Bird Observer

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HOT BIRDS

A **Western Grebe**, originally detected by Alan Trautmann during the annual TASL Boston Harbor waterbird census on February 7, went unreported from that date until rediscovered by Soheil Zendeh, March 11. It was then enjoyed by many birders through at least April 16. Suzanne Sullivan took the photo on the left.

In a textbook case of the "Patagonia Picnic Table Effect", birders chasing the first-state-record Yellow-billed Loon at Race Point found not one but two **Common Gulls**, the European subspecies of Mew Gull. Dick Veit reported the first one on March 13. Mary Keleher photographed what she thought was the same bird on March 26 but subsequent examination determined this to be a second individual. Jason Forbes took the photo on the left.

A flock of Glossy Ibis, described by several longtime area birders as the largest they'd ever seen and numbering over 400 birds at times, was found by Steve Grinley and Margo Goetschkes to include at least two and maybe three **White-faced Ibis**. The flock circulated between the Hamlin Reservation in Ipswich, Pikul's Pans in Rowley, and other nearby wetlands between April 24 and May 5. Bob Stymeist took the photo on the left.

The best (so far) find of an excellent spring for inland seabirds was the **Little Gull** that Jonathan Pierce photographed (on left) on Silver Lake in Pittsfield on April 29, apparently only the second record ever for Berkshire County. Unfortunately, the bird flew off after being photographed and was not seen again despite much searching by many area birders.

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Birding Essex County, Vermont

Thomas Berriman

Essex County is located in northeast Vermont. It is one of three counties that make up what is known as the Northeast Kingdom, named by Governor George Aiken in 1949. Essex County is the least populated county in New England, with just 6125 residents. There are a dozen or so towns in the county, only three of which have populations over 1000, the rest having populations of a few hundred or less. Almost all of these towns can be found along the paved perimeter roads that circle the county.

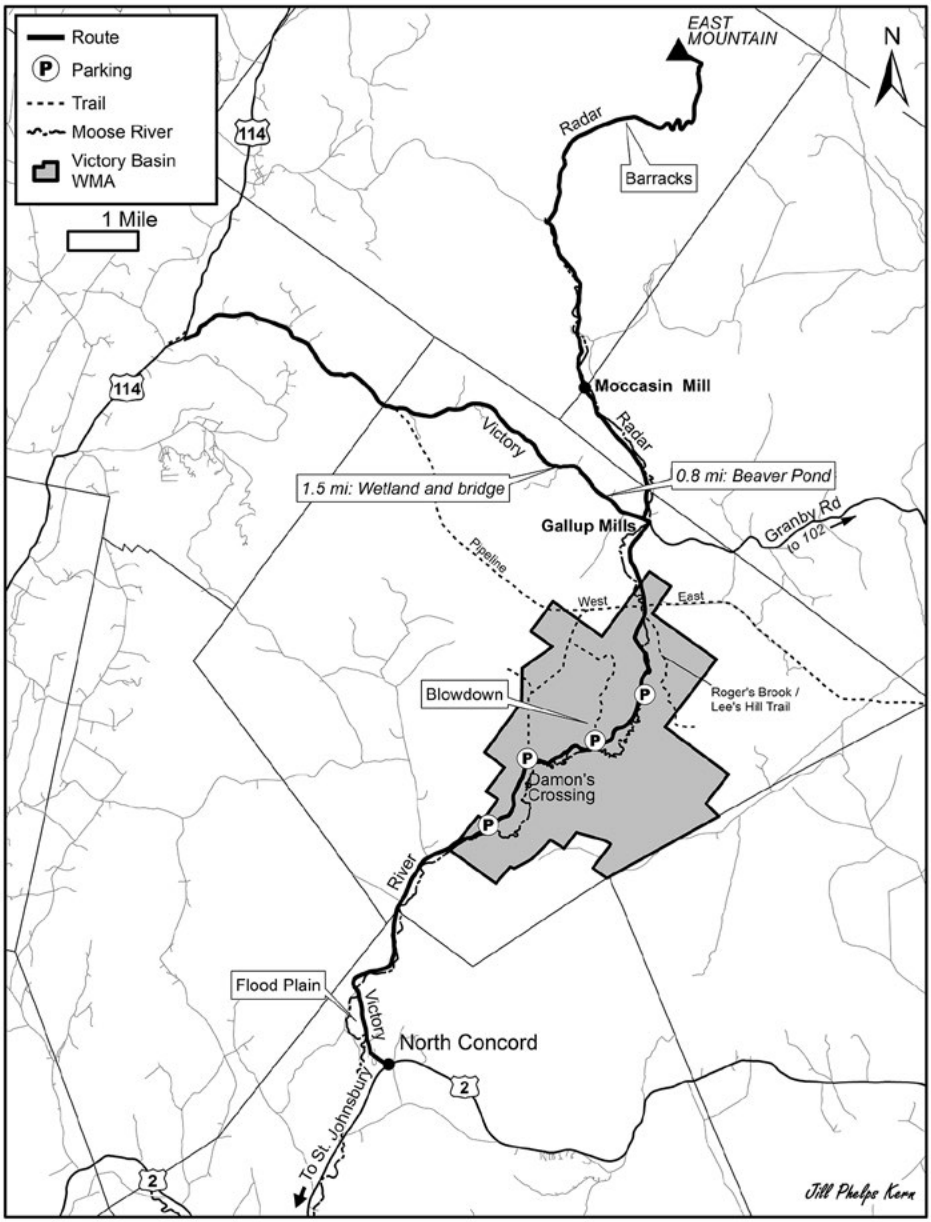
Take a drive along the only paved roads in the county (save one section of east-west road, Route 105, from Island Pond to Bloomfield) around the perimeter of 675 square miles of undeveloped wilderness and you will begin to appreciate how vast this 45-mile-long by 23-mile-wide section of Vermont is. Starting from Lyndonville in Caledonia County, head northeast on Route 114 to Island Pond, and continue north on 114 to the town of Norton on the Canadian border. There, Route 114 takes a 90-degree turn east, shadowing the 45th parallel of the Canadian border, to the town of Canaan. Canaan is on the border of New Hampshire, and here the Connecticut River divides the two states of Vermont and New Hampshire. At Canaan you will make another 90-degree turn and head south on Route 102, following the western shoreline of the Connecticut River, to the town of Lunenburg. Route 102 ends here merging into Route 2. Follow Route 2 west to the town of Concord to complete the circuit of Essex County.

I reference this circuit because there is so much acreage that cannot be reached by automobile, especially in winter but in summer as well. The good news is that within this circuit there is one paved road and a few gravel roads that are maintained year-round for access to some of the best birding locations in Vermont. In winter you will be able to access at least a few of the very best locations for finding boreal species and winter finches. In summer after mud season—usually around mid-May in Essex County—you will be able to access hundreds of miles of good hard-packed gravel roads to gain entry into the heart of The Kingdom. On most of these roads you will be able to use your family sedan without four-wheel drive.

ESSEX COUNTY BIRDING LOCATIONS

Victory Basin Wildlife Management Area

Starting in St. Johnsbury from the Intersection of Route 2 and Route 5—also known as Railroad Street and Portland Street—drive east on Route 2 for about 11.5 miles to the town of North Concord at the intersection of Route 2 and Victory Road. (Note: Victory Road becomes River Road after 2.8 miles. All mile marker notations along Victory and River roads in this article refer to the start of this road in North Concord.) Make a left onto Victory Road, which becomes a gravel road after 0.2 mile


Route
Parking
Trail
Moose River
Victory Basin WMA
1 Mile
EAST MOUNTAIN
N
Radar
Barracks
114
Moccasin Mill
Radar
Victory
1.5 mi: Wetland and bridge
0.8 mi: Beaver Pond
Gallup Mills
Granby Rd to 102
Pipeline
West
East
Blowdown
Roger's Brook / Lee's Hill Trail
Damon's Crossing
River
Flood Plain
Victory
North Concord
2
To St. Johnsbury
Jill Phelps Kern

Victory Road, Victory Basin Wildlife Management Area. All photographs by the author.

of asphalt road, past the eight or ten houses and the post office that make up the town of North Concord. At about 0.7 mile, there is a flood plain on the left that in spring is usually flooded by snowmelt and rising waters from the Moose River. Park as far to the right as you can on this dirt road and use a scope to scan the field and river below. Look for several species of dabbling ducks as well as American Bitterns, Green Herons, Great Blue Herons, Belted Kingfishers, Wilson's Snipe, and possibly a few shorebird species.

As you continue north on Victory Road during spring, summer, and into fall, you will undoubtedly hear several warbler species as you drive along. Feel free to stop anywhere along this road to search them out. Winter Wrens, Hermit Thrushes, Wood Thrushes, and vireos are found in good numbers. During the fall dozens of Northern Flickers forage alongside the roadway, and Ruffed Grouse are seen frequently along the road as well. In winter watch for flocks of Pine Siskins, Purple Finches, American Goldfinches, and Common Redpolls as they forage on the sanded roadways. Some years, you may see the occasional Red Crossbill or White-winged Crossbill.

I usually try to drive this road as early as possible in the morning. There is very little traffic to begin with but even less the earlier it is. I am often rewarded with catching good views of a moose as it saunters down the middle of the road. Other mammal sightings may include coyote, red fox, mink, river otter, black bear, and white-tailed deer.

Damon's Crossing, Victory Basin Wildlife Management Area.

At about 3.0 miles, where you are now on River Road, just past a yellow farm house and red barn on the right are fields on both sides. A small wetland area with several snags is on the right. American Bittern has been found here as well as Merlin and Red-tailed Hawk. Wild Turkeys are usually on either side of the road foraging through the grasses. While you are here, check for sparrow species and, some years, Killdeer.

Damon's Crossing

The actual border for the Victory Wildlife Management Area (sign post on left) is 3.8 miles in on River Road. There is a parking lot on the left at 4.4 miles where you can get the car off the road if you choose to bird here. I prefer to drive farther north to Damon's Crossing at 5.5 miles. There is a larger parking lot on the left that is even plowed in winter months. Bog Brook flows under the small concrete bridge and merges with the Moose River on the right. This basin area of the Victory Wildlife Management

Area is an excellent place to sit or stand in one place and bird. Beginning in early spring and through the fall, chances are you will find 25 to 35 species in an hour or so. The wide open expanse from the basin to the surrounding hardwood forests offers the opportunity to hear woodpeckers, thrushes, and warbler songs. Common Yellowthroats, Yellow Warblers, American Redstarts, and Chestnut-Sided Warblers breed here along with Least and Alder flycatchers. A few nest boxes supply breeding sites for Tree Swallows. American Bitterns can be seen and heard as well as a half-dozen Wilson's Snipe. You can also hear and see Swamp, Song, and White-Throated sparrows.

Bog Brook floods in early spring, attracting Canada Geese, Black Ducks, Mallards, Hooded Mergansers, Common Mergansers, and Wood Ducks. By mid-summer, dozens of Cedar Waxwings and a half-dozen Gray Catbirds forage on elderberry. As late summer approaches, Black-billed Cuckoos and Eastern Wood Pewees can be heard calling from the surrounding hardwoods. Rose-breasted Grosbeaks join the mix and forage on the berry bushes along the road. Some years, pairs of Cooper's Hawks, Northern Harriers, and Merlins (which breed here regularly) fly over the basin. If you're lucky you might even see a moose along the road here.

Black-backed Woodpecker.

In winter, it can be pretty quiet unless it is an irruption year for winter finches. Blue Jays, Black-capped Chickadees, Hairy and Downy woodpeckers, Red-breasted Nuthatches, Purple Finches, and the occasional American Tree Sparrows watch over the refuge when all others have long departed for southern areas.

There is a trailhead at Damon's Crossing marked by a kiosk. It follows along the former Moose River Logging Railroad line starting at Damon's Crossing and runs in a northwesterly direction. A series of wooden planks help to traverse some of the wetter areas of the trail. This area can be wet in early spring and into summer. When mid-May rolls around, expect to be under siege from black flies and mosquitoes. (DEET or a head net is advised.) But if you get lucky and it isn't as wet a spring as normal and there's a slight breeze, this is a great trail for birding. Expect to find Yellow Warblers, Common Yellowthroats, Nashville, Chestnut-sided, and Canada warblers, American Redstarts, Black-throated Blue and Black-throated Green warblers, Gray Jays and Black-backed Woodpeckers. In spring look for Solitary Sandpipers, Great Blue Herons, and American Bitterns along the first section. The trail runs through a northern white cedar swamp and then enters coniferous forest consisting of balsam fir and black spruce. Black spruce is the preferred habitat for Spruce Grouse, Boreal Chickadees, and Black-backed Woodpeckers.

Spruce Grouse at The Blowdown.

Once you are out of the wetlands area, the trail is on slightly higher elevation—five or six feet higher. This is a great trail for hiking if you enjoy the northern forest. It meanders through a mix of habitats and eventually winds up at an old stone logging era dam that has long ago been breached by time and water. There are a few old stone foundations that were once part of a large logging operation a century ago. Once the trail exits the conifers I don't find a great variety of species, although I do enjoy snowshoeing here in winter.

When you return to the Damon's Crossing parking lot, you can leave the car and walk north along River Road and bird, or you can drive approximately one mile to The Blowdown.

The Blowdown

A mile north of Damon's Crossing, or 6.5 miles in from North Concord, is the Victory Blowdown. The name was given to this area after a microburst storm knocked down 50 acres of conifers in 2010; Vermont Fish & Wildlife lists this trailhead as Guldenschuh Trail on some Vermont Fish & Wildlife maps. You access the area by an old logging road on the left side of River Road. Depending on weather conditions you can park in the log landing area a hundred yards into the Blowdown. I usually park on River Road as far to the right shoulder as I can. This is one area of Victory WMA where I have found all four boreal species: Black-backed Woodpecker, Gray Jay, Boreal Chickadee, and Spruce Grouse. It has taken many trips to this area to find all four; I've found Spruce Grouse here only once and Boreal Chickadee twice. Gray Jays and Black-backed Woodpeckers are common and breed here.

Moose River at Victory Basin WMA.

A note on Spruce Grouse: From 2008 to 2010, Vermont Fish & Wildlife reintroduced Spruce Grouse to Victory WMA. Approximately 134 birds were brought in from Quebec and Maine to try to establish a second location in Vermont. The other location for Spruce Grouse is in the Nulhegan Basin, which includes the Wenlock Wildlife Management Area and the Silvio Conte National Wildlife Refuge. Surveys in 2015 have shown that the Spruce Grouse are not doing as well as hoped. Two reasons may be predation or too little black spruce habitat for them to establish a healthy breeding population. I managed to see one male in the fall of 2015, so there are still perhaps a few birds out there.

This trail dissects a series of clearings, each of which can be exciting to bird. Expect to find Canada and Mourning warblers breeding here. Each year I manage to find at least one active cavity of Black-backed Woodpeckers here. White-throated Sparrows and Common Yellowthroats are found in good numbers. Last year Olive-sided Flycatcher bred here. Swainson's Thrush is now breeding here, and this is one of two places in the Victory WMA to find Palm Warbler. I believe it breeds here now but have not confirmed it. Red-breasted Nuthatches, Brown Creepers, and Golden and Ruby-crowned kinglets are found in good numbers. Wood Thrushes and Hermit Thrushes can be heard singing.

The great thing about this area is that it is a condensed area to bird and it is also flat and easy to navigate. You can find many species in this one area of Victory WMA. In early spring you will be able to access areas of the clearings a lot easier than by late June when thickets and wild raspberry make traversing anywhere but the trail almost

Beaver Pond along Pipeline East, Victory Basin WMA.

impossible. This is an excellent place during fall migration when Blackpoll, Bay-breasted, and Cape May warblers are foraging through the area.

Black flies and mosquitoes can be abundant on summer days with no breeze. And each year more and more of the Blowdown area is filling in with new growth, changing the character of the habitat rapidly.

Continuing along the trail, you will enter an area of balsam fir, larch, and spruce where Black-backed Woodpeckers and Gray Jays are frequent. Black-throated Blue and Black-throated Green warblers are found along with Blackburnian Warblers. Listen for Brown Creepers, Winter Wrens, and Hermit Thrushes before the trail enters a more hardwood section of woods. At 1.5 miles, the trail enters wetlands that are part of the back of what is referred to as Victory Bog and, unless it is winter, the trail dead-ends. In winter, the wet area is frozen and you can intersect with the old railroad bed and take it back to Damon's Crossing area if you are skilled with using a map and compass. Note: Victory Bog is a wooded swamp and not a true bog, because Bog Brook flows through the wetland.

The Blowdown is a good location for viewing moose, black bear, coyote, and plenty of red squirrel. At the entrance of the trail along the roadway check for mink and river otter in the eddies of the Moose River.

Leaving the Blowdown area and continuing north on River Road, you will come to a short dirt pulloff along the right side of the road in about 1.0 mile, or 7.5 miles in from North Concord. A local citizen sometimes hangs a feeder or two here and Gray Jays often come in for seed, especially in winter. The stop is a fine place to pull off the

road and bird the roadway in each direction. As I mentioned before, at any location along the River Road you can find a variety of warbler and boreal species.

Oil Pipeline: East and West (The Pipeline)

At mile 8.7 along River Road is a concrete bridge over the Moose River. Access to the Pipeline West is on the left just before the bridge. For access to the Pipeline East, cross the bridge and in another tenth of a mile you will find a pair of yellow gates and the 60- to 80-foot-wide clearing running east and west. You can only access the Pipeline East from here as the Moose River blocks any westward movement. There is another set of yellow gates after you cross the bridge and before you reach the Pipeline East. This is the trail for Roger's Creek/Lee's Hill, and I will discuss this birding location after the Pipeline. Parking for these locations is as far right onto the shoulder of roadway as possible.

The Pipeline in Victory WMA refers to the Portland Pipeline, an underground system of three pipes that run from Portland, Maine, to Montreal, Canada. The 12-inch, 18-inch, and 24-inch pipelines were built in 1941. German U-boats were sinking too many oil tankers bound for the St. Lawrence River, so a pipeline from Portland, Maine, to Montreal was a safer way to get oil to Canada. The River Road intersects this 236-mile-long pipeline at exactly the halfway point at mile 118. If you look in either direction of this clearing, you will see orange mile markers. The first one just off the road and east is mile marker 118. The 24-inch pipeline is barely in use today, although in 2002 it carried 418,000 barrels of oil a day to Montreal from 235 oil tankers. There have been proposals to reverse the flow and bring tar sands oil from Canada to Portland, Maine, but area residents are strongly opposed.

Pipeline East

The Pipeline East is one of my favorite birding locations during the spring. This gravel roadway is just wide enough for maintenance vehicles. It gently rises and falls for two miles, passing a handful of beaver ponds. This open route passes through a mix of conifer and hardwood forests and provides excellent viewing opportunities for a host of species, both avian and mammal. At the back of the first pond listen for Lincoln's Sparrow, which I have found here several years in a row. The trail jogs to the left and passes through a mix of habitat where either Ruffed or Spruce grouse may be found. In fall, this section of the trail is good for migrating warblers. The trail then heads east and rejoins the cleared Pipeline area. On each crest of the small hills you can see for a mile in each direction, sometimes catching sight of moose or black bear in the open grounds between the forested sides.

