Bird Observer

VOLUME 48, NUMBER 3 JUNE 2020

HOT BIRDS

Marj Watson, after photographing a flock of Glossy Ibis in Newbury near Cherry Hill Reservoir, noticed that one of the birds had pinkish knees. She alerted Shilo McDonald, who was still birding in that area, and Shilo confirmed that the flock included a **White-faced Ibis**. Reports have continued through press time from the Ipswich-Rowley-Newburyport-Plum Island vicinity. A few birders later reported two White-faced present, and even a possible hybrid, in the midst of hordes of Glossy Ibis frequently exceeding 150 birds. Shilo McDonald took the photograph on the right.

Many Massachusetts records of **Purple Gallinule** are dull-colored immature birds in the fall, but the state hosted not one, not two, but *three* spectacularly full-plumaged birds this spring. All were kept initially under wraps out of concern for crowds gathering in violation of virus control recommendations, but word eventually leaked out. One of the birds was originally found on April 21 by Nancy Villone, at Dennis Pond (which is technically in Yarmouth and not Dennis). Another turned up in the Manomet vicinity; it came to light via a May 15 eBird post by Mark Faherty, who mentioned that it had been present for a while. The third was photographed and posted second-hand to the "Birding Nantucket" Facebook group on April 28. There have been no further updates from Nantucket, but the other two birds were still being reported at press time. Mark Faherty took the photo on the left.

Evan Dalton, staff member for Manomet Inc., was conducting a regular survey of their property when he encountered a **MacGillivray's Warbler**. While the species occurs in Massachusetts fairly regularly in the fall, this was the first record ever in the spring, not just for Massachusetts but for the entire east coast north of Georgia. Sadly, with the property closed to visitors due to the COVID-19 pandemic, only Manomet staff were able to see it. Even they only saw it on the day of its initial discovery, it has not been reported since. Sean Williams took the photo on the right.

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Cover: Yellow-throated Vireo by John Sill © Massachusetts Audubon Society. Courtesy of the Museum of American Bird Art.

Bird Observer

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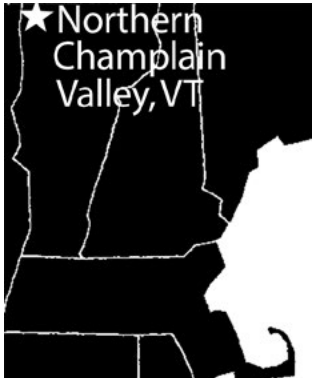
Searching for Gold: Where to Find *Vermivora* Warblers in Northern Vermont



Steven Lamonde

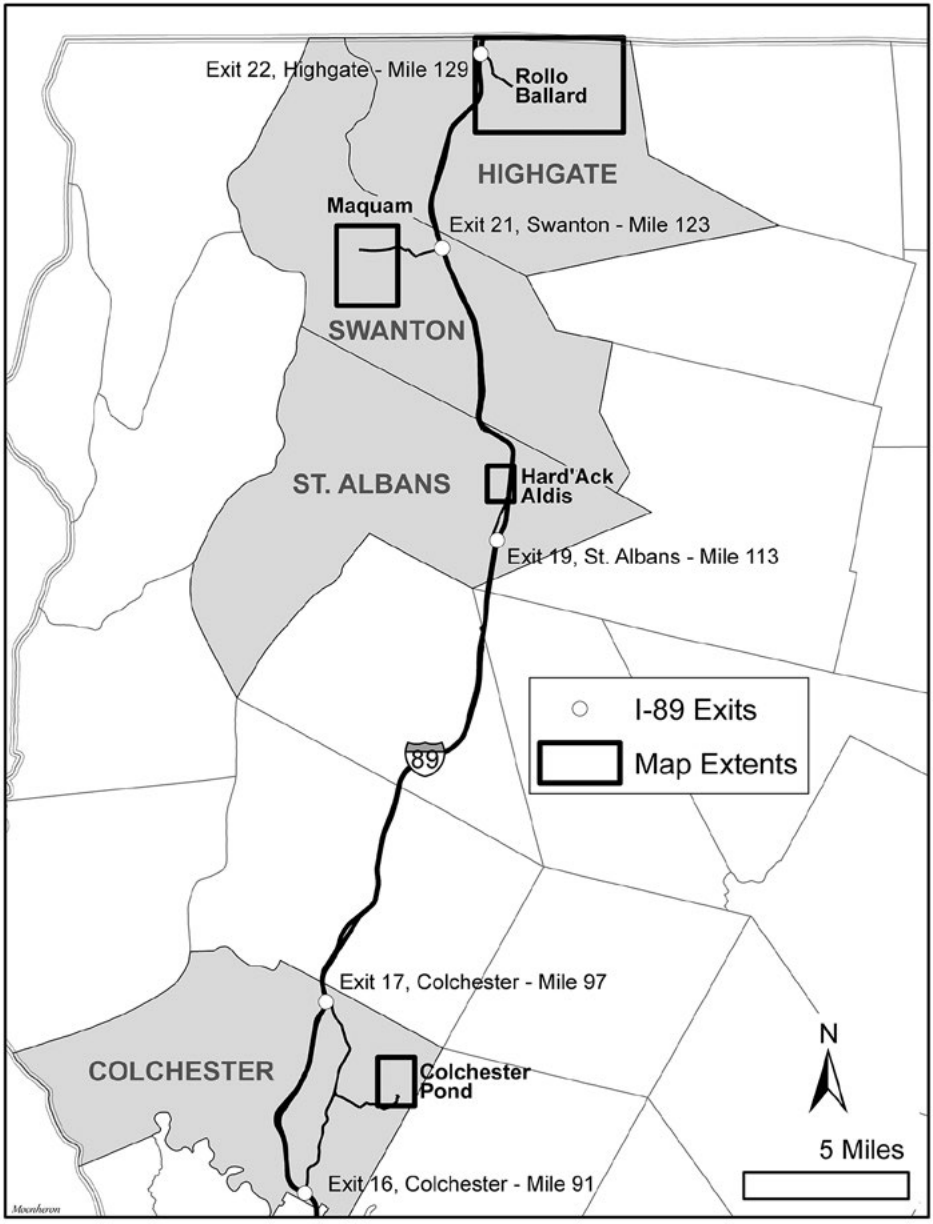
If you have searched for Golden-winged Warblers (*Vermivora chrysoptera*) in Vermont, chances are you have probably heard of Geprags Community Park in Hinesburg. This is arguably Vermont's most famous site to see Golden-winged Warblers, Blue-winged Warblers (*Vermivora cyanoptera*), and their hybrids, collectively known as the "winged-warbler" or *Vermivora* complex, after their genus name. Roughly 93% of winged-warblers reported to eBird in Vermont are documented at, or south of, Geprags Community Park, which has left the northern end of the Champlain Valley, the area above Burlington and west of the Green Mountains, underexplored. While over 90% of the northern Champlain Valley is privately owned, four publicly accessible locations annually host breeding winged-warblers: Colchester Pond Natural Area (Colchester), Aldis Hill and Hard'ack Recreation Area (St. Albans), Maquam Wildlife Management Area (Swanton), and Rollo and Ballard roads (Highgate).

It is best to visit these places between the latter half of May and June, when winged-warblers are easiest found. The warblers arrive in Franklin County as early as the first week of May, and springtime detections of these birds peak in the last two weeks of May. They continue to sing through June, gradually decreasing in how often they sing and eventually falling silent during the first two weeks of July, adding substantial challenge to locating them. While difficult to observe, these birds stay another month in the region, taking time to raise young and prepare for fall migration. Virtually all winged-warblers leave northern Vermont by mid-August, having spent two-and-one-half to three-and-one-half months on their breeding grounds.

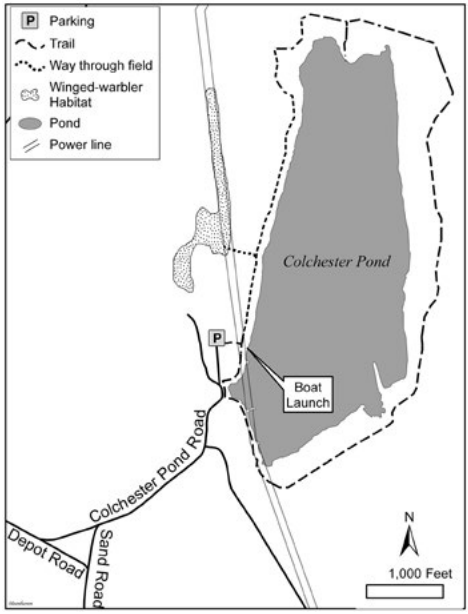
On any given day between mid-May and the end of June, you can best hear winged-warblers during the dawn chorus, which ranges from about 30 minutes before sunrise to three to four hours after sunrise. However, winged-warblers have been detected as early as 4:00 am and as late as 8:30 pm, so if you are running behind schedule it is not impossible to find them later in the day. Regardless of time of day, ticks, mosquitoes, and black flies are ubiquitous across the northern Champlain Valley May through July, so pant legs tucked into socks and insect repellent are recommended at all four sites.

Colchester Pond Natural Area, Colchester

Directions: From Interstate 89 (I-89), take Exit 17 if you are coming from the north or Exit 16 if coming from the south. Whichever exit you take, get onto US-2 heading toward VT-2A. This will be US-2 West from Exit 16 and US-2 East from Exit 17. Not more than 0.25 mile after turning on to Main Street/VT-2A East, you



Map 1. Northern Vermont Overview



Map 2. Colchester Pond Natural Area.

will pass The Village Scoop ice cream shop on your left. Keep this place in mind for a congratulatory treat after birding for winged-warblers at Colchester Pond. Continue driving on Main Street for 0.8 mile, and turn left (north) on East Road. After 0.6 mile, take the first right onto Depot Road, which becomes Colchester Pond Road near DJ's Tree Service & Logging business on the left. Pass over the railroad tracks, and continue for 0.3 mile, keeping left at the split to stay on Colchester Pond Road. After the split, continue another 0.2 mile, and take the first slight right to enter the access road to the parking area (44.550796, -73.125110).

Owned by the Winooski Valley Park District, the 693-acre Colchester Pond Natural Area attracts hundreds of visitors each year. Fishing, hiking, dog walking, and wildlife watching are popular activities along the three-mile trail that encircles the park's 182-acre namesake, Colchester Pond. Nearly 200 bird species have been documented on the property, which boasts good avian diversity year-round. In winter, Northern Shrike, American Tree Sparrow, and overwintering Eastern Bluebird occur regularly. In spring migration, grebes and shorebirds are not uncommon, and more than 25 warbler species can be found. From June through July, some 120 bird species breed in the property's diverse habitat, including Caspian and Common terns, American Bittern, Bald Eagle, Red-shouldered Hawk, Eastern Meadowlark, and Scarlet Tanager. Fall migration is particularly good for waterfowl; Tundra Swan, Long-tailed Duck, and Red-breasted Merganser have been highlights in recent years.

Although the trail completes a three-mile loop around the pond, the winged-warbler habitat is located within 0.4 mile of the trailhead. From the parking lot, head east toward Colchester Pond, following the trail downhill. Just before the dock at the end of the trail, turn left under the power lines. From here, the trail continues just under 0.25 mile along the west shore of Colchester Pond. After passing a tree line on the left-hand side of the trail, turn uphill through the hayfield to the power line, about 120 yards away. Take care to stay close to the tree line to reduce the risk of stepping on a Bobolink or Savannah Sparrow nest, since they prefer nesting toward the center of a field.

Under the power line, you will see an ATV trail for power line company employees, which you can follow north under the power line. You can find winged-warblers, Prairie Warblers, Field Sparrows, Indigo Buntings, and other scrub/shrub-dwelling birds along the first 0.4-mile of this trail before the scrub/shrub transitions

Ideal winged-warbler habitat contains a mixture of herbaceous ground cover, dense scrub/shrub, interspersed young trees, and adjacent mature deciduous forest. All photographs by the author.

to mostly herbaceous cover. From the start of the scrub/shrub habitat at the edge of the field, winged-warblers can also be found to the west and southwest. There are not trails through this section of habitat west of the power line, but the vegetation is sparse enough in some areas for relatively easy passage if you would prefer to walk around rather than conduct a stationary point count to listen for winged-warblers. It could take as little as 15 minutes from leaving the car to detect a winged-warbler, but an hour or two would not be unexpected if wind, precipitation, or time of day is against you. The recommended time is 40 minutes to 2 hours, longer if you want to go around the pond.

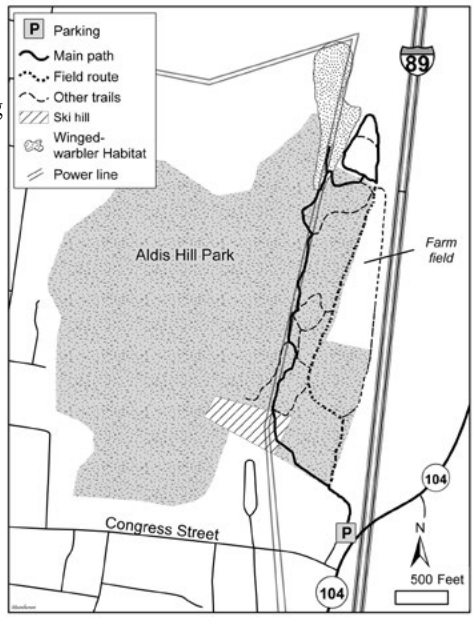
Aldis Hill and Hard'ack Recreation Area, St. Albans

Directions: From Interstate 89, take Exit 19 toward St Albans/US-7/VT-104. Leaving the exit ramp, take the first right to head north on VT-104. You will pass a Maplefields store and gas station on the right as you make the turn. Drive north 1.2 miles, and turn left (west) onto Congress Street. If you find yourself driving over the Interstate, you have gone too far. Once on Congress Street, take your first right (north) to enter Hard'ack recreation area. The entrance is paved with gravel, and parking (44.813342, -73.064462) will be on your right across from the dog park.

The combined property of Aldis Hill (130 acres) and Hard'ack Recreation Area (100 acres) sits in the northeast corner of St. Albans, just west of I-89. A local historical gem, the park has a small tow-rope ski and sledding hill that began operating in the 1960s, as well as a stone monument memorializing the site where the last gray wolf in Franklin County was killed in 1839. A six-mile maze of unmarked trails traverses Aldis Hill. These trails are used by hikers, mountain bikers, and cross-country skiers. eBird

lists 88 species for the park, yet fewer than 50 eBird checklists have been submitted here to date. Rough-legged Hawks, Brown Thrashers, Bohemian Waxwings, Mourning Warblers, and, of course, the V*ermivora* warblers are highlights at this location. No doubt this property list will continue to grow the more often birders visit.

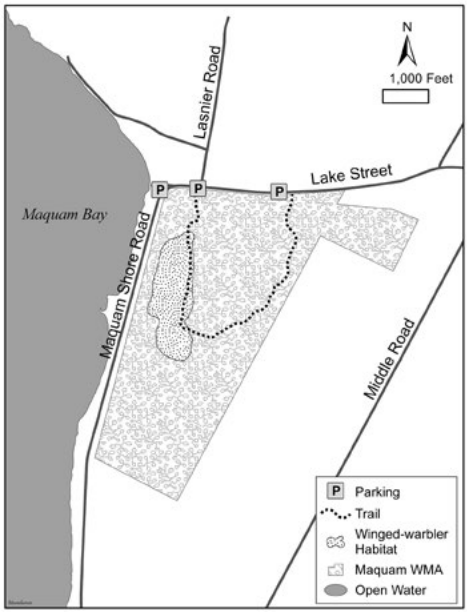
The best winged-warbler habitat at Aldis Hill and Hard'ack Recreation Area is limited to a roughly nine-acre area just north of the park. Most of this prime habitat is on private property; however, the southern end dips into the park and is accessible from some of the park's trails. Additionally, you can sometimes find winged-warblers using the power line corridor that stretches 0.5 mile north from the ski slope. To reach this area from the parking lot, follow the gravel road north past the gate, and continue until you reach the ski slope. Keeping the power lines above you and the hum of vehicles on I-89 to your right, enter the trail system and head north. Do your best to stay in or near the power line, and keep walking north until the trail reverses sharply to the south and there are no other trails heading north from this point (44.822739, - 73.065295). This is the best location within the power line corridor and on a trail to find winged-warblers. For more adventurous seekers, a game trail meanders north from the mowed path. You can follow it for several dozen meters, getting closer to the prime habitat roughly 400 feet farther north.



Map 3. Aldis Hill and Hard'ack Recreation Area.

Pure Golden-winged and Blue-winged warblers have been documented at Aldis Hill, as well as the more common Brewster's Warbler hybrid and this rarer Lawrence's Warbler hybrid.

Alternative to heading off-trail, you can sometimes hear winged-warblers from the western edge of the northernmost field of Hard'ack Recreation Area. To get here from the power line corridor, head east toward the highway, then take the first left. Follow this trail around the field, back toward the power line. The tall, unmanicured hedgerow at the western edge of this field can make viewing into the winged-warbler habitat difficult, so be sure to listen as best as possible. Traffic noise from the highway can be challenging, so birding from this spot is recommended outside of morning commute times or on weekends. Fortunately, birding within the power line and forest is easier because the tall vegetation better



Map 4. Maquam Wildlife Management Area.

blocks sound from the highway. All told, you need about an hour to secure a good chance of detecting a winged-warbler on the suggested trails and two to four hours for the entire park.

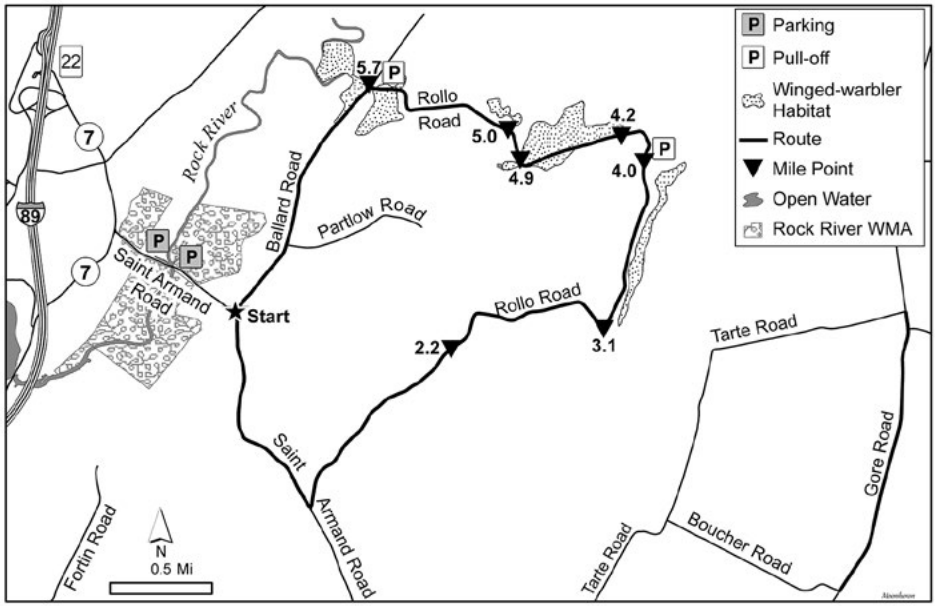
Maquam Wildlife Management Area, Swanton

Directions: From Interstate 89, take Exit 21 onto First Street/VT-78 West, and drive 0.8 mile into downtown Swanton. At the intersection across from the village green, take a right onto Grand Avenue and continue, following signs for VT-78. Cross the bridge of the Missisquoi River, and turn left onto South River Street. After a short 350 feet, take the first right onto VT-36/Lake Street, and continue for 1.4 miles. There is room for one car to park (44.920641, -73.160092) on the south side of Lake Road across from Lasnier Road, but some feel it is easier to park at the boat launch (44.920762, -73.156938) 0.1 mile farther down the road.

Currently managed by the Vermont Fish and Wildlife Department, this state-owned land was first purchased in 1953, and additions have been acquired as recently as 2002. Prior to European settlement, the Missisquoi band of the Abenaki tribe called this area home. Beaver, or *maquam* in Algonquian, can still be found in the northern part of the Maquam Wildlife Management Area (WMA), which lies north of route VT-36. The southern Lampman parcel consists of 482 acres of upland forest, patches of which are managed for American Woodcock, Ruffed Grouse, and white-tailed deer. Hunting is allowed at the WMA, but the only season that overlaps with winged-warbler breeding is the turkey season, May 1–31.

