

MISSISQUOI MATTERS

NEWSLETTER OF THE FRIENDS OF
MISSISQUOI NATIONAL WILDLIFE REFUGE

Winter, 2022-2023



Winter Activities Schedule at Missisquoi NWR

29 Tabor Road, Swanton, VT 05488

Bird Tales

February 2, 2023, 7:00PM via Zoom

Bird Tales has become one of the Friends of Missisquoi NWR's most popular events. Mark your calendar and get set for the 7th Annual Evening of Bird Tales and find out why! This year's collection of stories will be coming from the staff of the Vermont Center for Ecostudies. These dedicated scientists spend a considerable amount of time out in the forests and fields of Vermont so their personal bird tales are not to be missed. Information about registration for Bird Tales and other upcoming winter events will be available on our website: <https://friendsofmissisquoi.org/calendar/>



✂ Ring-billed Gull



✂ Coopers Hawk



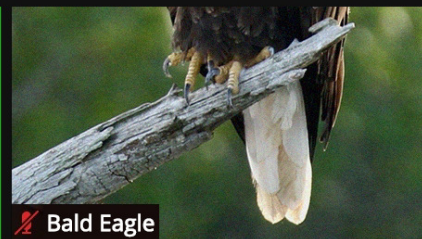
✂ Evening Grosbeak



✂ Least Flycatcher



✂ Marsh Wren



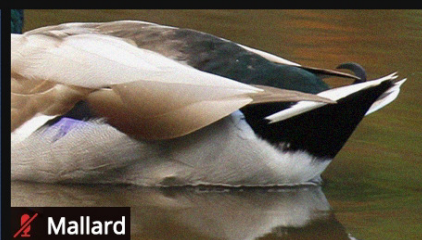
✂ Bald Eagle



✂ Northern Cardinal



✂ Red-tailed Hawk



✂ Mallard

illustration by Hannah Filiberti



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.

29 Tabor Road, Swanton, VT 05488

(802) 868-4781 ext 121

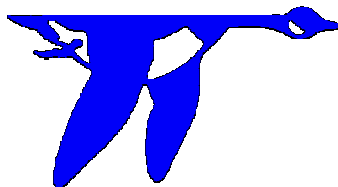
www.friendsofmissisquoi.org

E-mail: info@friendsofmissisquoi.org

Newsletter edited by Al Crist

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Ken Sturm	<i>Refuge Manager</i>
Judy Sefchick	<i>Wildlife Biologist</i>
Lisa Swainbank	
	<i>Office Administrative Assistant</i>

Monthly Bird Monitoring Walks

Friends board members and birders extraordinaire Ken Copenhaver and Julie Filiberti lead the walks 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. These walks are appropriate for birders of all skill levels and provide a wonderful opportunity to learn about birds throughout the seasons.

After 151 months of walks, we have recorded 162 species of birds. Registration for the walks is not required.

The schedule for the next three months is:

December 17: Jeep Trail. Meet at the Louie's Landing parking lot located on Rte. 78, approx 3½ miles west of Swanton village. From there we will drive to the trail head at Mac's Landing.

January 21: Old Railroad Passage Trail: Meet at the parking lot on Tabor Rd, about a mile past the refuge Visitor Center

February 18: Maquam/Black Creek Trail. Meet at the parking lot located on Rte. 78, approx. 2½ miles west of Swanton village.



Intrepid bird-walk leaders, Ken and Julie

If and when new Refuge events are scheduled, they 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 www.friendsofmissisquoi.org and click on "Calendar".

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

Refuge Managers Update - November, 2022

by Ken Sturm, Refuge Manager, Missisquoi NWR



As I write this I am thinking about the closing to another refuge field season and what thoughts I have from the past year at Missisquoi. All in all, I have to conclude that this has been one of the

most difficult years we have had at the refuge, mostly due to the unexpected retirement of our star maintenance mechanic Joe Bertrand. Joe was the quintessential “Swiss Army Knife” employee, filling many roles effortlessly. Without his expertise, insight, and dedication to the refuge this year, it’s been a struggle meeting all the refuge’s needs.

