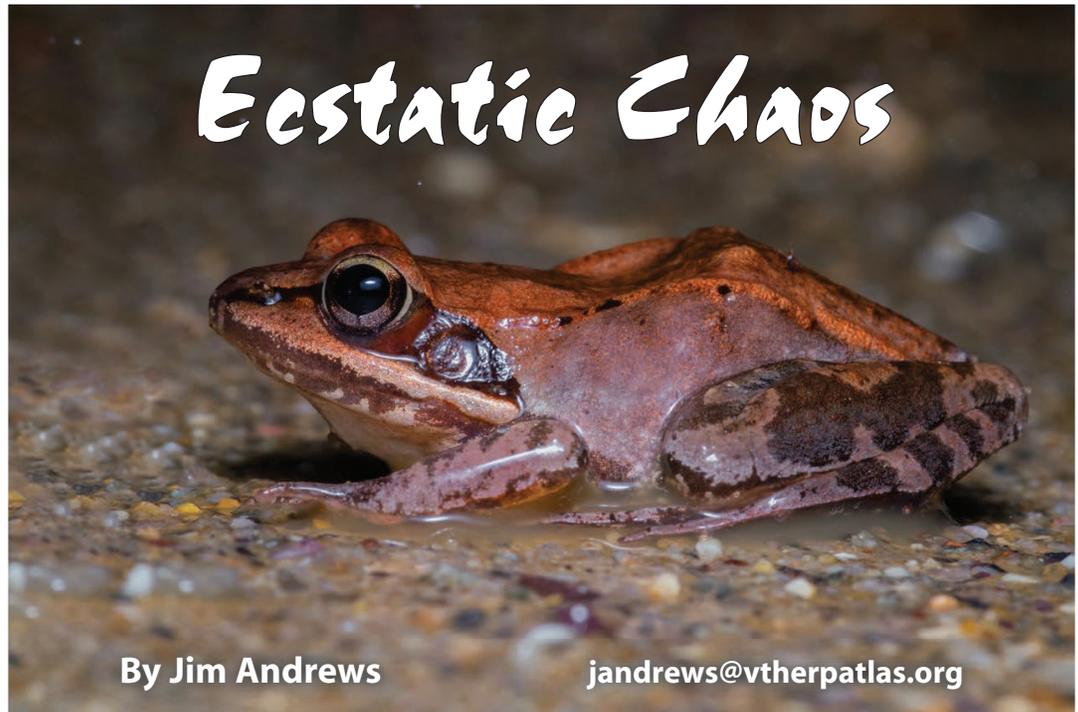




Otter Tracks

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Ecstatic Chaos

By Jim Andrews

jandrews@vtherpatlas.org

The floodgates opened around 8:15 PM at Morgan Road on Thursday, March 29th, and seven species of amphibian poured through with over 2,500 counted in the two hours we were on site. Many amphibians went uncounted even with 37 volunteers helping out. At my greeting and education post, I had a steady flow of amphibians moving out from under the parked cars, through my legs, and around my feet. It was difficult to move for fear of stepping on an amphibian. Still, we gathered some useful data, but these numbers should all be viewed as minimums for the time we were there. Both WPTZ (Channel 5, NBC) and the Addison Independent were there; I hope you saw the coverage.

Morgan Road is known for its large population of Blue-spotted Salamanders and they move earlier than most other spring migrating amphibians. In the two hours that we were there (8:15 to 10:15) we tallied 1,248 of them. For the first migration night of the spring, there were far more Spotted Salamanders (665) than usual. They and other species were crossing in areas at the margins of the normal flow where they had not been seen previously.

Wood Frogs numbers (399) were still increasing as we left, and while driving out it was difficult to avoid them. Four-toed Salamanders (114), Eastern Red-backed Salamanders (78), and Spring Peepers (71) were seen in closer to average numbers. Two cars came through during the two hours we were there and two passed through just before we arrived. The temperature was 7° C (~45° F).

