



# Otter Tracks

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## 16<sup>th</sup> Annual Dead Creek Wildlife Day



On Saturday, October 7, head out to Addison for Dead Creek Wildlife Day for a free celebration of the Champlain Valley's wildlife! Family-friendly activities as well as talks, presentations and demonstrations take place throughout the day at Dead Creek Wildlife Management Area. A full list of events will be posted on the VT Fish and Wildlife website at least a week ahead.

Here are some of the fun, informative events:

- Bird-banding from 7 to noon at the Dead Creek boat launch area, one mile west of the headquarters. Come any time to watch Dead Creek Bird Observatory banders extricate birds from mist nets, gather data and then band and release them unharmed
- Beginners' bird walk at 10 at Dead Creek boat launch
- Presentation on American marten, newly returned to Vermont, at 10
- Goose decoys, sets and calls at 10:30
- Take a walk to learn about invasive species at 11
- Vermont moose research at 11
- New: Enjoy the happy tunes of the Swing Peepers: 12:15 to 1
- Learn about wildlife photography at 1
- Engaging update on Vermont's bats by bat biologist Alyssa Bennett from noon to 1:30. Keep an eye out for Bat Woman!

- Jim Andrews' presentation on amphibians at 2
- Youth waterfowl calling contest at 2
- Live Animals all day presented by the Southern Vermont Natural History Museum
- Retriever fans will enjoy watching master retriever handler and trainer Alec Sparks run his dog Zoom through its paces at 10:30, while Game Warden Rob Sterling and his rescue dog Crockett will show their own brand of retrieving at the headquarters area at 2
- Owl pellet dissection with Otter Creek Audubon's Carol Ramsayer, 2 to 4
- Nature walks at 10:30 and 2:30
- Soap carving – 11 to noon
- Decoy carving, face painting, bluebird nest box construction, pellet gun shooting and archery take place all day.

Entrance and parking are free. A free bus runs between the headquarters area and various other event sites. Nutritious food is available all day at a reasonable price. Come to Dead Creek Wildlife Management Area headquarters on Route 17 one mile west of the junction with Route 22A in Addison on October 1<sup>st</sup>. See why Dead Creek Wildlife Day continues to be among Addison County's and Vermont's most popular events.



### 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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2016-2017

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# The Fifth Draft Climate Change Report

Editorial by  
Warren King



## VIEWPOINT



Columbia Glacier, Alaska, in 2006 (left) and 2012 . Photographs by James Balog (left), and extreme ice survey with Matthew Kennedy

**G**laciers are melting, snow cover disappearing, sea ice shrinking, and sea levels and water vapor levels are rising. With 95-100 percent certainty humans have caused most of the temperature increase since 1951. "There are no alternative explanations, and no natural cycles are found in the observational record that can explain the observed changes in climate."

This is among the conclusions of the fifth and possibly final draft of the U.S. Global Climate Research Program Climate Science Special Report. The report is a special science section of the National Climate Assessment, released every four years, as mandated by the U.S. Congress. The U.S. Academy of Sciences and the National Science Foundation have signed off on the draft. It still requires Trump administration approval. Scientists from 13 federal agencies and 17 university scientists prepared the 545-page report. It disagrees strongly with the position taken by President Trump and EPA chief Pruitt, both of whom are climate change doubters.

Surface, atmospheric and oceanic temperatures rose 0.9°C (1.6°C) between 1865 and 2015. Given the current upward trend of climate-forcing gases, we can expect 1.4°C or more over the next several decades. This warming will lead to more extreme and, in some cases, lethal heat waves. The oceans are acidifying faster than at any time since the Cretaceous-Tertiary extinction event 66 million years ago. Coral reefs, on which 25 percent of marine species depend, are particularly at risk. Arctic temperatures are rising at twice the rate of temperate or tropical temperatures. The ocean will rise at least one foot, possibly four feet and, under a high emissions scenario, as much as eight feet by the end of the century. We are likely to be approaching unanticipated tipping points resulting from greatly reduced ice cover or extreme weather events.

Closer to home, annual precipitation has increased in the Midwest and the Northeast. With high confidence, heavy precipitation events, including heavy snowfalls, have increased in intensity and frequency since 1901, the largest increases occurring in the Northeast. The trend in heavy precipitation events will likely continue, particularly in the Northeast in autumn. A 15 percent precipitation increase is projected. The report states, "Many lines of evidence demonstrate that human activities, especially emissions of greenhouse (heat-trapping) gases, are primarily responsible for recently observed climate change."

Climate science is now at the point of being able to attribute some extreme weather events to climate change. Examples of weather events to which human activity contributed with "relatively strong evidence" include the European heat wave of 2003 and the unprecedented Australian heat wave of 2013.

