



Otter Tracks

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Great Blue Heron

by Susan Roney Drennan



Great Blue Heron with prey. Photo by Dottie Nelson

Standing four feet high with his head raised, this splendid bird is outranked in size, among our wading birds, only by the cranes and the Great White Heron of extreme southern Florida, now considered a subspecies of the Great Blue Heron (*Ardea herodias*). The Great Blue's summer range extends from southeastern Alaska to Nova Scotia and southward to Mexico and the West Indies. In winter, it generally withdraws from the North to ice-free lowlands. With its formidable, lance-like beak, the Great Blue Heron is an excellent "dispatcher" pursuing minnows, suckers, and other small nongame fish, mice, other rodents, salamanders, turtles, frogs, and insects. It has even been seen deftly seizing butterflies on the wing. This elegant heron usually impales a fish crosswise, then tosses it into the air, catches and swallows it headfirst.

The Great Blue Heron is impressive in flight, its two long legs trailing parallel straight back, its outstretched neck S-curved so that the nape rests on its back. The wings with a six-foot span oaring buoyantly, steadily, in slow beats against the wind. It is a glorious sight to see them rise so slowly and stately, so long and limber in undulating motion. They

sail away on dazzling slate-blue wings. Their wings are so long in proportion to their bodies that there seems to be more than one heavy undulation to a wing as they pass out of sight.

The adult birds are mainly solitary and wary and become gregarious only in the nesting season, gathering in heronries with oftentimes more than fifteen nests in a single high tree. The courtship duels of the male birds display a skill in thrust-and-parry worthy of D'Artagnan. From three to five eggs (usually four) are laid, and both parents take part in feeding their squealing, ravenous young, which, like the eggs, are under considerable threat from crows, gulls, hawks, and owls.

Although these herons are resplendent in the extreme, a wounded Great Blue Heron is dangerous to approach, its rapier beak stabbing with lightening speed at the eyes of any man or dog venturing within range. 🐾



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 46, No. 3

www.ottercreekaudubon.org

Printed on 100% recycled paper

Otter Creek Audubon Society

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2020-2021**

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Migratory Bird Protection in Vermont

Editorial by
Warren King



VIEWPOINT

A major portion of the 100-year-old Migratory Bird Treaty Act provides for protection of migratory birds from “incidental take”: deaths from such human actions as oil spills, electrocution on uninsulated power lines, and collisions with airplanes, vehicles, buildings and communication towers. In 2017, the Trump Administration’s Interior Department removed this protection but in August of this year, U.S. District Court Judge Valerie Caproni issued a decree rejecting their position. Judge Caproni stated: “If the Department of the Interior has its way, many mockingbirds and other migratory birds that delight people and support ecosystems throughout the country will be killed without a legal consequence.”

Bird populations across North America have declined by 29 percent since 1970. National Audubon’s studies indicate that two of every three North American birds are at risk of extinction due to climate change. Adding to the risk confronting migratory birds at a time when bird survival is already suffering from serious declines is a strongly misguided policy. If the incidental killing had not been in force in 2010, when the Deepwater Horizon oil spill took place, BP would have suffered no consequences for its role in this oil spill. An estimated one million birds were killed by the spill. BP agreed to pay fines of \$18.7 billion in 2015. The \$18.7 billion it did end up paying were because of the estimated 1 million birds that were killed by the spill.

You can help ensure that the Migratory Bird Treaty Act remains fully in force in Vermont, even if not in the rest of the country. Encourage your state senator to vote for H.683, the Migratory Bird Protection Act, when the Vermont legislature reconvenes next January. The Vermont House has already passed H.683. David Mears, Audubon Vermont’s executive director, and several Audubon members in Vermont offered testimony to help H.683 pass the Vermont House. Addison County Senator Chris Bray is chair of the Senate Natural Resources Committee and is generally supportive of environmental legislation. 🐾

Grant applications available soon!

