



Otter Tracks

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Audubon Annual Dinner Celebrates Amy Clapp and Scott Weidensaul

A sell-out Annual Dinner audience at Kirk Alumni Center applauded the 2018 Silver Feather recipient Amy Clapp for her remarkable contributions to bird conservation education at Salisbury Community School and other Addison County elementary schools. The keynote speaker Scott Weidensaul presented "Project SNOWstorm", the follow-up research on the Snowy Owl irruption of 2013-2014 winter to understand and explain the phenomenon of periodic irruptions in the U.S and Canada. Also at the meeting, artist Klara Calitri presented OCAS with a generous contribution. Inspired by news of the decline of pollinators and determined to do her part, last June Klara mounted an art exhibit at Town Hall Theater. "Birds, Bees and Butterflies in the Land of Milk and Honey" was an exhibition of art and poetry by many local artists and poets. Their generosity in donating the sales of some of their works to OCAS resulted in last night's gift. It will go directly towards the Education Committee's work with local schools. 🐾



Kathy Starr awards the Silver Feather award to Amy Clapp Photo by George Ramsayer

Silver Feather Award to Amy Clapp by Kathy Starr

The Silver Feather Award is given to a deserving citizen "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." This year the award was presented to Amy Clapp. In light of OCAS' emphasis on education, we were especially excited to honor an educator. Amy has a "can do" attitude, and when she sees an opportunity to grow professionally, she grabs it and then translates that experience into educational opportunities for her students.

Amy grew up in rural Shelburne, Vermont where she spent time in the surrounding cow pastures and forests. She went to college in

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Scott Weidensaul and Project SNOWstorm

Scott Weidensaul presented circumstances of the massive Snowy Owl irruption of 2013-2014 and painted an intriguing picture of the reasons for it and for other irruptions having to do with excessive reproduction and the pressures on offspring to search for new hunting territory.

Weidensaul is a remarkably productive researcher on bird conservation issues, a prolific author of books and articles on bird biology and conservation, and an instructor and field trip leader in strong demand. He is currently ornithology director of National Audubon's Hog Island summer camp program on the Maine coast. He does long-term owl research, including Saw-whet Owl migration and ecology, for the Ned Smith Center for Nature and Art in Millersburg PA. He

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OCAS Mission:

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

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Scott Weidensaul at the Annual Meeting.

Photo by George Ramsayer

IPCC Special Report: No Historic Precedent

Editorial by
Warren King



VIEWPOINT

On October 8, 2018 the Intergovernmental Panel for Climate Change (IPCC) released a special report assessing the impact of a global temperature increase of 1.5°C compared to 2°C, the target that had guided the 21st Conference of the Parties and the Paris Agreement of 2015. New information indicates that to avoid massive environmental and financial damage the nations of the world “will have to transform the world economy with a speed and scale that has no documented historic precedent.” Even adopting a target tightening of 1.5°C will result in extensive and expensive environmental impact.

Among the differences between a 1.5°C rise and a 2°C rise, global sea level will rise four inches less, and the Arctic Ocean will only be ice-free one year in 100, but once a decade at the 2°C target. Irreversible loss of some ecosystems will take place at 2°C but not at 1.5°C. A number of actions that will permit only a 1.5°C rise are already in effect, “but they would need to accelerate.” Limiting the temperature to a 1.5°C rise “would require rapid and far-reaching transitions in land, energy, industry, buildings, transport and cities.” Existing science is beginning to lead the way to a target that will result in a livable planet, but only if we commit to it fully and quickly.

The special report states unequivocally that atmospheric warming of 1.5°C above preindustrial levels will result in inundated coastlines, intensifying droughts and increased poverty. Already at 1°C we are experiencing more extreme weather events, rising sea levels inundating coastlines, more serious wildfires, food shortages, loss of coral reefs, and diminished glaciers and Arctic sea ice, according to the co-chair of one of the three IPCC working groups. These impacts will be more serious with a 1.5°C rise, and more serious yet with a 2°C rise.

