Bird Observer

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HOT BIRDS



Bear Creek Sanctuary continues its campaign to be considered the state's most magnetic spot for rare birds, following up records of Swainson's Hawk last December, and Smith's Longspur in January, with a **Forktailed Flycatcher** in June! Soheil Zendeh took the photo (left) on June 8.

A **Gull-billed Tern** at Plum Island, later joined by a second, drew many admiring birders after its initial discovery by Suzanne Sullivan on June 11. Liam Waters found two more at Wellfleet, and Peter Flood one more at Race Point, all around the same time. George Gove took the photo on the right.





Blair Nikula found an immature **Franklin's Gull** (photo at left) at Race Point on June 12 loafing among Laughing Gulls. At least eight species of terns were observed in the same vicinity. The gull was photographed again 11 days later in the same area.

Race Point is hosting another spectacular seabird show this summer. Eight tern species, including Royal, Gull-billed, and this **Sandwich Tern** (Peter Flood took the photo on the right on June 18), were documented along with Franklin's and Little Gulls.



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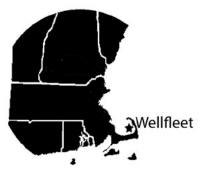
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Birding Wellfleet Bay Wildlife Sanctuary

With an emphasis on fall shorebird migration

Marsha C. Salett and Mark Faherty

Introduction

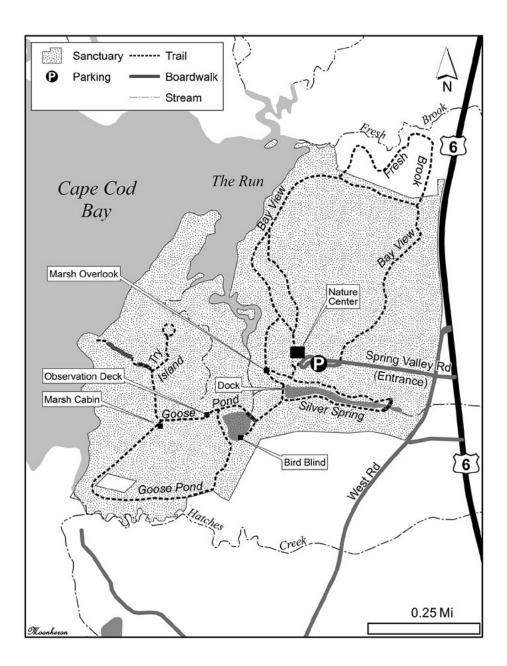


One of the most diverse and beautiful places to bird on Cape Cod, Mass Audubon's Wellfleet Bay Wildlife Sanctuary (WBWS) offers excellent birding throughout the year, particularly during the shorebird show from mid-July to the end of September. At least 291 species have been recorded here according to eBird, making it the most speciose eBird Hotspot on Cape Cod (http://ebird.org/ebird/hotspot/L207462). The sanctuary also has attracted a long list of rarities over the years, including Spotted Redshank (1990), Black-tailed Godwit (1994), Chuck-will's-widow (1996), Mississippi Kite (at least three records), Golden Eagle (2008), Fork-tailed Flycatcher (2009), American Avocet, Black-necked Stilt, Scissor-tailed Flycatcher, and Lazuli Bunting (2012).

In 1958, Mass Audubon bought the original 366-acre property from the Austin Ornithological Research Station, one of the largest private bird banding stations in the world in its heyday. Today Wellfleet Bay Wildlife Sanctuary has grown to more than 1100 protected acres of varied habitats for birds and other wildlife, including salt marsh, barrier beach, extensive tidal flats, brackish and freshwater ponds and creeks, pitch pine and scrub oak woods, coastal heathland, and sandplain grassland. Five miles of trails wind through the sanctuary, providing interest to birders, botanists, and nature lovers in general. Admission is free to Mass Audubon members. For nonmembers, the fee is \$5.00 for adults and \$3.00 for children (2-12) and seniors (65+).

The Esther Underwood Johnson Nature Center has been awarded a Platinum LEED rating for its green technology and sustainable building features. It contains classrooms, exhibits, a green building "trail," a gift shop, and an area for feeder watching—an especially warm spot in winter. The Nature Center is open daily Memorial Day through Columbus Day from 8:30 am to 5:00 pm, and open Tuesday through Sunday Columbus Day–Memorial Day from 8:30 am to 5:00 pm. Trails are open daily 8:00 am to dusk.

Wellfleet Bay has a universally accessible, multi-sensory interpretive trail that overlays the Robert R. Read All-Persons Pathway and Goose Pond Trail and is approximately one-quarter mile long from the Nature Center to a boardwalk at Goose Pond. You can download the Accessible Trails Booklets and the Sensory Trail's audio tour to play on your iPod or other MP3 player at http://www.massaudubon.org/getoutdoors/wildlife-sanctuaries/wellfleet-bay/about/accessibility/sensory-trail#audiotour. During Nature Center hours, you can borrow an MP3 player at WBWS, copies of the trail map in printed or tactile formats, and copies of a printed or Braille guide.



Exploring the All-Persons Pathway, the Nature Center, and the parking lot, birders of all abilities can enjoy Wellfleet Bay Wildlife Sanctuary.

WBWS opened a bird banding station in 2014 for the first time since the 1980s. Banding will begin again in 2016 with weekly demonstrations each Saturday morning from early September through mid-November. Demonstrations in spring run from late April through the end of May.

Tides and Timing

At WBWS-and most places on the Cape—the best time to bird the beaches and flats is on an incoming mid tide, one to three hours after low tide, or on a dropping tide, as birds fly in to feed on the recently exposed flats. For an outgoing tide, two to four hours after the high tide is most productive. The birds are concentrated closer to the beach and trails, and you can still see shorebirds roosting and feeding in the salt marsh. More importantly, the highest full moon or storm tides flood the trail and boardwalk to the beach. Before you begin your walk, check the tide charts. There's one in the Nature Center to the right of the door



American Avocet. All photographs by Richard Johnson.

leading out to the trails, and another chart outdoors on a post near the beginning of the Goose Pond Trail. On 10- to 12-foot tides, the trail is flooded at high tide, but it also may be wet on mid to low tides.

On a sunny beach day you'll find few other visitors on the trails, but on a cloudy cool day the sanctuary gets quite crowded and finding a parking space is difficult. Plan to arrive early. When it is busy, ask the trail naturalists to point you toward the least traveled trails. They can also inform you of current rarities.

Fall shorebird migration begins around mid-July with the arrival of Short-billed Dowitchers, Whimbrels, and Semipalmated and Least sandpipers, and it peaks during the entire month of August, winding down in late September. The following walk for an optimal birding day in August at WBWS assumes a low tide between 6:00–7:00 am, but you can adjust for the tide by changing the order of how you walk the trails. Birding can be good at all tides, so don't worry if your trip does not align with this itinerary. Plan on arriving at the sanctuary when it opens at 8:00 am and staying for either the entire morning or most of the day. You can bring lunch to eat at the picnic tables.

Parking Lot and Nature Center

When you drive up to the parking area, check the nest boxes in the field to your

right for Eastern Bluebirds—resident year-round—and Tree Swallows. In spring and summer a Purple Martin gourd rack is present, which was donated by the Birdwatcher's General Store in Orleans in 2014. As of this writing the gourds have attracted only a few scouts, mainly young males, with none yet staying to nest. The tall nest pole in the back of the field has yet to attract an Osprey, but Red-tailed Hawks, Eastern Bluebirds, Northern Flickers, and many other species use it. Judging from pellets found underneath the pole, the Great Horned Owls that usually nest in the campground woods like to use it on occasion (one such pellet consisted entirely of striped skunk fur). Spend a couple of minutes in the parking lot to look for Cedar Waxwings, Gray Catbirds, Eastern Towhees, Baltimore Orioles, and Wild Turkeys near the photovoltaic array.



Baltimore Orioles frequent the jelly feeder at the Nature Center.

In the spring and fall, the parking lot is one of the best spots for warblers and other migrants: Yellow-rumps and Rubycrowned Kinglets in April, then Northern Parulas, Nashville, Yellow, Chestnutsided, Magnolia, Black-throated Blue, Black-throated Green, Black-and-white, and American Redstarts, along with Bluegray Gnatcatchers, and Blue-headed and Red-eyed vireos. If thrushes are around they are likely to be in the picnic area just off the parking lot. October is the time to find Yellow-bellied Sapsuckers in the parking lot elms, and the sanctuary may be the most reliable spot on the Cape for this species. Winter brings flocks of robins and waxwings and the occasional vagrant: Bohemian Waxwings, redpolls, and both crossbills have been here during irruption vears.

Head toward the Nature Center. If you

arrive before it opens at 8:30 am, go through the gate near the butterfly garden to access the trails. Around the Nature Center and at the beginning of the Goose Pond Trail, you'll find the common resident species: Black-capped Chickadees, Tufted Titmice, Red-breasted and White-breasted nuthatches (both species are year-round here), Song Sparrows, Chipping Sparrows, Northern Cardinals, House Finches, and American Goldfinches. Jelly feeders in the butterfly garden attract Baltimore and Orchard orioles and Gray Catbirds; Ruby-throated Hummingbirds dart to and from the nectar feeders and often perch on bare twigs in the big elm above the garden. The garden's native wildflowers attract many butterflies, including American ladies, spicebush swallowtails, coral and banded hairstreaks, dun and silver-spotted skippers, monarchs, and Leonard's skipper in fall.



Northern Bobwhite.

It is worthwhile to check out the feeders at the Nature Center before and after you walk the trails. The Lazuli Bunting was spotted here in February of 2012. In winter, there can be up to seven sparrow species at one time: Field, Song, White-throated, Fox, Dark-eyed Junco, Swamp, and American Tree, with White-crowned often seen during October. In summer, the mix includes Eastern Towhee and Chipping Sparrow. Of late, the feeders attract Wild Turkeys in addition to the resident passerines, but the Northern Bobwhites that once visited the feeders have not been seen or heard since 2012. Purple Finches and Pine Siskins are often seen at the feeders in October, and Rusty and even Yellow-headed blackbirds have made appearances, as have Brown Thrashers several times.

Goose Pond Trail

Follow the Goose Pond Trail past the photovoltaic array, but instead of bearing left, detour straight ahead to the split rail fence at the marsh overlook. Scan the salt marsh for American Black Ducks and Mallards, Greater Yellowlegs, Least Sandpipers, and Great and Snowy egrets. If you visit the sanctuary within a day or two of a late August full moon, you may witness the phenomenon when the tide is so high that it floods the entire marsh, and dozens of Laughing Gulls bob in the water and fly overhead, calling loudly. Listen for nesting Orchard and Baltimore orioles, Pine Warblers, American Goldfinches, Red-bellied Woodpeckers, Black-capped Chickadees, Tufted Titmice, and both nuthatch species in the nearby pitch pines. Retrace your steps, then turn right onto the Goose Pond Trail.



Barn Swallows.

Another short and productive detour is the dock at Silver Spring. Look for Belted Kingfishers and Eastern Phoebes overhead and Gray Catbirds, Red-winged Blackbirds, Common Grackles, and again, both orioles in the trees (Orchards typically nest somewhere over the dock) or bathing in the shallows to your left. Recently fledged Barn and Tree swallows perch on snags and overhanging branches and hawk for insects over the water early in the season. Listen for Fish Crows overhead, and scan the trees for Green Herons and juvenile Yellow-crowned Night-Herons later in the summer. Black-crowned is also possible, but Yellow-crowned has been the default late summer night-heron in recent years.

From the dock, you may also see painted turtles, bullfrogs, and green frogs. Common dragonflies at Silver Spring include slaty skimmers, blue dashers, and eastern amberwings; damselflies include eastern and fragile forktails and bluets. For butterflies, look for broad-winged skippers nectaring on the pickerelweed and water willow in July and August.

Back on the trail, scan the marsh opposite Silver Spring from the dike. The cattails right below you can host Virginia Rail, Swamp Sparrow, and the occasional Marsh Wren in migration. Clapper Rails are occasional in the salt marsh beyond but only detectable when they are calling. A Short-eared Owl did a flyby here in October of 2009.

Continuing on the Goose Pond Trail, you will pass through a tract of dead and dying red pines and spruces. Many of these European red pines that Dr. Austin planted in the 1930s have succumbed to old age or infestations of native insects, rendering this section of the property a haven for woodpeckers and other cavity nesters. Native pitch pines, white pines, and oaks are beginning to transform this woodland. Downy and Hairy woodpeckers, Blue Jays, Black-capped Chickadees, and White-breasted



Fowler's Toads.

Nuthatches are common here. You will also hear Common Yellowthroats calling from the edge of the marsh here (and all along the Goose Pond and Bay View trails). In winter, this is a good spot for Golden-crowned Kinglets.

Goose Pond is where much of the shorebird migration action is, especially when the mudflats are exposed in late summer and when high tides cover the feeding flats out by the beach. The show is varied and variable from week to week: Green Herons, Great and Snowy egrets, and Belted Kingfishers may be perched on snags in the pond or in the surrounding trees. The herons and egrets may be hunting in the water and you'll often hear the rattling call of kingfishers overhead. With your scope, scan the shore of the entire pond for young Yellow-crowned or Black-crowned night-herons, and the back for Spotted and Solitary sandpipers. Northern Waterthrushes are annual in July and August and can be seen walking the perimeter. The most common shorebirds are Semipalmated Plovers, Greater and Lesser yellowlegs, and Semipalmated and Least sandpipers; less common visitors include Western, White-rumped, and Pectoral sandpipers. Stilt Sandpipers have been seen here multiple times in the past few years. Both Wilson's Phalarope and a Hudsonian Godwit visited in September of 2014, providing rare point-blank views of both species as they fed at nearly arm's length.

Mallards and American Black Ducks—sometimes hybrids—and their ducklings paddle around in June and July. Red-winged Blackbirds nest in the phragmites and Eastern Phoebes hawk insects there. Remember to look up now and then for a Redtailed, Cooper's or Sharp-shinned hawk, Merlin, or Peregrine Falcon. The raptors will sometimes perch on the top of the large eastern cedar next to the bench. In winter, Cedar Waxwings gorge on its fruit.

Goose Pond is also a nursery for Fowler's toads and many species of fish, including mummichogs, killifish, and sheepshead minnows. Looking straight down into the water from the railing, you'll often see them schooling in the shallows. When dry-downs occur in late summer and trap the fish in ever shrinking pools, egrets and shorebirds sometimes concentrate right below the bridge offering staggeringly close looks. You may also see painted and snapping turtles and the occasional muskrat here.

Before moving on, scan the salt marsh right across from Goose Pond for sandpipers, and scope farther out for egrets, night-herons, Great Blue Herons, and infrequent Glossy Ibis.

The pitch pine and scrub oak habitat of the trail is where you'll find Greatcrested Flycatchers, Blue Jays, American Robins, Northern Cardinals, and American Goldfinches. Cedar Waxwings and Green Herons have occasionally nested in the pitch pines in this area. The sanctuary's first fisher, a mammal that has colonized Cape Cod only during the last ten years, was spotted resting in a tree right here in 2014. Where the Goose Pond Trail forks to the left, keep going straight.

The trees begin to thin out at the observation platform, which provides a pretty view of Cape Cod Bay, the salt marsh, and Try Island. Scope the pans for Snowy Egrets, both yellowlegs, and Willets. Walking from the platform toward the marsh cabin, look and listen for breeding Prairie Warblers, Eastern Kingbirds, Field Sparrows, Eastern Bluebirds, and Eastern Towhees, especially in the restored heathland on your left (spring and summer). Woodcocks display in the heathland on



Yellow-crowned Night-Heron.

spring evenings. In case they recolonize from the surrounding areas, listen for Northern Bobwhites in spring and summer.

When you arrive at a T-intersection, you'll be facing the wide expanse of salt marsh and Cape Cod Bay. Before you turn right to head toward the beach, spend a few moments near the bench. This sandy spot is one of the best places on the sanctuary to watch fiddler crabs—favorite food of Whimbrels—scurrying around or darting into their burrows in the sand. If the water is lapping at the foot of the bench or the tidal creek is too wide to ford easily, you'll know that the trail to the beach is inundated; but it shouldn't be at most low tides.

Try Island

Instead of going straight to the beach, turn right onto the Try Island Trail, which is just past the tidal creek. This is one of the most interesting trails for birders and botanists, with a spectacular panoramic view over the salt marsh, beach, and bay. Try Island, a true island in Cape Cod Bay a couple of hundred years ago, was the site of a "try works" where settlers would render whale blubber into oil. Now it is an upland remnant of Southern hardwood forest— including mockernut hickory, white oak, and sassafras—in the midst of the salt marsh. This section of marsh between the Try Island and beach trails can be one of the only places to find Northern Mockingbirds on the



Try Island.

sanctuary and is a good place for Prairie Warblers and Eastern Bluebirds. Listen and look here for Field, Song, Savannah, and Saltmarsh sparrows. Eastern Kingbirds, Tree Swallows, and American Goldfinches are common in the salt marsh all along the Try Island Trail. American Robins, American Crows, and Eastern Towhees are common in the upland forest. Historically, Brown Thrashers and Black-billed Cuckoos occurred on Try Island.

At the top of the rise, the trail bears left, but detour to the right to the overlook. Pan your scope slowly across the marsh. Although they don't breed here, Great Blue Herons gather in the marsh in summer and fall. When the tide is high, the grass hides dozens of Whimbrels. Whimbrels spend their days feeding on fiddler crabs at Wellfleet Bay then return to Monomoy Island, a presumed night roost that was confirmed by a satellite-tracked juvenile Whimbrel in 2015. When the tide is lower, scan the pans and creek banks for Whimbrels, Willets, Greater and Lesser yellowlegs, and smaller shorebirds. Watch for Ospreys overhead and Northern Harriers cruising over the salt marsh. American Crows and Ring-billed, Herring, and Great Black-backed gulls are common in the marsh.

Continue along the Try Island loop. At the bench, take in the view of the beach and the bay. This west-facing bench is one of the best places to enjoy gorgeous sunsets any time of year. As you walk downhill, the trail becomes sandier and vegetation transitions to eastern red cedar, beach plum, poverty grass (Hudsonia), and goldenrods. Cedar Waxwings, Northern Cardinals, and finches are attracted to this spot.

By now, you've probably noticed several wire exclosures in the sand. These contain diamondback terrapin nests, many of which are concentrated in open, soft sand turtle gardens. Terrapin volunteers walk the sanctuary a couple of times a day in June when the terrapins lay their eggs so that they can find the nests and protect them from predators. In August, the volunteers are back on the trails monitoring the nests in order to free the hatchlings from the exclosures and take them to the nature center to be



Saltmarsh Sparrow.

weighed and measured—and monitored for a few days if necessary—before releasing them back to the wild. For more information about diamondback terrapins, inquire at the nature center. If you're lucky enough, you might see a volunteer along the trail with some newly hatched terrapins.

Boardwalks

Follow the two boardwalks out to the beach. The boardwalks are also a fine place to watch the fiddler crabs. Willets breed in the marsh to the left. In June and July through early August when they are raising young, you can't miss them; they'll be wheeling above the marsh, screeching their *wil-willet* calls. For the rest of the summer they quietly move to the salt pans or the edge of the water. Far more subtle

are the sparrows: mostly Song, but also Savannah, and in some years Saltmarsh. These boardwalks are probably the best place at the sanctuary to find Saltmarsh Sparrows. Listen for Clapper Rails here as well.

The several patches of bare ground in the marsh are the result of salt marsh dieback, likely the result of overgrazing by the nocturnal square-backed marsh crab combined with stress from sea level rise affecting the regrowth of the marsh grasses. The bare spots will pool up with the rising tide. Around low to mid tide, you may find Semipalmated Plovers, Willets, an occasional Whimbrel, or even a Ruddy Turnstone.

Overhead, Tree Swallows hawk for insects most of the summer. You'll get some of the closest views of Tree Swallows at WBWS halfway down the second boardwalk. Early in the summer, look for a few Barn Swallows among them; look for Roughwinged and Bank swallows later in the season.

The Beach

You've arrived at the beach. The creek straight ahead is Hatches Creek; the barrier beach behind it and to the left is South Sunken Meadow Beach. If you arrive at low tide, the tidal flats extend out half a mile or more to Cape Cod Bay. At high tide, the run covers the flats entirely, the creek rises, and there is no way to navigate by foot between the sanctuary beach and South Sunken Meadow. Ideally, your timing is perfect on an incoming tide: most of the flats are covered, there's a wide peninsula of beach at Sunken Meadow, and Hatch's Creek is shallow but well defined and flowing inland.

Tree Swallows rest on Sunken Meadow Beach throughout the summer. Scope the beach behind them, where you might find nesting Piping Plovers in June and July. With a lot of patience, you may also spot a plover on the sand. By August, when the



Green Herons.

young have fledged, the Piping Plovers occasionally feed on this side of the creek. You'll find a few Greater Yellowlegs and Willets in the water at low tide; as the tide rises, they're joined at water's edge by Short-billed Dowitchers, Semipalmated Plovers, Semipalmated, Least, and Spotted sandpipers, and an occasional Ruddy Turnstone. American Oystercatchers and Black Skimmers can be irregular visitors to the beach. The skimmers, mainly juveniles, have appeared in early July as well as in late August.

Look briefly beyond the bench on your left for Horned Larks and Song and Savannah sparrows. Most of the action will be to your right toward Fresh Brook, which is tidal. Lieutenant Island is behind it, and you can see Great Island in the distance to the west. When Fresh Brook is a wide ribbon of mud or only inches deep, it is full of birds: American Black Ducks, Mallards, Brant (winter), Double-crested Cormorants, Great Blue Herons, Great and Snowy egrets, Black-bellied and Semipalmated plovers, Greater and Lesser yellowlegs, Willets, Whimbrels, Short-billed Dowitchers, and Semipalmated and Least sandpipers. There are a handful of records of Baird's and one of Buff-breasted Sandpiper at the beach, but they are certainly not expected. American Golden-Plover is possible in late summer. Set up your scope on the sand at the edge of the marsh; please do not walk through the salt marsh. As the tide comes in, smaller shorebirds will move up into the mudflats closer to the sand.

Laughing Gulls (spring and summer), Ringed-billed Gulls, Herring Gulls, and Great Black-backed Gulls are common in and along Fresh Brook and the beach. They concentrate on the narrowing sand peninsulas as the tide rises, joined in late summer by roosting Common Terns, Forster's Terns, and an occasional Roseate Tern. Earlier in the summer, breeding Least Terns fly over the marsh regularly. In late summer, you might see jaegers and shearwaters, mainly Cory's in recent years, from the beach. As summer turns to fall, Forster's Terns can become common and are the default tern in October. The high count here was an impressive 243 in October of 2012, though more typical maxima are in the range of a couple dozen.