The Environmental Education Grant program will be offered for next year, regardless of whether children will learn in-school or remotely. Applications for the 2021 grants will be distributed at the end of September through school principals and on the OCAS website. Deadline this year will be Monday, November 2, 2020. Spread the word to your teacher friends! 🐾



Greenland’s Glaciers Pass Tipping Point

Analysis of 40 years of glacial melt and accumulation from over 200 large glaciers indicate that Greenland’s glaciers have reached a tipping point. Prior to 2000 the glaciers lost roughly the same amount of ice annually as was added from snowfall. In the following five or six years, and continuing thereafter, glacial loss accelerated from 450 billion tons annually to 500 billion tons annually while snowfall remained unchanged. Since 1985, the glaciers have receded 3 km.

They will continue to shrink now regardless of the temperature. Whereas prior to 2000 the ice sheet would have an equal chance to gain or lose ice each year, presently the ice sheet is likely to increase in size only one year in 100. 🐾

Loss of Arctic Sea Ice

One way to research the likelihood and timing of the loss of Arctic sea ice today is to study the loss of sea ice in the most recent interglacial period, 127,000 years ago. The United Kingdom Met Office Hadley Centre compared sea ice loss in that interglacial period with sea ice loss in this warming period. Specifically, the climate model indicates that an essential aspect in both time periods is the formation of sea-ice melt pools. These pools, warmer than the ice and the seawater, capture intense spring sunlight and become warmer than the ice and the surrounding seawater so they increase the rate of melt. Simulation of melt pond development into the future shows that the Arctic may become ice-free in the northern summer by the year 2035. 🐾



A TAM Adventure

By Carol Ramsayer

Bobolink along the TAM.
photo by Carol Ramsayer

Back in April, as both migration and the pandemic were in full swing, I was bouncing around ideas for how to raise money for Birdathon. Inspired by Gary Starr's terrific photos on the OCAS Facebook page, I came up with a plan. I decided to walk the whole Trail Around Middlebury (TAM) – a section at a time, of course, not all at once. This was something I had wanted to do since moving to Middlebury in 2009. I would call it Socially Isolated Birding – really socially isolated, as in by myself!

Armed with a TAM map from the Middlebury Area Land Trust (MALT) website, I chose the Wright Park section as a starting point. Off I went, with high hopes of not getting lost. What a gorgeous woodland trail to start with! Painted Trilium, Wood Thrush, beaver gnawings – and at the end, Belden Falls. The trail loops back to the parking lot. Not only did I not get lost - I was hooked! Already I was relaxed and committed to slow walking – allowing myself time for listening, standing still, jotting notes, looking around. My plan was to walk the TAM counterclockwise. I would park my car, walk a section, then return to my car. Three of the sections were too long for my slow pace, so I did each of those over two days.

The adventure was underway! After Wright Park, the sections were all new to me. It didn't take long to realize that

each had a unique personality. All had forested segments; many of these were sprinkled with ancient trees. Songs of Ovenbird, Eastern Wood-Pewee and Red-eyed Vireo kept me company. Several segments skirted lush, flowing fields, dotted with singing Bobolinks. Some trails followed watercourses. One favorite trail began near a marshy frog pond that, as the trail progressed, gradually grew into a stony stream, destined for Otter Creek. And of course every day there were discoveries! Tiny jewel-like flowers...a Pileated hacking away on a fallen log...a family of Wood Ducks...a snake, hemlocks, damselfly, lichen, a crayfish on a trail, scolding Red-winged Blackbirds, breathtaking views, Jack-in-the-Pulpit, Indigo Bunting, etc. Each day was new and exhilarating.

Along the way I learned first hand why the TAM is known as the "Emerald Necklace" – it is truly a Middlebury treasure. The trail is in excellent shape, thanks to the dedicated work of MALT, its volunteers and especially John Derick. Trail signs are easy to follow. I only got just a tiny bit lost once! In the end my only sadness was when, after 14 days of walking, I "closed the loop" back at the Wright Park kiosk. Actually, it didn't take me long to start planning for a fall TAM adventure! 🐾

Chlorpyrifos

Anually, 6 million lbs. of chlorpyrifos, a broad spectrum organochlorine insecticide that had its origins in nerve gas development during World War II, are sprayed on 10 million acres of cropland, the largest amount of any insecticide. It is used on 50 kinds of produce including soybeans, corn, apples, oranges, asparagus, walnuts, alfalfa, onions, grapes, cherries, broccoli, and cauliflower.

