



Otter Creek Audubon Society

May  
2014

# Otter Tracks

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### OCAS Mission:

To protect birds, other wildlife and their habitats by encouraging a culture of conservation within Addison County.

OTTER CREEK AUDUBON SOCIETY

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## 2014 Salamander Escort Results

This was the eighth year we've helped salamanders and frogs across Morgan Road in Salisbury, gathering amphibian data for herpetologist Jim Andrews, and providing insight into an extraordinary but rarely seen and little appreciated natural phenomenon. On April 15<sup>th</sup> the 28 enthusiasts who braved the snow moved 194 blue-spotted salamanders, 11 spotted salamanders, 10 four-toed salamanders, an eastern newt and a wood frog. By 10 PM salamanders were moving veerry slowly due

to the cold.

In past years red-backed salamanders have been abundant, sometimes the most abundant species we've encountered. This year we had none. Similarly, in past years we've always had a good number of spring peepers and wood frogs. This year we've had one wood frog and it was already dead. For now these mysteries are unresolved. There may well be further movement this year. 🐾

### Help the Monkton Amphibian Underpass Project!

Unlike the Morgan Rd. amphibian crossing site, there is major amphibian mortality at a road crossing in Monkton. Fifty percent of salamanders and frogs that attempt to cross the Monkton-Vergennes Road to their breeding sites don't make it all the way. The Lewis Creek Association and the Monkton Conservation Commission have been fundraising for months to cover the construction cost of two amphibian underpasses. They have gotten the major grants they sought; now they are asking all of us to help finish up the campaign. After persistent effort they have raised \$90,000 and still are \$10,000 short. One last push will get this project over the finish line so construction work can begin this summer. They need your help! Please send contributions – of any amount - to Marty Illick, Lewis Creek Association, 442 Lewis Creek Road, Charlotte VT 05445. Contributions are tax-deductible.

# Otter Creek Audubon Society

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**Great Blue Heron looking for signs  
of spring.** Photo by Peter Grant

## Odd Weather

**Editorial by  
Warren King**



# VIEWPOINT

Increasingly, climate scientists are realizing they must play a major role in convincing a skeptical or indifferent public of the importance of their research in order to balance the hundreds of millions of multinational corporate dollars that have sown doubt about climate science's conclusions. The scientific community has begun to respond lately with vigor.

☛ The United Nations International Panel on Climate Change (IPCC), recipient of a Nobel Prize, released parts 2 and 3 of its *Fifth Assessment Report*. More than 1000 climate scientists, economists and others contributed to this 2,500-page report. Its conclusions are consensus-driven, and therefore quite conservative. Part 1, covering science, stated that humans are the main cause of climate change with 95 percent certainty (extremely likely). Part 2, covering impacts, documented the profound impacts of climate change around the globe. Larger governmental sums still subsidize fossil fuels than support the shift to cleaner energy. Part 3, mitigation, pointed out that delay in implementing major reductions in carbon release would jeopardize the opportunity to keep CO<sup>2</sup> below 350 parts per million (it just broke 400 ppm), the target that can help us avoid calamitous and unpredictable climate changes. Waiting until 2030 before limiting fossil fuel use could render the problem insoluble. IPCC economists indicated that tackling the problem now would reduce global economic growth by several hundredths of a percent, but waiting until 2050 would make the planet five percent poorer due to the annually increasing expenses of climate change mitigation. Two-thirds of proven fossil fuel reserves must remain in the ground if we are to avoid disastrous consequences. Apparent carbon reduction in the U.S. and other wealthy countries is largely due to outsourcing carbon emissions to China and India.



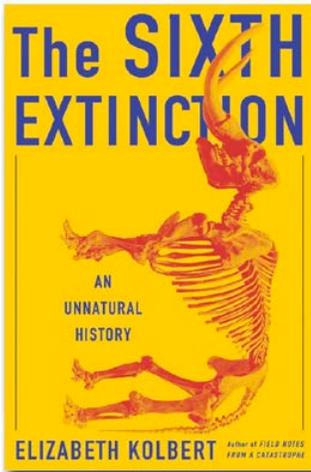
**Hermit Thrush baffled by the late spring**

photo by Patricia Wakefield

☛ The 27-page American Association for the Advancement of Science (AAAS) booklet called *What We Know: the Reality, Risks and Responses to Climate Change* notes that 97 percent of climate scientists agree climate change is happening, and that it is human-caused. Our climate system is being pushed toward abrupt, unpredictable, potentially irreversible, highly damaging changes. The sooner we act, the lower the risk and cost.

