

**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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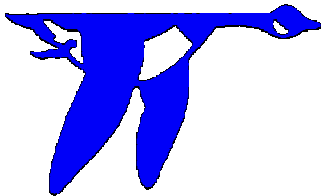
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Newsletter edited by Ken Copenhagen

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

International Migratory Bird Day

On Saturday, May 16, another successful International Migratory Bird Day (IMBD) celebration was held at the refuge. The theme for the 2015 IMBD was “Restore Habitat-Restore Birds.”

About 50 participants met at 7:30 at the Visitor Center to divide up into teams for counting birds. Two groups took to the river on refuge boats, and two groups birded by land on the Stephen Young Marsh Trail and the Railroad Passage Trail. Each group kept track of how many bird species they observed and the number of individual birds of each species.

At 11:00 AM the teams returned to the Visitor Center to turn in their counts and eat pizza. Ken Sturm then presented the tallies and compared them to the past few years. With 95 species, we did just a tiny bit better than the 94 species in 2014, but couldn't come close to the record 102 species in 2013. But we'll try again next year!

After reviewing the counts, Jason Batchelder, who heads up the enforcement division of Vermont Fish and Wildlife, gave a presentation on the history of the Vermont Fish and Game Wardens and the future direction of the department, particularly with respect to “non-hook and bullet” outdoor activities. The presentation was informative, thought-provoking, and well-received.



The day also marked the opening of the “Art on the Refuge” art exhibit. Paintings and photographs from local artists will be on display for viewing and for sale through July 17. A portion of the proceeds benefits the Friends of Missisquoi NWR. Stop in and see the artwork whenever the Visitor Center is open.

**FRIENDS OF MISSISQUOI
NATIONAL WILDLIFE REFUGE****Bi-monthly Board Meeting****Wednesday, July 8, 2015 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, September 9, 2015 at 6:30 pm

Manager's Update – Spring 2015

by Ken Sturm, Refuge Manager, Missisquoi NWR

Looking back at last year's spring update, I realize that what I was about to write for 2015 mirrored my spring 2014 update. As you can probably guess, it would be in noting the long cold winter and delayed spring we are seeing again this year. Wildflowers and many migrant birds seem to be arriving late, and who can blame them? It wasn't until late April that the ground finally thawed! A big difference between spring of 2014 and 2015 is that the lake started out quite low this year and we haven't seen a fast melt or much rain to swell the Missisquoi River over its banks. Typically our floodplain forests are inundated in April from spring melt and rains. Not so this year—or at least not yet!

This field season will be busy for us, and we are lucky to be able to hire back Jeff Harvey, who will be with the refuge for 6 months as a temporary laborer. Jeff will work directly with Maintenance Mechanic Joe Bertrand on the multitude of tasks to keep the refuge running efficiently during the busy field season. Jeff was last with us for the 2011 season and we are glad to be able to bring him back this year.

The refuge is also hiring Student Conservation Association Intern Stephanie Frank, who will work with the refuge for the summer. Stephanie graduated in 2013 from St. Michaels College in Colchester with a Bachelor of Arts in Environmental Studies and a minor in Biology. She worked the 2014 field season as the head educator for Grand Isle State Park. Stephanie will be doing a variety of tasks while at the refuge, working both with the biology and visitor services programs.

And speaking of visitor services, the refuge is planning on completing the replacement of our Mac's Bend boat launch this summer. This project was funded in 2014 and the contractors are currently gearing up to complete the project soon. For those of you who like to sit by the river at the Mac's Bend Parking lot during the summer, you may find a busy construction site there for a few weeks. Please be

patient as the construction takes place, and we look forward to having a new and improved ramp for the public to enjoy this fall.

This year we have been fortunate once again to augment our projects with funding from two different grants. We are lucky to be working again with the Friends of Missisquoi NWR on a grant to control the aquatic invasive plant, water chestnut, on the refuge. This marks the third year where the Friends have supported this control operation and with great success. The Friends will be hiring two contract employees who will coordinate their control operations with the refuge and continue to make great strides in managing this invasive plant on the refuge.