“Joe was the quintessential
‘Swiss Army Knife’ employee”

That said, I have to highlight our refuge biologist, Judy Sefchick, and our Administrative Officer, Lisa Swainbank, for taking on many extra duties and working on projects outside of their “job description”. While this occurs with many refuges with small staff, Lisa and Judy really helped keep the refuge moving forward by taking on maintenance projects, boat operation, and other work typically conducted by the maintenance position. I must also note that our volunteers provided exceptional support in both biological and maintenance projects this year: it was truly a group effort.

One project that took a lot of extra work for the staff was conducting the annual water chestnut control operations in refuge wetlands. This

year Judy was often operating our shallow water “Go-Devil” mud boat alone in refuge wetlands pulling chestnut rosettes. Lisa accompanied her on many occasions and both put in a couple very long days, including removing water chestnut at a new location in Gander Bay, just outside of refuge boundaries. This site alone accounted for over 60% of all the water chestnut pulled in 2022. Working with the Friends, the refuge has submitted another request for grant funds through the Lake Champlain Basin Program to continue this work in 2023.

Speaking of grants, thanks to funding from the Franklin County 100 Women Who Care, the Friends were able to provide meaningful environmental education programs for school and camp visits to the refuge in 2022. Ever since the loss of the refuge Park Ranger in 2018 we have been unable to provide programs for visiting groups. This summer, thanks to this grant, we were able to host 6 youth groups who were led on various trails and presented guided programs ranging from aquatic invertebrates to wetland ecology.

It has been a beautiful fall on the refuge and we have seen a steady parade of visitors using our trails and boat ramps. Since the lake levels rebounded in late September, refuge wetlands are providing the valuable waterfowl habitat the refuge was established for, which was quite a bit different than the exceptionally dry conditions we experienced in 2021. A walk or float down the river on the refuge in the last few weeks has certainly been a treat given the mild and even warm weather. I hope that everyone was able to savor these last few days of late fall and will look forward to the winter season at Missisquoi.

Warning: Bear Crossing!



by Judy Sefchick, Wildlife Biologist, Missisquoi NWR

Warning! The bears are out again. They're crossing Route 78, Tabor Road, and even the sidewalks and parking lots at Missisquoi National Wildlife Refuge. Please pay extra attention while driving or walking around. After all, fall

is the season of bounteous woolly bear caterpillars, crossing the roads in front of us, unaware of the consternation they cause drivers like me, who try to avoid them!

Woolly bears (a.k.a. wooly worms) are the furry, familiar, rusty-brown-and-black-banded caterpillars that most of us played with as children (and *some* continue to play with as adults). If you've ever picked one up, you know there is nothing wool-like about them. With its soft body protected by short, stiff bristles of hair, the woolly bear is prickly, slick, and easy to drop (sorry predators). If drastic defense measures are needed, a woolly can channel its inner hedgehog by curling itself into a ball. Time is *not* of the essence for woollies. They patiently stay rolled until danger passes, thwarting plans of the hungriest predators or most curious creatures (like us)!



After hatching from eggs in spring and summer, woolly bears spend their time eating and growing. Preoccupied by munching (dandelion, birch, clover, and maple) and molting (up to six times before reaching full size and final coloration), woollies have little time to roam. Come fall, it's a different story.

Instead of eating their way through life, mature woollies disperse--often traveling distances at four feet/minute or more! When a woolly is racing across a road or sidewalk, you can be sure it's finished feeding for the year. Now there's only one thing left for the woolly to do--find the perfect rock, piece of bark, or log to curl under and spend the winter. The best thing *you* can do for a woolly is get out of its way!

