



Otter Tracks

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Steve Parren Awarded Silver Feather

Steve Parren and snapping turtle.
Photo by Ron Payne

Steve Parren, Wildlife Diversity Program Director for the Vermont Fish and Wildlife Department and longtime leader in protecting Vermont's wildlife at risk, received Otter Creek Audubon's Silver Feather and got a standing ovation from the audience at OCAS' annual dinner on Thursday, November 8th at the American Legion. Adding their voices to the crowd was an impressive group of eight Vermont conservationists and biologists including Fish and Wildlife Commissioner Pat Berry. Steve has been at the forefront of state efforts to protect Vermont's threatened and endangered species. A measure of his effectiveness is the removal of Common Loon, Peregrine Falcon, and Osprey from Vermont's List of Threatened and Endangered Species in 2005.

The OCAS board has awarded the Silver Feather annually to Addison County residents since 1994 "in honor of notable devotion, dedication, and untiring effort on behalf of the preservation and appreciation of the birds, other wildlife, and natural communities of Addison County."

Barb Otsuka, president of OCAS since 2009, is stepping down but will remain active on the

OCAS board. Ron Payne of Middlebury will serve a two-year term as president. Marcia Parker, Warren King and Gary Starr will continue in their roles as vice-president, secretary and treasurer respectively for two more years. Barb noted with regret that Mike Winslow, long time board member and former president, will step down from the board.

Jim Shallow, Director of Conservation and Policy for Audubon Vermont, informed the gathering that Doug Parker, the popular executive director of Audubon Vermont for the last eight years, has resigned and will take a new position in California.

Steve Parren presented an informative and entertaining overview of the biology and conservation issues affecting the threatened spiny softshell turtle population of Lake Champlain. The softshell lays its eggs on shale pebble beaches and overwinters in river mouths and areas of current in the northern half of the lake, where it is subject to predation by raccoons, skunks and foxes and by disturbance and development of beaches by humans. Parren has worked to conserve these turtles and their breeding and basking sites for more than a decade. 🐾



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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Vol 38, No. 4

www.ottercreekaudubon.org

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To help you with membership renewal we have highlighted the due date on your label.

It's handy to renew over the phone at the National Audubon membership center:

800/274-4201

Please check the "Join Us" tab on our webpage:

ottercreekaudubon.org

We've prepared a membership FAQ, listing questions we often hear from OCAS members. If your label doesn't have an expiration date, it means we are sending it as a gift. Please check the FAQ.

McKibben's Three Numbers

Review and
Editorial by
Warren King



VIEWPOINT

Bill McKibben's *Global Warming's Terrifying New Math* came out on 19 July in *Rolling Stone* magazine. Bill called it "my most important statement since *The End of Nature* in 1989." *The End of Nature*, you'll recall, was the first popular book dealing with climate change.

McKibben's *Rolling Stone* article is relatively short and to the point. He notes that a 2°C increase in global temperature is widely accepted as the limit beyond which irreparable changes to our climate will take place. A growing number of climate scientists think 2° C may be too permissive. But Bill takes the 2° C number as the starting point of his argument.

The second number he offers is 565 gigatons. This is the amount of CO₂ the world can pump into the atmosphere and still stay below the 2° C cap. We have already raised the temperature 0.8° C, and an additional 0.8° C rise is assured from the CO₂ already in the atmosphere. The world is expected to continue its 3 percent annual increase in carbon emissions in the near future, in spite of alternative energy gains. We will exceed 565 gigatons, the remaining 0.4° C, in 16 years.