☛ The United Kingdom Royal Society collaborated with the U.S. National Academy of Science on *Climate Change: Evidence and Causes*. It provides in 21 pages authoritative answers to 20 essential climate change questions as well as an eight-page section on climate basics.

That three highly respected science organizations have released publications targeting the public in three months points out that science may have done its work in finding out about climate change, but scientists are just realizing they need to sell the public on their results. The IPCC *Fifth Assessment Report* aims primarily at the scientific, governmental, and academic communities, but is accessible to the general public with effort. It only considers peer-reviewed publications, so the latest findings get ignored until the next assessment report in six years. It is the driest and least reader-friendly of the three, has the most challenging figures and charts, but is the most comprehensive, and it assigns confidence limits to the certainty of events taking place. The AAAS publication is all text, but is quite readable. The Royal Society-National Academy publication has striking illustrations and video interviews with noted climate scientists. There is no longer an excuse for not being informed about climate science.☛



**Book Review:**  
**The Sixth Extinction**  
**An Unnatural History**  
**by Elizabeth Kolbert**  
**Henry Holt and Co.,**  
**New York, 2014. 336 pgs.**  
**Review by Warren King**

French biologist Georges Cuvier was the first to recognize that species become extinct. In 1795 he pronounced a massive molar from along the Ohio River as coming from an elephant, although not from any elephant currently known. Thus, Cuvier began his list of “lost species” with mastodon. He added dozens of species to this list in his lifetime. Today we recognize that millions of species have become extinct. The life expectancy of a species is about a million years on average. E.O. Wilson estimates that the rate of extinction today is “on the order of 10,000 times greater than the naturally occurring background rate”. Elizabeth Kolbert book provides us with a fascinating context within which to compare extinctions of the far past with those of the recent past and of the near future.

Over geologic history five big extinctions and a number of lesser ones have taken place. The best known is the extinction that marked the end of the Cretaceous Period 66 million years ago. A six-mile wide asteroid hit the earth at 45,000 miles per hour and formed a 100-mile wide crater just off the tip of the Yucatan Peninsula. The resulting cloud of sulfate-rich vapor and debris circled the earth for years and depressed global temperature. The oceans acidified, causing yet more losses. All animals larger than cats died, including the dinosaurs, which were at their evolutionary peak. Mammals got their big break on the evolutionary stage thanks to that asteroid. Other big extinctions had other causes. The end-Ordovician extinction

was triggered by an atmospheric loss of CO<sup>2</sup> that cooled the climate and caused major glaciation. The end-Permian extinction was caused by climate warming from sudden release into the atmosphere of enormous amounts of carbon. Ocean temperatures rose as much as 18° F and the oceans acidified. Ninety percent of species died out.

The name proposed for the geologic period in which human actions have become the predominant geologic and evolutionary force is the Anthropocene. Increasing CO<sup>2</sup> is heating the atmosphere and acidifying the oceans. Humans originated in Africa, where their ancestry has been traced back almost two million years. Humans arrived in Europe about 40,000 years ago, shortly before the extinction of woolly rhinos, cave bears, aurochs, and giant elk; in Australia they arrived shortly before extinction of dwarf rhinos, marsupial lions and giant short-faced kangaroos; in North America just before extinction of mastodons, mammoths, Camelops, grizzly-sized beavers, sabre-toothed cats, and glyptodonts the size of subcompacts; in Madagascar just before extinction of pygmy hippos, elephant birds and giant lemurs; and in New Zealand just before the extinction of moas and Haast’s Eagle. When humans first migrated to Europe and western Asia they found Neanderthals and Devorians present. When they arrived in New Guinea they found a hobbit-like relative already present. Shortly after humans’ arrival, these more “primitive” human relatives were extinct.