Like other bears, woolly bear caterpillars overwinter by hibernating. It may seem like a harsh existence, but Vermont woolly bears have it better than some. Canada's woolly bears spend December through April encased in naturally formed ice, under two feet or more of snow. Arctic woolly bears face temperatures of -70 degrees Fahrenheit and spend most of their 14-year life frozen solid! Luckily, woolly bears produce their own form of antifreeze, keeping their cells ice-free!

Come spring, don't be surprised to see woolly bears traveling on top of the snow, as they emerge from their wintery sleep. These hardy hibernators are looking for food to form their fat, felt-like cocoons for pupation. Soon each woolly bear will become its ultimate self: an Isabella Tiger Moth. With nondescript yellowish-orange and cream-colored wings, the medium-sized Isabella doesn't eat, drink, or grow. Unlike its charismatic caterpillar self, the moth can easily go unnoticed. After all, Isabella lives only a mere week or two, just long enough to find a mate, lay eggs, and start the cycle all over again.

Woolly bears have intrigued humans for generations, but are they the legendary predictors of the coming winter's severity, like we think they are? The short answer, sadly, is no. After studying the correlation between woolly bears and winter weather for decades, the American Museum of Natural History and the scientific community at large, disregard the weather-forecasting abilities of our woolly friend. Sorry woolly bears, but I think you just joined the ranks with Punxsutawney Phil!

Symmetry & The Big Sit

by Julie Filiberti

The natural world is boundless when it comes to examples of symmetry - the radial symmetry of a snowflake or a spider's web; the Fibonacci sequence in pinecones, sunflowers, and nautilus shells; the fractal symmetry of ice crystals and tree branches; and the bilateral symmetry of every single one of us. During this year's Big Sit, I discovered that a day has symmetry too. To understand the symmetry of a day, one needs to spend their time being a stationary observer from sun up through sun down, such as what takes place during a Big Sit. While participating in this event, we are confined to a 17-foot circular area. In our case, we chose a time length of 12 hours, beginning at the fully dark, pre-dawn hour of 6 a.m. Awareness takes on a heightened state, since the object of the Big Sit is to record every single species of bird that is seen or heard from your location. So our senses absorb everything - each chip, each rustle, and each movement. Hopefully, these sights and sounds produce a bird species that one or more of us can identify and record on our list. This year, more than any other in the past, the symmetry of the day is what I remember most about my participation.

The pre-dawn darkness typically only produces a handful of species that we can hear beginning to stir, usually commencing with the hoot of the resident Great Horned Owl. The predominant sounds are chips from the sparrows in the marsh and call notes from the thrushes. Occasionally we get something special to appear, like when one of the two American Woodcock that we heard flew right over our heads, or when the Great Blue Heron spread its massive wings and lifted itself off of its perch to head to the south on slow powerful wingbeats. Little did I know, but that particular heron was the start of a symmetrical day.

The 7:00 hour brought on the sun, and subsequently, the movement of birds. The hour's highlight was most certainly the American Bittern that, like the heron minutes before, rose out of the

marsh to head south past us, affording us wonderful looks as it slowly glided by. Red-winged Blackbirds and the cacophony of their awakening were the story of the hour, however, as a multitude of groups of tens and twenties and thirties emerged from the reeds at the north end of the marsh and took off above our heads, again moving to the south. The only group of birds that were headed in the northerly direction were the over 150 Double-crested Cormorants, likely headed into the northern lake to feed for the day.

A variety of expected birds filled the rest of the morning hours including woodpeckers, chickadees, goldfinches, Blue Jays, Dark-eyed Juncos, White-breasted Nuthatches, and Yellow-rumped Warblers. Many memorable minutes were spent watching a Merlin move from one snag to another, eyeing anything that would make a suitable breakfast. Another memorable highlight was the recognizable bugling calls from a pair of Sandhill Cranes, only to be topped by a quick sighting of them flying and bugling together a bit later. We were all on the lookout for Rusty Blackbirds, a bird that usually migrates through the area in the fall, and they did not disappoint, noting our first Rusty in the 9:00 hour. These birds mix well with the redwings and are sometimes more easily heard than seen as their call resembles squeaky rusty hinges. Once we heard this distinctive noise, we began a more intensive search for a blackbird with a yellow eye, brownish head, and lacking red epaulets on their wing.

