Bird Observer

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HOT BIRDS

Doug Brink photographed this handsome pair of **Gull-billed Terns** (left) on the Parker River National Wildlife Refuge on June 1, 2008.

Vern Laux discovered and photographed this **Black-necked Stilt** (right) in the Cisco area of Nantucket on June 1, 2008.

On June 6, 2008, employees at New England Biolabs in Ipswich noted some strange-looking ducks in the pond out back and decided that they were **Black-bellied Whistling Ducks** (above). Fellow employee and birder Jim Style confirmed the identity. Phil Brown took this great photograph.

Rob Ranney-Blake identified and photographed this adult male **Calliope Hummingbird** (right) at a feeder in Deerfield on August 1-2, 2008. This sighting is only the fifth state record of this species.

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BLACK SKIMMER BY DAVID LARSON

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Bird Observer

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Birding Scarborough Marsh

Scott Cronenweth

You just can't keep a good marsh down. Ditch it, dike it, drown it, fill it, foul it, ignore it. Surround it with development and choke it with invasive plant species. What remains still beats with the pulse of the tides. The peat still holds, the *Spartina* grasses still wave. The clams, the worms, the crabs, the fish — and the birds — carry on. At some point we humans look up from our driving and shopping across that sweeping expanse of evanescent color that is Scarborough Marsh and think: this is magnificent! Nothing like this remains. This is worth caring for and getting to know.

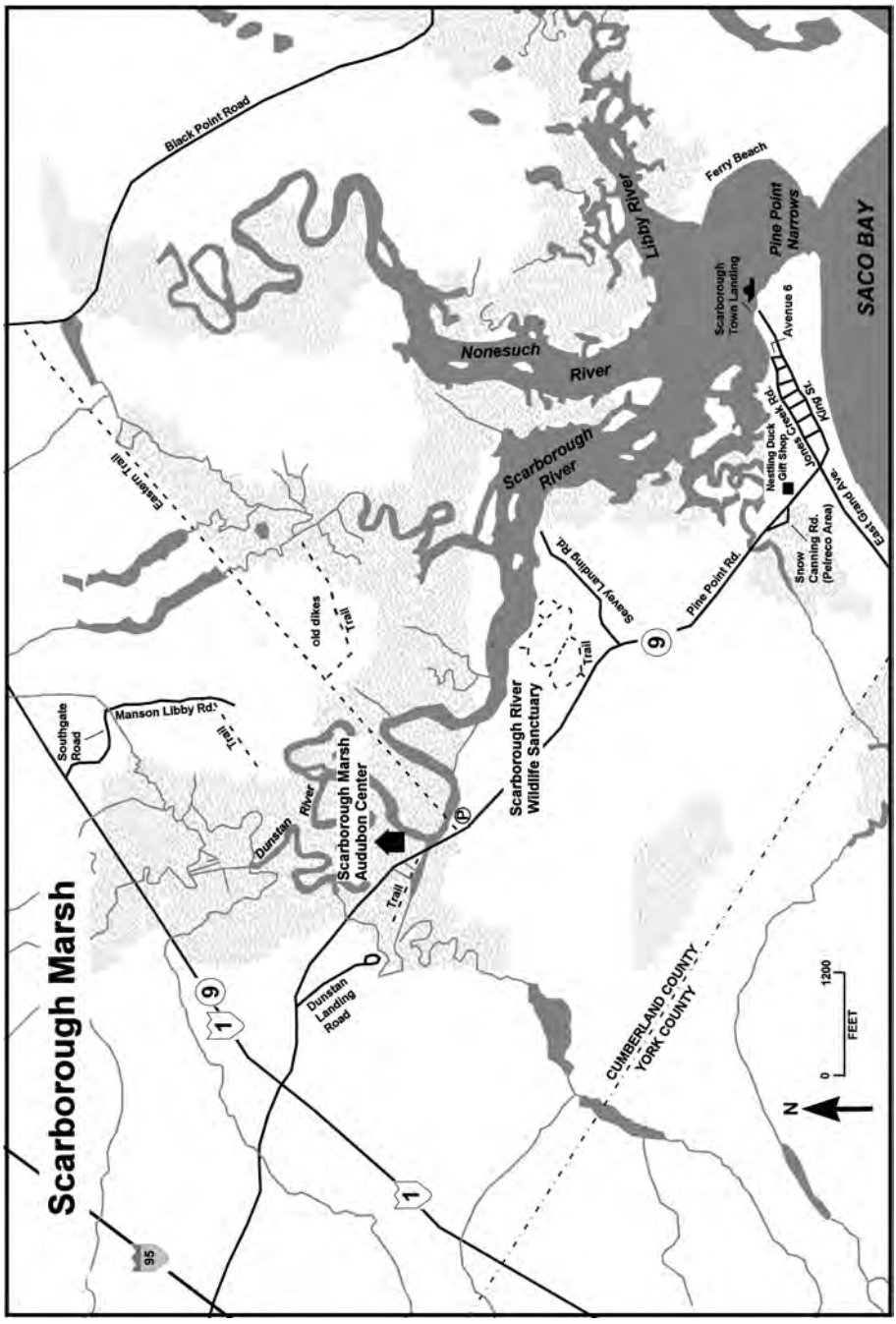
And indeed it is. These days we're all well aware of the importance of salt marshes in general as nurseries and foraging areas for commercial and sport fish, as well as edible shellfish such as quahogs and oysters. No other habitat, even rainforest, supports as much life energy per unit of surface area as the tidemarsh. By virtue of its physical location as well as its extremely tough and resilient peaty substrate, Scarborough Marsh further serves to buffer our coastal habitations from storms and flooding, while also filtering runoff and wastewater pollutants. Even compared to more McMansions and vacation condos built on fill, the marsh is "priceless."

And then there's the birding. Scarborough Marsh is almost certainly Maine's #1 birding hot spot in terms of birder energy invested and terrific birds observed in all seasons of the year. Whatever the calendar date, weather conditions, or time of day and tide, Scarborough Marsh is worth checking out. April through October are overall the most productive months, but even in winter the area can harbor some of the best birds in the region. If you enjoy the fun and challenges of salt-marsh birding, you'll fall in love with this place. Plan to spend at least a half-day here.

Birds to look for

As the key breeding habitat in Maine for Saltmarsh Sharp-tailed Sparrow, a salt marsh obligate species imperiled by rising ocean levels, Scarborough Marsh is a globally significant Important Birding Area. Other threatened or endangered species regularly seen in and around the marsh include Least, Roseate, and Arctic terns (all nesting on nearby Stratton Island), American Oystercatcher (also nesting offshore), Piping Plover (a nester on several area beaches), and Peregrine Falcon (especially, in my experience, hatch-year birds in fall). Least Bittern, a state Species of Special Concern that has been strongly recommended for Endangered status, has nested in small numbers in the freshwater wetlands surrounding the marsh.

Scarborough Marsh is also critical stopover habitat for migrating shorebirds like Least, Semipalmated, White-rumped, and Pectoral sandpipers, both yellowlegs, both dowitchers, Dunlin, Whimbrel, and many others. From mid-July into October this is among the very best shorebirding sites in northern New England. Breeding birds of



MAP BY DOROTHY GRAASKAMP

the marsh proper include Willet, Bobolink, Red-winged Blackbird, Green-winged Teal, American Black Duck, and Mallard; and, of course, the two sharp-tailed sparrows and hybrids. Seaside Sparrow is a rare and difficult-to-locate breeder here at the northernmost limit of its range.

Species that nest nearby and favor the tidemarsh for foraging include Snowy and Great egrets, Great Blue, Little Blue, and Green herons, Black-crowned Night-Heron, and Glossy Ibis (many of which nest offshore on nearby Stratton Island). Tricolored Heron has often been present in recent summers, and Cattle Egret is occasional. Both adult and juvenile Yellow-crowned Night-Herons have also been seen in the marsh from time to time. Stratton Island is a sanctuary owned by the National Audubon Society and an epicenter of avian conservation and research. For information on the Project Puffin research station on Stratton Island visit <http://www.projectpuffin.org/islands/stratton_island.html>.

Ducks and other waterfowl steal the show here during spring migration. In early spring the marsh hosts hundreds of Snow Geese and potentially thousands of Canada Geese. Later in spring you may find Green-winged and Blue-winged teal, Northern Pintail, Wood Duck, Ring-necked Duck, American Wigeon, and Common, Red-breasted, and Hooded mergansers. Scarborough Marsh is also among the most likely places in the state for Northern Shoveler and Gadwall.

Of course, it's also worthwhile to look up while birding Scarborough Marsh. Gulls include Bonaparte's Gull in spring and late summer and Iceland and Glaucous gulls in winter. Sabine's Gull has also been reported a few times in fall down near Saco Bay, and Caspian Tern is as likely here as anywhere in Maine. Laughing Gull is uncommon but not unexpected throughout the summer months.

The raptor review at Scarborough Marsh can also be surprisingly good at times. Look for Osprey in season; Northern Harrier, Peregrine Falcon, Merlin, and American Kestrel in migration and winter; and Bald Eagle, Red-tailed Hawk, and Cooper's Hawk anytime. Rough-legged and Broad-winged hawks and even Sharp-shinned Hawk and Northern Goshawk are also possible outside the breeding season. Gyrfalcon has been reported a few times. Great Horned and Short-eared owls are sometimes encountered as well.

Speaking of rarities, it's no surprise that Scarborough Marsh has hosted some exceptional birds, among them White-faced Ibis (annual in recent years), Yellow Rail, Black-necked Stilt, American Avocet, Ruff, Curlew Sandpiper, Eurasian Wigeon, Common Teal, Cackling Goose, Royal Tern, Franklin's Gull, Mew Gull, and Northern Wheatear in addition to those mentioned elsewhere in this write-up.

A humble disclaimer

By now, I hope you have a sense of the spectacular birding potential that awaits you at Scarborough Marsh. A downside of all this wonderment is that Scarborough Marsh is too large, too diverse, and too riddled with bird-finding possibilities to be covered definitively or even comprehensively by yours truly in an article-length piece. I also hasten to add that many other birders know the marsh and its birds far better

than I do. My goal here is only to present straightforward and readily digestible suggestions for birding the area that will help newcomers to make the most of their initial visits and support further exploration.

But first… a little history

One reason Scarborough Marsh is such a terrific birding area might be the comparative scarcity of this vitally important habitat in the state. Estuarine wetlands make up a comparatively small percentage of Maine's rocky shores. At about 3100 acres, Scarborough Marsh is the largest contiguous salt marsh complex in Maine, making up roughly 20 percent of our total salt marsh area. Fed primarily by tidal rivers (notably the Scarborough, Dunstan, Libby, and Nonesuch), the Scarborough Marsh estuary system is classified geologically as a "course-grained" wetland; i.e., its sediments come in mostly from the ocean rather than down creeks and streams from surrounding uplands.

Human activity had an impact on the marsh long before Scarborough became one of the most heavily developed and fast-sprawling communities in Maine. When European settlers arrived in the area in the 1630s, they harvested salt hay from the marsh to feed their livestock. Getting horses and carts into the marsh meant digging drainage ditches to firm up the boggy surface. A few remnants of the old hay staddles still poke out from the cordgrass in places. More ditching and diking took place wherever the marsh stood in the way of rail and auto roads, culminating most noticeably today in the bisection of the marsh by the Route 1 corridor and its too-narrow culverts, which constrain tidal flow through the Dunstan River to the northwestern quadrant of the marsh. Primarily because of this constriction, the quadrant of the marsh "upstream" of Route 1 is much more degraded and much less typically birded than the "downstream" areas this write-up will focus on.

During the 1930s, Scarborough Marsh, like almost every salt marsh in the Northeast, was subjected to ditching to control mosquitoes, a major public works project. Some of these trenches, now covered by grasses, still lie in wait for the unwary "marsh-whacking" birder . . . . And, of course, all during the modern area homes and businesses were built on fill around the fringes of the marsh.

Starting in the late 1950s the Maine Department of Inland Fisheries and Wildlife (MDIFW) began acquiring the marsh complex in the hopes of cutting off the tidal flow and converting half the marsh into freshwater duck-hunting habitat, a normal conservation practice at the time. Fortunately for birders and everyone else, engineers were unable to stem the tide given the ways and means at their disposal, and in the process one of the most vibrant ecosystems on the New England coast was saved.

Today the marsh is owned by MDIFW and protected as the Scarborough Wildlife Management Area. Since land acquisition for conservation ended in the early 1980s, the marsh has slowly been healing. A partnership of various state, federal, and local agencies works to restore tidal flow, plug ditches, remove fill, and control invasive species.

Major threats to Scarborough Marsh today include rampant development that has hemmed the marsh in on all sides and may prevent its organic reestablishment on higher ground as sea levels rise. The recent phenomenon of sudden wetland dieback, the cause and impact of which remain unknown, has been observed in several areas in southern Maine, including the nearby Rachel Carson National Wildlife Refuge and possibly also in Scarborough Marsh itself. Recent research on sharp-tailed sparrows and other species shows elevated levels of mercury, pointing to further ongoing human impacts on the ecology of the marsh.

Getting oriented

Though this sprawling marsh can be accessed in countless ways, a natural point of departure for birding the area is the intersection of Pine Point Road (Route 9) and Route 1 in Scarborough. From here you can drive southeast down Pine Point Road to the mouth of the Scarborough River in Saco Bay, stopping along the way at most of the most popular and productive birding spots. The tide level is more of a factor at some places than others, as I'll note along the way.

Dunstan Landing

On the right about 0.2 of a mile down Pine Point Road from the intersection with Route 1 is Dunstan Landing Road. Drive down this residential street to the cul-de-sac at the end, from which salt meadow, brackish pans, and shallow tidal creek beds are visible through the trees. The pans are good for shorebirds and long-legged waders, and interesting land birds can also be found here. This is my favorite spot in the marsh for Solitary Sandpiper.

Interestingly, sailing ships once were built and put to sea from here. Around the time of the American Revolution, shipbuilders cut a channel from the landing into the marsh at the Dunstan River. When the seclusion afforded by this location subsequently became less important, yards sprang up around Casco Bay to the north and shipbuilding waned here, ceasing by the mid-1800s.

The Scarborough Marsh Audubon Center

The unassuming edifice of the Scarborough Marsh Audubon Center, operated by the Maine Audubon Society, perches on the edge of the marsh on the left-hand side of Pine Point Road 0.7 of a mile from the intersection with Route 1. From here you can scan the heart of the marsh in three directions and get a feel for the place. This is a good place to look for waterfowl in spring and fall, peeps and other shorebirds in migration (at lower tide levels), and herons, egrets, swallows, and Glossy Ibis in the

Scarborough Marsh Audubon Center. All photographs by the author.

breeding season. The urgent calls of Willets are often heard here when the birds are defending territories. Watch for Common Loons or Double-crested Cormorants fishing in the Dunstan River.

Here at the center you can also rent a canoe, buy hats, T-shirts, books, and beverages, check out interpretive exhibits, and plan a self-guided nature walk on the trail across the street. A wide array of wonderful programs for children and adults are offered — including a bird walk from 7:00-8:30 a.m. on Wednesdays in the late spring and summer. There's also a port-a-potty here. For the latest information on goings-on at the center, visit <http://www.maineaudubon.org/explore/centers/marsh2.shtml>.

The trail across the street from the Audubon Center is worth checking for shorebirds and waders in season. You can often get great looks at common birds here.

A few tenths of a mile past the Nature Center on the right is an obvious dirt pull-off marked with an MDIFW sign and a placard on a large rock describing the Cascade Brook Salt Marsh Restoration program. A disused trail founded on an old rail bed left over from shipbuilding days leads into the marsh here, back towards Dunstan Landing. In addition to the expected species, this area is especially worth visiting in early August when juvenile Saltmarsh Sharp-tailed Sparrows can frequently be found along the soggy northwest end of the trail.

The Eastern Trail

A great way to get to know Scarborough Marsh is to walk straight out into it. The best and easiest place, by far, to do this is on the Eastern Trail, a new rail-trail that bisects the marsh along the former bed of the Portsmouth, Saco & Portland Railroad line. As recently as a few years ago this area was not readily accessible from Pine Point Road, and instead (as described in the *Birder's Guide to Maine*, now out of print) was best accessed by driving south down Eastern Road from Black Point Road. Today Eastern Road is no longer open to automotive traffic as far as the marsh, though you are now explicitly welcome to walk your dog, jog, or bike all the way through.

The access point for the Eastern Trail is on the left 1.1 miles down Pine Point Road from the intersection with Route 1. An MDIFW sign and a small brick building flank the driveway and parking area. The best time to walk out here is between May and October, and especially in late July and early August when both shorebirds and breeding species are present. Besides your binoculars and scope you'll do well to bring insect repellant, water, and sunscreen.

Among the breeding species you'll hear and see in season are Song and Savannah sparrows, Common Yellowthroat, Yellow Warbler, Willet, Tree Swallow, and American Goldfinch. Double-crested Cormorants frequently fish in the tidal channel, showing off their gorgeous turquoise eyes. The view over the marsh here is unequalled and breathtaking.

At times, you can hear sharp-tailed sparrow vocalizations across the Scarborough River on your left as you start down this trail. Sometimes you can even see the birds

well along the banks of the river, but don't be satisfied with brief glimpses of what could be Savannah or Song sparrows. Note, too, that the *sa-heeee-chay* song of the Savannah Sparrow can, at a distance, sound a lot like the "hot metal" hiss of Nelson's Sharp-tailed Sparrow. Both songs can carry surprisingly far if the wind is light. Savannah Sparrows often vocalize just past the bridge on the right.

Looking down the Eastern Trail

Sharp-tailed sparrow vocalizations can often be heard from the northwest side of the marsh at and beyond the spot where the Nonesuch River arcs off to the north and the first pans appear next to the trail on the right. I like to bring a scope when searching for sharp-tails along here, since teed-up birds might not be close enough at hand to ID the individuals to species or ascribe a preponderant parentage to one of the numerous hybrids.

After walking about a half-mile on the Eastern Trail — about half the distance to the high island — you'll begin to see small salt pans close to the trail on your right. Sharp-tailed sparrows are more plentiful, and you may begin to encounter peeps and other shorebirds. As you continue walking about another quarter-mile, the pans get bigger and more numerous. Out here your chances of spotting White-rumped, Pectoral, and Stilt sandpipers, Dunlin, both dowitchers (with Short-billed being much more common), Whimbrel, and both yellowlegs increase. Also present here may be Wilson's Phalarope, Baird's and Western sandpipers, and rarer species like Ruff. A Seaside Sparrow was seen and heard a number of times in this vicinity in June and July 2008.

The shorebirding out here among the largest pans can be terrific, especially at higher tide levels when the birds feeding on the mudflats at Pine Point Narrows move into the marsh. Keep scoping the ever-shifting flocks, and watch as birds move in and out of view behind vegetation — and one another. You can easily spend an hour or two out here communing with your shorebird friends.

But don't forget to periodically scan the distant marsh. Herons, egrets, and ibis often congregate out toward the far high island off to the southeast, or in the large, isolated pan just before the cattail marsh on the northwest side of the trail. This latter spot can be a great place to study Little Blue Herons: juveniles, adults, and piebald "tweeners."

Likewise, don't neglect those cattails adjacent to the high island. In particular, they constitute probably the most reliable spot in Scarborough Marsh for Virginia Rail. These endearing birds are frequently heard vocalizing and sometimes seen beside or even right on the trail. American and Least bittern are also possible here, though Marsh Wren and Swamp Sparrow are considerably more likely.

Bushwhackin' the Pans

For me, the highlight of the birding year in Scarborough Marsh is trekking out into the salt pans off the Eastern Trail to view shorebirds in late summer and early fall. The diversity and sheer numbers of birds don't really compare with hot spots farther south, like Parker River National Wildlife Refuge or South Beach on Cape Cod. What makes this ramble worthwhile is the deeper intimacy you can feel with the birds out here, almost as if you're part of their world.

Depending on rainfall and tidal activity, this area can range from extremely boggy and wet to too dry to be particularly productive. Anytime you walk into a salt marsh you risk being covered with mud up to your eyepieces, being consumed by biting insects, and losing your footwear to the sucking mire. One misstep is all it takes to send you home reeking. Do not attempt this slog without rubber boots and a sincere willingness to accept the risks.

To walk out through the pans you first need to scramble down the embankment. Do this at a point just past the small red oak tree on the right, immediately beyond where you can see the remains of old wooden cribs sinking into the marsh next to the trail. Adjacent to the southeast side of the first large pan, look carefully, and you'll spot the ancient, collapsed remains of a derelict dike wandering off perpendicular to the rail trail. This is the closest thing to firm ground you'll find, and if you tread carefully and have sustained good luck you can follow it out past these large pans and eventually around to the north along the east side of the high island.

Move slowly and reverently to avoid flushing the birds, which may be very close by. As you see shrubby, higher ground ahead, be alert for Green-winged Teal and other waterfowl and waders in addition to shorebirds. Good luck — and don't say I didn't warn you if you're later mistaken for Swamp Thang's stunt double.

By the way: a walk out here in winter might yield Snow Bunting, Lapland Longspur, Horned Lark, Northern Harrier, Rough-legged Hawk, Northern Shrike, and Iceland or Glaucous gulls. The mosquitoes will certainly be fewer, too, but the wind can carry a startling chill after traveling over all that open ground.

Pelreco

On the right 2.9 miles down Pine Point Road from the intersection with Route 1 is Snow Canning Road, the entrance to the famous Pelreco area, named for the primary business that operates here now. Park well out of the way (which means very possibly parking on mud), and please bear fully in mind that this is private property that could be closed to birders anytime.

From this funky but highly productive vantage, you can scan a chunk of marsh that is elevated slightly above the tide, so shorebirds might be found roosting and feeding here at any point in the tide cycle. Wading birds and waterfowl also frequent this area, including all the snazzy ducks mentioned above. Tree, Barn, Cliff, and sometimes Bank swallows are often present in season. This is also an outstanding spot from which to get a good look at a sharp-tailed sparrow. Look and listen also for Marsh Wrens, and scan the distant snags for raptors.


Pelreco views

Be patient when birding Pelreco. Sometimes it might seem like the joint is deserted when you show up, but gradually more and more birds seem to appear. To see the pans from a different vantage, you can drive down Snow Canning Road past the front of the buildings and around to the back.

Almost directly across Pine Point Road from the Pelreco zone are the Nestling Duck Gift Shop and the Clambake Seafood Restaurant. I have never personally set foot in either establishment but have frequently parked my vehicle between the two buildings and stuck my snout and optics into the marsh here. Despite its somewhat scruffy aspect, this little spot is among the best birding vantages in the marsh, and the local birders swear by it. Good birds seen here just in the past year or two include Snowy Owl, Yellow-crowned Night-Heron, Lesser Black-backed Gull, and Blue-winged Teal. This is also an outstanding spot from which to locate and get good looks at sharp-tailed sparrows, especially Saltmarsh-type birds. (Note that I am careful to say "type" because Scarborough Marsh is the epicenter of hybridization among the two sharp-tailed sparrow species; the majority of birds show some characters of both species in the hand.)