TOTALS:

- Blue-spotted Salamander: 1240 alive, 8 dead**
- Spotted Salamander: 659 alive, 6 dead**
- Wood Frog: 371 alive, 28 dead**
- Four-toed: 113 alive, 1 dead**
- Eastern Red-backed Salamander: 78 alive (many lead phase)**
- Spring Peeper: 71 alive**
- Eastern Newt: 1 alive**

Combined Total: 2526 amphibians (43 of these were dead). This was the largest number of amphibians crossing Morgan Road in Salisbury during a two hour period monitored twice each spring since 2007 by OCAS and the Salisbury Conservation Commission. 🐾



OCAS Mission:

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

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Migratory Bird Treaty Act Weakened

Editorial by
Warren King



VIEWPOINT

On 22 December 2017 the Solicitor's Office of the Department of the Interior issued an opinion that the Migratory Bird Treaty Act (MBTA), the 100-year old legal foundation of bird conservation in the U.S., only covers the affirmative and purposeful killing of birds, no longer the killing by any means and in any manner which Congress has assumed to be the case. This opinion means that "incidental taking" of birds, for example, by wind turbines, by impact with buildings, vehicles or utility towers, drowning in oil waste pits, predation by cats, getting stuck in uncapped pipes used to stake claims in the West, and a wide range of other "passive" human-caused mortality, is no longer covered by the MBTA. The new opinion reverses at least 40 years of legal precedent.

The Obama Administration made clear its perspective on incidental taking and killing in its closing days when the Interior Solicitor's Office issued a January 2017 opinion that the MBTA's "scope of liability" for incidental take was practically unlimited. In the Obama years there was significant arbitrariness to enforcement of the MBTA. Federal courts of appeal and district courts ruled that incidental take was a criminal offence; other courts did not. Because incidental take can be so broadly construed, the problem, and the solution, had been to invoke it infrequently and allow the threat of its use to cover the bulk of the job. Narrowing the scope of incidental take makes enforcement far simpler and less arbitrary, but it rules out the causes of mortality that account for most human-related bird deaths.

The MBTA has afforded protection to 1026 bird species as a result of bird protection treaties with Canada, Mexico, Japan and Russia. A letter from 17 former leaders in the Department of the Interior, including several migratory bird directors, recommended Interior Secretary Ryan Zinke convene a bipartisan group of experts to find "a sensible path forward." The letter said the Act "can and has been successfully used to reduce gross negligence by companies that simply do not recognize the value of birds to society or the practical means to minimize harm. Your new interpretation needlessly undermines a history of great progress, undermines the effectiveness of the migratory bird treaties, and diminishes U.S. leadership."

The new opinion also sets the direction under which the Department of the Interior interprets laws. It does not change policies or regulations. It does not require or solicit public comment, and it will stay in force until it is overturned by another opinion from the Office of the Solicitor. Oil companies, electric utilities, mining companies, chemical companies, wind turbine owners, commercial fishermen, the Pentagon, and free roaming cat owners are all smiling. Birds and bird lovers are looking back with dismay to the good old "incidental take" days. 🐾



Earthworm Concerns



In the last Ice Age a vertical mile or two of ice over Vermont made sure that no native earthworms survived. Since the terminal moraine of the latest glaciation was far more than 100 miles south of here on Long Island, and since studies indicate that earthworms move at most five yards a year, earthworms can't have moved back on their own. And yet when we dig in the soil around our homes earthworms are generally abundant. They're all introduced species: 15 species from Europe and one from Asia. Some introductions date back to colonial times, accidentally arriving from Europe in soil used as ballast in ships, while other more local introductions come from fishing bait containers, in compost, in mulch or on the hooves of livestock. Earthworm distribution in Vermont is quite spotty and unpredictable. Some species remain in the duff layer and have little effect on soil mixing. Other species mix mineral and organic soil, and some species, including the night crawler, can move leaf litter several feet into the soil and bring mineral soil to the surface.

