

WINTER 2019-20

NH Audubon **Afield**

Notes from the Field Edition





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NH Audubon Afield

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FROM THE PRESIDENT'S DESK

We do a lot each year at NH Audubon. In fact, the pages that follow describe a body of work any organization would be proud to achieve over a decade of time. From the far northern spruce and fir forests of Coos County, to the Statehouse in Concord, from our highest peaks to our seashore, we are monitoring, studying, managing, legislating, and protecting species ranging from insect pollinators to the mighty Bald Eagle and Peregrine Falcon.

We demonstrate how to improve your backyard garden for wildlife while also tracking some of the rarest birds in the most remote locations in the state. We work in partnership with others to advance the scientific literature on wildlife interactions, to guide prescribed fire management in the Pine Barrens, and to train teachers how to motivate students to be environmental stewards at their schools.

This *Conservation Notes* edition of *Afield* focuses on our Policy and Science efforts. Everything we do tells a story about how to better protect our natural environment. All the stories we tell bring people closer to nature. Thanks to NH Audubon, our volunteers, students,



partner scientists, legislators, and citizens get the chance to be outdoors and to learn something that will inspire them to act.

Thank you for being a part of our extended team. More than ever, we need your help and your support. As you consider your charitable giving and goals, remember that ALL the projects you read about here need additional support. It's a great time to increase your gift, your membership level, and your impact. You will also hear from us soon about our opportunities for year-end giving.

The scale of the challenges and the fast pace of changes in our state and our world need dedicated people to help us make a difference. I hope the stories to follow inspire you as much as they do me; I am proud of our work and ready to start the new year with a renewed sense of urgency and purpose.

Doug Bechtel
President

TWO GIFTS IN ONE!



This season, give the gift of membership* and receive a beautifully hand-crafted glass ornament from Old Hancock Glassworks

To purchase a gift of membership, and receive a free ornament, stop by the Nature Store at McLane Center or call Membership at 224-9909 x310.

**Does not apply to membership renewals.*

Cover Photo:

This amazing view of one of last year's Peregrine chicks was captured on June 9 at New Jersey Palisade, by Stefan Vozarik. The banded 1-yr old falcon 'Black-green 85-BV' fledged in Manchester, NH in 2018. The image is so crisp that you can see the new molt coming in, turning the falcon from brown to slate grey.



Bohemian Waxwings, by Scott Heron.

The Ups and Downs of Birds at Your Feeder

by Rebecca Suomala

From lots of birds to no birds, the activity at bird feeders is always changing. Last winter feeders were quiet and we received many questions about what was “going on with the birds.” When that happens, we turn to NH Audubon’s annual NH Backyard Winter Bird Survey and look at the more than 30 years of data to help us figure out the patterns of ups and downs in our feeder birds.

What *was* going on? In the fall of 2018 the natural food supply was exceptionally poor (remember all the squirrels crossing roads to find food?). That meant some birds left last winter. Blue Jays are linked to acorn crops and with so few acorns, they headed south for better feeding. We were also missing the Dark-eyed Juncos which were so abundant in the winter of 2017-18. They returned to their typical wintering areas farther south in the absence of good natural food crops in New Hampshire. Goldfinches were scarce for the same reason. Many people were lucky enough to have Evening Grosbeaks at their feeders. We also saw more Pine Grosbeaks in some areas. Other northern visitors such as the Common Redpoll and Pine Siskin never appeared in large numbers, despite quite a few reports.

We’ve been following Black-capped Chickadees closely after their record low on the 2018 Survey. Evidence indicated they were in the woods eating the abundant natural food supplies and staying away from feeders, but it also appeared that they had a poor breeding season in 2017 so there were fewer of them around to begin with. The Survey shows that their numbers fluctuate widely over time with low years followed by high peaks. Numbers were up on the 2019 Survey (Figure 1) but only slightly, so we’ll be continuing to watch them closely.

For those whose birds seemed to vanish in the middle of this summer – we don’t always know why this happens, but it’s a time when nesting is wrapping up. Some birds

are already beginning migration, but others, including young and adult birds, are undergoing molt and become very secretive. The mast crop of nuts, seeds and berries was excellent and birds had lots of natural food in the woods and fields. They were likely foraging away from feeders until the arrival of cold and snow.

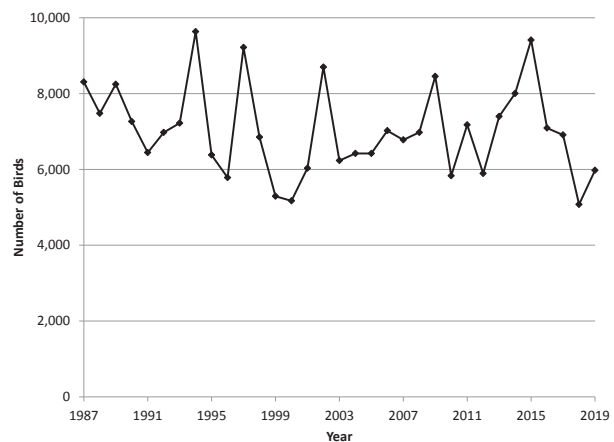


Figure 1. Number of Black-capped Chickadees on NH Audubon’s annual Backyard Winter Bird Survey, 1987-2019.

What Will Happen This Winter? Help Us Find Out!

BWBS: February 8-9, 2020

The Backyard Winter Bird Survey (BWBS) is open to everyone. It’s a great way to have fun watching birds and make a vital contribution to our knowledge. It’s easy to do – just count the birds in your backyard on the Survey weekend and send in the results on a special reporting form or report online. We need as many participants as possible all over the state. Check the NH Audubon website for more details on how to participate or to make a donation to support the Survey.

To receive a packet in the mail, email bwbs@nhaudubon.org or call NH Audubon at 603-224-9909.

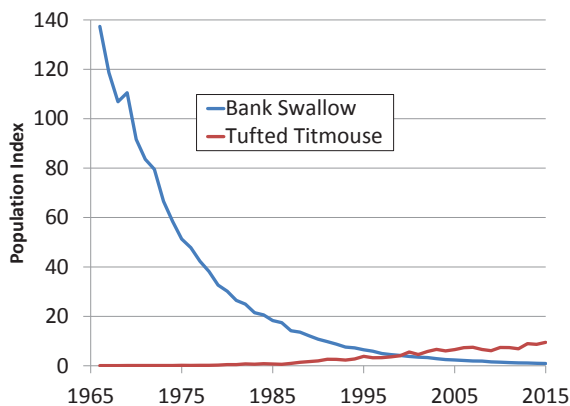
Conservation Notes

Update to the “State of New Hampshire’s Birds”

by Pamela Hunt

In September 2019, a paper in the scientific journal *Science* made headlines with its conclusion that bird populations in the US and Canada had declined by 30% – or almost three billion birds – since 1970. While this news is stunning, we have known that bird populations have been declining for some time. Here in New Hampshire, our 2011 *The State of New Hampshire’s Birds* report concluded that a third of the 186 species nesting in the state (65) were in decline, with about the same number increasing or stable. We are currently in the process of revising that report with newer data, and this analysis indicates that 81 species (42% of breeders) are declining, 38 of them strongly. A similar percentage are increasing or stable, but for the most part the magnitude of the increases is much lower than that of the decreases, and the net result is that we too have likely lost a significant number of birds in the last 50 years.

These losses have been particularly strong among three groups of birds: aerial insectivores (especially swifts and swallows), grassland birds, and shrubland birds, and in fact the top five declining species are members of those groups. Increasing species, at least among common songbirds, tend to be generalists and/or species moving into the state from the south.



To demonstrate how radically different the strongest trends look, here are Tufted Titmouse and Bank Swallow



Tufted Titmouse, a species increasing in the state. Photo by Pamela Hunt.

on the same graph. Gains in titmouse populations nowhere **near** make up for the loss of Bank Swallows, and this pattern is repeated across all the top increasers and decreasers.

There **is** good news. Waterfowl populations have been increasing for decades thanks to habitat conservation, and raptors have made dramatic recoveries in part due to the banning of DDT in 1973 and active species conservation efforts. Coastal species like terns and Piping Plovers have similarly benefitted from concerted efforts at protecting their nesting areas and managing threats. Even our forest birds are doing relatively well compared with many other habitat groups.

For the rest of the species, there is much to be done. For many of our most rapidly declining species we don't fully understand the causes, and until we do, it's hard to devise solutions. For species that migrate long distances, often as far as South America, the challenge is compounded by geography. The work that NH Audubon and our partners do is all part of the puzzle, and some of that is highlighted in this issue of *Afield*.

There are also things you can do at home, described in our Top Ten Things You Can Do to Help Conserve NH's Birds, counted down on the next few pages. Watch for the revised *State of New Hampshire's Birds* early in 2020.

Funding for publication of the State of New Hampshire's Birds comes from the Biber Foundation.

TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS



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Advocate for strong environmental policy! While individual actions are great, sometimes we still need a top-down approach to make critical changes happen. Laws like the Clean Water Act and Endangered Species Act apply everywhere, and yet would not have been possible without strong support from concerned citizens. Make your voice heard! Write, call, or email your representatives at all levels of government and urge them to support strong and sensible policies and regulations. Don't let long-standing and effective laws be weakened. Such advocacy can be applied to businesses, as evidenced by increasing adoption of plastic bans at restaurants and retailers.

A Better Year for Purple Martins

by Pamela Hunt

As reported last year, Purple Martins are now restricted to the New Hampshire coast, after the last remaining colony in the Lakes Region (Wakefield) was not occupied in 2018. This year all our eggs were in only two baskets: the colonies in Seabrook and Rye. At the former, the number of active nests dropped from 18 to 11, but collectively these produced more young (50 vs. 44 last year). The Awcomin Marsh colony in Rye doubled in size to eight nests, and these produced 33 young. So although there were fewer nests, the number of fledgling martins increased by almost a third to 83 – a new record since we started keeping more accurate records in 2014. The spring was again marked by some cold and wet weather, this time right around when birds were arriving from the south. Such conditions can result in mortality when martins can't find food, so this year volunteers supplied mealworms and dried crickets by placing them in the gourds. This appeared to work, and no mortality was noted.

