



## 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

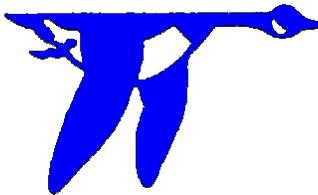
[www.friendsofmissisquoi.org](http://www.friendsofmissisquoi.org)

E-mail: [info@friendsofmissisquoi.org](mailto:info@friendsofmissisquoi.org)

Newsletter edited by Ken Copenhaver

## Board of Directors

Paul Madden	<i>President</i>
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Carol Yarnell	<i>Secretary</i>
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Ken Sturm	<i>Refuge Manager</i>
Dave Frisque	<i>Park Ranger</i>
Judy Edwards	<i>Wildlife Biologist</i>
Eddie Edwards	<i>Zone Enforcement Officer</i>
Lisa Swainbank	<i>Office Administrative Assistant</i>
Joe Bertrand	<i>Maintenance Mechanic</i>

MNWR HQ hours are  
Monday thru Friday  
8:00am – 4:30pm  
Saturdays May 19 to ???  
10:00 am – 2:00 pm

## - NOTICE -

### FRIENDS OF MISSISQUOI NATIONAL WILDLIFE REFUGE

#### Bimonthly Board Meeting

**Tuesday, September 11, 2012 at 6:30 pm**

**At the Refuge Headquarters**

Members are always welcome to attend.

Come and see what the board is planning and contribute your ideas.

Next meeting: Tuesday, December 11, 2012 at 6:30 pm

## Looking for New Board Members!

The Friends board now has 9 directors, and our charter calls for up to 12 directors. So, we have a few open positions. Any members who think they might want to take a more active role in the Friends' mission can contact Paul Madden at [paulmadden88@gmail.com](mailto:paulmadden88@gmail.com) and express your interest. Paul will fill you in on the nomination process (very simple), the obligations (not too burdensome) and the rewards (many).

## Volunteers Needed for Visitor Center and Book Store

The Friends board is looking for one or more volunteers to help with the Refuge Visitor Center and the Friends Book Store. The goal is for the Visitor Center and Book Store to remain open at least from 10 AM to 2 PM on Saturdays year-round. The refuge's summer resident volunteers, Morey and Margaret Zuber, will be leaving September 16. Unless volunteers are found, the Visitor Center will not be open on weekends after that date.

Volunteers may also assist in ordering merchandise for the store. The store is the Friends' second-largest source of revenue, after membership dues. If you think you would be interested in helping, please contact Paul Madden at [paulmadden88@gmail.com](mailto:paulmadden88@gmail.com). Paul will give you information on what is required and how you can get started! Thank you.

## Climate Change Concerns Most Refuge Visitors

*Reprinted from the July/August 2012 issue of Refuge Update, published by US Fish and Wildlife Service*

Visitors to national wildlife refuges are concerned about the impact of climate change on America's fish, wildlife and plants—as well as the habitat that supports them, according to a survey released in late May by the U.S. Fish and Wildlife Service.

The survey also shows strong support for efforts to help native species adapt to changing climate conditions, such as those being implemented by the Service and its partners.

Seventy-one percent of the more than 10,000 visitors to national wildlife refuges who took part in the survey—designed and conducted by the U.S. Geological Survey in 2010 and 2011—believe that climate change poses a serious threat to wildlife and habitat. About 74 percent agree that addressing climate change effects on wildlife and wildlife habitats will benefit future generations.

More than half of the refuge visitors surveyed indicated a high level of interest and personal involvement in climate issues. More than two-thirds (69 percent) agreed that addressing climate change impacts could “improve our quality of life.” Nearly half of visitors surveyed (46 percent) expressed interest in learning from refuges what they could do to help address the effects of climate change on wildlife and habitat.

Economic considerations factored into visitors' assessments. More than two-thirds (71 percent) agreed that “it is important to consider the economic costs and benefits to local communities when addressing climate change effects on fish, wildlife and habitats.”

