Bird Observer

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HOT BIRDS

Amazing enough, a **Bell's Vireo** was caught and banded at the Manomet Center for Conservation Science on October 12. But then another one was found at Fort Hill by Sean Williams less than 2 weeks later! The latter bird, possibly only the 10th state record, was seen for a few days after its initial discovery. Sean Williams took the photo on the left.

Definitely the bird of the season so far, a **Gray Kingbird** was found in Hyannisport by Carol Wrisley on October 23. It continued in the same location through press time, to the joy of many birders who successfully chased it. The 5th record of this species for Massachusetts. Photograph © Susan Wrisley.

Apparently a one-day wonder, a **Northern Wheatear** found in Sandwich by Peter Crosson was seen by a few other birders that day, but was never reported again. Peter took the photograph on the left.

A wave of **Rufous Hummingbirds** seemed to hit the state, starting with a one-day-wonder September 29 at Phil Brown's feeders in Essex. It was succeeded in October by a bird at Sean Williams' feeder in Westborough October 7, and another at Donna Cooper's feeder in Andover October 12, both of which stuck around long enough to be caught, banded, and confirmed to be Rufous and not Allen's. Phil Brown took the photo on the right.

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Birding Along the Connecticut River in Turners Falls and Gill

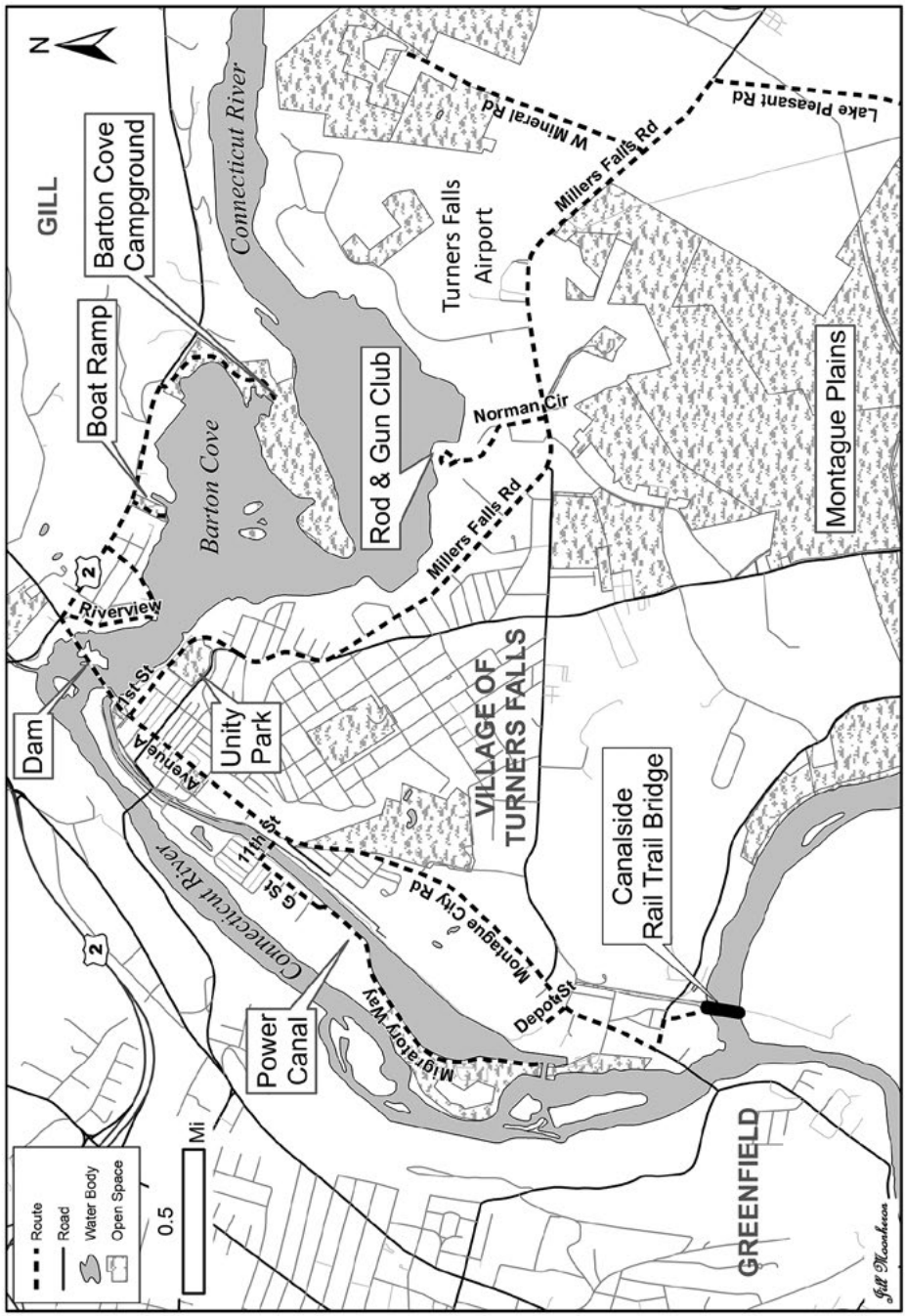
Joshua Rose

For the first ten days of February 2016, the attention of the Massachusetts birding community focused on a bend in the Connecticut River in Franklin County. James Smith had photographed a gull there that turned out to be the state's best prospect so far for a documented Yellow-legged Gull—pending consideration by the Massachusetts Avian Records Committee (MARC). Hundreds of birders crowded both sides of the river, Gill to the east and Turners Falls (a village in Montague) to the west, scanning the resident roosting gull flock for this oddball. It was a level of interest that the county rarely receives from birders.

Franklin County is perhaps the least-birded county in Massachusetts, with fewer eBird checklists submitted than any other except for the two island counties. Its habitat is relatively monotonous, mostly forest with a few scattered pockets of grassland or wetland. Less densely populated than most of the state, farthest from any coast, it rarely hosts the sort of species that attract listers from the rest of the state. But it has had a few rarities: Great Gray Owl in Gill (1973), Brambling in Montague (2000), Cassin's Kingbird in Whately (2002), Varied Thrush in New Salem (2005), and Henslow's Sparrow in Montague (2009).

Within the county, Gill, Turners Falls, and Montague are usually the main hotbeds of birding activity. The main attraction here is the Connecticut River, including a series of bays and a canal, which draw in a variety of water-associated bird species impressive for a location so far inland. Rare waterbirds often hop from one local spot to another, disappearing from their initial location to be refound nearby. The area's list includes Barnacle Goose (2003), Whimbrel (2006), Tundra Swan (2007), Little Gull (2008), and Slaty-backed Gull (2009). Iceland, Glaucous, and Lesser Black-backed gulls are an almost annual occurrence, as are Cackling Geese and Barrow's Goldeneye. Bald Eagles have at least two active nests in the immediate area and are seen daily year-round, often flying over the outdoor tables of various restaurants (including the Wagon Wheel and Ken's Roadside Diner on Route 2 in Gill, and the 2nd Street Bakery on 4th Street in Turners Falls; the author eats regularly at all three).

Summer is the slowest season for birding this area. Winter is reliably fun. When the water freezes, birders may have to hunt around for the remaining patches of open water, but those patches are all the more entertaining because the remaining waterbirds are concentrated. Migration, of course, can be a jackpot when one's timing is right. In addition to waterbirds, flocks of hundreds of swallows that may include five or more species often swirl over the water, skimming for aquatic insects when the air is too cool for many bugs to fly.


N
GILL
Barton Cove Campground
Boat Ramp
Connecticut River
Barton Cove
Rod & Gun Club
Turners Falls Airport
W Mineral Rd
Millers Falls Rd
Lake Pleasant Rd
Norman Cir
Montague Plains
Riverview
Millers Falls Rd
Dam
1st St
Avenue A
Unity Park
VILLAGE OF TURNERS FALLS
11th St
G St
Montague City Rd
Canalside Rail Trail Bridge
Connecticut River
Power Canal
Migratory Way
Depot St
GREENFIELD
Route
Road
Water Body
Open Space
0.5
Mi

Bald Eagles. All photographs by the author.

That bend in the river where James Smith found the peculiar gull with yellow legs is one of the gems of Franklin County birding—Barton Cove (http://ebird.org/ebird/hotspot/L673714). A large dam on the river, directly under the Turners Falls-Gill bridge, forms a wide, shallow expanse of water. Thirty-four species of ducks, geese, and swans have been documented here, including a rare inland record of Common Eider in 1986. When ice spreads across the cove in the winter, flocks of gulls congregate to roost on the ice every evening; the yellow-legged bird appeared in such a flock. The depth of the water fluctuates wildly and unpredictably based on the operation of the dams downstream. When the water is down, extensive mud flats are exposed and at the right times of year can attract shorebirds. During migration, especially just after a cold front, species such as Laughing Gull, Franklin's Gull, Black-legged Kittiwake, Arctic Tern, Red-throated Loon, and Red-necked Phalarope, and flocks of Red-necked Grebes and all three scoters may fall out on the cove. The county's best-known Bald Eagle nest is located here. Merlins frequently lurk in the vicinity and Peregrine Falcons often perch on old factory smokestacks within sight of the bridge.

You can view the cove from several vantage points. Perhaps the most popular is Unity Park (http://ebird.org/ebird/hotspot/L2402215). From Avenue A—the main road through downtown Turners Falls, and the one that runs across the bridge to Gill—turn southeast onto 1st Street and follow it along the water to a large gravel parking area at the water's edge. A paved parking lot lies on the opposite side of the road for anyone who doesn't want to brave the ample potholes in the gravel. This is the only access point on the Turners Falls side. It has the most parking spaces, a paved walking trail,

Ring-necked Ducks.

and the most panoramic view of the largest area of the cove. However, you will need a spotting scope because many of the birds are at a considerable distance.

For a closer approach to birds across the river, drive over the bridge into Gill, turn right (east) onto Route 2 (aka the Mohawk Trail), and almost immediately turn right again onto Riverview Drive. It is a narrow street in a residential neighborhood with no real parking, so is unsuitable for convoys of vehicles or large crowds chasing a rarity.

Return to Route 2 and continue east; look for the public boat ramp on the right. When Barton Cove freezes over in winter, the last remaining patch of open water is usually near this ramp, often attracting impressive aggregations of diving ducks including the occasional Redhead or Canvasback. This is also the best spot to view the local eagle nest, especially in spring before the trees leaf out. Birders can drive up to the ramp at the water's edge during the boating season; when the gate closes during the colder months, park just outside the gate and walk in.

A bit farther east on Route 2, also on the right, is the Barton Cove Campground (http://ebird.org/ebird/hotspot/L697339), the southernmost vantage point on the cove. It adjoins a bay that often harbors rafts of waterfowl not easily visible from the rest of the cove, sometimes triple-digit totals of Ring-necked Duck or Hooded Merganser. The campground is on a rocky peninsula jutting into the cove. The peninsula is mostly covered by mature forest, which makes it the best spot on the cove to hear singing warblers, vireos, and flycatchers, and rarely a Saw-whet Owl. The area is open for camping from Memorial Day through Labor Day, but you can visit for hiking and birding (and using the Porta-Potty) year-round.

Red-necked Grebe.

Return to the bridge and cross back into Turners Falls, this time following 1st Street past Unity Park and uphill to where it merges into Millers Falls Road. Keep going and look for a small sign on the left pointing down Norman Circle to the Turners Falls Rod & Gun Club (http://ebird.org/ebird/hotspot/L340849). The top of the club's driveway descends from the back corner of the circle, and is labeled on maps as Deep Hole Road. This is a private club, but they allow birders to visit so long as we are quiet, respectful, and unobtrusive. If you visit this spot, please be **extremely** careful not to disturb any club members or get in the way of their activities, or else they may cease allowing us to visit.

Deep Hole Road is very steep; don't attempt to drive down if any ice or snow is on the road, as you may find it impossible to drive back up again until it melts! The last house before this descent often has well-stocked and popular bird feeders that have attracted Purple Finch or Pine Siskin in some winters. The road descends through deeply wooded slopes that are excellent for hearing Neotropical migrants singing in spring and summer. The lawn below the club and shrubs along the water's edge usually harbor sparrows and other passerines. Some of the friendlier club members will chat with birders about the Red-headed Woodpecker that visited in 2003. Deep Hole, the bay beside the club, attracts many of the same waterbirds and seabirds that are seen at Barton Cove, sometimes leading birders on chases from one to the other and back. A shallow mud bar across the bay from the club features a small cattail marsh that

occasionally draws in a Northern Harrier. When low water levels expose the mud around this marsh, it can be one of the best shorebird spots in the county.

Return to Turners Falls, taking a left on Avenue A and following it out of the downtown area (where its name changes to Montague City Road). Turn right on 11th Street, and cross a bridge over the Turners Falls Power Canal (http://ebird.org/ebird/hotspot/L340851). This is home to the county's most reliably impressive wildlife spectacle as well as its longest species list. Adjacent to a power station, the water is warmer here than in the river, so it remains open long after Barton Cove and the Rod & Gun Club bay have frozen over. Few birds are present in the morning, as they spread out to forage on nearby rivers, fields, and ponds, but numbers build throughout the winter day. By sunset the canal is swarming with waterfowl, with ducks continuing to fly in well after the light is too dim to identify them. By dark the accumulated mass often includes triple-digit totals of Common Goldeneye, Common Merganser, and Mallard; four-digit numbers of Canada Geese; and smaller numbers of several other species. Large gull flocks will spend the night here at times, especially if the local Bald Eagles have flushed them off Barton Cove. If a birder really needed to see a Barrow's Goldeneye in Massachusetts, being here at sunset in the winter might be one of the safest bets, as the species is found annually among the rafts of Commons. A Pink-footed Goose appeared here for a few days in 2011, and two Ross's Geese that were found nearby—in a farm field in Gill (2004) and at Barton Cove (2014)—were relocated at the canal days after their initial detection.

While the canal is best known for its waterbirds, birders can find much more here. The power company drains the canal almost completely for maintenance for a few days every autumn, exposing extensive mud that often brings in a few shorebirds. The narrow strip of forest between it and the river can be excellent on the right day for Neotropical migrant passerines in mixed-species flocks. The power line cuts and other open spots often provide habitat for a variety of sparrows, even one record of Nelson's. The canal's species list includes 23 warblers and 13 sparrows.

You can view the canal from either side. The west side is more popular with birders. From the 11th St bridge, turn left onto G Street, which continues to a gate where the street's name amusingly changes to Migratory Way and leads to a federal aquatic biology research facility. When the gate is open, you can bird the canal from here without leaving the car, an appealing option in poor weather or for less mobile birders. Even when the gate is closed, the walk down to the widest part of the canal (where most waterbirds accumulate) takes only a few minutes. There is a small parking lot just outside the gate, and birders who walk nearly always see or hear species that the car-bound birders miss, occasionally including Eastern Screech-owl.

The Canalside Rail Trail runs along the east side of the canal. The easiest access is by returning to Montague City Road, turning right, and taking another right turn on Depot Street. Park in one of the few spaces under the power lines. A paved path beyond a gate leads up to the rail trail; occasionally another parallel path is cut into the dense brush beneath the power lines. Birding is often significantly better from this side, especially in the morning when the light on birds in the canal is much more favorable.

Barrow's Goldeneye.

For some reason, rarities such as Eurasian Wigeon or Greater White-fronted Goose seem to favor this side. The more open habitat along the east side of the Rail Trail harbors bird species that do not occur on the forested west side. If the path under the power line cut is not too overgrown, it can be productive for landbirds and leads to a nice-looking little marsh.

South of the canal, just across the town line into Montague, another stretch of the Canalside Rail Trail leads to another excellent birding spot where it crosses the Connecticut River on a historic former railroad bridge (http://ebird.org/ebird/hotspot/L2574456). From the power canal, take Montague City Road south. Before this road crosses the river, turn left onto Greenfield Road, then immediately turn right onto Poplar Street. Poplar dead-ends in a gravel patch often used by fishermen to access the river. Be wary of mud and ice anywhere off the paved road. When winter gets so cold that even the Power Canal as well as Barton Cove freezes, this is still the one place in town where the water might be open and harboring waterfowl. Even during milder parts of the winter, many of the mergansers and goldeneye—including Barrow's—that overnight on the canal feed along this stretch of the river during the day. Views are often from a greater distance than at the canal (a scope is essential) but the Barrow's can be seen in much better light from the Rail Trail bridge since the goldeneyes usually move from here to the canal at dusk. In the late spring and summer, you can see hen Common Mergansers escorting rafts of their fluffy chicks. Bald Eagles and Peregrine Falcons are often seen from the bridge as well. The woods along the river are productive for woodpeckers all year and Neotropical migrant landbirds in spring and fall. On just the right day at the end of the winter when the ice breaks up, this bridge

offers a view of the spectacle of large floes washing downstream, cracking apart, and dramatically crashing into each other.

If time allows, you should visit three nearby birding spots that are away from the water. One is downtown Turners Falls itself. Though densely developed, several of the streets are lined with crab apple trees. These trees regularly bring in flocks of frugivorous birds in late winter and early spring, normally Cedar Waxwings, American Robins, and European Starlings, but also the more rare irruptive northern species. In 2008 and 2012, flocks of Pine Grosbeaks were present along these urban streets. Bohemian Waxwings were found here in six out of eight years between 2004 and 2011. Avenue A and 3rd Street are often the most productive, but L Street and others have trees worth checking as well.

On Millers Falls Road, just east of the turnoff for the Rod & Gun Club, is the Turners Falls Airport (http://ebird.org/ebird/hotspot/L575194). This little-used facility is one of the largest expanses of grass in the area. During the breeding season, it is home to Grasshopper Sparrows, and you may observe more of these sparrows here than anywhere else in Franklin County. The species is often easiest to hear and see from West Mineral Road, which is off Millers Falls Road just outside the airport fence to the east. In the late fall and winter, occasional flocks of Horned Larks or American Pipits may stop here, sometimes with a Snow Bunting or Lapland Longspur mixed in. Rarely, a Northern Shrike or Rough-legged Hawk has shown up.

Just past the airport, Lake Pleasant Road runs south from Millers Falls Road into one of the state's real natural gems: the Montague Plains (http://ebird.org/ebird/hotspot/L207389). Most of the unusual species here are not birds: rare insects, reptiles, and at least one federally endangered plant live in this Wildlife Management Area. However, birds typical of pine barren habitat are common breeders here: Pine Warbler, Red-breasted Nuthatch, Field Sparrow, Brown Thrasher, Hermit Thrush, and more. Ornithologists from University of Massachusetts have studied the Prairie Warbler population here for years. Ring-necked Pheasants show up regularly, undoubtedly the product of stocking for hunters. Red Crossbills can be found when the pine cone crops are good, and might stick around to breed on occasion. A male Hooded Warbler lingered here into July one year, sparking similar rumors of breeding.

Joshua Rose *grew up in Essex County and started tagging along after Barbara Drummond and the Brookline Bird Club when he was in fifth grade. His first job was a wildlife research internship for Massachusetts Audubon in 1990 while he was in college. Since then, he has worked for Manomet, the Point Reyes Bird Observatory (now Point Blue Conservation Science), Whitefish Point Bird Observatory, and most recently at the World Birding Center. He earned a Master's degree from the University of Texas at Arlington studying giant water bugs, and a Ph.D. from Duke University studying dragonflies. In 2009, he moved back to Massachusetts and has been living in Amherst with his wife, children, and assorted pets, serving as a board member of the Hampshire Bird Club, writing articles for the Hitchcock Center for the Environment, and volunteering for the Kestrel Trust and other local groups.*

Satellite Tagging of Ospreys in New Hampshire

Iain MacLeod

Rob Bierregaard (L) and Iain MacLeod with Art, May 2012. Photograph by Chris Martin.

The Osprey (*Pandion haliaetus*) is one of the more familiar and charismatic birds of New England. Its large nests, conspicuous habits, fishing prowess, and tolerance of human activity have made it a favorite of birders and the general public alike.