To limit temperature rise to 1.5°C, CO₂ emissions would need to fall 45 percent from 2010 levels by 2030, and attain a “net zero” level by 2050. Emissions after the 2050 “net zero” level would need to be offset by removal of CO₂ from the air to be paid for with carbon taxes. Removal of CO₂ from the air is not presently achievable at large scale.

The IPCC report’s compilers, 91 scientists and government representatives from 44 countries and 133 contributing authors, referenced over 6,000 peer-reviewed publications. They concluded that repairing the environmental damage done by climate change by 2040 at 1.5°C would cost \$54 trillion. At 2°C it would cost \$69 trillion. Avoiding this damage is still possible but not likely politically. The carbon fees needed to achieve the 1.5°C level by 2040 would not be feasible, given the political climate in the world’s largest economy and the second largest greenhouse gas emitter, the U.S. The U.S. is likely to lose 1.2 percent of its gross domestic product for each degree C the world gains. The report states, “A price on carbon is central to prompt mitigation.” Global coal use will need to drop from today’s 40 percent of global electrical generation to 7 percent or less by 2050. 🐾

**Klara Calitri donated generously to
OCAS at the Annual Meeting held at
the Kirk Alumni Center. She awarded
a check to treasurer Gary Starr.**

Photo by George Ramsayer



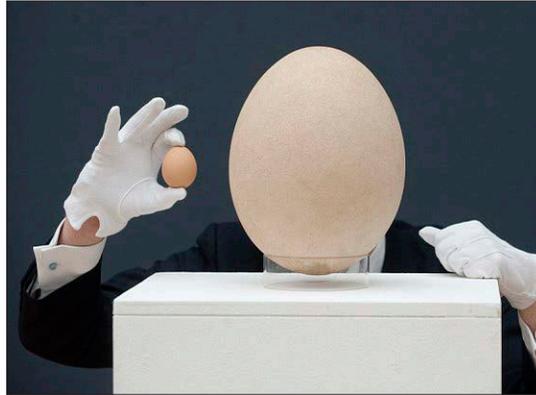
The Largest Birds Ever

by Gary Starr

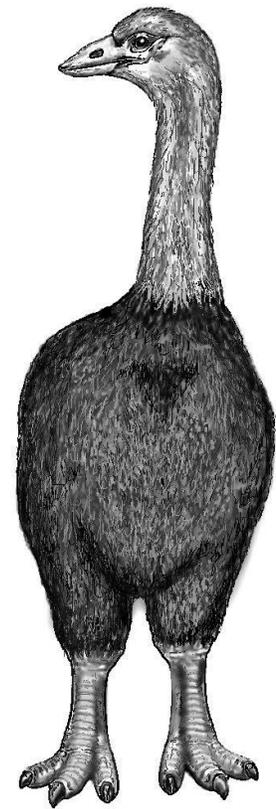
Recent research in Madagascar has settled one question but raised a second, more perplexing one. Eighty years have elapsed since the last taxonomic assessment of the elephantbirds, avian family Aepyornithidae, that became extinct in Madagascar around 800 years ago. On 28 September scientists of the Zoological Society of London published an account in the journal Royal Society Open Science that set to rest the number of elephantbird species at four, and, at the same time, the identity of the world's largest bird, which was ten feet tall and weighed up to 1600 lbs.

Because of their size elephantbirds left behind numerous bone fragments that have made their way into museums and collections around the world. Also left behind were a small number of intact basketball-sized eggs and an abundance of egg fragments that look like ancient pottery shards. The volume of the egg averages 160 times the volume of a hen's egg.

Present studies indicate there were four elephantbird species. The fairly closely related moas, flightless birds of New Zealand as tall as elephantbirds but weighing in at a svelte 500 lbs., were eliminated by Maori natives in about 1400 AD. It was thought that elephantbirds were eliminated several hundred years after the presumed original human inhabitants arrived on Madagascar from Indonesia about 2000 years ago. But prominent cuts on



An elephantbird egg compared to a hen's.



recently studied elephantbird bones show strong evidence of the bird being butchered with stone tools some 8,000 years ago. The date was confirmed in this case by carbon dating. Thus, humans were apparently on Madagascar and coexisted with elephantbirds for 6,000 years, according to a fresh assessment of the data. All other archaeological evidence points to human presence on Madagascar only for the past 2000 years. Thus there is an unaccounted for presence of humans on Madagascar for 6000 additional years. Could the archaeologist be wrong? 🐾

