



Missisquoi Matters

is the quarterly newsletter of the Friends of Missisquoi National Wildlife Refuge, Inc., a non-profit 501(c)(3) organization, dedicated to promoting a better awareness, appreciation, conservation, and responsible utilization of the Missisquoi National Wildlife Refuge.

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(802) 868-4781 ext 121

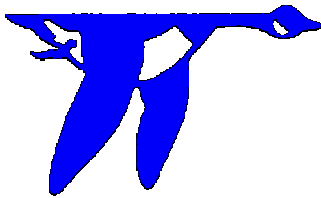
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Newsletter edited by Ken Copenhaver

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MNWR Visitor Center hours
are Monday thru Friday
8:00am – 4:30pm

Manager's Update – August 2017

by Ken Sturm, Refuge Manager, Missisquoi NWR

Summer at Missisquoi -- there really is no better place to be. It feels like it took a long time for summer weather to actually arrive, but nonetheless the refuge staff has been typically quite busy during the last few months. With lots of rain this year some work had to be shifted around, but all in all it has been a very productive season.

The refuge hosted a local Youth Conservation Corps (YCC) team again this year through the Northwoods Stewardship Center. This program brings high school-aged boys and girls out to the refuge to help with a variety of maintenance and biological projects. The program also has an educational focus that helps the crew members learn about the refuge system, wildlife, and habitat conservation. Much of the trail work you will see on the refuge is due largely to the YCC crew who worked in rainy and buggy conditions for most of their season. New gravel was placed to improve the Black and Maquam trail system, a boardwalk at Stephen Young Marsh was leveled, and many invasive plants were pulled thanks to the YCC crew. They finished their season by spike camping at the Refuge's Eagle Point Unit in Derby, Vermont. Here they worked with the Vermont Fish and Wildlife Department to improve infrastructure and control vegetation.

From a biological front, there are many things to be happy about. Our biologist, Judy Sefchick-Edwards, reported that the refuge had the highest count of state-endangered black terns at 166 pairs. Missisquoi NWR is the only location where this rare bird nests in the state of Vermont. These birds build floating nests and are quite sensitive to disturbance which makes the refuge's closed wetland areas perfect habitat for nesting pairs.

The refuge continues to face increasing threats from invasive plants. However there are two success stories to highlight. The first is spotted knapweed, a terrestrial invasive plant which had started to reach major infestation levels in the refuge grasslands. Through concerted effort by the refuge staff and contractors, we have been able to reduce infestations from roughly 40% abundance down to less than 1% abundance in most of refuge grasslands.

Another highlight is the refuge's continuing efforts and success at controlling water chestnut in wetland habitats. Thanks to continuing support from the Friends of Missisquoi NWR we have been able to support a contract crew for the last 4 years to hand pull this aquatic invasive plant. I am happy to report that infestation levels are the lowest in 6 years. When

the refuge started this program, a total of 5,963 rosettes were pulled in 2007. Thanks to continuing work of the refuge staff and especially to the contract work, the crew pulled only 447 rosettes this year. We hope to continue this work with the Friends in years to come. Water chestnut can be controlled as we have demonstrated at the refuge, but without consistent effort it can very quickly become a problem.

A last highlight I will mention was a project the refuge cooperated on to remove a problem dam in the Missisquoi River. The dam was located just downstream from the Machia Road bridge over the Missisquoi River and was part of the old Rixford axe factory. The project was led by the Northern Forest Canoe Trail and aimed at removing the dam which was a significant safety hazard to boaters. In years past several people canoeing have been pinned against the dam and in at least one case a boater was sucked under the dam. Fortunately he was not harmed.

The refuge joined the project to provide logistical support, equipment, and equipment operators. Other partners included the towns of Swanton and Highgate, the USFWS Lake Champlain Fish and Wildlife Resources Office, and Aroostook NWR. After almost two years of planning and obtaining permitting and funding, the project was completed in early August this year. Missisquoi equipment operator Joe Bertrand oversaw the project and operated one of the large excavators used to remove the dam. The other equipment operator, Kirk Cote, was brought down for a detail from the Aroostook NWR in northern Maine. Together Joe and Kirk removed the dam in a little more than two days.