For the first mile, each valley has a pond on the left side of the trail where a mink, muskrat, or beaver may be found. As you approach mile marker 117, another pond is on the right. Northern Waterthrushes are in at least a few of these pond areas. Wood and Black ducks, Canada Geese, and Hooded Mergansers use these ponds frequently. Kingfishers are here every year. You can find Gray Jays and Black-backed Woodpeckers at any location along this section of pipeline and, occasionally, Boreal Chickadees. This is probably the farthest south for the range of Boreal Chickadee,

Pool along Roger's Creek Trail, Victory WMA.

so finding one would be an excellent catch. Blue-headed Vireos, Nashville, Yellow-rumped, and Canada warblers breed here, as well as a few Palm Warblers. If you are lucky there is a chance that one of the released Spruce Grouse may still have some offspring along this trail. Depending on spring snowmelt and rain, some of the lower sections of the trail may be slightly flooded, so waterproof boots are advised.

In winter the Pipeline East is used as a snowmobile trail and connects with the Pipeline West section across River Road. You may still walk and bird along the Pipeline, but when I do it is usually midweek when there is little snowmobile traffic.

Pipeline West

As I mentioned, the Pipeline West access is before the concrete bridge on the left. There is a set of yellow gates at the point of access. Spruce Grouse have been found here at the beginning of the trail. Golden and Ruby-crowned kinglets, Winter Wrens, and White-throated Sparrows greet you as you begin this section of the Pipeline. After a few hundred yards this access section will merge with the cleared Pipeline West trail area. As you follow the Pipeline west there are two beaver ponds on the right. Check for Solitary Sandpipers, Wood or Black ducks, or any surprise shorebird that may happen to be here in the spring. Swamp Sparrows and Song Sparrows are common. Merlins have nested here for several years, although I have yet to find their nest. In late summer, an adult swooped down from behind me three times, coming within a few feet of my head as a juvenile perched nearby. In April and May, you will most likely hear

the drumming of not only Ruffed Grouse but also Black-backed Woodpeckers. As with the Pipeline East, this is a great trail for black bear and moose sightings. If you look west with your binoculars, you will see the orange mile marker 119 sign at the crest of the hill. As you can see, the habitat changes right about there from coniferous to hardwood forest. This is about as far as I take this trail.

Providing 10- to 20-acre clearings to create areas for Ruffed Grouse, Spruce Grouse, and American Woodcock to forage is part of the management plan in the WMAs. A new clearing was logged on the Pipeline West in 2015. It begins across from where the access trail meets the Pipeline. Look for a series of large boulders across the access to this clearing. Walk behind the boulders for about 300 yards and you will find what will be a great area for a variety of species for several years. In the spring of 2015, I found nesting Black-backed Woodpeckers, as well as Mourning and Canada Warblers. Broad-winged Hawks frequented the skies above. It is always exciting to watch as these clearings attract more and more species each year. Watch as new growth fills in, bringing with it a host of birding surprises.

Roger's Brook/ Lee's Hill Trail

This is the best trail in Victory WMA for a chance to see all four boreal species: Black-backed Woodpecker, Boreal Chickadee, Gray Jay, and Spruce Grouse. This was one of the areas used as a release site for the reintroduction of grouse in 2008–2010. Access to the trail is just north of the concrete bridge on the right side of the road and a hundred yards before the Pipeline. A yellow gate marks the start of the trail. Blackburnian Warblers are often found here in spring. A few hundred yards along this sandy trail is a clearing on the right. Lincoln's Sparrows have been present for several years in a row and may be breeding here. As you begin this walk, Ruffed Grouse seem to be in good numbers for the first three-tenths of a mile. Once past the clearing on the right, you will come to a second gate and a more coniferous section of woods. Expect to find any of the boreal species for the next mile or so. In spring, you can hear any number of warbler songs along the trail; eventually Magnolia, Canada, Black-throated Green, and Common Yellowthroat predominate.

A small concrete bridge crosses Roger's Brook, which soon merges with the Moose River. Kingfishers, Hooded Mergansers, Common Mergansers, and Spotted Sandpipers can be found in the pool just to the right of the bridge. Once you have crossed the bridge, you enter spruce-fir habitat where I have found Spruce Grouse on five occasions in 2010 to 2012. I often see or hear a couple of Black-backed Woodpeckers here in the spring. An opening will soon appear on your left, which is another clearing designed to regenerate spruce and fir. This area was cut in 2008 and is already filled in with new growth. Expect to hear or see Swainson's Thrushes, Palm, Mourning, and Canada warblers, and possibly Yellow-bellied Flycatchers. There is a good chance to hear or see Olive-sided Flycatchers as well. When you come to the end of the clearing, the slight rise to the trail is good place to find Gray Jays. It is also a transition place between the coniferous woods and the beginning of a mixed hardwood forest.

East Mountain Summit View.

If you choose, you can continue along this trail for at least another mile. You will come to a large clearing with a small camp. This land is in private ownership and is the end of the trail. Along the way possibilities include Scarlet Tanagers, Rose-breasted Grosbeaks and, of course, Red-eyed Vireos. Other hardwood species include Downy, Hairy, and Pileated woodpeckers, Brown Creepers, White-breasted Nuthatches, and Wood and Hermit thrushes.

In reality, every trail in Victory Basin WMA leads to a dead end. But just because you must return along the same way you came in doesn't mean you won't have a few new surprises along that same trail. Attempts at bushwhacking a route other than those already established should only be done by seasoned navigators of wilderness. I have often hiked off the trail following bird song and come back to the trail hundreds of yards from where I thought I should be.

When you return from exploring the Pipeline, continue driving along River Road. At 10.1 miles, you will come to the intersection of Victory Road, Granby Road, and River Road. This is the village of Gallup Mills. A left turn onto Victory Road will lead 7.7 miles out to Route 114. A right turn onto the Granby Road will take you through the village of Granby and out to Route 102 along the Connecticut River. Either of these roads is great for stopping any place to see what birds are in the area. In Gallup Mills, after you turn left on Victory Road, Radar Road is 0.1 mile on the right. I will talk about this section of Victory in the East Mountain description.

My suggestion is to head left at the intersection toward Route 114. At 0.8 mile from the intersection, you can park at a clearing on the left side of the road. There is a beaver pond a short walk ahead and good chances for Olive-sided Flycatcher, Northern

Waterthrush, and other warbler and vireo species. Continuing the drive out to Route 114, at 1.5 mile from the intersection there is a wetland area on the right and an old logging trail on the left just after the small bridge. Park on the right shoulder, then walk down the logging trail for 400–500 yards to another beaver dam. A few duck species may be present as well as Spotted Sandpiper, Wood Thrush, and a handful of warbler species including Magnolia and Canada warblers.

If you like to find American Woodcock in spring, this 7.7 miles of road at dusk will yield several as they perform their aerial display flights. Take heed during mud season; this section of road can be several inches deep in mud. Four-wheel drive is a must during the spring thaw in April.

East Mountain Summit Radar Buildings.

East Mountain: Bicknell's Thrush

From the intersection in Gallup Mills, Radar Road is 0.1 mile on the right after you turn left and head west toward Route 114. Pass the Victory Town Clerk's office on the right and continue through the red gates along Radar Road.

I often climb this mountain during the first week of June. The optimal time to find Bicknell's Thrush is from about 4:20 am to 5:00 am when they are singing and calling at first light. The grade up the mountain is moderate mainly because at one time it had to accommodate vehicle traffic daily to the Radar Base at the summit. This means I start at 3:00 am using a headlamp. The road up is wide and parts still have the 60-year-old asphalt, making it a moderate hike. Give yourself at least an hour and a half from the mid-level barracks area to the summit.

Of course, Bicknell's breed here, so you may be able to find or hear one any time of day; however, this is one of the locations for the Mountain Bird Survey, so using recordings and playback devices are not permitted. Familiarize yourself with Bicknell's song and calls before you go. Playback devices and recordings may not be used at any time or place on any of the refuges and wildlife management areas in Vermont.

At 3438 feet elevation, East Mountain is one of the highest mountains in the Kingdom. In the mid-50s the U.S. Air Force chose the mountain as a site to build a radar base to detect missile launches and any attack coming from the Soviet Union during the Cold War period. About halfway up in a level area of the mountain, Quonset hut barracks and facilities for housing approximately 170 men were built. At the summit, several large concrete and sheet metal buildings with the latest technology for detecting possible missile launches were built. These became the ears for detecting any air activity over the North Pole. By 1963, the radar base had closed down. Today many structures are in place, although their innards were gutted long ago. <https://urbanpostmortem.wordpress.com/2014/09/11/the-east-mountain-experience/ >

East Mountain Summit View.

In 1961 the radar base detected an unidentified object, which many believe was a UFO. The Air Force never was able to confirm what they had detected for a period of 18 minutes. Just two hours later, Barney and Betty Hill of Portsmouth, New Hampshire, were driving through Franconia Notch in New Hampshire when they spotted what they later believed was a UFO. Barney and Betty Hill believed they were abducted aboard that alien ship that night and were the first people to report having been abducted by aliens. *The Interrupted Journey,* a book describing their nightmare, was published in 1966 and a television movie was made in 1975. Along Radar Road, 2.2 miles on the right along the Moose River, are the foundation and walls of an old mill known as Moccasin Mill. Pull over and check it out, keeping in mind that any time you stop along these roads there are birds waiting to be heard and seen. At 2.8 miles you'll cross a wooden bridge over the Moose River.

For a side trip, take a right after the bridge and cross another wooden bridge, then climb a hill, bear to the left, and after 0.5 mile you will come to a T intersection. Take the right. After another 0.5 mile, there will be an old logging trail on the right along with two small ponds. These are nice to check out before continuing on for 0.6 mile to the upper beaver pond and wetland area that encompass both sides of the road. Cedar Waxwings, Spotted Sandpipers, Wood Ducks, and Blackpoll Warblers are just a few of the surprises well worth seeing. Total distance from Radar Road wooden bridge to upper pond is 3.6 miles. Return to Radar Road after this visit.

Continuing along the Radar Road, the Moose River will be on your left. There are gorgeous places to stop at several spots along this road and take in the small waterfalls of the Moose River. East Mountain contains the headwaters of the Moose River. The

sound of the river may limit hearing bird song, but there is always the chance for mammal viewing. At 4.6 miles from the beginning of Radar Road, you will come to a set of gates. These should be open, but if not you'll have to park at the small clearing on the left. If open, turn right and drive up the slope for 1.9 miles to the barrack base camp for the radar base. It is reasonably level here, so park off the main roadway; you will have to hike the remaining distance to the top. This location is 6.5 miles from the start of Radar Road.

The base camp is a great place to explore. Be careful of rusted metal and holes or pits that you may stumble into as you browse what used to be an old mess hall, bowling alley, theater, and housing for the men 60 years ago. Check for Least and Alder flycatchers. Blackpoll Warblers, and—depending on time of year—any other of 15 warbler species. You may find Lincoln's Sparrows in the wetland just up the road and on the left. Fisher, white-tailed deer, moose, and black bear are possibilities on the climb up.

This is also the one location where you can get six thrush species as you walk up the mountain: American Robin, Hermit Thrush, Wood Thrush, and Veery at the lower elevations; Swainson's Thrush in large numbers as you get in the 2500 feet elevation; and Bicknell's Thrush at the summit. I've often had a dozen or more Swainson's and sometimes four to seven Bicknell's on a good morning. As daylight comes, Yellow-rumped, Magnolia, and a dozen Blackpoll warblers can be found. Add a few Yellow-bellied Flycatchers, a couple of Boreal Chickadees, and the occasional Gray Jay to the mix. In 2010 late one afternoon I also found one of the newly released Spruce Grouse females at 3400 feet, each of us surprised to see the other.

In the early morning, the summit is an eerie place to visit. Sheet metal on the remaining buildings bangs and clangs against the steel framing now rusted and deteriorating. It looks as if their listening equipment missed detecting an incoming missile and all that remains is the skeleton of the $21-million base (1950s cost). I can't help but think about Betty and Barney Hill's abduction and ponder the possibilities of that UFO returning! Be careful as you explore this environment: there are lots of hazards up here and you are a long way from medical attention. In a few of the concrete buildings, you can climb a story or two up to metal landings that give 360-degree views of the Northeast Kingdom. If you're lucky, a Bicknell's may alight onto a nearby spruce for excellent views. As you head back down the mountain most of the warbler species are now up and about while the thrush species are becoming less vocal.

Link for Victory WMA map and description: <http://www.vtfishandwildlife.com/UserFiles/Servers/Server_73079/File/Where%20to%20Hunt/St.%20Johnsbury%20District/Victory%20Basin%20WMA.pdf>

Thomas Berriman *moved to the Northeast Kingdom of Vermont in 2002 after living in San Francisco for 25 years. Since then, he has spent a good deal of the time birding that area of Vermont. He is an Audubon chapter president and leads several field trips throughout Vermont each year. Over the last five years he has honed his skill in digiscoping the birds he finds.*

American Kestrel: Can The Decline Be Reversed?

Matthew D. Kamm

American Kestrel. All photographs by Sandy Selesky.

Whenever I drive by an open grassy field with utility wires paralleling the road, I always scan the lines for the silhouette of a hunting kestrel. Too often, though, my glances reveal no more than a flock of idling starlings or a pair of Mourning Doves. By now, it really is not news to most birders and ornithologists that American Kestrels are rapidly declining. According to the USGS Breeding Bird Survey, kestrel numbers are declining an average of 1.6% per year, with annual declines exceeding five or six percent in some regions. The question on many people's minds is "how did this happen?"

Rarity was not always the rule for kestrels. As with many species, consulting the historical record for information about kestrels is complicated by the multiple common names that were used for this species. W.L. McAtee's collected *Folk Names of New England Birds*, which appeared originally in the Massachusetts Audubon Society Bulletin in the mid-1950s, refers to this bird as "Sparrow Hawk." The kestrel was also, confusingly, sometimes called "Pigeon Hawk," a name more commonly assigned to the Merlin (*Falco columbarius*) due to its size. "Killy Hawk," a name derived from the kestrel's shrill repeated "killy-killy-killy" call, is mercifully unambiguous.

Nonetheless, the kestrel is generally identifiable in the historical record, especially when the work includes an illustration to accompany natural history information about the bird. Such is the case with Mark Catesby's *The Natural History of Carolina,*

American Kestrel male brings snake to female.

Florida, and the Bahama Islands, one of the best natural history resources composed in the Americas during the early eighteenth century. Catesby referred to the species as "The Little Hawk," and though he does not comment on their abundance, he does say that they could be found year-round throughout Virginia and Carolina and that they ate a wide variety of large insects and small vertebrates. By the mid-nineteenth century, John James Audubon's *Birds of America* had become the definitive resource on avian natural history in the United States. Of the bird he called the American Sparrow Hawk, Audubon said, "We have few more beautiful Hawks in the United States than this active little species, and I am sure, none half so abundant." During the winter in the southern states, when migrant kestrels from farther north join the resident southeastern subspecies (*Falco sparverius paulus*), Audubon reported that he saw kestrels in "about every old field, orchard, barn-yard, or kitchen-garden..."

In Massachusetts, the historical record is sparse. In precolonial times, most of Massachusetts was forested. Native people managed the land through regular burning, and lightning strikes also caused fires throughout the state, thereby creating areas of open habitat suitable for kestrels. In their first written reports, Europeans noted kestrels in some natural heathlands across the state. The eminent Edward Howe Forbush wrote briefly of the falcons in his 1913 *Useful Birds and Their Protection*. He said that none of them (kestrel, Merlin, and Peregrine Falcon) were "very common" in

American Kestrel pair. Female with snake.

Massachusetts, but then stated that the Merlin and peregrine were "uncommon or rare," implying that kestrels were somewhere between "uncommon" and "very common." By 1927, in his *Birds of Massachusetts and Other New England States*, Forbush wrote that kestrels were not only becoming more common in eastern Massachusetts, but also nesting in urban areas in close proximity to humans. Even so, he acknowledged that the species remained a bird of the farmlands first and foremost, and therein lies the likely crux of this bird's difficulty: loss of habitat.

After being driven nearly to extinction by organochlorine pesticides, other raptors including the Bald Eagle, Peregrine Falcon, and Osprey have staged remarkable recoveries. Kestrels, however, have continued on a steady pattern of decline throughout their range and Massachusetts has been no exception. The Breeding Bird Atlas 2 reported kestrels in fewer than half the number of blocks they occupied during the first Atlas in the late 1970s (Kamm et al. 2013). These rapid losses have prompted focused action from many conservation organizations to better understand and address this decline (Smallwood et al. 2009). Numerous hypotheses have been proposed for kestrel decline, including toxic chemicals (Sullivan et al. 2013), disease (Dubé et al. 2010), predation by larger raptors (Farmer et al. 2008), competition for nest cavities with invasive species (Koenig 2003), and loss of habitat (Farmer et al. 2008).

These drivers are often obscure or difficult to assess in wild populations. The endocrine disrupting effects of polybrominated diphenyl ether (PBDE) flame retardants in kestrels have been widely studied and well-documented but will not be the focus of this piece; for a recent paper on the topic, see Fernie et al. (2015). West Nile Virus was responsible for considerable bird mortality in corvids and raptors during the earliest years of the 21st century (CDC 2015), but the patterns in kestrel decline have occurred

American Kestrel female eats snake.

on a longer time scale, often predating the introduction of West Nile Virus. Wild populations of kestrels in Quebec and Pennsylvania also showed widespread exposure to the virus, as determined by the presence of antibodies in the blood, but the exposed kestrels bred successfully and did not exhibit apparent ill effects (Medica et al. 2007, Smallwood et al. 2009). Though it is likely that the introduction of West Nile Virus to the American Kestrel population did not do the bird any favors, it seems that "flock immunity" has set in, and the virus is likely not a significant contributor to declining kestrel numbers.

The predation on kestrels by Cooper's Hawks remains mysterious. That Cooper's Hawks occasionally prey on kestrels is not in question; see Smallwood and Bird (2002) for a summary of historic accounts of this behavior. However, the degree to which this predation represents a threat to kestrel populations at large is uncertain. On one hand, Cooper's Hawks are an expanding species in many parts of their range. These forest hawks are taking full advantage of the reforestation of former agricultural areas such as has occurred in Massachusetts. In addition, Cooper's Hawks were once killed with abandon as a threat to domestic poultry (Forbush 1927), but they are now observed and appreciated. In Massachusetts, breeding Cooper's Hawks were recorded in 531—about half—of the blocks surveyed during the second Breeding Bird Atlas, compared to only 15 blocks in the first Atlas (Kamm et al. 2013). The resurgence of the Cooper's Hawk

American Kestrels after mating. Photograph by Sandy Selesky.

coincides with the decline of the American Kestrel, but is the relationship causal? A broad analysis of abundances using Breeding Bird Survey data did not detect a clear connection (Smallwood et al. 2009), but the question is not settled, especially considering the likely complex relationship between Cooper's Hawks, American Kestrels, and habitat structure. As forest birds that often patrol woodland edges, Cooper's Hawks would encounter kestrels most frequently on the ecotone between forests and open fields. It is likely that in parts of the kestrel's range where large areas of open habitat are not juxtaposed with forest, predation from accipiters is less of an issue.