The duff layer, the uppermost layer on the ground, to which trees contribute leaf by leaf each autumn, is particularly important to insects, spiders, amphibians, migratory birds and small mammals. Think American Woodcock, Wood Thrush, or Ovenbird. Without earthworms, it takes three to five years for microbes and fungi to break down the duff into soil. A crop of night crawlers can do it in a month. However, there are three important consequences. First, the duff layer ceases to exist as a seedbed and germination layer for

understory plants. Second, sugar maple, poplar and birch, native shrubs like maple-leaved viburnum, and less common native forest herbs like trillium and ginseng have trouble reseeding in the mineralized soil produced by earthworms. The remaining understory is increasingly browsed by deer and other herbivores, producing ideal habitat for aggressive invasive understory plants like garlic mustard, invasive shrubs like multiflora rose and Eurasian honeysuckle, and invasive trees like Eurasian buckthorn. A third consequence of earthworms' quick work is that carbon dioxide and methane, briefly taken up in the duff, are released back into the atmosphere, a small but previously unaccounted for source of greenhouse gases.

In places where human activity has involved the burning of coal or leaded gasoline, earthworm castings or the earthworms themselves often contain lead or mercury. One researcher noted, "Our results suggest that exotic earthworms could be responsible for the high levels of toxic metals in ground foraging animals such as birds, amphibians and even small mammals across New England."

But earthworms have a productive role to play in organic agriculture. If the vegetation from last year's harvest is left in place and the soil not tilled, earthworms can process the vegetation, releasing needed nitrogen and reducing the need for added fertilizer. Since there is no good way to remove earthworms from soil they have invaded, we might as well benefit from them when we can. 🐾

A New Fungal Disease in Snakes

A deadly new fungal disease was described from an isolated timber rattlesnake den in New Hampshire in 2006. By 2009 the disease had been given the name *Ophidiomyces ophiodiicola*. Snakes with similar skin lesions have been known in the wild since the 1950s and in captive snakes since 1980. The disease has occurred in wild snakes in Europe as well.

The disease is not selective. It can affect any snake species in any habitat. The senior author of the publication that described the fungal disease said, "If it were a human, it would be one day 'Grandpa had a sore on his face', and the next day it's like 'Night of the Living Dead'". Little is known about the disease, its origins, and its targets other than that it affects snakes of any kind. Widespread fungal infections have also affected frogs, salamanders and bats in the last few decades. 🐾



Ryley Olsen at Dead Creek Wildlife Day, 2014
Photo by Ryan Kayhart

Our 2018 Hog Island Camper!

Otter Creek Audubon is happy to announce the 2018 winner of our Hog Island Audubon Camp Scholarship. She is Ryley Olsen, currently an 8th grader at Vergennes Union High School. She will be attending the session entitled "Coastal Maine Bird Studies for Teens." Ryley is the daughter of Meghan and Rodney Olsen, and has been banding birds under her father's direction for as long as she can remember. As she said in her application, "Nature is so delicate; we need to learn about it in order to be able to preserve it. But let's be honest, we also do it because it is fun."

Congratulations, Ryley! Have a wonderful week on the coast of Maine as you learn, explore new habitats, and have tons of fun with fellow teen bird enthusiasts! 🐾

Wright Park Birding!

Let's start the summer vacation off right with our annual beginner's bird walk at Middlebury's Wright Park. It's the perfect chance to spend the morning with folks who can help you identify the warbler that's singing from the treetops! Held this year on Saturday, June 23rd, the outing will be co-hosted by Otter Creek Audubon and Middlebury Area Land Trust (MALT). Our experienced naturalists will guide small groups along a loop off the Trail Around Middlebury. This year one of the groups will be especially designed for families, with several new stations led by MALT educators. All walkers will explore 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 be the traditional snack stop for any hungry hikers.

Please join us for this yearly 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 or wheelchairs. We will meet at 9:00 AM at the Wright Park parking lot north of Pulp Mill Covered Bridge on Seymour Street



Along a Wright Park trail with Ron Payne's group of explorers. Photo by Gary Starr

Extension. (Go northwest from the Middlebury Green on Seymour Street, then just before Pulp Mill Covered Bridge turn right on Seymour Street Extension to the parking area at the end.) The walk ends by about 10:30 AM. We will go rain or shine, but if you have questions call 989-7115. 🐾



Tough Life for Upland Sandpipers

An Upland Sandpiper (*Bartramia longicauda*) perched on a fence post in the Carden Alvar region, near Kirkfield, Ontario, Canada.

