# **Bird Observer**

VOLUME 45, NUMBER 4

**AUGUST 2017** 



### **HOT BIRDS**



Lynn Abbey discovered a **Ruff** at Mass Audubon's Allen's Pond Sanctuary on May 11. Many birders observed it in the vicinity through May 16. Bob Stymeist took the photograph on the left.

Paul Roberts spotted a **Scissor-tailed Flycatcher** speeding past the Plum Island Hawk Watch on May 20. A couple of weeks after that, Elana Price photographed another one at Mass Audubon's Moose Hill Sanctuary. Both were one-day wonders, but Elana's bird stuck around for at least a few hours and was seen by the lucky birders who got there quickly enough. Marshall Iliff took the photo on the right.





A **Purple Gallinule** found on Nantucket on May 27 by Janette Vohs was relocated the next day by a few birders but was gone the day after that. Janette took the photo on the left.

Larry Therrien found a **Golden-winged Warbler** singing near the Quabbin Reservoir on May 31. It initially gave hope that it might be singing on territory and planning to stay, but on June 2 the bird flew away and was not seen again. Larry took the photo on the right.



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Judy Marino

# Summer Birding along Realty Road, Aroostook County, Maine

Nicholas Komar

Editor's Note: Where was Bird Observer birding 30 years ago? In August 1987, Nicholas Komar wrote an article about finding birds in Aroostook County, Maine, reprinted below, from Volume 14, Number 4, August 1987, pp. 164–170. Before you decide to explore Realty Road, please visit the North Maine Woods, Inc. website at www.northmainewoods.org for current information about rules and regulations, fees, road conditions, and changes that have occurred over the last 30 years. For example, the day use fee in 2017 is \$10.00, no longer \$2.00.

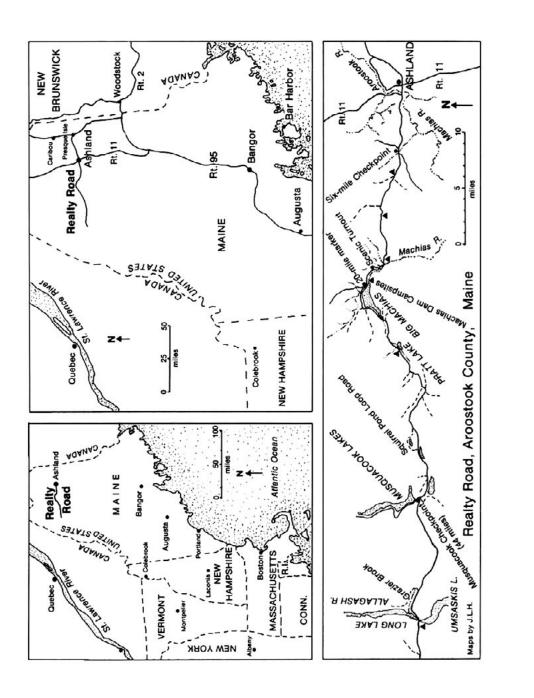
The American Realty Tote Road in Aroostook County, Maine, is a private logging road that provides an excellent opportunity to bird the vast wild lands of the North Maine Woods region. This region is rich in birdlife and other wildlife and offers the chance to see northern "specialty" birds such as Winter Wren, Gray Jay, Common Raven, Boreal Chickadee, Evening and Pine grosbeaks, crossbills, Three-toed and Black-backed woodpeckers, and others during the breeding season. Even Boreal Owl has been seen along this road. The relative abundance of Black-backed Woodpecker is especially welcomed by birders.

Realty Road, known locally as the "Reality Road," is open to the public for recreational purposes. A fee of \$2.00 per person is charged for the day or \$4.50 per person per day if you are camping at one of the many campsites along the road. The road is operated by the North Maine Woods Association, an organization of private (mostly paper companies) and public owners (the state of Maine) of the uninhabited spruce-fir forests of northern Maine.

To reach the road, from I-95 in East Millinocket, take Route 11 north to Ashland. Follow Route 11 through the town, and turn left just after you cross the Aroostook River. When the paved road bears left just past the Gateway Variety Store, go straight onto a dirt road. A sign there states that you are entering North Maine Woods and that trucks have the right of way on this road. This caution must be taken very seriously. This is Realty Road.

Realty Road will first take you through some potato fields. Check these fields for Upland Sandpiper, Horned Lark, Cliff Swallow, Bobolink, and Savannah Sparrow. After about six miles you will reach the Six-mile Checkpoint where you must stop, register, and pay applicable fees. As you continue west along the road, watch for Snowshoe Hare, Woodchuck, Red Fox, Coyote, White-tailed Deer, Moose, and Black Bear

For three quarters of a mile beginning 1.2 miles beyond mile-marker 17 the spruce-fir forest has little underbrush and no major blowdowns and is relatively easy to walk through. This is probably the best place to enter the forest and the most likely area to find both Black-backed and Three-toed woodpeckers. In 1985, they both nested across the road from the scenic turnout at 18.6 miles. [Author's note: Miles given in the



text such as "18.6 miles" refer to the total miles you have travelled since first entering Realty Road. Therefore, 18.6 miles is equivalent to 1.6 miles beyond mile marker 17.] Also be alert for Pileated Woodpecker, Boreal Chickadee, and Sharp-shinned and Broad-winged hawks.

The common breeding warblers in the forest are Tennessee, Nashville, Magnolia, Yellow-rumped, Cape May, Blackburnian, and Bay-breasted. Other birds commonly found throughout the spruce-fir forest anywhere along Realty Road are Ruffed Grouse, Yellow-bellied Sapsucker, Hairy Woodpecker, Yellow-bellied Flycatcher, Blue Jay, Gray Jay, Black-capped Chickadee, Red-breasted Nuthatch, Brown Creeper, Winter Wren, Hermit and Swainson's thrushes. Ruby-crowned and Golden-crowned kinglets. Purple Finch, Evening Grosbeak, Pine Siskin, American Goldfinch, Dark-eyed Junco, and White-throated Sparrow. Be alert at all times for Red and White-winged crossbills and Pine Grosbeaks to fly overhead.

From the scenic turnout, scan for Common Mergansers in the Machias River below, Olive-sided Flycatcher at the tops of the trees across the river, and Red-tailed Hawk soaring overhead. Also listen here for Northern Waterthrush and Canada Warbler, both commonly found near wet habitats along the road.

Continue west 1.3 miles from the scenic turnout to the Machias Dam Campsites. This is a fine spot to pitch a tent if you are camping. You must, however, reserve the site ahead of time. Information on how to reserve campsites can be found at the end of this article. Of the two campsites here, number 253 is farther from the road and prettier. Even if you are not camping, this is still a nice spot for birds. Listen for Olive-sided and Alder flycatchers singing from across the road. Walk along the path to the river, an excellent site for a swim if it is a hot day. Look for Common Merganser here, and scan the river's mouth (to the right) for Common Goldeneye, American Black Duck, and Ring-necked Duck. During the summer of 1985 I found a Greater Scaup at this spot, a highly unusual bird for Maine during the breeding season. This is also a good area for Moose. Listen here for Lincoln's Sparrow and for Swamp Sparrow, singing from the swampy edges of the estuary.

Continue west along Realty Road 0.4 mile. The second driveway on the left after the 20-mile marker is Machias Lake Camps, a sporting camp used for bear hunting in the fall. This is a convenient place to base yourself if you are staying for a few days. Cabins are spacious, comfortable, and well-equipped and cost \$12 per person per day. For information about staying here, contact Ivan and Peggy Porter, Ashland, ME 04732, telephone: 207-435-6977, well in advance of your trip. If you are not staying here, you should ask permission to bird on the lakeside property. Birds commonly found on and around this property are Common Loon, Great Blue Heron, American Bittern, Canada Goose, Ring-necked Duck, Common Goldeneye, Common Merganser, Osprey, American Kestrel, Killdeer, Common Snipe, Spotted Sandpiper, Herring Gull, Belted Kingfisher, Eastern Kingbird, Alder and Olive-sided flycatchers. Yellow Warbler, Common Yellowthroat, and Chipping, Swamp, and Song sparrows.

At 1.4 miles farther west on Realty Road, there is a small but steep hill. The forest here, as in numerous places along the 20-mile stretch of road you have traveled,

### SUMMER BIRD LIST FOR REALTY ROAD

A	ABUNDANT	VU	VERY UNCOMMON
VC	VERY COMMON	R	RARE
C	COMMON	VR	VERY RARE
U	UNCOMMON	O OCCA	ASIONAL

U UNCOMMON		O OCCASIONAL	
SPECIES	STATUS	SPECIES	STATUS
Common Loon	C	Ruby-crowned Kinglet	C
American Bittern	Ü	Veery	Č
Great Blue Heron	Ŭ	Swainson's Thrush	č
Canada Goose	Ŭ	Hermit Thrush	Č
American Black Duck	Ř	Wood Thrush	VR
Ring-necked Duck	R	American Robin	Č
Greater Scaup	O	Gray Catbird	Ř
Common Goldeneye	Č	Cedar Waxwing	U
Common Merganser	U	European Starling	R
Osprey	U	Solitary Vireo	U
Northern Harrier	VR	Warbling Vireo	VR
Sharp-shinned Hawk	U	Red-eyed Vireo	C
Broad-winged Hawk	Č	Tennessee Warbler	C
Red-tailed Hawk	U	Nashville Warbler	VC
American Kestrel	R	Northern Parula	Č
Ruffed Grouse	C	Yellow Warbler	U
Kulled Glouse Killdeer	U	Chestnut-sided Warbler	U
	C	Magnolia Warbler	VC
Spotted Sandpiper Common Snipe	C		VC
American Woodcock	U	Cape May Warbler Black-throated Blue Warbler	U
Herring Gull	Č	Yellow-rumped Warbler	VC
Barred Owl	C	Black-throated Green Warbler	U
Northern Saw-whet Owl	C	Blackburnian Warbler	A
	VC		C
Common Nighthawk	U	Bay-breasted Warbler	R
Chimney Swift	R	Blackpoll Warbler Black-and-white Warbler	R R
Ruby-throated Hummingbird	K VU	American Redstart	C C
Belted Kingfisher	C	Ovenbird	U
Yellow-bellied Sapsucker	VU		U
Downy Woodpecker	VU	Northern Waterthrush	U
Hairy Woodpecker		Mourning Warbler	
Three-toed Woodpecker	VU C	Common Yellowthroat Wilson's Warbler	U R
Black-backed Woodpecker	C		
Northern Flicker		Canada Warbler	U
Pileated Woodpecker	U U	Scarlet Tanager	U C
Olive-sided Flycatcher	-	Rose-breasted Grosbeak	C
Eastern Wood-Pewee	R VC	Chipping Sparrow	U
Yellow-bellied Flycatcher		Savannah Sparrow	0
Alder Flycatcher Eastern Phoebe	U VR	Fox Sparrow	U
	v K R	Song Sparrow	U
Great-crested Flycatcher Eastern Kingbird	U	Lincoln's Sparrow	U
Horned Lark	VR	Swamp Sparrow	VC
		White-throated Sparrow	
Tree Swallow Cliff Swallow	C R	Dark-eyed Junco Bobolink	VC U
Barn Swallow	C C		C
	C	Red-winged Blackbird Common Grackle	C
Gray Jay	C	Brown-headed Cowbird	U
Blue Jay	C		VR
American Crow	C	Northern Oriole	
Common Raven		Pine Grosbeak	R
Black-capped Chickadee	U	Purple Finch	VC VP
Boreal Chickadee	C C	Red Crossbill	VR VU
Red-breasted Nuthatch		White-winged Crossbill Pine Siskin	
Brown Creeper	C C		C
Winter Wren	VC	American Goldfinch	U A
Golden-crowned Kinglet	v C	Evening Grosbeak	А

This is not an inclusive list of all northern Maine woods species; it includes only those species that the author saw in the vicinity of Realty Road from May 25 to July 5, 1985.

is deciduous. Listen here, or at any similar mixed-wood area, for Northern Flicker, Downy Woodpecker, American Robin, Wood Thrush, Veery, Red-eyed Vireo, Black-and-white Warbler, Northern Parula, Black-throated Green and Chestnut-sided warblers, Ovenbird, American Redstart, Scarlet Tanager, and Rose-breasted Grosbeak.

Half a mile farther along on the left, you will see a large cleared area, overgrown with raspberries. If you stop here, remember to park well off the road, because heavy trucks have the right-of-way. It might be a good idea to park on the side road that you can see ahead of you. Like any clearing, this is a fine location for Mourning Warbler and Lincoln's Sparrow. The forest on the right is prime spruce-fir habitat and easy to walk through. Listen here for Solitary Vireo. I found a Northern Saw-whet Owl here as well.

Continue west on Realty Road, following the signs for McNally's to avoid taking any wrong forks. At approximately 27.7 miles, a small clearing on the right marks the entrance to an old overgrown logging road. Owling here yielded Northern Saw-whet and Barred owls. About a half-mile along the overgrown path, I saw and heard a Fox Sparrow singing in late May and early June of 1985. Fox Sparrows have not been thought to breed in the eastern United States, but one has been confirmed nesting in the state of Maine. Be alert for this species throughout the region in the proper habitat of shrubby areas associated with streams and thick stands of young spruce and fir. The song is a series of sweet slurred notes with a buzzy note at the end. To me, it sounds like *deee dooo cheery cheery cheery dooo dee dee zee* with the *zee* rising at the end. A little farther along the road (0.4 mile) at the Pratt Lake Campsite, listen for Black-throated Blue Warbler. Scan the lake for loons and the sky above for Osprey and Bald Eagle.

If you wish to continue at this point, you will find a pleasant side road to walk down at 36.9 miles, 8.8 miles beyond Pratt Lake Campsite. It is a very pretty road, known locally as Squirrel Pond Loop Road, and birding is good along its entire length. About one mile down this road where the road makes a turn to the right, a Three-toed Woodpecker was seen about 450 feet into the forest on the left. Unfortunately, the forest becomes quite swampy at that spot, and walking is difficult. Listen for Pine Grosbeak and Mourning Warbler in this area as well.

Most wilderness enthusiasts will want to continue west on Realty Road to the famed Allagash Wilderness Waterway (AWW) at 57.2 miles. To do so, you must pass through a locked gate at 44 miles that is staffed only from 6 am to 8 pm Another good place to walk into the forest is at 56 miles, 1.2 miles before you get to the waterway. If you enter the forest here, walk straight in to the right (north), just before the AWW entrance sign comes into view, and you will reach Glazier Brook after about 400 feet. Look for Common Merganser, and listen for Wilson's and Mourning warblers across the brook. Also, the concentration of Bay-breasted Warblers at this site is phenomenal.

It is not necessary to go as far as the Allagash River to see all the birdlife of this region. However, the Umsaskis Bridge crossing is a scenic site for a picnic, and free

camping is also available there. At the bridge, listen for Warbling Vireo and Alder Flycatcher, and scan the lake for loons and Common Merganser. Moose may appear along the waterway early in the morning.

Beyond the bridge about 0.3 mile, red ribbon flags mark an entrance into the woods on the left. From the road, listen for Barred Owl, Swainson's Thrush, and Blackthroated Blue and Mourning warblers. In 1985, Three-toed Woodpeckers nested in the forest on the left, and the chance of seeing Black-backed and Pileated woodpeckers here is also very good. Notice the cedar trees with the deep oval-shaped holes carved out by the Pileated Woodpeckers.

#### **Practical Suggestions.**

Although Realty Road is a dirt road, it is maintained regularly and can be easily traversed by two-wheel-drive vehicles. A speed of 30 mph is reasonable along most of the road, although some bumpy sections necessitate slower speeds. North Maine Woods Association recommends against trying to average more than 20 mph.

A good map of the North Maine Woods region, showing all roads, overgrown logging roads, and paths can be obtained at the Six-mile Checkpoint. A good compass is *an absolute necessity* for walking through the forest where there are no paths to guide you. You will find that spruce-fir forest looks remarkably the same in every direction. The use of bright flagging ribbon - buy a roll or two at the Ashland Hardware Store - to mark your route into the forest is a good precaution in the event that you do lose your sense of direction.

Wear heavy shoes when walking in the forest. The forest floor is quite damp, and you must be prepared to get shoes and slacks wet. The mosquitoes and black flies are most abundant in mid-June, so wear protective clothing and carry plenty of insect repellent. Head nets are advisable and are available at Bushey's Clothing Store in Ashland.

For camping information and to make campsite reservations, write to North Maine Woods Association, P. O. Box 382 [now 425], Ashland, Maine 04732.

Although 1 have described and recommended specific roadside birding stops, it should be stressed that most of the bird species mentioned can be seen almost anywhere along the road in appropriate habitats. Therefore, if you equip yourself with map, compass, markers, insect repellents, and protective clothing. I urge you to be adventurous and explore as much of the wonderful wilderness area of "Reality Road" as you can.

Nicholas Komar, a biochemistry major at the University of Massachusetts at Amherst, spent six weeks in the summer of 1985 collecting data on bird territories in spruce-fir plots along the Realty Road as part of a long-term monitoring project sponsored by the state of Maine and private paper companies in an effort to learn more about the effects of pest control and logging on the wildlife of the spruce-fir ecosystem. A skilled birder since boyhood, Nick has birded for thirteen years locally in Newton, extensively in the United States, and abroad in Europe, Israel, Mexico, Costa Rica, and Peru. He served on the Bird Observer Field Studies Committee and has been a contributor to this publication.

# Distinctions between Three-toed and Black-backed Woodpeckers

Nicholas Komar



Black-backed Woodpecker (left). Photograph by Denis Fournier (CC BY 2.0). Three-toed Woodpecker (right). Photograph by David A Mitchell (CC BY 2.0).

The following comments on these two species of northern woodpecker (generically referred to as "three-toed") are based on observations made during the 1985 breeding season (May 25-July 5) in the spruce-fir habitat along Realty Road in Aroostook County, Maine.

Both woodpecker species are oblivious to people, as are other boreal species. Sometimes, while walking through the forest, I would hear the distinctive soft tapping of a "three-toed" and would look up to discover a Black-backed Woodpecker (*Picoides arcticus*) going about its business only a few feet away. More often than not, however, it would fly out of sight as soon as I noticed it. Rarely was I lucky enough to come across the less conspicuous Three-toed Woodpecker (*P. tridactylus*). However, the few experiences 1 did have with the latter species have enabled me to make some clear distinctions between the two. Although both are tolerant of an observer's presence,

the Black-backed Woodpecker seemed more so and is in every respect a much more conspicuous bird than the slightly smaller and shyer Three-toed Woodpecker.

#### Field Marks

The Black-backed Woodpecker is a very beautiful bird, much more striking than its counterpart. The completely black back is actually shiny — appearing glossy black. The back of the Three-toed is much less striking than the Black-backed's, of a very dark brown or black color, but not shiny. The major contribution to the duller aspect of the back is the presence of weak white barring (barely visible on some individuals) in the eastern subspecies of the Three-toed Woodpecker (*P. t. bacatus*). This fact confused me when 1 located my first Three-toed. Expecting to differentiate the two species by the clear white ladderback shown in the field guides, I was surprised when close scrutiny of this individual Three-toed revealed only faint barring on the back!

The heads of the two species can be contrasted in the same way. The Black-backed has a striking black-and-white head with a well-defined white face pattern. The bright yellow cap is also well-delineated. On the other hand, the head of the Three-toed is less striking. The black-and-white head pattern is characterized by poorly defined borders. The weak eyeline stretches faintly back over the black neck and connects with the faint barring on the upper back. This gives the appearance of the ladder-back creeping up onto the nape. Even the male's yellow cap always appears ruffled, whereas that of the Black-backed is usually immaculate. Overall, the color pattern of the Three-toed's head seems rather disorganized, whereas the Black-backed has quite a handsomely marked head.

#### Calls.

The call of both species is *kik*, although that of the Black-backed is slightly more explosive than that of the Three-toed. The Black-backed has another very distinctive call which sounds like a kingfisher rattle. It often makes this call in flight, and also after alighting near its nest with food, sometimes spreading its wings as it calls.

The Three-toed Woodpecker gives a similar call just before feeding young or when it is excited (as when intruders are near the nest). The call can be described as five rapid *kiks*, each one getting shorter and lower-pitched but without culminating in a rattle like the Black-backed's call.

The two woodpeckers have nearly identical drumrolls. The drumroll gets noticeably faster at the end, distinguishing it from the rolls of the Hairy, Downy, or Flicker.

The most common noise you will hear from the "three-toeds" is their distinctive pecking, which sounds like someone tapping out the Morse Code! They make this noise while trying to remove rectangular flaps of bark to get at the morsels of food underneath.

#### Nesting.

Another noise to be alert for is that of the young in the nest. Nestlings of both

species make a continuous, high-pitched ticking noise, which gets louder when the parents call, with about 240 ticks per minute. Use this noise as a guide for locating the nest from as far as a hundred feet away. The nests of both species are marked by a small round hole, located about ten to twenty feet up the trunk of a dead softwood tree that is usually well-decorated with the lichen *Usnea* ("old-man's beard"), hanging from the dead limbs. Young of both species were still in the nest as of the first week of July (a good time to go looking).

