Bird Observer

VOLUME 39, NUMBER 6 DECEMBER 2011

HOT BIRDS

October 20, 2011, was the first day of the Nantucket Birding Festival, and it started out with a bang. Jeff Carlson spotted a **Magnificent Frigatebird** (right) over Nantucket Harbor and Vern Laux nailed this photo.

Nantucket Birding Festival, day 2, and Simon Perkins took this photo of a **Scissor-tailed Flycatcher** (left).

Nantucket Birding Festival, day 3, and Peter Trimble took this photograph of a **Townsend's Solitaire** (right). Hmmm, maybe you should go to the island for that festival next year!

Jim Sweeney was scanning the Ruddy Ducks on Manchester Reservoir when he picked out a drake **Tufted Duck** (left). Erik Nielsen took this photograph on October 23.

Turners Falls is one of the best places in the state for migrating waterfowl and on October 26 James P. Smith discovered and photographed a **Pink-footed Goose** (right) there, only the fourth record for the state.

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HARLEQUIN DUCKS BY DAVID LARSON

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Bird Observer

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Birding the Wrentham Developmental Center in Winter

Eric LoPresti

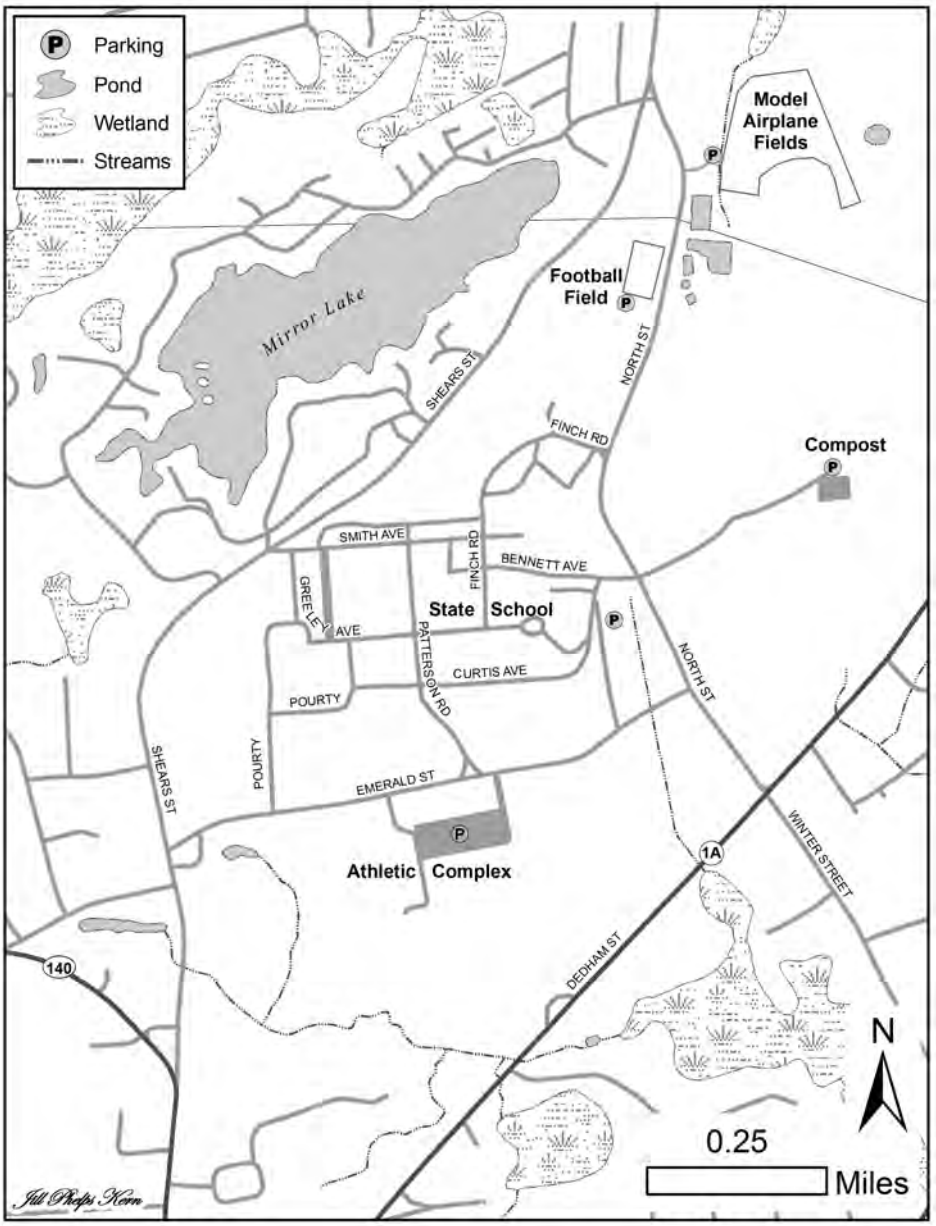
Introduction

The southern part of Norfolk County receives little in the way of birding attention, especially in the winter, though much of it falls into one of Mass Audubon's Important Bird Areas—the Stop River IBA. It holds some gems, however, as the Barnacle, Snow, and Greater White-fronted geese in Sharon have shown in recent years. This, coupled with its easy access from highways, makes it deserving of more attention. As a long-time resident of the town of Wrentham, I present a guide to a birding area that I have found to be productive and easy to access during the winter: the Wrentham Developmental Center. Formerly a mental hospital, and still known around town as the "State School," it has all but closed down in recent years, but most of the land, which was previously farm or facilities, is sparsely managed and attracts birds. Bordered by Route 1A, Shears Street, and North Street in a roughly triangular area, the major spots can all be hit in an hour. Persistence pays off, though, and devoting a whole morning to the area always results in a great morning of inland birding.

I wrote this guide with driving in mind, to allow for some reheating time in between spots on a chilly winter morning, but on a balmy day the area is small enough that walking it is feasible and quite enjoyable. The tour starts at the southwest corner, at the intersection of Shears and Emerald Streets (see map). Driving east on Emerald Street, take a right into the William Rice Athletic Complex.

Birding Spots

William Rice Athletic Complex: This is a series of baseball, soccer, and unkempt fields. Park in the large lot and scan the edges of the fields and parking lot for Snow Buntings. They have shown up here reliably every winter and seem to favor the snowmelt areas on the edges of the lot. Wintering Savannah Sparrows are often found here and, during the summer, breed abundantly in the area. Now walk between the baseball field and the basketball courts and then left on the old road towards the far corner of the field. Along here, you may flush a roosting Northern Harrier, or come upon one coursing over the field. American Pipits are sporadic but regular in winter. As you come down the old road over the hill towards Route 1A, take a left into the field. There is often a cut path here, but not always. Stay near the edge of the field and walk towards Emerald Street. In front of you is a shrubby marsh, which often harbors lingering Eastern Towhees, loads of American Tree Sparrows, and flocks of blackbirds—keep an eye and an ear out for Rusties. Now walk along the edge of the wet area until you reach the soccer field. Walk back towards the concession area and your car. Behind the concession shack lies an especially



productive weedy section of the field, which is always worth poking around for a few minutes.

Leave the complex and take a right on Emerald Street, then a left on North Street. Turn right in 150 yards or so and park at the end of a dirt road leading uphill. Keep your eyes on the power lines along North Street and the fence posts along the dirt road—wintering Eastern Bluebirds perch here often.

Compost Area: After parking, you will find a gated compost area. Walk in and poke around the large compost piles where there are usually flocks in the hundreds of juncos and starlings. Behind the building is a small marsh, an overgrown lot, several compost heaps, and some decrepit machinery. This is a great spot, always harboring flocks of sparrows and finches. I have seen Killdeer here until late November.

To the left of the compost area is a large network of trails on which Wild Turkeys and other common woodland birds are often seen, but I have found them unproductive in the winter, so unless you are looking for a long hike or snowshoe, they are not usually worth checking. The trails do connect to the model airplane fields and to the sewage plant, and occasionally you can luck out on a feeding flock of kinglets and the like.

Walk back to your car and scan the fields down the hill. Red-tailed Hawks and Northern Harriers hunt these parts regularly during the colder months and bluebirds seem to occur in these fields more often than adjacent ones. Drive back down the road and take a right. You will pass the sewage plant on your right in a quarter mile, and then in another 200 yards you will find a parking area down a hill on your right. Park here.

Model Airplane Fields: This is the most productive area on most days that I bird the complex. A few members of the local model airplane club keep the place well stocked with food—there is usually sunflower seed spread around the parking lot and a suet feeder on the field side of the stream. They also occasionally put out muffins and bagels and other expired food. Simply watching from the parking area usually results in a great diversity of common winter birds. The feeding, coupled with the stream next to the lot, draws large numbers of birds. From the small concrete bridge, scan both ways on the stream—a flock of Rusty Blackbirds has spent all winter here for at least the past four years and a few are generally found walking around the stream picking for invertebrates. The thickets on the opposite side of the parking lot occasionally harbor a “half-hardy” and often have an attendant mockingbird chasing other birds away.

A path weaves from the right of the parking lot into the woods along the stream and often is a good place to check for Rusties and Winter Wrens. The field can be productive as well, especially the wet areas nearer to the stream, and deserves at least a cursory check, as do the thickets near the parking lot.

Before you leave check the stream area again, as birds seem to cycle in through here on a regular basis. I generally start my loop of the area here, come back later, and end up with completely different numbers of birds and occasionally different species.

Turn left out of the parking lot, then take a right into the football field parking lot (about 50 yards back the way you came).

Stump Dump: As far as I know, this has not been an active dumping spot for several years, but the rotting logs and cover from old Christmas trees and the like is perfect for sparrows. Walking left from the parking lot, focus on the stumps and shrubs on the edges. This has been the most reliable winter Field Sparrow spot for the

last few years—generally one is around, but occasionally two or three pop out at once. As you get to the end of the row, take a right by the old abandoned school bus and work your way back along that edge to the parking lot. There is a really nice thicket on the north end that ought to have birds, too, but I have not found anything of note there. Keep careful watch on the fields as well, as Killdeer sometimes linger here. Generally, this spot takes little time, but it can be fun chasing Carolina Wrens in and out of the school bus and sorting through the sparrows in the stump area. Also, be aware that this parking lot gets really icy.

From here, take a right and then another right onto Finch road.

State School Grounds: Here is where some walking or slow driving with the windows down can really pay off. Flocks of passerines seem to utilize the grounds extensively for wintering; Pine Warblers and Chipping Sparrows have been found in the dead of winter here in some numbers (e.g., nine Pine Warblers in one flock). However, the flocks are never in the same spots, so exploring is the key here.

A good route would be to follow Finch road, then take a left on Bennett, then a right on Curtis. A parking lot here is abutted by a small stream, which is worth a check. Continue on Curtis around the bend. This area has a feeder, as well as a stand of tall pines that have harbored Pine Warblers as well all the usual winter suspects. Searching this area by foot is advisable. Continue on Curtis (which turns into Pourty) paying careful attention to the fields at the southwest corner, which are often coursed by Northern Harriers. Then continue around the periphery, which will put you back on Finch Road where you began. However, the interior can be good, too, so get out of your car and explore.

Take a right out of Finch Road, a right again onto Emerald Street, and carefully scan the fields and the trees on your way out—occasionally large flocks of Canada Geese are feeding here, and are worth scanning for a Snow Goose or something even rarer. Nearby in Wrentham and Norfolk are a few other birding spots, which I will briefly summarize. If you find yourself hungry, Mike's Deli, on Shears Street less than half a mile north of the intersection with Emerald Street, is a great lunch stop.

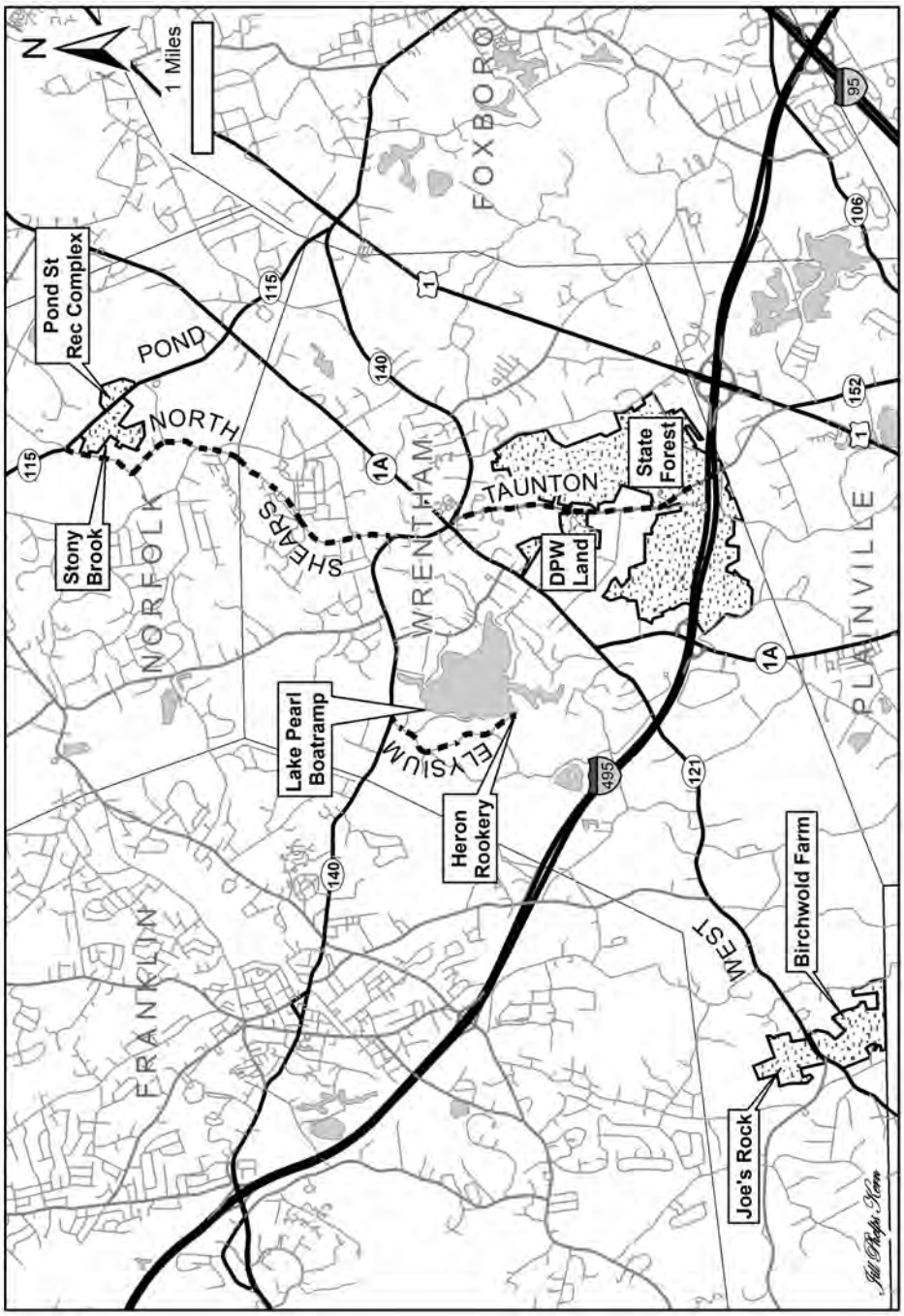
State School Complex in other seasons

Eastern Meadowlarks, Bobolinks, Savannah Sparrows, Indigo Buntings, and more common species all breed in the fields and meadows, while the woods have Wild Turkeys, several thrushes, many warblers, and more. I don't get to bird the area very often in the other seasons, but have noted harriers until mid-May, and in fall it holds pipits and flocks of migrating blackbirds. Hopefully, someone will get out there and find out what else regularly (and rarely) comes through the area.

Other Birding Spots within 15 minutes of the State School Complex

All directions start from the intersection of Route 1A and Route 140 in the center of Wrentham, at the traffic light.

Lake Pearl, Wrentham: Drive north on Route 140 for two miles, take a left on Elysium St., and take your first left into the boat ramp. The boat ramp is one of the



only lake access spots and a good place to scope from. The lake holds wintering waterfowl as well as the occasional Bald Eagle.

Heron Rookery, Esker Woods/Wollomonopaug, Elysium St., Wrentham: Follow the directions for the boat ramp, but continue on Elysium St. and take your second left to remain on Elysium St. The parking area is on the right at the end of the road. This is a heron rookery which is great in the spring/summer for Great Blue Herons and the occasional Great Horned Owl, but can also be productive in the winter if the water is not frozen. It seems to be a decent spot for Hermit Thrushes in December/January. Walk down the path to the beaver pond where the rookery is. There is a two-mile loop, but usually only the first half-mile or so is really productive, so I generally do not walk the loop

Stony Brook Wildlife Sanctuary, 108 North Street, Norfolk: Take Route 140 north for 0.5 mile, then continue straight onto Shears St. where Route 140 bends to the left. Continue north on Shears Street/North Street for three miles to Stony Brook (passing the main complex explained above on the right). Stony Brook is a Mass Audubon property, which includes deciduous and mixed woodland as well as ponds and a marsh. A sightings board on the front of the building can quickly inform you of what has been found in the area. The many feeders around the building bring in many wintering birds and usually an accipiter or two as well. In other seasons, Pileated Woodpeckers, Wood Ducks, and other birds nest here.

Pond Street Recreational Fields, Pond Street, Norfolk: From Stony Brook, continue on North Street another 0.1 mile and take a right on Pond St. (Route 115). The field complex is 0.5 mile up on your left. Or, from the Route 1A/140 intersection, follow Route 1A north for 2.3 miles and take a left on Pond Street; it will be on your right in half a mile. In spring/summer/fall, a trek into the woods straight out from the parking lot provides the only access (not a trail) to a large swamp that has nesting Ospreys and a Great Blue Heron rookery.

DPW land/Wrentham State Forest, Taunton Street, Wrentham: Drive south on Route 140 and take your first (immediate) right through the common (David Brown Way). Follow this across an intersection (you are now on Taunton St.) for another half mile—the DPW land is on the right past the schools, and the state forest is on both sides another mile up. The DPW land, surrounding the senior center, consists of a large white pine forest and a couple ponds, while the state forest (both sides of the road, after the intersection with Beech Street) is mixed deciduous with some streams. When you enter the DPW land there is a fork in the road, with the senior center on the left. The pine forest, straight ahead, is a reliable place for Red-Breasted Nuthatches, even in bad years, and a power station leaves part of one of the ponds perpetually unfrozen, concentrating ducks. To the left is a brush dump, which harbors flocks of sparrows, and occasionally accipiters on the margins. The state forest, your next stop, is good in spring/summer and may have nesting Common Ravens.

Joe's Rock/Birchwold Farm, West Street, Wrentham: From town take Route 1A south and at your first light take a right on Route 121 (West Street). The two parks are across the street from each other on that road, about five miles down. These two parks have a surprising amount of habitat diversity. Habitats include an old field, a

large marsh, a small swamp, many woodland streams, a power line cut, a tall overlook, and hundreds of acres of deciduous woods on these and abutting properties with trails. I find these to be most productive in spring and summer, with many breeding warblers (including Lawrence's annually), but in winter it has held Rusty Blackbirds, Northern Catbirds, and flyby Bald Eagles from the nearby Cumberland Reservoir area.