Kolbert’s premise is that the human condition is to engender change wherever we wander, and that we cause extinction as we go. She lists human characteristics as: restlessness, creativity, cooperative problem solving, completing complicated tasks, sharing information with others, including other generations, and transforming the ecological landscape. She concludes that, “We, too, will eventually be undone by our transformation of the ecological landscape. Having freed ourselves from the constraints of evolution, humans nevertheless remain dependent on the earth’s biological and geochemical systems.” This fascinating book provides a solid background with which to interpret what many perceive as the most important of today’s global problems. 🐾

## Chickadee Hybridization and Movement

Black-capped Chickadees hybridize with Carolina Chickadees along a narrow sinuous line that crosses mid-New Jersey, southeastern Pennsylvania, Maryland, West Virginia, mid-Ohio and Indiana. North of this zone it’s all Black-caps; south of it only Carolinas. This narrow zone has average winter low temperatures between 14° and 20°F. Studies in 2000-2002 and 2010-2012 by biologists at Cornell and Villanova showed that in a decade the hybridization zone had moved northward seven miles. Carolina Chickadees had advanced north

seven miles; Black-caps had retreated north an equal distance. Barring a better explanation, the biologists are attributing the chickadees’ northward movement to climate change.

At their current rate of movement Carolina Chickadees should arrive in southern Addison County in 310 years, the blink of an eye in geological time, but impractical for today’s birdwatchers. You’ll have to go south at least to central New Jersey or southern Ohio to be sure of adding Carolina Chickadee to your life list. 🐾



Carolina Chickadee. photo by Dan Pancamo

## Spring

by Thomas Nashe (1567–1601)

*Spring, the sweet Spring, is the year's pleasant king;  
Then blooms each thing, then maids dance in a ring,  
Cold doth not sting, the pretty birds do sing,  
Cuckoo, jug-jug, pu-we, to-witta-woo!*

*The palm and may make country houses gay,  
Lambs frisk and play, the shepherds pipe all day,  
And we hear aye birds tune this merry lay,  
Cuckoo, jug-jug, pu-we, to-witta-woo!*

*The fields breathe sweet, the daisies kiss our feet,  
Young lovers meet, old wives a-sunning sit,  
In every street these tunes our ears do greet,  
Cuckoo, jug-jug, pu-we, to-witta-woo!  
Spring! the sweet Spring!*

## Appalachian Salamanders Shrinking in Size

The central Appalachians are home to the greatest diversity of salamanders in the world. But climate change is making it hotter and drier there and the metabolic rate of cold-blooded animals there is accelerating. Central Appalachian salamanders are burning eight percent more energy since the 1980s and they are getting smaller as a result.

Two studies published in *Global Change Biology* covering a 50-year time span showed six salamander species had shrunk by eight percent while one species was marginally larger. This effect was most notable at the lowest elevations and at more southerly sites, where it was warmest and driest. The studies also showed population declines. The authors documented an average decrease in size of one percent between each generation and the next after 1980, a remarkably large change in a short period. Reduction in size may be the first step in elimination of a salamander species from portions of its range. One author of the most recent study noted "We don't know if this is a genetic change or a sign that the animals are flexible enough to adjust to new conditions. If these animals are adjusting, it gives us hope that some species are going to be able to keep up with climate change." 🐾

## Announcing the 2014 Environmental Education Grant Recipients

Otter Creek Audubon realizes the critical importance of exposing children to the wonders of nature. Meaningful outdoor experiences build a love and respect for the natural world, fostering a culture of conservation. To that end, OCAS offers Environmental Education Grants to teachers in Addison County. Teachers are encouraged to design nature-based experiences for their students, such as field trips or outside presentations. In making funding decisions, proposals that actually get students *into* the natural world are favored.

This year the grants committee was pleased with the enthusiastic response from educators. The proposals received were creative and well thought out. Although the \$7245 requested far exceeded our budget, we are pleased to announce that \$2500 was granted to eight excellent projects. The funds will support teacher's programs in 8 Addison County schools, reaching about 290 children.

This spring Addison County citizens can watch out for motivated and inspired students around the county, made possible at least in part by OCAS funds. Perhaps they'll see Steve Flint and his 3<sup>rd</sup> and 4<sup>th</sup> graders from Mary Hogan Elementary release brook trout that they have raised into the Middlebury River. Or they might see Shoreham 6<sup>th</sup> graders and their teacher Nancy Wollum, paddling offshore from the Lake Champlain Maritime Museum, analyzing water and identifying the animals that depend on it. Further afield, Rodney Olsen and his Diversified Occupations students will work side-by-side with ornithologists, expanding the students' bird banding skills and studying migrating birds at the Braddock Bay Bird Observatory. This summer look for Bridport students enjoying hands-on birding activities at their school's summer day camp.

