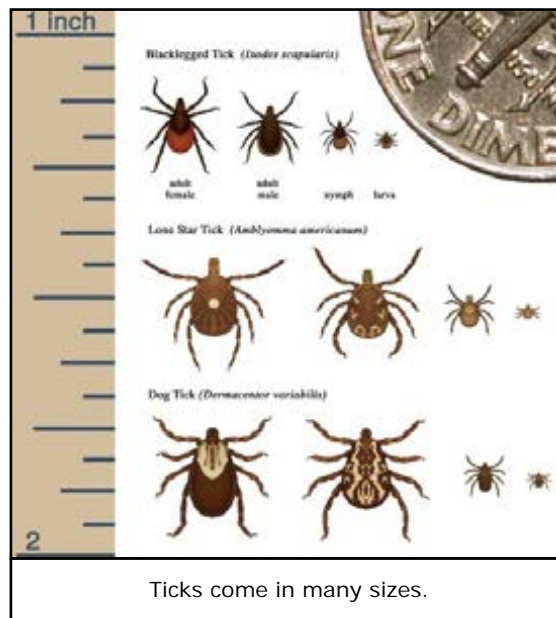
Wear light-colored long pants and tuck them into socks. Wear long-sleeved light-colored shirts. If possible, wear insect-repellent clothing. Clothing treated with permethrin is more effective than clothing sprayed with permethrin. You can even have your own garments treated by Insect Shield for a nominal fee. www.insectshield.com/IS>YourOwnClothes/default.aspx

Long hair should be covered or tied up.

Check yourself and your clothing a few times for ticks after you've been in grassy, brushy, or wooded areas that are likely to have ticks.

Check your pets for ticks before they come into the house.

I purchased a pair of Ex Officio pants with Insect Shield, Outdoor Research permethrin-treated gaiters, and a spray bottle of Sawyer Permethrin Insect Repellent. A friend gave me a Columbia



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How Not to Be A Tick Magnet

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Insect Blocker bandana. The clothes will help ward off other pesky biting insects, too, like deerflies and mosquitoes.

According to a comprehensive list of ways to deal with an attached tick published by the University of Rhode Island (www.tickencounter.org/prevention/top_ten_things_list), "The easiest and safest way to remove a tick is with a pointy tweezer. Think of a tick as a little germ-filled balloon. Squeeze it too hard on its back end, and all the germs get pushed to the front end, which by the way, is attached to you by the tick's straw-like mouthpart. Using really pointy tweezers, it's possible to grab even the poppy-seed sized nymphs right down next to the skin. The next step is to simply pull the tick out like a splinter. Don't worry if the mouthpart stays in your skin as long as you've got the rest of the tick by its head.

If you are bitten by a tick, save it and have it tested by your local health department. According to Amy Tan, "Some say you don't have to worry unless the tick was attached for over 24 or 48 hours. But how do you know when the tick first attached itself to you? And why is it that my tick caused me to be sick less than 24 hours later? If you don't see a bull's eye around your rash, realize that about 50% of the people diagnosed with Lyme never saw the tick, and over 50% of those who actually had the rash did not see a bull's eye."

Tick borne illnesses are a threat that we must take seriously. Vigilance and prevention are the best tools we have. Remember: "Ticks crawl up," so tuck in your pants and pull up your socks. We can outsmart these prehistoric pests.

(Tick illustration courtesy of www.emedicinehealth.com)

Jan Kennedy

Did You Know...

Did you know that, in spite of its common name, Canada thistle (*Cirsium arvense*) is not native to Canada? Instead, it is native to southeastern Europe and the eastern Mediterranean region. It is a terribly invasive agricultural weed in Canada just as it is elsewhere in North America, northern and southern Africa, the Middle East, Japan, India, New Zealand, Australia, and South America. Canada thistle is thought to have been introduced to North America in the 1600s as a contaminant in crop seed or ship's ballast. Once established, the



Canada Thistle in bloom.

abundant, bristly-plumed seeds are rapidly spread by the wind, as a contaminant in agricultural seeds, in hay, in livestock droppings, and on farm machinery. By one account, Canada thistle was thought to have entered the United States in hay transported by the horses of British Army officer, John Burgoyne.



Canada Thistle in seed.

General Burgoyne is best known for his role in the American Revolutionary War. He was appointed to command an English force moving south from Canada to split away New England to end the American rebellion. Instead, he was trapped and surrounded by American forces near Saratoga and was forced to surrender his army of 6,200 men on October 17, 1777. Once established, Canada thistle—□or creeping thistle as it is also known—emerges each spring, sending up numerous erect stems forming clonal colonies from deep, fleshy rhizomes. Root systems are typically very extensive, growing horizontally outward as much as 19 and a half feet in just one season. Its deep rhizomatous root system and aggressive growth makes this invasive species one of the most difficult to control and eradicate.