Photo by Wikipedia User Johnath

The Upland Sandpiper was once abundant in midwestern grasslands, but always less so in the periphery of the species' breeding range, which includes the grasslands of the Champlain valley. It has declined significantly as a breeding species in Vermont as grasslands have changed under increasingly intensive management or returned to forest. The Upland Sandpiper is now critically endangered in Vermont.

The first Vermont Breeding Bird Atlas, field work for which was conducted between 1977 and 1981, confirmed Upland Sandpiper breeding in thirteen 5 km by 5 km priority blocks in four biophysical regions. Ten of these blocks were in the Champlain Valley. In the second atlas, (field work 2003 to 2007), only two blocks had confirmed nesting and these were in Franklin and Grand Isle counties. There were also two confirmed nesting pairs in Washington County, outside of priority blocks. In 2004 and 2005, 774 point counts in 199 hayfields and 18 pastures yielded just two Upland Sandpipers. In 2015 in a follow-up round of 1356 point counts at 700 sites in the Northeast Upland Sandpipers were found in only four percent of sites where they were previously found. Declines were recorded in neighboring states as well.

In order to study Upland Sandpipers Vermont Center for Ecostudies biologists have had to travel to grasslands in the Midwest. By the end of the upcoming summer they will have deployed geolocators on Upland Sandpipers at six different grassland locations across the country. Begun in 2015, the project has already produced striking information. As of April 2018 one Upland Sandpiper, a female banded and affixed with a geocator in April 2016, is currently on her second round trip between the Flint Hills of Kansas and Uruguay, where she overwintered. Weighing less than eight ounces, she took similar routes south both years, going from Kansas to Central America, then over the Pacific to Colombia, then east of the Andes across the Amazon basin to Uruguay. The first year, her return route involved a nonstop 1860-mile flight from Chile to Central America. This year, she is making her way along the northwestern coast of South America. When she arrives back in the Flint Hills she will have covered 25,000 miles in the two years she has carried the geocator. It's hard to imagine a more challenging way to make a living. 🐾

May – June 2018 OCAS Calendar of Events

**SUNDAY, MAY 6
7:30-10:30 AM** **WARBLER WARM-Up.** Ron Payne, Warren King and Chris Runcie 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, MAY 6
TO SUNDAY, MAY 20** **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.

**SATURDAY, JUNE 9
8 AM** Net and affix geolocators on Golden-winged Warblers at Bob Collins Conservation Farm. Park at 8 AM at the TAM kiosk on the southwest side of Route 23 in Weybridge. Joint event of Audubon Vermont, MALT and OCAS. For more information call Ron Payne at 388-6019.

**SATURDAY, JUNE 9
8 PM** **MOTH EVENT** at Ilsley Library, 75 Main Street, Middlebury. Enjoy the huge diversity and abundance of moths in Vermont with an outdoor black light session to see what moths are active in early summer. Local moth experts will be on hand to help us with moth identification and biology. Call Ron Payne at 388-6019 for further information.

**TUESDAY EVENING
JUNE 19 AND/OR
WEDNESDAY MORNING
JUNE 20** **OCAS TRIP TO MT. MANSFIELD.** See article, this issue. Call Kathy Starr at 802/388-6552 or gstarr@together.net.

**SATURDAY, JUNE 23
9-10:30 AM** **BEGINNERS BIRD WALK.** Jointly sponsored with MALT at Wright Park. Led by experienced naturalists. 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.

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.