Birders who decide to look for these woodpeckers along Realty Road will thoroughly enjoy the striking beauty and coquettish behavior of the Black-backed Woodpecker. The Three-toed Woodpecker will be much more of a challenge, but equally rewarding. With luck and careful observation, you won't have to come home with only stories of the probable "three-toed" that got away.

## Bird Observer Volunteer Job Opening

## Where to Go Birding Editor

Bird Observer has an opening for a Where to Go Birding Editor. The position requires generating—not writing— six articles per year that highlight a wide range of places to bird in New England, particularly Massachusetts. The editor must know and be able to network with a lot of birders in our region.

Primary job responsibilities:

- Solicit and schedule articles about where to go birding throughout Massachusetts and New England.
- Work with authors to get their articles ready for editing and publication.
- Be the liaison between authors and *Bird Observer*'s mapmaker to generate site and trail maps.
- Communicate with authors as often as it takes so that they meet their deadlines.

This is a job that requires excellent organizational and communication skills, attention to detail, and the ability to meet multiple deadlines.

If you are interested or have questions, please contact Marsha Salett at msalett@gmail.com

### Canvasbacks at Fresh Pond: Coming or Going?

Jeffrey Boone Miller



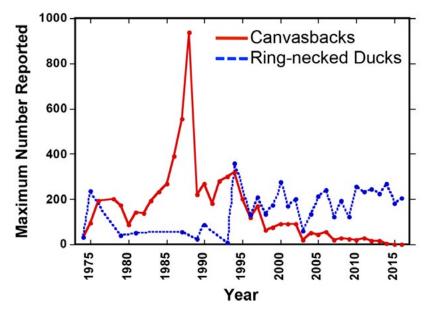
Drake Canvasback at Fresh Pond on November 8, 2011. Photograph by the author.

Fresh Pond in Cambridge, Massachusetts, has for decades been a reliable location for urban birders to see many species of waterfowl during the autumn migration (Robinson 1975, Barton 1995). Notably, Fresh Pond has been perhaps the best place in all of New England to see Canvasback ducks (*Aythya valisineria*), particularly at close range (see photo). When we first arrived in Massachusetts from San Francisco in October 1988, one of the first places my wife Kathleen Buckley took me was Fresh Pond. On this first walk around the pond, we saw dozens and dozens of Canvasbacks, a bird I have loved to see since I first encountered them on the lakes near my hometown of Spokane, Washington.

Since that first trip in 1988, I have returned every autumn to Fresh Pond, always coming on multiple days to observe the migration. During these almost thirty years, I, along with many other observers, have noted that the number of Canvasbacks has gradually dropped so that in the past three seasons only a handful has been seen. For example, as noted by Rines (2017) regarding November and December 2016:

There was a time when Fresh Pond in Cambridge was one of the best places in the state to find Canvasbacks, with counts over 100 in the 1990s. Numbers have dwindled since then, with only one seen during this reporting period.

This essay describes my attempt to understand why Canvasback numbers have decreased so markedly at Fresh Pond over the last two decades.



**Figure 1.** Maximum numbers of Canvasbacks (solid line) and Ring-Necked Ducks (dotted line) reported at Fresh Pond for 1974–2016. Data from *Bird Observer*, Barton (1995), and eBird.

#### Forty-plus years of Canvasback records at Fresh Pond

Bird Observer began publication in 1973 and since then has continuously published records of bird sightings in Massachusetts. In almost every year, the compilers of these records—for whom I have unbounded admiration—have included the number of Canvasbacks at Fresh Pond. In addition, Barton (1995) compiled eleven years of Fresh Pond records and, more recently, many observers including me have contributed their observations of Canvasbacks at Fresh Pond to the eBird website. Most records from Bird Observer have also been added to eBird. I used these sources to identify and graph the maximum number of Canvasbacks observed at Fresh Pond during each autumn migration period (October–January) for the years 1974–2016 (Figure 1). For comparison, I also graphed the number of Ring-necked Ducks.

These data show that Canvasback numbers peaked at Fresh Pond in 1988—the very year I first visited—at around 1000. The records also confirmed that Canvasback numbers started decreasing in the mid-1990s. The last time more than 100 birds were seen was in 1997 with 170. The last year with more than 50 was 2006 with 54, the last year with more than 10 was 2013 with 16, and 2014—2016 had four or fewer each year. Though only one bird was reported in 2016, I saw both a female and a male Canvasback on separate visits, so there were at least two different birds. In contrast, Ring-necked Duck numbers have remained stable at approximately 200–300 throughout the period when the Canvasback numbers have been declining. Ruddy

Ducks, though more variable than Ring-necks in number—and not shown on the graph—have also maintained their numbers at typically 25–100 throughout this period. Whatever is leading to the decline of Canvasbacks at Fresh Pond is clearly not affecting the Ring-necks and Ruddys.

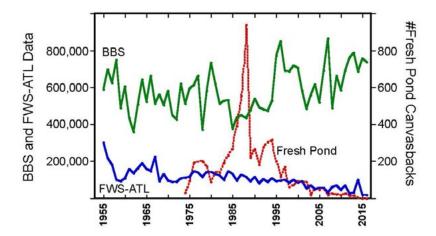
Looking at Figure 1, it appears that Canvasback numbers were increasing throughout the mid-70s. For years prior to 1974, however, I have so far not been able to find records of Canvasback numbers at Fresh Pond. Thus, I don't know if this rise in numbers began from a pre-1974 period of very few birds (i.e., similar to 2014–2016), or if numbers had been higher in those earlier years. The data in Figure 1 thus raise, but can't answer, the question of whether it is the low number of Canvasbacks in 2014–2016, rather than the high numbers in 1980s and 1990s, that should be considered the usual state of affairs. To try to answer this question, I turned to earlier historical sources and alternative data sources.

#### Historical notes about Canvasbacks at Fresh Pond and in Massachusetts

In addition to providing a respite for urban dwellers, Fresh Pond has attracted the sustained attention of botanists (Bigelow 1824), philosophers (Emerson 1910) and, of course, ornithologists (Brewster 1906, Forbush 1912) since the early days of the Commonwealth. Canvasbacks have always been a duck of great interest, for reasons both aesthetic and—during the market gunning era—economic. Canvasbacks that fed on wild celery were good to eat and could sell for two or three dollars (Forbush 1912). So, what do these early sources suggest about the likely numbers of Canvasbacks at Fresh Pond?

In his memoir of Cambridge birding, Brewster (1906) includes information about the waterfowl at Fresh Pond both in 1867–1871, an era when hunting was allowed, and during the first years of the 1900s, well after Cambridge banned shooting at the pond in 1884. His descriptions of the pond, the neighboring Great Swamp of Cambridge, the local birds, and his companions are well worth reading, but, for this essay, it is his observations of Canvasbacks that are of interest. Brewster listed the Canvasback as "of very rare occurrence during migration" and was able to provide only three records. One record was from an 1846 meeting of the Boston Society of Natural History at which Dr. S. Cabot Jr. noted that a Canvasback had been taken by Captain N. J. Wyeth at Fresh Pond (Gould 1848). Though the date this bird was taken was not given, the Wyeth family had been at Fresh Pond since 1797 (Sinclair 2009). The other two records of Canvasbacks at Fresh Pond provided by Brewster included one bird seen in autumn of 1903 and another single bird seen in December of 1905. Brewster was a comprehensive observer of Cambridge birdlife, so his observations suggest that Canvasbacks were almost vanishingly rare at Fresh Pond throughout the 1800s and into the early 1900s.

The accounts of Job (1897), Fay (1910), and Phillips (1925) show that observations in Massachusetts of even small numbers of Canvasbacks were considered noteworthy, again suggesting that this species was historically rare in our area. Similarly, Forbush (1912) states, "In my early years, the Canvas-back was regarded as little more than a straggler in New England, though occasionally a few were taken."



**Figure 2.** Estimated Canvasback populations for the North American continent from Breeding Bird Survey data (BBS, upper solid line) and for wintering Canvasbacks in the Atlantic Flyway from U.S. Fish and Wildlife Service midwinter waterfowl surveys (FWS-ATL, lower solid line). Shown for comparison are the numbers for Fresh Pond from Figure 2 (dotted line, but note different scale on right axis).

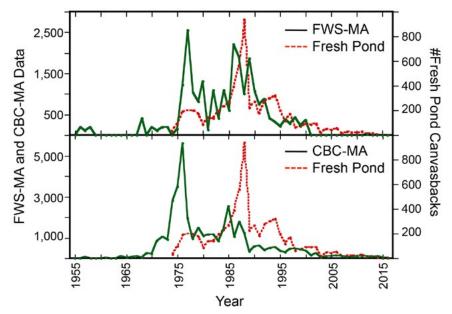
Though agreeing that the Canvasback was generally rare, these writers also noted that, in some years (e.g., 1896 and 1901–1905), Canvasbacks arrived in noticeably larger numbers than in other years. However, even in what Job (1897) called the "phenomenal flight" of 1896, his note included observations of only eight Canvasbacks.

#### More Numbers—it's a New England Phenomenon

Taken together, the historical accounts and the data from the past forty years suggest that Canvasbacks have usually been rare at Fresh Pond. Thus, the high numbers in the late 1980s and early 1990s may have been an anomaly, and the recent low numbers may represent a return to the more common state. To further investigate possible reasons for this very local population change, I turned to more comprehensive surveys of Canvasbacks.

First, I considered whether local Canvasback numbers might be a simple reflection of the total Canvasback population. As shown in Figure 2, however, the total North American population of Canvasbacks, as estimated from the Breeding Bird Survey (BBS), has been on a slow upward trend, and its fluctuations do not mirror the changes at Fresh Pond. Thus, the decreasing numbers of Canvasbacks at Fresh Pond are not due to a decreased total population of Canvasbacks. Barton (1995) similarly concluded that Canvasback numbers at Fresh Pond were not coupled to continental populations.

Next, I considered how Canvasback populations in our Atlantic Flyway, as estimated from the U.S. Fish and Wildlife Service (USFWS) midwinter waterfowl



**Figure 3.** Estimated wintering Canvasback populations in Massachusetts from the USFWS midwinter waterfowl survey (FWS-MA, top panel, solid line) and from all Massachusetts Christmas Bird Counts combined (CBC-MA, lower panel, solid line). Shown for comparison are the numbers for Fresh Pond from Figure 2 (dotted line in each panel, but note different scale on right axis).

surveys, might correlate with the numbers at Fresh Pond. The data from these surveys, which can be accessed online, have documented a consistent decrease in wintering populations of Canvasbacks in the Atlantic Flyway during the past 60 years (Figure 2). Indeed, as habitat quality has declined in Chesapeake Bay, which was once home to hundreds of thousands of wintering Canvasbacks, their wintering range has been shifting westward into the Central Flyway (Mowbray 2002). Over the past 20 years, the decrease in Atlantic Flyway Canvasbacks has coincided with the decreasing numbers at Fresh Pond. This result is unsurprising, because the birds at Fresh Pond must be drawn from the pool of Atlantic Flyway birds. However, the overall Atlantic Flyway numbers did not show a peak in the 1985–1995 period to correspond with the peak numbers at Fresh Pond. Thus, perhaps unsurprisingly, there seems to be no simple one-to-one correlation between the number of Canvasbacks wintering in the Atlantic Flyway and the number that appear at Fresh Pond. This result suggests that factors at less than flyway scale are important in determining Canvasback numbers at the pond.

To examine more local changes, I next examined Massachusetts county-specific records in eBird and found that only on Nantucket have Canvasbacks continued to be consistently reported. For example, each year from 2009–2017, eBird reports from Nantucket have included high counts of 37 or more (range = 37–230) Canvasbacks on the island's ponds, with peak numbers often in February or March. In contrast,

only scattered reports of small numbers of birds were reported during this period from Barnstable County on Cape Cod or from Bristol and Norfolk counties in southeastern Massachusetts. Remarkably, no Canvasbacks have been reported since 2009 from Dukes County, which includes Martha's Vineyard. Though the data in eBird showed that Canvasbacks continue to be found on Nantucket, I found that there were some years and counties for which eBird lacked data, thus limiting its usefulness.

Finally, to find more complete data for our region, I examined Canvasback records from the Audubon Society Christmas Bird Counts (CBC) for Massachusetts and Rhode Island, as well as records from the Massachusetts state-specific USFWS midwinter surveys, all of which are available online. These records show that over the past two decades, wintering Canvasbacks have almost disappeared not only from Fresh Pond, but from all of Massachusetts (Figure 3) and Rhode Island (not shown). In addition, these two data sets agree that Canvasbacks were rare in Massachusetts throughout the 1950s and 1960s, more abundant from the mid-1970s to the mid-1990s, and decreasing from the mid-1990s through 2016. This pattern roughly coincides with the trends at Fresh Pond. For the CBCs, birds on Nantucket composed 70–97% of the Canvasbacks reported in the 2009–2016 period, which is consistent with the eBird data. In contrast, Nantucket birds typically represented <10% of the Canvasbacks in Massachusetts during the 1980s and early 1990s, when Canvasbacks were both more numerous and more widely distributed in Massachusetts. Rather than being a strictly local phenomenon at Fresh Pond, therefore, the decreasing numbers of Canvasbacks over the past two decades appear to have occurred throughout much of southeastern New England, with the notable exception of Nantucket.

#### What about Food?

When I first contemplated this essay, my hypothesis was that Canvasbacks might be decreasing at Fresh Pond due to habitat change, including perhaps a decrease in their preferred foods. As is well known, Canvasbacks have a particular fondness for wild celery (*Vallisneria americana*)—also known as American eelgrass or tape-grass—especially during the nonbreeding seasons. Historically, wild celery has been found at Fresh Pond. Bigelow (1824) notes that he collected wild celery at Fresh Pond, and in the digital collections of the Harvard University Herbaria I found images of wild celery plants collected at Fresh Pond in 1910 and 1917 (Harvard University Herbaria 2017). Furthermore, writing in 2002, Mowbray noted, "During past 40 yr, Canvasbacks have altered traditional migration routes, changed wintering sites, and modified diets in response to changes in availability and predictability of certain foods."

So, it seemed plausible that changes in Canvasback numbers at Fresh Pond were following changes in food availability.

Unfortunately, I was not able to determine the current status of wild celery or other potential Canvasback foods at Fresh Pond. I corresponded with Jean Rogers, the chief ranger at the Fresh Pond Reservation, and she wrote that no studies had been made of the aquatic vegetation at Fresh Pond. I have also been unable to find observations that identify what Canvasbacks eat at Fresh Pond—I am embarrassed to say that I never noticed!

Though some key information is missing, I am nonetheless willing to risk concluding that change in food availability is unlikely to have driven the large changes, both up and down, in Canvasback numbers at Fresh Pond. My reason is that, as noted above, Canvasback numbers have changed more or less synchronously throughout all of southeastern New England. It's hard to believe that region-wide changes in availability of foods such as wild celery would have gone unnoticed. Furthermore, if such food changes had occurred only at Fresh Pond, then I would have expected changes in Canvasback numbers to have been similarly limited to Fresh Pond, rather than changing over the entire region as was the case. Finally, Canvasbacks are able to eat many kinds of foods, including invertebrates such as freshwater clams (Mowbray 2002), and I have noticed Ring-necked Ducks eating shellfish at Fresh Pond.

#### **Changing Migration Patterns?**

Could changes in migration patterns have led to the changing numbers of Canvasbacks at Fresh Pond and throughout Massachusetts? The general outlines of Canvasback breeding areas and migration routes have been understood for more than 100 years (Forbush 1912), and studies of banded and dye-marked Canvasbacks have provided additional details (Stewart, Geis, and Evans 1958; Serie, Trauger, and Sharp 1983).

Because Canvasbacks do not breed in the Atlantic Flyway, all of the birds that appear in New England originate from breeding areas and migrate via staging areas that are far to the west of us. One study found that autumn migrants destined for New England first congregate at staging areas on the Upper Mississippi River, for example, at the locations known as pools 7 and 8 on the border between southeastern Minnesota and western Wisconsin (Serie, Trauger, and Sharp 1983). From there, the birds head almost due east, likely passing Lake Erie and the Finger Lakes region of New York before entering New England.

For New England, the key fact about this migration is that a large majority of the Canvasbacks that winter in the Atlantic Flyway do not pass through New England at any time. Rather, they follow more southerly routes to the wintering grounds along the mid-Atlantic coast and on the Chesapeake Bay. As noted by Forbush (1912), "Only the most northerly edge of the great fan-shaped migrating movement reaches New England."

Thus, if we are to see any Canvasbacks at Fresh Pond or other areas of Massachusetts, it's necessary for the northern edge of the migration to pass into our region. Small displacements of the migration edge to the north or south—on the order of a hundred miles or so—could conceivably cause large changes in Canvasback numbers in New England.

Unfortunately, we lack the data needed to determine if Canvasback migration routes to New England have fluctuated over the past decades, so many questions remain unanswered. Is it possible that a northward shift in the migration route, which was then maintained for a couple of decades, was responsible for the increased number of Canvasbacks seen here from the mid-1970s until the mid-1990s? In years such as

2014–2016 when few Canvasbacks arrived in New England, did the Canvasbacks enter but then overfly New England or did the birds simply bypass New England on a more southerly route? Or did the birds stop before reaching New England, perhaps at Lake Erie or the Finger Lakes of New York? Where do the birds on Nantucket come from? If the migration route shifts northward in the future, will high numbers of Canvasbacks again return to Fresh Pond and southeastern New England? What factors determine where the northern edge of the migration route occurs? Do the birds in New England all originate from a single small breeding area? Has the migration route been affected by a shift to the northwest of breeding sites (Mowbray 2002) or by local changes in breeding success and populations? Have migration staging areas changed? What is the effect of ongoing climate change? To answer such questions, it would seem necessary to track birds with radio transmitters or other real-time tracking devices. Though there has been one study of radio-tracked female Canvasbacks wintering on the Chesapeake (Haramis, Jorde, and Bunck 1993), there have been, to my knowledge, no such studies of Canvasbacks in New England.

#### Conclusions

I began this essay with a simple question: why have Canvasback numbers decreased at Fresh Pond over the past two decades? Though I haven't found a simple answer, my investigations did change my understanding of the problem.

First, I found that changes in Canvasback numbers at Fresh Pond are not a strictly local phenomenon, but rather mirror changes occurring throughout southeastern New England, with the exception of Nantucket. On the other hand, the Fresh Pond changes do not appear to be closely coupled to the overall Canvasback population in the Atlantic Flyway or to the total continental population. Thus, we should seek regionwide, in addition to local, understanding of Canvasback population changes.

Second, I found that the abundance of Canvasbacks at Fresh Pond in the late 1980s and early 1990s—when I first visited—was likely to have been historically unusual. Today's low numbers may thus represent a return to a more common circumstance in which Canvasbacks are rare in our area.

Finally, it seems unlikely that decreased food availability led to the recent decrease in Canvasback numbers. On the other hand, northerly or southerly displacements in migration routes might well have contributed both to the abundance of Canvasbacks twenty years ago and to their rarity today. However, much more information is needed to reach definite conclusions about these possibilities.

Biology is a science in which history counts. Knowing that Canvasbacks are historically rare in our area and that there has not been a catastrophic local habitat change has given me a more optimistic view of the changes at Fresh Pond. In the coming autumn of 2017, it's likely that only a handful Canvasbacks will appear. 2017 could even be the year when no Canvasbacks come to Fresh Pond. However, it's also possible that this year—or some future year—will be the year when the trend changes and Canvasbacks start to become more abundant. I live in hope.

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# Bird Sermons: Thomas Green Fessenden and the *New England Farmer* (1822–1846)

Peter W. Oehlkers



Thomas Green Fessenden. Image from Perrin 1925.

I consider those insects as a judgment from Heaven upon the land, for the wanton cruelty of its inhabitants in shooting and killing birds

("Amicus" 1826)

These are the Farmer's little friends, And foes to his annoyers; The petty means to potent ends, As worm and bug destroyers.

But oft these prettiest of all The works of their Creator, Are prematurely doomed to fall By Man, the Desolator! (Fessenden 1829)

Decades before the Audubon movement of the late 1800s, farmers, newspaper editors, and legislators in New England were already acting to protect birds from wanton destruction. By 1818, Massachusetts had a "bird law," certifying the value of insectivorous birds and prescribing a closed season on robins and "larks." By 1831, it had the nation's first real public bird sanctuary, Mount Auburn Cemetery. And beginning in 1822, it had a strong public voice in favor of birds, the *New England Farmer*, edited by Thomas Green Fessenden.

This was an era that could be hostile to birds. Farmers and horticulturists often saw birds as undifferentiated pests, depredators of fruit and seed. Hunters were largely indiscriminating and focused on quantity. On New England holidays such as "Election Day" at the end of May, boys would compete to see who could bag the most songbirds.