Scan the marsh behind the beach for Great Blue Herons and egrets if you didn't do so on Try Island. Bird your way back to the Goose Pond Trail and marsh cabin. Check the vegetation in front of and next to the half-hidden cabin for passerines, including Eastern Kingbird and Prairie Warbler. A Red-tailed Hawk or a crow may tee up on the tallest cedar. If you are running out of time, or the day is hot and humid, turn left and head back toward the Nature Center. If you want a longer walk, follow the back loop of the Goose Pond Trail. It is less traveled than the main trail to the beach, and you'll have a good chance at finding Eastern Bluebirds, goldfinches, and sparrows. When Purple Finches breed



Dunlin.

on the sanctuary, it is usually in the red cedar groves along this trail. When you reach the woods behind Goose Pond, if you hear an agitated flock of crows, look in their direction to see if they are mobbing a hawk, a Great Horned Owl, or even a fisher. A Scissor-tailed Flycatcher made an appearance on this less-visited trail in November of 2012.

Stop at Goose Pond again because a couple of hours can make a big difference. Before you get back to the Nature Center, there'll be one more trail to explore.

Silver Spring

Turn right onto the Silver Spring trail and head into the pine woods. This side of Silver Spring is good for Downy, Hairy, and Red-bellied woodpeckers along with Northern Flickers and Great-crested Flycatchers. From the hill, you can make out the long thin shape of this freshwater pond below. Scan the snags on the opposite shore of Silver Spring for Green Herons and juvenile Black-crowned and Yellow-crowned night-herons.

When you get to the bridge, check the lily pads for Spotted and Solitary sandpipers in migration, listen for warblers during fall and spring, and watch for river otters or muskrats paddling by. In fall and winter, you might find Black Ducks, Mallards, and Hooded Mergansers. Without fail, up to three Hooded Mergansers mysteriously turn up



Silver Spring.

in Silver Spring every July, a season when this species is rare on the Cape. The fruiting black tupelos along the bank to the east were a favorite feeding spot for the Fork-tailed Flycatcher that visited the sanctuary in September of 2009.

Once you cross the bridge, the habitat changes from conifers to mature oaks, black locusts, and tall shrubs. During the summer, it is quiet except for robins and catbirds, but in the spring and fall, this side of the Silver Spring Trail is an excellent place for warblers and other migrating songbirds: American Redstart, Magnolia Warbler, Northern Parula, Black-throated Green, Blackpoll, Northern Waterthrush, and others are expected, and goodies like Mourning Warbler are occasional. Scarlet and sometimes Summer tanagers are possible as well. When birding for warblers, take the Silver Spring Trail early and first, reversing the direction from this walk, and then head down to Goose Pond, Try Island, and the beach. Be warned that during bird banding season, the section of the Silver Spring trail closest to the visitor center is closed to walkers until about 11:30 am, but it is still possible to hike most of the trail, including the bridge and much of the best warbler habitat on the north side, and then double back. Check with the front desk before you head out.

By the time you get back to the Nature Center, it is probably midday. There's one more major trail worthy of birding that you might want to explore after lunch or save for another day.

Bay View Trail

The shorter loop of the Bay View Trail covers one mile and takes you through



Northern Rough-winged Swallow.

several natural communities: salt marsh, black cherry/locust woodland, coastal heath, and sandplain grassland, as well as offering spectacular views of the sanctuary marshes and Cape Cod Bay beyond. On calm, cool days, you can sometimes hear the moaning of the hauled-out gray seals on Jeremy Point, 3.5 miles to the west across Wellfleet Bay. You can add another half mile to your walk by following the Fresh Brook Pathway along the tidal brook and through the pitch pine woods. Especially when there are a lot of visitors, it is a quieter alternative to the Goose Pond Trail and the beach, and you should encounter the bird species that you would find on other trails. This trail is shadier and cooler in the summer, and tends to shield you from the wind in winter.

To hike the Bay View trail, start by heading down the Goose Pond Trail to the marsh overlook, and scan the tidal creeks. The salt pans are important feeding and staging habitat for migrating shorebirds. Scan the marsh for Willets, Greater and Lesser yellowlegs, and the small sandpipers, along with egrets and, rarely, Glossy Ibis.

Turn right onto the Bay View Trail. Some of the pitch pines here are about 100 years old and attract year-round residents such as Downy Woodpeckers, Black-capped Chickadees, Tufted Titmice, White-breasted and Red-breasted nuthatches, and American Goldfinches. The pine habitat abruptly changes as you enter the black cherry/black locust/oak grove known to sanctuary staff as the maze. This woodland is historically underbirded and can hold some nice migrants in fall and spring. Bird banding in spring of 2016 produced species such as Hooded and Canada warblers, Lincoln's Sparrow, and Gray-cheeked Thrush from this woodland. In September and October, you can easily pish up warblers and vireos here, where they are drawn to the many fruiting Virginia creeper vines, among other fruiting trees and shrubs.

When you get to a fork in the trail, take a left and follow the locust grove through a transition zone of smooth sumac and other shrubs that opens up to a field on the right and open views of the marsh on your left. At the bench that faces Try Island, scan the creeks and muddy pans for Mallards and American Black ducks, Snowy and Great egrets, gulls, and shorebirds. In winter, check the barrier beaches beyond the marshes for Snowy Owls during irruption years. Tree and Barn swallows and Eastern Kingbirds hunt insects over the marsh. Northern Harriers fly low over the marsh hunting meadow voles and other small animals in fall and winter; Turkey Vultures and Osprey soar high overhead in spring and summer.

Continue on to the open expanse of Fresh Brook Bay. During the hours of low water, the marsh is a maze of tidal creeks, salt pans, and sand flats; at high tide, it may look like a sea of grass. Mass Audubon and the Town of Wellfleet own the open land across the marsh on Lieutenant Island and on the far side of Fresh Brook. The south side of Lieutenant Island can host a nice diversity and number of shorebirds, including during May, when hard to find species like White-rumped Sandpiper, Whimbrel, and even Red Knot may show up among the more expected Dunlin, Ruddy



Semipalmated Plover.

Turnstones, and Black-bellied Plovers. In summer and early fall, hundreds to thousands of migrating shorebirds stop here to rest and feed: Semipalmated and Black-bellied plovers—look for the occasional American Golden Plover—Whimbrels, Greater and Lesser yellowlegs, Willets, Semipalmated, Least, and uncommon Western sandpipers. Laughing Gulls and Common and Forster's terns stage here, roosting and feeding in the marsh grass and creeks.

In winter, the salt marsh and Fresh Brook Bay are home to large groups of ducks and geese: hundreds of Brant (which sometimes stay through mid-May) are typical, along with Canada Geese, American Black Ducks, Mallards, Common Eider, Bufflehead, and Red-breasted Mergansers. Loons and gannets, and sometimes shearwaters and jaegers, can be seen from the beach in the appropriate seasons.

When you are ready to leave the marsh, look for the signpost that marks the trail junction. Turn right to continue on the shorter of the Bay View Trail loops back to the Nature Center. For a longer walk, you have two options: a detour along the Fresh Brook Pathway that returns to the Bay View Trail or the long Bay View Trail Loop for a walk in the pitch pine barrens.

Taking the shorter loop, you will emerge from the pitch pine barrens into the coastal heathland and sandplain grassland. From the top of this ridge, there is a breathtaking view of the salt marsh, barrier beach, Fresh Brook, and Cape Cod Bay.

The bird boxes in the field are dominated by Tree Swallows, but Eastern Bluebirds also nest in these boxes. The larger box was put up to attract American Kestrels, which last nested in 2009. Kestrels may be extirpated from the Outer Cape. During the day, this field is a favorite cruising ground for Northern Harriers, Cooper's and Sharpshinned hawks (both nest at the sanctuary) and Redtails, and at night for Great Horned Owls. In 2006, a Barn Owl unexpectedly turned up in the nets here during a saw-whet banding demonstration. In the spring, American Woodcocks display in the field and even the parking lot; they nest in the field and surrounding thicket. Check the shrub thickets on the right side of the field for breeding Field and Song sparrows as well as Eastern Kingbirds, Eastern Phoebes, and occasionally Brown Thrashers.

To return to the Nature Center, please follow the trail to the right, turn left at the intersection at the locust grove, retrace your steps along the Bay View Trail to the marsh overlook, then left up the trail to the entrance of the building.

You can find directions to Wellfleet Bay at http://www.massaudubon.org/getoutdoors/wildlife-sanctuaries/wellfleet-bay/directions. Online maps and GPS units may not give accurate directions, so please use these directions. For your convenience, they are printed below:

From Boston: Follow Route 3 South and cross the Sagamore Bridge to Cape Cod. Follow Route 6 East for 45 miles. The sanctuary entrance is on the left just over the Wellfleet/Eastham town line after the Wellfleet Drive-in Theater.

From Providence: Follow Interstate 195 or Interstate 495 to Route 25 and cross the Bourne Bridge to Cape Cod. Turn off the Bourne Rotary at the exit for Route 6 East. Continue on Route 6 for 50 miles. The sanctuary entrance is on the left just over the Wellfleet/Eastham town line after the Wellfleet Drive-in Theater.

From Provincetown: Take Route 6 West to South Wellfleet. The sanctuary entrance is on the right just before the Wellfleet Drive-in Theater.

By public transportation: Public Transportation is available through the Cape Cod Regional Transport Authority (CCRTA). For information regarding standard bus routes near the sanctuary or to request a b-bus for door-to-door service, call (800) 352-7155 or visit: www.capecodrta.org.

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Atlantic Coastal Pine Barrens: A Globally Rare Habitat in Southeastern Massachusetts

Melinda S. LaBranche



Northern Parula may nest in coastal pine barrens. Photograph by Sandy Selesky.

Atlantic coastal pine barrens are distinguished by their fire-mediated climax community that is dominated by pines and often small oaks or other hardwoods. Variously called barrens, savannas, pinelands, flatwoods, sandhills, or sandplains, in their natural state these forests are flat and open with a mild scent of pine and sometimes smoke. The barrens are decidedly rare due to habitat alteration and fire suppression, making them among the "most threatened ecosystems in North America" (King et al. 2011). Coastal pine barrens are actually far from barren, and birders too often ignore these habitats as they drive past or through them to a different birding hot spot.

Historically, regular, naturally occurring fires prevented canopy closure in pine barrens, thereby allowing regeneration of the fire-tolerant pines and associated vegetation. In addition, the regular occurrence of fires reduced the fuel available for future fires, thus promoting faster, cooler burns. With expanding human populations, the barrens' sandy, dry soil, not ideal for agricultural use, was used for forestry and later residential building (Sohl and Sohl 2012). In areas not already in use, fire suppression allowed tree crowding, canopy closure, and the loss of shrubland plant and animal species. Through recent management efforts, particularly removing non-native



A controlled burn in Mashpee National Wildlife Refuge. Photograph by Catherine J. Hibbard/USFWS. (CC BY 2.0)

pine plantations and regular prescribed burning, pine barrens are slowly returning to a small portion of their historic distribution.

In the coastal pine barrens of Massachusetts, pitch pine (Pinus rigida) is the dominant pine species with an understory of scrub oak (*Quercus ilicifolia*) and dwarf chinquapin (O. prinoides) (Swain and Kearsley 2001). Griffith et al. (2009) described the New England Atlantic Coastal Pine Barrens ecoregion as transitional between the southern and northeastern coastal zones. The Massachusetts Natural Heritage and Endangered Species Program (NHSEP) divides the local Atlantic pine barrens into two shrub community types and one woodland community (Swain and Kearsley 2001). The two shrub communities, "pitch pine-scrub oak" and "maritime pitch pine on dunes," are ranked as imperiled and critically imperiled, respectively, in Massachusetts because they have few remaining acres or are vulnerable to extirpation. These shrub communities are mostly limited to Plymouth and Barnstable counties as well as the Montague Wildlife Management Area in Franklin County (Swain and Kearsley 2001). In southeastern Massachusetts, public access is possible at Myles Standish State Forest (MSSF) in Carver and Plymouth; Camps Cachalot and Squanto in Plymouth; the Mashpee Pine Barrens in Mashpee; and the Manuel F. Correllus State Forest on Martha's Vineyard (Swain and Kearsley 2001). Among the Important Bird Areas that include pine barrens are Dead Neck Island and Mass Audubon's adjoining Sampsons Island Sanctuary in Osterville; the Massachusetts Military Reservation; and Myles Standish State Forest

Although pitch pine can grow tall and straight, it also can have a shrubby, crooked habit that decreases its value as lumber (Corey 2007). In New England it was often replaced with plantations of fire-intolerant species such as red pine (*P. resinosa*) and white pine (*P. strobus*). Decades of fire suppression promoted by Smokey Bear resulted in a buildup of fuel resulting in hard-to-control, long-burning, tree-killing fires. In 1957 and 1964, fires in Carver that escaped MSSF and leveled nearby homes were among several northeastern fires that eventually brought about major changes in forest management (USFWS 2010). Methods such as logging pine plantations and using prescribed burning to maintain the native vegetation are now used. In some locations, removal of red and white pines has returned the forests to the original native pine barrens. At the Massasoit National Wildlife Refuge, fire is regularly used to manage the pitch pine-scrub oak habitats, however this refuge is not open to the public (USFWS 2010).

In MSSF, red pines—most of them diseased and dying—were removed beginning in February 2014. The foresters' objectives behind these removals included reducing fire threat and rebuilding the native habitat to sustain numerous rare and endangered species that require open habitats. The species targeted by this management strategy included eastern box turtle (*Terrapene carolina*) and 15 species of butterflies and moths (Mass DCR 2015), notably the coastal barrens buckmoth (*Hemileuca maia*) and the large and spectacular imperial moth (*Eacles imperialis*) (Swain and Kearsley 2001, NHESP 2007). In addition, several rare plants, including broom crowberry (*Corema conradii*), which require open habitats with frequent fires are known only in these pine habitats (NHESP 2015).

At this point readers may be wondering what all of this has to do with birds. These fire-adapted pine habitats support numerous rare and interesting birds in Massachusetts. Eastern Whip-poor-wills are increasingly restricted to sandy areas in the pine barrens (NHESP 2007) where they nest in scrapes on the ground. Their creamy, marbled eggs blend easily with the light-colored sands (Cink 2002, Brigham et al. 2011) that are opened by fire or by land management that mimics the effects of fire. Discovering the nests or young of whip-poor-wills and other caprimulgids has never been intentional on my part, and was always a result of nearly stepping on the incubating or brooding parent who burst into flight.

Ruffed Grouse, American Woodcock, and Eastern Towhee are all in decline in Massachusetts (Kamm et al. 2013) but can still readily be seen in local pine barrens. Like the caprimulgids, woodcocks nest in a scrape on the ground which their young leave just a few days after hatching. Considered an indicator species for young forests, woodcocks prefer shrub and sapling habitats in pine barrens where their favorite food, earthworms, is prevalent (Masse et al. 2014). Throughout their range, woodcock population declines are thought to be in large part due to loss of the shrublands associated with early succession as forests grow older and canopies close (McAuley et al. 2013). Despite relative stability and even growth in other areas of Massachusetts, the *Breeding Bird Atlas 2 (BBA 2)* notes that woodcocks are now underrepresented in the southeastern ecoregions (Kamm et al. 2013).



Eastern Towhee. Photography by Sandy Selesky.

The second Breeding Bird Atlas notes that "there is hardly another species that has shown such a dramatic regional shift during the interval between Atlas 1 and 2" than Ruffed Grouse (Kamm et al. 2013). Despite similar percentages of total blocks occupied, the birds appear to be abandoning the eastern half of the state. In fact, the BBA 2 maps show a discernible gap in the area of MSSF. Kamm et al. (2013) suggest this gap may in part be due to forest maturation. Next to a tree or rock and in an open area where they can spot predators, female grouse build a nest on the ground, often lining it with vegetation. The young leave the nest within a day of hatching (Rusch et al. 2000).

Eastern Towhees, the largest and most colorful of our local sparrows, are mostly stable in the southeastern ecoregions despite their slight decline both in Massachusetts (Kamm et al. 2103) and in the United States as a whole (Sauer et al. 2014). Females typically build a cup nest of sticks and leaves on the ground or just above the ground in a tangle of vines (Greenlaw 2015). Threats to towhees include habitat alteration and canopy closure due to late succession (Greenlaw 2015).

Not surprisingly, Pine Warblers are common in pine barrens and are increasing in the state (Kamm et al. 2013). Although rare for most warblers, Pine Warblers regularly eat seeds, including pine seeds (Rodewald et al. 2013). They nest high in pines and are common in the mixed species flocks characteristic of the Southeast in winter (Rodewald et al. 2013). At least once each year in my time in the North Carolina pine savannas, I would observe a Brown-headed Cowbird fledgling that dwarfed the tiny Pine Warbler parent that was feeding it.

The Northern Parula, a species listed as threatened in Massachusetts, is associated with trees covered with dense epiphytic growth. In Massachusetts, the birds are

associated with old man's beard (Usnea sp.) thereby limiting the warblers to habitats that support this lichen, including coastal pine barrens. Female parulas hollow out a hanging nest in the lichens by creating a side entrance and lining the nest cup with more lichens and other soft materials (Moldenhauer and Regelski 2012). Nesting parulas were recorded in Plymouth and Barnstable counties in Massachusetts Breeding Bird Atlas 1 but despite an increase in possible breeding birds in the second atlas they were no longer noted as nesters in Plymouth County (Kamm et al. 2013). The last record for Northern Parula in MSSF recorded in eBird is May 2013.

Other bird species nesting in pine barrens but not confined to this habitat include Wild Turkey, Red-shouldered Hawk, Red-bellied Woodpecker, Eastern Bluebird, Prairie Warbler, and many more.

Many birders are aware of the plights of grasslands and grassland bird species, but the Atlantic coastal pine barrens, with their fire-dependent mid-successional shrub habitats and their associated fauna are equally threatened. To maintain these types of habitats for birds requires management approaches that are complex and can be controversial. Despite the unmistakable benefits of prescribed burning, local communities often are concerned with air quality and the potential for wildfire. Visiting local pine barrens, reporting your sightings, and distributing information about maintaining pitch pine-scrub habitats can go a long way to supporting these ecosystems. Also, for more information about the Southeastern Massachusetts Pine Barrens Alliance in Plymouth visit www.SEMPBA.org.

To see the birds and other species in local pine barrens, I recommend a visit to MSSF, the pine barrens in Mashpee, or those on the Islands. In midsummer, these open communities often make it easy to view even the most secretive species while all other habitats at this season are dense with vegetation. You also may want to visit some of the pitch pine-oak forests that transition between the pine barrens and upland forests throughout southeastern Massachusetts and Cape Cod. Many of these areas include the birds of the shrub pine barrens and are also open to the public, including parts of the Cape Cod National Seashore, Wellfleet Bay Wildlife Sanctuary, and a number of parks and natural areas owned by Plymouth, Carver, Wareham, Barnstable, Sandwich, and other nearby towns in Plymouth County and Cape Cod.

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The Great Seabird Show of 2015

Peter Flood



Gulls and terns, Race Point, May 10, 2015. All photographs by the author unless otherwise indicated.

Provincetown and the surrounding waters have a rich history of attracting exciting marine fauna including many species of seabirds, marine mammals, and sport fish. It can be argued that there is no better land-based vantage point along the Eastern Seaboard of the United States to view and appreciate the spectacular marine diversity found just offshore.

Strong tidal currents, deep offshore rips, and the proximity of the Stellwagen Bank National Marine Sanctuary to the north create dynamic oceanic conditions—mixing water masses and upwellings—that form the basis of a complex food web that attracts marine life. The abundance of sand lance (*Ammodytes* spp.) appears to be a significant driver in attracting seabirds and other marine fauna to the area. Two species of sand lance are likely at play off Provincetown, *A. americanus*, an inshore species, and *A. dubius*, an offshore species.

A banner year for seabirds off Provincetown, 2015 brought in thousands of seabirds of a variety of species during significant portions of the year. Seabirds from as far away as the eastern North Atlantic, the Arctic tundra, and islands off Antarctica arrived in and around Provincetown. A few mega-rarities also turned up and added additional sparkle to an already spectacular 2015 season. In many ways 2015 was a continuation and enhancement of a similarly extraordinary seabirding season off Provincetown in 2014. Given some of the recent mega-rarity sightings as well as late state records, the first few months of the 2016 seabirding season seem to be trending toward another spectacular year.



Fig. 1. Map of Provincetown.

For space constraints in summarizing and writing what could be a doctoral thesis, I have limited my discussion of seabirds to albatrosses, Northern Fulmars, petrels, shearwaters, storm-petrels, gannets, boobies, gulls, terns, jaegers, skuas, and alcids. However, I do mention a loon or two. Many observations and discussion points are based on personal experience and experiences of others. I gleaned and summarized seabird numbers and distributions from the eBird database.

I also have broken down the year by season, defining winter as January through March, spring as April through June, summer as July through September, and fall as October through December..

What are seabirds doing off Provincetown?

Watching seabirds regularly off Provincetown for the past 15–20 years has certainly sparked more questions than answers. Seabird movements and behavior can be unpredictable as well as interesting, but after studying seabirds over the years, I've been able to formulate several generalizations:

- The presence or absence of seabirds off Provincetown is food related
- Seabirds often stop feeding/moving at high tide
- A half tide falling is often preferred and potentially optimal for seabird feeding
- Seabirds are often moving in some direction at first light and early morning

However, I'm often puzzled by the behavior and movements of seabirds, and once I think I might be on to understanding something, an exception probes the rule.



Fig. 2. Cory's Shearwater with Sand Lance.

Food

How do seabird numbers correlate with sand lance populations? Do sand lance have population booms and crashes similar to lemmings on the arctic tundra? People forget that there also have been lean seabirding years off Provincetown.

Observations onshore and offshore from 2014 and 2015 indicate that the presence of sand lance appears to be a significant driving factor in attracting seabirds to the waters off Provincetown. Every year, I regularly watch gulls and terns feeding on sand lance and, at times, conspicuously carrying them in their bills. In 2015, I first witnessed shearwaters feeding on and carrying sand lance in their bills (Figure 2).

Tide and Timing

Why do seabirds generally stop moving or feeding at high tide? Does high water not move enough to stir up prey items?

Do seabirds move around or feed in the waters off Provincetown at night? Squid is reportedly a significant component of shearwater diets (Warham 1996). Do shearwaters switch to feeding on the squid that rise in the water column at night?