Pine Point Narrows and the Scarborough Town Landing

Pine Point Narrows is a sheltered area of shallow water and strong currents where the Scarborough River enters Saco Bay. You can find a good mix of waterbirds here anytime, while the sizeable expanse of sand and mud exposed at lower tide levels makes this one of the best shorebirding spots in Maine. Plus there's ample paved parking and easy, stroll-up access to a number of scoping vantages. There's even a public restroom in season. In the warmer months get here early, before clamming and boating activity stirs up the birds.

To get here, turn left at the stop sign at the end of Pine Point Road (3.1 miles from the intersection with Route 1) where East Grand Avenue becomes Jones Creek Road. Keeping the Scarborough River on your left, proceed to the end of the road and turn left onto Avenue 6 (or Avenue 5 or 4 or 3 — it makes little difference). At the stop sign turn left onto King Street and, as the sign says, it's 0.2 of a mile to the Scarborough Town Landing.

Birding Pine Point

During their southbound migration a diverse mix of shorebirds is possible out on the flats. An ideal time to start birding the area is two to three hours after high tide, when the falling tide begins to expose "recharged" mud and sand, and the birds are concentrated moderately close to the landing. You might spot both yellowlegs, Semipalmated and Least sandpipers, Sanderling, Dunlin, Black-bellied and Semipalmated plovers, Killdeer, Willet, Red Knot, Ruddy Turnstone, Whimbrel, American Oystercatcher, and others. Hudsonian Godwit and American Golden-Plover are regular in fall, and Marbled Godwit has been pretty much annual in recent years. Be sure to check not only the flats directly off the boat ramp, but also the area to the left of the boat launch. This latter spot can afford close looks at the birds; you can turn up some of the less common peeps here.

While you're at it, scan the river mouth for Common, Roseate, Arctic, and Least terns. You might even glimpse a Piping Plover across the channel on Ferry Beach. Forster's and Black terns are also seen here occasionally in late summer. Bonaparte's Gulls are common in spring and from late summer into fall; Laughing Gull is uncommon but regular in summer and early fall and Little and Common Black-headed gulls are seen occasionally in the company of the Bonies. Near dusk and dawn, the sight of herons and egrets commuting from their roosts on Stratton Island completes the idyllic scene.

Pine Point Narrows is also a great birding spot in late fall, winter, and on into spring. Scan the narrows for Common and Red-throated loons, Horned and Red-necked grebes, Great Cormorant, Common Eider, Common Goldeneye, Bufflehead, Long-tailed Duck, Red-breasted Merganser, all three scoters, and possibly Hooded Merganser and either scaup. In early winter, the dunes behind the beach might harbor an "Ipswich" Savannah Sparrow in addition to other beach-loving visitors like American Pipit, Horned Lark, Lapland Longspur, and especially Snow Bunting.

Departing, it's easier to follow King Street all the way back out to Pine Point Road. Be sure to stop between Avenue 4 and Avenue 3 to check the feeders at the home of veteran Scarborough Marsh birder and neighborhood "fixture" Gloria Carson.

Depending on time of year, time of day, and other factors, a looming question might arise as you drive back up Pine Point Road toward Route 1: which clam shack to patronize for fried seafood? It's a toss-up between Ken's and Bayley's in my experience, and few of my birding friends have a strong preference, either.

Other nearby spots of interest

If you have time, here briefly are a few among many possible suggestions for other spots in Scarborough Marsh to check.

Libby Road area

This northwestern quadrant of the marsh may afford good looks at roosting herons and egrets, including Tricolored Heron, in dead trees along the edge of the marsh. This is also among the more likely parts of the marsh for Seaside Sparrow.

Access is from Southgate Road, off Route 1 at the entrance to the Scarborough Industrial Park. The Tractor Supply Company building makes a good landmark. At the end of Southgate Road turn right onto Manson Libby Road. You can glimpse the marsh and adjacent uplands on your right. After 0.3 of a mile bear right to remain on Manson Libby Road when Washington Avenue veers left. Immediately past this point, you'll see a dirt track on the right, which ends at an MDIFW sign beside a disused outbuilding. The trail, little used and wildly grown up in grass by late spring, has a cable across it. Walk through a stand of White Pines for about 500 yards to access the marsh proper. Tall boots, insect repellant, and some hefty anti-tick mojo are all useful back in here.

Seavey Landing

On the left two miles from the intersection of Pine Point Road and Route 1 (and flanked by the Congregational Church) is Seavey Landing Road. This quiet, residential street dead-ends at a small parking area and small craft put-in on the Scarborough River, affording views of the marsh to the east and south. This can be a fun place to get close-up views of Short-billed Dowitchers, peeps, and plovers in late summer when they might be disturbed in busier spots. Be sure to check the upland adjacent to the parking area for Little Blue Heron and Whimbrel.

Scarborough River Wildlife Sanctuary (aka Scarborough River Park)

The entrance to this lovely sanctuary, managed by the Town of Scarborough, is on the right 1.8 miles down Pine Point Road from the intersection with Route 1. This area is worth checking in any season and makes for a nice walk. It comprises fifty-six acres of upland White Pine woods and old fields sloping down to the Scarborough River estuary and two spring-fed ponds. Barred Owl is quite possible here in late winter and early spring. For information and a trail map see <http://www.scarboroughmaine.com/sos/index.html>.

Getting to Scarborough Marsh

From the Boston area or north of Portland take I-95 to Exit 42 (Scarborough). Go straight through the toll plaza onto Haggis Highway toward Route 1-9. At the intersection with Route 1-9 turn right to access the points described in this article. You'll soon see the sweep of the marsh opening up on your left as you drive. Pine Point Road (Route 9) separates from Route 1 roughly one mile down on the left.

From the intersection of Haggis Highway and Route 1-9, turn left to get to Black Point Road and the northernmost parts of the marsh.

Scott Cronenweth *is a freelance writer, naturalist, and birding guide based in South Portland, Maine. A veteran Maine Audubon trip leader, Scott particularly enjoys mentoring new birders and kids. He has volunteered on several research projects in Scarborough Marsh and frequently helps visiting birders find their life Saltmarsh and Nelson's Sharp-tailed sparrows. He often leads the Wednesday morning birding walks sponsored by the Scarborough Marsh Audubon Center in summer. Scott is also a proud member of the Scarborough Marsh Audubon Center's Mighty Marsh Muckers Bird-a-thon team, which is always in the running for the coveted Golden Binoculars. Visit Scott's website at <http://www.naturalpathwalks.com>.*

LOOK QUICK! - SALTMARSH SHARPTAILED SPARROW BY DAVID LARSON

Whodunnit? Tracking Nest Outcomes in Coastal Birds

Becky Harris and Ellen Jedrey

The protection and recovery of populations of threatened and endangered coastal bird species is the top priority of Mass Audubon's Coastal Waterbird Program (CWP) <http://www.massaudubon.org/cwp>. At many of the approximately 100 nesting sites CWP monitors, productivity of Piping Plovers, American Oystercatchers, and Least Terns is low due to high levels of predation on eggs and chicks. Human activity has substantially influenced the density, species diversity, and impact of predators on our endangered and threatened coastal birds. Non-native predators — introductions from other continents or regions within North America — in aquatic and terrestrial ecosystems can be especially destructive to native wildlife. For example, striped skunks (extirpated from the Vineyard by the early 1900s) were reintroduced to Martha's Vineyard and are now one of the primary egg predators on that island. Other non-native species that can pose problems for beach-nesting birds include red fox, feral cats, and Norway rats.

[Editor's note: In the February, 2008, issue of National Geographic News *see "Rat Invasions Causing Seabird Decline Worldwide" by Scott Norris. The author writes: "Invasive rats on ocean islands are threatening the survival of many of the world's seabirds, according to a new report . . . . The global analysis found that non-native rats have been observed preying on roughly a quarter of all seabird species, often with disastrous consequences."]*

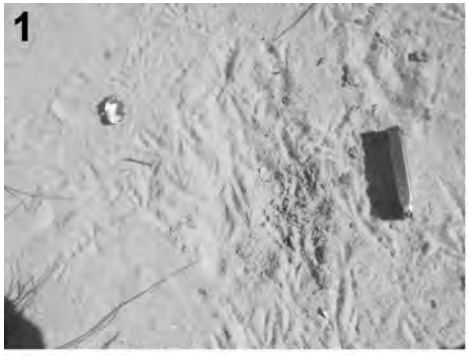
Populations of threatened coastal waterbirds (which nest on the ground in MA) have always been sensitive to predation, but aided by human disturbance, even native species of predators, which once may not have caused populations to crash, have the ability to do so now. Human activities and development patterns have influenced the distribution of other predatory species such as gulls and opossum. The availability of human refuse as a food source in coastal communities — dumpsters in parking lots, food debris on beaches — often attracts large numbers of small mammals like red fox, striped skunks, raccoons, and avian predators, including gulls and crows. Further, coastal development that involves "armoring" via jetties, revetments, and other hard structures has resulted in fewer available nesting sites for plovers, oystercatchers, and terns. Thus, when one beach becomes unproductive due to high predation pressure, the birds' adaptive strategy of shifting to a new site that predators haven't already found is no longer an option.

High levels of egg predation have resulted in CWP staff becoming "crime scene detectives"; we try to determine the outcome of every nest attempt by every pair of Piping Plovers we monitor and protect (over 250 pairs, each often with multiple nest attempts if earlier attempts fail). However, it is extremely challenging to determine what has happened to lost eggs, and even more difficult (or virtually impossible) to determine the fate of chicks that have disappeared. In some cases, if we can identify

predators at particular sites, we can implement appropriate management techniques at those sites in the future. Unfortunately, many of the non-lethal deterrents such as wire "exclosures" and electric fencing may produce only short-term benefits because predators often quickly learn to breach these structures as well as to recognize them as food sources. Some techniques also may have the unintended effects of increasing predation by one predator while decreasing predation by another. For example, small circles of fencing around nests can be successful in preventing small mammal predation, but they can increase avian predation by providing a "bulls-eye" target for species such as crows or Northern Harriers.

Important steps to reducing predation on threatened beach-nesting birds include: working with landowners to decrease sources of food and garbage on and near beaches, using fencing to close off access to possible denning areas for predatory mammals under decks and foundations, and removing sources of cover such as plastic buckets and boats from beaches and back dune areas. In fact, one of the CWP's long-time part-time seasonal staff, Luanne Johnson, is currently completing her PhD dissertation research on skunk ecology on Martha's Vineyard. See Luanne's website for more recommendations on how you can help conserve coastal birds by taking a few simple steps in your backyard: <http://www.antiochne.edu/es/phd/ljohnson.cfm>.

Below are some examples of predator tracks and other signs that we've encountered on the beach. Test your sleuthing skills!



See page 212 for interpretation of these vignettes.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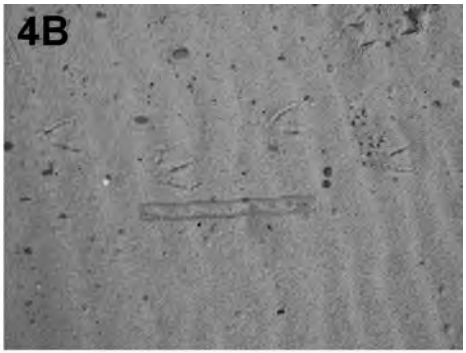
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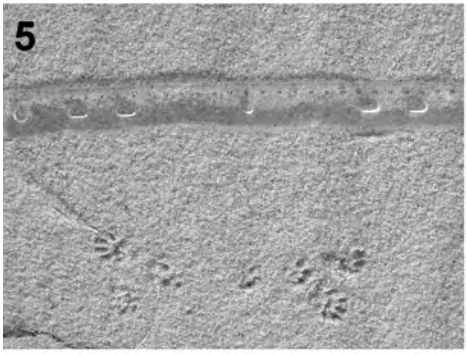
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Interpretation:

(1) American Crow tracks cover the beach after a predation event on Common Tern eggs at a colony on Gray's Beach, Yarmouth, in 2005. Note the scattering of yolk, which is typical of crow predation.

(2) Domestic or possibly feral cat tracks taken at Sesachacha Pond, Nantucket, after a major predation event at a Least Tern colony during the summer of 2007. Photograph by Chelsea Scudder.

(3) The remains of an adult female Piping Plover that was killed just prior to laying her first egg at Chapin Beach, Dennis during the 2005 field season. There is a visible X in the sand just above the wing to the right of the head; this is the zygodactyl footprint of the Great Horned Owl. Photograph by Chris Walz.

(4) Gull tracks on South Beach, Chatham, during 2004. Note how tracks can look very different depending on substrate. (A) It is likely, based on size compared to the field notebook, that these tracks were made by a Great Black-Backed Gull. (B) It is likely that these tracks, based on size compared to the ruler, were made by a Herring Gull.

(5) Long-tailed weasel tracks at South Beach, Chatham, 2005. We were able to photograph one of these animals with a hidden trip camera.

(6) Norway rat tracks photographed at Sesachacha Pond after a major predation event at a Least Tern colony by both Norway rats and feral cats during the summer of 2007. Photograph by Chelsea Scudder.

(7) In this photo a red fox sat and, we imagine, investigated the scene, prior to a massive fox predation event on the Least Tern colony at Town Neck, Sandwich, during the 2005 field season. If you look closely, Least Tern tracks (with webbing) and Piping Plover tracks (no webbing) are also present.

(8) River otter tracks at South Beach, Chatham, April 2004. While River Otters have not been documented thus far as egg predators within the Coastal Waterbird Program, it is an easily distinguished track. River otters on Cape Cod are known to use both ocean and freshwater environments, and we see them from time to time on the beaches.

(9) Skunk tracks on South Beach, Chatham, MA, taken during March 2004.

(10) Virginia opossum tracks, taken at an unknown beach location during the 2007 field season.

Becky Harris *is Director and* ***Ellen Jedrey*** *Assistant Director of Mass Audubon's Coastal Waterbird Program.* *The work done by CWP over the past twenty-one years is of global significance, protecting fifteen percent of the world's population of Atlantic Coast Piping Plovers. In 2007, twenty-five seasonal CWP staff and dozens of volunteers monitored, managed, and protected over 100 beaches. The total number of sites censused was 145, with ninety-three sites monitored almost daily. This effort revealed that 261 pairs of Piping Plovers now inhabit beaches that the CWP monitors, nearly half the state's population of over 540 pairs, up from a low of 126 pairs in 1987, which was the first year of the program. Piping Plover productivity was about 1.15 fledglings/pair, and plover density on beaches that CWP monitors was about three pairs/linear mile. For the second year in a row, South Beach, Chatham, was the site with the highest number of plover pairs — fifty pairs were counted during the census period in June. Dowses Beach in Osterville had a single nesting pair that fledged four chicks in early July — the first time a pair has successfully fledged chicks on this heavily used beach in seven years! CWP also monitored twenty pairs of American Oystercatchers with productivity of 0.7 fledglings/pair, and 1564 pairs of Least Terns at thirty-five colonies.*

Why Expect Clusters of Vagrants?

Richard R. Veit

In the winter of 2007-2008 we were confronted by multiple occurrences of several vagrant species to the northeast — Slaty-backed Gull, Townsend's Solitaire, and Ash-throated Flycatcher in particular. Clusters of vagrants like this are difficult to account for if one sees the occurrence of individual vagrants as independent events, such as would arise from random genetic or behavioral mistakes often postulated to account for vagrancy.

But the occurrences of individual vagrants are quite clearly *not* independent events. They are related to one another because vagrancy is a property of populations, not of individual birds. Vagrancy is related to population growth (Veit 2001) because larger numbers of young birds mean more potential for dispersal. It is also related, at least theoretically, to abundance or quality of resources (Baker 1978). I will use data on vagrants to eastern North America to support this claim.

Background

Animals (far more than just birds) are almost universally characterized by "long-tailed" distributions of dispersal distances like this:

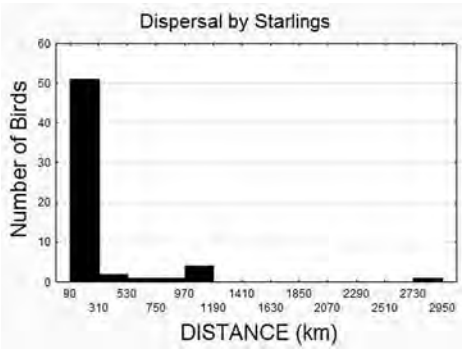

Figure 1. Frequency distribution of dispersal distances. These data are band returns for starlings (data from Cabe 1999). In virtually all animals, these distributions have "long tails," meaning that there is a small proportion of the population that disperses much farther than average, and also, farther than what would be predicted by random drift.

This means that a small proportion of the population disperses very much farther than the rest. That is, all populations have vagrants. The scaling of the actual distance travelled varies tremendously; nevertheless, even for slow or sedentary animals there exists a small proportion who travel much farther than average. This simple observation means that as a population increases, there will be more vagrants, since there will be a larger number of individuals in the "tail" of the distribution (imagine the entire curve in Figure 1 lifted up).

In addition, there is evidence that the probability of dispersing, and the distance dispersed, varies with "stress" level. Here, "stress" could be thought of as the ratio of population density to resource availability (Baker 1978). If there are lots of birds and few resources, then the probability of dispersing and distance dispersed increases. This effect, if added to a population increase, would further increase the number of vagrants (or further exaggerate the long tail of Figure 1). There is evidence this is true from studies of White-crowned Sparrows and other birds (e.g. Breuner and Hahn 2003). Furthermore,

there is now evidence that dispersal distances actually evolve to become larger as a population expands (Duckworth 2008 Phillips et al. 2008). More about this below.

It is often argued that long-distance dispersal cannot be selected for if the vagrants do not accomplish reproduction. This is not true. First, the exploratory behavior discussed above and in Baker (1978) is not necessarily genetically variable; all birds could have such capacity, and the exploratory behavior itself is "turned on" by environmental conditions. Second, exploration or vagrancy only has to be selected for in a long term average; vagrancy only has to be a slightly better option than staying at home, and many birds that stay at home do not reproduce at all (Perrins et al. 1991, Newton 1998). Indeed there is little (or no) evidence that vagrants suffer higher mortality than nonvagrants, and it is altogether possible that they are, in fact, in better physical shape than nonvagrants. Indeed, evidence is accumulating that birds that disperse are actually in better condition than those that stay behind (Barbraud et al. 2003).

It may seem odd that vagrants should aggregate at vast distances away from the area where any reproduction is taking place. For example, it is quite clear that no Slaty-backed Gulls are nesting closer to Massachusetts than eastern Siberia, or possibly western Alaska. But it is broadly characteristic of dispersal patterns in birds and other animals that histograms of distances dispersed (Figure 1) have very long "tails." This basically means that once a bird starts moving in an exploratory fashion, it keeps going. For example, southern birds like Prothonotary Warblers are not dramatically rarer in Nova Scotia than they are in New York. Vagrants do accumulate at boundaries, especially coastlines, and these two observations go some way in explaining numbers of all species discovered at the Atlantic Coast.

Exploration

The life of a bird, indeed of most vertebrates, perhaps most animals, is a process of exploration. Exploration begins with learning the vicinity of the nest, perhaps the parents' territory, and eventually, in what we call "migration," the exploration that extends to wintering ground and then to a new nest site. In many ways this statement seems like common sense, yet we as birders seem bent on disproving it when we assume that every vagrant has made a mistake or been drifted off course by the wind. To me, it is much easier to understand the spectacular range extensions and incidences of vagrancy presented in North American Birds (NAB) when one accepts that birds continually *explore*.

This notion is not new; indeed, the idea of exploratory behavior leading to migration and dispersal has been spelled out in exhaustive detail in a 1200-page book entitled *The Evolutionary Ecology of Animal Migration* published in 1978 by Robin Baker. The thesis of the book is that exploratory behavior hinges on a relationship between resource abundance and density of conspecifics; if you, as a White-winged Dove, are surrounded by a large number of White-winged Doves and low resource levels, you are more likely to initiate exploration. Birds that explore, of course, have to take advantage of appropriate winds to take them in the direction that they want to go, and for this reason there are correlations between wind direction and vagrancy.

But the weather is not the cause of the vagrancy, the cause of vagrancy is the behavior of the birds themselves.

In order for southerly birds, for example, to expand their range northward in response to climate change, it has to be the case that these birds are constantly exploring the limits of their range in order to assess whether such expansion is possible. As birders, we know this is exactly what happens — just follow the northward progress of White-winged Doves, Mississippi Kites and Black-bellied Whistling Ducks in the pages of NAB over the last few years to persuade yourself that this is so.

Certainly, birds exploit favorable winds and sometimes get displaced by storms, but the underlying process that we witness and describe as vagrancy is one of persistent, unrelenting exploration.

Some Examples

To illustrate the generality of long-distance dispersal in bird populations, I constructed graphs of the occurrence of Glossy Ibises and Ash-throated Flycatchers in eastern North America (Figures 2, 3). The similarity of these two trajectories is striking, especially the initial, episodic occurrence of single birds followed by a steadily increasing number of records, and, in the case of ibises, nesting. I suspect that most would agree that the colonization by Glossy Ibises of the Americas and their subsequent expansion in eastern North America is an instance of "natural" range expansion. At the same time, I expect most would categorize the occurrence of Ash-throated Flycatchers in eastern North America as something altogether different. I disagree, and argue that the two examples represent essentially the same process. The main difference is that ibises found suitable locations for breeding.

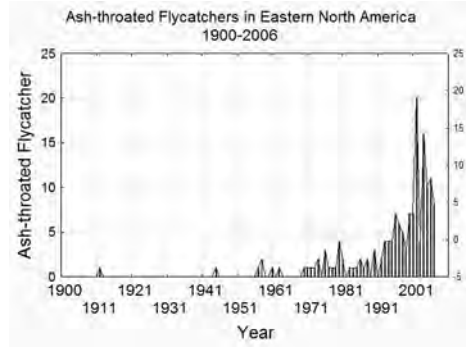

Figure 2. Occurrence of Ash-throated Flycatchers during fall in eastern coastal North America (Newfoundland to Florida) 1900-2006. Data from *North American Birds* and Murphy 1982.

For either Glossy Ibis or Ash-throated Flycatcher, the first occurrences in Massachusetts (or anywhere in eastern North America) were of single birds. A mechanistic model of the range expansion of House Finches in eastern North America (Veit and Lewis 1996) predicts exactly this: that the first arrivals from the population of an expanding species to a new area will be single birds. As the process of expansion continues, larger numbers of vagrants appear. (This is the nonindependence part; multiple Glossy Ibises in Massachusetts in the 1950s are not independent of one another; they are all appearing due to the expansion of the Glossy Ibis population).