Ward's Fields, Mechanic Street, Sharon (not on map): This good birding area is more than 15 minutes away, but these fields have held Barnacle, Snow, and Greater White-Fronted geese the past few winters, as well as regular Snow Buntings, Savannah Sparrows, and Horned Larks.

The Wrentham area does not have the bird diversity of Plum Island or Cumberland Farms, but it offers easy access from I-495 and I-95, is manageably small, and has the potential to hold some rare birds. It is an underbirded area, but with a vast number of different habitats, the chances of finding something interesting certainly exist. Therefore, head down for a few hours, bird for an hour while you are passing by, or hit up many of the spots I've described and make a day of it. Don't forget to enter your sightings on eBird, so that a permanent record of birds in the town exists. Development plans are floated every couple years, and the more data we have on the town's birdlife, the better.

Eric LoPresti *began birdwatching in earnest his freshman year of college and now works most of the year as a field biologist studying swallows in South America, as well as dabbling in insects. He birds Wrentham whenever possible but will not be around this winter, so someone else will have to!*

BARNACLE AND CANADA GEESE BY DAVID LARSON

State of the Birds: Documenting Changes in Massachusetts Birdlife

Matt Kamm

Birders know that birds are more than just the background sound track to our outdoor experiences. They are living, breathing creatures, each with its own complex natural history. We are witnesses to the annual spectacle of migration, as well as the longer-term ebb and flow of different bird populations. Birding is one way for us to "listen" to the natural world by observing the way birds respond to the myriad of changes that our species imposes on our shared environment. Decoding what the birds are saying is not always an easy or straightforward process, but Mass Audubon's recently released *State of the Birds* report is an important step on the road to greater understanding.

To interpret what the birds may be telling us, *State of the Birds* drew on several of the most rigorously executed and long-running collections of wild bird observation data available for Massachusetts. Foremost among these were three particular datasets: Mass Audubon's Breeding Bird Atlas I and II, the Breeding Bird Survey curated by USGS, and National Audubon's Christmas Bird Count. Other data sources used in the analyses included information from migration counts by the Manomet Center for Conservation Sciences and the Hawk Migration Association of North America (HMANA), as well as studies by state agencies, academic institutions, local bird clubs, and other organizations. Through the analysis of data on breeding, wintering, and migrating birds, the report provides a comprehensive snapshot of the current state of Massachusetts' birdlife.

TABLE 2. Number of species identified using thresholds from Table 1. *The numbers in parentheses in the BBS and CBC columns are those species with trends that are statistically significant.*

	Atlas	BBS	CBC
Strong Increase	52	21 (12)	52 (51)
Likely Increase	61	21 (5)	57 (46)
Likely Stable	29	28 (2)	27 (3)
Likely Decrease	12	44 (21)	24 (15)
Strong Decrease	34	20 (11)	23 (21)
Present in too few blocks to indicate a trend	31		

Table 2 from the report shows the number of species showing increases and decreases, based on the three main reports utilized (Atlas, BBS, CBC).

This analysis has led to several broad conclusions, many of which will make sense to the active birder. First, grassland and shrubland birds are declining significantly more than birds associated with other habitat types. Eastern Meadowlark, American Kestrel, Brown Thrasher, Northern Bobwhite, and Golden-winged Warbler

have consistently appeared on lists of the fastest-declining birds in the state. Early-successional habitats tend to be prime targets for development, especially the "old farm" habitats where we could imagine ourselves seeing many of the aforementioned birds. When not lost to development, many of these habitats revert to forest within a few decades of being abandoned. Fire suppression and flood control efforts have further reduced the amount of natural early-successional habitat that would otherwise be available to our birds.

While birds of certain habitats seem to be struggling, others are prospering. Urban and suburban birds are doing significantly better than birds in other categories, and several species of natural landscapes (such as Peregrine Falcon) have successfully adapted to urban life. Regenerating forests have bolstered the numbers of many woodpeckers and other woodland-associated birds. Likewise, many migratory waterfowl species and other birds that winter along our coast have been increasing significantly according to the Christmas Bird Count data.

In addition to habitat choices, avian natural history criteria that have yielded significant population correlations include migration strategy, nesting strategy, feeding strategy, and the relative location of Massachusetts within the bird's overall range. Several of these characteristics have become useful indications for how a species might be faring. For instance, those birds that nest primarily on or very near the ground were found to be declining significantly more than other birds, due in part to an increasing conflict with small mammalian predators (cats, skunks, etc.) supported by humans. One group of species in decline due to feeding strategy seems to be the aerial insectivores, whose primary method of feeding consists of catching flying insects in the air column. Species fitting into both of these categories, such as Whip-poor-wills, were invariably found to be significantly declining.

Climate change is a looming concern in any discussion about conservation, and all its potential effects are still not understood. A generally warming climate does go a long way towards explaining some of the interesting trends described in *State of the Birds*. The range expansions of species that, fifty years ago, were thought of as southern birds have been impressive and noteworthy. The local success of Red-bellied Woodpeckers, Cooper's Hawks, Tufted Titmice, and other such species may not be news to most birders, but there are other, more subtle effects of our changing climate. Species that undertake long, arduous annual migrations to the Neotropics seem to be declining more than those birds that migrate only within the USA or not at all. Birds such as Least Flycatchers and Canada Warblers may be suffering from a disconnect in timing as the insects on which they and their young depend emerge earlier each year while they continue to migrate according to their own natural rhythms.

After these analyses, some mysteries remain. Why, for example, is the tree-nesting, forest-dwelling Purple Finch one of the most rapidly declining birds in the Commonwealth? What underlies the gradual but statistically significant declines in breeding population of many of the state's common backyard birds: Northern Flickers, Blue Jays, and Eastern Towhees? You can learn more about these questions and the other topics in this article by visiting Mass Audubon's State of the Birds website

<http://www.massaudubon.org/StateoftheBirds/index.php>. There, you can download your own free PDF copy of the full report. In addition, you can read useful summaries of the data that drove the report, searchable by species, habitat, behavior, range, migration strategy, conservation status, and more.

Matthew Kamm *was born in the Garden State, but he relocated to the Bay State for university and has lived there ever since. He now works as a Bird Conservation Assistant for Mass Audubon, where he has been fortunate enough to participate in the Breeding Bird Atlas II and State of the Birds projects in addition to coordinating Mass Audubon's fledgling American Kestrel nest box program. He has been birding since the age of eight, and his nemesis bird is the Short-tailed Hawk.*

Supporting data may be found on the Mass Audubon website at <http://www.massaudubon.org/StateoftheBirds/index.php>.

Common Eider Die-offs on Cape Cod: An Update

Julie C. Ellis, Sarah Courchesne, and Chris Dwyer

As reported previously in ***Bird Observer*** (Vol. 36, No. 6, 2008), researchers at the Seabird Ecological Assessment Network (SEANET), at the Tufts Cummings School of Veterinary Medicine, began an investigation of Common Eider die-offs on Cape Cod in 2006. The die-offs proved to be far more complex than expected and several additional collaborators have since become involved. At the time of the last report on the topic many questions remained unanswered: researchers at the National Wildlife Health Center (NWHC) in Madison, Wisconsin, for example, had detected the presence of a novel virus in tissues of dead eiders, but the significance of the virus was unknown. Moreover, the identity of the virus had yet to be determined. We were also uncertain about the true numbers of dead birds during these die-offs; in the past, estimates have been highly speculative because Great Island, the apparent epicenter of the die-offs, is difficult to access and survey. The geographic origin of the affected birds was also unclear. Do all the affected birds come from one colony where the virus originated, or are birds infected during migration or during overwintering at Cape Cod? Finally, we could not explain why so many dead eiders were found at Great Island rather than at other locations on the Cape where large numbers of live eiders occur (e.g., Monomoy). In this follow-up report, we present some answers…and some lingering questions.

In order to determine whether the virus could cause mortality in eiders, the NWHC conducted a laboratory study in collaboration with the U.S. Fish and Wildlife Service in 2010. Researchers collected eider eggs from breeding colonies in Maine, hatched the ducklings in the laboratory, and then conducted a viral inoculation experiment. Ducklings inoculated with the virus became sick, whereas the control ducklings (those that were not inoculated) remained healthy. Necropsy findings in the inoculated birds were similar to those seen in die-off birds: necrosis of the liver, pancreas, spleen, and intestine. The virus was isolated from tissues of the inoculated birds, but not from any control birds. Because the virus was re-isolated from the tissues of the inoculated birds, and because the symptoms in the inoculated birds mimicked those seen in die-off birds, the researchers inferred that the virus causes illness, and potentially, mortality of eiders in the wild.

The next step in the investigation was to determine the identity of this novel, pathogenic virus. In October 2010, another die-off occurred, and eider carcasses were sent to the Southeast Cooperative Wildlife Disease Study (SCWDS) at the University of Georgia's veterinary school. Based on genetic analysis, the virus was determined to be a novel orthomyxovirus (family Orthomyxoviridae, genus *Quarjavirus*). The virus has tentatively been named Wellfleet Bay virus (WFBV). There are five genera in the Orthomyxoviridae including Influenza A, B, and C. Quarjaviruses are thought to circulate in transmission cycles involving ticks and birds, particularly colonial nesting birds. But, little else is known about the natural history of these viruses. Now that the virus has been identified, blood serum will be collected from dead eiders

during die-offs as well as from live eiders from breeding colonies. The serum will be used to test for antibodies to the virus; the presence of antibodies in a bird (live or dead) indicates exposure to the virus. Knowing something about which birds have been exposed will tell us about the origin(s) and spread of the virus.

With funding and support from staff at the Cape Cod National Seashore National Park, SEANET hired an intern in 2009 to produce more accurate estimates of the numbers of birds involved in die-offs. The intern surveyed Great Island approximately once per week from mid-November 2009 to January 2010. Live, sick, and dead eiders were counted during the surveys. All dead eiders were also tagged so that they were not re-counted on subsequent surveys. In total, 442 dead eiders were found during the Fall of 2010, representing a conservative estimate because the surveys were begun just after a die-off event had already started. Interestingly, the largest number of live eiders (5,000) was observed nearshore during the mortality event, suggesting that the events may coincide with large aggregations of live eiders nearshore. SEANET will continue to work with interns at Great Island in order to gain a better understanding of the numbers, genders, and ages of birds affected.

During surveys, the interns also collected wings from dead eiders as part of an effort by the USFWS to determine the origin of affected birds. Collections of wings are ongoing and once an adequate number have been obtained, a stable isotope study will be conducted. Stable isotopes are non-radioactive forms of elements that have similar chemical properties, but vary in their atomic mass due to differences in the number of neutrons. Feathers are the most commonly used tissue in stable isotope investigations of avian migration. Most species of migratory birds undergo a complete molt once each year on or near their breeding areas, and the isotopic signatures of foods eaten during this time become incorporated into feathers. Because isotopic signatures are mostly inert once stored in feather tissue, samples collected later on in the year provide information about the geographic location of birds during molt. During die-offs that occur in the fall (October to November), dead male eiders are encountered far more frequently than dead females. Males will have just completed their molt and subsequent migration south in the fall. Thus, the stable isotopes present in their feathers should reflect the location where they molted prior to migration. Information on the origin of affected birds will help us determine whether the virus originates from a specific region or, alternatively, whether birds are infected on their migratory route, or while overwintering at Cape Cod.

The vast majority of sick and dead eiders found during die-offs are observed at Great Island in Wellfleet (Fig. 1).

Thousands of eiders overwinter at Cape Cod and large rafts have been observed in other locations such as Nantucket Sound; however, mass mortality events are very infrequently reported from other locations. Do sick and dead eiders found in Wellfleet simply get trapped there by prevailing offshore winds and currents? Cold-stunned turtles and stranded marine mammals certainly do. In an effort to answer the question, “why Wellfleet?” an aerial survey was conducted during the most recent die-off in Fall 2011. The survey was conducted in the nearshore area of Cap Cod Bay

from Scituate to Provincetown, down the outside of the Cape to Monomoy, halfway out to Nantucket Sound, back to the east shore of Monomoy, up to Jeremy Point, and across Cape Cod Bay back to Plymouth. The survey revealed relatively small numbers (~200) around Jeremy Point at Great Island and large numbers ~15,000 off the southeastern tip of Monomoy with ~200 close/onshore along the southwest tip of Monomoy. These numbers are just a snap shot, but do suggest that Monomoy may be another site where eider die-offs could occur. Similar to Great Island, Monomoy is difficult to access and, therefore, no formal eider surveys have been conducted in this area. Surveys for sick and dead eiders will soon be conducted at the Monomoy National Wildlife Refuge.

This investigation has grown to include numerous agencies and individuals, and has been a model of inter-organization cooperation. Indeed, the progress that has been

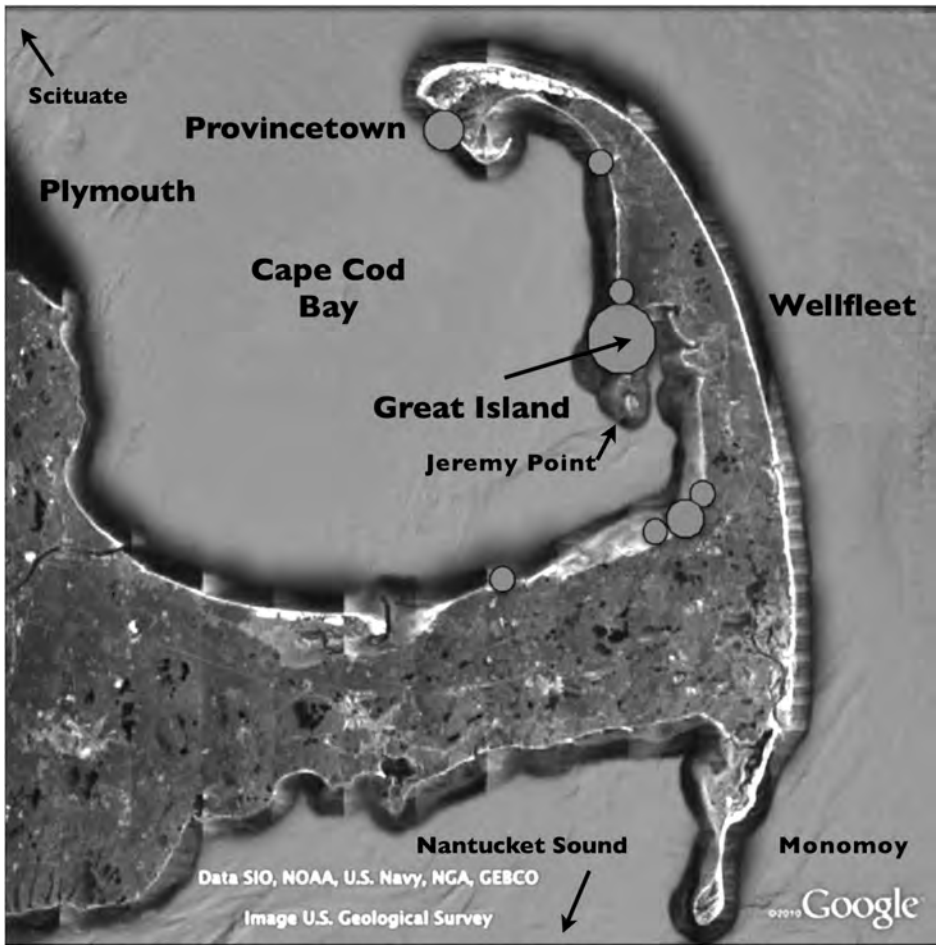


Figure 1. “Typical” distribution of dead eiders during die-offs, as estimated by routine surveys by SEANET volunteers.

made would not have been possible without the cooperation of several groups. Randy Mickley (USDA Wildlife Services) has taken several trips from his office in central Massachusetts to Wellfleet in order to collect sick and dying eiders for submission to various laboratories for diagnostics. Bob Cook of the National Park Service on Cape Cod granted access to Great Island in Wellfleet and provided logistical support. Val Boschler, Hon Ip, and Anne Ballman of the National Wildlife Health Center conducted diagnostics and conducted the virus inoculation experiment. Kevin Keel, Mark Ruder, Justin Brown, and Andrew Allison of the Southeast Cooperative Wildlife Disease Study conducted diagnostics and identified the novel virus. Inga Sidor of the New Hampshire Veterinary Diagnostic Laboratory conducted diagnostics during the most recent die-off. Dick Jordan, SEANET volunteer, alerted SEANET staff to the onset of die-offs at Great Island and worked with interns and Randy Mickley to count and mark dead birds and collect wings. Several other SEANET volunteers in the Cape Cod Bay area also reported dead eiders during their routine SEANET surveys, thus helping to understand the spatial extent of the events. Interns Michelle Stantial (now Avis) and Ashley Gorr conducted surveys of Great Island in sun, rain, gale force winds, and blizzards. Kate Iaquinto and Michelle Avis, at the Monomoy National Wildlife Refuge, will assist with eider surveys at Monomoy.

[Editor's note: Birders can contribute to this ongoing research effort by reporting the discovery of large numbers of dead or sick eiders to SEANET at sarah.courchesne@tufts.edu. It is *not* necessary to report solitary dead or sick birds. Please include precise location, numbers, sex and age, and apparent condition of birds. Photographs are welcome as well. Please be sure to check for leg bands and record the band information. Also note the presence of plastic cable ties, which are attached to dead birds by SEANET volunteers to prevent re-counting. Avoid handling carcasses and do not collect any unless instructed to do so by SEANET or the Fish and Wildlife Service.]

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COMMON EIDERS BY DAVID LARSON

Glover Morrill Allen: Accomplished Scientist, Teacher, and Fine Human Being

William E. Davis, Jr.

Glover Morrill Allen was one of the great naturalists in Massachusetts during the first half of the 20th century. He was born to humble surroundings in Walpole, New Hampshire, in 1869, son of Reverend Nathaniel and Harriet Allen. He developed an early interest in natural history, roaming the woodlands and fields of New Hampshire. After moving to Newton, Massachusetts, where he attended high school, Allen continued to pursue his interests in New Hampshire's natural history from his summer home in Intervale (Tyler 1943). By the time he reached high school, Allen was well on his way to becoming an accomplished naturalist. "He was a marvelous observer and had already an extraordinary ability to recognize birds by their notes or by catching a glimpse of them in the field when he was a boy." (Barbour et al. 1943). Also, "…his ability to recognize birds, particularly the numerous warblers, by their notes was almost uncanny" (Clark 1942). Allen also became an expert taxidermist, and he regularly visited with Charles J. Maynard, a local natural history legend (Davis 2002), who spoke of Allen as a promising lad (Clark 1942). Allen was a bright, talented, and precocious youth; he published his first note on birds in the *Oologist* when he was 11 years old (Allen 1890). This note on the Rose-breasted Grosbeak suggests that he was already a careful observer and a quantitative one:

Glover Morrill Allen in 1901. Photographs courtesy of the Ernst Mayr Library, Museum of Comparative Zoology, Harvard

> The nest is a shallow structure, made of twigs, etc., and is rather oval in shape; the eggs are three to five in number. They are bluish green or greenish blue in color, spotted thickly of reddish brown. Sizes range from .95 to 1.08 in length by .70 to .76 in breadth.