Why does the composition of seabirds and whales sometimes change radically from one day to the next in the same general area? I have seen thousands of seabirds in the company of feeding whales one day, and have observed thousands of seabirds but no whales the next. On other days, there are many whales but seabirds are absent.



Greater Shearwater, Peaked Hill, Truro August 29, 2015.

Movement and Numbers

Why do seabirds off Provincetown generally fly into the wind? For Cory's Shearwater or Wilson's Storm-Petrel that are equipped with olfactory foraging capabilities, such behavior may be understandable, but it is puzzling for Parasitic Jaeger, Razorbill, and Common Tern.

I have witnessed thousands of Great Shearwaters fly east past Race Point between 6:00–7:00 am with virtually no Cory's Shearwaters among them. An hour later, at 8:00 am, I have seen hundreds of Cory's moving east past Race Point with no Great Shearwaters present. Is this coincidental or deliberate flocking behavior?

After watching 10,000 shearwaters fly east past Race Point and Race Point Beach, I wondered where they went, especially when I watched the same phenomenon the next day. When did all of these shearwaters fly west back into Cape Cod Bay, if at all? Are these the same birds daily?

Perhaps seabird movements are circular off Provincetown. For example, early in the morning of October 20, 2015, Kate Sutherland and I followed the movements of several hundred shearwaters that traveled east to west along the deep water rip line approximately 1,500 feet offshore from Race Point Beach toward Race Point. Once at Race Point, many of the shearwaters veered off to the north and northwest toward the southwestern corner of Stellwagen Bank. During the early afternoon, we saw several hundred shearwaters moving west to east—perhaps coming off the bank—beyond the deep water rip line. They formed several large beehives, or feeding aggregations, off

to the northeast in the vicinity of the southeastern corner of Stellwagen Bank and the Peaked Hill Area. Did these shearwaters travel in a clockwise circle from the rips off Race Point to Stellwagen Bank and then off to the east this particular day? See Figure 1, for on and offshore locations around Provincetown.

The Seasons

Winter: January through March

The winter months on the ocean waters surrounding Provincetown belong to the alcids—those penguin-like black and white seabirds that can be frustratingly difficult to identify at a distance. The day-to-day directional movements of alcids, like shearwaters and other seabirds, are puzzling; and are presumably related to food resource availability, location, and perhaps wind direction and tidal currents.

All six species of North Atlantic alcids have been seen wintering off Provincetown: Razorbill, Common Murre, Thick-billed Murre, Dovekie, Black Guillemot, and Atlantic Puffin. A great winter beach day in Provincetown is to observe all six alcid species. Observers accomplished this feat twice in 2015: on January 29 from Herring Cove Beach and on February 21 from Race Point Beach.

Razorbills are the most numerous and conspicuous alcids seen off Provincetown and down the backside of Cape Cod. Modest numbers were seen during the winter months with a high count of 3,115 recorded on January 29.

Thick-billed Murres—those hunch-backed flying footballs—were seen in good numbers during the winter season and, in many cases, were observed quite close to shore. A high count of 23 from Herring Cove on January 29 and 15 reported from Race Point Beach on March 15 were notable. A couple of Thick-billed Murres in Provincetown Harbor often provided point blank photographic opportunities. Thickbilled Murres often set up shop in sheltered coves and harbors during winter.

Common Murres have been historically rare within sight of land (Veit and Petersen 1993). However, sightings from land-based vantage points over the last 10–15 years have been increasing in and around Cape Cod and certainly around Cape Ann. On February 8, 2015, observers recorded 52 Common Murres in several hours of seawatching from Race Point Beach to Race Point.

Pacific Loons were sporadic during the 2015 winter season, with individuals recorded from Provincetown and Truro.

Spring: April through June

Spring was slow to arrive on Cape Cod (and most other places) after a brutally cold and snowy winter. However, spring eventually wrestled winter's death grip away from the region and all hell broke loose off Provincetown on May 2, 2015. While on a late afternoon hike out to Race Point, my son Liam and I encountered an absolute blizzard of Bonaparte's Gulls—conservatively estimated at 3,200 birds—flying in off the ocean from the northwest and landing on Race Point and just beyond in the surf line. Inconspicuously embedded within the masses of breeding plumaged (fully



Parasitic Jaegers Pursuing Laughing Gull, Race Point, October 15, 2015.

hooded) Bonys were several smaller, delicate, and most elegant Little Gulls, many of which also were in full breeding plumage.

Over the next couple of weeks, the number of adult Bonaparte's Gulls decreased and immature plumaged birds moved into the region. Nevertheless, the numbers of Bonaparte's Gulls seen in May 2015 were unprecedented; the previous high count in spring was approximately 250 birds. (Blair Nikula, personal communication). Traditionally, high counts of Bonaparte's Gulls in Massachusetts have been recorded in late fall and early winter (Veit and Petersen 1993). At the time of this writing, May 2016, exceptional numbers of Bonaparte's Gulls are once again being seen off Provincetown.

In addition to the Bonaparte's Gulls, many other seabirds arrived during late April and early May 2015. Cumulative counts of Laughing Gulls, Common Terns, Roseate Terns, Herring Gulls, Great Black-backed Gulls, and several immature Iceland Gulls reached into the thousands. Curiously, substantial numbers of immature Black-legged Kittiwakes lingered off Provincetown, including 180 on June 6, 2015, and dozens summered here well into July. A Sabine's Gull, which is an unusual spring visitor, was present at Herring Cove from May 5 through May 9.

Parasitic Jaegers, already trickling into the region, made their presence known on May 16, 2015, with 24 birds recorded from Race Point Beach. A true kleptoparasite, the Parasitic Jaeger makes a tidy living on the open sea terrorizing small gulls and terns by means of highly acrobatic, prolonged chases to force their victims to disgorge consumed fish or drop a carried fish for the jaeger to eat.



Manx Shearwater, Offshore Provincetown, June 14, 2015.

Changes to the outer beach between Race Point Beach and Race Point created a nifty little area that local birders refer to as The Cove. The Cove is a sand spit or miniature barrier beach running east to west for several hundred feet; a finger of water behind it separates the spit from the main beach area. During late spring, many gulls and terns began gathering or resting reasonably undisturbed in the Cove. This is a nice setup for an avid seabirder traversing the beach to sort through the masses of gulls and terns for a rarity.

Summer: July through September

The summer months off Cape Cod belong to the shearwaters. The four regular species off Provincetown and surrounding waters are Cory's, Great, Sooty, and Manx shearwaters. Their mass movements off Provincetown in early mornings was quite a spectacle during July and August and well into September for 2015, as it was for 2014.

In 2015, Blair Nikula and I ran several dedicated pelagic charter trips with Captain Rich Wood aboard the seaworthy 35-foot *Beth Ann* out of Provincetown Harbor. These five-hour trips allowed for quick access to many of the areas where seabirds congregate, including the rips off Herring Cove, Race Point, Race Point Beach, and rarely visited (although highly productive) area northeast of Provincetown and Truro known as Peaked Hill. Additionally these trips provided access to the southeastern and southwestern corners of Stellwagen Bank to the north. To say these trips were a success would be an understatement. The photographic opportunities were excellent. Getting participants within arm's length of Great and Cory's shearwaters, having a jaeger chase a tern nearly into the stern of the boat, or seeing breaching humpback whales within 100 feet of the boat were seemingly routine on these trips.



Brown Booby, Peaked Hill, Truro, August 29, 2015.

Beyond the astounding numbers and diversity of birds encountered on these dedicated pelagic trips, a couple of special rarities turned up during July and August.

On July 18, 2015, a Fea's Petrel briefly made a pass by the *Beth Ann* near the Peaked Hill area off Truro delighting all onboard and providing the second state record of this spiffy North Atlantic gadfly petrel. Fea's Petrels are seen with some regularity along the western edge of the Gulf Stream off North Carolina. They originate from the Desertas and Cape Verde Islands in the eastern North Atlantic. Curiously, the first Fea's Petrel was recorded on June 24, 2014, on the southwest corner of Stellwagen Bank. Is this the same bird? Or is this the start of a new trend?

On August 29, 2015, a Brown Booby was seen from aboard the *Beth Ann* in the Peaked Hill area off Truro feeding with a mixed flock of shearwaters. This is presumably the same bird that was seen earlier in the year off Wood End and Hatches Harbor in June. Whatever is going on with Brown Boobies in the North Atlantic these days is a mystery. Historically, Brown Boobies were unknown north of Florida, but records north of Florida have increased sharply in recent years (Nisbet et al 2013). Suffice to say, I don't think we can safely gloss over those distant brown sulids and assume they are all young Northern Gannets anymore.

Avid seabirders are always on the lookout for that rarity from some far-flung corner of the world's oceans. So the sight of an unidentified albatross, likely a Yellow-nosed Albatross, observed on July 12, 2015, from a whalewatching boat was most intriguing. Unfortunately, the albatross was seen sitting on the water in the distance while the boat was in transit back to port. This sighting was motivational and instrumental in running as many charter trips out of Provincetown as we could with the



Pomarine Jaeger, Offshore Provincetown, September 6, 2015.

hopes of catching up with this albatross. Fortunately, on August 10, 2015, a Yellownosed Albatross was observed and magnificently photographed from a whalewatching boat out of Provincetown.

Sabine's Gull is traditionally a late summer and early fall rarity off Provincetown. Two Sabine's Gulls were reported on August 31, 2015, from Herring Cove and two were reported on September 12, 2015, from Race Point.

One of the more impressive days of the summer season was September 13, 2015. Several land-based observers spent the better part of the day seawatching from Race Point Beach and Race Point. At the same time, the New England Coastal Wildlife Alliance (NECWA) was running its traditional fall Seabirds and Whale Tails excursion to the waters off Provincetown. Suffice to say, the bases were well covered for what would be a truly extraordinary day of seabirding. A staggering 15,000 Great Shearwaters were observed from Race Point Beach and 14,350 were seen from Race Point (certainly overlap but remarkably close totals). In addition, counts from Race Point included 1,500 Cory's Shearwaters, 12,000 unidentified Great or Cory's shearwaters, 44 Sooty Shearwaters, and 447 Manx Shearwaters—placing the total number of shearwaters at 28,341.

The NECWA trip enjoyed a fantastic feeding frenzy of Great Shearwaters late in the afternoon approximately two miles off Race Point Beach. However, the real show was farther offshore on Stellwagen Bank earlier in the day where over 30 Pomarine Jaegers were identified and perhaps as many as 60 were observed. Many of these jaegers were seemingly traveling on a northwest to southeasterly bearing and perhaps migrating. Contrary to what I thought I knew of Pomarine Jaegers, many of these birds



Long-tailed Jaeger, Offshore Provincetown, September 6, 2015.

were successfully kleptoparasitizing Common Terns—a behavior and choice of victim that I personally had not seen before from the largest of the three jaegers. More than four Long-tailed Jaegers also showed up, including a stunning juvenile bird that chased a Common Tern right up the wake of the boat and within close distance of the stern, which allowed for great photo opportunities.

Late September brought in an amazing influx of Northern Fulmars—both light and the more northerly dark phase—to the waters in and around Provincetown. Many were visible off Race Point Beach and in particular off Race Point, where some of these birds were feeding or traveling just beyond the surf line. On September 26, 2015, there were 383 and 290 Northern Fulmars recorded from Race Point and Race Point Beach respectively.

Fall: October through December

The fall season was full of highlights beginning with the nor'easter of October 2–3 that brought heavy winds and seas to the area. September's Northern Fulmar counts were eclipsed during this storm when 950 were observed. Many of these fulmars were observed off Race Point in the surf line and slightly beyond, feeding via hen-picking at the ocean surface. What they were feeding on is a mystery. Based on reviews of many of my own photos and others, most of the birds that were part of this influx appeared quite fresh looking and were presumably young of the year.

In addition to the Northern Fulmar incursion, thousands of shearwaters and terns were recorded from observers situated at Race Point and Race Point Beach. Hundreds of jaegers of all three species were seen during the nor'easter and represented an



Yellow-billed Loon, Race Point, March 20, 2016.

amazing day of seawatching even for the most demanding of seabirders. However things were kicked up a notch further when a surprise visitor from the southern hemisphere—a South Polar Skua—made its presence known with an incredibly close west to east pass along the beach, providing exceptional photographic fodder.

As the fall season carried on, the question often raised among those regularly seabirding off Provincetown was: how long is this going to last? What are we to make of Parasitic Jaegers, Laughing Gulls, Sooty Shearwaters, Great Shearwaters, and Manx Shearwaters lingering into December? December 25, 2015, was the late date record for Parasitic Jaegers. In fact, it would be January 2016 before the last Great Shearwaters (January 8, 2016) and Manx Shearwaters (January 17, 2016) finally departed the area, providing late date records for Massachusetts. It was particularly interesting to see Manx Shearwaters foraging and flying alongside Razorbills during December 2015 and January 2016. It is remarkable how similar they can appear at times—an identification issue that had never really been raised until 2015.

I would be remiss in not mentioning some of the amazing sightings during the first few months of 2016. Most noteworthy was the discovery of a Yellow-billed Loon off Race Point on February 27, 2016, by Steve Arena. This bird showed well and delighted many birders for over a month; it was last reported off Race Point on April 2, 2016. In addition, three or more Pacific Loons, including one juvenile (an age class rarely if ever recorded in Massachusetts), were also present. This gave some lucky birders four species of loon on their checklists—not bad for Massachusetts.

As was the case with the Pacific Loons, two Mew Gulls of the European race (Common Gull) were discovered while birders searched for the Yellow-billed Loon. The first gull was discovered on March 13, 2016, and a second bird with notably different plumage characteristics—reduced head streaking and darker outer primaries—was recorded on March 26.



Mew Gull, Race Point, March 26, 2016.

On May 8, 2016, a White-winged Tern was discovered in a flock of resting Common Terns and Roseate Terns at Race Point. This particular flock eventually flushed off the beach and the tern was rediscovered a few hours later roosting with a jumpy flock of Common and Roseate terns at the mouth of Hatches Harbor. Unfortunately, the White-winged Tern became one of those one-day wonders. It flushed a final time from Hatches Harbor with a restless group of terns and spiraled up very high into the sky, which is a behavior often exhibited by Common and Roseate terns (Jeremy Hatch personal communication several years ago) just prior to migrating. The White-winged Tern was observed for a couple of more minutes as it continued to gain altitude and head out of Provincetown on a northeasterly bearing to its next destination.

Final Thoughts

There is inherent excitement and anticipation as one drives into the Race Point Beach parking lot during the early morning hours. Driving past several blowouts in the dune line that provide brief views of the Atlantic Ocean, it is virtually impossible to refrain from taking a peek through the sandy windows in the hopes of catching hundreds if not thousands of seabirds on the move even before pulling into a parking space and critically sorting through the masses over the water.

For some people, the seabirding experience is setting up a spotting scope in the dune line and observing the show from a distance. For others, it is a walk down to the waterline for a closer look. Or it is a half or full day hike out to Race Point to the west. More recently, folks such as Steve Arena have been seabirding by using an off road vehicle (ORV), which provides quick and easy access from Hatches Harbor to

Species	Number	Date	Location
Pacific Loon	2	May 2, 2015	Herring Cove
Albatross sp.	1	July 12, 2015	Stellwagen Bank
Yellow-nosed Albatross	1	August 10, 2015	Stellwagen Bank
Northern Fulmar	950	October 3, 2015	Race Point
Fea's Petrel	1	July 18, 2015	Stellwagen Ban SE Waters
Cory's Shearwater	8,700	August 9, 2015	Race Point Beach
Great Shearwater	15,000	September 13, 2015	Race Point Beach
Sooty Shearwater	1100	June 29, 2015	Race Point Beach
Manx Shearwater	447	September 13, 2015	Race Point
Shearwater sp.	5,000	September 21, 2015	Race Point Beach
Wilson's Storm-Petrel	1,000	July 20, 2015	Stellwagen Bank
Leach's Storm-Petrel	5	October 5, 2015	Race Point
Brown Booby	1	August 29, 2015	Peaked Hill
Northern Gannet	12,640	November 11, 2015	Race Point
Red Phalarope	1	November 4, 2015	Stellwagen Bank
Red-necked Phalarope	51	August 19, 2015	Stellwagen Ban SE Waters
Sabine's Gull	2	September 12, 2015	Race Point
Black-legged Kittiwake	1,200	December 19, 2015	Race Point Beach
Little Gull	10	May 6, 2015	Herring Cove Beach
Bonaparte's Gull	3,200	May 2, 2015	Race Point
Black-headed Gull	3	September 23, 2015	Race Point Beach
Laughing Gull	900	September 13, 2015	Race Point
Iceland Gull	42	December 31, 2015	Race Point
Lesser Black-backed Gull	87	May 16, 2015	Race Point
Caspian Tern	2	September 21, 2015	Race Point Beach
Royal Tern	4	July 4, 2015	Race Point Beach
Common Tern	7,200	September 13, 2015	Race Point
Arctic Tern	5	June 7, 2015	Race Point Beach
Roseate Tern	600	September 20, 2015	Race Point
Black Tern	25	September 3, 2015	Herring Cove
Long-tailed Jaeger	4	September 6, 2015	Race Point Waters
Parasitic Jaeger	125	October 3, 2015	Herring Cove
Pomarine Jaeger	38	September 26, 2015	Race Point
South Polar Skua	1	October 3, 2015	Race Point
Black Guillemot	6	February 1, 2015	Race Point Beach
Common Murre	52	February 8, 2015	Race Point Beach
Thick-billed Murre	23	January 29, 2015	Herring Cove
Razorbill	3,115	January 29, 2015	Herring Cove
Dovekie	37	November 21, 2015	Race Point Beach
Atlantic Puffin	3	October 24, 2015	Off Provincetown

 Table 1. Select Seabird Species High Counts off Provincetown 2015

Race Point Beach and points south. For summer seabirding, Blair Nikula and I began chartering the 35–foot boat *Beth Ann* out of Provincetown Harbor in 2015 to get in and among the masses of seabirds and gain a better understanding and appreciation of seabird movements and behavior throughout the day.

However you prefer to look at seabirds, I encourage birders who list their seabird sightings in and around Provincetown to take note of factors and variables such as wind speed and direction, tidal state, sea conditions, flight direction of seabirds, and feeding aggregations. These data will help us learn more about the seabirds that frequent our waters.

As previously noted, I have far more questions than answers and I'm not sure I feel any wiser for my efforts—but I sure am having fun trying. Hope to see you on the beach or offshore in 2016.

Acknowledgements

First and foremost, I would like to thank Blair Nikula for many years of field companionship on land and sea, and many thoughtful and at times lively discussions of seabirds. Blair and Kate Sutherland provided many helpful edits, suggestions, comments, additions, and subtractions to a draft of this article. I also would like to acknowledge Steve Arena, who has been a force and a fixture at Race Point and continues to compile some amazing sightings. He expands our knowledge of the movements and behaviors of seabirds off Provincetown with his dedication, perseverance, and enthusiasm. Last, I would like to acknowledge Captain Rich Wood of the *Beth Ann* for providing access at sea to many of the offshore areas of Provincetown and Truro, and the participants who registered for these pelagic excursions, as these trips would not be possible otherwise.

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Peter Flood, a Cape Cod resident, has a passion for ornithology. His birding interests are primarily focused on the ecology of seabirds. He has been a naturalist for Mass Audubon's Wellfleet Bay Wildlife Sanctuary leading birding tours and educational programs related to bird identification, natural history and biology; conducted Mass Audubon's aerial seabird and waterfowl surveys of Nantucket Sound as part of the proposed "Cape Wind" project; and conducted shorebird surveys for Manomet Center for Conservation Sciences. Peter also volunteers with NOAA, conducting seabird surveys of the Stellwagen Bank National Marine Sanctuary. Peter serves as Secretary on the Board of Directors for the Cape Cod Bird Club. His current profession is a Senior Project Manager with Green Seal Environmental, Inc.

PHOTO ESSAY

Birds of Race Point



White-winged Tern, Race Point, May 8, 2016. All photographs by Peter Flood.



Northern Fulmar, Offshore Provincetown, September 27, 2015.



Little Gull, Race Point Beach, May 9, 2015.



Sooty Shearwater, Offshore Provincetown, September 13, 2015.

MUSINGS FROM THE BLIND BIRDER

Achieving the Swing

Martha Steele

In *The Boys in the Boat*, a riveting book about the 1936 Olympic gold medalwinning eight-man crew from the University of Washington, the author Daniel Brown frequently uses the term "the swing." In many team sports, a high-performing athlete can carry the team to victory, despite the ineptitude of his or her teammates. But in rowing, as Brown so eloquently writes, to be successful all individuals in a rowing boat must be performing in perfect harmony together, giving him or herself up with a profound trust in teammates so that the whole achieves its swing. Writes Brown, "All were merged into one smoothly working machine; they were in fact a poem of motion, a symphony of swing and blades." At these moments, crew members feel a sense of elation, almost a separation from their individuality, as they and the boat are in their swing.

I have often thought of this concept since listening to Brown's book, applying it to many situations where members of a group shed their egos and their personal ambitions to help or harmonize with others to achieve a shared goal accompanied by emotions of elation, satisfaction, or gratitude. I try to think of my guide dog Alvin and me achieving our swing, where we are working in perfect harmony with each other, stepping together in perfect balance and rhythm, responding to each miniscule movement of the other, shedding our individuality for trust in each other to achieve our own poem of motion.

But I also thought of so many moments in my birding experiences, especially during travel, that remind me of similar feelings.

One of my most memorable birding trips included standing near the Platte River in Nebraska on a chilly March evening. I was with my husband Bob and my close friends as we watched thousands of Sandhill Cranes all around us, on water, land, and in the air, their sounds enveloping us to our cores, and a brilliant evening sky behind the thousands of silhouetted birds in the air. I felt that we could all melt into the ground, so overwhelmed we were with the sights and sounds of this astounding spectacle. At that moment, we were profoundly connected to each other and to the birds, completely stripped of any thoughts about ourselves or our problems, and were filled with awe, wonderment, excitement, optimism, and connection, nearly touching the divine.

Birding trips are not just about the birds; they are just as much, if not more, about the people and surroundings. Seeing a target bird on a trip can easily be dampened by a member of the group out of step with others in the group. By contrast, the same target bird experienced by everyone anxious to share and help each other see the bird, each pulling for the other, can produce levels of connection, humility, and teamwork similar to achieving the swing. Because of my difficulty in spotting birds due to vision and hearing loss, I have had countless times when every member of our group wanted badly for me to see a bird, each one falling over himself to make sure I had the opportunity to see the bird. When I exclaimed certain words (not to be repeated here), the group chuckled and reveled in my excitement, knowing that I had not only seen the bird, but I had seen it well. We had achieved our swing!