At other sites in the Seacoast, martins showed early interest in the Portsmouth Country Club but failed to nest this year (there was a single pair in 2018). In Hampton, encroaching vegetation and increasing numbers of House Sparrows resulted in our moving the Island Path gourd array from dry land to the nearby marsh. After no signs of martins last year, early nests were noted in three gourds in 2019, but none resulted in full nesting attempts. Finally, in early May a new gourd array was installed at The Nature Conservancy's Lubberland Creek Preserve in Newmarket. This site is not too far from the Portsmouth Country Club (PCC), and is a great location in an open field close to Great Bay. With the record productivity at the active colonies in 2019, we have high hopes that lots of young birds will be returning and looking for nest sites in 2020!



John Cavanagh checking his gourds in Rye on May 4. Photo by Linda Cavanagh.



Recently-hatched Purple Martin nestlings in Seabrook (far left), photo by Dennis Skillman; 10-day old nestlings (middle), photo by Dennis Skillman; and five nestlings in a Rye nest about 15 days old with 10-11 days before they fledge (right), photo by John Cavanagh.



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS

Help conserve bird habitat! Hand-in-hand with municipal planning is a clear need to set aside habitat in perpetuity. This can involve supporting local land protection efforts, contributing to state or local land trusts, or placing a conservation easement on your own property. As with municipal planning, it is increasingly important to consider the landscape in which you're operating and to think about how your actions contribute to effective conservation on the larger scale. Most land trusts are well-versed in helping with these sorts of decisions.

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Conservation Notes



Northeast Endemic Damselflies Are Focus of New Regional Project

by Pamela Hunt

MAP LEGEND:

- Found in 2018-2019
- Found 2007-2017
- Last found pre-2007

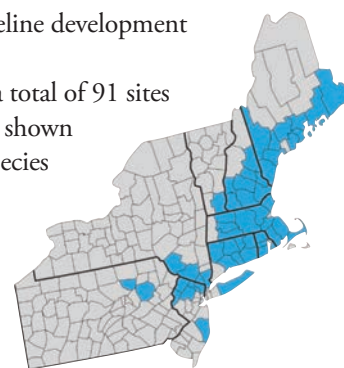
Field work wrapped up in 2019 for the regional Northeast Endemic Damselfly Project encompassing seven states and four priority species of damselflies. Across the region, it was a mixed year in terms of damselfly activity. We got an earlier start than in 2018, and as a result had much more success with the two species that are active in May and June (the relatively late spring also helped). For the late-flying species in July and August, several new sites were found in the north (New Hampshire and Maine). In Maine, surveys documented both New England and Scarlet Bluets well to the north and east of where they were previously known in the state, suggesting that both species are a lower conservation priority than previously thought. In the south the results are less consistent: Scarlet Bluets were missed at several historic sites on Cape Cod and Long Island, but found at a few new sites in Connecticut. Observers in the former locations suspect that higher than normal water levels may have reduced habitat suitability or simply made surveys more difficult. Sites on

Long Island remain at risk from shoreline development and associated risks.

In New Hampshire, we surveyed a total of 91 sites in 2018-19, and the initial results are shown in Table 1. Three of the four target species appear more widespread than we previously thought, although there weren't any major range expansions such as were seen in Maine. The exception is the Pine Barrens Bluet, which is only known from one site in New Hampshire, and as a result is listed as "of Special Concern" by NH Fish and Game. It was discovered at NH Audubon's Ponemah Bog Sanctuary in 2001, and found there sporadically through 2007. This site was searched multiple times in 2018-19 without success, and it is possible that Pine Barrens Bluet no longer occurs here. Because the species is hard to find and identify, it could certainly be present in other sites near the Massachusetts border, and as time permits new searches will be attempted in 2020.

The next steps in this project involve compiling the data from all seven states to produce habitat models for each of the four species. These models will draw from habitat variables measured at each site (e.g., pH, aquatic vegetation, shoreline vegetation, and pond substrate) and be used to identify the habitat features most important to each species. Preliminary models run for only Maine and New Hampshire early in 2019 indicate that perhaps the most important feature for Scarlet Bluet is the presence of floating vegetation such as lily pads. It will be interesting to see how these results change when a broader geographic range is included in the analysis. We will also produce a conservation plan for the group of damselflies as a whole. This plan will identify threats to each species or its habitat and propose conservation actions to mitigate those threats. It may also include a monitoring plan to ensure that changes to these populations can be detected into the future. Monitoring will be particularly important in southern New England and Long Island where some of the threats may be more pervasive, and species are often of higher conservation concern.

Funding for the Northeast Endemic Damselfly Project comes from a generous grant from the Sarah K. de Coizart Article Tenth Perpetual Charitable Trust. It was also made possible by the participation of representatives from all six other states where the project is taking place.



The New England Bluet, one of 4 endemic damselflies in the Northeast (pictured top left, by Pam Hunt). NH distribution to the left and regional distribution above.

Species	Total Historic Sites	2018-19 Surveys		
		Historic Sites Visited	Sites with Species	New Sites Discovered
New England Bluet	50	33	24	23
Little Bluet	43	20	15	14
Scarlet Bluet	55	42	32	23
Pine Barrens Bluet	1	1	0	0

Table 1. Known historic and current records of four species of Northeast endemic damselflies in New Hampshire.

TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS



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Advocate for Smart Growth! Every new road and cul-de-sac is a potentially fragmenting feature for New Hampshire's forests, and risks introducing non-native predators and plants into previously natural areas. At the same time, protecting areas needs to consider additional ecological concepts such as connectivity and parcel size and shape: a long thin strip of open space along a road is far less useful to wildlife than a circle or rectangle of the same area. NH Audubon's Conservation Department has worked with several communities to address habitat needs in local land use planning policies. Regional Planning Commissions also can be a source of assistance.

Peregrine Falcon 2019 Breeding Season

by Chris Martin

Spring 2019 marked the 39th breeding season in the post-DDT era for New Hampshire's state-threatened Peregrine Falcons. In 2019, we experienced a somewhat disappointing Peregrine breeding season. We did confirm 24 territorial pairs, 20 incubating pairs, and 16 successful pairs, but only 28 young fledged statewide. Unlike 2018, when three New Hampshire sites fledged four chicks each, there were no New Hampshire Peregrine nests that fledged four young in 2019. This was the first time since 2013 that less than 30 young Peregrines fledged from New Hampshire nests in a single year. It is encouraging to look back, since similar one-year productivity declines in the state in 2006 and in 2012 were followed by several years that set new record highs (see graph).

A multi-year satellite transmitter project with Biodiversity Research Institute and Stantec wrapped up in 2019 with the loss of the I-95 female, recapture/removal of a non-functional transmitter from the Walpole female, and failure of the device worn by the Holts Ledge female that had worked well for more than five years. We got word of a notable band encounter of a 2018 Manchester fledgling, 'Black/green 85/BV,' who turned up on the Hudson River at the New Jersey Palisades in June 2019.

About 25% of New Hampshire's Peregrines now nest on human-created structures, including on buildings, bridges, stacks, and quarry walls. Sheltering falcon nests from disturbance is important, and our management efforts in 2019 focused on construction projects at two New Hampshire bridges where Peregrines nest. We helped Maine DOT install a new nest box on the I-95 Piscataqua River Bridge in a spot shielded from ongoing bridge repair, but the resident female died in March, and the sub-adult female who

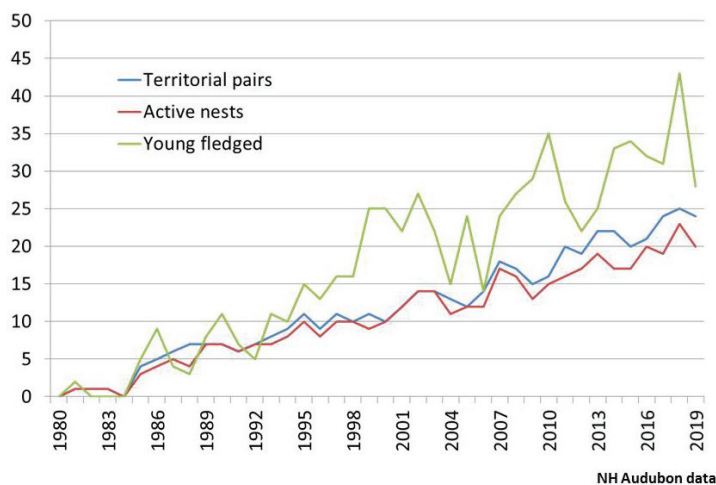


Brady-Sullivan Peregrine chicks and Chris Martin eyeing each other on May 28. Photo by Melissa Proulx/Union Leader.

replaced her did not lay eggs. At the Route 293/101 bridge in Bedford/Manchester, an incubating pair abandoned eggs in May as site work intensified.

Management activity at New Hampshire Peregrine breeding sites is supported by a federal grant to NH Fish and Game's Nongame Wildlife Program and by the generous support of donors. A really big "Thank You!" goes out to all those who sustain our efforts.

NH Peregrine Falcon Productivity, 1980-2019



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS

Manage land for wildlife! If you own relatively extensive acreage, there are things you can do to enhance its value to birds. This could be through timber harvest, field mowing, or the creation of openings, depending on the habitats present, the area involved, and your goals for the land. When managing land, it is also increasingly important to consider what's happening on adjacent lands since birds certainly don't pay attention to property lines. Advice and guidance on management can be obtained from state or county Cooperative Extension offices (<https://extension.unh.edu/programs/wildlife>).

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Conservation Notes

Rusty Blackbird 2019 Breeding Season

by Carol Foss

The 2019 breeding season was a rough one for Rusty Blackbirds. The field crew checked 56 areas of previous or potential nesting habitat and observed at least one pair at 26 of them. Of 23 nests monitored (three of which were re-nests after failures), only 11 successfully fledged young, 10 failed, and two were of unknown outcome. One pair was successful on its third nesting attempt. The crew observed fledglings of four additional pairs whose nests had not been monitored.

Master Bander Patti Wohner captured and banded 14 adult males, 13 adult females, and 51 nestlings, and collected blood samples to explore potential effects of bird blow fly parasitism on nestling health. She attached radio transmitters to 16 nestlings for a fledgling survival study and attached nanotags (tiny transmitters, see “Motus for New England” in this issue) to nine adults for migration studies. We look forward to detection of the nanotags by Motus receiving stations during the migration and wintering periods. We observed seven previously banded individuals, including one female that was originally banded in 2014. Of the 16 telemetered nestlings, seven were

predated within the first week after leaving the nest and the remaining nine all survived the first three weeks after fledging. One individual was still frequenting an extensive wetland near its nest site at the end of our field season on August 9.