Among intellectual elites, though, the killing of insectivorous birds was recognized as a classic case of mistaking friends for foes, and a practice that could have disastrous results. Benjamin Franklin was fond of telling the tale of the year (1749) farmers in one New England community destroyed all their blackbirds and paid for it in the form of failed crops (Benson 1987). Early ornithologists were often also bird advocates: Benjamin Barton (1799), for example, helped to introduce the concept of the "useful" bird; Alexander Wilson's *American Ornithology* (1808) was not merely a description of the birds of America but an attempt to "vindicate them from every misrepresentation." The weekly agricultural newspaper, aimed at collecting and disseminating up-to-date

knowledge about best farming practices, was an ideal medium to spread this wisdom in favor of birds.

#### Fessenden and the New England Farmer (1822–1846)

Thomas Green Fessenden (1771–1837) was raised on a farm in New Hampshire, educated as a lawyer in Vermont, and after settling in England, gained some renown as an inventor and as poet of satirical humorous verse (Perrin 1925). After returning to the United States, he concentrated on writing and editing, though later in his life he served as a judge and as a member of the Massachusetts legislature. Nathaniel Hawthorne, who regarded him as a kindly genius, befriended him two years before his death and wrote a short biography (Hawthorne 1838).

The first issue of the *New England Farmer* was published by Thomas W. Shepard of Congress Street, Boston, on August 3, 1822. It would be the second enduring agricultural weekly in the United States (the Baltimore-based *American Farmer* [1819–1834] was the first). In the first issue, Shepard introduced the editor as a "man of science" conversant with both the theory and practice of farming. Fessenden would spend the next fifteen years constructing the paper each week from his own work and that of other associated authorities, adding material copied from other newspapers via an exchange network, and offering a forum for correspondents wishing to relate their own opinions and experiences. Hawthorne (1838) described Fessenden's home as consumed with such writing and editing:

The table, and great part of the floor, were covered with books and pamphlets on agricultural subjects, newspapers from all quarters, manuscript articles for "The New England Farmer," and manuscript stanzas for [his poetry].

Fessenden would end up writing several books on gardening and farming topics.

There is no evidence that Fessenden had much scientific knowledge of bird life, though his poetry shows that he was at least conversant with the song of the "bobo-linkhorn." Regardless, the *New England Farmer* quickly became a forum for promoting the value of protecting birds. On November 14, 1822, for example, he ran a correspondent's letter copying an entry from Wilson on the Scarlet Tanager, introduced as follows:

It will be perceived that this showy stranger, which is indeed more and more to visit us of late, mostly feeds upon the large winged and most noxious and injurious insects. If, however, this bird, so modest and sweetly attired, is not kindly received, we shall lose the visits with which he gratifies us. Why not place him with the Swallow, the Turtle Dove, and other favored harmless birds, who in fond reliance cluster around our houses? But above all, let those who deal out leaden death, consider that as this sweet bird of both song and plumage affords no inducements as game or luxury for food—whether it does not belong to their spirit and gallantry *to spare* as they wish to be thought *its* admirers, *innocence and beauty*. ("W" 1822)

Fessenden was also willing to stretch the category of the useful bird to include crows and blackbirds, editorializing in response to an article on the "Destruction of Crows" via the sewing of horse hairs into corn seed,

We doubt the policy as well as the humanity of destroying crows and blackbirds, if it could be effected by a wish. They sometimes injure the farmer by pulling up a few hills of corn, but they benefit him much more by destroying worms and other insects. And there are other means of preserving Indian corn not only from birds, but from worms, which we believe are more effectual than the above mentioned, and liable to no objection. ("Gloucester" 1825)

#### Bird Sermons

Of particular note during Fessenden's term as editor was the inclusion of essays drawn from other papers and contributed by correspondents that plead for the protection of birds. These would eventually be known as "spare the birds" stories (Oehlkers 2017). On September 1, 1826, he reprinted a story from a Massachusetts newspaper calling insect infestations a "judgment from heaven" for killing birds. Throughout the late 1820s correspondents contributed like letters, some with similar religious rhetoric.

Roland Howard of Easton, Massachusetts, called Election Day bird-shooting matches an attack on the "goodness of the Creator:"

A mind not perverted, and sunk in sensuality, cannot be insensible to the vocal music of the feathered songsters of the orchard and the grove, but will insensibly be led to join with them in a song of praise to HIM, whose tender mercies are over all his works, and whose watchful care extends itself even to the sparrow, so "that not one of them falls without his notice." (Howard 1827)

R. Green of Mansfield, Massachusetts, observed the number of insects destroyed by a single pair of birds and celebrated the balance of nature:

Mr. Fessenden—These are to the farmer and gardener of great value. They were designed by the Creator to check the too great increase of insects; and no farmer ought to suffer them to be wantonly destroyed on his premises. The number of insects destroyed by the robin, swallow, sparrow, mock-bird, and other small birds, is astonishing. One little family will destroy several hundreds in a single day.

He urged farmers to cease their "wars of extermination" against them:

They are not merely useful in destroying insects—for they call the farmer and the gardener to their business—cause the groves to resound with music, and usher in the morning with melodious praise. (Green 1828)

Not all correspondents, however, employed the religious frame. "F" of Danvers, Massachusetts, cited Wilson as his main authority:

[F]or my own part, I think, were we to leave off wantonly destroying our small SINGING BIRDS, we should be less troubled with insects of all kinds. It is a fact well known to every naturalist, that small birds destroy an almost incredible number of noxious insects. The amiable and indefatigable ornithologist, ALEXANDER WILSON, who perhaps was better acquainted with the habits of our birds than any other person, when speaking of the *Sturnus Predatorius*, or red-winged black bird, which, by the way, is by our farmers considered the most mischievous of birds, says "their food in spring and the early part of summer consists of grub-worms, caterpillars, and various other larvae, the silent but deadly enemies of all vegetation, and whose secret and insidious attacks are more to be dreaded by the husbandman than the combined forces of the whole feathered tribe together...." ("F" 1828)

It was the disruption the balance of nature that was the problem. "F," like other authors, blamed shooting parties:

I am fully persuaded, as long as farmers and others permit boys to roam over their fields and shoot down every small bird they meet—as long as young men are in the habit, on our anniversaries, of forming themselves into shooting parties, for the purpose of destroying small birds, which they do in immense numbers—I say as long as this wanton destruction of birds is carried on, we must expect innumerable hosts of noxious insects will continue to commit depredations on our orchards, our fields, and our gardens. ("F" 1828)

#### Fessenden, the Massachusetts Horticultural Society, and Mount Auburn Cemetery

The *New England Farmer* was integral to the formation of the Massachusetts Horticultural Society in 1829. Fessenden had published the initial notice calling for society members and was an enthusiastic booster, often printing Society proceedings in full, including a report of a special meeting (June 18, 1830) in which, among other things, a committee was chosen to "consider the expediency of recommending some measures to prevent the wanton destruction of useful birds." The *Farmer* also printed Zebedee Cook's famous anniversary speech in which he proposed that the Society create a cemetery in the style of Père la Chaise in Paris. This cemetery would be Mount Auburn.

It is worth noting that immediately preceding this proposal, Cook had taken up the topic of bird protection:

The protection and preservation of useful birds is a subject I would propose for your particular consideration. To those whose souls are attuned to the harmony of their music, who delight to listen to the warbling of nature's choristers, little need be urged to insure them security in the peaceful possession of their accustomed haunts. But if this consideration is not sufficient, there is another view in which the subject may be presented, that cannot fail to render them the objects of our care and watchfulness.

We must either encourage them, or resign our gardens and orchards to the overwhelming ravages of innumerable insatiate insects. We must preserve them and consent to tolerate their minor depredations, or suffer them to be destroyed, and with them all hopes of preserving any portions of our fruits. (Cook 1831)

Cook called on society members to help enforce the existing bird law, in order to "preserve those innocent and useful co-laborers, who amply repay us in the aid they afford." This suggests that Mount Auburn was designed from the beginning with birds in mind (Linden-Ward 2007).

A letter from "A Cultivator" printed the following May, endorsed Cook's call. It was members' moral duty to enforce the law:

It is a common practice with these sportsmen through the summer to range the groves and orchards, in this vicinity, almost every pleasant day and more numerously on holidays, and to shoot every bird that comes within their reach.



T.G. Fessenden monument inscription: "This monument is erected by the Massachusetts Society for promoting agriculture, by the Horticultural Society of Massachusetts and by Individuals as a testimony or respect for the literary talents and acquirements of the deceased and his untiring labor in promoting the objects of the above Institutions. Photograph by the author.

It is not, however, a small nor an easy task for one individual, to get their names, residence, and the evidence necessary for their conviction; but it requires the united efforts of all who are immediately interested. Already have these sportsmen commenced their wanton destruction of these useful creatures, even before they had time to build a nest for rearing of their young—Birds that have survived the dreary winter in a more genial clime, having now returned to bless our efforts by their industry and to cheer our days with their melody, are scarcely permitted to commence their vernal song, ere they must fall victims to a WANTON IDLENESS that is as destitute of moral feeling, as of useful employment. ("A Cultivator" 1831)

Fessenden would reprint this letter as part of his section on "Birds" in his 1834 book, *The Complete Farmer and Rural Economist*. After his sudden death in 1837, Fessenden would be among the first generation buried in Mount Auburn Cemetery.

Fessenden's pro-bird editorial direction would be continued by subsequent editors of the *Farmer*, including Henry Colman, Allen Putnam, and the seed company

magnate Joseph Breck, who also served as the paper's publisher. After the paper ceased publication in 1846, a second *New England Farmer* (1848–1864) emerged with a similar editorial position. It would be notable in its own right for being on Henry David Thoreau's reading list and for providing a very young J.A. Allen with a place to publish his ornithological writing.

Agricultural papers across the country, with total circulations in the hundreds of thousands by mid-century, followed the *New England Farmer* in urging bird protection. These efforts would influence the wave of state-level bird protection legislation in the 1850s and 1860s and would ultimately inform the Audubon Society movement at the end of the century (Judd 1997).

Note: Sections of this paper are adapted from the author's blog, available at http://wingedwardens.blogspot.com

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## The Increase in Wintering Hooded Mergansers in New England from 1986 to 2015 as Recorded by the Christmas Bird Counts

Steve Davis

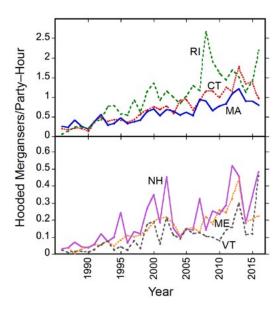


Hooded Merganser. Photograph © Shawn P. Carey.

In my experience, Hooded Mergansers (*Lophodytes cucullatus*) are much easier to find in southern New England than they were 30 years ago. A quick look at the National Audubon Society's Christmas Bird Count (CBC) numbers supported this observation, so I decided to do a more comprehensive analysis of the New England CBC Hooded Merganser data from the last 30 years to see if the quick look and the personal feeling were supported by the data. I found that the data indeed show that the numbers of Hooded Mergansers have increased in all six New England states. I also did a detailed analysis of the Hooded Merganser data from Massachusetts to obtain a more comprehensive view of this increase.

In a prior article in this journal (Davis 2000), I discussed the status of Hooded Mergansers in New England as reported in the CBCs for the late 1980s and late 1990s. That article, which demonstrated significant increases during that decade, serves as a baseline for this analysis. This article documents the continuing increase in reported Hooded Mergansers in all six New England states. As the numbers and graphs below show, each state has had a roughly linear increase in numbers through the past thirty years, although the rates of increase have been different for each state.

Data on Hooded Merganser counts from the six New England states for the years 1986 to 2015 (CBC numbers 87 to 116) were provided by the National Audubon



**Figure 1**. Upper panel. Hooded Mergansers per party-hour for Connecticut (CT, dotted line), Massachusetts (MA, solid line), and Rhode Island (RI, dashed line). Lower panel. Hooded Mergansers per party-hour for Maine (ME, dotted line), New Hampshire (NH, solid line), and Vermont (VT, dashed line). Note different scales on y-axes.

Society. They also provided measures of effort by count; that is, the number of driving and walking party-hours and hours at feeders. These data are also available on their website at www.audubon.org/conservation/science/christmas-bird-count.

For the first part of this analysis for the six New England states, I considered both the number of Hooded Mergansers per count circle each year from 1986 to 2015 and the number of Hooded Mergansers per party-hour per count circle. For the second part of this analysis, which looks in more detail at the counts for Massachusetts, I also considered the number of count circles reporting Hooded Mergansers and the total number of count circles each year.

More Hooded Mergansers are being counted, but are there really more Hooded Mergansers in New England? Although there are increases in reported Hooded Mergansers, there are many reasons why the number of birds identified could increase without there being an increase in the actual population of the species. During the past thirty years, there has been an increase in the number of count circles in each state. Consequently, there has been an increase in the number of party-hours and party-miles, two of the effort factors. There has also been an increase in the percentage of counts that have reported Hooded Mergansers. The analysis of the Massachusetts data in the second part of this article addresses some of these issues.

#### Part 1: The New England States

I analyzed the numbers of Hooded Mergansers and the number of Hooded Mergansers per party-hour from each state with *Statistix7* (Analytical Software, Tallahassee FL) and Microsoft *Excel*. As discussed below, the resulting graphs and statistical data are striking in that there have been increases in both categories in each New England state for the past 30 years. In general, the values contain yearly variations but seem to be generally increasing.

I also calculated average values for the number of Hooded Mergansers and of Hooded Mergansers per party-hour for the first three years and for the last three years of the 30 year period. The average yearly increases in these values for each state were derived from linear regressions done on the data. Also, I graphed the values for the thirty years for each state. Figure 1 shows the values of the number of Hooded Mergansers per party-hour for the six states.

The results of the numerical analyses for each of the New England states are shown in Table 1. In all of the states, the average number of Hooded Mergansers for the last three years of CBC counts (2013, 2014, and 2015) increased from the average number for the first three years (1986, 1987, and 1988), as did the average number of count circles reporting Hoodeds over the same three-year periods. The number of Hooded Mergansers identified per party-hour increased as well. Over 30 years, the average yearly increase in the number of Hooded Mergansers identified varied state by state. Connecticut saw an annual average increase of 74.1 Hoodeds, Maine averaged 15.4, Massachusetts 103, New Hampshire 14.8, Rhode Island 26.4, and Vermont 10.1

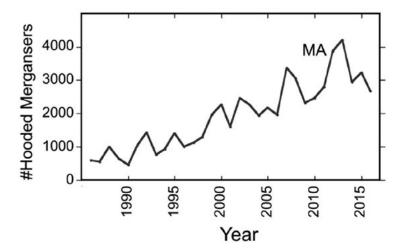
#### Part 2: Massachusetts

Although the increases in reported Hooded Mergansers for each state are statistically significant as demonstrated by the linear regression analysis, as mentioned above, there are many reasons why the number of birds reported could increase without there being an increase in the actual population of the species. First, there have been increases in the number of CBCs conducted in each state. In the first three years of this analysis, Massachusetts averaged 16 counts per year; in the last three years, the average was 31, almost twice as many. There have also been increases in the number of party-hours and party-miles. Even with increases in the number of count circles, the percentage of counts that have reported Hooded Mergansers has increased, suggesting that Hooded Mergansers have expanded their winter locations. In the first three years of this analysis about 60% of the count circles in Massachusetts reported Hooded Mergansers; for the last five years, the average has been about 97%, with about one count circle per year not reporting Hoodeds.

Jim Berry published a thoughtful discussion of these issues a while back in this journal (Berry 1992). As Berry wrote, the increased number of species reported in CBCs was likely due to:

TABLE 1: HOODED	TABLE 1: HOODED MERGANSER NUMBERS-NEW ENGLAND	NEW ENGLAND				
State	Туре	Ave. for the first 3 years (Counts 87-89)	Ave. Number of Counts Reporting HOMEs in the first 3 years	Increase per year (calculated ave)	Ave. for the last three years (Counts 114-116)	Ave. for the Ave. number of counts last three years Reporting HOMEs (Counts 114-116) in the last 3 years
CONNECTICUT	Number of HOMEs No. of HOMEs per PHR	421 0.19	11	74.1 0.043	2206 1.23	16
MAINE	Number of HOMEs No. of Homes per PHR	28 0.02	7	15.4 0.009	325 0.2	20
MASSACHUSETTS	Number of HOMEs No. of Homes per PHR	732 0.3	16	103 0.026	2950 0.86	31
NEW HAMPSHIRE	Number of HOMEs No. of Homes per PHR	35 0.05	က	14.8 0.012	405 0.33	12
RHODE ISLAND	Number of HOMEs No. of Homes per PHR	41 0.2	2	26.4 0.058	708 2.19	വ
VERMONT	Number of HOMEs No. of Homes per PHR	11 0.02	3	10.1 0.007	291 0.23	12

Table 1. Comparative Values for the Six New England States



**Figure 2**. Total number of Hooded Mergansers in Massachusetts reported by Christmas Bird Counts.

...better birders using better optics and better field guides. There can be little question that species totals would have increased significantly over the years for these reasons even if all other factors had been constant.

Today, his list might also include more birders in more circles using internet-communicated locations. Berry and others, however, have determined that the number of birds of a species recorded per party-hour is the most reliable measure for comparative analyses over time.

Although the effects of the above factors on the apparent increases in the numbers of Hooded Mergansers identified cannot be definitively assessed, a comparison of the numbers of Hooded Mergansers and the number per party-hour is informative. When the graph of the actual number of Hooded Mergansers counted in Massachusetts through the years (Figure 2) is compared with the number of Hooded Mergansers per party-Hour through the years for Massachusetts (upper panel, Figure 1), the visual impression is that there is a close correlation. The calculated correlation coefficient is actually 0.98. The correlation coefficients of these two recording methods for the other five New England states are: Connecticut 0.98; Maine 0.97; New Hampshire 0.98; Rhode Island 0.93; and Vermont 0.97. Because the correlation coefficients are so close to 1.00 for New England Hooded Merganser counts, then, the trends for the total numbers reported and the numbers per party-hour are essentially interchangeable. Using the per party-hour correction, however, probably makes for a more accurate representation of the slopes of the increases since it takes into consideration increased numbers of counts and increased total effort.

In summary, this analysis of the number of Hooded Mergansers identified on New England Christmas Bird Counts for the past 30 years demonstrates increases for each state. Each of the six states has shown an increase through the years both in the number of Hooded Mergansers found and in the number of Hooded Mergansers found per party-hour. The average increase in the number of birds per year has ranged from 10.1 birds per year for Vermont to 103 birds per year for Massachusetts. Although there are factors that influence the number of Hooded Mergansers identified, the party-hour calculation helps to standardize the trends.

Why have the reported numbers of wintering Hooded Mergansers been increasing in our region? Similar to the CBCs, the Breeding Bird Survey has documented an increasing number of Hooded Mergansers, including in New England, over the past several decades (Sauer et al. 2017). While the underlying reasons for this increase are unknown, possibilities include the increased amount of beaver-created breeding habitat, increased open water during the CBCs consequent to warming winter temperatures, as well as the increased coverage and skill of counters. It will be interesting to see what the numbers of Hooded Mergansers in New England do over the next 30 years.

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**Steve Davis** is a retired family doctor who has birded extensively in Swansea. He thanks Kathy Dale and Geoff LeBaron of the National Audubon Society for providing the CBC data, and Cody and Cameron Bernier of Swansea, MA for help with data extraction



BAY-BREASTED WARBLER BY SANDY SELESKY

### PHOTO ESSAY

## Common Yellowthroat Courtship and Mating Display

Eric Swanzey

While birding at Acadia National Park in Maine on June 2, 2017, I was fortunate to witness the courtship and mating display of a pair of Common Yellowthroats (*Geothlypis trichas*) at Sieur de Monts Spring. The display lasted mere seconds and might easily have been missed. It was one of those mornings when the air was so still that even a light wing flutter could be heard, the tipoff that something unusual was about to happen. Please log in to <a href="https://www.birdobserver.org">www.birdobserver.org</a> to view a complete set of high resolution, full color images.



1. The female takes position while also observing the male that is above and out of the frame. All photographs Copyright 2017 by Eric Swanzey.



2. The female signals the male and calls out to him



3. The male swoops in from above.



4. The male positions himself while the female keeps her steady posture.



5. The male vocalizes.

6. The male completes his task.



7. The male retreats while the female holds position.



8. The male swoops across the female's field of view.



9. The male vocalizes one final time.

10. The female prepares to depart.



11. The male hops to a nearby branch and provides a final display.



12. The male resumes his typical form and habit.  $\checkmark$ 

# Ray Brown's Talkin' Birds

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# MUSINGS FROM THE BLIND BIRDER

# Migration

Martha Steele

One of the greatest wonders associated with birding is the astonishing feat that is long-distance migration. Most birders at some point are likely to ask themselves how a bird born in New England in the spring or summer knows how and where to migrate to its wintering grounds and then find its way back the following year, a pattern to be repeated year after year. It is as if I get set with Alvin and embark on a trip from my house in Arlington, Massachusetts, to my winter haven in Costa Rica, all without ever having traveled that route and without asking a single person (or consulting a GPS device) for any help or direction along the way. Imagine us trying to use the sun, the stars, the earth's magnetic field, and other landmarks or information to complete our journey.