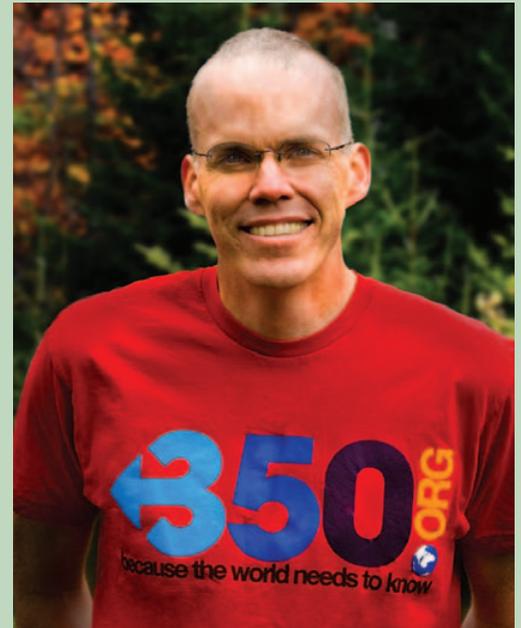
Now for the bad news. The third number Bill offers is 2795 gigatons. This is the CO₂ in the confirmed fossil fuel reserves already identified by the world's energy companies and energy-producing nations. "Identified" means not only discovered and quantified, but also "is figured into share prices, companies are borrowing money against it, nations are basing their budgets on the presumed returns from their patrimony." That's five times what we can release and remain below the 2° C cap. That's why fossil fuel companies are paying to generate doubt about climate change and resisting regulation of carbon emissions.

Energy companies simply cannot afford to acknowledge the damage that the use of their products will bring. Those fossil fuels, worth \$27 trillion on today's market, will bring with them a global temperature rise of 6° C (11° F). But if the energy companies are forced to keep four-fifths of their fuel underground, they would have to write off \$20 trillion of acknowledged assets.

To keep four-fifths of the fossil fuel undeveloped we need to make it way less profitable. Carbon is a pollutant, perhaps the only one not presently controlled by our government. We need to fix a price on carbon emissions and return the proceeds to consumers, so that fossil fuel companies no longer have the unfair advantage of polluting but not paying.

McKibben sees a campaign to promote divestiture of investments in fossil fuel companies as a way of generating sufficient economic pressure to keep the oil companies from bringing most of their products to market. Divestiture worked to bring down the South African apartheid government. At a larger scale it can work to keep the fossil fuel industry from wrecking our planet. Bill McKibben's group, 350.org, is working to encourage divestiture on a significant scale, but will need all the help it can get.

The fossil fuel companies in this country have the upper hand at present, as evidenced by the frequency with which "climate change" entered the recent series of presidential debates. But President Obama did take note of it in his acceptance speech. We'll hope he takes action as well as taking note. 🐾



Emerald Ash Borer News

Of the several insect pests threatening to overrun Vermont, emerald ash borer is among the most serious. We are all familiar with the purple prism traps hanging over roads throughout the state to monitor the arrival of the ash borer. They work because they are treated with a chemical pheromone that attracts ash borers. Most of the 1,295 purple prism traps have now been monitored, and the doctor has given us a clean bill of health, for now. But there is an emerald ash borer site in Dalton in northwestern Massachusetts, just south of Vermont, others in New York due west of Dalton, and yet others in southern Quebec twenty miles north of Vermont. Massachusetts is defining a quarantine area that will restrict movement of wood in and from the affected area. This applies specifically to firewood, ash sawlogs and other ash products. For details contact the Vermont Department of Forest, Parks and Recreation or APHIS, U.S. Department of Agriculture. 🐾



Purple Martin Census Blitz

A one-day census blitz of nesting colonies in Grand Isle, Chittenden and Addison counties this summer demonstrated that the Vermont Purple Martin population had not dropped below the 300 breeding pair threshold and did not warrant listing as threatened. The blitz yielded 421 nesting pairs in 30 colony sites, mostly (65 percent) in the Champlain islands and Swanton, but also along the Champlain shore between Shelburne and Addison (35 percent). This census technique is not suitable for most bird species, but the success of the Purple Martin census has raised hope for a similar statewide census of Bank Swallows in the future. 🐾



Purple Martins gather on an efficient perch.
Photo copyright James R. Hill, III/PMCA

Orwell Village School Hosts Environmental Science Days

By Carol Ramsayer

For two days in September, Camp Sunrise was alive with outdoor learning. Some Orwell Village School students rowed on the lake to evaluate water quality. Others took soil samples or studied trees and ground cover. Still others experienced nature through art and photography, or played physical games. Another group took to the woods and made discoveries along a nature trail. All these 5th through 8th graders were involved in their school's Environmental Science Days, designed by their teachers to promote learning in nature and to foster curiosity about the environment. Over the two-day period, the 55 students traveled in small groups through ten outdoor stations, investigating and exploring. Everyone had a book-

let where thoughts and memories were recorded after each activity.