Some 124 bird species have been documented to eBird at Maquam WMA, a hotspot it shares with Swanton Town Beach, which is located across VT-36 from the northwest corner of the management area. A well-maintained boat launch offers good views of waterfowl and shorebirds during spring and, especially, fall migration. Black Terns have been reported along the shore of Lake Champlain south and north of the beach, and this species is an expected next addition to the location list. Within the WMA itself, the songbird mix is typical of northern hardwood forests. What sets this site apart from similar-looking places east of the Green Mountains is the presence of winged-warblers.

To access the WMA from the parking spot or boat launch, head south past the gate and down the slightly overgrown trail. Long pants and insect repellent are strongly recommended when exploring this ungroomed trail because biting insects can be



Map 5. Rollo Road and Ballard Road loop.

expected. About 0.2 mile from the gate, the trail passes through several re-foresting clearings, each of which possesses suitable habitat for winged-warblers: herbaceous groundcover, scrub/shrub bushes, and adjacent deciduous forest. Winged-warblers establish territories along this 0.5-mile section of trail, which eventually turns west and north back toward VT-36. This eastern half of the trail can be wet in the spring and is difficult to follow in some sections due to the amount of overgrowth. No clearings or patches of early-successional forest are present to support winged-warblers on this eastern half of the WMA, but other warblers, flycatchers, thrushes, tanagers, woodcocks, and grouse are plentiful. While just 30–40 minutes are recommended for finding winged-warblers at Maquam WMA, a full 1.5–2.5 hours allows for birding the entire trail loop and boat launch.

Rollo Road and Ballard Road loop, Highgate

Directions: From Interstate 89, take Exit 22, the last exit on I-89 before Canada. Make a right at the end of the exit ramp onto VT–7 South, and follow this for 0.7 mile before turning left onto St. Armand Road. Pass the Rock River Wildlife Management Area and associated marsh, and continue for 0.7 mile until you reach Ballard Road on your left. This intersection (44.993983, -73.066170) marks the start of the driving loop.

A mere 2,000 feet from the international border with Canada, this location is the northernmost site in Vermont where winged-warblers can be found with some regularity. Although neither public lands nor exceptional pull-off parking spots exist along Rollo Road and Ballard Road, the 7.1-mile driving loop presents suitable early-successional habitat close to the roadway, and automobile traffic is minimal due to the rural setting.

From the starting intersection of St. Armand Road and Ballard Road, you have the choice of driving north along Ballard Road or continuing straight on St. Armand Road and taking the first left onto Rollo Road. If time is limited, head north 1.3 miles to the intersection of Ballard and Rollo roads. This area, particularly the first 600 feet south of Rollo Road, is the best location for winged-warblers along the route. If you have 90 minutes on hand, birding the full loop is recommended. A good morning during the third or fourth week of May can yield more than 60 species of birds. The following directions and distances apply to driving the loop clockwise from the starting intersection.

Reset the trip odometer on your car at the intersection of St. Armand and Ballard roads. Drive 1.1 miles to Rollo Road, which will be on your left. Turn onto Rollo Road, passing several houses on both sides of the street. Be sure to check the feeders and yards for songbirds. Next, drive through a 0.6-mile stretch of forest. Wood Thrushes, Veerys, pewees, forest flycatchers, warblers, Baltimore Orioles, and Scarlet Tanagers all can be heard in this section. At 2.2 miles, Rollo Road opens to fields on both sides of the road, and a small pond is on the left. You can pick up some ducks and Great Blue Herons here. Drive around several bends in the road until it turns sharply left at 3.1 miles. The winged-warbler section of Rollo Road begins here and continues for 2.6 miles until you reach the intersection with Ballard Road.

As you drive this relatively straight section of Rollo Road, stop frequently for at least five minutes at a time to listen for winged-warblers along the east side of the road. At 4.0 miles, you will pass a farm on the right. Here, the winged-warbler habitat bordering the tree line to the east moves farther away from the road. However, at 4.05 miles, the road widens on the uphill just past the farm, allowing for a good pulloff to enjoy a view to the east over the farm. If the farm is not busy, this is a good place to scan the skies and fields for raptors, swallows, and grassland birds. Beyond the farm and around a bend to the left, another patch of winged-warbler habitat comes into view on the right side of the road. With the morning sun at your back on the last 1.5 miles of Rollo Road, lighting is ideal for photographing winged-warblers and other creatures near the road. Several stops are recommended between odometer readings 4.2–4.9, with another stop at 5.0 miles, where Rollo Road crosses a stream.

Continue until you reach the T-intersection with Ballard Road. There is room near the intersection to pull off the road to park. Getting out of the car here for 20–30 minutes is worthwhile. There is good winged-warbler habitat from the intersection to 600 feet back up Rollo Road as well as 600 feet south along Ballard Road. You can hear and see Bobolinks, Savannah Sparrows, and sometimes Eastern Meadowlarks in the hay fields north and northwest of the intersection. This spot concludes the Rollo Road and Ballard Road loop. If time allows, you will be rewarded by a nearby stops in Highgate at Rock River WMA and Gore Road. Rock River WMA boasts Least and American bitterns, Soras, Virginia Rails, and the odd Common Gallinule; Gore Road is one of the few places in Vermont that Upland Sandpipers can be found reliably. The section between Boucher Road and Tarte Road is most productive.

Vermont's Golden-winged Warblers: Half of the Vermivora Story

Steven Lamonde and Mark LaBarr

A male Golden-winged Warbler sports a temporary, lightweight nanotag that sends out a coded radio signal. Photograph by Steven Lamonde.

Just a few decades ago, Golden-winged Warblers were thought to have disappeared from all of New England. Thanks to recent volunteer surveys and scientific studies over the past eight years by Audubon Vermont and partnering institutions, a modest population of Golden-winged Warblers has been documented in Vermont's Champlain Valley. This near-endangered species' geographic range forms two disjunct populations—one in the central highlands of the Appalachian Mountains and one surrounding the Great Lakes. Breeding Bird Survey data exhibit a 66% decline in Golden-winged Warbler populations, making it one of the fastest declining songbird species in North America. Its at-risk population status promotes the bird as a flagship species for conservation of early-successional forest habitat, the preferred habitat of Golden-winged Warblers and other cohabitating species of greatest conservation need in Vermont, such as Brown Thrasher, Field Sparrow, Prairie Warbler, and Eastern Towhee.

To better understand the habitat of Golden-winged Warblers, we completed a series of GIS analyses for Audubon Vermont from 2016 to 2019 that located patches of early-successional forest throughout Vermont's Champlain Valley. Just as the human brain

Half of radio telemetry research is putting a radio tag on the organisms; the other half is tracking each tagged individual. Here, Steven (center) and two field technicians listen closely for nanotag radio signals. Photograph by Mark LaBarr.

can look at an aerial image and tell the difference between a building and a driveway or a grassy field and a forest, we trained a computer to identify the visual pattern of early-successional forest that Golden-winged Warblers prefer. Our goal was to find all the other places in the Champlain Valley that matched the same visual "fingerprint." After a few improving iterations, the analysis yielded approximately 10,000 acres of potentially suitable habitat spread across nearly 8,700 parcels, most of them privately owned. While 10,000 acres sounds like a lot, this area covers just 1.23% of the Champlain Valley—underscoring the general scarcity of early-successional forest in Vermont and across much of New England.

To gain permission for targeted winged-warbler surveys, we sent letters to 183 landowners who owned particularly good-looking habitat. These surveys turned up 49 winged-warblers: Golden-winged Warblers (29%), Blue-winged Warblers (42%), and hybrids or unseen winged-warblers (29%). Some preliminary calculations estimate that 192 Golden-winged Warbler pairs exist in Vermont, nearly 10 times more than previously thought in 2012. While this species is certainly not yet gone from New England, the ephemeral early-successional habitat that winged-warblers depend on needs to be actively managed and maintained, through either human or natural means. Without it, early-successional forest will mature into tall deciduous forests and the

habitat will be better suited for Ovenbirds and Scarlet Tanagers than Golden-winged Warblers.

While working on our GIS analysis, we learned about a new study by researchers at Cornell Lab of Ornithology who found that Golden-winged Warblers and their close cousin, Blue-winged Warblers, were 99.97% genetically similar (Toews et al. 2016). To place this in perspective, two subspecies of Swainson's Thrush, olive-backed and russet-backed, have more genetic differences than Golden-winged and Blue-winged warblers. Similarly, other researchers have also compared a 0.03% genetic difference to humans with and without freckles. Furthermore, the genetic separation between Golden-winged and Blue-winged warblers manifests itself as different plumage characteristics—nothing more. Scientists have known for some time that these species hybridize, and that their offspring are fertile, or able to produce viable young. This raises the question: are Golden-winged Warblers and Blue-winged Warblers the same species despite looking markedly different?

Setting this question aside, especially when recognizing that Golden-winged and Blue-winged Warblers exhibit the same habitat preferences in Vermont, we adopted a more modern "conservation unit" approach to guide our work. Whether or not these two different-looking warblers are classified as the same species, our goal is to protect the entire *Vermivora* complex: Golden-winged Warblers, Blue-winged Warblers, and the many different hybrids that span a complex plumage spectrum from "pure" Golden-winged Warbler to "pure" Blue-winged Warbler. While robust genetic mixing between Golden-wings and Blue-wings can frustrate birders who are looking to add these species to their lists, the direct correlation of plumage pattern to genetic separation of Golden-winged Warblers and Blue-winged Warblers lends itself well to determining, to the best of a birder's ability, if a winged-warbler is a hybrid or pure. No one field mark can determine if a winged-warbler is a pure bird or hybrid, yet a combination of characteristics can.

Golden-winged Warbler	**Brewster's Warbler (hybrid)**
Wing bar color: all yellow Wing bar width: broad and confluent Breast color: gray or white Throat: black	Wing bar color: gray, white, or faint yellow Wing bar width: broad and partly separated Breast color: gray or white Throat: no black
Lawrence's Warbler (hybrid)	**Blue-winged Warbler**
Wing bar color: mixed white and yellow Wing bar width: broad and partly separated Breast color: all yellow Throat color: black	Wing bar color: all white Wing bar width: narrow and well separated Breast color: Yellow-green Throat: no black

Table 1. Comparison of key plumage characteristics to differentiate pure winged-warblers from hybrids. A full comparison of 11 characteristics can be found at <https://vt.audubon.org/sites/default/files/static_pages/attachments/winged-warblers._how_to_tell_a_pure_species_from_a_hybrid._7-10-19e.pdf.>

After working with Ian Worley and leaning heavily on the genetic work done

This bird looks similar to a Golden-winged Warbler, but the yellow wash on the breast and wing bars indicate it possesses some Blue-winged Warbler DNA. Photograph by Steven Lamonde.

by David Toews and others (2016), we produced a set of guidelines for identifying winged-warblers and entering them into eBird, the popular international citizen-science database for birds <https://vt.audubon.org/sites/default/files/static_pages/attachments/winged-warblers._how_to_tell_a_pure_species_from_a_hybrid._7-10-19e.pdf>. Any bird that deviates from pure Golden-wing and Blue-wing characteristics (Table 1) should be entered into eBird using one of the following categories that best describes the plumage pattern: "Golden-winged x Blue-winged Warbler (hybrid)," Lawrence's Warbler (hybrid), Brewster's Warbler (hybrid), or the catch-all category "Golden-winged/Blue-winged Warbler." This last option is particularly useful in the hybrid zone of these two species when a winged-warbler is heard and not seen. In Vermont, winged-warblers can sing a variety of songs, ranging from the typical *bee-bzzzz* of the Blue-winged Warbler to a *bee-bzzzz-bzzzz-bzzzz-bzzzz*, one more *bzzzz* than a typical Golden-winged Warbler song. Preliminary data we collected in 2017 suggest that Golden-winged Warblers in Vermont are more likely to sing a typical Blue-winged Warbler song than Blue-winged Warblers are to sing a typical Golden-winged Warbler song. The reason behind this is unknown, although it may have to do with the gradual shift in Vermont's winged-warbler population from mostly Golden-winged Warblers to mostly Blue-winged Warblers.

In early 2018, another groundbreaking study was published. To learn more about the migratory pathways of winged-warblers from both the Appalachian and Great

Blue-winged Warbler. Photograph by Sandy Selesky.

Lakes populations, ornithologists tracked individual winged-warblers with lightweight geolocators (Kramer et al. 2018). Kramer and his team found that birds from these populations overwintered in separate places in the tropics, and where these birds overwintered directly correlated to population declines. Golden-winged Warblers from the rapidly declining Appalachian population overwinter in Venezuela, where deforestation is a major issue. Conversely, Golden-winged Warblers from the Great Lakes region, along with most Blue-winged Warblers and hybrids, overwinter in Central America, where deforestation is less of a problem. This study highlights the need for full life-cycle conservation, not just for Golden-winged Warblers, but for all migratory birds. Land conservation and habitat management for Golden-winged Warblers on their breeding grounds can improve reproductive success, and possibly decrease recovery and preparation time for spring and fall migration, respectively. However, without protection of the forests on Golden-winged Warbler's wintering grounds, the Appalachian population will likely continue to decline dramatically.

Between June and July of the 2019 breeding season, we conducted a radio telemetry study of winged-warblers by placing nanotag trackers on 13 adult male winged-warblers. The nanotags, weighing just 0.31 grams, or about one-seventh of a dime, emit a coded radio signal, which is unique to each individual tag (See Figure 1). Over a two-month period, we checked on each bird at different times of day to see where it was and what it was doing. While this data is still being analyzed, we learned that the habitat component of adjacent mature deciduous forest is more important than previously thought. Originally, Golden-winged Warbler researchers found that adult males will take half of their fledglings into the mature forest to forage prior to migrating south. Adult females, on the other hand, will take the other half of the brood and raise them in the early-successional, scrub/shrub part of their habitat. We found adult males actively using the mature forest canopy, sometimes farther than 300 meters from their nests. Although we had a hard time following adult males through the mature forest, where visibility into the canopy was low and the males would rarely vocalize, we could presume they were foraging because on return to the nest they often had a juicy caterpillar or other insect. Is it possible these males were also scouting out places to bring their young once they fledged? More research is needed.

Not only did this radio telemetry study yield interesting and informative behavioral patterns, we are also using the data combining each male's movements across the entire season to calculate its breeding home range, or the entire area an organism uses to defend a territory, attract a mate, forage, and raise young. Once a home range is calculated, we will look at the forest structure to quantify what percent of the home range comprises mature forest, early-successional forest, and herbaceous cover. Through the knowledge of how much each habitat ingredient is needed to make the ideal environment, we can improve current habitat management guidelines for winged-warblers in Vermont.

For the 2020 breeding season, Audubon Vermont will focus on surveys in the northern Champlain Valley to gain a better understanding of how winged-warblers are distributed across the entire Champlain Valley, ultimately allowing us to continue working to maintain the habitat that is important to support these songbirds.

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Mark LaBarr *is Conservation Biologist and Program Manager and oversees conservation projects, project staff, and volunteers for Audubon Vermont, including the Champlain Valley Bird Initiative. As a biologist, his focus is on the Common Tern Recovery Project as well as on efforts to better understand breeding populations of Golden-winged Warblers and other grassland and shrubland obligates in the Champlain Valley. He has a master birdbanding permit and runs the Audubon birdbanding station at the Green Mountain Audubon Center. He works in close cooperation with partner agencies and organizations such as the Vermont Fish and Wildlife Department, the Natural Resources Conservation Service, and the University of Vermont. He is the Chair of the Scientific Advisory Group on Birds for the Vermont Endangered and Threatened Species Committee, and he served on the Bird Technical Committee for the State's Wildlife Action Plan. He obtained his undergraduate degree in Wildlife Biology from the University of Vermont and a master's degree in Education from St. Michael's College.*

Frances Hamerstrom, a Flamboyant Ornithologist

William E. Davis, Jr.

Frances Hamerstrom's research helped preserve the Wisconsin population of Greater Prairie Chickens. Photograph by Gregory Smith.

Fran Hamerstrom was born Frances Flint in December 1907 to a prominent and wealthy Boston family. Her father was an international criminologist and Frances spent four of her early years in Europe, where she became fluent in French and German. Her parents intended to bring her up well educated and well connected so that she could marry into prominent social circles. Early in life Frances decided her future would be otherwise as she developed a fascination for the natural world. She was unconventional from an early age, becoming, for example, a cigarette smoker at age six, reacting perhaps against an authoritarian father. Also at age six, while in Europe, she captured a hare, which became her first pet, and saw her first Golden Eagle.

She was given to impulsive behavior, as shown in her response to the words of her European governess while on an outing:

> "Look! There is the King! See he is under those trees." I had never touched a king. I broke away from Fräulein Lehman and ran full speed to touch that king. I ran so fast that I bumped into him! He turned around, and looked at me and said, "Excuse me." So the only king I ever touched apologized to me. (Hamerstrom 1994, p. 12)

The looming war in Europe sent the family back to Boston in 1914 where Frances continued her exploration of nature. She dissected a Blue Jay:

> … I went alone to the grave and dug the bluejay up. I took it to the tree where I kept my razor blades; selecting one of the least rusty blades, I opened the bluejay. It had a heart. It had lungs. And yes, a very shiny liver. (Hamerstrom 1994, p. 24)

By age eleven she had made a substantial collection of insects and was reading Charles Darwin. She visited the Boston Museum of Natural History and was entranced with the collections, particularly of insects. She was not happy with her somewhat tyrannical father and a mother she considered a weak person, and she didn't trust adults in general. She had hideaways in treetops and eventually a secret garden around which she planted poison ivy to keep grown-ups away. Here she spent her time tending and enjoying her wild pets, which included mice, fish, turtles, squirrels, snakes, and a variety of birds. Unbeknownst to her parents she also had become the owner of a

BB gun and a .22-caliber rifle that she hid under the stables. She raised and trained an American Kestrel that a neighbor had given her. Many nights she would climb out her window and spend the night sleeping outdoors, using a horse blanket on chilly nights, "There is a magic to lying alone under the sky, listening to the sounds of small creatures, and finally drifting to sleep." (Hamerstrom 1994, p. 47) Clearly she was not grooming herself for life in high society but rather for a life of research in natural history.

Education and marriage

Fran was given a good education, spending nine years at Milton Academy, although she did not graduate, and eventually continued on to Smith College. Things did not go smoothly there and she flunked out after sophomore year, having received 3 A's and three F's—she didn't bother to go to classes that she found boring.

She got a job as a fashion model in a Boston department store and became rather social. One weekend in the fall of 1928, at a Dartmouth College house party, she met Frederick N. Hamerstrom, Jr. Hammy, as he was called, moved from Dartmouth to Harvard University, while Frances took a trip to California and visited Hollywood where she had a chance meeting with Gloria Swanson and was offered a contract by Warner Brothers, which she turned down. During the next two years they spent a great deal of time hunting ducks and they both became proficient at it. They had become engaged on their third date and were secretly married in Florida by a justice of the peace in February 1931. Thus began 59 years of marriage and one of the greatest research partnerships imaginable. They had a formal wedding in June to make her parents happy.

That fall she and her new husband enrolled in the Game Conservation Institute in Clinton, New Jersey. Frances was the only woman among the 40 students. At an American Game Conference in 1931 they heard Aldo Leopold speak and were so impressed that they vowed to become involved with this impressive and inspiring man. Fran and Hammy moved to Ames, Iowa, where they worked under Paul Errington at Iowa State College. Fran received a BS in biology in 1935 with a minor in veterinary medicine and was awarded the prize of the Women's Honorary Society as graduating woman of the year. Hammy received a Master's degree in 1936. They had become good friends with Aldo Leopold, who was a bold proponent of research-based game management, which in 1939 led to Fran and Hammy joining Leopold in taking on a Greater Prairie Chicken research project that would lead to further advanced degrees at the University of Wisconsin. Hammy, with Fran's assistance, took the primary responsibility for the prairie chicken research while Fran studied dominance in winter chickadee flocks. She published her results in 1942 in the *Wilson Bulletin*. Fran was Aldo Leopold's only female graduate student, graduating with her masters in 1940. Fran and Hammy moved to Michigan but still returned to their prairie chicken booming grounds in spring.