For just about all the Ash-throated Flycatcher occurrences shown in Figure 2, it has been argued that the appearance of any one individual was the result of unusual

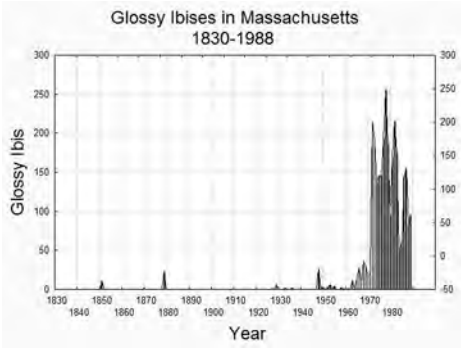

Figure 3. Occurrence of Glossy Ibises in Massachusetts, 1830-1988. Numbers are maxima in any one year. Data from Bailey (1955), Griscom and Snyder (1955) and *Bird Observer*.

weather patterns (southwesterly winds). In aggregate though, the increase in records over time renders this factor of secondary importance. A much more plausible explanation is that relatively large numbers of young Ash-throated Flycatchers are being produced (in fact they are; <http://www.mbr-pwrc.usgs.gov/bbs/htm03/trn2003/tr04540.htm>), and these young are exploring. That is, the pattern of occurrence of Ash-throated Flycatchers in the east is analogous to the pattern of occurrence of Glossy Ibises; both are elevated levels of long-distance dispersal related to population growth.

An interesting, and unanswered, question is whether increased occurrence of vagrants is simply the result of increased production of young or whether the behavior of those young must be changing as well. It is possible that, as a population expands, it changes evolutionarily in the direction of being more prone to dispersal. Individual birds at the advancing fringe of the population may be genetically more prone to disperse than those at the core of the range, and therefore may produce more dispersal-prone offspring. As this process reinforces itself over time, the entire population may become more likely to generate long-distance vagrants.

Recent research supports the intriguing possibility that dispersal behavior evolves as a population expands (Duckworth 2008, Phillips et al. 2008). This idea supposes that there is some heritable, genetic basis to dispersal tendency. If so, then individuals that disperse from the core to the edge of the range are likely to be genetically more "dispersal prone" than those at the core of the range. In the next generation, individuals at the range edge are likely to travel far, because they are genetically predisposed to do this. Over time, long-distance dispersal is selected for. That this process occurs has been demonstrated for the expansion of cane toads (*Bufo marinus*) through Australia.

Back to Massachusetts Birds

What of Slaty-backed Gulls and Townsend's Solitaires? For solitaires, BBS data does show a population increase at the southeastern boundary of the range (http://www.mbr-pwrc.usgs.gov/bbs/htm03/trn2003/tr07540.htm). For Slaty-backed Gulls there are no clear data of range expansion, but in fact the data may not be available to say either way. For Ash-throated Flycatchers and Townsend's Solitaires, we are only able to detect population expansion because of the BBS data, and no such data are available for Slaty-backed Gulls. Nevertheless, virtually all species of large gulls have expanded during the twentieth century, and these expansions have been accompanied by long distance vagrancy worldwide (Howell and Dunn 2007, Olsen

and Larsson 2004), and records of Slaty-backed Gulls in North America have undeniably increased over the past ten to twenty years.

In sum, I expect that Slaty-backed Gulls are at the phase of population expansion where Glossy Ibises were in the 1940s or 1950s, and where Ash-throated Flycatchers were in the 1960s or 1970s (and I am pretty sure that the birding community at those times would have been equally incredulous about the appearances of multiple ibises or flycatchers then as we are of multiple Slaty-backed Gulls now). It is quite possible that weather events (storms, unusually broadscale tailwinds) influenced some of the records included in the graphs above. But there is no way that weather patterns can account for the surging increase in occurrence. The explanation for this increase has to lie in population growth coupled with exploration.

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Richard Veit *is a professor of biology at City University of New York. His primary research is with foraging and movement behavior of seabirds and with dispersal of birds in general. He lives on Staten Island, NY, and on Nantucket, MA.*

News from the U. S. Fish and Wildlife Service:

The preliminary estimate of total ducks from the 2008 Waterfowl Breeding Population and Habitat Survey was just over 37 million, nine percent less than last year's estimate, but still 11 percent greater than the 1955-2007 average. In the U.S. and Canadian prairies, population estimates of many species declined, while populations increased in the boreal forest to the north, likely reflecting in part those birds that overflew the prairies because of drier habitat conditions there.

The Waterfowl Breeding Population and Habitat Survey samples two million square miles across the north-central and northeastern United States, south-central, eastern, and northern Canada, and Alaska. The survey estimates the number of ducks on the continent's most important nesting grounds.

Overall, habitat conditions for breeding waterfowl in 2008 were generally similar to or somewhat worse than conditions in 2007. The total pond estimate was 4.4 million ponds, 37 percent below last year's estimate and 10 percent below the long-term average.

Highlights from the survey include the following population estimates:

Mallard: 7.7 million birds, similar to last year and the long-term average.
Blue-winged Teal: 6.6 million birds, similar to last year and 45 percent above the long-term average.
Green-winged Teal: 3.0 million, similar to last year and 57 percent above the long-term average.
Gadwall: 2.7 million, 19 percent below last year and 56 percent above the long-term average.
Redhead: 1.1 million, similar to last year and 66 percent above the long-term average.
Canvasback: 489,000, 44 percent below last year and 14 percent below the long-term average.
Northern Shoveler: 3.5 million, 23 percent below last year and 56 percent above the long-term average.
Scaup (Lesser and Greater combined): 3.7 million, similar to last year and 27 percent below the long-term average.
Northern Pintail: 2.6 million estimate, 22 percent below last year and 36 percent below the 1955-2007 average.

Population estimates for American Black Ducks, Ring-necked Ducks, American Wigeon, Bufflehead, goldeneyes, and mergansers surveyed in eastern North America were similar to last year as well as their 1990-2007 averages.

This preliminary report does not include estimates from surveys conducted by State or Provincial agencies. The entire 2008 Trends in Duck Breeding Populations report can be downloaded from the Service's Web site at <http://www.fws.gov/migratorybirds/>.

Aggressive Behavior and Territoriality Among Wintering Mixed-species Sandpiper Foraging Flocks on the Florida Keys

William E. Davis, Jr.

Mixed species shorebird flocks forage on beaches in winter along the Atlantic and Gulf coasts of the southern United States. The beaches of the Florida Keys commonly have concentrations of beach wrack that harbor vast numbers of amphipods as well as extensive tidal mud flats with a broad spectrum of invertebrates. Sometimes the shorebirds within mixed-species flocks get along peaceably with each other, sometimes they do not.

On the morning of March 22, 2006 I was watching a flock of Sanderlings (*Calidris alba*) foraging in the beach wrack and along the water's edge on the Atlantic side of Bahia Honda State Park in the Florida Keys. I noticed that one Sanderling was repeatedly attacking other Sanderlings. I began a fifteen-minute count of aggressive interaction and counted forty-three attacks in which the aggressor approached another Sanderling running with body held close to the ground, head low, and wings slightly drooped. Most of the attacks were by a single Sanderling that appeared to be defending a feeding area of about eighteen feet long along the water's edge. Five additional two-minute counts produced eighteen additional attacks. I couldn't determine if specific individuals were involved in any or all of the attacks.

I returned to the same area on February 17, 2008, and observed a mixed-species flock of foraging shorebirds. During an observation of about an hour I made counts of each species, with maxima of sixty-eight Ruddy Turnstones (*Arenaria interpres*), sixty-two Least Sandpipers (*Calidris minutilla*), and twenty-seven Sanderlings. The flock foraged in beach wrack six to nine feet from the water's edge, capturing mostly sand fleas (amphipods) that were abundant in the wrack. The flock was cohesive, occupying a stretch of wrack about thirty feet in length. Individual birds, and sometimes a dozen or so, occasionally flew to the water's edge to forage or loaf. I was standing in shallow water looking into the shore about forty-five feet from the wrack line. I noticed that there were aggressive interactions occurring between individual birds, mostly Ruddy Turnstones, and began making slow sweeps with my binoculars and counting aggressive interactions. Between 11:35 and 11:44 a.m., when the flock was dispersed by a person walking the beach, I recorded four interactions between Ruddy Turnstones. The flock reassembled quickly, and over the next nineteen minutes I recorded forty-six aggressive interactions, all between Ruddy Turnstones, except for two in which a Ruddy Turnstone attacked a Sanderling. In subsequent observations I recorded an additional seventeen attacks. The total time of observation was forty minutes, and the total aggressive interactions was sixty-seven, all but two between Ruddy Turnstones.

About two-thirds of the attacks were charges in which one bird would lower its head and charge a second bird, causing that bird to run or more typically hop into the air fluttering its wings. The remaining third of the encounters consisted of chases or face-to-face confrontations in which the birds stood erect, bumping breasts, with wings extended, and bill-jabbed at each other. Some of the chases were protracted. The chased bird characteristically ran with occasional wing-fluttering. Several chases exceeded three meters in length, and one involved two 180-degree turns by both birds. The longest chase was about twenty feet in length and ended in a face-to-face confrontation.

I have spent many hours watching the mixed-species foraging flocks of sandpipers on the Florida Keys and have seen no aggressive interactions, either intra- or inter-specific, involving Short-billed Dowitchers (*Limnodromus griseus*) or Least Sandpipers. As detailed above I have witnessed intra-specific aggressive behavior in Sanderlings and both intra- and inter-specific aggressive interactions in Ruddy Turnstones. I have also watched mixed species foraging flocks on the Keys in which high densities of Ruddy Turnstones and Sanderlings were in close proximity and Sanderlings were closely following Ruddy Turnstones and using them as "beaters." During these observations I did not see any aggressive interactions (Davis 2003).

So why were Ruddy Turnstones and Sanderlings aggressive during some observations and not at others?

The literature describes many aggressive interactions among shorebirds on wintering grounds. Ruddy Turnstones can be aggressive and territorial in the non-breeding season (Myers et al. 1979a) and, among several factors, their level of aggression may be influenced by prey abundance (Fleisher 1983, Recher and Recher 1969). Adults dominate juveniles in wintering foraging flocks (Groves 1978). Short-billed Dowitchers are normally non-aggressive but have been observed in migration being aggressive to other dowitchers at patchily-distributed food resources (Mallory and Schneider 1979). They have also been the target of aggression by Ruddy Turnstone (McNair 1991). Up to 25 percent of Sanderlings, particularly in fall and early winter, defend feeding territories, and patchiness of food may influence levels of aggression (Pitelka et al. 1980). Non-territoriality and reduction in territory size correlate positively with food density (Myers et al. 1979b). Surprisingly, Least Sandpipers have been reported to commonly aggressively interact with a variety of shorebirds including Sanderlings, and aggressive behavior is most common when food resources are restricted or patchy (Recher and Recher 1969).

The literature thus suggests that aggression is influenced by either (1) sparseness of prey, or (2) patchy distribution of prey — the more sparse, the more aggressive, the more patchy, the more aggressive. Thus aggression seems to be adaptive when prey is sparse or patchy in distribution. Fighting is energetically expensive, and if prey are superabundant, it would be energetically more conservative to simply forage for prey rather than try and maintain a feeding territory. In those instances when I did not observe aggression, for example when Sanderlings were exploiting Ruddy Turnstones as beaters, prey was indeed superabundant — turnstones were flipping over stacks of

beach wrack and literally clouds of amphipods were exposed for easy consumption. The one hyper-aggressive Sanderling that I observed in 2006 was foraging and defending a territory at the water's edge, away from the beach wrack and its resources. In my observations, if prey was easily available, levels of aggression were low. The higher level of aggression I observed in Sanderlings in 2006 compared to 2008 may have been influenced by seasonal effects. The 2006 observations were nearly a month later than the 2008 observations, and hormonal effect related to the onset of the breeding season may have prompted higher levels of aggression.

The presence of people on beaches influences shorebird foraging behavior (Burger and Gochfeld 1991) and it has been suggested (Myers 1984, Myers et al. 1979a) that the presence of resident predators may serve to lessen territorial behavior and aggression in wintering shorebirds, with territorial birds joining flocks and tolerating the resulting reduced spacing. Although I saw no evidence of predators in the wintering shorebird flocks on the Florida Keys, there were frequent interruptions of feeding by humans walking along the beach. It may be that this frequent interruption produced a response similar to that of the presence of predators.

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William E. Davis, Jr. *(Ted) is Professor Emeritus at Boston University, where he taught biology and physical science for thirty-eight years. He is an ornithologist with research interests in*

foraging ecology and the history of ornithology, specializing in Australian birds. He is past president of the Nuttall Ornithological Club, the Association of Field Ornithologists, the Wilson Ornithological Society, and Bird Observer of Eastern Massachusetts, Inc. An artist as well, Ted is Department Head for cover art for Bird Observer. *He thanks John Kricher for helpful comments on an earlier draft of the manuscript.*

News from the U. S. Fish and Wildlife Service

More than 14.5 million ducks were harvested in the United States during the 2007-2008 waterfowl hunting season, according to preliminary estimates by the U.S. Fish and Wildlife Service. This is up from 13.8 million ducks harvested the previous season. Hunters harvested almost 3.7 million geese, similar to the 2006-7 estimate. These figures come from a report called Migratory bird hunting activity and harvest during the 2007 and 2008 hunting seasons. The Service generates the estimates contained in this report based on surveys of selected waterfowl hunters through the cooperative State-Federal Harvest Information Program.

Almost one million duck hunters spent nearly seven million days in the field, up slightly from the previous season's nearly 6.8 million days. More than 700,000 hunters spent approximately four million days hunting geese, which is similar to the 2006-2007 season.

In the Atlantic Flyway, approximately 1.7 million ducks were harvested during the 2007-2008 season, similar to the prior season. The 936,000 geese harvested in 2007 represent an increase from the 714,000 harvested the previous season.

As has been in the past, Mallards were the most prevalent duck bagged by hunters in the United States, with approximately 4.9 million birds harvested. Other dominant species this year were Green-winged Teal, with almost two million birds harvested, and Gadwall, with nearly 1.5 million harvested. Wood Ducks and Blue-wing/Cinnamon teal rounded out the top five hunted waterfowl, with more than one million of each species harvested during the 2007-8 season.

Canada Geese were the most prevalent geese harvested, with almost 2.7 million birds taken. Snow Geese were the second most popular goose species harvested, with an estimated 560,000 taken nationally.

The Service compiles this report each year to estimate waterfowl hunting activity, success, and harvest by species. These surveys are used by the Service and State wildlife agencies, in part, to develop estimates of the number of all migratory birds harvested throughout the country, as well as to establish season lengths and bag limits designed to maintain healthy sustainable waterfowl populations.

The report is available on the Service's Web site at <http://migratorybirds.fws.gov/reports/reports.html> or at <http://www.flyways.us>.

[*Ed. note: see page 218 for waterfowl population estimates*]

Observations on the Feeding Behavior of Bohemian Waxwings

Jim Berry

The winter of 2007–2008 was the greatest in history for Bohemian Waxwings, *Bombycilla garrulus*, in Essex County, Massachusetts, and in fact for all of southern New England generally, with the possible exception of the winter of 1993–1994. The birds are rare vagrants this far south and absent most winters, but hundreds were discovered on both Cape Ann and Cape Cod during Christmas Bird Counts the weekend just before Christmas, with lesser numbers found elsewhere in eastern Massachusetts. Counts dropped off dramatically as the winter wore on but bounced back in late March and early April, probably as the result of birds that had passed through earlier returning through Massachusetts and southern New Hampshire on their way back north. The spring event was a bit more extended, with birds remaining in many good feeding areas longer than they had in December and providing abundant viewing opportunities. John Kricher covered the explosion of Bohemians and other boreal irruptive species in the April issue of *Bird Observer*, including some historical background (Kricher 2008). In this article I explore some aspects of the birds' feeding behavior and raise some related questions on evolutionary processes.

One of the many places visited by Bohemian Waxwings this spring was a busy industrial park in Newburyport in the northeastern part of Essex County. The site has been developed for only about thirty years and consists of one-story commercial and light industrial buildings with large lawns, decorative plantings, and lots of traffic. Along the streets are crab apples of a variety with small fruits the size of grapes, attached by stems up to two inches long. The birds, discovered there the first week of April, were undeterred by the traffic and noise; birders reported them daily for the next week or so. On April 8 I watched them in two crab apples along Malcolm Hoyt Drive at point-blank range from my car during the noon hour, when walkers and joggers augmented the traffic. Big trucks scared them away from the crab apples for a few moments, but they always came right back. I took a few photos and then watched them for over an hour as they flew from elevated perches in large, bare trees to the small, heavily fruited trees to eat the berries, which seems the appropriate word for these berry-sized fruits.

Several things captured my attention about their feeding habits. One is that they swallowed the berries whole. That is well known in waxwings, though Tom Young (pers. comm.) observed some Bohemians in southern New Hampshire this winter that bit into larger crab apples; he sent me a photo of one and noted that "the bird's bill has apple mush all over it" in the manner of Pine Grosbeaks (*Pinicola enucleator*). The crab apples in Newburyport were little, but big enough to be a challenge for the Bohemians to swallow. Cedar Waxwings (*Bombycilla cedrorum*), being smaller, might not have been able to do it, which might have explained their absence from this flock. The berries were varied in size, but the waxwings went after all of them and often had

Bohemian Waxwings swallowing fallen crab apples at the location described by the author. Photograph by David Larson.

to struggle to get them down. Of the instances I observed, the longest time it took a bird to swallow one was almost a minute. Bent (1950) cited a similar instance of Bohemians eating *Crataegus* (hawthorn) berries in Quebec in 1920, when "it seemed as if a bird made five or six unsuccessful attempts to swallow a fruit for every one successful attempt."

A big part of the process was separating the berry from the tree. Many fruits had fallen to the ground, but the vast majority of the feeding took place in the trees, where the birds had to work hard to pull the berries off. I was amazed at how much effort they had to put into this; for every successful tug there were probably ten or more unsuccessful tugs. Often they simply gave up and moved on to the next group of berries.

When the waxwings pulled off a fruit, they usually managed to separate it from the stem rather than the stem from the twig, so that all that remained was to swallow. But sometimes they pulled it off with the stem still attached. The berries they picked up from the ground also still had stems. It was clear that they don't like the stems, because they went to great pains to get them off. Their basic method was to hold the berry in the bill and shake it. When that didn't work (which of course it never did), they would proceed to swipe the stem back and forth against a branch or the grass, which didn't work either. But that didn't keep them from doing it for minutes on end, in some cases up to five minutes! This was not an efficient process!

So what happened? In most of the episodes that I watched from start to finish, the birds eventually gave up, dropped the berry, and went on to the next one. Some had apparently learned the futility of all that work better than others, which was especially true of the birds on the ground; many of them would hop around picking up a series of berries and immediately discard any with a stem. Others tried the swiping method on the grass without success. I did see at least three instances of birds finally swallowing the berry with the stem still attached, the stem going down last, but that was the exception. They seemed to do everything they could to avoid having to eat the stem.

Other birders made similar observations this winter. Doug Chickering reported that Bohemian Waxwings he watched at Turners Falls in western Massachusetts a couple weeks earlier had been more decisive about eating or discarding similar crab apples (pers. comm.). "If the stem stayed on the tree then the bird would gobble down the fruit; if the stem came off with the apple, the waxwing would drop it without hesitation. Apples with stems were completely abandoned and none of the waxwings bothered to try further to remove the stems." That is a remarkable difference between two groups of Bohemians feeding on apparently very similarly structured crab apples.

Steve and Jane Mirick, on the other hand, made observations similar to mine as they watched a group of Bohemians in Bradford around the same time. "Jane noticed it first that the birds were having problems with the stems. Either the fruit would not come off the tree or the fruit came off with the stem and the bird had to try to remove it. It seemed a lot of effort was going into the feeding behavior with relatively little success. Perhaps, this late in the season, the secondary fruit trees with more difficult fruit are all that is left."

Erik Nielsen had a slightly different experience from mine, in that he saw some of the Newburyport Bohemians succeed in removing stems, though with what frequency he did not say. "Yes, it seemed that they would try a number of tricks to remove the stems. Sometimes they succeeded, but other times they resigned to swallow the fruit with the stem."

Surprisingly, these behaviors are barely addressed in the *Birds of North America* (BNA) accounts for either waxwing species. Since those accounts are based on literature searches, the implication is that the behaviors have not been studied, at least not in the published literature. Moreover, the account for the Cedar Waxwing (Witmer et al. 1997) makes the astonishing statement that the species "rarely ventures to ground (to bathe or feed on emergent insects)." The "rare" part of that statement is simply not true, and foraging on the ground for fruit is not even mentioned. I have personally observed both species of waxwings multiple times feeding on the ground under fruiting trees as described in this note. It is clearly a frequent behavior, even if done to varying extents by different individuals. To his credit, the same author (Witmer 2002) states in the Bohemian Waxwing account that they sometimes feed on the ground for fallen fruit, but no information is given on frequency, effectiveness, and so on. The stem issue is not raised in either BNA species account despite lengthy descriptions of the many types of fruits eaten and the body chemistry involved in

digesting them. The species accounts in Bent (1950) cover the phenomenon of picking up fruits from the ground but do not address the problem of removing stems.

These observations invite another interesting question. Why did only a minority of the birds forage on the ground? (I cannot guarantee that it was a minority, since the birds on the ground could have been different birds each time, but at any *one* time there were never more than a few on the ground compared to a couple dozen in the trees, whereas fruit was abundant in both places.) The same question has occurred to me with Cedar Waxwings, for which the same can be said because I have observed comparably small percentages of them feeding on the ground even when abundant fruits were thus available and would not have required the physical effort of pulling them off the twigs. The species accounts referenced in the previous paragraph do not delve into this question, either.

One possible explanation is that the birds are not adapted to foraging on the ground, as reflected by the fact that they hop rather than walk. This indicates, in evolutionary terms, that as arboreal birds they have not been feeding on the ground for as many generations or as regularly as birds that can walk or run, such as American Robins (*Turdus migratorius*). I have seen the same phenomenon with Cedar Waxwings on many occasions, when all locomotion was by hopping. If the ground-feeding behavior was to help those individuals survive better or it conferred a reproductive advantage, the tendency might be selected for and become more common. This in turn could lead to a gradual progression in locomotion from hopping to walking, as it has done with other ground-feeding birds. But there is no way to know whether this will come to pass. Perhaps the fruit on the ground is inferior in nutritional value, or the birds may be more subject to predation on the ground than in the tree. Factors like these could act against such an evolutionary tendency.

One author who thought about such evolutionary questions was Essex County's Charles W. Townsend, who considered the hopping vs. walking issue in a book called *Sand Dunes and Salt Marshes* (1913). The book's last chapter, "Bird Genealogy," deals with many avian phenomena and their possible origins and shows how Darwin's theories had made a deep impression on serious students of natural history within a few decades after they were published. He did not write about locomotion in relation to waxwings, but his comments apply directly to the many species of ground-feeding birds. "The tree dwellers naturally hop from branch to branch, and it is probable that the earliest birds were arboreal. When the tree-dwelling bird descends to the ground it naturally hops there also, but hopping is not a satisfactory method of progression for a ground feeder; it does not permit of cautious approach, and it is decidedly jarring. A walking gait, therefore, may be understood to indicate a long custom of feeding or dwelling on the ground. Although the flicker is frequently seen on the ground, the ground habit is probably but recently acquired, for it has not learned to walk, while the robin, for example, is able to run and does so much more often that he hops. Young robins show, however, their arboreal ancestry by hopping more than they run. Pipits, horned larks and Ipswich sparrows have so completely departed from arboreal habits, that they run easily and walk with grace."