Loss of habitat is a significant factor limiting the populations of many bird species, and grassland bird species in particular are feeling the squeeze. More than 50% of native grassland and savanna habitat in the United States has already been lost to development and intensive agriculture. This habitat type is one of the most imperiled in the world today in terms of the rate at which it is being converted to other land use types, such as forest or developed land (White et al. 2000, Hoekstra et al. 2004). Kestrels are looking for an even more specific habitat than most grassland birds: not only do they need open space to forage, they need an available cavity such as an old woodpecker hole in which to nest. Trees with pre-existing cavities large enough to host a kestrel nest that are also adjacent to open hunting territory are not necessarily easy to find. Fortunately, kestrels take readily to artificial nest boxes, and many programs around the country have been started to bolster local kestrel numbers (Smallwood et al. 2009). Kestrels have taken to these boxes in many cases, yet occupancy rates are

often lower than expected or decline over several years. While boxes in apparently suitable habitat go unused, increasing attention is being paid to kestrels in urban areas, just as Forbush reported in the 1920s. During the course of my field work, I have found kestrels breeding in residential areas of Cambridge and Somerville, and in unlikely spots such as storage warehouses adjacent to power corridors. Clearly, the habitat requirements of kestrels are not as simple as "open grasslands," and a more nuanced analysis is called for.

Fortunately, there are plenty of data available from the large number of nest boxes that are being put up for kestrels. A large network of boxes has been erected and maintained at cranberry bogs in southeastern MA by Keeping Company with Kestrels, LLC. The bogs may be unorthodox habitat, but the kestrels return year after year. Other box programs have been initiated in the Berkshire and Essex Counties, by the Essex County Ornithological Club and by concerned private citizens. Mass Audubon's nest box program has put boxes up across the state on their own property and on properties owned by member landowners and other conservation organizations. The Kestrel Land Trust, as befits its name, has found several properties willing to take boxes and have had multiple successful nests in recent years. Mass Wildlife's efforts to erect and monitor new boxes, led by State Ornithologist Andrew Vitz, have also produced kestrels in the past few breeding seasons.

Even so, nearly every nest box program has more unoccupied boxes than it would like, even on properties that appear perfectly suitable to our human eyes. With so many boxes now set up, we can begin comparing the habitat characteristics around boxes that do get occupied and boxes that don't. Such studies may help us construct a more complete understanding of how kestrels choose where to nest. Once we understand their habitat choices, we can get the most "bang for our buck" in recovery actions.

This improved understanding may prove crucial in the coming years. Some nest box programs, e.g., in southeastern Massachusetts, have reported that drops in occupancy have slowed or halted over the past few years, but many others report that the patterns are unclear or still negative. The Breeding Bird Survey reports an estimated annual trend for kestrel abundance in Massachusetts of -6.4% annually using data from 2003–2013, but these data include considerable uncertainty, especially because the average number of kestrels encountered per survey route in the Bay State is just 0.23. As far as anyone can tell, kestrels are still a declining species and likely to remain so as long as open habitats continue to disappear. Now, while the species is still common enough for new nest box programs to attract breeding kestrels, we must focus on learning as much as we can.

If we can aid this species in a timely and effective way, there is every likelihood that it will persist on the landscape for generations to come. Thanks to good science and a lot of hard conservation work, Peregrine Falcons recovered from an even more precarious position. There is every reason to believe that the same can be true of American Kestrels, and that the sight of one of these agile little falcons swooping and hovering into the wind will be enjoyed for generations to come.

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Matthew Kamm *is a graduate student in the lab of Dr. Michael Reed at Tufts University, where he studies the decline of the American Kestrel and how it can be better understood and eventually reversed. Before graduate study, he worked on several projects with Mass Audubon, including the* Breeding Bird Atlas 2 *and the Massachusetts State of the Birds report. His nemesis bird is the Short-tailed Hawk.*

Massachusetts Young Birders Club Attends Mass Audubon Birders Meeting

Jonathan Eckerson

Young Birders Club table at the Birder's Meeting. Photograph courtesy of the author.

Thanks to a sponsorship agreement between Mass Audubon and Zeiss, nearly 25 members of the Massachusetts Young Birders Club attended the 24th Annual Mass Audubon Birders Meeting on March 13, 2016. We had a table and several club members were able to attend. The meeting was situated in a beautiful building on the UMass Boston campus overlooking Dorchester Bay.

I wasn't able to sit in on every presentation and sadly didn't catch the entire Project Puffin talk, but what I did hear was exciting, informative, and inspirational. Dr. Stephen Kress of Project Puffin was there and his account of the ongoing puffin study was fascinating. I especially loved the part about the value of different fish in a puffin's diet and how their diet varies with the availability of different fish species.

Throughout the day I met many encouraging people and I look forward to crossing paths with them again. I couldn't recommend this event enough to any young birder. It's an excellent place for making contacts, hearing some informative presentations, and finding out how to get involved with conservation opportunities. I can't overstress how great an event it is and I also can't thank Zeiss and Mass Audubon enough for helping out the club. And last but not least, I want to thank everyone who entered our screech owl nest box raffle; it was successful and we appreciate your support.

A few of the other young birders who attended have written about their time at the event.

Sam Heinrich

It was an honor to be sponsored by Zeiss to attend this year's Mass Audubon Birders Meeting as a part of the Massachusetts Young Birders Club. It was an

incredible experience to hear talks about seabirds from some of the foremost experts in New England and the world. The vendors and booths were filled with knowledgeable and friendly people and the excitement was palpable. The talks we heard were fascinating. The photos presented by the speakers were unbelievable, and I could barely contain my excitement. I have always been interested in seabirds, but living over an hour from the coast doesn't make them the most accessible group of birds for me to watch. I have been dying to sea watch since the meeting, and hope to volunteer out on Stellwagen Bank over the summer doing seabird counts.

Evan Lipton

Attending the Mass Audubon Birders Meeting was fun and enlightening, and it was great to have a focus on seabirds after a phenomenal year of birding on Cape Cod in 2015. Thanks to Zeiss, young birders were able to attend an event that was eye-opening and deeply informative. It means a lot that companies like Zeiss and organizations like the Mass Audubon are willing to go out of their way to support the next generation of birders. I was fortunate to be able to visit Cape Cod several times over the summer and fall, and it was fantastic to learn in more depth about the life history and identification of some of the birds I saw. The mood of the meeting was friendly and excited, and I hope to continue to attend in the coming years.

John Shamgochian

Attending the Mass Audubon Birders Meeting this year was, as it always is, entertaining and educating. The new location for the meeting at UMass Boston suited a meeting of birders and the theme of the meeting, seabirds. The only place more fitting might have been onboard a pelagic trip, but that probably would have been an exercise in the inconvenient. I found that the view from the building was spectacular, with a great swath of Boston Harbor clearly visible through the broad, tall windows of that sparkling construction. Scopes had been placed before the glass and access to them was free. A communal list of the birds seen in the harbor was maintained through the day, and the quantity of Red-breasted Mergansers, known to be abundant in the region, was almost matched by the number of birders who saw them from the campus that day. In regards to those birders, I say this; they were all jovial and friendly. Everyone shared a few good conversations—one could, I believe, find no atmosphere more merry than in that meeting hall, except perhaps a well-attended Irish music session in a tavern, or a gathering of hippies. Everyone seemed pleased with the day; even the food was good and for this I am thankful. The organizers were capable and all the speakers were educated and well spoken.

Seabirds are by their nature fascinating and the reasons for this are multiple. Seabirds are rarely seen by most people and what is least known evokes the most curiosity. There are many different groups of pelagic avifauna, each with different shapes, sizes, and postures. One finds onself not only drawn to the elegance of seabirds in the shape of their wings and their flight patterns but also to the diversity of that basic elegance. These are two reasons, as I understand it, that birders are drawn to these birds, whose colors are generally so bland and who never sing pretty songs.

The speakers themselves were knowledgeable, clear-spoken, and lightly humorous. These three traits are quintessential for a distributor of knowledge. One must know what he or she is teaching and thus one need be knowledgeable. One must speak clearly or else he will find that his or her audience has not gained the information given. One must be amusing, or else one will find the audience no longer fully devoted to listening to his clearly-stated facts. As I already said all the speakers had these three qualities, and I was thoroughly satisfied with the presentations.

I feel, however, that this writing will be incomplete unless I share a few of things that I learned from the meeting. I was taught the best direction for a storm in relation to sea birding on Cape Cod. I learned about identifying auks in flight. I was introduced to the concept of birding the continental shelf, an activity to which I found myself attracted (a worrying desire considering the price and its nature of consuming great portions of one's time). I also found myself interested in studying puffins on the Maine islands. One more piece of knowledge new to me was the breeding ranges of so many pelagic species—information that was lacking in my knowledge and engrossing. Come to think of it, that is the word I would use to describe the 2016 Massachusetts Birders Meeting: "engrossing." That fits perfectly doesn't it? Engrossing!

Jeremiah Sullivan

Having attended previous Mass Audubon Birders Meetings and enjoyed their Bentley venue, I was initially unenthusiastic about the change in location. These doubts were swiftly assuaged, however, when I rode the elevator up to the ballroom where the meeting was held. The ballroom was spacious, containing many more tables than were available at the previous meeting place and drawing what seemed to me many more attendees than previous meetings had attracted. The adjacent vendors' room too, was a great improvement from the pair of smaller rooms down a hall where they had previously been confined, granting purchasers a much more easily accessible shopping experience. As an added bonus, the view of Boston Harbor from the hall outside the ballroom allowed birders to scope the sea for Common Eiders, Brants and other coastal waterbirds. While I was disappointed that David Wingate was unable to come and speak on the Cahows, or Bermuda Petrels, that he famously rediscovered as a young man on Nonsuch Island, the other lecturers rose to the challenge, speaking to us about seabird identification, restoration, and migration.

Personally, my favorite lecture was "Saving Seabirds: New Lessons From Puffins and Terns," presented by Stephen Kress and Derrick Jackson. Though I have attended lectures on Maine's Atlantic Puffin colonies before, I always enjoy a good story on a successful and daring reintroduction, especially coupled as it was with more recent information on the diets and reproductive success of the birds. I have landed on Eastern Egg Rock in the height of the breeding season, so Atlantic Puffins hold a special place in my heart and any lecture on them is sure to be a favorite of mine. I tremendously enjoyed myself at this year's Mass Audubon Birders Meeting and would urge any birders who have not yet attended one to come to next year's meeting. My only question is what next year's theme will be.

Duck!

John J. Galluzzo and Christopher E. Degni

Great Point Lighthouse. Photography courtesy U.S. Lighthouse Society Archive – uslhs.org

We know for sure that the wind was blowing hard on Nantucket the night the ducks struck the lighthouse. We know—or believe, based on the evidence presented—the duck species. And we know they caused quite a bit of damage. Only one thing is in question: why did the assistant keeper's story change from newspaper to newspaper?

Nantucket's Great Point Lighthouse, which stood at the extreme northeastern tip of the island and helped guide mariners between Monomoy, at the southern tip of the elbow of Cape Cod, and Nantucket Island, looked in 1902 much like the tower that stands there today. But it's not the same tower. The first Great Point Light, built in 1785 of wood, burned down in 1816. The second tower, built of stone in 1818, stood until a terrific storm turned it into a pile of rubble in the spring of 1984. The third tower, standing today, replicates the second tower. The harrowing event in question took place at the second Great Point Lighthouse.

Assistant Keeper Marcus E. Howes stood watch in the lighthouse on April 1–2, 1902, the night when the ducks came crashing in. In the April 5 edition of the *Nantucket Inquirer & Mirror*, the closest news organization to the lighthouse, a reporter stated that, "At midnight Tuesday, assistant keeper Marcus E. Howes of Great Point light started downstairs to call the keeper [Joseph W. Nickerson] to take his watch."

The April 3 *Portsmouth Herald*, in New Hampshire, had the situation differently: "To the fact that he had left his post a moment to get a drink of water, Assistant Lighthouse Keeper Howes, of the Great Point station, attributes his escape from injury in a remarkable way, which occurred here today and in which two canvasback ducks caused considerable damage to the lighthouse."

So which was it? In the end, it doesn't matter, of course, as Assistant Keeper Howes is no longer available to stand up to inquiry. The real story here is the impact.

"Just after midnight," wrote the *Portsmouth Herald*, "Keeper Hawes [sic] left his position and had scarcely stepped down from his station when a loud crash was heard at the same instant the light went out."

"Hastening back to the lantern room," continued the *Nantucket Inquirer & Mirror*, "he found everything in confusion."

From what Howes could ascertain, "two great canvasback ducks of a species rare in this section had plunged through one of the large plate glass windows." The window in question was six feet high, 27 inches wide and 3/8 of an inch thick. The average windowpane in the 1900–1915 time period was approximately 1/10 of an inch thick, according to the Society for Historical Archaeology. But the larger the window, the greater the need for more thickness; thus, this six-foot-tall windowpane was more than three times the thickness of the average homeowner's window. The ducks, or at least one of them, smashed the window to "atoms" according to the Nantucket paper, and "no piece of glass bigger than a half dollar could be found," said the *Portsmouth Herald*. The Canvasback blasted through the glass, extinguished the light inside the third-order Fresnel lens and smashed into a window on the opposite side. The *Herald* claimed that two ducks came in through the window, while the *Inquirer & Mirror* stated that, "When morning dawned, the mate to the duck was found at the base of the tower."

What shocked Howes most, though, was the astonishing timing of his absence from the spot of impact, "as the man on watch is accustomed to stand near this window," said the *Herald*. "It is thought that he could not have escaped injury from flying fragments had he been in his place."

The crash came with both familiarity and mystery. "It is no unusual occurrence for sea fowl to fly against the lanterns of lighthouses and be killed," stated the *Inquirer & Mirror*, "but it is rarely they break the heavy plate glass of the lanterns." Perhaps most startling was the species of duck in question. "On account of the rareness of the species there is much surmising as to where they came from," said the *Herald*.

Canvasbacks are known as prairie pothole ducks, most often found in the western half of the United States, though they have historically occurred in eastern North America, if in much smaller numbers than are seen out west. In 1900, Reginald Heber Howe and Glover Morrill Allen wrote in *The Birds of Massachusetts* that it was at that time a "very rare autumn migrant along the coast," listing Nantucket as one of the ten places in which it had been seen in recent memory. The authors did admit, though, to spring migration dates of March 20 to 31. Observers in Taunton, Massachusetts, had recorded one visitation in 1884. A reporter from Essex County, along the coast north of Boston, called it "very rare," while word from Nantucket was that it was simply "rare." More than a century later, Massachusetts birders still consider a Canvasback a quality checkmark on any bird list generated within the bounds of the Commonwealth.

Canvasbacks are diving ducks (dabbling ducks tip their posteriors skyward and submerge their heads to tug at reachable plant growth in shallow ponds; diving ducks swim underwater for their food); moreover, they are one of the largest diving ducks in North America. The lighthouse keepers estimated that the birds weighed about seven pounds apiece that day, but repeated modern measurements put them at much less than that, in a range between 862 and 1588 grams, or 1.9 to 3.5 pounds. Their size allows them to generate terrific flight speeds. According to Ducks Unlimited, until recently eclipsed by a Red-breasted Merganser clocked at 100 miles per hour, a Canvasback held the record for fastest known duck, at 72 mph. The *Portsmouth Herald* believed that the individual that struck the lighthouse had hit the 100 mph mark, which was possible. Mallards flying 50 mph with a 50 mph tail wind have been known to cover 800 miles in eight hours. According to the *Inquirer & Mirror*, on the night in question, "the wind was blowing a gale from the west."

We can estimate the force of the Canvasbacks' impact on the lighthouse window. An average-sized duck, traveling at 70 mph would have produced the same amount of pressure—in physics terms, about 0.65 pound-force per square inch (psi)—on the glass as a 62-pound object would if it were set on top of it. That is roughly equivalent to setting a boxer's heavy workout bag on the glass.

If we assume that the bird was on the larger end of the scale and traveling at 100 mph, the analogous force would have been closer to setting several bags of concrete or a stack of three cinder blocks on the glass.

Being toward the northern end of the Canvasbacks' migration probably saved the lighthouse more extensive damage, as the species tends to fly in large mixed (male/female) flocks until pairing up near its breeding grounds. The fact that only two birds struck the tower probably means that these Canvasbacks had moved into that final phase of their migratory flight. Imagine the fireworks that would have resulted in the lantern room if an entire flock had hit the lighthouse at the same time.

Sad to say, birds strike windows at an alarming rate. While many people have seen or heard a bird hit a window, they tend to believe it is an unusual event. However, the American Bird Conservancy estimates that up to a billion birds die in collisions with glass each year in the United States…the number is staggering. It's also unsustainable for our overall bird populations. David Sibley, author of the popular *Sibley Guides to*

North American Birds, writes, "Birds see the natural habitat mirrored in the glass and fly directly into the window, causing injury and, in 50% or more of the cases, death." There is hope, though, he says:

Simple steps can be taken to reduce the number of birds striking windows. Decals that stick to the glass are not very effective, but strips of tape on the outside of the glass, or strings or feathers hanging outside the window, each no more than 10 inches apart, are fairly effective. Decorative features like stained glass designs or window dividers can achieve the same result. Outside screens are very effective both to reduce the reflection and to cushion the impact. In short, anything that reduces or breaks up the window's reflection will reduce bird strikes.

Traveling at night—as the Canvasbacks of Great Point Lighthouse did in 1902—comes with its own danger. Birds can become disoriented by artificial light, leading to collisions with buildings. Mass Audubon is leading the "Lights Out Boston" campaign with city leaders with the intention of lessening or eliminating this danger to birds during the spring and fall migrations. Large-scale efforts like this one could save thousands of avian lives.

As to the results of the impact, "Word of the disaster was at once telegraphed to the department and meanwhile temporary repairs will be made by the keepers that the light may be kept burning to guide mariners on their way," said the *Inquirer & Mirror*.

Needless to say, the birds died. That fact did not mean that they were lost forever, though. "They will be preserved as trophies by the life savers," said the *Herald*, presumably at the nearby Coskata Life-Saving Station.

And Assistant Keeper Howes, though he would leave the lighthouse the following year, would never forget the night the Canvasbacks paid Great Point Lighthouse a visit.