It is well worth pausing to contemplate the migratory abilities of the birds we see through our binoculars or scopes every spring and fall. As you receive this issue of *Bird Observer*, the fall migration has already started, primarily composed of shorebirds moving through New England. When you look at a Red Knot through your scope, think of the fact that it is one of the longest-distance migrants of any bird species, traveling about 9,300 miles from its Arctic breeding grounds to the Tierra del Fuego archipelago off the southernmost tip of South America. Better understanding of migratory routes for all birds, including the Red Knot, has led to enhanced conservation efforts to preserve critical stopover sites for the birds, such as those used by Red Knot and other shorebirds in the Delaware Bay region.

But what really strikes at my heart is seeing a bird that has returned to the same spot at our Vermont home, indicating that it had made it to its wintering grounds, survived the winter, and overcame all obstacles to get back to our mutual home. For every disheartening story of birds killed during their migrations from man-made obstacles, such as tall buildings, wind turbines, or high tension wires, there are the heart-warming stories of individuals successfully navigating across the hemispheres despite natural and man-made dangers.

Even though I can listen to lectures or read about how and why birds migrate, it still sends shivers up my spine to think about what long-distance migrants are able to do. I vividly remember a passage in Scott Weidensaul's superb book, *Living on the Wind: Across the Hemisphere with Migratory Birds*, where he describes setting up a scope on his deck in Pennsylvania on a clear autumn night with a full moon. He set the scope sights directly on the moon, and over the next hour counted the birds he saw passing across the light of the moon. He then used his count to estimate how many birds migrated over his area during that one hour based on what he saw in the tiny sphere of the moon in the sky, and came up with an approximate count of 8,340 birds. The scene evokes awe, wonderment, amazement, and deep appreciation for these migratory feats and the sheer number of birds involved.

It is not just the distance the birds travel, be it 46,000 miles covered in annual migrations by the Arctic Tern or mere miles by short-distance migrants. It is how they do it, most notably as a first-year bird setting off for a place it does not know, perhaps relatively nearby or perhaps thousands of miles away. This is one of the most impressive phenomena in the animal kingdom. Those of us in New England know that birds setting off from the East Coast in late August and September over the Atlantic Ocean toward South America may well encounter tropical storms or hurricanes during their journey. Tracking data on Whimbrels revealed that the birds are even able to fly—at a clip of 31 miles an hour—through the heart of massive oceanic storms to get to their destinations.

Recognition of the importance of all segments of a bird's annual cycle has led to a relatively new field in ornithology, migratory connectivity. Weidensaul, in a 2012 article (http://www.audubon.org/magazine/march-april-2012/unlocking-migrations-secrets), noted that ornithological research for centuries had focused primarily on the bird's breeding grounds. The study of migratory connectivity links individuals and populations throughout their annual cycle. Data from all locations that a bird navigates throughout the year enables more focused and effective conservation efforts to stem declines in bird populations. Weidensaul discussed the example of the American Redstart, where the quality of its wintering habitat in Jamaica (the wetter and buggier the mangrove swamp, the better) was the primary predictor of its breeding success in North America. Thus, conservation efforts on the summer breeding grounds of the American Redstart would be to little avail if declining winter habitats in Jamaica were not addressed.

To me, one of the most amazing migrants is the Blackpoll Warbler. I cannot imagine this tiny bird flying non-stop for three days over the Atlantic Ocean before landing in South America. It is difficult enough for our Blackpoll Warblers in New England, but even more astonishing is that Blackpoll Warblers that breed in Alaska fly clear across the North American continent to the East Coast to join their eastern counterparts before heading down to South America (http://www.audubon.org/news/the-blackpoll-warbler-tiny-bird-amazing-migrator).

I am truly humbled by the epic flights of long-distance migratory birds. This is one reason that I so often say, when listening to a returning migrant, "Welcome back, and good luck, little fellow!" These birds deserve our respect and appreciation beyond our simple pleasure of seeing their beauty and reveling in their song. Their migratory wanderings evoke strong emotions for me and help sustain my connection to each and every bird that I hear. That is a wonderful thing and a pillar of my passion for birding.

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@yerizon.net>.

# FIELD NOTE

# Confusing Fall Blackpoll Warbler

Trevor Lloyd-Evans





Axanthic Blackpoll Warbler (left). Photograph by Alex Bartolo, Manomet Staff. Blackpoll Warbler in 1st basic plumage (right). Photograph by Emily Renaud, Manomet Staff.

On October 14, 2016, in the course of normal fall migration banding at the Bird Observatory in Manomet, Massachusetts, we mist netted a very washed-out looking Blackpoll Warbler (*Setophaga striata*). The bird's black and white coloration was normal, its eye ring was white, and the rest of its plumage colors were grayish with just a faint touch of green. Measurements were normal: wing chord was 68 mm, mass was 12.5 g, and the skull was two-thirds ossified. So, it was a hatching year bird in first basic plumage that we would expect to have plenty of yellow and green coloration in the feathers, plus varying amounts of yellow in the feet. However, all yellow coloration seemed to be missing in the plumage. Even the toes and soles of the feet were dull grayish, so this bird did not fit the old banding mnemonic "blackpoll—yellow soles."

What terminology should we use to describe this bird? A variety of related terms have been used to describe the condition in which plumage has *excess* yellow coloration including xanthochroism, xanthochromism, and xanthism (Leahy 2004, Davis 2007, Wikipedia 2017). A xanthic bird would thus be excessively yellow. In aviculture, xanthic birds are also called lutinos. Xanthochroism in wild birds has been





Axanthic Blackpoll Warbler (left). Close-up of Blackpoll Warbler soles (right). Photographs by Alex Bartolo, Manomet Staff.

recorded in a number of species including Cape May Warbler (Schnell and Caldwell 1966). By analogy, the bird we captured, which apparently *lacked* the carotenoids required for yellow pigments, would be an *axanthic* Blackpoll. Jeff N. Davis, who wrote the article referenced above, kindly examined our photographs and was not aware of a published case specifically addressing this phenomenon (Davis personal communication). He commented that genetic mutation, physiological factors, or both may have disrupted normal carotenoid metabolism or expression. Dr. Jocelyn Hudon, Curator of Ornithology at the Royal Alberta Museum, agreed that the cause could be diet or a genetic anomaly. He agreed with the descriptor axanthic and suggested that retention of the melanins—dark pigments—would also make the bird schizochroic.

Not just a confusing fall warbler, but also a splendid confusion of terms to describe its coloration and the causal factors.

I would like to thank the banding staff and members of Manomet who staff or support our migration banding studies, and also Jocelyn Hudon, Jeff Davis, and David Sibley for their expert opinions on this unusual Blackpoll.

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# ABOUT BOOKS

# Where Tanagers and Butterflies Sport About

Mark Lynch

*The New Neotropical Companion*. John Kricher. 2017. Princeton, New Jersey: Princeton University Press.

At mid-day the vertical sun penetrated into the gloomy depths of this romantic spot, lighting up the leafy banks of the rivulet and its clean sandy margins, where numbers of scarlet, green, and black tanagers and brightly colored butterflies sport about in the stray beams. Sparkling brooks, large and small, traverse the glorious forest. (Bates, Henry Wallace. *The Naturalist On the River Amazons*, p. 56)

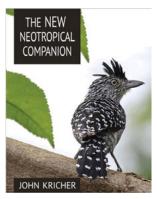
I was only nine years old when my parents gave me a present that would further spark my interest in the natural world, especially the tropics. *The Wonders of Life On Earth*, the "special de luxe edition," was a large format, colorful book published by the editors of *Life* magazine. I still have my original copy. This was an introduction to the writings and theories of Darwin, filled with color photography and superb illustrations of wildlife from around the world. Two three-page fold-out illustrations immediately drew my attention. One was a sampling of the myriad types of colorful and weird insects found in a Brazilian rain forest, and the other was a painting of a classic ant swarm, with other attendant creatures, on a Neotropic forest floor. I used to gaze at these pictures for what seemed like hours. Here was a place that was dark and mysterious but dense with life, where unusual creatures flew, such as antirds or the "Big Winged Masked Lantern Bug" (now known simply as lantern fly). "Could such a place be real?" It was then that I decided I would visit the Neotropics when "I grew up."

As an adult, I have visited different parts of the Neotropics over the years, and each experience has never failed to exceed my childhood dreams. I have seen ant swarms and attendant antibrds, marveled at the large and colorful butterflies, and seen more species of birds there than any other place on the planet. But, as of this writing, I have yet to see a lantern fly, still one of my most wanted Torrid Zone species.

I was not the only one enthralled by *The Wonders of Life on Earth* as a young person. John Kricher's dedication in *The New Neotropical Companion* reads: "To my parents, who introduced me to the world we live in and to the wonders of life on Earth." Those are references to both the large format nature books published by *Life* magazine and *The World We Live In*, which has inspired any number of biologists, ecologists, and natural historians.

John Kricher is a professor of biology at Wheaton College, Massachusetts, who has a genuine talent for writing about the complexities of rain forest ecology. Although he has authored important academic books about the subject, he is most widely known for his books written for general audiences like birders.

There were earlier versions of this book. Kricher's original book was simply called *A Neotropical Companion* and was published in 1989. It quickly became a natural history classic, affectionately called "the little green book." Keep in mind that this was published at a time when it was still a big deal to take a birding trip to Costa Rica or Brazil. There were very few tour groups that catered to birders, and tourist facilities in some parts of the Neotropics were spartan or nonexistent. There were not always high-quality field guides to the places you wanted to go. Finding yourself facing a dark green lush wall of a rain forest, it was all you could do just to spot and identify a bird. At the



time, few birders knew anything about the ecology of where they were or how those species they were gleefully ticking fit into that ecology. "I wrote it at a time when field research in tropical ecology had really begun to burgeon." (Kricher 1989, p. 9)

In 1989, *A Neotropical Companion* changed that. Here was a book that described how the trees and vines grew and how a rain forest functions. It taught you how to look for evolutionary patterns. A section called "A Rainforest Bestiary" (Kricher 1989, pp. 276–331) introduced the birder to the other denizens—or at least representative forms—of the rain forest. Finally, a section on "Neotropical Birds" (Kricher 1989, pp. 211–275) gave an overview of the groups and families of birds found there, focusing on their "adaptations and basic ecology" (p. 212) and the extreme avian species diversity in the Neotropics. *A Neotropical Companion* was beautifully illustrated with line drawings by Andrea S. LeJeune, and included that lantern fly I long to see. The problem was that as fine as these drawings were, black and white illustrations can never capture the full riotous beauty and complexity of the rain forest, particularly the landscapes. Still, *A Neotropical Companion*, though thick, was small and portable enough to bring with you or at least dip into on your plane ride south.

Which brings us to *The New Neotropical Companion*. Since 1989, Kricher has written much more about rain forest ecology and has taken and led many more trips to the jungle. This is a greatly expanded version of the original book filled with beautiful color photography on almost every page that makes the text come alive. The text has been thoroughly updated to include the latest information on subjects like the importance of rain forests as carbon sinks or how the El Nino/Southern Oscillation affects the climate of the region. This book is nothing short of a thorough undergraduate course on rain forest ecology. But don't think that it is a dry, technical text. Kricher has added the meaningful word "companion" to the title. Unlike an academic course, this book is thoroughly enjoyable to read and really geared for the interested novice. On every page Kricher conveys his excitement, his wonder of this unique place. Kricher is personally taking you on a tour of the tropics, and he is great company.

Early on, the reader is taken on "A Sample Walk in a Panamanian Rainforest" (pp. 62–68), which will have you booking your next trip as soon as you can get away.

Rain begins, soft at first, soon more intense. We are surprised at how little of it seems to wet us. The dense, leafy rain forest canopy intercepts most of the rain. Soon the shower ceases, though for a while the steady dripping from the canopy makes it seem as if it is still raining. A loud snap, not too distant, indicates that a big branch or perhaps a full-size tree, has fallen. (p.62)

Later in the text, there will be in-depth discussions about rain forest leaves with their drip tips and about how forest gaps are formed and why they are important. A new section will be appreciated by anyone who has gone on an organized field trip anywhere: "Trail Etiquette: Top Ten Tips" (pp. 68–70) includes:

7. Be aware that you may not be the only one in the group with a camera. Digital photography has provided unrivaled opportunities to document wildlife. The illustrations that grace this book are a testament to that reality. Even small point-and-shoot digital cameras are now available with extremely good telephoto capacity. But, alas, I have seen some overzealous photographers push folks out of the way to get positioned for a clear shot. So please don't thrust your 500mm lens in front of someone's field of vision so you can get the "perfect shot" of the Swallow Tanager (*Tersina viridis*; plate 435) perched in the open. Of course, if you are alone, shoot away." (p.70)

There is so much interesting information in this book it is impossible for any review to summarize it. But Kricher's goal is this: "There are two words to keep in mind as I accompany you through the pages of this book: *observation* and *interpretation*" (p.12). "My goal will be to teach you how to spot patterns, to observe, to see, and to understand a tropical ecosystem as an ecologist does" (p.13).

My only caveat about this wonderful book is a minor one. With all the new information and the abundant color photography, *The New Neotropical Companion* is really too big to put in a back pack and probably too heavy for some of you to even consider packing. No matter, plan your trip and read chapters as you count down the weeks and days.

The New Neotropical Companion gives you the information and the concepts you will need so that on your next trip to the rain forest you are not simply ticking species. You will enjoy the whole spectacle of a place with the most species of almost everything including "one third of the world's approximately 10,000 bird species" (p.12). Whether in the dark depths of a rain forest, or in a unique elfin forest, or on the foggy and windy heights of the páramo, Kricher teaches you why this environment is important, what needs to be sustained, and what bird and wildlife to look for there. Yes, there is even a photograph of a lantern fly (p. 360).

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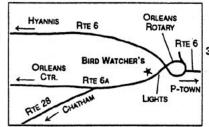
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# **BIRD SIGHTINGS**

# March-April 2017

# Neil Hayward and Robert H. Stymeist

March arrived like a lamb with a high of 63°, the highest temperature recorded for the month, but it quickly dropped to a low of 21° on March 4. The average for March was 34°, four degrees below the norm. Rainfall in Boston totaled 4.18 inches, just a tad under normal with the most falling during the nor'easter on March 13–14. Snowfall totaled 10.1 inches in Boston, most of which fell in two back-to-back storms on March 10 and 13–14. The powerful nor'easter on March 13–14 buried Worcester and much of the area north and west of Boston with total snowfall approaching two feet. Cape Cod, the Vineyard, and the south coast escaped with about three inches that changed to rain early in the storm. The weather was generally dreary with some rain each day from March 24 through the end of the month.

April averaged 52° in Boston, four degrees above the average for the month with a high of 86° on April 16. The low was 33°, recorded on April 1, when some folks on the Massachusetts-New Hampshire border woke up to a foot of snow while others on Cape Cod and the Islands had none. Gusts of up to 60 mph were noted on Nantucket, with power outages on Cape Cod and winds reaching 40–50 mph. Precipitation totaled 3.74 inches in Boston, two inches more than the norm, most of it following the storm on April 1. Snowfall was 1.2 inches in Boston, all on April 1. Strong southwest winds on April 27 and 28 brought major fallout of migrants throughout the state.

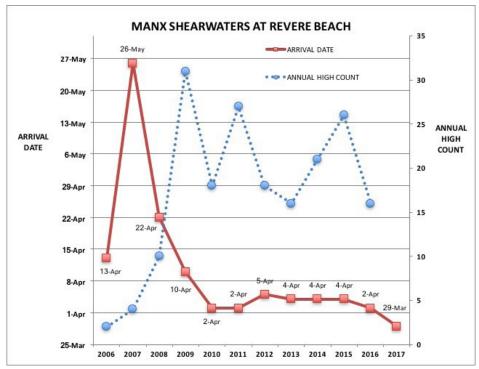
R. Stymeist

#### WATERFOWL THROUGH ALCIDS

Numbers after dates reflect the number of days early (-) or late (+) compared to average arrival date. Thus, Piping Plover (March 5, +2) means the earliest record this year was March 5, two days later than the average arrival date (i.e. March 3). Average arrival dates are calculated from eBird data for the period 2000–2016.

Except for Barnacle Goose (a pair of which sat stubbornly on the Connecticut River in Enfield, Connecticut, and couldn't be bothered to cross the nearby border), all the usual rare geese were represented in Massachusetts this period. A **Pink-footed Goose** continued in the Ipswich area until March 8. This species was recorded in eight states along the eastern seaboard this winter from Maine to Maryland and must now be considered annual to our region. **Greater White-fronted Goose**, another species whose records have increased dramatically over recent decades, was represented with singles continuing in Southwick until March 19 and Topsfield until April 3, and a bird was present at Turners Falls for most of March. A **Ross's Goose** was found in Lexington on March 3 and remained for almost a week. A second bird, or perhaps the same one, was hopping across I-495 between Westborough and Southborough later in the month. The only **Cackling Goose** of the period was seen in Dighton and departed on March 18. **Tundra Swan** is less than annual in Massachusetts, and four birds present in Cheshire on March 24–25 represented the first record since 2014.

Massachusetts hosted half of all the **Tufted Ducks** that were reported in March and April for the entire eastern United States. The four Massachusetts individuals (two males and two females) included a male on Nantucket that lingered until April 23, setting a new late departure



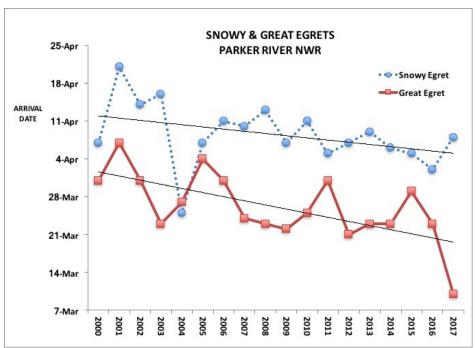
**Figure 1.** Manx Shearwater arrival dates (solid line) and annual maxima (dotted line) at Revere Beach, 2006–2017.

date for the state. A male King Eider continued at the Cape Cod Canal until April 16, drawing an appreciative crowd of birders and photographers from New England and beyond.

**Pacific Loon** has become almost annual in spring (recorded every March or April since 2010), and Race Point remains the most reliable location to spot one. One to two birds were present there during the current period.

Revere Beach continues to be the best place in the country to simultaneously eat lobster rolls and watch Manx Shearwaters. The species has been summering here since at least 2006, typically appearing in the first week of April and departing by the third week of August. This year's arrival on March 29 beats the previous early arrival date by four days (see figure 1). Originally known as British Shearwater, this species has been expanding westward; the first North American breeding was confirmed on Penikese Island, Buzzards Bay, in 1973. This still represents the only confirmed Massachusetts breeding record. The Revere Beach birds were observed copulating in 2008. If they are breeding, a likely location may be one of the nearby Boston Harbor islands.

It's hard to remember that egrets haven't always been the ghostly denizens of our coasts. Neither Great nor Snowy egrets bred in Massachusetts until the 1950s, after which there was an obvious population explosion. Both species are now considered harbingers of spring and together with the season have been getting steadily earlier; figure 2 shows arrival dates this century at Plum Island. (Notice that Great Egrets typically arrive two weeks before Snowys). This year a Great Egret at Plum Island on March 10 was a full week ahead of the average arrival date for the



**Figure 2.** Snowy Egret (dotted line) and Great Egret (solid line) spring arrival dates at Parker River NWR, 2000–2017..

state. Snowy Egrets didn't get the memo and were late (April 3, +8). The first Cattle Egret of the spring was reported from Nantucket on April 9, +7.

Since 2007, **White-faced Ibis** has been reported annually in Essex County, and this year the arrival of a bird on April 16 was bang on target. A count of four birds on April 24 beats last year's high of three. Breeding is suspected but yet to be confirmed, and hybridization with the locally abundant Glossy Ibis is a possibility.

At Barre Falls Dam, hawk watchers recorded 11 species of raptors from April 2 to April 30, with a total count of 374. Numbers of Broad-winged Hawks (262), Red-tailed Hawks (37), and Cooper's Hawks (7) were above average compared to the last three years. Sharp-shinned Hawks were considerably below average, while Osprey (21), Bald Eagle (9), and Red-shouldered Hawk (2) remained consistent with recent spring counts. A fourth-year Golden Eagle was observed on April 9.

Clapper Rails were reported from Fairhaven (where up to four were present the previous year) and from Horseneck Beach. Separating King and Clapper Rails by voice alone is difficult. Habitat is an important consideration; inland fresh water birds can safely be considered King Rails, and salt marsh birds as Clapper Rails. But intermediate brackish, cattail marshes such as those hosting two heard-only birds in Harwich, are problematic, and such birds are probably best left identified as simply "King/Clapper Rail." A pair of Common Gallinules, a rare breeder in the state, was present in Pittsfield at the end of April.