The most exciting event of the season was the recapture of a male Rusty Blackbird who had received a pinpoint geolocator (GPS tag) provided by the Smithsonian

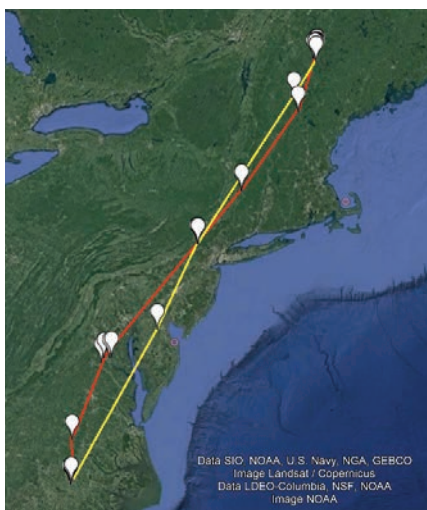


This recently fledged Rusty Blackbird awaits its first food delivery after leaving the nest. Photo by Carol Foss.

Migratory Bird Center in 2018. This bird provided the first information about the migration route and wintering area of a Rusty Blackbird breeding east of the Appalachian Mountains (see map to left).

This year's nest analyses documented bird blow fly parasitism in only 17% of nests dissected. This percentage is substantially lower than in previous years (range of 52-79%), possibly attributable to the cool temperatures this spring. The maximum blow fly larva count for a given nest was 15, slightly lower than 2018's 17 and considerably lower than previous highs of 34-77. As in 2016 and 2017, nests contained evidence of two bird blow fly species. Each year brings further clues about the relationship between bird blow flies and Rusty Blackbirds, and the influence of spring temperatures on this relationship.

We are grateful to our cooperating landowners, Seven Islands Land Company, Umbagog National Wildlife Refuge, Wagner Forest Management, and Weyerhaeuser (formerly Plum Creek); to the Conservation Biology Research Fund at the New Hampshire Charitable Foundation, and Wagner Forest Management for continuing support of this work; to the University of Maine for funding two field technicians; to Dr. Terry Whitworth for bird blow fly analyses; and to LightHawk Conservation Flying for helping us track “lost” fledglings.



Travel route of male Rusty Blackbird from its breeding grounds in New Hampshire to its overwintering area in North Carolina, with brief stopovers on its journey south (red line) and back (yellow line).

TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS



6 Create a bird friendly yard! Whether you have a tiny backyard or a big one, you can landscape for birds and other wildlife. Choose native bushes, trees, and other plants that provide food, protection from predators, resting spots during migration, and nesting spots. The National Wildlife Federation has a certification program and more information at: <https://www.nwf.org/Garden-for-Wildlife/Certify>. UNH Cooperative Extension has a sheet on NH's Native Trees, Shrubs, and Vines with Wildlife Value at: <https://extension.unh.edu>. As a bonus, native plantings also support pollinators, another group of increasing conservation concern.

Motus for New England

by Carol Foss

In last year's issue of Conservation Notes we introduced the Motus Wildlife Tracking System, which tracks birds, bats, and even butterflies using tiny radio transmitters (nanotags) and a network of receiving stations. An initiative, led by the Northeast Motus Collaborative, to expand the Motus network throughout the northeast region made great strides in 2019, thanks to a Competitive State Wildlife Grant (C-SWG) from the US Fish and Wildlife Service for expanding Motus infrastructure in the mid-Atlantic States. This \$497,929 grant (with \$230,343 in non-federal match) is supporting the installation of 46 receiving stations in New York, New Jersey, Pennsylvania, Maryland, and Delaware, slated for completion in 2020. The grant also provided nanotags (the Motus radio transmitters) for deployment on New England Rusty Blackbirds and enabled the installation of a receiving station in our northern New Hampshire Rusty Blackbird study area.

On June 5, an intrepid crew from Pennsylvania, led by Todd Alleger of the Willistown Conservation Trust, braved northern New Hampshire's blackflies and mosquitoes to install a Motus receiving station overlooking South Valley Brook Road in Dixville. In addition to several of our nanotagged

Rusty Blackbirds, this station has also detected flyovers of two migrating Red Knots tagged last spring in South Carolina and New Jersey, and four Semipalmated Sandpipers tagged in late summer in Churchill, Manitoba.

Banders Patti Wohner and Luke Douglas attached nanotags to 12 adult Rusty Blackbirds in Maine and New Hampshire. The new South Valley receiving station has detected four of these individuals, and volunteer Levi Burford located three of them using mobile tracking equipment in late August and early September. We look forward to learning of their fall migration route from receiving stations farther south.

Independent of the Northeast Motus Collaborative's efforts, researchers installed five additional Motus receiving stations in New Hampshire this summer: four at the Hubbard Brook Experimental Forest in Woodstock and one at Antioch New England's Glover's Ledge conservation area in Langdon.

In July, the Northeast Motus Collaborative submitted a new C-SWG application for expanding Motus infrastructure in New England. If awarded, this \$998,037 grant will provide for installation of 50 receiving stations across Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island. The proposal also includes field projects tracking American Kestrel movements and Monarch butterfly migration and testing the effectiveness of various receiving equipment combinations. The grant requires a 25% match, and interested parties are already pledging support for receiving stations throughout the region. We anticipate notification of a decision by the end of 2019, and if the decision is positive, fund-raising efforts will begin in earnest in early 2020.

The South Valley Motus tower installed in Dixville, NH in 2019 to assist with tracking Rusty Blackbirds and any other species with a nanotag that comes within range. It has already detected migrating shorebirds. Photo by Carol Foss.



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS

Buy bird friendly coffee! Biologists have known for a long time that "shade grown" coffee provides important habitat for birds in the tropics, including species that migrate south from New Hampshire, like Blackburnian Warblers. Such coffee plantations maintain natural tree canopies that more closely resemble an undisturbed tropical forest. In contrast, most intensive coffee production removes the canopy and relies on extensive inputs of pesticides and fertilizers. Stop by the Nature Store at McLane Center to take home a variety of bird-friendly coffees.

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Conservation Notes

Bald Eagle 2019 Breeding Season

by Chris Martin

In 2019, NH Audubon staff and volunteers confirmed 72 territorial pairs of Bald Eagles in New Hampshire, up 11% compared to 2018. We documented 44 successful nests (13% above 2018) and tallied 81 young fledged, up from the 70 fledglings produced in 2018. Each statistic mentioned above set a new post-DDT state-record high in 2019.

Since Bald Eagles resumed breeding here 30 years ago, a grand total of 578 young eagles have fledged from New Hampshire nests. More than a third (36%) of all eagles produced in the state since 1989 have fledged within just the past three breeding seasons! Among 2019's highlights, we identified 10 new breeding territories, including the first successful eagle nest documented in Concord's city limits in over 100 years. We tallied five nests that fledged three young each in 2019, the most trios on record for a single year in the state.

Our volunteer observers and photographers contribute so much to our monitoring efforts each year, and they deserve much of the credit for gathering data on our nesting eagles and for providing wonderful images that help us with our educational outreach!

With New Hampshire's breeding eagle population doubling every 5-7 years, it is stretching the limits of our monitoring resources. This situation has led us to propose changes in our tracking strategy for this iconic bird. After discussions with our NH Fish & Game partners, NH Audubon has adopted a new monitoring protocol that divides the state into five monitoring zones (North Country, Connecticut Valley, Lakes, Merrimack Valley, and Coastal). We will actively monitor breeding sites in one zone per year for the next five breeding seasons, rotating through the entire state over a five-year period. We will also document new breeding sites

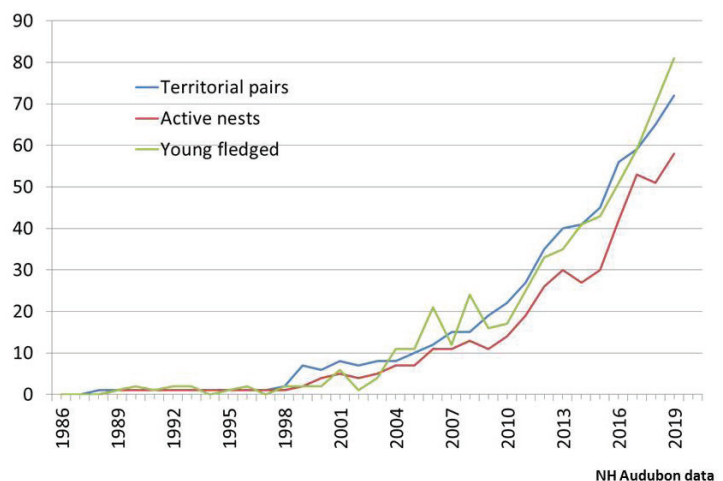


Adult Bald Eagle brings non-traditional meal to Canterbury eagle chick on May 26. Photo by Debbie LaValley.

elsewhere in the state as they are reported, adding them to the list for the appropriate zone for future monitoring.

This change in methods may result in population estimates that lag behind what is actually happening, but given continued increases in the number of nests, we believe this strategy will allow us to detect any significant population changes in a cost-effective way. We are grateful for individual donors who supported our work in the 2019 season, especially Ann Preston and JoAnn O'Shaughnessy. Volunteers remain critical to our future monitoring efforts, and I look forward to working with everyone as we streamline eagle monitoring.

New Hampshire Bald Eagle Productivity, 1986-2019



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS



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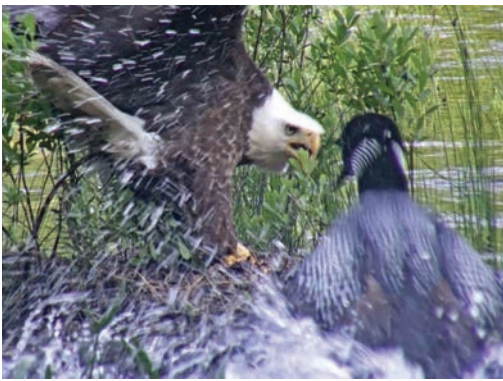
Avoid the use of pesticides or products that were grown with pesticides! DDT is the classic example of a pesticide that had detrimental effects on birds, but its banning does not mean the threat has gone away. A whole new class of insecticides known as neonicotinoids are now found almost everywhere, with increasing evidence that they too can harm birds. You can help minimize these potential threats by buying organic and/or local produce, advocating for accurate agricultural labeling, and not using such chemicals in your own environment. More information is available at: <https://abcbirds.org/threat/pesticides/>.