It does not take a group of people to experience the swing. It may only be two people. I think of a moment when Bob and I were casually scanning a small lake in northeastern Vermont for water birds when we both heard and exclaimed, in perfect unison syllable by syllable, "Pileated!" We both marveled at the joint response, made even more meaningful by the fact that I was only just learning to identify bird vocalizations after my first cochlear implant. That was a moment of pure swing, pure togetherness, profound sharing, and elation, all centered around a common bird of the northern forests.



Pileated Woodpeckers.Photograph by Sandy Selesky.

But sometimes a group can achieve its swing simply by being together, each member immersed in the group feeling of elation and excitement. Think of the times that many of you have sat around a table in the lodging where you are staying on a birding trip, perhaps enjoying a cocktail hour after a satisfying and spectacular day of birding or mammal sightings. You are doing the daily checklist, sharing again the exciting moments of the day, thoroughly enjoying the company of your friends. To me, that is another level of achieving a swing: being in harmony, focusing on the moment, being generous in spirit, pulling and caring for everyone in the group, and being grateful for one another's friendships.

So, yes, birders can achieve the swing too. We can be so immersed with the bird, feeling such an emotional connection threaded between and among the bird and the people we are with, that at that moment, we achieve our swing. The shared elation, sheer awe, acts of kindness, and teamwork to help all to see the bird elevates us to a new level of inspiration and appreciation for birding and all that it adds to our lives. So, the next time you see a crew rowing their boat through the water, think about their swing and then about your own swing moments. These are the moments or times that we treasure and are unlikely to ever forget. Time to go birding and find our next swing.

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 <<u>marthajs@verizon.net</u>>.

GLEANINGS

Distributed Effects

David M. Larson

Increasing numbers of studies have shown that global climate change alters phenology of plant and animal communities and is implicated in changes in bird populations and behavior. One potential problem involves reductions in habitat availability, especially for species dependent upon restricted habitats, e.g., loss of salt marshes for Saltmarsh Sparrow. Another set of problems that has been well documented is mismatches between migratory bird movement times and prey availability peaks. Birds have evolved migratory strategies that rely on abundant prey at migratory stopover points and during crucial feeding periods for nestlings. When food resource availability peaks earlier due to altered climatic conditions but bird migration does not or cannot adjust as rapidly, the result can be reduced adult fitness and migration delays. Mismatches between breeding and peak resources on the breeding grounds can lead to increased mortality of hatchlings. But climate-induced effects need not be so obviously direct.

van Gils et al. (2016) recently reported on a three-decade study on Red Knots (*Calidris canutus canutus*) breeding in the high Arctic on the Taimyr Peninsula in Russia, staging on migration in Gdansk Bay in Poland, and wintering at Banc d'Arguin in the West African country of Mauritania. Based on satellite data, snowmelt on the breeding grounds has occurred progressively earlier over the past 33 years (rate of 0.5 days/year), reflecting the high trends of warming in the Arctic. Over this period, the researchers captured Red Knots and measured body sizes—mass, bill length, tarsus length, and wing chord—of 1990 juveniles during their first autumn migration in Poland. On a year-by-year basis, juveniles were smaller after Arctic summers with early snowmelts, including overall size and bill length. In years with later snowmelts, the juveniles had longer bills and were bigger overall.

Decreasing body size in the juveniles could be due to insufficient nutrition caused by a mismatch between hatching and prey abundance. While adult knots are arriving on the breeding grounds earlier (0.25 days/year), the rate of that change is only half the rate of change in snowmelt dates. The increasing gap between the post-melt prey abundance peak and hatch dates means that the growing chicks cannot take advantage of the normally abundant food. In addition, with earlier snowmelt, the major insect prey items are smaller bodied, making them of lower nutritional value.

These physical disparities in size and bill length were retained when the birds arrived in Mauritania, demonstrating no signs of compensatory growth. It seems that early snowmelt leads to lowered availability of nutritional resources for growing chicks, which leads to permanently stunted offspring.

On the wintering grounds in Africa, the knots feed on mollusks in the intertidal mud flats. Longer-billed birds rely mostly on the abundant and high quality bivalve

Loripes lucinalis, whereas shorter-billed individuals do not, possibly because the *Loripes* are beyond their reach. A bird with a 40mm bill can reach twice as many *Loripes* as can a bird with a 30mm bill. The short-billed knots feed primarily on the relatively rare bivalve *Dosinia isocardia* and rhizomes of seagrass. Having a shorter bill consigns birds to a lower-quality diet. Knots with shorter bills have lower apparent survival rates throughout life.

Thus, there is a strong selection pressure against the stunted juvenile Red Knots due to a trophic mismatch caused by earlier snowmelt dates. Due to the higher mortality of short-billed juvenile knots, the bill length of the adult knots is decreasing slower than is the overall body size, suggesting a climate effect on body shape.

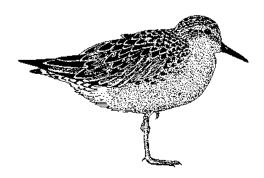
While these studies focused on the steeply declining Red Knot subspecies in the Old World, there is no reason not to suspect similar problems with New World knots or many other Arctic-nesting sandpipers. Of course, drawing broad conclusions from these sorts of the analyses is not simple, and effects of other covariates are a constant complication for all descriptive studies of climate change effects.

This work is of critical importance because it stitches together the entire life history of these birds, showing that climate change effects in one part of the world can lead to selection pressures later in life. This sobering reality demonstrates the need for international cooperation in science and bird protection efforts, as in this *Science* paper involving researchers from the Netherlands, Australia, France, Poland, and Russia.

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RED KNOT BY GEORGE WEST

FIELD NOTES

Red-tailed Hawk Attacks a Day-flying Bat at Mount Auburn Cemetery

Jeffrey Boone Miller

One advantage of my limited experience is that birding remains full of surprises. For example, on Sunday April 17, 2016, at about 2:30 pm my wife Kathy Buckley and I were walking in Mount Auburn Cemetery in Cambridge, Massachusetts, when our attention was caught by a bat that was fluttering around near the intersection of Yew and Ash avenues. By itself, seeing a bat fly during the day, though unexpected, was not unprecedented. Twice before I had seen day-flying bats on similar warm spring days. But as I was daydreaming about those previous bats, I heard Kathy exclaim as she saw a Red-tailed Hawk (*Buteo jamaicensis*) swoop in over her left shoulder and attempt to capture the bat. Now here was something we had not seen before.

We watched as the bat executed a quick upward and leftward roll to avoid the hawk. The bat then resumed its fluttering flight about ten feet above the ground while the hawk perched in a nearby tree. A few moments later the hawk launched a second attempt, but the bat executed another successful avoidance maneuver. The hawk then flew away with empty talons and the bat continued to fly, now seemingly in peace.

When I see something I've not seen before I head to my favorite search engine to find out if it's really something new—which is seldom—or something well known, which is the usual case. As I soon found, Red-tailed Hawks in some localities are indeed known to prey on bats. For example, one video posted on YouTube—narrated by the great Scottish actor David Tennant, no less—showed Redtails in Texas capturing Mexican free-tailed bats (*Tadarida brasiliensis*) (John Downer Productions 2011). I also found a pair of field notes discussing possible Redtail predation on bats at caves in Oklahoma (Harden 1972, Looney 1972). Extending beyond Redtails, I read about the Bat Hawk (*Macheiramphus alcinus*) of sub-Saharan Africa and South Asia and the Bat Falcon (*Falco rufigularis*) of Central and South America and the Caribbean, birds whose common names reflect their reliance on bats as prey. Finally, I found that predation of bats by birds is a worldwide phenomenon that involves many species of both birds and bats (Mikula et al. 2016).

Though it turned out that Redtails were known to prey on bats, some aspects of our observation nonetheless seemed distinctive. First, it was a single hawk having a chance meeting with a single bat in the middle of the day, not a group of hawks congregating where tens of thousands of bats appear at a predictable time every day. Second, it seems possible that the hawk had never before encountered a bat. Day-flying bats are not common—how did the hawk recognize it as prey? Did the fluttering flight of the bat perhaps resemble that of an injured, therefore vulnerable, bird?

Though I wasn't able to identify the species of bat we saw that day, it was likely to have been an Eastern red bat (*Lasiurus borealis*). Regina Harrison photographed one of these red bats—which Wayne Peterson subsequently identified—at about 1:00 pm on May 23, 2016, near Auburn Lake in the cemetery. Another possibility is that we saw a big brown bat (*Eptesicus fuscus*), which is a migratory bat known to occur in urban areas. Though nine species of bats are known to occur in Massachusetts (Massachusetts Department of Fish & Wildlife 2016), most are found in low numbers or in specific habitats. Unfortunately, the state's population of the cave-dwelling little brown bat (*Myotis lucifugus*), which formerly occurred in large numbers, has been sharply reduced by white nose syndrome.

So what we saw on that Sunday was probably a unique encounter for the individual bat and hawk, but it was also an example of what is the widespread phenomenon of birds preying on bats. However, lest you think that predation goes only one way, I also found that there is at least one species of bat, the giant noctule bat (*Nyctalus lasiopterus*), that in Europe feeds on nocturnally migrating birds such as the European Robin (*Erithacus rubecula*) and the Blue Tit (*Cyanistes caeruleus*) (Dondini and Vergari 2000, Ibáñez et al. 2001, Popa-Lisseanu et al. 2007). There's a neat symmetry between the European bats preying on migrating passerines and the Texas Redtails preying on evening flights of bats. These reciprocal predator-prey relations raise questions about how feeding behaviors are learned and have evolved, but Kathy and I will need a few more Sunday walks to think about those issues.

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Shorebird Behavior on their Wintering Grounds

William E. Davis, Jr.

On February 21 and 28, and March 5 and 17, 2016, I watched flocks of shorebirds on the beaches of the Florida Keys and Sanibel Island in western Florida. I paid particular attention to the behaviors of these shorebirds as they foraged, interacted aggressively, bathed, and preened; and I recorded my observations in my journal. The flocks that I watched on the first three days were composed of Ruddy Turnstones (*Arenaria interpres*), Sanderlings (*Calidris alba*), and Least Sandpipers (*Calidris minutilla*). The flock on March 17 was composed of Willets (*Tringa semipalmata*). I discuss below several of the behaviors I witnessed. Previously, I have reported on foraging and aggressive behavior by these same species at the same localities (Davis 2003, 2008, 2011, Davis and Jackson 2007).

Maintenance behaviors

The social or group aspects of two maintenance behaviors, bathing and preening, were of particular interest. In each of my four separate observations of bathing including one on Geiger Beach near Key West in 2014—more than one individual was bathing. In the one instance when a single Sanderling and Least Sandpiper bathed they were in the company of four bathing Ruddy Turnstones. Although individual preening birds were often scattered throughout roosting flocks, there were also times when all of the birds in a section of the flock were actively preening (Figure 1). These observations suggest that social stimulation may be involved in bathing and preening behaviors.

The February 21 and March 5 observations were presumably of the same flock of more than 50 individuals on the same beach at Bahia Honda State Park in the Florida Keys. Total observation time was about three hours in mid-afternoon. On February 21, I photographed one of two turnstones as it bathed (Figure 2). It would typically duck its head under water, then toss its head up and shake while fluttering its wings and body feathers. It drooped its wings and ended the bathing with preening. On March 5, I recorded seven turnstones bathing (four at one time), with one Least Sandpiper and one Sanderling bathing with the four bathing turnstones. On March 4, 2014, I watched Least Sandpipers bathing together at Geiger Beach. I recorded the event as:

Least Sandpipers, three together in shallow water of Atlantic side, bathing: dip head under water, bring it up and flutter-flap wings and tail down on water, in bouts of about 1 second (Figure 3). Then two birds together 1–2 feet from shore, 10–12 shakes, fly up with rapid flapping (presumably to dry themselves) then land and run ashore. About eight birds bathing in 11 minutes of observation. About 60 birds in flock.

All the bathing occurred in one section of the flock. On March 17, I encountered a flock of Willets at a beach in Ding Darling National Wildlife Refuge. Most were loafing but at one end of the flock I watched a group of five Willets bathing (Figure 4). I wrote:



Fig. 1: A cluster of Ruddy Turnstones preening. All photographs by the author.



Fig. 2. A bathing Ruddy Turnstone shaking its head as it emerges from a dunking.



Fig. 3. Three bathing Least Sandpipers, including one with wings spread and shaking off water.



Fig. 4. Four bathing Willets with a fifth that has flown and is shaking off water.

... at one point there was a flock of more than 150 Willets and I photographed five of them, as a group, bathing—why do small groups do this rather than random individuals? This is similar to the behavior I have observed in both Least Sandpipers and Ruddy Turnstones.

I searched the *Birds of North America* species accounts of these four species and found bathing described only for the Least Sandpiper (Cooper 1994) and for Ruddy Turnstones (Nettleship 2000). Bathing was not mentioned in the Sanderling account (Macwhirter et al. 2002), and the Willet account showed a simple "No information" under the section "Preening, head-scratching, stretching, bathing, anting, etc." (Lowther et al. 2001). In none of the accounts was the social nature of bathing mentioned.

Intraspecific kleptoparasitism

Kleptoparasitism, the stealing of food by one individual from another, is common among some birds—e.g., gulls, jaegers, and frigatebirds—but is rare among the Passeriformes. It has been reported for many species of shorebirds. On February 28, 2016, I witnessed an act of intraspecific kleptoparasitism among Ruddy Turnstones at Veterans Memorial Park in the Florida Keys, and I noted numerous similar cases on March 5, at Bahia Honda State Park.

On February 28, at 3:45 pm, I watched a Ruddy Turnstone pick up what looked like a flat three-quarter-inch diameter sea bean, possibly a coin vine (*Dalburgia* sp.). It dashed off and was pursued by three other turnstones, each of which made close passes at the first bird over perhaps 50 feet. One of the pursuing birds finally grabbed the sea bean from the first bird and fled with it—a clear case of intraspecific kleptoparasitism. On March 5, in a flock of 30 or more Ruddy Turnstones, individuals were finding yellow food items between one and two centimeters in diameter and mostly flat. When a bird ran by holding one of these items in its beak it caused a veritable frenzy of intraspecific kleptoparasitism behavior from the other turnstones. As one bird ran back and forth through the other sandpipers, I counted 29 attempts to steal the food—probably some birds attacked on more than one occasion—before the flock was spooked and flew off. I witnessed similar behavior on at least six occasions. In several of these situations the food item was broken and multiple turnstones attempted to retrieve the fragments. Although Least Sandpipers and Sanderlings were present in the shorebird flock on March 5, I observed kleptoparasitism only among the turnstones.

In searching the *Birds of North America* species accounts of the four species mentioned above and other literature, I found that the Willets had been observed stealing food from Long-billed Curlews (*Numenius americanus*) (Lowther et al. 2001) and from a White Ibis (*Eudocimus albus*) (Davis and Jackson 2007) which were cases of interspecific kleptoparasitism. For Sanderlings, it had been reported that Sanderlings may fight over large prey items, implying kleptoparasitism behavior (Macwhirter et al. 2002). I could not find any reference to kleptoparasitism in the Ruddy Turnstone account (Nettleship 2000) or in the Least Sandpiper account (Cooper 1994). There is some evidence that in shorebirds kleptoparasitism occurs more frequently at high feeding densities and is more likely when food items are large and require long handling times (Colwell 2010). It has also been suggested that larger prey may be less accessible to shorebirds because they may attract the attention of other shorebirds (Geering et al. 2007). I suspect that intraspecific kleptoparasitism in Ruddy Turnstones is a fairly common behavior but that it is underreported.

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ABOUT BOOKS

Into the Woods

Mark Lynch

One Wild Bird at a Time: Portraits of Individual Lives. Bernd Heinrich. 2016. Boston/New York: Houghton Mifflin Harcourt.

Into the woods, each time you go There's more to learn, of what you know. (from the finale of the musical *Into The Woods*, debut 1986, music and lyrics by Stephen Sondheim)

"Birdwatching and writing are best done solitarily." (p. 191, *One Wild Bird at a Time)*

This May, I discovered some nesting Evening Grosbeaks in the Berkshires. After the initial thrill of such a find, my next thought was to try to see a rather curious field mark mentioned in Bernd Heinrich's new book. Heinrich's writing makes us want to move beyond the mere ticking of a species name on a list, and to closely observe and get to name that bird. *One Wild Bird at a Time* is an invitation to become a natural historian.

In a recent interview with Bernd Heinrich, I asked him why he decided to write so many books for the general public when he is a busy research scientist. He confessed he never thought about it much. He then explained that early on in his career he realized that a lot of information that would interest general readers could be found among the technical jargon of a typical scientific paper. So he began to write short articles for magazines like *Scientific American* and *Natural History*. He soon discovered that he got more insights and ideas from writing these articles than from detailing the results of his research for other scientists. And thus the prolific writing career of one of our greatest living natural historians was born.

Through the last two and a half decades, Heinrich's literary output has been impressive, beginning with the classic *Mind of the Raven* in 1994. He has written about birds and bees and death and migration, always with a unique and personal perspective. *The Snoring Bird: My Family's Journey Through a Century of Biology* was a wonderful account of his travels with his scientist father and their coming to America. He has even written about running. Heinrich is serious about running and came in first in the Golden Gate Marathon in the 1980s. His book *Why We Run: A Natural History* (2002) is a classic of running literature. Through all his books, he seems to return to birds as his real passion, though bees are a close second. He has been on a lifelong "quest to understand what would be gained from intimacy with wild birds." (p. vii)

In his writing Heinrich conveys not only the joy and wonder of closely observing the natural world, but gives the reader a feeling of what it takes to be a scientist. Heinrich will observe something that piques his curiosity. Through further observation, he will form a hypothesis and then with weeks, months, or even years of observation test that hypothesis. Though much of current ornithological research is very technical and beyond the reach of the non-scientist, Heinrich's writing shows that a lot can be learned just by systematic and careful observation, and that can be exciting.

> I hope to capture something of the adventure of the chase. This book is less about research results than about the reasons I "do" research. It is aimed to be as realistic as science demands and imaginative enough to suggest possibilities that science allows. (p. ix)

One Wild Bird at a Time is a collection of short pieces, each on a different species. Almost all the action takes place around Heinrich's cabin in the Maine woods. He steps out of his cabin, sees something he doesn't understand, and like



BERND HEINRICH



an ornithological Sherlock Holmes, the game is afoot. A Northern Flicker begins to excavate a nest hole in his cabin wall. To most of us, this would be annoying, and we would fret over the damage to our house. Not Bernd. He realizes that once the flicker opens the hole in the cabin it will be inside the deep space between the two walls. Because there is no closed bottom to this space, once the flicker completes the excavation it will likely abandon this location. So what does Bernd do? He opens up a section of the wall inside his cabin, creates a bottom for the nest hole, and creates a removable panel in his cabin wall so he can carefully observe the nestlings. Weeks of detailed observations follow the young flickers to fledging. He carefully counts how many times the adults return to feed the young and details the weird vocalizations of the baby flickers. Classic Heinrich.

Each bird is an opportunity to learn more. A Black-capped Chickadee killed by a Northern Shrike offers Heinrich the opportunity to begin to discover how chickadees survive during the long, cold Maine winter. Hearing a Blue Jay call loudly while by itself deep in the woods begins a long investigation on jay sociality and the meaning of their calls. He finds a Broad-winged Hawk nest and begins to wonder why the hawks continually place fresh fern fronds in the nest. You realize that Heinrich has a number of projects going on simultaneously. Sometimes he finds an answer, sometimes not.

Heinrich is very much a "do it yourself" researcher, and he comes up with some creative solutions to help him in his studies. As an aid in observations of hunting Barred Owls, the reader learns that "Thread is a great tool for making a dead shrew move." (p. 64)

Heinrich discovers that during periods when light, powdery snow lies deep on the ground, Ruffed Grouse spend a lot of time in burrows deep under the snow. He meticulously counts and analyzes the pellets the grouse leave behind in these burrows and discovers that in winter grouse have plenty to eat. But they eat the tree buds mostly at dawn or dusk and spend most of the day and night snug and safe in their snow forts. But do they use the same burrows day after day? To test this, he has to make some ersatz grouse burrows. "I made a hundred fake entrances by tossing snow onto and then yanking back a surrogate for a diving grouse (a dead bantam rooster) attached to a strong string. (p. 141)

The vision of a determined Heinrich trudging alone through the frozen winter landscape tossing a frozen chicken like a fowl yo-yo in the name of science has to make you smile. But that's Bernd Heinrich.

Throughout *One Bird at a Time*, Heinrich has captured an almost poetic sense of place and time. The reader gets to intimately know Heinrich's cabin, the woods surrounding it through the different seasons, and the bird species visitors, both common and infrequent. The book is illustrated with color and black-and-white drawings by the author. These have the look of field sketches and add to the personal tone of the book.

Through the centuries, certain books have captured the beauty and complexity of the natural world and have therefore shaped the way the public thinks about the environment. Books like *The Natural History and Antiquities of Selborne* by Gilbert White (1789) and *Naturalist on the River Amazons* by Henry Walter Bates (1865) are still read today because they convey the excitement of personal discoveries in the natural world, whether in a local field or exotic rainforest. *One Bird at a Time* and other books by Heinrich take us back to this golden age of natural history writing, a time when a curious and determined natural historian would reveal the wonders of the natural world to a reader. In addition, *One Wild Bird at a Time* encourages all of us to become part of this process and to make discoveries of our own. That is one of Heinrich's greatest legacies.

And now, sixty years later, I'm still learning by being an audience to a woodcock, and so can anyone learn by watching a starling, a sapsucker, a flicker or a house sparrow—one wild bird at a time. (p. 190)

Also Noted:

Hector Galbraith has just published *Birds of Hinsdale Setbacks and Bluffs, New Hampshire.* This is an e-book in the form of a 70-page pdf, which is free to download (see below). The Hinsdale Setbacks and Bluffs are on the Connecticut River just a short drive north of Northfield, Massachusetts. Based on Galbraith's photographs and description, this is a wonderful area to bird, particularly for migrant waterfowl. You can stand in one spot and see nesting Bald Eagles, Ospreys, and Peregrine Falcons. Though his book includes records going back to the 1930s, it is only in the last few decades that this area is getting the coverage it deserves.