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John J. Galluzzo *is the development writer for the South Shore YMCA, formerly the director of education and camping for the South Shore Natural Science Center, and ran adult education and citizen science programs for Mass Audubon's South Shore Sanctuaries. He also holds the Thomas and Phyllis Tag Fellowship for lighthouse history research through the United States Lighthouse Society. His brother-in-law* ***Christopher E. Degni*** *graduated from the University of Chicago with a PhD in Mathematics and has worked in the defense industry for the last decade. They live in Hanover and Weymouth, Massachusetts, respectively.*

Restore the Call

A Bold Initiative to Aid Loon Recovery

Lee Attix and Michelle Kneeland

> At dawn on August 20, 2015, I held chick number one anxiously, and I'm sure my breath as well, before wading out into the lake to set him free, marking an amazing moment in history. I don't remember if the sunrise in the east was licking my face, or if it was pouring rain. I just remember letting go, a quickened pulse, and a final glance from this historic loon chick. I consider myself one of the lucky ones, and I hope he is, too.— Lee Attix

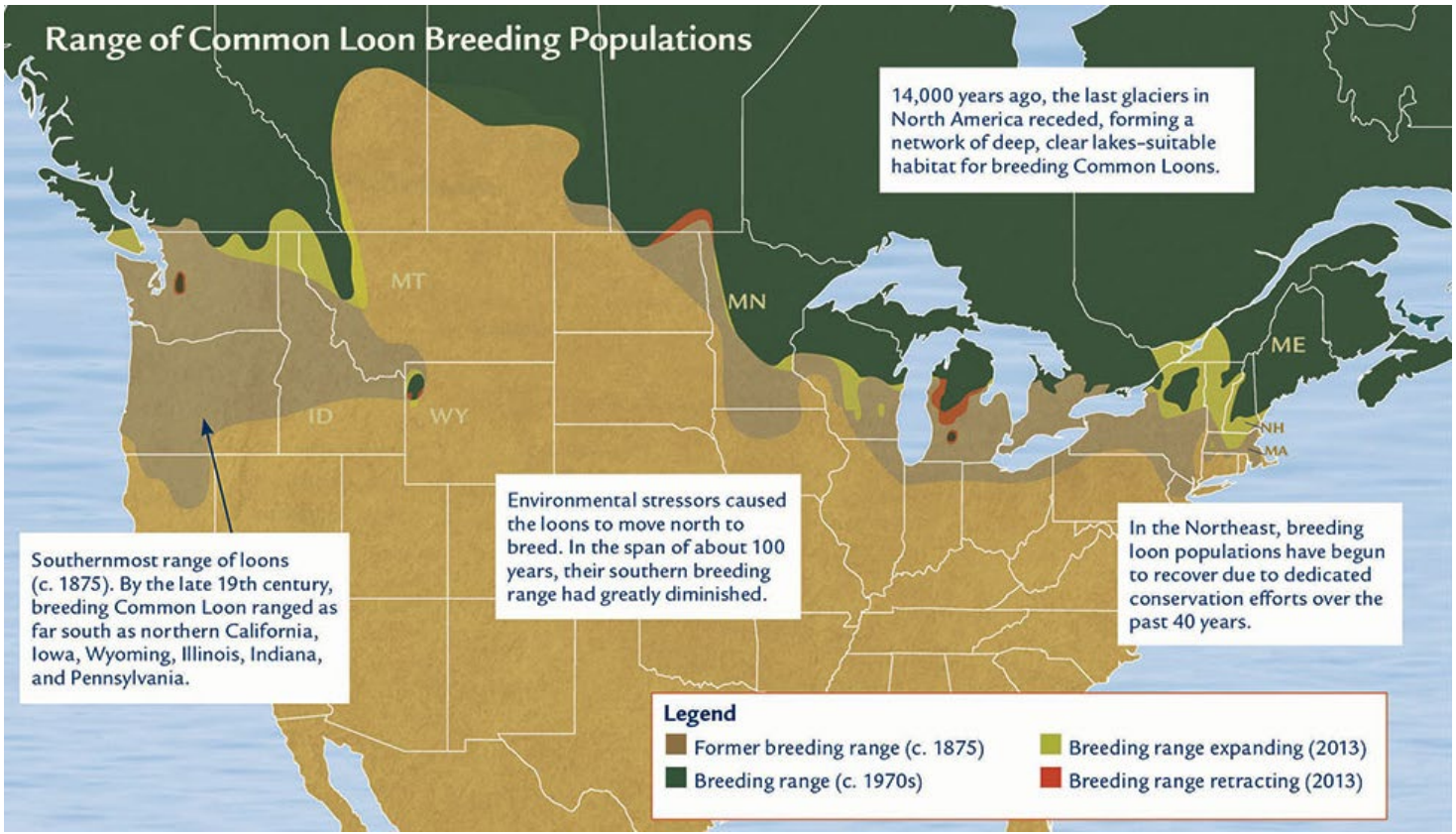
Common Loons (*Gavia immer*) and those who look after their well being in the United States have reason to celebrate. There is a bold new initiative underway to help restore the breeding loon population to designated areas of their former range across the country. It is the single largest conservation project undertaken to aid loons and their recovery, and it is happening in the morning shadow of Cape Cod.

This article will discuss a groundbreaking component of the larger project, which is the translocation and captive rearing (hacking) of loon chicks, with a focus on the work being conducted in New England, particularly Massachusetts. The Biodiversity Research Institute (BRI), a wildlife conservation organization based in Portland, Maine, is spearheading the Restore the Call initiative in collaboration with the Massachusetts Division of Fisheries and Wildlife (MassWildlife). The project is funded exclusively by the Ricketts Conservation Foundation.

To provide some perspective, it is important to convey that Common Loons have been well studied and there is a lot of literature to inform us about their plight through time. Some of that literature tells us that loons were extirpated—became locally extinct—in Massachusetts and many other states across the United States as a result of human activities in the 1800s and early 1900s. Hunting loons was legal, and it was a major contributor to their demise, until the Federal Government stepped in and passed the Migratory Bird Treaty Act of 1918, protecting loons and more than 1000 other migratory species.

By all accounts, the loon population did not begin to rebound in areas of their former range until the 1970s. Map 1 illustrates how their former range shrank throughout the United States, and how dedicated conservation efforts over the last 40 years have helped the population rebound.

Review of the historical literature for Massachusetts finds that loons were officially declared extirpated in 1925, but records indicate the last known breeding pair dated all the way back to 1872, some 53 years earlier. It would be more than 100 years before another pair of nesting loons was confirmed in Massachusetts in 1975. That breeding pair was found on Quabbin Reservoir, which has become an important breeding location for loons during their recovery in Massachusetts.



Map 1. Range of Common Loon Breeding Populations. All maps and photographs courtesy of BRI staff unless otherwise indicated.

The Department of Conservation and Recreation (DCR) first began monitoring loons on Quabbin Reservoir in the 1980s, in collaboration with MassWildlife. In 1996, under the leadership of Dan Clark, Director of Natural Resources, DCR expanded the program to include more active management strategies. BRI began collaborating with DCR in 1999, and more recently with MassWildlife, on a statewide loon monitoring effort, which led up to the proposed translocation undertaking.

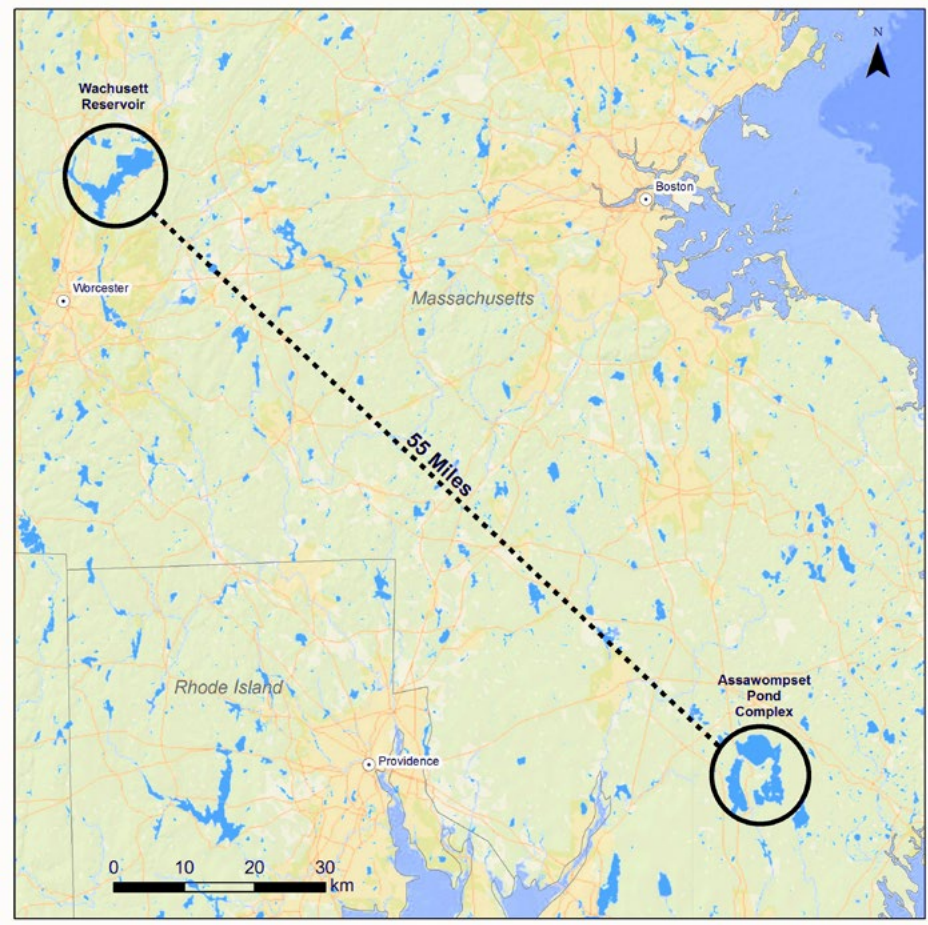
Since that first nesting pair was identified on Quabbin Reservoir in 1975, Quabbin has developed into the hub for Common Loons in Massachusetts. In 2015, researchers from DCR and BRI confirmed 22 territorial pairs on Quabbin, making it one of the most densely populated water bodies in all of New England. Loons have also repopulated many other lakes, mostly clustered in Worcester County in north central Massachusetts. The population trend is upward with 45 confirmed pairs in Massachusetts in 2015.

You might ask, why do loons need further management intervention? Aren't they doing fine, and in time, won't they be successful repopulating all of their former breeding range in Massachusetts? These are good questions.

Researchers believe that the single biggest obstacle to loons naturally repopulating a region successfully is their difficulty in colonizing and dispersing out from established breeding territories. Prior studies confirm that, on average, loons disperse only 13 kilometers (about eight miles) from their natal lake, and over 80% of the time, breeding adults return to the same territory year to year.

In Massachusetts, this presents a formidable challenge for loons to disperse out from the repopulated north central region to former breeding grounds in the Berkshires to the west. It is an even greater challenge for them to disperse to the isolated region of southeastern Massachusetts, which currently is some 55 miles away from the closest pair of breeding loons in the state (Map 2).

In some ways, the recovery in Massachusetts mirrors the rebound of loons across the United States. There are pockets of limited geographic areas where loons have rebounded well, and other areas where they have repopulated in small, disjointed numbers or not at all. This knowledge challenged BRI researchers, and led them to the bold idea of attempting active restoration—translocation and hacking of chicks—something that has been done successfully in the past with raptors and other birds, but never loons. The prospect of doing this successfully with loons presented unique challenges and risks, namely: 1) how to safely contain a loon in the water while giving it adequate space to swim, exercise, and allow it to continue to learn to forage on its own since loons eat only live prey, 2) how to feed them live prey without negative imprinting and possibly developing a reliance on human feeding, 3) how to monitor their activity and survival after release because loons in the wild forage in large areas and do not return to their nests after hatching, and 4) how to ultimately confirm that the translocated chicks return as adults to the same area to breed because loons don't return for three years, and don't breed until they are at least five years old. These were daunting questions.



Map 2. Distance between Wachusett Reservoir, Worcester County, and Assawompset Pond Complex, Plymouth County.

After many meetings filled with healthy debate, BRI researchers developed methods they believed could work, and in 2014, they conducted a pilot study in Minnesota. For the first time in history, Common Loons were translocated and captive reared on a lake before being released. It was an opportunity to test and refine methods, and it was extremely successful. Five loon chicks were safely translocated from northern Minnesota to southern Minnesota, reared in captivity, released in good health, and all fledged off the release lake.

The BRI research team learned many lessons during the pilot study. The overall approach proved sound, and with minor refinements, they set plans in motion to expand the project to loon conservation efforts in Massachusetts in 2015.

Let's go behind the scenes for an in-depth look at the restoration effort in Massachusetts, and learn how BRI researchers solved the challenges they faced, and if they could match their success in Minnesota.

Common Loon chick after its release into a rearing pen. © Shawn P. Carey

Identifying The Restoration Site

Based on habitat survey assessments and historic knowledge, MassWildlife and BRI collaboratively selected southeastern Massachusetts, particularly the area of the Assawompset Pond Complex (APC), as the area to receive translocated chicks due to its value to loon restoration and excellent habitat. As a drinking water supply, much of the APC water bodies and shorelines are protected from development and human access. The Massachusetts Audubon Society designated the APC as an Important Bird Area. The lakes offer high quality loon habitat including clear water, healthy fish populations, and good shoreline nesting habitat.

Identifying Source Lakes

With the approval and cooperation of the New York State Department of Environmental Conservation (DEC), BRI researchers selected the Adirondack region of New York State as the target area for sourcing chicks for the 2015 translocation effort. Source lakes were identified by BRI biologists based on long-term studies of the New York loon population, conducted by BRI's Adirondack Center for Loon Conservation, in close collaboration with DEC.

Capture and Translocation

Chicks that were six to eight weeks of age were captured using traditional and reliable nighttime lighting techniques, which were developed by BRI and perfected over the last several decades. Once the chicks were in hand, a BRI attending veterinarian performed a quick physical examination and then administered

Relaxed chick in transport crate. © N. Schoch, 2015.

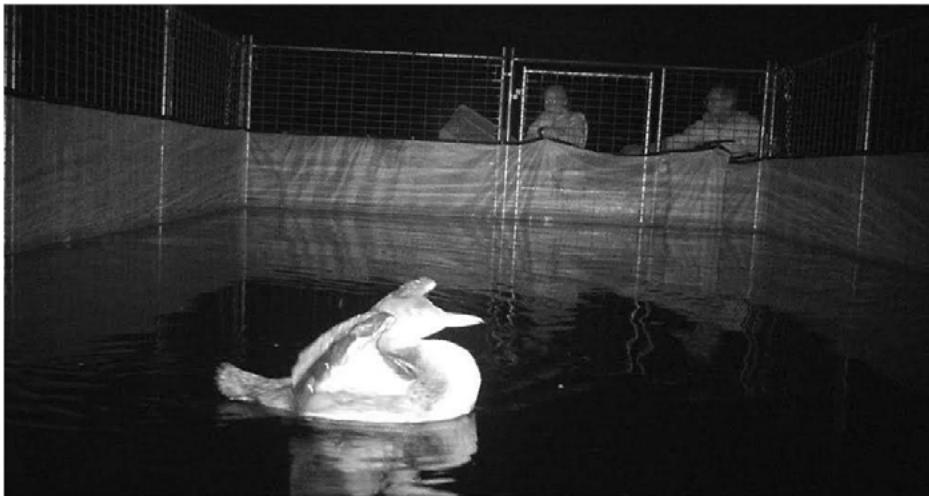
subcutaneous fluids to prevent dehydration during transport, which averaged about six hours in a car.

To keep the chicks calm, cool, and healthy during transport, BRI designed custom, opaque, plastic containers, with a mesh floor suspended from the bottom, where the chicks rested. The mesh floor served as a soft, forgiving surface to protect the chick's keel, and it also allowed any excrement to fall away from the bird. Several two-inch diameter holes were cut in the bottom of the containers below the netting, out of reach of the bill, to allow adequate airflow into the container, and frozen ice packs were inserted to keep the environment cool. These transport boxes significantly reduced the risk of injury during translocation and helped preserve feather quality.

Much to the discomfort of the driver and passenger, the temperature in the transport vehicle was kept between 50 and 60° F to minimize the risk of heat stress in the chicks. Upon arrival at the rearing site, chicks were immediately brought to the pens, and carefully hand-released into the water in the pens, only one per pen. Chicks were usually released into the rearing pens in the early morning hours just after sunrise.

Rearing Pens

Building a structure to securely and safely contain the loon chicks in the water was extremely challenging. The BRI team had to design something to keep the birds inside while keeping potential predators outside, and it had to be sturdy enough to withstand the force of pounding waves. The solution they landed on for the rearing pens was



Released chick in its rearing pen.

using freestanding chain-link fence panels, similar to those used in dog kennels. Each enclosure measured 12 feet x 24 feet to give the loon chicks plenty of room to forage and exercise.

Because the chain-link fence presents an entrapment risk for loons, all sides of the pens were lined with white polyester aquaculture netting with a 1/32-inch mesh size. The bases of the pens were open, allowing for a natural lake bottom floor. The tops of the pens were also open but covered with avian guard netting to offer protection from aerial predators and prevent other predators or scavengers from entering the pen.

Three individual pens were installed in the lake, placed approximately 60 feet from shore in order to reach an adequate water depth. The pens were positioned approximately four feet apart, to allow access for staff in between, and to give each chick some separation.

Once the three rearing pens were in place in the water, a temporary dock was erected that extended from the shore to the front of the pens, across the front of all three pens, and in between the pens. This dock arrangement allowed easy access to the pens for feeding and recapture of chicks. Two feeding blinds were constructed on the dock in between the pens. A PVC feeding pipe extended from inside the feeding blind into the pen, allowing staff to deposit live fish through the tube without being seen by the chick. This setup allowed feeding of the captive chicks without habituation to humans or creating an association between humans and food.

Feeding

Loons primarily eat fish, a lot of fish, which is true even for young chicks. BRI needed a reliable, local source of live fish. As luck would have it, the APC complex sits just a few minutes south of the region's largest wholesale bait shop, and they carried an abundant supply of Golden Shiners (*Notemigonus crysoleucas*), the only native fish species available.

Three rearing pens in the lake.

When asked how much eating "a lot of" fish is, a BRI staff person on site answered that when there was a chick in all three pens, they were purchasing 15 pounds of live golden shiners per day! Fish were purchased daily or every other day, held at the rearing site in a floating fish pen in the lake, and fed to the chicks as needed.

Using the blind as a visual barrier so the chicks could not see the person feeding them, staff placed the fish into a large funnel that was connected to a PVC tube. Once in the tube, the fish slid down and dropped into the water. The end of the pipe was about two feet above the water surface. BRI researchers discovered that the chicks were stimulated by the noise of the fish dropping into the water. The loon chicks were fed using this method multiple times a day, and they would consume as many as 15–20 fish in a single feeding.

Release

The chicks were reared in the pens for various lengths of time depending on their age at the time they were translocated and how well they acclimated to the pen. The older chicks (eight weeks or older) were reared for just nine days, and the youngest chick (about six weeks old) was reared for 23 days.

Prior to release, the BRI team recaptured the chicks from the pens, gave them a full health assessment, and banded them with a unique color combination and number sequence, which allowed researchers to identify them during post-release monitoring efforts.

Rearing pen with feeding tube and blind.

Monitoring After Release

The research team found that the chicks were quick to adapt to their freedom after release. They began foraging on their own quite quickly. In some cases they foraged individually. In other cases, multiple chicks foraged as a group, which mirrors natural foraging behaviors of adults and of chicks who are becoming independent from their parents.

The on-site team monitored the chicks from shore and motorboat, using binoculars and spotting scopes. They were monitored daily for several weeks after the last chick was released, and weekly thereafter until none were observed several months later. When they could no longer observe it, the team considered a chick fledged.