In 1940, the couple had a son, Alan, and in 1943, a daughter, Elva. Fran took the pregnancies in stride with her usual formidable energy. A friend, Bill Longenecker, described her on a day of hunting, "She was eight months pregnant. We pushed through

brush, waded ditches, climbed fences, pulled ourselves through mud. I have never been so tired in my life. When we finally got back to the house, there was Hammy, calmly typing away while she got supper." (Corneli 2002, p. 267)

The looming threat of European war disrupted their plans and as World War II flared, Hammy joined the Air Force, which put an end to their prairie chicken research until after the war. Following the war's end Fran and Hammy joined an initiative sponsored by the American Ornithologists' Union (AOU) to send aid to European ornithologists who were in a bad way following the war. Fran had close ties to German ornithologists and was deeply involved in the AOU's efforts to send food and clothing to those who badly needed help. She was made a corresponding member of the German Ornithological Society for her efforts. In 1949, Fran and Hammy took positions with the grouse project of the Wisconsin Conservation Commission and the Wisconsin Department of Natural Resources, positions for which they were eminently qualified. The jobs were to begin in the fall so Fran and Hammy took a spring trip to Germany to study grouse and then returned to a research appointment that was to last for decades.

Research in remote Central Wisconsin

In 1950, the Wisconsin Greater Prairie Chicken population was shrinking and it became the job of Fran and her husband to band or otherwise mark as many chickens as possible, follow these birds through their spring booming—the annual event where groups of males display and *boom* to attract females—and throughout the year to learn enough about their basic biology to allow for the making of management plans that could stop the decline. This meant trapping and banding birds in winter so that there would be marked birds for the spring booming. One way of marking chickens to facilitate individual recognition was imping, the removal of part of a prominent feather and replacing it with a brightly colored dyed feather, or a feather from a Northern Cardinal or Blue Jay.

Fran and Hammy needed a base of operations and eventually settled into a pre-Civil War farmhouse with 240 acres of land in Plainfield, Wisconsin. The house needed substantial repair but had a large attic that got an excited Fran to say, "Think of it Hammy! We could bunk crews in this room." (Corneli 2002, p. 146) This was to be their home for the rest of their lives and the bunkhouse for some 7,000 "gabboons," the folks who helped collect data on the prairie chickens during booming season or helped Fran with her ongoing raptor studies. The house had an outhouse, water from a hand pump, a pear-shaped tin bathtub, and it was heated by firewood—not exactly loaded with modern conveniences. They did replace the broken windows and had the house wired for electricity. Then they set up their trapping stations and during that first winter banded 300 prairie chickens, traipsing across the prairie and marsh on snowshoes.

With the booming season approaching, Fran sent out hundreds of letters soliciting help tending the blinds and watching the booming grounds for the six-week booming season. They got over a hundred volunteers, the first of the gabboons, a pattern that was to continue for more than 20 years. After that first season they never had a problem getting volunteers—the word got around. Fran also used volunteers in her ongoing raptor studies. Fran cooked most of the meals and specialized in piecrust. One guest

recalled: "'Lovely crust, Fran,' I murmured. 'Lard, I suppose?' 'Bear grease!' she announced triumphantly. 'It makes the best crust.'" (Corneli 2002, p. 175)

The routine during booming season was described by Professor John Emlen. He described participating in the booming season studies as a "superb introduction to prairie chicken biology and conservation." He valued the demonstration of the importance of note taking, the precise arrangements for pre-dawn transportation to a blind, and the encouraging tone. They were, he wrote, "sent to bed with a warm pat on the back. After from four to five hours of unforgettable watching and listening … all were returned to HQ for a round up of reporting…." (Corneli 2002, p. 180)

The Hamerstroms' research and conservation management recommendations were not received well by some of the local folks and precipitated what was referred to as the "Prairie Chicken War." Fran and Hammy eventually prevailed, but newly introduced mechanized farming practices and the planting of trees in prime chicken habitat were ongoing problems. In 1962, Fran and Hammy began to spend part of their winters in Texas and Mexico following an incident where Hammy had problems after an episode of snowshoeing in the cold. As Fran explained:

> A hard winter came in 1962. Someone tightened the bindings on his snowshoes; Hammy didn't adjust them: he didn't expect to be out long. When he came in his toes looked exactly like expensive purple grapes. Dr. Garrison feared amputation, and insisted on winters in a warmer climate. (Corneli 2002, p. 202)

They wintered for 15 years at the Welder Wildlife Refuge in Texas with camping trips into Mexico. They also made trips to most of the International Ornithological Congresses (IOC), for example in Switzerland in 1954, and spent three months in Europe in 1958 that included the IOC in Helsinki. They made visits to the Max Planck Institute and to Conrad Lorenz in Austria and they also studied grouse in Lapland. Fran, who kept lots of injured birds around the house, brought her Great Horned Owl to the IOC at Cornell in 1962.

The prairie chicken research reaped results. In their 22 years of research, they followed long-term population fluctuations, turnover rate and densities in various areas, daily and seasonal prairie chicken movements, and survivorship of cocks, hens, and young birds. All these variables were in the context of habitat quantity and quality that allowed them to create working management plans that stabilized Wisconsin's prairie chicken population and saved it from extinction. As part of their research, they played a role in a diverse group of organizations including the Raptor Research Foundation, the North American Falconry Association, and the Wisconsin Society of Ornithologists. Fran was chairman of the Legislative Committee of the National Association of Falconers of America from 1963–1970. In 1971 they retired but continued doing research, with Fran concentrating on her raptors. Fran said at the time, "We aren't retired! We're just concentrating on our own work." (Corneli 2002, p. 247).

Publications

Frances's publications generally fell into one of four categories: (1) more than 40

papers published in professional journals (e.g., Hamerstrom 1968, 1969, 1974, 1979); (2) popular articles of about the same number; (3) reviews and committee reports, about 70 of which dealt with raptors; and (4) books that were published over a period of 25 years. She was a gifted storyteller and most of her books abound with stories of her experiences. She also had a new task in life:

> After fulfilling the scientist's task of writing papers for specialists, Fran had a new mission, one that Conrad Lorenz had practiced, to 'reach out to the larger audience and change the ordinary person's view of the world. … [it is] the scientist's duty to tell the public in a generally intelligible way, about what he is doing.' (Corneli 2002, p. 250)

Most of her books show a personal, autobiographical touch. For example, *Birding with a Purpose: of Raptors, Gabboons, and Other Creatures* (1984), she talks at length about her childhood experiences:

> My family graciously gave me a vacant maid's room for my hobbies. It contained my insect collection, my mammal collection, my bird collection, my egg collection, arsenical soap for preserving skins, and things that I just happened to like: for example, a doll's bureau with a secret compartment for hiding small objects. Dolls were not part of my world. (Hamerstrom 1984, p. 4)

She also tells of her experiences devising raptor traps and her adventures trapping Barred, Hawk, and Snowy owls, and various hawks and eagles, including one notable experience when, on a Canadian hawk-banding expedition, a man stopped his car and picked up a trap that Fran had set by the road. Fran leapt out of her car and shouted, "That's *mine*!" The man with the trap, who was a Mountie, "… tried to hand me the trap, but his fingers were caught in the nooses and he couldn't free himself. Thus it came to pass that we made the largest catch on record: A Royal Canadian Mounted Police Officer (estimated weight 186 pounds)." (Hamerstrom 1984, p. 120)

In her book *An Eagle to the Sky* (1970), Frances recounts her adventures raising Golden Eagles, training them, and learning from them. The first was a female named Chrys who developed the notion that Fran was her mate. Fran helped her through nest building and took turns tending the eggs with her:

> I ran to the nest with the warm hot water bottle, and when I stayed at the nest Chrys reacted as though I had finally come to my senses. She stepped off the nest, I put the water bottle on the eggs, and Chrys pounced on a dead chicken and ate it. …Now that I realized it was my duty to relieve Chrys at the nest, I took my turn day after day. (Hamerstrom 1970, p. 11)

Eventually Fran provided chicks—very young Red-tailed Hawks—for Chrys to brood. Fran got a second adult eagle, a male named Grendel, in hopes of providing a partner for Chrys, and a series of stories relate the trials and tribulations of this unsuccessful matrimonial attempt:

> On March 4, Grendel started nest building … I stroked his neck and we both held onto the same stick with excitement rising. Suddenly it came to me: to stimulate a male eagle, behave like a female eagle. I turned my back and crouched. Calling and trumpeting, Grendel mounted me. He jumped to my lower back. I could feel his talons through my thin summer jacket as he trod his way upward to my shoulders. (Hamerstrom 1970, pp. 38–39)

Sadly, Chrys never accepted the advances of Grendel. Fran rescued another female eagle, Nancy, and rehabilitated her and released her back into the wild. It is a moving story of the mutual friendship between Fran and Nancy.

Strictly for the Chickens (1984) is a largely autobiographical series of stories highlighting her quarter-century of research on Greater Prairie Chickens. In an introductory author's note Fran expresses her thanks, "to about 7,000 'boomers' [gabboons] who helped by reading numbered bands on legs of chickens and brightened our lives for some twenty-five springs." She further gives thanks "to a Lady named Luck who helped spring me from a cultured, but narrow, background into the wide, wide world of other real people—from other walks of life and opportunities that round out our beautiful world." In one paragraph Frances summed up what she and her husband were trying to do:

> We tried to explain to our neighbors, to Indians, to everyone what we were doing and why: that this great region was to become public domain and that the wildlife would be managed so the sandhill cranes (then rare) would trumpet over the marshes each spring, the prairie chickens would boom in early mornings, the fur harvest would be planned, and the deer would be held down so they would not overbrowse their range. We tried to teach conservation. (Hamerstrom 1980, p. 7)

In a brief sentence ,Fran describes the life-changing decision the she and Hammy made: "Together, joyously, but not without trepidation, we had made the decision to burn our bridges behind us, cross the Rubicon, and take to a life as biologists in a wilderness." (Hamerstrom 1980, p. 8)

Is She Coming too? Memoirs of a Lady Hunter (1989) is Fran's compendium of hunting stories and her constant attempt to become an equal in a "man's sport." For example, at age 15 she was invited by one George, a college man, to go duck hunting but he was having second thoughts and asked if she were sure she wanted to go. Fran responded, "I'm sure. I'll bring my Crescent." The man replied, "Crescent?" and Fran responded, '"My Crescent is a 20-gauge double barrel. On a good flight day I find that a twenty's all I need unless somebody' I looked at George appraisingly, 'unless somebody keeps blasting away out of range."' (Hamerstrom 1989, p. 3) The book is a wonderful series of stories about her climbing out her second story window to go hunting, swimming naked to retrieve a duck she had shot, the trials and tribulations of being the only woman at the Game Conservation Institute, and many others. The book, like many of her others, was illustrated by her daughter Elva Hamerstrom Paulson.

Frances wrote several children's books, including *Walk When the Moon is Full.*

As with most of her books it is an autobiographical story. It describes a dozen walks when the moon was full, one from each month of the year, which Fran took with her young children, Alan and Elva, mostly exploring their 240-acre farm. Several of Fran's books were more professional in orientation, including *Harrier, Hawk of the Marshes: The Hawk That is Ruled by a Mouse* (1986), but it still contains stories and describes situations in Fran's usual dynamic style. Her biographer, Helen Corneli, wrote that this book: "… is the very footprint of Fran Hamerstrom: her persistence and practicality, her curiosity, her innovative approaches, and her self-confessed foibles." (Corneli 2002, p. 233) The book describes her trapping and banding raptors, the disastrous DDT-era effects, and her scientific results, including, as she states in the Prologue: "Appendices at the end of this book contain original data, and dry technical material—not of interest to all." When Fran wanted to find out what chemicals the spray planes were spraying, she would go at night to the airport to find out: "… I sometimes put on dark clothes, armed myself with a pen light, and copied labels on containers. I kept these little excursions secret from Frederick and the gabboons, and hid my eco-snoop notebook so they wouldn't find it and want to come, too." (Hamerstrom 1986, p. 91)

She was appalled at the attitude of the local Agricultural Station people, recalling a visit to their office to try and find out who was spraying what. After their discussion, the Ag person said, "Now I have a question for you. You're Mrs. Hamerstrom—the one who catches all those hawks and lets them go…. Why do you let them go?" (Hamerstrom 1986, pp. 89–90) The level of ignorance concerning pesticides by the local folks was appalling. Fran had noticed a plane spraying a herd of dairy cattle so went to the farmer to ask why. When confronted the farmer replied: '"Flies,' he resumed. 'I *hired* that plane to spray my cows.' For a moment I was too astonished to ask another question. At last I said, 'What are they spraying with?' 'DDT. It keeps the flies off.'" (Hamerstrom 1986, p. 75)

Birds of Prey of Wisconsin (1983) is a straightforward book, lavishly illustrated by her daughter Elva. There are general sections on, for example, migration, and species accounts for all the hawks, vultures, eagles, and owls. But the Field Key for each of these groups begins with a size key: HUGE, NOT HUGE, ABOUT CROW SIZE, ROUGHLY ROBIN-SIZED which is rather Franesque, as is the beginning of the introduction of the falcons: "Some people, especially the British, do not consider falcons hawks. Who knows why?" (Hamerstrom 1983, p. 26).

Toward the end of her life Fran wrote her autobiography *My Double Life: Memoirs of a Naturalist* (1994). It is a delightful romp through a most interesting life. When asked about wild animals she has handled besides birds she replied: "I've handled a fresh-caught adult badger, and been bitten by raccoons, dogs, cats, muskrats, mice, and an adder." (Hamerstrom 1994, p. 133) Her tenacity and indomitable style and flair for the dramatic is evident in her description of her catching of more American Kestrels than she had anticipated:

> Trapping was fabulous. I set two small balchatris—little cages baited with mice—by the roadside and caught two birds before I could get the car turned around. … I put one kestrel in my purse, leaving the top slightly open, and

> looked around for something to put the next one into. … All I could find was my raincoat and I feared the kestrel might smother in that, so I took off my shoes and socks and put the bird in a sock. By then I had caught *three* more birds! I slipped one of these into the other sock and then—holding two kestrels in one hand—put on the raincoat, took off my slacks, and fastened the remaining two birds into the pants legs. The sun was getting fairly high and the heat was beginning to beat down. Common sense should have suggested that it was time to quit and go home, but I never gave it a thought. Another kestrel was working one of the traps, and there were two more sitting on a wire just down the road. I baited and set out another balchatri and caught three more. I muttered 'damn female clothes.' *My* slacks had no pockets—but my shirt did. Looking carefully up and down the road to make sure no one was in sight, I took off my raincoat, took off my shirt, and hastily donned the raincoat again. It was all I had on. A kestrel apiece went into each pocket of my shirt, and I tied one into a sleeve. (Hamerstrom 1994, pp. 295–296)

Her facility with French and German became important in her raptor and grouse work as she was a co-translator of a classic book, *Bird Trapping and Bird Banding*: *A Handbook for Trapping Methods All Over the World* (1991) originally published in German by Hans Bub. She also published reviews of more than a hundred books and professional papers, mostly of European origin (Bildstein 1999).

Rewards for a lifetime of research

Fran and Hammy twice won the National Wildlife Society Publication Award and won the National Wildlife Federation's Distinguished Service Award for Conservation in 1971. Fran received an honorary doctorate from Carroll College in 1961. Fran received the Notable Wisconsin Authors Award from the Wisconsin Library Association in 1992. Both Fran and Hammy were inducted into the Wisconsin Conservation Hall of Fame in 1996. The accomplishments of Fran Hamerstrom were many and varied, as extolled by Robert Rosenfield in his 1998 Memoriam to her: "Fran will be sorely missed and remembered fondly by the many, many assistants, artists, biologists, readers, and friends that she touched. She left our world a better place for her efforts and truly was one of Wisconsin's treasured natural resources."

The end of a remarkable career

After they had "retired" the Hamerstroms expanded their travel and visited such far-flung places as Siberia, Sri Lanka, Australia, India, and Indonesia. They continued their active life until 1989 when Hammy died of pancreatic cancer. They had been married for 59 years and had been a formidable research team. Fran continued for nine years more in her usual dramatic style, traveling to Zaire to go hunting with a tribe of Pygmies and making several trips to the rainforests of Peru with native guides, on one of which she broke her hip and had to be evacuated by canoe (New York Times 1998). From these and other travels she drew a strong conservation message:

> I am going back to the rain forests. Pygmies and Indians, among the oldest races of mankind, have lived in forests and jungles since time immemorial and have not destroyed their habitat. No white people can say the same. Also, wherever I have gone in my far, wide travels in 'civilized' countries, in each I have encountered overpopulation with its twin horrors: human misery and despoliation of the environment. If we are to preserve this beautiful world of ours, with its creatures great and small and their wondrous homes, we must have fewer people on earth, we must have fewer children, or the beauty of the wild will be gone … (Hamerstrom 1994, pp. 315–316)

Fran died in 1998 at age 90, having lived a remarkable life. I met Frances Hamerstrom back in the 1980s, probably at an AOU meeting. It was at a break between paper sessions and I struck up a conversation with her. She was animated, forceful, dramatic, and exuberant as she spoke, waving a hand around with a cigarillo held between her fingers. We had a long talk and I will always remember her as the "flamboyant ornithologist."

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Mass Audubon Presents Annual Hemenway + Hall Wildlife Conservation Award to Manomet

Mass Audubon

Brian Harrington and Jeff Collins. Photograph by Stephen Broker.

Manomet, the respected environmental organization that is marking 50 years as a leader in avian research and conservation, has been awarded Mass Audubon's Hemenway + Hall Wildlife Conservation Award for 2020.

The presentation was made at Mass Audubon's annual Birders Meeting, which drew an audience of hundreds to the Hogan Center on the campus of the College of the Holy Cross in Worcester, Sunday, March 8.

The Award is named for Mass Audubon founders Harriet Hemenway and Minna Hall, who in 1896 organized what would become a successful national campaign to stop the slaughter of birds for their feathers. The honor recognizes "excellence in wildlife conservation and celebrates an organization or individual whose research and related ecological management successes have amply demonstrated and provided a significant and lasting wildlife conservation benefit."

Launched in the summer of 1969 as a bird observatory on a spectacular coastal bluff in the Manomet area of Plymouth, the organization established a sterling reputation for avian research and conservation. In recent decades, Manomet's mission has expanded with a focus on science-driven sustainability in the forestry, fisheries, and

agriculture sectors—with an enduring focus on birdlife and biodiversity.

"Manomet has been celebrating five decades of active support for birds and other wildlife, a worthy legacy that Harriet Hemenway and Minna Hall would certainly appreciate and applaud," said Gary Clayton, President of Mass Audubon, the state's largest nature conservation nonprofit.

"From monitoring shorebirds internationally to studying forests habitats regionally, this organization continues to play an important role in protecting and enhancing biodiversity in Massachusetts and beyond," Clayton added. "So, Mass Audubon is very pleased to present Manomet with the 2020 Hemenway + Hall Wildlife Conservation Award."

Accepting the Hemenway + Hall award was longtime (now retired) Manomet senior scientist Brian Harrington.

Mass Audubon *protects more than 38,000 acres of land throughout Massachusetts, saving birds and other wildlife, and making nature accessible to all. As Massachusetts's largest nature conservation nonprofit, we welcome more than a half million visitors a year to our wildlife sanctuaries and 20 nature centers. From inspiring hilltop views to breathtaking coastal landscapes, serene woods, and working farms, we believe in protecting our state's natural treasures for wildlife and for all people—a vision shared in 1896 by our founders, two extraordinary Boston women.*

Today, Mass Audubon is a nationally recognized environmental education leader, offering thousands of camp, school, and adult programs that get over 225,000 kids and adults outdoors every year. With more than 135,000 members and supporters, we advocate on Beacon Hill and beyond, and conduct conservation research to preserve the natural heritage of our beautiful state for today's and future generations. We welcome you to explore a nearby sanctuary, find inspiration, and get involved. Learn how at <massaudubon.org.>

NORTHERN PARULA BY SANDY SELESKY

Return of the Great Horned Owl Nestling

Andrew Joslin

Left: Great Horned Owl waiting to be put back in its nest. Right: Climbing the hard way, no substantial limbs to set a rope on. Photographs by Kirsten Hirschler.