It was important for the refuge to be a part of this project for several reasons. The Missisquoi River and the Northern Forest Canoe Trail travel right through the refuge. Ensuring safe boating opportunities are important to the refuge so that boaters' experiences are positive. Having people interested in boating connects them to the river and the outdoors in a special way. Having this connection ultimately helps people understand the significance of protected areas and conservation in general. Another reason the refuge was involved was to provide the support needed in a multi-partner local project. Without all the partners this project would never have happened, and it serves as a testimony to what can be accomplished when everyone plays a role.

As summer winds down, I hope that you and your friends and family find time to visit the refuge. Take advantage of these beautiful late-August days to bottle up some Missisquoi summer to remember when the seasons change. Hope to see you on the trails!

FRIENDS OF MISSISQUOI NATIONAL WILDLIFE REFUGE

Bi-monthly Board Meeting

Wednesday, September 13, 2017 at 6:30 pm

At the Refuge Visitor Center

Members are always welcome to attend. Come and see what the board is planning and contribute your ideas.

Next meeting: Wednesday, November 8, 2017 at 6:30 pm

What Goes Up Must Come Down?

by Judy Sefchick Edwards, Wildlife Biologist, Missisquoi NWR

What goes up must come down. Unless of course, it's a pesky population of invasive plants—then all rules of physics and logic go right out the window! With the endless barrage of gravity-defying alien invasions, it's hard to keep up, with what's popping up, on the refuge. In the northeast, however, one foul flora has the title of being the biggest, baddest bully of them all. Guaranteed to give any self-respecting wetland the willies, invasive water chestnut is the ultimate in aquatic nightmares. It's mean, it's green, and sadly, it's seen, at the very heart of Missisquoi National Wildlife Refuge!

For those who don't know it, *this* water chestnut has absolutely nothing to do with a delightful Chinese dinner. It's a rooted aquatic plant, with a look all its own; and once you see it, there's no mistaking it. Triangular toothed leaves float to form a glossy green rosette; while feathery submersed leaves spiral around a long, cord-like stem. As an annual, it produces plenty of bizarre-looking seeds that are best described as: thumbnail-sized weapons, containing four sharp spikes that pack a powerful prick, when handled! These seeds, wicked weeds, have many strategies to outcompete and outlive other plants. Spiked seeds can stick to unsuspecting fur, feathers, boats, and whatever, for transport into new areas. If that wasn't enough, the hardy seeds of water chestnut have no problem overwintering in wetland sediments—in fact, they can remain viable there for up to *twelve years*, if necessary!

If you haven't seen water chestnut, consider yourself lucky. Those who have hand-pulled it call it pure evil and claim that it possesses the unique ability to multiply right before your very eyes! Not exactly,

but consider this: each dropped seed can form a new plant; each new plant can contain many rosettes; and each rosette can contain many seeds. Do the math—one missed plant can create the next hydro-apocalypse! If left unchecked, water chestnut can literally consume a wetland. How does it do that? Over time, its population becomes high enough to form a dense, impenetrable mat that limits light,

