



### 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.

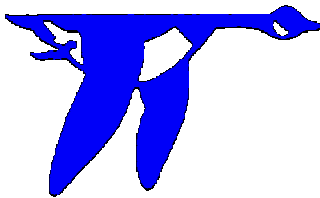
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Newsletter edited by Ken Copenhaver

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MNWR HQ hours are  
Monday thru Friday  
8:00am – 4:30pm  
Saturdays  
10:00 am – 2:00 pm

## Saving Habitat One Plant at a Time

by Katie Leuenberger, Biological Technician, Missisquoi NWR

Invasive species have been a growing concern for the refuge for many years now, but we are fighting to make the refuge as natural and invasive-free as we can. For years, Missisquoi has been battling these non-native species that can take over areas and out-compete their native counterparts. Why should we care? Well for one thing, we have beautiful plants that we don't want to lose. There is nothing like looking into a marsh and seeing a rainbow of colors like milkweed, asters, and marsh marigold, not to mention all the diverse sedges and reeds that can be found. Second, many of our native wildlife need native species to survive for food sources, especially insects that have evolved with these plants over centuries and are an important food source to many birds, mammals, reptiles, and amphibians.

As a part of the battle, this summer a large-scale invasive species mapping project was conducted in the floodplain forests of Missisquoi. The goal of this project was to search for, find, and control invasive species. Since many of these areas hadn't been accessed regularly, some of the invasives may not have been found previously. Although the refuge has been working diligently to control invasive species throughout the refuge, this was the first project to look systematically at every area in the floodplain forest in order to identify all invasive species locations. The primary species surveyed were Japanese knotweed, phragmites, yellow iris, and purple loosestrife.

Surveys were done using an iPad for quick data entry in the field and a mapping component that could track where surveyors were on a map. With this technology we were able to track where we had been and make sure to cover all the floodplain forests as efficiently and effectively as possible. The refuge hired two new technicians to survey for these species during the summer, Megan Kane and me (Katie Leuenberger). We worked throughout the summer searching for these potentially harmful species to keep the floodplain forest as invasive free as possible.

The floodplain forest at Missisquoi is a unique and important habitat type. It is primarily made up of silver maples, green ash, and eastern cottonwood with ferns, jewelweed, and wood nettles in the understory. This forest type is resistant to frequent flooding and has stood the test of time with many of the areas having not been disturbed for 100+ years. These forests contain some of the largest and most impressive trees on the refuge -- I know I have been impressed! These forests are also great habitat for cavity-nesting birds, like Wood Ducks and Common Goldeneyes, because there are cavities in many of these ancient trees.

With all of our searching we found most of the floodplain forests to be in great shape. The areas we discovered with invasive species were few and far between and there were only a couple of spots where invasive species had actually started to dominate the area. By finding and identifying these areas we will be able to continue to keep Missisquoi native and diverse for future generations of animals and people!

Hello Missisquoi Friends group,

I am sure I have met many of you during my time here, but I thought I would take this opportunity to introduce myself formally. My name is Katie Leuenberger. I am originally from Indiana, where I graduated from Purdue University with my Bachelors in science for wildlife science in 2008. Ever since then I have had great opportunities to work all around the country, including Louisiana with marsh birds, Wyoming with pygmy rabbits and pocket gophers, and Missouri with amphibians and reptiles. I finished my Masters in science last summer from Texas Tech University where I did a project comparing urban birds to vegetation and house prices in Lubbock, TX.

I have always wanted to explore as much of the US as possible, so I was very excited to get a job working here at Missisquoi so I could experience the northeast. I came here in June to start an invasive species mapping project and I have been able to do a lot more than just that, including duck banding and sampling eastern newts for chytrid. Now I am working on analyzing multiple datasets, including data on big game hunting and waterfowl banding. I have been lucky enough to get to see most of the refuge while on the ground surveying for invasive species, but my data work has been of special interest to me because I am often dealing with many years of data where I can see how the refuge has changed from well beyond the scope of my time here

This is one of my first experiences doing on-the-ground management rather than just research. It has been an education and an amazing experience. I feel as if I have actually made an impact on Missisquoi even though I have only worked here for a short time.