The lesson in all this is that behavioral observations of birds sometimes reveal characteristics, activities, or other phenomena that have not been documented in the ornithological literature or are inadequately documented. There is always much more to learn about the lives of birds, and it is not that uncommon for birders to observe behaviors that have not heretofore been published. The recent Bohemian Waxwing invasion has provided such opportunities in a species that we don't often get a chance to study.

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Jim Berry *continues work on an annotated checklist of the birds of Essex County. The model for his work is Charles W. Townsend's book on the same subject,* The Birds of Essex County, Massachusetts *(1905), and a* Supplement *to that book (1920). Jim is also the county coordinator for the second Massachusetts Breeding Bird Atlas project currently underway. He is grateful to Marta Hersek for suggestions on a draft of this article that improved its content and organization.*

Bohemian Waxwings drinking from a puddle by the crab apple trees on Malcolm Hoyt Avenue in Newburyport in April 2008. Photograph by David Larson.

FIELD NOTES

Nest Cavity Reuse by Woodpeckers in a Red Maple Swamp

David Larson and Susan Carlson

The red maple swamp on our property now contains many dead trees, a gift from the beavers to the woodpeckers, bluebirds, chickadees, and other cavity nesters. During the breeding season of 2007, we observed the sequential use of one nest hole by three species of woodpeckers.

The original excavation was made by a Hairy Woodpecker, approximately 20 feet up in the east side of a debarked red maple. This nest hole faced our driveway and house and could be observed easily throughout the season. The Hairy Woodpeckers fledged an unknown number of young in June. Shortly thereafter, a pair of Red-bellied Woodpeckers began enlarging the entrance hole and proceeded to use the cavity for their clutch. We had several opportunities to observe the mutual tapping display (one inside and one outside of the nest hole). The young Red-bellies fledged in July. After the Red-bellies abandoned the cavity, Northern Flickers took up residence to raise a brood, once again remodeling the hole and cavity to their liking.

While woodpeckers normally nest in newly excavated cavities, there is considerable precedent for reuse. Red-cockaded Woodpeckers usually reuse the same cavities for years (Jackson, 1994), not surprising in a species that nests in living green trees. Northern Flickers have been shown to reuse old nest cavities (Lawrence, 1967; Sedgewick, 1997), as have Red-bellied Woodpeckers (Bent, 1939). Weibe, et al. (2007) describe the energy balance for reuse of existing nest cavities by Northern Flickers. They conclude that reuse is more common in second broods and late nesting dates (consistent with the date of our observations) and may be "adaptive by offering time and energy savings."

The particular virtues of the hole and tree in our yard are not obvious to us, but clearly the Red-bellied Woodpeckers and the Northern Flickers used a pre-existing cavity, suitably enlarged, to good advantage. Curiously, in 2008, no woodpeckers used the cavity or even the tree in question.

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Shaking Up the Tree of Life

Scientists working through a project called "Early Bird," a large-scale cooperative effort among five institutions in the U.S., Scotland, and Australia, released a new study to help explain the evolutionary relationships among major groups of birds. The initial results, distributed in the last days of June, are expected to provide a detailed estimate of the "family tree" of bird life that will help to organize and interpret related information about birds.

It is enough to say — in our available space — that a real shake-up in understanding some avian families is in the works. For example, songbirds and parrots are seen to have descended from a common ancestor; falcons and hawks/ospreys are not as closely related to each other as are falcons with songbirds/parrots and hawks/ospreys with New World vultures; and grebes share ancestors not with loons, but with tropicbirds. The tremors continue, so don't start altering your checklists yet!

For a peek at the findings, see the scientific paper abstract: <http://www.sciencemag.org/cgi/content/abstract/320/5884/1763> and a summary from the participating University of Florida: <http://news.ufl.edu/2008/06/26/bird-evolution/>.

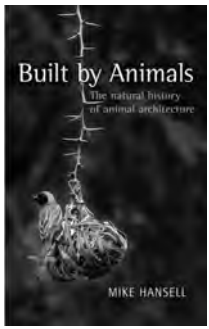
Sushma Reddy, one of the paper's authors said, "First, appearances can be deceiving. Birds that look or act similar are not necessarily related. Second, much of bird classification and conventional wisdom on the evolutionary relationships of birds is wrong."

Clearly, these findings will be discussed in the scientific community for some time to come.

[From the *Birding Community E-Bulletin*, July 2008, distributed through the generous support of Steiner Binoculars. You can access an archive of past E-bulletins on the website of the National Wildlife Refuge Association (NWRA): <http://www.refugenet.org/birding/birding5.html>.]

ABOUT BOOKS

Bower Birds and Art Students: A Conversation with Mike Hansell



Built by Animals: The Natural History of Animal Architecture by Mike Hansell (2007 Oxford University Press) is one of the most thought-provoking books on ethology I have read in some time. Professor Hansell is Professor Emeritus of Animal Architecture at the University of Glasgow and has spent his life studying the various structures creatures build. In *Built By Animals*, Hansell considers everything from the simple but striking pebble cases that certain amoebas build, to honeycombs, beaver lodges, and of course bird's nests. This book contains the latest information on what is known about how and why these structures are built and poses some interesting questions as well. How can millions of tiny termites that obviously have no higher thought processes organize themselves to build complex mounds ten feet high? Why is starting a bird's nest the most difficult part of its construction? This book poses as many questions as it answers.

I had the great pleasure of interviewing Mike Hansell this year for my radio show (June 29, 2008 on *Inquiry* on WICN 90.5FM). But we talked for so long, some of our most interesting conversation was never broadcast but instead only exists as a podcast file on the station's website. A careful and hardnosed scientist throughout most of his book, in the very last chapter Professor Hansell does some interesting theorizing about certain species of birds and their connection to human ideas about art. Speculative but always scientific, Hansell's thoughts on these seemingly unrelated subjects are original and endlessly fascinating.

ML: *I want to talk about bowerbirds. First because I have been to Australia and seen several species.*

MH: Lucky you!!!!

ML…*For people who have never seen bowerbirds before, describe the building behavior of these birds. There are two basic designs of the bowers: the "avenue" and the "maypole." These are huge structures! You can see pictures of them, but you really need to see them "in real life" to fully appreciate these complicated pieces of architecture.*

MH: These are big in relation to the size of the bird. The Golden Bowerbird (*Prionodura newtoniana*) is only a few centimeters high, and it builds these twin towers, which are two to three meters high. They are enormous when compared to the size of the bird. In this case, it has these two stick towers, which it decorates with pieces of lichen and little white flowers. And that structure, in relation to complexity and detail, is a relatively simple maypole-type bower. The Vokelkop Bowerbird (*Amblyornis inornatus*), found in New Guinea, finds a little, thin sapling on the forest

floor, and then it builds a stick tower by placing sticks tangentially up to about a meter and a half. Again, this is a small bird, about the size of an American Robin. This maypole stands in the middle of a beautiful circular courtyard in which pieces of different kinds of ornaments — snail shells, bits of dark fungi, acorns, all in shades of brown and black — are made into these individual piles and carefully placed around the circular area.

A regional variant is completely different in terms of the colors of the ornaments. These have red, green, and blue berries all placed in little piles. Each type of ornament is in its own little pile.

These (bowers) are to attract females. These are not nests at all. In bowerbirds, the males make all the displays, which also involves, when the female shows up, running around the bower, wing-flapping and vocalizing. The males do all that, while the females inspect them (the bowers) and decide which are doing the best job. After deciding to mate with the male, the female, alone, flies off to make a nest. This nest is something completely different from the bowers. It is a cup-shaped, fairly standard nest you would expect from any ordinary bird in a tree somewhere.

ML: *When the female shows up in some of the species, the male picks some of the objects it has decorated the bower with and seems to display them?*

MH: Yes! You see this in two of the best-studied avenue-builders, the Satin Bowerbird (*Ptilonrhyncus violaceus*) and the Spotted Bowerbird (*Chlamydera guttata*). In the case of the Satin Bowerbird, it's blue objects (that decorate the bower), usually blue parrot feathers. There is a stick avenue in which the female stands while the male displays. The bower runs north-south, with the lighter end being the north end. Outside the northerly entrance, the male picks up the blue parrot feathers and dashes about. He is called a "satin" bowerbird because he has these dark purple and ultra-violet reflective sleek and beautiful feathers. The male dashes about "sleeking" and ruffling his own feathers, making whirring and whistling noises, and mimicking local noises, like mechanical machinery, like a saw cutting down trees, that sort of thing. The female is watching this "all singing/all dancing" performance in a specially prepared theatre, which is what the bower amounts to.

ML: *Now what would happen if I was to take a blue shell or blue coffee stirrer and place it near the bower?*

MH: That's kind of interesting. There is an American biologist named Borgia, who has been studying Satin Bowerbirds for a number of years. Reportedly, and I have never discovered if this is actually true, he goes to his study site, and if he wants to discover where the local bowerbirds are, instead of transecting the forest, he takes his radio tags, paints them all blue, throws them around the woodland a bit, and lets the male bowerbirds do all the work. They take all the blue objects and bring them back to the bower.

ML: *In your book, there is a fascinating discussion (about aesthetics). Looking at the complex architecture and behavior of these bowerbirds, can all of this say anything about our human ideas of art and aesthetics? You talk about your own*

passion for clay pots and ceramics and then ask a very interesting question. How do we know and recognize beauty? Is there a connection with the behavior of these bowerbirds?

MH: Mark, as you say, I am very interested in this. My attraction, my response, to studio-made pottery, like by Bernard Leach (British potter, 1887-1979) or some of the European potteries of the 1930s, I think it's a biological question. I am strongly charmed by these things, but why do I have this physiological response? As a biologist, I should ask where this response comes from. And the puzzling thing is that what one would normally do as a biologist is look for closely related species that have similar kinds of responses. But I can't go to the monkeys and the apes because their artistic achievements don't seem to be that great. The nearest thing we have are some paintings done by captive gorillas and chimpanzees. But in the wild, well, it's just not out there. You don't see artistic activity by wild chimpanzees. So we have to find other ways, other parts of biology, in which we can see animals create things that look like artistic creativity. And the most obvious example seems to me what the bowerbirds are doing. Things which are multi-media, complex, and to us, wonderfully delightful displays.

What we have to wonder then is: "Do they feel something special?" Something one might call "pleasure" from doing that? And is this parallel to the kinds of things we experience when we listen to a great aria or opera?

ML: *In your book, you mention a researcher Ellen Dissanayake and her idea of "making special" about art making. The idea that when you watch the male bowerbird take these objects placed in its construction and displaying it in a certain way, this is the idea that this bird is now taking an ordinary object and "making it special." You come up with something called "the art school hypothesis," what is that?*

MH: The way in which the evolution of bowers by bowerbirds is conventionally explained in evolutionary biology is to say that it is sexual selection, which Darwin recognized in his book in 1871. That sexual selection can create powerful and complicated behavioral displays. That the way the females "judge" these displays is that the individual (displaying) is "very vigorous," or "this individual is powerful," agile. All things which are physically tangible, which we wouldn't regard as an aesthetic judgment of any kind.

But my argument is that you can't explain it quite as simply as that. To explain why there is all that beautiful elaboration in bower building. I am looking to put forward an alternative hypothesis, the "art school hypothesis," which says that they (bowerbirds) really *are* artists, that the males have to become artists to become successful and the females become "art critics" to judge what is good and what isn't. And that makes predictions how bowerbirds, male and female, ought to behave. One of them is that it takes a long time to be good at it. We do know that for the Satin and Golden bowerbirds, that it takes several years for a male to become successful at making his own bower and attracting females. That includes practicing, watching other males who are successful at what they do, inspecting the bowers of successful

males when those males are absent. It's doing all those things that you would expect an art student to do. But you would also expect an art student to also have some kind of judgment of what is "lovely." The biggest challenge is to say what Darwin says: that they (the bowerbirds) must receive some pleasure from these experiences.

I get pleasure from looking at these brown studio pots. Do the male bowerbirds get pleasure from making a good bower? Do females get pleasure from watching a good display at a good bower? So we want to physiologically measure that experience of pleasure. I think we are getting to the stage in which we might begin to measure that. In humans, we can do that already by looking at patterns of brain activity.

Here the conversation had to end.

Mark Lynch

From *The Ornithological Newsletter* On-Line: <http://www.osnabirds.org/on/182.htm>

THE FEATHER ATLAS OF NORTH AMERICAN BIRDS is a new web-based resource for the examination and identification of flight feathers (remiges and rectrices). Currently, the website <http://www.lab.fws.gov/featheratlas/> contains high-resolution scanned images of the flight feathers of 80 species, including almost all widespread North American grouse and quail, hawks and eagles, falcons, New World vultures, owls, cuckoos, pigeons and doves, and woodpeckers. Each scan includes a table with specimen data and measurements of feather lengths. Extensive series of scans illustrate the appearance of the flight feathers at various ages in both Bald and Golden eagles, and age- and sex-related variation in flight feathers of other species is illustrated whenever possible. This is an ongoing project that will continually add new species. Efforts are currently directed toward scanning the feathers of herons, ibis, and allies for which specimens are available in the collection of the National Fish and Wildlife Forensics Laboratory. We solicit the donation or loan of specimens for this project. If a species from one of the families currently covered on the website is not represented, that means we lack a specimen for this purpose. Examples include Spruce Grouse, Swallow-tailed Kite, Zone-tailed Hawk, Crested Caracara, Gyrfalcon, White-winged Dove, Williamson's Sapsucker, and Arizona Woodpecker. We are also interested in obtaining examples of unrepresented plumage types, such as Krider's Red-tailed Hawk. We welcome inquiries, comments, or suggestions on the *Feather Atlas*, which may be sent to Pepper Trail (pepper_trail@fws.gov) or through the Contact Us page of the website.

BIRD SIGHTINGS

March/April 2008

Seth Kellogg, Marjorie W. Rines, Robert H. Stymeist, and Jeremiah R. Trimble

March came in like a lamb, with a temperature that reached a high of 61˚ in Boston on March 4, and real spring weather prevailed for the first ten days of the month. The temperature for the month averaged 38.2˚, with only one inch of snow, 7.3 inches below the Boston average. Rainfall totaled 4.67 inches, with measurable amounts falling on eleven days. After southwest winds on March 25, 27, and 31 the first migrant herons, Killdeer, and blackbirds were back in force.

April was warm, dry, and very sunny — perfect weather for the start of spring migration. The average temperature was 49.3˚, one degree above normal and 4.1˚ warmer than last April. Summer-like temperatures were recorded, with 72˚ on April 10, 74˚ on April 24, and the month's high of 84˚ on April 23 in Boston. Rainfall was 2.98 inches, nearly four inches less than the nearly seven inches of rain in Boston last April. Wind direction in April was not as favorable as the warm and sunny dry days; east winds prevailed on twelve days, and southwest winds were noted on just one day, April 1. The only other days all month with a southerly direction were southeast on April 4, 9, and 15. *R. Stymeist*

WATERFOWL THROUGH ALCIDS

Although **Greater White-fronted Geese** have become more common during spring and fall migration, we received reports of no fewer than nine different individuals during this period. Prior to 1999, western Massachusetts could boast fewer than five records total. In contrast, during this period western Massachusetts reported at least five Greater White-fronted Geese! **Barnacle Goose** may well be on its way to the status of routine visitor as well. This season a bird was reported in both Hadley and Northfield, though this may have been the same bird. It is unclear if the status of **Cackling Geese** in the state is changing or simply that observers are paying more attention now that it is considered a full species. A single Cackling Goose and a flock of three were reported from western Massachusetts during March. Although never common in the state, **Tundra Swans** have become increasingly rare over the last few decades, so reports of small flocks in Longmeadow and Sheffield were noteworthy.

Spring arrivals of most dabbling ducks, such as Blue-winged Teal, Gadwall, and American Wigeon, were right on schedule during the first or second week of March. Up to four Eurasian Wigeons were reported during the period. A male Common Teal was discovered in Yarmouthport on April 5. Harlequin Ducks often linger in the state into late April and even May. This year, however, they seemed to clear out early and were last reported in North Scituate on April 6.

One of the most interesting reports concerned at least three Manx Shearwaters off Revere Beach starting on April 22. On April 25, a lucky observer witnessed and photographed two of the birds copulating on the water just off of Revere Beach! This species is a very rare breeder on this side of the Atlantic Ocean. It has only been confirmed as a breeder in the United States on one previous occasion, and that was in Massachusetts on Penikese Island in 1973. There is a colony in Newfoundland, and birds have been witnessed prospecting islands off of Maine and even in Narragansett Bay in Rhode Island. Interestingly, Revere Beach has been a reliable spot

to see this species in late spring perhaps as far back as the 1970s! Given this knowledge and the evidence of copulation, there is a very real possibility that this species may again breed in the state.

Herons begin arriving in Massachusetts at the end of March. A Great Egret was the first on March 22. Only one Snowy Egret made an appearance in March, but by April 8 one observer counted seventeen Snowy Egrets along with twenty-seven Great Egrets in Manchester. Three adult Little Blue Herons were at the same site that day, and three other individuals were reported throughout the month of April. Single Tricolored Herons were found at Plum Island and Mashpee at the end of April, and two Cattle Egrets were encountered in the Essex/Ipswich area around the same time. Impressive counts of up to 200 Glossy Ibis were made on the North Shore.

The raptor highlight of the season was a **Swallow-tailed Kite** that appeared at Edgartown on Martha's Vineyard on March 10. Unfortunately, this bird was found dead four days later on Chappaquiddick Island. This kite has been known to stray into Massachusetts in early March on several occasions, although this was one of the earliest reports. An impressive hawk movement occurred at Plum Island on April 13. A total of forty-six Northern Harriers were tallied moving north over the island, the highest spring count ever for the state. On the same day a total of 376 American Kestrels represented the third highest single-day count for Massachusetts. On April 3, an observer on Cape Cod tracked down a pair of nesting Red-shouldered Hawks in Falmouth, possibly only the second nesting record for this species on Cape Cod. A few Golden Eagles were reported during this period, including a particularly unusual sighting for eastern Massachusetts in Dorchester.

A King Rail put in the first appearance of the season on April 23 on Plum Island, probably the most reliable place in the state to find this species. **Sandhill Cranes** continue to increase. They bred for the first time in the state last year, and this period saw the passage of at least nine Sandhill Cranes, including a number in areas perhaps appropriate for future breeding. An American Golden-Plover was discovered in Newburyport on March 30, where it lingered for a few weeks and was seen by many. While this species is regular during fall migration, it is less than annual in the spring. A Semipalmated Plover found at Duxbury on April 11 was very early, and one wonders if this individual may have overwintered somewhere nearby. Piping Plovers arrived a few days ahead of schedule on March 11. The first American Oystercatcher of the season and the year arrived on Nantucket on March 7. A Solitary Sandpiper on April 6 was exceptionally early, while a Lesser Yellowlegs was equally unusual on March 17. Other unusual spring shorebirds included a Whimbrel in Mashpee on April 16 and a Long-billed Dowitcher at Newburyport Harbor on April 26. At least three pairs of Upland Sandpipers were uncovered at their state stronghold on Cape Cod.

The star of the winter, Gloucester's adult **Slaty-backed Gull** lingered into the reporting period and was last seen on March 9. An adult Little Gull appeared at Newburyport Harbor on April 12, and single Black-headed Gulls were encountered in Barnstable and Newburyport during early March. Up to five Glaucous Gulls lingered in Gloucester through April 9, although four in Provincetown on April 27 were more noteworthy. A flock of six Caspian Terns was found at Plymouth Beach on April 26. A Common Murre on Plum Island on April 25 was unusually late. *J. Trimble*

Greater White-fronted Goose

3/6	Concord (NAC)	1 ad	S. Perkins
3/13-14	Springfield	1	E. Rutman
3/13-25	Sharon	1	W. Sweet + v.o.
3/14	Northbridge	1	M. Lynch#
3/15-22	Amherst/Hadley	2	C. Gentes + v.o.
3/19-4/3	Deerfield area	2	D. Mako + v.o.
4/16-18	Cumb. Farms	1	H. + J. Levesque

Snow Goose

3/14-23	Hadley	37-131	v.o.
3/26-30	Northfield	200	M. Taylor
3/28	Concord	30	M. Thornton
3/31	Lenox	75	D. King
4/1	Pittsfield	30	T. Collins
4/3	Rockport	11	J. Robinson
4/5	P.I.	23	S. Grinley#
4/6	N. Truro	5	D. Manchester
4/20	DWWS	1	C. Dalton#

Brant

thr	P.I.	207 max	v.o.
3/10, 4/12	Plymouth	177, 220	Davies, Dalton
3/16, 4/6	Squantum	425, 550	G. d'Entremont
3/19	Duxbury B.	120+	R. Bowes
3/25	Chatham	146	R. Heil
4/26	P'town H.	165+	B. Nikula
4/27	Newbypt H.	220	R. Heil
4/27	Nahant	610+	L. Pivacek
4/27	S. Boston	220	R. Stymeist#

Barnacle Goose *

3/22	Hadley	1	S. Surner
3/26-4/2	Northfield	1	M. Taylor + v.o.