Although the cacophony of the Red-winged Blackbirds calmed, their chatter never truly ended as handfuls of them remained in and around the marsh for the entirety of the day. This changed around the 3:00 hour when the numbers of them began to increase, beginning us on the symmetrical reverse of the morning's observations. Over the next few hours blackbirds were coming from the south in small groups and beginning to settle back down into the marsh. The 4:00 hour also brought back the Great Blue Heron from the south, with

continued >> p. 6

from << page 5 it gliding into the marsh and perching in its snag to begin a session of preening. By 5:00 we were witnessing several hundreds of cormorants, each of the groups flying in their V formation, heading back to the south. The icing on the cake, however, was that same American Bittern flying slowly past us and back into the reeds to settle for the night.

The symmetry of the comings and goings of the birds of the marsh as the day progressed was

amazingly recognizable. Had we stayed past the 6:00 hour and into the twilight hours I'm confident we would have again heard those quiet chips of the sparrows as they were tucking themselves in for the night, would have heard the hoots of the Great Horned Owl as it awakened for a long night of feeding, and would have even seen the distinguishable silhouette of the American Woodcock with its long probing beak as it flew back over our heads and into the marsh.



Here are the 2022 Big Sit results:

- | | | |
|------------------------------|----------------------------|-----------------------------|
| 1. American Bittern | 15. Downy Woodpecker | 29. Red-winged Blackbird |
| 2. American Crow | 16. Eastern Phoebe | 30. Rusty Blackbird |
| 3. American Goldfinch | 17. European Starling | 31. Sandhill Crane |
| 4. American Robin | 18. Gray Catbird | 32. Snow Goose |
| 5. American Woodcock | 19. Great Blue Heron | 33. Song Sparrow |
| 6. Bald Eagle | 20. Great Horned Owl | 34. Swamp Sparrow |
| 7. Barred Owl | 21. Hairy Woodpecker | 35. Tufted Titmouse |
| 8. Black-capped Chickadee | 22. Hermit Thrush | 36. Turkey Vulture |
| 9. Blue Jay | 23. Merlin | 37. White-breasted Nuthatch |
| 10. Canada Goose | 24. Mourning Dove | 38. White-throated Sparrow |
| 11. Common Raven | 25. Northern Flicker | 39. Wild Turkey |
| 12. Cooper's Hawk | 26. Northern Harrier | 40. Wood Duck |
| 13. Dark-eyed Junco | 27. Pileated Woodpecker | 41. Yellow-rumped Warbler |
| 14. Double-crested Cormorant | 28. Red-bellied Woodpecker | |