“The results of this survey underscore the Service's responsibility to ensure that we use the best science to understand and anticipate the impacts of

a changing climate in order to safeguard fish, wildlife and plants and the important benefits and services they provide,” said Service Director Dan

Ashe. “We recognize the serious threats that climate change and other environmental stressors pose to wildlife, and we're working with our partners to address these immense challenges using the latest science-driven

approaches.”

The Service's work with conservation partners includes:

- Leading development of a National Fish, Wildlife and Plants Climate Adaptation Strategy to guide government-wide wildlife adaptation partnerships over the next 50 to 100 years.
- Developing an innovative carbon sequestration program in the Lower Mississippi Valley in partnership with The Conservation Fund, American Electric Power Company and Entergy Inc., that is also restoring native habitats to bolster populations of wildlife and migratory birds. The project has added more than 40,000 acres of habitat to the National Wildlife Refuge System and reforested more than 80,000 acres, sequestering 30 million metric tons of carbon over the project's 70-year lifetime.
- Helping create a network of locally driven, solution-oriented landscape conservation cooperatives that will allow federal, state and local partners to develop shared science capacity to inform conservation actions that help priority species and habitats withstand the impacts of climate change.

The survey is available at:

<http://pubs.usgs.gov/ds/685/DS685.pdf>.

*Seventy-one percent of survey respondents said climate change poses a serious threat to wildlife and habitat.*



## 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.

### Volunteer Recognition Dinner

Friday, Sept. 21, 6:00 to 10:00 pm

A special dinner is being planned to recognize everyone who has volunteered at the refuge over the past two years. More information will be available as we get closer to this event.

### Refuge Open House

Saturday, October 20

Mark your calendar now! More information will be available as we get closer to this event.

To check for any schedule changes or additions, visit the Friends website at [www.friendsofmissisquoi.org](http://www.friendsofmissisquoi.org) and check the "Upcoming Events" section.

### Monthly Nature Walks

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

Join Friends of Missisquoi NWR board member Joe Belanger for nature 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 1: Jeep Trail.** Meet at the Louie's Landing boat access area. We will drive in to the trail head at Mac's Bend.
- October 6: Stephen Young Marsh Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge headquarters and across the road from the marsh.
- November 3: Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.

### Monthly Bird Monitoring Walks

3<sup>rd</sup> Saturday of each month, 8:00 am to 10:00 am

Friends board members Bridget Butler and Ken Copenhaver 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 will be 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 all levels of birders and provide a wonderful opportunity to learn about birds throughout the seasons. Registration is not required. **After 30 months of walks we have recorded 120 species of birds.** The schedule for the next three months is:

- September 15: Stephen Young Marsh Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge headquarters and across the road from the marsh.
- October 20: Old Railroad Passage Trail.** Meet at the parking lot on Tabor Rd, about a mile past the refuge headquarters and across from Stephen Young Marsh.
- November 17: Maquam/Black Creek Trail.** Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.