Eye-catching Migrant: White-crowned Sparrow



Adult White-crowned Sparrow
Photo by Henry Trombley

The White-crowned Sparrow is an elegant exception to the rule that sparrows are dull streaky brown. With uniformly soft gray underparts and throat contrasting with a back covered with brown streaks, brown wings with narrow white wing bars and a striking black and white striped crown, this 7-inch long sparrow stands out. It is uncommon in New England, present largely only on migration, although a small number breed near the New England coast. It is more plentiful in the West. It moves south through Vermont from mid-September through October and back again taiga- and tundra-bound from southern North America the first three weeks of May.

Migrating north, White-crowned Sparrows are likely to encounter and eat seeds that have been dosed with imidacloprid, among the most widely used neonicotinoid insecticides. Imidacloprid has been shown to disrupt White-crowned Sparrows' ability to determine the northern component of their migration route. Birds given the equivalent of a single kernel of treated corn weakened and lost up to a quarter of their weight, and only were able to renew their migration after two weeks. A delay in migration may have consequences if their arrival time is after peak availability of an important food source.

The North American Breeding Bird Census detected a 29 percent decline in numbers of White-crowned Sparrows between 1966 and 2012, although the decline had not been enough to add the species to the State of the Birds Watch List as of 2014. It remains a bird worth watching not only for its striking appearance but its susceptibility to neonicotinoids, the use of which remains widespread. 🐾



The Master Naturalist Program

Interested in learning more about the natural world around you? The Master Naturalist Program is available in almost every state, including Vermont. Join like-minded nature enthusiasts for training from local experts. You'll learn how to interpret local conservation lands around you at several levels: geology, glacial history, ecology, natural communities, cultural geography and local plants and animals. The programs are developed on a local level and are open only to the residents of that specific community.

The Vermont Master Naturalist Program began in 2016 under the tutelage of Alicia Daniel who has taught the UVM Field Naturalist program for many years. She started in Burlington and is on the third program there. So far the only program in Addison County is the Bristol 5-Town program. Its coordinator, Chris Runcie explained, "Each Vermont Master Naturalist program takes an in depth look at a particular town or region, so each one will be distinct. Our program will tell the unique story of our five-town area, focusing on its rich geological and cultural history and its flora and fauna. We'll have five day-long outings, each to a different site, led by experts in different fields, spread out over the year. Our goal is to create a group of naturalists with a deep understanding of the local natural history to act as a resource for our communities."

Master Naturalist candidates complete 30 hours of training and then design team projects amounting to 20 hours per candidate with the goal of providing for specific needs in conservation education or stewardship. The program costs \$425. Contact Alicia Daniel at adaniel@uvm.edu for information on the formation of new Master Naturalist groups in Addison County or elsewhere in Vermont. 🐾

Weidensaul/SNOWstorm

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bands hummingbirds to satisfy his curiosity about the increasing appearance of western hummingbirds in the East in fall and winter. He is co-director of Project OwlNet involving 125 owl research facilities across North America. Critical Connections and the Northeast MOTUS Collaboration are two programs in which he has explored the capabilities of next-generation tracking technology using solar GPS tracking transmitters and ultra-small self-powering nanotransmitters.

Scott's publication list of two dozen books includes *Living in the Wind: Across the Hemisphere with Migratory Birds*, a finalist for the 2000 Pulitzer Prize; *Return to North America: A year-long search for the continent's natural soul*, in 2005; *Of a Feather, a history of American birding*, in 2007; and his most recent, *The Peterson Reference Guide to Owls of North America and the Caribbean*, in 2015. He is a field editor for the National Audubon Society and has written numerous articles for national magazines, including Smithsonian.