On the afternoon of Friday, March 27, 2020, I found myself standing in a grove of young white pines looking up through my binoculars at a pair of Great Horned Owls (*Bubo virginianus*). One of the adult owls was on its nest, and the other was on a small pine branch just above and to the left. I was there because I am an arborist and recreational tree climber who has rescued many animals from trees. On this day, my task was to return a fallen owlet to its nest.

I have had a strong interest in New England natural history since my youth, and I started birding seriously in my early thirties. Now as a 64-year-old rope and harness tree climber, I am often called upon to rescue pet cats stuck in trees. As my reputation among eastern Massachusetts animal control officers and wildlife rehabilitators has grown, I've become a regular resource for this task. Most fire and police departments no longer assist with animal in a tree rescues, so it is now up to an informal network of willing climbers to help out. Along the way I have climbed trees to capture many cats as well as a growing list of other species in trouble: an injured adult Great Horned Owl, an escaped pet parrot, and a sick raccoon captured at the request of a wildlife rehabilitator. My most ironic rescue was an escaped pet squirrel. The young owner had raised the found squirrel from a "pinky" and was very worried. The squirrel looked quite at ease in the very top of a Norway maple.


Left: Halfway there. Right: Parts of a cottontail rabbit dropped from the nest. Photographs by the author.

Earlier the same day, I was contacted by Westford, Massachusetts, Animal Control Officer and wildlife rehabilitator Kirsten Hirschler. She was checking on my availability to help put a fallen Great Horned Owl back in its nest. Kirsten, who is active in the Massachusetts wildlife rescue and rehabilitation community, put me in touch with Joanne Adey of Adey Wildlife Rehabilitation in Ashburnham, Massachusetts. Joanne had responded to a "baby owl on the ground" call from a homeowner in Lexington, Massachusetts, the day before. Joanne is federally licensed to handle raptors for rescue and rehabilitation purposes. She arrived at the scene and determined that the young owlet needed assistance.

Great Horned Owl young are capable climbers and will climb a tree to get back to their nest after a fall. Even if an owlet cannot climb up, the parents will continue feeding the young wherever they are. In the niche white pine habitat between two well landscaped suburban yards there was very little cover on the ground. The needle duff layer provided a soft landing, but there was a chance that a domestic cat, dog, or a wild predator would end the owlet's youthful adventure. Joanne captured the owlet and took it to her facility. Overnight she provided it with subcutaneous hydration and fed it thawed lab mice. The "patient" responded well and ate with gusto. In the morning Joanne reached out to the wildlife rescue and rehabilitation community to locate a climber to put the owl back in its nest.

When I arrive at an arboreal rescue scene I never know what I'm going to find. Cats don't care about the condition or the species of tree they've chosen to climb, and they vary greatly on where they decide to perch in a tree. Some will go to the very uppermost twigs on a tall white pine, and others will settle in on a stout oak limb just

Two siblings and rabbit remains in the nest. Photograph by the author.

out of ladder reach from the ground. As I studied the owl nest, I also assessed the tree. It was a skinny white pine with a sound trunk that was about 70 feet tall. The nest was on a natural shelf at about 55 feet from the ground. The pine's original top had broken in a storm and the new top which regrew from a side branch curved out slightly from the upper trunk.

Something had built a small nest on this narrow shelf, possibly a crow or even a Mourning Dove. Or it could have been the remains of a squirrel's nursery drey. It was now a very minimal Great Horned Owl nest. It is likely that the owlet fell because of the small size and no sides to the nest. Owl young grow fast and space was becoming limited up there. The fallen owlet could have been jostled out by a sibling competing for rabbit parts or by a gust of wind. It was clear to me that I would need to increase the size of the nest and to reinforce it to make it safer for the young. While I prepared to climb, Kirsten and Joanne gathered sticks and twigs for the rebuild.

There are many ways to climb a tree with rope and harness. The classic way to ascend a conifer to a raptor nest is to use lineman's spikes, or spurs as tree climbers call them, attached to the climber's boots. This technique is fast and effective but is not good for the tree. Punching holes up the trunk of a tree with sharp spikes can make a tree more vulnerable to bark beetles and fungal intrusion. The current rule in modern tree care is to use spurs only for removals.

An alternative method is to set a rope for climbing. For this method, I throw a 10-ounce weighted bag trailing a high-strength braided cord up over a strong anchor limb. Then I attach my climbing line to the throw line and pull it up over the anchor limb. This tree, however, had no substantial live side branches below the nest, and there was nothing to anchor a rope to above the nest.

Without a safe option for a canopy anchor, I elected to climb the hard way; I alternately choked a short rope called a lanyard and my long rope on the trunk and

The third sibling returned, the lump of down in the foreground. Photograph by the author.

gradually worked my way up.

As I started climbing, the adult owl on the small branch left the tree. It flew to a large Norway spruce, though, within a minute or two, a red-tailed hawk came in and chased the owl out of the spruce. Working my way up through the dead branch zone I came across the remains of a cottontail rabbit draped over a branch, and a few feet above that the hollowed-out rear third of a rat, tail still attached. No doubt the parents were excellent hunters and providers. The owl on the nest remained and watched me intently as I climbed—I'm guessing this bird was the female. She stayed put as I worked my way through 30 or so feet of the typical dead branch zone on a white pine. When I was about 20 feet below the nest she flew. As I reached the nest, she flew under me twice but never came close to me.

Looking into the nest I found two young owls hunkered down. They looked a bit alarmed and alternately hissed and clicked their mandibles—typical owl defense behaviors. I waited for them to calm down a little and called for Joanne and Kirsten to attach the bundle of sticks to the end of my climbing line. I pulled the bundle up and began weaving the sticks in to give them more room and to provide a "guardrail" against falling. The nestlings remained calm as I worked, and I was careful not to poke or jostle them. There were some strong gusts as I was working. When wind blows hard, white pine tops move a lot as the tree's crown absorbs the wind energy and dissipates it by moving freely. I had to stop working a couple of times to wait until a gust was over. During the harder gusts the owlets put their heads down. They instinctively knew that standing up straight was not a good strategy in that wind. You can see my video of the owlets at <https://vimeo.com/401622466>.

With the nest structure improved, I called to the ground for the owlet to be placed in a secure bag and attached to the end of my rope. The owl weighed about 580 grams and felt like nothing as I pulled it up. I carefully removed it from the bag and placed it

in the nest. The returning owlet immediately huddled with its siblings, creating what looked like a unified lump of owl down. I called to the ground that the mission was accomplished, and a small cheer rose up into the upper pine branches.

I descended from the tree and derigged my climbing rope. After packing up my gear I took a look around to see if I could spot the parents anywhere. No luck. As large as they are, an adult Great Horned Owl can easily disappear into the thickly-needled upper branches of a white pine or Norway spruce. After returning home I heard from Joanne that the property owner had seen both adult owls come back to the nest. As of April 1, 2020, the parents were actively attending to the nestlings, and the young were observed looking out over the nest edge.

On Saturday morning April 4, however, I received a text message that an owlet was again on the ground at the Lexington nest site. The previous two days had been extremely windy with driving rain from a coastal storm. When I arrived, I inspected the nest and saw that most of it was gone. The sticks I had added a week a before were all that was left. Two owlets perched on the remaining twigs, and one was safe on the ground under a box.

With a climb to the nest already performed, I had some ideas how to make it go more efficiently. I set a rope in an adjacent pine and used it as a support to move faster on the nest tree. As I ascended, the presumed female circled into the pine grove and then exited to perch in the nearby Norway spruce. Once up, I confirmed that there was no longer a functional nest, just the sticks added previously. I built a new nest and lashed it to the pine branches with cordage. I called to the ground for the owlet to be bagged and attached to the end of my rope. It could have been my imagination but the owlet felt heavier than the one I had pulled up a week earlier. The owlets in the nest had grown noticeably. Their flight feathers were now emerging as long pin feathers, and the mantle and scapular feathers were replacing the down and showing tiger-striped plumage. I placed the owlet in the new nest and it immediately settled in with its siblings. The video of "The Great Horned Owl Renest Round 2" is at <https://vimeo.com/404366524>. [See this issue's photo essay for photographs.]

Soon after I took my ropes out of the tree and packed up my gear, an adult owl returned to the nest. With the nest enlarged and well secured, I hoped that the accidental falls would be ended and the owlets would fledge normally.

This project was my first to return an owl to its nest. The collaboration and support from the Massachusetts wildlife rescue community was key and is a great model for professional and citizen volunteer support for our local wildlife in distress.

Andrew Joslin *is a climbing arborist, naturalist, and artist who lives in Carlisle, Massachusetts. He teaches recreational rope and harness tree climbing though his Tall Pines Tree School in Carlisle: tallpinestreeschool.com. His illustrations have appeared in* The Wild Trees *by author Richard Preston and* Nature's Temples, The Complex World of Old-growth Forests *by author Joan Maloof. Joslin is a long-time birder who contributed a field note on the Brighton crow roost to* Bird Observer *29 (2):127-129. In addition to his other activities, Joslin teaches art and nature classes for a City of Lowell public schools after-school program in collaboration with Concord-based Musketaquid Arts and Environment.*

PHOTO ESSAY

The Great Horned Owl Renest Round 2

Andrew Joslin

Growing fast, pin flight feathers and new tiger stripes. All photographs by Andrew Joslin.

The stubs of the signature “horn.”

Fallen owlet back in the rebuilt nest.

Mother owl returns to the nest after he's done.

MUSINGS FROM THE BLIND BIRDER

State Birds

Martha Steele

The state bird of Maine is the "chickadee."

In early March 2019, news stories highlighted a controversy in Maine about whether to change its official state bird from "chickadee" to either Boreal Chickadee or Black-capped Chickadee. Some preferred the Boreal Chickadee because Massachusetts already had the Black-capped Chickadee as its state bird and the Boreal Chickadee was more characteristic of Maine. Maine's legislature eventually chose not to propose any change in its state bird name and hence, the nonspecific chickadee remains the official state bird.

The news stories piqued my curiosity about state birds in general. The first states to name state birds did so in 1927. Over time, all states designated a state bird, with the last state being Arizona (Cactus Wren) in 1973. Maine is only one of two states that does not have a specific species, the other being Utah, whose state bird was codified generically in 1955 as "seagull," but was understood to be the California Gull (more on that below).

When reviewing the list of state birds through today's lenses, some choices may be surprising or even puzzling, while others may seem to be more of a convenience rather than a careful consideration of what bird to choose to represent the state. However, it is probably important to note that these decisions were largely made long before backyard and more serious birding became popular, and before travel focused on seeing the birds that are characteristic of a region or state and could result in tourist and economic benefits to local communities. For example, the American Robin was chosen in 1931 by Michigan as its state bird because it was the best known and most beloved bird. Today, some might give consideration to the Kirtland's Warbler for Michigan, given the influx of birders who visit the state perhaps solely for this bird, which occurs only in a specific area of that state and nowhere else in North America.

Still, it is fun to look at the state birds and contemplate what the choices might be if they were made today. To start, the most common state bird is the Northern Cardinal, which adorns seven states. Next comes the Western Meadowlark (six states) and Northern Mockingbird (five states). Three states have the American Robin as their state bird.

In some cases, there is a documented rationale for why a state selected a particular bird. For example, in 1955, Utah selected the "seagull" as its state bird, further stating that by common consent, the state bird was the California Gull. The selection was based on the gull's role in protecting the state's agriculture during an 1848 invasion

The Northern Mockingbird is the state bird for five states, including Florida and Texas.

of crickets. Reportedly, huge numbers of California Gulls descended to feast on the crickets, thereby saving the crops.

Alabama selected a bird by the name of the Yellowhammer in 1927. This was supposed to represent what was then called the Yellow-shafted Flicker, with the phrase Yellowhammer referring to Alabama troops in the Civil War who wore yellow bands on their uniforms.

Delaware adopted the Blue Hen Chicken as its state bird in 1939 in recognition of a Delaware unit in the Revolutionary War that took these game birds, noted for their fighting ability, with them. When the men were not fighting, they entertained themselves with cock fights that became well known throughout the Army. Reportedly, when members of the troop fought valiantly in battle, they were compared to these fighting cocks.

Several states have state birds whose names have changed since the official state proclamation, such as the Eastern Goldfinch (adopted in 1935 by New Jersey), now called the American Goldfinch. In Washington, the state bird is Willow Goldfinch, adopted in 1951, and yet another name for American Goldfinch.

Interestingly, many states could choose a bird that more closely represents their state. Northern Mockingbird is the state bird for arguably the two birdiest states in the country, Florida and Texas. Florida and Texas? There seem to be so many other possibilities for these states. For starters, in Texas, we can think of Golden-cheeked Warbler or Black-capped Vireo. We can also think of Zone-tailed Hawk or the beautiful Aplomado Falcon. Anything but Northern Mockingbird, please. For Florida, birders enjoy many waders, such as Roseate Spoonbills, that are also a draw to the region for tourists.

Many states chose birds that still seem appropriate for today: Minnesota (Common Loon), Louisiana (Brown Pelican), Alaska (Willow Ptarmigan), California (California Quail), Maryland (Baltimore Oriole), New Mexico (Greater Roadrunner), Oklahoma (Scissor-tailed Flycatcher), and Vermont (Hermit Thrush).

Some groups are not represented at all among the fifty states. No raptors made any state bird, although the national bird is the Bald Eagle. No warbler, duck, seabird, or shorebird made the cut.

The state birds of Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont.

And some states could have state birds connected to their state names. Could the Tennessee Warbler be the state bird of Tennessee instead of its current Northern Mockingbird? Could the Connecticut Warbler be the state bird for its namesake instead of the American Robin? South Carolina originally designated the Northern Mockingbird as its state bird, but in 1942 changed to the Carolina Wren, which many birders may consider more appropriate.

Some of you may remember the U.S. Postal Service (USPS) issuing commemorative twenty-cent stamps in 1982 that featured the state birds of all 50 states. Arthur and Alan Singer of Jericho, New York, were the first father and son team to design stamps for the USPS. Each stamp had the state bird, designed by Arthur, and the state flower, designed by Alan. Each stamp was different even when a particular species (e.g., Northern Cardinal) was the same for multiple states. Two states, North Carolina and Virginia, even had the same bird (American Robin) and same flower (flowering dogwood).

For your enjoyment, here is a list of state birds:

- American Robin: Connecticut, Michigan, Wisconsin
- Baltimore Oriole: Maryland
- Black-capped Chickadee: Massachusetts
- Blue Hen Chicken: Delaware
- Brown Pelican: Louisiana
- Brown Thrasher: Georgia (the "Bobwhite Quail," or Northern Bobwhite, is the state game bird)
- Cactus Wren: Arizona
- California Gull (codified as Seagull): Utah
- California Quail: California
- Carolina Wren: South Carolina
- Chickadee: Maine
- Common Loon: Minnesota
- Eastern Bluebird: Missouri, New York
- Eastern (American) Goldfinch: Iowa, New Jersey
- Greater Roadrunner: New Mexico

- Hermit Thrush: Vermont
- Lark Bunting: Colorado
- Mountain Bluebird: Idaho, Nevada
- Nene (Hawaiian Goose): Hawaii
- Northern Cardinal: Illinois, Indiana, Kentucky, North Carolina, Ohio, Virginia, West Virginia
- Northern Mockingbird: Arkansas, Florida, Mississippi, Tennessee, Texas (the Wood Duck is the official state waterfowl of Mississippi)
- Purple Finch: New Hampshire
- Rhode Island Red: Rhode Island
- Ring-necked Pheasant: South Dakota
- Ruffed Grouse: Pennsylvania
- Scissor-tailed Flycatcher: Oklahoma (the Wild Turkey is the state game bird)
- Western Meadowlark: Kansas, Montana, Nebraska, North Dakota, Oregon, Wyoming
- Willow (American) Goldfinch: Washington
- Willow Ptarmigan: Alaska
- Wood Thrush: Washington, D.C.
- Yellowhammer (Northern Flicker): Alabama

***Martha Steele**, a former editor of* Bird Observer*, has been progressively losing vision due to retinitis pigmentosa and is legally blind. Thanks to a cochlear implant, she is now learning to identify birds from their songs and calls. Martha lives with her husband, Bob Stymeist, in Arlington. Martha can be reached at <marthajs@verizon.net>*

The 1982 U.S. Postal Service state bird stamp set was designed by Arthur and Alan Singer of Jericho, New York.

GLEANINGS

Listening to Yellow Warblers

Dave Larson

Many species of animals have vocal alarm calls that they use to alert conspecifics to predators. This intraspecific communication is particularly widespread in songbirds and involves different vocalizations for different types of threats. As noted in an earlier "Gleanings," Black-capped Chickadees have different alarm vocalizations for flying and perched raptors (Larson 2016). Specific alarm calls for other dangers, such as nest parasites, are less commonly recognized.

Effective nest defense against brood parasites is enhanced by early detection and deterrence. Yellow Warblers (*Setophaga petechia*) have developed a distinct *seet* call that signals the presence of Brown-headed Cowbirds (*Molothrus ater*). This referential alarm call, given by males and females, alerts their mates to the threat of brood parasitism from a cowbird. The elicited behavior in the female is not to join in mobbing the threat, but to return to and sit tight on the nest, blocking access by cowbirds. This cowbird-specific call contrasts with the Yellow Warbler's *chip* call, which is a generalized alarm call.

Eavesdropping by heterospecifics on alarm calls of various bird and mammal species has been widely reported. It even works on birders; when Red-winged Blackbirds (*Agelaius phoeniceus*) make that loud, high *teew* call, I look up for a flying raptor. Attention to alarm calls from other species is obviously adaptive. The specificity of that adaptation is the subject of a paper by Lawson, et al., 2020. This publication describes two types of experiments designed to determine if Red-winged Blackbirds eavesdrop on and respond to the cowbird-specific *seet* alarm calls of Yellow Warblers. Both experiments involved playback of alarm call recordings on nesting territories of these birds.

Experiments on Yellow Warbler territories took advantage of the proximity of the warbler and blackbird nesting territories. Playback of the warbler *seet* calls brought blackbirds into the warbler territory significantly more frequently than the warbler's *chip* alarm calls or the nonthreatening song of a Wood Thrush (*Hylocichla mustelina*) used as a control. In these experiments, the *seet* calls were as effective as cowbird chatter vocalizations, suggesting a functional equivalent of the two on eliciting aggressive behavior by blackbirds.

The second series of experiments involved playback near blackbird nests. In contrast to Yellow Warblers, Red-winged Blackbirds respond to cowbirds with a "front-loaded nest defense," using verbal and physical aggression. The purpose of these experiments was to test the hypothesis that territorial blackbirds would respond to nearby warbler *seet* calls using their aggressive nest-defense behavior. It turned out that male blackbirds were similarly likely to respond immediately to cowbird chatters, warbler *seet* calls, Blue Jay (*Cyanocitta cristata)*— a nest predator of warblers and

blackbirds—calls, and blackbird alarm chatter, all as compared to the Wood Thrush song control. Males responded more quickly than females, but the latency patterns were similar. Males approached significantly closer to the speaker, suggesting a higher level of aggression, when it was broadcasting blackbird chatter than the other tested vocalizations. They also moved closer in response to cowbird chatter than to *seets*, jay calls, or thrush songs. Red-winged Blackbirds, male and female, called at a significantly higher rate in response to each of the stimuli, compared to the thrush control. These experiments clearly indicate that the blackbirds recognize the *seet* calls as evidence of a threat and respond with a generic aggressive response.

Male blackbird vocal responses to *seet* and cowbird chatter playback was negatively correlated with distance of the blackbird nest from a warbler territory, suggesting that blackbirds nesting more closely to warbler territories are more attentive and sensitive to these calls. Interestingly, this greater response of blackbirds may help to explain the reported higher nesting success of Yellow Warblers in locations near blackbird nests.

The authors looked for a response from other wetland species to the *seet* calls of Yellow Warblers, but more species responded to the *chip* calls, and there was little interest in the *seet* calls. This result suggests that the heterospecific response to the *seet* call may be limited to Red-winged Blackbirds.

The authors concluded that the blackbirds actively eavesdrop on their neighboring warblers and respond to the warbler's referential alarm *seet* calls by mounting a generalized predator defense. It seems that the Red-winged Blackbirds do not have a referential cowbird alarm system of their own, so they make use of the warbler's. Since the blackbird response to the *seet* calls provides some additional protection, presumably, to the warblers, this heterospecific alarm system could form a mutualistic communication system.