The book includes a complete "where to go" section, a detailed map of trails, and a history of birding in the area. The bulk of the book consists of a well-researched annotated checklist of species seen there, complete with details on frequency of occurrence. Color photographs and graphs augment the book. This e-book is a wonderful example of the possibilities of creating a personal guide and annotated checklist to a single birding destination created for everyone to enjoy. My guess is that within five years we will see a number of other e-books about New England birding destinations inspired by Hector Galbraith's *Birds of Hinsdale Setbacks and Bluffs, New Hampshire.* Nice job, Hector!

To access the pdf, go to

https://hinsdalebirds.files.wordpress.com/2016/03/birds-of-hinsdale-setbacks-and-bluffs-new-hampshire.pdf

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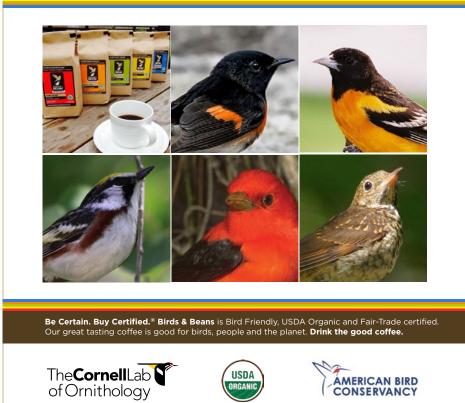
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Bird Sightings

March-April 2016

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

March both came in and left like a lamb. The temperature averaged 42° degrees in Boston, four degrees above normal. There were five days with temperatures in the sixties and two days in the seventies. The temperature hit 77° on March 9, 34° above the normal for that date and ended at 71°. The low was 21° on March 3. Snow was recorded on two days: 0.5 inch on March 4, and 3.6 inches fell on March 21 and quickly melted with readings in the sixties in less than 36 hours. Rainfall was just 3.16 inches, 1.16 below the average.

April started out mild, but on April 3 the temperature dropped 30° to a month low of 22° and came with 6.6 inches of snow. This caused considerable damage to many trees that had budded early with the warmth at the end of March. Rainfall totaled 2.91 inches, an inch below average for April. Strong southwest winds on April 22–23, when temperatures soared over 70°, brought us the first big wave of migrants. *R. Stymeist*

Waterfowl through Alcids

The **Yellow-billed Loon** first discovered at Race Point in Provincetown on February 27 lingered for another month through April 2, allowing numerous birders to enjoy this exciting rarity. It was accompanied by up to two **Pacific Loons**, allowing for an extraordinary four-loon day for many. On February 7 a **Western Grebe** was discovered off Winthrop Beach, but despite many searches it was not reported again in February. Amazingly, on March 11 it was rediscovered and remained through the middle of April.

A Manx Shearwater was photographed off Provincetown on March 26, normally an unusual date for this species. It was evidently one of a group of up to thirty that had been reported there at the beginning of January. The Revere Beach Manx Shearwaters arrived shortly thereafter on April 2 and increased to as many as 14 by the end of the month.

Cattle Egrets have never been numerous in Massachusetts but have become even rarer since the 1990s. Since most have been reported from coastal Essex County, sightings in Andover and at Daniel Webster Wildlife Sanctuary in Marshfield were unusual.

White-faced Ibis is now annual in Essex County, and the first report was received on April 24. Three individuals were reported, the highest number yet, giving rise to the hope that full-species breeding can be confirmed. Although this species has been recorded at the heron-breeding colony at Kettle Island in 2012, the possibility of hybridization with a Glossy Ibis cannot not be eliminated.

Sandhill Cranes continue to be well reported including two in Worthington, where they are now breeding, and two at Burrage Pond, where they have been consistently reported since 2015 and may be now breeding.

A **Mew Gull** was discovered at Race Point in Provincetown on March 13 and was consistently reported through March 27. Photographs suggested that there might have been two individuals involved. **Caspian Terns** are regular spring migrants throughout Massachusetts but are typically seen for only one day, so one that lingered for several days at Burrage Pond was unusual. *M. Rines*

Greater Whi	te-fronted Goose			3/6	Falmouth	1 m	G. d'Entremont
thr	Ipswich	1	V.O.	3/13	Lee	2	C. Jones
3/1	Falmouth	2	v.o.	4/24	Otis	1	T. Swochak
3/27	Rutland	1	C. Bailey	Ring-necked			
3/28-31	Mansfield	1	M. Fox + v.o.	3/11	Pittsfield (Onota		G. Hurley
4/18-20	P.I.	1	S. Williams $+$ v.o.	$\frac{3}{11}, \frac{4}{7}$	New Salem 155 Waltham 280	, 180	B. Lafley
Snow Goose 3/4	Saugus	2	S. Zendeh	3/13, 4/7 3/22	Pittsfield	100	J. Forbes J. Pierce
3/13-19	Eastham (F.H.)	2	D. Taylor#	3/26	Petersham	128	B. Zajda
3/18	P.I.	4	T. Mara#	4/7	Quabog IBA	98	M. Lynch#
3/23	Longmeadow	75	M. Moore	4/29	Quabbin (G33)	12	G. Watkevich
3/26	Worthington	2	S. Lewis	Greater Scau			a 115
Brant	DI	00	TWAT	3/6	Falmouth	750	G. d'Entremont
3/18 3/20	P.I. Winthrop	80 200	T. Wetmore P. + F. Vale	3/11 3/20, 4/24	Pittsfield (Onota Waltham	15,3	G. Hurley J. Forbes
4/3	Plymouth	300	G. d'Entremont	4/25	S. Quabbin	15,5	L. Therrien
4/9	Duxbury B.	300	R. Bowes	Lesser Scaup		1	E. Therrien
4/13	Quincy	270	P. Peterson	3/11	Stockbridge	2	G. Ward
Cackling Go				3/13, 4/14		15, 2	J. Forbes
3/2	Rochester	1	J. Hoye#	3/26	Quabbin (G41)	5	B. Zajda
3/5	Longmeadow	1	S. Motyl	3/30	W. Newbury	7 2	MAS (D. Moon)
3/10 Wood Duck	Hadley	1	L. Therrien	4/9 4/18	Turners Falls S. Quabbin	3	E. Huston L. Therrien
3/17	Winchester	16	R. LaFontaine	King Eider	5. Quabbili	5	L. Incincii
3/20	Nashua R. IBA	41	M. Lynch#	3/5	Rockport (A.P.)	2	BBC (Hepburn)
3/20	Worc. (BMB)	11	J. Liller	3/5	Gloucester (E.P.		MAS (Wheelock)
4/7	GMNWR	32	K. Dia#	3/11	Weymouth	1	S. Avery
4/13	IRWS	18	J. Nelson	Common Eic		200	LD //
4/21 Gadwall	Lynnfield	18	J. Berry#	3/12 3/13	Gloucester H. P'town	260 660	J. Berry# M. Lynch#
3/3	Sudbury	2	J. Forbes	3/19	Westport	58	M. Lynch#
3/5	Gloucester		BBC (S. Hepburn)	Harlequin D		50	ivi. Lynenn
3/22	Peabody	19	P. Peterson	3/2	Cape Ann	76	BBC (B. Volkle)
4/17	P.I.	20	J. Berry#	4/8	Duxbury B.	4	R. Bowes
Eurasian Wi		1	C PEnterment	Surf Scoter	Classication II	24	I. D
3/6 American Wi	Falmouth	1 m	G. d'Entremont	3/12 3/13	Gloucester H. P'town	34 45	J. Berry# M. Lynch#
3/9	Hadley	3	L. Therrien	White-winge		45	M. Lynch#
3/17	Pittsfield	5	J. Pierce	3/13	P'town	650	M. Lynch#
3/19	Acoaxet	19	M. Lynch#	3/19	Westport	18	M. Lynch#
3/20	Waltham	6	J. Forbes	Black Scoter			
4/1 Dhua minaad	P.I. Teel	8	J. Keeley	3/2	Cape Ann	71	BBC (B. Volkle)
Blue-winged 3/22	Pittsfield	2	J. Pierce	3/25 4/28	Worcester P.I.	2 25	E. Kittredge# T. Wetmore
4/4	Williamstown	2	C. Jones	Long-tailed I		25	1. wethore
4/6	Ludlow	2	L. Richardson	3/17	Pittsfield	1	J. Pierce
4/10	W. Harwich	12	P. Trull	3/30	N Adams	1	M. Morales
4/10	W. Newbury	2	E. Labato	4/22	Waltham	1	J. Forbes
4/14 4/24	Winthrop DWWS	2 2	P. Peterson	4/23 4/30	P.I.	500	D. Swain#
Northern Sho		2	G. d'Entremont	Bufflehead	S. Quabbin	3	A. Griffiths
3/thr	Arlington Res.	7	V.O.	3/19	Westport	93	M. Lynch#
3/11	Pittsfield (Pont.)		G. Hurley	3/26	Quabbin (G35)	34	B. Zajda
3/12	Waltham	6	J. Forbes	4/10	Wakefield	11	P. + F. Vale
3/27	Westwood	3	W. Webb	4/27	W. Newbury	15	MAS (D. Moon)
4/28 Northern Pint	P.I.	5	T. Wetmore	Common Go 3/5		19	P Zaida#
3/5	Longmeadow	1	B. Zajda#	3/13	Longmeadow N Truro	58	B. Zajda# M. Lynch#
4/14	GMNWR	4	K. Dia#	4/9	P.I.	13	N. Landry
4/26	P.I.	3	R. Ross	Barrow's Go			
Green-winger				thr	Turners Falls	2	V.0.
3/20	Nashua R. IBA	43	M. Lynch#	3/3	Everett	1	J. Layman
3/23	Topsfield W. Harwich	155 25	P. + F. Vale	3/5 3/6	Newbypt Fairhaven	1 f 1	M. Goetschkes C. Longworth
3/26 3/31	P.I.	231	B. Nikula D. Chickering	3/6	Boston (Deer I.)		R. Doherty
4/4	Bolton Flats	150	J. Hoye#	3/26	Williamstown	1	C. Jones
4/20	E. Boston (B.I.)	22	P. Peterson	Hooded Mer			
	een-winged Teal			3/3	GMNWR	30	K. Dia#
3/6-11	Seekonk	1	J. Sweeney $+$ v.o.	3/5	Quabog IBA	11	M. Lynch#
3/11-4/26	P.I. Topofield	1	T. Murray $+$ v.o.	3/26	Quabbin (G41)	16	B. Zajda M. Lunch#
3/?-4/15 Redhead	Topsfield	1 m	N. Dubrow $+$ v.o.	4/11 Common Me	Ware R. IBA	18	M. Lynch#
3/1-9	Gloucester (E.P.) 2	V.O.	3/1	Stoneham	80	D. + I. Jewell
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Common Mei	rganser (continued	d)		Northern Gan	nnet		
3/10		1000	G. Gove#	3/13	P'town	35	M. Lynch#
3/12	Southboro	147	M. Lynch#	3/26	N. Truro	220	B. Ňikula
3/26	Quabbin (G35)	116	B. Zajda	4/24	Stellwagen	36	K. Mueller
3/29 Ded breasted	W. Newbury	85	P. + F. Vale	4/25	P.I.	8	T. Wetmore
Red-breasted 3/13	P'town	880	M Lynch#	4/3	ed Cormorant Milton	60	G. d'Entremont#
3/13	Westport	72	M. Lynch# M. Lynch#	4/3	P.I.	120	P. + F. Vale#
4/8	Sheffield	2	K. Schopp	4/29		1325	S. Arena
4/12	Lee	2	J. Pierce	Great Cormon			
4/21	S. Quabbin	2	L. Therrien	3/5	Medford	1	G. Nassiopoulos
4/23	P.I.	40	T. Wetmore	3/7	P.I.	4	T. Wetmore
Ruddy Duck		2 42	D D (American Bit		c (
3/18, 4/21 3/19	Chestnut Hill 6		P. Peterson	thr Least Bittern	Reports of indiv	. from 9	locations
3/19	Pembroke Waltham	21	SSBC (W. Petersen) J. Forbes	4/29	P.I.	1	T. Wetmore
3/30	W. Newbury	12	MAS (D. Moon)	Great Blue H		1	1. wethore
4/10	Waltham	43	J. Forbes	3/17	Concord	12 n	A. Morgan
Ring-necked	Pheasant			3/25	Quabog IBA	27	M. Lynch#
3/9	Tolland	1	M. Lynch#	4/14	Lynnfield	11 n	P. + F. Vale
3/28	Norfolk	1	D. Allard	Great Egret			
4/10	Petersham	2	S. Miller#	3/17	Hingham (WE)	2	K. Mueller
4/23 Buffed Groug	Otter River SP	1	G. d'Entremont	4/8 4/9	Essex	16	J. Nelson
Ruffed Grous 4/10	Quabbin (G40)	6	S. Miller#	4/9	S. Dart. (A.Pd) Quincy	6 5	B. Loughlin P. Peterson
4/17	Quabbin (G40) Quabbin (G37)	2	S. Miller#	4/13	Saugus	5	S. Zendeh#
4/17	Sandisfield	5	M. Lynch#	Snowy Egret		0	5. Eendenin
4/17	Marstons Mills	3	P. Crosson	3/25	Longmeadow	1	P. Sumislaski
4/18	Ware R. IBA	3	M. Lynch#	3/26	Duxbury	1	R. Bowes
4/30	Mashpee	3	M. Keleher	3/31	Nantucket	6	S. Kardell
Red-throated		• •	N X 1 11	4/10	Ipswich	43	J. Berry
3/19	Westport	16	M. Lynch#	4/13	Quincy	6	P. Peterson
3/27	P'town P.I.	400 10	B. Nikula	4/28 Little Plue H	E. Boston (B.I.)	4	S. Riley
4/6 4/6	Duxbury B.	40	MAS (D. Moon) R. Bowes	Little Blue H 4/3	Gloucester	2	C. Haines
Pacific Loon	Duxbury D.	40	R. Dowes	Tricolored He		2	C. Hames
thr	P'town	1-2	v.o.	3/29	Mashpee	1	M. Malin
Common Loc				4/15	Nantucket	2	L. Buck
3/4	Quabbin Pk	4	L. Therrien	4/23	Duxbury B.	1	R. Bowes
3/13	P'town	22	M. Lynch#	Cattle Egret	5.0.00		
4/24	Stellwagen	13	K. Mueller	4/22	DWWS		MAS (D. Ludlow)
4/25	P.I.	65	T. Wetmore R. Wendell	4/26 Green Heron	Andover	1	M. McCarthy
1/26	Dittefield (Onote	1 25					
4/26 4/26	Pittsfield (Onota Wachusett Res					1	I Davies
4/26	Wachusett Res.	a) 25 7	M. Lynch#	4/22	Manomet	1 1	I. Davies R. Emerson
	Wachusett Res. Loon						I. Davies R. Emerson C. Tibrewal#
4/26 Yellow-billed	Wachusett Res. Loon P'town (R.P.)	7	M. Lynch#	4/22 4/23	Manomet Hopkinton	1	R. Emerson
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22	Wachusett Res. Loon P'town (R.P.) rebe Cheshire	7 1 2	M. Lynch# v.o. J. Pierce	4/22 4/23 4/24 4/24 Black-crowne	Manomet Hopkinton GMNWR Barnstable ed Night-Heron	1 1 1	R. Emerson C. Tibrewal# R. Hamman
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41)	7 1 2 2	M. Lynch# v.o. J. Pierce B. Zajda	4/22 4/23 4/24 4/24 Black-crowne 3/30	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton	1 1 1	R. Emerson C. Tibrewal# R. Hamman P. Peterson
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR	7 1 2 2 3	M. Lynch# v.o. J. Pierce B. Zajda K. Dia#	4/22 4/23 4/24 4/24 Black-crowne 3/30 4/21	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge	1 1 1 1	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver#
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I.	7 1 2 2	M. Lynch# v.o. J. Pierce B. Zajda	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford	1 1 1 1 6	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebo	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I.	7 1 2 2 3 2	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry#	4/22 4/23 4/24 4/24 Black-crowne 3/30 4/21 4/29 4/29	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge	1 1 1 1	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver#
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14 4/17 Horned Grebo 3/11	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge	7 1 2 2 3	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown	1 1 1 1 6	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebo	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I.	7 1 2 2 3 2 4	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 4/29 Glossy Ibis	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford	1 1 1 1 6 2	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebo 3/11 3/13 3/19 4/11, 25	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.)	7 1 2 2 3 2 3 2 4 2 19 0 2, 3	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# G. Hurley	4/22 4/23 4/24 4/24 Black-crownd 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 6 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ $	R. Emerson C. Tibrewal# R. Hamman D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebo 3/11 3/13 3/19 4/11, 25 4/23	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pitsfield (Pont.) P.I.	7 1 2 2 3 2 3 2 4 2 19	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 Glossy Ibis 3/26 4/21 4/23 4/24	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 6 \\ 2 \\ 1 \\ 2 \\ 333 \end{array} $	R. Emerson C. Tibrewal# R. Hamman D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pitsfield (Pont.) P.I. Grebe	7 1 2 2 3 2 4 2 19 0 2, 3 3	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# G. Hurley S. Miller	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/24 4/26	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.)	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 1\\ 1\\ 2\\ 333\\ 3\\ 3\end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Pitsfield (Pont.) Pitebe Winthrop	7 1 2 2 3 2 4 2 19 2,3 3 78	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont#	4/22 4/23 4/24 4/24 Black-crowne 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/21 4/23 4/24 4/26 4/30	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 6 \\ 2 \\ 1 \\ 2 \\ 333 \end{array} $	R. Emerson C. Tibrewal# R. Hamman D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Birbee Winthrop P.I.	7 1 2 2 3 2 4 2 19 0 2, 3 3 78 12	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams	4/22 4/23 4/24 4/24 Black-crownd 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/24 4/26 4/30 White-faced	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 3\\ 1\\ \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Grebe Winthrop P.I. Pittsfield (Pont.)	7 1 2 2 3 2 4 2 19 0 2, 3 3 78 12	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 dlossy Ibis 3/26 4/21 4/29 dlossy Ibis 3/26 4/21 4/23 4/24 4/26 White-faced 4/24	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 1\\ 1\\ 2\\ 333\\ 3\\ 3\end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Grebe Winthrop P.I. Pittsfield (Pont.)	7 1 2 2 3 2 4 2 19 0 2, 3 3 78 12	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams	4/22 4/23 4/24 4/24 Black-crownd 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/24 4/26 4/30 White-faced	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 3\\ 1\\ \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley#
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Fulr	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Pittsfield (Pont.) be Winthrop B. mar	7 1 2 2 3 2 3 2 2 3 2 2 4 2 19 9 2,3 3 7 8 12 3 1	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o.	4/22 4/23 4/24 Black-crownd 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/24 4/26 4/30 White-faced 4/24 Black Vulture 3/11 3/15	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Chilmark Sheffield	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 1\\ 1\\ 2\\ 333\\ 3\\ 1\\ 3\\ 2\\ 34\\ \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Olivet# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gree 3/11-4/16 Northern Fulr 4/21	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Grebe Winthrop P.I. Pittsfield (Pont.) be Winthrop B. nar Stellwagen	7 1 2 2 3 2 4 2 19 2,3 3 78 12 3	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 4/29 dlossy Ibis 3/26 4/21 4/29 4/29 4/20 4/21 4/23 4/24 4/26 4/30 White-faced 4/24 Black Vulture 3/11 3/15 4/5	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Chilmark Sheffield P.I.	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 3\\ 1\\ 3\\ 2\\ 34\\ 2 \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM)
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Full 4/21 Sooty Shearw	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) PI. Pittsfield (Pont.) be Winthrop B. mar Stellwagen ater	7 1 2 2 3 3 2 4 2 2 3 3 2 4 2 9 3 3 78 12 3 1 1 1	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o. P. Flood#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 4/29 4/29 4/29 4/29 4/21 4/23 4/21 4/23 4/24 4/24 4/26 4/30 White-faced 4/24 Black Vulture 3/11 3/15 4/5 4/22	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Chilmark Sheffield P.I. W. Roxbury	$ \begin{array}{c} 1\\1\\1\\1\\6\\2\\1\\1\\2\\333\\3\\1\\3\\3\\1\\3\\2\\34\\2\\5\end{array}\right) $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM) M. McCarthy
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Greba 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Fulr 4/21	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Pittsfield (Pont.) be Winthrop B. nar Stellwagen ater Stellwagen	7 1 2 2 3 2 3 2 2 3 2 2 4 2 19 9 2,3 3 7 8 12 3 1	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o.	4/22 4/23 4/24 4/24 Black-crowne 3/30 4/21 4/29 4/29 Glossy Ibis 3/26 4/21 4/23 4/24 4/26 4/20 White-faced 4/24 Black Vulture 3/11 3/15 4/5 4/22 4/24	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Chilmark Sheffield P.I. W. Roxbury Athol	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 3\\ 1\\ 3\\ 2\\ 34\\ 2\\ 5\\ 2\\ 5\\ 2 \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM) M. McCarthy D. Small
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Fulr 4/21 Sooty Shearw 4/21 Manx Shearw	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Grebe Winthrop P.I. Pittsfield (Pont.) be Winthrop B. nar Stellwagen ater Stellwagen	7 1 2 2 3 3 2 4 2 19 9 9 2,3 3 7 8 12 3 1 1 52	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o. P. Flood#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 d/29 d/29 d/29 d/29 d/29 d/29 d/23 4/21 4/29 d/29 d/23 4/24 4/26 black Vulture 3/11 3/15 4/5 4/22 4/24 4/26	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Sheffield P.I. W. Roxbury Athol Milton	$ \begin{array}{c} 1\\1\\1\\1\\6\\2\\1\\1\\2\\333\\3\\1\\3\\3\\1\\3\\2\\34\\2\\5\end{array}\right) $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM) M. McCarthy
4/26 Yellow-billed 3/1-4/2 Pied-billed Gr 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Fulr 4/21 Sooty Shearw 4/21 Manx Shearw 3/23	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Brebe Winthrop P.I. Pittsfield (Pont.) be Winthrop B. nar Stellwagen ater P'town (R.P.)	7 1 2 2 3 3 2 19 9 12,3 3 78 12 3 78 12 3 1 1 52 1	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o. P. Flood# P. Flood# P. Fernandes#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 4/29 4/29 4/29 4/29 4/29 4/21 4/23 4/24 4/24 4/26 4/30 White-faced 4/24 Black Vulture 3/11 3/15 4/25 4/22 4/24 4/26 Turkey Vultur	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Sheffield P.I. W. Roxbury Athol Milton re	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 1\\ 3\\ 2\\ 34\\ 2\\ 5\\ 2\\ 2\\ 2\\ 2 \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM) M. McCarthy D. Small J. Farwell
4/26 Yellow-billed 3/1-4/2 Pied-billed Gi 3/22 3/26 4/14 4/17 Horned Grebe 3/11 3/13 3/19 4/11, 25 4/23 Red-necked C 3/20 4/18 4/25 Western Gre 3/11-4/16 Northern Fulr 4/21 Sooty Shearw 4/21 Manx Shearw	Wachusett Res. Loon P'town (R.P.) rebe Cheshire Quabbin (G41) GMNWR P.I. Stockbridge P'town Westport Pittsfield (Pont.) P.I. Brebe Winthrop P.I. Pittsfield (Pont.) be Winthrop B. nar Stellwagen ater P'town (R.P.)	7 1 2 2 3 3 2 4 2 19 9 9 2,3 3 7 8 12 3 1 1 52	M. Lynch# v.o. J. Pierce B. Zajda K. Dia# J. Berry# G. Ward M. Lynch# M. Lynch# M. Lynch# G. Hurley S. Miller G. d'Entremont# S. Williams J. Pierce S. Zendeh + v.o. P. Flood#	4/22 4/23 4/24 Black-crowne 3/30 4/21 4/29 d/29 d/29 d/29 d/29 d/29 d/29 d/23 4/24 4/23 4/24 4/26 White-faced 4/24 Black Vulture 3/11 3/15 4/5 4/22 4/24 4/26	Manomet Hopkinton GMNWR Barnstable ed Night-Heron Milton Cambridge Medford Belchertown Cumb. Farms Wayland P'town Ipswich E. Boston (B.I.) GMNWR Ibis Ipswich Sheffield P.I. W. Roxbury Athol Milton	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 6\\ 2\\ 333\\ 3\\ 1\\ 3\\ 2\\ 34\\ 2\\ 5\\ 2\\ 5\\ 2 \end{array} $	R. Emerson C. Tibrewal# R. Hamman P. Peterson D. Oliver# R. LaFontaine B. Zajda P. Jacobson B. Harris B. Nikula L. Ireland S. Riley D. Swain S. Grinley# K. Magnuson J. Pierce Hawkcount (TM) M. McCarthy D. Small