Research Team Published in *Wilson Journal of Ornithology*

NH Audubon and the Loon Preservation Committee collaborated on an innovative study of how two of New Hampshire's most iconic birds interact on the state's lakes and rivers. The two wildlife conservation groups examined 16 years of breeding data for both Bald Eagles and Common Loons to evaluate what influence nesting eagles had on loon territory occupancy and productivity. A major article describing their findings appeared recently in the well-respected *Wilson Journal of Ornithology*.

For nearly 40 years, NH Audubon has partnered with NH Fish and Game to monitor and manage Bald Eagle population recovery. The Loon Preservation Committee has a 45-year history of fostering Common Loon population recovery in the state. Loons remain on New Hampshire's threatened list, while eagles were taken off the state's threatened list in Spring 2017 because of significant progress toward full recovery.

NH Audubon President Doug Bechtel noted, "It's interesting



Screen capture from the LPC Loon Cam showing an interaction at a loon nest site this summer.

how loon and eagle populations have recovered to the point where we're seeing more interactions between these two highly visible fish-eating species, something that probably

used to happen regularly before they declined."

Bald Eagles are known to steal fish from loons, harass incubating adult loons, and occasionally prey on loon eggs or chicks. Managing interactions between these species of conservation concern is challenging, particularly since so much evidence is anecdotal.

When data collection for this study concluded in 2013, there were about 284 territorial pairs of Common Loons and



Co-authors John Cooley, Vanessa Johnson, David Harris, and Chris Martin (l-r), gathered in Concord, NH recently to celebrate publication of their Eagle-Loon study in the *Wilson Journal of Ornithology*.

40 territorial pairs of Bald Eagles. Biologists now estimate that there are about 313 territorial pairs of loons and 72 territorial pairs of eagles in the state. In other words, in the last six years the state's loon population has risen by 10% but the state's eagle population is up 80%.

Collaborating on the study were Loon Preservation Committee biologist John Cooley, NH Audubon conservation biologists Chris Martin and Vanessa Johnson, as well as volunteer statistician David Harris. The team looked for evidence of predation attempts by an increasing eagle population, and whether this was limiting how successful loons are at raising young or if eagles provoked changes in where loons nest. The scientists found that eagle nest proximity may be contributing to >3% of observed loon nest failures, but that this pressure does not fully account for local declines in loon abundance. Loons face a wide range of other simultaneous threats, including mortality from lead tackle poisoning, avian malaria, and entanglement in monofilament fishing line.

"For me, the single biggest take-home point is the incredible value of these long-term data sets," said NH Audubon's raptor biologist Chris Martin. "Both LPC and Audubon gathered data on our respective species of concern for years. Then we realized that combining our data allowed us to ask and answer new and important research questions."

Funding for this study, initiated more than a decade ago, came from an individual donor with an interest in both species nesting on Squam Lake.



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS

Reduce risks from lights and windows! Another important source of mortality is collisions with buildings and windows. Birds can get disoriented by lighted windows at night or confused by reflections during the day. Several cities now have "lights out" programs (for example the Fatal Light Awareness Program at <https://flap.org/>). Additional information, including things you can do at home to minimize such collisions in your own yard, can be found at <https://abcbirds.org/threat/bird-strikes/>.

3

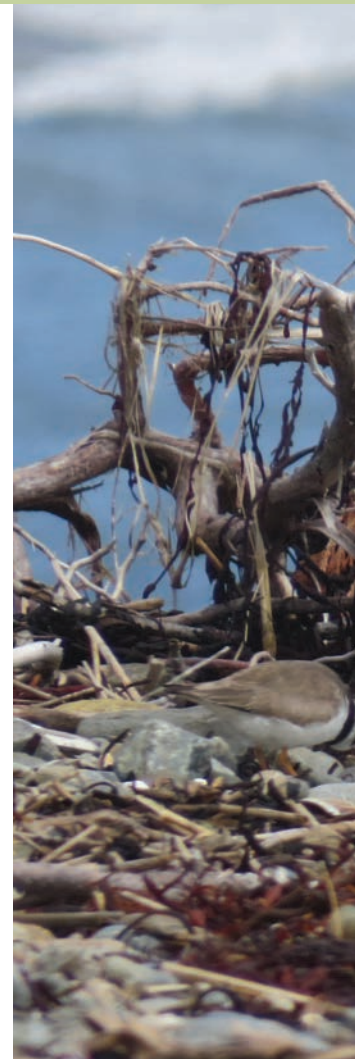
Shorebirds' Shifting Patterns on the Coast

Story and photos by Pamela Hunt

The shorebirds that we see along the New Hampshire seacoast are travelling between northern breeding areas and tropical wintering ones. Only four species actually breed along our coast (Piping Plover, Killdeer, Spotted Sandpiper, and Willet), and the rest are here for one reason: to feed. They are eating to build up fat reserves to fuel the next leg of migration, which might entail a flight of hundreds of miles. NH Audubon last looked at shorebird use of the coast in 2006-07, and much can happen in over a decade. Through a combination of eBird data and standardized surveys, we revisited this area in 2018-19 to see what might have changed. A shift in site use may indicate that shorebirds are being driven from prime foraging or roosting locations by disturbance or other threats in our narrow coastal zone.

The key area for foraging shorebirds in New Hampshire remains the tidal flats of the Hampton-Seabrook Estuary, where hundreds may congregate at low tide. As these flats are inundated, the birds shift elsewhere, with sites including Meadow Pond in Hampton and areas of seaweed (aka "wrack") deposited on beaches the length of the coast. At the highest tides, shorebirds need a place to rest until they are able to forage again, and these roost sites are just as important as feeding areas. Some locations have shifted dramatically since our previous study, with pools on the periphery of the Hampton-Seabrook estuary that are no longer used. Instead, a significant roost has formed on a cobble beach at the north end of Hampton, where hundreds of birds pack into a narrow strip of dry ground at high tide.

Anything that compromises shorebirds' ability to feed or causes them to waste energy may compromise migration. In this light, there is increasing concern about threats that include loss of habitat and repeated flushing by people, vehicles, or unleashed dogs. Ideally, birds can rest at their roosts undisturbed, but increasing human presence often means they are flushed more regularly, resulting in their expending some of their stored energy



Flock of Semipalmated Plovers and mixed sandpipers in Hampton (left), Semipalmated Plovers at a high tide roost site in Hampton (top), Least and Semipalmated Sandpipers in Seabrook (below), and a collection (bottom right).





reserves. At the same time, changes to the coastal landscape (e.g., development and sea-level rise) can degrade roost sites and force birds to less suitable locations where they may be subject to more frequent disturbance.

Clearing of wrack from beaches is another threat listed for shorebirds in the North Atlantic, since it deprives them of a valuable food source.

Shorebird surveys are just one aspect of this project. If we want to ensure that the birds passing through New Hampshire each spring and fall can successfully complete their migratory journeys,

we also need to educate people in coastal communities about their conservation. The first step in this process occurred in June of 2019, when I presented a talk at the “Beaches Conference” in Kittery, Maine. This is an annual venue where coastal stakeholders come together to update one another on the status of our beaches and the threats they face. More outreach will occur once all the data are collected and analyzed.

Funding for shorebird conservation comes from grants from the Fuller Foundation and the Blake-Nuttall Fund of the Nuttall Ornithological Club.





Phenology Reflections: Focus on Red Maple

Story and photos by Diane De Luca

Red Maple (*Acer rubrum*) is one of the most widely distributed trees in eastern North America having expanded its distribution and dominance significantly since pre-European settlement forests. This species is adaptable to a wide range of site conditions, helping to drive this expansion. The flowers, twigs and seeds are all red, but perhaps the most dramatic is the deep red foliage in the fall. Red Maple is one of the first trees to flower in early spring, one of the characteristics that make close phenological observations particularly interesting.

Since 2012, I have closely monitored the phenology, or timing of the life-cycle phases of many species, including the Red Maple. Every year of close observation reminds me that each species responds to change in a unique way. The range of flowering dates for the Red Maple at Deering since 2012 is quite broad. The earliest date for Red Maple flowers was March 27, 2012 during the warmest spring on record. The latest flowering occurred on May 6, 2015 after a cold spring with deep snow cover. This 41 day span is greater than any other species observed on the Deering Sanctuary. In 2019, I observed another phenomenon. The buds swelled in early April but it was three more weeks until flowers would appear. Weather conditions are obviously a cue for flowering in this species but research suggests that most species respond to the length and severity of the winter as well as the warming in the spring. Early bloomers are at greater risk for damage by frost, making the observations in 2019 thought provoking for adaptation to a changing climate.

I encourage you to make a long-term commitment to documenting the stories in your own backyards. These stories will contribute to better understanding the impacts of climate change. Please contact me (ddeluca@nhaudubon.org) if you are interested in making phenology observations.

We are grateful to an anonymous donor for supporting the NH Audubon Phenology Project.



Enlarging Red Maple Buds on April 6, 2019 (top), breaking Red Maple Buds on April 20 (above left), and Red Maple Flowers on April 21 (above right).

TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS



2 **Keep your cat indoors!** Domestic cats are among the most significant threats to wild bird populations in much of the United States. Even well-fed cats and those with bells can and will kill birds. And then there are feral cats and semi-feral cat “colonies.” Some studies estimate that hundreds of millions of birds are killed by cats each year. For more information visit <https://abcbirds.org/threat/cats-and-other-invasives/>.

Pollinator Happenings

Story and photos by Diane De Luca

Pollinators are essential to the health of our natural ecosystems and the agricultural economy worldwide. It is estimated that one out of every three bites of food we eat exists because of pollinators like bees, butterflies, flies, and birds. Populations of many pollinator species are in decline due to habitat loss and misuse of pesticides. Protecting, enhancing, or providing habitats are some of the best ways to conserve pollinators. Current research is revealing the importance of public participation in helping recover and maintain native pollinators.