Another grant was received by the refuge from American Forests' Global ReLeaf program this winter. The grant will pay for 500 native trees and shrubs to be planted along the Missisquoi River. The grant included conducting two plantings, one in the spring and one in the fall, with the aim of stabilizing an eroding river bank and beginning the reforestation of the river corridor in this area. Our first volunteer planting went exceptionally well, and we planted 200 trees and shrubs on May 2. Thanks to all the volunteers who spent a beautiful Saturday morning planting trees for the refuge! Our next planting is scheduled for National Public Lands Day, September 26th when we will plant the remaining 300 trees to complete our grant agreement.

We are all looking forward to the coming summer season, perhaps more eagerly than in some years thanks to an exceptionally cold winter. However, don't forget to enjoy the spring which seems to be accelerating at a rapid pace. A walk on refuge trails now will provide you with a multitude of sounds and sights. Enjoy the spring bloom and bird migration while you can. The refuge trails are a great place to do it. But do it soon as it will certainly be gone before you know it!



Summer 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.

Abenaki Life in Vermont, by Dr. Fred Wiseman various Fridays, 6:30 to 8:00 PM

Join Dr. Fred Wiseman for a series of Friday evening programs featuring various cultural aspects of Abenaki life in Vermont. The presentations started in January and will continue on May 29 and June 26. All programs are free of charge and will be presented at the refuge Visitor Center.

The topic of the May 29 program is "Eating History: Traditional and Modern Wabanaki Cuisine." Fred Wiseman will discuss the introduction of ancient foods and food preparation into the modern regional fare of Northern New England. This program will examine alternative cuisine and the attempt to bring traditional Wabanaki cooking to the Euroamerican diet. Professor Wiseman will look at the partnerships and relationships bringing ancient cuisine to chefs, restaurateurs, institutional dietitians, and academics while still maintaining respect for Native communities and their traditions.

Kids Fishing Clinic Saturday June 6, 8:00 AM to 1:00 PM

The annual Kids Fishing Clinic will take place along the Mac's Bend Road from Louie's Landing Parking lot down to the Mac's Bend boat launch site, a distance of about 1 mile. Fishing will occur along the banks of the Missisquoi River. Numerous educational and informational venues will be operating near the Mac's Bend Building while the fishing is on-going. Topics include fly casting, fly tying, spincasting, watershed models and demonstrations, a fish ID aquarium, lure making, and an aquatic invasive species display. Children are encouraged to participate in these activities at some time while they are fishing. A light lunch will be served and a limited number of random drawing prizes will be given away at the end of the event.

Please register for this popular annual event at 802-868-4781.

Family Paddling Day Saturday July 18, 9:00 AM to 1:00 PM

Join us for a morning of paddling and instruction for families sponsored by [Friends of the Missisquoi National Wildlife Refuge](#), [Missisquoi National Wildlife Refuge](#), and [Northern Forest Canoe Trail](#). The schedule is:

9:00	Meet at Mac's Bend in the Missisquoi National Wildlife Refuge
9:15-9:45	Small group paddling and safety instruction
9:45-11:30	Small group paddling on the Missisquoi River within the refuge
11:45-1:00	Lunch

RSVP Required. The event is free and lunch is included. Please bring a water bottle, shoes or sandals that can get wet, sunscreen, and a hat. Register your family for FREE with the Northern Forest Canoe Trail. To register or learn more contact kevin@northernforestcanoetrail.org or call 802 535-5855. Directions to the event will be provided at registration.

Youth Waterfowl Hunter Training Program Saturday August 22

Youth hunters 12-15 years of age are encouraged to participate in this one day training at the Franklin County Sportsman's Club.. Please contact the refuge to register for the training event. The youth hunter

must have an adult mentor with them at the training activity who is also willing to mentor the youth as they hunt on the refuge. The Missisquoi Refuge has waterfowl hunting areas available for youth hunters in the early part of the waterfowl season.

Call 802-868-4781 to register for this activity.

Tree Planting Day**Saturday September 26**

Celebrate National Public Lands Day by coming to the refuge and planting trees! The goal of the tree planting is to stabilize an eroding river bank and begin the reforestation of the riverbank across the river from the Black/Maquam Trail parking lot. More information will be available as the time approaches.

Call 802-868-4781 to register for this activity.

Monthly Nature/Photography Walks**1st 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. **Come have fun with us!**

June 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.

July 4: Maquam/Black Creek Trail. Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.

August 1: Railroad Trail. Meet at the parking lot on Tabor Rd, about a mile past the refuge headquarters 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 62 months of walks we have recorded 135 species of birds.** Registration is not required. The schedule for the next three months is:

June 20: Railroad Trail. Meet at the parking lot on Tabor Rd, about a mile past the refuge headquarters and across the road from the marsh.