Otter Creek Audubon was happy to contribute \$500 to this program through an OCAS-funded environmental education grant (see article on OCAS funding of outdoor education). The Orwell teachers submitted their grant proposal in January 2012 and were among the ones selected. Funding decisions favored programs that actually got students outside and improved their understanding of the natural world.

We congratulate the teachers who organized these valuable outdoor learning experiences for their students. It was wonderful to see the students so engaged as they explored these opportunities. 🐾

Status of Vermont's Birds at Risk

It was a fairly productive year for Vermont's presently or formerly endangered and threatened birds.

Common Loon: Of 100 pairs on territory, 70 attempted to nest and 50 were successful, raising 66 chicks through August. Of several new nesting pairs two were on Franklin County lakes, a first for that county, although neither pair was successful. Fishing line entanglement caused two mortalities and ingestion of lead fishing gear probably caused one more. Since 1999 the number of territorial, nesting, and successful loons in Vermont has doubled. Loons were removed from the state's list of endangered species in 2005, having met the goals of the species' recovery plan for five years.

Peregrine Falcon: Forty pairs were monitored in 2012. Several pairs were not monitored due to funding restrictions. All but one of the forty pairs nested; 28 (72 percent) were successful, fledging 60 young. One new site was discovered. Reproductive rates were close to average. The species continues slow growth following delisting in 2005. Of the five Addison County sites, Bristol Cliffs and Mt. Horrid raised at least one young each. The other three failed.

Osprey: The gradual increase in this delisted species continues. Well over 100 nests were active. Several new nests were discovered. Funding constraints limited the extent of nest monitoring.

Bald Eagle: A record 13 nests yielded 24 fledglings. Nine of the nests were along the Connecticut River. One pair nested on Otter Creek and produced two young. The recovery plan for this species has now finally been accepted by the Secretary of the VT Agency of Natural Resources and awaits final approval by a legislative committee. If reproduction continues successfully for three more years the species will qualify for downlisting to threatened.

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Sixth Annual Cabin Fever Lecture Series

Otter Creek Audubon is pleased to announce its 6th annual Cabin Fever Lecture Series for winter 2013. All events take place the second Thursday of January, February and March at Ilsley Library at 7 PM. They are free and open to the public.

On Thursday January 10th local ornithologist Warren King will recount his years of working with seabirds in a program entitled “From Christmas to Easter: Seabirds of the Pacific Islands”. Warren worked as an ornithologist for the Smithsonian Institution, which published his book *The ICBP Bird Red Data Book: The Endangered Birds of the World* in 1980. He was an environmental educator for the Keewaydin Environmental Education Center in Salisbury, Vermont, for 13 years. He received the 2002 Vermont State Award of the New England Wildflower Society, the 2005 Charles H. Callison Award from National Audubon for volunteer service, and received with his wife Barry the 2005 Eco-Spirit Award from Spirit in Nature.

On Thursday February 14th Mike Winslow will introduce attendees to ‘Owls of Vermont’. Seven species of owls are known to breed in Vermont and another four species are rare winter visitors. Learn how to tell them apart with both visual and auditory clues. Mike has surveyed owls for the Middlebury and Ferrisburg Christmas Bird Counts and for the Vermont Breeding Bird Atlas. He is the staff scientist for the Lake Champlain Committee and the author of *Lake Champlain: A Natural History*. He is the recipient of the Steven Young Environmental Award given by Audubon Vermont.