Education and Career at Harvard and the Museum of Comparative Zoology (MCZ)

At Harvard College Allen earned a scholarship, was elected to Phi Beta Kappa in his junior year, graduated Magna Cum Laude with an A.B. in 1901, and received an A.M. in 1903 and a Ph.D. in 1904. In addition to science, Allen mastered a number of European languages including Russian and Danish and thus had direct access to the

European scientific literature, which gave him an edge throughout his career. He also was one of the few ornithologists of that era who was well versed in the broader aspects of biology and the biological literature, including experimental method. His doctoral dissertation involved mammals, and mammals were his prime research focus throughout his career. Birds, however, were to play a secondary but important role in his professional life, for he was to become better known as an ornithologist than as a mammalogist (F. H. Allen 1942). While in college Glover Allen published *The Birds of Massachusetts* (1901) with Reginald Heber Howe; although Allen was listed as second author, he did the majority of the work (Clark 1942). The year that he received his M.A. from Harvard he published his second book, *A list of the birds of New Hampshire* (1903). Allen's career was off to a flying start.

After receiving his A.B. degree Allen embarked on a long relationship with the Boston Society of Natural History. In 1901 he became the Society's Secretary and Librarian, positions he held respectively until 1925 and 1927. He also became Curator of Mammals at the Museum of Comparative Zoology (MCZ) at Harvard in 1907, a position he held until his death in 1942 (F. H. Allen 1942). In 1924 he was appointed Lecturer in Zoology at Harvard University, Associate Professor in 1928, and Professor in 1938.

Allen honed his editorial skills as Editor for *The American Naturalist* during 1906–1907 until the journal was taken over by another publisher (Clark 1942). His journeys abroad began in 1906 with a collecting trip to Labrador with Charles W. Townsend, a physician and stalwart member of the Nuttall Ornithological Club. This adventure led to their publication of a monograph, *Birds of Labrador* (1907).

Glover Morrill Allen at his desk at the Museum of Comparative Zoology

Allen developed an interest in conservation and served on the Massachusetts Audubon Society's Board of Directors from 1918–1925. He was later made an Honorary Vice President. Allen made frequent contributions to the *Bulletin of the Massachusetts Audubon Society*, including a letter in which he defended the American Crow as the best candidate for the Massachusetts state bird. In the letter (1940), perhaps with a little tongue-in-cheek humor, he made the comparison between the crow's attitude and typical, old-fashioned Yankee values:

> To my mind, no species better typifies the supposed 'rugged individualism' of New England than the American Crow. The Crow is a bird of strong character. Plain of garb and with our somewhat nasal twang of speech, his reliance is upon his own sterling traits….Even in the severity of winter, he does not desert our bleak landscapes to follow the less virile species southward, but manages to eke out a living where less versatile birds would starve. Strong, active, of social ways, watchful and alert, ready to adapt himself to changing conditions, the Crow more than any other bird is a true Yankee; cautious when need be, bold at times, but not too aggressive, he holds to his ancestral rights and liberties in the face of constant threat….

Glover Allen was a "joiner" as were many professional naturalists of that period. He was a member of the Naturalists' Club of Boston, the Appalachian Mountain Club, the New England Zoological Club, and the Biological Society of Washington, and he was a Fellow of the Harvard Travelers Club. Of the more professional organizations, he belonged to the Nuttall Ornithological Club (NOC), the American Ornithologists' Union (AOU), and the American Association for the Advancement of Science (AAAS) (Anonymous 1942). Allen was a founding member of the American Society of Mammalogists and served on its Board of Directors from 1919–1942. He was elected Vice-President in 1924 and served in that capacity until he was elected President for 1927–1929.

Foreign adventures

Because of his long association with the Boston Society of Natural History and the MCZ, Allen became involved in a long series of collecting trips that took him to what in those days were extremely wild areas of the world. The trips provided him with a series of adventures that he loved to tell stories about. In addition to Labrador (1906), he visited East Africa (1909–1910), Grenada (1910), the Sudan (1912–1913), Puerto Rico (1917), Haiti (1919), Belgian Congo and Liberia (1926), the St. Lawrence area (1928), Brazil (1929), and Australia (1931). He also collected birds and mammals at many sites in the United States.

Although slight of build, Glover Allen proved to be well adapted to hardship and adventure. Francis Allen related a typical situation (1942):

> That he had what it takes to make a good explorer was evidenced to the present writer one windless summer night on Ipswich Beach some years ago, when that seasoned camper Dr. Charles Townsend and I wandered from dune to dune seeking refuge from mosquitos, while Glover, rolled head and all in his blanket, never stirred all night and awoke refreshed in the morning.

Thomas Barbour, long-time Director of the MCZ (Davis 2001) related several more interesting adventures under some more daunting circumstances in which Allen found himself (Barbour et al. 1943):

> In 1903, in company with Owen Bryant and myself, he [Allen] went on a long cruise on a sponging schooner in the northern Bahamas. [we were caught in a] prolonged drought…. and to these troubles was coupled the cessation of the trade winds, so the vessel lay becalmed and the whole group even tried eating young cormorants, herons, and the like, garnered from the rookeries in the coastal mangroves. Allen used to laugh about this as long as he lived.
>
> In 1909 [he went] to East Africa….and who can ever forget the tale of his being helped climb a spiny Acacia by the antics of an angry rhinoceros close at his rear….
>
> Allen … as is so often with small, slight persons, he was absolutely tireless and with an ability to walk and carry a load which was a source of wonder on numberless occasions.…
>
> In 1912, he went back to Africa with Doctor John C. Phillips. This time, with a caravan, they travelled through the eastern Sudan along the course of the Dinder River and the Blue Nile. One can hear Allen, now, mimicking the broken English of George, the Greek caravan leader, imploring Phillips to purchase great stores of objects of religious art, in Khartoum, of all places. 'Little Christs and small, cheap Virgins; these be very good if Abyssinian poachers raid our camp.'

William E. Schevill (Barbour et al. 1943) relates a story of Allen on a collecting trip to the Houtman Abrolhos islands off the western coast of Western Australia:

> … the rains had failed and water was low; he [Allen] cheerfully and quietly worked for a fortnight on a ration of two cups of water a day, including what was used for cooking.

Allen's letters and journals, housed in the Special Collections of the Ernst Mayr Library of the MCZ, present insight into the work he did on his collecting trips and the difficulties encountered a century ago. He frequently wrote to Samuel Henshaw, Director of the MCZ:

> 21 Dec 1912
>
> …After nearly a month I have reached Khartoum [Sudan]… We had several days in Cairo and managed to do a little collecting under difficulties – obtained a small series of some of the common birds…
>
> [Narobi] 1 July 1909
>
> …We leave for Gulgil, 70 miles by train up the line, in a couple of hours. There we pack in from there for Mt. Kenia with 65 porters…

Traveling was a bit different in those days. From Allen's field journal we hear about a morning on the job:

> East Africa – 1090 (1)
>
> 2 July night fairly cold, but slept well. At daybreak, 6 a.m. went out around the open flat we are camped on. Numbers of Lark with white rump & black crescent on breast [there were no field guides in those days], some singing a short 3-syllable song from a clod of earth. Shot 2. …A few Pipits also in small groups on this plain. Also a large Bustard, white below, black above with white secondaries & tertials [.] note like a yellow leg 'cu——cara.' A big beak with very broad wings.
>
> Got away at 8:30 along a narrow foot path through the hills. Shot a number of birds on the way, saw 2 Frankolins which flushed under my feet … skinned birds all p.m.

Allen, although a collector for the MCZ, was also very interested in the live animal. He kept detailed journals from an early age, and recorded behavioral observations of birds. This example is from his *Journal I Massachusetts, 1899–1900*:

> Sept. 23, '99 Fair, wind N.E., light.
>
> Early in the morning, I came upon about ten Flickers in an open field on the Point. Some were sitting still on the rocks nearby, while others were hopping about on the ground in pairs or singles. Two were seen on the ground facing each other, and, with bills almost straight up, were making their 'Flicker' note, at the same time moving their heads from side to side. Occasionally they would move about, but kept constantly facing each other at about 6 or 8 inches apart. At times they stood motionless, thus facing each other, and finally both flew up in the air a few inches and came down together again, still facing each other, having maintained throughout their same relative position to each other.

This type of careful observation recording was not new. Alexander Wilson had recorded observations like this a century before, and Audubon a half-century previously. Most ornithologists of Allen's day, however, were primarily interested in collecting eggs and bird specimens, so his live-animal orientation was somewhat remarkable.

Glover Allen and the Nuttall Ornithological Club (NOC; Club) and the American Ornithologists' Union (AOU)

Glover Morrill Allen was an influential member of the NOC for 44 years. He was elected Resident Member in 1898 while he was a sophomore at Harvard College. By 1901 he had become Secretary of the Club, a position he held for five years. He served on the Council from 1906–1908 and again from 1913–1919.

When Allen began his long series of collecting trips to exotic places around the world, he presented programs to the NOC on his return. He gave talks, for example,

on his long ocean voyages and travels in East Africa. The Club chose Allen and Charles W. Townsend to compile a pamphlet containing records and field notes on 151 bird species from Club meetings, *Abstract of the Minutes of the Nuttall Ornithological Club for the Year 1907.* When in 1905 Townsend produced a monograph, *Birds of Essex County, Massachusetts,* published as a Memoir of the Club, Allen was the editor (Batchelder 1937).

William Brewster founded the NOC in 1873, and except for a brief hiatus, was its President until his death in 1919. The election of a new President was of great importance because it appeared likely that the presidency held life tenure. Charles W. Townsend and Glover Morrill Allen were nominated for President. Twenty-eight Members appeared for the annual meeting, the largest turnout for any meeting in the Club's history. Allen won on the fourth ballot, and Townsend became the Vice-President (Davis 1987).

Allen had probably been chosen over Townsend because of his vast intellect and a breadth of knowledge of most animal groups. He was widely published in both ornithology and mammalogy and was more familiar with the general literature of biology than most ornithologists of the time. He again defeated Townsend in the annual election of 1920, and Charles Batchelder in 1921. Allen remained President for 23 years until his death in 1942.

Glover Allen's style of leadership was radically different from Brewster's. Brewster had been Jovian and clearly the dominant force at meetings, presiding, as it were, with an iron fist. Allen, who was rather small in stature, was rather quiet and certainly less formal than Brewster. His informality sometimes stretched to include a bit of humor during a meeting. For example, the minutes of the 2 November 1936 meeting state that:

> Dr. Allen, under the prerogative of Club gossip, read an article that appeared recently in the *Traveller* and other newspapers describing how (our eminent member) Ludlow Griswald had collected a European Godwink, at Chatham. Mr. Griscom explained how the story had leaked out through the treachery of the driver of a hired beach-wagon.

In an interview, David L. Garrison, who was Secretary of the NOC during Allen's later years as President, said:

> Glover Allen went out of his way to get to know each new member. In his shy, friendly way he would seek out the new man and find a subject for conversation with him. He put the new member at ease and made him feel at home and sure of support. (quoted in Davis 1987).

Allen also frequently gave the talk at Club meetings, often on short notice. Allen missed, on the average, a single meeting per year (of an average of 16), while Brewster attended only about a third of the meetings during his last two decades as President.

Allen was able to lead the NOC as affectively as Brewster, and guided it through times of change in ornithological thinking, away from the "shotgun" school of

ornithology towards the study of the ecology of living birds. During his tenure as President, notable ornithologists such as Ludlow Griscom and Roger Tory Peterson joined the NOC; therefore, field identification of birds with binoculars rather than shotgun was on the ascendency.

Glover Morrill Allen later in life

Although the old-school Club members began to die off, to be replaced generally with individuals for whom binoculars were the primary tool of the trade, the spirit of the old "Victorian men's club" did not die easily. When Ludlow Griscom, often referred to as the "Dean of the Birdwatchers," started promoting the notion that perhaps a woman might be elected a member of the Club, a backlash ensued that Allen either could not or did not wish to squelch (Davis 1994). Since 1873 the bylaws of the NOC had read "Resident Members shall be persons interested in ornithology …" but in 1936, the bylaw wording was changed from "persons" to "men," thus eliminating for nearly four decades the dire threat of feminine incursion into the old-boy domain.

However, during the Allen years the number of guests at meetings increased as did the number of guest speakers—the Club became more cosmopolitan and more modern in its ornithological philosophy. In an address given in 1923 at the 50th anniversary of the founding of the NOC, Witmer Stone predicted that the changes that would occur in succeeding decades would include the shift in ornithology into broader biological fields, the study of broader biological problems with ensuing specialization, a decrease in the emphasis on collecting, and an increase in study of living birds (Stone 1924). These shifts in perspective certainly occurred in the NOC, and Glover Allen was there to guide the way.

Glover Allen was also influential on the national level through his involvement with the AOU. He was elected an Associate Member of the AOU in 1896, while he was a junior in high school, and a Fellow in 1921. By the middle 1930s, Witmer Stone had been Editor of *The Auk* for 25 years and had been receiving criticism from many quarters for not having strict enough acceptance standards for journal articles. Glover Allen was elected Editor in 1937 when Stone resigned. Allen's strong international scientific reputation and familiarity with the international literature were probably factors in his choice at that critical point in *The Auk*'s history. Allen remained as Editor of *The Auk* until his death.

Teacher, friend, and all-around nice guy with a touch of humor

Glover Allen's accomplishments as an ornithologist and in other disciplines gave him an international reputation—he was known and respected worldwide. But perhaps more impressive was his reputation as a tireless teacher, a good friend, and a generally beloved person. Testimonials, both before and after his death, are unanimous in this regard. Winsor Tyler wrote (1943), "As we think back over his life, we seem to see two pictures: one, the eminent naturalist, admired, respected and honored the world over; the other, our beloved personal friend, quiet, humble, almost self-effacing, the epitome of modesty."

Austin H. Clark wrote (1942):

> Scholar as well as student … taking keen pleasure in helping others though himself shy and retiring and always so far as possible keeping in the background, Dr. Glover Morrill Allen was one of the significantly outstanding mammalogists and ornithologists of his time….He was always courteous to everyone and always anxious to be of assistance in any possible way…Especially characteristic was a lively sense of humor. Frequently he would surprise one with a droll remark, or an unusual combination of words. For instance, a zoo to him was "a museum which is not yet dead."

Thomas Barbour wrote of Allen's personality (Barbour et al. 1943), "… his utter unconcern with praise or credit, his singleness of purpose and gentleness and purity of spirit were beyond all praise." Barbour's comment smacks of hyperbole, but one gets the impression that Glover Allen was a genuinely nice guy.

Glover Morrill Allen puffing on his pipe

Sherwood L. Washburn (Barbour et al. 1943) also remarked on the kindly nature of Glover Allen: "Many books and articles constitute a lasting memorial to Dr. Allen's intellect and industry. Unfortunately, there is little in these scientific achievements that reflects the genial personality and kindness of their author. Everyone liked Dr. Allen."

Francis H. Allen was but one of several who remarked on Allen as a teacher (1942), "But perhaps his most notable service to ornithology was as a teacher, particularly in directing the studies of candidates for the degree of Ph.D. in zoology."

Joseph Grinnell, of the Museum of Vertebrate Zoology at Berkeley, wrote a

letter to Allen for the celebration that Harvard University and the MCZ hosted in honor of Glover Allen in 1939 for publishing three major treatises on mammals in one year. Grinnell, a prominent ornithologist, remarked on the value of Allen's book *Birds and Their Attributes*, which was published in 1925:

> As perhaps the best real evidence I can offer of my high appreciation of your scientific judgment, here is a fact: I teach a university course in 'advanced vertebrate zoology', in largest part ornithological in content. There are literally scores of text-books in ornithology to choose from. Of all these, down continuously from the year of its first printing, I have held your 'Birds and Their Attributes' as being by all odds the best book for the truly university-calibered students to use. Its stimulatively philosophical tenor is ideal, and the information you selected for inclusion, judiciously comprehensive.

Professor F. L. Hisaw, who apparently didn't have a high regard for ornithologists, made an exception for Glover Allen. In a speech at the 1939 celebration Hisaw said:

> The attainment of a man is not only measured by his productive scholarship but is also measured by the kind of students he produces. When I first came to Harvard one of Dr. Allen's students came into my laboratory and asked my advice concerning some of the work he was doing. I soon found he was interested in ornithology and in discussing it with him I said it had been my general observation that most ornithologists were only half-baked zoologists so that it would be well to pay considerable attention to the basic disciplines of Biology. Later on I happened to be appointed a member of the committee to examine this boy for his Ph.D. and his performance was all that one's heart should desire. … That is the kind of experience we have had with many of the students that have come to us from Dr. Allen. So now when a student comes in and tells me he is working with Dr. Allen I never caution him about ornithology. I simply say, 'If you get by Dr. Allen, you should get by all the rest of us and we will be satisfied.'

Glover Allen's comments at the conclusion of the celebration in his honor sum it all up, "I certainly thank everybody here for this most remarkable occasion and I am sure there isn't another one in the room who should not be in my place."

Allen's thoughtful and kindly personality is seen in his many letters to colleagues. This is typified by his letters to Witmer Stone whom he would replace as Editor of *The Auk*:

> June 18, 1931…
>
> I was extremely sorry to hear that you have not been well. It must have been a tremendous piece of work to put THE AUK through under the circumstances.
>
> Please take very good care of yourself…

June 25, 1931…

It was a pleasure to know that you are having somewhat of a rest at your favorite Cape May. I do hope that you will find yourself very much better soon, and so do all of us at the Museum.

A final example is a letter from Allen to his friend, Thomas E. Penard, who was in Paramaribo, Surinam:

Aug 30/21

Dear Thomas:

Just a line or two to let you know that the friends at home have not forgotten you. I imagine you at this moment, sitting in a tropical lounging chair, feet up, under the palm trees drinking a lime-and-soda from a tall glass, and listening to the rattle of tree frogs and the howling-monkeys. Well, I wish I were there myself …

Conclusions

There can be no question that Glover Morrill Allen made substantial contributions to the science of ornithology, the Museum of Comparative Zoology, the Nuttall Ornithological Club, and the American Ornithologists' Union. He was a prolific contributor to the literature of ornithology. He wrote, co-wrote, or edited eight books or monographs on birds. He also contributed 33 papers on birds to the scientific literature and nine more that were in part ornithological. He published his first book review of an ornithological subject in 1905 in the *American Naturalist* and authored a total of 161 book reviews, mostly in *The Auk*, and a substantial portion during his tenure as Editor of the journal. He also wrote 28 obituaries or memorials, again mostly in *The Auk.* His research and contributions to the scientific literature on mammals were even more significant. Glover Allen's influence extended beyond the purely scientific. He was an enthusiastic teacher and mentor. And he was one very much beloved guy.

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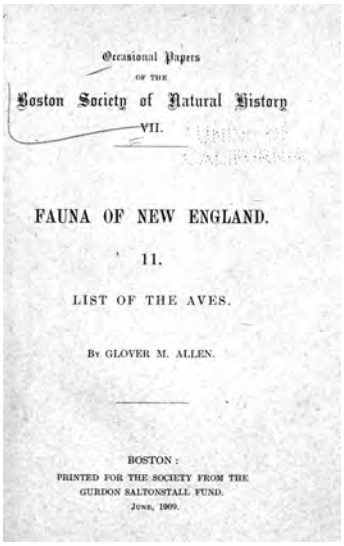


Occasional Papers
OF THE
Boston Society of Natural History
VII.