Spiny Softshells 2022 Update

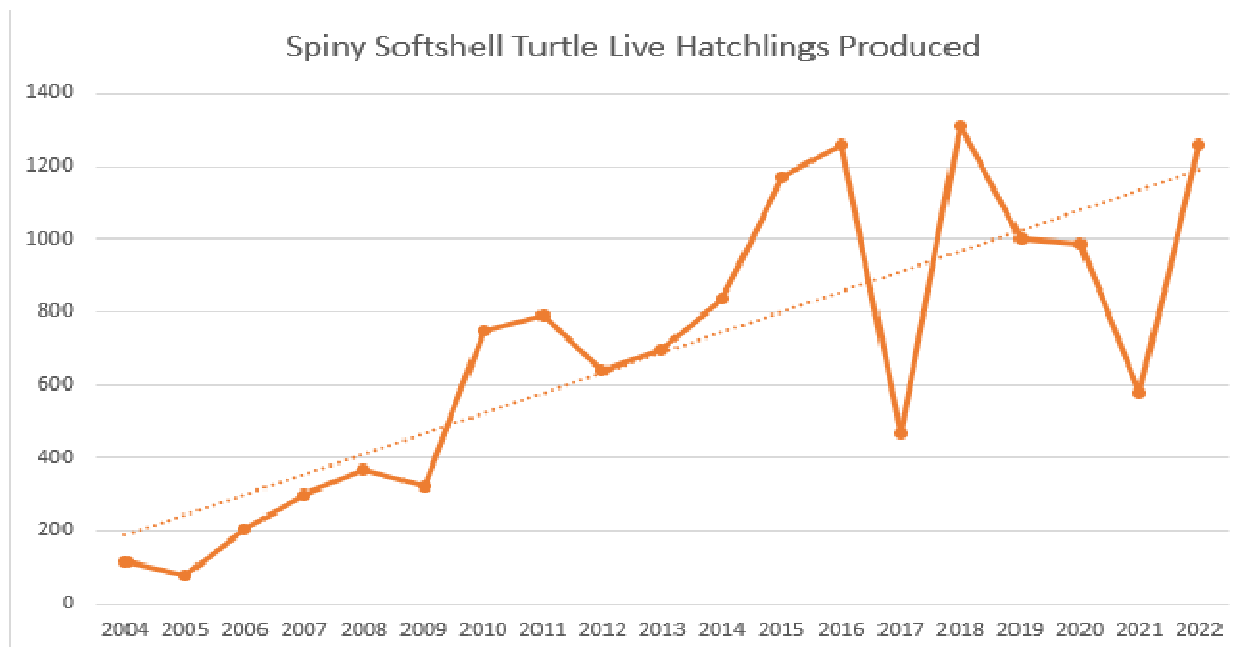
Here is the yearly update on Spiny Softshell nesting on northern Lake Champlain beaches, received from Toni Mikula, Vermont Fish & Wildlife:

“I just wanted to send out some final numbers on the season. It was a great season. The second-highest count of live young ever, just edging out 2016 by a handful. 2018 remains the year to beat, but I have a good feeling about next year. Two additional softshell nests were found at Sandy Point in October bringing the total successful nests to 74. There were only 7 nests found at North Hero, but that is the most since 2015. I’m including the totals from my two Colchester sites (Kiniya & Delta) here as well. As you can see predators are an even greater challenge there.”

Location	All Nests	Successful Nests	Emerged Hatchlings	Released Hatchlings	Headstarted	All Live
Sandy Point	74	71	984	77	13	1074
North Hero	7	4	38	0	0	38
Kiniya	88	11	114	11	2	127
Delta	65	2	18	0	0	18
Total	234	88	1154	88	15	1257

Notes- The number of emerged hatchlings are calculated by counting empty shells left behind in nests. Released hatchlings were those found still in the nests when the nests were excavated. In this case, most of the other hatchlings have already emerged and one or two stragglers are found. “Headstarted” refers to found hatchlings who have not yet absorbed their egg sacks or to found fertile and un-hatched eggs. Both of these types are taken to ECHO to be cared for until ready for release.

For more information on Lake Champlain’s Spiny Softshells, see the fall 2022 issue of *Missisquoi Matters*.



Friends Welcome New Member to the Board

Tom Hargy has been a birder since his childhood, when he watched feeder birds out the kitchen window of his southern Ohio home. He shared this interest in the outdoors by serving as a naturalist for a Boy Count camp in the area during his summers away from college. On graduating from college with a degree in geology, and with supporting course work in ornithology and botany, he was hired to assist with a major environmental assessment of the lands and waters around a proposed mine site in northern Minnesota. During his ten years in that position, he quantified plant and animal diversity in forest, wetland, and edge habitats; took censuses of summer and winter birds; and banded breeding birds. Some high-points of those activities include the return of a Yellow-rumped Warbler to the same net site from which Tom first captured and banded it seven years previously, and the recapture of a ten-year-old Hairy Woodpecker. Tom also assisted with the US Fish & Wildlife's wolf recovery program by radio-collaring timber wolves. Taking brief respite from the cold winters of Minnesota, Tom would take annual birding and hiking trips to locations such as Arizona, Texas, and Florida.