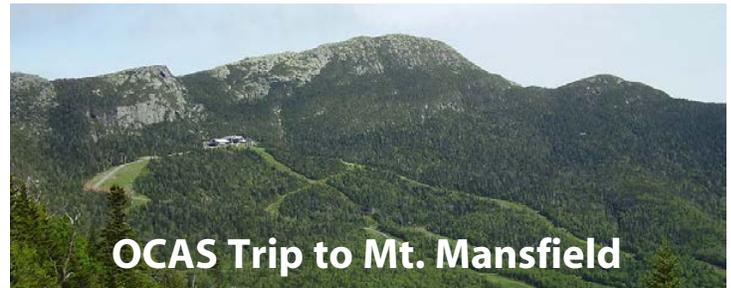
SATURDAY, MAY 12, 7–9 AM

SATURDAY, JUNE 16, 7–9 AM

SATURDAY, JULY 14, 7–9 AM

SATURDAY, AUGUST 11, 7–9 AM

SATURDAY, SEPTEMBER 8, 7–9 AM



Otter Creek Audubon Society is offering an opportunity to visit Mt. Mansfield with the hope of seeing some of the iconic Vermont high-elevation birds, including Bicknell's Thrush. The Vermont Center for Ecostudies works in the Spring on the mountain, setting up their mist nets in the evening, running the nets until dark, and then resuming at pre-dawn and running them until noon. They have graciously agreed to have us join them.

Where: **Top of Mount Mansfield via the Toll Road**
When: **Tuesday evening June 19th**
 and/or Wednesday morning June 20th
Rain dates: **Wednesday evening June 20th**
 and/or Thursday morning June 21st

There are three options for those who would like to participate in this trip. Those who are interested can drive over in the afternoon for an evening on the mountain, stay somewhere in Stowe for the night and head back up the mountain for the morning. Or do just one portion of the trip: evening on the mountain and drive back home that night or pre-dawn drive to Stowe for a morning on the mountain. We will carpool for the trip over and back from Stowe and, more importantly, for the drive up the toll road as the number of cars on the road and parking on top is limited.

So if the possibility of seeing Bicknell's Thrush, Swainson's Thrush, Blackpoll Warbler, White-throated Sparrow and Winter Wren, hearing their dusk and dawn chorus, and seeing the sun rise and set from the top of Mount Mansfield appeals to you, let us know.

Sign-up is required due to the limitation of numbers on the mountain. If you are interested please contact Kathy Starr at (802) 388-6552 or gstarr@together.net for more details and availability of spaces. 🐾

Mount Mansfield from the Toll Road.
Photo by Joe Calzarette



Opening Up New Worlds

by Carol Ramsayer

Nearly every year, Audubon Vermont offers Vermont Audubon chapters the opportunity to apply for National Audubon Collaborative Grant funds. In 2017 OCAS received a grant to purchase a stereo microscope for use in our education programs. This spring the scope had its debut at the Salisbury Community School. All students, K–6, were studying Feathers and Flight, under the tutelage of Amy Clapp, the school’s science teacher. Their first class concerned the structure of feathers, and was presented in a series of four learning stations. One was learning to use the new stereo microscope. It was easy to tell when a student had managed to focus in on an object—gasps of delight and amazement ensued! The learning continued with a comparison of a hawk feather and an owl feather under 30x magnification. These kids know why an owl has soft feathers (for stealthy flight)—and now they know the feather structures that are responsible for this softness.

Students were also invited to explore a myriad of objects from nature that OCAS has collected in its very own “Cabinet of Curiosities.” Everything from a snakeskin to a fossil to a piece of whale baleen to a delicate shell were explored with the stereo microscope. Excitement was high as tiny details were revealed under its magnification. Broccoli at 30x was especially neat!

The learning will continue in the coming weeks as Amy teaches the physics of flight, and Kathy leads activities around the function of feathers. But having our stereo microscope to explore feather structures in this first class was an exciting way to begin the all-school unit on bird flight. Thanks to Heidi and Preston for helping Amy and Carol with these stations.

Our plan is to have the stereo microscope and the Cabinet of Curiosities available to schools on short term loan. Also, with the carrying handle it will be easy to take the microscope out into nature on class field trips. Just as binoculars bring into focus the otherwise unnoticed details of a distant bird, a microscope can open up a whole new world of amazement for the mysteries of nature. We are grateful to Audubon Vermont for providing the grant funds to make this all possible. 🐾



Science students make feather discoveries in Amy Clapp’s science class Photo by Carol Ramsayer

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