In the fall of 2018, NH Audubon established a Pollinator Garden at the McLane Center with the goal of demonstrating and sharing best practices for creating pollinator-friendly spaces in your own backyard. There's interpretive signage, an informational kiosk, and a brochure to help educate and promote pollinator-friendly habitat. In the spring of 2019, a pollinator garden was also established at the Massabesic Center. Both are ideal sites for homeowners, teachers, students, and visitors to learn more about native plants, pollinators, and the best pollinator-safe practices.

A Garden Opening Celebration was held in June of 2019 as part of a Pollinator Series that featured speakers, workshops and events to celebrate and engage participants in pollinator conservation. Topics ranged from bee conservation, birdscaping, moths as pollinators, and the co-evolution of native plants and pollinators. The series culminated in a Native Plant sale in September. We look forward to presentations in 2020 and a Spring Native Plant sale.



Clockwise from top: McLane Center Pollinator Garden and kiosks, volunteers hard at work, and a bee pollinating anise hyssop.



Support for the McLane Center Pollinator Gardens came from the US Fish and Wildlife Service, New England Office, the Gertrude and Benjamin Couch Trusts, the Robin Colson Memorial Foundation, the

Patricia and Charles Walker Family Fund, and many dedicated volunteers.



TOP 10 THINGS YOU CAN DO TO HELP CONSERVE NH'S BIRDS

Help collect data! Everyone from NH Audubon and NH Fish and Game to local land trusts and conservation commissions rely to some degree on information gathered by volunteer "citizen scientists." You don't need to be an expert. It can be as simple as watching the swallow nests on your barn or counting birds at your feeders. For more complicated projects, there is often training available. For more information on bird survey volunteer opportunities with NH Audubon, contact the Conservation Department (603-224-9909).

1

Conservation Notes

Ups and Downs for Cliff Swallows

by Pamela Hunt

We've now spent three years searching out Cliff Swallow colonies in New Hampshire, and 2019 was the first time we've been able to visit almost all of them in a single year. With most results in, it looks like there were 20 active colonies, and that these supported roughly 150 pairs of birds. The latter number is actually higher than the estimated total I came up with after 2017-18 field work, which provides us with a little hope. However, our 20 colonies remain but a shadow of the 80 or more known during the early 1980s, and fully half of our current nests appear to be in just four colonies. These are located in Pittsburg, Milan, Tamworth, and Danbury, and contained a total of 86 nests in 2019. Thankfully, all four sites, and most of the others, appear to be secure, meaning they're safe from disturbance. In fact, the owners of three of the sites (all on farm buildings) actually enjoy their swallows, and one even creates a source of mud to aid them in nest building. The fourth large site is on a bridge, and persists despite repairs to that bridge a few years ago. At the opposite extreme, one site active last year appears to have been abandoned after birds started arriving in early June. When I visited in July, House Sparrows had taken over all visible nests. I was unable to explore elsewhere on the property at that time, but will attempt to do so next year. The good news is that House Sparrows currently do not co-occur with Cliff Swallows at any of the larger colonies.



The only nesting site for the state-threatened Cliff Swallow on the New Hampshire Seacoast is at Fort Constitution in New Castle, where a single pair has nested for the last few years. Historically there was a large Cliff Swallow colony nesting on the lighthouse at this site until exclusion methods were deployed following renovations. Photo by Holly Bauer on July 18.

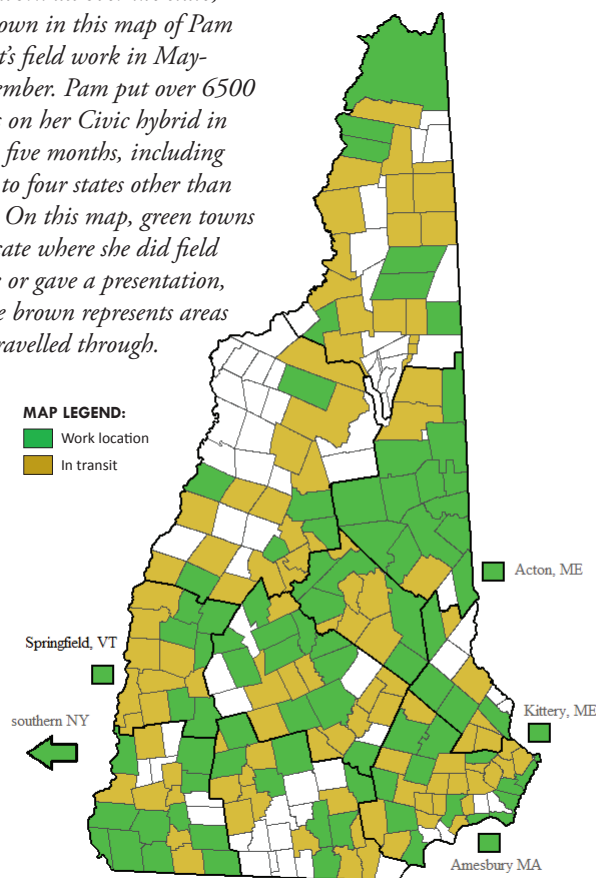
Cerulean Warbler Wrap-up

by Pamela Hunt

After three summers of searching for Cerulean Warblers at historic and potential sites, it appears the species is barely holding on in New Hampshire. There were two isolated sightings in Pawtuckaway State Park in 2018 and 2019, where Ceruleans bred reliably for 20 years starting in the early 1990s. Birds were also found in the same two years at Mount Wantastiquet in Hinsdale/Chesterfield. In 2019, a singing male was found there and persisted into early July (although not everyone who tried finding it was successful!). This suggests that Wantastiquet may be the more reliable place to find this threatened species in the state. Searches at the historic site along the Blackwater River in Salisbury came up empty, as did expeditions elsewhere in southern New Hampshire where habitat was deemed suitable. It appears that Cerulean Warbler remains an exceedingly rare and elusive member of the state's avifauna. Because of this, it is imperative to thoroughly document any observations of this species during the breeding season (late May through July), ideally through a photograph and/or voice recording. In many parts of southern New Hampshire, recent surveys have found Black-throated Blue Warblers that sound remarkably like Ceruleans, and for this reason heard-only records are unlikely to be accepted into the state's database of threatened and endangered species.

NH Audubon's conservation staff work all over the state, as shown in this map of Pam Hunt's field work in May-September. Pam put over 6500 miles on her Civic hybrid in those five months, including trips to four states other than NH! On this map, green towns indicate where she did field work or gave a presentation, while brown represents areas she travelled through.

MAP LEGEND:
■ Work location
■ In transit



Project Nighthawk

by Rebecca Suomala

The main focus of our Common Nighthawk monitoring this year was to confirm activity at all of last year's active sites. We found at least one male at 11 of the 12 sites, confirmed nesting at three of these sites, and probable nesting at four sites. The cold weather in late May and early June appeared to delay but not deter the start of nesting. One of the confirmed nest sites was in Concord. It fledged one chick which stayed on site for more than 40 days and was flying well when last seen. There has been only one other nest site monitored by Project Nighthawk where a chick has stayed on site for that long. Overall nighthawk numbers were stable this summer but the number of active sites is still very low and has declined in the past ten years.

Project Nighthawk is funded by private donations and NH Fish & Game.



*Common Nighthawk female with a fledged chick about 30 days old on July 27 in Concord, NH.
Photo by Rebecca Suomala.*

New Hampshire Bird Records and NH eBird

by Rebecca Suomala

New Hampshire birders have embraced eBird as the place to record their bird sightings online, and the volume of reports keeps growing. In Spring 2019 (March 1 - May 31) there were 196,881 sightings in eBird! That's a far cry from the years when birders sent their reports to NH Audubon on paper slips and we used to think that 2,000 reports was a lot for spring. That amount of data is incredibly valuable for research and it also allows eBird to provide maps and all kinds of tools for birders. It also presents a challenge for our volunteer Season Editors who not only review those sightings but also analyze them for their season reports in *New Hampshire Bird Records*. In response, we'll be changing some things in the *New Hampshire Bird Records* which presents some of the eBird data, so watch for a new look in the publication.

Funding for New Hampshire Bird Records (and related NH eBird activities) is provided by subscriptions, donations, sponsors of the Twitchers in the Rye, the Milne Fund, and the New Hampshire Bird Records Endowment Fund.

Thank you!

We are very grateful to all our supporters who contributed to the Conservation Department's work in 2019. Our projects depend on funding from contracts, grants, and donations from people like you. Each project summary lists its funding sources. Collaborations and partnerships strengthen our work, but in many instances our partners and funders can only support a portion of our research projects, and that is when we depend on your donations to help fill the gap. All gifts, both large and small, are important and we appreciate each one. We also depend on volunteers and it is their help that allows us to maximize the dollars we receive. It is truly a team effort!

To support the department overall or a specific research project please visit our website at <http://www.nhaudubon.org/join-donate/research-support/>.

To contribute to the Conservation Department endowment please call Becky Suomala at 224-9909 ext. 309.

Thank you for being part of our team!

Policy Notes

2019 Summary of Environmental Policy Activities

by Carol Foss

NH Audubon's Environmental Policy Committee (EPC) members were frequent visitors to the Legislative Office Building and the State House during the 2019 legislative session. Committee members provided testimony on five bills (Table 1, below) and signed in on another 40 (see Table 2 online at www.nhaudubon.org/events-and-news/afield/). The majority of environmental bills were favorable this year, and we opposed only three (none of which passed). Energy remains a major focus of the legislature, and 26 of the 45 bills we weighed in on pertained to energy issues. NH Audubon supports policies that promote energy conservation and renewable energy sources that reduce New Hampshire's reliance on the fuels that contribute to climate change. Our 45 bills of interest met a variety of fates: 11 became law in their original or amended form, 11 were retained in or sent back to committee for further work, nine passed both chambers but were vetoed by the Governor, and eight were voted inexpedient to legislate. Full text and docket details for these bills are available through the New Hampshire General Court website: <http://www.gencourt.state.nh.us/> (see Tables 1 and 2 for bill numbers and titles).

I continue to represent nongame wildlife interests on the New Hampshire Forest Advisory Board, a legislatively mandated board that provides input on "factors affecting the use, ownership, and management of forest resources" to the Division of Forests and Lands. I also serve on the recently formed Bear Brook Management Plan Steering Committee, which is overseeing a revision of the management plan for Bear Brook State Park.