Tom moved from Minnesota to Milton, Vermont in 1987, and one of the first places he sought out for

birding was the Missisquoi National Wildlife Refuge. As a member of Milton's town trails committee, he participated in the initial layout of the Milton Town Forest trails, and led birding hikes there and at Eagle Mountain. Tom now lives with his wife, JoAnna, in Georgia, Vermont, near Arrowhead Mountain Lake. While his career as a researcher in the fields of filtration and disinfection of public drinking water supplies kept him from birding as often as he would have liked, he is now retired, and makes frequent trips to the refuge for birding and recreation. In short order, he met up with other Friends, and now looks forward to the monthly refuge walks and annual Big Sits.

**“return of a
Yellow-rumped
Warbler to the
same net site
from which
Tom first
captured and
banded it seven
years
previously”**



Visit <https://www.facebook.com/friendsofmissisquoi> to learn more about the refuge and coming events. You can also share your own photos.

You do not need to have a Facebook account to view the page.



2022 Invasives Update

This year the Friends of Missisquoi NWR once again received a generous grant from the Lake Champlain Basin Program, to be used to aid the refuge in the control of riparian invasive plant species. Total funds awarded through the grant to the Friends were \$10,000 and the Friends also committed \$1,050 cash, plus in-kind services (surveys and administration) estimated at \$2,066.

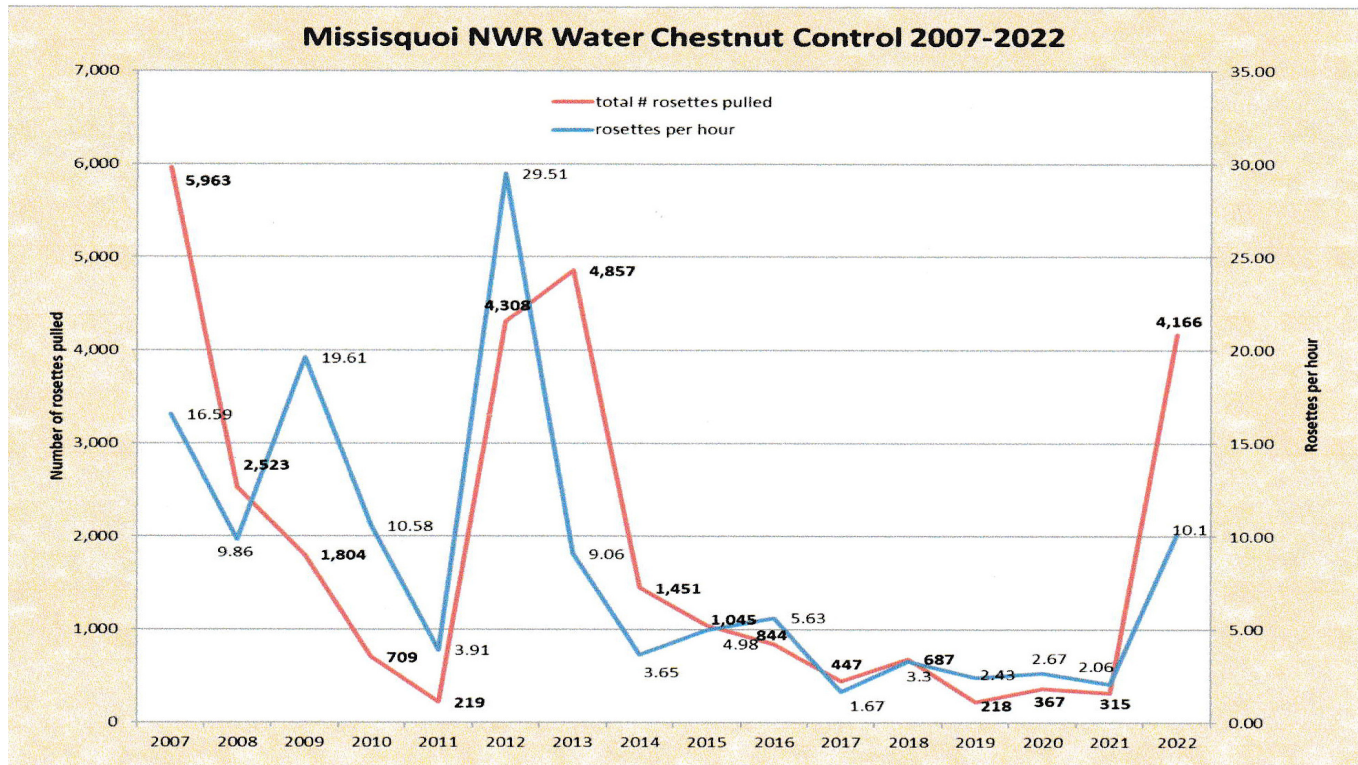
Surveys in the floodplain forest have documented extensive yellow iris throughout the refuge's riparian habitat. Phragmites and Japanese knotweed are an increasing problem in the refuge's floodplain forests and purple loosestrife continues to be pervasive in peripheral wetland habitats. Thanks to Friends grant support in 2022, 72 acres of Yellow Iris and 9-1/2 acres of Japanese Knotweed were able to be treated by contractors. In addition, volunteers surveyed 86 acres of riparian forest documenting invasive species to be treated in future years.