Of course, Ospreys are only a New England bird for less than half the year. Their specialized food requirements—the only diurnal raptor in the world to feed exclusively on live fish—means that as cooler temperatures reach New England in September and October, Ospreys depart our shores before the freeze of winter locks its piscean diet under a shroud of ice.

Through banding studies, we knew that almost all of our New England Ospreys spend our winter months in South America. Or, I should say the recovery of dead banded Ospreys in places such as Brazil, Colombia, and Venezuela led us to conclude that is where our Ospreys go. (See Figure 1 for the wintering location of seven of the Ospreys we've tagged.) Hawk migration observers had also documented the southward push of Ospreys along the Eastern Seaboard each fall, including through Florida and

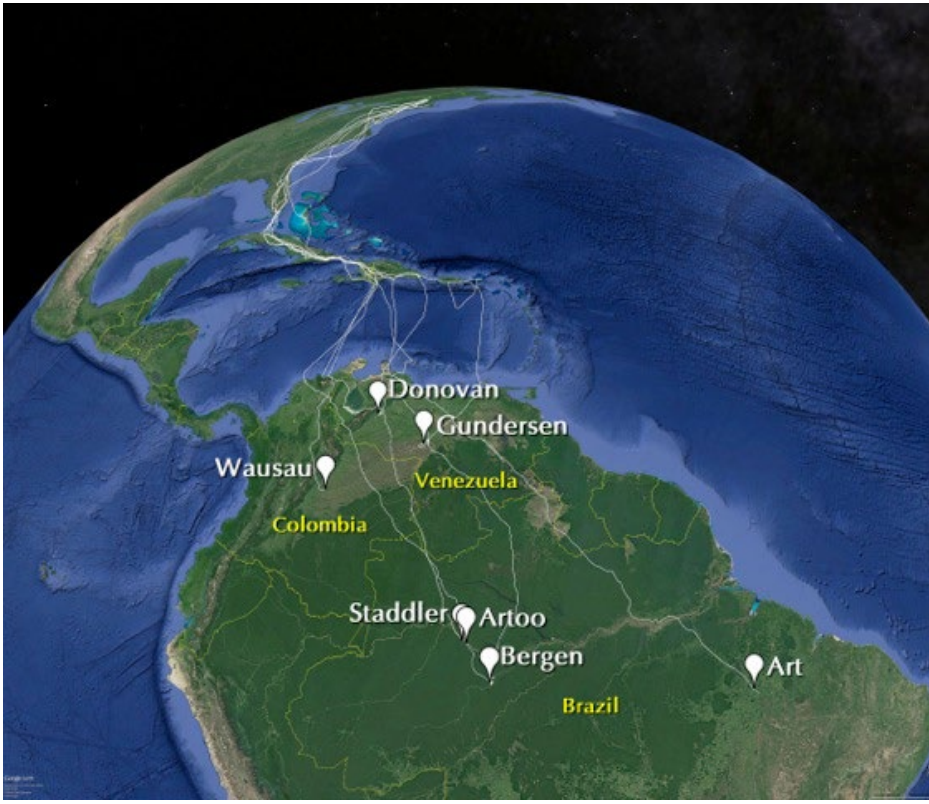


Figure 1. Map of migration routes and wintering locations of seven Ospreys tagged in New Hampshire.

Cuba, so we had a good idea of how the birds reached South America and when they migrated. It was only with the development of miniature GPS tracking units in the 1990s, however, that we had the opportunity to see in detail where these birds go, how they get there, and what hazards they face along the way.

In 2011, the Squam Lakes Natural Science Center launched a new Osprey research and education project under my leadership and in partnership with Dr. Richard O. (Rob) Bierregaard. At that time, Rob was a Distinguished Visiting Research Professor in the Department of Biology at the University of North Carolina at Charlotte. He is now a Research Associate at the Academy of Natural Sciences of Drexel University in Philadelphia. Bierregaard had been studying Ospreys—starting on Martha's Vineyard—since 1970, and in 2000 he began deploying lightweight satellite backpacks to track Ospreys.

Now after 17 years, and more than 100 birds tagged, this project has revealed migration differences among Ospreys and is helping to pin down where threats to Ospreys lie. For example, like human adolescents, juvenile Ospreys wander, loiter, and get lost. They even cross open oceans unnecessarily. Adults, in contrast, appear to be more sure of where they are headed and thus fly more direct migration routes. The

Accessing the nest via bucket truck, Tilton, New Hampshire, May 2012. Photograph by Iain MacLeod.

tracking project also confirms that the mortality rate of juveniles is much higher than for adults; 70–80% of juveniles die in their first year, but the mortality rate for experienced adults is about 10% per year.

Since 2011, we have outfitted sixteen Ospreys in New Hampshire with GPS satellite transmitters known as Platform Transmitter Terminals (PTTs) made by Microwave Telemetry Inc. Each PTT weighs 30 grams and has a small photovoltaic cell on the upper surface so that the battery is charged by the sun. Our tagged birds have included six adult males and ten recently fledged juveniles (see Table 1). Here are some of their stories.

One of our tagging sites is a nest on a disused 40-foot electric pole that is located in the wood chip yard of a biomass power plant on the edge of the Pemigewasset River in Bridgewater, New Hampshire. To put a PTT on an Osprey, you first have to catch it. We use a trap known as a noose carpet that consists of a four-foot square piece of heavy gauge wire mesh covered in hundreds of monofilament fishing line slip knots that we call nooses. We tether the trap to the nest so that it covers a clutch of dummy eggs, while we keep the real eggs warm in an insulated box. The idea is that the target Osprey will try to incubate the dummy eggs and become trapped by its toes. We choose only nests that are easily and quickly accessible so we can quickly extract the trapped bird without harm. At the Bridgewater nest, we had the help of a large hydraulic lift operated by Arthur, one of the power plant employees. It was a perfect nest for our project.

In 2011, we attempted to catch the adult male at this nest, but he didn't cooperate and we failed to catch him. We did, however, trap and band his mate, though we did not outfit her with a PTT. We usually target the adult males for PTTs because we have major gaps in our knowledge about the foraging habits and territory sizes of male Ospreys. In the Osprey world, there is a clear demarcation of responsibility during nesting. The male does all the fishing for the family, while the female defends the nest and does 70-80% of the egg incubation and almost all of the chick brooding. So, if you want to find out where Ospreys fish and how far they travel from the nest, you have to track males.

Name	Art	Donovan	Gundersen	Mackenzie	Staddler	Wausau		
PTT#	117560	117561	146859	117562	146861	146860		
Age when tagged	Adult	Adult	Adult	Adult	Adult	Adult		
Date of first GPS Location	5/30/12	5/13/13	5/19/15	5/15/13	5/21/15	5/20/15		
Date of last GPS Location	8/11/13	11/11/15	1/12/16	9/21/13	9/28/16	9/28/16	**TOTAL**	Average
# of GPS locations	5155	11440	2954	1613	6231	6170	**33563**	**5594**
Total point to point (km)	25529	54375	8897	3592	27185	23026	**142604**	**23767**

Name	Artoo	Bergen	Bridget	Chip	Jill	Juliet	Lizzie	Saco	Tilton	Weber		
PTT#	117560	128137	136034	117559	106890	146862	136035	106891	136033	128136		
Age when tagged	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile	Juvenile		
Date of first GPS Location	8/13/13	8/13/13	8/12/14	8/2/12	8/3/12	8/12/15	8/13/15	7/17/11	8/12/14	7/30/13		
Date of last GPS Location	9/20/15	2/13/14	1/31/15	10/13/12	10/4/12	10/10/15	8/26/15	10/27/11	9/27/14	10/1013	**TOTAL**	Average
# of GPS locations	9622	2344	2256	925	786	753	183	1266	610	801	**19546**	**1955**
Total point to point (km)	30942	10842	4774	4923	6680	6394	278	5492	1575	5434	**77334**	**7733**

Table 1. Data Overview of 16 Ospreys Tagged In New Hampshire.

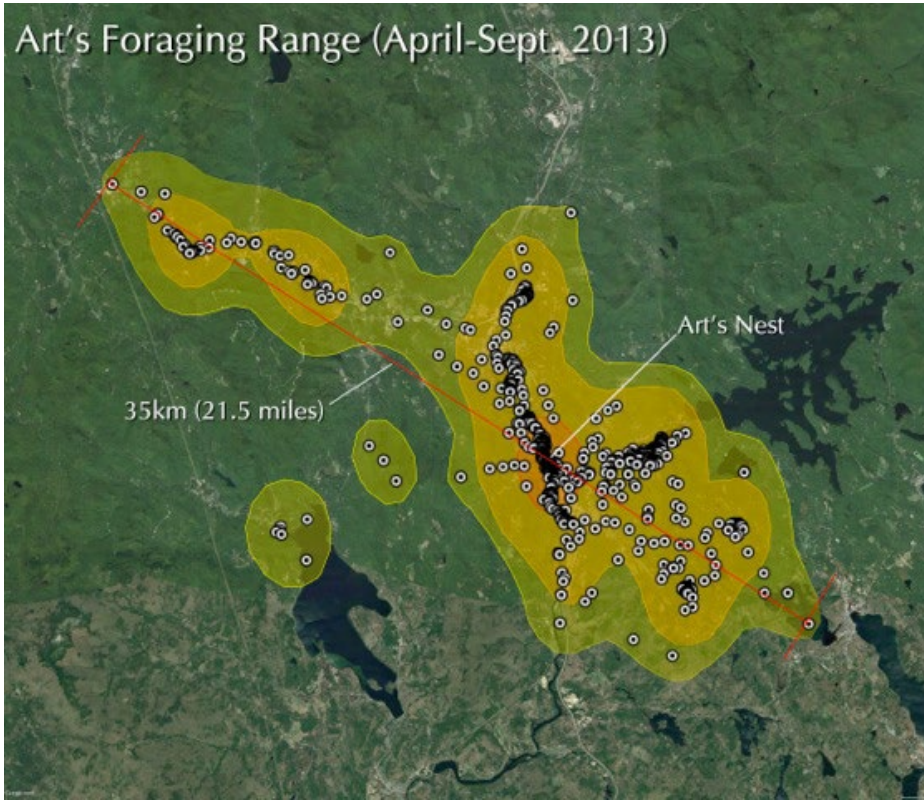


Figure 2. Art's Foraging Range, April-September, 2013.

After failing to catch the male at this nest in 2011, we were back for a second attempt in May 2012. The same pair was back and incubating three eggs. This time, we quickly caught the male and equipped him with his custom-fit hi-tech backpack. The Bridgewater male was christened Art after the power plant employee who had been so helpful to our work. Because education and public outreach are important aims of our project, we give each of our tagged birds a name. Our rationale is that online followers will be more invested in an Osprey named Art rather than ID #110967.

Art immediately started transmitting fascinating data. Each transmitter communicates with a network of orbiting satellites on an every-third-day schedule. The data upload has a GPS location for each PTT every hour from 7:00 am to 7:00 pm. Those times are programmed to adjust at different times of the year, but consistently give 13 hourly points per day. Being diurnal, Ospreys rarely move at night, so nighttime points are not worth recording. For each time point, we also get the height of the transmitter above sea level, what direction it is facing, and how fast it is moving.

Throughout the rest of the summer of 2012, I could see exactly where Art spent his time. I could see on what stretches of river or which ponds and lakes he fished and at what times. I could tell when he was interacting with intruder Ospreys, how he

Total Fishing Points	485		Perched	Active	Unknown
Baker River	65	13.40%	30	30	5
Bear Pond	1	0.21%	1	0	0
Hawkins Pond	21	4.33%	12	6	3
Jackson Pond	7	1.44%	4	2	1
Little Squam	108	22.27%	30	74	4
Newfound Lake	7	1.44%	1	6	0
Otter Pond	1	0.21%	1	0	0
Oxbow Pond	21	4.33%	6	14	1
Pemi River -- Ashland	48	9.90%	33	9	6
Pemi River -- Livermore	48	9.90%	33	10	5
Pemi River -- Plymouth	87	17.94%	48	27	12
Pemi -- ALL	183	37.73%	114	46	23
Powers Rd Marsh	1	0.21%	0	1	0
Sky Pond	37	7.63%	31	5	1
Small Oxbow	3	0.62%	2	0	1
Squam River	21	4.33%	9	12	0
Stinson Lake	1	0.21%	0	1	0
Waukewan Lake	3	0.62%	0	3	0
White Oak Pond	2	0.41%	1	1	0
Winona Lake	3	0.62%	2	1	0
			244	202	39

Table 2. An analysis of Art's foraging activity in summer 2013.

overlapped with his neighbors, and how often he perched near the nest or incubated. We could even tell how efficient a hunter he was. Quick trips between a fishing spot and the nest indicated successful hunts. The transmitters provided an amazing insight into the lives of these Ospreys.

In 2012, Art and his mate successfully raised one chick that fledged in mid-August. Art left New Hampshire on September 11 and made an epic 4,900-mile migration to the Araguaia River in east central Brazil where he spent the winter. Art followed what we know to be the classic adult migration route along the Eastern Seaboard. He passed through Florida, over to Cuba, across to Haiti and the Dominican Republic, and then flew across the Caribbean Sea to Venezuela and finally south into Brazil. He reached his winter home on the Araguaia River on October 22.

Rob Bierregaard with Artoo, May 2013. Photograph by Chris Martin.

The winter habits of an adult Osprey are very different from their time on the breeding grounds and Art demonstrated that well. Because Osprey pairs have no association outside the breeding season and take separate winter vacations, Art had no mate to feed, no nest to defend, and no chicks to rear. By all accounts the living was easy and relaxed. I probably oversimplify, but the basic daily routine seemed to be: roost on a favorite tree branch or stump, fly to the river, catch a fish, eat fish, sit in the sun along the river—no doubt preening—catch another fish in the afternoon, sit in the sun, roost, and repeat for five months. Throughout the winter of 2012–13, I checked in on Art's virtual self on Google Earth every three days and confirmed his activity.

Art left his winter home in Brazil on March 15, 2013. He reached the coast of Venezuela on March 26, crossed over to Haiti, and zipped through Cuba by March 31. He arrived back at his nest in New Hampshire on April 10 where he had a welcoming party. His same mate had arrived back from her winter vacation five days earlier, and I was there along with a crew from the local ABC TV affiliate and reporters from three newspapers. Art was a showman and arrived in spectacular fashion. He heralded his arrival with a high aerial display before plummeting to his nest and joining his mate. Though they hadn't seen each other in six months, within 20 minutes they had rekindled their partnership and mated. Within 11 days of Art's arrival, they were sitting on eggs. The pair hatched and successfully reared three chicks.

Once again we followed Art's fishing routine throughout the summer of 2013 as he and his mate reared their chicks. Table 2 shows details of his foraging activities in 2013. Figure 2 depicts his territory and foraging range.

On August 12, 2013, Rob and I were back at Art's nest. Our goal was to catch one of the recently fledged chicks and outfit it with a new PTT. We agreed that if we caught Art, we would remove his transmitter. We had learned more than enough about Art and

there was no need for him to continue to carry the backpack for another long migration. Catching him was a long shot as he had obviously seen the trap before and would likely be wary.

We set up the trap on the nest with a fish as an enticement for the hungry chicks, who were perched on snags along the river. Art's mate also sat watching us. She too had been caught before and was wary. As luck would have it, Art was off fishing on Little Squam Lake and had no clue we were at his nest. Within 20 minutes of us installing the trap, Art came over the hill with a big trout for breakfast. One of his chicks flew to the nest to be first in line. Art landed next to him and a second chick flew in to share the feast. All three were caught! Arthur hoisted Rob up to the nest on the lift and we soon had three Ospreys hooded and swaddled in custom-made fabric straitjackets—we call them Osprey cozies.

We quickly removed Art's transmitter, thanked him for his amazing contribution to avian science, and released him. We put Art's PTT on his son, who we named Artoo, and put a new PTT on his other son, who we named Bergen. Now we could follow Art's sons and see how their migrations and habits compared to their father.

Art, who was recognizable by the silver band on his left leg, returned to his nest in April 2014 and once again raised three chicks with the same mate, who was recognizable by the silver band on her right leg. They were both back in 2015, when they again raised three chicks, and in 2016, when they raised two chicks. Tracking of other birds over multiple winters confirms that adult Ospreys return to the same winter home each year, so even though Art no longer carries a transmitter, I can be sure that he makes his 9,800 mile round-trip each year between his little stretch of the Araguaia River in Brazil and his nest in New Hampshire. Each spring, I've been delighted to welcome this old friend back to New Hampshire.

Artoo and Bergen were fascinating to follow. Artoo began his first migration on August 15, just three days after we tagged him. He headed for inland Pennsylvania where he found some rivers to his liking. His brother Bergen began his migration on August 21 and headed for the coast of Virginia and Maryland. After a month of separate wanderings, we were amazed when, on the evening of September 25, they both ended up on the Virginia coast and both flew through the night across the Georgia Bight. They were at times so close that they must have seen each other—what are the chances?

From then on, the brothers followed separate routes through Florida and into Cuba. On October 14, Bergen crossed the Caribbean Sea to Colombia where he spent time exploring several upland rivers along the north edge of the Andes. On October 20, Artoo left the Dominican Republic and crossed to Venezuela. He settled just north of the Orinoco River for the next couple of months. Bergen renewed his migration on October 28 and headed for the Amazon Basin in Brazil. By November 6, he had settled on the Rio Purus just to the south of the main trunk of the Amazon River and more than 4,000 miles from his natal nest. Interestingly, although he was more than 1,000 miles west of his father Art's winter home, he and his father were on exactly the same latitude.

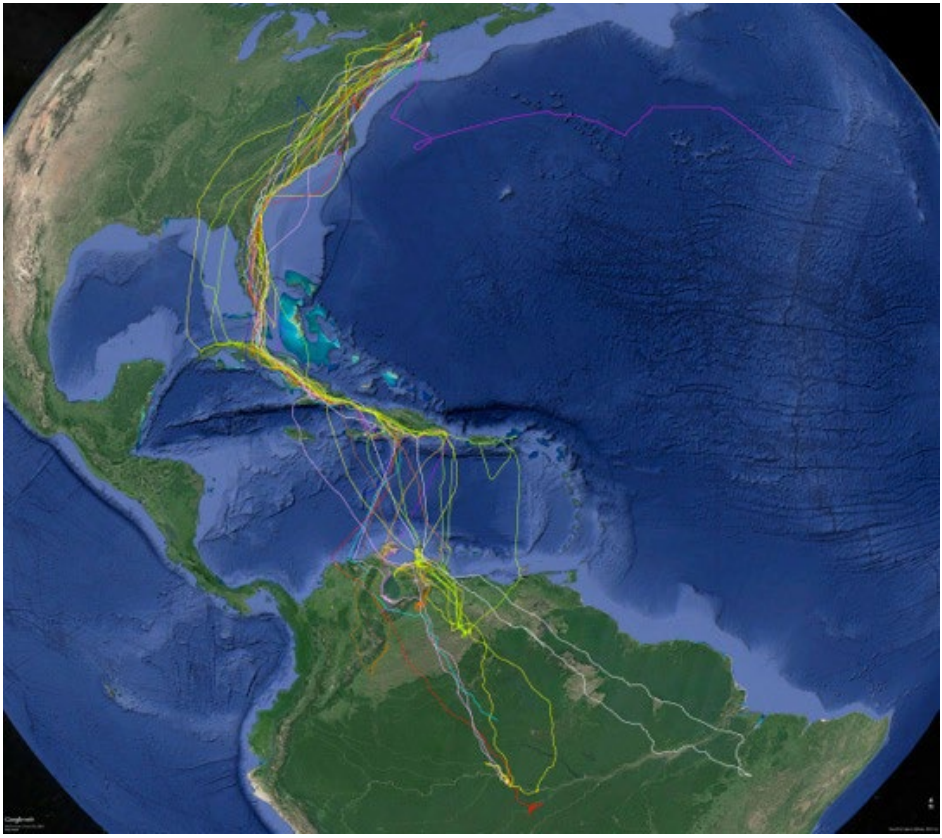


Figure 3. Map of migration routes of 16 Ospreys tagged in New Hampshire.