**Sandhill Cranes** first nested in the state at New Marlborough in 2007. They have since bred at Worthington and are suspected to breed at Burrage Pond. A pair returned to the latter site on

#### March 25.

Returning shorebirds were generally late this year: American Oystercatcher (March 13, +6), Piping Plover (March 18, +4), Pectoral Sandpiper (April 2, +9), Solitary Sandpiper (April 13, -1), Upland Sandpiper (April 14, +0), Least Sandpiper (April 18, +3), and Short-billed Dowitcher (April 27, +10). A Semipalmated Plover at Ellisville Harbor that was present from December 2016 was still there on March 22 and seems to have successfully overwintered. Winter records of this species in Massachusetts are extremely rare, and this represents the most northerly March record for this species on the East Coast. Otherwise, the first returning Semipalmated Plovers of the year appeared on April 29 (+2) at Duxbury Beach and Race Point. The only unusual shorebirds of note were Whimbrel, an uncommon spring migrant in the state, with records from Nantucket, West Dennis, and Race Point. A **Black-necked Stilt was** found on April 12 in Edgartown.

Larophiles were treated to two rare gull species this period, both at Race Point. An apparent adult **Thayer's Gull** was photographed on April 16, and a suspected third-cycle bird was found on April 22 and stayed until April 26. Ever since its discovery in 1913, Thayer's Gull has been an ornithological head scratcher. Originally a subspecies of Herring Gull, it wasn't until 1973 that it was upgraded to full species by the American Ornithologists' Union (AOU). But structurally it's more comfortable sitting in the Iceland Gull complex, and that's where it would have been placed but for a 1961 research project on Baffin Island, Canada that showed Thayer's and Kumlien's Iceland Gull to be reproductively isolated. That result has never been replicated, and it's been questioned if the author even did the experiment (!). This year sees a long-awaited proposal for the AOU (now the American Ornithological Society [AOS] after a merger with the Cooper Ornithological Society in October 2016) to lump Thayer's Gull with Iceland Gull. Unless you really prize your hard-won state Thayer's Gull tick, this change might make all our lives considerably easier.

Also from Race Point, photos of a **Mew Gull** on April 15 quickly indicated two birds from opposite sides of the hemisphere: a nominate *canus* from Europe (Common Gull) and the East Asian *kamtschatschensis* (Kamchatka Gull). The Common Gull was different than one photographed at Race Point the previous month. Kamchatka Gull is the largest and bulkiest Mew Gull subspecies and is a very rare visitor to the East Coast. Interestingly, a Kamchatka Gull was present in Digby, Nova Scotia, this past winter, before departing on April 1.

Rare larid activity wasn't confined to just the Cape. Western Massachusetts scored a Laughing Gull, a species that rarely ventures far from the coast, in Lee on March 27.

On April 22, Turners Falls and Provincetown simultaneously welcomed the first terns of the year: **Caspian Tern** and Common Tern. The following day, 150 Common Terns were back at their breeding site on Ram Island, off Mattapoisett.

N. Hayward

Pink-footed	Goose			3/28	Athol	20	B. Kamp
3/1-8	Ipswich	1	V.O.	Ross's Goos	e		•
Greater Whi	ite-fronted Goos	e		3/3-8	Lexington	1	M. Rines $+$ v.o.
3/1, 19	Southwick	1, 1	S. Kellogg	3/12-13	Southboro/N	Iarlboro 1	M. Lynch + v.o.
3/1-4/3	Topsfield	1	V.O.	3/28-30	Westboro	1	B. $Robo + v.o.$
3/2-3/28	Turner's Falls	1	V.O.	4/21	Sheffield	1	K. Schopp
Snow Goose				Brant			**
3/7	Lee	36	G. Ward	3/18	Fairhaven	164	M. Lynch#
3/24-29	Newbury	7	D. Adrien + v.o.	3/20	PI	95	D. Adrien
3/25	N. Dighton	72	J. Eckerson#	4/3	Quincy	162	P. Peterson
3/25	Orange	90	B. Lafley	4/3	Revere B.	68	R. Stymeist
3/25	P'town (RP)	35	P. Flood	4/9	Saugus	130	L. Waters#

Brant (contin	ued)			4/3	PI	10	T. Wetmore
4/15	Duxbury B.	200	R. Bowes	Tufted Duck			
Cackling Go 3/5-18	ose Dighton/Berkle	v 1	v.o.	3/1-19 3/16-19	Lakeville Wilmington	1 r	n v.o. S. Sullivan + v.o.
Tundra Swa		y 1	v.o.	3/26-4/2	Plymouth		A. Kneidel# + v.o.
3/24-25	Cheshire	4	G. Hurley, v.o.	4/9-23	Nantucket	1 r	
Wood Duck	a	105	0.77.11	Greater Scauj		100	G INT
3/11	Southwick	125 27	S. Kellogg	3/12 3/18	Lakeville	100 580	G. d'Entremont
3/20 4/20	Quabog IBA GMNWR	22	M. Lynch# A. Bragg#	3/18	Fairhaven Gloucester H.	30	M. Lynch# J. Berry#
4/26	Ipswich	16	J. Berry	3/27	Stockbridge	40	J. Pierce
Gadwall	1		Ž	Lesser Scaup			
3/18	Mattapoisett	38	M. Lynch#	3/1	Quabog IBA	11	M. Lynch#
3/21	PI Tuman'a Falla	5 12	D. Prima	3/11	Sharon Gloucester	12	L. Waters
4/19 Eurasian Wi	Turner's Falls	12	J. Coleman	3/17 3/25	Pembroke	5 8.9	J. Berry SSBC (W. Petersen)
3/18	Acoaxet	1 m	M. Lynch#	4/2	Arlington Res.	3	J. Forbes
3/26-4/5	Marlborough		K. + J. Dia#, v.o.	King Eider	Č		
4/23	Nbpt H.	2 pr	G. d'Entremont#	3/1-4/30	P'town (RP)	1	V.O.
American Wi		4	I. Faulasa	3/13	Sandwich	1 r	
3/9 3/18	Lexington Acoaxet	4 111	J. Forbes M. Lynch#	3/15-4/16 3/30-4/5	Bourne Gloucester	11	n L. Schibley, v.o. D. Adrien + v.o.
4/3	Bolton Flats	16	D. Grant	4/29	Orleans	2	S. Williams#
4/8	Burrage Pd WN		R.Stymeist	Common Eid			
American Bla				3/18	Fairhaven	121	M. Lynch#
3/18	Acoaxet	416	M. Lynch#	3/18	Gloucester H.	200	J. Berry#
3/30 4/2	Revere Ipswich	128 115	R. Stymeist J. Berry	Harlequin Du 3/4	N. Scituate	6	BBC (G. d'Entremont)
Blue-winged		113	J. Delly	4/27	Westport	7	M. Iliff
3/22	Fairhaven	2 pr	D. MacKinnon	4/29	Orleans	1	S. Williams#
3/29-4/3	Wayland	1	J. Forbes	Surf Scoter			
4/3	Bolton Flats	1	D. Grant	3/18	Fairhaven	138	M. Lynch#
4/6 4/8	Tyringham Burrage Pd WN	1	R. Wendell R.Stymeist	3/18 4/19	Gloucester H. Pittsfield (Onota	45 a) 2	J. Berry# R. Wendell#
4/9-22	Newbury		P. + F. Vale, v.o.	4/23	P'town (RP)	280	B.Nikula
Northern Sho		- P.	1. 1. 1410, 1.0.	White-winge			2.1 (111414
3/9	GMNWR	4	K. Dia#	3/18	Gloucester H.	25	J. Berry#
3/11	Nantucket	3	T. Pastuszak	4/21	Pittsfield (Onota		K. Hanson
3/25 4/3	PI Bolton Flats	10 11	T. Walker D. Grant	4/22 Black Scoter	Turner's Falls	2	E. Huston
4/9	E. Boston (BI)	10	P. Peterson	3/18	Gloucester H.	3	J. Berry#
4/9	Westport (APd)		J. Forbes	4/7	Manomet Point		T. Lloyd-Evans#
Northern Pint				4/19	Hinsdale	1	G. Hurley
3/10	PI	100	T. Wetmore	Long-tailed I		02	M. I
3/18 4/9	Acoaxet Rowley	136 2	M. Lynch# P. + F. Vale	3/18 3/18	Fairhaven Gloucester H.	82 50	M. Lynch# J. Berry#
Green-winge		2	1. + 1. vaic	3/31	Turner's Falls	2	E. Huston
3/19	Topsfield	110	P. + F. Vale	4/4	Cheshire	5	J. Pierce
3/30	Revere	78	R. Stymeist	4/4	Southwick	9	S. Kellogg
4/5	Bolton Flats	57	M. Lynch#	Bufflehead	Palakanan	250	M. I
4/5 4/7	W. Harwich Lexington	30 20	B.Nikula M. Rines	3/18 3/18	Fairhaven Gloucester H.	359 35	M. Lynch# J. Berry#
	d Teal (Eurasian)	20	IVI. IXIIICS	4/10	Lincoln	15	M. Rines
3/9	PI	2	T. Wetmore	4/28	E. Boston (BI)	2	DCR (S. Riley)
3/21-4/30		1	P. Crosson#	4/29	Squantum	30	G. d'Entremont#
4/2-6	Concord	1 2	S. Perkins + v.o.	Common Gol	ldeneye Wachusett Res.	57	M. Lamah#
4/18 Canvasback	Wayland	2	D. Wolf	3/5 3/7	PI	57 24	M. Lynch# T. Wetmore
3/18	Nantucket	48	T. Pastuszak	3/11	Sharon	55	L. Waters
3/18-25	Westboro	1	B. Abbot + v.o.	3/18	Fairhaven	150	M. Lynch#
3/28-30	New Salem	1 G	Watkevich + v.o.	Barrow's Gol			
Redhead 3/18	Nantualist	4	C Vardall	3/1-7 3/1-26	BHI (Deer I.)	1 1	V.O. I Eckerson 02/05
3/18 3/27	Nantucket Northampton	5	S. Kardell K. Yakola	3/1-26	Dighton Turner's Falls	1	J. Eckerson, 03/05 G. Watkewich
3/28	Wilmington	3	S. Sullivan	3/28	Plymouth	1	A. Kneidel
3/29-30	Stockbridge	2	G. Hurley	4/2-3	Randolph	1	V. Zollo + v.o.
Ring-necked		217	36.7.1."		Barrow's Goldene		T W.
3/5 3/9	Wachusett Res. Sharon	317 185	M. Lynch# L. Waters	3/7 Hooded Merg	PI	1	T. Wetmore
3/18	Waltham	375	G. d'Entremont	3/11	Sharon	105	L. Waters
3/25	New Salem	225	B. Lafley + v.o.	3/17	Quabbin (G35)	80	B. Lafley
3/26	Westfield	136	S. Kellogg	3/18	Southwick	85	S. Kellogg

Hooded Mer	ganser (continued)	`		Manx Shearw	vater		
3/20	Quabog IBA	195	M. Lynch#	3/18	P'town (RP)	1	P. Flood#
Common Me			. ,	3/29, 4/12		2, 11	V.O.
3/4	Quabog IBA	318	M. Lynch#	Northern Gar			D.D.
3/11	Sharon	155	L. Waters	4/3 4/3	Quincy	50	P. Peterson
3/17 3/25	Quabbin (G35) Pembroke		B. Lafley SBC (W. Petersen)	4/3 4/6	Revere B. P'town	415	R. Stymeist B.Nikula
3/27-28	Wayland	50	B. Black#	4/7	Westport	16	M. Iliff
4/4	Southwick	600	S. Kellogg	Great Cormo		10	141. 11111
Red-breasted				3/1-9	Medford	1	V.O.
3/27-28	Southwick	3	S. Kellogg	3/4	N. Scituate		BBC (G.d'Entremont)
3/27	Turner's Falls	1	P. Gagarin	4/2	Acoaxet	20	M. Lynch#
4/2	Westport	96	M. Lynch#		ed Cormorant	1.4	M Tal-#
4/4 4/16	Cheshire PI	1 28	J. Pierce J. Keeley#	4/2 4/2	Acoaxet Harwich	14 111	M. Lynch# J. Hoye#
4/22	P'town (RP)	900	B. Nikula	4/22	Medford	225	M. Rines
Ruddy Duck		, 00	D. Tillulu	American Bit			111. 1111105
3/7	Pittsfield (Pont.)	) 2	J. Pierce	3/22-thr	Reports of indiv	fron	7 locations
4/14	Waltham	44	M. Rines	Least Bittern			
4/15	Pembroke	42	G. d'Entremont#	4/30	PI	1	D. Larson
4/23	W. Newbury	38	J. Berry	Great Blue H 3/24		8	m D. Laurahlim
Northern Bo	Bolton flats	1	J. Hoye#	3/24 4/3	W. Bridgewater Lynnfield	15	
Ring-necked		1	J. 110ye#	4/19	Tewksbury	20	
3/5	Woburn	1	G. d'Entremont	Great Egret	Tewksoury	20	ii 1. Guidetti
4/11	W. Newbury	1 m		3/9-12	Gloucester (EP)	1	C. Haines + v.o.
Ruffed Grou				3/13	Duxbury	1	N. Villone
4/10-23	Freetown	1	L. Abbey	3/29	Westport	1	G. Gove#
4/15	Quabbin (G40)	2	J. Hoye#	4/3	Sheffield	1	K. Schopp
4/16 4/24	Falmouth Huntington	3 1	C. Neill	4/28 4/30	Longmeadow Manchester	3 50	M. Moore J. Berry#
Wild Turkey		1	M. Lynch#	Snowy Egret		50	J. Delly#
3/18	Nbpt	28	G. d'Entremont	4/3	Ipswich	4	N. Dubrow
3/20	Quabog IBA	22	M. Lynch#	4/3	N. Dighton	3	<ul> <li>A. Eckerson</li> </ul>
3/22	Woburn	29	M. Rines	4/28	E. Boston (BI)	8	DCR (S. Riley)
Red-throated		400	D. 1771 - 1	4/29	WBWS	9	J. Junda#
thr	P'town (RP)	400 m		4/30	Manchester	50	J. Berry#
4/7 4/7	Southwick Westport	1 76	D. Holmes M. Iliff	Little Blue H	eron Acushnet	1	H. Zimberlin
4/29	Revere B.	75	G. d'Entremont#	4/8	Bridgewater	1	N. Marchessault
Pacific Loor		7.5	G. a Enacmont	4/22	Gloucester	3	J. Hoye#
3/4-18	P'town (RP)	2	V.O.	Tricolored He			Ž
Common Lo				4/15	Nantucket	1	S. Kardell
3/1-3	Quabbin Pk		L. Therrien, 03/03	4/17	W. Harwich	1	N. Dorian
3/18	Gloucester H.	25	J. Berry#	4/30	Manchester	3	S. Hedman
4/7 4/9	Westport Cambr. (FP)	62 2	M. Iliff M. Resendes	Cattle Egret 4/9, 29	Nantucket	1	S. Kardell
4/20	Wachusett Res.		M. Lynch#	4/17	Barre Falls	1	D. Schilling#
4/23	P'town (RP)	48	B.Nikula	4/23-25	Eastham	i	C. Bates#
Pied-billed C				4/29-30	Ipswich	1	N. Dubrow $+$ v.o.
4/6	GMNWR	4	A. Bragg#	Green Heron			
4/12-29	PI		MAS (D. Moon), v.o.	4/14	Williamsburg	1	C. Johnson
4/13 4/22	Westboro	1	S. Moore	4/23	Newton	1 1	H. Miller
4/22	Burrage Pd WM Fairhaven	1A 1	P. Jacobson# G. d'Entremont	4/24 4/29	Boston (FPk) Wenham	2	P. Peterson J. Nelson
Horned Greb		1	G. a Entremont		ed Night-Heron	_	J. 14CISOII
3/18	Fairhaven	31	M. Lynch#	3/29	Brookline	1	A. Morgan
3/18	Gloucester H.	5	J. Berry#	4/5	Dorchester	23	P. Peterson
4/3	Revere B.	4	R. Stymeist	4/10	Watertown	21	R. Stymeist
4/12	MBO	242	A. Kneidel	4/14	E. Weymouth	18	MAS (K. Rawdon)
Red-necked	Winthron	9	D Ctrimoiat		ned Night-Heron	1	I Cabiblar + v a
3/30 3/31	Winthrop Cheshire	3	R. Stymeist J. Pierce	4/2-3 Glossy Ibis	Plymouth	1	L. Schibley + v.o.
4/7	Southwick	1	D. Holmes	3/25	Burrage Pd WM	A 1	SSBC (W. Petersen)
4/12	MBO	40	A. Kneidel	3/30	Wayland	1	C. Martone
4/12	PI	2	MAS (D. Moon)	4/13-24	Bolton Flats	1	J. Lawson $+$ v.o.
Northern Ful				4/17	GMNWR	38	A. Bragg#
	Eastham (FE)	1 dl	c B.Nikula	4/20	Ipswich	100	J. Dillon
4/2		2.14	D XI:11	4/24			
4/23	P'town (RP)	2 lt	B.Nikula	4/24 White-faced	MtA Ibis	10	A. Trautmann
	P'town (RP)	2 lt 1	B.Nikula P. Flood	4/24 White-faced 4/16, 24		10	A. Trautmann  D. Peacock

D11- X/-1				4/20	Ough as IDA	4	M. I
Black Vulture 3/18	Sharon	2	V. Zollo	4/29 Sora	Quabog IBA	4	M. Lynch#
3/24	W. Warren	2	B. Loughlin	4/11	W. Harwich	1	K. Fiske#
3/29	Westport	19	G. Gove#	4/15	Bolton Flats	1	S. Arena
4/3	Nantucket	í	S. Kardell	4/18	Lenox	i	G. Ward
4/5	Medford	2	M. McBrien	4/24	Pittsfield	ī	G. Hurley
4/9	Mattapoisett	3	N. Marchessault	Common G			0.11
4/23	Sheffield	28	M. Lynch#	4/22-25	Pittsfield	1	K. Hanson $+$ v.o.
Turkey Vultu				4/23	Stockbridge	1	M. Lynch#
3/5	Saugus	1	C. Lapite#	American C			
3/18	Westport	13	M. Lynch#	3/7	Ludlow	1	D. Holmes
4/2-29	PI	94	Hawkcount (T. Mara)	3/18	Acoaxet	3	M. Lynch#
4/14	P'town	30	B.Nikula	3/21	Jamaica Plain	8	P. Peterson
Osprey	Folia outh	1	A Camlan	4/23 Sandhill Cr	Nantucket	3	T. Pastuszak
3/23 4/2-30	Falmouth Barre Falls		A. Copley Hawkcount(D.Schilling)	thr		2	***
4/2-30	PI	28	Hawkcount (T. Mara)	3/12	E. Bridgewater Bradford	4	v.o. D. Larson
4/2-29	Westport	32	M. Lynch#	3/25			SSBC (W. Petersen)
Swallow-tail		32	WI. Lynch	4/2	Worthington	2	E. Lewis
4/17	Falmouth	1	K. Fiske	4/9	New Marlborou		K. Schopp
Golden Eagl		•	11. 1 15110	4/17	New Salem	1	D. Small#
4/9		bad IV	Hawkcount(D.Schilling)	Black-neck		-	
4/15	Quabbin (G40)	1 a		4/12	Edgartown	1	L. McDowell#
Northern Har	rier		Ť	American O	ystercatcher		
3/1-22	PI	4	T. Wetmore $+$ v.o.	3/13	Nantucket	1	T. Pastuszak
3/16	Milton	3	P. Peterson	3/18	Plymouth	3	N. Marchessault
4/2-29	PI	111	Hawkcount (T. Mara)	3/23	Falmouth	2	G. Hirth
Sharp-shinne				3/29	Nantucket	9	T. Pastuszak
4/9-30	Barre Falls		Hawkcount (D.Schilling)	3/30	Winthrop	11	R. Stymeist
4/9-29	PI	48	Hawkcount (T. Mara)	4/24	Salem	2	E. McKay
Cooper's Hav		2	3.6.7. 1.11	Black-bellie			T.O. 1
4/2	Dartmouth	3	M. Lynch#	4/2-28	PI	1	J. Sender + v.o.
4/9-29 4/10-30	PI Dome Fello	11	Hawkcount (T. Mara)	Semipalmate 3/1-22		1	I Cabibla
Northern Gos	Barre Falls	4 1	lawkcount (D.Schilling)	4/29	Plymouth Duxbury B.	2	L. Schibley F. Bowes
4/2	Barre Falls	1 г	lawkcount (D.Schilling)	4/29	P'town	1	E. Sibley
4/22	Nantucket	1 p		Piping Plove		1	E. Sibicy
Bald Eagle	Namucket	1 P	d. Hillson	3/18	Hyannis	1	S. Matheney
3/18	Medford	7	P. Roberts#	4/3	Revere B.	4	R. Stymeist
3/20	Quabbin	3	M. Lynch#	4/5	Duxbury B.	6	R. Bowes
3/22	Nantucket		mm T. Pastuszak	4/5	PI	22	MAS (D. Moon)
4/2-18	Barre Falls	9 F	lawkcount (D.Schilling)	4/10	Nashawena I.	63 p	
4/5	W. Harwich	2 a	d v.o.	Killdeer		•	•
4/23	PI	5	B. Rusnica#	3/9	GMNWR	4	K. Dia#
Red-shoulder				3/26	Orange	8	T. Pirro
3/13	Easton	63 p		3/29	Petersham	18	D. Small
3/18	Mattapoisett	2	M. Lynch#	4/5	Middleton	35	A. Bean
3/26	Royalston	2	T. Pirro	Upland Sand		4	C Matal D Halman
Broad-winge		262 1	I	4/14 4/22	Westover	4	S.Motyl, D.Holmes
4/2-30 4/14	Barre Falls Wompatuck SP		MAS (K. Rawdon)	4/23	DWWS Saugus	1	B. Hodson G. Wilson#
4/17	PI	2	Hawkcount (T. Mara)	4/24	Bedford	1	P. + F. Vale
4/28	Royalston	8	M. Lynch#	4/29-30	Newbury	i	J. Smith + v.o.
Red-tailed Ha		O	ivi. Lynciii	Whimbrel	riewoury	•	J. Billitii · v.o.
4/2-28	Barre Falls	28 F	lawkcount (D.Schilling)	4/28	P'town	1	S. Arena
4/7-17	PI	13	Hawkcount (T. Mara)	4/30	Nantucket	3	K. Blackshaw#
Rough-legge	d Hawk		` ′	4/30	W. Dennis	2	C. Gibson
03/thr	PI	2	T. Wetmore $+$ v.o.	Ruddy Turns	stone		
3/19	Saugus	2	G. Wilson#	3/29	Revere B.	1	P. Peterson
3/25	Cumb. Farms	2 ii	mm L. de la Flor	4/3	Quincy	29	P. Peterson
King Rail				Sanderling			
4/29	Bolton Flats	1	N. Paulson	3/1	PI	75	T. Wetmore
Clapper Rai		1.0	2.7	4/2	Gloucester (EP)		C. Haines
4/19-30	Fairhaven		C. Longworth + v.o.	4/3	Quincy	22	P. Peterson
4/27	Westport	1	M. Iliff	Dunlin	PI	275	T Water
King/Clapper 4/12-30	W. Harwich	1	B.Nikula	3/1 4/2	Eastham (FE)	140	T. Wetmore B.Nikula
Virginia Rail	vv. 11a1WICII	1	D.MKUIA	4/2 4/15	Duxbury B.	1500	R. Bowes
	Ipswich	2	J. Berry	Purple Sand		1500	A. DOWES
			J. Delly				D WILL:
4/17 4/19			K Schonn	3/26	Lvnn	15	I) Wilkinson
4/19	Sheffield	3	K. Schopp M. Rines	3/26 4/3	Lynn PI	15 40	D. Wilkinson T. Spahr
		3	K. Schopp M. Rines D. Williams	3/26 4/3 4/7	Lynn PI Westport	15 40 18	D. Wilkinson T. Spahr M. Iliff