Cackling Goose *

3/13-22	Hadley/Amherst	1	F. Bowrys
3/29	Turners Falls	3	B. Kane

Mute Swan

3/9	Swansea	33	J. Sweeney#
3/10	Turners Falls	22	H. Allen
3/10	Plymouth	13	I. Davies#
3/13	Westport	29	R. Stymeist#
3/14	Ipswich	22	R. Heil
3/15	Northbridge	14	M. Lynch#
3/29	N. Scituate	31	G. d'Entremont
3/30	W. Bridgewater	27	G. d'Entremont
4/16	Mashpee	15	M. Malin

Tundra Swan

3/19-22	Longmeadow	2	J. Cavanaugh
3/23	Sheffield	5	D. MacDonald

Wood Duck

3/6	Wayland	42	B. Harris
3/16	W. Newbury	65	J. Sutherland
3/22	Sudbury	30+	G. Dysart
3/23	Chicopee	60	H. Allen
3/23	Wilmington	22	M. Rines#
3/25	Hatfield	64	F. Bowrys
3/25, 4/8	Bolton Flats	220, 25	T. Pirro
3/29	Hadley	60	C. Gentes

Gadwall

3/2	Plymouth	19	G. d'Entremont
3/4	Marshfield	20	L. Ferraresso
3/6, 4/27	P.I.	101, 30	R. Heil
3/14	Ipswich	64	R. Heil
3/22	Salisbury	22	P. + F. Vale
3/23	Ipswich	102	R. Heil
4/3	Belchertown	5	L. Therrien

Eurasian Wigeon

3/3-10	Falmouth	1	M. Keleher + v.o.
3/3-11	Eastham	1	v.o.
3/23-26	W. Bridgewater	1 m	K. Ryan + v.o.
4/7-10	N. Chatham	1 m	C. Thompson

American Wigeon

3/6-4/13	P.I.	4-11	v.o.
3/6	Acoaxet	150	G. Gove#
3/7	Falmouth	37	M. Malin
3/9	Swansea	52	J. Sweeney#
3/13	Westport	60	R. Stymeist#
3/22	Salisbury	63	P. + F. Vale
3/24	Northampton	30	A. Magee
3/24	Easthampton	18	C. Gentes

American Black Duck

thr	P.I.	560 max	R. Heil
3/2	Plymouth H.	500	G. d'Entremont
3/9	W. Bridgewater	250	J. Hoye#
3/13	Westport	360	R. Stymeist#
3/14	Ipswich	120	R. Heil
3/25	Chatham	340	R. Heil

Blue-winged Teal

3/13-4/24	P.I.	1-5	v.o.
3/20	Northampton	2	T. Gagnon
3/21	Cumb. Farms	10	J. Sweeney
3/25-4/30	GMNWR	2-3	USFWS
3/27-28	Northfield	2	F. Bowrys
4/3	Newbury	2	S. Grinley
4/3	Bolton Flats	3	T. Pirro
4/10	Athol	2	J. Duprey
4/20	Hadley	2	C. Gentes
4/21	Sudbury	2	P. + F. Vale

Northern Shoveler

3/22	Sudbury	1 m	G. Dysart#
3/24-4/28	P.I.	1-3	v.o.
3/27-4/15	GMNWR	1-2	USFWS
3/29	Cummaquid	1 m, 1 f	P. Trull
4/1	Northampton	7	S. Svec, M. Taylor
4/4	Williamstown	2	J. Wilder
4/5	Yarmouthport	pr	P. Trimble
4/12	Newbypt	1 m, 1 f	S. Grinley#
4/12	Hatfield	2	C. Gentes
4/13	W. Bridgewater	pr	G. d'Entremont

Northern Pintail

3/3	Bourne	2	M. Keleher
3/4	Winchester	2	R. LaFontaine
3/6, 4/16	P.I.	123, 32	R. Heil
3/6-4/5	Concord (NAC)	119 max	R. Walton
3/8, 22	Bolton Flats	2, 30	S. Sutton
3/10	Westport	181	J. Sweeney#
3/16	Northampton	36	D. Peake-Jones
3/17	Longmeadow	30	J. Cavanaugh
3/25	S. Quabbin	31	L. Therien
3/30	Hatfield	44	F. Bowrys
4/16	Ipswich	70	R. Heil
4/16	Rowley	60	R. Heil

Green-winged Teal

thr	P.I.	104 max	R. Heil
3/5, 26	Concord (NAC)	10, 225	S. Perkins
3/8-4/8	Bolton Flats	300 max	v.o.
3/12	Longmeadow	60	S. Ricker
3/17	Cumb. Farms	81	J. Sweeney
3/23	Rowley	380	R. Heil
3/23	W. Bridgewater	83	J. Sweeney#
3/29	Topsfield	85	P. + F. Vale
4/3	Harwich	78	P. Trull#
4/6	Tyringham	87	M. Lynch#
4/12	Hatfield	87	C. Gentes
4/13	W. Harwich	99	B. Nikula
4/13	Hadley	213	S. Surner

Common Teal

4/5	Yarmouthport	1 m	P. Trimble

Canvasback

3/3	Falmouth	9	M. Keleher
3/6	Acoaxet	30+	G. Gove#
3/9	Dighton	22	J. Sweeney#
3/9-24	Turners Falls	3-6	F. Bowrys
3/12	Brewster	8	P. Trull
3/13	Westport	45	R. Stymeist#
3/16	Dorchester	20	R. Donovan
3/17	Lakeville	13	J. Sweeney#
3/18	Pepperell	5	T. Pirro
3/20	Braintree	15	P. Peterson
3/24	Randolph	16	M. Iliff

Redhead

3/3	Truro	1	S. Grinley#
3/3-7	Falmouth	4	M. Keleher + v.o.
3/29	N. Scituate	1 f	G. d'Entremont

Ring-necked Duck

3/3	Barnstable	175	M. Keleher
3/4	Winchester	87	M. Rines
3/5-4/1	Concord (NAC)	110 max	S. Perkins

Ring-necked Duck (continued)

3/14	Duxbury	108	R. Bowes
3/22	Burrage Pd	800	SSBC (Petersen)
3/22	W. Bridgewater	425	SSBC (Petersen)
3/27	GMNWR	138	B. Larson
3/30	N. Grafton	100+	J. Liller#
4/2	Hadley	90	H. Allen
4/6	Turners Falls	200	S. Kellogg

Greater Scaup

3/2	Falmouth	1190	G. d'Entremont
3/9	Somerset	104	J. Sweeney#
3/13	Westport	90	R. Stymeist#
3/18	Lakeville	55	K. Anderson
3/23	Squantum	750	G. d'Entremont
3/24	Randolph	24	M. Iliff
3/25	Hatfield	2	F. Bowrys
3/27	Turners Falls	2	F. Bowrys
4/16	Newbypt	34	R. Heil

Lesser Scaup

3/3	Falmouth	27	M. Keleher
3/10	Lakeville	16	J. Sweeney#
3/16	Lynn	7	L. Pivacek
3/17	Lakeville	31	J. Sweeney#
4/12	Turners Falls	12	F. Bowrys
4/13	Pembroke	22	G. d'Entremont
4/17	Monterey	10	S. Prothroe

King Eider

3/25	Chatham	1 m ad	R. Heil

Common Eider

3/13	Westport	680	R. Stymeist#
3/14	Ipswich	145	R. Heil
3/25	Chatham	4420	R. Heil
3/27	Mashpee	105	M. Keleher
4/1	P.I.	120	S. Grinley
4/5	Hingham (W.E.)	100	SSBC (H. Cross)
4/8	Manchester	175+	R. Heil
4/27	Boston	80	R. Stymeist#

Harlequin Duck

3/9	Rockport	24	J. Berry#
3/13	Westport	7	R. Stymeist#
3/23	Winthrop	1 m	K. Hartel#
4/6	N. Scituate	30	SSBC (H. Cross)

Surf Scoter

3/25	Chatham	10	R. Heil
3/28	Nant. Sound	100	MAS (J. Galluzzo)
4/8	Manchester	120	R. Heil
4/11	P.I.	40+	P. + F. Vale
4/13	Nahant	173	L. Pivacek
4/13	P'town	250+	B. Nikula
4/13	Marion	300	I. Nisbet
4/30	Duxbury B.	23	R. Bowes

White-winged Scoter

3/4, 4/27	P.I.	160, 185	R. Heil
3/25	Chatham	20	R. Heil
3/28	Nant. Sound	100	MAS (J. Galluzzo)
4/13	Nahant	192	L. Pivacek
4/16	Essex	37	R. Heil
4/17	Revere B.	50	P. Peterson
4/27	Boston	22	R. Stymeist#

Black Scoter

3/2	Gloucester (E.P.)	5	I. Davies#
3/6, 4/27	P.I.	28, 5	R. Heil
3/25	Chatham	24	R. Heil
3/28	Nant. Sound	50	MAS (J. Galluzzo)
3/29	N. Scituate	20	G. d'Entremont
4/13	P'town	200	B. Nikula

Long-tailed Duck

3/6, 4/27	P.I.	132, 1700	R. Heil
3/6, 4/27	Newbypt	60, 2100	R. Heil
3/25	Chatham	14	R. Heil
3/27	Mashpee	12	M. Keleher
3/28	Nant. Sound	200+	MAS (J. Galluzzo)
4/13	Marion	200	I. Nisbet
4/29	Rockport (A.P.)	21	R. Heil

Bufflehead

3/3	Barnstable	110	M. Keleher
3/4	Winchester	22	R. LaFontaine
3/13	Westport	208	R. Stymeist#
3/16	Squantum	175	G. d'Entremont
3/23, 4/22	Newbypt H.	200, 22	R. Heil
3/25	Chatham	420	R. Heil
3/27	Mashpee	225	M. Keleher
3/29	Nantucket	300+	MAS (J. Galluzzo)
4/5	Hingham (W.E.)	100	SSBC (H. Cross)
4/13	Nahant	154	L. Pivacek

Common Goldeneye

thr	P.I.	55 max	v.o.
3/2	Turners Falls	29	R. Palmer
3/3	Barnstable	95	M. Keleher
3/7	Westport	145	K. Bourinot#
3/10	Plymouth	98	I. Davies#
3/10	Lakeville	40	J. Sweeney#
3/16	Squantum	150	G. d'Entremont
3/25	Chatham	49	R. Heil
4/5	Wachusett Res.	36	K. Bourinot
4/12	Newbypt	550	E. Neilsen

Barrow's Goldeneye

3/2	Falmouth	1 f	G. d'Entremont
3/3	Wellfleet	1 m	S. Grinley#
3/4	Gloucester (E.P.)	1 m	J. Center
3/16	Newbypt H.	1 m	S. Grinley#
3/23	Fairhaven	2	A. + D. Morgan
4/10	Athol	1	J. Johnstone
4/12	Newbypt	1 m	E. Neilsen

Hooded Merganser

3/4	Winchester	47	R. LaFontaine
3/6, 30	P.I.	32. 13	R. Heil
3/13, 4/8	GMNWR	44, 2	USFWS
3/14	Ipswich	27	R. Heil
3/15	S. Easton	24	D. Cabral
3/18	Pepperell	48	T. Pirro
3/22	Sudbury	30+	G. Dysart
3/23	W. Newbury	28	J. Berry
3/25	Pepperell	35	T. Pirro
4/13	Petersham	9	M. Lynch#
4/13	Wakefield	6	P. + F. Vale
4/21	Westminster	2	C. Caron

Common Merganser

3/thr	Melrose	155 max	D. + I. Jewell
3/3	Falmouth	56	M. Keleher
3/9, 4/11	Medford205, 23		Stymeist, LaFontaine
3/16	Lynn	96	L. Pivacek
3/22	Hanson	138	SSBC (Petersen)
3/26	W. Newbury	162+	MAS (B. Gette)
3/27	Mashpee	52	M. Keleher
4/2	Northampton	285	C. Gentes
4/5, 22	Westminster	191, 9	C. Caron
4/9	Turners Falls	300	H. Allen
4/20	S. Peabody	20	R. Heil
4/27	P.I.	6	R. Heil

Red-breasted Merganser

thr	P.I.	140 max	v.o.
3/3	Falmouth	65	M. Keleher
3/10	Plymouth	55	I. Davies#
3/10	Westport	61	J. Sweeney#
3/23, 4/13	P'town	1200, 2400	B. Nikula
3/25	Chatham	310	R. Heil
3/29, 4/19	Squantum	750, 35	GdE, Ryan
4/1	Northampton	1	T. Gagnon
4/5	Hingham (W.E.)	100	SSBC (H. Cross)
4/8	Manchester	76	R. Heil

Ruddy Duck

3/3	Falmouth	28	M. Keleher
3/9	Dighton	6	J. Sweeney#
3/12-4/12	Melrose	13 max	D. + I. Jewell
3/13-4/6	P.I.	2 m	R. Heil
3/16-4/30	Woburn (HP)	5-9	M. Rines#
3/16	Lynn	2	R. Heil
3/17	Rochester	2	J. Sweeney
3/26, 4/27	Arlington Res.	2, 1	M. Rines
4/13	Pembroke	84	G. d'Entremont
4/15	Brighton	9	P. + F. Vale
4/17	W. Newbury	6	P. + F. Vale

Ring-necked Pheasant

thr	Belmont	2	v.o.
3/8-24	Salisbury	1	S. Grinley# + v.o.

Ring-necked Pheasant (continued)

3/14	E. Boston (B.I.)	1 m	R. Stymeist
3/30	P.I.	1 m	R. Heil
4/6	Tyringham	1 m	M. Lynch#
4/13	Gloucester	1 m	S. Hedman#
4/26	Tyringham	1 m	M. Lynch#
4/29	Newbypt	1	S. McGrath

Ruffed Grouse

3/4	E. Sandwich	3	D. Manchester
4/3	S. Quabbin	2	L. Therrien
4/12	Northampton	2	F. Bowrys
4/13	Oxford	3	D. Berard#
4/16	Belchertown	2	L. Therrien
4/20	Hawley	6	M. Lynch#
4/26	Lee	3	M. Lynch#

Wild Turkey

3/2	W. Gloucester	20	J. + M. Nelson
3/5	Williamstown	48	H. Allen
3/8	E. Middleboro	35	K. Anderson
3/13	Plymouth	20	K. Doyon#
3/20	Holyoke	23	T. Gagnon
3/26	Newton	27	G. Long
3/29	N. Truro	21	D. Manchester
4/11	Spencer	26	M. Lynch#
4/20	Hawley	30	M. Lynch#

Northern Bobwhite

3/11	WBWS	15	M. Faherty
4/11	N. Truro	1	D. Manchester

Red-throated Loon

thr	P.I.	38 max	R. Heil
3/18	Mashpee	6	M. Malin
3/22	Winthrop	11	R. Stymeist#
3/22, 4/30	Duxbury B.	30, 28	R. Bowes
4/26	Nant. Sound	2500	V. Laux
4/27	Boston	11	R. Stymeist#

Common Loon

thr	P.I.	42 max	R. Heil
3/14	Ipswich	29	R. Heil
3/22, 4/30	Duxbury B.	20, 21	R. Bowes
3/25	Chatham	23	R. Heil
3/27, 4/29	Mashpee	19, 4	M. Keleher
3/28	Nant. Sound	50	MAS (J. Galluzzo)
4/5	Wachusett Res.	11	K. Bourinot
4/23	N. Truro	15	D. Manchester

Pied-billed Grebe

3/7	Falmouth	2	M. Malin
3/29	Hadley	2	S. Surner
3/30	Lynnfield	3	D. Williams
3/30	W. Bridgewater	2	G. d'Entremont
3/30	Wakefield	4	D. Williams
4/4	Southwick	4	S. Kellogg
4/9	W. Bridgewater	2	G. d'Entremont

Horned Grebe

3/4	P.I.	41	R. Heil
3/9	Swansea	14	J. Sweeney#
3/10	Plymouth	16	I. Davies#
3/22	Boston	19	M. Iliff
3/30	Duxbury B.	20+	R. Bowes
4/8	Manchester	15	R. Heil
4/11	Holyoke	3	T. Gagnon
4/13	N. Scituate	30	G. d'Entremont

Red-necked Grebe

3/6, 4/29	P.I.	24, 1	R. Heil
3/23	Winthrop	64	K. Hartel#
3/30	Duxbury B.	5	R. Bowes
4/7	Turners Falls	3	F. Bowrys
4/8	Manchester	6	R. Heil
4/13	N. Scituate	27	G. d'Entremont
4/19	Nahant	2	BBC (L. Pivacek)

Manx Shearwater

4/22-30	Revere	1-3	v.o.
4/27	Nahant	2	L. Pivacek
4/29	Rockport (A.P.)	1	R. Heil

Northern Gannet

3/23, 4/11	P'town	77, 4500	B. Nikula
3/29	Nantucket	30	MAS (J. Galluzzo)
4/5	Mashpee	15	CCBC (M. Malin)
4/13	N. Truro	2000+	D. Manchester
4/27	Marshfield	30	G. d'Entremont
4/29	Rockport (A.P.)	269	R. Heil
4/30	Duxbury B.	1100+	R. Bowes

Double-crested Cormorant

3/16	Arlington	1	M. Rines
3/31	W. Harwich	14	M. Keleher
4/thr	P.I.	182 max	v.o.
4/5	Squantum	100	J. Moore
4/13	Turners Falls	57	F. Bowrys
4/19	Squantum	75	SSBC (K. Ryan)
4/19	Westminster	22	T. Pirro
4/19	Nahant	180	BBC (L. Pivacek)
4/30	N. Truro	750+	D. Manchester#

Great Cormorant

thr	P.I.	12 max	R. Heil
3/15	P'town H.	120	B. Nikula
3/16	Medford	3	C. Cook
4/5	N. Scituate	40	SSBC (H. Cross)
4/30	Duxbury B.	28	R. Bowes

American Bittern

3/9	Eastham	1	fide B. Nikula
4/1	Squantum	1	P. Peterson
4/13	Oxford	1	D. Berard#
4/16	Ware	1	C. Coyle
4/16	Belchertown	1	L. Therrien
4/22	Cummington	1	B. Spencer
4/22	N. Truro	1	D. Manchester#
4/23	W. Bridgewater	1	SSBC (GdE)
4/23-29	P.I.	1	S. Grinley + v.o.
4/26	Tyringham	2	M. Lynch#
4/26	Lee	3	M. Lynch#
4/27	Spencer	1	M. Lynch#

Great Blue Heron

3/7	Lawrence	24	J. Fenton
3/7	Stoneham	7 n	D. + I. Jewell
4/2	Littleton	6 n	B. Larson
4/5	Wachusett Res.	13	K. Bourinot
4/5	W. Boylston	6 n	K. Bourinot
4/8	Manchester	18	R. Heil
4/12	Duxbury	27	R. Bowes
4/13	W. Warren	4 n	B. Zajda
4/13	P.I.	29	S. Grinley#
4/16	Essex	30	R. Heil
4/26	Lee	20 n	M. Lynch#

Great Egret

3/22, 4/12	Duxbury B.	1, 4	R. Bowes
3/23-4/30	P.I.	15 max	v.o.
3/23	E. Boston	1	K. Hartel#
3/24	Bolton Flats	1	S. Sutton
3/26	Uxbridge	1	B. Milke#
3/26	Scituate	1	S. Maguire
4/5	Wachusett Res.	1	K. Bourinot
4/5	Hingham (W.E.)	8	SSBC (H. Cross)
4/5	Mashpee	4	CCBC (M. Malin)
4/8	Manchester	27	R. Heil
4/13	S. Quabbin	1	L. Therrien

Snowy Egret

3/29	Ipswich	1	J. Hoye#
4/3-30	Essex	33 max	v.o.
4/5	Mashpee	1	CCBC (M. Malin)
4/8	Manchester	17	R. Heil
4/12	Duxbury	1	R. Bowes
4/12	N. Falmouth	1	I. Nisbet
4/17	E. Boston (B.I.)	6	P. Peterson
4/24	N. Falmouth	6	I. Nisbet

Little Blue Heron

4/5	WBWS	1	I. Ace#
4/6	Hingham	1	P. Knight
4/8	Manchester	3 ad	R. Heil
4/17-26	Duxbury	1 ad	R. Bowes

Tricolored Heron

4/24-30	P.I.	1	C. Jackson + v.o.
4/30	Mashpee	1 ph	M. Malin

Cattle Egret

4/22-30	Ipswich/Essex	1-2	v.o.

Green Heron

4/23	Amherst	1	H. Lappen
4/23	Mt.A.	1	BBC (Vale)

Green Heron (continued)

4/29-30	Groton	1	B. Hill

Black-crowned Night-Heron

3/10	Plymouth	1	I. Davies#
3/22	Winthrop	2	R. Stymeist#
3/29	Beverly	3	J. McCoy
3/31	W. Harwich	7	M. Keleher
4/1	Neponset	7	P. Peterson
4/4	Plymouth	5	MAS (J. Galluzzo)
4/11	Mashpee	6	M. Keleher
4/23	P.I.	3	S. Grinley
4/26	Medford	4	M. Rines

Glossy Ibis

3/30	Harwich	1	M. Salett
4/6	Fall River	6	R. Marr
4/6	Ipswich/Essex	116 max	v.o.
4/6	Bolton Flats	9	A. Marble
4/20	N. Truro	1	D. Manchester
4/21	Quincy	8	H. Robinson
4/22	Rowley	200	R. Heil
4/22	Chatham	1	R. Clem
4/23	W. Bridgewater	1	SSBC (GdE)
4/28	E. Boston (B.I.)	4	P. Peterson
4/30	Arlington Res.	1	L. Thompson

Black Vulture

3/12	Amherst	2	S. Sauter
3/15	Westport	3	L. Abbey
3/20	Westfield	1	S. Kellogg
3/22	Williamstown	1	H. Bacheller
4/8	Easthampton	2	H. Hubert
4/12	Fitchburg	1	D. Horn
4/15	Gr Barrington	1	R. Laubach
4/17	N. Truro	1	Hawkcount (DM)
4/21	Rowley	1	M. Taylor#
4/26	Nantucket	2	fide E. Ray

Turkey Vulture

3/thr	N. Truro	33	Hawkcount (DM)
3/3	Bourne	9	M. Keleher
3/4	Scituate	8	S. Maguire#
3/10	Greenfield	40	D. Mako
3/13	Westport	8	R. Stymeist#
3/18	Framingham	9	E. Smith
3/23	Amherst-Hadley	7	M. Lynch#
3/30	Concord	7	S. Perkins
4/thr	P.I.	29	Hawkcount (CJ)
4/thr	N. Truro	289	Hawkcount (DM)
4/5	P'town	15+	D. Berard
4/6	Tyringham	8	M. Lynch#
4/12	Fitchburg	25	Dave Horn

Osprey

3/16	Hyannis	2	M. Richmond
3/27	Mashpee	23	M. Keleher
3/30	Quincy	pr	J. Poggi
4/thr	N. Truro	22	Hawkcount (DM)
4/3	Grafton	pr	B. Milke
4/5	M.V.	pr	J. Liller#
4/8	Plympton	1 n	K. Anderson
4/8-30	P.I.	31	Hawkcount (CJ)
4/10	Scituate	1 n	C. Nims
4/12	Westminster	5	T. Pirro
4/16	Mashpee	9	M. Malin
4/17	E. Boston (B.I.)	pr	P. Peterson
4/19	N. Falmouth	2 f n	I. Nisbet
4/22	P.I.	3 pr	R. Heil

Swallow-tailed Kite *

3/10-14	Edgartown	1 ph	William Marks

Bald Eagle

3/1-9	Medford	1-2	v.o.
3/1-4/13	Newbypt	8 max	v.o.
3/10	Acoaxet	2 2W	M. Tucker#
3/16	W. Warren	3 imm	B. Zajda
3/18	Lakeville	pr	K. Anderson
4/5	Wachusett Res.	3	K. Bourinot
4/12	Westminster	2 ad	T. Pirro
4/19	N. Truro	2	Hawkcount (DM)

Northern Harrier

thr	P.I.	9 max	v.o.
3/1-4/2	DWWS	2-5	v.o.
3/11	S. Quabbin	2	L. Therrien
3/13	Westport	5	R. Stymeist#
3/14	Plympton	5	J. Sweeney
3/17	Cumb. Farms	2	J. Sweeney
3/21	Bridgewater	2	A. + D. Morgan
3/23	W. Bridgewater	4	J. Sweeney#
3/27	Bolton Flats	2 f	K. Bourinot
4/thr	N. Truro	8	Hawkcount (DM)
4/9	Shelburne	2	C. Caron
4/12	Hatfield	5	S. Surner
4/13	P.I.	46 migr	Hawkcount (RH)
4/16	Essex	2	R. Heil