Turkey Vultu							
	re (continued)			3/26	Hudson	2	P. + F. Vale
4/3	Lynn	10	T. McElligott	3/26-4/30	Worthington	2	E. Lewis
4/9	P.I.	28	Hawkcount (CJ)	Black-bellied	Plover		
4/23	Huntington	13	M. Lynch#	3/6	Falmouth	1	G. d'Entremont
Osprey			j	American Go			
3/20	Duxbury	2	R. Bowes	4/25	Edgartown	1 ph	K. Magnuson
4/8	P.I.	9	Hawkcount (TM)	Semipalmated		i pii	it. magnason
4/8-27	Barre Falls	22	Hawkcount (DS)	3/30	Plymouth	1	B. Zuzevich
4/21		8	M. Wilson	Piping Plover		1	D. Zuzevien
	Mt Holyoke	7				2	D. Stallar
4/24	Saugus	/	S. Zendeh#	3/13	Plymouth	3	D. Stolley
Bald Eagle	W/ 1 D	•	N	4/1	Ipswich (C.B.)	6	J. Berry
3/7	Wachusett Res.	3	M. Lynch#	4/10	Revere B.	6	P. Peterson
3/10	New Salem 3	ad, 1	imm B. Lafley	4/14	Winthrop B.	8	P. Peterson
3/18	P.I.	4	Hawkcount (TM)	4/14	P.I.	13	D. Prima
4/21	Quabbin (G40)	4	R. Stymeist#	Killdeer			
Northern Har	rier		-	3/3	Cumb. Farms	10	P. Peterson
3/3	Cumb. Farms	3	P. Peterson	3/19	Ipswich	14	J. Berry
3/11	E. Boston (B.I.)		DCR (S. Zendeh)	3/20	Nashua R. IBA	28	M. Lynch#
4/2-28	P.I.	90	Hawkcount (CJ)	3/26	Bolton Flats	20	R. Stymeist
4/13	P.I.	12	P. + F. Vale	4/3	Saugus	20	S. Zendeh#
Sharp-shinne		12	1. + 1. vaic	American Oy		20	5. Zenden#
		29	Hamilto and (CD)			2	E Davi
4/8-28	P.I.		Hawkcount (CJ)	3/13	Nantucket	3	E. Ray
4/14-25	Barre Falls	23	Hawkcount (DS)	3/24	S. Dartmouth	2	J. Hoye#
Cooper's Hav				3/26	Winthrop	8	C. Hepburn#
3/27	Squantum	pr	G. d'Entremont	4/2	Squantum	4	E. Lipton
3/27	Stoughton	pr	G. d'Entremont	4/26	Marblehead	1	L. Ferraresso
4/thr	Belmont	pr n	R. Wrubel #	Spotted Sand	piper		
4/8-28	P.I.	^r 23	Hawkcount (CJ)	4/21	ONWR	2	J. Hoye#
4/27	Ipswich	2	J. Berry	4/23	Huntington	3	M. Lynch#
Northern Gos		-	5. Deny	4/26	Wachusett Res.	2	M. Lynch#
4/11	ONWR	1	I Howe#	Greater Yello		2	Ivi. Lynch#
			J. Hoye#			2	M. Laurah#
4/18	Templeton	1	T. Pirro	3/13	N Truro		M. Lynch#
4/30	Great Barringto	n 1	M. Lynch#	3/26	Bolton Flats	2	G. Fabbri
Red-shoulder				3/26	W. Harwich	12	B. Nikula
3/9	Sandisfield	2	M. Lynch#	4/13	Quincy	7	P. Peterson
3/17	Randolph	pr	P. Peterson	4/23	Ipswich	25	J. Berry
3/18	Chestnut Hill	3	P. Peterson	4/30	Ŵewbypt Н.	124	G. d'Entremont#
Broad-winged				Western Wille			
4/9	Bolton Flats	1	J. Hoye#	3/20	Salisbury	1	P. Brown
4/17	Worcester	2	R. Quimby	Willet	Sunsoury	1	1. Diown
4/17-29		27		4/13	Eastham (CCP)	1	A. Sullivan
	Barre Falls		Hawkcount (DS)		Eastham (CGB)		
4/21	Mt Holyoke	282	M. Wilson	4/19	Nantucket	1	T. Pastuszak
4/23	Otter River SP						XT XC 1 1
4/30		2	G. d'Entremont	4/21	Mattapoisett	2	N. Marchessault
	Great Barringto		M. Lynch#	4/28	E. Boston (B.I.)	6	S. Riley
Rough-legged	l Hawk	n 6	M. Lynch#	4/28 4/30	E. Boston (B.I.) P.I.		
		n 6 3		4/28	E. Boston (B.I.) P.I.	6	S. Riley
Rough-legged	l Hawk	n 6	M. Lynch#	4/28 4/30	E. Boston (B.I.) P.I.	6	S. Riley
Rough-legged 3/3 3/11	l Hawk Cumb. Farms	n 6 3	M. Lynch# P. Peterson	4/28 4/30 Lesser Yellow 3/19	E. Boston (B.I.) P.I. vlegs Bolton Flats	6 29 1	S. Riley P. + F. Vale T. Pirro
Rough-legged 3/3 3/11 King Rail	l Hawk Cumb. Farms P.I.	n 6 3 1	M. Lynch# P. Peterson E. Labato	4/28 4/30 Lesser Yellow 3/19 4/10	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich	6 29 1 2	S. Riley P. + F. Vale T. Pirro S. Finnegan
Rough-legged 3/3 3/11 King Rail 4/24-30	l Hawk Cumb. Farms	n 6 3 1	M. Lynch# P. Peterson	4/28 4/30 Lesser Yellow 3/19 4/10 4/24	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus	6 29 1 2 3	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh#
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail	Hawk Cumb. Farms P.I. Burrage Pd WM	n 6 3 1 IA 1	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o.	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28	E. Boston (B.I.) P.I. Vlegs Bolton Flats W. Harwich Saugus Ipswich	6 29 1 2	S. Riley P. + F. Vale T. Pirro S. Finnegan
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16	d Hawk Cumb. Farms P.I. Burrage Pd WM Wayland	n 6 3 1 1A 1 1,4	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandp	E. Boston (B.I.) P.I. Vlegs Bolton Flats W. Harwich Saugus Ipswich biper	6 29 1 2 3 9	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren	n 6 3 1 1A 1 1,4 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandp 4/10	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich piper Saugus	6 29 1 2 3 9 1	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield	n 6 3 1 1A 1 1,4 3 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17	E. Boston (B.I.) PI. vlegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee	6 29 1 2 3 9 1 6	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA	n 6 3 1 1A 1 1, 4 3 5	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# M. Lynch#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17 4/21	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I.		S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore#
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield	n 6 3 1 1A 1 1,4 3 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandţ 4/10 4/17 4/21 4/24	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I. Saugus		S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28 Sora	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR	n 6 3 1 1A 1 1, 4 3 5 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 Upland Sandu 4/10 4/17 4/21 4/21 4/22 4/29	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I.		S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore#
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA	n 6 3 1 1A 1 1, 4 3 5 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# M. Lynch#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandţ 4/10 4/17 4/21 4/24	E. Boston (B.I.) PI. vlegs Bolton Flats W. Harwich Saugus Ipswich oiper Saugus Chicopee PI. Saugus Sandwich		S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28 Sora	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR	n 6 3 1 1A 1 1, 4 3 5 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 Upland Sandu 4/10 4/17 4/21 4/21 4/22 4/29	E. Boston (B.I.) PI. vlegs Bolton Flats W. Harwich Saugus Ipswich oiper Saugus Chicopee PI. Saugus Sandwich		S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/28 Sora 4/16 4/21	l Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland	n 6 3 1 1A 1 1, 4 3 5 3 1A 3	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17 4/21 4/21 4/29 Sanderling 3/19	E. Boston (B.I.) P.I. Alegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I. Saugus Sandwich Westport	6 29 1 2 3 9 1 6 1 2 4 90	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch#
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/28 Sora 4/16 4/21 4/28	I Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland Belchertown	n 6 3 1 1A 1 1, 4 3 5 3 1A 3 1 1	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris L. Therrien	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandp 4/10 4/17 4/21 4/29 Sanderling 3/19 3/31	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich oiper Saugus Chicopee P.I. Saugus Sandwich Westport P.I.	6 29 1 2 3 9 1 6 1 2 4 90 53	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch# D. Chickering
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28 Sora 4/16 4/21 4/28 Sora 4/16 4/21 4/26 4/26	I Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland Belchertown W. Newbury	n 6 3 1 1A 1 1,4 3 5 3 1A 3 1	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandp 4/10 4/17 4/21 4/21 4/29 Sanderling 3/19 3/31 4/1	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich piper Saugus Chicopee P.I. Saugus Sandwich Westport P.I. Ipswich (C.B.)	6 29 1 2 3 9 1 6 1 2 4 90	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch#
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28 Sora 4/16 4/21 4/26 4/26 Common Ga	I Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland Belchertown W. Newbury llinule	n 6 3 1 IA 1 1,4 3 5 3 IA 3 1 1 2	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris L. Therrien J. Hoye#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17 4/21 4/21 4/29 Sanderling 3/19 3/31 4/1 Least Sandpij	E. Boston (B.I.) P.I. Alegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I. Saugus Sandwich Westport P.I. Ipswich (C.B.) per	6 29 1 2 3 9 1 6 1 2 4 90 53 26	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch# D. Chickering J. Berry
Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/28 Sora 4/16 4/21 4/26 Common Ga 4/13	I Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland Belchertown W. Newbury Ilinule Nantucket	n 6 3 1 1A 1 1, 4 3 5 3 1A 3 1 1	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris L. Therrien	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17 4/21 4/29 Sanderling 3/19 3/31 Least Sandpin 3/31	E. Boston (B.I.) P.I. vlegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I. Saugus Sandwich Westport P.I. Ipswich (C.B.) per S. Dart. (A.Pd)	6 29 1 2 3 9 1 6 1 2 4 90 53 26 1	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch# D. Chickering J. Berry N. Sylvia
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Rough-legged 3/3 3/11 King Rail 4/24-30 Virginia Rail 3/9, 4/16 4/16 4/21 4/24 4/28 Sora 4/16 4/21 4/26 Common Ga 4/13 American Co 3/13 3/19	I Hawk Cumb. Farms P.I. Burrage Pd WM Wayland Warren Lynnfield Quabog IBA GMNWR Burrage Pd WM Wayland Belchertown W. Newbury Ilinule Nantucket ot Longmeadow Acoaxet	n 6 3 1 1A 1 1,4 3 3 5 3 1 1 2 1 1 19	M. Lynch# P. Peterson E. Labato B. Zuzevich + v.o. B. Harris M. Lynch# J. Berry# M. Lynch# A. Bragg# P. Peterson B. Harris L. Therrien J. Hoye# S. Kardell A. Robblee M. Lynch#	4/28 4/30 Lesser Yellow 3/19 4/10 4/24 4/28 Upland Sandr 4/10 4/17 4/21 4/29 Sanderling 3/19 3/31 4/1 Least Sandpir 3/31 4/22 4/29 4/30	E. Boston (B.I.) P.I. Alegs Bolton Flats W. Harwich Saugus Ipswich biper Saugus Chicopee P.I. Saugus Sandwich Westport P.I. Ipswich (C.B.) per S. Dart. (A.Pd) W. Harwich S. Dart. (A.Pd) Squantum	6 29 1 2 3 9 1 6 1 2 4 90 53 26 1 3	S. Riley P. + F. Vale T. Pirro S. Finnegan S. Zendeh# J. Berry S. Zendeh S. Surner T. Wetmore# S. Zendeh D. Kim M. Lynch# D. Chickering J. Berry N. Sylvia M. Keleher
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Destand Com	I	``		Lesland Call			
	lpiper (continued)) 9	M Holcow	Iceland Gull 3/8	Poston (Door L) 6	S. Zendeh#
4/27 Purple Sandp	P.I.	9	M. Halsey	3/8	Boston (Deer I.) 6 36	R. Schain
3/2, 4/22		0.16 N	MAS (D. Moon)	3/12	P'town (R.P.) Stellwagen	2	J. Berry#
3/2, 4/22	Gloucester (E.P		IAS (D. Larson)	3/27	Boston (Deer I.		O. Burton
3/9	S. Boston	.) 0 10	S. Zendeh#	Lesser Black-) 5	O. Buiton
3/24	Westport	22	J. Hove#	3/7	Turners Falls	1	J. Smith
Dunlin	westport	22	5. 110yc#	3/24	P.I.	1	D. Sibley
3/8	P.I.	220	T. Wetmore	3/25	Sharon	1 ad	
3/9	S. Boston	85	S. Zendeh#	4/7	Ipswich	1	J. Berry
4/1	Ipswich (C.B.)	95	J. Berry	4/18	Quincy	2	E. Lipton
Short-billed I		20	5. Delly	4/26	S. Quabbin	ĩ	S. Surner
4/25	Essex	1	M. Beyly#	4/29	P'town (R.P.)	22	S. Arena
Dowitcher sp		1	M. Deytyn	Glaucous Gul			5.7 Henu
4/9	S. Dart. (A.Pd)	1	B. Loughlin	3/7	S. Quabbin	1	L. Therrien
Wilson's Snit			D. Douginin	3/18	P'town (R.P.)	4	S. Arena
3/31	Hadley	40	D. Winkler	Least Tern	1 10/11 (11.1.)	•	0.110114
4/3	Bolton Flats	55	K. Bourinot#	4/26	Mashpee	1	M. Keleher
4/3	Fairhaven	56	C. Longworth	Caspian Terr	n	-	
4/4	Ipswich	36	R. Nok	4/23	P'town (R.P.)	2	M. Iliff#
4/11	W. Newbury	60	P. + F. Vale	4/24-27	Burrage Pd WN		O. Burton $+$ v.o.
4/26	E. Boston (B.I.)	20	S. Riley	Roseate Tern			
American Wo			~	4/29	P'town (R.P.)	2	S. Arena
3/9	P.I.	25	T. Wetmore	4/30	Marion	20	M. Iliff
3/9	Burlington	19	M. Rines	Common Terr			
3/13	Eastham (F.H.)	17	K. Yakola	4/23	P'town (R.P.)	1	M. Iliff#
3/20	Nashua R. IBÁ	28	M. Lynch#	4/28	Mattapoisett	120	N. Marchessault
Black-legged	Kittiwake		5	4/28	Medford	2	G. Richards
3/12	P'town	10	B. Nikula	4/30	Marion	550	M. Iliff
3/12	Stellwagen	50	J. Berry#	Forster's Terr	1		
Bonaparte's (-	4/26	Turners Falls	2	E. Huston
4/24	Stellwagen	450	K. Mueller	4/26	Pittsfield (Onota	a) 1	J. Pierce
4/26	Northampton	1	K. Yakola	Parasitic Jaeg	er		
4/26, 28	S. Quabbin	1, 1	L. Therrien	4/30	P'town	1	B. Nikula
4/26	Wachusett Res.	1	M. Lynch#	Dovekie			
4/26	Whately	1	E. Huston	3/13	P'town	1	M. Lynch#
4/30	P'town	1400	B. Nikula	Common Mu			
Black-heade				3/5	P'town (R.P.)	30	P. Trimble#
3/2	Orleans	1	B. Lagasse	4/21	Stellwagen	13	P. Flood#
3/7	Falmouth	1	G. Hirth	Thick-billed I			
4/29	P'town (R.P.)	1	S. Arena	3/12	Gloucester H.	3	J. Berry#
Little Gull				3/17	P'town (R.P.)	8	K. Yakola
4/12	Eastham (CGB)		A. Sullivan	Razorbill			
4/24	Stellwagen	1 imm		3/5	Rockport (A.P.)		AS (S. Wheelock)
4/29	Pittsfield	1	J. Pierce	3/18		4275	S. Arena
4/30	P'town	1 imm	B. Nikula	4/11	Dorchester	9	J. Benson
Laughing Gu		•	D 11.11	4/18	P.I.	75	S. Williams
3/13	P'town (R.P.)	2	R. Veit#	4/24	Stellwagen	40	K. Mueller
3/31	Plymouth	24	M. Iliff	Black Guiller		2	NDI
4/29	P'town (R.P.)	1570	S. Arena	3/5	P'town (R.P.)	2	N. Dubrow
Mew Gull	D24	1.0	V.: 17.1.1	3/12	Gloucester H.	7	J. Berry#
3/13-27	P'town (R.P.)	1-2	Veit, Keleher	4/6	P.I.	1	MAS (D. Moon)
0 1 4	F ¹ I						

Owls through Finches

A Barred Owl was found on Martha's Vineyard on April 14, only the fourth record for the island. A Snowy Owl lingered as late as April 25 on Nantucket. Long-eared Owls were reported from five locations during this period; at the same time in 2015 none were noted, and there was just one report in 2014. The first Ruby-throated Hummingbird was reported on March 31, well before the general arrival though later than the earliest date on record, March 18, 1973, in Sudbury. Hawk watchers stationed at lot 1 on Plum Island tallied 217 American Kestrels and 41 Merlins during the month of April.

Some early migrants included a male Purple Martin that arrived in Rehoboth on March 19; normally the first birds arrive at the end of the first week in April. A Hooded Warbler was found on Nantucket on March 30, and the first Palm Warbler of the season was noted on Plum Island on March 23.