## The Importance of Missisquoi to Black Terns

*Abstract, written by Judy Sefchick-Edwards, Refuge Biologist*

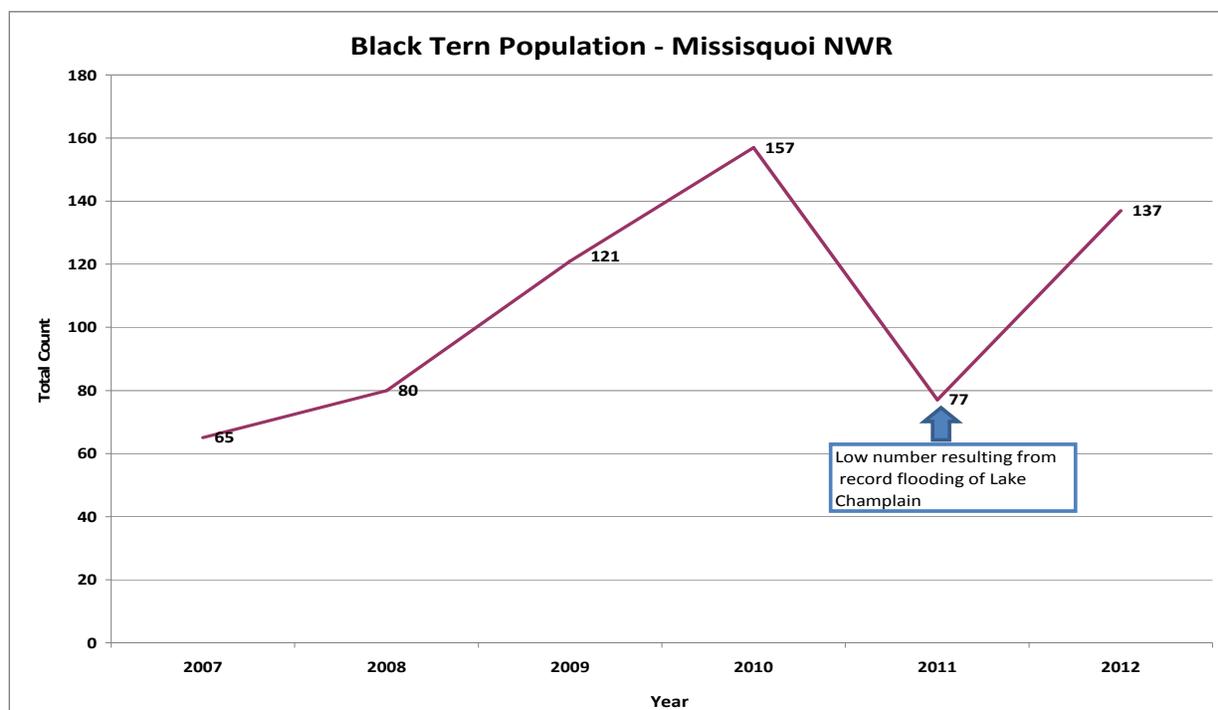
Black terns are a species of concern in North America because of continent-wide population declines, particularly since the 1960s. Breeding bird surveys show black terns declined at an average rate of about two percent annually from 1966 to 2007. Currently, the species is listed as threatened or endangered in six states and is considered a species of conservation concern in 18 other states and Canadian provinces. In addition, the black tern is a U.S. Fish and Wildlife Service migratory bird of conservation concern in the northeastern United States, and a bird of conservation concern in Bird Conservation Region (BCR) 13, the Lower Great Lakes/St. Lawrence Plain.

In Vermont, the black tern is listed as Threatened, and is considered one of the state's high priority species of greatest conservation need. As a result, monitoring has been done since 1990 by the Vermont Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to determine the number of breeding pairs state-wide. During this time, the black tern nesting population has remained low (average 81 breeding pairs; 44-157 range) but relatively stable.

The number of nesting locations that black terns use, however, has decreased. During the 1990s, black terns nested at 4 locations in Vermont: (1) in the west-central part of the state at Dead Creek, Addison County, (2) in the north-central part of the state at South Bay in Lake Memphremagog, Orleans County, and (3) in the northwestern part of the state at both Mud Creek and (4) Missisquoi National Wildlife Refuge (NWR), in Franklin County. Since 2004, however, the entire breeding population in Vermont has nested at Missisquoi NWR.

Because black tern nesting colonies at Missisquoi NWR are small and localized, they are extremely susceptible to both human-caused (disturbance, wave action from boats) and natural (flooding, predation) events. To help prevent these situations from occurring, the refuge staff uses various management techniques including: closing tern and other bird nesting areas to the public, maintaining a stable water level at Cranberry Pool impoundment during the nesting season, eradicating invasive aquatic plants that may degrade habitat, and monitoring black tern nesting pairs and habitat conditions annually.

If monitoring efforts in the future show a decline in the population of nesting black terns in Vermont, the VTDFW and the USFWS may need to adopt different strategies for their management, including: refining monitoring techniques to better detect population trends and determine the cause of changes, managing habitat for black terns based on current knowledge while conducting further research to identify limiting factors, or evaluating additional management techniques.