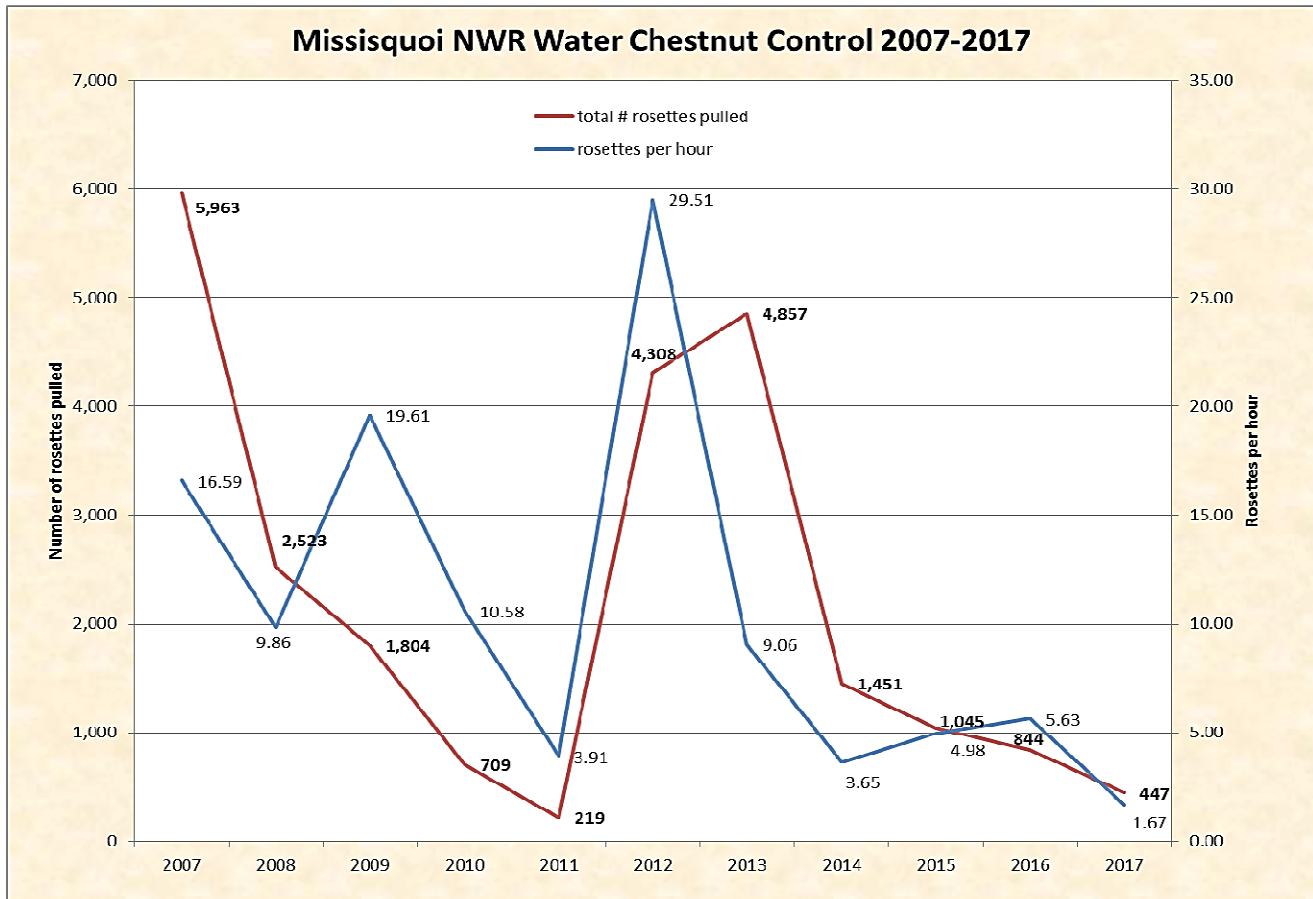
oxygen, nutrients, and space, rendering the wetland uninhabitable for fish and fowl.

There's no doubt about it, a plant like water chestnut belongs in "*The Little Shop of Horrors*," not in refuge wetlands! That's why surveying and pulling it ranks as one of the top management objectives at Missisquoi NWR every field season. Who said that controlling invasive

plants would be easy? Populations of water chestnut ebb and flow, like a never-ending roller coaster ride, with ups and downs, stomach-dropping surprises, and external factors beyond our control. (See chart on next page.)

Unfortunately, the fight against water chestnut is far from over. Chances are, there's always going to be just one more rosette in a wetland somewhere, just waiting to propagate. At Missisquoi, we should consider ourselves fortunate. For more than a decade, dedicated staff, volunteers, and contractors, along with funding and support from The Lake Champlain Basin Program, Vermont Department of Environmental Conservation, and the Friends of Missisquoi National Wildlife Refuge, have successfully fended off this impish invader. It's been twelve years, in fact. But at this point, who's counting?





Landowner Habitat Meeting Held at Stephen J. Young Marsh

In July the refuge hosted a meeting for landowners interested in managing their land for wildlife. Partnering with the Natural Resource Conservation Service (NRCS), the USFWS Partners for Fish and Wildlife Program and the Vermont Fish and Wildlife Department, the refuge hosted 18 interested landowners on the night of July 12th. The intent was to discuss land management practices that individuals can use on their property to enhance young forests, wetlands, vernal pools, and forest health. Also, individuals from the various agencies were able to communicate how both federal and state funding and technical assistance is available to help landowners with these types of projects.