This research was carried out in several wetlands in three counties in central Illinois. It would be very interesting to see if a similar heterospecific alarm and response structure exists in other geographic areas within the joint range of these species.

***David M. Larson, PhD**, is the Science and Education Coordinator at Mass Audubon's Joppa Flats Education Center in Newburyport, the Director of Mass Audubon's Birder's Certificate Program and the Certificate Program in Bird Ecology (a course for naturalist guides in Belize), a domestic and international tour leader, President of the Nuttall Ornithological Club, and a member of the editorial staff of* Bird Observer.

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FIELD NOTE

How a Common Raven Caches Donuts

Brian Cassie

A raven buries donuts in the mulch next to a Dunkin' in Foxboro. All photographs by the author.

Three donuts are buried and completely covered with mulch.

The raven fit a donut snugly into the hole it dug before covering it completely with mulch.

Easter morning, clear and cool, I drove over to Route 1 to see if maybe some interesting birds could be seen from my car. At the Dunkin' where I pulled onto Route 1, a Common Raven sailed across the road in front of me. "Great start," I thought, and pulled into the Dunkin' parking lot for a look at the raven. It was 7:00 am.

In the next thirty minutes, I watched that raven in amazement. The store has a dumpster off to the side of the parking lot and it was open at the top. The raven landed on the edge of the dumpster as I watched and then dropped down into the dumpster, out of sight. It reappeared in about twenty seconds with a donut in its beak, looked around for a few moments, and then flew off across the parking lot and over some buildings to the south beyond my field of vision. In two minutes, it was back at the dumpster, diving for donuts. Again, it flew away with its prize. Twice more, at two-minute intervals, it got a donut and flew off with it. That was four donuts so far, a lovely Easter feast.

But this raven was just getting started. For donuts number five, six, and seven, it procured the donut in its beak, flew down to the mulched edge of the parking area, put the donut on the mulch, dug a proper-sized hole in the mulch with its beak, placed the donut in the hole, and covered it over with mulch, using its beak to finish the process. Just remarkable, and all with me as a front row viewer! The first attempt at donut caching was less than perfect and the hole the raven made

was a little undersized, so it had to put the donut aside twice to get the hole right. The second and third holes were dug to the proper dimensions on the first try.

The depth of the hole in the bark mulch for each donut was just fractionally greater than the thickness of the donut, yet the donut at the end of the burying process was fully covered with mulch and not visible.

After the first donut burying, I got out of my car and talked to an employee named Lisa, who had watched the whole process from her car while on her break from work. She said she never would have believed it if she hadn't seen it herself.

The raven was done with burying donuts for the time being. Donut number eight was placed on the roof of the building. Donuts number nine and ten were flown off to be cached with donuts one through four, presumably.

By now it was 7:30 and I made a quick dash to Jonathan Glover's house to alert him to what was going on. Jonathan more or less instantly joined me (separate cars in this time of social distancing, of course) and we got back to the Dunkin' at 7:43. When we arrived, a Fish Crow was perched on the dumpster, a Northern Mockingbird and two Tufted Titmice were fluttering around the edge of the dumpster, and the raven was nowhere in sight. It showed up in a couple of minutes, grabbed another donut from the dumpster, and flew up to the roof of the store briefly and then off to the north, out of sight.

I returned at 10:50 and found the dumpster lid closed, the gate around it closed, and no birds to be seen. I asked for permission to take a few pictures and the fellow inside said, "No problem."

First time I've ever seen a bird burying food. It was some awesome Easter Parade.

Follow up:

April 16: one of the mulched donuts was gone at 6:30 this morning, presumably collected by the raven. The other two were still in place.

April 17: the second of three donuts was gone as of 6:45 this morning.

April 22: at 8:30 this morning I found the last donut exposed and half eaten; it was too worn to be picked up whole. No raven in sight.

April 23: As of 7:40 this morning the last part of the last donut was gone.

On April 22, the third donut was exposed and half eaten.

Common Raven © Amanda Brannon.

A Silent Raven

A raven with a donut in its bill
Is quite still.

With a donut in its beak
It can't croak…it's lucky to creak.

B. Cassie

ABOUT BOOKS

One Swallow Makes Not a Spring. But Two on the Other Hand…

Mark Lynch

> ***White Feathers: The Nesting Lives of Tree Swallows***. Bernd Heinrich. 2020. Boston, Massachusetts: Houghton Mifflin Harcourt.
>
> "One swallow makes not a spring, nor one woodcock a winter." (p. 143, *A Collection of English Proverbs* by John Ray, 1678)

How much time do you spend looking at any single bird? You may spend more time if that bird is a rarity or a particularly colorful species. Maybe you will spend more time if you are trying to snag a perfect photograph. But on the average, I imagine you spend anywhere from a few seconds to a few minutes studying any one bird you come across in the field. Less time if it's a common species. That's because so much of birding involves moving along as quickly as possible to the next bird and the next and the next. We are always hoping to hit the jackpot and find something special. And as soon as we do, the search begins again.

Imagine looking at just one pair of birds for hours every day during the summer breeding season, for six consecutive summers. That is what Bernd Heinrich did with a pair of Tree Swallows. Bernd Heinrich is an internationally acclaimed scientist, avid runner, and author of many books, including several that are considered classics of natural history. His approach to science and looking at the natural world can only be described as "old school" in the best possible sense. He will come across some odd bit of behavior of a bird or even an insect and begin to ask a series of basic questions. This impels him to then carefully observe that species over long periods of time, sometimes years, until he has wrestled answers from these observations. Often, he will come up with a series of experiments that he will execute in the field and very carefully observe the results, taking copious notes, timing everything. Typically, even more questions will arise in the process. Some questions will go unanswered, at least for now. Nowadays, this whole personal process of scientific investigation will occur at Heinrich's cabin, deep in the Maine woods. It's not that Heinrich is some kind of ornithological Luddite. Far from it. He has a deep knowledge and appreciation of contemporary scientific research and techniques. He is always searching the literature to help him find answers. But Heinrich is convinced that careful and prolonged observations in the field have as much worth as careful experiments in a laboratory or another controlled environment.

In 2010, while living in Vermont, Heinrich opened a Tree Swallow box and noticed something odd. Besides the typical nesting materials of grasses, there were a number of pure white feathers laid on top. This observation begins a series of questions. Do all Tree Swallows do this? Where do these white feathers come from? At what point in the nesting process do the swallows bring in the white feathers? Is it the male or female or both that place the feathers in the nest?

Most of us making an observation like this would probably assume that there would be an answer in the literature. After all, nesting Tree Swallows have been extensively studied, typically in carefully controlled grids of many nest boxes. But Heinrich searches the published literature and finds no answer to his questions about the white feathers. In 2011, Heinrich moves to a remote cabin in the Maine woods that has a half-hectare clearing just outside his door. There is no one, not even a farmer, for miles. He puts up several Tree Swallow boxes in this clearing and is gratified that a pair takes up residence. Heinrich recalls his observation of the white feathers and is off on another adventure.

You may think of Tree Swallows as a very common species and can't imagine watching a pair closely for a prolonged period. But Heinrich has always thought of Tree Swallows as a perfect subject for a study. "There is arguably no bird in the world that combines graceful flight, beauty of feathers, pleasing song, and accessibility, plus tameness and abundance, more than the tree swallow (*Tachycineta bicolor*)." (p. xi)

If you have a Tree Swallow box on your property, you may think you have observed this species carefully. What Heinrich has in mind is something much more focused and intense. "Ordinarily we barely glance at swallows; I wanted to watch them deliberately and get to know them intimately." (p. xiii) This entails Heinrich getting up well before dawn with a fresh cup of coffee in hand and beginning to watch even before the swallows arrive. Heinrich wants details of swallows' behavior even before they begin nesting.

"Tree swallows usually return more than a month before they begin to nest, when snow may still be in the woods and few flying insects are available for food." (p. 25) Once they do arrive, he plops himself down in a chair close to the nest box and carefully takes notes, and even times every part of their nesting behavior. There are detailed descriptions of the various swallow vocalizations. He describes carefully how the swallows bring nesting material to the boxes and how many trips they make in doing so. There are many interesting interactions between the male and the female, and Heinrich watches where they perch and what they eat. He continues this painstaking process through the entire nesting period until all the young swallows have, with luck, fledged and left the nest. The next summer, he begins again.

For the first couple of years, it appears to be the same pair of Tree Swallows that come to nest. Heinrich knows this from their behavior on arrival.

> A further sign of their being back home: within seconds of landing one of the pair swooped down from that high perch to land directly in the entrance of the same nest-box (there were eight others available) used last year. It was next to the garden, on a pole two meters from the ground. The second bird

followed, and both entered the nest-box without hesitation." (p. 26)

He first acclimates the pair to his presence, so that he can approach them closely and even open the box to look at the nestlings. He then begins a series of experiments to investigate how they use the white feathers.

> I had saved white feathers for the pair. I began offering after the nest looked finished, and they took each one almost off my fingers when I tossed it into the air. I offered a dark feather, which had white markings, while the pair was perched side by side fifty meters from me on "their" locust tree. As I stepped out the cabin door and tossed this feather into the air, the reaction took me by surprise—the female instantly dived off her perch, caught it in midair, flew up past her mate, and carried the feather into the nest, which at that point had no feathers in it. Previously I had thought that it was the male who got the feathers. Wrong again. (p. 28)

I will not reveal his findings because that would be a spoiler. But as he continues his observations over the years, not always with the same pair, Heinrich begins to notice other more complicated aspects of Tree Swallow behavior. He observes several instances of "egg dumping" in which an interloping female lays her eggs in the nest of another pair. This is a breeding strategy fraught with problems. "When a female succeeds in foisting parental care on unsuspecting victims, the cost to the nest can be high. There will be too many babies, and some will die." (p. 39) Too many eggs laid in a nest means too many young need to be fed, and ultimately that one or more young will not survive to fledging. There is an optimal number of young in every nesting, typically three and sometimes four. Three young mean the parents will be able to clean the nest easily and bring enough food to allow all the nestlings to grow properly. One extra egg dumped in a nest from a brood parasite can have disastrous results for all the swallows. The timing of this egg-dumping is critical.

> Timing is extremely critical: an egg that is inserted a day or two late will become the runt of the litter (except among birds with precocial young, which are born with the ability to feed themselves from the start), prone to starve in the competition for food among the young. Conversely, an egg inserted before the host has laid one of her own could potentially be discriminated against, so long as the host knows whether she has laid an egg. After she has laid an egg and a foreign one is inserted, the chances are even that any egg she removes or destroys will be her own. Thus, for the egg cuckold to be successful, the female should insert the parasite sometime during the time of egg laying, and assess the nest contents to time it right." (p. 39-40)

As the years pass, Heinrich realizes that he is becoming familiar with the behaviors of Tree Swallows on a level not achieved by conducting more carefully controlled experiments.

> "My" tree swallows were beginning to reveal their struggles in a way that felt far richer and more exciting than the studies of tree swallows that I was

> reading. Researchers had studied swallows living in identical boxes set up in huge symmetrical grids in order to get consistent and statistically significant results. I was now eager to see the swallows the next spring, to observe how individuals might deal with the more natural situations of this clearing in the woods." (p. 47)

This kind of personal study of the Tree Swallows means that Heinrich can suddenly change his protocols when he makes a fortunate find. Like taking advantage of a roadkill.

> I might have left it at that, but for my discovery of a black-and-white domestic road-killed duck. Its feathers offered a perfect control for testing the swallows' color preference. They were all duck feathers, but what variety—black or white in color, short or long in shape, fluffy or smooth in texture. I plucked and stored enough feathers for tests of several swallows in several seasons. (p. 65)

He sets out white feathers on black paper, black feathers on white paper, and offers the swallows feathers that are part black and white. Which do the swallows prefer? You will need to read the book to find out.

Nothing escapes Heinrich's close observations. Peeking into the nest box, he notices that one of the young has a bit of an insect sticking out of its mouth. Nothing escapes Heinrich's observations, so of course he has to try to identify what insect this is from the small fragments left. "I found a mayfly jutting out of the side of one nestling's mouth. Only one leg of its normal six remained, and its three long tail bristles were missing, but enough was left for me to tentatively identify it as *Ephemera simulans*, the brown drake. Well known as bait for trout fishing." (p. 80)

Heinrich's observations of the tense fledging process are some of the best sections in this book. It's a tense process, with the parents trying to lure the young out of the box with calls and food. Typically, most make their first tenuous flights to a nearby bush and eventually follow the adults to a staging area before migration. Often one bird is left behind, too weak from not being fed properly because there were too many young in the nest. Time is short, and the swallows need to move on. The parents may make a few attempts to get the weakened young one up and moving, but typically the adults leave and the young perish.

By observing a single nesting pair of birds closely over such a long time, chances are you will observe something really out of the ordinary. One of the strangest occurrences in *White Feathers* is Heinrich's discovery of a nest box full of bloody, macerated, dead nestlings when just the day before they were all fine. Also found in the nest box was a live *Nicrophorus pustulatus*. This is a species of burying or sexton beetle. Heinrich has written extensively before about burying beetles around his cabin, but he had never seen this species before! Typically sexton beetles bury small carcasses of mice and shrews and lay their eggs on the corpse. The larvae then feed on the decaying body. Heinrich explains, "But *N. pustulatus* has the singular habit of

burying turtle eggs instead, using them, rather than animal carcasses, as food for its larvae. Finding *this* beetle, in this context, was beyond bizarre." The nearest pond is some distance away. How did this very odd beetle end up in a Tree Swallow box? Was it responsible for the death of all the fledglings? You will have to read *White Feathers* to find out.

In a final chapter, Heinrich follows the swallows out of his yard, and on into fall migration, and over-wintering much farther south. The reader is no longer sitting beside Heinrich in his yard, but following the swallows' long journey south.

> From this day on, as in other years, the tree swallows disappeared as if swept from the country. In my mind I would follow their journey to winter roosts in the swamps and wetlands along the Atlantic and Gulf coasts, to gatherings of millions that funnel out of the evening sky, a mass of swallows like smoke descending to enter the reed thickets where they rest overnight. Tree swallows are birds of the sky. I will miss them, and I wish them a good journey, with plenty of bayberries to eat on the Maine coast, lots of bugs in the South, and as always, safe travels back home. (p. 207)

White Feathers is not like most birding literature and also unlike any ornithological paper you have read. The pace of the book is the pace of the breeding season of the one pair of Tree Swallows. The rhythms of the book are the rhythms of the natural world. It is filled with what at first may seem to be small observations. Over the pages of *White Feathers* these observations aggregate to give the reader a very intimate peek at the life of a wild bird family. *White Feathers* includes a small section of color photographs and a number of Heinrich's black-and-white drawings. There is also a section that lists some of the most important published papers on the Tree Swallow.

As I write this review, we are still in the midst of the ravages of the Covid-19 virus, and many of us are staying home, yearning to be out birding without restrictions. *White Feathers* is a perfect book to read while you are marooned at home, showing us that careful observation of the common life found just outside our door can be fascinating and important.

White Feathers is not just about Tree Swallows. As we watch the swallows nest, we also get to know that particular cabin in the woods, the other life around it, and Heinrich himself, who is always good company. A close reading of *White Feathers* will encourage the reader to stop and linger over your next Tree Swallow sighting and encourage all of us to pose more questions about what we are looking at in the natural world.

> "For one swallow does not make a summer, nor does one day; and so too one day, or a short time, does not make a man blessed and happy." (Aristotle, *Nicomachean Ethics*)

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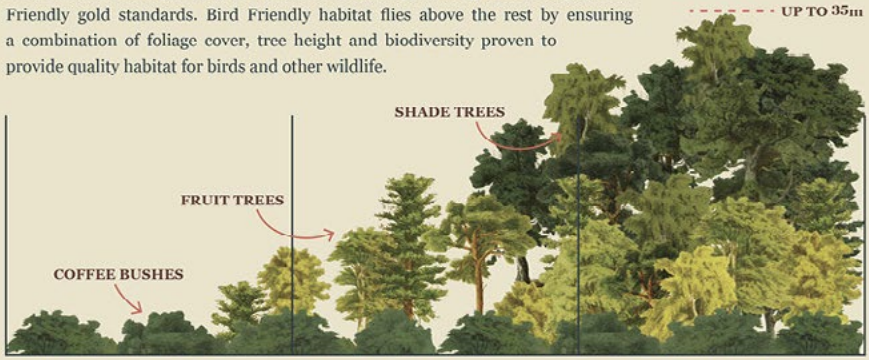

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BIRD SIGHTINGS

January–February 2020

Neil Hayward and Robert H. Stymeist

The weather was the highlight for birders during this period. Winter, as defined by meteorologists, is December through February. This winter, the temperature averaged well above normal and snowfall totaled only 15.1 inches, 19 inches below average, with 7.1 inches of that total falling in early December. This warm and nearly snowless winter was a boon for many species, including the human birders who were able to get out and enjoy some comfortable birding.

Both January and February were warmer than normal with near average rainfall. Only 3.6 inches of snow fell in Boston compared to 13.7 inches during the same period in 2019. The year opened with clear skies and a high temperature of 43 degrees for those birders ready to start a new year of birding. The temperature for the month of January averaged 38 degrees in Boston, compared with a 30-year average of 29 degrees. The high temperature was an amazing 74 degrees on January 12, setting an all-time record high for the month. It was also the first year in which Boston reached 70 degrees twice during January. The previous record high was 64 degrees, recorded on January 26, 1950.

Neither Punxsutawney Phil nor Ms. G—his Massachusetts counterpart at Drumlin Farm, Lincoln—saw their shadows and so both predicted an early spring. We have to agree that they were spot-on; the temperature averaged 44.8 degrees, six degrees above normal for February. The high mark was 64 degrees on February 24; the low for daytime temperature for Boston was 31 degrees. Rainfall during the month was 2.8 inches, nearly a half inch less than average. Snowfall was a paltry 0.5 inches for Boston, more than 10 inches below normal.

R. Stymeist

GEESE THROUGH IBISES

The fields around Rochester, Plymouth County, continued to be the hotspot for wild goose chases. A pair of **Barnacle Geese** appeared on January 15 and stayed through the period into March. During their visit, they hopped the border into Bristol County, where they were regularly reported along the Acushnet River. This pair represents the second county record for both Bristol and Plymouth counties, after records in February and March 2003. On February 23, Rochester hosted a **Pink-footed Goose**, perhaps the same individual that had continued from December until January 5 in the Dighton or Somerset area. Pink-footed Geese have been recorded in the state every year now since 2014. **Greater White-fronted Geese** were reported from eight counties, including the first for Martha's Vineyard since 2011.

The adult **Tundra Swan** at Somerset continued from the previous period (discovered on December 7) until January 19. Five adult Tundra Swans in Worcester on February 29 were the first for the county since January 1999.

Since 2010, Blue-winged Teals have been found overwintering in small numbers on Cape Cod. This year, up to four birds (two pairs) were present at Mill Pond in West Barnstable, which represents a new high count for the period. This location has become somewhat of a regular wintering location for the species, hosting up to three birds in 2018 and a long-staying pair in 2019. A count of 30 Redheads on Nantucket on February 16 is the highest February count for the state since 1997. Another high count was logged for **Tufted Duck**; two birds (male and female)

at Harwich for most of the period is a new high count for Barnstable County. A male Tufted Duck continued on Nantucket. The island has hosted a male Tufted Duck annually since 2013. **King Eiders** were reported from four counties, including a female at Chappaquiddick on January 4, the first January record for Dukes County since 2008.

Duck hybrids included two returning birds: a Bufflehead x Common Goldeneye at Rock Harbor Marsh, Orleans, first discovered in April 2017, and a Common Goldeneye x Hooded Merganser at Oldham Pond in Pembroke, which has been wintering there since January 2017. A Northern Pintail x Mallard hybrid was found on the Charles River at Waltham.

An **Eared Grebe** spent over three weeks in February off the Beverly coast. This was the first record for Essex County since the long-staying individual that wintered off Eastern Point from December 1995 through March 2008. The only other Eared Grebe in New England this period was a bird just across the Rhode Island state line in Stonington, Connecticut.

Though Sandhill Cranes have become a regular visitor to the state in recent years, with breeding first recorded in 2007, the four birds reported in Medfield and Lancaster represent high counts for both January and February.