To our surprise, in January 2014, Artoo renewed his migration and headed south again. He ended up another 700 miles farther south, also on the Amazon and within 100 miles of his brother. On February 13, Bergen's PTT stopped transmitting. We had no indication that Bergen was in trouble. He was in an area he knew well and all seemed normal, but we never heard from him again.

For the next month or so, Artoo wandered around the great Amazon Basin exploring the Rio Solimões—which is what the Brazilians call the upper reaches of the Amazon River—and the Rio Japura. He finally settled on a small lake next to the Rio Solimões on March 28. He would spend the next six months there. Young Ospreys do not return to the breeding grounds until they are nearly two years old, in their third calendar year, so Artoo had found the location for his "gap year." He left this lake on October 5, 2014, and went for a wander again up the Solimões. My guess is that he was displaced by a returning adult Osprey who vacated the lake in spring to head north to breed and returned in early October to find an intruder. After a while, Artoo settled on the river close to "his" lake, where he remained until March 31, 2015, when the urge to return north kicked in. Artoo arrived back home in the Lakes Region of

Rob Bierregaard with Staddler. The PTT attached and he is calmed with the hood. May 2015. Photograph by Iain MacLeod.

New Hampshire on July 24 after a long meandering journey north. He settled in northern Massachusetts for the remainder of the summer and headed south again on September 1. He reached southern Florida on September 17 and headed toward Cuba on the next day. Something dramatic must have happened during the night, because the next morning his signals indicated that he was floating on the sea off the east coast of Florida. We never heard from him again and will never know what happened. We knew that the early years of an Osprey are filled with peril, but losing Artoo was particularly tough.

The fates of other birds have also remained a mystery. Jill, a 2012 juvenile from a nest in Tilton, made it to Brazil but after just a day or two her signal stopped and we assume she died. Weber, a 2013 juvenile from a nest in Seabrook Harbor, arrived in Venezuela and flew into a remote ravine along a river. His transmitter continued to send signals from the same exact location for several weeks before going dead and we assumed Weber had perished. Interestingly, the signals started up again from the same location several months later indicating that the PTT was exposed to the sun again, causing the battery to charge and start transmitting. While compiling data for a table in this article, I noticed that data points from Weber's PTT continued to trickle in over a five month period. We now believe that Weber was still alive at least until December 2014, and we have no reason now to believe he isn't still alive. Tilton, a 2014 juvenile from the same nest as Jill, headed for Cape May, New

Jersey, and settled there for several weeks before his PTT signal indicated that Tilton was down. A couple of ground searches revealed no sign of the bird or the transmitter. Juliet, a chick from the same nest in 2015, arrived in Venezuela. She settled along a river close to a major highway and her signal went dead within a few days.

The fates of other birds have not been so mysterious. Chip, Jill's brother and nest mate in 2012, ended up landing on a large container ship off the coast of New York. He rode the ship east across the Atlantic for a couple days, then he landed on a second ship and finally on a third ship, all of which were headed east. After a week of hitching rides and getting farther and farther off course, he ditched in the ocean not far from the Azores. No doubt he was weak after a week without food. Bridget, one of Art's daughters from 2014, wintered near Vero Beach in Florida. Her signal stopped moving near a road in January and we suspect she was hit by a car.

Mackenzie, an adult male from a nest in Stratford in northern New Hampshire, died on the shore of a pond in Berlin, New Hampshire, after successfully raising a chick. He was fattening up and getting ready to migrate when he stopped moving. I searched the area and found his remains. He had been preyed upon by a larger raptor, perhaps a Bald Eagle or a Goshawk.

Lizzie, one of Art's daughters from 2015, was absolutely fascinating. She left the nest on August 13, one day after we tagged her. She flew south to Belcher Cove in Rhode Island and stopped moving. I assumed the worst, but when I zoomed in on her location on Google Earth I could see the telltale shadow of a tall Osprey nesting pole, so I assumed she was on that nest. A quick phone call to the active nest monitors in Rhode Island led us to Butch Lombardi. Butch had been checking on that nest all season and it had fledged two chicks. When Butch checked the nest now, however, he found that Lizzie had "force-adopted" herself at this nest and was being fed by the resident male. She aggressively fought off another youngster—presumably the rightful tenant of the nest—and claimed fish at this nest for several days. Although post-fledging youngsters have been recorded visiting neighboring nests and being fed, this behavior had never been confirmed to occur over such a long distance. In this case, the nests were 222 kilometers apart. Perhaps it is common for young Ospreys to mooch where they can as they disperse from their natal area. We are publishing a short paper in the *Journal of Raptor Research* to describe this incident.

Unfortunately, Lizzie's story had a sad ending. Twelve days after arriving in Belcher Cove, she was found dead under a power line near her adopted nest.

Other birds have been more successful. Donovan, a breeding male from the nest in Tilton who was the father of Jill, Chip, Tilton, and Juliet, wintered on a small river just north of the Orinoco River in Venezuela. We tagged him in 2013 and followed him for three breeding seasons, three southbound migrations, three winters, and two northbound migrations. We learned about his foraging and saw some intriguing changes each year in his territory. Over the three summers, his foraging area became smaller and his fishing more concentrated. My guess is that he got more efficient and as he got to know the area better and could focus more on one favorite fishing spot. In November of 2015, after returning to his winter home for the third time, his signal went dead and

Rob Bierregaard with Staddler. The hood is off and he is ready to be released, May 2015. Photograph by Iain MacLeod.

we never heard from Donovan again. I held out hope that he might return in the spring with a dead transmitter, but he did not. His old mate did return, however, and she found a new mate immediately. They raised two more chicks at this successful nest.

Another adult male named Gundersen, whom we tagged in May 2015, also died on his wintering ground in Venezuela in January 2016. His old mate quickly found a new male and raised two chicks in 2016. These adult mortalities do allow us to track how quickly lost mates are replaced—VERY quickly as it turns out. This rapid replacement of mates indicates that there is a healthy surplus of young birds looking for opportunities to claim a nest.

Two other adult males that we tagged in 2015 did survive the winter and returned to New Hampshire in 2016. Wausau, who nests on a huge pole in Groveton, New Hampshire, spent his winter near the Meta River in the Casanare region of Colombia. He arrived back at his nest a little late and found that his mate had taken a new male. I was at his nest on April 18 to see his arrival and, like Art in 2013, he put on a spectacular show indeed. A high skydance proclaimed his arrival, but now he also had to see off the interloper. Apparently, that didn't take long, as an hour later he arrived at the nest and mated with the female. She greeted him by then demanding that he go get a fish. They commenced incubation shortly afterwards, but later in the season they failed. Wausau remained near the nest until he set off on his southern migration

Staddler gives us the eye as we approach his nest, May 2015. Photograph by Iain MacLeod.

between 11:00 am and noon on September 4. He arrived back at his winter home in Colombia on October 5, 2016.

Staddler, a male we tagged at his nest in Seabrook Harbor in May 2015, spent the winter on the Rio Tefé next to the main trunk of the Amazon River in central Brazil. He obviously was in a prime spot as he spent 95% of his time in a three-quarter square kilometer area on the shore of the lake. He left his winter home on March 18 and reached his nest and his old mate on April 7. He and his mate raised two chicks. Staddler began his 2016 fall migration on September 5 and arrived back at the Rio Tefé on October 13.

Table 1 looks at the number of data points collected and the distances traveled between those points by the Ospreys we have tagged in New Hampshire. One thing that jumps out from this table is the difference in the duration of data gathering between adults and juveniles—an indication of the high mortality rate of juveniles in their first year. The six adults we have followed accounted for 33,563 GPS points. Two birds, Staddler and Wausau, are still active and their data point total has been accumulated through September 28, 2016 when I created the table. That's an average of 5,592 GPS data points per adult bird. The combined travel distance between those points was 142,604 kilometers—an average of 23,764 km per bird. Donovan provided the greatest amount of data with 11,440 points and 54,375 km. The total for the 10 juveniles was 19,546 data points and 77,334 kilometers traveled, for an average of 1,955 points and 7,733 km per bird. Figure 3 shows the migration routes of all 16 of these Ospreys.

My colleague Rob Bierregaard has been tagging other Ospreys in different states including Virginia, Maryland, and Massachusetts. In 2016, he expanded our research

to Newfoundland. In August, he tagged six Ospreys on the Avalon Peninsula—the most easterly breeding site for Ospreys in North America. It will be fascinating to see where these birds go. Rob suspects that some juveniles, reacting to their innate sense to fly south—and because they don't know any better—might head due south from Newfoundland and end up flying as many as 3,200 km over water to the eastern Caribbean Islands. A few lucky ones may find Bermuda. This route would be a truly astonishing migration for a young Osprey.

[Note: After I submitted this article, Virginia one of the Newfoundland juveniles flew nonstop for 82.5 hours from the Avalon Peninsula to North Carolina, a staggering 3,584 km. Unfortunately, she made landfall just as Hurricane Matthew pounded that area and we have not had an upload from her PTT since, suggesting that she perished]

All of the information in this article can be found on the website of the Squam Lakes Natural Science Center: http://www.nhnature.org/programs/project_ospreytrack/osprey_maps.php

Interactive maps and blogs, as well as educational materials for schools, and links to all kinds of Osprey-related materials, are available. We also have a phone app—called Animal Tracker—that tracks all of our Ospreys, so you can follow these amazing migrations from your armchair.

Iain MacLeod *is Executive Director of the Squam Lakes Natural Science Center in Holderness, New Hampshire and has been studying Ospreys for more than 35 years, first in his native Scotland and now in New Hampshire. He is on the Board of NorthEast Hawk Watch and is a former chairman of the Hawk Migration Association of North America. Iain also is a member of the New Hampshire Bird Records Editorial Team and New Hampshire Rare Birds Committee. He lives in Ashland, New Hampshire.*

CANVASBACK BY RICHARD JOHNSON

Bird Observer Volunteer Job Openings

Sightings Records Editor

Bird Observer has an opening for a Records Editor. The position requires records to be compiled in two-month batches. Contributions are submitted from a dozen sub-compilers in varying formats, which are converted to text files to be imported into an Access database. Once all records are complete, they must be pared down to eliminate irrelevant and duplicate submissions. All unusual records must be supported by details, often available on eBird, but if not, the editor must contact whoever submitted the record for details. Records are output from the database to Bird Observer records format, then edited to give a picture of the reporting period. The editor also writes an analysis of the reporting period for half the species, and edits the analysis for the other half.

The editor:

- must be proficient in Microsoft Word, Excel, and Access, have a familiarity with transferring files between these applications, and a proficiency in creating and using macros.
- must have extensive knowledge of breeding birds and migration patterns within Massachusetts.

If you are interested or have questions, please contact Marj Rines at marj@mrines.com

Subscription Manager

Bird Observer is looking for a new staff member to on take the position of Subscription Manager. Primary job responsibilities:

- Process new subscriptions and renewals received through the mail or our website.
- Send periodical renewal notices to subscribers.
- Prepare mailing labels and USPS forms for each of our six editions per year.
- Maintain a master database containing information and subscription status for all subscribers.
- Record and pass on to our Treasurer all subscription revenue.
- Pick up mail at our Arlington USPS Box 3–4 times per month.

This is a computer intensive job that requires familiarity with Microsoft Office programs Access, Excel, Word, and Outlook or their functional equivalents.

If you are interested or have questions, please contact John Marsh at jmarsh@jocama.com.

Interview: Bill Peterson, Refuge Manager at Parker River National Wildlife Refuge

David M. Larson

Bill Peterson, Rye, New Hampshire. Photograph courtesy of the author.

In 2014, Bill Peterson started work as the new Refuge Manager at the Parker River National Wildlife Refuge (NWR) in Essex County, Massachusetts. Bill grew up in St. Joseph, Minnesota, so he is obviously a wonderful person [full disclosure, the author is also a Minnesota native]. Bill started his 20-year career with the U.S. Fish & Wildlife Service (USFWS) as an intern at Sherburne NWR just north of Minneapolis. He worked at Necedah NWR in Wisconsin where he met his wife Stacy (who was working on Whooping Crane restoration there), before taking the Refuge Manager position at Wapanocca NWR in northeast Arkansas. Bill says that he has not seen an Ivory-billed Woodpecker at Wapanocca, but cannot prove that they are not there. He came here to the Parker River NWR position from Arkansas. It is a safe bet that there are no Ivory-billed Woodpeckers here, either.

Bill has a background in biology and is particularly interested in ecological management efforts. He has been heavily involved in stewarding reestablishment of degraded and altered habitats at previous refuges. At Parker River, the challenges are different. Here, the focus is more on maintaining habitat. The main habitat priority of the refuge is salt marsh. And that habitat focus includes the breeding birds, e.g.,

Saltmarsh Sparrow and Willet, and the migrating birds that use that habitat. Given the reality of accelerated sea-level rise due to climate change, the health of the salt marsh is of great concern. Normally, during times of natural sea-level rise, salt marshes would gradually migrate inland in response. With the accelerated sea-level rise due to anthropogenic effects and with human development along the upland edges of the marshes, important ecological management questions are: how fast can the salt marshes migrate and where can they go? Clearly, there are areas of the refuge that are suitable for salt marsh expansion. Building in this sort of resilience will be a long-term goal of the refuge, along with partnering with local government, nongovernmental organizations, and interested citizens to perpetuate off-refuge marsh.

A significant challenge for Bill and the rest of the Refuge staff is the current flat funding of the USFWS. Flat funding over the past years has resulted in positions being frozen as employees retire. Right now, Bill's staff includes only one maintenance worker and one enforcement officer. He has no assistant manager. Also, the Parker River staff is the staff for Thatcher Island NWR in Massachusetts and for Great Bay NWR and Wapack NWR in New Hampshire. The lean staffing situation has resulted in painful prioritization of tasks. For instance, the Refuge is far behind on developing their 15-year plan, developing mitigation plans for sea-level rise, and addressing other planning issues, as well as general maintenance. During the summer of 2016, long-delayed repairs to the Hellcat trail boardwalks were underway and the refuge sent out a bid request for designers to increase the ADA-compatibility of the Hellcat trails. So, given funding over the coming years, rebuilding those trails to reduce or eliminate stairs will happen. In addition, the Marsh Loop trail will be shifted back along the edge of the cattail marsh in order to facilitate management of the marsh.

Of more immediate significance, by the end of 2016 the Refuge will grant increased access at Stage Island. The last remaining cottage was torn down and cleanup is well underway. After some site improvements, the trail will be opened for foot traffic from Parking Lot #6 to the Plum Island Sound. No expansion of Lot #6 is planned, but the access will allow for increased birding opportunities.

Bill is an open and engaging person, interested in optimizing experiences at Parker River NWR for all types of visitors, including birders, photographers, school groups, casual visitors, and beachgoers. As for the inevitable differences of opinion and conflicts with visitors, abutters, and other players in the area, he has a calm and relaxed manner. He enjoys working with the various interested parties on issues such as the fate of the Pink House along the Plum Island Turnpike. His hope is for "clean water and healthy birds," and he plans to be around for some time to help steward that hope.

The Parker River National Wildlife Refuge celebrated its 75th birthday in 2016 and, in the spirit of the occasion, I asked Bill what the greater birding community could do to help the Refuge. He encourages birders to support environmental education, youth birding, and other wildlife-dependent recreation activities to foster the next generation of conservationists.

Placing and Protecting Barred Owl Nest Boxes

Alfred Maley

Gang of Four (Ralph, Alice, "Norton," and Thelma). The young Barred Owls from the nest in the yard stopped by for a group shot before heading off on their summer vacation. Photograph taken through the slider by Alfred Maley.

In my previous articles on Barred Owl nest box construction (Maley 2010, 2015), I glossed over the placement of the box in a tree and providing protection from raccoons. This note describes a simple, safe way to get a box up in a tree and a relatively simple, easy-to-maintain flashing system to keep raccoons from taking over the nest box.

The problem of attaching the box to a tree is discussed in the previous articles, and two methods of doing so are described therein. Regardless of the method used, it is critical to have both hands free to perform this task. That means that, in addition to a safety belt that secures you to the tree, you will need a way to raise the box and secure it in position while you attach it.

Raising the Box Into Position

A scheme that is simple and works well is to attach a piece of light, 3/16 inch Grade 30 chain snugly around the tree above where the box will be, with a pulley attached to the chain over the box location. A rope is used then to hoist the box into position. First a piece of 16-gauge tie wire is attached to the box—through the eye bolts

Close-up of chain-pulley-rope mount.

if used—and connected above the box to make a place to secure the rope. Wire will not interfere with connecting a chain to the box, as would happen using the rope itself. Imagine a wire clothes hanger, with the horizontal part through the eye bolts and the rope attached to the apex.

A 50-foot piece of 3/8 inch twisted nylon rope is usually sufficient. It must match the size of the pulley, so get a two-inch pulley that will accommodate that rope size. A 1/4 inch Quick Link will secure the pulley to the chain. To secure the chain around the tree, first attach a 1/4 inch clevis grab hook to one end of the chain. Then you can pull the chain snug around the tree and clip the grab hook over a chain link. The weight of the box will pull the chain tight on all but a greased flagpole.

After inserting the rope through the pulley, put a knot in each end of the rope. It is very easy for the weight of the rope to pull it out of the pulley at an awkward moment, causing delay and extra steps.

An assistant on the ground is helpful to pull the box up into the tree and hold it there while you attach the box. Alternatively you can raise the box yourself from the ground, secure the rope, and then proceed to ascend the ladder and attach the box.

In no case should the assistant—or anyone else—stand below the box. All parties should be well to the side in case something goes wrong.

Once the box is attached, the wire can be cut with wire cutters and the wire, chain, and pulley removed.

Note that this method may also be used to remove a box, should you need to.

Flashing to Keep Raccoons Out

Aluminum flashing is useful to keep raccoons from climbing the nest box tree. But trees grow, so some way must be found to adapt the flashing to the growing diameter of the tree. After much trial and lots of error, I have found a way that works well and does minimal or no damage to the tree. It consists of joining two pieces of flashing together, then fastening them to a slim piece of wood that you secure lightly to the tree bark with two screws. The flashing is then wrapped loosely around the tree and the end is attached to the piece of wood. See the photo.

Aluminum flashing can readily be found in widths of 16 to 20 inches at building supply stores, but that's a little narrow for a determined raccoon. I join two pieces

Close-up of flashing around tree trunk.

together with an inexpensive pop rivet tool. It's worth getting; you'll find lots of thing to rivet together.

Start by measuring the circumference of the tree at chest height. Add two feet to the measurement and cut two pieces of flashing to that length. I like to have 30–36 inches of flashing, so overlap the two pieces to obtain a width in that range. Use pieces of duct tape to secure the pieces together so that the rivets get placed and inserted smoothly. Use rivets with a grip range of 1/16 to 1/8 inch. I use 1/8 inch oversize-head, aluminum blind rivets, trade size 42; see www.BoltDepot.com for a lucid discussion of blind rivets. After drilling each hole through the overlapped pieces at intervals of about one foot, insert a rivet. Place the first rivet a few inches from the end so that it will not fall on top of the piece of wood you are attaching the flashing to. After all the rivets are in place, remove the duct tape.

The best source of wood to attach the flashing to seems to be square pressure-treated deck balusters, obtainable cheaply at lumberyards. These balusters are the same as used in the nest box construction. I use 42-inch-long pieces, which leaves several inches at the top and bottom for the two attachment screws. These pieces are about 1.25 inches square, which is more than is needed. I rip the pieces on a table saw to get a piece that is about 3/4 inch thick.

Next, attach the end of the joined flashing pieces to the baluster with about five stainless steel screws. I use Phillips pan-head sheet metal screws, size #6 x 3/4 inch with a washer. Predrill a hole through the flashing and partway into the baluster to make things easier. Drill two holes in the baluster, one near each end, so that the attachment screws will slide easily through the wood (but not the head of the screw). I use three-inch stainless steel deck screws, but other types would be suitable.