It remains to be seen whether the Trump administration will acknowledge the science that has led to this report, force major changes in the conclusions, or simply ignore the report. It is a comprehensive enough report that ignoring it hardly seems likely. President Trump has just disbanded a 15-person advisory panel of academics, corporate officials, and local officials whose task was to interpret the findings of the National Climate Assessment for those in and outside of federal government. We haven't heard the end of this yet. 🐾

## NEWS FLASH!

### Earlier Grant Deadline This Year!!

Each school year Otter Creek Audubon offers Environmental Education Grants to all educators in Addison County. This program encourages teachers to design proposals that provide nature-based experiences for their students. Proposals that get students out into the natural world are favored. Funds may be used to help defer the cost of transportation, equipment, admission fees or outside presentations.

In the past, the application for these grants was available in early December, with the deadline for submission in January. This year, in order to better meet the scheduling needs of teachers, we have decided

to move up this application process to the fall. Digital applications for the 2017–2018 school year will be available on the OCAS website in late September. At that time, school principals will also be notified and asked to distribute applications to their teachers. Deadline for submission will be in late October, with notification sent out to



At Ferrisburgh Central, live raptors from Outreach for Earth Stewardship helped kick off an all-school study of birds. Later, a guided walk by Craig Zondag added to the students' appreciation of the various habitats. Photo by Carol Ramsayer

grant winners in mid-December.

All interested elementary, middle and high school teachers are encouraged to develop proposals and apply for these OCAS Grants. Please spread the word! 🐾

## Naturally Literate

### A Checklist Booklet Created by Amy Clapp

by Carol Ramsayer

The third grade Mary Hogan students sat along the edge of a bridge spanning the Middlebury River. Along with students from Shoreham and Salisbury, they were on lunch break during their trout release day. Interest in lunch was minimal though. Instead, each was poring over her very own copy of a newly published checklist booklet entitled *Naturally Literate*.

It was a sight that warmed the heart of Amy Clapp, Salisbury Community School's science education specialist. The distribution of these booklets was the culmination of two years of research and refinement — and the result of a dream conceived in the summer of 2015. Amy won a grant from the Fund for Teachers to join a two-week birding trip through Costa Rica, where many Vermont nesting birds spend their winter months. As any novice birder remembers, an immersive birding experience like that Costa Rica trip can be overwhelming. Amy found that evening checklists helped her learn and remember new species. Checking off daily sightings gave her concrete proof of her learning success — and was fun! Who doesn't love keeping track of one's accomplishments!

By the time Amy returned to Vermont she had hatched an idea. She imagined a booklet, not just for local birds, but for other Addison County plants and animals, too. It would provide checklists for species that students should be able to recognize by the time they graduate from sixth grade. With color pictures for each species and small spaces to check off for each year it was seen, it would be a record of sightings and a motivating tool for young naturalists. With enthusiastic support from OCAS board members, Amy moved forward with her plan. She enlisted the advice of local experts in birds, reptiles and amphibians, trees, insects, wildflowers, fish and mammals. Each submitted a list of the 10 to 20 species critical for each student to be able to identify and Amy gathered photos of each. Soon her idea was ready for its initial



Amy Clapp used her grant funds to print copies of her "Naturally Literate" checklists. She distributed them to all participants in the Trout Release Day held along the Middlebury River near Ripton. Students from Mary Hogan Elementary, Shoreham Elementary, and Salisbury Community schools participated. Photo by Carol Ramsayer

printing, funded by the Addison Central Educational Endowment Fund. Amy's son Theo and Salisbury students were the first to be given the booklets. Their immediate enthusiasm was all that Amy had hoped for. After refining the layout, Amy used grant funds from Otter Creek Audubon and the New Haven River Anglers Association to print additional booklets.

It's easy to imagine the future for *Naturally Literate*. Many Addison County teachers have already requested copies for their classes. A Shoreham teacher's sixth graders will use it to develop monthly paired-learning activities with first grade buddies. Last June Amy gave booklets to all hikers at OCAS' Beginner's Bird Walk.

Those third graders we saw keenly examining their new checklists have doubtless already added checks and notations from recent summer adventures and are on their way to developing a love and appreciation for the natural riches of their Vermont home. Each child's booklet will thus become a well-worn record of her observations and outdoor learning. 🐾

## Our First Endangered Bumblebee

**T**he rusty patched bumblebee was added to the U.S. Endangered Species List on 21 March 2017, the first bumblebee to be listed. Twenty years ago this bumblebee was abundant in two Canadian provinces and 31 states in the Midwest and the East, including Vermont. It is now known from nine states and one province, occurring at just five percent of locations where it was found 20 years ago. It represented eight percent of U.S. bumblebees then; it represents a scant one percent now. It is listed in Vermont as endangered, but in spite of intensive searching, has not been reported since 1999.