July 18: Maquam/Black Creek Trail. Meet at the parking lot located on Rte 78 approx. 2 ½ miles west of Swanton.

August 15: Jeep Trail. Meet at the Louies Landing boat access area. We will drive in to the trail head at Macs Bend.

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/

Shorebirds: Sure Signs of Spring

by Judy Sefchick Edwards, Wildlife Biologist, Missisquoi NWR

Time flies and shorebirds do too...but this time it's *spring migration* that brings them to and through Missisquoi National Wildlife Refuge. Springtime is no time for dilly-dallying! Most shorebirds just stop to refuel in Vermont before continuing their northward rush to arctic or boreal breeding grounds. Who can blame them? With only two short months to find a mate and raise a family, shorebirds need to get this show on the road!

If you're wandering around water, and hear a resonating three-part "tu-tu-tu" call, **stop everything!** You may be in the presence of a *Greater Yellowlegs*—one of the first shorebirds to arrive in April. Although they have cryptically-colored bodies, and are more solitary than not, their upright stance, emphatic call, and namesake yellow legs announce their arrival loud-and clear! Why not? Yellowlegs have done a lot of work to get here and it's not over yet. Putting on the feed bag for a strenuous northward migration is no easy feat, especially since around 50% of their body weight needs to be stored as fat. Where's a McDonalds when you need one (and yes, they would like some fries with that!)?

Think you're seeing double? You may want to wait to get your eyes checked. *Lesser Yellowlegs*, a slightly smaller and daintier version of the Greater, arrives in small flocks a little later in April or May. What's the easiest way to distinguish the two? Remember this: the "lesser" is a shorter bird (Lesser Yellowlegs are 10 inches tall compared to the 14 inch Greater Yellowlegs) with a shorter, softer, two-part call, "tu-tu!"



Lesser Yellowlegs (photo by Julie Filiberti)

If you see a sparrow-like bird probing the edges of mudflats or marshes in May, take a good look—it may be the *world's smallest* shorebird, right here in Vermont! At a mere five inches tall, and a weight of only one ounce, *Least Sandpipers* are speedy sensations, capable of 50 mph flight! But that's not the only impressive thing about them. Although

they breed in the extreme north of North America, these brown beauties may winter as far south as South America. How can they do this? They fly non-stop over the ocean—a grueling distance of around 2,000 continuous miles!

Think you're seeing spots? Are they moving? It's probably a *Solitary*

Sandpiper skipping on rocks and doing its characteristic boogie by bobbing its body up and down. Extremely alert and quick to give alarm calls, these clever shorebirds have more than a few tricks up their feathers. If probing in the mud or picking tasty tidbits from the water isn't working, solitary sandpipers use their feet to stir up small creatures from the mud—creating their own ballet buffet! But that's not all. Solitary sandpipers recycled long before recycling was cool! Instead of nesting on the ground, like most shorebirds, they use old songbird nests instead—only one of two sandpipers *in the world* to do this!

Spring is short-lived and the visits of shorebirds are too, so get out and enjoy them while you can. One thing is for certain: the subtle style and quirky characteristics of these migratory marathoners surely won't disappoint!

So Many Ways to Fly

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

Everyone knows that with few exceptions, birds fly. It's easy to overlook the many styles and techniques that birds use to move through the air. There are practically as many ways to fly as there are birds, and knowing their styles of flight is an underappreciated pigment on the birdwatcher's palette.

I first grappled with the idiosyncrasies of bird flight on pelagic birding trips off the east coast. Out at sea, a speck would appear on the horizon and, after a glance, one of the guides would call out "Cory's Shearwater" or another species to the assembled birders. By the end of the day we would be doing the same thing, identifying distant birds solely by their style of flight.

One of the key reasons birds can fly is the hollow structure of their bones, affording great strength with little weight. Surprisingly, hollow bones were not originally adapted for flight. Before the first bird flew, hollow bones enabled long-necked dinosaurs to lift their relatively-small heads. We can see traces of that origin in the numerous vertebrae present in a bird's neck. A giraffe has fewer neck vertebrae than a hummingbird.

The simplest flight is the one we humans have adopted, namely fixed-wing aviation. A bird's stiff wing has the airfoil shape we use in the wing of an airplane. The shape causes the air above the wing to move faster than the air below, making the pressure above the wing lower than the pressure below and creating lift. At the extreme, this structure enables an albatross to use its 12-foot wingspan to glide as much as 1500 miles without one flap.