People can ingest it from foods they eat that were sprayed with chlorpyrifos. U.S. epidemiological studies show that infants and children suffered developmental impacts, including reduced birth weight and lower scores on standard development tests. Those who live within a mile of treated fields have higher levels than those who live farther away. In 1991 the Food Quality Protection Act banned it for indoor uses. Small children are apt to ingest it as they play on the floor and put fingers in their mouths.

U.S. environmental legal organizations petitioned the U.S. Environmental Protection Agency to ban all uses of the insecticide in 2007, arguing that there is no safe level for its use. In 2016 under the Obama administration the EPA's Science Advisory Panel outlawed all uses of the insecticide on the precautionary principle that children suffer neurodevelopmental effects even at low levels of exposure. Great Britain also banned all uses of the insecticide in 2016.

With the advent of the Trump administration, and without undertaking any in-depth studies to confirm or reject the science, EPA Administrator Scott Pruitt reversed the decision of his predecessor, making widespread use of chlorpyrifos available. The decision prompted a new round of lawsuits from environmental lawyers that have not yet been resolved.

The Protect America's Children from Toxic Pesticides Act, S.291, was introduced in the U.S. Senate in August. California and Hawaii have already banned chlorpyrifos in their states. Currently, New York, Massachusetts, Maryland, Washington, the District of Columbia and Vermont are in the process of suing the EPA to ban all uses of chlorpyrifos. In announcing Vermont's joining the suit Vermont Attorney General T.J. Donovan said: "We sued the EPA because we don't think allowing a toxic pesticide to be on food, on fruits and vegetables—that is dangerous mostly to infants, to young children and pregnant women—makes any sense." 🐾

Monarchs Amid a “Ubiquity of Pesticides”

As of March 2020 the number of monarch butterflies on their wintering grounds in the Mexican states of Mexico and Michoacan decreased 53 percent from the previous winter. The area of their wintering ground also decreased: the Oyamel Fir occupied by the population decreased from 15 acres to 7 acres, although this area has been as low as 1.66 acres (in 2013). By contrast, in 1996 a record 44.95 acres were occupied. Mexico established the Monarch Butterfly Biosphere Preserve in 1980. In the 1990s the population was just below 1 billion butterflies. The count in 2018 was 93 million. The western monarch population, which overwinters near San Diego and Santa Cruz, has also declined precipitously, from 10 million in the 1980s to below 30,000 for each of the last two years, a figure below which scientists consider monarchs to be unlikely to recover.

The U.S. Department of the Interior has been asked repeatedly to assess the status of the monarch for listing under the Endangered Species Act. It proposed to provide a status survey by the end of 2019, which was postponed to the end of 2020.

Monarch caterpillars feed on, and adults lay eggs on, milkweed. Milkweed populations across the continent have declined significantly as the result of widespread treatment of agricultural fields by Roundup, an active ingredient of which, glyphosate, allows genetically modified crops to continue growing but kills unmodified plants, including milkweed. Additionally, neonicotinoids (neonics), a widely-used class of insecticides, are used to treat a variety of insects. Seventy-nine percent of monarchs exposed to neonics in one study died within 22 days of neonic treatment. Twenty percent of monarchs in a nearby untreated nearby sample also died. In 2019, researchers analyzed 64 kinds of pesticides in use in fields in the Central Valley of



Female monarch laying eggs on milkweed. Photo by Ron Payne

California. Of 227 samples, all contained at least one pesticide, the average contained 9 pesticides, and some contained 25 pesticides. Chlorantraniliprole, a new “reduced risk” pesticide, was found to be non-toxic to birds, mammals and fish by DuPont, its manufacturer. It was found in 91 percent of samples and was shown to occur in doses lethal to monarchs in 58 of the 227 samples.