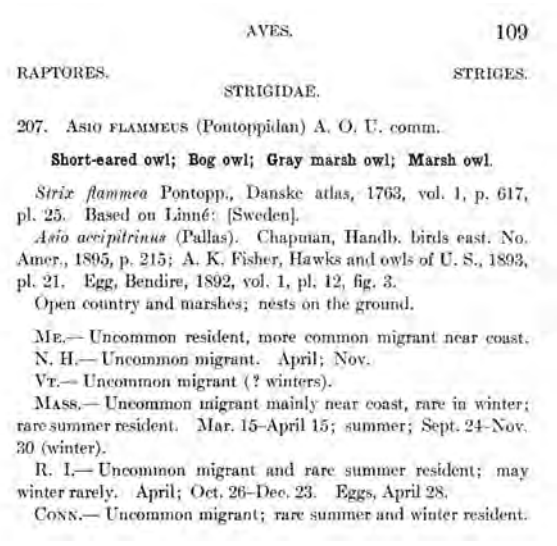
FAUNA OF NEW ENGLAND.

11.

LIST OF THE AVES.

By GLOVER M. ALLEN.

BOSTON:
PRINTED FOR THE SOCIETY FROM THE
GURDON SALTONSTALL FUND.
JUNE, 1909.



AVES. 109

RAPTORES. STRIGES.

STRIGIDAE.

207. ASIO FLAMMEUS (Pontoppidan) A. O. U. comm.

Short-eared owl; Bog owl; Gray marsh owl; Marsh owl.

Strix flammea Pontopp., Danske atlas, 1763, vol. 1, p. 617, pl. 25. Based on Linné: [Sweden].

Asio accipitrinus (Pallas). Chapman, Handb. birds east. No. Amer., 1895, p. 215; A. K. Fisher, Hawks and owls of U. S., 1893, pl. 21. Egg, Bendire, 1892, vol. 1, pl. 12, fig. 3.

Open country and marshes; nests on the ground.

ME.— Uncommon resident, more common migrant near coast.

N. H.— Uncommon migrant. April; Nov.

VT.— Uncommon migrant (? winters).

MASS.— Uncommon migrant mainly near coast, rare in winter; rare summer resident. Mar. 15–April 15; summer; Sept. 24–Nov. 30 (winter).

R. I.— Uncommon migrant and rare summer resident; may winter rarely. April; Oct. 26–Dec. 23. Eggs, April 28.

CONN.— Uncommon migrant; rare summer and winter resident.

Managing Conflicts between Aggressive Hawks and Humans

Tom French and Norm Smith

Hawks are not as large as they look. Even a large female Red-tailed Hawk weighs only about three and a half pounds. Most hawks will not attack people. Some, however, are not afraid of people and will aggressively defend their eggs and chicks. For over 25 years, the authors have responded to requests for help with aggressive raptors across Massachusetts. The responsibility to protect migratory birds, and when necessary, to provide people with relief from personal injury or property damage caused by migratory birds, is shared by the federal and state fish and wildlife agencies. As the Assistant Director of MassWildlife responsible for the "nongame" section of the agency, Tom has had the lead role in addressing these conflicts in Massachusetts. As one of the most active raptor biologists in the state and a staff member of Mass Audubon, Norm has been a great partner in these endeavors.

Although Northern Goshawks have the reputation for being aggressive much of the time, we have had to intervene in a goshawk attack only once. That occasion was in 1989 in Concord, Massachusetts, where the nest was in a residential backyard. There have been many cases of goshawks attacking people on woodland trails, but it is generally fairly easy to keep people away from these sites. Urban Peregrine Falcons are nearly always aggressive, although pairs nesting away from people on natural cliff ledges are usually not. Most other species of Massachusetts raptors rarely display aggressive behavior towards humans. As some species have grown more abundant, however, and pairs are nesting more frequently in suburban neighborhoods, even on urban buildings, conflicts with people have rapidly increased. During the summer of 2011, we received significantly more calls about aggressive hawks than before. A total of 24 hawk attacks were reported, including six that were unidentified because the location was not visited. Five of these attacks were by Red-tailed Hawks, three by Broad-winged Hawks, and ten by Red-shouldered Hawks.

Tom inspecting a clutch of four Peregrine Falcon eggs laid on a coil of rope in a steel box on the former Goliath Crane in the Quincy Shipyard, April 9, 2008. Photo by Norm Smith

In general, wild animals are afraid of people; even large animals, including carnivores, usually shy away. However, familiarity reduces this fear, and raptors that are born close to the sights and sounds of people are more likely to lose this fear.

The two most frequent offenders in Massachusetts historically have been Broad-winged and Red-shouldered hawks. Ten years ago, a small, aggressive hawk was

almost always a Broad-winged Hawk, but more recently, Broad-wings have become less common and Red-shouldered Hawks have noticeably increased. It is amazing how scary these two relatively small birds can be when you are the target. Conflicts between them and humans occur often in wooded residential neighborhoods, although even there, most of the pairs are timid and attempt to remain inconspicuous. Of the few aggressive birds, most are females. They begin an attack quietly by coming in from behind and flying at full speed past the intruding person's head, sometimes so close that you can feel the wind as she flashes by. The attack is mostly just startling. With the few birds that are brave enough to actually hit a person, the approach is the same. The hawk almost always comes from behind and rakes one or more talons across the top of the head. If the feet are closed, the contact feels like being slapped on top of the head. If the talons make contact, they generally cause some bleeding, but the hit is comparable to being slapped by a cat. The actual injury to the scalp is minor, but the nerves can be shattered, especially if the target is a person who has not had much exposure to nature and wildlife. People are often quick to point out that "these birds could put an eye out", but since hawks nearly always attack from behind, facial injuries are very rare. In fact, if you turn and face the attacking hawk, she will usually veer off course and not strike.

The tiny percentage of Red-tailed Hawks that are aggressive enough to strike a person is even lower, and most of these pairs are in urban rather than suburban settings. In Franklin in 2011 an aggressive female attacked a woman seriously enough to require stitches. Later, the bird attacked the two responding Animal Control Officers. This assault was a rare exception. The hawk was nesting in woods by the sports fields of a high school. Red-tails are so common now that they nest anywhere there is food. They nest in trees in city parks as well as on building ledges in Boston, Cambridge, Worcester, Springfield, Lawrence, Gardner, and other cities across Massachusetts. Even if a hawk is willing to be aggressive towards humans, it will attack only if a person approaches the nest or a recently-fledged chick too closely. So, when Red-tails nest on the ledge below the press box at Fenway Park, virtually everyone on that side of the stadium is at risk of being struck. But when they nest on top of a tall tower of stadium lights they are not threatened by anyone in the park, although they would quickly attack someone climbing the tower to change the light bulbs. The best-known nesting pair of Red-tails in Massachusetts in 2011 was the pair that nested on a building ledge at 185 Alewife Brook Parkway in Cambridge. They never displayed aggressive behavior to the people on the sidewalks below even when the three chicks, one after the other, fledged to the ground with people nearby. However, we have noticed that some birds get grumpier

The male Red-tailed Hawk trapped by Norm (April 9, 2008) was released near the New York border but was back at Fenway two days later. Photo by Vin Zollo, Mass Audubon

as they get older, so the behavior of the female of this pair surrounded by people could change as she ages. It is more likely, however, that this pair will continue to be intimidated by humans as nearly all other Red-tails are, including most of the urban birds.

In any given year, there are usually one or two female Red-tailed Hawks in Massachusetts that actually hit someone. The problem with Red-tails is that they cause the most serious injuries, often requiring stitches. A man who became the target of a female Red-tailed Hawk with two newly-hatched chicks (one and three days old) in a nest on a fourth-floor fire escape at Tufts University in Medford, was struck four or five times in a series of consecutive passes. In the first strike, the hawk's talon caught in the skin just above his left cheek at eye level. As the bird passed, the skin tore in a semicircle half way around the left side of his eye and required 19 closely-placed stitches to close. The second pass cut across the base of his left ear requiring nine stitches, and two or three more passes caused minor scratches across the top of his scalp.

Our challenge over the years has been to protect both the public and the birds. The difficulty with these birds is that they never learn. You can blow a loud noise in their face or capture them (a scary experience for the bird), and they will not stop aggressively defending their eggs or chicks. Protecting the nest and young is the female's job, and the male rarely joins in. The difficulty with people is that most feel that they "own" their yard and should have constant, unobstructed use of their property. It is difficult to convince people to stay out of some or most of their yard during the warmest part of the year, or to carry an umbrella in order to check the mail. In the end, most people have little choice but to learn to live with an aggressive Broad-winged or Red-shouldered hawk defending the yard as its territory. However, if we don't make some effort to solve the conflict, some people will (and probably already have) become frustrated enough to kill the hawks themselves. In reality, the chances of proving that someone has killed a problem hawk in his yard is very low, so we try to work out a solution that is tolerable to both the people and the birds.

The federal Migratory Bird Treaty Act (MBTA) provides legal protection for all species of migratory birds native to the U.S. and its territories. The framework allows the hunting of migratory game birds with conditions designed to insure the continued health of these species, and it provides essentially full protection of all other species, including all raptors. Most people believe that hawks have been protected since the first Migratory Bird Treaty (MBT) with England, representing Canada, in 1916. Congress passed this as the MBTA in 1918. However, raptors did not receive federal protection until an amendment was passed in 1972 to the original 1936 MBT with Mexico. Raptors in Massachusetts are also protected by state wildlife law MGL 131:75A. Even employees of a state fish and wildlife agency must be authorized by federal permit to capture, relocate, or kill a hawk in order to stop its aggressive behavior towards people, or even to help the bird. However, one exception to these laws is that a protected bird can be killed by anyone who is being attacked and is protecting his safety or the safety of someone else. That is why the two officers in

Franklin who went to investigate the Red-tailed Hawk that attacked a woman near the high school could legally shoot and kill two birds when they, too, were attacked.

By understanding what motivates hawks to attack, we can also predict what kinds of interventions will stop this behavior. Our desired outcome is to protect the public from injury, allow both adult hawks to live to nest again in future years, and to have the chicks successfully grow up and fledge from a wild hawk nest. Our first approach is simply to keep people away from the nest, or to suggest ways that people can protect themselves as they go about their outdoor activities. In most cases, these measures are all that is needed. Some people are not happy with this arrangement, but they reluctantly go along with it. On average, there have been two cases per year where intervention was required. In 2011, we intervened in three cases involving one pair each of Broad-winged, Red-shouldered, and Red-tailed hawks. Including the Franklin pair of Red-tailed Hawks, in which we were not involved, four pairs of Massachusetts hawks were disrupted because of the aggressive behavior of the female, a record for a single year. We have gone to a great deal of effort over the years to intervene in a non-lethal way because of personal preference rather than for conservation reasons. Since aggressive individuals of these three species are rare in the population, removing them lethally would not have any measurable conservation impact, even though it would stop the conflict. Since lost mates are quickly replaced during the nesting season, a pair would remain in the same territory and the new bird would almost certainly be docile. In many ways lethal removal is the more logical solution but one that would certainly generate public disapproval.

The 2011 case in Holliston involved a pair of Broad-winged Hawks that nested at the end of the driveway in a large sugar maple on the edge of the lawn. This was a single family home, but it also served as a home daycare facility for very young children with a play area on the opposite side of the house. As soon as the first chick hatched, the adult female began hitting people when they got out of their cars until they arrived at the front door of the house, which was not visible from the nest. Usually, it would be difficult to justify intervening in a case like this. The hawk drew blood on several occasions, but the injuries were minor and a family could learn to cope with this for the seven weeks it would take until the chicks fledged and dispersed. However, this hawk was also hitting parents delivering their young children to daycare. Some of the parents were not rational about the level of risk as they responded to threats to their own offspring. Since our strategies do not harm the birds and in fact may serve to protect them from the retaliation of a homeowner, we decided to end this conflict. Tom climbed the tree. Although he was struck five or six times in the process, he removed the chicks and the nest. The chicks were placed into the nest of another Broad-winged Hawk in Hanson the following day, and later successfully fledged. The adult female very quickly stopped her aggressive behavior, and the more bashful adult male was never seen by anyone. Since Broad-wings use a nest only once, next year this pair will nest in a different tree nearby but will not likely be a problem. Most but not all conflicts with aggressive Broad-winged Hawks are one-year events. Red-shouldered Hawks may re-use a nest in multiple years but move fairly often. Red-tails, however, sometimes re-use their nest for many consecutive years.

Two Red-tailed Hawk chicks and a cracked egg on a fire escape at Tufts University, May 6, 2011. Photo by Norm Smith

At Tufts University, there was no doubt that the aggressive behavior of the Red-tailed Hawk nesting on the fire escape had to be stopped before she seriously hurt someone else. When these birds are not afraid of people, they often stand their ground at the nest and refuse to leave. They hold their wings open and puff up all of their feathers to look as threatening as possible. For protection, we wear a helmet and a pair of gloves when approaching a nest in a tree or on a building. On several occasions we were able to slowly get close enough to grab the hawk by the legs. More often than not, however, the bird is faster than we are and dodges our grab and then turns the tables by grabbing our gloved hand. The outcome is the same. The hawk gets caught. This is good for several reasons. First, we want to hold the hawk while the chicks and eggs are being removed. We also want to band her so that we will be able to recognize her in future years. In the case of a very aggressive hawk we may want to hold her for a period of time or move her some distance away until her aggressive behavior has subsided. The female at Tufts allowed us to approach within about five feet before flying right at the lead person. She was caught and banded, transported to the Blue Hills, and released there the following day. She was back at the nest site, 15 miles away, later the same day. The younger of the two chicks, which had hatched two days after the first, had not competed well with its older sibling. An unexpected benefit of this intervention was the chance to save a chick that would have died during the next couple of days. After the chicks were kept for five days until both were well fed and strong, they were fostered into another pair's nest and fledged well.

The aggressive female and her mate had nested on campus for several years without causing any conflict, but the original nest site was high in a tall white pine behind a nearby building. This tree had been broken off by a lightning strike and was later cut down, so the hawks had moved to the fire escape where they were suddenly too close to people. Next spring, it will be the responsibility of the university staff to persistently remove any nest material on the fire escape or any of the buildings before the birds have a chance to lay an egg. If the grounds people are diligent, the hawks will be frustrated from continued failed efforts to complete a nest and will move to a different site. Once they nest in a tall tree or some other site out of the way of people, they can be allowed to build and settle in. After they establish a new site where they will feel safe from people, they will likely continue to nest there for many years. As most people enjoy seeing hawks on campus, this outcome is best for both the birds and people.

Over the years, the most notorious aggressive hawk in Massachusetts was the female Red-tail that struck numerous people around her nests in Fenway Park and Boston University from 2002 through 2008. In some years, this bird became very

aggressive as soon as nest construction began. In 2002, she made news when the pair nested on a metal-grated ledge just below the press box. On her first two days of aggression, she struck at least five people in the park, two of whom needed stitches. Her nest was removed before an egg was laid, and all new sticks were knocked off the ledge every day until the pair finally gave up and moved to a tree just outside the park where they successfully nested without bothering anyone. In 2003, they nested on a dorm fire escape and were greatly enjoyed by the students living in the room by the nest. Unfortunately, graduation ceremonies were scheduled to be held in an area below the nest, and the female, with a single chick still one or two weeks away from fledging, became defensive and hit four or five people during rehearsal the day before. Since the University justifiably feared that she would dramatically disrupt graduation ceremonies, we intervened. She was captured on her nest along with her large, well-feathered chick and taken to the Wildlife Clinic at the Tufts School of Veterinary Medicine in Grafton. They were kept for a month together in a large flight cage. The female continued to feed and care for the chick until it could fly, and afterwards until the chick was fully independent. Then both were banded and taken to near the New York border and released in late summer. The chick has not been seen again, but the female nested in Boston right on schedule the next spring.

In 2008, she nested back on the ledge under the press box at Fenway Park, where on April 2nd a Boston Globe photographer photographed her hitting a high school girl from Connecticut who was visiting Fenway as part of a school trip. In an abundance

What to do When Hawks Get Trapped

In the pursuit of prey, a hawk may focus its attention on the target to the exclusion of everything else. In the process, it can get hit by a car, strike a window, or fly into a warehouse. Fairly often, both the hawk and the small bird it was chasing are found dead together on the road or under a window. Those that fly through open loading dock doors of a warehouse become trapped as they fly up to the high rafters and can no longer see out through the open door. At least a dozen times a year, the authors receive calls to help get a hawk out of a warehouse. A decade ago, the hawk would usually be an American Kestrel, but now it is almost always a juvenile Cooper's Hawk. With 30+ foot high ceilings, capturing a hawk in a large warehouse is very difficult. In some cases, the hawk is in no rush to get out as it hunts and captures House Sparrows and European Starlings that live in the warehouse. Patience is the best solution. Usually within three or four days, if at least one door is left open, the hawk will find its way out. To speed up the process, we suggest spreading birdseed or bread on the loading dock to attract sparrows and starlings. This will sometimes lure the Cooper's Hawk down low enough to see out the door. If it can see out, it will usually head straight for the trees, sky, and freedom.

For help rescuing hawks trapped behind pigeon netting, in building lobbies, or in similar situations in the Boston area, call the Animal Rescue League of Boston at 617-426-9170.

of caution by the park, the girl was taken by ambulance to a hospital. Her injury was bloody but not serious. Four people were struck that day and the next, so it was clear that the hawk's behavior had to be stopped. That year, park staff had been removing sticks from the ledge to discourage nesting, but one of the pair brought back a winter knit stocking hat and the female laid an egg on it with no other nest material. The egg rolled off the hat the same day and was abandoned as nest building continued. The hat, along with new sticks and the egg, was removed but the female remained aggressive. Efforts to trap her inside the park failed, but the male was captured, so he was transported to the New York border and released in order to disrupt their nesting cycle. Although raptors are said to mate for life, a lost mate is quickly replaced with a new partner. However, the drive to return home during the nesting season is strong, so the original male, now identifiable by his band, was back at Fenway two days after his release and quickly regained his position from his replacement.

We have done one other long-distance relocation of a Red-tailed Hawk, our first. There was a female in 1990 at Franklin Park that struck numerous people jogging and walking on a paved footpath, as well as golfers playing on a fairway that ran parallel to the footpath. Her nest was in a large red oak tree overlooking both. The area was surrounded by yellow caution tape to keep people out of her defense zone, but this cut off the footpath and part of the fairway; there were many complaints. The area was also posted with signs in English and Spanish warning people to stay away, but people continued to be hit. Finally, the neighbors called for the bird to be killed and suggested that they would do it if no one else did. Once the decision was made to intervene, the Park provided a large cherry picker truck to lift one of us up to the nest. This female had been banded. It turned out that she had experienced several previous encounters with people. Norm had trapped and banded her as a juvenile on Chickatawbut Hill in the Blue Hills four years earlier. Later the same year, she had been seen attacking captive ducks at the zoo and after a couple of days struck the building next to the duck pond and was injured. She was rehabilitated for a couple of months at the zoo before being released on the Park grounds where she stayed to nest. Later she was transported to the New York border for release. Her lone chick was fostered into another Red-tailed Hawk nest very close by in Franklin Park. The next spring, the banded female and her mate peacefully raised a family in a stand of trees a short distance away, but more protected from people. The next year (1992), the pair nested next to the golf course again and attacked numerous people before hitting a twelve-year-old girl who was taken to the hospital. This event made the news. The hawk was trapped for the second time, taken to the New York border, and released. This time she was not seen again.