Sharp-shinned Hawk

3/thr	N. Truro	9	Hawkcount (DM)
3/6	P.I.	1 ad, 1 imm	R. Heil
4/thr	N. Truro	86	Hawkcount (DM)
4/thr	Barre Falls	97	Hawkcount (BK)
4/10-30	P.I.	35	Hawkcount (CJ)
4/13	Nahant	2	L. Pivacek
4/13	Barre Falls	33	Hawkcount (BK)
4/26	Tyringham	2	M. Lynch#

Cooper's Hawk

3/13	Westport	4	R. Stymeist#
3/14	Topsfield	pr	J. MacDougall
3/23	Lynnfield	pr	P. + F. Vale
3/23	Carlisle	pr	A. Ankers
3/31	Ipswich	pr	J. Berry
4/thr	N. Truro	28	Hawkcount (DM)
4/1	Haverhill	3	S. McGrath
4/9	Mt. Tom	3	L. Therrien
4/26	Medford	3	M. Rines
4/30	P.I.	4	Hawkcount (TM)

Northern Goshawk

3/6	Barre Falls	3	Hawkcount (BK)
3/9	Rockport	1	D. Bates#
3/13	Groton	1 ph	T. Murray
3/26	N. Truro	1	Hawkcount (DM)
4/9	Mt. Tom	2	L. Therrien
4/10	Boxford (C.P.)	2	J. Offermann
4/12	Westminster	1	T. Pirro
4/13	Petersham	1	M. Lynch#
4/13, 14	Barre Falls	1, 1	Hawkcount (BK)
4/15	Ashburnham	1	C. Caron
4/16, 17	N. Truro	1, 1	Hawkcount (DM)
4/20	Hawley	1 ad	M. Lynch#
4/25	Belchertown	1	L. Therrien
4/27	Carlisle	1 ad	A. Ankers#

Red-shouldered Hawk

3/2, 22	Carlisle	1, 3	A. Ankers
3/6	Barre Falls	4	Hawkcount (BK)
3/7	Falmouth	2	M. Malin
3/7	E. Bridgewater	pr n	E. Giles
3/13	Westport	3	R. Stymeist#
3/16, 4/13	Petersham	1, 3	M. Lynch#
3/21-4/30	E. Middleboro	pr n	K. Anderson
4/thr	N. Truro	12	Hawkcount (DM)
4/3-30	Falmouth	pr n	P. Trimble
4/13	Springfield	pr n ph	C. Surprenant

Broad-winged Hawk

4/2	Williamstown	1	L. Reed-Evans
4/2	Ipswich	1	J. MacDougall
4/3	Lanesboro	2	M. Kelly
4/3	Belchertown	1	L. Therrien
4/7	Wayland	1	J. Hoye#
4/8	Boxford (C.P.)	1	J. Offermann#
4/13-30	Barre Falls	282	Hawkcount (BK)
4/13	Barre Falls	64	Hawkcount (BK)
4/14	Barre Falls	75	Hawkcount (BK)
4/23-30	N. Truro	13	Hawkcount (DM)
4/23	W. Barnstable	2	C. Walz
4/24	Wompatuck SP	2	SSBC (S. Avery)
4/30	Barre Falls	65	Hawkcount (BK)

Red-tailed Hawk

3/thr	N. Truro	20	Hawkcount (DM)
3/22	Barre Falls	31	Hawkcount (BK)
4/thr	N. Truro	39	Hawkcount (DM)
4/9	Mt. Tom	12	L. Therrien
4/27	Boston	7	R. Stymeist#

Rough-legged Hawk
3/1-4/17 P.I. 1-3 v.o.
3/1-4/20 DWWS 1-2 v.o.
3/2, 30 Plympton 3, 4 J. Sweeney
3/2, 17 Cumb. Farms 3, 4 J. Sweeney
3/9 Hadley 1 T. Gagnon
3/21 Bridgewater 1 A. + D. Morgan
3/22 S. Boston 1 I. Davies#
3/23 Gloucester 1 dead C. Wood
3/23 W. Bridgewater 1 lt J. Sweeney#
3/23 Brookfield 1 lt M. Lynch#
4/8 N. Truro 1 dk Hawkcount (DM)
4/22 Barre Falls 1 Hawkcount (BK)
Golden Eagle
3/20 Dorchester 1 R. Donovan
4/3 S. Quabbin 1 L. Therrien
4/13 Pittsfield 1 T. Collins
American Kestrel
3/17, 4/14 Boston (Logan) 9, 70 N. Smith
3/30 Hadley 6 C. Gentes
4/thr N. Truro 182 Hawkcount (DM)
4/6-30 P.I. 631 Hawkcount (CJ)
4/12 Hatfield 10 S. Surner
4/13 DFWS 15 G. Loud#
4/13 Boston (Long I.) 42 R. Donovan
4/13 Barre Falls 12 Hawkcount (BK)
4/13 P.I. 376 Hawkcount (RH)
4/16 Ipswich 7 R. Heil
4/16 Mashpee 7 M. Malin
4/16 Southwick 5 S. Kellogg
Merlin
3/16 Harwich 2 A. Curtis
3/25 Mt.A. 2 F. Bouchard
3/28 P.I. 2 R. Heil
4/thr N. Truro 18 Hawkcount (DM)
4/5-30 P.I. 30 Hawkcount (CJ)
4/30 Duxbury B. 2 R. Bowes
Peregrine Falcon
3/22 Boston 3 ad R. Stymeist#
4/thr N. Truro 10 Hawkcount (DM)
4/13 P.I. 6 Hawkcount (RH)
4/26 N. Truro 3 Hawkcount (DM)
King Rail
4/23 P.I. 1 S. Grinley
Virginia Rail
3/28, 4/27 P.I. 1, 4 R. Heil
3/30 Nantucket 1 MAS (J. Galluzzo)
4/20 S. Peabody 2 R. Heil
4/22 Burlington 2 M. Rines
4/24 Southwick 1 S. Kellogg
4/25 S. Dart. (A.Pd) 1 P. Champlin
4/27 Mashpee 1 M. Keleher
Sora
4/22 P.I. 2 R. Heil
4/28 Gloucester 1 S. McGrath
4/29 Amherst 1 H. Allen
American Coot
3/1-4/8 Woburn (HP) 7 M. Rines#
3/6 Acoaxet 12 G. Gove#
3/10 Westport 6 J. Sweeney#
3/16 Lynn 10 R. Heil
3/29 Nantucket 35 MAS (J. Galluzzo)
4/4 Plymouth 30 MAS (J. Galluzzo)
4/12 Eastham 7 B. Nikula
Sandhill Crane
4/12 Warren 3 ph R. Ciejka
4/16 Ipswich 1 R. Heil
4/16-19 Ware 1 Freylinghausen#
4/18 P.I. 1 B. Stevens#
4/20 Hawley 1 M. Lynch#
4/22 Sheffield 2 S. MacDonald
Black-bellied Plover
3/11 WBWS 4 M. Faherty
3/25 Chatham 18 R. Heil
4/6, 16 Duxbury B. 6, 24 R. Bowes
4/13 Marion 2 I. Nisbet
4/24 P.I. 1 P. + F. Vale
American Golden-Plover
3/30-4/13 Newbypt 1 G. Gove
Semipalmated Plover
4/11 Duxbury 1 R. Bowes
Piping Plover
3/11-4/30 P.I. 10 max v.o.
3/21-4/30 Plymouth B. 10 max v.o.
3/25 Chatham 5 R. Heil
3/27-4/30 Duxbury B. 9 max R. Bowes
3/27-4/30 Mashpee 5 max M. Malin
4/5 Scituate 6 S. Maguire#
4/16 Mashpee 5 M. Malin
Killdeer
3/14 Ipswich 63 R. Heil
3/18 Hadley 62 T. Gagnon
3/28 Newbury 17 I. Davies#
4/3 Topsfield 28+ P. + F. Vale
4/3 Bolton Flats 20 T. Pirro
4/5 Hatfield 65 B. Kane
4/6 Tyringham 16 M. Lynch#
4/13 Cumb. Farms 15 SSBC (J. Sweeney)
4/16 Essex County 22 R. Heil
American Oystercatcher
3/7, 28 Nantucket 1, 4 Ray, Galluzo
3/17, 4/14 Boston (Logan) 3, 5 N. Smith
3/23 Fairhaven 2 A. + D. Morgan
3/23 Winthrop 4 P. + F. Vale
3/29 Squantum 2 G. d'Entremont
4/5 Hingham (W.E.) 2 SSBC (H. Cross)
4/5 Marblehead 2 D. Noble
4/12 N. Falmouth 2 I. Nisbet
4/13 Marion 5 I. Nisbet
4/23 S. Dartmouth 2 M. Barber
4/24 Chatham 20+ R. Messer
Spotted Sandpiper
4/24 W. Springfield 1 J. Zepko
4/26 Holyoke 2 S. Svec
Solitary Sandpiper
4/6 Bolton Flats 1 A. Marble
4/13 Cumb. Farms 1 SSBC (J. Sweeney)
4/25 Pittsfield 1 T. Colins
4/30 Northampton 2 C. Gentes
Greater Yellowlegs
3/25 Chatham 7 R. Heil
3/27 Mashpee 1 M. Keleher
3/30, 4/14 Hadley 1, 8 Gentes, Therrien
3/30, 4/22 Rowley 4, 87 R. Heil
4/3, 22 Newbypt 3, 175 Grinley, Vale
4/11, 26 Duxbury 1, 28 R. Bowes
4/13-30 W. Harwich 31 max B. Nikula
4/15 Turners Falls 8 F. Bowrys
4/19 N. Falmouth 14 I. Nisbet
Willet
4/12 P.I. 1 N. Landry
4/25 W. Dennis 1 P. Trull
4/26 N. Falmouth 26 I. Nisbet
4/27 Revere B. 6 B. Cassie
4/27 Chatham 47 B. Nikula
4/29 Newbypt H. 9 R. Heil
4/30 Mashpee 6 M. Malin
Lesser Yellowlegs
4/3 Bolton Flats 1 T. Pirro
4/6 Newbypt 1 P. + F. Vale
4/13-30 W. Harwich 6 max B. Nikula
4/14 Hadley 4 L. Therrien
4/15 Turners Falls 3 F. Bowrys
4/15 P.I. 2 J. Offermann
4/22 Rowley 2 R. Heil
4/30 Easthampton 9 C. Gentes
Upland Sandpiper
4/23 Leicester 2 M. Lynch#
4/25 Falmouth 3+ pr P. Trimble
Whimbrel
4/16 Mashpee 1 M. Malin
Ruddy Turnstone
3/8 Gloucester 10 L. Messely
3/28 Revere 4 P. Peterson

Sanderling
3/6 P.I. 110 R. Heil
3/18, 4/16 Mashpee 20, 53 M. Malin
3/28 Nant. Sound 30 MAS (J. Galluzzo)
4/12 Plymouth B. 50 C. Dalton#
4/16 Mashpee 53 M. Malin
4/26 Duxbury 387 R. Bowes
Least Sandpiper
4/13, 26 P.I. 1, 5 R. Heil, Vale
4/29 Newbypt 1 S. McGrath
White-rumped Sandpiper
4/26 W. Harwich 1 B. Nikula#
Pectoral Sandpiper
3/30 Hadley 2 C. Gentes
4/5 Hatfield 4 B. Kane
4/13 Cumb. Farms 1 SSBC (J. Sweeney)
4/16 Essex 2 R. Heil
4/28 Beverly 1 S. McGrath
4/28 E. Boston (B.I.) 1 P. Peterson
Purple Sandpiper
3/16 Gloucester (E.P.) 65 MAS (W. Petersen)
3/18 Mashpee 14 M. Malin
3/30 Nantucket 30 MAS (J. Galluzzo)
4/5 N. Scituate 50 SSBC (H. Cross)
4/8 Manchester 28 R. Heil
4/16 Nahant 70 L. Pivacek
4/19 Squantum 25 SSBC (K. Ryan)
4/28 Revere 35 P. Peterson
4/29 Rockport (A.P.) 40 R. Heil
Dunlin
3/10 Plymouth 440 I. Davies#
3/11 WBWS 200 M. Faherty
3/13 Westport 252 R. Stymeist#
3/15 Orleans 90 B. Nikula
3/16-4/30 Newbypt H. 559 max v.o.
3/17, 4/24 Duxbury B.500, 1343 R. Bowes
3/23 W. Newbury 180 R. Heil
3/25 Chatham 521 R. Heil
4/13 Nahant 64 L. Pivacek
4/30 Easthampton 1 C. Gentes
Short-billed Dowitcher
4/19 Rowley 1 S. Grinley#
4/30 Mashpee 1 ph M. Malin
Long-billed Dowitcher
4/29 Newbypt H. 1 R. Heil
Wilson's Snipe
3/4 Wayland 1 B. Harris
3/12 Brewster 1 P. Trull
3/14 Ipswich 15 R. Heil
3/28 Newbury 144 R. Heil
3/30 Hadley 18 D. Maki
4/5 Lexington 27 M. Rines
4/6 Hatfield 19 C. Gentes
4/6 Tyringham 81 M. Lynch#
4/8 Bolton Flats 23 T. Pirro
4/13 W. Harwich 63 B. Nikula
4/13 Cumb. Farms 70 SSBC (J. Sweeney)
American Woodcock
3/4 Falmouth 4 M. Keleher
3/9 DWWS 14 MAS (J. Galluzzo)
3/10, 24 Medford 3, 8 P. Devaney
3/14 Newbypt 13+ S. Grinley#
3/15 Westboro 10 J. Slovin#
3/22 Squantum 9 L. Tyrala#
3/22 Longmeadow 7 J. Wojtanowski
3/23 Waltham 8 J. Forbes#
3/29 Blackstone 36 M. Lynch#
4/11 Spencer 41 M. Lynch#
4/13 Petersham 18 M. Lynch#
4/14 P.I. 12 S. McGrath#
4/20 Essex 1 ad, 4 yg C. Corley#
4/26 Tyringham 21 M. Lynch#
Laughing Gull
3/22 Chatham 4 P. Trull
3/31 Harwich 1 A. Curtis
4/12, 26 Plymouth B. 25, 400 Dalton, Fenton
4/26 P'town 200+ B. Nikula
4/27 Brewster 120 B. Nikula
4/29 P.I. 1 ad R. Heil
Little Gull
4/12 Newbypt H. 1 ad E. Neilsen
Black-headed Gull
3/3 Barnstable 1 M. Keleher
3/11-15 Newbypt 1 1W S. Williams#
Bonaparte's Gull
3/27 Mashpee 4 M. Keleher
3/28 Nant. Sound 2 MAS (J. Galluzzo)
4/4 Plymouth 1 K. Doyon
4/5 Concord (NAC) 1 ad. P. Alden#
4/5 Southwick 2 S. Kellogg
4/11 Holyoke 1 T. Gagnon
4/13 Nahant 124 L. Pivacek
4/13 Cheshire 1 G. Hurley
4/29 Newbypt H. 4 R. Heil
Iceland Gull
3/2 Centerville 1 1w B. Nikula
3/6 Newbypt 3 ad R. Heil
3/9, 4/9 Gloucester 21, 1 Bates, Hedman
3/15 Truro 3 B. Nikula
3/15, 4/13 P'town 3, 30 B. Nikula
3/15-4/13 Westminster 1-2 v.o.
3/24, 4/9 Fitchburg 1 1W T. Pirro
3/25 Chatham 2 ad R. Heil
3/29 Turners Falls 1 B. Kane
3/29 Nantucket 5 MAS (J. Galluzzo)
4/1 Northampton 1 T. Gagnon
4/22 Hadley 1 F. Bowrys
Lesser Black-backed Gull
3/2-4/12 Plymouth 1-2 v.o.
3/6-4/10 Newbypt 1 ad R. Heil + v.o.
3/14 Springfield 1 A. + L. Richardson
3/16, 4/27 Brewster 2 ad, 1 ad B. Nikula
3/20 Turners Falls 1 F. Bowrys
3/22-4/15 Boston 1-2 v.o.
3/29 Nantucket 20 MAS (J. Galluzzo)
4/1-6 Concord (NAC) 1 2yr S. Perkins#
4/19 N. Chatham 1 3w B. Nikula
4/26 P'town H. 9+ B. Nikula
Slaty-backed Gull *
3/1-9 Gloucester (E.P.) 1 v.o.
Glaucous Gull
3/1-4/9 Gloucester (E.P.) 5 max v.o.
3/7 Amherst 1 H. Allen
3/15 Westminster 1 1yr T. Pirro
3/30 Lowell 1 M. Baird
3/30 Nantucket 1 MAS (J. Galluzzo)
4/3 Salisbury 1 imm J. Offermann
4/19 Turners Falls 1 M. Iliff
4/22 Hadley 1 F. Bowrys
4/26-27 P'town 4 M. Iliff
Caspian Tern
4/26 Plymouth B. 6 ph J. Fenton
Common Murre
3/8 Rockport (A.P.) 3 R. Heil
4/25 P.I. 1 S. Grinley
Thick-billed Murre
3/18 Cummaquid 1 P. Trull
Razorbill
3/6 P.I. 73 R. Heil
3/8 Rockport (A.P.) 45 R. Heil
3/16 Gloucester (E.P.) 5 MAS (W. Petersen)
3/28 Nant. Sound 1 MAS (J. Galluzzo)
Black Guillemot
3/2, 4/27 Marshfield 11, 4 G. d'Entremont
3/9 Duxbury 1 R. Bowes
3/16 Gloucester (E.P.) 8 MAS (W. Petersen)
3/29 Squantum 1 G. d'Entremont
4/29 Rockport (A.P.) 5 R. Heil
Large alcid species
3/23 P'town 43 B. Nikula

DOVES THROUGH FINCHES

Barn Owls continue to be successful on Martha's Vineyard, with four juveniles reported from Felix Neck Sanctuary in early April. There were many reports of nesting Great Horned Owls as well as several Screech Owls and a number of pairs of Barred Owls. The last report of a Snowy Owl was from Wollaston on April 6, and a report of a Short-eared Owl on April 15 from South Monomoy was intriguing. A Northern Saw-whet Owl took up residence inBoston's busy Post Office Square in the last week in April. The first Whip-poor-wills were heard calling on April 25, and the first hummingbirds were noted on April 23. There were two reports of Red-headed Woodpeckers, still a very uncommon spring bird, in Wayland and in the hills of Florida in the Berkshires.

The first Eastern Phoebes were noted early in March, but significant numbers did not arrive until the beginning of April. The highlight of the month was the discovery of an adult male **Fork-tailed Flycatcher** on April 12 at Chandler Pond in Brighton. This is just the third spring record for this species in Massachusetts; the first was from Plum Island on May 4, 1968, the other from Concord on May 2, 1990.

Common Ravens continue to increase their range in eastern Massachusetts, with reports from Plum Island, Gloucester, Haverhill, Concord, and Waltham. Only one Purple Martin was reported from Plum Island during the period. The Parker River NWR colony has been rather unproductive in recent years, and there is a concern for this species as a breeder in the state. Twenty species of warblers were reported during the period plus one unusual subspecies, an **Audubon's Warbler** in Marshfield. Other unusual warblers included a Yellow-throated on the Vineyard, a Kentucky in Provincetown, and three Prothonotary Warblers.

A **Townsend's Solitaire** successfully overwintered in Rockport as did an Orange-crowned Warbler at a feeder in Mashpee and a Lark Sparrow in Millbury. Other unusual reports included a **Summer Tanager** from Oak Bluffs, two **Western Tanagers** at a feeder in Brewster, and a singing Clay-colored Sparrow in Fairhaven.

According to Cornell, the populations of Rusty Blackbirds are in serious decline, with their numbers down by as much as eighty-eight to ninety-eight percent over the last few decades. These numbers are based on data gathered on the Breeding Bird Surveys and Christmas Bird Counts, so it was encouraging to hear about a nightly roost of Rusties in West Roxbury that numbered as many as 143 in early April. Other flocks of over fifty individuals were noted in West Bridgewater and in Belchertown, the highest number from western Massachusetts since 1994.