April was a good month for migration especially after the rare snowstorm early in the month. The first Louisiana Waterthrush of the season was reported on April 3, about two weeks ahead of the average date of arrival. Twenty-three warbler species were noted during the period, most of which arrived during the last week of April. Warbler highlights included two Worm-eating, a Tennessee, two Hooded, two Orange-crowned, and four **Yellow-throated**. A Snow Bunting on April 20 in Winthrop was late to leave the state. Rare birds that continued from the winter included the **Mountain Bluebird** in Falmouth, last reported on March 22, a **Yellow-headed Blackbird** at Cumberland Farms, and Clay-colored Sparrows in Bradford and Lexington. *R. Stymeist*

Yellow-billed				4/20	Ipswich	2	J. Berry
4/24	GMNWR	1	D. Pettee	American K			
4/28	Edgartown	1	K. Magnuson	4/thr	P.I.	217	Hawkcount (CJ)
Barn Owl				4/12	Hanscom	7	M. Rines
3/6	Nantucket	1	G. Andrews	4/13-27	Barre Falls	15	Hawkcount (DS)
Great Horned				4/21	Mt Holyoke	6	M. Wilson
3/20	Nashua R. IBA		M. Lynch#	4/24	DWWS	4	G. d'Entremont
4/thr	Belmont 2	ad, 2yg	R. Wrubel#	4/24	Saugus	7	S. Zendeh#
Snowy Owl	D ² (D D)			4/24	N. Truro	5	D. Manchester
3/thr	P'town (R.P.)	1	V.0.	Merlin	DI	4.5	
3/1-4/13	Saugus	1	M. Resendes	4/thr	P.I.	45	Hawkcount (CJ)
3/1-4/9	Duxbury B.	1	R. Bowes	4/24	N. Truro	4	D. Manchester
3/1-4/10	P.I.	1-2	V.0.	Peregrine Fa		2	M D
3/3	Eastham	1	C. Bates	thr	Woburn	2	M. Rines
4/25	Nantucket	1	H. Young	3/27	P.I.	2	N. Landry
Barred Owl	N 10 1	•	N D	4/10	Saugus	2	S. Zendeh#
thr	Medford	2	M. Rines	4/20	E. Boston (B.I.)	2	P. Peterson
4/6	Leominster	2	B. Mulhearn		Woodpecker	1	
4/15	M.V.	1	E. +. J. Graves	thr	Wore. (BMB)	1	V.O.
4/18	Sharon	2	D. Radovsky	thr	Longmeadow	2	V.O.
4/22	Ipswich	3	J. Berry#	thr	W. Roxbury (M		V.O.
4/23	Upton	7	B. Cassie	thr	Ipswich	1	V.O.
4/30	Great Barringto	on 2	M. Lynch#		ied Sapsucker	2	D I d
Long-eared C		•	<u> </u>	4/2	New Salem	3	B. Lafley
3/6	Nantucket	2	G. Andrews#	4/9	Wendell	6	M. Lynch#
3/31	Mt.A.	1 ph		4/17	Quabbin (G37)	14	S. Miller#
4/9	Hadley	1	A. Hulsey	4/20	Petersham	13	M. Lynch#
4/10	Hamilton	2	J. Berry#	4/21	Quabbin (G40)	7	R. Stymeist#
4/12-21	Ashley Falls	1	K. Schopp	4/30	Great Barringto	n 24	M. Lynch#
Short-eared C			D T T T	Northern Fli		•	75 XX .
3/1-4/16	P.I.	1-2	E. Labato	4/19	P.I.	20	T. Wetmore
3/5	N. Andover	1	B. Fox	4/30	Great Barringto	n 15	M. Lynch#
3/18	E. Boston (B.I.)		DCR (S. Zendeh)	Pileated Wo			
4/6	Hadley	1	T. Hulsey	4/17	Sandisfield	4	M. Lynch#
4/10	Saugus	2	S. Zendeh#	4/18	Ware R. IBA	3	M. Lynch#
Northern Saw			x xx //	4/29	Ipswich	3	J. Berry
3/8	Sudbury	1	J. Hoye#	4/30	Quabbin (G54)	4	B. Zajda
Eastern Whip			D 11	Least Flycat		10	
4/21	S. Peabody	1	R. Nok	4/30	Great Barringto	n 10	M. Lynch#
4/30	MSSF	2	M. Iliff	Eastern Pho		10	D 7 1
Chimney Swi		(D) 2	N . 11:00	3/27	W. Warren	12	B. Zajda
4/24	W. Roxbury (M		M. Iliff	3/31	P.I.	17	D. Chickering
4/28	Worc. (BMB)	11	J. Liller	4/1	Quabog IBA	45	M. Lynch#
4/28	GMNWR	12	A. Bragg#	4/10	Andover	10	M. Baird
4/28	Stoneham	30	D. + I. Jewell	4/17	Quabbin (G37)	11	S. Miller#
4/30	Newton	8	J. Forbes		ed Flycatcher	1	D. C
	d Hummingbird	1.2	ТИ	4/30	Framingham	1	B. Cassie
3/31, 4/1	W. Falmouth	1, 2	T. Kapur	Eastern King		1	IZ Elle
4/18 4/22	Littleton	1	H. Bailey	4/22 4/27	Falmouth	1	K. Fiske M. Fox
	WBWS	1	J. McCumber		Mansfield	-	
4/24 Daltad Kinaf	Holden	1	K. Mills	4/27 Northann Sh	Melrose	1	D. + I. Jewell
Belted Kingfi 3/6		2	G. d'Entremont	Northern Sh 4/7	Windsor	1	G. LeBaron
3/6	Falmouth Reading	3 2	D. Williams			1	G. Lebaron
4/17	Sandisfield	5		White-eyed 4/14		1 nh	R. Emerson
4/17	Westwood	2	M. Lynch# W. Webb	4/14 4/18	Hopkinton N. Dighton	1 ph 1	J. Eckerson
4/10	westwoou	2	vv. vvebb	4/10	IN. Digitton	1	J. ECKEISUII

	vireo (continued)			4/17	Wompatuck SP	7	G. d'Entremont
4/27	Longmeadow	1	M. Moore	4/23	Upton	12	B. Cassie
Yellow-throat	ted Vireo			4/27	Warwick	7	M. Lynch#
4/25	Quabbin Pk	1	L. Therrien	House Wren	TT 1		
4/29 4/30	Nahant Graat Parrington	1	D. Wilkinson	4/22 4/24	Hamilton	1	J. Berry M. Lungh#
Blue-headed	Great Barrington	1 2	M. Lynch#	4/24 4/24	New Braintree Belmont	1	M. Lynch# J. Battenfeld
4/20	Petersham	6	M. Lynch#	4/24	Ipswich	2	J. Batterneta J. Berry
4/28	Medford	7	M. Rines#	4/26	Belmont	4	MBC (R. Stymeist)
4/28	Mt.A.	7	M. Sabourin	4/28	Medford	3	M. Rines#
4/28	P.I.	7	D. Prima	Winter Wren	0.11: (0.00)		D 7 1
4/29	Ipswich	7 4	J. Berry	3/26	Quabbin (G35)	2 2	B. Zajda
4/30 Warbling Vire	Framingham	4	B. Cassie	4/17 4/27	Wompatuck SP Warwick	5	G. d'Entremont M. Lynch#
4/27	Woburn (HP)	2	M. Rines	4/30	Great Barrington		M. Lynch#
4/29	Cambridge	5	J. Guion	Marsh Wren	ortar Burringtor		
4/29	Worcester	3	R. Quimby	3/9	Wayland	2	B. Harris
4/30	Boston (A.A.)	3	BBC (R. Mayer)	3/11, 4/24		3, 14	V.O.
Fish Crow	Lananaadam	h	D Zaida#	4/21 4/24	Lynnfield	2	J. Berry#
3/5 3/12	Longmeadow Gloucester	2 8	B. Zajda# J. Berry#	4/24 4/30	Ipswich P.I.	2 7	J. Berry T. Wetmore
4/1	Stoughton	31	BBC (GdE)	Blue-gray Gn			1. wethore
4/6	Revere (POP)	4	R. Stymeist	4/5	Northampton	1	D. Pritchard
4/13	P.I.	5	T. Wetmore	4/28	GMNWŔ	8	A. Bragg#
4/20	Ipswich	11	J. Berry	4/28	Seekonk	5	J. Sweeney
4/28	Waltham	4	J. Benson	4/30	Georgetown	5	$P_{r} + F_{r}$ Vale
Common Rav 3/23	P'town (R.P.)	4	M. Morales	4/30 Golden-crown	Medford nod Kinglet	8	M. Rines#
3/23	Boston	4	O. Burton	4/1	P.I.	15	b B. Flemer#
3/24	Huntington	4	M. Lynch#	4/8	Woburn (HP)	4	M. Rines
3/31	Woburn	4	M. Rines	4/8	W. Roxbury (MI		J. Battenfeld
Horned Lark				4/13	Winchester	4	R. LaFontaine
3/3	Cumb. Farms	40	P. Peterson	4/23	P.I.	3	D. Swain#
3/6	Saugus	30 10	S. Zendeh#	4/27 Ruby-crowne	Warwick	5	M. Lynch#
3/11 3/17	P.I. Ipswich	27	E. Labato J. Berry	3/19	Newton	2	H. Miller
4/11	Rutland	10	M. Lynch#	4/17	Quabbin (G37)	17	S. Miller#
Purple Martin				4/18	P.I.	20	S. Williams
3/19	Rehoboth	1	R. Marr	4/21	Quabbin (G40)	12	R. Stymeist#
3/31	P.I.	2	T. Mara#	4/21	P'town	13	B. Nikula
4/21	Norfolk	2	E. Lipton	4/24	Boston	13 13	B. Nikula P. Peterson
4/21 4/22	Norfolk DWWS	$2 \\ 20$	E. Lipton MAS (D. Ludlow)	4/24 4/27	Boston Warwick	13 13 34	B. Nikula P. Peterson M. Lynch#
4/21 4/22 4/24	Norfolk DWWS Norfolk	2	E. Lipton	4/24 4/27 4/28	Boston Warwick Medford	13 13	B. Nikula P. Peterson
4/21 4/22	Norfolk DWWS Norfolk	$2 \\ 20$	E. Lipton MAS (D. Ludlow)	4/24 4/27	Boston Warwick Medford	13 13 34	B. Nikula P. Peterson M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10	Norfolk DWWS Norfolk Wayland Bolton Flats	$220 \\ 4$ 20 4 20 4	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo	4/24 4/27 4/28 Eastern Blueb 3/6 3/7	Boston Warwick Medford bird DFWS Wachusett Res.	13 13 34 22 11 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR	$220 \\ 4$ 20 4 200 200	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling	4/24 4/27 4/28 Eastern Blueb 3/6 3/7 4/11	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA	13 13 34 22 11 6 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS	$220 \\ 4$ 20 4 2 10 200 100	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird#	4/24 4/27 4/28 Eastern Blueb 3/6 3/7 4/11 4/13	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst	13 13 34 22 11 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I.	$2 \\ 20 \\ 4 \\ 2 \\ 10 \\ 200 \\ 100 \\ 100 \\ 200 \\ 100 \\ $	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl	Boston Warwick Medford Dird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird	13 13 34 22 11 6 6 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/25	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res.	$2 \\ 20 \\ 4 \\ 2 \\ 10 \\ 200 \\ 100 \\ 200 \\ 257 \\ $	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird#	4/24 4/27 4/28 Eastern Blueb 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst	13 13 34 22 11 6 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/25	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I.	2 20 4 2 10 200 100 200 257 W 2	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl	Boston Warwick Medford Dird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird	13 13 34 22 11 6 6 6	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. agh-winged Swallo	2 20 4 2 10 200 100 200 257 W 2 2	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29	Boston Warwick Medford Dird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33)	13 13 34 22 11 6 6 6 1	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# M. Lynch# B. Zajda v.o.
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. igh-winged Swallc Westford Waltham South Royalston	2 20 4 2 10 200 100 200 257 W 2 2 8	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus	Boston Warwick Medford Dird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h	$ \begin{array}{r} 13 \\ 13 \\ 34 \\ 22 \\ 11 \\ 6 \\ 6 \\ 6 \\ 1 \\ 1 \\ 1 \end{array} $	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. gh-winged Swallc Westford Waltham South Royalston DWWS	2 20 4 2 10 200 100 200 257 W 2 2	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth	13 13 34 22 11 6 6 6 1 1 1 1 3	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow	Norfolk DWWS Norfolk ⁷ Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS	2 20 4 2 10 200 200 257 W 2 2 8 8 8	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA	$ \begin{array}{c} 13\\13\\34\\22\\11\\6\\6\\6\\1\\1\\1\\1\\3\\16\end{array} $	B. Nikula P. Peterson M. Lynch# P. Sowizral M. Lynch# M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. righ-winged Swallc Westford Waltham South Royalston DWWS W	2 20 4 2 10 200 100 200 257 W 2 2 8 8 8 6	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Very 4/28 4/29 Hermit Thrus 3/6 4/18 4/21	Boston Warwick Medford DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I.	$ \begin{array}{r} 13 \\ 13 \\ 34 \\ 22 \\ 11 \\ 6 \\ 6 \\ 6 \\ 1 \\ 1 \\ 1 \\ 3 \\ 16 \\ 10 \\ 10 \\ 10$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Barn Swallow	Norfolk DWWS Norfolk ⁷ Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. IRWS P.I. Wachusett Res. Igh-winged Swallo Westford Waltham South Royalston DWWS W Manomet P.I. V	2 20 4 2 10 200 200 257 W 2 2 8 8 8	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford	$ \begin{array}{r} 13 \\ 13 \\ 34 \\ 22 \\ 11 \\ 6 \\ 6 \\ 1 \\ 1 \\ 1 \\ 1 \\ 3 \\ 16 \\ \end{array} $	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. tyh-winged Swallc Westford Waltham South Royalston DWWS Wanomet P.I.	2 20 4 2 10 200 200 200 257 WW 2 2 8 8 8 6 1	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich	13 13 34 22 11 6 6 6 6 1 1 1 3 16 10 13	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11 3/31	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS W Manomet P.I. V P'town (R.P.) Wayland	2 20 4 2 10 200 100 200 257 WW 2 2 8 8 8 6 1 1	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Very 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29 Gray Catbird	Boston Warwick Medford DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich	13 13 34 22 11 6 6 6 6 1 1 1 1 3 16 10 0 13 19 14	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines# J. Berry
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11 3/31 4/23	Norfolk DWWS Norfolk ⁷ Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS ⁸⁷ Manomet P.I. ⁹⁷ P'town (R.P.) Wayland GMNWR	2 20 4 2 10 200 200 200 200 257 2 8 8 8 8 6 1 1 1 7	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 Gray Catbird 3/19	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro	13 13 34 22 11 6 6 6 6 1 1 1 1 3 16 10 13 19 14 2	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines# J. Berry E. Faughnan
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 3/11 3/31 4/23 4/26	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallo Westford Waltham South Royalston DWWS Manomet P.I. Y Pitown (R.P.) Wayland GMNWR Wachusett Res.	2 20 4 2 10 200 100 200 257 WW 2 2 8 8 8 6 1 1 1 7 7 6	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/27 4/28 4/29 Gray Catbird 3/19 4/28	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown	13 13 34 22 11 6 6 6 6 1 1 1 1 3 16 10 0 13 19 14	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines# J. Berry
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11 3/31 4/23 4/26 4/27	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS W Manomet P.I. V P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich	2 20 4 2 10 200 200 200 200 257 2 8 8 8 8 6 1 1 1 7	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29 Gray Catbird 3/19 4/28 Brown Thrasl	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 3/11 3/31 4/23 4/26	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS W Manomet P.I. V P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich	2 20 4 2 10 200 100 200 257 WW 2 2 8 8 8 6 1 1 1 7 7 6	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/27 4/28 4/29 Gray Catbird 3/19 4/28	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown	13 13 34 22 11 6 6 6 6 1 1 1 1 3 16 10 13 19 14 2	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines# J. Berry E. Faughnan
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 3/11 3/31 4/23 4/26 4/27 Red-breasted 4/9 4/11	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS Manomet P.I. Y P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA	2 20 4 2 10 200 100 200 257 2 2 2 8 8 8 8 6 1 1 1 1 7 6 5 3 13	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry J. Berry# M. Lynch#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29 Gray Catbird 3/19 4/28 Brown Thrasl 4/26 4/26	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\\ 2\\ 4\\ 2\end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11 3/31 4/23 4/26 4/27 Red-breasted 4/9 4/11 4/17	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. ugh-winged Swallo Westford Waltham South Royalston DWWS W Manomet P.I. V P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA Quabbin (G37)	$2 \\ 20 \\ 4 \\ 2 \\ 10 \\ 200 \\ 200 \\ 257 \\ 22 \\ 8 \\ 8 \\ 6 \\ 1 \\ 1 \\ 1 \\ 7 \\ 7 \\ 6 \\ 5 \\ 3 \\ 13 \\ 9 \\ 9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 1 \\ 7 \\ 6 \\ 5 \\ 3 \\ 13 \\ 9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry M. Lynch# S. Miller#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29 Gray Catbird 3/19 4/28 Brown Thrasl 4/21 4/26 4/26 4/28	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown Medford	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\\ 2\\ 4\end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda M. Lynch# T. Wetmore
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/22 4/24 Barn Swallow 3/11 3/31 4/23 4/26 Barn Swallow 3/11 3/31 4/27 Red-breasted 4/9 4/17 4/18	Norfolk DWWS Norfolk 'Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS 'Manomet P.I. P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA Quabbin (G37) P.I.	2 20 4 2 10 2000 2000 2257 2 2 8 8 8 6 1 1 1 7 6 5 3 13 9 3	E. Lipton MAS (D. Ludlow) J. Alberta B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry J. Berry# M. Lynch# S. Miller# M. Halsey	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 Brown Thrasl 4/21 4/26 4/28 American Pip	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown Medford jt	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\\ 2\\ 4\\ 2\\ 3\\ 3\end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# M. Rines# J. Berry E. Faughnan B. Zajda M. Lynch# T. Wetmore B. Zajda M. Rines#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 4/24 Barn Swallow 3/11 3/31 4/23 4/26 4/27 Red-breasted 4/9 4/11 4/17 Kl 18 4/23	Norfolk DWWS Norfolk ' Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS ' Manomet P.I. ' P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA Quabbin (G37) P.I. Otter River SP	$2 \\ 20 \\ 4 \\ 2 \\ 10 \\ 200 \\ 200 \\ 257 \\ 22 \\ 8 \\ 8 \\ 6 \\ 1 \\ 1 \\ 1 \\ 7 \\ 7 \\ 6 \\ 5 \\ 3 \\ 13 \\ 9 \\ 9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 1 \\ 7 \\ 6 \\ 5 \\ 3 \\ 13 \\ 9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry M. Lynch# S. Miller#	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/29 Gray Catbird 3/19 4/28 Brown Thrasl 4/28 Brown Thrasl 4/28 Alve Catbird 3/19 4/28 Brown Thrasl 4/28 American Pip 3/4	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown Medford jit Cumb. Farms	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\\ 2\\ 4\\ 2\\ 3\\ 30 \end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda M. Lynch# T. Wetmore B. Zajda M. Lynch#
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 4/24 Bans Swallow 3/11 3/31 4/23 4/26 4/27 Red-breasted 4/9 4/11 4/17 Ked-breasted 4/9 4/11 4/17 Sproxet Allow 3/10 10 10 10 10 10 10 10 10 10 10 10 10 1	Norfolk DWWS Norfolk ' Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS ' Manomet P.I. ' P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA Quabbin (G37) P.I. Otter River SP	$\begin{array}{c} 2\\ 20\\ 4\\ 10\\ 200\\ 100\\ 257\\ 0\\ 2\\ 2\\ 8\\ 8\\ 8\\ 6\\ 1\\ 1\\ 1\\ 7\\ 6\\ 5\\ 3\\ 13\\ 9\\ 3\\ 4\\ \end{array}$	E. Lipton MAS (D. Ludlow) J. Alberta B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry J. Berry# M. Lynch# S. Miller# M. Halsey	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 Brown Thrasl 4/21 4/26 4/28 American Pip	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown Medford jit Cumb. Farms Newbury	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 111\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 2\\ 3\\ 30\\ 15\\ \end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda M. Lynch# T. Wetmore M. Lynch# M. Rines# M. S. Zajda M. Lynch# T. Wetmore B. Zajda
4/21 4/22 4/24 Tree Swallow 3/10 3/10 3/27 4/2 4/25 4/26 Northern Rou 4/9 4/16 4/18 4/24 Bank Swallow 4/24 Bank Swallow 4/24 Barn Swallow 3/11 3/31 4/23 4/26 4/27 Red-breasted 4/9 4/11 4/17 Kl 18 4/23	Norfolk DWWS Norfolk Wayland Bolton Flats GMNWR IRWS P.I. Wachusett Res. Igh-winged Swallc Westford Waltham South Royalston DWWS Wanomet P.I. P'town (R.P.) Wayland GMNWR Wachusett Res. Ipswich Nuthatch Hamilton Ware R. IBA Quabbin (G37) P.I. Otter River SP er	2 20 4 2 10 2000 2000 2257 2 2 8 8 8 6 1 1 1 7 6 5 3 13 9 3	E. Lipton MAS (D. Ludlow) J. Alberta B. Harris B. Robo N. Dowling M. Baird# D. Williams M. Lynch# D. Cabral J. Forbes M. Lynch# G. d'Entremont E. Dalton T. Wetmore R. Schain B. Harris J. Forbes M. Lynch# J. Berry# M. Lynch# S. Miller# M. Halsey G. d'Entremont	4/24 4/27 4/28 Eastern Bluet 3/6 3/7 4/11 4/13 Mountain Bl 3/1-22 Veery 4/28 4/29 Hermit Thrus 3/6 4/18 4/21 4/27 4/28 4/29 Gray Catbird 3/19 4/28 Brown Thrasl 4/21 4/26 4/26 4/28 American Pip 3/4 3/29	Boston Warwick Medford bird DFWS Wachusett Res. Ware R. IBA S. Amherst uebird Falmouth Belchertown Quabbin (G33) h Falmouth Ware R. IBA P.I. Warwick Medford Ipswich Northboro Belchertown her Lancaster P.I. Belchertown Medford jit Cumb. Farms	$\begin{array}{c} 13\\ 13\\ 34\\ 22\\ 11\\ 6\\ 6\\ 6\\ 6\\ 1\\ 1\\ 1\\ 1\\ 3\\ 16\\ 10\\ 13\\ 19\\ 14\\ 2\\ 2\\ 2\\ 4\\ 2\\ 3\\ 30 \end{array}$	B. Nikula P. Peterson M. Lynch# M. Rines# P. Sowizral M. Lynch# B. Zajda v.o. L. Therrien G. Watkevich G. d'Entremont M. Lynch# T. Wetmore M. Lynch# J. Berry E. Faughnan B. Zajda M. Lynch# T. Wetmore B. Zajda M. Lynch#