Results

Given the daunting challenges the team faced, BRI considered this first year of translocating loon chicks from New York to Massachusetts an overwhelming success. Over the course of 52 days, six chicks were captured in the Adirondacks, translocated to APC, reared, and safely released. The first chick arrived on July 27, 2015, and the last chick arrived on September 17, 2015. One additional chick was translocated on September 29, 2015. It was between 10–11 weeks old and fully capable of foraging on its own, so it was released directly onto the lake with the other chicks.

Future

As of March 2016, BRI is gearing up to continue the work in 2016 and 2017, with the goal of translocating 25–30 chicks after three years. With recent verbal approval

from state of Maine wildlife officials, BRI researchers will be able to source chicks from Maine as well as from New York starting in 2016.

The ultimate success of the loon recovery project will be measured by confirming that the chicks return as breeding adults and repopulate the region. That won't be known for a few more years, which is another story for another day. Nonetheless, the unprecedented success of the first translocation phase in 2015 gives the species a chance at attaining successful recovery, which will fulfill the dreams and hopes of BRI researchers and, I'm sure, of many loon enthusiasts out there. Cheers to that!

On a frigid mid-December day, Michelle Kneeland and Vincent Spagnuolo returned to the release lake as they had done each week since releasing the last chick in late September. They were looking for chick number one, the first loon chick translocated from New York and the last chick to remain, and they didn't see him. After a thorough scan of the lake with their optics, Vincent lowered his binoculars and said, "I think he finally left. I bet he's already on the ocean by now."

> Michelle nodded and struggled to find the words to articulate what she was feeling. Having watched this loon grow from a small, downy-covered chick over the past four months, his departure brought relief, happiness, pride, but also a twinge of sadness. "I really hope we see him again in a few years," was all she could say, but the weight of those words lingered as they turned to leave the lake.— Michelle Kneeland

Lee Attix *is a loon conservation specialist with Biodiversity Research Institute in Portland, Maine. He began working with Common Loons in 1997 after a brief period studying raptors in the Northwest. Lee has been with BRI since 1999. In addition to his work with loons, Lee has served in many business capacities over the years at BRI, most recently as chief operating officer. In 2013, Lee returned to loon conservation work full-time, and is currently the project lead for the Commonwealth of Massachusetts for BRI's national Restore The Call initiative.*

Michelle Kneeland *is a staff veterinarian and director of BRI's Wildlife Health Program. Michelle was first introduced to loons and BRI in 2007 while working as a wildlife health and mortality research assistant at Tufts Veterinary School. She spent the following two summers as a veterinary intern for the Loon Preservation Committee in New Hampshire. Following graduation from Tufts Veterinary School in 2012, Michelle completed a one-year surgical internship at the University of Pennsylvania New Bolton Center. She joined BRI as a wildlife veterinarian in the fall of 2013. Her current work at BRI focuses on wildlife health and mortality research, conservation medicine, and overseeing the loon health and captive rearing aspects of BRI's Restore the Call initiative.*

PHOTO ESSAY

Loon Recovery

Six-week old Common Loon Chick in its rearing pen. Photographs courtesy of BRI staff unless otherwise indicated.

Banding and health assessment of Loon Chick before its release. © Shawn P. Carey

Monitoring chicks after release.

Loon Chick underwater.

Resighting Banded Common Loon Chicks

Biodiversity Research Institute (BRI) is seeking help finding some banded birds and we are offering a reward for their resighting.

In 2015, seven common loon chicks were banded in Massachusetts as part of a movement and demographic study. These chicks have fledged and we are hoping to resight them off the southern New England coast over the next three years. We expect these loons to winter in the area of Buzzards Bay, but they could end up residing anywhere from Long Island Sound to Boston Harbor or beyond. In the spring and summer they might visit coastal lakes in southeastern Massachusetts.

These loons are banded with a silver band on the left leg and a unique combination of color bands with markings on the right leg.

Anyone who successfully reports a correct band combo for one of these birds, or provides information leading to our resighting of these birds, will be rewarded with the following:

- Acknowledgement in project reports and publications
- BRI hat, stickers, loon poster, etc.
- Signed copy of the book *Journey with the Loon* by David Evers and Kate Taylor

Please report any findings to:

vincent.spagnuolo@briloon.org

michelle.kneeland@briloon.org

lee.attix@briloon.org

Resighting these birds will prove difficult and require a lot of luck, but the information gained would be incredibly valuable to our research. Please spread the word to fellow birders!

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MUSINGS FROM THE BLIND BIRDER

Bird Walking with a Guide Dog

Martha Steele

The author with Alvin. Photograph by Bob Stymeist.

I recently got a guide dog, Alvin, a two-year-old male yellow Labrador retriever. As we enter our first spring together, I am wondering how to teach Alvin to do the bird walk. He is a young and energetic dog, accustomed to a steady trotting pace with a straight line trajectory from curb to curb. By contrast, the bird walk features an inconsistent pace, meandering angles, and frequent stops and starts. How does a dog that has learned to move steadily learn to dawdle while his handler strains to listen and stop for birds?

Can a guide dog be transformed into a birder, or at least do the bird walk, on demand?

Thinking of this makes me think back to the early days of my own birding. I became a birder as an adult after many years of hiking, backpacking, and camping in remote regions of North America. Thus, like Alvin I suppose, I was accustomed

to hitching up my boots and throwing a 40-pound backpack over my shoulders and moving forward as straight, steadily, and consistently as possible during long days of hiking rugged terrain. My eyes rarely left the ground in front of me, and when they did, it was to enjoy spectacular scenery or perhaps large mammals. My hearing at the time did not enable me to listen to birds as I could not hear them. Even if I could, I am not sure I would have caught the birding bug, as I did later in life.

Rarely did I notice birds. I was much more attuned to scenery, mammals, plants, and, frankly, getting to the next campsite in plenty of time to set up camp, cook dinner, and settle in for the night before the sun dipped below the horizon.

When birding captured my passion in 1989 on spring bird walks with my friend Martha Vaughan, my view of the outside world changed forever. At the time, of course, I could still see but not hear birds, and I was ravenous to see as many birds as possible that spring. I have so many vivid memories of birds, particularly the migrating warblers, images and experiences that simply stunned me and filled me with excitement. I did not realize what I had been missing all those years. I had even lived for more than two years in Cali, Colombia, and had not noticed birds there either. Imagine that, Colombia, a country with one of the world's most diverse avifauna, and I didn't notice them.

In the summer of 1989, I hiked to the summit of Mount Katahdin in Maine. The change in what I paid attention to was palpable; I was constantly looking around to try to see any birds, including those soaring above us as we hiked above tree line. I could not wait to tell birding friends what I had seen during that trip. And hiking was no longer just an exercise in physical endurance, looking down, and focusing on getting to the next destination of the day.

My new avocation fundamentally altered how I experienced the outdoors and chose travel destinations. Birding, of course, takes you many places that you may otherwise never visit, even within the lower 48 states of the United States. Who in New England would normally go to Texas as often as birders do?

Birding also is an avocation of slow walking and often demands great patience, especially during long droughts of bird activity. It can have you standing for long periods of time or driving great distances to find specific birds or a rarity. So although birding is an outdoor experience, as are hiking and camping, they are vastly different in their experiences.

Back to Alvin. In order to be a good birding guide dog, he will have to slow down, and perhaps periodically stand around or lie down if he gets bored. He will rarely get to break into a trot for more than a minute or so, unlike our usual hour-plus routine of trotting walks. And he will have to learn not to pay any attention to the birds around us.

This latter point is an important one. So far, if the birds are singing and flitting about in trees or nearby on the water or ground, he does not appear to notice them, as I once did not. But I have learned that if we are close, very close, to a larger bird, such as a duck, I need to snap to attention. For example, earlier this year in Arizona, we were walking along the edge of a man-made reservoir on a paved sidewalk with my friend

Jan. Alvin was to my left, and to his left was a slight drop-off of about six inches to the water. Many ducks were swimming in the reservoir, and an American Coot came particularly close to us along the edge of the sidewalk. I was confident Alvin would not attempt to jump into the water and chase the coot, but, much to my surprise, he did just that without any warning. Fortunately, I did not follow him into the water, which was deep enough for him to swim but not stand. Momentarily discombobulated, I quickly decided to grab the back of his harness and just lift the 65-pound dog out of the water. When I put him down, he promptly showered me with water when he shook himself, and then looked up at me, tail wagging. I had a great time, he seemed to be saying. I just stared at him and said, "Why did you do that?" In guide dog training, we were often reminded that there are two words in the phrase "guide dog." The dogs are both guides and dogs, and at this particular moment, Alvin was a fun-loving yellow lab who loved the water perhaps more than the coot.

As I write this in late March, I wonder exactly how this birding thing will go with Alvin. He will have to learn that spring is a different season when it comes to our daily routine, and he will have to learn patience with so many stops and starts. I know he will be quiet; he rarely barks. He will have to learn to hold back on any urge to chase anything, though he has already demonstrated great restraint in the vast majority of situations. And he will have to indulge me my passion. Alvin, after all, wants nothing more than to be with us, wherever that may be and in whatever capacity it is. So, if you see Alvin and me birding, ignore him and continue with your own passionate pursuit of the birds we love to see and hear. As for Alvin, he will probably just lie down and sigh until he can really stretch out on a brisk—not bird—walk.

***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>.*

SORA, ASH STREET SWAMP, WEST NEWBURY. DAVE ADRIEN.

GLEANINGS

Weighing the Odds

David M. Larson

Peregrine Falcon with prey. Photograph by Sandy Selesky.

Okay, here's the scenario. You are hungry, very hungry. No good food supplies around your location. You look across the river and there's plenty of food there. Problem is, the river might have crocodiles. Oh, and the plentiful food on the other side might be guarded by lions and tigers and bears. Oh my. What do you do?

If you are on migration, you might be facing this sort of challenge daily. Do you hide in the bushes, relatively safe from predators but hungry, or do you venture out into the open and risk tooth and claw for food? How do migratory birds weigh the trade-offs between predation risk and food? Several single-species studies have shown that hungry birds will risk death for higher quality food resources. McCabe and Olsen (2015) recently published a study designed to answer that question, not just for one avian species, but for a whole suite of frugivorous migratory birds that make refueling stops along the coast of Maine. At six coastal locations, the authors contrasted bird use of safe habitat patches (high woody-plant stem density) and habitats rich in food resources (high fruit abundance).

The authors studied 28 species of migratory passeriform and piciform birds composing the bulk of the migratory landbird community during fall migration. Rarer species were not used for analysis. Some of the study sites provided no trade-off between predation risk and food availability; others presented the birds with a clear dilemma. Factors involved included cover, food availability, and presence of raptors; these varied weekly during the fall based on fruit availability and abundance of avian predators. Since the study examined all 28 commonly caught species of migratory landbirds, it was possible to contrast habitat use of long-range and short-range migrants. The high energetic demands of long-range migration might predispose those birds to more risky food gathering.

At two coastal headlands and on four islands, the authors captured birds using multiple passive mist nets and assessed vegetation within four meters around each net during two fall migration seasons. All nonmigratory species were excluded from the analysis, as were all nonfrugivorous species. Individual birds were weighed, measured, aged, sexed, banded, and scored for fat. The authors recorded raptor abundance by counting all birds of prey visiting the banding sites during hours of operation. The most common raptor species recorded were Merlin, Sharp-shinned Hawk, and Peregrine Falcon. Habitat patch measurements included woody-plant stem densities, using standard techniques. Ripe fruit abundance was determined weekly and excluded bayberry, which only Yellow-rumped Warblers used. The researchers assessed each mist net/vegetation patch weekly to determine whether the fruit and stem densities were both high or low (nontrade-off sites) or one was high and the other low (trade-off sites). Due to the phenology of fruiting, sites could switch characteristics from week to week during the season, so they expressed the trade-off/nontrade-off metric in site-weeks.

The researchers captured nearly 10,000 migrant birds at the six banding stations. In the statistical modelling of the variables (fruit, trade-off, stem density, migration distance, raptor abundance), a trade-off status was present for 15 site-weeks and absent for 46 site-weeks. The top-ranked model for predicting variability in patch use combined fruit availability and migration distance, while controlling for the other variables. However, within that model, the authors found important effects of week, year, trade-off status, raptor abundance, and stem density. Controlling for all other variables, birds preferred patches with thick cover (higher stem densities). Fruit availability was less important to short-range migrants and more important to the longer-range migrants.

Contrary to the authors' initial prediction, birds preferred dense cover whether or not trade-offs were present. In addition, fruit abundance was only predictive of patch use for the longest-distance migrants. Overall, bird abundance was highest in sites without trade-offs, meaning that these are smart birds. This finding is consistent with a hypothesis that migrating birds rapidly select refueling sites based on the quality of cover and resources, and are willing to take longer to refuel in safety. However, long-range migrants have tighter time constraints and seem more willing to risk safety for faster refueling stops.

This research project demonstrates that an entire community of migratory frugivores shows preferences for high-quality, safe, stopover locations. A clear suggestion from this paper is that migratory bird conservation does not depend just on protecting breeding and wintering grounds, but also on providing high-quality migratory stopover sites for refueling, as shorebird biologists have long known.

References

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ABOUT BOOKS

An Artist Does the Altricial

Mark Lynch

Baby Birds: An Artist Looks into the Nest. Julie Zickefoose. 2016. Boston/ New York: Houghton Mifflin Harcourt.

"If you would know how something is built, draw it." (p. xiii)

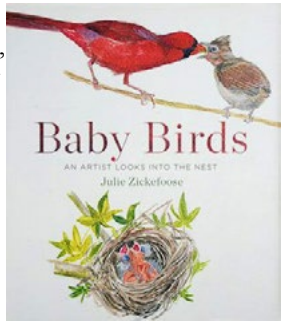
For centuries, artists have attempted to show the passage of time in their work. Rembrandt captured the process of aging by painting a long series of self-portraits throughout his life. Monet investigated the changes of light and shadow throughout a day by painting the same haystacks at different hours. Modern Japanese artist On Kawara executed a series of 3,000 date paintings that consisted simply of the same date painted on a colored background. If he could not finish a painting on that date, it was destroyed. His One Million Year series records the years back one million years from the date he conceived the project as well as one million years into the future. The series ended with his death. Contemporary photographer Amy Elizabeth Skinner has for years done a photographic self-portrait—not a "selfie" by any means—every single day and posted it on-line. Her considerable body of work traces her inner thoughts as she has faced different situations through her life. Artist, writer, natural historian, and contributing editor to *Bird Watcher's Digest*, Julie Zickefoose has also captured the passage of time, but in her work, it is by painting various species of baby birds each day until they fledge. This outstanding body of work is published in *Baby Birds: An Artist Looks into the Nest*.

Julie Zickefoose has worked as a bird rehabilitator since 1984 and has been what she calls "a bluebird nest landlord" for decades. Because of this, she has been in intimate contact with very young birds every spring. It occurred to her that probably the best way to learn about the rapid physiological changes that occur in nestlings is to take the same bird out of the nest every day and paint it. "I'm not even sure what compelled me to start the project, other than a burning desire to understand more of how baby birds are put together, how they grow and develop." (p. xiii)

Each chapter is dedicated to a different species. Zickefoose began painting the nestlings of the cavity nesting species on her property, bluebirds and swallows, and eventually continued this labor-intensive project with seventeen different species of birds, all altricial species. "Altricial birds are born blind and helpless; all the songbirds of the order Passeriformes fall into this category. Precocial birds, by contrast, hatch with open eyes and strong legs, and pick up their own food from the start." (p. xiv)

The species she chose to paint were a matter of chance: either whatever species she came across in her role as a rehabilitator or species she discovered nesting on her large eastern Ohio homestead. Included are such familiar species as titmouse, Carolina Chickadee, Indigo Bunting and Ruby-throated Hummingbird. She has yet to rehab a

White-breasted Nuthatch and is looking forward to painting those young birds when the opportunity arises. At first glance, many of the newborn birds seem to look alike until you study Zickefoose's paintings and the differences are revealed. A few species are unique in their development and are the most different-looking fom the start. These include the Chimney Swift, Mourning Dove, and Yellow-billed Cuckoo. Only one species of warbler, the Prothonotary, has been included so far. Readers may be surprised that Zickefoose also draws species that many consider pests. Zickefoose had long had to evict House Sparrows from her bluebird nesting boxes and, like so many of us, had considered them as something to get rid of and paid no further attention to them. But one day as she was about to once again unceremoniously evict some squatter House Sparrows, her nine-year-old daughter Phoebe asked her why she wouldn't want to paint that species' young? And Zickefoose realized she was right.



Although a few artist natural historians have painted nestling birds before, typically it was only a few species and never on a daily basis. So this project is truly groundbreaking. No matter how long you have been birding, you have never seen common species in this way. The artwork and writing in *Baby Birds* brings us close into the nest and allows us to gaze at the accelerated development of a bird at our leisure. It is an amazing process to witness.

Zickefoose would delicately remove a nestling, always the same one, for a short period of time every day. She would feed the bird several times while it was being painted. She attempted to paint the bird from two different views at each setting. Later she found that the bird she was working with actually gained more weight than the other nestlings. Several times in *Baby Birds*, Zickefoose emphasizes that her credo in this project is taken from the Hippocratic Oath: "First do no harm," and she goes to great ends to make sure her artistic intentions do not adversely affect the birds.

Each session with a species was painted on a single sheet of watercolor paper that the artist kept rolled up under her art table:

> The paintings were done on 20 x 30 inch sheets of 140-pound Fabriano or Winsor Newton hot-press watercolor paper. There's something about the smooth, quiet surface of hot-press paper that helps me relax and keeps me from noodling too much detail into the painting. Detail, obviously, is called for, but speed is of the essence. (p. xix)

It was important to Zickefoose to get all she saw done quickly so she could return the nestling to the nest. She often didn't notice the small daily changes in the birds anatomy until she looked back at her paintings days later. The reader will be amazed at seeing amorphous fleshy blobs slowly develop the beginnings of feathers and gradually turn into the birds we are all familiar with.

At the beginning of each chapter there are two, three, or four page spreads of Zickefoose's watercolors of that species, reproducing the large watercolor sheets she

used. Many other additional watercolors are placed among her journal entries, which form the bulk of the text of *Baby Birds*. Her handwritten notes are often included next to the paintings. There are a few full-page fully realized paintings including a wonderful one of Zickefoose's daughter, Phoebe, contemplating her namesake, a young Eastern Phoebe. The reproductions are superb and the layout aesthetically pleasing. Houghton Mifflin Harcourt is to be congratulated for publishing a book of this quality while managing to keep the price reasonable.

Each species presented a different set of challenges to rehabilitator Zickefoose. Death is always hovering close by. There were relentless rat snakes and other predators trying to rob nests. One nestling swallowed a large twig that lodged in its crop and then had to be delicately removed by Zickefoose. Large blowfly larvae suddenly popped up underneath the skin of young House Wrens. Keeping the nestlings hydrated and free from infestation by mites was a continual concern. The reader learns that the best way to rid a nest of mites is to remove the birds and then microwave the nest. As the young Chimney Swifts matured, Zickefoose's husband Bill Thompson III, editor of *Bird Watcher's Digest*, built a mock chimney for them to cling to. Birds are eventually moved to larger enclosures or flight tents and then released. Each release as described by Julie Zickefoose in her journals is an exhilarating event touched with a bit of sadness at seeing her charges leave. Do some return the next year and how does she know if they do? You will have to read the book to find out.