### **Trail Closures**

Please be aware that during the big game hunting seasons, all refuge trails are closed to non-hunters except Black/Maquam Creek Trail. Trail closures in 2016 are in effect during the following periods:

Rifle Deer Season – November 12 to 27

Muzzleloader Deer Season – December 3 to 11

### **FRIENDS OF MISSISQUOI NATIONAL WILDLIFE REFUGE**

#### **Bi-monthly Board Meeting**

**Wednesday, January 11, 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, March 8, 2017 at 6:30 pm**

## **Manager's Update – November 2016**

*by Ken Sturm, Refuge Manager, Missisquoi NWR*

Another field season is in the books for Missisquoi National Wildlife Refuge. In the last newsletter I discussed all of the big field season projects the refuge staff undertook including comprehensive invasive species mapping, invasive species control, wildlife surveys, and increased public outreach efforts working with the Swanton Public Library.

As that article was written in August, it did not include an important infrastructure project that many of you surely noticed at Stephen Young Marsh. The dike at the north end of the marsh had been eroding for years and needed improvement. Equipment operator Joe Bertrand worked with our Regional Office to rehabilitate and improve the dike in September. We were able to bring in another equipment operator from nearby Lake Umbagog NWR in New Hampshire to help with the project. The main work was to rebuild the eroding dike and widen it to allow passage of light equipment to the west side of the unit. In addition, Joe replaced the water control structure and added a "beaver baffle" that hopefully will thwart our active beaver colony from plugging up the outlet, an almost nightly occurrence this time of year. The operation went smoothly thanks to Joe's preparation and hard work.

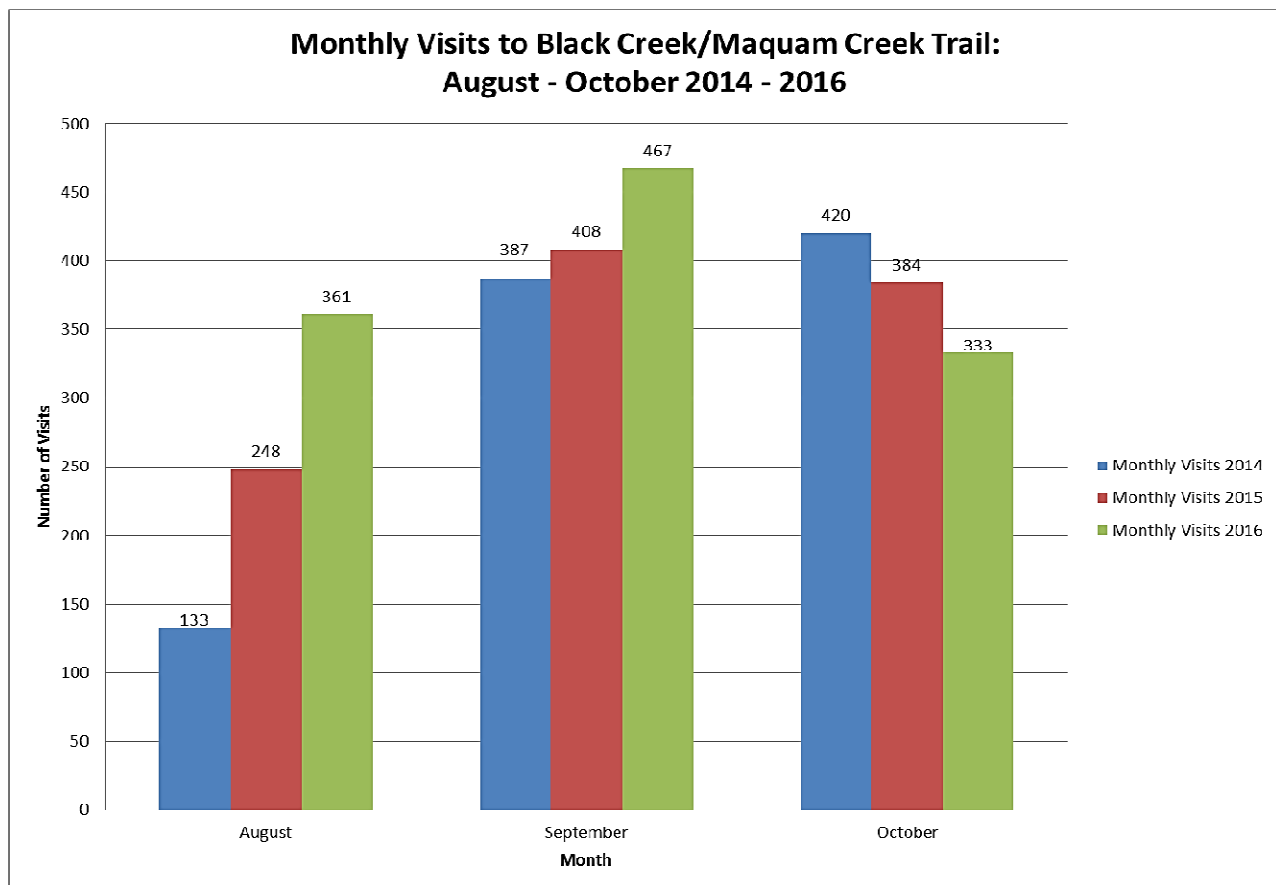
Another infrastructure project is just beginning at the Eagle Point Unit on Lake Memphremagog. The refuge and the Vermont Fish and Wildlife Department have worked with the Town of Derby and VTrans to submit an application to the Federal Lands Access Program (FLAP) to replace a failing culvert over Hall's Creek. The FLAP program provides funds for projects that help access transportation facilities located on or adjacent to federal property. The failing culvert was a high priority to replace and provides the only road access to the trails and parking areas of the Eagle Point Unit. The project will replace the culvert with a bridge that will provide improved access to both the walking trails at Eagle Point and will also allow for safer fishing from it on Hall's Creek. The bridge will also improve aquatic connectivity between Lake Memphremagog and the Hall's Creek wetland complex. We are looking forward to seeing this project funded.