## **Manager's Musings: Summer – Fall Update 2012**

*by Ken Sturm, Refuge Manager, Missisquoi NWR*

It's been a busy summer at the refuge this year, and we still have many interesting work projects ahead of us before the snow flies. Working through a difficult budget year, we were not able to hire any seasonal help during the field season as we had in previous years. This kept our permanent staff more than busy with regular projects and a few new ones.

The regular wildlife surveys were all conducted by our Biologist Judy Sefchick-Edwards with occasional help from our Equipment Operator Joe Bertrand. With water levels relatively normal in the beginning of the season, access to much of the refuge for routine breeding surveys was good. However, as the summer progressed, water levels dropped exposing mudflats in many areas of the refuge. For Judy this made several follow-up surveys challenging such as assessing the breeding success of the refuge's black tern and osprey populations. Luckily the refuge has a low-draft work boat that can operate in very little water; it has proved indispensable for late-season biological surveys and work projects.

We were fortunate to have two wildlife biologists visit the refuge from the Ohio River Islands NWR (Patty Morrison and Craig Zievis) to conduct a required mussel survey on the Missisquoi River and to clear a site for a dredging project. The refuge's barge has been silted in from years of sediment deposition, exacerbated by two floods in 2011. The dredging will open the barge slip and once again allow use of the barge to move equipment and supplies across the river to the island portion of the refuge. Over the course of three days and aided by staff from the state and the USFWS Lake Champlain Fish and Wildlife Resources Office, a total of 808 native mussels were relocated to a safe location upstream from the barge slip. Included were 49 state threatened and endangered species that were tagged and relocated into a separate marked plot.

Other news in the biological world is that water chestnut has become a bit more aggressive in certain areas of the refuge, including the Cranberry Pool unit. Whether current low water levels, flooding in 2011, or the combination of the two are to blame, many more rosettes are being hand-pulled by refuge staff this summer than was expected. Stay tuned on the outcome as this control effort continues through the late summer and early fall months.

And speaking of invasive plants, the refuge has hired a recent graduate from the University of Vermont to help control woody invasive plants this summer and fall. Joe Acompora will begin on August 20th with the sole mission of killing as many European buckthorn and honeysuckle plants as he can for about one month. We hope to make some headway in areas around the refuge Visitor's Center as well as heavily infested areas along the Railroad Passage Trail and Steven Young Marsh tract.

The refuge has been busy managing our new Eagle Point Unit in cooperation with the Vermont Fish and Wildlife Department this summer. Highlights include funding an 8-person Student Conservation Association work crew with a visitor services grant to begin a trail system and construct a wetland overlook platform on the property. Thanks to the Friends of Missisquoi NWR we will also soon be installing an interpretive panel that describes grassland management along the newly-constructed trail. On August 10 the refuge joined with many partners including the Vermont Fish and Wildlife Department, Vermont Land Trust, and Student Conservation Association to formally dedicate the Eagle Point Unit to Michael Dunn who graciously donated the property to the federal government. Over 100 people attended the gathering.

Our Visitor Services manager Dave Frisque has kept the Visitor's Center and classroom bustling with

activity. Many field trips from area schools and other special events were held this summer at the refuge. We especially thank our volunteers who donate time to provide the much needed support for the large groups that come to visit the refuge. We can't do it without you!

The annual refuge Kids Fishing Derby was a success again this year with over 85 kids attending with their parents. Although water was low in the Missisquoi River, many nice fish were caught, including several nice small- and largemouth bass. Again, supported by refuge volunteers and partners, this event is always popular with the public and it's rewarding to see the smiles on the faces of the kids and parents alike.

And speaking of fishing, the refuge was happy to host once again the Ditch Pickle Classic participants who sought out Lake Champlain's biggest bass for a catch and release fly fishing tournament. Now in its third year, an ever-growing group attended the event. Participants paid a registration fee which, in part, signs them up for a one-year membership to the Friends of Missisquoi NWR. Thanks to all who helped make this event a success again, and we look forward to hosting the Ditch Pickler's in future years!