Tom preparing to release a juvenile Red-tail at Norm's banding station on Chickatawbut Hill, October 5, 2011. Photo by Norm Smith

A particularly unusual case involving a Broad-winged Hawk took place in Hingham several years ago when a pair nested in a tree by the back door of a house adjacent to a pool. The family was told that they would have to use the front door and avoid the pool area until the chicks fledged, and hopefully next year the hawks would find another location. In this case the male was the aggressive bird and would hit anyone in the backyard. Having been deprived of the pool for most of the summer, the home owner hired a tree company the following winter to remove all the trees from the yard except for a small Japanese maple in the front yard and a 100-foot tall white pine in the backyard near the property line. The following May, the hawks came back and built a nest in the maple tree in the front yard, and several weeks later the male began attacking again. The family called and said that they were being attacked in both the front and back yards and could not safely leave their house. When Norm went to investigate, he was attacked as soon as he stepped out of the car and found that there were two nests, one in each of the two remaining trees. A second female occupied the nest in the backyard, and the same aggressive male was protecting them both. The chicks from both nests were removed, and placement in foster nests ended the aggressive behavior.

There is no doubt that being hit unexpectedly by an attacking hawk defending its nest can be a traumatic experience. While most of us are happy to see a growing numbers of hawks nesting in cities and residential suburbs, it is likely that the number of conflicts will also continue to grow. However, the reason for the sudden spike of hawk attacks in 2011, from the typical four or five cases to 24, is a mystery. The unique factor this year was how late some pairs nested. Broad-winged Hawks are usually the latest to nest in a season, fledging chicks in late June and July, but this year some pairs of Red-tailed Hawks and Red-shouldered Hawks were still fledging chicks on record late dates in August. These cases of late nesting may have involved pairs that failed earlier in the season and re-nested, but the fledging of chicks this late is very unusual.

Tom French *is an Assistant Director of the Massachusetts Division of Fisheries and Wildlife, where he has directed the Natural Heritage and Endangered Species Program since it began in 1984. Tom has been very active in the restoration and management of the Peregrine Falcon and Bald Eagle, as well as the federally endangered Plymouth population of northern red-bellied cooter (aka Plymouth red-bellied turtle), and others. For six years he chaired the New England Large Whale Recovery Plan Implementation Team, which focused on the recovery of the northern right whale. After monitoring the slow but steady recovery of bats hibernating in Massachusetts caves and mines for 27 years, one of his greatest disappointments has been documenting the unexpected and sudden population crash of four species, including the once abundant little brown bat, as a result of white-nose syndrome. His previous contributions to Bird Observer have included articles on the Northern Raven, Peregrine Falcon, Leach's Storm-petrel, and Whooper Swan.* ***Norman Smith*** *is a self-taught naturalist who has worked for the Massachusetts Audubon Society since 1974. His current position is Director of Blue Hills Trailside Museum and the Norman Smith Environmental Education Center in Milton, Massachusetts. He has studied birds of prey for over 40 years. Norm has rehabilitated injured birds and has successfully fostered over 1,000 orphaned hawk and owl chicks into adoptive nests. In addition, he has captured and banded over 6,000 raptors. His ongoing long-term projects include trapping and banding migrating hawks and owls in the Blue Hills Reservation*

and migrating Saw-whet Owls. He has also done research on Snowy Owls and other raptors wintering at Boston's Logan International Airport. This has included putting satellite transmitters on Snowy Owls and, for the first time anywhere, tracking them from their wintering grounds back to the Arctic. His mission is to use the information gathered from his research to stimulate a passion in everyone he meets to help us better understand, appreciate, and care for this world in which we live.

JUVENILE RED-TAILED HAWKS AT AN URBAN NEST SITE BY SANDY SELESKY

FIELD NOTE

Addendum to Turkey Vulture Nest Story (June 2011 Issue)

Matt Kelly

After the publication of my story, "Discovery of a Turkey Vulture Nest in Berkshire County, Massachusetts" in *Bird Observer* in June, 2011, I was made aware of the discovery of another Turkey Vulture nest in Berkshire County that actually preceded the nest described in my story.

In early July, 2003, Scott Jervas, Aquarium Manager of The Berkshire Museum in Pittsfield, Massachusetts, found the nest of a Turkey Vulture in Dalton, Massachusetts, which is in central Berkshire County. This nest was found on a hillside near the Appalachian Trail off Grange Hall Road, and contained two downy-white Turkey Vulture chicks. The nest was located in a recess of a giant split boulder. Mr. Jervas subsequently brought Thom Smith, Curator of Natural Science of The Berkshire Museum, Dave and Lucy St. James, Ben Garver (a photographer for the *Berkshire Eagle* newspaper), and Tony Costello who all verified the presence of the nest. The photo provided here was taken by Thom Smith on July 6, 2003.

Previously, most Turkey Vulture sightings were from southern Berkshire County. The earliest record of a Turkey Vulture nest in Massachusetts was from Tyringham (in southern Berkshire County) in 1954. The Massachusetts Breeding Bird Atlas (Petersen and Meservey) notes that an immature Turkey Vulture, still with its down, was found dead at Mount Everett (also in south Berkshire County) in August of 1945. The Atlas goes on to report that during its study period from 1974-1979, two nests were confirmed in Barre and at the Quabbin Reservoir (both in central Massachusetts), along with 23 "probable breeding" sites, and 103 "possible breeding" sites, mostly in western and central Massachusetts The Atlas also reports that from 1982 to 1987, eight nests were located in the Blue Hills of eastern Massachusetts, and in 1986, another nest confirmation came from Sturbridge.

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ABOUT BOOKS

The Pen Is Mightier than the Bin

Mark Lynch

Field Notes on Science & Nature. Edited by Michael R. Canfield. 2011. Cambridge, MA: Harvard University Press.

"At one point I described the area as having a 'silly number' of Yellow Warblers." From my field notes of May 1, 2011, while atlasing in Fairhaven and Mattapoisett.

Just after dawn on a cold December 28, 2000, Sheila Carroll and I arrived at the Head of the Meadow Beach in North Truro to kick off our day doing the Truro CBC. As we got out of the car, we were witness to one of the most spectacular flights of alcids I have ever seen in Massachusetts. Birds whizzed by in small flocks at varying distances out to the horizon. Realizing that simply reporting a "crap load" of alcids was insufficient, I began to furiously take notes on numbers and species while simultaneously attempting to use the scope to identify (when possible) the species of the throngs of birds. It was one of the most frantic, frustrating, and insane times I have ever had birding. Even estimating minute by minute, I was recording only a fraction of the birds that zipped by. After the action eased a bit and we got other teams to relieve us, I looked down at my field notes. I had filled pages of my small notebook with numbers, lines, and names as well as various expletives and exclamation points. Among my totals for that short period were 6330+ Razorbills and minimally 8496 "large unidentified alcids." Obviously I would never have been able to even approximate the numbers of birds after the fact had I not been writing continual counts in my field notebook. But there was something else recorded too. The visual chaos of words, lines, and numbers on the pages perfectly captured the excitement and frustration of that moment in the field.

I am a constant field note taker. You will never see me birding without a small notebook in which to record species, numbers, the occasional details on uncommon sightings as well as lists of the mammals, herps, invertebrates, and plants seen in the field that day. This data is translated when I get home into a variety of listing programs and written journals. So committed am I to field note taking that I do it in my sleep, and Sheila has often seen me sound asleep and writing furiously in the air. The only downside of this behavior is that if I wake up suddenly, my hands drop and I end up punching myself in the face. My love of note taking is one reason why I found Michael Canfield's *Field Notes on Science & Nature* one of the best birding books of the last year. Even though this book is only tangentially about birding, field note taking is a behavior we all should cultivate at some level.

Michael Canfield is Lecturer on Organismic and Evolutionary Biology at Harvard University, and he is very interested in the traditions and future of field biology. His introductory essay describes not only what field biologists do but starts even more

basically by describing where “the field” is located. Depending on your area of interest, “the field” can be a rainforest in Borneo, a paleontological site in Mongolia, a native village in Amazonia, or even your backyard feeders.

> Field scientists also have a common set of tools that include binoculars and hand lenses, field guides, good footwear, and the most fundamental and simple of all field equipment: paper and pencil. These final implements are perhaps the most important and are required for the continuing the traditions of recording the science and narrative of the field in notebooks and journals. (p.1)

Though Canfield writes that “the history of field notes has not been written nor will it be written here” (p. 6), his introduction certainly contains what could be considered an outline of what such a history might look like. Besides well-known natural history luminaries like Charles Darwin and Joseph Banks, Canfield also introduces the reader to William Dampier, a pirate-naturalist who also kept extensive field notes. I immediately wanted to follow in Dampier’s foorsteps and continue the tradition of a plunderer-birder.

The introduction is profusely illustrated with large color reproductions from the field notebooks of these naturalists. There is something special about reading Darwin’s own handwriting from his “zoological notebook” describing the behavior of the marine iguana. The reader gets an ineffable sense of the living Darwin on that day, how he thought, what grabbed his interest in the field. It is the idiosyncratic nature of the journals that make them so interesting to read. A page from Carl Linnaeus’s Lapland journal contains a quirky, detailed doodle of Andromeda in the lower corner (p. 7). Meriwether Lewis’s field notes from February 24, 1806, on the Eulachon fish (p. 12) have a large, detailed ink drawing of the fish running diagonally across the entire page creating a very dramatic layout.

Looking at these historical examples, it becomes obvious that the worth of keeping field notes is both obvious and complex. “The value of taking field notes lies both in the actual information that is recorded as well as in what is gained in the process of recording itself.” (p. 14)

It is not just the lists of species written down, but the actual act of writing that forces the natural historian to reflect on what she or he has seen, to consider what species or details are the most important to record. In more detailed journals there is a sense that the field scientist is trying to put on paper what it was like to be in that certain place on that one day. So the best field journals can convey a palpable sense of what doing fieldwork is really like.

The bulk of *Field Notes on Science & Nature* is a wonderful and varied collection of essays by leading field scientists on why keeping field notes is crucial. This includes their very personal definitions of what field notes comprise. The notes run the gamut from a simple list of species seen that day, to complex annotated drawn details of their digs and study areas, to extensive artistic studies of their study animals. Each essay is illustrated with large color photo reproductions of that

scientist's field notebooks. Some of these field notebooks are illustrated just in pencil, others in colored inks and pencils or watercolor, and others include photographs. All are endlessly fascinating and very personal and make *Field Notes on Science & Nature* as much an art book as a science text.

Each essay varies dramatically on how that scientist views her or his field notes.

For renowned natural historian Bernd Heinrich, journal keeping is essential, but he feels that his chaotic pages are for his eyes only, not posterity's. One importance of journals for Heinrich, who has kept field books for many decades, is that in looking back and reading them, patterns of odd events may be revealed, and these may spark further field research or even the writing of a book. He also relates how surprised he was that famous biologist, Ernst Mayr, thought the field note taking was a complete wasted effort as it took too much of the biologist's time when she or he had better things to attend to.

For tropical ecologist Roger Kitching, his field notes are also personal accounts, not intended for anyone's eyes but his own. His journals are "memory prompts" that help recall the favor of that day's expedition. Still, his journal pages are covered with exquisite watercolors of butterflies and kingfishers that beg to be seen by an appreciative audience. In the end he admits these notebooks are a legacy. "Perhaps that row of handwritten accounts, with their sometimes wobbly drawings and their bird lists, will be read by my grandchildren (currently too young to read) and give them a sense of what made the old man tick. I hope so!" (p.87)

For paleontologist Anna K. Behrensmeyer, field notebooks are definitely for future generations to read, and she looks at writing in the field as creating "my own time capsule," (p. 89) which should be written with posterity in mind. Her essay in *Field Notes on Science & Nature* is rigorous and detailed. She looks at field notes as a group record and therefore open to the suggestions and entries of others that join in her field work. She is adamant about establishing a personal note-taking format and process and even making copies of the notes so they are not lost to future audiences. Anthropologist Karen L. Kramer goes even further and keeps three types of on-going journals: one for village events, one for all her coding definitions, and finally a journal just for herself.

For researchers like Jonathan Kingdon and Jenny Keller, field journals can also be collections of fine drawings and watercolors of observations. With these natural historians the very act of drawing makes one look more closely at the subject. There is a marvelous two-page reproduction of Kingdon's drawings of the ear-flagging behavior of the wild feline, the caracal, that illustrates this concept perfectly. Keller also believes that sitting down in the field and taking the time to study and sketch may allow the scientist to record valuable information that may not necessarily be recorded in photography. For those of you who feel you cannot draw, let alone draw outside, Jenny Keller's essay includes a fine introduction into how to draw and paint field illustrations. If you are a hardcore birder, at some point in time, even if you do own a camera, you will likely have to do a field sketch. The importance he assigns to illustrations is why I think Keller's essay should be required reading.

Of course, cutting-edge electronic field note taking is also included in this book. The essay by world katydid expert Piotr Nasknecki is a thorough review of software and techniques, including digital photography, that he uses to record every aspect of katydid life.

Field Notes on Science & Nature ends with a fine summing-up essay by ethologist and ecologist Erick Greene titled "Why Keep Field Notes?" (p. 251–274). He begins by noting how his current students look at field note keeping as a puzzling and archaic practice and voice the attitude that could be summed up as, "Doesn't someone have a spreadsheet to do that?" Greene makes an earnest plea for the resurrection of notebooks in field biology for many reasons. These notebooks capture the wonder and beauty of the natural world while honing the observational skills of the authors. Field notes are THE basic documentation of your time in the field and will give you great pleasure when you go back and read them. Even after a few days, it is surprising how much you can forget about the small details of that day in the field, but by writing it down while there, you can capture the experience for posterity. These notebooks are also incubators of your ideas and observations that will evolve over time. Greene ends with a list of best practices that includes everything from what kind of notebooks to use to the advice to treat your field notebook like a scrapbook.

Though many birders now keep online blogs, most of these capture only a narrow aspect of what a good field notebook can. Most birders' blogs are too short on words and observational details of behavior to make them of any real interest to future generations or even other readers. They are closer to diaries than field notes. I cannot tell you how boring it is to read a blog entry that consists of just a list of species seen that day. Part of the problem is that most birding blogs are not written in the field, but hours or days later, and therefore lack the little details of that place at that moment that capture the subtler aspects of that day. There are of course some fine online birding blogs that do approach the depth and variety of field notebooks. The online journal of artist and hardcore birder Catherine Hamilton is filled with her drawings, including field sketches, as well as some very interesting written content. She has even exhibited her field notes and lists and installation artworks! See <http://mydogoscar.com/birdspot>.

Field Notes on Science & Nature is an outstanding and beautiful natural history book. Just reading essays by this outstanding collection of researchers on what it is like to do field research, including a wonderful foreward by E. O. Wilson, is invaluable. But what makes this book a "must own" is the beauty and wonder of so many reproductions of those scientists' field notes that allow us to see their fieldwork through their eyes. I hate to sound like a Luddite, but for me it is the actual handwriting, scribbles, drawings, and photos taped into the pages that make these field records the lively, invaluable, and very human documents they are. Though birding blogs are fine as far as they go, they could be much more. *Field Notes on Science and Nature* gives all of us some ideas on how we could enrich and expand the records of our birding life for family, friends, and future generations.

From The Birding Community E-Bulletin

NEW BIRD-SAFE BUILDING GUIDE

This month, we draw your attention to a new and highly informative free downloadable publication available from the American Bird Conservancy's Collisions Program on "Bird-Friendly Building Design."

The 58-page publication examines the mirror effect of windows, glass transparency, the "passage effect" caused by dark glass, and the dramatic effects of external and internal building lighting, all of which contribute to bird collisions. The publication also addresses building design, bird movements, and habitat and landscape designs which can either prevent or increase the collision problem.

The publication can be viewed and downloaded at <http://www.abcbirds.org/newsandreports/BirdFriendlyBuildingDesign.pdf>.

TIP OF THE MONTH: REVISIT YOUR BINOCULAR STRAPS

The most important recommendation on using your binoculars in the field is to wear your binoculars around your neck! Carrying them around without using a neck-strap is just asking for trouble. Besides, when they are hung around your neck you always know where they are!

It used to be that binoculars would come with thin, shiny, plastic straps. They were terrible. Today most binoculars come with straps that are fairly wide. These are generally better, but not always much better.

Investing in a good strap for your binoculars is highly recommended. Comfort is essential. Some models come with neoprene segments that can spread out the weight of the binoculars that helps relieve neck and back strain. This is especially true for the popular binocular harnesses, those straps with criss-crossed shoulder straps.

Another suggestion is not to wear your binoculars hung too low. They should ride fairly high on your chest, as opposed to bouncing off your stomach. This helps to reduce the danger and discomfort of swinging binoculars and also keeps them close at hand.

Finally, remember that your straps don't last forever. Revisit them regularly and look into replacing them as they get worn. If you have to tape your binocular strap, it's time for a replacement!

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>.

BIRD SIGHTINGS

July/August 2011

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

July was hot and dry with an average temperature of 77.3° in Boston, 3.4° above normal, surpassing last July as the second hottest July of record. The high of 103° in Boston was on July 22, tying for the second hottest day on record, just one degree short of the 104° record set on July 4, 1911. Temperatures hit the 90s on ten days with a low mark of 63°. Rainfall totaled 2.04 inches in Boston, an inch less than normal. There was no rain for eight straight days during the oppressive heat, causing a big demand for water and increasing fire potential. Thunderstorms were noted on six days in the state with many lightning strikes and even reports of tornadoes.

August weather was wild with the first major tropical storm to hit hard in twenty years as Hurricane Irene roared into our area on Sunday, August 28. Making landfall along the New Jersey coast weakened Irene to a tropical storm when it hit New England. More than 700,000 homes lost power in Massachusetts. Rainfall totaled nearly seven inches in western Massachusetts where the flooding was severe. The south coast area was also hit very hard. The dunes at Horseneck Beach were devastated, and East Beach Road at the end of Route 88 was impassable for many weeks after the storm. The temperature averaged 73.9° in Boston, 1.6° above normal, with a high of 93° on August 1. Rainfall totaled 7.74 inches in Boston for the month, 4.37 inches above the average and the fifth greatest amount in 140 years of record keeping. *R. Stymeist*

WATERFOWL THROUGH ALCIDS

The event of the season was Tropical Storm Irene, which blew into Massachusetts on August 28. There were exciting reports from the coast, but the real story was from inland locations, particularly from the western part of the state. Tubenoses made an astonishing incursion: a Sooty Shearwater and a Leach's Storm-Petrel at Quabbin, Wilson's Storm-Petrels at Lake Pontoosuc in Pittsfield and in Florence. Two **White-tailed Tropicbirds** were reported: one from Lake Onota in Pittsfield and the second from Quabbin Reservoir (as many as 13 tropicbirds were reported from the Northeast during this storm). Inland reports of shorebirds that are rarely seen away from the coast included Whimbrel, Hudsonian Godwit, Ruddy Turnstone, Red Knot, Sanderling, and Short-billed Dowitcher. Two species of phalarope were reported from five inland locations. Laughing, Bonaparte's, and Lesser Black-backed gulls were sighted in several inland locations. **Sooty Terns** were reported from Onota and Quabbin. Black Terns were reported extensively; Common and Forster's terns showed up in several inland locations. Parasitic Jaegers at Quabbin, Fitchburg, and Lakeville were just icing on the cake.