Birders were treated to a massive invasion of **Bohemian Waxwings**, far surpassing the flights in 2000 and 2004. Most of the largest congregations were in western Massachusetts, notably a group of over 300 in Northfield, which was present for several days and delighted many birders who had never witnessed such concentrations in one spot. Other large flocks were present in Newburyport, Turners Falls, and Fitchburg. There were also good numbers of Cedar Waxwings, making it a bit difficult to pick out the one Bohemian in a flock of over 200 Cedars in Boston's South End! Winter finch reports included good numbers of Common Redpolls through the end of March and four **Hoary Redpoll** reports, including two birds at the Wellfleet Bay Wildlife Sanctuary. There were far fewer reports of numbers of Pine Siskins, mostly single birds with one report of fifty from Shutesbury. There was an increase in Purple Finch reports and one report each for Red and White-winged crossbills. *R. H. Stymeist*

Barn Owl
4/5 M.V. n + 4 juv J. Liller#
Eastern Screech-Owl
3/25 E. Middleboro pr B. Lessard
3/27 Essex pr J. Berry#
3/thr Wayland pr n J. Hoye#
4/8 Medford pr P. Devaney
4/13 Oxford 3 D. Berard#
4/19 Blackstone 2 M. Lynch#
Great Horned Owl
3/16 Ipswich 1 on nest J. Berry
3/29 Blackstone 6 M. Lynch#
4/thr P.I. 1 n v.o.
4/3 Brookline 1 yg in n B. Cassie
4/3 S. Natick 1 f ad n B. Cassie
4/6 Plymouth pr n K. Doyon
4/8 Brookline 2 ad, 2 yg R. Stymeist
4/12 Brookline 1 ad, 2 yg McMahon
4/13 Belmont 2 ad, 1yg R. Stymeist
4/20 Newbury 1 ad, 3 yg S. Grinley#
4/30 Lexington pr + 1 fl M. Rines
Snowy Owl
3/1-4/1 P.I. 1 v.o.
3/11, 17 Boston (Logan) 1, 1 N. Smith
4/5-6 Wollaston 1 N. Smith
Barred Owl
3/18 Middleboro pr A. Mason
4/6 Mashpee pr M. Keleher
4/12 Haverhill 2 S. + J. Mirick
4/12 Princeton 2 J. Dekker
4/13 Petersham 5 M. Lynch#
4/13 Topsfield 2 J. MacDougall
4/17 Carlisle pr A. Ankers
4/26 Tyringham 2 M. Lynch#
Long-eared Owl
3/14 Kingston 1 D. Ludlow
Short-eared Owl
3/1-4/10 P.I. 1-2 v.o.
3/2 DWWS 3 G. d'Entremont#
3/2 Duxbury 1 R. Bowes
3/6 Hadley 1 C. Gentes
3/11 Boston (Logan) 2 N. Smith
4/15 S. Monomoy 1 M. Brady#
Northern Saw-whet Owl
3/1-13 Mt.A. 1 R. Stymeist#
3/6-31 Woburn (HP) 1 M. Rines
3/30 Nantucket 1 MAS (J. Galluzzo)
4/13 Petersham 9 M. Lynch#
4/19, 26 Mashpee 1 M. Keleher
4/26 Tyringham 2 M. Lynch#
4/27 Boston 1 R. Stymeist#
Whip-poor-will
4/25 Southwick 2 S. Kellogg
Chimney Swift
4/26 Haverhill 1 S. + J. Mirick
4/26 Scusset B. 1 SSBC (D. Clapp)
4/27 Longmeadow 15 N. Eaton
4/27 Arlington Res. 10 M. Rines
Ruby-throated Hummingbird
4/23 Brewster 1 m D. Clapp
4/23 Pittsfield 1 G. Shampang
4/25 Newbypt 1 C. Sheridan
4/25 Brewster 1 P. Trull
4/26 Acushnet 1 K. Langevin
4/27 S. Dartmouth 1 A. Morgan
4/27 Littleton 1 H. Bailey
Belted Kingfisher
4/26 Mashpee 6 M. Keleher
4/27 Spencer 3 M. Lynch#
Red-headed Woodpecker
3/20 Wayland 1 imm P. Shaub
4/3 Florida 1 T. Gagnon
Red-bellied Woodpecker
3/10 Ipswich 8 L. Messely
3/14 Blackstone 5 M. Lynch#
3/27 Mashpee 6 M. Keleher
4/5 Hingham (W.E.) 4 SSBC (H. Cross)
4/10 Boxford (C.P.) 4 J. Offermann
4/13 IRWS 3 BBC (Vale)
4/20 Braintree 3 G. d'Entremont
4/27 Spencer 7 M. Lynch#
Yellow-bellied Sapsucker
3/thr Mt.A. 1-3 R. Stymeist + v.o
4/13 Petersham 6 M. Lynch#
4/16 Fitchburg 3 C. Caron
4/19 Colrain/Shelburne 5 C. Caron
4/20 Hawley 9 M. Lynch#
4/21 Westminster 4 C. Caron
4/26 Lee 16 M. Lynch#
Hairy Woodpecker
3/14 Ipswich 3 R. Heil
3/16 Woburn (HP) 3 M. Rines#
3/27 Mashpee 4 M. Keleher
3/29 GMNWR 3 R. Furrow
4/13 Wompatuck SP 5 G. d'Entremont
4/20 Hawley 6 M. Lynch#
4/21 Sudbury 4 P. + F. Vale
4/27 Fitchburg 5 C. Caron
4/27 Spencer 6 M. Lynch#
Northern Flicker
4/13 Belmont 11 R. Stymeist
4/17 Ashburnham 11 C. Caron
4/17 N. Truro 10 D. Manchester
4/18 P.I. 20 S. Grinley#
4/19 Wakefield 12 P. + F. Vale
4/19 Blackstone 11 M. Lynch#
4/20 S. Peabody 21 R. Heil
4/25 Worcester 10 M. Lynch#
Pileated Woodpecker
3/8 Carlisle pr A. Ankers
3/16 Ipswich pr J. Berry
3/27 Amherst 3 H. Allen
3/31 Longmeadow 3 N. Mole
4/8 Boxford (C.P.) pr P. + F. Vale#
4/14 Manchester pr n S. Hedman
4/20 Medfield pr J. O'Connell
4/22 Westminster 3 C. Caron
4/26 Lee 4 M. Lynch#
4/26 S. Quabbin 4 L. Therien
4/26 Wompatuck SP 2 BBC (E. Giles)
Eastern Phoebe
3/2-26 Reports of indiv. from 10 locations
3/27 Mashpee 4 M. Keleher
4/4 Plymouth 4 K. Doyon
4/11 P.I. 29 P. + F. Vale
4/12 Westminster 17 T. Pirro
4/13 Wompatuck SP 13 G. d'Entremont
4/19 Blackstone 29 M. Lynch#
4/19 Westminster 15 T. Pirro
4/26 Lee 21 M. Lynch#
Great Crested Flycatcher
4/27 Hingham 1 G. d'Entremont
Eastern Kingbird
4/27 Pembroke 1 G. d'Entremont
4/30 Randolph 1 C. Jackson
Fork-tailed Flycatcher (details submitted) *
4/12-15 Brighton 1 ph D. Kierdorf# + v.o.
Northern Shrike
3/1-4/10 Reports of indiv. from 23 locations
3/7 Nantucket 2 E. Ray
3/16 P.I. 2 N. Landry
White-eyed Vireo
4/19-30 P'town 1 ph P. Trimble#
4/30 Nahant 1 M. Iliff
Blue-headed Vireo
4/12 Holyoke 1 H. Allen
4/13 Sutton 1 J. Liller
4/13 Belmont 1 R. Stymeist
4/20 HRWMA 8 T. Pirro
4/20 Hawley 4 M. Lynch#
4/25 Winchendon 3 C. Caron
4/26 Lee 4 M. Lynch#
4/30 Medford 5 M. Rines
Warbling Vireo
4/22 Westminster 1 C. Caron
4/24 Jamaica Plain 1 BBC (A. Birch)

Warbling Vireo (continued)

4/25	Woburn (HP)	4	M. Rines

Fish Crow

3/2	Tewksbury	9	S. Arena
3/14	Weymouth	16	J. Sweeney
3/22	Hanson	6	SSBC (Petersen)
3/23	Longmeadow	10+	M. Lynch#
3/24	Topsfield	15	J. MacDougall
4/1	Northampton	5	M. Taylor
4/27	Mashpee	9	M. Keleher
4/28	Melrose	9	P. + F. Vale

Common Raven

3/6	P.I.	3	R. Heil
3/9	Orange	6	T. Pirro
3/16	Gloucester (E.P.)	2	MAS (W. Petersen)
4/6	Haverhill	2	S. + J. Mirick
4/6	Concord	3	C. Coppersmith
4/13	W. Warren	2	B. Zajda
4/18	Ashby	2	C. Caron
4/20	Royalston	pr	M. Taylor#
4/21	Waltham	2	J. Forbes#
4/22	Westminster	2	C. Caron

Horned Lark

3/1-4/22	P.I.	36 max	R. Heil
3/10	Rochester	100+	J. Sweeney#
3/17	Cumb. Farms	120	J. Sweeney
3/18	Sharon	150	P. Peterson
3/23	Amherst-Hadley	80+	M. Lynch#
3/25	Duxbury B.	pr n	R. Bowes
3/28	Newbury	46	I. Davies#
3/30	Plympton	50	J. Sweeney#
4/12	Northampton	165	C. Gentes

Purple Martin

4/12	P.I.	1 m	S. Grinley#
4/14	Rehoboth	1	R. Marr
4/26	Mashpee	3	M. Keleher
4/27	DWWS	2	G. d'Entremont

Tree Swallow

3/9	Norfolk	1	W. Sweet
3/16	Wayland	1	G. Long
3/16	W. Bridgewater	1	J. Sweeney
3/17	Lakeville	5	J. Sweeney
3/27-4/3	GMNWR	200 max	v.o.
4/13	W. Warren	110	B. Zajda
4/13	New Braintree	200	M. Lynch#
4/27	P.I.	180	R. Heil
4/27	Pembroke	250	G. d'Entremont
4/28	Turners Falls	400	F. Bowrys
4/28	W. Roxbury	100	M. Iliff

Northern Rough-winged Swallow

3/30	Wayland	1	G. Long
4/7	Northampton	1	C. Gentes
4/13	W. Warren	4	B. Zajda
4/19	Mashpee	5	M. Keleher
4/20	S. Peabody	4	R. Heil
4/27	Woburn (HP)	4	M. Rines
4/27	Boston (PO Sq.)	18	R. Stymeist#
4/28	W. Roxbury	25	M. Iliff

Bank Swallow

4/26	P.I.	1	J. Miller
4/26	W. Warren	2	B. Zajda
4/27	Boston	3	R. Stymeist#
4/27	Turners Falls	5	S. Surner

Cliff Swallow

4/27, 28	Turners Falls	1, 4	Surner, Bowrys
4/30	W. Roxbury	1	M. Iliff
4/30	Easthampton	3	C. Gentes

Barn Swallow

3/29	Ipswich	1	J. Berry
3/29	Nantucket	1	MAS (J. Galluzzo)
4/10, 27	P.I.	1, 24	R. Heil
4/19	Mashpee	4	M. Keleher
4/20	Topsfield	3	P. + F. Vale
4/22	Burlington	4	M. Rines
4/23	N. Truro	5	D. Manchester
4/27	Melrose	4	P. + F. Vale
4/30	Mashpee	6	M. Malin
4/30	W. Roxbury	10	M. Iliff

Red-breasted Nuthatch

3/7	Ipswich	3	J. Berry
3/13	Westport	6	R. Stymeist#
3/25	Chatham	7	R. Heil
3/27, 4/27	Mashpee	13, 8	M. Keleher
3/30	Nantucket	3	MAS (J. Galluzzo)
4/19	Harwich	6	CCBC (A. Curtis)
4/26	Lee	4	M. Lynch#

Brown Creeper

3/29	Wompatuck SP	3	W. Childs#
4/6	Mashpee	4	M. Keleher
4/6	Tyringham	8	M. Lynch#
4/10	Boxford (C.P.)	4	J. Offermann
4/10	S. Quabbin	5	L. Therrien
4/12	Hubbardston	5	C. Caron
4/13	Petersham	8	M. Lynch#
4/20	Hawley	8	M. Lynch#
4/20	HRWMA	4	T. Pirro
4/21	Manchester	5	S. Hedman
4/25	Groveland	2 pr	P. + F. Vale

Carolina Wren

3/2	Falmouth	8	G. d'Entremont
3/13	Westport	28	R. Stymeist#
3/14	Ipswich	7	R. Heil
3/16	Woburn (HP)	6 m	M. Rines#
4/12	Stoughton	8	G. d'Entremont
4/19	E. Gloucester	10	J. Nelson
4/19	Blackstone	15	M. Lynch#
4/20	Braintree	11	G. d'Entremont

House Wren

4/5	Cambr. (F.P.)	1	E. Wylde#
4/13	Oxford	1	D. Berard#
4/19	Belmont	1	S. Baker
4/20	Nahant	2	O. Spalding#
4/24	Winchester	1	M. Rines
4/24	Lexington	2	M. Rines
4/24	Concord	2	P. Alden
4/26	Shelburne	2	C. Caron
4/27	Arlington Res.	3	M. Rines
4/27	Spencer	2	M. Lynch#

Winter Wren

3/31	Watertown	2	D. Logan
4/6	Tyringham	2	M. Lynch#
4/8	Boxford (C.P.)	2	P. + F. Vale#
4/13	Belmont	2	R. Stymeist
4/13	Petersham	2	M. Lynch#
4/15	Wakefield	2 m	F. Vale
4/19	Mashpee	2	M. Keleher
4/20	Hawley	6	M. Lynch#
4/26	Lee	8	M. Lynch#
4/27	Wompatuck SP	6	G. d'Entremont

Marsh Wren

3/14	Ipswich	1	R. Heil
3/24	Harwich	1 m	B. Nikula
4/3	Harwich Port	1	B. Nikula
4/6	Mashpee	1	M. Keleher
4/11, 27	P.I.	1, 3	Grinley, Heil
4/27	Mashpee	2	M. Keleher

Golden-crowned Kinglet

3/1	Lenox	6	R. Laubach
3/13	Westport	6	R. Stymeist#
4/5	Carlisle	6	A. Ankers
4/11	P.I.	40+	S. Grinley
4/12	Malden	22+	P. + F. Vale
4/13	Petersham	18	M. Lynch#
4/16	P'town	10+	B. Nikula

Ruby-crowned Kinglet

3/11	Watertown	1	D. Logan
3/14	Blackstone	1	M. Lynch#
4/5, 30	Medford	1, 6	R. LaFontaine
4/16, 19	P'town	5, 8	B. Nikula
4/17	S. Quabbin	15	L. Therrien
4/18, 30	Mt.A.	3, 17	P. + F. Vale
4/23	P.I.	15	J. Offermann

Blue-gray Gnatcatcher

4/13	Wompatuck SP	1	G. d'Entremont
4/15	Longmeadow	1	E. Rutman
4/16	P'town	1	B. Nikula

Blue-gray Gnatcatcher (continued)

4/20	Lexington	2	J. Forbes
4/20	W. Roxbury	pr	M. Garvey
4/20, 27	Woburn (HP)	1, 4	M. Rines
4/22	Littleton	6	G. Marley
4/24	MNWS	4	P. + F. Vale
4/25	Groveland	2 pr	P. + F. Vale

Eastern Bluebird

3/6	Wayland	12	B. Harris
3/7	Falmouth	8	M. Keleher
3/14	Ipswich	9	R. Heil
3/15	Worcester	9	M. Lynch#
3/26	Amherst	8	H. Allen
3/29	Blackstone	7	M. Lynch#
3/30	Grafton	11	J. Liller#
4/13	IRWS	8	S. Hedman#
4/13	Scituate	9	S. Maguire

Townsend's Solitaire *

3/1-3	Rockport	1	v.o.

Hermit Thrush

3/13	Westport	6	R. Stymeist#
4/11	Mt.A	7	R. Stymeist#
4/13	Petersham	12	M. Lynch#
4/13	Wompatuck SP	6	G. d'Entremont
4/18	P.I.	12	S. Grinley#
4/19	Mashpee	7	M. Keleher
4/20	Hawley	6	M. Lynch#
4/30	Medford	6	M. Rines

American Robin

3/6	Worcester	369	M. Lynch#
3/15	Wakefield	275+	P. + F. Vale
3/15	Melrose	175+	P. + F. Vale
3/18	Spencer	256	M. Lynch#
3/29	Blackstone	369	M. Lynch#

Gray Catbird

3/2	Falmouth	2	G. d'Entremont
3/13	Westport	4	R. Stymeist#
3/14	Ipswich	1	R. Heil
4/24	Medford	2	M. Rines#
4/28	W. Roxbury	2	M. Iliff
4/28	Belmont	2	F. Bouchard

Brown Thrasher

3/16	Nahant	1	L. Pivacek
4/11	Amherst	1	D. Minear
4/19	Wakefield	1	P. + F. Vale
4/20	S. Peabody	3	R. Heil
4/21	Medford	3	R. LaFontaine
4/25	Woburn (HP)	5	M. Rines
4/25	Saugus	3	D. + I. Jewell
4/27	P.I.	12	R. Heil
4/27	Spencer	6	M. Lynch#

American Pipit

3/22	Duxbury B.	1	R. Bowes
3/25	P.I.	1	S. Haydock
3/29	Newbury	10	P. + F. Vale
3/30	Bolton Flats	1	T. Murray
4/3	Topsfield	1	P. + F. Vale
4/3	Northfield	25	N. Mole
4/6	Hatfield	20	C. Gentes

Bohemian Waxwing

3/1-4-4/19	Reports of 1-30 I ndiv. From 21 locations		
3/2	Cummington	110	C. Quinlan
3/4	Williamstown	97	T. Collins
3/15-4/15	Fitchburg	122 max	v.o.
3/21-4/13	Newbypt	170 max	v.o.
3/28-4/9	Turners Falls	250 max	v.o.
3/28-4/5	Northfield	300 max	v.o.
3/30	Belchertown	50	M. Taylor
4/1	Northampton	105	T. Gagnon
4/4	Williamsburg	65	G. LeBaron
4/5	Bradford	75	S. + J. Mirick
4/7	Marlboro	55	T. Spahr
4/8	Hadley	100	H. Lappen
4/8	Marlboro	65	T. Spahr

Cedar Waxwing

3/6	Lincoln	50	P. Peterson
3/14	Hadley	135	S. Surner
3/15-16	Fitchburg	54	R. Monroe
3/21	Newbypt	100	S. McGrath#
3/27	Mt.A.	155	R. Stymeist.
3/30	Northfield	100	G. LeBaron
3/31	Groton	150	T. Murray
4/5	Lynn	120	J. McCoy
4/5	P'town	43	B. Nikula
4/7-09	Boston	200+	T. Factor#
4/12	Malden	45+	P. + F. Vale
4/19	Shelburne	65	C. Caron

Orange-crowned Warbler

3/7	Springfield	1	R. Baumhauer
3/12-24	Mashpee	1	M. Keleher

Nashville Warbler

4/27	Pittsfield	1	N. Mole
4/30	Mt.A.	1	C. Nims#

Northern Parula

4/20	Granby	1	L. Rogers
4/25	MNWS	1	D. Sandee#
4/27	P.I.	1 m	R. Heil

Yellow Warbler

4/20	W. Roxbury	1	M. Garvey
4/22	Acushnet	1	M. LaBossiere
4/23	Longmeadow	1	N. Eaton
4/27, 30	Woburn (HP)	1, 5	M. Rines
4/27	Norton	5	J. Shea
4/27	Boston	4	R. Stymeist#
4/28	W. Roxbury	6	M. Iliff
4/30	Fall River	4	P. Gurn#

Yellow-rumped Warbler

3/2	W. Gloucester	2	J. + M. Nelson
3/2	Falmouth	9	G. d'Entremont
3/13	Westport	15	R. Stymeist#
3/27	Mashpee	18	M. Keleher
3/30	Nantucket	100	MAS (J. Galluzzo)
4/8, 29	Woburn (HP)	1, 52	M. Rines
4/18, 27	Arlington Res.	3, 65	M. Rines
4/27	Amherst	32	L. Therien
4/27	Boston	35	R. Stymeist#
4/27	Melrose	75	P. + F. Vale
4/27	Fitchburg	64	C. Caron

Audubon's Warbler

3/29	Marshfield	1 f	G. d'Entremont

Black-throated Green Warbler

4/24	MNWS	1	J. Smith#
4/24	Berlin	1	BBC (S. Sutton)
4/25	Pittsfield	1	N. Mole
4/26	Douglas	4	M. Landon
4/26	Lee	2	M. Lynch#
4/27	Wompatuck SP	2	G. d'Entremont
4/30	Westminster	2	C. Caron

Yellow-throated Warbler

4/25	Oak Bluffs	1 m ph	S. Anderson

Pine Warbler

3/4	Newbury	1	L. Leka
3/6	Gloucester	1	J. Nelson
4/6, 27	Mashpee	8, 23	M. Keleher
4/13	Petersham	12	M. Lynch#
4/17	S. Quabbin	36	L. Therrien
4/19	Blackstone	11	M. Lynch#
4/19	Mashpee	21	M. Keleher
4/27	Boston	10	R. Stymeist#
4/27	Wompatuck SP	22	G. d'Entremont

Palm Warbler

4/10, 25	P.I.	2, 35	Heil, Vale
4/12, 16	Medford	3, 21	LaFontaine, Rines
4/13	W. Springfield	12	J. Zepko
4/16	Amherst	22	L. Therrien
4/17	W. Gloucester	18	J. Nelson
4/19	P'town	10	B. Nikula
4/19	Belmont	24	S. Baker
4/19	Salem	28	BBC (L. dela Flor)
4/20	S. Peabody	52	R. Heil
4/27	Melrose	30+	P. + F. Vale

Black-and-white Warbler

4/17	Gr Barrington	1	J, Johnson
4/20, 27	S. Amherst	1, 3	B. Zajda
4/20	Acushnet	1	K. Langevin
4/21	Manchester	1	S. Hedman

Black-and-white Warbler (continued)

4/21	N. Falmouth	1	I. Nisbet
4/22	Essex	1	J. Style
4/26	Douglas	18	M. Landon
4/27	Wompatuck SP	7	G. d'Entremont
4/30	Mt.A.	3	C. Nims#

Prothonotary Warbler

4/23	MNWS	1	L. Pivacek + v.o.
4/23-28	Nantucket	1	fide E. Ray
4/24-29	Melrose	1	D. Jewell + v.o.

Worm-eating Warbler

4/24	P'town	1	T. Lipsky
4/24	MNWS	1	J. Smith#

Ovenbird

3/31	Brewster	1	R. Everett
4/24	Wompatuck SP	1	SSBC (S. Avery)
4/27	Halifax	1	G. d'Entremont
4/30	ONWR	1	P. Cozza

Northern Waterthrush

3/23	Nantucket	1	S. Langer
4/19, 26	Douglas	1, 6	M. Landon
4/20	Medfield	1	J. O'Connell
4/21	Westminster	1	C. Caron
4/22	E. Middleboro	2	K. Anderson
4/26	Lee	2	M. Lynch#
4/28	Ashburnham	6	C. Caron

Louisiana Waterthrush

4/10	Hubbardston	1	C. Caron
4/11	Lenox	1	R. Laubach
4/11	Holyoke	1	T. Gagnon
4/12	Marlboro	1	T. Spahr
4/19	Colrain/Shelburne	7	C. Caron
4/20	Hawley	7	M. Lynch#
4/24	Berlin	2	BBC (S. Sutton)
4/26	Lee	5	M. Lynch#

Kentucky Warbler

4/19	P'town	1 ph	B. Nikula#

Common Yellowthroat

4/24	E. Middleboro	1	K. Anderson
4/26	Hadley	1	S. Surner
4/26	P.I.	1	J. Miller
4/27	Mt.A.	1 f	D. Bates

Hooded Warbler

4/23	MNWS	1	J. Offermann + v.o.