Now is the time to make the flashing nearly invisible with flat camouflage paint. I use Rust-Oleum's camouflage spray paint. Start by spraying the entire piece either all black, all brown, or a combination of both. After it dries a bit, place leaves, fern branches, hemlock boughs, etc. randomly on the surface. Make sure the items rest flat for the best effect. Then overspray with green and maybe small bits of a lighter color such as khaki.

For a neater application, the tail end of the flashing is going to slip under the head of the flashing, so it needs to be narrower. Start by marking a pencil line two inches from each edge of the last two feet of the tail end of the flashing. These edges will be cut back to where the tail is to go under the head of the flashing once the flashing is in place on the tree.

It is helpful to have an assistant if it is windy when you attach the flashing to the tree. Attach the baluster to the tree lightly with two long screws, penetrating the bark only enough to secure the baluster in place. Wrap the flashing around the tree leaving about two inches of space all the way around and mark where the tail meets the baluster. Cut back the edges from the end of the tail to that mark. Remove all but the top and bottom screws that attach the flashing to the baluster. Slide the tail piece between the head and the baluster, verify the spacing around the trunk and that everything is as straight as possible, then re-insert the screws you removed. They will go in the same holes and will penetrate the tail piece and secure everything in place.

Maintenance consists of backing out the two screws holding the baluster a bit every year or so, and adjusting the tail every few years. That adjustment consists of again removing the middle screws securing the head and tail, pulling the tail out as needed, and then re-inserting the screws.

It is important not to make holes in the bark of a tree and leave them open since carpenter ants will use them to gain access to the heart of the tree and may lead to rot. If I remove flashing, I place a suitable nylon or brass screw in any hole to seal the hole and to be friendly to a future arborist with a chain saw.

Nesting Results for 2016

Barred Owls successfully occupied seven nest boxes in Hampstead, New Hampshire, this year. One pair continued to nest in our suburban yard and fledged four young. They graced the backyard from mid-May through mid-July, before setting off to learn to hunt in the larger neighborhood.

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Alfred Maley *is a retired software engineer whose interest in nest boxes began at age 10, when he cobbled together a successful bluebird house with wood from an orange crate. Later came Barn Owl nest boxes and Long-eared Owl nest baskets. When they are not watching raptor migration in Spain or traveling with Danger Tours to Latin America, he and his wife Linda reside in Hampstead, New Hampshire. Readers with questions can contact him by email at: alfredmaley@gmail.com.*

The History of Bald Eagle Decline and Recovery in Massachusetts

Tom French

First flight of a young Bald Eagle from the hack tower at Quabbin Reservoir in 1983. All photographs by Bill Byrne unless otherwise indicated.

No one really knows how common the Bald Eagle was in Massachusetts at the time of early European colonization. The first author to describe the early fauna of Massachusetts was Josslyn (1672), but he made no mention of eagles. Nesting had not been documented in the state for nearly 200 years when Allen (1864) reported that eagles had nested at Mount Tom, though it is more likely that they actually nested along the Connecticut River adjacent to Mount Tom, as they do today. Other nest sites reported from the 1800s included locations in Beverly (Anon. 1864), Cheshire (Faxon and Hoffmann 1900), Sunderland on Mount Toby (Stearns 1884), and Winchendon in 1887 (Howe and Allen 1901). The last generally accepted nest record was at Bear Hollow near Snake Pond, Sandwich (1900–1905, Hill 1965). In his *Sportsman's Scrapbook*, John Phillips (1928) reported "… it should be recorded that Eagle Hill or Agawam River twenty-five years ago (about 1903) was a veritable resort for these great birds. On a fine morning in May or June when the alewives were well on the run, we could see from the camp door two or three, sometimes as many as five or six

The view from one of the first Bald eagle nests built by a pair of eagles released from the hack tower at Quabbin Reservoir.

huge eagles sitting on the bare branches of a great dead white pine about a quarter of a mile up the stream. … But now that the alewives have failed to run as they used to on the Agawam, eagles have gone elsewhere, and one of the striking sights of that lovely river has passed forever." Bagg and Eliot (1937) reported later dates for nesting pairs in Brookfield near High Rocks (1908–1920), Colrain (1930s), and Conway (1930s). While these reports were based on the presence of adults in the spring and summer when they should be on their breeding territories, and in Brookfield over a period of 12 years, no nests were ever located.

Deforestation in Massachusetts peaked in the 1830s, leaving a mostly open landscape across about 80% of the Commonwealth. Grassland species, including Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, and Savannah Sparrow, were found in greater numbers than they ever have been, before or since. Wet meadows were mowed by horse-drawn equipment, providing habitat for Sedge Wren and Henslow's Sparrow. Most of our large forest species, including Wild Turkey, black bear, fisher, beaver, moose, and others, disappeared with the trees. Even white-tailed deer became rare. This is probably also the period in which the Common Raven and most of the resident Bald Eagles disappeared from the state. While the loss of habitat was likely a significant driving factor for the disappearance of the Bald Eagle, they were also deliberately killed and their eggs were actively collected. Eagles were not illegal to kill until 1907 when the Massachusetts legislature passed a law prohibiting "the hunting of loons on fresh water and the hunting of eagles anywhere." By then, all of the resident nesting eagles in Massachusetts may have already disappeared, and if not, they were certainly scarce. Bald Eagles were not protected by federal law

Kurt Palmateer of MassWildlife nets a Bald Eagle chick for banding in a nest on the Merrimack River in West Newbury.

until passage of the Bald Eagle Protection Act in 1940, but the United States territory of Alaska was exempted. Although the Migratory Bird Treaty Act had been passed in 1918, birds of prey, including the Bald Eagle, were not added to the Act until an amendment in 1962. The passage by the Alaskan legislature in 1917 of "An Act to preserve the food supply of Alaska and placing a bounty on eagles" provided a fifty-cent bounty to be paid for both feet of any eagle, but prohibited the use of poisons (DeArmond 2008). In 1923, the bounty payment was increased to a dollar. Between 1917 and 1953, a total 120,195 bounties were paid; this number does not account for the additional eagles killed whose feet were not turned in for the bounty, or the eagles that were wounded or killed, but not retrieved. The bounty was eventually rescinded as Alaska prepared to become the 49th state in 1959. An argument was made in the territorial legislature that it was not appropriate to be paying bounties on the symbol of the nation Alaska was about to join. Several Canadian provinces also paid bounties on Bald Eagles. Even the town of Vinalhaven, Maine established a twenty-cent bounty on Bald Eagles in 1806 (Lyons 1889).

The U.S. Fish and Wildlife Service (USFWS) has estimated that there may have been 300,000–500,000 Bald Eagles in North America in the 1700s, mostly in Alaska and northwestern Canada. By the time of heavy DDT use in the 1940s and 1950s, the Bald Eagle was long gone as a nesting bird in Massachusetts, and by 1963 the species had collapsed across the entire lower 48 states to only 487 documented nesting pairs, mostly as a result of eggshell thinning caused by the bioaccumulation of DDT. In that year, Rachel Carson's book *Silent Spring* put a spotlight on the harm caused by DDT, and was a catalyst for the formation of the Environmental Defense Fund, founded in

Pat Huckery and Erik Amati of MassWildlife band P/1 in West Newburyport, May 2012.

1967 specifically to fight for a ban on the use of DDT. Also in 1967, the Bald Eagle was listed under the Endangered Species Preservation Act (a precursor to the Endangered Species Act of 1973) as federally Endangered in the lower 48 states, except Michigan, Minnesota, Wisconsin, Oregon, and Washington, where it was listed as Threatened. By 1973, the U.S. Environmental Protection Agency had banned most uses of DDT in the United States and set the stage for recovery efforts to begin. Interestingly, Massachusetts was one of the last states to totally ban the use of DDT. Until 1977, DDT was actively used as a tracking powder sprinkled at the entrances of bat colonies in houses. Bats would get the powder on their feet and fur as they entered and exited the colony and be poisoned after licking it off. DDT was considered "an acceptable and appropriate toxicant for eliminating bats, which pose a significant public health hazard." (Wells and Girard 1977)

For over 30 years (1950s–1987), Maine was the only state in New England with nesting Bald Eagles. Even there, the numbers had plummeted to only about 21 pairs by 1967. In the next two largest eagle states in the East, New York and Pennsylvania, eagle numbers dropped to a low of one nonreproducing pair in New York (1974) and three nonreproducing pairs in Pennsylvania (1980). Unfortunately, the few surviving adults during this period were so heavily contaminated with DDT that their eggs failed to hatch year after year. The first conservation efforts taken in Maine and New York were to foster eggs and chicks taken from Midwestern and Alaskan parents relatively clean of DDT. These healthy eggs and chicks were given to some of the last old pairs who had constantly failed. For the first time in years, they were able to raise chicks again.

New York took the national lead to restore Bald Eagles by beginning the first hacking program for this species anywhere, just two years after the general use of DDT was banned. The strategy for hacking is simple. Chicks that are old enough to feed themselves are taken from wild nests, placed in cages on a tower and provided food until they are old enough to fly. Then they are released without any parents and quickly learn by instinct to fend for themselves. Without any parental instruction, they learn to hunt, court mates, set up territories, build nests and raise young. The point of release becomes the location from which they disperse. Some go far, but many stay very close to where they had been released, exactly as they would do if they had fledged from a

Bald Eagle chick P/0 just after being banded on June 1, 2010 in West Newbury. P/0 was next reported on March 9, 2014 as a near-adult on the Connecticut River in Enfield, CT.

nest. The system is simple but labor intensive. The most important step is to locate a donor population that is healthy enough to give up some of its eagle chicks. New York wanted to be sure to release enough chicks for the program to have a real chance of success, so they arranged to collect eagle chicks from Alaska where their numbers were high. Over a 13-year period from 1975 through 1988, New York released 198 Bald Eagle chicks from hack towers.

Massachusetts was the fifth of ten eastern states and the District of Columbia to initiate a Bald Eagle hacking program. Over seven years from 1982 through 1988, 41 Bald Eagle chicks were released from a hack tower located at the mouth of Prescott Brook on the east side of the Prescott Peninsula at Quabbin Reservoir. The first two chicks came from Michigan. The second year, four chicks came from Manitoba, Canada, and for the last five years, chicks were taken from nests on Bras d'Or Lake, Cape Breton, Nova Scotia. Another nine captive-born eagle chicks were fostered into wild Massachusetts nests between 1990 and 1998. These early efforts have been well reported in a number of previous articles and updates (W.J. Davis 1983, 1987, 2011, D.B. Davis 2014, and others). In all, at least 1,016 Bald Eagle chicks were released in hacking programs in the eastern United States through 2015. In addition to New York and Massachusetts, programs were carried out in Georgia (89 birds, 1979–1995), Tennessee (370 birds, 1980–2015), Kentucky (1 bird in 1981), North Carolina (29 birds, 1983–1988), Pennsylvania (88 birds, 1983–1989), New Jersey (60 birds, 1983–1990), Alabama (91 birds, 1985–1991), Washington DC (16 birds, 1995–1998), and Vermont (29 birds, 2004–2008). The American Eagle Foundation in Tennessee is the only organization still hacking Bald Eagle chicks. In addition to Bald Eagles, over 165

Spring ice-out on Quabbin Reservoir.

Golden Eagles were released through hacking programs in the mountains of Georgia, North Carolina, and Tennessee between 1981 and 2006.

As a consequence of these hacking programs, the genetic makeup of northeastern Bald Eagles has been substantially mixed. The hacking programs of New York and Massachusetts alone brought birds from as far apart as Cape Breton, Nova Scotia, west to Alaska, and from several places in between, including Great Lakes states and Manitoba. Most of the 88 eagle chicks hacked in Pennsylvania came from Saskatchewan, Canada. These transplanted birds grew up to join our few surviving native birds in Maine, and a few elsewhere, to form a recovered population with much greater genetic diversity.

In Massachusetts, the first eagle chicks in modern times fledged from two different nests in 1989 at Quabbin Reservoir. In all, three chicks fledged that first year. Since then, our eagle population has continued to grow. By 2016, the Massachusetts Bald Eagle population included 54 known active nesting pairs, of which at least 45 laid eggs, and 36 successfully fledged 63 chicks. This was the 27th year that Bald Eagles have raised young in Massachusetts since their restoration. During these 27 years, at least 646 wild-born chicks are known to have fledged from Massachusetts nests, and undoubtedly, more have been raised in undiscovered nests. As large and showy as these birds are, and as grand as their nests can be, it is remarkable how long they can go undiscovered. As an example, adult Bald Eagles have been seen around Mashpee-Wakeby Pond during the nesting season since 2013, and Cliff Pond in Nickerson State Park, Brewster in 2015, but a nest has still not been documented on Cape Cod in modern times. I have no doubt that eagles already nest on the Cape, but it will take

a sleuthing birder or dumb luck to eventually confirm. It is amazing that Common Ravens were confirmed nesting on the Cape before Bald Eagles.

From the beginning of recovery, MassWildlife has made an effort to band eagle chicks in their nests. In 2016, 44 of the 63 known chicks (70%) were successfully banded, and since 1989 when the first chicks fledged, 533 of the 646 known chicks (83%) have received bands. Each bird gets two bands. The first is a standard silver-colored aluminum band issued by the federal Bird Banding Laboratory, usually put on the right leg. The second is a field-readable color band usually put on the left leg. In the early years, our color bands were gold with black figures, but since 2007, Massachusetts eagles have been identifiable by their burnt orange bands with white figures. This color is also used in Quebec, but intended for resident adults, so there has been virtually no confusion. Other nearby states use black (New Hampshire, Vermont, Connecticut, Rhode Island), red (Maine), blue (New York), green (New Jersey), and red over black (New York). The unique letter/number code is repeated three times around the color band so that it can be read from nearly any angle. These bands were designed to be read by birders with spotting scopes, but now they are more often being read from digital photos. With the quality of modern digital cameras, an eagle flying down the middle of the Merrimack River can be photographed from shore, and the color band code can be read by enlarging a good high resolution photo.

Many remarkable records of travel, dispersals from fledging sites to eventual nesting sites, and records of individual life spans have been accumulated through reports of these bands. At least one bird, S/3, from Onota Lake in Pittsfield, Massachusetts, became a rock star as she was seen and photographed by hundreds of photographers for four consecutive winters (2011/12–2014/15) at the Conowingo Dam on the Susquehanna River between Maryland and Pennsylvania. She was huge, aggressive, and a great poser for the cameras. Then in 2015 she was photographed in Hancock, Hillsborough County, New Hampshire, and found nesting in Enfield, Grafton County, New Hampshire, in 2016.

Some states, but not Massachusetts, have attached modern satellite radio telemetry to eagles and receive thousands of location records as these birds move around. One bird banded in 2012 in New Jersey is now settling down on a section of the Connecticut River in Massachusetts and Connecticut (http://www.seaturtle.org/tracking/?tag_id=98584).

While her radio signals constantly report that she is here, no birder has yet reported seeing an eagle with a radio backpack and trailing antenna. Clearly, modern technology has revolutionized how we can study these birds, and other wildlife.

The results of restoration efforts, in combination with natural recovery, have been remarkable. As their recovery took hold, then gained momentum, the Bald Eagle was down-listed from federally Endangered to Threatened in 1995, and was then completely removed from the Endangered and Threatened Species List in 2007. The population had come from a low of 487 nesting pairs in all of the lower 48 states in 1963, and rebounded to over 11,000 by the time the species was delisted. The

Good Bald Eagle habitat on the Merrimack River in Haverhill, MA.

population has continued to climb, and now may be somewhere between 15,000 and 20,000 nesting pairs.

In Massachusetts, the Bald Eagle was included as Endangered on the first regulatory list of Endangered, Threatened, and Special Concern Species in 1980 when no breeding birds were left, and was down-listed to Threatened in 2012 with 39 active nests. Only four years later, we have at least 54 active nests. The same story of recovery has played out across the Northeast. In 2016, there were about 165 active pairs in New England (excluding Maine): New Hampshire (42), Vermont (21), Massachusetts (54), Rhode Island (4), and Connecticut (44). The last statewide survey in Maine was in 2013 when 633 Bald Eagle nests were documented, but now the number, estimated by two different methods, is believed to be somewhere between 780 and 915 (Charlie Todd, per. comm.). In other nearby states, there were about 350 pairs in New York, 304 in Pennsylvania, and 160 in New Jersey in 2016. At this point, the question is how much more will Bald Eagle numbers increase in Massachusetts, and elsewhere, before they level off. And, can there be too many Bald Eagles? In Maine, a few Bald Eagles have become significant predators of seabirds, just as they are in Alaska. Eagles have apparently already wiped out the few Great Cormorants nesting on Maine islands. If there is any doubt that Bald Eagles can be efficient predators, watch the 2016 Osprey nest camera footage from the National Audubon Society's Hog Island (http://www.npr.org/sections/thetwo-way/2016/08/03/488588696/in-captivating-video-a-bald-eagle-attacks-an-osprey-nest).

It took the cooperation of numerous organizations and individuals to make the Massachusetts Bald Eagle restoration efforts possible, but it was amazing how easy it

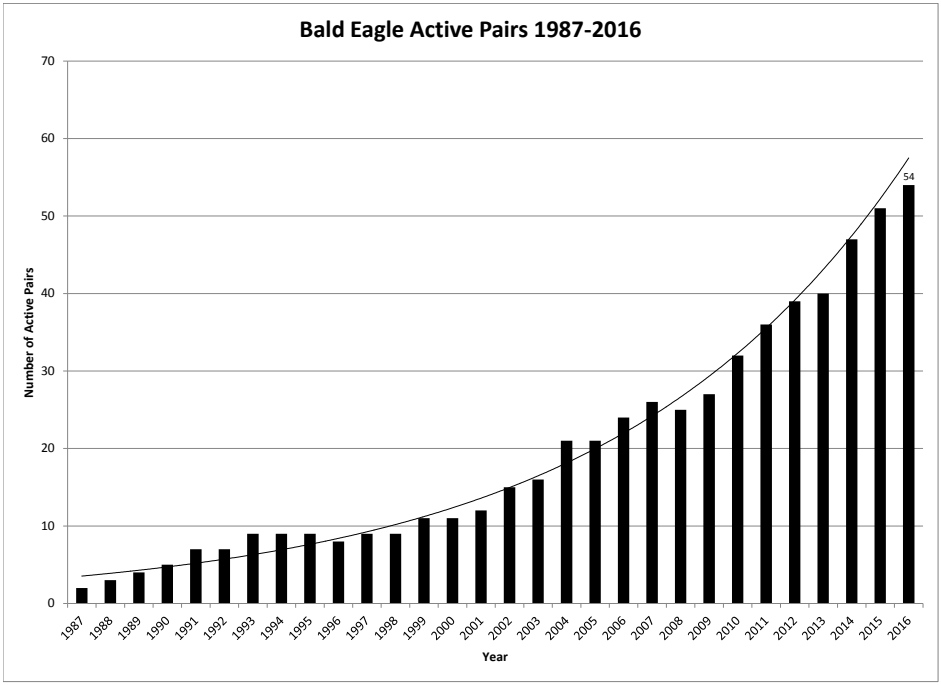

Figure 1. The increase in active pairs of Bald Eagles since the beginning of population recovery. Active pairs were pairs that had begun at least some nest construction. The graph is overlaid with an exponential growth curve.

was to invite people to join in to help this charismatic bird. This is in stark contrast to the difficulties encountered by a 2016 proposal to establish a population of state Endangered Timber Rattlesnake on Mount Zion Island in the Quabbin Reservoir for the purposes of having one population that can be protected from road mortality and deliberate killing by the public. Among the main cooperators in the early Bald Eagle restoration effort were the Metropolitan District Commission (MDC—now known as the Department of Conservation and Recreation—DCR) which manages the Quabbin Reservation; the USFWS, which has the responsibility for the Migratory Bird Treaty Act, the federal Endangered Species Act, and the Bald and Golden Eagle Protection Act; the Nova Scotia Department of Natural Resources, which provided the bulk of the eagle chicks; the Bank of Boston (now Bank of America) and the Massachusetts Audubon Society, which provided start-up funds; and Mass Electric (now National Grid), which for many years provided helicopter flight time to monitor the growing eagle numbers on Quabbin Reservoir and the Connecticut River. The Massachusetts Division of Fisheries and Wildlife (MassWildlife), as the state wildlife agency, took the lead role. Most of the annual monitoring and banding was done by MassWildlife's five District Managers and District Wildlife Biologists, with the essential help of our primary climber, Kurt Palmateer, an Assistant Fish Culturist at the McLaughlin Fish Hatchery.