Common Eiders are becoming more numerous as breeders along the coast, but a **King Eider** was a very unusual visitor to Gloucester Harbor in early July. A Long-tailed Duck that spent July in Gloucester and a Harlequin Duck in late August at Race Point in Provincetown were similarly uncommon summer visitors.

There are a handful of June records of **Pacific Loon**, but one seen at Andrew's Point in Rockport on July 17 is apparently unprecedented. A Northern Fulmar on August 17 was exceptionally early. Tropical Storm Irene brought **Band-rumped Storm-Petrels** to three locations on the southern coast. A **Brown Booby** discovered at Corporation Beach in Dennis on

August 16 is only the fifth record for Massachusetts. It lingered in Dennis for a week, allowing many birders the pleasure of seeing and photographing it, then was rediscovered on August 29 in Provincetown. A Brown Booby was reported from a whale watch boat out of Portland, Maine, on August 12, undoubtedly the same bird. At Cuttyhunk on August 31 a visiting yachtsman definitively photographed a **Brown Pelican**.

A **Little Egret** was discovered and photographed on Plum Island on July 10, and either the same bird or another was photographed nearly a month later on August 6. Since this species is extremely similar to Snowy Egret, it is possible that it could have gone undetected.

Although kites are being reported with more frequency, they are more common during spring migration, so July reports of a **Swallow-tailed** and **Mississippi kite** were extremely unusual. Mississippi Kite bred in New England for the first time in 2008 (Newmarket, New Hampshire), and it is undoubtedly only a matter of time before it is recorded breeding in Massachusetts. A **Black-necked Stilt** in Orleans was the shorebird highlight of the period.

The occurrence of **Sooty Terns** in Massachusetts is closely associated with hurricanes, and there were a number of sightings during Tropical Storm Irene at coastal locations in addition to the inland birds. **Bridled Tern** is far rarer, and the sighting of birds from three locations was exciting. A **Gull-billed Tern** was sighted in Westport on the day of the storm, and a second individual spotted at Plum Island two days later may have been associated with the storm. **Sandwich Terns** were reported from Martha's Vineyard and Nantucket. Jaegers were well reported, including up to seven **Long-tailed Jaegers**.

An **Elegant Tern** on Plum Island on July 23 was initially identified as a Royal Tern until photographs were carefully examined. This is only the second record of the species in Massachusetts. The first, a bird discovered on South Beach in Chatham in August of 2002, was also initially identified as a Royal Tern, and it was rediscovered two weeks later. *M. Rines*

Brant			
7/13	Chatham (S.B.)	2 ad	B. Zajda#
7/17-8/29	Duxbury B.	1	R. Bowes
8/22	Squantum	1	V. Zollo
Wood Duck			
7/20	GMNWR	21	A. Bragg#
8/6	Lenox	67	M. Lynch#
8/14	Waltham	27	J. Forbes
8/24	Longmeadow	29	T. Alicea
8/28	Westboro	33	N. Paulson#
Gadwall			
7/5	P.I.	53 ad, 35 juv	R. Heil
7/9	S. Momomoy	30	S. Broker
American Wigeon			
8/6	P.I.	7	S. Sullivan
Blue-winged Teal			
thr	P.I.	6 max	v.o.
8/13	S. Monomoy	4	B. Nikula
Northern Shoveler			
7/27	Wachusett Res.	1 f	B. Kamp
8/20	P.I.	4	M. Harvey
8/29	Quincy	2	V. Zollo
Northern Pintail			
7/4	P.I.	1	F. Bouchard
8/13	S. Monomoy	7	B. Nikula
Green-winged Teal			
8/9	October Mt.	13	E. Neumuth
8/13	S. Monomoy	8	B. Nikula
8/17	GMNWR	4	W. Hutcheson
8/30	P.I.	500	R. Heil
King Eider			
7/6-12	Gloucester H.	1 m	C. Wood + v.o.
Common Eider			
7/6	Boston H.	436 + 117 yg	Stymeist#
8/2	Gloucester H.	130	S. Hedman
8/23	Chatham	120	R. Heil
8/30	P.I.	125	R. Heil
Harlequin Duck			
8/29	P'town (R.P.)	1 f	J. Young
Surf Scoter			
7/20-21	Duxbury B.	2	R. Bowes
7/22	N. Monomoy	2	R. Schain
8/2	Gloucester H.	2	S. Hedman
8/9	Westport	18	M. Lynch#
White-winged Scoter			
7/4	P.I.	6	S. Grinley#
7/9	Winthrop B.	3	P. Peterson
7/12	Gloucester	8	J. Berry#
8/13	Chatham (S.B.)	5	SSBC (GdE)
Black Scoter			
7/2-05	P.I.	6	T. Wetmore + v.o.
8/29	S. Dart. (A.Pd)	2 ph	D. Zimberlin
Long-tailed Duck			
7/thr	Gloucester H.	2	v.o.
Hooded Merganser			
7/21	Becket	3	R. Laubach
7/21	Belmont	2	J. Forbes
7/23	W. Bridgewater	5	S. Arena
7/31	Westboro	7	S. Arena#
8/5	Westminster	3 imm	C. Caron
8/13	WBWS	3	M. Faherty
Common Merganser			
7/6	Becket	3	R. Laubach
7/16	Deerfield	8	H. Allen
8/1	S. Quabbin	6	L. Therrien
8/27	Petersham	11 yg	M. Lynch#
Red-breasted Merganser			
7/9	Winthrop	1	P. Peterson

Red-breasted Merganser (continued)
7/16 P'town 22 B. Nikula
Ruddy Duck
7/1-19 Chestnut Hill 1-2 v.o.
7/12 P.I. 2 R. Heil
Northern Bobwhite
7/16 Falmouth 2 M. Keleher
7/22 WBWS 2 ad, 12 yg M. Faherty
7/27 Chatham 1 B. Zajda#
Ring-necked Pheasant
7/16 Webster-7 2 m C. Caron
Ruffed Grouse
7/2 Quabbin (G10) 1 SSBC (GdE)
7/3 Brookfields 1 ad + 8 yg Lynch
7/26 Westminster 1 C. Caron
Pacific Loon
7/14 Rockport (A.P.) 1 S. Perkins#
Common Loon
7/6 Wachusett Res. pr + 2 yg G. Gove#
8/7 Westminster 8 ad C. Caron
8/27 Petersham 16 ad M. Lynch#
8/29 Quabbin (G35) 8 B. Zajda
Pied-billed Grebe
7/13 Sterling 1 P. Morlock
8/1 GMNWR 1 A. Bragg#
8/14 Wellfleet 1 S. Broker
8/19 P.I. 1 D. Chickering
8/26 Winthrop 1 imm P. Peterson
Red-necked Grebe
8/3 Wachusett Res. 2 K. Bourinot
8/28 Pittsfield (Onota) 1 C. Blagdon
Northern Fulmar
8/17 Stellwagen 1 lt S. Frontierro
Cory's Shearwater
7/9, 7/30 N. Truro 5, 250 B. Nikula
7/16, 8/10 P'town 400, 50 B. Nikula
7/16 Contin. Shelf 14 BBC (M. Iliff)
8/6 Stellwagen 18 P. Trull
8/15 Rockport (A.P.) 4 R. Heil
8/17 Gloucester 4 S. Frontierro
8/28 Tuckernuck 1 R. Veit
Great Shearwater
7/9 N. Truro 8 B. Nikula
7/16, 8/10 P'town 120, 40 B. Nikula
7/16 Contin. Shelf 726 BBC (M. Iliff)
8/6 Stellwagen 900 P. Trull
8/8 Jeffries L. 98 MAS
8/15 Rockport (AP) 1130 R. Heil
Sooty Shearwater
7/9 N. Truro 300 B. Nikula
7/9, 8/6 Stellwagen 150, 1100 Emmons, Trull
7/16, 8/10 P'town 390, 125 B. Nikula
8/27 Rockport (A.P.) 15 P. + F. Vale
8/28 Quabbin 1 ad M. Iliff#
Manx Shearwater
7/16 P'town 23 B. Nikula
7/16 Contin. Shelf 6 BBC (M. Iliff)
7/23 Jeffries L. 7 MAS (D. Larson)
7/26 P'town 14 P. Trull#
7/28, 8/10 N. Truro 16, 74 B. Nikula
8/6 Stellwagen 23 P. Trull
8/15 Rockport (A.P.) 6 R. Heil
Wilson's Storm-Petrel
7/9, 7/16 P'town 400, 1400 B. Nikula
7/16 Contin. Shelf 613 BBC (M. Iliff)
8/4, 8/27 P'town 800, 250 B. Nikula
8/8 Jeffries L. 925 MAS
8/15 Rockport (A.P.) 90 R. Heil
8/23 Chatham 5000 R. Heil
8/28 Pittsfield (Pont.) 1 J. Morris-Siegel
8/29 Florence 1 B. Higgins
Leach's Storm-Petrel
7/16 Contin. Shelf 45 BBC (M. Iliff)
8/28 Westport 1 P. Champlin
8/28 Nantucket 1 V. Laux#
8/28 Quabbin Pk 1 M. Iliff#
Band-rumped Storm-Petrel
8/28 Westport 1 P. Champlin
8/28 Tuckernuck 2 R. Veit
8/28-29 Nantucket 1 V. Laux
White-tailed Tropicbird
8/28 S. Quabbin 1 L. Therrien#
8/28-29 Pittsfield (Onota) 1 J. Morris-Siegel
Brown Booby
8/16-24 Dennis 1 imm ph M. Richmond + v.o.
8/29-31 P'town 1 B. Nikula#
Northern Gannet
7/15, 7/28 P'town 8, 13 B. Nikula
7/23, 8/8 Jeffries L. 46, 39 MAS (Larson)
7/30 Stellwagen 10 BBC (N. Yusuff)
8/15 Rockport (A.P.) 435 R. Heil
8/30 P.I. 230+ R. Heil
Double-crested Cormorant
7/thr Stoneham pr n D. + I. Jewell
8/21 P.I. 253 N. Landry
8/25 Monomoy 700 M. Faherty
8/30 Lexington 70 J. Forbes
Brown Pelican
8/31 Cuttyhunk 1 ph K. Kleister
American Bittern
7/1 E. Boston (B.I.) 1 W. Manter
7/9 Windsor 1 S. Wheelock
7/10 P.I. 1 P. + F. Vale
7/16 Webster-7 1 C. Caron
8/13 Quabbin (G35) 1 B. Zajda
8/24 N. Truro 1 S. Broker
Least Bittern
7/4-16 E. Boston (B.I.) 1 v.o.
7/17 P.I. 2 T. Wetmore
7/23 W. Bridgewater 3 ad + 2 juv S. Arena
8/9 Salisbury 1 E. Kneipfer
8/10 Auburn 1 m ad B. Mulhearn#
8/23 GMNWR 4 W. Hutcheson#
Great Blue Heron
7/thr Stoneham 45 n D. + I. Jewell
7/27 P.I. 21 J. Berry
8/1 GMNWR 14 A. Bragg#
8/10 Sandwich 40 P. Crosson
Great Egret
thr P.I. 85 max v.o.
7/10 GMNWR 7 BBC (S. Martin)
7/29 Westport 58 M. Lynch#
8/2 Revere 14 P. Peterson
8/7 Petersham 3 M. Lynch#
8/22 Chatham 33 B. Zajda#
8/26 E. Boston (B.I.) 24 R. Stymeist#
Little Egret
7/10 P.I. 1 ph P. + F. Vale
8/6 P.I. 1 ph J. Hoye#
Snowy Egret
thr P.I. 246 max v.o.
7/9 Manchester 136 J. Hoye#
7/22 N. Monomoy 47 R. Schain
7/23 E. Boston (B.I.) 45 P. Peterson
8/13 Chatham 35 F. Atwood
8/22 Squantum 49 V. Zollo
Little Blue Heron
thr Chatham 1-2 v.o.
7/9-23 DWWS 1 M. Emmons#
8/1 Manchester 4 D. Young
8/11 Fitchburg 1 imm C. Caron
8/21 Scituate 1 juv J. Scott#
8/26 Sutton 1 ad M. Joubert
Tricolored Heron
7/17-20 Chatham 1 L. Seitz#
7/22 N. Monomoy 1 R. Schain

Green Heron

7/11	WBWS	8	E. Orcutt
7/25	Burlington	4	M. Rines
7/28	Waltham	4	J. Forbes
8/22	Wakefield	4	P. + F. Vale
8/24	N. Truro	6	S. Broker
8/27	Sterling	5	R. Quimby

Black-crowned Night-Heron

8/2	Wayland	6	B. Black
8/7	P.I.	9	V. Zollo
8/23	Longmeadow	6	A. & L. Richardson
8/26	Eastham	33	D. Clapp

Yellow-crowned Night-Heron

7/1, 8/2	Duxbury	1 1S	R. Bowes
7/16-8/20	P.I.	1 ad	N. Landry#
7/20	S. Dartmouth	1	A. Morgan#
7/24	E. Boston (B.I.)	1	M. Iliff
8/17	Eastham	3	N. Hayward
8/17	Gloucester H.	1 ad	S. Frontierro

Glossy Ibis

7/1	S. Dart. (A.Pd)	11	R. Stymeist
7/9	Manchester	26	J. Hoye#
8/7	Rowley	77	J. Keeley#
8/9-10	Chelmsford	1 imm	M. Resch

Black Vulture

7/2	Uxbridge	2	M. Garvey
7/8	Sheffield	2	T. Gagnon

Turkey Vulture

7/1	Fall River	24	R. Stymeist#
7/17	Georgetown	9	P. + F. Vale
8/22	Leicester	22	M. Lynch#
8/29	P.I.	16	T. Wetmore
8/29	Northampton	76	T. Gagnon

Osprey

7/5	P.I.	20+	R. Heil
7/29	Westport	61	M. Lynch#
8/14	Saugus (Bear C.)	6	S. Zendeh#
8/22	Chatham	6	B. Zajda#

Swallow-tailed Kite

7/11	Harwich	1	R. Schain

Mississippi Kite

7/19	Falmouth	1	J. Spendelow

Bald Eagle

7/11	P.I.	2 imm	P. Peterson
7/16	Deerfield	12	H. Allen
8/28	Wachusett Res.	2	N. Paulson
8/29	Quabbin (G35)	1 ad, 2 juv	B. Zajda

Northern Harrier

7/1	Peabody	1 f	J. Berry#
7/30	Chatham (S.B.)	2	BBC (GdE)
8/17	HRWMA	1 juv	T. Pirro
8/17	Duxbury B.	1 m imm	R. Bowes
8/19	P.I.	4	T. Wetmore
8/21	Cumb. Farms	1 juv	S. Arena
8/26	GMNWR	1	G. Billingham#
8/26	Belchertown	1	L. Therrien

Sharp-shinned Hawk

8/23	GMNWR	2	W. Hutcheson#

Cooper's Hawk

7/19	Ayer-11	1 ad, 2 juv	C. Caron
7/21	Chatham	1 ad, 2 yg	F. Atwood
8/6	Newbypt	2 juv	S. McGrath#
8/21	Cumb. Farms	5	S. Arena
8/23	HRWMA	2	J. Hoye#
8/23	GMNWR	2	W. Hutcheson#

Northern Goshawk

7/1	Groveland	1	K. Elwell
7/30	Rutland	1	K. Bourinot
8/20	Orange	1 imm	M. Lynch#

Red-shouldered Hawk

7/16	Acushnet	1 ad, 2 juv	C. Longworth
8/12	October Mt.	2	E. Neumuth

Broad-winged Hawk

7/3	Boxford	pr	J. Berry
8/17	GMNWR	4	W. Hutcheson
8/17	Lexington	3	M. Rines
8/20	Mt. Greylock	2	M. Lynch#
8/29	W. Roxbury (MP)	2	P. Peterson

American Kestrel

7/24	Ipswich	ad + 1 yg	J. Berry
8/1	Hyannis	2 yg	N. Smith
8/2	Revere	3	P. Peterson
8/7	Westfield	2	S. Kellogg
8/14	Saugus (Bear C.)	8	S. Zendeh#
8/21	Cumb. Farms	37	S. Arena
8/22	Leicester	11	M. Lynch#

Merlin

7/5	Lenox	1	R. Laubach
7/9	Nantucket	1	E. LoPresti
7/12	P.I.	1	L. Tiller#
7/26	Northampton	1	L. Therrien
7/28	Wachusett Res.	1	T. Pirro
8/12	Scituate	1	J. Galluzo#
8/14	Mashpee	1	M. Keleher

Peregrine Falcon

7/5	Boston	2	P. Peterson
7/1-31	Sagamore	pr	v.o.
7/30	Woburn (HP)	pr	P. Ippolito
8/14	Saugus (Bear C.)	2	S. Zendeh#
8/22-24	P.I.	2	J. Scott# + v.o.