Bohemian W	Voywing			4/1	Nantucket	1	G. Andrews
3/3	Dalton	2	G. Hurley	American I		1	O. Andrews
3/15	Williamstown	1	M. Morales	4/27	Cambridge	1	C. Husic
3/26 Cedar Waxw	P.I.	2	S. Hepburn#	4/30 Northam D	Great Barringto	n 1	M. Lynch#
3/5	Quabog IBA	33	M. Lynch#	Northern P 4/12	Winchester	1	R. LaFontaine
3/20	Nashua R. IBA	27	M. Lynch#	4/21	ONWR	3	M. Lynch#
4/22	Hamilton	12	J. Berry	4/28	Medford	6	M. Řines#
Lapland Lon				4/30	Quabbin (G54)	3	B. Zajda
3/5 3/6	Cumb. Farms P'town (R.P.)	1 1	G. d'Entremont P. Wolter#	4/30 Magnolia V	Jamaica Plain Varbler	3	P. Peterson
3/10	Winthrop B.	i	D. Scott	4/26	Mt.A.	1	J. Benson
3/12	Nantucket	1	S. Kardell	4/28	W. Roxbury (M	P) 1	B. Cassie
4/3	Hadley	1	S. Surner	Blackburni			
4/4	Ipswich	1	R. Nok S. Zendeh#	4/28	W. Roxbury (M		B. Cassie
4/24 Snow Buntin	Saugus	1	S. Zenden#	4/30 Yellow Wa	Great Barringto	on 3	M. Lynch#
3/4, 3/17		. 27	R. Bowes	4/22	Falmouth	1	K. Fiske
3/10, 4/20	Winthrop B. 6	0,1	V.O.	4/25	Newton	1	J. Forbes
3/11	P'town (R.P.)	90	R. Schain	4/27	Woburn (HP)	2	M. Rines
3/28 Ovenbird	Wachusett Res.	4	B. Robo	4/28 4/28	Seekonk	5 P) 9	J. Sweeney
4/22	W. Barnstable	1	S. Matheny	4/28	W. Roxbury (M Cambridge	8	B. Cassie J. Guion
4/23	Otter River SP	i	G. d'Entremont		ated Blue Warbler	0	J. Gulon
4/29	Ipswich	5	J. Berry	4/24	Jefferson	2	D. Mahoney
4/30	Framingham	16	B. Cassie	4/30	Great Barringto	n 3	M. Lynch#
4/30	Rowley	12	J. Berry#	Palm Warb		1 24	T Water and
Worm-eating 4/28	Mashpee	1	J. Pratt	3/23, 4/1 4/16	Warren	1, 24 42	T. Wetmore M. Lynch#
4/30	Quabbin (G54)	i	B. Zajda	4/21	GMNWR	20	D. Swain#
Louisiana Wa				4/21	Medford	24	R. LaFontaine
4/3-30	Reports of 1-2 in			4/21	Arlington Res.	34	M. Rines
4/7 4/17	Spencer Sandisfield	3	M. Lynch#	4/22 Western De	P.I. Ilm Warbler	22	S. McGrath#
4/17	Willard Brook SF	, <u>,</u>	M. Lynch# G. d'Entremont	4/30	Rowley	1	J. Berry#
4/23	Huntington	12	M. Lynch#	Pine Warbl		1	5. Denyn
4/24	Ashby	5	R. Stymeist#	3/6	Salisbury	1	D. Kraushaar
4/30	Great Barrington	4	M. Lynch#	3/12	Lincoln	1	M. Rines
Northern Wa 4/7	New Salem	1	D Laffay	4/17 4/21	Quabbin (G37)	42 24	S. Miller# R. Stymeist#
4/9	Oakham	1	B. Lafley K. Van Schoick	4/21	Quabbin (G40) Warwick	34	M. Lynch#
4/24	Wompatuck SP	2	G. d'Entremont#	4/29	Ipswich	22	J. Berry
4/30	Framingham	4	B. Cassie		nped Warbler		2
Blue-winged				4/21	Arlington Res.	78	M. Rines
4/21 Lawrence's V	ONWR Varbler	1	M. Lynch#	4/21 4/23	Brighton Winchester	45 22	P. Peterson R. LaFontaine#
4/28	Seekonk	1	J. Sweeney	4/27	Warwick	121	M. Lynch#
Black-and-w		•	t. S / tentey	4/27	P'town	50	B. Nikula
4/23	P.I.	2	D. Swain#	4/28	Medford	125	M. Rines#
4/24	Boston	2	P. Peterson	4/30	Jamaica Plain	30	P. Peterson
4/28 4/28	Seekonk Medford	3 8	J. Sweeney M. Rines#	3/27-4/4	oated Warbler S. Dartmouth	1	A. Morgan + v.o.
4/30	Framingham	12	B. Cassie	4/22	Falmouth	1	K. Fiske
4/30	Great Barrington	10	M. Lynch#	4/23	Swampscott	1 m	
Tennessee W			TL C.	4/29	Brookline	1	B. Cassie
4/28 Orange-crow	Mt.A.	1	H. Stevens	Prairie War 4/24	bler Medford	1	R. LaFontaine#
3/1	Ipswich	1	M. Brengle	4/24 4/30	Framingham	1	B. Cassie
4/30	MNWS	1	S. Hepburn		ated Green Warbler	1	D. Cussie
Nashville Wa	arbler		·	4/24	New Braintree	1	M. Lynch#
4/21	Brewster	1	S. Finnegan	4/25	Boxford	1	J. Berry
4/28 4/29	Mt.A. Wenham	1	D. Hursh J. Nelson	4/30 4/30	Great Barringto Quabbin (G54)	n 13 4	M. Lynch# B. Zajda
4/29	Framingham	1	B. Cassie	Eastern To		4	D. Zajua
4/30	Medford	i	M. Rines#	4/16	Burrage Pd WN	1A 2	P. Peterson
Common Yel				4/22	Hopkinton	4	R. Emerson
4/23	Huntington	1	M. Lynch#	4/23	P.I. Madfand	38	D. Swain#
4/23 4/29	WBWS Woburn (HP)	1	T. Skillin# M. Rines	4/28 4/30	Medford Great Barringto	10 n 13	M. Rines# M. Lynch#
4/29	Great Barrington		M. Lynch#	4/30	Quabbin (G54)		B. Zajda
4/30	Medford	2	M. Rines#		Free Sparrow		-
Hooded Warl				3/5	Cumb. Farms	50	G. d'Entremont
3/30	Nantucket	1	J. Papale#	4/21	Arlington Res.	1	M. Rines

Amorioan Tra	a Sparrow (aantin	(hou		Social trans	~~ ~		
4/27	e Sparrow (contin Northboro	ueu) 2	S. Miller#	Scarlet Tanag 4/22	Falmouth	1	K. Fiske
Chipping Spa		2	5. Wither π	4/28	Jefferson	1	B. Robo
4/18	Ware R. IBA	47	M. Lynch#	Rose-breasted		1	D. 1000
4/21	Quabbin (G40)	17	R. Stymeist#	4/23	Harvard	1	A. Becklean
4/21	W. Newbury	16	P. + F. Vale#	4/26	Wakefield	î	$T_{.} + J_{.}$ Beers
4/27	Warwick	77	M. Lynch#	4/26	Merrimac	1	$B_{.} + B_{.}$ Buxton
4/29	Ipswich	16	J. Berry	4/28	Medford	2	M. Rines#
Clay-colored			5	Dickcissel			
tĥr	Bradford	1	S. Mirick	3/16	Worcester	1	B. Kamp
3/26	Arlington Res.	1	J. Forbes	3/16	Plymouth	1	K. Doyon
Field Sparrow				Eastern Mead			
4/14	Woburn (HP)	3	D. Williams	3/2	Templeton	1	T. Pirro
4/16	Sturbridge	4	M. Lynch#	3/5	E. Boston (B.I.)	1	A. Trautmann
4/20	Worc. (BMB)	3	J. Liller	3/12	Bolton Flats	1	N. Dowling
4/21	Lancaster	5	M. Lynch#	3/13	Wachusett Res.	2	B. Robo
4/23	P.I.	4	T. Wetmore	3/26	Falmouth	2	P. + F. Vale
Vesper Sparro 4/2	Belchertown	1	D. Griffiths	3/27 4/8	W. Warren Essex	2 2	B. Zajda J. Nelson
4/2 4/14	Williamstown	2	M. Morales	4/8	Ashley Falls	4	K. Schopp
4/14	Hadlev	4	L. Therrien		ed Blackbird	4	K. Schopp
4/18	Orange	2	E. Huston	3/4-05	Cumb. Farms	1	D. Ludlow + v.o.
4/21	Lancaster	3	M. Lynch#	4/23	W. Harwich	1 p	
4/24	Saugus	í	S. Zendeh#	Rusty Blackb		тp	11 101.711015
Lark Sparro			D. Dendenn	3/17	S. Hamilton	36	D. Walters
3/7-10	Eastham (F.H.)	1	S. Miller#	4/8	Lexington	20	M. Rines
Savannah Spa				4/10	Concord	20	C. Corey
3/31, 4/21		2, 43	B. Harris	4/10	Wayland	126	B. Harris
4/13	Quincy	20	P. Peterson	4/24	Lynnfield	333	L. Ireland
4/17	Saugus	65	S. Zendeh#	Orchard Orio	le		
4/21	Topsfield	14	J. Berry	4/28	Boston (PG)	1	BBC (Ferraresso)
4/23	P'town (R.P.)	96	I. Davies#	4/28	Winchester	1	R. LaFontaine
4/27	Cambr. (Danehy) 22	K. Hartel	4/28	Mt.A.	2	F. Leyman
Ipswich Spari				Baltimore Ori			
4/9	Duxbury B.	1	R. Bowes	4/1	Barnstable	1	N. Villone
4/26-27	Burrage Pd WM	A 1	N. Marchessault#	4/23	Winchester	1	S. Driscoll
Grasshopper				4/28	Mt.A.	2	M. Sabourin
4/30	Westfield	1	S. Cloutier	4/30	Medford	2	M. Rines#
Nelson's Spar		5	IZ Valata	Purple Finch	TT- model and	1	D MIL-1
3/13 Saltaranah Sar	Eastham (F.H.)	5	K. Yakola	3/17 4/2	Harwichport New Salem	1 2	B. Nikula
Saltmarsh Spa 4/23		1	P. Peterson	4/2 4/4	Bolton	$\frac{2}{2}$	B. Lafley J. Moosbruker
	E. Boston (B.I.)	1	P. Peterson	4/4 4/6	Ipswich	2	J. Moosbruker J. Berry
Fox Sparrow 3/5, 26	Woburn	1, 5	M. Rines	4/0	Ware R. IBA	64	M. Lynch#
3/6	Falmouth	2	G. d'Entremont	4/11	P.I.	12	T. Wetmore
3/18	Lexington (DM)		M. Rines	4/21	Quabbin (G40)	2	R. Stymeist#
3/26	Quabbin (G39)	6	B. Lafley#	Pine Siskin	Quaddin (040)	2	R. Stymeista
3/20	Oxford	5	P. Meleski	3/27	Milton	1	G. d'Entremont
Swamp Sparr		5	1. Wreteski	4/2	New Salem	i	B. Lafley
4/21	Wayland	62	B. Harris	4/6	Colrain	2	J. Hove#
4/23	Wakefield	17	P. + F. Vale	4/21	N. Truro	ī	B. Nikula
4/23	Otter River SP	11	G. d'Entremont	4/21	P'town	2	B. Nikula
4/24	Quabog IBA	34	M. Lynch#	4/30	Great Barrington	1 2	M. Lynch#
4/28	ĠMNẄ́R	19	A. Bragg#	Evening Gros			2
White-crown				3/1	Williamstown	3	M. Morales
3/6-26	Cumb. Farms	1	N. Marchessault	3/17	Athol	10	G. Watkevich
3/17	Quincy	1	J. Sweeney	3/18	Colrain	1	C. Lively
4/16	Nantucket	1	P. Trimble#	4/16	Warrick	3	G. d'Entremont#
Dark-eyed Ju			/	4/19	Plainfield	2	J. Williams
4/27	Woburn	1	M. Rines	4/20	Cummington	1	L. Therrien
4/28	P.I.	3	D. Prima	4/25	Rowe	4	C. Hyytinen

IBA News: Connecticut Sites Increase

Birders e-Bulletin July 2016

Last month, Audubon Connecticut announced five new Important Bird Areas (IBAs) in the Nutmeg State, three held by municipalities and two by land conservation organizations. According to Corrie Folsom-O'Keefe, Audubon Connecticut's IBA Coordinator, "These areas are important to bird species of conservation concern. They are also places where the municipality or land conservation organization is actively managing or working to improve habitat for birds."

The three municipal properties are New Haven's West River Memorial and Edgewood Parks, the District of Willimantic, and Redding's Couch Hill Preserve. The New Haven parks are important to migrating songbirds and regularly host Rusty Blackbirds in the winter. In the District of Willimantic, large chimneys, including that of the Windham Town Hall, are used by upwards of 250 roosting Chimney Swifts in the summer, and many more birds make use of the chimneys as nocturnal roosts during migration. Couch Hill Preserve is a crucial nesting sites for nesting Bobolinks in Fairfield County.

Aton Forest Inc. in Norfolk, Connecticut, and Naromi Land Trust's Wimisink Marsh in Sherman are the other two new IBAs. Aton Forest supports a wide diversity and high numbers of woodland nesting birds, and has also seen quite a bit of recent activity by Sandhill Cranes. Wimisink Marsh is a fine example of a healthy freshwater wetland and hosts several species restricted to this habitat type (e.g., American Bittern).

For more details on these sites, including how the chimneys were protected for the swifts and how a mowing regime employed by the Town of Redding to maintain Couch Hill gives Bobolinks adequate time to nest, see here:

<http://ct.audubon.org/news/five-new-important-bird-areas-connecticut>

For additional information about worldwide IBA programs, including those in the U.S., check the National Audubon Society's Important Bird Area program web site at:

<www.audubon.org/bird/iba/>

ABBREVIATIONS FOR BIRD SIGHTINGS

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

Locations		Newbypt	Newburyport
Location-#	MAS Breeding Bird Atlas Block	ONWR	Oxbow National Wildlife Refuge
A.A.	Arnold Arboretum, Boston	PG	Public Garden, Boston
ABC	Allen Bird Club	P.I.	Plum Island
A.P.	Andrews Point, Rockport	Pd	Pond
A.Pd	Allens Pond, S. Dartmouth	POP	Point of Pines, Revere
B.	Beach	PR	Pinnacle Rock, Malden
Barre F.D.	Barre Falls Dam	P'town	Provincetown
B.I.	Belle Isle, E. Boston	Pont.	Pontoosuc Lake, Lanesboro
B.R.	Bass Rocks, Gloucester	R.P.	Race Point, Provincetown
BBC	Brookline Bird Club	Res.	Reservoir
BMB	Broad Meadow Brook, Worcester	RKG	Rose Kennedy Greenway, Boston
BNC	Boston Nature Center, Mattapan	S.B.	South Beach, Chatham
C.B.	Crane Beach, Ipswich	S.N.	Sandy Neck, Barnstable
CGB	Coast Guard Beach, Eastham	SRV	Sudbury River Valley
C.P.	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	WE	World's End, Hingham
Cumb. Farms	Cumberland Farms, Middleboro	WMWS	Wachusett Meadow WS
DFWS	Drumlin Farm Wildlife Sanctuary	Wompatucl	
DWMA	Delaney WMA, Stow, Bolton, Harvard	Worc.	Worcester
DWWA	Daniel Webster WS	wore.	worcester
E.P.	Eastern Point, Gloucester	Other Abb	roviations
F.E.	First Encounter Beach, Eastham	ad	adult
F.H.	First Encounter Beach, Eastham Fort Hill, Eastham	b	banded
F.P.	Fresh Pond, Cambridge	br	breeding
F.Pk	Franklin Park, Boston	dk	dark (morph)
G40	Gate 40, Quabbin Res.	f	female
GMNWR	Great Meadows NWR	fide	on the authority of
H.	Harbor	fl	fledgling
H.P.	Halibut Point, Rockport	imm	immature
HP	Horn Pond, Woburn		juvenile
HRWMA	High Ridge WMA, Gardner	juv lt	light (morph)
I.	Island		male
I. IRWS	Ipswich River WS	m	
	1	max	maximum
L.	Ledge Mass Audubon	migr	migrating
MAS		n	nesting
MP	Millennium Park, W. Roxbury	ph	photographed
M.V.	Martha's Vineyard	pl	plumage
MBWMA	Martin Burns WMA, Newbury	pr	pair
MI	Morris Island	Ŝ	summer $(1S = 1st summer)$
MNWS	Marblehead Neck WS	V.O.	various observers
MSSF	Myles Standish State Forest, Plymouth	W	winter $(2W = second winter)$
Mt.A.	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: http://www.birdobserver.org/Contact-Us/Submit-Sightings.

Species on the Review List of the Massachusetts Avian Records Committee, as well as species unusual as to place, time, or known nesting status in Massachusetts, should be reported promptly to the Massachusetts Avian Records Committee, c/o Matt Garvey, 137 Beaconsfield Rd. #5, Brookline MA 02445, or by email to .

ABOUT THE COVER

Little Gull

The Little Gull (*Larus minutus*) is aptly named—the Latin word *minutus* means "little"—because it is the world's smallest gull species. Adults are identified in flight, even at great distance, by their distinctive black underwings. The dorsal wing surface is gray with white tips. Breeding plumaged adults have black heads that in winter plumage are reduced to a black ear patch and patch on the crown. As illustrated on the cover of this issue, juvenile Little Gulls have a distinctive dorsal wing pattern with a prominent black "M" and a black tip to the tail. They lack the dark underwing pattern of the adults. By the second winter, the dorsal wing pattern is reduced to dark patches near the wing tips and the underwings are darker. The adult plumage is attained by the third winter. The sexes are similar in plumage. Little Gulls are monotypic and are probably most closely related to the Ross's Gull.

Little Gulls are found mainly in Europe and Siberia, but they have been recorded in North America sporadically since the 1920s. They were first confirmed breeding here in 1962. In recent decades, they have been recorded breeding in the Great Lakes and St. Lawrence River basin with scattered reports from Minnesota and as far north as James and Hudson's bays. Little Gulls are migratory, wintering in small numbers along the East Coast from Maine to Florida, along the Gulf Coast from Alabama to Texas, and along nearly the entire West Coast of the United States. They also winter on several of the Great Lakes. In Massachusetts, Little Gulls are considered rare to uncommon migrants along the coast, and there are at least two inland occurrences in Berkshire County. When found, they are often in flocks of Bonaparte's Gulls. They have been recorded in every month of the year, with a spring peak in April and May and a fall peak in August.

Little Gulls are monogamous. Their breeding biology is poorly known in North America but is better known from European studies. Little is known about their pair formation; however, during courtship a pair may assume an upright posture and walk around each other. They are territorial around a nest site.

Little Gulls utter a so-called "long call" that is used in a wide variety of circumstances, including in the presence of intruders as well as to mates and young. It is probably also important in individual recognition. The call consists of several elements variously described as *kay*, *ke-koo*, and *ke-keh*. Oblique posture—where a standing bird extends its head and neck forward, tail tilted slightly up, and gives long calls—is used in aggressive situations but may also serve to attract females. When approaching another bird, Little Gulls may use a vertical posture, in which the standing bird extends its head and neck vertically with its tail also pointing up.

A rather strange aggressive behavior, the function of which is unknown, involves extended chases usually involving three individuals: a pursuer, a pursued, and a follower at the end of the procession. The pursuer may chase with its head and neck extended, uttering long calls; then it may fly with fast, stiff wingbeats with its head tilted upward; and then it may glide with wings held stiffly down or extended. Occasionally it will attack the pursued bird. The three birds involved in this chase may be adults of either sex or immatures, and they participate in any order—very odd.

Little Gulls nest in freshwater wetlands, wet meadows, and in brackish marshes. They may nest solitarily or in small groups, often with other gulls and terns. The method of nest-site selection is not known, but at the nest site the gulls may give a choking display with body inclined downwards, bill down, and wings slightly raised, uttering *ko-ko* sounds. The nest site is often on floating mats of vegetation. The nest is a shallow cup of aquatic plants such as cattails, reeds, or grasses. Both parents are presumed to have brood patches and share incubation of the usual clutch of three olive buff eggs for the three weeks until hatching. During nest relief, they give long calls and sometimes exchange choking calls. The chicks are precocial; within a day or two they are able to leave the nest either by walking or swimming. However, they return to the nest to be brooded and fed for about a week. Presumably both parents feed the chicks, but the extent and particulars of parental care are poorly known. The chicks can fly after about a month.

Little Gulls are mostly aquatic foragers, flying low over the water and dipping down to take prey from the surface or just below it. They may hover over the water and sometimes plunge-dive, submerging the head and neck. They also forage while swimming and sometimes hawk flying insects. Most of their prey consists of small fish, but they also take crustaceans and insects.

Not much is known about nest predation of Little Gulls, but they probably are preyed upon by small mammals and by birds such as owls and larger gulls. Adults will mob predators and will dive-bomb human intruders. The number of reports of Little Gulls nesting in North America has steadily increased since 1962, as have the numbers recorded on Christmas Bird Counts. It is thought that much of the population increase has occurred from an influx of birds from Europe or Siberia. Indeed, it appears that this delightful little immigrant gull is here to stay.

William E. Davis, Jr.

ABOUT THE COVER ARTIST

Kenn Kaufman

Lifelong naturalist Kenn Kaufman is best known for his birding memoir, *Kingbird Highway*, and for his field guide series, which includes titles such as *Kaufman Field Guide to Birds of North America*. The field guides are illustrated with digitally edited photos, but Kenn also has been drawing and painting birds since childhood. He's a believer in the value of sketching birds directly from life as a way of learning about them, and has filled up many sketchbooks over the last three decades. In the past, he used his paintings to illustrate bird identification columns in both *American Birds* and *Birder's World* magazines. Currently living in Oak Harbor, Ohio, Kenn devotes much of his time to painting portraits of waterbirds and birds of prey.

AT A GLANCE

June 2016



WAYNE R. PETERSEN

This month's puzzler is clearly a waterbird. Although it has the long bill and lanky legs suggestive of a heron or shorebird, the prominent, black-and-white vertical barring on its flanks is uncharacteristic of any species of Massachusetts heron or shorebird. This combination of features, and the fact that the bill is gently curved, fairly thick at the base, and clearly bicolored on the lower mandible, indicate that it is some species of rail.

Rails generally have either short, chicken-like bills, or bills that are relatively long and gently curved like that of the bird in the photograph. The only regularly observed short-billed rail in Massachusetts is the Sora, which has a yellow bill and a black throat in adult plumage, and is much smaller than the pictured bird. Although the American Coot and the Common Gallinule are both rail relatives, they also lack vertical flank barring and have significantly shorter bills than the rail in the picture. Having eliminated these three species, the remaining candidates are Virginia, Clapper, and King rail. Of these the Virginia Rail is the smallest and most common species in Massachusetts. The remaining two are nearly the same size and, depending upon the subspecies involved, can sometimes closely resemble each other in appearance. Indeed, some authorities consider the Clapper Rail and King Rail to be conspecific, meaning that they are actually one and the same species. Under the current taxonomy, however, they are treated as separate and distinct species.

The Virginia Rail, which is 9.5 inches long, is only slightly larger than a European Starling. While exact size can be difficult to judge in a picture, in comparison to

the grasses and flowers around it, the mystery rail is much larger than a starling. Its relatively uniform cheek and face pattern, compared to what would be a noticeably contrasting light gray face in a Virginia Rail, and its fairly long thick bill indicate that the mystery bird is not a Virginia Rail. So the choice is between the much larger Clapper Rail and King Rail.

A careful look at the pictured rail's flank barring shows it to be sharp and distinct, and it has a back pattern that is clearly defined, with the individual feathers distinctly showing extensive dark centers. These features alone, even if you are viewing the black-and-white photograph in *Bird Observer*'s print edition and cannot see the bird's overall rusty color tones, point in the King Rail's direction. A Clapper Rail would have less sharply defined back and flank barring and the back feathers would not be nearly as distinct, the individual feathers scarcely showing the contrasting dark centers present in the pictured rail, and a Clapper Rail would be grayer in overall color tone. Indeed, the mystery bird is a King Rail (*Rallus elegans*).

The King Rail is state-listed as a threatened species in Massachusetts, where it is close to the northern limit of its range in the Northeast. As a breeder in the state it is rare and local, with relatively few positively confirmed nesting records through the years. Unlike the similar Clapper Rail, which is almost exclusively confined to saltmarshes, King Rails are principally found in freshwater cattail marshes, although they occasionally occur in salt marshes during migration and rarely in winter. The author photographed this King Rail at Fort Hill in Eastham on May 30, 2010.

Wayne R. Petersen



PEREGRINE FALCON BY SANDY SELESKY

AT A GLANCE

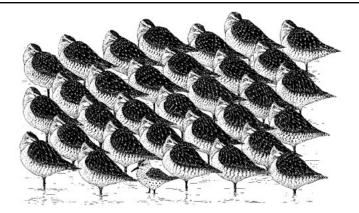


WAYNE R. PETERSEN

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

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