Today, Bald Eagles are almost common in some parts of Massachusetts. Nearly anyone who fishes on the Quabbin Reservoir or boats on the Connecticut River will see

at least one eagle during the day. As much as I have worked with Bald Eagles over the past three decades, I never get tired of them, and it looks like they are back to stay.

In Massachusetts, the Bald Eagle was included as Endangered on the first regulatory list of Endangered, Threatened, and Special Concern Species in 1980 when no breeding birds were left, and was down-listed to Threatened in 2012 with 39 active nests. Only four years later, we have at least 54 active nests (see Figure 1). The same story of recovery has played out across the Northeast.

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PHOTO ESSAY

Bald Eagles in Massachusetts

Above: A pair of Bald Eagles on the Merrimack River in West Newbury with one of their two chicks. Photographs by Bill Byrne unless otherwise indicated.

Left: A very young Bald Eagle chick on the ground for banding at Lake Watuppa, in Fall River. Photograph by Jason Zimmer.

A young Bald Eagle recently fledged from a Massachusetts nest.

Two adult Bald Eagles at Quabbin Reservoir fighting over food in the winter. One was banded as a chick in New York.

MUSINGS

New York, New York

Martha Steele

Virginia Rail. Photograph by Bob Stymeist.

Bob, Alvin, and I visited New York City in early September 2016 for a Thursday evening event at the Museum of Modern Art. We stayed that night at a nearby hotel in Times Square and then took a morning walk in Central Park, several blocks from the hotel.

The morning was hot and muggy, the sort of morning where you search for every available shady spot to avoid the scorching sun. We were taking in the sounds and sights of this surreal city that truly never seems to stop its hustle and bustle, even in the relatively serene Central Park. As birders, of course we were listening and looking for possible migrants moving through but the intense heat and humidity of the morning were not particularly conducive to birding or, for that matter, any other outdoor activity. Still, we pushed on exploring this 843-acre jewel in the heart of Manhattan.

We had no map and we were just walking the paths, randomly going this way or that when we arrived at a more densely wooded area. A sign indicated that we were entering The Ramble. Bob immediately recalled that this was one of the best birding areas in all of Central Park, especially for spring and fall migrations. It certainly looked the part: the paths narrowed, the denser woodland enveloped us, and we descended into the hilly area. The path soon opened at its base into a small clearing with a short bridge over a stream that emptied into a marshy pond. In the opening were several birders, binoculars around their necks and cameras at the ready. Neither Bob nor I had binoculars, and we looked the typical tourist types.

We asked what they were seeing. We got a typical, somewhat distracted and perfunctory response that serious birders give to nonbirders, thinking that we are looking at something like a deer or moose or other large animal, "Oh, not much, just looking at birds." We smiled, and then asked if there had been any warbler movement that morning. One of the birders perked up, realizing that we probably knew something about birds and said no, but there was a Virginia Rail out in the marsh and everyone was looking for it. That led to a conversation about Virginia Rails, how common or not they were in migration, how we see them often in northern Vermont, and then on to the general topic of how the fall migration was going. I am sure there were a few dubious glances sent my way, given that I had a guide dog by my side, but I did not attempt to enlighten anyone about my birding background.

We stood around with the birders for a few more minutes but decided that waiting for a Virginia Rail was probably not the best use of our limited time in New York City. We continued walking up and out of The Ramble and soon encountered more birders—some in business attire—hurrying down the path, talking about the rail as they went. We smiled and said, "This must be a good bird for the city."

We were also smiling at the knowledge that no matter where we go, it is always possible to run into birders. At the time, we looked like typical tourists and the birders we encountered had no reason to pay any attention to us, as they had no idea of our birding interest or skills. They were focused only on trying to see the bird and chatting with other birders that they knew. When we said something that identified us as birders, they became more engaged and inclusive of us in the search of the bird. This is one of the nice things about being a birder: you are immediately part of a community that embraces you no matter where you are.

Being part of the birding community led me to meet the man who I would ultimately marry, Bob Stymeist, as well as to forge many deep and lasting friendships. It is important to me to feel part of some community, as I think it probably is for all of us. We can easily strike up conversations, share our passions, joys, or disappointments at the birds we are searching for, and make new friends. Birding connects us to languages, cultures, and across geographic areas around the world. Because birders tend to get outside to search for birds as often as we can, we are connecting with oen another every time we step outside.

There are many communities, of course, that people can be part of, an infinite array of choices before us, be they related to our recreational pursuits, our religious

beliefs, our political leanings, our social advocacy passions, or others. Belonging to the birding community combines some of my core values: environmental protection and preservation, love of animals and wildlife, and respect for all life forms that must share the planet with Homo sapiens. I am pretty sure that my core values are in sync with those of many birders, which only adds to the intricacies of the web of our relationships.

There, in the heart of New York City, I could feel a bit uneasy, out of my element, overwhelmed with the noise and sea of humanity, but then in an instant, I was back in the familiar and comfortable embrace of birders, excited about trying to find a bird and eager to share their pursuit with us who, despite being total strangers, were accepted and swept into the local birding scene and the chase.

We were soon back into the world of people, cars, sirens, vendors, and just general controlled chaos (to my ears) as we continued our walking of the sidewalks of the city, stopping at famous attractions, such as Macy's, the New York Public Library, and the location of The Today Show. The brief interlude of birders looking for a Virginia Rail in the middle of Central Park quickly faded but was not forgotten. Exciting as New York City can be, there was something calming about accidentally running into birders doing what we all do: chase a good bird. Perhaps this is one reason that belonging to the birding community (or any other community, for that matter) is comforting, even more so when you are in an unfamiliar city, state, or country. So I will remember our few moments in The Ramble because those moments epitomized in a small way what it means to belong to the birding community.

***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>.*

CAROLINA WREN BY SANDY SELESKY

GLEANINGS

Costs of a Migratory Life

David M. Larson

Dark-eyed Junco. Photograph by A. Drauglis (CC BY-SA 2.0).

Many of New England's favorite bird species are migratory, including wood warblers, shorebirds, waterfowl, and seabirds. These birds largely breed in the north in the summer and migrate to more temperate to tropical climes during the nonbreeding seasons. There are significant physiological advantages to avoiding the harsh winters of the Arctic or Boreal forests. And there are significant reproductive advantages to migrating to the Arctic or Boreal zones for breeding, including abundant food and space for raising young. The evolution of this migratory strategy in so many taxa gives proof to its utility. But with benefits come costs and migration is a perilous practice. Mortality rates are higher in migratory populations than in similar nonmigratory populations, especially during the difficult first year. Increased predation, collision, and disease are all obvious causes of mortality. In addition to these acute effects, other challenges include increased oxidative stress, immunological challenges, and weight fluctuations or even breakdown and reconstitution of muscle and organs.

Bauer, et al. (2016) tested a hypothesis that a long-term detrimental effect of migration might be increased shortening of telomeres in a migratory population of Dark-eyed Juncos as opposed to a nonmigratory population. Telomeres are noncoding

DNA segments that cap chromosomes in all multicellular organisms and are thought to protect coding regions of DNA from damage. Telomere lengths shorten with each cell division; when they become short enough, cells senesce (die). While aging clearly leads to telomere shortening, oxidative stress and other metabolic insults may also cause shortening. And that brings us back to migrating juncos.

The authors assessed telomere length in two subspecies of Slate-colored Dark-eyed Juncos: *Junco hyemalis hyemalis*, which is migratory, and *J. h. carolinensis*, which is nonmigratory and resident in the southeastern United States. These birds share a wintering ground in Virginia where the authors captured them in Potter traps and mist nets in March. First winter *hyemalis* had completed one fall migration and then overwintered in the same habitat as the resident *carolinensis* birds. Blood samples from first winter birds were processed to extract red blood cell DNA, and telomere lengths were assessed using standard molecular assays.

Telomere lengths in *carolinensis* were significantly longer than in *hyemalis*, suggesting that one migration leg and the attendant stress was enough to cause loss of telomeres. Clearly, migration is fraught with danger, and the mortality in migratory birds, especially in the first year, is high. Bauer's work suggests that even for those that survive their first migration, the migratory lifestyle may have detrimental effects on life span. Alternatively, *carolinensis* may have more active DNA repair mechanisms than *hyemalis* and so could maintain telomere lengths. If either of these explanations is correct, it is clear that both subspecies are well adapted to their lifestyles. *Hyemalis* may concentrate its strategy on breeding in optimal locations for increased food availability and success in breeding, whereas *carolinensis* may focus more on a lower risk strategy.

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FIELD NOTE

The First Documented Nest of Merlins in Worcester County

Lucy Allen, Amy Lawson, and Justin Lawson

Merlin, Glen Valley Cemetery, Barre, Massachusetts. All photographs by Justin Lawson.

In July 2016, a nest of Merlins was discovered in Glen Valley Cemetery in Barre, Massachusetts. Andrew Vitz, the State Ornithologist, verified that it was the first documented evidence of nesting Merlins in all of Worcester County (Andrew Vitz, Central Massachusetts Birders Facebook page, comment on Justin Lawson's photo 9:38 pm on July 9). Discovering the nest site was a collaborative project involving Lucy Allen, who found the Merlins in the cemetery on July 7, and Justin Lawson and Amy Lawson, who uncovered the juveniles and the likely nest area on July 9. Following their observation of the Merlin family, Lucy was able to spot and photograph the nest on July 10. Andrew Vitz observed it on July 16.

The discovery came after Lucy Allen attended an interment of a relative in her family plot in the cemetery on June 25. The large cemetery opened in 1865. It was landscaped with many conifers and deciduous trees—now mature and tall—and features an expansive open meadow. During the interment service, the attendees

watched a Green Heron circle the Allen plot and land in a tree above the landscaped pond next to the plot. Lucy returned to the cemetery many mornings afterward in hope of photographing the Green Heron, with no success.

While searching for the Green Heron on July 7, Lucy heard the cawing of several crows. She suspected that they were heckling a raptor. Suddenly, a Blue Jay-sized bird flew with very swift wingbeats from a grove of tall conifers, across the pond and the Allen plot, over the meadow, and into a stand of trees. All the time, the bird kept up a high-pitched chattering alarm call. It perched on a branch in clear sight and Lucy was able to get several photographs. To this amateur birder, the alarm call was unfamiliar. The bird was much too small to be the Red-tailed Hawk or Broad-winged Hawk she usually saw in this location. Unable to identify the bird, she asked for help.

After posting a photograph on the Central Massachusetts Birders Facebook page, Lucy learned that the bird was a Merlin (*Falco columbarius*). Members of that group commented that it might be a rare breeder in this area.

The next day, July 8, Lucy returned to Glen Valley Cemetery seeking further evidence of a nest. She identified two adult Merlins at the cemetery. One was perched on a tall larch tree near the center of the cemetery, while another could be heard calling from tall conifers near the entrance. A dramatic aerial battle took place between a Red-tailed Hawk and the Merlin sentry as Lucy watched and took numerous photographs. She notified members of the Central Massachusetts Birders Facebook page that she had seen and heard two adult Merlins in Glen Valley Cemetery, and that one was obviously guarding a nest site as it fought off the Red-tailed Hawk. She suggested that other members of the group might want to look for the nest, as she was not able to pursue that project.

Justin Lawson and Amy Lawson responded to the invitation and went to Glen Valley Cemetery on Saturday, July 9. With directions from Lucy that the nest was probably near the entrance of the cemetery, Justin and Amy settled down on the mown path that crosses a triangle of land between two access roads. A tall grove of spruce grows on a knoll to the west, and tall pines grow on another knoll to the east. Given the tall grass and wetlands near this area, they encountered hordes of mosquitoes as they watched for the Merlins. They quickly encountered an adult male and then an adult female Merlin. They counted six Merlins spread among three trees, with four juveniles that were tree-hopping but not flying. For three hours, Justin and Amy observed and photographed the Merlin family and made sound and video recordings, but they did not find the nest.

The following morning, Lucy Allen returned to the cemetery in hope of observing the fledglings. Calculating where Justin and Amy had been standing, she looked up and, in a fortunate combination of morning light and a breeze, the branches of a tall white pine tree parted enough to reveal a large nest near the top, with Merlins posed on branches on either side. She reported the finding on the Central Massachusetts Birders Facebook page.

Two of three Merlins spotted on a single tree.

Meanwhile, Lucy reviewed photographs she had taken of the adults and noticed that one had a U.S. Fish & Wildlife Service metal band on its right leg. Since these Merlins were on the southern edge of their expanding range, Andrew Vitz thought that the information on the band could prove interesting (email from Andrew Vitz to Lucy Allen, July 15, 2016). On Saturday July 16, he, Bill Byrne, and Lucy gathered at the cemetery and used a mist net and a Great Horned Owl decoy to attempt to lure the adults. The adult Merlins proved too savvy to fall for the decoy and the recorded owl calls. They flew in close, took one long look at the decoy, and returned to the tall spruces where the family had gathered. Andrew Vitz noted that the cemetery was a wonderful habitat for the Merlins with its open woodlands created by the tall trees and meadow.

Many birders had the opportunity to photograph the first documented nesting Merlins of Worcester County. It was a successful team effort between a local but neophyte birder and birders with more knowledge and experience.

ABOUT BOOKS

Road Trip!

Mark Lynch

> ***Listening to a Continent Sing: Birding by Bicycle from the Atlantic to the Pacific.*** Donald Kroodsma. 2016. Princeton, New Jersey: Princeton University Press.
>
> "Beyond the glittering street was darkness and beyond the darkness the West. I had to go." (Jack Kerouac, *On the Road*, p. 58)
>
> "We are pioneers, embarking on a transcontinental journey unlike any before it." (*Listening to a Continent Sing,* p. xiii)

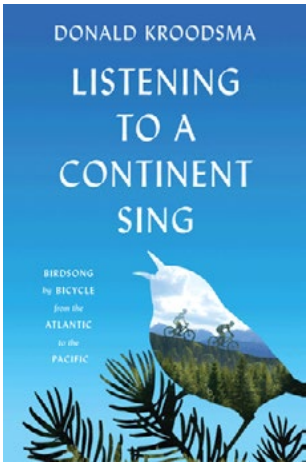
Tales both real and imagined of epic journeys have captured our cultural imaginations since Ancient Greece. Tales of the adventures while traveling long distances in strange lands have a global appeal. What is Homer's *Odyssey* other than an account of a gripping road trip complete with Cyclops and Circe? Who hasn't deeply enjoyed the stories of Sinbad's fanciful trips as told in the Arabian Nights? If you are old enough, you will remember learning world history as a series of long and exciting voyages by explorers like Marco Polo, Magellan, Captain Cook, and Lewis and Clark. In the 20th century, roads became commonplace and stories of trips by highway also became common. Children's books featured yellow brick roads and classic road trips like Freddie the Pig's trip to Florida. Stories of road trips became the subject for many Hollywood films like *It Happened One Night* (1934), *Sullivan's Travels* (1941), and the series of Bing Crosby and Bob Hope Road pictures (1940–1962). With the publishing of Jack Kerouac's autobiographical novel *On the Road* in 1957, the idea of a road trip became "hip" but also personal. We didn't need to discover new lands or even invent a new way to look at the history of life on the planet (as in Darwin's voyages) to experience high adventure and learn something about ourselves. If you had the time and the guts, you could hop in your car or stick out your thumb and travel about America on your own personal Odyssey and come back a changed man or woman. *Listening to a Continent Sing* is a classic road trip adventure, except that this story features bird song as the signposts.

> Others have traveled the continent to be sure, including birders who have listed all the species they've identified. Not us. We will reach more deeply, more intimately, far beyond such lists as we listen in on the personal lives of individual birds, using their songs and calls as a window into their minds. (p. xiii)

Donald Kroodsma is well known to the New England birding community as the research ornithologist who has written several unique books about the wonderful complexity of bird song. You need to see Kroodsma listening to a bird sing to really grasp how absolutely passionate he is about avian vocalizations. It is like watching an

opera fanatic listening to a perfectly sung aria. One of my favorite quotes by Kroodsma is "seeing birds is highly overrated." (p. 31) But the impetus for this trip was not just the prospect of hearing a lot of birds, but the politics of academia.

> I am a professor mired in a biology department that worships cells, genes, molecules, and most of all money. "Show us enough grant money and you don't have to waste your time teaching," I am told. The director of my graduate program crowed, "I'm willing to be an asshole to get what I want." I despaired. (p. 45)



In classic late 60s style, Kroodsma decides to "get his head together" about his academic life by taking the grand tour of the country and the country's bird song by bicycling the TransAmerica route established in 1976. He will tell only a few close friends before leaving town, and his plan is to avoid email for the entire trip. He will be out of touch with the university completely. Unlike many bicyclists who ride the trail from west to east to capitalize on prevailing winds, Kroodsma decides on taking the route from east to west. Although he lists several reasons for doing this, the main one is to experience the wonders of spring song in the Appalachians. If he rode from west to east, he would hit the Appalachians in mid to late summer. Along for the ride is Kroodsma's 24-year-old son, David, and it is this pairing that elevates *Listening to a Continent Sing* into a classic of road literature. Though David is a budding environmentalist concerned with global warming, he is not by any stretch a hardcore birder and furthermore never ever rises before sun-up. Kroodsma, on the other hand, always rises well before dawn, the better to enjoy the dawn chorus. Furthermore, he could spend hours listening to one chat or thrasher sing. The interplay between the two of them is a treat to follow along the way, and it brings this story familiar humanity. David, who is sending email to friends back home, sarcastically parodies his father by writing "New terrain, new birds—help me contain my excitement!" (p. 123) Of course, this doesn't deter Kroodsma senior from constantly pointing out why that wren singing there by the road is so spectacular. David finally answers at one point, "Cool…but how can all birds be the most spectacular?" (p. 223)

And so they begin their transcontinental adventure, bicycling from Virginia to Oregon. Like any good road trip adventure, there are numerous encounters with interesting people, odd attractions, and wonderful wildlife as well as birds. Kroodsma writes as passionately about the history, geology, and paleontology he sees along the way. In Kentucky, he reminisces about the Passenger Pigeon: "But that's all past. Like roadkill, the pigeons are forever silenced, our singing continent forever the less for it. Carolina parakeets would have been abundant here too, perhaps even a few Bachman's warblers, or the occasional ivory-billed woodpecker. But no more." (p.73)

But any good road trip story cannot consist of just positive events. On the downside were their experiences with nasty domestic wildlife, unpredictable weather, bicycles in need of a repair far from a good bike shop, and serious illness. But the pair

persevere through it all, Don often rising far before David and meeting him a bit farther down the road at a pre-agreed-upon location. And, of course, on every page there is Kroodsma's rich descriptions of the bird song he hears as the land changes from east to west, over several mountain ranges, through prairies and grasslands, until he reaches the shores of Oregon, which have a special place in his life. "Oregon is home, as I lived here while in graduate school from 1968 to 1972 before David was born." (p. 242) In the end the trip was a kind of homecoming where the bird song is definitely familiar to Kroodsma.