One of the big conversation points around the office has been the exceptionally low lake levels all summer and into the fall. The lake hit a low of 93.8 feet in September, which was the lowest September lake level recorded since 1952! This steadily dropping lake level created great stands of wild rice in refuge wetlands, an important food for waterfowl. The problem however is that most of the rice was high and dry as the lake is still quite low, meaning that most of the rice production was unavailable to the thousands of ducks migrating into the refuge during September and October. Boat access out all three mouths of the Missisquoi and Dead Creek became all but impossible for the latter half of the summer and most of the fall making field work difficult on the refuge. Thankfully we are now seeing some rain and the lake is slowly rebounding.

One of the take-home messages from this summer's low lake level is the significance of water level fluctuations on the ecology and function of the refuge. Climate change predictions indicate an increasing trend of precipitation in Vermont, but the timing of that precipitation is generally unknown. Whether it falls as snow or rain and during what time of year can affect lake levels basin wide. Should we see higher levels than historically normal during the early part of the summer, production of wetland plants will be hindered and trees may suffer from longer inundation periods. Should conditions favor summer and fall with exceptionally dry conditions, food production for wildlife may improve but may not be available to waterfowl when they need it. As with all natural areas, the habitats and associated wildlife are inter-connected. We can only hope that Missisquoi's incredibly important wetland complex will remain resilient to future climate conditions and will continue to provide the values to both wildlife and people for future generations.

## Friends and Refuge News Shorts

- **Duck Banding** – With the help of many volunteers Judy and the refuge staff banded a total of **574 ducks**: 534 Wood Ducks; 34 Mallards; 3 Northern Pintails; 2 American Black Ducks; and 1 Mallard x Black Duck hybrid.
- **Trail Counters** – If you've walked the Black/Maquam Creek Trail, you've probably noticed the counter box along the side of the trail just south of the railroad crossing. Since a working counter has now been in place for several years, it is interesting to see the visitor trends over time during the months of August, September, and October:



Such information is valuable to refuge staff to know how many people use refuge trails and to report this information to the Regional Office. Additional counters were recently placed on Mac's Bend Road and Discovery Trail.