As everyone in Vermont's conservation community understands, federal and state lands can only be a small part of wildlife and habitat conservation in the state. Most of Vermont's land is held in private ownership giving individual landowners the power to make a big difference in the future of wildlife and habitat conservation in our state. Thanks to a variety of federal, state and private programs, landowners can receive help in making a commitment to conservation for the future.

If you or someone you know is interested to learn more about specific programs to help conserve and manage your property, please reach out to the refuge office for more information. You may also contact the numbers below for help.

Carissa Stein – Natural Resources Conservation Service – 802-528-4173

Chris Smith – USFWS Partners for Fish and Wildlife Program – 802-662-5303

Dave Adams – Vermont Fish and Wildlife Department – 802-879-2330



Fall Activities Schedule at Missisquoi National Wildlife Refuge

29 Tabor Rd.
Swanton, VT 05488

All programs and tours are free, but registration is required where noted.

Monthly Nature/Photography Walks 1st Saturday of each month, 9:00 to 11:00 AM

Join Friends of Missisquoi NWR members Joe Belanger and Bob Chaperon for nature/photography walks on various refuge trails, held the first Saturday of each month. Registration is not required. The schedule for the next three months is:

- September 2: Jeep Trail.** Meet at the Louie's Landing parking lot on Rte 78 approx. 3 ½ miles west of Swanton. We will meet at the gate and drive in to the trail head at Mac's Bend.
- October 7: Stephen Young Marsh Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge Visitor Center and across the road from the marsh.
- November 4: Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton village.

Monthly Bird Monitoring Walks 3rd Saturday of each month, 8:00 to 10:00 AM

Friends of MNWR members Ken Copenhaver and Julie Filiberti will lead bird monitoring walks year-round on various refuge trails on the third Saturday of each month. The purpose of the walks is to gather long-term data on the presence of birds, their abundance, and changes in populations. Observations are entered into the Vermont eBird database where data is stored by the Cornell Lab of Ornithology and the National Audubon Society. These walks are appropriate for birders of all skill levels and provide a wonderful opportunity to learn about birds throughout the seasons. **After 89 months of walks we have recorded 147 species of birds.** (In August we added Least Sandpiper and Least Bittern to our species list.) Registration for the walks is not required. The schedule for the next three months is:

- September 16: Stephen Young Marsh Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge Visitor Center and across the road from the marsh.
- October 21: Railroad Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge Visitor Center and across the road from the marsh.
- November 18: Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton village.

Other Fall events will be posted on the Friends website as soon as dates are known.

To check for any schedule changes or additions, visit the Friends website at

www.friendsofmissisquoi.org and click on "Calendar."

For more information about the refuge, visit www.fws.gov/refuge/missisquoi/

Refuge Trail Closures and Advisories for Fall Hunting Seasons

Discovery Trail, Old Railroad Trail, and Stephen J. Young Marsh Trail are **closed** this year:

Nov 4-5	Youth Deer Weekend
Nov 11-26	Regular Deer Season
Dec 2-10	Muzzleloader Season

Trail Advisories are posted to advise hikers and users that the area is open to hunting and to proceed with caution on the following trails and dates:

Jeep Trail: Oct 11-Dec. 9 Waterfowl Season

Discovery Trail, Old Railroad Trail, and Stephen J. Young Marsh Trail:

Oct 7 – Nov 3 & Dec 2 – 10	Archery Season
Sep 30 – Mar 11, 2018	Upland Game Season

Note that since hunting is not permitted in the Black/Maquam Creek Trail area, this trail is never closed due to hunting.

Help Endangered Species with TIGER Stamps

The US Post Office selling a “**Save Vanishing Species**” stamp, the proceeds from which benefit endangered species. Eleven cents of the stamp’s 60-cent cost directly benefits the conservation of tigers, rhinos, African and Asian elephants, great apes, and marine turtles in the wild. Since its inception in 2011, the tiger stamp has raised nearly \$3.8 million for conservation. Stamps can be purchased at many post offices or directly from the USPS website:

https://store.usps.com/store/browse/uspsProductDetailMultiSKU?productId=S_576674&categoryId=over-stamp-rate

(Note that this address will be a link in the pdf version of the newsletter, available on the Friends website at <http://friendsofmissisquoi.org/>)



Two New Members Join the Friends Board; New Officers

The Friends board of directors welcomes two new board members:

Jason Crooks

Linda LeBlanc

Also, Rich Kelley, was elected to President. Rich had been Vice President and serving as acting President. And Ken Copenhaver was elected to Vice President.