It is amazing what Zickefoose uncovers in her careful scrutiny of these nestling birds. After painting newly hatched hummingbirds, she realizes that from above they look amazingly like the poisonous caterpillar of the black-winged flannel moth. Could this be some form of protective mimicry? The inside coloration of the mouths of nestling cuckoos is a startling scarlet red sprinkled with blue-white pearls. Young nestling swifts do not gape for food by facing up, like most other birds, but instead face downwards. This presents challenges when trying to feed them. Zickefoose also notes a variety of other bird behaviors like the noises that different nestlings make, including snakelike hisses or sizzling rattles.

Julie Zickefoose describes her *Baby Birds* this way: "What results from all this is an odd sort of book, like a Victorian-era curiosity" (p. xx) *Baby Birds* is that rare book that combines an extraordinary art project with serious natural history study. Like the canvases of Rembrandt and Monet, her work is about time and nature, about development and aging. This book offers a studied look at the subtle changes that occur going from blind helplessness to mastering flight. More than just a "Victorian curiosity," *Baby Birds* is the record of a lifetime's work in several fields. And it is not over. As Zickefoose bluntly exclaims at the end of the book: "I don't want this project to end. So it won't." (p. 325)

We can all eagerly look forward to *Baby Birds* volume *2*.

Note: The Museum of American Bird Art at Mass Audubon is exhibiting *Baby Birds: An Artist Looks into the Nest* – Watercolors by Julie Zickefoose April 30–September 18, 2016. <http://www.massaudubon.org/learn/museum-of-american-bird-art/exhibitions/current-exhibitions>

BIRD SIGHTINGS

January-February 2016

Seth Kellogg, Marjorie W. Rines, and Robert H. Stymeist

January and February were warmer than usual with near normal rainfall and low snow accumulation. In January there were 19 days with above average temperatures and a high of 58˚ on January 10, 22˚ degrees above normal; the low was 8˚ on January 5. Rainfall measured 3.27 inches, slightly below the average, while snowfall in Boston was 9.5 inches, with 6.1 inches on January 23. On February 1, the mercury hit a balmy 65˚ in Boston, 29˚ degrees above average. There were 15 days in February with above normal temperatures. A deep freeze hit between February 12 and 15, and many areas saw the temperatures well below zero. Boston had a low of minus 9˚ on the 14th. Precipitation was near normal at 3.78 inches, and snowfall was 15 inches with most falling on February 5 and 9, each with 6.8 inches.

R. Stymeist

WATERFOWL THROUGH ALCIDS

The **Pink-footed Goose**, originally discovered in November at Turners Falls, returned to Connecticut for the first half of January but made a cameo appearance in Agawam on January 16, and again on February 21. Given the rarity of this species there is little reason to speculate that more than one bird was involved. A **Tufted Duck** in Haverhill was undoubtedly the same individual reported in nearby Groveland as early as November 15.

A first-winter **Yellow-billed Loon** was discovered on February 27 at Race Point in Provincetown, for a first state record. In addition, up to three **Pacific Loons** were in the same area. Although this species is annual, three individuals is possibly a first. This caused a lot of excitement in the birding community, as numerous birders scored a first four-loon day for Massachusetts. On February 7, a **Western Grebe** was discovered on Winthrop Beach but was not reported subsequently.

A Little Blue Heron lingered at Belle Isle Marsh in East Boston for the first few days in January, a rare sighting for the month. On January 11, a distressed **Purple Gallinule** was discovered at Hathaway Pond in Barnstable, and was taken to a wildlife rehabilitator where it was treated for anemia.

On February 1, James Smith discovered an intriguing adult gull at Turners Falls. It was listed in the records as "**Yellow-legged Gull**," but given the difficulty of identifying this species, a final identification may never be reached. James commented as follows:

> It was clearly darker mantled than the adult Herring Gulls but was also obviously paler than the typical Lesser Black-backed Gull….In addition, the head was gleaming white and clean, offset against a bright egg-yolk yellow bill and particularly large bright red gonys spot. Overall, the bird looked immaculately clean. Finally I checked the legs, which were certainly yellow, but appeared to be dull mustard yellow rather than bright yellow. The bird looked to be in full breeding plumage though I expected the legs to be brighter, especially if I was going to entertain thoughts of a Yellow-legged Gull! On the other hand, if I was sorting through Yellow-legged and Armenian Gulls on a beach in Northern Israel I doubt very much if I'd consider this bird to be a hybrid, especially from an American Herring x Lesser Black-backed Gull pairing!

What to make of this gull? Well I just don't know at this stage. We do know that Lesser Black-backed Gulls are hybridizing to some extent with American Herring Gulls in the Northeast and a 'perfect' hybrid seems (to me) to be much more plausible than a Yellow-legged Gull from the Mediterranean region of Europe. Another population of Yellow-legged Gull breeds in the Azores, a form which I've never seen, but should be rather more likely as a vagrant to eastern North America than the Mediterranean form.

Numerous photos and additional comments are on James's blog at: http://pioneerbirding.blogspot.com/2016/02/ma-interesting-yellow-legged-type-gull.html. *M.Rines*

Pink-footed Goose			
1/16, 2/21	Agawam	1	Robblee, Motyl
Greater White-fronted Goose			
thr	Ipswich	1	v.o.
1/1	Agawam	1	S. Motyl
1/4	Melrose	1	R. Stymeist
1/14	Quincy	1	D. Brown
1/14-17	Lynnfield	1	C. Martone
1/27-2/11	Bolton Flats	1	M. Lynch#
1/31-2/7	Longmeadow	1	S. Motyl + v.o.
2/thr	Falmouth	2	P. Wolter#
Snow Goose			
1/1	Amherst	2	v.o.
1/6	Hadley	3	B. Lafley#
1/30	Ipswich	4	J. Berry
2/21	Saugus	2	S. Zendeh#
2/thr	Falmouth	3	P. Kyle#
Brant			
1/3	Fairhaven	64	R. Stymeist#
1/4	E. Boston (B.I.)	50	P. Peterson
1/17	Swansea	212	J. Sweeney
1/17	Fairhaven	91	M. Lynch#
Cackling Goose			
1/1	Sheffield	1	G. Hurley
1/4	Ipswich	1	T. Murray
1/22	Swansea	1	M. Lynch#
1/31	Longmeadow	2	S. Motyl
2/22	Amherst	1	D. Griffiths
2/29	Rochester	1	N. Marchessault
Wood Duck			
1/2	Jamaica Plain	42	P. Peterson
1/14	GMNWR	27	A. Bragg#
1/17	W. Roxbury	20	P. Peterson
1/29	Brookline	33	R. Mayer
2/13	Sandwich	10	P. Trimble
2/28	Bolton Flats	26	M. Lynch#
Gadwall			
thr	P.I.	125 max	v.o.
1/3	Fairhaven	60	R. Stymeist#
1/9	Quincy	9	P. Peterson
1/26	E. Gloucester	6	J. Berry
2/15	Acoaxet	42	G. d'Entremont
2/20	Plymouth	26	M. Lynch#
Eurasian Wigeon			
1/2	P.I.	1 m	T. Martin
1/7	Marstons Mills	3 m	S. Matheney
1/17	Nantucket	3	B. Harris#
1/17-31	Swansea	1 m	J. Sweeney + v.o.
1/23	Haverhill	1 m	S. Mirick
2/20	Falmouth	3	J. Trimble#
2/21	Tyringham	1	M. Lynch#
American Wigeon			
1/1	P.I.	20	T. Wetmore
1/3	Fairhaven	66	R. Stymeist#
1/9	Waltham	6	J. Forbes
1/22	Swansea	111	M. Lynch#
2/5	Turners Falls	2	S. Kellogg
2/17	Westport	23	M. Lynch#
Blue-winged Teal			
1/1	Chatham	1	R. Schain
1/31	Marstons Mills	1	R. Debenham
Northern Shoveler			
thr	Arlington Res.	6	v.o.
1/1-2/23	Marstons Mills	3	v.o.
1/1	GMNWR	4	W. Martens
1/3	E. Boston	5	P. Peterson
2/29	Littleton	3	S. Miller
Northern Pintail			
thr	P.I.	150 max	v.o.
1/15	Sudbury	22	T. Spahr
2/17	Acoaxet	85	M. Lynch#
2/22	Northampton	4	L. Therrien
2/25	Bolton Flats	6	B. Kamp
Green-winged Teal			
1/3	E. Boston	12	P. Peterson
1/4	P.I.	65	T. Wetmore
1/17	Williamstown	2	M. Morales
2/25	Bolton Flats	15	B. Kamp
2/29	GMNWR	14	J. Forbes
Canvasback			
1/1-7	Reports of indiv. from 5 locations		
thr	Nantucket	37 max	v.o.
1/11	Brewster	5	S. Finnegan
1/24	Shrewsbury	5	K. Bourinot
2/29	Sheffield	1	C. Blagdon
Redhead			
thr	Haverhill	3 max	v.o.
thr	Everett	3 max	v.o.
1/1-11	Waltham	4 max	v.o.
1/24-27	Shrewsbury	1	J. Lawson
1/28-2/29	Gloucester (E.P.)	2 m	v.o.
2/7	Nantucket	16	S. Kardell
2/17-29	Sheffield	2	C. Jones
2/20	Falmouth	7	J. Trimble#
Ring-necked Duck			
1/7	Lynnfield	100	J. Berry
1/9, 2/4	Waltham	140, 230	J. Forbes
1/15	Arlington	30	J. Layman
1/25	Haverhill	140	J. Berry#
Tufted Duck			
1/6-25	Haverhill	1 m ad	S. Mirick + v.o.
Greater Scaup			
1/3, 2/4	Waltham	25, 8	J. Forbes
1/8	Wachusett Res.	100	J. Liller
1/17	Mattapoisett	1080	M. Lynch#
1/30	Wachusett Res.	72	M. Iliff
2/20	Falmouth	1050	J. Trimble#
Lesser Scaup			
1/2	Plymouth	20	G. d'Entremont#
1/17	Lakeville	28	J. Sweeney
1/31	Nantucket	44	T. Pastuszak
2/4	Lancaster	13	K. Bourinot
2/23	Mashpee	340	J. Trimble
King Eider			
thr	Gloucester (B.R.)	1	v.o.
thr	Rockport (A.P.)	2-3	v.o.

King Eider (continued)

1/thr	Bourne	1 m	v.o.
2/1-13	Weymouth	1	v.o.
2/10	Sandwich	1	J. Glydon

Common Eider

1/6	Ipswich	110	J. Berry
1/26	E. Gloucester	130	J. Berry
2/7	Monomoy	30000	BBC (Iliff)
2/7	Nant. Shoals	30525	BBC Pelagic
2/17	Scusset B.	350	R. Stymeist#

Harlequin Duck

1/thr	Rockport	70 max	v.o.
2/thr	Rockport	70 max	v.o.
1/9	Westport	2	M. Lynch#

Surf Scoter

1/26	E. Gloucester	11	J. Berry
2/7	Nant. Shoals	350	BBC Pelagic
2/17	Westport	22	M. Lynch#
2/20	Plymouth	74	M. Lynch#

White-winged Scoter

1/9	P'town	1500	B. Nikula
1/9	Westport	37	M. Lynch#
2/7	Monomoy	3500	BBC
2/7	Nant. Shoals	4548	BBC Pelagic
2/20	Plymouth	62	M. Lynch#

Black Scoter

1/9	Orleans	150	SSBC (W. Petersen)
1/17	N. Truro	350	B. Nikula
2/2	Rockport	45	J. Berry#
2/7	Nant. Shoals	50	BBC Pelagic
2/21	P'town	1100	S. Arena
2/28	P.I.	25	T. Wetmore

Long-tailed Duck

1/2	Quabbin (G5)	2	CBC (J. Rose)
1/6	Ipswich	23	J. Berry
1/17	Mattapoisett	26	M. Lynch#
2/2	Rockport	32	J. Berry#
2/7	Nant. Shoals	2725	BBC Pelagic
2/27	P.I.	35	T. Wetmore

Bufflehead

1/2	P.I.	40	T. Wetmore
1/6	Ipswich	36	J. Berry
1/14	Newbypt	12	J. Berry
1/26	E. Gloucester	54	J. Berry
2/20	Plymouth	460	M. Lynch#

Common Goldeneye

1/8	Wachusett Res.	43	J. Liller
1/14	Newbypt	30	J. Berry
1/17	Fairhaven	245	M. Lynch#
1/21	Turners Falls	100	J. Rose
1/28	P.I.	30	T. Wetmore

Barrow's Goldeneye

thr	Fairhaven	2	C. Longworth
thr	Turners Falls	1	J. Smith + v.o.
1/9	Agawam	1	S. Motyl
1/17	Dighton	1 m	J. Sweeney
1/18	Everett	1	J. Layman
1/26-2/29	Gloucester	1 m ad	v.o.
1/28-2/29	Boston	1 m	v.o.
1/29	Hadley	1	L. Therrien
2/7	Newbypt.	1	B. Harris
2/17	Westport	1	M. Lynch#

Hooded Merganser

1/2	P.I.	70	N. Landry
1/7	Lynn	76	L. Pivacek
1/14	Haverhill	150	P. + F. Vale
1/15	S. Quabbin	64	L. Therrien
1/22	Swansea	72	M. Lynch#
1/25	Medford	82	P. Roberts
1/30	Turners Falls	30	v.o.

Common Merganser

1/1	Arlington	354	M. Rines
1/2	Randolph	260	P. Peterson
1/4	Westboro	500	G. Gove#
1/15	Southwick	85	S. Kellogg
1/23	S. Quabbin	130	L. Therrien
2/28	Quabog IBA	201	M. Lynch#

Red-breasted Merganser

1/9	Acoaxet	66	M. Lynch#
1/15	P.I.	115	R. Heil
1/15-23	Quabbin Pk	1	L. Therrien
1/17	Fairhaven	176	M. Lynch#
1/17	P'town	800	B. Nikula
1/26	E. Gloucester	33	J. Berry

Ruddy Duck

1/1	Quabog IBA	22	M. Lynch#
1/1	Brewster	68	D. Clapp
1/1	Melrose	14	D. + I. Jewell
1/9	Arlington	51	J. Forbes
1/14	Haverhill	25	P. + F. Vale
2/27	Eastham	43	J. Trimble#

Northern Bobwhite

2/15	Yarmouth	3	A. Middleton

Ring-necked Pheasant

1/1	Newbypt	1	BBC (de la Flor#)
1/15	Cheshire	1	M. Lynch#

Ruffed Grouse

1/28	Camp Edwards	2	J. McCumber

Red-throated Loon

1/2	Stockbridge	1	J. Pierce
1/6	Pittsfield (Onota)	1	G. Hurley
1/9	Westport	61	M. Lynch#
1/15	P.I.	27	R. Heil
2/27	P'town (R.P.)	113	S. Arena

Pacific Loon

1/9	Aquinnah	1	S. Santino
2/20	Plymouth	1	M. Lynch#
2/21	P'town (R.P.)	3 ph	S. Arena#

Common Loon

1/9	Wachusett Res.	9	K. Bourinot
1/15	Gloucester (B.R.)	42	J. Nelson
1/15	P.I.	86	R. Heil
2/7	Nant. Shoals	139	BBC Pelagic
2/21	P'town (R.P.)	40	S. Arena

Yellow-billed Loon

2/27-29	P'town (R.P.)	1 1W ph	S. Arena#

Pied-billed Grebe

1/thr	Reports of indiv. from 6 locations		
1/2	Plymouth	2	G. d'Entremont#
1/7	Lynn	2	L. Pivacek

Horned Grebe

1/2	Arlington	1	S. Miller#
1/9	S. Quabbin	12	L. Therrien
1/9	Westport	12	M. Lynch#
2/2	Rockport	2	J. Berry#

Red-necked Grebe

1/6	Winthrop	15	R. Stymeist
2/4	P.I.	20	T. Wetmore
2/6	Quabbin Pk	1	L. Therrien
2/7	Gloucester (B.R.)	9	H. Miller
2/21	P'town	7	S. Arena

Western Grebe

2/7	Winthrop	1	C. Jackson#

Northern Fulmar

1/1	P'town	1	S.Arena#
1/10	Rockport (A.P.)	3	R. Heil
1/24	Eastham (F.E.)	3	B. Nikula
2/7	Nant. Shoals	5	BBC Pelagic