- **Student Visits** – From late September through October, 205 students visited the refuge. The Friends of MNWR continues to provide grants of \$100 per class trip to offset the schools' cost of transportation. For many schools, field trips to the refuge would not be possible without these grants.
- **Bags 4 My Cause** – Hannaford Store again chose The Friends as a recipient of their *Hannaford Helps Reusable Bag* program. For the month of October, the Friends received a \$1 donation from each purchase of a reusable bag at the Hannaford store in Swanton. The Friends had previously been chosen for this program by both the Swanton and St. Albans stores.

## Evening Grosbeaks: Ornaments of Winter

*Used with permission and adapted from an article by Casey Rucker, Friends of the 500th, Canaan Valley NWR*

When trees are brown, skies are gray, and snow blankets the ground, the brilliant colors of winter birds brighten our Vermont landscape. Blue Jays, Northern Cardinals, and Purple Finches maintain their intense hues through the winter season, even as most of our year-round residents wear the camouflage of earth tones to help them avoid predation.

Many of our winter visitors, including Rough-legged Hawks, Northern Shrikes, and American Tree Sparrows, also sport earth tones. Others keep bright colors to a minimum like the yellow wing-patches of Pine Siskins or the red foreheads of Common Redpolls.

No such conservatism afflicts the spectacular Evening Grosbeaks, flashing bright yellow and bold black and white as they flutter to feeders around the state. From the 1950s through the 1970s Evening Grosbeaks were common winter visitors, often moving in large flocks. Since then, their visits have been much more sporadic.

The male Evening Grosbeak has a broad stripe of a startling chrome yellow above his very large yellowish bill, and the plumage on his body ranges from a tawny olive-green back to lemon-yellow undertail coverts. Wide patches of white on his wings contrast with black wing coverts, giving the impression of a summertime American Goldfinch on steroids. The female's colors are more muted, with most feathers ranging from olive-green to gray, and with less-striking black and white in the wings. In the Appalachians, females generally outnumber males, because the males prefer to stay farther north: In Vermont this ratio is reversed. Their vocalizations in wintertime include twittering reminiscent of the sound of crossbills, and a very simple "cheerio" tune sung when perching.



Much remains to be learned about Evening Grosbeaks. Their very name is a misnomer, based on a 19<sup>th</sup>-century belief that they sang only in the evening. In fact Evening Grosbeaks do not sing much during mating season, making it harder to study their breeding habits. As additional barriers to research, they build nests that are not very durable, often near the tops of trees in remote habitats.

Evening Grosbeaks may appear to be counterparts of the beautiful Rose-breasted Grosbeaks that grace our area during spring and summer.

The two birds share a name, are exactly the same size, and have bills that are similarly massive. This resemblance, however, is deceptive: Rose-breasted Grosbeaks are members of the Cardinal family, while Evening Grosbeaks are finches. One difference I have observed at close range is the Rose-breasted Grosbeak's greater aggressiveness when feeding. The Rose-breasted Grosbeak will defend its space against larger birds such as Hairy Woodpeckers and Blue Jays, while the Evening Grosbeak is more likely to flutter away.

Our eastern Evening Grosbeaks are currently considered to belong to the *vespertinus* subspecies, the only one of three subspecies found east of the Mississippi River. New acoustical research, however, has suggested five different types of Evening Grosbeak, each with recognizable vocalizations and a population that does not interbreed with any of the others. Under this new system, our eastern Evening Grosbeaks are considered Type 3.

Always welcome, if imperfectly understood, Evening Grosbeaks are shining ornaments of our high country winter. On a dreary winter day, a glimpse of these dazzling visitors can brighten the spirits as well as delight the eyes.



## Winter 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 1<sup>st</sup> Saturday of each month, 9:00 to 11:00 AM

Join Friends of Missisquoi NWR members Joe Belanger, Mark Batchelder, 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:

- December 3:** **Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.
- January 7:** **Jeep Trail.** Meet at the Louie's Landing boat access area on Rte 78. We will drive in to the trail head at Mac's Bend.
- February 4:** **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.