Clapper Rail

7/1	S. Dart. (A.Pd)	1	R. Stymeist

King Rail

7/1-10	E. Boston (B.I.)	1	W. Manter + v.o.
7/23	W. Bridgewater	1 ad, 2 juv	S. Arena

Virginia Rail

7/6	Burlington	9	M. Rines
7/23	W. Bridgewater	4 ad, 8 juv	S. Arena
7/29	P.I.	9	R. Schain
7/30	Konkapot IBA	8	M. Lynch#

Sora

7/9	S. Monomoy	2	S. Broker
8/3	P.I.	1	W. Tatro

Common Gallinule

7/2-10	Truro	1	J. Young#
7/17	GMNWR	2	S. Perkins#
8/30	Groveland	1 ad, 6 juv	K. Elwell

Sandhill Crane

8/18	Groveland	1	K. Elwell

Black-bellied Plover

thr	P.I.	235 max	v.o.
8/21	Duxbury B.	337	R. Bowes
8/23	Chatham	1600	R. Heil
8/26	Winthrop	112	R. Stymeist#
8/28	Quabbin Pk	7	M. Iliff#
8/28	Hatfield	6	M. Fairbrother
8/28	Fitchburg	64	T. Pirro

American Golden-Plover

8/19	P.I.	1	T. Wetmore
8/28	S. Quabbin	2	M. Iliff
8/28	Fitchburg	7	T. Pirro
8/29	Nantucket	4	E. LoPresti

Semipalmated Plover

thr	P.I.	1200 max	v.o.
7/14, 8/21	Duxbury B.	8, 1611	R. Bowes
8/7	Longmeadow	20	S. Surner
8/12	Ipswich (C.B.)	1000	D. Williams
8/13	Chatham (S.B.)	550	SSSB (GdE)
8/19	Revere	242	P. + F. Vale
8/27	Wollaston B.	450	J. Baur#

Piping Plover

7/13	Ipswich (C.B.)	30	BBC (D. Williams)
7/15	P.I.	20	S. Sullivan
7/25	Chatham (S.B.)	39	F. Atwood
7/28	Duxbury B.	12	R. Bowes

Piping Plover (continued)
7/31 S. Monomoy 15 B. Nikula
American Oystercatcher
7/26 Winthrop 15 R. Stymeist#
7/31 Chatham (S.B.) 15 BBC (GdE)
8/22 Quincy 12 V. Zollo
Black-necked Stilt
8/30 Orleans 1 E. Orcutt
Spotted Sandpiper
7/10 Wachusett Res. 9 K. Bourinot#
7/19 Boston H. 15 R. Stymeist
8/27 Westboro 10 N. Paulson#
8/28 Wachusett Res. 8 N. Paulson
Solitary Sandpiper
7/15 Wakefield 1 J. Beers#
7/24 GMNWR 4 J. Forbes
8/12 October Mt. 10 E. Neumuth
8/14 Topsfield 23 R. Heil
8/21 Cumb. Farms 14 S. Arena
Greater Yellowlegs
thr P.I. 200 max v.o.
7/25 Chatham (S.B.) 90 F. Atwood
8/12 Newbypt H. 120 S. Grinley
8/13 Topsfield 30 S. Sullivan
8/22 Squantum 57 V. Zollo
8/28 Turners Falls 2 J. Smith
Willet
thr P.I. 216 max v.o.
7/1 S. Dart. (A.Pd) 22 R. Stymeist
7/21 Duxbury B. 58 R. Bowes
7/26 Winthrop 34 R. Stymeist#
8/3 Monomoy 115 F. Atwood
Lesser Yellowlegs
thr P.I. 136 max v.o.
7/9 E. Boston (B.I.) 10 P. Peterson
7/13 Chatham (S.B.) 27 B. Zajda#
7/20 GMNWR 6 A. Bragg#
7/24 Newbypt H. 300 P. + F. Vale
8/7 Agawam 1 S. Surner
8/7 Revere 26 S. Zendeh
Upland Sandpiper
8/3 Boston 6 R. Schain
8/7 Westfield 6 S. Kellogg
8/21 Petersham 1 M. Lynch#
Whimbrel
thr P.I. 1-5 v.o.
7/21 Duxbury B. 4 R. Bowes
7/27 WBWS 44 E. Orcutt
8/9 Harwich 26 F. Atwood
8/15 Rockport (A.P.) 38 R. Heil
8/28 Lakeville 3 J. Sweeney#
8/28 S. Quabbin 1 L. Therrien
8/29 Duxbury B. 1 R. Bowes
Hudsonian Godwit
7/15 P.I. 1 S. Sullivan
7/30 Chatham (S.B.) 41 BBC (GdE)
8/28 S. Quabbin 11 L. Therrien
8/28 Fitchburg 3 T. Pirro
8/29 Revere B. 1 M. Garvey
8/30 Duxbury B. 1 A. Tull
Marbled Godwit
7/thr Chatham (S.B.) 1-2 v.o.
7/23-8/13 P.I. 1-2 v.o.
8/13 S. Monomoy 2 B. Nikula
Ruddy Turnstone
7/23, 8/21 Duxbury B. 145, 102 R. Bowes
8/3 Monomoy 145 F. Atwood
8/14 Longmeadow 2 S. Kellogg
8/28 Fitchburg 12 T. Pirro
8/28 Quabbin Pk 4 L. Therrien
8/31 Revere B. 20 P. Peterson
Red Knot
7/24 Plymouth B. 10 BBC (GdE)
8/13 Chatham (S.B.) 650 SSBC (GdE)
8/28 Fitchburg 8 T. Pirro
8/28 Wachusett Res. 1 N. Paulson
8/29 S. Dart. (A.Pd) 39 P. Champlin
8/30 P.I. 35 R. Heil
Sanderling
7/23, 8/21 Duxbury B. 1100, 1734 R. Bowes
7/26 P'town (R.P.) 300 B. Zajda#
8/12 Ipswich (C.B.) 1000 D. Williams
8/14 Longmeadow 1 S. Kellogg
8/19 Revere 133 P. + F. Vale
8/28 Fitchburg 10 T. Pirro
8/30 P.I. 200 R. Heil
Semipalmated Sandpiper
7/12, 8/14 P.I. 260, 1800 R. Heil
7/13, 8/12 Ipswich (C.B.) 250, 1300 D. Williams
7/23, 8/21 Duxbury B. 5450, 5112 R. Bowes
8/3 Monomoy 2600 F. Atwood
8/7 Longmeadow 144 S. Surner
8/28 Fitchburg 20 T. Pirro
Western Sandpiper
7/17 Chatham (S.B.) 4 B. Nikula#
7/23-8/31 P.I. 1-2 v.o.
8/30 Revere B. 1 M. Iliff
Least Sandpiper
thr P.I. 410 max v.o.
7/13 Chatham (S.B.) 350+ B. Zajda#
7/23, 8/21 Duxbury B. 260, 83 R. Bowes
8/14 Topsfield 100 R. Heil
8/29 Waltham 15 J. Forbes
White-rumped Sandpiper
7/12-8/31 P.I. 41 max v.o.
8/12 Chatham (S.B.) 23 F. Atwood
8/21 Duxbury B. 107 R. Bowes
Baird's Sandpiper
8/10-8/31 P.I. 1-2 v.o.
8/26 Winthrop B. 1 juv P. Peterson
8/28 Quabbin Pk 1 M. Iliff#
8/28 Concord 1 juv W. Hutcheson
8/29 Nantucket 2 V. Laux
8/30 P'town (R.P.) 2 J. Young
8/30 Revere B. 1 juv M. Iliff
Pectoral Sandpiper
7/15-8/31 P.I. 13 max v.o.
7/30 Wachusett Res. 6 B. Kamp#
7/31 S. Monomoy 2 B. Nikula
8/16 October Mt. 5 E. Neumuth
8/28 Hatfield 10 M. Fairbrother
8/30 P'town (R.P.) 8 J. Young
Dunlin
7/5-8/24 P.I. 1-2 v.o.
7/27 Agawam 1 J. Hutchison
7/31 Chatham (S.B.) 1 BBC (GdE)
Stilt Sandpiper
7/12-8/31 P.I. 21 max v.o.
8/7 Revere 1 S. Zendeh
8/7-12 Squantum 1 J. Miller + v.o.
8/14 Duxbury 1 R. Bowes
8/24 Chatham 2 C. Nims
8/28 Nantucket 1 V. Laux
Buff-breasted Sandpiper
8/11 October Mt. 1 ad E. Neumuth
8/28 Nantucket 1 E. LoPresti#
8/30 Revere B. 1 M. Goetschkes
8/30 P.I. 3 juv R. Heil
Short-billed Dowitcher
7/11-8/31 P.I. 487 max v.o.
7/14, 8/12 Duxbury B. 100, 341 R. Bowes
7/26 Wachusett Res. 1 B. Kamp
8/6 Chatham 2225 F. Atwood
8/28 Fitchburg 2 T. Pirro
Long-billed Dowitcher
7/12-8/21 P.I. 1-2 v.o.

Long-billed Dowitcher (continued)

7/23	Duxbury B.	2	R. Bowes
7/31, 8/13	S. Monomoy	1, 1	B. Nikula

Wilson's Snipe

7/9	Tyringham	1	S. Wheelock
8/16	October Mt.	3	E. Neumuth

American Woodcock

7/6	Ipswich (C.B.)	4	J. Berry
7/24	E. Boston (B.I.)	2	E. Labato
7/31	W. Roxbury (MP)	3	M. Iliff

Wilson's Phalarope

thr	Chatham (S.B.)	1-2	v.o.
8/14	P.I.	1	V. Zollo
8/29	Topsfield	1 ph	S. Sullivan

Red-necked Phalarope

7/28	Chilmark	1	L. McDowell
8/15	Rockport (A.P.)	25	R. Heil
8/25	Monomoy	9	M. Faherty
8/28	Sharon	3	W. Sweet
8/28, 31	Turners Falls	1	J. Smith

Red Phalarope

7/30	Wachusett Res.	1	K. Bourinot#

Phalarope species

8/26	Ipswich (C.B.)	2	D. Williams
8/28	Quabbin	1	M. Iliff#
8/28	Agawam	6	S. Kellogg

Black-legged Kittiwake

8/29	P'town (R.P.)	1 ad	J. Young

Sabine's Gull

7/26	P'town (R.P.)	1 1S	B. Zajda#
8/30	Provincetown	2	E. Orcutt

Bonaparte's Gull

7/13	Ipswich (C.B.)	146	BBC (D. Williams)
7/14	Plymouth B.	32	P. Peterson
7/27-8/7	Wachusett Res.	2-6	B. Kamp
7/29	P.I.	548	R. Schain
8/3	Lynn B.	177	R. Stymeist
8/28	Quabbin Pk	4	M. Iliff#
8/30	P.I.	52	R. Heil

Little Gull

7/4, 7/26	P.I.	1, 1	Grinley, Sullivan
7/10	Lynn B.	1	V. Zollo
7/15	Revere (POP)	1 1S	M. Garvey
8/14	Newbypt	1 juv	J. Berry#

Laughing Gull

7/9	P'town	675	B. Nikula
7/24	Plymouth B.	450	SSBC (GdE)
8/6	Stellwagen	350	P. Trull
8/7	Agawam	2	S. Surner
8/23	Chatham	1700	R. Heil
8/28	Concord	1 juv	W. Hutcheson
8/28	Quabbin Pk	4 juv	M. Lynch#
8/30	P.I.	17 ad, 68 juv	R. Heil

Lesser Black-backed Gull

7/9	P'town	1 ad	B. Nikula
7/30	Chatham (S.B.)	1 1S	BBC (GdE)
8/6-14	P.I.	1	S. Sullivan#
8/28	Fitchburg	1 ad	T. Pirro
8/28	Concord	1 ad	S. Perkins#

Sooty Tern

8/28	Tuckernuck	1 ad	R. Veit
8/28	Winthrop	1 ad	M. Garvey
8/28	Nantucket	1	V. Laux
8/28	Pittsfield (Onota)	1	S. Kellogg
8/28	S. Quabbin	1	L. Therrien
8/28	Sharon	1	W. Sweet
8/28, 29	Westport	6, 1	Champlin, Hoye
8/28-29	Nantucket	1	V. Laux

Bridled Tern

8/28	Tuckernuck	1	R. Veit
8/28	Westport	4	P. Champlin
8/28	Buzzards Bay	1	K. Miller#

Least Tern

thr	P.I.	110 max	v.o.
7/13	Ipswich (C.B.)	47	BBC (D. Williams)
7/21	Chatham	100	M. Faherty
7/30	Plymouth B.	40	SSBC (GdE)
7/30	Revere	46	P. + F. Vale
8/13	S. Monomoy	50	B. Nikula

Gull-billed Tern

8/28	Westport	1	P. Champlin
8/30	P.I.	1 ad ph	R. Heil

Caspian Tern

7/25	P.I.	1	T. Wetmore
8/7	Petersham	1	M. Lynch#
8/24	Squantum	2	V. Zollo
8/27	Quincy	4	S. + C. Whitebread
8/29	Duxbury B.	1 ad	R. Bowes

Black Tern

7/13, 8/13	S. Monomoy	18, 35	Broker, Nikula
7/25	Nantucket	11	B. Harris
8/27	P'town	50	B. Nikula
8/27	Chatham (S.B.)	134	M. Sylvia
8/28-29	Reports of 1-21 indiv. from 15 locations		
8/28	Tuckernuck	250	R. Veit
8/28	Westport	53	P. Champlin
8/28	Chatham	75	B. Harris#
8/28	Nantucket	145	E. LoPresti#
8/29	Eastham (F.E.)	40	B. Nikula#
8/29	P'town (R.P.)	60	J. Young
8/31	Dartmouth	50	A. Morgan#

Roseate Tern

thr	P.I.	70 max	v.o.
7/24	P'town	120	B. Nikula
8/26	Ipswich (C.B.)	11	D. Williams
8/28	Tuckernuck	2500	R. Veit

Common Tern

thr	P.I.	1050 max	v.o.
7/thr	P'town	1350 max	B. Nikula
7/24	Plymouth B.	2500	BBC (GdE)
8/23	Chatham	17,500	R. Heil
8/28	Tuckernuck	4500	R. Veit
8/28	Middleboro	100	J. Young
8/28	S. Quabbin	2	L. Therrien
8/28	Lakeville	100	V. Zollo#
8/28	Turners Falls	5	M. Fairbrother
8/28	Pembroke	5	J. Sweeney#
8/29	Wachusett Res.	3	C. Caron

Arctic Tern

7/1	Nantucket	1 1S	B. Harris
7/3	Plymouth B.	2	J. Hoye#
7/17	Chatham (S.B.)	1 1S	B. Nikula
7/31	S. Monomoy	1 1S	B. Nikula
8/7	P'town	1	B. Nikula
8/10	P.I.	1	MAS (B. Gette)

Forster's Tern

8/7	P'town	2	B. Nikula
8/12	Chatham (S.B.)	9	F. Atwood
8/14	N. Truro	10	B. Nikula
8/20	P.I.	6	P. + F. Vale
8/21	Duxbury B.	3	R. Bowes
8/28	Lakeville	2	V. Zollo#
8/28	Pembroke	9	J. Sweeney#
8/31	Dartmouth	12	A. Morgan#

Royal Tern

7/5	Nantucket	1	J. Blyth
7/14	Winthrop.	1	M. Garvey
7/23	Chatham (S.B.)	2	B. Nikula
7/24	Plymouth B.	8	BBC (GdE)
7/24	P'town	2	B. Nikula
8/9	Duxbury B.	1	E. Corbett
8/13	P.I.	1 ph	E. Nielsen#
8/25	Squantum	1	M. McWade#
8/28	Plymouth	1	J. Sweeney#
8/29	Tuckernuck	3	R. Veit

Royal Tern (continued)

8/29	Menemsha	1	O. Burton
8/29	S. Dart. (A.Pd)	1	D. Zimberlin
8/30	Squantum	2	M. Iliff
8/31	Dorchester	1	R. Schain

Sandwich Tern

8/29	Menemsha	1 ph	O. Burton
8/29	Nantucket	1	USFWS (A. Boyd)

Elegant Tern

7/23	P.I.	1	Grinley, Davies

Black Skimmer

7/22	N. Monomoy	2	R. Schain
8/28	Chatham	5	B. Nikula
8/29	P'town	2	J. Trimble#
8/29	S. Dart. (A.Pd)	3 juv	P. Champlin
8/30	Winthrop B.	8 juv	M. Iliff
8/31	Plymouth B.	3	S. Fenwick
8/31	Squantum	3	R. Schain
8/31	P.I.	3 juv	B. Zajda#

South Polar Skua

7/25	Stellwegen	1	J. Rose

Skua species

7/26	Nantucket	1	B. Harris

Pomarine Jaeger

7/16	Contin. Shelf	1 imm	BBC (M. Iliff)
8/6	Stellwagen	2	P. Trull
8/7	P'town	1	B. Nikula
8/15	Rockport (A.P.)	2	R. Heil
8/19	Chatham	1	R. Schain
8/28	Nantucket	1	V. Laux
8/29	Eastham (F.E.)	1	B. Nikula#
8/29	P'town (R.P.)	1	J. Young

Parasitic Jaeger

7/19	P'town	3	P. Champlin
8/6	Stellwagen	6	P. Trull
8/15	Rockport (A.P.)	18	R. Heil
8/28	S. Quabbin	1	L. Therrien#
8/28	Lakeville	1	J. Young
8/28	Fitchburg	1 imm lt	T. Pirro
8/28	Chatham (CGB)	13	B. Harris
8/28	Tuckernuck	10	R. Veit
8/29	P'town	5	B. Nikula#
8/29	Eastham (F.E.)	15	B. Nikula#
8/30	P.I.	5	R. Heil

Long-tailed Jaeger

7/16	Contin. Shelf	2 1S	BBC (M. Iliff)
7/16	M.V.	1 ph	M. Iliff#
7/19	P'town	1	P. Champlin
8/28	Tuckernuck	1 dk juv	R. Veit
8/28	Nantucket	1 imm	V. Laux#
8/28	Chatham (CGB)	1	B. Harris#
8/29	Eastham (F.E.)	1 juv., ph.	B. Nikula#
8/29	Nantucket	2	V. Laux

Black Guillemot

7/10	Gloucester H.	1	D. Ely
7/15	Marblehead	1 ad	D. Noble
8/14	P.I.	1 juv	R. Heil
8/15	Rockport (A.P.)	1 juv	R. Heil

CUCKOOS THROUGH FINCHES

July is typically a quiet time for our songbirds. Their family duties are mostly over by midmonth with the young on the wing, and song has almost stopped. In August we start to notice the beginning of migration and by mid-August we expect the first nighthawks. Veteran nighthawker Tom Gagnon reported an unusually low August count from his lookout in Northampton, although from August 16 through the end of the month he tallied a total of 1816 migrating nighthawks. A **Chuck-wills-widow** was still calling as late as July 16 in Orleans.

Another early migrant is Olive-sided Flycatcher, one of the last migrants to show up in the spring and one of the earliest to leave in the fall. The entire population vacates North America after breeding; the first true migrant was noted on August 19 in Wayland. Purple Martins are still very local breeders in the state with monitored colonies on Plum Island, Rehoboth, and two colonies in Mashpee. The success rate was good on Plum Island; the boxes at the north end of the island had 100% success rate with 12 nests fledging 42 young. The colony at the Crestwood Country Club in Rehoboth had 29 nesting pairs that successfully produced 103 fledged birds. The two colonies in Mashpee were not as successful and fledged only 35 young from a total of 109 eggs.

A **Sedge Wren**, possibly a breeder, was noted on two different days in Tyringham. A Tennessee Warbler on July 29 in Hancock was intriguing. This species is not known to breed in the state but the area in which it was noted resembles its preferred conditions in the boreal forest to our north. Twenty-nine species of warblers were reported during the period. Two **Golden-winged Warblers** were reported, including one banded at Manomet. An early returning Bay-breasted Warbler was reported from Chatham on the last day of August.