Wilson's Warbler

4/30	Medford	1 m	P. + F. Vale#

Yellow-breasted Chat

3/24	Marblehead	1	K. Haley

Summer Tanager

4/29	Oak Bluffs	1 m ph	S. Anderson

Western Tanager *

3/26-31	Brewster	2	Maddock

Eastern Towhee

3/2, 4/26	Mashpee	3, 8	M. Keleher
3/13	Westport	5	R. Stymeist#
4/10, 27	P.I.	1, 34	R. Heil
4/17	S. Quabbin	5	L. Therrien
4/19	Blackstone	6	M. Lynch#
4/20, 25	Woburn (HP)	1, 7	M. Rines
4/21	Sudbury	8	P. + F. Vale
4/25	Worcester	17	M. Lynch#
4/26	Scusset B.	7	SSBC (D. Clapp)
4/27	Wompatuck SP	14	G. d'Entremont

American Tree Sparrow

3/1-4/20	P.I.	15 max	v.o.
3/2	Plympton	22	J. Sweeney
3/9	W. Bridgewater	20	J. Hoye#
3/10	Millbury	16	D. Berard
3/10	Westport	24	J. Sweeney#
3/19	Gloucester	17	S. Hedman
4/13	W. Warren	3	B. Zajda

Chipping Sparrow

3/1	Marion	1 ad	M. Maurer
3/28	Pittsfield	1	T. Collins
4/10	Medford	5	M. Rines
4/19	Westminster	15	T. Pirro
4/19	Blackstone	83	M. Lynch#
4/20	HRWMA	26	T. Pirro
4/27	Spencer	80	M. Lynch#
4/27	Wompatuck SP	34	G. d'Entremont
4/27	Boston	25	R. Stymeist#

Clay-colored Sparrow

4/24	Fairhaven	1	C. Longworth

Field Sparrow

3/27	Mashpee	2	M. Keleher
4/10	Belchertown	2	L. Therrien
4/12	Westminster	2	T. Pirro
4/18	P.I.	4	S. Grinley#
4/19	Colrain/Shelburne	9	C. Caron
4/19	Blackstone	8	M. Lynch#
4/20	S. Peabody	7	R. Heil
4/27	Spencer	7	M. Lynch#
4/29	Woburn (HP)	4	M. Rines

Vesper Sparrow

4/9	Lenox	1	N. Mole
4/12	Hatfield	1	C. Gentes
4/15	Melrose	1	D. Jewell + v.o.
4/16	Hadley	3	F. Bowrys
4/17	Holyoke	1	F. Bowrys
4/17	Williamstown	1	J. Wilder
4/20	Amherst	1	S. Surner
4/23	Leicester	1 ph	M. Lynch#

Lark Sparrow

3/10, 4/3-15	Millbury	1	D. Berard

Savannah Sparrow

3/27	Mashpee	2	M. Keleher
4/6	Duxbury B.	2	R. Bowes
4/13	Cumb. Farms	10	SSBC (J. Sweeney)
4/19	Medford	16	M. Rines#
4/23	Lancaster	19	C. Caron
4/26	Carlisle	20	BBC (Brownrigg)
4/27	P.I.	19	R. Heil
4/27	Melrose	30+	P. + F. Vale
4/27	Leicester	25	M. Lynch#
4/27	Arlington Res.	21	M. Rines
4/27	Boston	40	R. Stymeist#

Ipswich Sparrow

3/6	P.I.	1	R. Heil
3/7	Westport	1 ph	K. Bourinot#
3/22, 4/11	Duxbury B.	2, 1	R. Bowes
3/25	Chatham	1	R. Heil
4/12	Plymouth B.	1	C. Dalton#

Saltmarsh Sharp-tailed Sparrow

4/26	P.I.	1	J. Miller
4/28	E. Boston (B.I.)	2	P. Peterson

Seaside Sparrow

4/20-28	P.I.	1-2	v.o.
4/25	S. Dart. (A.Pd)	1	P. Champlin

Fox Sparrow

3/4, 29	Woburn (HP)	1, 6	M. Rines
3/18, ,28	Norfolk	1, 5	MAS (Yeager)
3/21	Stoughton	4	BBC (GdE)
3/27	Gloucester	5	S. Fulmer
3/30	Longmeadow	7	A. + L. Richardson
4/14	Mt.A	2	R. Stymeist

Swamp Sparrow

3/2	Mashpee	6	M. Keleher
3/4	Wayland	2	B. Harris
4/13	IRWS	4	S. Hedman#
4/20	ONWR	7	BBC (J. Center)
4/22	Burlington	26	M. Rines
4/26	Lee	62	M. Lynch#

White-throated Sparrow

3/14	Ipswich	46	R. Heil
3/23	Longmeadow	25+	M. Lynch#
4/13	Nahant	14	L. Pivacek
4/17	W. Newbury	22	P. + F. Vale
4/24	Newbury	22	L. Leka
4/27	P.I.	42	R. Heil

White-crowned Sparrow

3/2	Plympton	1	J. Sweeney
3/9	Dighton	1	J. Sweeney#
4/13	W. Warren	2	B. Zajda
4/13	Northampton	6	S. Surner
4/13	Cumb. Farms	1	SSBC (J. Sweeney)
4/20	Amherst	1	S. Surner

White-crowned Sparrow (continued)

4/25	P'town	1	T. Lipsky
4/27	DWWS	1	G. d'Entremont

Dark-eyed Junco

3/18	Spencer	92	M. Lynch#
3/27	Malden	75+	P. + F. Vale
4/2	P.I.	27	I. Davies#
4/5	Ashburnham	66	C. Caron
4/13	Petersham	91	M. Lynch#

Lapland Longspur

3/4, 30	P.I.	5, 1	R. Heil
3/29	Salisbury	1	J. Hoye#
4/5	Scituate	1	S. Maguire#

Snow Bunting

3/1, 22	Plymouth	17, 4	K. Doyon
3/4, 28	P.I.	31, 5	R. Heil
3/5	Hadley	340	F. Bowrys
3/18	Sharon	40	P. Peterson
3/23	Newbypt	6	R. Heil
3/29	Nantucket	2	MAS (J. Galluzzo)
3/29	Bolton Flats	5	S. Wheelock
4/5	Scituate	1	S. Maguire#

Rose-breasted Grosbeak

4/10	Athol	2	J. Duprey
4/25	Lincoln	1	G. Loud
4/25	Wayland	1	M. Daley
4/28	Littleton	1 m	G. Marley
4/29	Westwood	1	W. Webb
4/30	Hingham	1	J. Scott

Indigo Bunting

4/25	Northampton	1	A. Hildebrandt
4/29	Nantucket	3	V. Laux

Red-winged Blackbird

3/2	Plympton	300+	J. Sweeney
3/6	Wayland	250	B. Harris
3/8	Spencer	423	M. Lynch#
3/12	Concord (NAC)	800+	S. Perkins
3/14	Ipswich	680+	R. Heil
3/15	Northbridge	410+	M. Lynch#
3/16	Bolton Flats	500	S. Sutton
3/23	Amherst-Hadley	400+	M. Lynch#
4/10	P.I.	130	R. Heil

Eastern Meadowlark

3/6-4/30	P.I.	1-4	v.o.
3/10	S. Dart. (A.Pd)	13	J. Sweeney#
3/17	Newbury	2	P. + F. Vale
3/22	Amherst	1	H. Allen
3/23	Rowley	1	R. Heil
3/26-4/30	Newbypt	1-4	v.o.
3/29	Bolton Flats	5	S. Wheelock
4/23	Leicester	12	M. Lynch#
4/25	Falmouth	10	P. Trimble

Rusty Blackbird

3/2	Plymouth	13	D. Ludlow
3/8	Newton	24	I. Reid
3/29	Bolton Flats	20	S. Wheelock
3/31	Longmeadow	18	N. Mole
4/3	Boston	143	M. Trimitsis
4/5	W. Bridgewater	50	SSBC (H. Cross)
4/6	Tyringham	12	M. Lynch#
4/11	GMNWR	10	P. Gilmore
4/27	Belchertown	55	L. Therien

Common Grackle

3/14	Ipswich	300+	R. Heil
3/15	Wakefield	195+	P. + F. Vale
3/25	Chatham	190+	R. Heil
4/3	Bolton Flats	2750	T. Pirro
4/10	P.I.	565	R. Heil

Brown-headed Cowbird

3/3	Duxbury	70+	R. Bowes
3/13	Westport	40	R. Stymeist#
3/15	Sharon	150	G. d'Entremont
3/30	Taunton	52	J. Sweeney#
4/6	Tyringham	47	M. Lynch#
4/13	P.I.	385+	R. Heil#

Orchard Oriole

4/22	Mt.A.	1 m ad	L. Ferraresso
4/30	Newbury	1 m	S. Stichter
4/30	Arlington	1	M. Rines

Baltimore Oriole

4/5	P'town	1	D. Berard
4/23	Mt.A.	2 m	BBC (Vale)
4/24	Newton	1	H. Miller
4/27	Norton	1 m	K. Sejkora
4/28	Littleton	1	G. Marley
4/30	Bolton	1	P. Sowizral
4/30	Woburn (HP)	1	M. Rines#

Pine Grosbeak

3/2	Windsor	12	K. + M. Conway
3/3	Amherst	17	D. Minear
3/4	Northampton	10	C. Gentes
3/6	Lincoln	12	P. Peterson
3/9	Turners Falls	12	F. Bowrys
3/9	New Salem	4	B. Lafley
3/13	Westport	1	R. Stymeist#
3/20	Groton	1 f	T. Pirro
3/22	Pepperell	1 m	E. Stromstead

Purple Finch

4/7	Canton	18	V. Zollo
4/10, 22	P.I.	3, 10	R. Heil
4/13	Wilmington	7	M. Emmons#
4/13	Carlisle	6	A. Ankers#
4/13	Bradford	6	D. Larson
4/13	Petersham	18	M. Lynch#
4/13	W. Warren	9	B. Zajda
4/19	Westminster	14	T. Pirro
4/20	Hawley	9	M. Lynch#
4/20	HRWMA	22	T. Pirro
4/24	E. Middleboro	5	K. Anderson
4/25	New Salem	12	B. Lafley
4/28	Ashburnham	7	C. Caron

Red Crossbill

3/3-4/14	Bolton	3	Laurie Costa

White-winged Crossbill

4/26	Nantucket	12	V. Laux

Common Redpoll

3/3	WBWS	12	S. Grinley#
3/3	Ashfield	30	S. Sauter
3/8	Burlington	50	J. Mullen
3/8	Newbury	12	L. Leka
3/11	WBWS	20	M. Faherty
3/14	Marlboro	30	J. Dunbar
3/16	Blandford	40	C. + M. Conway
3/22	Shutesbury	30	P. Jacgues
3/30	Lowell	16	M. Baird
4/3	Millbury	23	D. Berard
4/13	Grafton	10	J. Liller

Hoary Redpoll

3/3	Ashfield	1	S. Sauter
3/3	WBWS	2	S. Grinley#
3/9	Sunderland	1	S. Surner

Pine Siskin

3/6	S. Orleans	1+	C. Thompson
3/8	Carlisle	1	A. Ankers
3/9	Shutesbury	50	K. Weir
3/18	Merrimac	2	B. + B. Buxton
3/29	Marshfield	1	G. d'Entremont
4/7	S. Orleans	1	C. Thompson
4/12	Princeton	4	J. Dekker
4/14	Becket	2	R. Laubach
4/23	New Salem	3	B. Lafley
4/27	Wompatuck SP	1	G. d'Entremont

Evening Grosbeak

3/5	Carver	5	T. Morey
3/8	New Salem	2	B. Lafley
3/16	Barre	18	M. Lynch#
3/16, 4/3	Petersham	22, 2	M. Lynch#
3/18	Spencer	4	M. Lynch#
4/5, 28	Ashburnham	43, 1	C. Caron
4/12	Hubbardston	1	C. Caron
4/15	Becket	1	R. Laubach
4/20	Hawley	6	M. Lynch#
4/24	E. Dennis	1	S. McGibbon
4/24	Berlin	1	BBC (S. Sutton)

ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, 42nd, 43rd, 44th, 45th, 46th, 47th, and 48th Supplements , as published in *The Auk* 117: 847-58 (2000); 119:897-906 (2002); 120:923-32 (2003); 121:985-95 (2004); 122:1026-31 (2005); 123:926-936 (2006); 124(3):1109–1115, 2007 (see <http://www.aou.org/checklist/index.php3>).

ABC	Allen Bird Club
A.P.	Andrews Point, Rockport
A.Pd	Allens Pond, S. Dartmouth
B.	Beach
Barre FD	Barre Falls Dam, Barre, Rutland
B.I.	Belle Isle, E. Boston
B.R.	Bass Rocks, Gloucester
BBC	Brookline Bird Club
BMB	Broad Meadow Brook, Worcester
C.B.	Crane Beach, Ipswich
CGB	Coast Guard Beach, Eastham
C.P.	Crooked Pond, Boxford
Cambr.	Cambridge
CCBC	Cape Cod Bird Club
Cumb. Farms	Cumberland Farms, Middleboro
DFWS	Drumlin Farm Wildlife Sanctuary
DWMA	Delaney WMA Stow, Bolton, Harvard
DWWS	Daniel Webster WS
E.P.	Eastern Point, Gloucester
EMHW	Eastern Mass. Hawk Watch
F.E.	First Encounter Beach, Eastham
F.P.	Fresh Pond, Cambridge
F.Pk	Franklin Park, Boston
G40	Gate 40, Quabbin Res.
GMNWR	Great Meadows NWR
H.	Harbor
H.P.	Halibut Point, Rockport
HRWMA	High Ridge WMA, Gardner
I.	Island
IRWS	Ipswich River WS
L.	Ledge
M.V.	Martha's Vineyard
MAS	Mass. Audubon Society
MBWMA	Martin Burns WMA, Newbury
MNWS	Marblehead Neck WS
MSSF	Myles Standish State Forest, Plymouth
Mt.A.	Mt. Auburn Cemetery, Cambr.
NAC	Nine Acre Corner, Concord
Newbypt	Newburyport
ONWR	Oxbow National Wildlife Refuge
P.I.	Plum Island
Pd	Pond
P'town	Provincetown
Pont.	Pontoosuc Lake, Lanesboro
R.P.	Race Point, Provincetown
Res.	Reservoir
S. Dart.	South Dartmouth
S.B.	South Beach, Chatham
S.N.	Sandy Neck, Barnstable
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
TASL	Take A Second Look Boston Harbor Census
WBWS	Wellfleet Bay WS
WMWS	Wachusett Meadow WS
Wompatuck SP	Hingham, Cohassett, Scituate, and Norwell
Worc.	Worcester

Other Abbreviations

ad	adult
alt	alternate
b	banded
br	breeding
dk	dark (morph)
f	female
fl	fledgling
imm	immature
juv	juvenile
lt	light (morph)
m	male
max	maximum
migr	migrating
n	nesting
ph	photographed
pl	plumage
pr	pair
S	summer (1S = 1st summer)
v.o.	various observers
W	winter (2W = second winter)
yg	young
#	additional observers

HOW TO CONTRIBUTE BIRD SIGHTINGS TO *BIRD OBSERVER*

Sightings for any given month must be reported in writing by the eighth of the following month, and may be submitted by postal mail or e-mail. 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 e-mail submission, visit: <http://massbird.org/birdobserver/sightings/>.

Species on the Review List of the Massachusetts Avian Records Committee (indicated by an asterisk [*] in the Bird Reports), 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 Marjorie Rines, Massachusetts Audubon Society, South Great Road, Lincoln, MA 01773, or by e-mail to <marj@mrines.com>.

ABOUT THE COVER

Rose-breasted Grosbeak

Few birds are as striking as a male Rose-breasted Grosbeak (*Pheucticus ludovicianus*) in the spring with his black head, back, wings, and tail, contrasting with a white rump, wing bars, beak, and belly, all accentuated by a flaming rose-red breast that has earned him the charming nickname "cutthroat." In flight, this beautiful bird flashes red and white from his underwing and white from large patches on the upper wing. The female is largely brown and white, with a bold head pattern and brown stripes down her whitish breast, which serve to distinguish her from the female Black-headed Grosbeak. Juvenile birds have tawny breasts and strongly resemble female Black-headed Grosbeaks — better wait until spring to try to separate them.

Rose-breasted Grosbeaks are monomorphic, with no subspecies recognized. They are closely related to, and sometimes hybridize with, Black-headed Grosbeaks, whose song is similar. They breed from northeastern British Columbia southeast across the Great Lakes, and through the Maritime Provinces as far as Newfoundland. Their range extends south into Kansas and Maryland and in the Appalachians as far south as northern Georgia. They are mid- to long-distance migrants, wintering from Mexico through Central America and as far south as Peru, where they tend to winter in second-growth woodlands and forest. They are nocturnal migrants that in Massachusetts are considered common to uncommon during migration. They arrive in mid- to late May, with males preceding females, and are considered a fairly common breeder, especially in central and western Massachusetts. They rarely breed on Cape Cod and are absent from the Islands. In fall, migrants pass through Massachusetts in September.

Rose-breasted Grosbeaks are monogamous and usually produce a single brood per year. They nest in a broad spectrum of habitats, especially deciduous or mixed forests and woodlands. They often nest along streams or ponds but also in parks, gardens, and orchards. The male's territorial song, usually given from an elevated perch, consists of a sequence of melodious phrases up to a second in duration separated by short pauses. The female sings during nest-building, at nest relief, and while incubating. Both sexes also give various call and alarm notes, *clink*s, *squawk*s, and *chuck*s. During courtship, males give a rapid song without pauses from low perches. They also sing in flight with tail spread and shallow wing beats. At a perch they may also fluff feathers and droop wings and tail, showing their white wing bars and rumps; they often hop along the perch. Males defend their territory, attacking and chasing intruders with crown feathers raised, tail spread, and wings flicking. Females will attack females that enter their territory.

Both parents select the nest site, which is usually in branch forks and typically three to fifty feet above the ground in sapling deciduous trees, shrubs, or vines. Both construct the nest, a loose, flimsy cup of sticks, twigs, coarse grass, and stems, lined with rootlets or hair. The usual clutch is four bluish-green eggs, speckled with a variety of dark colors. The female has a brood patch, and the male may have a partial

one. Both incubate, unusual in such a sexually dimorphic species. The female, however, does most of the work. Incubation lasts about twelve to thirteen days until hatching, and both parents brood the chicks until fledging, about ten days. The young birds then depend on the adults for approximately three more weeks. They are fed mostly invertebrates.

Rose-breasted Grosbeaks forage mostly by gleaning foliage but will hover-glean trunks and branches and hawk flying insects. They often come to bird feeders. Their diet is about half invertebrates, including beetles, bees, ants, and caterpillars. The remainder consists of plant materials, including wild fruit such as blackberries, seeds, and sometimes flowers. They are largely frugivorous during fall migration and have been reported staggering along on the ground, drunk from eating fermenting berries. During breeding season their diet is about seventy-five percent animal material.

Rose-breasted Grosbeaks are subject to predation by the usual avian, reptilian, and mammalian nest predators but will mob predators and even attack humans who venture too close to their nest. They are sometimes plagued by Brown-headed Cowbird nest parasitism, but the rate is low compared to most open-nest species. Many are killed by collisions with towers during migration, and they are popular cage birds at their wintering grounds. Nevertheless, Breeding Bird Census data show no long-term population decline in the United States but some decline in Canada from 1966–2000. Their habitat plasticity may help them survive in the constantly changing landscape of humans.

William E. Davis, Jr.

About the Cover Artist: Barry Van Dusen

Barry Van Dusen's work is well known to our readers. Barry has illustrated several nature books and pocket guides, and his articles and paintings have been featured in *Birder's World, Birding,* and *Bird Watcher's Digest*. He was one of thirteen artists to contribute to the long-awaited *Birds of Peru,* published by Princeton University Press in 2007. For that book Barry illustrated sixty species of shorebirds (plates 50–58), depicting various plumages and birds in flight. He frequently exhibits in New England, elsewhere in the United States, and abroad: throughout the British Isles and in France and Holland. In 1994 he was elected a full member of London's Society of Wildlife Artists and is a frequent contributor to its exhibitions. Most recently, during the summer of 2007, Barry exhibited at the Slimbridge Wetland Centre in Gloucestershire, England. He became attracted to nature subjects through an association with the Massachusetts Audubon Society, which began in 1982. Barry has been influenced also by the work of European wildlife artists, whose methodology of direct field sketching he has adopted. His skill as a field artist has enabled Barry to participate in projects abroad sponsored by the Netherlands-based Artists for Nature Foundation. With this organization he has traveled to India, Peru, England, Ireland, and Spain to raise funds for conservation of threatened habitats. In 2007 he became the first U.S. artist to be commissioned by the Wildlife Habitat Trust of Wexham, England, to design the 2007 UK Habitat Conservation Stamp, which is modeled after the U.S Duck Stamp program. Barry resides in the central Massachusetts town of Princeton. His website is <http://www.barryvandusen.com>.

AT A GLANCE

June 2008

DAVID M. LARSON

Hmmm? Another one of those headless birds! Rather than getting bogged down immediately in fine points and technicalities, let's first have a go from the perspective of a first impression — "At a Glance," if you will. Left to my own devices, two species immediately jump to my mind as identification candidates, Green-winged Teal and Long-billed Dowitcher. The inquiring reader should ask, why these?

Let's consider the teal first. The most noticeable features about the bird in the photograph are the white undertail coverts, the cocked stubby tail, and the position of the head under water, just the way a teal often feeds. There are, however, some problems with this assessment. First, the rear end of the bird seems to be riding too high for a swimming duck, and ducks seldom droop their wings when feeding. Even when tipping-up, their wingtips tend to point upward, not downward as the visible wing feathers do in the mystery photo. A closer examination of the photograph suggests that the bird is marked with thin, vertical white lines on the sides and flanks, another feature not characteristic of a Green-winged Teal. The teal and other ducks are out of the running on this last point alone.

Now let's think about Long-billed Dowitcher as a possibility. The bird is feeding in deep water with its head completely submerged, it looks relatively gray in overall

color, and it shows some striping (barring?) on the sides. Not a bad fit for a dowitcher on first appearances. However, it's not perfect! Those bars on the sides are strikingly white, and they appear to extend well up onto the sides of the bird as well as along the flanks. Also, the bird appears too elongated and too chunky to be a dowitcher, and the drooped aspect to the wings is uncharacteristic of a feeding dowitcher. Dowitchers normally keep their wing tips folded on top of their tail, and they tend to have a more forward-leaning aspect in their feeding posture, a function of the rather central location of their legs under their body.

Assuming that the bird is neither a duck nor a shorebird, only two viable possibilities remain: a heron or a rail of some kind. Those side stripes eliminate any of the smaller herons (e.g., Green Heron or Least Bittern), and any heron species would undoubtedly stand taller in the water due its longer legs. Consequently, we are left with a rail as the best possibility. The apparent gray tone of the bird in the photograph, along with its relatively robust appearance, rule out Virginia Rail. Although Soras have white undertail coverts, they very seldom wade into deep water and submerge their heads, preferring instead to feed along reedy pond margins, or else in dense vegetation (e.g., cattails, wild rice, etc.). This leaves only the Clapper Rail and the King Rail as viable possibilities. The whiteness of the mystery bird's undertail coverts; its relatively dull, unpatterned back coloration; a less-than-bold contrast in the flank striping; and the bird's feeding in open water all point to it as a Clapper Rail (*Rallis longirostris*).

Relatively rare breeding denizens of Massachusetts salt marshes, Clapper Rails sporadically nest in places such as Parker River National Wildlife Refuge, Allens Pond Wildlife Sanctuary in South Dartmouth, and scattered localities on Cape Cod. When winter ice is not too severe, they may attempt to overwinter in salt marshes. In Massachusetts this species is very close to the northern limit of its range. David Larson photographed the pictured Clapper Rail in South Carolina in April 2008.

Wayne R. Petersen

Bird Observer Web Content

- Which are the best areas for spring birding at Wompatuck State Park?
- I wonder if there's an "At A Glance" article to help me identify this bird?
- Which *Bird Observer* cover had a Barry Van Dusen sketch of a Carolina Wren?
- I wonder if *Bird Observer* has recommended any good hawk field guides?

These and other questions can be quickly answered by using *Bird Observer*'s online indices at <http://massbird.org/birdobserver/BOIndex/index.htm>. Each of *Bird Observer*'s four regular features — "Where to Find Birds," "At a Glance," "Book Reviews," and "Cover Art" — are indexed back to the 1970s or 1980s and easily searchable by keyword. Check out this web feature, give it a try, and you may find your back issues of *Bird Observer* getting dusted off and used more than ever!

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.
AT A GLANCE is sponsored by the Peterson Field Guide series.

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