On Thursday March 14th birding guide Susan Roney Drennan will discuss “Albatrosses and their Interactions with Long-line Fisheries.” Susan will introduce the beauty and grace of albatrosses that inhabit the Southern Ocean, the practice of long-line fishing, how it affects albatrosses, and some possible solutions to minimize these effects. Susan has enjoyed a lively career. Before retiring to Middlebury, she worked for National Audubon for many years as Editor-in-Chief of its ornithological publication, *American Birds*, and as Vice President for Ornithology. She is recipient of the Bushnell Distinguished Birder Award and the prestigious Arthur A. Allen Medal, awarded to individuals who have dramatically advanced ornithological knowledge through their writings, publications, teaching, and inspiration. She is the author of numerous papers, scientific/popular articles and books, including *Where to Find Birds in New York State: The Top 500 Sites*, *The Birders Field Notebook*, and *The North American Birder’s Library Lifestyl*.

Get out of the house, join the community, and learn something new.👣

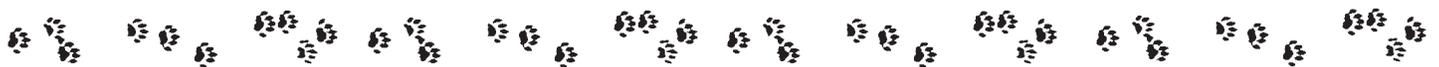


Audubon Offers Funding For Outdoor Education

Otter Creek Audubon is pleased to announce the availability of a limited number of grants to help finance environmental education projects for Addison County schools. Grant funds may be used to help defer the cost of transportation, equipment, outside presentations, or other expenses that will improve students’ understanding of the natural world. Grants of a maximum of \$1,000 will be awarded for use in 2013, and Otter Creek Audubon hopes to assist schools in multiple supervisory unions. Proposals that get students into the natural world will be favored.

In 2012 OCAS funded Weybridge, Bridport, and Shoreham Elementary to participate in the Paddling Ecology Program at the Lake Champlain Maritime Museum. Ferrisburgh Elementary received funding for an outing to the Willowell Foundation property. Orwell Elementary hosted an Environment Day.

For application materials contact mikekira@myfairpoint.net or call 877-6586. Applications are due by January 9, 2013. Grant recipients will likely be contacted by February 18, 2013. Successful applicants will also be asked to provide a one- to two-page summary of their field trip after it takes place.👣



OCAS Calendar of Events November 2012 – March 2013

CHRISTMAS BIRD COUNTS IN ADDISON COUNTY
All Welcome. Contact Organizer for Details
No Fee for Participation

SATURDAY, DECEMBER 15 FERRISBURGH CHRISTMAS BIRD COUNT. Call Mike Winslow at 877-6586 or write mkekira@myfairpoint.net for details.

SATURDAY, DECEMBER 15 MT. ABE CHRISTMAS BIRD COUNT. Call Randy or Cathy Durand at 453-4370 or write Durand@gmavt.net for details.

SUNDAY, DECEMBER 16, MIDDLEBURY CHRISTMAS BIRD COUNT. Call Jim or Kris Andrews at 352-4734 or write jandrews@middlebury.edu for details. Full day participants meet at Rosie's Restaurant on Route 7 at 6 AM.

SATURDAY, DECEMBER 29 HINESBURG CHRISTMAS BIRD COUNT. Call Paul Wiczorek at 802-434-4216 or write mgcpw@gmavt.net for details.

FRIDAY, FEBRUARY 15 TO MONDAY, FEB. 18 GREAT BACKYARD BIRD COUNT: See upcoming article in February 2013 *Otter Tracks*.

MARSH, MEADOW AND GRASSLAND WILDLIFE WALKS

A monthly joint OCAS-MALT event. We invite community members to help us 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.

THURSDAY, DECEMBER 13, 8 – 10 AM
Leader: Barb Otsuka

SATURDAY, JANUARY 12, 8 – 10 AM
Leader: Craig Zondag

THURSDAY, FEBRUARY 14, 8 – 10 AM
Leader: Ron Payne

SATURDAY, MARCH 9, 8 – 10 AM
Leader: Warren King

SIXTH ANNUAL CABIN FEVER LECTURE SERIES

Downstairs at Ilsley Library, 75 Main Street, Middlebury
See article on pg. 4 for details