This will be the 36th year for the annual Junior Waterfowl Training day, which is being planned as I write this. The event is aimed at educating kids about all aspects of waterfowl hunting. Participants learn waterfowl identification, hunter ethics, gun safety, decoy layout, and shot gun patterning techniques. At the end of the day kids and their parents/mentors are drawn for special youth hunting blinds on the refuge to take what they learn to the field. This is truly a special event and I encourage those of you interested in volunteering or participating to call the refuge and discuss the opportunities.

Summer was busy and time seemed to fly by. Seems like only yesterday that we were hosting the annual International Migratory Bird Day event, and now I find our staff gearing up for our fall waterfowl banding program. As you visit the refuge over the next few months, pay attention to the subtle changes happening to our wildlife and habitats – blooming and seeding stands of wild rice, flocks of ducks and geese appearing overhead, refuge grasslands being hayed, and the change of leaf color from vibrant green to shades of red, orange, yellow and brown. Fall is coming and I hope everyone takes some time to visit the refuge and take note of these seasonal changes that make living in Vermont so special.

### 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  
Please add \$6.00 shipping and handling.

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Please send me:  **Waterfowl of Eastern North America (\$19.95)**  
 **National Audubon Society Pocket Guide to NA Waterfowl (\$10.95)**  
 **The Calls of Ducks and Geese (\$19.95)**

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

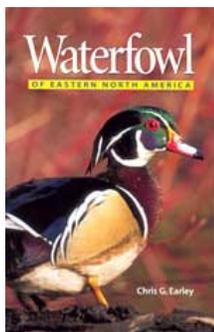
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Signature \_\_\_\_\_

(See store ad on next page)

**The Friends' Store**  
**at the Missisquoi National Wildlife Refuge**

**BOOKS    GAMES    GIFTS    TEE SHIRTS    HATS**

**for people of all ages who love the outdoors**



**Waterfowl of Eastern North America**

**\$ 19.95 paper**

Chris G. Earley

160 pages, 5 1/2 x 8 1/2

full-color photographs, maps

An indispensable field guide and reference for birders.

**National Audubon Society Pocket Guide to North American Waterfowl**

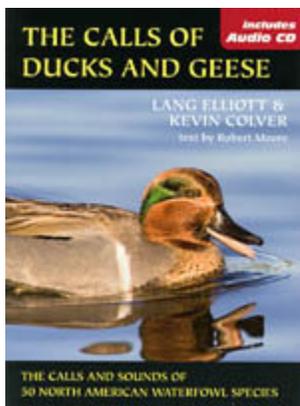
**\$ 10.95 paper**

192 pages, 6 x 4 1/4, full-color photographs

Waterfowl are a varied and fascinating group of birds. This very portable guide is designed to help you identify these birds in their natural habitats and learn about their habits, life cycles, and history. The guide features 74 species of North American birds associated with fresh or salt water. In addition to the swans, geese, and ducks that are traditionally termed waterfowl, it includes a variety of loons, grebes, cormorants, and rails that may be encountered in the same habitats. Also here are tips on birding technique (including the use of binoculars and spotting scopes), identification skills, and watching waterfowl, as well as notes on waterfowl conservation and more.



**The Calls of Ducks and Geese: The Calls and Sounds of 50 North American Waterfowl Species**



Kevin Colver, Lang Elliott & Robert Moore

**\$ 19.95, paper + compact disc**

103 pages, 6 x 8, full-color photographs

Features sounds of 50 North American waterfowl species. A full-color photograph complements each bird's description. Learn the songs and calls of 50 waterfowl species found across North America. An audio soundtrack combined with detailed text and beautiful color photographs makes this a useful guide for any birder. From the distinctive quack of the American black duck and whistled "peep" of the cinnamon teal to the cuckoolike call of the pied-billed grebe and yodel of the yellow-billed loon, this package covers waterfowl species in an easy-to-use format. Includes dabblers, sea ducks, geese, and other waterfowl.

(See order form on previous page)