The most unique aspect of this book is its revolutionary use of QR Codes. QR stands for "quick response," and these are the perfectly square bar codes you often see on product labels or any number of signs. In the margins of *Listening to a Continent Sing* there are 381 labeled QR Codes. You download a free QR Code reader app on your cell phone, and when you get to a code, hold the phone over it. It will quickly take you to what is essentially another whole book accessed through your phone's screen. This consists of state of the art recordings of not just bird song, but atmospheric recordings too, like conversations with people they met along the way, bees gathering nectar in fields, even geysers. In addition, there are complete written descriptions of the bird songs and how to listen to them. Kroodsma has a way of describing species songs that stay with the reader: "Henslow's sparrow: brief, yes, but not pathetic." (p. 93)

Because these recordings are not limited by recording space, as they would be if the book included CDs, many examples of one species are included, and some of the recordings are quite long. A number of Dickcissel dialects are offered. The reader listens to the very odd songs of the chickadees that are found in the narrow zone of hybridization of Black-capped and Carolina. There is even a two-hour recording of a ruffed grouse drumming! (p. 230) Each recording also contains other birds, as well as natural and human-made sounds, all of which are identified. You end up reading this book with your ear buds in, and magically you are along for the ride. You experience the entire trip through your eyes *and* ears. The effect is to slow the reading about the trip down to Don's speed on a bicycle. Instead of speed reading this book, you savor each of Don's discoveries as you spend time with a species and get to learn about that one bird.

To top it off, there are numerous small drawings of bird species and nice drawings of Don and David "on the road" by Nancy Haver.

Listening to a Continent Sing is a book you don't just read, but experience. It is a unique addition to the "road trip" canon, and an intimate look into how Donald Kroodsma sees the world. It is also a memorable celebration of habitat and bird song, of eastern and western America and the road that connects both coasts.

> But why think about that when all the golden land's ahead of you and all kinds of unforeseen events wait lurking to surprise you and make you glad you're alive to see. (*On the Road,* p. 135)

LITERATURE CITED

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BIRD SIGHTINGS

July-August 2016

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

The weather lowlight of the period was the continuing drought, which started to have a major impact on our water supply, vegetation, and wildlife. Most of the state was considered to be under severe drought except Cape Cod, a small portion of southeast Massachusetts, and most of the Berkshires. In July, rainfall in Boston was just .87 of an inch, nearly three inches below average, and in August, 1.72 inches of rain was recorded, 1.63 inches below normal.

It was also very hot. July had 12 days in which the temperature reached 90˚ with a high of 98˚ in Boston on July 22, although many communities west and north of Boston saw the mercury exceed 100˚. It was the hottest August ever recorded in Boston. There were seven days with temperatures in the 90s with a high of 98˚ on August 12. A rare night-time tornado with winds of up to 100 miles an hour occurred on August 22 causing severe damage in the MetroWest area. Sections of Concord and Marlboro were especially hard hit.

R. Stymeist

WATERFOWL THOUGH ALCIDS

On July 12, a flock of eleven **Black-bellied Whistling-Ducks** was photographed in Sandwich. There are half a dozen earlier records of this species in the state, but the size of this flock is unprecedented. The Lesser Scaup that spent the last reporting period at Quabbin Reservoir lingered through the end of July, and the Ring-necked Duck that spent the last reporting period at Horn Pond in Woburn lingered through the entire period.

A Red-throated Loon was discovered on a pond in Hampden. A snapping turtle caught it, but the observer rescued the bird and took it to the Tufts Wildlife Clinic. The injuries, however, were so severe that the bird had to be euthanized. The **Pacific Loon** originally discovered in June on Nantucket met a similar fate when it was finally taken to Tufts on July 7.

As usual, the Brookline Bird Club's pelagic trip on August 20–21 was productive, highlighted by a **Black-capped Petrel**, five **Audubon's Shearwaters**, six **White-faced Storm-Petrels**, six **Band-rumped Storm-Petrels**, and six **Long-tailed Jaegers**.

Good numbers of shearwaters continued to be reported from Race Point in Provincetown. On August 19, a **Red-billed Tropicbird** was photographed south of Nantucket Island.

An unusual number of herons was reported at inland locations during this period, particularly in the Connecticut River Valley, where as many as 39 Great Egrets were seen in Longmeadow alone. Snowy Egrets and Little Blue Herons are much less likely to turn up at inland locations, but there were an exceptional number of both. A Cattle Egret in Longmeadow was an exciting inland record. It is possible that the conditions caused by the extreme drought created perfect habitat for foraging herons. During the last reporting period we were able to confirm **Sandhill Cranes** breeding in Worthington, and this reporting period they were confirmed at Burrage Pond Wildlife Management Area, where a pair have been reported for the past two years.

An **American Avocet** spent nearly three weeks at Plum Island between July and August. There was a two-week interval in which it was not spotted, but either the same bird or a second

one was discovered on August 29. A Whimbrel flying over South Quabbin on August 1 was a very rare inland record. A **Ruff** was photographed in Newburyport Harbor on July 27.

Laughing Gull is particularly uncommon inland, but in mid-August there were reports from Turners Falls and Wachusett Reservoir. There was no overlap in the dates and both reports were of juveniles, so it is possible it was the same individual. Two Laughing Gulls were also seen in Everett, which is also inland but a straight shot up the Mystic River from the ocean, so a bit less surprising. A **Franklin's Gull** was photographed on Plum Island on July 8 and was enjoyed by many on the island that day, but unfortunately was not seen after this. On July 9, a sea watcher at Race Point in Provincetown spotted a tern that he questioned—was it Bridled or Sooty? He sent photos to other experts who agreed he had photographed a **Bridled Tern**.

In Yarmouthport an observer watched two juvenile Forster's Terns begging from a pair of adults. Photographs suggested the young probably could fly, and if they could, we cannot eliminate the possibility of breeding elsewhere, but it is very likely that they hatched locally. The only known Massachusetts breeding record was of a pair on Plum Island in 1991.

M. Rines

Black-bellied Whistling-Duck			
7/12	Sandwich	11	G. Tanguilig
Snow Goose			
7/31	Worthington	3	v.o.
8/6	Tolland	3	D. Holmes
Brant			
7/10	Orleans	1	K. Schopp
8/3	E. Boston (B.I.)	1	A. Trautmann
8/20	Quincy	1	E. Lipton
Wood Duck			
7/1	Konkapot IBA	31	M. Lynch#
7/19	Burrage Pd	20	P. Peterson
7/31	Lincoln	25	J. Forbes
8/24	Belchertown	112	L. Therrien
Gadwall			
7/4	P.I.	13	D. + T. Swain
8/24	Turners Falls	1	E. Huston
American Wigeon			
8/10	Washington	2	J. Pierce
8/29	P.I.	1	D. Adrien
8/31	Northboro	1	T. Spahr
Blue-winged Teal			
8/2	Sheffield	2	K. Schopp
8/24	Belchertown	1	L. Therrien
8/28	Woburn	1	J. Forbes#
8/29	Washington	2	J. Pierce
Northern Shoveler			
8/16	P.I.	2	T. Wetmore
8/19	Sandwich	1	J. Pratt
Northern Pintail			
8/28	P.I.	5	T. Wetmore
Green-winged Teal			
7/5, 8/19	P.I.	20, 23	T. Wetmore
7/22	Washington	11	J. Pierce
8/1	Belchertown	3	L. Therrien
8/13	Waltham	4	J. Forbes
8/27	Holden	8	M. Lynch#
Ring-necked Duck			
thr	Woburn (HP)	1	v.o.
8/13	Waltham	1	J. Forbes
8/14	Pembroke	1	N. Marchessault
Lesser Scaup			
7/thr	Quabbin Pk	1	L. Therrien
Common Eider			
7/31	Acoaxet	67	M. Lynch#
8/2	Nahant	58	L. Pivacek
8/25	Rockport	181	M. Lynch#
White-winged Scoter			
8/28	Chatham	50	J. Layman
Black Scoter			
7/3	P'town	3	B. Nikula
8/28	Chatham	30	J. Layman
Long-tailed Duck			
7/1	Gloucester (E.P.)	1	G. Power
7/17	Chatham	11	M. Iliff#
8/9	P.I.	1	T. Wetmore
Bufflehead			
8/26	P.I.	2	D. Adrien
Hooded Merganser			
7/28	Paxton	3 juv	M. Lynch#
8/7	Shirley	2	J. Forbes
8/12	Holden	11	M. Lynch#
Common Merganser			
7/7	W. Springfield	30	S. Kellogg
7/15	Sandisfield	f w/6 yg	M. Lynch#
8/13	Quabbin (G43)	18	B. Kamp
8/24	Holyoke	31	L. Therrien
8/26	Williamstown	47	C. Johnson
Red-breasted Merganser			
7/12	Wellfleet	2	K. Schopp
Ruddy Duck			
7/1	P.I.	2	T. Wetmore
Northern Bobwhite			
7/3	Eastham (F.H.)	2	E. Goodman
7/9	P'town (R.P.)	4	S. Arena
7/16	Nantucket	5	D. Blatt
Ruffed Grouse			
7/1	Konkapot IBA	ad w/8 yg	M. Lynch#
7/17	Savoy SF	1	B. Harris
8/8	Falmouth	3	G. Hirth
Red-throated Loon			
7/3	Hampden	1	A. Downey
Pacific Loon			
7/1-7	Nantucket	1	S. Kardell#
Common Loon			
7/4	Ludlow	4	S. Motyl
7/23	Gardner	pr, 2 yg	G. Gove#
7/27	P.I.	15	R. Heil
8/11	Wachusett Res.	20	M. Lynch#
Pied-billed Grebe			
8/12	P.I.	2	T. Wetmore
8/27	Waltham	2	J. Forbes
Red-necked Grebe			
7/24	P'town (R.P.)	1	S. Arena

Red-necked Grebe (continued)

8/23	Quabbin Pk	1	L. Therrien

Black-capped Petrel

8/20	S. of Nantucket	1	BBC Pelagic

Cory's Shearwater

thr	Stellwagen	1450 max	v.o.
7/2, 31	N. Truro	175, 400	B. Nikula
7/10	P.I.	750	R. Heil
7/10, 8/4	P'town	1000, 500	B. Nikula
7/24	E. of Chatham	450	B. Nikula#
8/20	S. of Nantucket	911	BBC Pelagic

Great Shearwater

7/3, 16	E. of Chatham	750, 450	P. Flood#
8/1	Stellwagen	2000	L. Waters
8/13	P'town (R.P.)	500	S. Arena
8/28	E. of Chatham	200	B. Nikula

Sooty Shearwater

7/3	E. of Chatham	500, 150	v.o.
7/9	P'town (R.P.)	1366	S. Arena
7/10	P.I.	84	R. Heil
8/1	Stellwagen	600	L. Waters

Manx Shearwater

7/4	Revere	7	P. Peterson
7/24, 8/28	E. of Chatham	8, 40	B. Nikula#
8/13	P'town (R.P.)	119	S. Arena
8/25	Stellwagen	135	S. Arena#

Audubon's Shearwater

8/20-21	S. of Nantucket	5	BBC Pelagic
8/21	Stellwagen	1	M. Sylvia

Wilson's Storm-Petrel

7/2	N. Truro	250	B. Nikula
7/2, 8/13	P'town	200, 1200	B. Nikula
7/27, 8/8	E. of Chatham	1700,1100	B. Nikula#
8/1	Stellwagen	4500	L. Waters
8/20	S. of Nantucket	1383	BBC Pelagic

White-faced Storm-Petrel

8/20-21	S. of Nantucket	6	BBC Pelagic

Leach's Storm-Petrel

7/3	Stellwagen	9	A. Gurka
8/20-21	S. of Nantucket	51	BBC Pelagic

Band-rumped Storm-Petrel

8/20-21	S. of Nantucket	6	BBC Pelagic

Red-billed Tropicbird

8/19	S. of Nantucket	1 ph	E. Savetsky

Northern Gannet

7/10	P.I.	36	R. Heil
7/10	P'town	34	B. Nikula
7/23	Stellwagen	3	BBC (I. Giriunas)

Double-crested Cormorant

7/20	Winthrop	74	R. Stymeist
8/20	Chatham	500	SSBC (GdE)
8/20	Agawam	35	S. Kellogg
8/25	Rockport	428	M. Lynch#

Great Cormorant

7/28	Westport	1	M. Iliff

American Bittern

7/1	Konkapot IBA	2	M. Lynch#
7/17	Washington	2	R. Wendell
8/7	Burrage Pd	2	S. Jacques
8/10	GMNWR	4	G. Dupont

Least Bittern

7/9	P.I.	1	T. Wetmore
7/21	GMNWR	1	A. Bragg#
7/30	DWWS	2	N. Marchessault
7/30	Burrage Pd	1	L. Waters
8/28	Wayland	1	B. Harris

Great Egret

7/29	Longmeadow	39	S. Kellogg
7/31	Barnstable (S.N.)	37	P. Crosson
7/31	Westport	66	M. Lynch#
8/12	P.I.	250	T. Wetmore
8/29	Northampton	21	D. Allard

Snowy Egret

thr	Reports of indiv. from 4 inland locations		
7/28	Longmeadow	4	C. Suprenant
7/31	Barnstable (S.N.)	45	P. Crosson
8/6	Lexington	2	J. Forbes
8/11	P.I.	383	D. Chickering
8/12	E. Boston (B.I.)	72	DCR (S. Riley)
8/24	W. Springfield	5	D. Schell

Little Blue Heron

7/20-8/31	Reports of indiv. from 9 inland locations		
7/25	Gloucester	10	C. Haines
7/31	Barnstable (S.N.)	2	P. Crosson
8/5	Essex	3	D. Brown
8/5	Nantucket	2	E. Landi

Tricolored Heron

7/2	Manchester	1	J. Hoye#
7/8	P.I.	1	G. Wood#
7/10	Mattapoisett	1	N. Marchessault

Cattle Egret

7/29	Longmeadow	1	A. Robblee

Green Heron

7/20	W. Newbury	7	J. Berry#
8/4	Burrage Pd	4	P. Peterson
8/6	Woburn (HP)	4	J. Thomas
8/24	Belchertown	15	L. Therrien
8/27	W. Springfield	5	S. Kellogg

Black-crowned Night-Heron

7/1	P.I.	27	D. Adrien
8/3	Ipswich	16	J. Berry
8/25	P'town	11	S. Arena#
8/27	Eastham	71	D. Clapp
8/31	Orleans	18	K. Schopp

Yellow-crowned Night-Heron

7/5	P.I.	4	D. Adrien
8/1-23	Milton	3 imm	v.o.
8/3	Ipswich	10	N. Dubrow
8/10	Newbypt	10	P. Lowe
8/18	Chatham	3	J. Hoye#
8/22	Plymouth	3	E. Corbett
8/23	Marshfield	3	E. Corbett
8/25	WBWS	4	M. Faherty#
8/27	Eastham	12	D. Clapp

Glossy Ibis

7/2	Manchester	171	J. Hoye#
7/16	Wakefield	2	P. + F. Vale#
7/20	Lexington	4	M. Rines
8/7	Nantucket	5	L. Dunn
8/18	Chatham	9	J. Hoye#

Black Vulture

7/31	Sheffield	41	K. Schopp
8/30	Millbury	1	L. Abbey

Turkey Vulture

7/28	P.I.	9	L. Waters
8/4	Hanson	8	P. Peterson
8/13	Sheffield	13	M. Lynch#
8/20	Mt. Wachusett	15	S. Olson#
8/23	Haverhill	35	C. Gibson

Osprey

7/28	P.I.	14	L. Waters
7/31	Westport	74	M. Lynch#
7/31	Acoaxet	39	M. Lynch#
8/18	Chatham	12	J. Hoye#

Bald Eagle

7/3	Quabbin Pk	3 pr, 6 juv	Mattuchio
8/17	Holden	3	M. Lynch#
8/29	Mt. Wachusett	3	Hawkcount (SO)

Northern Harrier

7/21-8/31	Reports of indiv. from 9 locations		
8/31	P.I.	7	R. Heil

Sharp-shinned Hawk

7/19	Charlemont	1	E. Ryba
7/27	Northboro	1	T. Spahr

Sharp-shinned Hawk (continued)
8/6 Northfield 1 E. Huston
8/25 GMNWR 2 A. Bragg#
Cooper's Hawk
7/23 Holden 3 M. Lynch#
7/26 Belmont 4 J. Forbes
8/20 Leicester 4 M. Lynch#
Northern Goshawk
7/30 Quabbin (G43) 1 imm B. Kamp
Red-shouldered Hawk
8/2 Milton 3 imm P. Peterson
Broad-winged Hawk
7/3 Quabbin (G10) 3 SSBC (GdE)
7/16 Ware R. IBA 6 M. Lynch#
8/21 Lexington 4 J. Forbes
8/29 Mt. Wachusett 10 Hawkcount (SO)
Clapper Rail
7/3 Fairhaven 1 I. Davies
King Rail
7/31 Burrage Pd 1 ad, 2 juv Marchessault
Virginia Rail
7/1 Konkapot IBA 5 M. Lynch#
7/31 DWWS 2 K. Rawdon
8/11 GMNWR 3 A. Bragg#
8/13 Belchertown 3 L. Therrien
Sora
7/5 Bolton Flats 1 P. Paul
7/5 P.I. 1 T. Wetmore
7/17 W. Bridgewater 2 N. Marchessault#
7/28 DWWS 1 D. Hlousek
7/29 W. Roxbury (MP) 1 M. McMahon
8/13 Walpole 1 V. Zollo
8/25 GMNWR 1 A. Bragg#
Common Gallinule
7/1 Konkapot IBA 1 M. Lynch#
American Coot
thr Nantucket 1 S. Kardell#
Sandhill Crane
thr Burrage Pd pr, 1 juv P. Sheehan
7/1-9 Cumb. Farms 1 v.o.
7/3 Bolton Flats 1 B. Kamp
7/24 Worthington pr + 1 yg M. Lynch#
Black-bellied Plover
7/28-8/31 P.I. 150 v.o.
8/17 Newbypt 250 J. Berry
8/30 Winthrop 50 P. Peterson
8/31 Ipswich (C.B.) 80 J. Berry#
American Golden-Plover
8/18-31 P.I. 1 B. Harris
8/21 Essex 1 D. Brown
8/30 Winthrop 1 P. Peterson
Semipalmated Plover
7/12-8/31 P.I. 1300 max v.o.
8/6 Washington 18 J. Pierce
8/7 Woburn (HP) 14 K. Hartel
8/14 Chatham 490 F. Atwood
8/20 Acoaxet 134 M. Lynch#
8/27 Revere (POP) 115 R. Stymeist
8/31 Ipswich (C.B.) 530 J. Berry#
Piping Plover
7/5 Revere B 10 ad, 16 yg R. Stymeist
7/16 Monomoy 107 J. Layman
7/23 Plymouth B. 23 SSBC (GdE)
7/27 Ipswich (C.B.) 22 J. Berry
7/28 P.I. 26 L. Waters
Killdeer
7/4 Sterling 30 B. Kamp
7/30 Holden 46 M. Lynch#
8/23 Newbury 56 P. + F. Vale
American Oystercatcher
7/26 E. Boston (B.I.) 9 DCR (S. Riley)
8/9 Westport 2 J. Hoye#
8/14 Chatham 33 F. Atwood
8/18 N. Monomoy 75 D. Heitzmann#
8/30 Winthrop 7 P. Peterson
American Avocet
7/25-8/15 P.I. 1 T. Wetmore + v.o.
8/29-31 P.I. 1 M. Brengle + v.o.
Spotted Sandpiper
7/4 Sterling 5 B. Kamp
7/30 Holden 17 M. Lynch#
8/2 Lexington 5 J. Forbes
8/9 Westport 5 J. Hoye#
Solitary Sandpiper
7/6 Pittsfield 5 J. Pierce
7/28 Washington 9 J. Pierce
7/30 Holden 11 M. Lynch#
8/4 S. Peabody 5 R. Heil
8/5 Easton 6 K. Ryan
8/12 Holden 7 M. Lynch#
Greater Yellowlegs
7/15 Longmeadow 1 L. Richardson
8/19 P.I. 160 T. Wetmore
8/27 Holden 9 M. Lynch#
8/27 Lincoln 3 J. Forbes
Willet
7/9 Westport 17 M. Lynch#
7/11 P.I. 30 T. Wetmore
8/3 Monomoy 48 D. Clapp
8/18 Chatham 12 J. Hoye#
Western Willet
8/13 P.I. 2 R. Murphy
8/17 Lynn 1 R. Heil
8/21 Chatham (S.B.) 6 B. Harris#
Lesser Yellowlegs
7/14 Longmeadow 1 L. Richardson
7/20-8/31 P.I. 125 max v.o.
8/10 Newbypt H. 100 MAS (D. Moon)
8/13 Woburn (HP) 9 J. Forbes#
8/13 Quabbin (G43) 10 B. Kamp
8/27 Lincoln 6 J. Forbes
Upland Sandpiper
7/14 Ludlow 2 L. Therrien
7/23 Plymouth 2 G. d'Entremont
8/30 Holden 1 M. Lynch#
Whimbrel
thr P.I. 4 max v.o.
7/19 Truro 10 J. Boyce
7/31 S. Quabbin 1 L. Therrien
8/5 Essex 7 D. Brown
8/7 Wellfleet 35 L. Waters
8/12 Chatham 13 F. Atwood
8/20 S. of Nantucket 45 BBC Pelagic
Hudsonian Godwit
7/16 Orleans 1 K. Schopp
8/5 Monomoy 20 B. Harrington
8/7, 15 P.I. 1, 2 Hayward, Watson
8/20 S. of Nantucket 5 BBC Pelagic
8/21 Chatham (S.B.) 2 B. Harris#
8/28 Scituate 1 N. Marchessault
Marbled Godwit
8/24 Chatham 3 M. Faherty#
8/26 Orleans 1 K. Schopp
8/27-31 Ipswich (C.B.) 3 D. Williams
8/28 Nantucket 2 L. Dunn#
8/28-31 Scituate 1 N. Marchessault
Ruddy Turnstone
7/5, 8/31 P.I. 5, 15 T. Wetmore
8/9 Westport 40 J. Hoye#
8/14 Chatham 185 F. Atwood
8/25 Rockport 3 M. Lynch#
Red Knot
8/14 Chatham 580 F. Atwood
8/16 Monomoy 250 B. Harrington