The rusty patched bumblebee is not alone in its plight. One study indicates that nearly one in four of the more than 4000 native North American and Hawaiian bee species are at risk, and more than half of the species whose status is known well enough to assess are in decline.

The significance of the decline of bees and other pollinators is that they can no longer provide the environmental services they have evolved to provide. Ninety percent of wild plants are insect-pollinated. Seventy-five percent of vegetables, fruits and nuts, which supply ninety percent of the world's human nutrition, are bee-pollinated. 🐝



## A Great Year for Monarchs in Vermont

By Ron Payne



Monarch caterpillar eating milkweed.  
photo by Ron Payne



Monarch butterfly seeking milkweed nectar. photo by Ron Payne

**I**f you have visited a flower garden or milkweed patch at any time this summer, there is a very good chance that you have seen monarch butterflies. And not just a few either, a lot of them. Unlike the past few years when they have been hard or downright impossible to find, conditions this year have allowed for a local boom.

Monarch numbers here are extremely weather dependent. The timing for the arrival of the first possible flight into the state in late May or early June needs to coincide with favorable wind and dry conditions. If they don't get those conditions, they can end up locked out of the state until the next generation in mid-summer, and some years bad conditions can lock that generation out as well. In 2013 we saw that happen and only a handful of monarchs were sighted in the entire year.

This year the weather has cooperated at the right times, and as an added bonus,

the largely wet spring has led to great flower production, including for their larval host plants, milkweed. That means lots of nectar for adults and lots and lots of food for larvae, which should lead to a very big migration flight back to Mexico in September.

One great year here does not necessarily bode well for the species as a whole, however. The real measure of how monarchs are doing is the count on their wintering grounds. And while that number has been stable over the past few years, it is still precipitously down from their historic numbers in the past. But every little bit helps, so it's important to plant native flowers and cultivate some milkweed if you can, so when we do have a good year here, the monarchs can make the most of it. 🐝

## Deer Leap Fire: Peregrines Unaffected

**A** team of 50 firefighters from Bristol and neighboring towns fought a fire on Deer Leap on Hogback Mountain in Bristol for 48 hours over the weekend of 5 and 6 August. The fire, a ground fire of unknown origin, produced copious smoke readily visible to Bristol residents but little in the way of flames. It blackened two to three acres in precipitous terrain before it was determined to be under control.

Deer Leap is the location of a Peregrine Falcon aerie. Two Peregrine young fledged successfully about two weeks prior to the fire. Neither they nor the parent pair appeared to have been

affected by the fire. A fire started by a hiker's campfire about 20 years previous in a nearby area also burned without damage to Peregrine youngsters even though they hadn't yet fledged.

Since 1987, when Peregrines were returned to Vermont following their extirpation from eggshell thinning due to use of DDT, the Deer Leap aerie has been the second most productive aerie in Vermont, having produced 57 fledglings. Peregrines recovered fully by 2005 and were removed from the Vermont endangered species list. 🐝

## September–December 2017 OCAS Calendar of Events

**SUNDAY, SEPTEMBER 17 11 AM–2 PM** **HAWK WATCH AT BUCK MOUNTAIN,** Waltham. Meet at 10:30 a.m. at Vergennes Park and Ride, junction of Routes 22A and 7, Vergennes, or at 11 at the trail-head on Route 66. Carpool to Route 66 if possible; parking there is extremely limited. Led by Ron Payne and Warren King. Call Warren at 388-4082 for more information or if in doubt about the weather.

**SATURDAY, OCTOBER 7 9:30 AM–4 PM** **DEAD CREEK WILDLIFE DAY.** Call 241-3700 for information. See article, this issue.

**THURSDAY, NOVEMBER 9, 5:30–8:45 PM** **OCAS ANNUAL DINNER AND MEETING.** The speaker is Michael Winslow, who will highlight the health of Lake Champlain in his presentation “Lake Champlain: How We Got Here”. Mike is a former Otter Creek Audubon board member, president for four years, and Silver Feather recipient, as well as the long-time Lake Champlain Committee staff scientist. He is presently with St. Michael’s College. Reservations are needed for dinner at 6. No fee for talk at 7:15. Dinner will be at the American Legion at 49 Wilson Rd. off Boardman St. and behind G. Stone Motors south of Middlebury on Route 7. Call Sue Rasmussen at 897-5411 for reservations. OCAS members will receive a separate invitation by mail. See article in November *Otter Tracks*.