Least Sandpi	ner			Black-heade	d Cull		
4/18, 30	W. Harwich 2, 2	23	v.o.	3/22	Barnstable	2	S. Matheney
4/28	Bolton Flats	6	B. Kamp	4/1	Osterville	ī	J. Trimble#
4/29	Burrage Pd WMA		S. Magnell	4/22	P'town (RP)	i	S. Arena#
4/29		35	J. Keeley#	Little Gull	1 town (Id)	•	B. Tirchan
	ed Sandpiper		v. Izeeley	4/28	P'town (RP)	1	D. Sibley#
4/29-30	Fairhaven	1 D.	Logan + v.o.	Laughing Gu		•	B. Bibley
4/30	W. Harwich	1	M. Keleher	3/27	Lenox	1	R. Laubach
Pectoral San		•	110101101	4/4	Plymouth	8	C. Hight
4/2	Acoaxet	1	M. Lynch#	4/25	P'town (RP)	600	B.Nikula
4/9	Montague	1	S. Surner	Mew Gull ("	Common Gull"	)	
4/15	Newbury	6	S. Grinley#	3/26	P'town (RP)	1 ph	B.Nikula#
4/30	W. Harwich	2	J. Trimble#	4/15	P'town (RP)	1 ph	A. Kneidel#
Short-billed	Dowitcher			Mew Gull ("	Kamchatka Gul	l") Î	
4/27	PI	1	L. Schibley	4/15	P'town (RP)	1 ph	W. Sweet
Wilson's Sni	pe		,	Thayer's Gu	ill ` ´	•	
4/12	Lexington	15	M. Rines	4/16	P'town (RP)	1 ad	ph S. Arena
4/13	Sheffield	6	R. Wendell	4/22-26	P'town (RP)	1 3cy p	oh B.Nikula#
Wilson's Sni	pe (continued)			Iceland Gull			
4/16		70	J. Berry#	3/12	Pittsfield (Onot		G. Hurley
American W				3/18	P'town (RP)	48	S. Arena#
3/9	W. Roxbury (MP)	5	J. Battenfeld	3/18	Stellwagen Bar		J. Berry#
3/25	PI	3	N. Landry	3/30	Turner's Falls	2	K. Yakola
3/25	Boston (RKG)	1 d	I. Vicari#	4/3	Winthrop B.	7	M. Iliff
4/8	MSSF		l'Entremont#	4/9	Lancaster	4	T. Pirro
4/9		10	J. Forbes	Lesser Black			D G : M 1
Spotted Sand			4 E I	3/5	Turner's Falls	1	D. Griffiths
4/8	N. Dighton	1	A. Eckerson	3/12	Nantucket	84	S. Kardell
4/22	Wompatuck SP	1	D. Peacock	4/4	Springfield	1	L. Richardson
4/24	Huntington	3	M. Lynch#	4/6	Duxbury B.	3	R. Bowes
4/30	Saugus	0	S. Jones#	4/6-21 4/7	Medford	3	J. Layman + v.o. T. Pirro
Solitary San	Topsfield	1	S. Sullivan	4/16	Westminster	10	S. Arena
4/13 4/16	Rowley	2	J. Berry#	Glaucous Gu	P'town (RP)	10	S. Alelia
4/17	PI	1	T. Wetmore	3/4	Westminster	1	C. Caron
4/29	Quabog IBA	2	M. Lynch#	3/7	Lexington	1	J. Forbes
Greater Yello		2	IVI. Lyncii#	4/2	Lunenburg	1	T. Pirro
3/25, 4/29		55	v.o.	4/23	P'town (RP)	2	S. Williams#
4/2	Harwich	7	J. Hoye#	4/29	Salisbury	ĩ	E. Labato
4/13		10	P. Peterson	Caspian Terr		•	E. Eucuto
4/23	Burrage Pd WMA		J. Hoye#	4/22, 30	P'town (RP)	2, 2	B.Nikula
Willet			******	4/22	Turner's Falls	-, -	J. Coleman
3/1	Barnstable	1	P. Trimble	4/24-30	Burrage Pd WN	<b>ЛАЗ</b> Е	E. Vacchino + v.o.
4/7	PI	1 M. S	choene + v.o.	Roseate Tern	Ü		
4/23	Nantucket	4	T. Pastuszak	4/28	P'town (RP)	1	S. Arena#
4/28	E. Boston (BI)		CR (S. Riley)	Common Ter	n		
4/29		40	J. Berry	4/22	Turner's Falls	1	J. Coleman
Lesser Yello				4/23	Mattapoisett	150	N. Marchessault
4/5-11	Newbury		R. Heil + v.o.	4/28	P'town (RP)	400	S. Arena#
4/23	Burrage Pd WMA		J. Hoye#	Common Mu			
4/29		15	D. Swain#	3/18	Gloucester H.	. 2	K. Rathinasamy
Parasitic Jae			ST 211//	3/18	Stellwagen Bar		J. Berry#
4/22, 30		, 3 A.O	'Neill# + v.o.	4/22	P'town (RP)	3	B.Nikula#
Black-legged		1.5	DATE I	Thick-billed		4.0	T. C
4/2		15	B.Nikula	3/6, 25	P'town (RP)		J. Sweeney + v.o.
Bonaparte's		1	I Diamas	4/1-9	Gloucester	1	M. Sovay + v.o.
4/4-5 4/8-9	Pittsfield	1 2 J. L	J. Pierce	Razorbill	D'toum (DD)20	00 550	I Cocolor# + r. a
4/8-9 4/19	Lancaster Quabbin Pk	2 J. L	awson + v.o. L. Therrien	3/5, 4/2 Black Guiller		00, 550	J. Socolar# + v.o.
4/19	Turner's Falls	1	E. Huston	3/18	Gloucester H.	6	J. Berry#
4/23		45	B.Nikula	Atlantic Puf		U	л. вену#
7/43	i town (Ki )	T.J	D.MKUIA	3/18	Stellwagen Bar	nk 1	fide J. Berry
				5/10	Stellwagen Dai	in I	nac J. Denry

#### **DOVES THROUGH FINCHES**

On April 24, a male **White-winged Dove** was singing in the Fenway. A pair had been present there since December 11, 2016, although the second bird (a female) hadn't been reported since April 5. The display of territoriality gave some speculation to the possibility of nesting.

A Yellow-billed Cuckoo was found in Dighton on April 28, the third earliest report within the last ten years. The earliest record for this species was of a dead bird picked up in Salisbury on 28 March 2010.

Snowy Owls were noted from five locations with the last one recorded at Duxbury Beach on April 8. A Barred Owl delighted birders at Plum Island for most of March, and a Long-eared Owl continued in Chatham. Short-eared Owls were noted from four areas with the last one reported from Plum Island on April 23. The strong southwest winds on April 28 brought very early Common Nighthawks with sightings noted from Wayland, Petersham, and Braintree. Eastern Whip-poor-wills were heard as early as April 18 in South Peabody and at Quabbin Park, generally a week before normal arrival.

The **Rufous Hummingbird** that had been present in Falmouth since October 2016 was last seen on April 3. The bird was banded in December as an immature male, and by the first week of spring he had developed his mature gorget. The first Ruby-throated Hummingbird was noted on April 25 followed by several others on April 28. Hawk watchers at Plum Island tallied 521 American Kestrels, 39 Merlins, and 12 Peregrine Falcons during the month of April.

There was an impressive fallout of migrant birds at the end of the April, when a low pressure system centered off the Carolinas brought in early migrants along the coast. Marshall Iliff described this event as a "slingshot": birds get drifted offshore in the Southeast and fly downwind until they make it to land along the Northeast coast or Atlantic Canada. The fallout from this event, which started on April 27, produced twenty-seven warbler species including Kentucky, Hooded, and Yellow-throated, as well as a Blue Grosbeak on Nantucket and a Painted Bunting in Huntington. Additionally, there were some early arrivals of typically later arriving migrants such as Blackpoll and Blackburnian warblers and an Eastern Wood Pewee, which was photographed on Plum Island on April 28. A similar event also happened earlier in the month (April 8–10), when a slingshot produced some very early arrivals: two Eastern Kingbirds on Plum Island, a Louisiana Waterthrush in Nahant, and a Prothonotary Warbler and Summer Tanager on the Vineyard.

The Ovenbird at Horn Pond, Woburn, survived several snow and ice storms to make it through the winter thanks to the help of dedicated volunteers who brought regular installments of mealworms and seed. Feeder birds that continued during the period included the **Boreal Chickadee** in Peru, a **Painted Bunting** in Orleans, and the **Harris's Sparrow** in Dalton. The celebrated **Smith's Longspur** was last noted at Bear Creek Wildlife Sanctuary in Saugus on April 9, thanks to Geoff Wilson of Wheelabrator, who organized special events that enabled hundreds of birders to see this rare vagrant. Lastly, several flocks of **Bohemian Waxwings** appeared in Western Massachusetts, especially in Franklin County in mid-March. Winter finches were few and far between with just one report of both Common Redpolls and Pine Siskins.

							R. Stymetst
White-winged Dove			4/15	Wayland	2	A. McCarthy#	
3/1-4/24	Boston (Fens)	1	v.o.	4/15	Wompatuck SP	1	G. d'Entremont#
Yellow-billed	l Cuckoo			4/22	Mashpee	1	K. Miller#
4/28-30	N. Dighton	1	M. Eckerson + v.o.	Long-eared C	)wl		
Snowy Owl	-			2/27-3/5	Chatham	1	S. Mason
3/7	Nantucket	3	N. Foley	Short-eared C	)wl		
3/16	Chatham	1	K. Burke#	3/10-4/23	PI	1	Hawkcount (B. Rusnica)
3/18-31	PI	1	V.O.	3/25	Cumb. Farms	1	L. de la Flor
3/19	Saugus	1	G. Wilson#	4/2	Saugus	4	G. Wilson#
4/15-18	Duxbury B.	1	R. Bowes $+$ v.o.	4/5	Duxbury B.	1	R. Bowes
Barred Owl	•			Northern Saw	v-whet Owl		
3/1-26	PI	1	V.O.	3/8-4/3	New Salem	1	B. Lafley
3/12	Boston (AA)	1	M. Dowaliby	3/9	Windsor	1	H. Higinbotham
3/25	Quabbin	2	M. Lynch#	3/10	Boston (RKG)	1	I. Vicari#

D Ctamaigt

N C	l t O l ( t)	1\		F t IZ:	1. 1 4		
Northern Saw 3/13	-whet Owl (conti MtA	inued)	V Corm Wittenmetein#	Eastern King 4/10	pira PI	2	T. Mara#
Common Nig		1	K. Sayn-Wittgenstein#	4/15	Bolton Flats	1	S. Arena
4/28	Petersham	2	M. Lynch#	4/18	Lowell	i	M. Baird
4/28	Wayland	2	B. Harris	Northern Shr			
4/30	Braintree	1	L. de la Flor#	3/1-4/12	PI	1	v.o.
Eastern Whip				3/24	Windsor	1	J. Pierce
4/18	Quabbin Pk	1	L. Therrien	4/2-9	Worthington	1	E. Lewis
4/29	MSSF	1	K. Marshall	4/3	Wayland	1	C. Martone
Chimney Swi			C. M. C. d	4/9	Boxborough	1	L. Markiewicz
4/11 4/28	Nbpt	6 4	S. McGrath	White-eyed V 4/16		1	Crinler#
4/28	Arlington Res. Gloucester	4	J. Forbes S. Hedman	4/22	Ipswich Mashpee	1	S. Grinley# K. Miller#
	d Hummingbird	4	S. Hedinan	4/27-31	PI	1	T. Wetmore + v.o.
4/25	Plympton	1 m	T. Lloyd-Evans	4/29	Newton	i	P. Gilmore
4/28	Belchertown	1	L. Therrien	Yellow-throa			
4/28	N. Andover	1	J. Willis	4/15	Chatham	1	M. Iliff
4/28	S. Dartmouth	1	<ul> <li>A. Morgan</li> </ul>	4/16-24	Boxford (CP)	1 I	O. Wilkinson + v.o.
Rufous Hum				4/17-18	W. Newbury	1	J. Keeley + v.o.
3/1-4/3	Falmouth	1	M. Mann	Blue-headed			D. F. E.
Belted Kingfi		D) 1		4/12	Medford	1	R. LaFontaine
3/1-13 4/11	W. Roxbury (M		V.O.	4/12 4/24	Woburn Huntington	1 19	J. Keeley
4/11	Wayland Andover	2 pi 2	M. Sterling J. Berry#	4/24	MNWS	5	M. Lynch# L. Ferraresso
Red-headed		2	J. Delly#	4/28	PI	18	P. + F. Vale
thr	Belchertown	1	v.o.	4/30	Wompatuck SP		BBC (E. Giles)
thr	Ipswich	1 in		Warbling Vir		-	( ( ,
3/31-4/30	Åmherst	1	v.o.	4/24	W. Roxbury (M	(P) 1	J. Battenfeld
Yellow-bellie	d Sapsucker			4/24	Worc.	1	R. Quimby
4/10	PI	3	T. Wetmore	4/29	Jamaica Plain	8	P. Peterson
4/11	Boston	3	P. Peterson	4/29	Quabog IBA	14	M. Lynch#
4/15	Quabbin (G40)	8	J. Hoye#	Red-eyed Vii			I Th
4/28 Northern Flic	Royalston	16	M. Lynch#	4/29 4/30	Quabbin Pk	1 1	L. Therrien
4/11	PI	20	T. Wetmore	4/30	Fairhaven N. Dighton	1	C. Longworth A. Eckerson
4/16	Wendell	13	M. Lynch#	Fish Crow	IV. Digition	1	A. Lekeison
Pileated Woo		13	ivi. Lynciiii	3/12	Southboro	1	M. Lynch#
3/26	Royalston	5	T. Pirro	3/16	Milton	80	P. Peterson
4/3		pr, 1 m	P. + F. Vale	4/3	PI	10	T. Wetmore
4/5	Acton	2 pı		4/5	Dorchester	110	P. Peterson
4/7	Manchester	2 pi	S. Hedman	Common Ra		_	** **
American Ke		4		3/7	Easton	2 n	K. Ryan
4/2-18	Barre Falls		awkcount (D.Schilling)	3/13-4/30		2	D. Williams
4/2-29 4/16	PI PI	521 179	Hawkcount (T. Mara)	3/26 4/10	Worc. (BMB) Barre Falls	10 11	J. Liller# D. Schilling#
4/19	Hanscom	8	Hawkcount (T. Mara) M. Rines	4/18	Woburn	4	M. Rines
4/29	Falmouth	5	R.Stymeist#	Horned Lark		7	WI. ICHICS
4/30	Plymouth Airpo		G. d'Entremont	3/11	Quabog IBA	120	M. Lynch#
4/30	Saugus	8	S. Jones#	3/12	Cumb. Farms	125	G. d'Entremont#
Merlin	Č			3/26	Orange	30	T. Pirro
4/2-29	PI	39	Hawkcount (T. Mara)	4/2	Saugus	85	G. Wilson#
4/16	PI	13	Hawkcount (T. Mara)	4/5	Middleton	70	A. Bean
Peregrine Fal		2	C Cibaan Las		ugh-winged Swall		C Varmer 04/02
3/thr 3/5	Woburn	2 pi 2	C. Gibson + v.o.	4/1 4/2	Marlborough	1 1	C. Kaynor, 04/02 D. Furbish
4/2-29	Saugus PI	12	C. Lapite# Hawkcount (T. Mara)	4/19	Cumb. Farms Worc. (BMB)	10	J. Liller
4/9	Taunton	2	C. Gibson	4/25	Woburn (HP)	52	M. Rines
Eastern Wood		~	C. Gloson	Purple Martin		32	W. Killes
4/28	PI	1 pl	n T. Wetmore	4/7	MBO	1	A. Kneidel#
Least Flycate		•		4/10	Rehoboth	2 pi	
4/28	Royalston	4	M. Lynch#	4/29	PI	12	J. Keeley#
4/29	Sudbury	1	J. Forbes	4/30	Norfolk	6	J. Glover
Eastern Phoel		41	M T 2"	Tree Swallov		4	D T 1 '
4/10 4/14	Quabog IBA	41	M. Lynch#	3/5 3/10	Westport	4	D. Tobias
4/14 4/23	IRWS Stockbridge	10 10	J. Nelson M. Lynch#	3/10 4/3	GMNWR Quabog IBA	6 141	P. Gilmore M. Lynch#
4/24	Huntington	13	M. Lynch#	4/7	Northboro	300	B. Volkle
Great Crested		1.5	Lyπeππ	4/8	Turner's Falls	175	G. d'Entremont#
4/28	Boston	1	P. Peterson	Bank Swallo	W		
4/28 4/28	Boston Winchester	1	R. LaFontaine	4/12	MBO	1	A. Kneidel
4/28	Boston					1 2	A. Kneidel D. Swain#