Great Shearwater

1/3	N. Truro	4	B. Nikula#
1/3	P'town (R.P.)	4	P. Flood

Sooty Shearwater

1/4	P'town (R.P.)	1	A. Lamoreaux#
2/7	Nant. Shoals	1	BBC Pelagic

Manx Shearwater

1/1	P'town	30	S.Arena#

Northern Gannet
1/8 P'town 500 B. Nikula
1/10 Rockport (A.P.) 111 R. Heil
2/7 Nant. Shoals 50 BBC Pelagic
Double-crested Cormorant
1/1 Arlington 10 K. Hartel
1/3 Salem 6 D. Ely
1/9 Boston 27 O. Burton
1/29 Cambridge 7 J. Layman
2/19 Boston 3 M. Iliff
Great Cormorant
1/2 Manomet 6 G. d'Entremont#
1/9 Westport 12 M. Lynch#
2/7 Nant. Shoals 11 BBC Pelagic
2/11 Medford 1 R. Stymeist
2/20 N. Scituate 15 BBC (S. Martin)
Great Blue Heron
1/3 Saugus 4 S. Zendeh#
1/4 E. Boston (B.I.) 3 P. Peterson
1/6 Haverhill 3 S. Mirick
1/7 GMNWR 3 A. Bragg#
1/24 Jamaica Plain 4 J. Novak
2/17 Westport 3 M. Lynch#
Great Egret
1/2 Aquinnah 2 R. Stymeist#
1/2 Chilmark 2 T. Spahr
1/22 Falmouth 1 G. Hirth
Little Blue Heron
1/1-04 E. Boston (B.I.) 1 imm v.o.
Black-crowned Night-Heron
2/4 Everett 1 J. Layman
2/7 Nant. Shoals 1 BBC Pelagic
Black Vulture
1/6 Dartmouth 10 G. Gove#
1/9 Westport 12 M. Lynch#
1/26 P'town 1 E. Hoopes
Turkey Vulture
1/30 Essex 2 J. Berry
2/6 Westfield 6 E. Goodkin
2/17 Westport 50 M. Lynch#
2/21 Reading 2 D. Oliver#
2/25 GMNWR 2 K. Dia#
2/28 Milton 4 R. Mussey
Osprey
2/28 Eastham 1 E. Lewis#
Bald Eagle
1/15 Quabbin (G35) 7 B. Lafley
1/19 P.I. 3 T. Wetmore
1/20 Medford 5 G. Campbell
1/23 Amesbury 3 MAS (P. Roberts)
1/23 Newbypt H. 4 MAS (P. Roberts)
2/1 Wachusett Res. 4 M. Lynch#
2/7 Dalton 3 M. Lynch#
2/29 Warren 3 M. Lynch#
Northern Harrier
thr P.I. 8 max v.o.
1/3 Concord 2 E. Lipton
1/9 S. Weymouth 2 P. Peterson
1/17 Cumb. Farms 14 J. Sweeney
1/20 Saugus 3 S. Zendeh#
1/24 Northampton 5 L. Therrien
2/7 Boston (Logan) 2 P. + F. Vale
2/15 Westport 3 B. Cassie
Sharp-shinned Hawk
thr Reports of indiv. from 12 locations
Cooper's Hawk
1/7 Danvers 1 J. Berry
1/17 Fairhaven 2 M. Lynch#
1/25 Ipswich 1 J. Berry#
2/15 Concord 2 R. Stymeist
2/25 Newton 1 R. Stymeist
2/27 Fairhaven 4 SSBC (GdE)
Red-shouldered Hawk
2/20 Westport 2 J. Hoye#
2/29 Boxboro pr R. Grossman
Red-shouldered X Red-tailed Hawk
2/17 W. Boylston 1 T. Pirro
Rough-legged Hawk
thr P.I. 2 v.o.
1/7 Windsor 1 J. Pierce
1/15 Quabbin (G35) 1 B. Lafley
1/17 Cumb. Farms 1 J. Sweeney
1/24 Amherst 1 L. Therrien
2/1 Wayland 1 M. Mulqueen
2/6 Hadley 1 L. Therrien
2/21 Tyringham 1 M. Lynch#
2/25 Lee 1 T. Collins#
Clapper Rail
1/1 Barnstable 2 A. Lamoreaux#
Sora
1/3 Barnstable 1 M. Iliff
1/6 Harwich 1 B. Nikula
Purple Gallinule
1/11 Barnstable 1 imm fide Boedeker
Common Gallinule
2/6 Nantucket 1 S. Kardell
American Coot
1/1 Somerville 14 R. Stymeist#
1/2 Medford 30 P. + F. Vale
1/5 Jamaica Plain 10 P. Peterson
1/25 Haverhill 26 J. Berry#
2/6 Woburn (HP) 50 P. Ippolito
Sandhill Crane
thr E. Bridgewater 1 E. Giles + v.o.
1/10 Bernardston 1 S. Power
Black-bellied Plover
1/15 P.I. 2 R. Heil
Semipalmated Plover
1/1 Plymouth 3 P. Trimble
1/11 Chatham 2 P. Kyle#
Killdeer
2/20 Longmeadow 3 M. Moore
2/25 Bolton Flats 4 B. Kamp
2/27 Concord 5 G. Gove#
2/27 Arlington Res. 3 J. Forbes
2/27 Cumb. Farms 4 G. d'Entremont#
2/29 Ipswich 13 W. Tatro
American Oystercatcher
1/1 Wollaston B. 2 E. Lipton
1/17 Falmouth 1 P. Swigart#
Spotted Sandpiper
1/1 Stockbridge 1 G. Ward#
Greater Yellowlegs
1/2 Barnstable 8 E. Hoopes
Lesser Yellowlegs
1/2 Upton 1 N. Paulson
1/2 Hopkinton 1 J. Forbes
1/3 E. Boston (B.I.) 1 P. Peterson
Ruddy Turnstone
1/9 Manomet 2 N. Marchessault
1/12 S. Boston 3 P. Peterson
Sanderling
1/15 P.I. 85 T. Wetmore
1/15 Duxbury B. 45 R. Bowes
1/27 Nantucket 275 T. Pastuszak#
2/13 Wollaston B. 10 V. Zollo
2/20 P'town (R.P.) 250 L. Waters#
Purple Sandpiper
1/9 Acoaxet 9 M. Lynch#
1/20 Rockport (A.P.) 50 MAS (B. Gette)
1/26 E. Gloucester 40 J. Berry#
2/7 S. Boston 7 TASL (S. Zendeh)
Dunlin
1/1 P'town (R.P.) 700 B. Nikula#

Dunlin (continued)			
1/12	S. Boston	112	P. Peterson
1/15	Duxbury B.	1250	R. Bowes
1/24	Eastham (F.E.)	220	B. Nikula
2/1	P.I.	180	T. Wetmore
2/21	P'town (R.P.)	125	B. Nikula
Long-billed Dowitcher			
1/6	Westport	4	G. Gove#
Wilson's Snipe			
1/15	E. Boston (B.I.)	1	P. Peterson
1/27	Saugus	1	L. Waters#
2/9	Sandwich	2	P. Crosson
2/13	Williamstown	1	M. Morales
2/21	Sheffield	3	M. Lynch#
American Woodcock			
2/27	Canton	6	P. Peterson
2/28	Burlington	3	M. Rines
2/28	Bolton Flats	16	M. Lynch#
2/28	N. Reading	3	P. + F. Vale
2/28	Cambr. (Alewife)	3	R. Stymeist#
2/29	Brewster	6	C. Bates
Black-legged Kittiwake			
1/9	P'town	350	B. Nikula
1/23	Rockport (A.P.)	860	R. Heil
2/7	P'town (R.P.)	150	B. Nikula
2/7	Nant. Shoals	1350	BBC Pelagic
Bonaparte's Gull			
1/2	Fairhaven	100	V. Zollo
1/3	Brewster	55	J. Young
1/6	Ipswich	7	J. Berry
1/9	N. Truro	35	S. Finnegan#
1/12	Barnstable (S.N.)	75	P. Crosson#
Black-headed Gull			
1/6	S. Dartmouth	1	G. Gove#
1/11	Yarmouth	1	P. Crosson#
1/14	Bourne	1	D. Heitzmann
1/16-2/29	Orleans	1	B. Lagasse
1/17-2/29	Nantucket	1	v.o.
1/20-2/6	Gloucester (E.P.)	1 1W	v.o.
1/22	Eastham	1	J. Hoye#
2/10-13	Harwichport	1	B. Nikula
Laughing Gull			
1/1	N. Weymouth	1	E. Lipton
Yellow-legged Gull			
2/1-10	Turners Falls	1	J. Smith#
Iceland Gull			
1/1	Turners Falls	2	J. Smith
1/6	Boston (Deer I.)	6	R. Stymeist
1/9	Lunenberg	2	K. Bourinot
1/25	Shrewsbury	2	J. Lawson
1/26	E. Gloucester	6	J. Berry#
2/7	Nant. Shoals	25	BBC Pelagic
2/21	P'town	154	S. Arena
Lesser Black-backed Gull			
thr	Turners Falls	2	J. Smith + v.o.
1/11	Sharon	2	L. Waters
1/24	Nantucket	69	P. Trimble#
2/7	Nant. Shoals	10	BBC Pelagic
2/13	P'town (R.P.)	4	S. Arena#
Glaucous Gull			
1/7	Lunenburg	1	B. Kamp
1/13	Lowell	1	S. Sullivan
1/15	Sharon	1	L. Waters
1/15	Turners Falls	1	D. Schell
1/20	Saugus	1	S. Zendeh#
1/30	Gloucester (E.P.)	1	P. + F. Vale
2/19	P'town (R.P.)	3	S. Arena#
Pomarine Jaeger			
1/24	Eastham (F.E.)	7	S.Arena#
Dovekie			
1/thr	P'town	6 max	v.o.
1/9	N. Truro	2	B. Nikula
1/10	Rockport (A.P.)	4	R. Heil
1/24	Eastham (F.E.)	2	S.Arena#
Common Murre			
1/23	Rockport (A.P.)	340	R. Heil
2/7	Nant. Shoals	17	BBC Pelagic
2/19	P'town (R.P.)	108	S. Arena
Thick-billed Murre			
thr	Rockport	6 max	v.o.
2/thr	Gloucester	4 max	v.o.
2/21	P.I.	1	E. Nielsen
2/28	P'town (R.P.)	16	M. Iliff#
Razorbill			
thr	P'town	12400	v.o.
thr	P.I.	50 max	v.o.
thr	Rockport	580 max	v.o.
1/31	Sandwich	5	M. Lynch#
2/7	Nant. Shoals	672	BBC Pelagic
Black Guillemot			
1/5	Gloucester	5	P. + F. Vale
1/10	Rockport (A.P.)	2	R. Heil
2/6	P'town (R.P.)	4	P. Flood#
2/14	Marshfield	5	SSBC (GdE)
Atlantic Puffin			
1/10	Rockport (A.P.)	4	R. Heil
1/24	Eastham (F.E.)	1	B. Nikula#
2/7	Nant. Shoals	6	BBC Pelagic

DOVES THROUGH FINCHES

A dead Barn Owl was picked up in Danvers; this is only the fourth record for mainland Massachusetts in the last ten years. Some recovery for this species was noted on Martha's Vineyard after last winter's horrific weather, and there's hope that this winter's mild temperatures will continue to help. Long-eared Owls were noted from five locations; this species may be more common but often goes unnoticed as it roosts in dense vegetation. Short-eared Owls were found in six areas with as many as four individuals tallied at Plum Island. **Red-headed Woodpeckers** were noted from five locations, four of which overwintered changing from immature to bright adults.

The bird of the period was a **Hammond's Flycatcher** in Fairhaven on New Year's Day, only the third record for the state. The first was found in Wellesley on December 19, 1988, and the second on Tuckernuck Island on November 1, 2003. Holdovers from December included **Ash-throated Flycatchers** in Cambridge until January 6 and at Manomet last seen on January 4. **Western Kingbirds** were holdovers at four locations. The **Mountain Bluebird** continued throughout the period at the Crane Wildlife Management area in Falmouth. The **Townsend's**

Solitaire at Corn Hill Beach in Truro lingered through January 14. A **Varied Thrush** visited a feeder in Rutland during the first three days of the year.

Several noteworthy birds appeared at feeders but were not easily accessible to the general birding community. These included a **Summer Tanager** in Saugus, **Western Tanagers** in Rowley and Eastham, two female **Painted Buntings** at a feeder in Orleans and a bright male on Nantucket, and a **Bullock's Oriole** in Newburyport.

The second runner-up for bird of the period was the **Smith's Longspur** found and identified on January 17 at Bear Creek Wildlife Sanctuary in Saugus. Photographs of a longspur taken at Bear Creek the day following the Boston CBC on December 21 proved to be this same individual. Thanks to Soheil Zendeh, who arranged with Geoff Wilson of Wheelabrator for a special trip on January 20, a group of 33 birders enjoyed prolonged views of this rare visitor. This was just the third state record. The first was at Salisbury Beach in October 1968; the second, on November 9, 2014, occurred at East Point, Nahant. Subsequent arranged tours to look for the longspur were unsuccessful.

The continued mild weather into January and February certainly benefitted several lingering passerines such as a House Wren, Black-throated Blue and Prairie warblers, an Orchard Oriole, and Baltimore Orioles in 17 different areas. Winter finch reports were few and far between with the exception of Purple Finches. *R. Stymeist*

Barn Owl			
1/1	Chilmark	2	R. Stymeist#
1/28	Danvers	1 dead	M. Oppelt
Eastern Screech-Owl			
1/2	Aquinnah	3	R. Stymeist#
2/2	Reading	2	I. Giriunas
2/15	S. Dartmouth	2	G. d'Entremont
Great Horned Owl			
thr	Mt.A.	2	v.o.
1/2	P.I.	2	T. Wetmore
1/20	Waltham	2	J. Forbes#
Snowy Owl			
thr	Reports of indiv. from 8 locations		
thr	P.I.	1-2	v.o.
1/1	P'town (R.P.)	2	S. Arena#
1/2	Nantucket	3	S. Kardell#
1/12	S. Boston	2	P. Peterson
Barred Owl			
1/14	Boxford	1	T. Martin
1/15	Cheshire	1	M. Lynch#
1/26	Woburn	1	M. Rines
1/27	Medford	1	R. Stymeist
2/27	Canton	1	P. Peterson
2/29	ONWR	1	J. Hoye#
Long-eared Owl			
1/2	P.I.	1	T. Wetmore
1/3	Nantucket	1	D. Bates#
1/25	Hatfield	1	B. Geryk
2/21	Amherst	1	L. Therrien
2/27	Hamilton	2	J. Berry#
Short-eared Owl			
1/thr	Northampton	2	L. Therrien + v.o.
1/2	Cumb. Farms	1	G. d'Entremont#
1/8	Chatham	1	S. Arena
1/22	P.I.	4	P. + F. Vale
2/7	Revere B.	1	E. Harrison
2/15	Orleans	1	K. Yakola#
Northern Saw-whet Owl			
1/1	Ware R. IBA	1	M. Lynch#
1/1	Sudbury	1	B. Harris
1/2	N. Quabbin	1	L. Therrien
1/17	P.I.	1	T. Wetmore
American Kestrel			
1/thr	Newbypt.	1	v.o.
1/12	Nahant	1	J. Paluzzi.
1/15	Somerville	1	M. Resendes
1/18	Everett	1	J. Layman
1/21	Hadley	1	J. Rose
2/21	Saugus	1	S. Zendeh#
Merlin			
1/2	Arlington Res.	1	H. Yelle
1/15	P.I.	2	R. Heil
1/17	Nahant	1	L. Pivacek
1/19	Westboro	1	J. Lawson
1/20	Ipswich	1	J. Berry#
2/7	Hadley	1	R. Stymeist
2/10	Waltham	1	J. Forbes
2/18	Cumb. Farms	1	J. Hoye#
2/23	Wayland	1	G. Dysart
Peregrine Falcon			
1/21	Medford	2	P. Roberts
1/30	Worcester	2	M. Lynch#
2/18	Woburn	2	C. Gibson
Red-headed Woodpecker			
thr	W. Roxbury (MP)	1	v.o.
thr	Ipswich	1	v.o.
thr	Worc. (BMB)	1	v.o.
thr	Longmeadow	1-3	v.o.
1/11	Millbury	1	H. Beaumont
Red-bellied Woodpecker			
1/30	Uxbridge	3	M. Lynch#
2/15	Ipswich	5	J. Berry#
2/20	Plymouth	3	M. Lynch#
2/28	Quabog IBA	3	M. Lynch#
Yellow-bellied Sapsucker			
1/2	Chappaquiddick	2	L. Johnson#
thr	Reports of indiv. from 12 locations		
Pileated Woodpecker			
thr	Stoneham	2	D. + I. Jewell
2/15	Merrimac	2	B. + B. Buxton
2/19	Ipswich	2	J. Berry
Hammond's Flycatcher			
1/1-02	Fairhaven	1 ph	Zimberlin + v.o.
Eastern Phoebe			
1/2	Chappaquiddick	1	L. Johnson#

1/3	IRWS	1	J. MacDougall
Eastern Phoebe (continued)			
1/7	Eastham (F.H.)	1	N. Villone
1/27	Worcester	1	M. Lynch#
Ash-throated Flycatcher			
1/1-6	Cambr. (Danehy)	1	v.o.
1/1-4	Manomet	1	v.o.
Western Kingbird			
1/1-7	Truro	2	v.o.
1/1-17	Nantucket	1	v.o.
1/2	Aquinnah	1	I. Davies#
1/7	Eastham	1	M. Faherty
Northern Shrike			
1/thr	Moran WMA	1	J. Luscier + v.o.
1/1	Sheffield	1	G. Hurley
1/2	N. Quabbin	1	B. Lafley
1/5	Longmeadow	1	M. Moore
2/13-29	Wayland	1	B. Harris
2/19	Sunderland	1	L. Therrien
Fish Crow			
1/17	W. Roxbury (MP)	3	P. Peterson
1/22	Swansea	6	M. Lynch#
1/24	Dalton	2	S. Surner
2/20	Plymouth	4	M. Lynch#
2/22	Framingham	9	G. Gove
2/24	Newbypt.	4	T. Wetmore
Common Raven			
1/3	Waltham	2	J. Forbes
1/12	W. Roxbury (MP)	2	J. Battenfeld
1/15	Haverhill	2	S. Miller#
1/28	Windsor	10	J. Hoye#
2/7	Dalton	13	M. Lynch#
2/19	Ipswich	2	J. Berry
2/21	S. Egremont	2	M. Lynch#
2/22	Easton	pr n	K. Ryan
Horned Lark			
1/1	Rutland	60	M. Lynch#
1/2	Ipswich	60	J. Berry#
1/15	Newbypt.	66	R. Heil
1/19	Deerfield	100	J. Rose
1/24	Hadley	140	L. Therrien
2/21	Saugus	35	S. Zendeh#
Red-breasted Nuthatch			
1/15	Windsor	11	M. Lynch#
1/19	Boston (A.A.)	1	P. Peterson
1/23	S. Quabbin	1	L. Therrien
2/15	Hamilton	1	J. Berry#
Brown Creeper			
1/14	GMNWR	3	A. Bragg#
2/6	Woburn (HP)	3	P. Ippolito
2/27	Hamilton	2	J. Berry#
2/29	Stoneham	3	R. LaFontaine
House Wren			
1/2	Aquinnah	1	I. Davies#
Winter Wren			
1/2	Aquinnah	2	R. Stymeist#
1/8	Belchertown	2	L. Therrien
Marsh Wren			
1/thr	Wayland	2	B. Harris
1/3	GMNWR	4	S. Zhang
1/7	Harwich	2	B. Nikula
1/15	Newbypt. H.	1	R. Heil
2/20	Falmouth	1	J. Trimble#
Golden-crowned Kinglet			
1/21	Royalston	2	M. Lynch#
2/4	Stoneham	2	D. + I. Jewell
2/6	Woburn (HP)	4	P. Ippolito
Ruby-crowned Kinglet			
1/3	Fairhaven	3	R. Stymeist#
2/9	Sandwich	2	P. Crosson#
Eastern Bluebird			
1/1	Rowley	7	P. + F. Vale
1/7	IRWS	9	J. Nelson
2/21	Sheffield	12	M. Lynch#
2/28	DFWS	8	P. Sowizral
2/28	Quabog IBA	25	M. Lynch#
Mountain Bluebird			
thr	Falmouth	1	v.o.
Townsend's Solitaire			
1/1-14	Truro	1	v.o.
Hermit Thrush			
1/3	Waltham	3	J. Forbes
2/11	P.I.	3	T. Wetmore
2/15	Acoaxet	5	G. d'Entremont
2/15	S. Dartmouth	2	G. d'Entremont
Varied Thrush			
1/1-03	Rutland	1	fide J. Bourget
Gray Catbird			
1/2	Ipswich	2	B. Harris#
1/2	Aquinnah	4	R. Stymeist#
Brown Thrasher			
1/1	Aquinnah	1	I. Davies#
2/13	Sandwich	1	P. Trimble
2/24	Amherst	1	J. Rose
American Pipit			
1/3	Concord	30	J. Keyes
1/31	Boston	2	A. Trautmann
2/25	Cumb. Farms	12	J. Hoye#
Bohemian Waxwing			
2/28	Williamstown	60	C. Jones
Cedar Waxwing			
1/1	Waltham	150	M. Rines
2/11	P.I.	175	T. Wetmore
2/12	Spencer	90	M. Lynch#
2/20	Falmouth	132	J. Trimble#
2/28	Quabog IBA	130	M. Lynch#
Lapland Longspur			
1/2	Orleans	3	A. Lamoreaux#
1/9	Hadley	1	L. Therrien
1/15	P.I.	8	R. Heil
1/31	P'town (R.P.)	4	S. Arena#
2/6	Ipswich	2	MAS (S. Wheelock)
2/27	Fairhaven	1	SSBC (GdE)
Smith's Longspur			
1/17-20	Saugus	1 ph	S. Zendeh#
Snow Bunting			
1/1	P.I.	80	T. Wetmore
1/3	Boston (Deer I.)	130	P. Peterson
1/7	Williamstown	200	M. Morales
1/8	Lanesboro	50	G. Hurley
1/9	Ipswich (C.B.)	150	J. Berry
1/15	Windsor	70	M. Lynch#
2/27	Fairhaven	60	SSBC (GdE)
Orange-crowned Warbler			
thr	Reports of indiv. from 10 locations		
1/1	Chilmark	2	I. Davies#
Common Yellowthroat			
1/1	Boston (RKG)	1	M. Birdman
1/7	Quincy	1	E. Lipton
1/17	Nantucket	1	B. Harris#
Black-throated Blue Warbler			
1/2-14	Needham	1	K. McClelland
Palm Warbler			
1/3	Falmouth	11	V. Zollo
2/6	Fairhaven	1	C. Longworth
Pine Warbler			
1/9	Falmouth	3	P. Trimble#
1/27	Salisbury	2	P. + F. Vale
Yellow-rumped Warbler			
1/1	P.I.	3	N. Landry
1/17	Mattapoisett	30	M. Lynch#
1/31	Scusset B.	27	M. Lynch#
2/15	Acoaxet	4	G. d'Entremont
2/15	Longmeadow	4	J. Bourget
2/27	Fairhaven	3	SSBC (GdE)