The mild conditions this period were conducive to overwintering rails. Soras rarely attempt to winter in the state unlike the hardier Virginia Rail. This year Soras were recorded in January for only the fourth time this century, with Plymouth County adding its first January record at Mass Audubon's Daniel Webster Wildlife Sanctuary. **Common Gallinule**, another uncommon wintering species, was recorded for just the fifth January this century, with Plymouth and Norfolk Counties adding their first January records.

The warm temperatures were also no doubt responsible for the number of unseasonal shorebird records. The most northerly American Oystercatchers on the continent for the period were three birds at Snake Island, Winthrop, on January 4. They represent the first Suffolk County record for January, and the fifth year this century that the species has been recorded in January in Massachusetts. A Piping Plover seen on Nantucket on February 23 was the only record north of Virginia Beach for the period. Remarkably, this is only the second February record for the state on eBird. The first came the previous year—a bird spotted on Nantucket, less than a mile from this year's bird and on the exact same date. Historically, there are other midwinter records of Piping Plovers (Veit and Petersen, 1993). This was the seventh year this century that Semipalmated Plovers have been recorded in January, almost all of which have been found on Cape Cod. This year, two birds were in Harwich for most of the period. A Marbled Godwit at Plymouth Harbor was the fourth January record this century. Red Knots were reported from Chatham and Rockport, the latter being the first February record since 2008. A couple of Long-billed Dowitchers on January 20 was the first January record for Nantucket, and the fourth January record for the state this century. A report of a Willet on January 3 is only the third January record for the state. The observer noted it was a Western Willet (subspecies *inornata*), which would be consistent with the wintering distribution of the species; Western Willets winter along the Atlantic and Pacific coasts. "Our" breeding Willets, the eastern subspecies *semipalmata*, leaves the country entirely to winter in the West Indies and the east coast of South America.

This period saw a major incursion of alcids into our waters. Boat trips to Jeffreys Ledge set a new eBird high count for Dovekie in January with an amazing 820 on January 4, and the second-highest count for February with 635 logged on February 9. Closer to shore, Suffolk County recorded its second January eBird record of Dovekie, with a bird stranded on Winthrop Beach. The 248 Common Murres that flew past Race Point on January 2 was a high count for the month and an all-time high for Cape Cod. Similarly, the 86 Thick-billed Murres reported

from Andrews Point, Rockport, on January 25 was a new January eBird high count. In historical terms, these numbers are still a long way shy of the 4,000 Thick-billed Murres that flew past Race Point after a storm on January 16, 1977 (Veit and Petersen, 1993). The pale, arctic breeding *mandtii* subspecies of Black Guillemot continued at MacMillan Wharf, Provincetown from the previous period. This is the only record of this subspecies in North America so far this year and represents a subspecies first for Massachusetts. On January 14, a boat trip to Jeffreys Ledge sighted 10 **Atlantic Puffins**, which is the second highest state count for January.

Lynn Beach should add **Mew Gull** to its tourist signs; it's surely one of the most reliable spots to find the species on the East Coast. This year, two birds appeared, both on the same day—January 31—and stayed throughout much of February. One bird was the returning "Common Gull"—the European *Larus canus canus* subspecies. This bird has become something of a celebrity. It was banded in Akureyrarflugvöllur, northern Iceland, on June 23, 2013, and has returned to the same spot on Lynn Beach every winter since February 2017. The other bird appears to be the Asiatic form, either the Kamchatka Gull, *L. c. kamtschatschensis* or the Russian Common Gull *L. c. heinei*. Elsewhere, Bristol and Norfolk counties added their second records of Mew Gull (subspecies unknown or unreported). On Nantucket a high count of 125 Lesser Black-backed Gulls was impressive.

Pacific Loon is annual to the state, recorded in every month except for August. This year, up to four birds were present off Race Point, which represents a new high count for the state. Single Sooty Shearwaters at Race Point and Stellwagen Bank at the start of January were unseasonal—just the fifth year the species has been recorded in January.

American White Pelican was missed entirely for the state in 2019 for the first year since 2007. But it only took two days for one to appear in 2020—soaring over Truro and Wellfleet on January 2. A month later, a bird was seen swimming on a pond in Wareham.

The only Great Egrets of the period were in February at Chappaquiddick and Chatham, the latter being the northernmost bird reported on the East Coast. A roost of 22 Black-crowned Night-Herons at the Upper Lagoon Pond on Martha's Vineyard is the second highest eBird January count, after a count of 33 also on the Vineyard on January 1, 1995. By the end of February, the roost numbers had dropped to 12. Black-crowned Night-Herons were also reported on the mainland coast north to Portsmouth, New Hampshire. Such attempts at overwintering are usually restricted to mild winters, such as this one. An immature Yellow-crowned Night-Heron, photographed at Chilmark, Martha's Vineyard, on January 2, represents the first state record for January. As an indication for how unusual this sighting is, there appear to be no records in the state for this species between November 1 and March 14, except for an adult in Bourne on February 17, 1965 (Veit and Petersen, 1993).

N. Hayward

Snow Goose			
1/1	Southwick	1	D. Holmes
1/1-2/29	Duxbury	1 ad	B. Frost + v.o
1/1-2/29	Rochester	1 imm	L.Schibley+v.o.
1/11	Agawam	1	T. Gilliland
1/12	Nantucket	4	J. Wagner#
1/23-2/24	Rumney (Revere)	1	P. Peterson + v.o.
1/25-2/28	Chatham	1	D. Clapp, v.o.
2/3	Hatfield	1	A. Hulsey
2/13	Montague	1	P. Gagarin
Greater White-fronted Goose			
1/1-1/23	Rochester	1 ph	A. Kneidel + v.o.
1/5-2/17	Sheffield	1 ph	Z. Adams + v.o.
1/12-2/7	Westfield	1 ph	D. Holmes + v.o.
1/16	Rutland	1 ph	B. Robo + v.o.
1/25-2/29	PI	1 ph	v.o.
2/14-2/15	Boston (FPk)	2 1ad+1juv ph	S. Jones+v.o.
2/18	Edgartown	1 ph	B. Shriber
Pink-footed Goose			
1/1-1/5	Dighton/Somerset	1 ph	v.o.
2/23	Rochester	1 ph	B. Vigorito + v.o.
Brant			
1/11	Fairhaven	322	M. Lynch#
1/23	Bourne	140	M. Lynch#
2/22	Beverly	63	G. d'Entremont
Barnacle Goose			
1/15-thr	Rochester	2 ph	N. Dowling + v.o.
Cackling Goose			
1/13-1/27	Topsfield	1 ph	v.o.
1/20-2/1	Halifax	1 ad ph	A.Kneidel+v.o.
2/14	Easthampton	1 ph	T. Gessing
2/16–23	BFWMA	1 ph	R. Heil + v.o.

Mute Swan
2/9 Westborough 22 M. Lynch#
2/25 Acoaxet 28 M. Lynch#
Tundra Swan
1/1-1/19 Somerset 1 ad ph v.o.
2/29 Worc. 5 ad D. Hollie
Wood Duck
2/16-2/29 BFWMA 5 max R. Heil + v.o.
2/25 ONWR 3 B. Robo
Blue-winged Teal
1/1-2/22 W. Barnstable 4 max P. Johnson-Staub+v.o.
Northern Shoveler
1/1, 2/29 Nantucket 12,8 J. Trimble#, S. Fee
Gadwall
thr Gloucester (EP) 28 max v.o.
1/18 Plymouth H. 140 G. d'Entremont#
2/2 Acoaxet 23 M. Lynch#
2/10 Worc. 1 ph C. Martone
2/23 Chatham 15 B. Nikula
Eurasian Wigeon
1/1-1/16 Somerset 1 m ph V. Burdette + v.o.
1/1-2/16 Nantucket 1 m ph v.o.
2/19-2/27 Rochester 1 ad m ph P. Zika + v.o.
American Wigeon
2/2 Acoaxet 59 M. Lynch#
2/9 Sandwich 29 SSBC (G. d'Entremont)
2/13-2/29 Longmeadow 2 max F. Bowrys + v.o.
2/23 Arlington 2 K. Hartel
2/26 GMNWR 2 S. Beattie
American Black Duck
1/23 Bourne 47 M. Lynch#
2/11 Kingston 1100 A. Kneidel
2/25 Acoaxet 359 M. Lynch#
Northern Pintail
1/14-2/22 Osterville 9 P. Crosson#
1/14-2/29 P'town 4 J. Wagner, v.o.
1/18 Plymouth H. 6 G. d'Entremont#
2/2 Acoaxet 67 M. Lynch#
2/22 Worc. 7 K. Keohane
Mallard x Northern Pintail (hybrid)
1/18 Waltham 1 m ph J. Forbes
Green-winged Teal
2/9 Marlborough 3 M. Lynch#
Canvasback
1/1 Nantucket 74 L. Waters#
1/16-1/31 Wenham 1 S. MacDonald + v.o.
Redhead
1/1-1/21 Lakeville 2 1pr M. Faherty + v.o.
1/23-1/25 Harwich 2 D. Clapp#
2/16 Nantucket 30 G. Andrews#
Ring-necked Duck
1/1-2/29 Cambr. (FP) 129 max v.o.
1/12-1/14 Ashley Falls 46 S. Townsend# + v.o.
1/19 Mashpee 155 A. Kneidel#
2/28 Northboro 38 M. Lynch#
Tufted Duck
thr Nantucket 1 m ph v.o.
1/10-2/2 Harwich 2 max 1pr ph S. Finnegan+v.o.
Greater Scaup
1/1 Wachusett Res. 82 M. Lynch#
1/2 Fairhaven 550 G. d'Entremont
1/19 Harwich 880 J. Trimble#
Lesser Scaup
1/2 W. Boylston 6 B. Abbott
1/19 Mashpee 510 A. Kneidel#
2/25 Acoaxet 42 M. Lynch#
King Eider
1/1-2/23 Gloucester (BR) 1 ad m ph v.o.
1/2-2/23 Rockport (HPt) 2 1f+imm m ph v.o.
1/4 Chappaquiddick 1 f ph A. Kneidel
1/8-1/15 Nantasket B. 1 ad m ph H. Cross + v.o.
1/17-30 Scusset B. 1 imm m ph R. Doherty+v.o.
1/24-2/17 N. Chatham 1 m ph M. Plato#
2/27 Gloucester 1 m D. Pelloquin
Common Eider
1/23 Scusset B. 1460 M. Lynch#
1/23 Bourne 802 M. Lynch#
2/25 N. Chatham 18000 R. Heil
Harlequin Duck
1/4-2/17 Aquinnah 9 max v.o.
1/12 Nantucket 11 S. Kardell
1/18 Manomet Point 26 J. Chisholm
1/25 BHI (Shag Rocks) 3 f T. Bradford + v.o.
2/2 Acoaxet 6 M. Lynch#
2/19 Yarmouth 8 ph T. Crocker
Surf Scoter
1/11 Fairhaven 110 M. Lynch#
2/29 Mattapoisett 53 M. Lynch#
White-winged Scoter
1/11 Fairhaven 7 M. Lynch#
1/23 Scusset B. 61 M. Lynch#
Black Scoter
2/25 Acoaxet 67 M. Lynch#
Long-tailed Duck
1/11 Fairhaven 22 M. Lynch#
2/29 Mattapoisett 35 M. Lynch#
Bufflehead
2/2 Westport 400 M. Lynch#
2/26 Wachusett Res. 8 7m+1f M. Lynch#
2/29 Mattapoisett 129 M. Lynch#
Bufflehead X Common Goldeneye (hybrid)
1/1-1/8 Orleans 1 m ph v.o.
Common Goldeneye
thr Turners Falls 135 max S.Auer,K.Barnes+v.o.
1/11 Fairhaven 143 M. Lynch#
1/19 Mashpee 110 A. Kneidel#
2/1-2/22 Lowell 52 max D. McDermott + v.o.
2/29 Mattapoisett 87 M. Lynch#
Barrow's Goldeneye
1/1 Nantucket 3 L. Waters#
Barrow's Goldeneye (continued)
1/1-2/24 Sharon 1 W. Sweet +v.o.
1/2-1/11 Agawam 1 m L.+A. Richardson+v.o.
1/11 Fairhaven 1 m M. Lynch#
1/13-1/30 E. Boston 1 m G. Denton + v.o.
1/15-1/22 Rochester area 2 N. Dowling + v.o.
1/19 Mashpee 2 1pr A. Kneidel#
1/24 Bourne 2 1pr Anon.
2/5-2/22 Lowell 2 1pr D. McDermott + v.o.
2/9 Plymouth 5 3m SSBC (G. d'Entremont)
Hooded Merganser
1/2-2/27 Lee 41 max J. Pierce + v.o.
1/23 Wareham 58 M. Lynch#
2/15 Quaboag IBA 60 M. Lynch#
2/25 Acoaxet 55 M. Lynch#
Common Goldeneye x Hooded Merganser (hybrid)
2/24 Pembroke 1 I. Davies
Common Merganser
thr Turners Falls 78 max S.Auer,K.Barnes+v.o.
1/1-2/27 Southwick 400 max D. Holmes
1/15 Westborough 478 S. Williams
2/1 Wenham 200 G. d'Entremont#
Red-breasted Merganser
1/3-2/22 Wachusett Res. 3 max P.Morlock#
1/10 Quabbin Pk 1 M. McKitrick
1/18 Southwick 1 D. Holmes
1/23 Scusset B. 54 M. Lynch#
2/2 Acoaxet 74 M. Lynch#
Ring-necked Pheasant
1/11-2/16 Egremont 3 max C. Blake + v.o.
2/1 New Braintree 1 Bob Abbott
Ruffed Grouse
1/22 Hardwick 2 W. Howes
1/23 Quabbin (G11) 4 A. Hulsey

Wild Turkey
1/3 Lancaster 21 M. Lynch#
1/6 Grafton 58 C. Martone
2/9-2/16 Orange 80 G. Watkevich, B. Lafley
Pied-billed Grebe
1/18 Harwich 3 G. d'Entremont#
Horned Grebe
1/3-1/28 Quabbin Pk 6 max L. Therrien + v.o.
2/2 Acoaxet 27 M. Lynch#
2/29 Mattapoisett 11 M. Lynch#
Red-necked Grebe
1/5-1/7 Quabbin Pk 1 T. Gilliland + v.o.
1/14-1/14 MBO 101 A. Kneidel
1/23 Scusset B. 2 M. Lynch#
Eared Grebe
2/1-2/29 Beverly 1 ph F. Morello# + v.o.
Virginia Rail
thr GMNWR 4 max v.o.
1/1-2/9 DWWS 2 K. Rawdon + v.o.
1/9 Cuttyhunk I. 13 M. Sylvia #
2/22 Tidmarsh WS 2 I. Davies
Sora
1/1-2/17 GMNWR 1 ph D. Littauer + v.o.
1/1 DWWS 1 ph T. O'Brien + v.o.
Common Gallinule
1/1-2/25 Nantucket 1 ph v.o.
1/1-1/29 Tidmarsh WS 1 ph B. Griffith + v.o.
American Coot
2/25 Acoaxet 9 M. Lynch#
Sandhill Crane
1/10 Medfield 4 ph P. Pilch
1/15-2/29 Lancaster 4 ph P. Christoph + v.o.
American Oystercatcher
1/4 BHI (Snake I.) 3 ph N. St George
Black-bellied Plover
1/1-1/7 Ellisville 2 E. LeBlanc +v.o.
1/3-2/17 Barnstable 6 v.o.
2/18 Edgartown 14 B. Shriber
2/26 Nantucket 18 S. Fea#
Killdeer
1/9, 2/21 Nantucket 6, 11 T. Pastuszak
1/11 Fairhaven 1 M. Lynch#
1/19-1/19 Ellisville 1 L. Schibley
2/23 Fairhaven 3 SSBC (G. d'Entremont)
2/29 Rochester 4 M. Lynch#
Semipalmated Plover
1/6-2/19 Hyannis 2 S. Finnegan, v.o.
Piping Plover
2/23 Nantucket 1 S. Kardell
Marbled Godwit
1/1-1/12 Plymouth H. 1 ph L. Schibley + v.o.
Ruddy Turnstone
1/1-1/1 Scituate 1 T. O'Brien
1/11 Fairhaven 1 M. Lynch#
Red Knot
1/22-2/25 N. Chatham 5,6 M. Faherty, R. Heil
2/23 Rockport (AP) 1 A. Karighattam#
Sanderling
1/2 Wellfleet 872 K. Yakola#
2/25 Westport 147 M. Lynch#
Dunlin
1/2 Wellfleet 750 K. Yakola#
2/2 Westport 9 M. Lynch#
2/29 P'town (RP) 105 B. Nikula#
Long-billed Dowitcher
1/20 Nantucket 2 T. Pastuszak#
American Woodcock
1/9 Belchertown 1 L. Therrien
2/8 Marstons Mills 2 anonymous
2/16 Cuttyhunk I. 10 M. Sylvia
2/25 Stoneham 2 M. Sinclair
Wilson's Snipe
2/4-2/29 Concord 3 max J. Keyes
Willet (Western)
1/3 Edgartown 1 P. Gilmore
Pomarine Jaeger
1/1 P'town (RP) 1 P. Flood
1/3 Stellwagen Bank 1 P. Flood#
1/5 Eastham (FE) 1 J. Johnson#
Parasitic Jaeger
1/5 Eastham (FE) 1 J. Johnson#
Dovekie
1/3 Stellwagen Bank148 P. Flood#
1/3 PLY Co. seas 7 L. Waters#
1/4 Jeffreys L. 820 Z. Cornell#
1/14, 1/26 P'town (RP) 39,6 L. Waters#, B. Nikula#
1/26 Winthrop B. 1 M. Sovay + v.o.
1/27 Manomet Point 2 E. Dalton
2/9 Jeffreys L. 635 J. Sparrell#
Common Murre
1/2, 1/26 P'town (RP) 248,20 S. Arena, B. Nikula#
1/3 Stellwagen Bank177 P. Flood#
2/1-2/6 Rockport (AP) 77 max R. Heil + v.o.
2/9 Jeffreys L. 48 J. Sparrell#
Thick-billed Murre
1/25 Rockport (AP) 86 R. Heil
1/25-1/27 Manomet Point 4 B. Griffith + v.o.
1/26-2/2 BHI (Deer I.) 2 max R. Doherty + v.o.
2/1-2/14 Lynn H. 4 max S.Williams # + v.o.
2/9 Jeffreys L. 5 J. Sparrell#
2/12 Gloucester 6 J. Keyes
2/29 P'town (RP) 13 I. Davies#
Razorbill
1/1 P'town (RP) 2500 P. Flood
1/11-2/2 BHI (Deer I.) 3 J. Taylor + v.o.
1/23 Scusset B. 11 M. Lynch#
2/9 Jeffreys L. 36 J. Sparrell#
large alcid sp.
1/26 P'town (RP) 3400 B. Nikula#
Black Guillemot
thr P'town 5 max v.o.
1/11 Fairhaven 1 M. Lynch#
Black Guillemot (*mandtii*)
thr P'town 1 *mandtii* P. Flood, v.o.
Atlantic Puffin
1/14, 2/9 Jeffreys L. 10,3 v.o.
1/25, 2/18 Rockport (AP) 2,1 R. Heil
Black-legged Kittiwake
1/1 P'town (RP) 575 P. Flood
1/3 PLY Co. seas 1 L. Waters#
Bonaparte's Gull
1/12 Plymouth B. 3 J. Johnson
Black-headed Gull
thr Hyannis 1 ad ph v.o.
Mew Gull
2/3 Sharon 1 ad ph W. Sweet
Mew Gull (European)
1/20 Westport 1 ph J.+M. Eckerson
1/31-2/23 Swampscott 1 ph A. Sanford + v.o.
Mew Gull (*kamtschatschensis/heinei*)
1/31-2/23 Swampscott 1 ph A. Sanford + v.o.
Iceland Gull
1/1 Blackstone 1 2W M. Lynch#
1/4-2/23 Turners Falls 4 max E. Huston + v.o.
1/5 Lunenburg 1 N. Tepper
1/13-1/31 Sharon 1 W. Sweet +v.o.
1/28, 2/22 Quabbin Pk 1 L. Therrien
2/29 P'town (RP) 57 B. Nikula#
Lesser Black-backed Gull
1/1-2/18 Sharon 2 max ad W. Sweet +v.o.
1/6-1/8 Taunton 2 max D. Burton + v.o.
1/25-2/29 Turners Falls 5 max J. Layfield + v.o.