More complex flight (and the ability to take off) is afforded by birds' ability to bend their wing at the elbow, allowing the upward beat to displace less air than the stiff-wing downbeat, which creates lift. Powerful breast muscles provide the thrust, and the wingtips move backward on the upbeat to minimize downward pressure. The smaller a bird's wings, the faster it must travel in order to stay aloft. Hummingbirds can sustain wing beat rates up to 80 flaps per second.

A woodpecker's flight demonstrates a simple climb and glide combination. First the bird will toss off a few stiff wing beats, its wings appearing to fan straight out from its body. The bird climbs only slightly. Then it will glide slightly downhill until it restarts the process. We see the same undulating flight, with more pronounced ups and downs, in goldfinches.

The most striking flyer I've had the chance to get to know is the White-throated Swift, a denizen of most of the rock climbing areas I've frequented out west. Hundreds of feet above the ground, the breeze from a White-throated Swift inches away in mid-dive often tickled the back of my neck. Flying at high speeds and changing direction in a fraction of a second, these birds don't even alight except to go to their roost. They even mate in the air, joining in spectacular dives and separating only to avoid crashing into the ground.

The more we observe a bird's flight, the more we are drawn into its world. By paying attention to this most-characteristic avian ability, we improve our own ability not only to identify birds, but to identify with them.

**When you visit the refuge, be sure to stop into the Visitor Center
and check out the store's new shipments of Missisquoi logo shirts
and hats, reusable water bottles and shopping bags, and new puzzles.**

The Friends' Store

at the Missisquoi National Wildlife Refuge Visitor Center

BOOKS

GAMES

GIFTS

TEE SHIRTS

HATS

for people of all ages who love the outdoors

How to Raise a Wild Child

The Art and Science of Falling in Love with Nature

By Scott D. Sampson

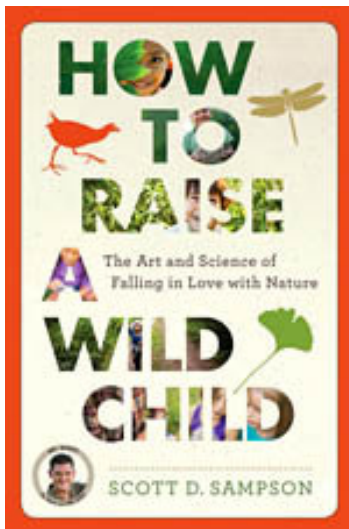
\$ 25.00, hardcover 328 pages, 5 3/4 x 8 1/2

From the beloved host of PBS Kids' *Dinosaur Train*, an easy-to-use guide for parents, teachers, and others looking to foster a strong connection between children and nature, complete with engaging activities, troubleshooting advice, and much more

American children spend four to seven minutes a day playing outdoors—90 percent less time than their parents did. Yet recent research indicates that experiences in nature are essential for healthy growth. Regular exposure to nature can help relieve stress, depression, and attention deficits. It can reduce bullying, combat illness, and boost academic scores. Most critical of all, abundant time in nature seems to yield long-term benefits in kids' cognitive, emotional, and social development.

Yet teachers, parents, and other caregivers lack a basic understanding of how to engender a meaningful, lasting connection between children and the natural world. *How to Raise a Wild Child* offers a timely and engaging antidote, showing how kids' connection to nature changes as they mature.

Distilling the latest research in multiple disciplines, Sampson reveals how adults can help kids fall in love with nature—enlisting technology as an ally, taking advantage of urban nature, and instilling a sense of place along the way.



Last Child in the Woods

Saving Our Children from Nature-Deficit Disorder

Updated and Expanded Edition

By Richard Louv

\$ 15.95, paper, 390 pages, 5 1/2 x 8 1/2

Richard Louv was the first to identify a phenomenon we all knew existed but couldn't quite articulate: nature-deficit disorder. His book *Last Child in the Woods* created a national conversation about the disconnection between children and nature, and his message has galvanized an international movement. Now, three years after its initial publication, we have reached a tipping point, with Leave No Child Inside initiatives adopted in at least 30 regions within 21 states, and in Canada, Holland, Australia, and Great Britain.

This is a book that will change the way you think about your future and the future of your children.