The Friends' Store

at the Missisquoi National Wildlife Refuge

BOOKS

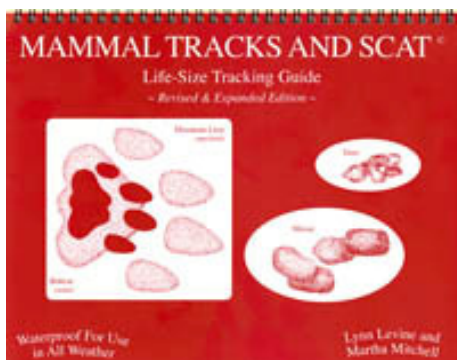
GAMES

GIFTS

TEE SHIRTS

HATS

for people of all ages who love the outdoors



Mammal Tracks and Scat Life-Size Tracking Guide

Lynn Levine

Illustrated by Martha Mitchell

\$ 19.95, spiralbound

24 pages, 11 x 8 1/2, two-color illustrations

By moving alongside a set of animal tracks, or finding scat, you can discover whether the creature climbed a tree, found a mate, or

marked its territory. *Mammal Tracks and Scat* is a life-size, waterproof tracking guide that will help turn your tracking adventure into a magical experience. The illustrations are actual size, making it much easier to compare drawings in this guide with tracks and scat in the field. This field guide is designed to be carried through brush, bramble, and snow, and still emerge unscathed. In a handy spiralbound format, *Mammal Tracks and Scat* can be laid on the ground for simple comparison with the actual track or scat.

Identifying Animal Tracks

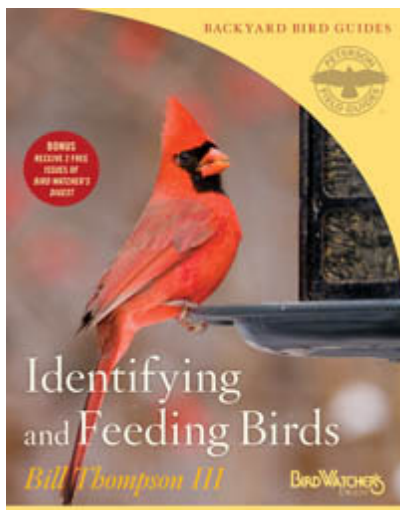
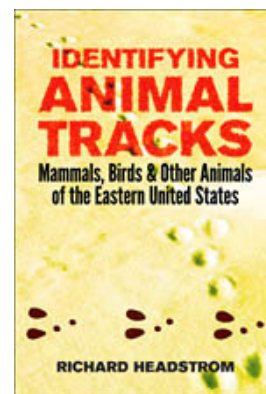
Mammals, Birds & Other Animals of the Eastern United States

Richard Headstrom

\$ 9.95, paper

142 pages, 5 3/8 x 8, b&w illustrations

Hunters, naturalists, scouts, and nature lovers will appreciate this comprehensive guide to wildlife prints and tracks. It features the tracks of more than 100 species of mammals, birds, frogs, toads, salamanders, snakes, lizards, turtles, insects, and other invertebrates, all common to the eastern United States.



Peterson Field Guides: Identifying and Feeding Birds

Bill Thompson III

\$ 14.95, paper

246 pages, 7 x 9
full-color photographs, maps

This readable, friendly guide is intended for bird watchers and non-bird watchers alike—for anyone who wants to enjoy nature right in his or her own backyard.

In an easygoing and lighthearted style, seven chapters cover all the elements needed to attract birds to a backyard (food, water, shelter) and address special cases and problems (keeping bees out of the hummingbird feeder, preventing birds from flying into windows, and much more). The final chapter profiles the 130 species that are most common at backyard feeders. No separate field guide is needed; it's all right here—everything a beginner needs to know to attract birds and then figure out what kind they are.