Lesser Black-backed Gull (continued)
2/9-2/24 Wilmington 4 max S. Sullivan + v.o.
2/28 Nantucket 125 S. Kardell
Glaucous Gull
1/4-2/15 Gloucester 2 1ad+1W R.Heil, J. Trimble
1/10 Wilmington 1 J. Keeley
1/13-1/24 Sharon 1 imm phW.Sweet+v.o.
1/19 Rumney (Saugus) 1 S. Zendeh + v.o.
1/19 Rumney (Revere) 1 S. Jones
1/24-2/22 Turners Falls 2 max, ph J. Rose + v.o.
2/2 Swampscott 1 J. Smith#
2/9 Rockport 1 S. Grinley#
2/29 P'town (RP)3 2-1W, 1 ad. B. Nikula#
Herring x Glaucous Gull (hybrid)
1/14, 2/16 P'town (RP) 1 ad ph L. Waters#
1/26 P'town (RP) 1 2W ph B. Nikula#
Red-throated Loon
1/18-1/27 Everett 1 T. Sackton + v.o.
1/23 Scusset B. 4 M. Lynch#
2/20-2/29 Medford 1 J. Kovner + v.o.
Pacific Loon
thr P'town (RP) 4 max ph v.o.
2/6, 2/12 Rockport (AP) 1,1 ph R.Heil, C. Floyd
Common Loon
1/1 Wachusett Res. 6 J. Bourget# + v.o.
1/1-2/23 Quabbin Pk 3 max S. Surner + v.o.
1/23 Scusset B. 26 M. Lynch#
2/2 Westport 18 M. Lynch#
Sooty Shearwater
1/1 P'town (RP) 1 ph P. Flood
1/3 Stellwagen Bank 1 P. Flood#
Double-crested Cormorant
2/2 Rockport (AP) 1 A. Sgroi
2/11 Cambridge 1 T. Bradford
Great Cormorant
1/23 Bourne 1 M. Lynch#
2/2 Acoaxet 11 M. Lynch#
2/26-2/29 Medford 1 J. Kovner + v.o.
2/29 Mattapoisett 2 M. Lynch#
American White Pelican
1/2 Truro, Wellfleet 1 ph M. Waters#, D. Berard
2/9 Wareham 1 T. OBrien
American Bittern
1/15 N. Truro 1 J. Eckerson#
2/16-2/19 PI 1 v.o.
Great Blue Heron
1/1-2/1 Cambridge 11 max K. Johnson + v.o.
2/17 Barnstable 8 G. d'Entremont#
2/25 Acoaxet 4 M. Lynch#
Great Egret
2/9 Chappaquiddick 1 B. Shriber#
2/22 Chatham 1 W. Kaempfer
Black-crowned Night-Heron
1/5-2/17 Gloucester 1 imm v.o.
1/22, 2/25 MV 22,12 ad+imm A. Steenstrup#
1/26 Salem 1 ad D. Brewster
2/17 Lynn 1 imm M. Genova
Yellow-crowned Night-Heron
1/2 Chilmark 1 ph P. Gilmore

VULTURES THROUGH DICKCISSEL

Raptor highlights during the period included high numbers of Black Vultures; in Ashley Falls, southwestern Berkshire County, as many of 26 were counted, while 28 were tallied in Blackstone, along the Rhode Island border. Ten Bald Eagles, nine of which were immatures, were found along the canal at Turners Falls. As many as six Long-eared Owls were reported from areas in East Boston and Revere. There were 15 individual Short-eared Owls reported compared with nine for the same period last year.

For those birds that have been lucky or hardy enough to survive to the start of the winter season, the period after the Christmas Bird Counts can take a heavy toll. Many individuals, including species such as Ruby-crowned Kinglet, Hermit Thrush, Gray Catbird, and Baltimore Oriole don't make it. This year (now through March, as I write this), has been one of the top 10 mildest and snowless winters in official record keeping. The result for wintering songbirds has been a bright picture of survival, as shown in Figure 1.

Among the vagrants were some holdovers from December including the elusive **Townsend's Solitaire** at Halibut Point State Park. Many birders made several trips before finding it, while others failed entirely. A **Western Tanager** that was coming to a feeder on Oriole Lane in Sandwich was much more obliging. The birding community is grateful to birders Scott and Sharion Boutilier for graciously allowing access to see the bird on their property. Another rare yard bird, a **Varied Thrush**, was visiting a feeder in Westhampton. The bird—unbeknownst to the host—was only discovered during a visit by a birding friend.

Other noteworthy reports included a **Sedge Wren** on Cuttyhunk, a **Yellow-throated Warbler** in Lancaster, and four individual **Painted Buntings** coming to feeders. Yellow-breasted Chats were reported in 20 locations. Other winter highlights included Nashville Warbler, Black-throated Blue Warbler, Prairie Warbler, and as many as 14 Orange-crowned Warblers.

R. Stymeist

References

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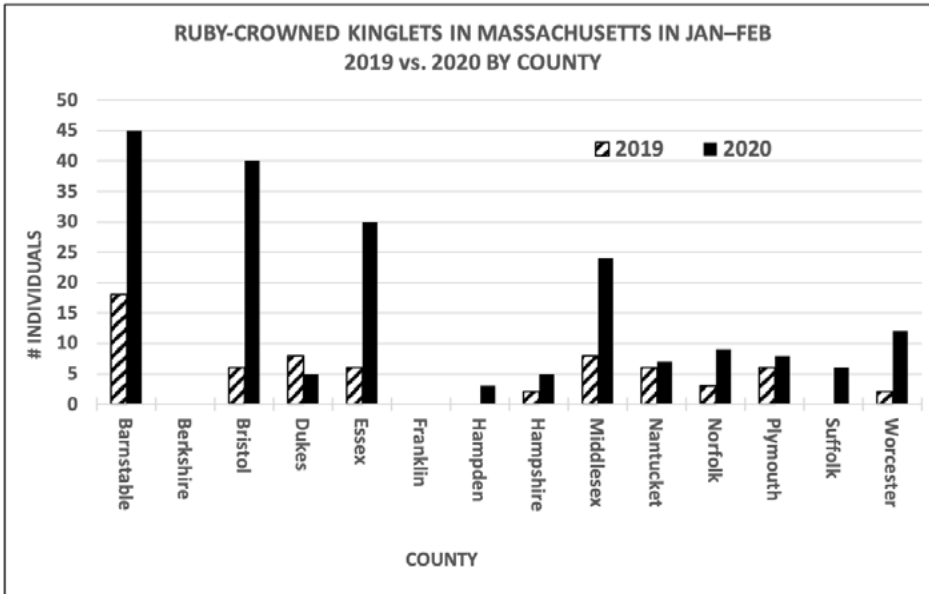

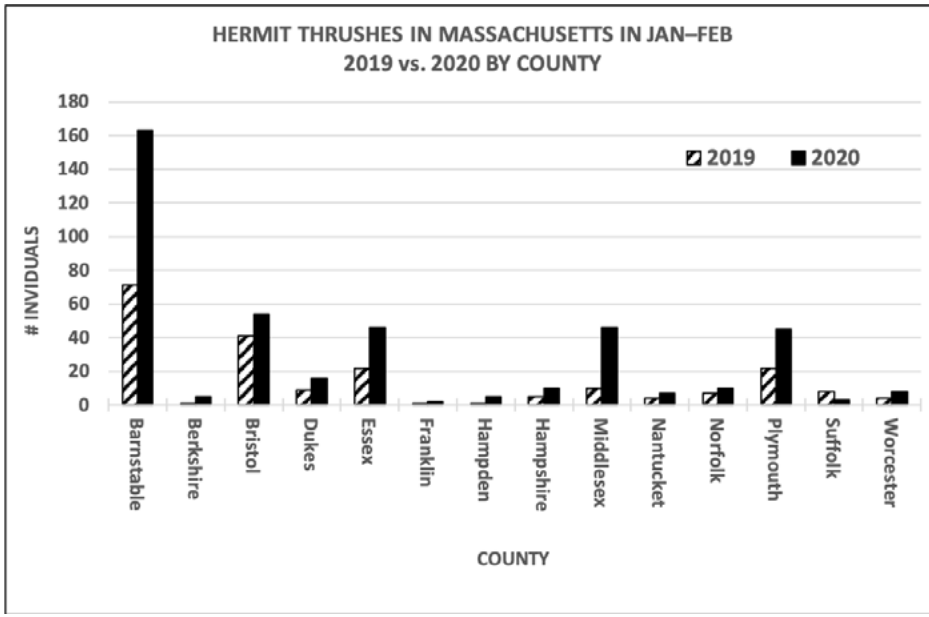

Figure 1. A comparison between 2019 and 2020 of total wintering individuals of Ruby-crowned Kinglets and Hermit Thrushes in Massachusetts counties for the period January–February. Data from eBird.org.

Black Vulture
1/1 Blackstone 28 M. Lynch#
1/1-2/22 Ashley Falls 26 max R. Wendell# + v.o.
2/2 Westport 7 M. Lynch#
2/8 Hopkinton 3 S. Williams
2/23 Barnstable 5 P. Trimble
Turkey Vulture
2/2 Westport 16 M. Lynch#
2/29 Blackstone 21 R. Hodson
Northern Harrier
1/10 Hadley 1 imm M. Lynch#
1/15 N. Truro 4 J. Eckerson#
2/23 Fairhaven 2 SSBC (G. d'Entremont)
2/25 Acoaxet 1 f M. Lynch#
Bald Eagle
2/8 Quabbin Res. 4 2ad+2imm M. Lynch#
2/24 Petersham 5 B. Lafley
2/25 Turners Falls 10 J. Rose, D. Small
Red-shouldered Hawk
1/11 Bourne 1 G. d'Entremont#
1/11 Fairhaven 1 M. Lynch#
2/9 Scusset B. 2 SSBC (G. d'Entremont)
2/12 W. Roxbury (MP) 1 R. Hodson
2/15 Quaboag IBA 2 1pr M. Lynch#
Rough-legged Hawk
1/1-1/11 Freetown 1 dk L. Abbey + v.o.
1/1-1/26 Saugus 1 dk S. Zendeh + v.o.
1/2 Hadley 1 lt L. Therrien
1/27 Montague 1 P. Gagarin
1/28 Chesterfield 1 lt T. Gessing
2/12 Williamstown 1 M. Morales + v.o.
2/16 Ashley Falls 1 dk J. Pierce# + v.o.
2/16 BFWMA 1 lt T. Murray + v.o.
2/22 Northampton 1 lt T. Tyning
2/27-2/28 Lee 1 lt J. Pierce + v.o.
Eastern Screech-Owl
2/4 MSSF 2 G. d'Entremont
2/22 Westborough 2 S. Arena
2/24 Lancaster/Harvard 3 M. Lynch#
Great Horned Owl
1/9 Ipswich 3 J. Berry
2/23 Westborough 3 S. Arena
2/24 Lancaster/Harvard 6 M. Lynch#
2/24 Marlborough 4 T. Spahr#
Snowy Owl
thr PI 3 max v.o.
1/3-2/20 Boston (Logan) 1 W. Scott + v.o.
1/11-2/29 Nantucket 1 v.o.
1/12 Ipswich (CB) 2 J. Berry#
2/9 Edgartown 1 B. Shriber
2/10 Nahant 1 T. McElligott#
Barred Owl
2/2 Upton 2 T. Dodd
2/24 Marlborough 4 T. Spahr#
Long-eared Owl
thr Suffolk Co. 6 max anon
Short-eared Owl
thr Indiv. reported from 8 locations
1/7-2/29 Cumb. Farms 3 max D. Furbish + v.o.
1/13-2/17 P'town 2 K. Burke, v.o.
1/15 PI 2 B. Howell#
Northern Saw-whet Owl
1/1-1/31 Great Barrington 3 max au Z. Adams, J.Pierce+v.o.
1/1 Paxton 2 M. Lynch#
2/1-2/3 Williamstown 4 max au N. Henkenius
2/24 Marlborough 5 T. Spahr#
Belted Kingfisher
2/26 Wachusett Res. 2 M. Lynch#
Red-headed Woodpecker
thr Ayer 1 imm ph v.o.
1/7-2/29 Hadley 3 2ad+1imm A. Hulsey+v.o.
2/5 Easthampton 2 imm ph D.McLain, K.Jones
Yellow-bellied Sapsucker
1/1-1/30 MtA 2 max A. Parker + v.o.
1/2 Wellfleet 4 Truro CBC
1/5 Boston (AA) 2 J. Hanson + v.o.
Northern Flicker
1/25-1/25 Tidmarsh WS 27 S. van der Veen
2/2 Acoaxet 4 M. Lynch#
Pileated Woodpecker
2/20 Concord 2 J. Forbes
2/21 Harvard 1 M. Lynch#
2/22 Montague 2 M. Lynch#
American Kestrel
1/1-1/29 Ashley Falls 2 max G. Ward# + v.o.
1/11-2/14 Williamstown 1 M. Morales
1/17 Easthampton 1 M. McKitrick
1/23-2/19 Hadley 1 M. Locher + v.o.
Merlin
1/1-1/2 Worc. 3 max B. Robo + v.o.
1/1-2/29 Medford 2 max J. Layman + v.o.
Peregrine Falcon
1/11 Holyoke 3 D. Allard
2/1-2/24 Watertown 2 1pr n R. Stymeist# + v.o.
Eastern Phoebe
thr Hadley 1 C. Elowe
1/1 Sheffield 2 R. Wendell#
1/3-1/3 MBO 1 A. Kneidel
1/6-1/20 Mashpee 2 K. Miller#
1/15-2/15 Athol 1 E. LeBlanc
2/22-2/25 IRWS 1 D. Littauer + v.o.
2/23 Marion 1 I. Davies
Northern Shrike
thr Indiv. reported from 14 locations
Fish Crow
1/1 Falmouth 635 J. McCumber
1/2-1/20 Chicopee 4 max F. Bowrys
1/28-2/27 Pittsfield 2 max J. Jew + v.o.
1/31 Blackstone 83 M. Lynch#
Common Raven
thr Amherst 4 max J. Rose
1/12-2/23 Nantucket 2 max v.o.
1/31 Hardwick 23 W. Howes
2/9 Groton 4 ph T. Murray
2/16 Pittsfield 6 max G. Miller, M. Marino
2/22 WBWS 3 L. Chen#
Horned Lark
thr Northampton 250 max L. Therrien + v.o.
1/9-1/30 Rutland 50 max B. Abbott + v.o.
1/12 Ipswich (CB) 7 J. Berry
2/1-2/16 Saugus 80 max G. Wilson + v.o.
Tree Swallow
1/1 Falmouth 2 K. Fiske
2/10 Nantucket 16 T. Pastuszak
Red-breasted Nuthatch
2/1-2/29 Shutesbury 9 A. Eckerson + v.o.
2/24 Quabbin (G40) 6 S. Miller#
Brown Creeper
1/22 Royalston 2 M. Lynch#
2/16 Hubbardston 5 N. Tepper
Winter Wren
1/1-2/17 Belchertown 2 max L. Therrien
1/2 Fairhaven 2 G. d'Entremont
1/2 Waltham 2 J. Forbes
1/7-2/23 W. Roxbury (MP) 2 M. Iliff + v.o.
Sedge Wren
1/9 Cuttyhunk I. 1 M. Sylvia #
Marsh Wren
thr GMNWR 2 max v.o.
1/2 N. Truro 6 M. Waters#
1/12 Burlington 1 M. Rines
2/9 Sandwich 1 SSBC (G. d'Entremont)

Marsh Wren (continued)
2/22-2/24 Wayland 1 B. Harris + v.o.
2/23 Fairhaven 1 SSBC (G. d'Entremont)
Carolina Wren
thr Northampton 8 max L.Therrien + v.o.
thr Longmeadow 6 max M. Moore + v.o.
1/31 Blackstone 8 M. Lynch#
2/23 Fairhaven 18 SSBC (G. d'Entremont)
Ruby-crowned Kinglet
1/10-1/15 Uxbridge 2 max ph C. Liazos + v.o.
1/25 Rockport (HPt) 2 G. d'Entremont#
1/31 Mashpee 4 M. Keleher
Eastern Bluebird
thr Pittsfield 18 S. Townsend
2/2 Acoaxet 28 M. Lynch#
2/23 Hardwick 24 M. Lynch#
Townsend's Solitaire
thr Rockport (HPt) 1 ph v.o.
Hermit Thrush
1/12 Amherst 3 S. Zhang
Varied Thrush
1/19 Westhampton 1 ph S. Jaffe
Gray Catbird
1/2 N. Truro 10 M. Waters#
1/9-2/1 Cumb. Farms 3 B. Vacchino + v.o.
1/11 E. Orleans 8 R. Heil
1/11 Fairhaven 5 M. Lynch#
Brown Thrasher
1/9 Cuttyhunk I. 2 M. Sylvia #
2/2 Nantucket 2 S. Kardell#
Bohemian Waxwing
1/22-1/24 Rockport (HPt) 1 ph R. Heil + v.o.
2/29 P'town 1 ph J. Wagner#
Cedar Waxwing
1/1 Lincoln 92 M. Rines
1/2-1/11 Dalton 105 max G. Hurley
1/4 Ashburnham 72 C. Caron
American Pipit
2/1-2/29 Gloucester 2 v.o.
2/25 Nantucket 3 S. Fea
Evening Grosbeak
1/4 Heath 1 H. Hallman
2/6-2/7 Colrain 5 max R. & H. Olson
Purple Finch
1/1 Mount Washington 3 S. Townsend#
Red Crossbill
1/1 New Marlborough 5 Type1,2,4,10 J. Pierce# + v.o.
2/1 Montague 1 f J. Layfield
2/9 Conway 8 max S. Auer, K. Barnes
Pine Siskin
1/1 Shelburne Falls 2 J. Coleman
1/3 Easthampton 1 T. Gessing
1/25 Hadley 1 M. McKitrick
2/2 Stockbridge 1 L. Beasley
2/16 Montgomery 4 L. Conley
Lapland Longspur
1/1-1/5 Bridgewater 2 P. Jacobson + v.o.
1/14 P'town (RP) 1 L. Waters#
1/19-2/19 Hadley 4 max T. Gilliland + v.o.
1/25-2/9 Egremont 3 max K. Hanson# + v.o.
2/16 Saugus 1 G. Wilson + v.o.
Snow Bunting
1/14 P'town (RP) 120 L. Waters#
1/21 Gloucester 35 P. Peterson
1/26 Wachusett Res. 15 T. Pirro
2/12 Williamstown 100 C. Johnson
Grasshopper Sparrow
thr Saugus 1 G. Wilson + v.o.
1/29-2/21 Barnstable 1 v.o.
Chipping Sparrow
thr Eastham 14 max v.o.
thr Arlington 6 max R. Stymeist#
2/9 Sudbury Res. 7 M. Lynch#
2/21 Chilmark 15 B. Shriber
Clay-colored Sparrow
thr Eastham 1 v.o.
2/21 Chilmark 1 B. Shriber
Field Sparrow
thr Easthampton 4 max L. Therrien + v.o.
1/26 Freetown 14 G. d'Entremont#
1/27-2/23 Southwick 9 max D. Holmes + v.o.
2/23 W. Roxbury (MP) 5 M. Iliff
2/26 Wachusett Res. 2 M. Lynch#
Fox Sparrow
2/1-2/17 Belmont 4 max J. Layman + v.o.
2/10 Boston (AA) 3 P. Peterson
2/17 Woburn (HP) 2 M. Rines
American Tree Sparrow
thr Great Barrington 45 G. Ward
1/1-2/26 Northampton 50 J. Young + v.o.
2/8 Northfield 63 F. Bowrys
2/15 Quaboag IBA 19 M. Lynch#
White-crowned Sparrow
thr Ashley Falls 4 max G. Ward + v.o.
1/23 Scusset B. 2 imm M. Lynch#
2/1-2/29 Saugus 4 max G. Wilson + v.o.
Vesper Sparrow
1/1-2/20 Hadley (Honeypot) 1 L. Therrien + v.o.
1/2 Truro 1 P. Crosson#
1/31-2/29 Falmouth 1 R. Heil, N. Marchessault
2/23 Hardwick 1 M. Lynch#
Savannah Sparrow
1/1-2/9 Northampton 21 max T. Gessing + v.o.
Savannah Sparrow (continued)
1/23 Sheffield 8 G. Ward
Swamp Sparrow
1/1 Blackstone 2 M. Lynch#
1/3-2/21 Lenox 5 max Z. Adams + v.o.
1/21 Hamilton 2 J. Berry
Eastern Towhee
2/17-2/29 Newton 2 H. Miller+ v.o.
2/23 Fairhaven 2 SSBC (G. d'Entremont)
Yellow-breasted Chat
thr Indiv. reported from 20 locations
Eastern Meadowlark
thr Cumb. Farms 15 max v.o.
1/1-1/24 S. Dartmouth (APd) 31 E. Lipton# + v.o.
1/1-1/29 Falmouth 9 max v.o.
1/1-2/16 Saugus 3 max G. Wilson + v.o.
Baltimore Oriole
1/1 Dennis 2 N. Villone#
1/15-1/23 Eastham 2 H. Swift#
1/27-1/30 Sandwich 1 P. Trimble + v.o.
2/1-2/15 Danvers 1 f K. McCuster
2/2 Acoaxet 1 imm m M. Lynch#
2/3-2/22 Kingston 2 m D. Furbish
2/8-2/22 Watertown 1 C. Browne
2/22-2/23 Jamaica Plain 1 P. Normandia
2/13-2/29 Nantucket 2 max G. Andrews#
Red-winged Blackbird
1/5-2/29 Northampton 215 max B. Finney + v.o.
1/28-1/31 Great Barrington 400 max G. Ward + v.o.
2/23 BFWMA 600 N. Dowling
Brown-headed Cowbird
1/11 Rochester 55 M. Lynch#
1/28-1/31 Great Barrington 100 max G. Ward + v.o.
Rusty Blackbird
1/13 Sandwich 3 S. Finnegan#
1/13 Grafton 2 C. Martone
1/14-2/19 Longmeadow 5 max M. Moore
1/17-1/17 Plymouth 2 1pr E. Gustafson#
1/31-2/23 Northampton 3 max L. Therrien