A bill introduced into the US House of Representatives called Saving America’s Pollinators Act (HR1337) would establish a Pollinator Protection Board to review pesticides, including neonics, for their toxicity to pollinators. It has 78 co-sponsors, although VT Rep. Peter Welch is not presently among them. 🐾



New Emperor Penguin Colonies

The number of Emperor Penguin colonies has increased! This isn’t due to a sudden population explosion of these large penguins nor does it have anything to do with their starring roles in *Happy Feet*. It’s actually thanks to technology allowing a better census – and to poop! Eleven new colonies were identified as a result of images from the European Commission’s Copernicus Sentinel-2 satellite mission. The images revealed a number of small colonies up to 180 km from the Antarctic continent formed on sea ice in shallow

water around grounded icebergs, some up to 180 km from the Antarctic Continent. These colonies were spotted because of the presence of penguin guano stains on the sea ice. Three of the colonies had been previously noted, but the satellite mission confirmed their presence.

These newly found colonies raise the total number of colonies to 61. The total population of Emperor Penguins is now up by about 10 percent, 265,500 to 278,500 breeding pairs. However, the new locations are all on the margin of the Emperor Penguin’s distribution and are at risk of disappearing due to climate change. 🐾

Emperor Penguin Family.
photo by Ian Duffy from UK / CC BY
(<https://creativecommons.org/licenses/by/2.0>)

OCAS Calendar of Events September - December 2020

SUNDAY, SEPTEMBER 15, 11 AM-2 PM **HAWK WATCH AT BUCK MOUNTAIN, Waltham.** Event cancelled due to coronavirus.

SATURDAY, OCTOBER 5 **DEAD CREEK WILDLIFE DAY.** Cancelled for 2020 due to coronavirus.

THURSDAY, NOVEMBER 14 5:30-8:45 PM **OCAS ANNUAL DINNER AND MEETING.** Cancelled due to coronavirus.

ADDISON COUNTY CHRISTMAS BIRD COUNTS

SATURDAY, DECEMBER 19 **FERRISBURGH CHRISTMAS BIRD COUNT.** Call Mike Winslow at 877-6586 for details and status change due to coronavirus.

SATURDAY, DECEMBER 19 **MT. ABE CHRISTMAS BIRD COUNT.** Call Randy or Cathy Durand at 453-4370 for details and status change due to coronavirus.

SUNDAY, DECEMBER 20 **MIDDLEBURY CHRISTMAS BIRD COUNT.** Call Jim or Kris Andrews at 352-4734 for details and status change due to coronavirus.

SATURDAY, JANUARY 2 **HINESBURG CHRISTMAS BIRD COUNT:** Call Paul Wiczorek at 802/434-4216 for details and status change due to coronavirus.

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.

SAT., SEPTEMBER 12, 7-9 AM: CANCELLED

SATURDAY, OCTOBER 10, 8-10 AM: CANCELLED

SAT., NOVEMBER 14, 8-10 AM: CANCELLED

SAT., DECEMBER 12, 8-10 AM: CANCELLED



Juvenile Northern Goshawk very close up.
Photo by Marita Johnson

Education Grants

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Starksboro's Robinson Elementary 5th and 6th graders were able to begin their phenology studies before their school went to remote learning.

photo by Ruth Beecher

pads, field guides and hand lenses will support their efforts. Otter Creek Child Center went forward with purchasing nature-themed educational materials for their preschoolers.

OCAS volunteers will continue to put in-class programs on hold when the 2020-2021 school year starts. The Environmental Education Grants program, however, will continue as in other years. Applications for Addison County educators will be available on the OCAS website in the end of September. 🐾

Update on the Environmental Education Grants

By Carol Ramsayer

Last spring we all assumed that students would be busy with outdoor learning activities, supported by OCAS Environmental Education Grants. However, when the schools went to remote learning in mid-March, 17 of the 20 grant projects had not yet taken place. To ease the shock of building closures, OCAS offered teachers the chance to rollover their funds to the 2020-2021 school year.

Instead of postponing their projects, three teachers requested minor changes to their plans. Flexibility was the watchword! Fourth and fifth graders at Starksboro's Robinson Elementary had looked forward to the study of phenology, using their individual "sit-spots" around the school to track seasonal changes. They were to be tutored by visiting Shelburne Farm educators. Instead, their "sit-spots" were around their own homes, and the Shelburne Farm naturalists taught via Zoom. Next, Bridge School educators made proposal changes in anticipation of safely teaching outside as much as possible. Stadium seats, waterproof note

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Otter Creek Child Center preschoolers using their new study materials.
Photo by Cookie Danyow



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