### 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 79 months of walks we have recorded 144 species of birds.\*** Registration is not required. The schedule for the next three months is:

- December 17:** **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.
- January 21:** **Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.
- February 18:** **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.

\*During the past 3 months we added 1 new species to the list: Greater Yellowlegs.

Other Winter 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](http://www.friendsofmissisquoi.org) and click on "Calendar."

For more information about the refuge, visit [www.fws.gov/refuge/missisquoi/](http://www.fws.gov/refuge/missisquoi/)



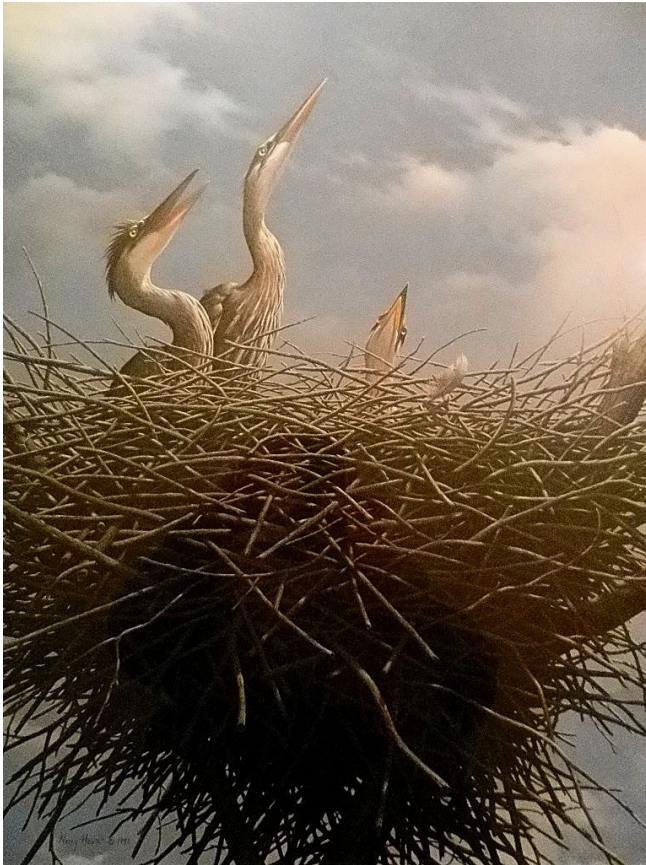
# The Friends' Store

at the Missisquoi National Wildlife Refuge

BOOKS    GAMES    GIFTS    TEE SHIRTS    HATS

for people of all ages who love the outdoors

## Baby Blues



19" x 24" signed and numbered print by artist Nancy Howe

**Price reduced to \$20.00**

In honor of Missisquoi NWR's 50<sup>th</sup> birthday in 1993, Nancy Howe, Vermont artist and winner of the 1991-92 Federal Duck Stamp Contest, created a painting entitled "Baby Blues." The artwork features three Great Blue Heron young in their nest. Nancy spent one day in a blind in the Refuge's heron rookery. She observed and photographed the birds to get material for this painting.

Signed and numbered prints are being offered by the Friends for \$20.

Consider giving a print as a holiday gift to a special bird-lover or nature-lover. Prints can be picked up at the refuge, ordered via the Friends website, or use the order form below. If ordered by mail or via the website, prints will be sent in a mailing tube. Shipping is free! (If using the order form below, also please fill out the membership form on the front page of this newsletter.)

### Store Order Form

To order by phone, call 802-868-4781. To order by mail, fill out this order form and send to:  
The Friends' Store MNWR, 29 Tabor Rd, Swanton, VT 05488

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Please send me:  **Baby Blues print (\$20.00, Free Shipping)**

Payment: Enclose check or money order, or fill in Credit Card information.

Type of card:  MasterCard     Visa

Credit Card Number \_\_\_\_\_ Exp date \_\_\_\_\_

Signature \_\_\_\_\_