Guy Denny

2016 ONAPA Stewardship Projects

See www.onapa.org for details and to sign up.



Clifton Gorge State Nature Preserve– Tim Snyder.

- March 23**-Boch Hollow
- April 6**-Olsen Preserve
- April 23**-Lake Katharine
- April 27**-Collier Preserve
- June 15**-Chaparral Prairie
- June 18**-Daughmer Savannah
- July 13**-Clifton Gorge
- July 23**-Johnson Woods
- August 17**-Myersville Fen
- August 20**-Jackson Bog
- August 24**-Gallagher Fen
- September 7**-Springville Marsh
- September 20**-Prairie Road Fen
- October 5**-Kent Bog
- October 15**-Brinkhaven Barrens
- October 19**-Campbell Preserve
- November 1**-Bonnet Pond Bog
- November 12**-Chaparral Prairie



Gallagher Fen State Nature Preserve-
Tim Snyder.

Thank you for your support! Newest Members & Donors

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As of 02/21/2016



When you purchase the new Nature Preserves plate, your \$15 donation will support facility and trail improvements, as well as provide new educational opportunities for visitors. Let Ohio know you support your nature preserves! Visit www.oplates.com

ONAPA Summer Picnic

July 30, 2016—Food, Friends & Fun



Come join us for a great field trip and cook-out at Guy Denny's prairie in Knox County. Guy is a retired Division of Natural Areas and Preserves (DNAP) Chief and ONAPA's President. His 22 acres of planted prairie are about 20 miles east of the original prairies of the Sandusky Plains, located in Marion and Crawford counties. It is designed to look as the prairies in that area would have looked prior to European settlement.

This is one of the best created prairies in Ohio.

Our host, Guy Denny, is a gifted naturalist and storyteller who brings to life the history of the prairie with stories of the plants and the people who lived with the grasslands. Learn about the origin, ecology and numerous prairie plants native to the state. Come with your questions and appetite. ONAPA experts will discuss anything on prairies or any other question you may have about our great state's nature preserve system.

The field trips on this site will begin at 10 am and run until 1 pm. The picnic from 11:30 am to 2 p.m. will be hosted by ONAPA for our members and friends. Your presence will provide the camaraderie and friendship for an all-around good time throughout the event. That's why it's called Food, Friends & Fun. Contact Christine Hadley at christinehadley@earthlink.net or 513-850-9585 with any questions. See www.onapa.org for up-to-date information.

2016 Field Trip Schedule

Visit www.onapa.org for details

- April 2**—Little Rocky Hollow (Mosses for beginners, with Barb Andreas)
- April 30**—Prairie Road Fen and Gallagher Fen (Joint field trip with CWPS to see 2 high-quality prairie fens with Dan Boone)
- May 7**—Blackhand Gorge (Field Trip with Dick Moseley and Bill Weaver)
- May 14**—Kitty Todd SNP (Joint field trip with OWA to visit high-quality Oak Openings TNC preserve with Ray Stewart)
- May 28**—Daughmer Savanna SNP (Visit this high-quality oak savanna with Warren Uxley)
- May 31**—Heritage Garden at the Governor's Residence (Tour the regions of Ohio represented at the Heritage Garden with Hope Taft)
- July 16**—Smith & Bigelow Cemeteries & Milford Center Prairie SNPs (Joint field trip with CWPS to see remnant tall grass prairies in the Darby Plains with Dave Kuehner)
- July 19**—Marblehead alvar and glacial grooves
- July 30**—Guy Denny's Prairie and ONAPA Picnic
- August 13**—Brinkhaven Barrens
- September 24**—Prairie seed collecting at Guy Denny's Prairie



Marblehead Alvar and Glacial Grooves—
Tim Snyder.

For information on membership in ONAPA, please visit
the ONAPA website at www.ONAPA.org.

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To submit inquiries, comments or questions, or information on your nature-related event for inclusion in the ONAPA calendar, e-mail us at info@onapa.org

SAVE THIS DATE!

ONAPA's 4th Annual Banquet & Meeting

Join us on Saturday, September 17, 2016, as we highlight Southwest Ohio's exceptional geological and botanical features with field trips, local experts, good food and fun: Heritage Banquet Hall, 1705 State Route 28, Goshen, Ohio 45122 (near Cincinnati). Details coming soon.

Join the conversation at
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