Scott has led groups of birding enthusiasts on field trips to bird-rich locations including Alaska and the Maine coast and islands. He has traveled the world with his wife Amy, studying bird migration. It's hard to imagine how one person can have time to make such a broad impact on birding and bird research. 🐾

Bird Extinctions and Newly Discovered Species

Of the 10,000 species of birds in the world, 1200 species are considered at various levels of risk. Birdlife International, which maintains the official list of extinct bird species, has recently added eight species to its list. Ninety percent of historic extinctions occurred on small islands and were caused by predation from invasives and from hunting by humans. But five of the newly listed eight species came from Brazil, where they all became extinct as a consequence of habitat destruction due to logging, drainage and unsustainable agriculture. The eight species had for some time been listed as critically endangered, but on the heels of exhaustive searches or near total destruction of limiting habitat, it was concluded that there was no longer a chance for their survival.

It is encouraging to note that while eight species have become extinct in the wild (one still occurs in captivity) at least two species new to science have been discovered in the wild. The Rote Leaf-warbler from the island of Rote (469 sq. mi.) off the coast of Timor in Indonesia is said to have a bill quite different from all other leaf-warblers of the genus *Phylloscopus*, a genus that contained 55 species until *P. rotiensis* came along. The other new species is the Rote Myzomela, a honeyeater from the same island.

In the last 15 years about five new bird species have been discovered annually due to careful exploration of locations difficult of access or covered by dense vegetation. Unfortunately, these numbers will be outweighed by the number of bird species becoming extinct due to the environmental impacts of an expanding human population and the increasing effects of climate change. 🐾

Another Pollinator Problem

In the last decade large numbers of honeybees have been decimated in what has become known as colony collapse disorder. The result has been a decline of pollinator availability at the times they are essential to pollinate food crops. The decline has been attributed to pesticides, antibiotics, loss of habitat and bacterial infections. A new study suggests that herbicides, specifically the widely used herbicide glyphosate, may be contributing to the problem.

The study showed that when honeybees were treated with an amount of glyphosate equivalent to amounts normally used on crops, the result was alteration of the honeybees' intestinal bacteria, especially a bacterial species that helps digestion and defends against pathogens. The presence of one pathogen in particular rendered honeybees more susceptible to mortality. Five times as many honeybees died if exposed to glyphosate than if not exposed. One of the researchers stated: "So if you disrupt the normal, stable community, you are more susceptible to this invasion of pathogens." The researchers recommend not using glyphosate on flowering plants if honeybees are likely to visit them. Bumblebees appear to be susceptible to similar declines in numbers due to glyphosate.

In 2015 the World Health Organization concluded that glyphosate was a probable cause of cancer in humans, "no level of contact for which comes with no possible harm", according to a consensus of non-industry scientists. 🐾

December – January 2018/19 OCAS Calendar of Events

ADDISON COUNTY CHRISTMAS BIRD COUNTS

- SATURDAY, DECEMBER 15** **FERRISBURGH CHRISTMAS BIRD COUNT.** Call Mike Winslow at 877-6586 for details.
- SATURDAY, DECEMBER 15** **MT. ABE CHRISTMAS BIRD COUNT.** Call Randy or Cathy Durand at 453-4370 for details.
- SUNDAY, DECEMBER 16** **MIDDLEBURY CHRISTMAS BIRD COUNT.** Call Jim or Kris Andrews at 352-4734 for details.
- SATURDAY, JANUARY 5** **HINESBURG CHRISTMAS BIRD COUNT.** Call Paul Wiczorek at 802/434-4216 for details.
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- TUESDAY, JANUARY 1
9 AM** **FIRST DAY BIRD HIKE.** New Year's Day birding trips are a tradition held by many birdwatchers as they begin to fill their annual bird lists. This year we invite you to join us as we combine that tradition with the fairly new tradition of First Day Hikes held at State Parks across the country. Meet us at Button Bay State Park in Ferrisburgh at 9 am to walk the trails in search of overwintering birds.

ELEVENTH ANNUAL CABIN FEVER LECTURE SERIES (Second Thursdays in January, February and March) Downstairs at Ilsley Library, 75 Main Street, Middlebury

THURSDAY, JANUARY 10, 7 PM
ICELAND AND ICE LAND

World-travelling birder Hank Kaestner will tell us about his recent travels to Iceland and Alaska to view Arctic birds. Expect lots of Puffins and Auks!