Red Knot (continued)

8/19	Essex	17	D. Brown
8/31	P.I.	29	R. Heil

Sanderling

8/9	Westport	200	J. Hoye#
8/16	Monomoy	1000	B. Harrington
8/19	Essex	207	D. Brown
8/26	P.I.	300	D. Adrien

Semipalmated Sandpiper

7/27-8/31	P.I.	3500 max	v.o.
8/2	Nahant	850	L. Pivacek
8/5	Monomoy	1800	B. Harrington
8/12	Essex	1123	D. Brown
8/13, 28	Woburn	33, 75	J. Forbes#
8/31	Longmeadow	14	S. Kellogg

Western Sandpiper

8/2	Nahant	1	L. Pivacek
8/4	E. Boston (B.I.)	1	DCR (S. Riley)
8/27	P.I.	1 ph	D. Swain#

Least Sandpiper

7/20	P.I.	115	R. Heil
7/23, 8/27	Lexington	57, 75	J. Forbes
7/27	E. Boston (B.I.)	50	DCR (S. Riley)
7/28	Washington	17	J. Pierce
8/13	Woburn (HP)	85	J. Forbes#
8/21	Holden	285	M. Lynch#

White-rumped Sandpiper

thr	P.I.	141 max	v.o.
8/2	Holden	4	J. Lawson#
8/5	Essex	68	D. Brown
8/12	E. Boston (B.I.)	5	DCR (S. Riley)
8/13	Woburn (HP)	2	J. Forbes#

Baird's Sandpiper

7/26	Ipswich (C.B.)	2 ph	N. Dubrow
8/19	Chatham	1	B. Harrington
8/24	Braintree	2	E. Lipton
8/27	N. Truro	1	S. Arena
8/29	N. Adams	1	M. Morales
8/30	Westboro	1	T. Spahr#

Pectoral Sandpiper

7/16	Nantucket	3	L. Dunn
8/13	Quincy	2	P. Peterson
8/20	Wakefield	2	P. + F. Vale
8/23	E. Boston (B.I.)	2	P. Peterson
8/28	P.I.	3	P. + F. Vale

Dunlin

thr	P.I.	2-3	v.o.

Stilt Sandpiper

thr	P.I.	13 max	v.o.
7/17	Squantum	1	J. Hoye#
7/28	E. Boston (B.I.)	2	DCR (S. Riley)
8/3	Ipswich	2	J. Berry
8/25	Essex	1	D. Brown#

Buff-breasted Sandpiper

8/20	Essex	1	D. Brown
8/27	P.I.	2	P. + F. Vale#
8/28	Eastham (CGB)	1	W. Mumford
8/28	Saugus	1	S. Zendeh#
8/30	Holden	1	M. Lynch#

Ruff

7/27	Newbypt H.	1	S. Sullivan

Short-billed Dowitcher

7/16, 8/25	Revere	4, 16	Zendeh, Peterson
7/17-8/31	P.I.	255 max	v.o.
7/17	Squantum	40	J. Hoye#
7/26, 8/12	E. Boston (B.I.)	3, 35	DCR (S. Riley)
8/14	Chatham	2120	F. Atwood

Long-billed Dowitcher

8/7-22	P.I.	1-2	v.o.

Wilson's Snipe

7/27	Washington	2	J. Pierce
8/22	Williamstown	1	C. Johnson

Wilson's Phalarope

7/1	P.I.	3	D. Adrien

Red-necked Phalarope

8/1	Stellwagen	4	L. Waters
8/13	E. of Chatham	7	P. Flood#
8/20-21	S. of Nantucket	83	BBC Pelagic
8/27	Lincoln	1 ph	N. Levey#
8/29	P'town (R.P.)	8	D. Fruguglietti

Red Phalarope

8/20	S. of Nantucket	10	BBC Pelagic

Black-legged Kittiwake

7/2, 23	N. Truro	12, 12	B. Nikula
7/9	P'town (R.P.)	15	S. Arena

Bonaparte's Gull

8/6	Huntington	2	D. McLain
8/14	Quabbin (G35)	1	T. Pirro
8/17	Newbypt	350	J. Berry
8/24	Boylston	1	B. Kamp
8/30	Nahant	400	S. Zendeh

Black-headed Gull

7/15-25	P'town	1	E. Masterson, v.o.
8/19	P'town (R.P.)	1	M. Schall
8/30-31	Nahant	1	S. Zendeh + v.o.

Little Gull

7/3-16	P'town	2 imm	B. Nikula
8/7	N. Truro	1	S. Arena

Laughing Gull

7/23	Plymouth B.	150	SSBC (GdE)
7/24	P'town (R.P.)	1700	R. Heil
8/15	Turners Falls	1	J. Smith
8/17-20	Wachusett Res.	1 imm	K. Bourinot#
8/24-30	Everett	2	R. Stymeist#
8/28	E. of Chatham	1000	B. Nikula

Franklin's Gull

7/8	P.I.	1 ph	B. Harris#

Herring Gull

8/28	E. of Chatham	1200	B. Nikula

Lesser Black-backed Gull

8/20	Chatham (S.B.)	5	B. Harris#
8/31	Ipswich (C.B.)	1 imm	J. Berry#

Bridled Tern

7/9	P'town (R.P.)	1 ph	S. Arena

Least Tern

7/20	Winthrop	36	R. Stymeist
7/23	Plymouth B.	75	SSBC (GdE)
7/27	Ipswich (C.B.)	120	J. Berry
8/4	P'town	100	B. Nikula
8/31	P.I.	26	R. Heil

Caspian Tern

7/2, 9	P'town (R.P.)	1, 1	Arena, Schopp
7/27	P.I.	4	M. Wilson
8/20	Quincy	2	E. Lipton
8/28	BHI (Thompson I.)	5	V. Zollo#

Black Tern

7/24	P'town (R.P.)	21	R. Heil
7/31, 8/27	Nantucket	200, 200	L. Dunn#
8/22	P.I.	2	S. Miller#
8/23	Quabbin Pk	1	L. Therrien

Roseate Tern

8/12	P.I.	5	BBC (S. Hepburn)
8/13	P'town (R.P.)	1600	S. Arena

Common Tern

thr	P'town (R.P.)	6500 max	v.o.
7/23	Somerville	13	J. Hirst
8/9	P.I.	300	M. Watson
8/25	Chatham (S.B.)	7000	S. Sullivan#

Arctic Tern

7/11	Orleans	1	K. Schopp
7/20	P'town	2 ad	B. Nikula
8/20	Chatham (S.B.)	1 1S	B. Harris#

Forster's Tern

7/21	Yarmouthpt	2 ad + 2 juv	R. Debenham

Forster's Tern (continued)			
8/19	P.I.	6	D. Adrien
8/20	Westport	3	M. Lynch#
Royal Tern			
7/1-22	P'town (R.P.)	1-4	v.o.
7/14	Orleans	2	K. Schopp
7/16	Eastham	2	S. Paventy#
Black Skimmer			
7/9	Plymouth B.	2	SSBC (Emmons)
7/16	P'town	1	B. Nikula
8/8	Westport	1	E. Lipton
8/15	Edgartown	33	S. Whiting#
South Polar Skua			
7/24	E. of Chatham	1	P. Flood#
Pomarine Jaeger			
7/3	E. of Chatham	4	P. Flood#
8/20	Stellwagen	2	S. Arena#
8/20-21	S. of Nantucket	2	BBC Pelagic
Parasitic Jaeger			
7/10, 8/11	P'town	1, 2	B. Nikula
8/19	Chatham (S.B.)	4	B. Harris#
8/20-21	S. of Nantucket	2	BBC Pelagic
Long-tailed Jaeger			
8/1	Stellwagen	2	L. Waters#
8/20-21	S. of Nantucket	10	BBC Pelagic
Common Murre			
7/9	Rockport (A.P.)	1	R. Heil
Razorbill			
8/9	P'town (R.P.)	2	J. Layman
Black Guillemot			
8/11	Ipswich (C.B.)	1	S. Weston
8/27	P.I.	1	D. Swain
Atlantic Puffin			
7/9	Rockport (A.P.)	1	R. Heil

DOVES THROUGH FINCHES

On Nantucket two **White-winged Doves** were noted in August, the first report of this species since August 2014. The fall movement of Common Nighthawks is an event many birders anxiously await. This year numbers were down from the same period last year. Several observers mentioned that there was no hatch of flying ants, which often occurs in August. A **Chuck-will's-widow** was heard in Orleans on Pochet Island, a traditional location for this species in recent years. A pair of **Merlins** was confirmed nesting in Barre, a first breeding record for Worcester County. Another pair of Merlins was seen defending a nest at Clark's Cove on Nantucket.

A July 2 report of an **Olive-sided Flycatcher** in Great Barrington gave no further indication of breeding; this species has bred in Berkshire County in the past but not recently. Yellow-bellied Flycatchers are one of the last of the empids to arrive in spring and one of the first to migrate in the fall. Manomet banded one on August 30. The dry weather this period was a positive event for the breeding success of Purple Martins. Colonies in Mashpee, Rehoboth, Marshfield, Norfolk, and Plum Island had great results; nearly all eggs hatched resulting in fledged young. Another interesting breeding report was of a Blue Grosbeak nesting at Cumberland Farms. A female was seen carrying nesting material in June. This nest apparently failed, but she was found building another nest in July. The annual Tree Swallow event on Plum Island never disappoints, at least 20,000 were estimated in mid-August.

By August, birds were on the move. A total of 29 warbler species was reported during the period including three Mourning, two Hooded, and a hatch year Cerulean, which is a rare but regular migrant in North Shore coastal thickets in August. Other noteworthy August migrants included Philadelphia Vireo in Williamstown, Swainson's Thrush in Medford, and Dickcissels in Wayland and on Plum Island. A White-winged Crossbill visited a feeder in Pittsfield, and there were reports of Evening Grosbeaks from four localities in central and western Massachusetts.

R. Stymeist

White-winged Dove

8/20, 28	Nantucket	2, 1	T. Pastuszak#

Yellow-billed Cuckoo

thr	Reports of indiv. from 11 locations		
7/3	Quabbin (G10)	2	SSBC (GdE)
8/8	Ware River IBA	2	M. Lynch#

Black-billed Cuckoo

7/7	Burrage Pd	1	B. Loughlin
7/12	Hamilton	1	J. Berry
7/26	P.I.	1	D. Adrien
7/31	HRWMA	2	T. Pirro

Eastern Screech-Owl

7/30	Burrage Pd	1	L. Waters
8/10	Winchester	1	P. Devaney
8/10	Arlington	1	D. Brisco
8/20	Morris I.	1	SSBC (GdE)
8/20	Woburn	1	M. Rines
8/27	P.I.	1	G. d'Entremont#

Great Horned Owl

7/26	E. Boston (B.I.)	1	DCR (S. Riley)
7/28	P.I.	1	D. Adrien
7/28	W. Roxbury (MP)	1	T. Bradford
8/4	E. Boston (B.I.)	1	DCR (S. Riley)
8/21	W. Roxbury (MP)	2	J. Battenfeld

Barred Owl

7/3	Quabbin (G10)	1	SSBC (GdE)
7/8	Bolton	1	M. Lynch#
7/31	HRWMA	1	T. Pirro
8/11	Ipswich	2	J. & N. Berry

Common Nighthawk

8/15-31	Northampton	1717	T. Gagnon
8/17	Paxton	12	R. Jenkins
8/20, 26	Leicester	59, 104	M. Lynch#
8/24	Pittsfield	430	G. Hurley
8/26	Williamstown	530	C. Johnson
8/27	Harvard	65	BBC (Moosbruker)
8/27	Townsend	100	R. Templeton
8/30	Longmeadow	107	L. Richardson

Chuck-will's-widow

7/16	Orleans	1	M. Iliff#

Eastern Whip-poor-will

7/2	Camp Edwards	3	J. McCumber
7/4	Townsend	3	J. Shetterly
8/20	P.I.	3	N. Landry

Chimney Swift

7/30	Lexington	60	C. Cook
8/20	Leicester	29	M. Lynch#
8/27	Pepperell	100	M. Resch
8/30	Mt.A,	45	R. Stymeist#

Ruby-throated Hummingbird

7/31	Whately	41	A. Hill
8/11	GMNWR	6	A. Bragg#
8/15	Huntington	19	M. Lynch#
8/16	DFWS	5	P. Sowizral

American Kestrel

7/23	Plymouth	1 f	G. d'Entremont
7/26	E. Boston (B.I.)	3	DCR (S. Riley)
8/18	Bradford	4	D. Larson
8/28	Saugus	4	S. Zendeh#

Merlin

7/3	Nantucket	2	T. Sackton
7/9-17	Barre	pr + 4 yg	L. Allen + v.o.

Peregrine Falcon

7/1	Konkapot IBA	2	M. Lynch#
8/14	P.I.	3	P. + F. Vale
8/29	Leicester	2	M. Lynch#

Red-headed Woodpecker

7/4	Amherst	1	M. Halbeisen
8/21	Lexington	1	J. Forbes

Yellow-bellied Sapsucker

7/1	Konkapot IBA	13	M. Lynch#
7/3	Quabbin (G10)	11	SSBC (GdE)
7/11	Wendell	14	M. Lynch#
7/17	Savoy SF	8	B. Harris

Hairy Woodpecker

7/3	Quabbin (G10)	7	SSBC (GdE)
7/11	Wendell	8	M. Lynch#

Pileated Woodpecker

7/4	Paxton	2	M. Lynch#
7/8	Bolton	2	M. Lynch#
8/15	Huntington	2	M. Lynch#
8/21	Holden	2	M. Lynch#

Olive-sided Flycatcher

7/2	Gr Barrington	1	K. Schopp
8/2	Sheffield	1	K. Schopp
8/15	Belchertown	1	L. Therrien

Eastern Wood-Pewee

7/3	Quabbin (G10)	12	SSBC (GdE)
8/15	Huntington	15	M. Lynch#
8/21	Groton	7	J. Forbes
8/21	Holden	9	M. Lynch#

Yellow-bellied Flycatcher

8/24	Windsor	1	T. Gagnon
8/30	Manomet	1 b	T. Lloyd-Evans#

Acadian Flycatcher

7/1	Westport	1	C. Floyd
7/3	Quabbin (G10)	1	SSBC (GdE)
7/5	Quabbin (G8)	1	L. Therrien
7/5	Pepperell	1	M. Resch

Alder Flycatcher

7/6	Wayland	4	B. Harris
7/16	Ware R. IBA	2	M. Lynch#
7/24	Huntington	25	M. Lynch#

Willow Flycatcher

7/28	P.I.	9	L. Waters
8/14	Lexington	3	J. Forbes

Least Flycatcher

7/3	Rowe	3	M. Lynch#
7/11	Wendell	5	M. Lynch#
8/20	Marlborough	1	J. Forbes
8/31	P.I.	1	R. Heil

Great Crested Flycatcher

7/9	Westport	4	M. Lynch#
7/12	Hamilton	8	J. Berry
8/6	Wompatuck SP	4	G. d'Entremont

Eastern Kingbird

7/1	Konkapot IBA	18	M. Lynch#
7/26	Quabog IBA	29	M. Lynch#
7/27	P.I.	38	R. Heil
7/31	Barnstable (S.N.)	26	P. Crosson
8/18	Bradford	6	D. Larson

White-eyed Vireo

7/9	Acoaxet	2	M. Lynch#
7/23	Westport	1	R. Stymeist#
8/9	Hampden	1	C. Caron

Yellow-throated Vireo

7/3	Quabbin (G10)	3	SSBC (GdE)
7/15	Sandisfield	2	M. Lynch#
7/26	Quabog IBA	3	M. Lynch#

Blue-headed Vireo

7/3	Colrain	5	M. Lynch#
7/3	Quabbin (G10)	5	SSBC (GdE)
7/15	Sandisfield	7	M. Lynch#
7/16	Ware R. IBA	6	M. Lynch#

Warbling Vireo

7/2	Wakefield	10	P. + F. Vale
7/26	Quabog IBA	19	M. Lynch#

Philadelphia Vireo

8/28	Williamstown	2	C. Johnson

Red-eyed Vireo

7/2	Phillipston	85	M. Lynch#
7/3	Quabbin (G10)	76	SSBC (GdE)
7/17	Savoy SF	28	B. Harris
8/15	Huntington	34	M. Lynch#

Red-eyed Vireo (continued)

8/23	Medford	5	M. Rines#

Fish Crow

7/21	Gloucester	8	R. Stymeist
7/25	Ipswich	5	J. Berry#
7/30	Essex	2	P. Brown
8/18	Beverly	7	J. Paluzzi

Common Raven

7/3	Colrain	4	M. Lynch#
7/14	Plymouth	6	K. Doyon
7/25	E. Boston (B.I.)	2	DCR (S. Riley)
7/26	Paxton	3	M. Lynch#
7/27	P.I.	2	R. Heil
8/15	Huntington	3	M. Lynch#
8/22	Mt. Wachusett	4	R. Chase

Horned Lark

7/23	Plymouth	2	G. d'Entremont

Purple Martin

7/16	Mashpee	76 ad 162 yg	M. Keleher#
7/19	Norfolk	7	D. Williams
7/19	Burrage Pd	8	P. Peterson
8/thr	P.I.	104 fl	S. McGrath
8/thr	Norfolk	13 ad, 15 imm	M. Linck
8/thr	Rehoboth	89 pr, 267 imm	R. Marr
8/1	DWWS	16	J. Hoye#
8/8	WBWS	1 ad 2 juv	M. Faherty

Tree Swallow

7/19	Burrage Pd	500	P. Peterson
8/17	P.I.	20,000	J. Berry
8/19	Ipswich (C.B.)	989	D. Brown
8/20	Acoaxet	1400	M. Lynch#
8/28	Chatham	1200	J. Layman

Northern Rough-winged Swallow

7/1	Konkapot IBA	1	M. Lynch#
7/2	Wakefield	2	P. + F. Vale
8/3	P.I.	1	MAS (D. Moon)
8/21	Holden	1	M. Lynch#

Bank Swallow

7/19	Burrage Pd	8	P. Peterson
7/23	Plymouth B.	10	BBC (GdE)
8/7	P.I.	16	E. Nielsen

Cliff Swallow

7/1	Konkapot IBA	25	M. Lynch#
8/8	Aquinnah	2	N. Bonomo
8/10	P.I.	3	MAS (D. Moon)
8/24	Holyoke	2	L. Therrien