Yellow-throated Warbler
1/2 Hingham 1 N. Marchessault
2/14 Amesbury 1 ph A. Deacon#
Prairie Warbler
1/24 Nantucket 1 P. Trimble#
Yellow-breasted Chat
1/thr Melrose 1 v.o.
1/2 Aquinnah 1 T. Spahr
1/2 Nahant 1 M. Watson
1/6 Eastham (F.H.) 1 M. Keleher
1/17 Nantucket 1 S. Sullivan#
2/7 S. Dart. (A.Pd) 1 N. Sylvia
Eastern Towhee
1/2 Lincoln 2 N. Levey
1/2 Aquinnah 7 R. Stymeist#
1/17 W. Roxbury 2 P. Peterson
2/28 Newton 2 P. Gilmore
Chipping Sparrow
1/3 Concord 2 E. Lipton
1/5 Bolton Flats 1 D. Ammerman
1/15 Haverhill 1 C. Norris
2/thr Athol 1 D. Small
2/15 Boylston 1 L. Kimball
2/15 Tisbury 1 L. McDowell
Clay-colored Sparrow
thr Arlington Res. 1 v.o.
1/8-2/29 Haverhill 1 C. Norris + v.o.
Field Sparrow
1/thr Wayland 1 B. Harris
1/1 Worc. (BMB) 1 B. Robo
1/2 Randolph 1 P. Peterson
1/2 Uxbridge 1 CBC (C.Rosenblatt)
2/7 GMNWR 2 D. Swain
Vesper Sparrow
1/25 Cumb. Farms 6 J. Hoye#
Lark Sparrow
1/1-6 Harwich 1 v.o.
1/1-2/7 Weymouth 1 v.o.
1/6 Eastham (F.H.) 1 R. Debenham#
Savannah Sparrow
1/3 Concord (NAC) 10 E. Nielsen
1/17 Northampton 2 S. Surner
1/20 Westboro 2 T. Spahr
1/25 Cumb. Farms 12 J. Hoye#
2/12 Hadley 14 M. Lynch#
Ipswich Sparrow
1/9 Ipswich (C.B.) 1 J. Berry
Grasshopper Sparrow
1/23 Rockport (A.P.) 1 R. Heil
Seaside Sparrow
1/15 Newbypt. H. 1 R. Heil
Fox Sparrow
1/3 Lexington 4 H. Yelle
1/3 Fairhaven 3 R. Stymeist#
1/26 Belmont 6 R. Stymeist
2/2 W. Roxbury (MP) 4 M. Iliff
2/10 Lexington 4 H. Yelle
2/20 Westport 3 J. Hoye#
Swamp Sparrow
1/1 Westboro 3 N. Paulson
2/8 Northboro 2 T. Spahr
2/15 Acoaxet 2 G. d'Entremont
White-crowned Sparrow
1/5 Northampton 2 D. Schell
1/9 Hadley 2 L. Therrien
1/14 Sheffield 5 J. Pierce
2/22 Cheshire 3 J. Pierce
Summer Tanager
1/10-2/29 Saugus 1 Mary Kinsell
Western Tanager
1/4-2/5 Rowley 1 M. Goetschkes
1/25 Eastham 1 ph fide O'Connor
Painted Bunting
1/25 Orleans 2 f ph fide O'Connor
1/29-2/29 Nantucket 1 m ph C. Witte#
Dickcissel
1/7 Plymouth 1 C. Goldthwaite
1/14 Marlboro 1 T. Spahr
1/22-2/13 Rockport 1 T. Schottland + v.o.
2/13 Chatham 1 D. Schain
Red-winged Blackbird
1/16 Harwich 160 B. Nikula
2/20 Salisbury 100 P. + F. Vale
2/28 Bolton Flats 2680 M. Lynch#
2/28 Cumb Farms 2000 G. d'Entremont
Eastern Meadowlark
thr E. Boston (B.I.) 1 v.o.
1/9 S. Weymouth 1 P. Peterson
2/17 Falmouth 3 R. Stymeist#
2/29 Ipswich 2 W. Tatro
Yellow-headed Blackbird
1/1 Chicopee 1 R. Gregoire
2/22-27 Cumb. Farms 1 f B. Loughlin + v.o.
Rusty Blackbird
1/3 Wayland 32 B. Harris
1/20 Westboro 43 T. Spahr
2/1 Lynnfield 20 L. Ireland
2/3 Newton 20 J. Forbes
2/4 Concord 7 D. Sibley
2/7 Waltham 16 M. Gooley
2/11 Milford 8 R. McDaniel
Common Grackle
1/12 Newton 200 J. Sender
1/19 Boston (A.A.) 53 P. Peterson
1/28 Hamilton 120 J. Berry
2/28 Bolton Flats 1200 M. Lynch#
Brown-headed Cowbird
1/1 Groton 12 T. Murray
1/8 Sharon 18 L. Waters
1/16 W. Roxbury (MP) 35 R. Doherty
1/17 Cumb. Farms 180 P. + F. Vale#
1/21 Rutland 30 M. Lynch#
Orchard Oriole
1/3-12 Manomet 1 P. Trimble + v.o.
Bullock's Oriole
2/5-26 Newbypt. 1 S. Grinley#
Baltimore Oriole
thr Reports of indiv. from 14 locations
1/1 Edgartown 2 I. Davies#
1/5 Orleans 2 B. Lagasse
1/24 Barnstable 2 N. Villone
Purple Finch
1/1 Ware R. IBA 4 M. Lynch#
1/8 Cummington 52 T. Gagnon
1/15 New Salem 6 B. Lafley
1/21 Royalston 17 M. Lynch#
1/24 Cummington 13 S. Surner
2/7 New Salem 28 R. Stymeist#
Common Redpoll
1/15 S. Quabbin 3 L. Therrien
Pine Siskin
1/3 New Salem 1 B. Lafley
1/3 Southwick 1 S. Kellogg
1/10 Pittsfield 14 G. Hurley
Evening Grosbeak
1/7 Shelburne 1 J. Coleman
2/7 Windsor 25 M. Lynch#
2/28 Williamstown 3 C. Jones

ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, up to the 53rd Supplement, as published in *Auk* 129 (3): 573-88 (2012) (see <http://checklist.aou.org/>).

Locations

Location-#	MAS Breeding Bird Atlas Block
A.A.	Arnold Arboretum, Boston
ABC	Allen Bird Club
A.P.	Andrews Point, Rockport
A.Pd	Allens Pond, S. Dartmouth
B.	Beach
Barre F.D.	Barre Falls Dam
B.I.	Belle Isle, E. Boston
B.R.	Bass Rocks, Gloucester
BBC	Brookline Bird Club
BMB	Broad Meadow Brook, Worcester
BNC	Boston Nature Center, Mattapan
C.B.	Crane Beach, Ipswich
CGB	Coast Guard Beach, Eastham
C.P.	Crooked Pond, Boxford
Cambr.	Cambridge
CCBC	Cape Cod Bird Club
Corp. B.	Corporation Beach, Dennis
Cumb. Farms	Cumberland Farms, Middleboro
DFWS	Drumlin Farm Wildlife Sanctuary
DWMA	Delaney WMA, Stow, Bolton, Harvard
DWWS	Daniel Webster WS
E.P.	Eastern Point, Gloucester
F.E.	First Encounter Beach, Eastham
F.H.	Fort Hill, Eastham
F.P.	Fresh Pond, Cambridge
F.Pk	Franklin Park, Boston
G40	Gate 40, Quabbin Res.
GMNWR	Great Meadows NWR
H.	Harbor
H.P.	Halibut Point, Rockport
HP	Horn Pond, Woburn
HRWMA	High Ridge WMA, Gardner
I.	Island
IRWS	Ipswich River WS
L.	Ledge
MAS	Mass Audubon
MP	Millennium Park, W. Roxbury
M.V.	Martha's Vineyard
MBWMA	Martin Burns WMA, Newbury
MI	Morris Island
MNWS	Marblehead Neck WS
MSSF	Myles Standish State Forest, Plymouth
Mt.A.	Mount Auburn Cemetery, Cambr.
NAC	Nine Acre Corner, Concord
Newbypt	Newburyport
ONWR	Oxbow National Wildlife Refuge
PG	Public Garden, Boston
P.I.	Plum Island
Pd	Pond
POP	Point of Pines, Revere
PR	Pinnacle Rock, Malden
P'town	Provincetown
Pont.	Pontoosuc Lake, Lanesboro
R.P.	Race Point, Provincetown
Res.	Reservoir
RKG	Rose Kennedy Greenway, Boston
S.B.	South Beach, Chatham
S.N.	Sandy Neck, Barnstable
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
TASL	Take A Second Look, Boston Harbor Census
WBWS	Wellfleet Bay WS
WE	World's End, Hingham
WMWS	Wachusett Meadow WS
Wompatuck SP	Hingham, Cohasset, Scituate, Norwell
Worc.	Worcester

Other Abbreviations

ad	adult
b	banded
br	breeding
dk	dark (morph)
f	female
fide	on the authority of
fl	fledgling
imm	immature
juv	juvenile
lt	light (morph)
m	male
max	maximum
migr	migrating
n	nesting
ph	photographed
pl	plumage
pr	pair
S	summer (1S = 1st summer)
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 must be reported in writing by the eighth of the following month, and may be submitted by postal mail or email. Send written reports to Bird Sightings, Robert H. Stymeist, 36 Lewis Avenue, Arlington MA 02474-3206. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, other observer(s), and information on age, sex, and morph (where relevant). For instructions on email submission, visit: <http://www.birdobserver.org/Contact-Us/Submit-Sightings>.

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 Matt Garvey, 137 Beaconsfield Rd. #5, Brookline MA 02445, or by email to <mattpgarvey@gmail.com>.

ABOUT THE COVER

Black-throated Blue Warbler

The Black-throated Blue Warbler (*Setophaga caerulescens*) is so strikingly sexually dimorphic in plumage that both Alexander Wilson and John James Audubon considered the sexes as separate species. The male is stunning: white below, dark blue above, with a black face and flanks, and an obvious white wing patch. In contrast, the female is drab olive with pale undertail coverts and a darkish cheek outlined above and below with lighter olive. Most adult females have a white wing patch, which is missing in the otherwise similarly plumaged juvenile females. Male Black-throated Blue Warblers do not molt into a "confusing fall warbler" plumage and thus look much the same year round. Two subspecies have traditionally been accepted although recent studies possibly suggest otherwise.

Black-throated Blue Warblers breed across the eastern half of southern Canada through Nova Scotia, and in the United States from the Great Lakes through New York State to New England away from the coast. South of the Northeast, they breed in a band that cuts through the Appalachian Mountains to northern Georgia. The species is migratory and winters in the Greater Antilles, the Bahamas, and the Caribbean, and in coastal areas from the Yucatan Peninsula through Honduras, mostly in dense tropical woodlands and forest. In Massachusetts, Black-throated Blue Warblers are a fairly common breeder Worcester County westward. They are an uncommon to fairly common migrant in both spring and fall. During migration they often are encountered in mixed species flocks.

Usually Black-throated Blue Warblers are seasonally monogamous but occasionally are polygynous. They may produce two broods in a season. They tend to be faithful to their breeding sites and sometimes pairs may reunite for a second breeding season. Not much is known about courtship behavior. Males have been observed in protracted chases of females, and males and females perched together have been observed assuming a posture with heads up, bills open, and wings drooping. Mate guarding by the males is common after pair formation. In winter both sexes are solitary and defend a feeding territory; they also tend to be faithful to their winter sites.

Males do most of the singing; their characteristic song typically consisting of a series of *zee* notes with the last note longer and slurred. Song serves both as territorial advertisement and a way to attract females. Counter-singing males at territorial boundaries give a two-note song and a three-to-five note whistle. During chases or fights, males also will produce a rapid trill. Both males and females aggressively defend their territory. During territorial disputes the male approaches an intruder on a fluttering glide while emitting the fast trill call. On the ground, males posture with head forward and wings drooping, and they may initiate a chase that can last for several minutes. Fights may result with the pursuer forcing the chased individual to the ground and pummeling it with his wings. Fighting birds may even lock claws and flutter into the air. Territorial disputes may last for hours.

Black-throated Blue Warblers nest in large tracts of deciduous or mixed deciduous-conifer forest with dense shrub layers, often in mountainous areas. It is thought that the female chooses the nest site, although the male may accompany her while she searches. The nest is usually in a fork of a dense shrub, three to five feet from the ground. The female constructs the nest, which is a cup of bark strips held together with spider web silk and possibly saliva; it is well hidden in the leaves. Only the female develops a brood patch and she alone incubates the usual clutch of four creamy-white eggs, spotted with various colors, for the 13 days until hatching. The male may bring food to the female while she is incubating. The chicks at hatching are altricial—nearly naked, eyes closed, and helpless. Both parents mob predators near the nest and the female may give a distraction display that includes a high-pitched twitter. The female broods the young birds for the eight to ten days until fledging. Both parents bring small insects to the chicks and continue to feed them for two to three weeks until they are independent. The male may take over all of the feeding duties if the female begins a second nesting.

Black-throated Blue Warblers are insectivorous, taking small insects, spiders, flies, and larvae, but they also may eat some small fruits in winter. They are visual foragers, snatching insects or hover-snatching them mostly from the undersides of leaves. They also glean foliage, twigs, and branches, especially in shrubs in the middle and lower strata of trees. Males forage, on average, higher off the ground than females. Some evidence further suggests that they may glean more in forests and hover less while on the wintering grounds.

During migration, many Black-throated Blue Warblers die in collisions with communication towers and buildings, while cold and rain may cause the death of nestlings. However, because Black-throated Blue Warblers tend to breed in extensive tracts of forest, they suffer little from cowbird parasitism. Because of their fidelity to their winter sites, they are vulnerable to deforestation or habitat degradation on their wintering grounds. Black-throated Blue Warbler populations probably underwent a steep decline in the 18th and 19th centuries due to deforestation, but they have rebounded with the return of farmland to forest. Breeding Bird Survey data suggest that population numbers are stable or increasing, so this lovely little warbler appears to be secure.

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.

AT A GLANCE

February 2016

DAVID LARSON

This month readers are faced with identifying a seed-eating species, specifically one that is not opposed to visiting bird feeders. "At a Glance," the unidentified seed-eater looks pretty much like some of the birds possibly visiting your own backyard feeder. But as most birders know, birds are not always what they may at first appear to be – but sometimes they are! To reference the familiar medical school (and birding) maxim: "When you hear hoof beats, think horses not zebras" may apply here, but perhaps not!

A careful look at the pictured species suggests that it is likely a sparrow of some sort based on its somewhat undistinguished back and wing pattern, the pointy aspect of its tail, and most importantly the conical shape of its bill. It gives no indication of having wing-bars, nor is there a suggestion of white in the tail. A close look at the bird's face reveals the presence of a black mark below the bill which is a partial view of a malar stripe (i.e., a jaw stripe similar to markings exhibited by Song Sparrows and a number of other sparrow species). This marking is actually important in identifying this mystery species.

Given the somewhat non-descript appearance of the back other than the clear, contrasting pale braces contrasting with darker stripes, there is little to use there that

is helpful to the identification process. The dorsal view does however provide a clear look at the length of the mystery bird's primaries – a feature that may be relevant to the identification process. With the above facts in mind, the head and bill ultimately offer the best clues to identification. There are only two regularly occurring species in Massachusetts that bear a resemblance to the mystery bird, female House Sparrow and Dickcissel, both of which are species that regularly visit bird feeders.

With the House Sparrow and Dickcissel as likely identification candidates, several of the observable features in the photograph are now significant. First, the bill. The mystery bird's bill is clearly sharp-pointed and relatively long, not stout and blunt-tipped like that of a House Sparrow. Second, House Sparrows lack a malar stripe and are clear-breasted from chin to the belly, unlike Dickcissels which have a clear malar stripe in any plumage. And finally, Dickcissels are long-distance migrants possessing relatively long wings, while House Sparrows are essentially short-winged and sedentary and have an overall plumper appearance than Dickcissels. Even though the mystery bird gives no hint of its distinctive ventral pattern or coloration, after thoughtful examination the features described above are sufficient to identify the bird as a Dickcissel (*Spiza americana*).

Dickcissels are relatively rare in spring in Massachusetts, but are uncommon fall migrants, especially in weedy fields and gardens near the coast, and a few regularly overwinter at feeders, often in company with House Sparrows. David Larson photographed the mystery Dickcissel at his feeder in Bradford during the fall of 2015.

Wayne R. Petersen

GREAT-HORNED OWL WITH OWLETS BY SANDY SELESKY

AT A GLANCE

WAYNE R. PETERSEN

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

MORE HOT BIRDS

The state's thirteenth **Golden-crowned Sparrow** was photographed by homeowner Carter Harrison at his feeders. After Harrison initially asked that birders not come to see it, concerned that the small residential street could not handle the expected crowds, Sean Williams (who took the photo at left) negotiated an arrangement by which birders could sign up via an on-line form for scheduled and controlled visits, allowing many birders to see this exciting rarity without overwhelming the neighborhood.

Just a few weeks after hosting the state's first record of Yellow-billed Loon, Race Point provided the state's second-ever record of **White-winged Tern** when Peter Flood (who took the photo on the left) discovered one on May 8! The bird was seen by a couple of other birders that day, but apparently not re-found in subsequent days.

BIRD OBSERVER (USPS 369-850)
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PERIODICALS POSTAGE PAID AT BOSTON, MA

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