At the Federal level, in March I joined Amanda Stone of NH

Cooperative Extension, Jim O'Brien of The Nature Conservancy, Mike Marchand of NH Fish and Game, and Sabrina Stanwood of the NH Heritage Bureau in meetings with the NH Congressional Delegation in Washington, D.C., to discuss the importance of State Wildlife Grants to New Hampshire. We collaborated with EPC members Michael Amaral and Paul Nickerson to provide comments on the proposed revisions to rules governing implementation of the Endangered Species Act. We participated in several meetings regarding relicensing of the

Errol Hydroelectric Project, and submitted scoping comments and study requests to the Federal Energy Regulatory Commission. We also continued to participate in the Conservation Funding Workgroup, which is working for passage of the Recovering America's Wildlife Act (RAWA). This legislation would provide funding for the management of fish and wildlife species included in state wildlife action plans. If passed, New Hampshire would receive an estimated apportionment of more than \$11 million, which would become available for management of the state's 169 Species of Greatest Conservation Need.

We have also contacted the New Hampshire Congressional delegation in support of the Protect America's Wildlife and Fish in Need of Conservation Act of 2019 (PAW and FIN Act), which would reverse the recent, damaging rule changes to the Endangered Species Act, and the Wildlife Corridors Conservation Act of 2019, which would establish National Wildlife Corridors to provide for the protection and restoration of certain native

fish, wildlife, and plant species. NH Audubon hosted a round table with Representative Annie Kuster in early October to discuss bird conservation needs in light of recent studies and media attention regarding bird population declines.



Carol talks to Senator Jeanne Shaheen at a celebration of the permanent reauthorization of the Land and Water Conservation Fund at Pulpit Rock Conservation Area in Bedford on Earth Day, April 22. Photo by Doug Bechtel.

Table 1. NH Audubon provided testimony in 2019 at hearings for the following bills.

Bill Number	Topic	Intent	NH Audubon Position	Outcome
HB 137	Water	Establishing a commission to examine the effects of wake boats in NH	Support	Passed, Adopted with Amendment
HB 156	Energy	Establishing a commission to study the establishment of a state department of energy	Support	Passed, Adopted with Amendment
HB 646	Pesticides	Relative to labeling, signage, and restrictions on the sales and use of neonicotinoid pesticides	Support	Retained in Committee
HB 682	Water	Establishing a water resources fund in the department of environmental services	Support*	Laid on Table in Senate
SB 076	Energy	Relative to the prohibition of offshore oil and natural gas exploration	Support	Passed, Adopted with Amendment

*Joint testimony with The Nature Conservancy in New Hampshire, the New Hampshire Association of Conservation Commissions, the New Hampshire Lakes Association, and the Society for the Protection of New Hampshire Forests.

Policy Matters!

by Nisa Marks

How does our policy team make a difference? Tracking bills, writing letters to state and national leaders, lobbying at the statehouse, and testifying on legislation are the stalwart tactics of any policy effort. At NH Audubon, wildlife and their habitats are our focus. If birds are in trouble, frequently there are policy actions that can make a difference.

The focus of a recent report in *Science** was mostly bad news: North American birds are in trouble. In nearly every species group, across most habitats, and in all U.S. states, bird populations have plummeted an average of 29% in the last 50 years, with some species declining much more.

Hidden but equally clear in the report was a much cheerier message: policy works. Two taxa in particular depart radically from the trends present in most species groups. Nationally, waterfowl populations have increased 56% and hawks and eagles increased 78%, with similar trends in New Hampshire.

Why the difference? Waterfowl and hawk populations each have policy that targets their needs, sustained funding, ongoing monitoring of their populations, and dedicated partnerships across the public and all levels of government. These factors are the recipe for successful conservation.

Waterfowl conservation receives dedicated funding through duck stamps, federal programs such as the North American Wetlands Conservation Act (NAWCA), and matching funds from state and private interests. Over 36 million acres have been conserved in support of waterfowl populations through NAWCA and duck stamps. By policy, populations are then monitored annually by federal and state officials to set bag limits. The result is steadily increasing waterfowl populations and sustained enjoyment by hunters and birders, even as other birds are in trouble.

Bald Eagles, Ospreys, and hawks also benefit from policy. Their populations rebounded after the federal government banned DDT in 1972 - a radical step at the time. State, federal, and NGO biologists monitor raptor populations and institute additional nest protections and habitat closures where needed. As a result, New Hampshire Osprey populations nearly quadrupled over the past 30 years, and this year alone there were 72 territorial pairs of Bald Eagles in the state, where there were none in 1987.

In order to protect the birds we see and hear in our backyards, forests, mountains, and seacoast, NH Audubon's Environmental Policy Committee engages with state and federal policymakers to advocate for birds and their habitats. Audubon testifies on priority bills on subjects such as water quality, wetlands protection, renewable energy, and wildlife and fisheries bills. We provide input on policy, like Fish and Game's State Wildlife Action Plan or Forest Management Plan. The Environmental Policy Committee works with partners such as the Society for the Protection of New Hampshire Forests, The Nature Conservancy, Appalachian Mountain Club, and Fish and Game to inform



Wood Duck populations have dramatically increased as a result of policies that benefit waterfowl. Photo by Walter Keane.

legislators, promote priority bills, and defeat counterproductive bills. Audubon's volunteers support the ongoing survey and monitoring efforts to ensure policies' effectiveness.

Many of the bird species that breed here migrate out of state or internationally. Populations are thus responsive not only to state and local conservation, but also to national and international regulation of habitat loss and land use. At the federal level, NH Audubon works with our members of Congress to describe the impacts of federal legislation on our local birds, ensure funding for conservation in New Hampshire, and represent members' interests in bird conservation. NH Audubon also regularly submits comments on federal policy changes, such as recent rule changes to the Endangered Species Act. NH Audubon is an active partner with groups such as the American Bird Conservancy, which work predominantly at the federal and international levels.

Ensuring good policy requires citizen participation. You can spread the word among family, friends, and colleagues about the dramatic decline of many of our iconic bird species. Inspire hope by sharing success stories, like that of the eagle, and mention the importance of policy in determining species' fate. Check out the policy page of our website, which will be updated soon with information on priority bills that the legislature will be considering in the coming year. For any bills that particularly interest you, attend hearings, or contact your state and federal representatives to thank them for (or ask for) their support. As elections approach, ask candidates of all parties what their plan is to protect biodiversity, and share what you hear. The grim report about the loss of three billion American birds in the last 50 years is a call to action. History shows that we have cause for optimism if we act, because we can devise solutions that work to reverse declines and preserve our natural heritage so future generations never have to endure a silent spring.

Nisa Marks is a member of NH Audubon's Environmental Policy Committee. A Henniker resident, she has worked as a biologist for the U.S. Fish and Wildlife Service and is currently pursuing a Masters in government from Harvard Extension School.

* (04 Oct 2019, Vol. 366, Issue 6461, pp. 120-124; also <https://www.3billionbirds.org/>)

Partnerships

by Doug Bechtel

We couldn't accomplish the level of success we do at NH Audubon without partnerships. It follows the seemingly simple concept that many hands make light work. In fact, we have identified *Collaboration* as one of our four organizational best practices. We state simply that NH Audubon must "engage in partnerships with other organizations, agencies, and businesses to accomplish shared goals and objectives."

New Hampshire Fish and Game

Over the years one of our closest partnerships is with a program within the New Hampshire Fish & Game Department. The NH Nongame and Endangered Wildlife Program focuses on wildlife species that are declining, rare, and are generally neither hunted nor fished. The supervisor of this program, Mike Marchand, agrees:

For many years, the Nongame & Endangered Wildlife Program and NH Audubon have partnered on a number of important bird conservation initiatives. NH Audubon has been a critical partner in the development, revision, and implementation of NH's Wildlife Action Plan. Today, we are excited to apply our history of successful partnership to conserve additional species like Cliff Swallows and Northern Harrier.

Pine Barrens Specialists

Two of the uncommon species tracked by NH Audubon and listed by the NH Nongame Program are Whip-poor-wills and Common Nighthawks. Both species are very rare in New Hampshire, and are restricted to uncommon habitat types. Common Nighthawks also nest on flat gravel roofs in cities, but their natural habitat is in the pine barrens. The Nature Conservancy New Hampshire program (TNC) has protected hundreds of acres of pitch pine-scrub oak barrens where they occur in New Hampshire, and they are managing it in a way that is beneficial for both of these rare birds.

Enter Jason Mazurowski, a Master's Degree candidate at the University of Vermont's (UVM) Field Naturalist Program. In a great collaboration between UVM, TNC, and NH Audubon, the strengths of each program enabled a study that no one party could do on their own. TNC provided housing in the area and Jason spent many mosquito-filled nights looking for nighthawk nests and calling whips. He spent his early mornings conducting songbird surveys for target pine barrens species. The purpose was to relate bird response to management practices used to maintain pine barrens habitat. His work confirmed many additional nesting nighthawks in the pine barrens, contributing vastly to our existing Project Nighthawk study, thanks to his many follow-up visits to active sites. He measured the habitat around each nighthawk nest, identified the features nighthawks preferred and made recommendations for TNC's management in the pine barrens.

Jeff Lougee, Director of Stewardship and Ecological Management at The Nature Conservancy, put it this way:

We know that the Ossipee Pine Barrens provide critical habitat for several bird species that are exceedingly rare in New Hampshire, and we need good monitoring data to help us understand how our prescribed fire habitat management is affecting these species. NH Audubon has been helping us to do this with a number of bird species in the pine barrens for over a decade now, and the project focused on Common Nighthawks is the latest iteration of this partnership. It was incredibly valuable to be able to partner with NH Audubon given the expertise that staff biologist Becky Suomala has with this species. We were able to infuse a lot of information and data about the overall management history at the site, while NH Audubon provided critical expertise on the current state of knowledge on Common Nighthawks in New Hampshire, and the best methods for conducting surveys.

Schoolyard Habitats

We also have a long history of working with the US Fish and Wildlife Service (USFWS). Funding from USFWS allows us to train teachers around New Hampshire to implement nature-based projects at their schools. Both USFWS and NH Audubon continue to commit to teaching children - connecting them to nature in ways that are tailored to the schools' needs and limitations. USFWS Wildlife Biologist Ted Kendziora explains:

Being a partner with NH Audubon since 2015 has enabled the US Fish and Wildlife Service to provide funds and technical assistance to over 40 schools throughout New Hampshire. NH Audubon was influential in starting the collaborative New Hampshire Partnership for Schoolyard Action Grants. The Action Grant team consists of partners from the US Fish and Wildlife Service's New England Field Office, NH Audubon, New Hampshire Fish and Game, and NH Project Learning Tree. NH Audubon's dedication to environmental education brings an important resource to the Service's Regional Priorities to Connect People to Nature.