Barn Swallov		-	D. W. 11	4/29	Quabog IBA	32	M. Lynch#
4/3	W. Harwich	5	P. Trull	4/30	Gloucester (EP)	15	S. Hedman
4/9, 29	PI	1, 20	V.O.	Brown Thras			3.6.7. 1.11
4/13	GMNWR	3	A. Bragg#	4/18	Quabog IBA	3	M. Lynch#
Cliff Swallow			77. 77 1	4/24	Ipswich (CB)	2	J. Berry
4/21	Arlington Res.	1	K. Hartel	4/24	PI	6	P. + F. Vale
4/29	PI	1	T. Mara#	American Pi		•	
Boreal Chick				3/4-29	Gloucester (EP)	2	V.O.
thr	Peru	1	V.O.	3/4-5	Saugus	1	J. Trimble + v.o.
Red-breasted		2	D. D. /	4/30	Quabbin (G5)	3	A. Griffiths#
4/11	Boston (AA)	3	P. Peterson	Bohemian V		2.4	T. D.
4/15	Wompatuck SP	4	G. d'Entremont#	3/10	Templeton	24	T. Pirro
4/29	PI	10	D. Swain#	3/20	Colrain	30	N. O'Brien
4/30	Sandisfield	7	M. Lynch#	3/20	Rowe	20	C. Hyytinen
Brown Creep				4/3	Northampton	1	B. Lafley
4/9	Winchester	8	M. Rines#	4/8	Townsend	30	T. Pirro
4/10-24	PI	19 b	B. Flemer#	Cedar Waxw			
4/12	Ware R. IBA	7	M. Lynch#	3/18	Gloucester H.	15	J. Berry#
4/15	Wompatuck SP	7	G. d'Entremont#	4/2	Acoaxet	42	M. Lynch#
House Wren				4/7	PI	35	M. Schoene#
4/15	N. Dartmouth	1	S. Martin	Lapland Lon	ngspur		
4/29	Nahant	4	G. d'Entremont#	3/26	Saugus	1	G. d'Entremont
4/29	Newton	3	P. Gilmore	4/30	Saugus	1	S. Jones#
4/29	Quabog IBA	17	M. Lynch#	Smith's Lor	igspur		
Winter Wren			•	3/1-4/9	Saugus	1	V.O.
4/9	Newton	2 pr	P. Gilmore	Snow Buntin			
4/15	Wompatuck SP	2 1	G. d'Entremont	3/16	Turner's Falls	27	J. Coleman
4/28	Ipswich	3	J. Berry	3/17	Holyoke	18	D. Tinsdell
4/30	Sandisfield	4	M. Lynch#	3/17	Saugus	15	G. Wilson
Marsh Wren			. ,	3/19	Wachusett Res.	13	T. Pirro
3/25	E. Sandwich	1	M. Iliff	3/25	Ipswich (CB)	46	N. Dubrow
4/29	Nantucket	4	S. Kardell	Ovenbird	-Po(0-)		
4/29	PI	10	D. Swain#	4/1-10	Woburn (HP)	1	v.o.
Blue-gray Gn			D. Swamin	4/16	MNWS	i	J. Parrot-Willis
4/10	Scituate	4	D. Peacock	4/22	Mashpee	i	K. Miller#
4/11	Groveland	3	F. Vale#	4/29	Quabog IBA	18	M. Lynch#
4/29	PI	12	D. Swain#	4/30	Wompatuck SP	36	BBC (E. Giles)
4/29	Quabog IBA	6	M. Lynch#	Louisiana W		30	DDC (E. GIICS)
4/30	Wompatuck SP	8	BBC (E. Giles)	4/8	Southwick	1	S. Kellogg
Golden-crow		o	DDC (L. Glics)	4/10	Nahant	1	L. Pivacek
3/29		2	J. Liller#	4/14-30	Boxford (CP)	1	V. O.
4/7	Worc. (BMB) Ipswich	2	J. Berry	4/14-30		3	v. o. v. o.
4/8	Arlington	4	K. Hartel	4/24	Wompatuck SP Huntington	4	
4/9-13	PI	34 b	B. Flemer#	Northern Wa		4	M. Lynch#
		34 U	D. FICHICI#	4/16	Nahant	1	I Diversals
Ruby-crowne 3/3		1	M. Valaham#	4/18		2	L. Pivacek
	E. Sandwich		M. Keleher#		Westport	8	L. Abbey
4/10-30	PI	81 b	B. Flemer#	4/28	Ipswich (WSF)		J. Berry
4/18	Lowell Quabog IBA	5	M. Baird				
4/18	Unianog IBA		N. T 1. //	4/28	Royalston	4	M. Lynch#
4/0.4		12	M. Lynch#	4/29	PI	5 b	B. Flemer#
4/24	MNWS		M. Lynch# L. Ferraresso	4/29 Blue-winged	PI l Warbler	5 b	B. Flemer#
Eastern Bluel	MNWS oird	12 15	L. Ferraresso	4/29 Blue-winged 4/27	PI l Warbler Westport	5 b	B. Flemer# M. Iliff
Eastern Blueb 3/3	MNWS oird Rehoboth	12 15	L. Ferraresso K. Bartels	4/29 Blue-winged 4/27 4/29	PI I Warbler Westport Medford	5 b	B. Flemer# M. Iliff M. Rines#
Eastern Blueb 3/3 3/14	MNWS bird Rehoboth Middleboro	12 15 12 8	L. Ferraresso K. Bartels H. Levesque	4/29 Blue-winged 4/27 4/29 4/30	PI I Warbler Westport Medford Wompatuck SP	5 b	B. Flemer# M. Iliff
Eastern Blueb 3/3 3/14 4/11	MNWS bird Rehoboth Middleboro Ipswich	12 15 12 8 8	L. Ferraresso  K. Bartels H. Levesque J. Berry	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w	PI I Warbler Westport Medford Wompatuck SP /hite Warbler	5 b	B. Flemer# M. Iliff M. Rines# BBC (E. Giles)
Eastern Bluet 3/3 3/14 4/11 4/23	MNWS bird Rehoboth Middleboro	12 15 12 8	L. Ferraresso K. Bartels H. Levesque	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12	PI I Warbler Westport Medford Wompatuck SP Thite Warbler Cambr. (FP)	5 b	B. Flemer# M. Iliff M. Rines# BBC (E. Giles) J. Trimble
Eastern Bluel 3/3 3/14 4/11 4/23 Veery	MNWS bird Rehoboth Middleboro Ipswich Stockbridge	12 15 12 8 8 6	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17	PI I Warbler Westport Medford Wompatuck SP Thite Warbler Cambr. (FP) Canton	5 b  1 2 2 1 1	B. Flemer# M. Iliff M. Rines# BBC (E. Giles) J. Trimble N. Block
3/3 3/14 4/11 4/23 Veery 4/28	MNWS bird Rehoboth Middleboro Ipswich Stockbridge	12 15 12 8 8 6	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29	PI of Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI	5 b  1 2 2 1 1 7 b	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer#
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA	12 15 12 8 8 6	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/29	PI S I Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford	5 b  1 2 2 1 1 7 b 12	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines#
Eastern Bluet 3/3 3/14 4/11 4/23 Veery 4/28 4/30	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk	12 15 12 8 8 6	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/29 4/30	PI of Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP	5 b  1 2 2 1 1 7 b	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer#
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h	12 15 12 8 8 6 1 b 1	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/29 4/30 Prothonotal	PI of Wastport Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler	5 b  1 2 2 1 1 7 b 12 13	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich	12 15 12 8 8 6 1 1 2	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/29 4/30 <b>Prothonota</b> 4/8	PI di Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven	5 b  1 2 2 1 1 7 b 12	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines#
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI	12 15 12 8 8 6 1 b 1 2	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow	PI of Warbler Westport Medford Wompatuck SP White Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven when Warbler	5 b  1 2 2 1 1 7 b 12 13	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP	12 15 12 8 8 6 1 b 1 2 1 40 b 10	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/29 4/30 Prothonotal 4/8 Orange-crow 4/24	PI of Warbler Westport Medford Wompatuck SP White Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro	5 b  1 2 2 1 1 7 b 12 13 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16	MNWS bird Rehoboth Middleboro Ipswich Stockbridge  MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont# M. Lynch#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotau 4/8 Orange-crow 4/24 4/26-28	PI  I Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro Tewksbury	5 b  1 2 2 1 1 7 b 12 13 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS	12 15 12 8 8 6 1 b 1 2 1 40 b 10	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow 4/24 4/26-28 4/28	PI di Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven wed Warbler Westboro Tewksbury Medford	5 b  1 2 2 1 1 7 b 12 13 1 1 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont# M. Lynch# L. Ferraresso	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow 4/24 4/26-28 4/28 4/29	PI of the Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven where Westboro Tewksbury Medford Boston	5 b  1 2 2 1 1 7 b 12 13 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15	MNWS bird Rehoboth Middleboro Ipswich Stockbridge  MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS  Pittsfield	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio J. Berry# B. Flemer# G. d'Entremont# L. Ferraresso T. Collins	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow 4/24 4/26-28 4/29 Nashville W	PI of Warbler Westport Medford Wompatuck SP White Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro Tewksbury Medford Boston arbler	5 b  1 2 2 1 7 b 12 13 1 1 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15 4/29	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS Pittsfield Boston (PG)	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont# M. Lynch# L. Ferraresso  T. Collins G. Fabbri	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow 4/24 4/26-28 4/28 4/29 Nashville W 4/28	PI  I Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP warbler Vineyard Haven westboro Tewksbury Medford Boston Boston Boston Boston Medford Boston Boston Boston Boston Medford Boston Bos	5 b  1 2 2 1 1 7 b 12 13 1 1 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones T. Wetmore
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15 4/29 4/29	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS Pittsfield Boston (PG) Quabog IBA	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio J. Berry# B. Flemer# G. d'Entremont# L. Ferraresso T. Collins	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotal 4/8 Orange-crow 4/24 4/26-28 4/29 Nashville W 4/28 4/29	PI di Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven wed Warbler Westboro Tewksbury Medford Boston arbler PI Medford	5 b  1 2 2 1 7 b 12 13 1 1 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15 4/29 Gray Catbird	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS Pittsfield Boston (PG) Quabog IBA	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont# M. Lynch# L. Ferraresso  T. Collins G. Fabbri M. Lynch#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotan 4/8 Orange-crow 4/24 4/26-28 4/29 Nashville W 4/28 4/29 Kentucky W	PI of Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro Tewksbury Medford Boston arbler PI Medford Womford Worbler Westboro Tewksbury Medford Boston Arbler Medford Varbler	5 b  1 2 2 1 1 7 b 12 13 1 1 1 1 2	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones T. Wetmore M. Rines#
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15 4/29 Gray Catbird 4/9	MNWS bird Rehoboth Middleboro Ipswich Stockbridge  MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS  Pittsfield Boston (PG) Quabog IBA Nahant	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio J. Berry# B. Flemer# G. d'Entremont# M. Lynch# L. Ferraresso  T. Collins G. Fabbri M. Lynch# L. Pivacek	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotan 4/8 Orange-crow 4/24 4/26-28 4/29 Nashville W 4/28 4/29 Kentucky W 4/27	PI of Westport Westport Medford Wompatuck SP White Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro Tewksbury Medford Boston arbler PI Medford Womford Boston Arbler E. Sandwich	5 b  1 2 2 1 1 7 b 12 13 1 1 1 1 1 1 1 1	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones T. Wetmore M. Rines# P. Crosson
Eastern Bluel 3/3 3/14 4/11 4/23 Veery 4/28 4/28 4/30 Hermit Thrus 3/16 4/9-13 4/15 4/16 4/24 Wood Thrush 4/15 4/29 Gray Catbird	MNWS bird Rehoboth Middleboro Ipswich Stockbridge MBO MtA Quabbin Pk h Ipswich PI Wompatuck SP Wendell MNWS Pittsfield Boston (PG) Quabog IBA	12 15 12 8 8 6 1 b 1 2 1 40 b 10 12 12 12	L. Ferraresso  K. Bartels H. Levesque J. Berry M. Lynch#  T. Lloyd-Evans# L. Nichols S. Cerchio  J. Berry# B. Flemer# G. d'Entremont# M. Lynch# L. Ferraresso  T. Collins G. Fabbri M. Lynch#	4/29 Blue-winged 4/27 4/29 4/30 Black-and-w 4/12 4/17 4/24-29 4/30 Prothonotan 4/8 Orange-crow 4/24 4/26-28 4/29 Nashville W 4/28 4/29 Kentucky W	PI of Warbler Westport Medford Wompatuck SP white Warbler Cambr. (FP) Canton PI Medford Wompatuck SP ry Warbler Vineyard Haven westboro Tewksbury Medford Boston arbler PI Medford Womford Worbler Westboro Tewksbury Medford Boston Arbler Medford Varbler	5 b  1 2 2 1 1 7 b 12 13 1 1 1 1 2	B. Flemer#  M. Iliff M. Rines# BBC (E. Giles)  J. Trimble N. Block B. Flemer# M. Rines# BBC (E. Giles)  M. Thibodeau#  S. Williams D. Prima M. McCarthy S. Jones T. Wetmore M. Rines#

	llowthroat			Wilson's War	·hler		
4/28	Needham	1	M. Salett	4/14-23	MtA	1	J. Bussman#+ v.o.
4/29	Newton	1	P. Gilmore	Yellow-breas			
4/29	PI	4	D. Swain#	3/1-4	Nahant	1	M. Iliff, 03/04
4/29 Hooded War	Quabog IBA	5	M. Lynch#	3/4 Grassbanner	Nantucket	1	S. Kardell
4/29	Douglas	1	N. Paulson	Grasshopper 4/22	Southwick	1	S. Motyl
American Re			11. I daison	Seaside Spari		•	5. Moty1
4/28-29	PI	1	S. Pierce + v.o.	3/20	Newbury	1	R. Heil
4/29	Quabog IBA	4	M. Lynch#	4/30	PI	1	T. Wetmore#
4/29 4/30	Wompatuck SP	1 1	R. Timberlake	American Tre		5	D. Dataman
Northern Par	Belchertown	1	A. Griffiths#	4/10 4/22	E. Boston (BI) Plympton	1	P. Peterson T. Lloyd-Evans
4/13	Framingham	1	C. Ewer	4/24	PI	1	M. Goetschkes
4/29	Medford	16	M. Rines#	Chipping Spa			
4/29	PI	6	D. Swain#	4/28	Ipswich	13	J. Berry
4/30	Fitchburg	1	H. Yelle	4/28	Royalston	98	M. Lynch#
Magnolia Wa 4/27-28	arbier PI	1	P. Wood	4/30 4/30	MtA Wompotuck SP	24 17	R. Stymeist
4/30	Boston	2	M. Kaufman	Field Sparrov	Wompatuck SP	1 /	BBC (E. Giles)
Blackburniar		_	111. 1244111411	4/16	Wendell	8	M. Lynch#
4/30	Sandisfield	1	M. Lynch#	4/23	PI	6	P. + F. Vale
Yellow Warb			36.7. 1.11	4/29	Quabog IBA	4	M. Lynch#
4/16	Wendell	1	M. Lynch#	Fox Sparrow			M. Dinne
4/17 4/29	W. Roxbury (M PI	P) 2 10	T. Bradford P. + F. Vale	3/7 3/13	Woburn (HP) Dedham	6	M. Rines P. Peterson
4/29	Quabog IBA	17	M. Lynch#	3/20	Quabog IBA	4	M. Lynch#
4/30	Newton	10	L. Berk	4/3	Ipswich (WSF)	3	J. Berry
Chestnut-side				4/4	ΡΊ	3	S. Riley
4/28	Lynnfield	1	M. Sovay	Dark-eyed Ju			T. 70 : 11 //
4/29 4/29	PI Quabog IBA	1 3	D. Swain#	4/29 4/29	MtA PI	1 1	J. Trimble# T. Wetmore
Blackpoll Wa	arbler	3	M. Lynch#		inco (Oregon)	1	1. Wetinote
4/28	MtA	1	J. Trimble	thr	Mashpee	1	M. Keleher
4/30	N. Dighton	1	<ul> <li>A. Eckerson</li> </ul>	White-crown	ed Sparrow		
	ed Blue Warbler			3/16	Sheffield	3	K. Schopp
4/27	Ware R. IBA	1	M. Lynch#	3/17	Cumb. Farms	1	N. Marchessault M. Baird
4/29 4/29	Lowell	1	M. Baird	4/18	Lowell	1	
			P Gilmore	4/27_29	ΡΙ	- 1	D $\Delta$ drien + $v$ $\alpha$
4/29	Newton PI	1 3	P. Gilmore D. Swain#	4/27-29 Harris's Spa	PI arrow	1	D. Adrien + v.o.
4/29 Palm Warble	PI r		P. Gilmore D. Swain#	4/27-29 Harris's Spa thr		1	D. Adrien + v.o. v.o.
Palm Warble 4/9, 16	PI r PI	3 1, 16	D. Swain#	Harris's Spa thr Vesper Sparre	r <b>row</b> Dalton ow	1	v.o.
Palm Warble 4/9, 16 4/10-29	PI r PI PI	3 1, 16 52 b	D. Swain# v.o. B. Flemer#	thr Vesper Sparre 3/9	n <b>rrow</b> Dalton ow Barnstable	1	v.o. P. Crosson
Palm Warble 4/9, 16 4/10-29 4/14	PI r PI PI IRWS	3 1, 16 52 b 23	v.o. B. Flemer# J. Nelson	Harris's Spa thr Vesper Sparro 3/9 4/10	nrow Dalton ow Barnstable Pittsfield	1 1 1	v.o. P. Crosson T. Collins
Palm Warble 4/9, 16 4/10-29 4/14 4/18	PI r PI PI IRWS Quabog IBA	3 1, 16 52 b 23 10	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch#	Harris's Spa thr Vesper Sparro 3/9 4/10 4/11-14	ntrow Dalton ow Barnstable Pittsfield W. Roxbury (MP	1 1 1 1 ) 1	v.o. P. Crosson T. Collins M. Iliff + v.o.
Palm Warble 4/9, 16 4/10-29 4/14	PI r PI PI IRWS	3 1, 16 52 b 23	v.o. B. Flemer# J. Nelson	Harris's Spa thr Vesper Sparro 3/9 4/10	nrow Dalton ow Barnstable Pittsfield	1 1 1	v.o. P. Crosson T. Collins
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Palm	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler	3 1, 16 52 b 23 10 17 6 b	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#	Harris's Sparts thr Vesper Sparrs 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sp.	nrow Dalton  Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow	1 1 1 1 2 1	v.o. P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27	PI r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth	3 1, 16 52 b 23 10 17	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23	nrow Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS	1 1 1 2 1 33	v.o. P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler	PI r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth	3 1, 16 52 b 23 10 17 6 b	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks	Harris's Spa thr Vesper Sparro 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23	Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus	1 1 1 2 1 33 20	v.o. P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer	3 1, 16 52 b 23 10 17 6 b	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23	nrow Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS	1 1 1 2 1 33	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3	PI r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth	3 1, 16 52 b 23 10 17 6 b 1	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks	Harris's Spa thr Vesper Sparro 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23	Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI	1 1 1 1 2 1 33 20 20	v.o. P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15	PI r PI PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont#	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sp. 4/23 4/23 4/29 Ipswich Spar 3/29	Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham	1 1 1 2 1 33 20 20 30	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/3 4/15 4/15 4/15	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller#	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23 4/28 4/29 Ipswich Spar 3/29 3/29-4/12	Dalton  Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI	1 1 1 2 1 33 20 20 30	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o.
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/122 4/27	PI T PI PI IRWS Quabog IBA Arlington Res. MBO m Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont#	Harris's Sparthr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sparre 4/23 4/28 4/29 Ipswich Sparre 3/29 3/29-4/12 3/29	Dalton  W Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus	1 1 1 2 1 33 20 20 30 1 1	v.o.  P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain#  C. Ewer  MAS (D. Moon), v.o. G. Wilson#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Palm 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/22 4/27 Yellow-rump	PI  r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth  Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17 46	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch#	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23 4/29 Ipswich Spar 3/29-4/12 3/29 4/9	Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB)	1 1 1 1 2 1 2 1 33 20 20 30 1 1 1 1 3 3	v.o.  P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29	PI T PI PI IRWS Quabog IBA Arlington Res. MBO m Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer#	Harris's Sparthr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sp. 4/23 4/28 4/29 Ipswich Spar 3/29 4/29 4/13 Lincoln's Spa	Dalton  W Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster Pl arrow DFWS Saugus Royalston PI Tow Framingham PI Saugus Ipswich (CB) Westboro	1 1 1 2 1 33 20 20 30 1 1	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/27	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17 46 52 8 b 54	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch#	Harris's Sparthr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sp. 4/23 4/28 4/29 Ipswich Sparr 3/29 3/29-4/12 3/29 4/9 Lincoln's Sparr 3/1-4/20	Dalton  W Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro Arrow Essex	1 1 1 1 2 1 2 1 33 20 20 30 1 1 1 1 3 3	v.o.  P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/27 4/29	PI  r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth  Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford	3 1, 16 52 b 23 10 17 6 b  1 1 2 12 15 17 46 52 8 b 54 111	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines#	Harris's Spa thr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spa 4/23 4/23 4/28 Ipswich Spar 3/29 3/29-4/12 3/29 4/9 4/13 Lincoln's Spar 3/1-4/20 Swamp Sparr	Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI Barrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro arrow Essex Fow	1 1 1 1 2 1 33 20 20 30 1 1 1 1 3 3 1	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/3 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/27 4/29 4/29	PI  T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth  Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI	3 1, 16 52 b 23 10 17 6 b  1 1 2 12 15 17 46 52 8 b 54 111 500	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines# D. Swain#	Harris's Spathr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spath/23 4/23 4/28 4/29 Ipswich Sparr 3/29 3/29-4/12 3/29 4/9 4/13 Lincoln's Sparr 4/13 Swamp Sparr 4/13	Dalton  OW Dalton  OW Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro arrow Essex FOW GMNWR	1 1 1 1 2 1 33 20 20 30 1 1 1 1 3 1 1 8	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/29 4/29 4/29 4/29	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI MtA	3 1, 16 52 b 23 10 17 6 b  1 1 2 12 15 17 46 52 8 b 54 111	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines#	Harris's Sparter thr Vesper Sparrer 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sp. 4/23 4/23 4/28 4/29 Ipswich Sparrer 3/29 4/9 4/13 Lincoln's Sparrer 3/1-4/20 Swamp Sparrer 4/13 4/23	Dalton  W Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster Pl arrow DFWS Saugus Royalston Pl row Framingham Pl Saugus Ipswich (CB) Westboro Arrow Essex row GMNWR Stockbridge	1 1 1 2 1 33 20 20 30 1 1 1 1 8 24	v.o.  P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain#  C. Ewer  MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg# M. Lynch#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/29 4/29 4/29 4/29	PI  T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth  Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI	3 1, 16 52 b 23 10 17 6 b  1 1 2 12 15 17 46 52 8 b 54 111 500	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines# D. Swain#	Harris's Spathr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spath/23 4/23 4/28 4/29 Ipswich Sparr 3/29 3/29-4/12 3/29 4/9 4/13 Lincoln's Sparr 4/13 Swamp Sparr 4/13	Dalton  OW Dalton  OW Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro arrow Essex FOW GMNWR	1 1 1 1 2 1 33 20 20 30 1 1 1 1 3 1 1 8	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/27 4/29 4/29 4/30 Yellow-throi 4/28 4/29	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI MtA ated Warbler WBWS MtA	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17 46 52 8 b 54 111 500 70	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines# D. Swain# R. Stymeist	Harris's Spathr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sparre 4/23 4/28 4/29 Ipswich Sparre 3/29 4/9 4/13 Lincoln's Sparre 3/1-4/20 Swamp Sparre 4/13 4/23 4/28 4/29 Eastern Towh	Dalton ow Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro arrow Essex row GMNWR Stockbridge Royalston PI nee	1 1 1 1 2 1 33 20 20 30 1 1 1 3 1 1 8 24 44 3 20	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain#  C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg# M. Lynch# M. Lynch# D. Swain#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/29 4/29 4/29 4/29 4/29 Prairie Warble	PI T PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI MtA ated Warbler WBWS MtA ler	3 1, 16 52 b 23 10 17 6 b  1 1 2 12 15 17 46 52 8 b 54 111 500 70 1 b 1 m	D. Swain#  v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans#  L. Meeks J. Gahagan M. Lynch# J. Berry G. d'Entremont# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# D. Swain# R. Stymeist J. Junda# J. Trimble	Harris's Sparter thr Vesper Sparrer 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Sparrer 4/23 4/28 4/29 Ipswich Sparrer 3/29 4/9 4/13 Lincoln's Sparrer 3/1-4/20 Swamp Sparrer 4/13 4/23 4/28 4/29 Eastern Towh 3/29	Dalton  W Dalton  W Barnstable Pittsfield W. Roxbury (MP Lancaster Pl arrow DFWS Saugus Royalston PI row Framingham PI Saugus Ipswich (CB) Westboro arrow Essex row GMNWR Stockbridge Royalston PI nee Westport	1 1 1 1 1 2 1 33 20 20 30 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain# C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg# M. Lynch# M. Lynch# D. Swain# G. Gove#
Palm Warble 4/9, 16 4/10-29 4/14 4/18 4/23 4/24 Western Paln 03/1-4/27 Pine Warbler 4/3 4/15 4/15 4/15 4/15 4/22 4/27 Yellow-rump 4/23 4/24-29 4/29 4/29 4/29 Prairie Warble 4/29 Prairie Warble	PI  r PI PI IRWS Quabog IBA Arlington Res. MBO n Warbler Plymouth  Ayer Quabog IBA Ipswich (WSF) Wompatuck SP Mashpee Ware R. IBA bed Warbler Arlington Res. PI Ware R. IBA Medford PI MtA ated Warbler WBWS MtA ler PI	3 1, 16 52 b 23 10 17 6 b 1 1 2 12 15 17 46 52 8 b 54 111 500 70 1 b	D. Swain# v.o. B. Flemer# J. Nelson M. Lynch# M. Rines T. Lloyd-Evans# L. Meeks J. Gahagan M. Lynch# K. Miller# M. Lynch# M. Rines B. Flemer# M. Lynch# M. Rines# D. Swain# R. Stymeist J. Junda#	Harris's Spathr Vesper Sparre 3/9 4/10 4/11-14 4/12 4/24-29 Savannah Spath/23 4/23 4/28 4/29 Ipswich Sparr 3/29 3/29-4/12 3/29 4/9 4/13 Lincoln's Sparr 3/1-4/20 Swamp Sparr 4/13 4/23 4/28 4/29 Eastern Towh 3/29 4/16	Dalton ow Barnstable Pittsfield W. Roxbury (MP Lancaster PI Barrow DFWS Saugus Royalston PI Saugus Ipswich (CB) Westboro Barrow Essex Cow GMNWR Stockbridge Royalston PI Stockbridge Royalston PI Westport Westport Westport	1 1 1 1 1 2 1 33 200 200 30 1 1 1 1 3 1 1 8 24 443 200 33 200 33 200 300 300 300 300 300	P. Crosson T. Collins M. Iliff + v.o. J. Hoye# D. Adrien P. Sowizral G. Wilson# M. Lynch# D. Swain#  C. Ewer MAS (D. Moon), v.o. G. Wilson# J. Berry S. Moore P. Brown A. Bragg# M. Lynch# D. Swain# G. Gove# M. Lynch#
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Summer Tan	ager (continued)			3/13	Dedham	9	P. Peterson
4/11	Harwich	1	P. Trull	4/8	Athol	11	G. d'Entremont#
4/30	MtA	1 f	J. Offermann#	4/11	P'town	2	B.Nikula
Scarlet Tanag	er			4/14	Wompatuck S	P 5	MAS (K. Rawdon)
4/28	MtA	1	I. Reid	4/20	Lynnfield	115	L. Ireland
4/28	PI	1	T. Wetmore	Orchard Orio	le		
4/30	Wompatuck SP	5	BBC (E. Giles)	4/19	Brewster	1	P. Trull
Rose-breasted			,	4/24	Stoneham	1	D. Jewell
4/24	Paxton	1	R. Jenkins	4/28	Bradford	1	D. Larson
4/24	Woburn (HP)	1	M. Rines	Baltimore Ori	iole		
4/29	Quabog ÌBA	3	M. Lynch#	4/15	Fairhaven	1	C. Longworth
Blue Grosbe	ak		•	4/17	Brookline	1	O. Burton
4/27	Nantucket	1 f	L. Buck#	4/28	PI	7	W. Tatro
Indigo Buntir	ng			Purple Finch			
4/7	Westport	1 m	imm M. Iliff	4/19	PI	22	T. Wetmore
4/9-12	Boston	1	D. Sullivan	4/24	Huntington	11	M. Lynch#
4/27	Westport	3	M. Iliff	4/27	Ware R. IBA	31	M. Lynch#
Painted Bun	ting <sup>^</sup>			4/29	Westford 8	1 m, 7 f	P. Guidetti
3/1-4/20	Orleans	1 m	V.O.	Red Crossbill			
4/26	Huntington	1	M. & D. Stewart	3/10, 4/29	PI	15, 8	V.O.
Dickcissel	Č			3/22	Sandwich	11	J. McCumber
4/26	N. Dighton	1	<ul> <li>A. Eckerson</li> </ul>	3/25-4/14	Montague	8	E. Huston
Eastern Mead	lowlark			3/28, 4/22	Salisbury	18, 6	V.O.
3/5-6	DWWS	4	N. Marchessault#	Common Red	lpoll		
3/5-26	Saugus	2	C. Lapite + v.o.	3/10	PI	5	M. Watson
3/13	Framingham	1	C. Ewer	Pine Siskin			
3/25-26	Orange	1	B. Lafley $+$ v.o.	4/8	Orange	3	G. d'Entremont#
4/3	Barre Falls	1	D. Grant	Evening Gros	beak		
4/29	Falmouth	3	R.Stymeist#	3/12	Ipswich	3	P. Low
4/30	Plymouth Airport	4	G. d'Entremont	4/8	Ĥardwick	4	<ul> <li>A. Barnes</li> </ul>
Rusty Blackb	ird			4/24	Huntington	1	M. Lynch#
3/7	Woburn (HP)	20	M. Rines	4/26-28	Royalston	2	E. LeBlanc