THURSDAY, JANUARY 10, 7 PM

Warren King: From Christmas to Easter: Seabirds of the Pacific Islands

THURSDAY, FEBRUARY 14, 7 PM

Michael Winslow: Owls of Vermont

THURSDAY, MARCH 14, 7 PM

Susan Roney Drennan: Albatrosses and their Interaction with Longline Fisheries

Birds at Risk

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Common Tern: Common Terns nested on Popasquash and Rock islands, both Audubon-owned. 215 pairs attempted breeding. All 66 pairs on Rock Island failed, but on Popasquash an estimated 105 chicks fledged. Owl and night heron predation likely reduced fledging success. Control of gulls nesting in tern nesting areas was required. Gull chicks also felt the impact of predation. Monitoring was limited to one visit per week. Tern reproductive rates were just below the downlisting level.

Black Tern: Nesting returned to normal at Missisquoi National Wildlife Refuge this year after last year's poor reproduction. In all, 137 pairs nested.

Spruce Grouse: Monitoring the species in the Northeast Kingdom's Yellow Bogs along new survey routes relocated to more suitable, younger spruce-fir habitat yielded 22 birds in the Nulhegan Basin, more than twice the count from previous years. Six males were recorded in Victory Bog, survivors of a reintroduction in 2008. An estimated 300 birds occur in the Northeast Kingdom.

Grasshopper Sparrow: This threatened species still occurs in several small grassland patches including ten pairs at Camp Johnson and three pairs at the Ethan Allen Firing Range in Chittenden County and eight pairs at the Franklin County Airport. Reports of several other individuals were made as well. 🐦

Chickadee Lottery

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the alpha mate. The status of the rest of the flock does not change. The floater, even though relatively young, has had the advantage of observing three or four territories and three or four pecking orders. He or she has taken the chance of not having a breeding territory, but if the alpha bird of the flock dies, the floater hits the jackpot.

The information in this article comes from The Black-capped Chickadee: Behavioral Ecology and Natural History by Susan M. Smith, 1991, Cornell University Press: Ithaca and London and The Tiniest Established Floater Crap Game in the Northeast by Susan M. Smith, Natural History 3/85, 43-46. 🐦

Chickadee Lottery

Like most songbirds, the male Black-capped Chickadee defends a territory of 6-7 acres through the breeding season and shares incubation and brooding duties with his mate. What happens after that is less predictable and more complicated.

Most fledglings disperse some miles away but one or two are likely to remain close to their parents, where they form a winter flock with one or more other fledglings from elsewhere and by one or more experienced pairs. The winter territory includes the breeding territory of the original pair but it expands to about 20 acres. A typical chickadee winter flock averages eight birds, but can be as big as fourteen birds.

Pair formation probably takes place during or before winter flock formation. As the flock comes together, a rigid flock social hierarchy forms based on sex (males over females), age (older over younger), and seniority (earlier joiners over later joiners). A second hierarchy based on pairs is determined by the male's individual status. A pair's status determines whether they will get one of the three breeding territories within the larger winter territory, find an inferior breeding territory, or sit out the breeding season altogether. Only the three most dominant pairs are likely to get breeding territories.

The alpha male and female dominate flock social interaction and win virtually all aggressive encounters. The alpha male feeds first at a food source, his mate feeds next, then the beta male, etc. One first-year pair is subordinate to all other pairs and gives

way in all encounters. Not infrequently the alpha male will move on before the most subordinate pair has fed, although subordinate birds often find and eat food before a more dominant bird supplants them.

What advantages are there to the lowest ranking members participating in the flock? First, flocking birds are more efficient in finding food than individuals. Second, flocks provide more eyes to spot predators. Subordinate birds have to "pay their dues" if they want to become dominant some day. But there are downsides to being the alpha male. When a flock encounters another flock along a boundary between territories, the alpha males actually engage in skirmishing, which carries with it a risk of physical injury.

Not all chickadees join flocks. A few young birds float between several flocks, never pairing and never being dominant to any regular flock member, except possibly to another floater whenever the two are temporarily together in a flock.

What happens when the alpha male or female dies? The beta bird does not break its pair bond to immediately establish a new one with the remaining alpha bird. Instead, the ranking floater immediately becomes the alpha, forming a new pair bond with

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