Rusty Blackbirds

NH Audubon leads a project monitoring one of New Hampshire's rarest birds, the Rusty Blackbird. It only lives in far northern Coos County, and its numbers are dwindling fast. Like many rare species, Rusty Blackbirds may be an indicator of other environmental impacts, such as climate change. Carol Foss has been leading the project for many field seasons:

Through participation in the International Rusty Blackbird Working Group, NHA's Rusty Blackbird project partners with collaborating biologists in Canada and Alaska as well as in southeastern states where the species overwinters. Here in New England, we partner with the University of Maine, the Maine Department of Inland Fisheries and Wildlife, the US Fish and Wildlife Service, and multiple cooperating landowners in our studies of the species' breeding ecology.

There are so many examples like these that demonstrate how shared goals and overlapping missions result in connecting people to nature. We all do this better together, and we can't thank our partners enough. If you get the chance, make sure to thank them too!

Annual Meeting at Newfound Lake

New Hampshire Audubon hosted its 105th Annual Meeting at Camp Pasquaney in Hebron on September 21. Members and friends filled the meeting hall for a day of celebration and connection. Photos by Dyanna Smith unless noted.



Hawkwatchers enjoyed the view from Little Round Top in Bristol on a field trip led by Phil Brown. Photo by Carol Foss.



Keynote speaker, Ben Kilham, shared his life's work rearing orphaned Black Bear cubs and returning them to the wild.



Christian Robinson and Madeline Champlin lead a group exploring Paradise Point (top), stopping to talk about the status of Bald Eagles in the area (above).



Carol Foss presented the new Motus research program, tagging Rusty Blackbirds in the North Country, and installing our first receiving tower.

2019 Conservation Awards



The Goodhue-Elkins Award was given to Iain MacLeod for outstanding contributions to our knowledge of New Hampshire birds. For over 30 years Iain has been involved in New Hampshire birding and especially with raptors, one of his life's great passions.



The President's Award was given to veterinarian Dr. Michael Dutton for outstanding commitment to NH Audubon's mission and success. Dr. Dutton has provided invaluable service to our captive wildlife, providing medical care and treatment of our raptors and other animals.



The Volunteer of the Year Award was presented to Janice Hood, an active volunteer at the Massabesic Center since the spring of 2006, and instrumental in the creation of our annual Earth Day Festival.



The Tudor Richards Award was presented to Ben Haubrich for working tirelessly and effectively for conservation in the Granite State. The sweep of Ben's land protection work, land stewardship, advocacy, and knowledge of the natural world is broad and inspiring.



Winners List

Wild NH photo contest

From 270 entries, here is the winning list, by category, from this year's Wild NH Photo Contest and fundraiser for Massabesic Center.

Best in Show: *Untitled* by J. Bonin (right)

Birds: 1st—*Untitled* by J. Bonin; 2nd—*A Rudolph Impersonator* by Kathleen Curran; 3rd—*Common Loon* by Ralph Fletcher and *Dinner to Go* by Susan Hershey

Wild Plants: 1st—*Blue Flower in a Droplet of Morning Dew* by Eric Simon; 2nd—*Iced-encased Pinecones* by Judi Lindsey; 3rd—*Unfolding Details of a Fern* by Kathleen Curran

Wildlife: 1st—*Marsh Skimmer Ballet* by Ralph Fletcher; 2nd—*Cub in the Rain* by Morgan Doyle and *A Cool Drink on a Hot Summer Day* by Kathleen Curran; 3rd—*Bobcat in the Snow* by Jane Sharpio

Landscape: 1st—*Boot Spur* by Drew Groves; 2nd—*Winter Reflection* by Drew Groves; 3rd—*Autumn in the Notch* by Susan Hershey



Youth: 1st—*Stinkbug Marco* by Forrest Simon; 2nd—*Ruby Throated Hummingbird* by Forest Simon; 3rd—*Pristine* by Ian Smith

People in Nature: 1st—*Two Boats* by Susan Hershey; 2nd—*Reflection* by Jennifer Pickard; 3rd—*Audubon Preserve, Deering* by Eric Sumon

Visit Massabesic Center to see the photo exhibit and put in a bid for your favorite during the silent auction. Bids are ongoing until the closing reception on December 7.

Visit our website to see a gallery of all the winning entries.

A Tax-Saving Way to Help NH Audubon

by Sean Gillery

If you are 70½ years old or older, you can take advantage of a simple way to benefit NH Audubon and receive tax benefits in return. You can give up to \$100,000 from your IRA directly to a qualified charity such as ours without having to pay income taxes on the money. This popular gift option is commonly called the IRA charitable rollover, but you may also see it referred to as a qualified charitable distribution or QCD for short.

This law no longer has an expiration date so you are free to make annual gifts to NH Audubon this year and well into the future.

Why Consider This Gift?

- ✿ Your gift will be put to use today, allowing you to see the difference your donation is making.
- ✿ You pay no income taxes on the gift. The transfer generates neither taxable income nor a tax deduction, so you benefit even if you do not itemize your deductions.
- ✿ If you have not yet taken your required minimum distribution for the year, your IRA charitable rollover gift can satisfy all or part of that requirement.

Simply contact your IRA administrator before December 31 to begin the transfer. If you have any questions about making an IRA Charitable Rollover gift, please contact me at sgillery@nhaudubon.org or 224-9909 ext. 307. I would be happy to assist you and answer any questions you might have about this, or other year-end giving opportunities.



TRUMPETER SWAN STAYS IN NH

The Trumpeter Swan that made headlines when it was first seen at NH Audubon's Abe Emerson Marsh in April, stayed for many months. This was the first time a Trumpeter had been documented in the state since 1784 and it garnered a lot of attention. Author Diana Stephens wrote an article about this swan and the story of the Trumpeter's near extinction and comeback. It will appear in the Spring 2019 issue of *New Hampshire Bird Records* but we're offering a free, online version now at <https://nhbirdrecords.org/>.

Subscribe to *New Hampshire Bird Records* and receive the printed issue with this, and many other fascinating stories, and support bird conservation at the same time!

In Memorium

BRUCE SCHWAEGLER

In late October, the environmental conservation community lost a heroic leader, and NH Audubon lost a good friend. Bruce Schwaegler passed away after a brief illness. Bruce was NH Audubon's Board of Directors Chair twice in the early 2000's, and served as our Interim President for seven months as a volunteer in 2006.

Bruce (and his surviving wife Sarah) exemplified New Hampshire environmental leadership. Both were committed to a broad range of conservation issues, including land protection, forest stewardship, wildlife habitat, rare plant monitoring, and conservation. Bruce and Sarah protected the shoreline of Indian Pond in Orford where they have lived since the 1980's. Bruce served on numerous boards and was selfless in his contribution to advancing the mission of many environmental causes.

We feel this loss deeply. He not only contributed his time, expertise, and



Bruce Schwaegler, 2014.

resources to conservation causes, he was also a true example of how to live a life dedicated to nature. He was an ally, an advisor, and a good friend.

BILL HARRIS

We are sad to report the passing of Bill Harris of Nashua, NH at the age of 102 years old. He and his wife May (deceased) were active members of the Nashaway Chapter. Bill was also an avid birder who sent in many bird reports to *New Hampshire Bird Records*.

Thoughtful gifts were made by the following individuals and groups in honor of friends and relatives. These gifts are a valuable contribution to the work we do for wildlife and conservation:

Memorial Gifts

In memory of Lee M. Alexander:

Everett F. Leonard

In memory of Nancy H. Black:

Ruth S. Chevion

In memory of Gordon R. Blakeney:

Judith W. Ashton

In memory of Nancy Boyd:

Deb A. Koltlookian

Leslie Ari

John R. Hendee

In memory of Persis W. Campbell:

Barry L. Brown

In memory of Hagen D. Esty-Lennon:

Grazyna Medynski

In memory of Linnea Ficek:

Lori Falling

In memory of Franklin Fillmore:

Marlyn Curtin

Duane Dunn

Mehgan Boudreau

The Fillmore Family

In memory of John L. Gleason:

Cynthia J. Fazzini

In memory of Pamela Haggarty:

Louise W. Yacovone

In memory of Marion Marcoux:

Sandra Pinkham

Sally Fannion

Sue Taylor

Therese Robitaille

William Kelton

Ann Conner

Horizon Solutions

In memory of Bradley L. Mark:

Peter S. Bartlett

Meredith S. Langevin

Nicole Pennell

Marilyn J. Mark

In memory of Sally S. Moore:

Susan M. Baldini

In memory of Jean F. Nichols:

Jay E. Swanson

In memory of Brian Shamis:

Diane Shamis

In memory of David F. Sweeney:

Helen L. Sweeney

Honorary Gifts

In honor of Richard S. Aaronian:

Stephen B. Wineberg

In honor of Brendan Gourley:

Lisa Bourcier

In honor of Angela Krysiak:

Linda Krysiak

In honor of The Morgan Family:

H. Meade Cadot

In honor of Jeffrey Perkins:

Andi Jones

Business Sponsors and Foundation Supporters

NH Audubon is proud to be supported by the following organizations who contributed \$500 or more in the last quarter in support of our programs:

136th Joe English Scouts Baden-Powell Service Association

Environmental Action Fund

Chippers

Annual Gathering and Meeting Sponsorship

Franklin Savings Bank

All in for Audubon Campaign

John Cooper Hubbard Audubon Campership Fund

Camperships

Kiwanis Club of Manchester

*Beech Street Elementary School
Environmental Education
Programming*

New Hampshire Charitable Foundation

Camperships

NH Council on Developmental Disabilities

*McLane Pollinator Brick Pathway
Leveling*

The Norwin S. and Elizabeth N. Bean Foundation

*Massabesic Center Roof
Replacement*

Pasquaney Trust

Ash Cottage Renovations

St. Paul's School

Enchanted Forest



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We are working to streamline our mailing list. If you would prefer to receive electronic communications from NH Audubon, please call 603-224-9909 or email nha@nhaudubon.org.