# INTERNATIONAL BIRDING AND NATURAL HISTORY TOURS

Explore our amazing planet with Mass Audubon staff naturalists: have fun, learn, and support conservation



White-naped Crane by Rich Lindie, via Rockjumper

Belize, Bhutan, Botswana, Costa Rica, Galápagos, Iceland, Japan, Melanesia, Mongolia, Namibia, Panama, Trinidad, and more massaudubon.org/travel | travel@massaudubon.org

#### ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, up to the 56th Supplement, as published in Auk 132 (3): 748-64 (2015) (see <a href="http://checklist.aou.org/">http://checklist.aou.org/</a>).

Location-#	MAS Breeding Bird Atlas Block	Nbpt Newburyport
AA	Arnold Arboretum, Boston	ONWR Oxbow National Wildlife Refuge
ABC	Allen Bird Club	PG Public Garden
AP	Andrews Point, Rockport	PI Plum Island
APd	Allens Pond, S. Dartmouth	Pd Pond
B.		
	Beach	
Barre FD	Barre Falls Dam	PR Pinnacle Rock, Malden
BHI	Boston Harbor Islands	P'town Provincetown
BI	Belle Isle, E. Boston	Pont. Pontoosuc Lake, Lanesboro
BR	Bass Rocks, Gloucester	RP Race Point, Provincetown
BBC	Brookline Bird Club	Res. Reservoir
BMB	Broad Meadow Brook, Worcester	RKG Rose Kennedy Greenway, Boston
BNC	Boston Nature Center, Mattapan	SB South Beach, Chatham
CB	Crane Beach, Ipswich	SN Sandy Neck, Barnstable
CGB	Coast Guard Beach, Eastham	SRV Sudbury River Valley
CP	Crooked Pond, Boxford	SSBC South Shore Bird Club
Cambr.	Cambridge	TASL Take A Second Look, Boston Harbor Census
CCBC	Cape Cod Bird Club	WBWS Wellfleet Bay WS
Corp. B.		
	Corporation Beach, Dennis	
Cumb. Farms	Cumberland Farms, Middleboro	WMWS Wachusett Meadow WS
DM	Dunback Meadow	Wompatuck SP Hingham, Cohasset, Scituate, Norwell
DFWS	Drumlin Farm Wildlife Sanctuary	Worc. Worcester
DWMA	Delaney WMA, Stow, Bolton, Harvard	WSF Willowdale State Forest, Ipswich
DWWS	Daniel Webster WS	Other Abbreviations
EP	Eastern Point, Gloucester	ad adult
FE	First Encounter Beach, Eastham	b banded
FH	Fort Hill, Eastham	br breeding
FP	Fresh Pond, Cambridge	dk dark (morph)
FPk	Franklin Park, Boston	f
G40	Gate 40, Quabbin Res.	fide on the authority of
GMNWR	Great Meadows NWR	fl fledgling
H.	Harbor	imm immature
HPt	Halibut Point, Rockport	juv juvenile
HP	Horn Pond, Woburn	lt light (morph)
HRWMA	High Ridge WMA, Gardner	S \ 1,/
I.		
	Island	
IRWS	Ipswich River WS	migr migrating
L.	Ledge	n nesting
MAS	Mass Audubon	ph photographed
MP	Millennium Park, W. Roxbury	pl plumage
MV	Martha's Vineyard	pr pair S summer (1S = first summer)
MBWMA	Martin Burns WMA, Newbury	
MI	Morris Island	thr throughout reporting period
MNWS	Marblehead Neck WS	v.o. various observers
MSSF	Myles Standish State Forest, Plymouth	W winter (2W = second winter)
MtA	Mount Auburn Cemetery, Cambr.	yg young
NAC	Nine Acre Corner, Concord	# 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: <a href="http://www.birdobserver.org/Contact-Us/Submit-Sightings">http://www.birdobserver.org/Contact-Us/Submit-Sightings</a>.

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

# Mass Audubon Birders Survey

Mass Audubon invites birders to take a brief survey designed to help us collect information on:

- The different types of birding activities they engage in.
- Their familiarity with environmental issues affecting local and global bird populations.
- Their understanding of the impacts associated with these conservation issues.
- Their familiarity and engagement with conservation actions that can help mediate these impacts.

Here is the link for taking the survey: https://www.surveymonkey.com/r/ZHCD3HX

What we learn from the survey responses, collected throughout spring and summer of 2017, will help us develop educational materials that build on birders familiarity with conservation issues, and that are relevant to birders current levels of engagement with certain conservation actions. By taking this survey, you will help us to develop materials that will be effective and applicable to fellow birders.

Lucy Gertz
Statewide Education Projects Manager
Education Department
Massachusetts Audubon Society
208 South Great Road Lincoln, MA 01773
Phone 781-259-2177 Fax 781-259-2377
Email lgertz@massaudubon.org

# ABOUT THE COVER

#### Black Skimmer

With its unique bill and foraging behavior, the Black Skimmer (*Rynchops niger*) is one of the most interesting and distinctive of our coastal waterbirds. Skimmers are black above and white below and have long narrow wings, but it is their bill that readily distinguishes them from other members of the order Charadriiformes. The basal half of a skimmer's bill is bright red and the distal end black. The bill is laterally compressed, and the lower mandible is longer than the upper. Their eyes are large but their pupils can be narrowed to a slit, a feature not found in other birds. The large eye is likely an adaptation for crepuscular and nocturnal foraging, and the slit feature may serve to protect the eye from bright light reflected from the water surface during the day. Black Skimmers are strongly sexually dimorphic; males average nearly 30% heavier than females. Juvenile skimmers are brownish with dark streaking above and white streaking below.

The bill of a Black Skimmer is an adaptation for foraging on small fish in shallow water. When foraging, skimmers fly low along the water with their bill open and the long lower mandible cutting through the surface. The upper mandible is hinged so that it can snap down and secure any little fish that has made contact with the knifing lower mandible. Skimmers mainly forage early and late in the day and, because they are tactile foragers, may also forage at night. Small fish are the primary prey, but small crustaceans also are taken.

The Black Skimmer is polytypic, with three subspecies generally recognized: *R. n. niger* in North America, and two subspecies in South America. The Black Skimmer is also closely related to two skimmer species found in Asia and Africa. In North America, Black Skimmers breed along the East Coast from Massachusetts to Florida and along the Gulf Coast from Florida to Northern Mexico. In the west, they breed in several colonies in southern California. Skimmers breeding from Massachusetts to Virginia are migratory, and largely spend the winter in Florida. More southerly breeders are often nomadic, either migrating, or remaining more sedentary. For this reason, determining migratory patterns is often confusing. Skimmers outside their year-round range can be found along both coasts of Mexico and parts of Central America. In Massachusetts, Black Skimmers are rare and irregular breeders, although they are regular summer and fall visitors. They may occasionally be abundant in the aftermath of hurricanes. Breeders arrive in late April and typically leave in September and October.

Black Skimmers are monogamous and pairs may remain together through the winter and sometimes for several breeding seasons. They are colonial nesters with colonies varying from a few birds to thousands. They almost always breed in colonies with terns. It is thought that they receive protection from the aggressive mobbing behavior that characterizes breeding terns. Most colonies are on islands, beaches, salt marshes, and even rooftops—just about anywhere terns are nesting. The skimmers

often form subcolonies and usually nest in the more open, unshaded areas of beaches than terns.

At colony sites both sexes are vocal. The most common call is a bark or series of barks that have been likened to the bark of a beagle. Skimmers call during displays, in aggressive situations, and to sound alarm; calls are usually given from within the pair's territory. Males mate guard females prior to egg-laying. During courtship, they bring fish or twig offerings to the female.

Nests are scrapes in the sand made by both males and females, and they sometimes make more than one scrape per territory. The nests are not lined with vegetation. Both parents develop brood patches and share in the incubation of the clutch of four cream colored dark-spotted eggs for the three-and-a-half weeks until hatching. The parents give distraction displays if disturbed. The chicks are semi-precocial at hatching, with their eyes open and bodies covered with down, and they can walk after only a few hours. Both parents brood the young birds. The chicks start to wander from the nest in three to five days but stay within approximately a meter of the nest until fledging. They can fly in about four weeks when they join flocks of adults, but the parents continue to feed them for at least two weeks as the young birds develop their highly specialized foraging behavior characteristic of the species. From the start, the parents feed the chicks whole small fish rather than by regurgitation.

Black Skimmer eggs and chicks fall prey to mammals such as rats, foxes, and raccoons. Gulls are the primary nest predators, but oystercatchers, turnstones, and several species of herons also eat skimmer eggs. Falcons and owls take adults. In the past, humans—including market gunners and commercial eggers—killed skimmers for food, and sometimes for the millinery trade. Disturbance that drives adults from their nests can be a threat, too, since chicks die quickly in direct sun. Storms, flooding, and human disturbance can also cause entire colonies to fail. Black Skimmers are listed by various states as Endangered, Threatened, or of Special Concern, with loss of breeding habitat being a major cause. The entire population was considered in decline in the 1960s and 1970s, however most populations have since stabilized and artificial dredge-spoil islands have expanded their breeding habitat. We can only hope that conservation efforts will salvage and protect sufficient breeding habitat for this unique waterbird, to thrive in our coastal waters.





BLACK-THROATED GREEN WARBLER BY SANDY SELESKY

# AT A GLANCE

#### June 2017



WAYNE R. PETERSEN

This month readers are faced with two individual birds, thus affording a frontal and a dorsal view of the mystery species. The small size, round heads, and short tails of the birds suggests that they might be juveniles, especially when it is noted that the frontal-facing individual is scaly on the chest. There is little else in the photo to support the hypothesis that they are juveniles however.

A closer examination shows that the two birds have plain, un-patterned faces, and that there is some fine streaking visible on the sides of the neck of both individuals. Also, the on-line version of the photograph shows dark spotting on the wing coverts of the back-facing bird. And finally, the short straight bills of the birds are clearly bicolored with pinkish-orange bases and dark tips. The small, round-headed appearance of the birds, their distinctive bill shape, and the chubby appearance of the front-facing bird all suggest that the birds might be doves or pigeons of some sort. However the short, rounded, slightly notched appearance of the right-facing bird's tail is very different from the familiar Mourning Dove's long, pointed, and prominently white-bordered tail.

With the features described above, there are a number of things that are atypical of a Mourning Dove of any age. Instead, the birds' short tails, scaly breasts, dark-spotted wing coverts, and dark-tipped pinkish-orange bills are collectively typical features of Common Ground-Doves (*Columbina passerina*).

Common Ground-Doves are vagrants in Massachusetts with only two records for the Commonwealth, the most recent being one in Lexington observed from November 13 – December 3, 2015. The author photographed the pictured Common Ground-Doves in Key West, Florida, on April 22, 2009.

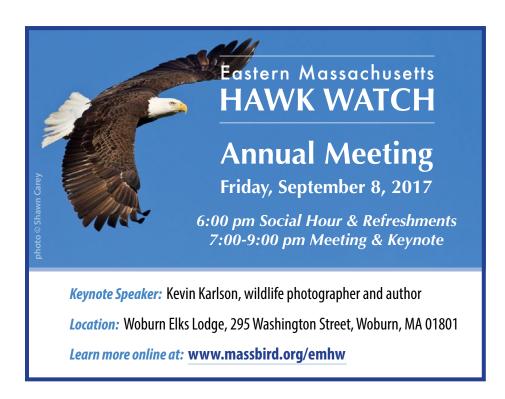
Wayne R. Petersen

# ABOUT THE COVER ARTIST

#### Ikki Matsumoto

Born in Tokyo, Japan, internationally-acclaimed artist Ikki Matsumoto (1935–2013) came to the United States in 1955 to study art first at the Herron School of Art and Design in Indianapolis, Indiana, and then at the Art Academy of Cincinnati, Ohio, under wildlife artist Charles Harper. Ikki worked in advertising, illustration, and design until 1975. One of his commissions was to illustrate the 1975 edition of *Joy of Cooking*.

Ikki embarked on a new career as a printmaker and painter, using native birds as his subjects, when he and his wife Polly moved to Sanibel Island, Florida, in 1975. For many years, they ran an art gallery in Sanibel. After retiring from the gallery business in 2006, Ikki continued to paint and exhibit his work. He died on December 31, 2013, one day before his 79<sup>th</sup> birthday. For more information, go to: http://www.ikkimatsumoto.com



# AT A GLANCE



DON FREIDAY

Can you identify the birds in this photograph?

Identification will be discussed in next issue's AT A GLANCE.

# **MORE HOT BIRDS**

Joe Bourget found a second-cycle **Franklin's Gull** at Race Point June 2. This turned out to be just the first; extensive photography and discussion of plumages indicated that four or more individuals were present at various times throughout most of the month of June. Peter Flood took the photo on the right.





A **Mississippi Kite** that arrived over the Province Lands Visitor Center on June 4 was joined after a short time by two others, and the trio soared over Provincetown for a while before departing. Sean Williams took the photo on the left.

BIRD OBSERVER (USPS 369-850) P.O. BOX 236 ARLINGTON, MA 02476-0003

PERIODICALS POSTAGE PAID AT BOSTON, MA

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