Barn Swallow

8/4	GMNWR	200	K. Dia#
8/8	Quabog IBA	76	M. Lynch#
8/20	Acoaxet	300	M. Lynch#
8/25	Wayland	515	B. Harris

Red-breasted Nuthatch

7/3	Colrain	26	M. Lynch#
7/17	Savoy SF	5	B. Harris
8/11	MSSF	8	G. d'Entremont
8/20	Marlborough	5	J. Forbes
8/31	P.I.	17	R. Heil

Brown Creeper

7/3	Colrain	6	M. Lynch#
7/13	GMNWR	5	A. Bragg#
8/5	Stoughton	2	G. d'Entremont
8/20	Marlborough	3	J. Forbes

Carolina Wren

7/9	Westport	6	M. Lynch#
8/11	Westford	3	S. Selesky
8/15	Lynn	4	T. McElligott

House Wren

7/2	Phillipston	6	M. Lynch#
7/9	Acoaxet	5	M. Lynch#
8/13	Sandisfield	5	M. Lynch#
8/15	Huntington	7	M. Lynch#

Winter Wren

7/3	Colrain	7	M. Lynch#
7/15	Sandisfield	1	M. Lynch#
7/16	Ware R. IBA	1	M. Lynch#

Marsh Wren

7/1	Konkapot IBA	16	M. Lynch#
7/7	GMNWR	31	A. Bragg#
7/14	Ludlow	4	L. Therrien
7/28	P.I.	25	T. Wetmore

Blue-gray Gnatcatcher

7/3	Nantucket	4	S. Kardell
8/9	Lexington	4	J. Forbes
8/23	Medford	3	M. Rines#
8/25	Rockport	7	M. Lynch#

Golden-crowned Kinglet

7/17	Savoy SF	2	B. Harris
7/27	Westport	2	M. Iliff
8/21	Jamaica Plain	2	P. Peterson

Veery

7/1	Konkapot IBA	44	M. Lynch#
7/2	Phillipston	31	M. Lynch#
7/3	Quabbin (G10)	29	SSBC (GdE)
7/11	Wendell	23	M. Lynch#
7/12	Hamilton	3	J. Berry

Swainson's Thrush

8/23	Medford	1	M. Rines#

Hermit Thrush

7/3	Colrain	5	M. Lynch#
7/3	Quabbin (G10)	7	SSBC (GdE)
7/11	Wendell	15	M. Lynch#
7/16	Ware R. IBA	26	M. Lynch#

Wood Thrush

7/3	Quabbin (G10)	5	SSBC (GdE)
7/15	Sandisfield	4	M. Lynch#
7/30	Holden	4	M. Lynch#

Gray Catbird

7/1	Konkapot IBA	68	M. Lynch#
7/2	Wakefield	16	P. + F. Vale
7/17	Cambr. (Alewife)	16	K. Hartel
7/27	P.I.	93	R. Heil
8/18	Manomet	56 b	T. Lloyd-Evans#

Brown Thrasher

7/3	Colrain	1	M. Lynch#
7/3	Dunstable	1	J. Forbes
7/27	P.I.	8	R. Heil

Cedar Waxwing

7/24	Huntington	32	M. Lynch#
7/27	P.I.	92	R. Heil
8/20	Leicester	24	M. Lynch#

Ovenbird

7/2	Phillipston	41	M. Lynch#
7/3	Quabbin (G10)	44	SSBC (GdE)
7/3	Colrain	23	M. Lynch#
8/4	Hanson	2	P. Peterson
8/6	Wompatuck SP	3	G. d'Entremont

Louisiana Waterthrush

7/13	Ashby	4	G. Dysart
7/24	Huntington	5	M. Lynch#
8/12	Manomet	1	I. Davies
8/13	Belchertown	1	L. Therrien

Northern Waterthrush

7/11	Wendell	2	M. Lynch#
8/10	MNWS	2	R. Heil

Blue-winged Warbler

8/9	Lexington	2	J. Forbes
8/10	MNWS	1	R. Heil
8/18	N. Brookfield	1	R. Jenkins
8/26	Rehoboth	1	K. Bartels

Black-and-white Warbler

7/2	Phillipston	7	M. Lynch#
7/15	Sandisfield	5	M. Lynch#
7/17	Cambr. (Alewife)	2	K. Hartel
7/30	Lexington	2	C. Cook
8/3	P.I.	2	D. Adrien
8/6	Wompatuck SP	2	G. d'Entremont

Tennessee Warbler
7/20 Sudbury 1 T. Spahr
8/14 Boxboro 1 S. Miller
8/27 Westport 1 M. Iliff
Nashville Warbler
7/11 Wendell 1 M. Lynch#
7/15 Sandisfield 1 M. Lynch#
Mourning Warbler
8/16 Winthrop 1 C. Dalton
8/18 Wayland 1 B. Harris
8/22 Williamstown 1 M. Morales
Common Yellowthroat
7/1 Konkapot IBA 44 M. Lynch#
7/3 Quabbin (G10) 23 SSBC (GdE)
7/4 P.I. 20 D. + T. Swain
7/12 Hamilton 10 J. Berry
7/24 Huntington 104 M. Lynch#
Hooded Warbler
8/31 MNWS 1 A. Sanford
8/31 Manomet 1 b T. Lloyd-Evans#
American Redstart
7/24 Huntington 4 M. Lynch#
7/27 P.I. 4 R. Heil
8/15 Huntington 6 M. Lynch#
8/24 Waltham 3 J. Forbes
Cape May Warbler
8/31 Nantucket 4 S. Kardell
Cerulean Warbler
8/10 Nahant 1 R. Heil
Northern Parula
7/2 ONWR 1 J. Hopkins
7/3 Brewster 1 B. Nikula
7/19 Sudbury 1 T. Spahr
8/10 Nahant 1 R. Heil
8/10 MNWS 1 R. Heil
9/19 Nantucket 1 G. Andrews
Magnolia Warbler
7/3 Colrain 3 M. Lynch#
7/3 Quabbin (G10) 1 SSBC (GdE)
7/15 Sandisfield 1 M. Lynch#
8/23 Manomet 1 b T. Lloyd-Evans#
Bay-breasted Warbler
8/10 WBWS 1 F. Atwood
Blackburnian Warbler
7/2 Phillipston 1 M. Lynch#
7/3 Quabbin (G10) 5 SSBC (GdE)
7/3 Colrain 13 M. Lynch#
Yellow Warbler
7/1 Konkapot IBA 15 M. Lynch#
7/24 Huntington 14 M. Lynch#
7/27 P.I. 46 R. Heil
Chestnut-sided Warbler
7/3 Colrain 28 M. Lynch#
7/3 Quabbin (G10) 23 SSBC (GdE)
7/17 Savoy SF 21 B. Harris
Blackpoll Warbler
8/10 MNWS 1 R. Heil
Black-throated Blue Warbler
7/2 Phillipston 7 M. Lynch#
7/3 Quabbin (G10) 27 SSBC (GdE)
7/11 Wendell 19 M. Lynch#
7/16 Ware R. IBA 13 M. Lynch#
Palm Warbler
8/15 Chatham 1 D. Clapp
8/18 Bradford 1 D. Larson
Pine Warbler
7/2 Phillipston 15 M. Lynch#
7/3 Quabbin (G10) 19 SSBC (GdE)
8/27 Holden 32 M. Lynch#
Yellow-rumped Warbler
7/3 Colrain 14 M. Lynch#
7/3 Townsend 1 J. Forbes
7/11 Wendell 7 M. Lynch#
7/16 Ware R. IBA 7 M. Lynch#
8/27 P.I. 2 G. d'Entremont#
Prairie Warbler
7/2 Phillipston 3 M. Lynch#
7/16 Ware R. IBA 3 M. Lynch#
8/18 N. Brookfield 3 R. Jenkins
8/20 Marlborough 1 J. Forbes
Black-throated Green Warbler
7/3 Quabbin (G10) 16 SSBC (GdE)
7/3 Colrain 25 M. Lynch#
7/11 Wendell 13 M. Lynch#
7/16 Ware R. IBA 16 M. Lynch#
Canada Warbler
7/11 Wendell 1 M. Lynch#
8/13 Wellfleet 1 J. Pratt
8/27 Paxton 1 M. Lynch#
Wilson's Warbler
8/10 MNWS 1 R. Heil
Yellow-breasted Chat
8/26 Manomet 1 b T. Lloyd-Evans#
Eastern Towhee
7/3 Quabbin (G10) 27 SSBC (GdE)
7/11 Wendell 61 M. Lynch#
7/27 P.I. 48 R. Heil
8/6 Wompatuck SP 16 G. d'Entremont
Field Sparrow
7/1 Woburn (HP) 4 R. Stymeist
7/6 Edgartown 4 D. Simpson
7/14 P.I. 3 T. Wetmore
Vesper Sparrow
8/16 Hadley 1 L. Therrien
Lark Sparrow
7/31 Nantucket 1 S. Kardell
Grasshopper Sparrow
7/14 Ludlow 1 L. Therrien
7/15 Richmond 1 J. Shetterly
Nelson's Sparrow
7/21 P.I. 1 T. Wetmore
Saltmarsh Sparrow
7/9 Westport 9 M. Lynch#
7/24 E. Boston (B.I.) 4 P. Peterson
7/28 P.I. 22 L. Waters
7/31 Acoaxet 7 M. Lynch#
8/20 Chatham 4 SSBC (GdE)
Seaside Sparrow
7/7 Barnstable 1 D. Simpson
7/12 P.I. 3 T. Wetmore
7/30 Newbury 9 J. Garrett
7/31 Westport 26 M. Lynch#
Swamp Sparrow
7/1 Konkapot IBA 31 M. Lynch#
7/2 Wakefield 6 P. + F. Vale
7/17 Ipswich 8 J. Berry
7/26 Quabog IBA 21 M. Lynch#
White-throated Sparrow
7/3 Colrain 14 M. Lynch#
7/24 Huntington 3 M. Lynch#
Dark-eyed Junco
7/3 Heath 4 M. Lynch#
7/3 Colrain 16 M. Lynch#
7/15 Sandisfield 3 M. Lynch#
Scarlet Tanager
7/3 Quabbin (G10) 16 SSBC (GdE)
7/16 Ware R. IBA 19 M. Lynch#
7/27 P.I. 2 R. Heil
8/3 DFWS 4 H. Yelle
8/6 Wompatuck SP 2 G. d'Entremont
Rose-breasted Grosbeak
7/17 Ipswich 4 J. Berry
7/24 Huntington 7 M. Lynch#
7/27 P.I. 6 R. Heil
Blue Grosbeak
7/thr Cumb. Farms 2 v.o.

Blue Grosbeak (continued)			
8/7	Cumb. Farms	pr n	M. Iliff
Indigo Bunting			
7/3	Colrain	12	M. Lynch#
7/3	Heath	8	M. Lynch#
8/15	Huntington	54	M. Lynch#
Dickcissel			
8/19	P.I.	1	T. Spahr
8/28	Wayland	1	B. Harris
Bobolink			
7/17	Holden	11	M. Lynch#
8/3	P.I.	20	T. Wetmore
8/18	GMNWR	12	A. Bragg#
8/25	Rockport	11	M. Lynch#
Eastern Meadowlark			
7/1	Essex	1	J. Nelson
Orchard Oriole			
7/9	Hadley	4	D. Johnson
7/27	P.I.	16	R. Heil
8/11	GMNWR	1	K. Dia
8/16	Woburn (HP)	1	D. Williams
8/31	P.I.	1	T. Wetmore
Baltimore Oriole			
8/27	Holden	5	M. Lynch#
8/31	P.I.	10	R. Heil
Purple Finch			
7/11	Wendell	4	M. Lynch#
7/13	Ipswich	1	J. Berry#
7/17	Savoy SF	5	B. Harris
7/27	P.I.	7	R. Heil
8/23	Lexington	1	J. Forbes
White-winged Crossbill			
8/8	Pittsfield	1	N. Mole
Pine Siskin			
7/11	Wendell	1	M. Lynch
7/14	Southwick	1	S. Kellogg
Evening Grosbeak			
7/3	Rowe	2	M. Lynch#
7/10	Shutesbury	3	B. Emily
7/19	Charlemont	1	E. Ryba
7/28	Quabbin Pk	1	L. Therrien

BARNACLE GOOSE, CONCORD, BY RICHARD JOHNSON

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.H.I.	Boston Harbor Islands
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

Red-tailed Hawk

The Red-tailed Hawk (*Buteo jamaicensis*) with its highly variable plumage characteristics, is one of the most common and widespread hawks in North America. In the eastern United States and Canada, adults of the subspecies *B. j. borealis* are sturdy, relatively short tailed, and easily identified by their red tails and white chests. The sexes have similar plumage: dark heads, brown mottled with white above, and pale below, usually with dark striping and barring across the belly. Juveniles have finely-barred gray tails and in flight show dark, patagial bars on the leading edge of their wings. Juveniles can be discerned from young Broad-winged Hawks by the latter's smaller size, more pointed wings, and dark borders to the underside of their wings.

There are 14 to 16 Red-tailed Hawk subspecies, several of which exhibit distinctive plumage. For example, Harlan's Red-tailed Hawks (*B. j. harlani*) are typically black and white instead of brown, and adults have gray tails; ranging from Alaska to British Columbia, they are migratory and winter in the central United States as far south as Texas. Krider's Red-tailed Hawks (*B. j. kriderii*) are pale and lack the usual striped belly, but adults have a pale red tail; they are found in the prairie states of the United States and Canada. The western Red-Tail subspecies (*B. j. calurus*) exhibits both light-dark plumage polymorphism, however adults of both morphs have red tails.

The breeding rage of the Red-tailed Hawk extends from Alaska across Canada to Nova Scotia and encompasses virtually all of the territorial United States and northern Mexico, with resident populations also occurring south to Cuba, Jamaica, Dominica, and Central America. Northern populations, including those of northern New England and the prairie regions of the western states, are migratory and join southern resident birds farther south. In Massachusetts, the Red-tailed Hawk is considered a fairly common winter resident and a widespread breeder.

Red-tails are monogamous and resident pairs stay together throughout the year. The typical vocalization is a hoarse scream *kee-eeee-arrr*, lasting several seconds and often given while soaring. Courtship flights involve both the male and female flying in circles, often with legs dangling, with the male diving and ascending, sometimes touching the female or feeding her in flight. The courtship flight call is a shrill *chwirk*. Soaring may also serve as territorial advertisement, a search for prey, or for exploration. Red-tails are highly territorial in breeding season and will sometimes attack intruders, chasing and sometimes even grappling with them.

Red-tailed Hawks prefer open areas with scattered trees. They are commonly seen perched on trees, telephone poles, or fence posts–especially in winter–where their posture has been compared to a football player slumped on the bench in the rain. A Red-tail nest is usually in the crown of a tall tree, in Massachusetts often in a white pine. Nesting may begin in March when pairs often search for and refurbish several old nests, eventually choosing one, which they line with bark and sprigs of vegetation. The nest is built or refurbished by both birds and consists of a platform of sticks and twigs

with a central depression. The usual clutch is two or three white eggs. Both parents incubate, but the female does the bulk of the work for the four-to-five weeks until hatching. The male brings the female most of her food during incubation. The young are altricial—helpless with closed eyes upon hatching. The female broods the chicks for about six weeks until fledging; the young may stay near the nest for another three weeks until sustained flight occurs. The male brings most of the food for the young birds, but the female feeds them. The adults may feed the young for as long as six to seven weeks after fledging.

Red-tailed Hawks are visual foragers. While the majority of hunting occurs from an elevated perch, they take most of their prey on the ground. When prey is spotted, they flap and glide or glide down on the prey and extend their legs and talons forward when they are about ten feet from contact. They may hunt insects on the ground by hopping and may also hunt by soaring and cruising. They have been known to hunt cooperatively and kleptoparasitize other hawks including other Red-tails. They usually return to a perch to eat but may feed on large prey on the ground, sometimes returning to their kill for several days. Red-tailed Hawks take mainly rodents—mice, voles, rats, rabbits, and squirrels are common prey. They also take reptiles and sometimes even birds during the winter months. Periodically they eject pellets of indigestible materials after eating.

Red-tailed Hawks are sometimes killed by Great Horned Owls, but humans are a major cause of death due to shooting, trapping, and collisions with motor vehicles. In the 19th and early 20th centuries, eastern populations were depressed by bounty shooting and other human persecution, habitat alteration, and—during the DDT era—eggshell thinning. Protected during the latter half of the 20th century, the Red-tailed Hawk has recovered and expanded its range to the point of largely replacing the Red-shouldered Hawk in much of the East. Nest site and prey availability probably limit Red-tail populations today. However, with its vast geographic range, the Red-tailed Hawk appears to be secure.

William E. Davis, Jr.

ABOUT THE COVER ARTIST

Barry Van Dusen

An artist who has created many of our covers, Barry Van Dusen, lives in Princeton, Massachusetts, and is well known in the birding world. Barry has illustrated several nature books and pocket guides, and his articles and paintings have been featured in *Birding, Bird Watcher's Digest,* and *Yankee Magazine* as well as *Bird Observer.* Barry's interest in nature subjects began in 1982 with an association with the Massachusetts Audubon Society. He has been influenced by the work of European wildlife artists and has adopted their methodology of direct field sketching. Barry teaches workshops at various locations in Massachusetts. For more information, visit Barry's website at http://www.barryvandusen.com.

AT A GLANCE

October 2016

WAYNE R. PETERSEN

This month readers are confronted with a uniformly dark, swimming waterbird. Assuming this perception is accurate, identification possibilities include some species of duck, a Sooty Shearwater, a cormorant, a juvenile Herring Gull, a dark jaeger, or a Black Guillemot in breeding plumage. A close look can eliminate Sooty Shearwater by the chunky body, relatively short wings compared to the long narrow wings of a shearwater, and the pale colored bill. The relatively short neck and chunky body of the mystery bird removes a cormorant as a possibility, as does the overall brownish rather than black color tone. A juvenile Herring Gull is arguably a good possibility, but a Herring Gull would have longer and more obviously jointed wings and would not have the blocky head shape of the mystery species. A dark jaeger in this posture would have wings that appear more falcon or gull-like than the fairly straight and shorter wings of the pictured bird, and a jaeger's wings would probably also offer a hint of some contrasting white coloration on its primaries. Additionally, a jaeger's bill would not be pale like that of the bird in the photograph. A Black Guillemot in breeding plumage would be jet black and would possess white wing linings and a sharp-pointed bill. A duck species is the best remaining alternative.

Females, eclipse males, and juveniles of many species of freshwater ducks, as well as male Harlequin Ducks and female eiders and scoters, all appear uniformly dusky below, so the color uniformity of this duck offers little in the way of an identification clue. The only certainty is that the pictured duck is obviously hefty, with a full chest and a puffy-looking head. A close examination of its pale-colored bill shows that it also seems to extend up well onto the face of the duck. This bill structure and facial feature, combined with the bird's full-chested appearance, relatively short wings, and uniformly dark underparts all point to the mystery bird's identity as a female Common Eider (*Somateria mollissima*). A closer view of the feathers on the underparts indicates that they are horizontally barred in appearance—a feature unique to most species of female

eiders. A female King Eider would appear paler underneath and would have a less prominent bill when viewed at the angle shown in the photograph.

Common Eiders are abundant winter visitors in Massachusetts coastal waters, and increasing numbers breed regularly along the Essex County coast, on islands in Boston Harbor, and in Buzzards Bay. Rare on freshwater anywhere in the state, varying numbers of nonbreeding individuals may be found along the coast at virtually any time of year. The author photographed this female eider in Wellfleet Harbor on November 28, 2010.

Wayne R. Petersen

NORTHERN SHOVELER BY RICHARD JOHNSON

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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 BBC's September overnight pelagic was another spectacular trip, encountering a whale shark for the second straight time, plus a few **White-faced Storm-Petrels** and a photogenic **South Polar Skua**! Isaac Sanchez took the photos.

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