More outdoor learning is planned for the fall. Barbara Young will again hold a 2-day Environmental Science Days for Orwell's 5<sup>th</sup> through 8<sup>th</sup> graders, held at Boy Scout Camp Sunrise. Seventh and eighth graders from the Aurora Middle School anticipate designing and building a nature trail and outdoor classroom. The Lake Champlain Maritime Museum will again be the site for on-water learning as Ferrisburgh 3<sup>rd</sup> graders interact with lake wildlife. Experimenting with plant life cycles will be the focus of Christina Wadsworth's 5<sup>th</sup> and 6<sup>th</sup> graders from Weybridge.

If you'd like to contribute to OCAS' Environmental Education Grants, a good opportunity is the OCAS Birdathon, described in the special insert in this issue. If you know a teacher who would like to submit a grant proposal, Carol Ramsayer ([cgramsmac@mac.com](mailto:cgramsmac@mac.com)) will be happy to provide all needed information. 🐾

## Let's Go Birding—Again

By Carol Ramsayer

On June 21<sup>st</sup> Otter Creek Audubon and Middlebury Area Land Trust will once again offer a beginning bird walk in Middlebury through Wright Park's diverse habitats. Small groups led by experienced naturalists will hike along the Quest Trail, exploring a managed shrubland, a variety of forest types, wetlands, beaver habitats and the banks of Otter Creek. We will listen for birdsong, watch for nesting behaviors and enjoy whatever natural wonders come our way. There will even be a surprise snack stop!

Please join us for this annual adventure! Bring your binoculars, or borrow a pair from OCAS. The walk is family-friendly and suitable for all ages, but not appropriate for baby strollers. We will meet at 9:00 AM at the Wright Park parking lot north of Pulp Mill Covered Bridge on Seymour Street Extension. The walk ends by about 11:00 AM. We will go rain or shine. If you have questions call Carol Ramsayer at 989-7115. 🐾

## MARSH, MEADOW AND GRASSLAND WILDLIFE WALKS

A monthly joint OCAS-MALT event. We invite community members to help survey birds and other wildlife at Otter View Park and Hurd Grassland. Meet at Otter View Park parking area, Weybridge Street and Pulp Mill Bridge Road, Middlebury. Shorter and longer routes possible. Beginning birders are welcome. Come for all or part of the walk. For information call 388-1007 or 388-6829.

**SATURDAY, MAY 10, 7 – 9 AM**

Leader: Ron Payne

**THURSDAY, JUNE 12, 7 – 9 AM**

Leader: Barb Brosnan

**SATURDAY, JULY 12, 7 – 9 AM**

Leader: Jim Phillips

**THURSDAY, AUGUST 14, 7 – 9 AM**

Leader: Craig Zondag

**SATURDAY, SEPTEMBER 13, 8 – 10 AM**

Leader: Ron Payne

## How Falcons Die

**A** surprising 122 of the 986 Peregrine Falcons banded in New England from 1990 to 2009 were recovered with their bands intact. Steve Faccio of the Vermont Center for Ecostudies banded a significant fraction of these Peregrines. Faccio coauthored a study published in the *Journal of Raptor Research* that looked at the causes of death of those banded Peregrines. Fourteen died from collisions with airplanes (airports are good foraging grounds for Peregrines), seven in collisions with trains, two were hit by cars, and one ran into a fence. Two were killed by gunshots, one was tangled in fishing tackle, and one died after eating a European Starling that had ingested fenthion, a pesticide banned in New York where the Peregrine was recovered. The majority of recovered Peregrines were first- and second-year birds. If they lived through the first and second years, their chances of survival to seven or eight improved considerably, as is true of most birds. 🐾

## OCAS Calendar of Events May – June 2014

**MONDAY, MAY 5  
THRU MONDAY, MAY 19**

**OCAS BIRDATHON.** Our main fundraiser of the year. OCAS teams identify as many species as they can under self-imposed rules in a 24-hour period. Supporters provide contributions per species or a lump-sum amount. See insert, this issue.

**SUNDAY, MAY 12  
7:30-10:30 AM**

**WARBLER WARM-UP.** Ron Payne and Warren King will lead a search for newly arrived spring migrants. Hone your birding identification skills before leaf-out. Co-sponsored with the Watershed Center. Meet at the Bristol Waterworks, Plank Road, east of North Street, Bristol. Call Warren at 388-4082 if in doubt about the weather.