10am-3pm
McLane Center
Concord

Holiday Craft Fair

December 14

ornaments
pottery
beeswax candles
nature photography
body care products
glass jewelry
fleece throws
quilted items
greeting cards
scroll saw puzzles
clocks
chocolate
and much more!

Visit McLane Center for a special holiday shopping experience. The Holiday Craft Fair features handmade crafts by local artisans plus a raffle, kid's activities, refreshments, and live birds.

Book reading and signing by author Franklin Black: *Petey Porcupine Climbs Mt. Washington*.

Members receive 20% off Nature Store purchases during the fair.

NH AUDUBON • 84 SILK FARM ROAD, CONCORD NH • NHAUDUBON.ORG • 603-224-9909

NH Audubon Winter Afield 2019-2020 • Calendar of Events

Events are free unless noted with \$, FT = Field Trip, SFT = Sanctuary Field Trip, R = Registration Required.



DEC

Wee Wonders: Feathered Friends

Dec 4 and Dec 11, 10-11:30am • \$/R • Massabesic Center, Auburn

Junior Explorers: Can Your Tree Win Adaptation Jeopardy?

Dec 4, 10-11:30am • \$/R • Massabesic Center, Auburn

Life and Survival of Winter Birds: Winter Bird Survival and Feeding

Dec 4, 8-9:30pm • \$/R • McLane Center, Concord

Water and Woods Art Exhibit Opening Reception

Dec 5, 5-7pm • McLane Center, Concord

Artist: Kathleen H. Peterson

Life and Survival of Winter Birds: Bird ID & Birding at Silk Farm Sanctuary

Dec 7, 10-11:30am • \$/R • McLane Center, Concord

Winter Tree and Plant ID

Dec 7, 10-11:30am • \$/R • Massabesic Center, Auburn

Wild NH Silent Auction & Fundraiser

Dec 7, 12:30-2pm • Massabesic Center, Auburn

The Connecticut: New England's Great River

Dec 10, 7-8:30pm • Mascoma Chapter, Hanover

Presenter: Adair Mulligan, Hanover Conservancy

Nashua-Hollis Christmas Bird Count Preparation**

Dec 10, 7-9pm • Nashaway Chapter, Nashua

Some Like it Hot: Birding Costa Rica from the Mountains to the Pacific Rain Forest

Dec 11, 7:30-9pm • Seacoast Chapter, Rye

Presenters: Jim Sparrell and Katie Towler

Holiday Craft Fair

Dec 14, 10am-3pm • McLane Center, Concord

Local artisans, crafts, and member discounts at Nature Store

Annual Littleton Christmas Bird Count**

Dec 15 • Ammonoosuc Chapter FT, Littleton

Concord Christmas Bird Count**

Dec 15, all or part-day • R • Capital Chapter FT, Concord

Wee Wonders: Chilly Changes

Dec 18, 10-11:30am and 1-2:30pm • \$/R • Massabesic Center, Auburn

Junior Explorers: Your Tree Topic - Presentations & Party

Dec 18, 10-11:30am • \$/R • Massabesic Center, Auburn

Remarkable Reptiles - with Live Animals!

Dec 21, 1-2pm • \$/R • Massabesic Center, Auburn

Annual Nashua-Hollis Christmas Bird Count and Dinner**

Dec 28, all or part-day • \$/Dinner • Nashaway Chapter FT

JAN

Wee Wonders: Hibernation Station

Jan 8 and Jan 15, 10-11:30am • \$/R • Massabesic Center, Auburn

Junior Explorers: Ready, Set, Adapt!

Jan 8, 10-11:30am • \$/R • Massabesic Center, Auburn

Columbia: The World's Birding Hotspot

Jan 8, 7:30-9pm • Seacoast Chapter Program, Rye

Presenter: David Donsker

Mid-Winter Bald Eagle Survey, Merrimack River, Hudson to Manchester

Jan 11, 8am-12pm • Nashaway Chapter FT, Nashua

Animal Tracking Workshop - Beginner

Jan 11, 1-2:30pm • \$/R • Massabesic Center, Auburn

Artist Reception: Painting and Printmaking Exhibit – A Glimpse of NH

Jan 11 (Jan 18 snow date), 1-3:30pm • Massabesic Center, Auburn

On the Trail of the Bicknell's Thrush in Cuba

Jan 14, 7-8:30pm • Mascoma Chapter, Hanover

Presenter: Chris Rimmer, VT Center for Ecosystem Studies

Penguins, Pardalotes and Pademelons: Seeing Australia While Avoiding the Deadlier Species

Jan 16, 7-8:30pm • Lakes Region Chapter, Moultonborough

Presenter: Kurk Dorsey, UNH History Dept.

Winter Birding on the Merrimack

Jan 18, 8:30-11am • Nashaway Chapter FT, Nashua

Winter Bird Walk

Jan 18, 10-11:30am • \$/R • Massabesic Center, Auburn

Wee Wonders: Arctic Adventures

Jan 22 and Jan 29, 10-11:30am • \$/R • Massabesic Center, Auburn

Junior Explorers: Tracks, Scat, and All of That!

Jan 22, 10-11:30am • \$/R • Massabesic Center, Auburn

Winter Survival Program

Jan 25, 10am-3pm • \$/R • Massabesic Center, Auburn

Ongoing Events

Water and Woods Art Exhibit

Through Jan 8 • McLane Center, Concord

Dec 5, 5-7pm: Opening Reception

Artist: Kathleen H. Peters

Wild NH Photo Contest Exhibit

Through Dec 7 • Massabesic Center, Auburn

Dec 7, 12:30-2pm: Silent Auction & Fundraiser

Painting and Printmaking Exhibit: A Glimpse of NH

Dec 12-Feb 6 • Massabesic Center, Auburn

Jan 11, 1-3:30pm: Artist Reception

Artists: Elaine Farmer, Patty Mynczywor, Hannah Phelps, and Gisele Thompson

Snowshoe Rentals

Dec 4-Mar 4 • \$ • Massabesic Center, Auburn

Weds-Sat 9am-2pm

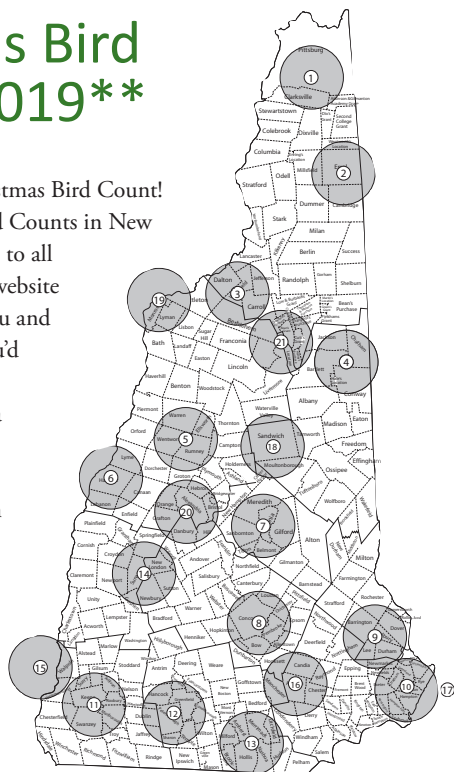
****Christmas Bird Counts 2019****

It's time for the annual Christmas Bird Count! There are 21 Christmas Bird Counts in New Hampshire, and they are open to all interested birders. Check the website link below for a count near you and contact the person listed if you'd like to help.

Each count takes place in a designated "count circle" on a specific day. The coordinator assigns teams to count birds in each section of the circle, but if you live in the circle you can simply count the birds in your backyard. Each count's survey area stays the same from year to year, comprising a circle fifteen miles in diameter around a central point.

International in scope, the Christmas Bird Count is organized and compiled by the National Audubon Society. Each count picks its own particular survey day between December 14 and January 5. So join in a 100-year-old tradition and have some winter fun!

For a complete list of Christmas Bird Count dates and locations:
<https://nhbirdrecords.org/new-hampshire-christmas-bird-count>



FEB

Florida Everglades Trip

Feb 5-13 • \$/R • Merlin Wildlife Tours
 Leader: Bob Quinn

Wee Wonders: Science of Snowflakes

Feb 5 and Feb 12, 10-11:30am • \$/R • Massabesic Center, Auburn

Junior Explorers: Winter Birds

Feb 5, 10-11:30am • \$/R • Massabesic Center, Auburn

Backyard Winter Bird Survey: You Can Help!

Feb 8 & 9 • Statewide

North Country Winter Finch Trip

Feb 8, 8am-5pm • Seacoast Chapter FT, Gorham

Full Moon Hike

Feb 9, 6-8pm • \$/R • Massabesic Center, Auburn

Mascoma Chapter Program - TBA

Feb 11, 7-8:30pm • Mascoma Chapter, Hanover

Citizen Scientist Monitoring of Osprey Distribution and Reproductive Success Along the Yellowstone River in Montana

Feb 12, 7:30-9pm • Seacoast Chapter Program, Rye
 Presenter: Marco Restani, Wildlife Biologist, NorthWestern Energy MT

Annual Wilder Dam Eagle Watch

Feb 15, 10am-12pm • Mascoma Chapter FT, Wilder, VT

The Romantic Habits of Animals

Feb 20, 6:30-8pm • \$/R • Massabesic Center, Auburn

Wintering Owls

Feb 22, 8am-3pm • Nashaway Chapter FT, Salisbury, MA

Animal Tracking Workshop - Intermediate

Feb 29, 1-2:30pm • \$/R • Massabesic Center, Auburn

Visit the Nature Store for all your holiday gift-giving needs! There is always something new to find, and this season we have lots of nature and bird-related toys, games, and books. You'll find natural and locally-made beauty products, items for the kitchen, and lots of new NH Audubon gear.

Stop by McLane Center M-F 10am-5pm and Saturdays 10am-4pm.

Do your kids love snow and nature?

Kids ages 6-12

Then February Vacation Camp is for them!

**Massabesic Center in Auburn
 or McLane Center in Concord**

February 24-28

Visit nhaudubon.org for details

Venture outside for games, fort building, tracking wildlife, exploration, and snow fun!

Visit with NH Audubon animals, create craft and nature projects.

Join us for a single day, several days, or the whole week.