### ADDISON COUNTY CHRISTMAS BIRD COUNTS

**SATURDAY, DECEMBER 16** **FERRISBURGH CHRISTMAS BIRD COUNT.** Call Mike Winslow at 877-6586 for details.

**SATURDAY, DECEMBER 16** **MT. ABE CHRISTMAS BIRD COUNT.** Call Randy or Cathy Durand at 453-4370 for details.

**SUNDAY, DECEMBER 17** **MIDDLEBURY CHRISTMAS BIRD COUNT.** Call Jim or Kris Andrews at 352-4734 for details.

**SATURDAY, JANUARY 6** **HINESBURG CHRISTMAS BIRD COUNT:** Call Paul Wiczorek at 434-4216 for details.

### 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 388-6019.

**SATURDAY, SEPTEMBER 9, 8–10 AM**

**SATURDAY, OCTOBER 14, 8–10 AM**

**SATURDAY, NOVEMBER 11, 8–10 AM**

**SATURDAY, DECEMBER 9, 8–10 AM**

### What Shape is a Bird’s Egg?



**B**irds’ eggs have been the object of collectors’ desires for centuries but, aside from measuring their length, width, colors, patterns, weight, thickness and clutch size, eggs have been neglected as a target of scientific research. The shape of different eggs ranges from spherical to elliptical and from symmetric to strongly asymmetric. No reason was known for this variability.

A sophisticated team of researchers took a comprehensive look at the variations. They quantified egg shapes to provide a means of comparison. They determined how the shape of eggs is determined developmentally, and they proposed reasons for the variation they found.

After quantifying the shape of 50,000 eggs of 1400 bird species from all 35 major taxonomic orders, they concluded there is a continuum from spherical to conical or elliptical with overlaps in many species. They concluded that the shape of the shell is determined by the shape and thickness of the shell membrane. “Think of a balloon,” said one of the researchers. “Guided by observations that show that the membrane thickness varies from pole to pole, we constructed a mathematical model that considers the egg to be a pressurized elastic shell that grows, and showed that we can capture the entire range of egg shapes observed in nature.”

They looked at correlations between egg shape and behavioral traits such as nest type, nest location, number of eggs in a clutch, calcium uptake, and flight ability. It became clear that demands of flight on wing shape relate directly to egg shape. Strong fliers need large or long wings and large breast muscles. To maximize egg volume without increasing egg width more than a narrow oviduct can tolerate, the optimum shape is strongly asymmetric or elliptical. Albatrosses and hummingbirds exemplify the extreme in flight ability. Their eggs are elliptical or conical. Weak fliers like owls can make do with a more spherical egg. Long distance migrant shorebirds and cliff-nesting seabirds have conical eggs to fit tightly together in clutches of four eggs and to keep eggs from rolling off cliff ledges. 🐾



# Chipping and American Tree Sparrows: The Black Mark Tells the Story

By Gary Starr



**The Chipping Sparrow**  
photo by Gary Starr

Two of my favorite local Vermont sparrows appear very similar but don't appear in Addison County at the same time. It is mid-August and Warren King has called to say that the Chipping Sparrows (*Spizella passerina*) have vacated their breeding territories in Ripton for another year. At the same time three of them, including two newly fledged, were feeding in our yard in Weybridge. In the late fall the breeding sparrows will have departed, and we will be hosts to American Tree Sparrows (*Spizella arborea*) and the remaining House Sparrows.

The American Tree Sparrow is poorly named as it summers and breeds above tree line in the Low-Arctic Tundra. It makes a nest of grasses on a grass tuft and may have neighbors such as Snow Buntings, Willow Ptarmigans, and Common Redpolls. In the winter it flocks in southern Canada and northern United States and feeds on smaller seeds.

Chipping Sparrows are ideally named. Their only call is a distinctive chipping heard from bushes and in yards. In winter they travel in mixed flocks throughout the South, stopping wherever they find food. Recently, their winter range has



**The American Tree Sparrow — The black mark on the breast and the eye stripe color tell the story.** photo by Gary Starr

expanded north with the change in weather.

Identification between these similar looking sparrows with rufous crowns can easily be determined by your observation date. The American Tree Sparrow will be in the snow around your feeders and is distinguished by its crisp look, black mark on a pale gray breast, and rufous line through the eye. The Chipping Sparrow is seen in the spring and summer, has a black line through the eye, and no black mark.

Please look closely at these two sparrows to appreciate their similarities and differences throughout the year. 🐾

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**Otter Tracks**

Otter Creek Audubon Society

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