Grant funding allows the refuge staff to focus on water chestnut removal while certified pesticide applicators are hired to control other invasive infesta-

tions in refuge wetland habitats. Missisquoi NWR staff conducted all chestnut control operations in 2022, and unfortunately there was much more found to be controlled than in the last few years.

Water Chestnut surveys and control operations focused on the two main problem areas: Cranberry Pool and Big Marsh Slough. A sizable new infestation was incidentally found in Gander Bay just outside of the refuge boundary, while refuge staff were posting boundary signs. A total of 1,286 rosettes were pulled from within the refuge and 2,880 rosettes were pulled from the new location in Gander Bay.

Overall, it appears that eradication efforts through grant funding over the last ten years have been generally successful in bringing the infestation of water chestnut under control on refuge lands. However, work this year showed a troubling trend of increasing rosettes on refuge land as well as documenting a new site in the lake. Expanded efforts will be required in future years and the Friends grant support will continue to be critical.



Friends of Missisquoi National Wildlife Refuge, Inc.
29 Tabor Road
Swanton, VT 05488



Please tell us how to serve you better – The Friends of Missisquoi NWR Board is eager to know more about the kind of programs, outings, or activities you would like to have offered on or about the refuge. Please email your suggestions and comments to info@friendsofmissisquoi.org. Thanks!

Yes! I want to support the Friends of Missisquoi National Wildlife Refuge and its programs with my membership. My dues include a subscription to Missisquoi Matters and a 10% discount on items at the Friends Gift Shop. Enclosed is my contribution of:

Membership Level

- ☐ \$10 Student
- ☐ \$15 Individual
- ☐ \$20 Family / Classroom
- ☐ \$50 Supporting
- ☐ \$100 Steward
- ☐ \$250 Life / Business
- ☐ \$1000 Patron

Would you like to receive your newsletter by postal mail or by email? Please circle one:

Postal Mail Email

Date: _____ (membership begins the month you join)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail: _____

(Your email address will not be shared with any other organization. We would like to be able to contact members regarding last minute changes to Friends activities and events.)