Rusty Blackbird (continued)
2/21 Lancaster 3 J. Bourget#
Common Grackle
2/23 BFWMA 1700 N. Dowling
2/25 Westport 45 M. Lynch#
Northern Waterthrush
1/1-1/12 Nantucket 1 G. Andrews#
1/4 Edgartown 1 J. Trimble#
Orange-crowned Warbler
thr Indiv. reported from 14 locations
Nashville Warbler
2/6 Mashpee 1 M. Keleher#
Common Yellowthroat
1/2 Wellfleet 1 J. Young#
1/6-1/6 DWWS 1 B. Albro
1/10-1/22 W. Roxbury (MP) 2 M. McMahon + v.o.
2/16 IRWS 1 B. Bolnick
2/16 Ayer 1 R.Heil
Northern Parula
1/14-thr S. Orleans 1 m ph D. Gilmore
Black-throated Blue Warbler
1/1-1/24 Wellfleet 1 f/imm M. Dorrell
Palm Warbler (Western)
1/11 E. Orleans 2 R. Heil
Pine Warbler
1/1-1/20 Waltham 1 J. Forbes
1/4-1/9 Great Barrington 3 J. Pierce, R. Wendell
1/21 Lakeville 11 M. Sylvia
2/17 Harwich 6 G. d'Entremont#
Yellow-rumped Warbler
1/1-2/26 Northampton 20 max A. Hulsey + v.o.
1/2 N. Truro 508 L. Waters#
1/23 Scusset B. 7 M. Lynch#
2/9 Lexington (DM) 5 M. Rines#
2/16 Winthrop 5 S. Jones + v.o.
Yellow-throated Warbler
1/6-1/26 Lancaster 1 ph L. Ercolini
Prairie Warbler
1/2 Wellfleet 1 J. Young
Western Tanager
thr Sandwich 1 ph v.o.
Painted Bunting
thr Eastham 1 m ph J. Carbone
thr Orleans 1 R. Utt
1/1-2/18 Harwich 1 m ph b S. Mackoul
1/1-1/28 Carver 1 f ph E. Dalton# + v.o.
Dickcissel
1/2-1/3 Lynn 1 ph S. McDonald + v.o.
2/9-2/12 Haverhill 1 ph D. Lyons
2/20-2/29 Rumney (Revere) 1 ph P. Peterson + v.o.

NORTHERN GOSHAWK BY NEIL DOWLING

BYGONE BIRDS

Historical Highlights for January–February

Neil Hayward

5 YEARS AGO

January–February 2015

A pair of **Barnacle Geese** were present in Northampton from January 2–11. An **Eared Grebe** was back at Mashpee on January 20, possibly the same bird seen in November. An immature **Purple Gallinule** was found in distress in Weston on January 19 but died before rehabilitators arrived the following day. Nantucket hosted a flyby **Brown Pelican** on New Year's Day and a Royal Tern on January 16, the first winter record for the state. A **Prairie Falcon** was a nice surprise on Plum Island for the first day of 2015. What would have been a state first ended up being rejected based on photographs that showed falconer's gear attached to one of the bird's legs. A **Spotted Towhee** was in Chilmark and a **Painted Bunting** in Wellfleet. Continuing birds from December included the **Townsend's Solitaire** in Marion, the **Townsend's Warbler** in Marblehead, and the **Audubon's Warbler** in Hingham.

Best sighting: Black-backed Woodpecker at the Forest Hills Cemetery, Jamaica Plain, January 6. This bird stayed for over four months and was seen by many local birders.

10 YEARS AGO

January–February 2010

Rare geese included the continuing **Greater White-fronted Goose** in Sharon and a **Barnacle Goose** in South Egremont. The pair of **Tundra Swans** continued on Nantucket. An **Eared Grebe** spent four days at Marstons Mills in January. A **Wood Stork** was a one-day wonder in Cotuit on January 20. Another one-day surprise was a **Slaty-backed Gull** photographed at Eastern Point, Gloucester, on January 25. **Ivory Gulls** were more obliging, with an adult at Race Point, January 14–17, and a second bird at Westport on January 23. The **White-winged Dove** first found on the Sturbridge Christmas Bird Count continued into January at the feeders of the Bird Store and More in Sturbridge. The **Allen's Hummingbird** first discovered in October at a feeder in Harwich survived until January 19. A **Townsend's Solitaire** spent more than three weeks in Yarmouthport, while a **Summer Tanager** and a **Painted Bunting** visited feeders within three blocks of each other in Orleans.

Best sighting: **Sage Thrasher** at Salisbury State Park, January 11–March 28. This represents the third state record for the species, the two previous records coming from Plum Island in October 1965 and November 2005.

20 YEARS AGO

January–February 2000

The **Eared Grebe** at East Gloucester continued for its fifth consecutive winter. Up to two **Greater White-fronted Geese** were on the north shore with another in Fairhaven. **Tufted Ducks** were found in Plymouth and at Wachusett Reservoir. A **Mew Gull** was present in South Boston for most of the period. Passerine highlights included a **Boreal Chickadee** in West Newbury, a **Western Tanager** in Orleans, an **Oregon Junco** in Easthampton, a **Spotted Towhee** in Hadley, and **Hoary Redpolls** in Easthampton and Halibut Point.

Best sighting: **Brown Pelican** in Westfield, January 1–4. This was a first for western Massachusetts. It was eventually captured, rehabilitated and relocated to Florida.

40 YEARS AGO

January–February 1980

A **Western Grebe** continued at Plum Island for the second half of January. Two **Gyrfalcons**—one gray and one dark—were reported from the Newburyport area marshes from late January through mid-February. **Varied Thrushes** were found at Harvard and South Orleans in February. Rare icterids included a **Yellow-headed Blackbird** in Hingham on January 1, and one or two **Brewer's Blackbirds** on Martha's Vineyard through the end of February. Other passerine highlights included **Western Tanagers** at Framingham and Dover and a Lincoln's Sparrow at Eastern Point, Gloucester, on New Year's Day.

Best sighting: After an absence off nearly twenty-five years, Bald Eagles were reported back at their former wintering haunts along the Merrimack River. As many as five immatures were present during February.

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ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOS checklist, Seventh edition, 60th Supplement, as published in *Auk* 136: ukz042 (2019) (see <http://checklist.aou.org/>).

Locations

AA	Arnold Arboretum, Boston
ABC	Allen Bird Club
AFB	Air Force Base
AP	Andrews Point, Rockport
APd	Allens Pond, S. Dartmouth
AthBC	Athol Bird Club
B.	Beach
Barre FD	Barre Falls Dam
BBC	Brookline Bird Club
BFWMA	Bolton Flats WMA, Bolton & Lancaster
BHI	Boston Harbor Islands
BI	Belle Isle, E. Boston
BMB	Broad Meadow Brook, Worcester
BNC	Boston Nature Center, Mattapan
BR	Bass Rocks, Gloucester
BRI Co. seas	Bristol County, offshore
Cambr.	Cambridge
CB	Crane Beach, Ipswich
CCBC	Cape Cod Bird Club
CGB	Coast Guard Beach, Eastham
Co.	County
Corp. B.	Corporation Beach, Dennis
CP	Crooked Pond, Boxford
Cumb. Farms	Cumberland Farms, Middleboro
DFWS	Drumlin Farm Wildlife Sanctuary
DM	Dunback Meadow
DWMA	Delaney WMA, Stow, Bolton, Harvard
DWWS	Daniel Webster Wildlife Sanctuary
EP	Eastern Point, Gloucester
FE	First Encounter Beach, Eastham
FH	Fort Hill, Eastham
FHC	Forest Hills Cemetery, Boston
FP	Fresh Pond, Cambridge
FPk	Franklin Park, Boston
G#	Gate #, Quabbin Res.
GMNWR	Great Meadows National Wildlife Refuge
H.	Harbor
HCB	Herring Cove Beach, Provincetown
HP	Horn Pond, Woburn
HPt	Halibut Point, Rockport
HRWMA	High Ridge WMA, Gardner
I.	Island
IBA	Important Bird Area
IRWS	Ipswich River Wildlife Sanctuary
L.	Ledge
MAS	Mass Audubon
MBO	Bird Observatory, Manomet
MBWMA	Martin Burns WMA, Newbury
McW	McLaughlin Woods
MI	Morris Island
MNWS	Marblehead Neck Wildlife Sanctuary
MP	Millennium Park, W. Roxbury
MSSF	Myles Standish State Forest, Plymouth
MtA	Mount Auburn Cemetery, Cambr.
MV	Martha's Vineyard
NAC	Nine Acre Corner, Concord
Nbpt	Newburyport
ONWR	Oxbow National Wildlife Refuge
Pd	Pond
PG	Public Garden, Boston
PI	Plum Island
Pk	Park
PLY Co. seas	Plymouth County, offshore
Pont.	Pontoosuc Lake, Lanesboro
POP	Point of Pines, Revere
PR	Pinnacle Rock, Malden
P'town	Provincetown
R.	River
Res.	Reservoir
RKG	Rose Kennedy Greenway, Boston
RP	Race Point, Provincetown
SB	South Beach, Chatham
SF	State Forest
SN	Sandy Neck, Barnstable
SP	State Park
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
TASL	Take A Second Look, Boston Harbor Census
WBWS	Wellfleet Bay Wildlife Sanctuary
WE	World's End, Hingham
WMA	Wildlife Management Area
WMWS	Wachusett Meadow Wildlife Sanctuary
Wompatuck SP	Hingham, Cohasset, Scituate, Norwell
Worc.	Worcester
WS	Wildlife Sanctuary
WSF	Willowdale State Forest, Ipswich
WWMA	Westborough WMA, Westborough

Other Abbreviations

*	first state record (pending MARC review)
!	subject to MARC review
ad	adult
au	audio recorded
b	banded
br	breeding
cy	cycle (3cy = 3rd cycle)
d	dead
dk	dark (morph)
f	female
fl	fledgling
h	heard
imm	immature
inj	injured
juv	juvenile
lt	light (morph)
m	male
MARC	Massachusetts Avian Records Committee
max	maximum
migr	migrating
n	nesting
nfc	nocturnal flight call
ph	photographed
pl	plumage
pr	pair
r	rescued
S	summer (1S = first summer)
subad	subadult
v.o.	various observers
W	winter (2W = second winter)
yg	young
#	additional observers

HOW TO CONTRIBUTE BIRD SIGHTINGS TO *BIRD OBSERVER*

Sightings for any given month should be reported to *Bird Observer* by the eighth of the following month. Reports should include: name and phone number of observer, name of species, date of sighting, location, number of birds, other observer(s), and information on age, sex, and morph (where relevant). Reports can be emailed to sightings@birdobserver.org or submitted online at <http://www.birdobserver.org/Contact-Us/Submit-Sightings>, or sent by mail to Bird Sightings, Robert H. Stymeist, 36 Lewis Avenue, Arlington MA 02474-3206.

Species on the Review List of the Massachusetts Avian Records Committee, as well as species unusual as to place, time, or known nesting status in Massachusetts, should be reported promptly to the Massachusetts Avian Records Committee, c/o Sean Williams, 18 Parkman Street, Westborough MA 01581, or by email to seanbirder@gmail.com.

ABOUT THE COVER

Yellow-throated Vireo

The Yellow-throated Vireo (*Vireo flavifrons*) is a beautiful bird but its biology is not well known, probably because it is uncommon through much of its breeding and wintering range. It is easily separated from other vireos by its yellow eye ring, throat, and breast and its white underparts and wing bars. The sexes are similar in plumage. Its large, stocky head and bill and short tail separate it from warbler species including the Pine Warbler, which it most closely resembles. The Yellow-throated Vireo is monotypic—having no subspecies—and appears to be closely related to the Blue-headed Vireo, which has similar breeding behavior and with which it occasionally hybridizes.

Yellow-throated Vireos are widely distributed throughout much of the eastern half of the United States, extending south to central Texas and northern Florida and Alabama along the Gulf Coast. Their breeding range also extends north into several places in southeastern Canada. They winter mainly in southern Mexico through Central America and south to Colombia and Venezuela, where they often forage in mixed-species flocks. Rarely, they winter in the Bahamas and other Caribbean islands. In Massachusetts, the Yellow-throated Vireo is considered an uncommon and local breeder, primarily in central and western Massachusetts, and is an uncommon to rare migrant in mid to late May and late August and September. They are typically solitary during migration.

Yellow-throated Vireos are thought to be monogamous, producing a single brood per season. Only the males sing a variable series of short buzzy phrases, which are usually separated by a second or more. Like other vireos, the song is probably learned. They also produce a variety of contact, scolding, and alarm calls. Males are territorial and may sing for most of the day until they secure a mate, after which singing is significantly reduced. Males will chase other males intruding into their territory and in aggressive situations will ruffle their head and body feathers and give scolding calls. The male selects the territory and may begin building a nest and use that site for its singing and displays involving feather fluffing. After pairing, the male mate-guards, following the female closely while she finishes building the nest.

Yellow-throated Vireos nest primarily in edge habitat in deciduous or deciduous/coniferous forests in mostly rural areas. The nest is usually in the crown of a deciduous tree. Initially, the male does most of the nest construction but the female progressively takes over the building responsibilities. Like most other vireo species, the nest is a cup suspended from a forked branch and consists of bark strips, grass, pine needles, and roots held together with spider web. The nest is lined with fine grass and often decorated with lichens, birch bark or even paper. The female develops an incubation (brood) patch and the male a partial one, with the female incubating the clutch of four dark spotted creamy or pinkish eggs at night and sharing duties with the male during the day. The eggs hatch after about two weeks and the young birds are altricial—helpless—and with their eyes closed at hatching. Both parents feed the chicks for the

two weeks until fledging. Then they divide the brood and continued to feed them for an additional two weeks or more.

Yellow-throated Vireos are mostly bark and foliage gleaners, but occasionally they may hawk flying insects or hover-glean foliage. After catching a large insect they beat it against a branch, sometimes holding it against a branch with a foot while they dismember it. Usually insectivorous, they may sometimes take fruit in fall and winter.

In the nineteenth century Yellow-throated Vireos were widespread and relatively common in Massachusetts. By the early twentieth century they had noticeably decreased, reaching their current status by mid-century. Spraying of pesticides for Dutch elm disease and gypsy moth caterpillars may have precipitated local declines. There are few data on predation, but owls, hawks, and jays have been recorded taking adults and nestlings. Yellow-throated Vireos suffer significant cowbird nest parasitism in some areas. A current concern about their population decline is the deforestation of their wintering grounds. However, Breeding Bird Census data indicate a population increase of about 1% per year from 1966–1994, despite local declines. We certainly hope that this beautiful vireo will be with us into the future.

William E. Davis, Jr.

ABOUT THE COVER ARTIST

John Sill

John Sill is a freelance wildlife artist living in the mountains of North Carolina. He was the illustrator for the Bird Identification Calendar for Mass Audubon for many years. His work has appeared in Birds In Art at the Leigh-Yawkey Woodson Art Museum, Wausau, Wisconsin, and in Art of the Animal Kingdom at the Bennington Center for the Arts in Vermont. He continues to illustrate the "About" and "About Habitats" series of natural history books for children written by his wife Cathryn.

OSPREY BY NEIL DOWLING

AT A GLANCE

April 2020

DAVID CLAPP

A species that eats mealworms! Though this clue may at first seem irrelevant, to backyard bird feeding devotees it may be just about all that is needed to identify this issue's mystery species. But before going down that road, let's concentrate on the bird itself.

Because this image is only viewable in black-and-white, readers are forced to use features other than color as identification clues. Characteristics to notice on the bird include a thin (but not tiny) bill, two prominent wing bars, two pale eye arcs around the eye, no obvious streaks on the back or the underparts, a diffuse pale patch on the side of the neck, and a relatively long tail. Using the shape of the bill and the overall conformation of the mystery species as clues, it bears the closest resemblance to a warbler of some sort.

Because the *gizz* (superficial overall impression) of the mystery bird is that of a warbler, careful examination and comparison of the bird's features is in order. The obvious wing bars and unstreaked underparts of the mystery warbler at once narrow the field to Blue-winged Warbler, Northern Parula, Bay-breasted Warbler, Chestnut-sided Warbler, and Pine Warbler. All other eastern warblers with prominent wing bars have at least some obvious streaking on their breast, sides, or flanks—a factor that eliminates the majority of otherwise potentially similar-looking species. Of the five listed species, Blue-winged can be eliminated by the absence of a distinct black eye line; Northern Parula by its tiny size, small bill, and short tail; Chestnut-sided by the absence of a complete white eye ring and a light gray face; Bay-breasted by streaks on its back, a relatively shorter tail, and bright green sides to the neck and buffy undertail coverts

(neither, unfortunately, can be seen in the black-and-white photo).

With four of the warbler species above eliminated, only the Pine Warbler (*Setophaga pinus*) remains as a solid identification candidate. And as noted in the opening sentence, Pine Warblers love to eat mealworms during the winter when they occasionally visit backyard bird feeders in small numbers, especially near the coast and on Cape Cod and the Islands.

Pine Warblers are fairly common and widespread in Massachusetts wherever there are extensive pitch pine or white pine woodlands, especially from Plymouth southeastward to Cape Cod and the Islands. Residents arrive in late March and regularly remain until mid to late fall, with small numbers frequently remaining through the winter, where they often appear at feeders to feed on suet or mealworms.

David Clapp photographed this female Pine Warbler on February 8, 2020, at his Cape Cod feeder in Brewster, Massachusetts.

Wayne R. Petersen

BAY-BREASTED WARBLER BY SANDY SELESKY

AT A GLANCE

DAVID CLAPP

Can you identify the birds in this photograph?
Identification will be discussed in next issue's AT A GLANCE.

MORE HOT BIRDS

Gloucester resident Kris Nemeroff (her photograph on the left) noticed a striking and unfamiliar bird under her feeders on May 12. A couple of days later, she managed to photograph it, and posted her photos in a Facebook birding group to see if anyone there recognized it. Her bird turned out to be a **Harris's Sparrow**, the first one documented in the state since 2017. It apparently stuck around just to have its picture taken, as she has not seen it again since.

Amherst homeowner Jane Mildred was pleasantly surprised to notice a young male **Western Tanager** visiting her bird feeders on April 18. She contacted a prominent local birder, who visited to confirm the bird's identity and document the occurrence. A second bird of the species was found on Nantucket on March 7 and continued there through at least April 5. Scott Surner took the photo on the right.

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