THURSDAY, FEBRUARY 14, 7 PM
ANTARCTICA BIRDING ADVENTURE

A travelogue of Gary and Kathy Starr's trip to Tierra del Fuego and the southern terminus of the Andes, the Falklands, South Georgia, the Shetland Islands and the Antarctic Peninsula

THURSDAY, MARCH 14, 7 PM
CITIZEN SCIENCE

Nathaniel Sharp, Citizen Science Outreach Naturalist at the Vermont Center for Ecostudies, will tell us about nature projects *you* can participate in.

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, DECEMBER 8, 8–10 AM

SATURDAY, JANUARY 12, 8–10 AM

SATURDAY, FEBRUARY 9, 8–10 AM

Amy Clapp Given Silver Feather Award

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Maine and then got her Master's degree in elementary science education from the University of Montana. After a stint as an educational consultant for the National Science Foundation, Amy began her teaching career at the Salisbury Community School in 1999 and continues there today. She's been a classroom teacher, K-6 science teacher and the district science coordinator.

In the spring of 2013, Amy applied for and received an OCAS scholarship to Hog Island Audubon Camp's Educator's Week. She came home energized and inspired to apply what she'd learned about birds to enhance her students' education. Another year, she got a grant from Funds for Teachers to join a Tropical Birding trip to Costa Rica and her experience was again reflected at the Salisbury Community School. The same was true after she attended an Outdoor Classroom program last summer. Each time, she found an opportunity to grow personally and as an educator, found the funds to make it happen, and then translated her new knowledge into meaningful education for her students. They have learned about birds, certainly, but in the yearlong themes on birds, flight, migration and shorter segments on nests and owls, they have embraced the excitement that Amy modeled. Her creativity and dedication – to her students and to the environment – enabled her to come up with an amazing number of activities to match any learning style. OCAS' Education Committee volunteers have been on hand to enhance the learning and enthusiasm whenever asked. And in turn, nearly every year since that initial grant, the year has culminated in a school-wide birdathon, proceeds of which were donated to OCAS.

In reviewing all that Amy has accomplished, what became evident and exemplifies the skills she brings to teaching that make her so deserving of OCAS' Silver Feather is that she plants seeds and they flourish until a whole community of children is exposed to the excitement of learning and caring about nature.

Thank you, Amy, for all you have brought to the students of Salisbury Community School and the Addison Central School District. We look forward to seeing what nature learning happens this year and in future years. 🐦

Ernie Franzgrote: The Man Who Made "A Big Year for Little Birds"

Ernst Franzgrote was an Otter Creek Audubon member for twenty years. He attended Notre Dame University and the California Institute of Technology and pursued a career at the Jet Propulsion Institute in Pasadena, California for 37 years, contributing to the science that resulted in the Surveyor and Voyager spacecraft. He was intrigued with flight his whole life, founding the CalTech Bird Walks, which still exist. He had the opportunity to fly the Gossamer Albatross, to which he made engineering contributions.



Frilled Coquette Photo by Ernie Franzgrote

When he retired from the space industry he moved to Shoreham, married Amy Douglas, who also had a connection with birds as an Otter Creek Audubon board member in 2008-2009. In his retirement Ernie pursued his passion for birds and flight by videotaping hummingbirds. He spent the year 2000 in Central and South America filming lesser known hummingbirds, resulting in a contribution of over 200 videotaped portraits of hum-



mingbirds that now reside in Cornell University's Macaulay Library. One batch of videotaped hummingbirds is included in the following link, and is well worth sampling: https://search.macauleylibrary.org/catalog?view=Grid&mediaType=v&sort=rating_rank_desc&userId=USER117131&user=Ernest%20Franzgrote. Ernie turned his best footage into a DVD: "A Big Year for Little Birds", which he showed and narrated across the country. His show at Middlebury's Ilsley Library on March 22, 2007, attracted a standing room crowd of 120 and was reviewed in the May 2007 *Otter Tracks*. Ernie's creative and productive life came to an end on August 14 at home in Shoreham in his 87th year. 🐾

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