**SUNDAY, JUNE 15**

**CANOE TRIP IN MISSISQUOI  
NATIONAL WILDLIFE REFUGE,**

Swanton VT. Pre-registration required by Sunday, June 8<sup>th</sup>. A 7-mile round trip paddle to Vermont's largest Great Blue Heron rookery at the Missisquoi River mouth. Trip limited to 8 canoes or kayaks. Bring canoe or kayak, paddles, life vests, water, bag lunch and beverage, raingear, sunscreen, insect repellent, binoculars. Trip will be all day. Drive from Middlebury to Refuge is 1.5 hours. To pre-register contact Warren or Barry King at 388-4082, kinglet@together.net.

**SATURDAY, JUNE 21  
9-11 AM**

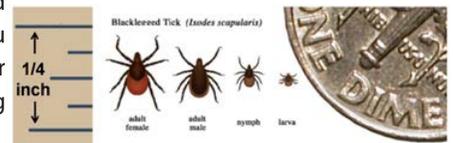
**BEGINNERS BIRD WALK.** Joint walk with MALT at Wright Park. Join leaders Ron Payne, Craig Zondag, Josh Phillips. Meet at Wright Park, northwest from the Middlebury Green on Seymour Street, then just before Pulp Mill covered bridge turn right on Seymour Street Extension to parking area at end. Call Carol Ramsayer at 989-7115 for further information. See article, this issue.

## Birders Beware: Ticks Ahead

**A**nytime it's above 40° ticks are active. They're looking for blood meals to morph from larva to nymph in spring, from nymph to adult in summer, and before the adult can lay eggs in fall. Three-quarters of Vermont's ticks are black-legged ticks, formerly called deer ticks, the ticks that transmit Lyme disease. In 2013 27% of nymphs and 62% of adult black-legged ticks carried Lyme spirochaetes. Tick density varies considerably site to site and county to county. The best strategy is to assume that you'll encounter ticks in the woods or fields, and that they are likely to carry Lyme.

To protect from Lyme infection, keep from being bitten. Tuck pants into socks, and wear long sleeves. Wear clothes treated with permethrin. Use repellent with up to 30% DEET, the active ingredient, on your socks, pants, shirt and hat. Light colored clothes make

ticks easier to spot. Remove ticks before they embed. If embedded, ticks are best removed with a gradual pull from sharp-nosed tweezers, grasping the head as close to the skin as possible. Then wash the site with soap and water. Do not probe the wound trying to remove head parts. It may become infected. The embedded tick takes 24 to 36 hours to mobilize its spirochaetes and pass them on. Lyme usually has a red skin rash, sometimes a red bulls-eye, and, after a few days, flu-like symptoms. See your doctor. And check yourself or get checked all over every day you are in the woods or fields. If you go birding you need a tick check.





Missisquoi Valley

Photo by Elliot Rosewater

## Missisquoi Delta Designated a Ramsar Wetland

Vermont's Missisquoi River Delta and Bay was declared a Ramsar Wetland of International Importance on 20 November 2013. This designation was bestowed by the Ramsar Convention on Wetlands, to which 168 countries, including the U.S., are contracting parties. The Missisquoi Delta is the 2,178<sup>th</sup> designated wetland worldwide since the convention was adopted in 1971. It is the 36<sup>th</sup> Ramsar Wetland in the U.S. The surface area of all designated sites is nearly the combined size of Alaska and Texas.

The mission of the Ramsar Convention is "the conservation and wise use of all wetlands through local and national actions and international cooperation as a contribution toward achieving sustainable development throughout the world."

Among the attributes for which the Missisquoi Delta was designated:

- ☛ Provides habitat for 20,000 waterfowl during migration
- ☛ Largest Great Blue Heron rookery in Vermont
- ☛ Provides habitat for endangered Black Terns, freshwater mussels, turtles and fish
- ☛ Largest wetland complex in the Champlain Basin
- ☛ Largest and highest quality silver maple floodplain forest in Vermont
- ☛ Includes Maquam Bog, Vermont's largest bog

OCAS is planning a canoe trip to Missisquoi National Wildlife Refuge in June. Pre-registration required. See calendar listing in this issue. ☛

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