Clay-colored Sparrows were noted in two areas of Cape Cod; Lark Sparrows were found in West Roxbury and at Manomet. A White-crowned Sparrow discovered along the road at Plum Island on July 12 was unusual for this time of year. Nine Dickcissels were reported compared with four for the same period last year. From a nighthawk watch lookout, a total of 1887 Bobolinks were noted migrating from mid-August to the end of the month with a high single day count of 353 on August 31. *R. Stymeist*

Yellow-billed Cuckoo
thr Reports of indiv. from 8 locations
Black-billed Cuckoo
thr Reports of 1-2 indiv. from 18 locations
Eastern Screech-Owl
7/6-11 Grafton 1 ad, 1 juv S. Jordan
7/17 Newton pr H. Miller
7/30 Woburn pr P. Ippolito
Great Horned Owl
7/9 Plymouth 1 M. Lynch#
8/23 GMNWR 1 W. Hutcheson#
8/30-31 Stoughton 1 G. d'Entremont
Barred Owl
7/4 Hardwick 1 yg M. Lynch#
8/2 Ashburnham-2 1 C. Caron
8/14 Petersham 1 M. Lynch#
8/14 New Salem 2 M. Lynch#
Short-eared Owl
7/5 Nantucket 1 B. Harris
Northern Saw-whet Owl
7/4 Mt Washington 1 R. Laubach
Common Nighthawk
8/16-31 Northampton 1816 T. Gagnon
8/18, 26 Northampton 246, 574 T. Gagnon
8/19, 26 Belchertown 127, 251 L. Therrien
8/26 Worcester 350 F. McMenemy
8/28 Sutton 325 M. Joubert#
8/29 Devens 144 C. Johnson
8/29, 31 Northampton 135, 454 T. Gagnon
8/29 Sutton 113, 454 M. Joubert#
8/30 Mt.A. 244 R. Stymeist#
8/30 Millbury 173 A. Marble
Chuck-will's-widow
7/1-16 Orleans 1 v.o.
Eastern Whip-poor-will
7/1 Milton 2 P. Peterson
7/11 Wellfleet 3 F. Bouchard
Chimney Swift
7/17 Bradford 250+ J. + S. Mirick
8/11 Mt.A. 28 R. Stymeist#
8/23 GMNWR 98 W. Hutcheson#
8/26 Watertown 50 C. Cook
8/26 Saugus 65+ F. Vale
8/26 Waltham 40 J. Forbes
Ruby-throated Hummingbird
8/6 Whately 42 B. Benner
8/14 Mashpee 7 M. Keleher
8/16-31 Northampton 24 migr T. Gagnon
8/17 GMNWR 8 W. Hutcheson
8/21 Cumb. Farms 10 S. Arena
Belted Kingfisher
7/16 Richmond 4 M. Lynch#
7/18 Ashburnham-2 4 C. Caron
8/14 Mashpee 3 M. Keleher
Yellow-bellied Sapsucker
7/2 Quabbin (G10) 18 SSBC (GdE)
7/16 Richmond 3 M. Lynch#
8/13 Petersham 10 M. Lynch#
Pileated Woodpecker
7/2 Quabbin (G10) 3 SSBC (GdE)
7/3 Hamilton pr P. + F. Vale
7/23 Wales 3 M. Lynch#
7/30 Winchendon-11 2 C. Caron
7/31 Petersham 4 M. Lynch#
Olive-sided Flycatcher
8/8 Ashburnham 1 C. Caron
8/17-23 HRWMA 1 T. Pirro
8/19 Wayland 1 J. Hoye#
8/20 Lexington 1 J. Forbes
8/26 C. Quabbin 1 L. Therrien
8/29 New Salem 1 C. Caron
8/29 Northampton 1 T. Gagnon
Eastern Wood-Pewee
7/3 Boxford 6 m J. Berry
7/10 Wachusett Res. 8 K. Bourinot#
7/12 Marlboro-4 5 C. Caron
7/31 Rowley 7 J. Berry
8/1 GMNWR 6 A. Bragg#
8/10 Harwich 13 F. Atwood
8/27 Petersham 13 M. Lynch#
Yellow-bellied Flycatcher
8/17 Chestnut Hill 1 M. Garvey
8/30 Carlisle 1 D. Brownrigg#
8/31 P.I. 1 b B. Flemer
Acadian Flycatcher
7/1 Fall River 3 L. Abbey#
7/17 Rutland pr B. Kamp
7/24 New Salem 1 M. Lynch#
8/25 Manomet 1 b T. Lloyd-Evans
Alder Flycatcher
7/3 Brookfields 3 M. Lynch#
7/3-10 Lexington 1 m M. Rines#
7/21 Winchendon-8 3 C. Caron
7/30 Konkapot IBA 7 M. Lynch#
8/1 Ashburnham-2 2 C. Caron
8/17 P.I. 1 b B. Flemer
Willow Flycatcher
7/3 Concord 6 S. Perkins#
7/16 Richmond 11 M. Lynch#
7/24 P.I. 6 P. + F. Vale
7/28 W. Roxbury (MP) 5 F. Atwood
7/30 Konkapot IBA 11 M. Lynch#
Least Flycatcher
7/3 Brookfields 18 M. Lynch#
7/10 Wachusett Res. 2 K. Bourinot#
8/24 Chatham 1 C. Goodrich
Great Crested Flycatcher
7/9 Plymouth 4 M. Lynch#
7/20 Beverly 5 J. Berry#
7/31 Rowley 5 J. Berry
8/14 Medford 2 M. Rines#
8/17 GMNWR 2 W. Hutcheson
Eastern Kingbird
7/3 Brookfields 36 M. Lynch#
8/25 P.I. 22 A. Wagner#
White-eyed Vireo
7/1 S. Dart. (A.Pd) 2 R. Stymeist
Yellow-throated Vireo
7/3 Boxford 2 m J. Berry
7/4 Ware 7 M. Lynch#
7/4 GMNWR 1 A. Bragg#
7/4 Hardwick 9 M. Lynch#
7/31 Westboro 2 S. Arena#
8/13 Quabbin (G35) 2 B. Zajda
Blue-headed Vireo
7/2 Quabbin (G10) 3 SSBC (GdE)
7/17 Petersham 8 M. Lynch#
7/22 Winchendon-12 7 C. Caron
8/27 Petersham 2 M. Lynch#
Warbling Vireo
7/3 Brookfields 27 M. Lynch#
7/4 Wakefield 8 BBS (Vale)
8/17 Lexington 5 M. Rines
8/26 E. Boston (B.I.) 3 R. Stymeist#
Philadelphia Vireo
8/21 Petersham 1 M. Lynch#
8/29 Menemsha 1 O. Burton
8/29 N. Andover 1 B. Drummond#
Red-eyed Vireo
7/2 Quabbin (G10) 56 SSBC (GdE)
7/3 Boxford 28 J. Berry
7/4 Quabbin (G22) 19 J. Hoye#
7/22 Winchendon-12 33 C. Caron
8/27 Petersham 51 M. Lynch#

Fish Crow

7/5	Amherst	9	S. Surner
7/9	Plymouth	6	M. Lynch#
7/24	Marshfield	3	G. d'Entremont#
7/26	Northampton	3	L. Therrien
7/31	Rowley	4	J. Berry
8/4	N. Attleboro	4	G. d'Entremont

Common Raven

7/1	Braintree	3	P. Peterson
7/1	Fall River	2	R. Stymeist
7/23	Wales	4	M. Lynch#
7/24	Revere B.	5	M. Iliff
7/25	Westford	2	P. Guidetti
7/29	Royalston	2	C. Caron

Horned Lark

7/14	Plymouth B.	5	P. Peterson
7/20	Duxbury B.	1	R. Bowes
7/29	P.I.	4	R. Schain
8/13	Chatham (S.B.)	6	SSBC (GdE)

Purple Martin

thr	P.I.	12 pr + 42 fl	v.o.
7/5	Mashpee	71	M. Keleher
7/9	Plymouth	15	M. Lynch#
7/21	Rehoboth	34 pr, 107 juv	R. Marr
7/24	DWWS	15	G. d'Entremont#

Tree Swallow

7/29	Duxbury B.	500	R. Bowes
7/30	Chatham (S.B.)	350	BBC (GdE)
8/9	Westport	1744	M. Lynch#
8/22	P.I.	100,000	D. Chickering#
8/26	E. Boston (B.I.)	500	P. Peterson
8/26	Northampton	120	B. Zajda

Northern Rough-winged Swallow

7/9	Winthrop	7	P. Peterson
7/17	Boston (Deer I.)	12	M. Garvey
8/2	Gloucester H.	6	S. Hedman
8/4	P.I.	6	J. MacDougall
8/22	Wakefield	20	P. + F. Vale

Bank Swallow

7/13	Ipswich (C.B.)	29	BBC (D. Williams)
7/14	Plymouth B.	13	P. Peterson
7/22	N. Monomoy	34	R. Schain
7/24	Plymouth B.	15	SSBC (GdE)
7/29	P.I.	18	R. Schain
7/30	Chatham (S.B.)	25	BBC (GdE)
8/17	GMNWR	30	W. Hutcheson

Cliff Swallow

7/16	Richmond	15	M. Lynch#
7/30	Tyringham	15	M. Lynch#
8/12	Scituate	1 imm	J. Galluzo#
8/12	Chatham	1	C. Goodrich
8/18	Wayland	1	B. Harris
8/28	S. Quabbin	1	L. Therrien

Barn Swallow

7/3	Brookfields	109	M. Lynch#
7/23	P.I.	80	D. Bates#
8/17	GMNWR	80	W. Hutcheson
8/17	Wayland	98	B. Harris
8/26	E. Boston (B.I.)	45	R. Stymeist#

Red-breasted Nuthatch

7/20	Winchendon-8	14	C. Caron
7/31	Petersham	6	M. Lynch#
8/2	Ashburnham-2	5	C. Caron
8/10	Harwich	16	F. Atwood
8/14	Mashpee	17	M. Keleher

Brown Creeper

7/29	Royalston	4	C. Caron
7/31	Rowley	2	J. Berry
8/2	Ashburnham-2	2	C. Caron
8/10	Harwich	3	F. Atwood

Carolina Wren

7/3	Brookfields	5	M. Lynch#
7/9	Plymouth	11	M. Lynch#
8/20	N. Scituate	4	G. d'Entremont

House Wren

7/3	Brookfields	22	M. Lynch#
7/24	Ipswich	10	J. Berry
8/17	Lexington	15	M. Rines
8/24	Belmont	10	R. Stymeist

Winter Wren

7/26	Westminster	5	C. Caron

Sedge Wren

7/30, 8/6	Tyringham	1	M. Lynch#

Marsh Wren

7/3	Brookfields	6	M. Lynch#
7/20	GMNWR	23	A. Bragg#
7/23	W. Bridgewater	5 ad, 7 juv	S. Arena
7/30	Konkapot IBA	24	M. Lynch#
8/6	P.I.	20	T. Wetmore
8/9	Harwich	7	F. Atwood
8/25	Amherst	1	L. Therrien

Blue-gray Gnatcatcher

7/16	Richmond	ad + 1 yg	M. Lynch#
7/28	W. Roxbury (MP)	4	F. Atwood
8/17	GMNWR	4	W. Hutcheson
8/18	Belmont	3	R. Stymeist
8/20	N. Scituate	3	G. d'Entremont
8/24	Chatham	2	C. Goodrich
8/24	Milton	2	P. Peterson

Golden-crowned Kinglet

7/9	Washington	5	S. Wheelock
7/9	Mt. Greylock	5	S. Wheelock
7/10	Plainfield	2	S. Kellogg
7/29	Royalston	1	C. Caron

Eastern Bluebird

7/2	Ipswich	8	J. Berry
7/3	Brookfields	11	M. Lynch#
7/30	Konkapot IBA	16	M. Lynch#
8/6	Saugus	6	D. + I. Jewell
8/23	DFWS	10	P. Sowizral

Veery

7/2	Quabbin (G10)	17	SSBC (GdE)
7/3	Boxford	12	J. Berry
7/4	Ware	42	M. Lynch#

Swainson's Thrush

7/11	Williamsburg	2	R. Laubach

Hermit Thrush

7/2	Quabbin (G10)	5	SSBC (GdE)
7/3	Boxford	10	J. Berry
7/10	Wachusett Res.	5	K. Bourinot#
7/21	Winchendon-8	18	C. Caron
8/1	Manchester	6	J. Berry#
8/2	Ashburnham-2	13	C. Caron

Wood Thrush

7/1	Milton	12	P. Peterson
7/3	Boxford	10	J. Berry
7/4	Ware	22	M. Lynch#
7/10	Wachusett Res.	3	K. Bourinot#
8/23	Medford	1	P. + F. Vale

Gray Catbird

7/3	Brookfields	136	M. Lynch#
7/4	Wakefield	32	BBS (Vale)
7/5	P.I.	45	R. Heil
8/20	N. Scituate	41	G. d'Entremont

Brown Thrasher

7/1	Southwick	1	S. Kellogg
7/7-15	P.I.	5	N. Landry + v.o.
7/25	Ipswich	3	J. Berry
8/31	Belchertown	1	L. Therrien

Cedar Waxwing

7/5	P.I.	90	R. Heil
8/6	Sheffield	44	M. Lynch#
8/23	GMNWR	78	W. Hutcheson#

Ovenbird

7/2	Quabbin (G10)	22	SSBC (GdE)
7/3	Boxford	16	J. Berry

Ovenbird (continued)

7/12	Marlboro-4	13	C. Caron
8/14	Mashepe	7	M. Keleher

Worm-eating Warbler

7/1	Milton	1	P. Peterson
7/4	Hardwick	1	M. Lynch#
7/4	Southwick	1	S. Kellogg

Louisiana Waterthrush

7/20	Belchertown	1	L. Therrien
7/26-31	Belmont	1 ph	J. Forbes + v.o.
8/1-04	Waltham	1	D. Bates + v.o.
8/6	P.I.	1	R. Schain

Northern Waterthrush

7/24	Hubbardston	2	C. Caron
8/3	MNWS	3	R. Stymeist
8/7	Westminster	2	C. Caron
8/14	Mashpee	2	M. Keleher
8/17	Boston	2	P. Peterson

Golden-winged Warbler

8/16	Belmont	1 m ad	D. Logan
8/29	Manomet	1 m b	T. Lloyd-Evans

Blue-winged Warbler

7/23	Belmont	2	D. Logan
8/10	MNWS	2	R. Stymeist
8/19	Wayland	3	B. Harris
8/23	GMNWR	1	W. Hutcheson#

Black-and-white Warbler

7/2	Quabbin (G10)	6	SSBC (GdE)
7/4	Ware	8	M. Lynch#
7/30	Winchendon-11	4	C. Caron
8/1	Manchester	5	J. Berry#
8/1	Ashburnham-2	8	C. Caron
8/21	Petersham	20 imm	M. Lynch#
8/22	Medford	2	R. LaFontaine

Tennessee Warbler

7/29	Hancock	1	J. Young

Nashville Warbler

7/14	Winchendon-11	1	C. Caron
7/21	Winchendon-8	1	C. Caron
8/2	Ashburnham-2	1	C. Caron
8/22	Medford	1	R. LaFontaine

Connecticut Warbler

8.23	Manomet	1 b	T. Lloyd-Evans

Mourning Warbler

7/9	Washington	2	S. Wheelock
8/17	Manomet	1 b	T. Lloyd-Evans
8/20	Mt. Greylock	1 m	M. Lynch#
8/21	P.I.	1 f b	B. Flemer
8/27	Squantum	1	G. d'Entremont

Common Yellowthroat

7/1	S. Dart. (A.Pd)	17	R. Stymeist`
7/2	Quabbin (G10)	16	SSBC (GdE)
7/3	Brookfields	81	M. Lynch#
7/4	Wakefield	22	BBS (Vale)
7/5	P.I.	25	R. Heil
7/6	Ipswich (C.B.)	22	J. Berry
8/20	Mt. Greylock	23	M. Lynch#

Hooded Warbler

7/1	Freetown SF	1	L. Abbey#
7/13	Westfield	1	E. Goodkin
8/17	Manomet	1 b	T. Lloyd-Evans
8/22	Medford	1	R. LaFontaine

American Redstart

7/4	Ware	37	M. Lynch#
8/3	Boxboro	6	C. Caron
8/7	Petersham	11	M. Lynch#
8/14	Medford	9	M. Rines#
8/17	Lexington	6	M. Rines
8/24	Belmont	5	R. Stymeist

Northern Parula

7/thr	Nantucket	pr n	B. Harris
7/23	Harwich	1	R. Schain
8/12	W. Quabbin	1	L. Therrien
8/14	Mashpee	1 ad, 2 yg	M. Keleher
8/17	Lexington	1	M. Rines
8/27	S. Quabbin	1	L. Therrien

Magnolia Warbler

7/24	Petersham	6	M. Lynch#
8/14	Medford	1	M. Rines#
8/25	P.I.	1	A. Wagner#
8/26	Waltham	1	J. Forbes

Bay-breasted Warbler

8/31	Chatham	1	C. Goodrich

Blackburnian Warbler

7/2	Quabbin (G10)	5	SSBC (GdE)
7/17	Petersham	3	M. Lynch#
8/13	Quabbin (G35)	6	B. Zajda
8/20	Mt. Greylock	8 imm	M. Lynch#
8/24	Milton	1	P. Peterson
8/25	Squantum	1	R. Stymeist

Yellow Warbler

7/1	S. Dart. (A.Pd)	13	R. Stymeist
7/3	Brookfields	18	M. Lynch#
7/4	Wakefield	12	BBS (Vale)
7/31	S. Monomoy	20	B. Nikula
8/6	P.I.	45	R. Schain
8/24	Belmont	2	R. Stymeist

Chestnut-sided Warbler

7/1	Freetown SF	1	R. Stymeist#
7/4	Ware	34	M. Lynch#
7/4	Hardwick	25	M. Lynch#
7/13	Fitchburg-4	11	C. Caron
8/13	Quabbin (G35)	6	B. Zajda
8/21	Petersham	11	M. Lynch#

Blackpoll Warbler

7/9	Mt. Greylock	5	S. Wheelock
7/11	Williamsburg	1	R. Laubach
8/22	Hadley	1	P. Yeskie
8/30	Lexington	1	J. Forbes
8/31	S. Quabbin	1	L. Therrien

Black-throated Blue Warbler

7/2	Quabbin (G10)	26	SSBC (GdE)
7/13	Fitchburg-4	2	C. Caron
7/23	Wales	2	M. Lynch#
7/24	Hubbardston	5	C. Caron
7/30	Winchendon-11	2	C. Caron
8/13	Petersham	11	M. Lynch#

Palm Warbler

8/29	Duxbury B.	1 ad	R. Bowes
8/31	Turners Falls	2	J. Smith

Pine Warbler

7/1	Fall River	10	R. Stymeist#
7/2	Quabbin (G10)	11	SSBC (GdE)
7/3	Hamilton	8	P. + F. Vale
7/3	Boxford	9 m	J. Berry
7/20	Beverly	9	J. Berry#
7/21	Winchendon-8	6	C. Caron
8/21	Petersham	94	M. Lynch#

Yellow-rumped Warbler

7/2	Quabbin (G10)	4	BBC (GdE)
7/7	Winthrop	1	W. Manter
7/20	Winchendon-8	4	C. Caron
8/2	Ashburnham-2	6	C. Caron
8/7	Westminster	3	C. Caron
8/27	Petersham	17	M. Lynch#

Prairie Warbler

7/1	Milton	3	P. Peterson
7/1	Freetown SG	6	R. Stymeist#
7/27	Fitchburg-8	2	C. Caron
8/30	Lexington	1	J. Forbes

Black-throated Green Warbler

7/2	Quabbin (G10)	6	SSBC (GdE)
7/3	Boxford	5	J. Berry
7/14-30	Winchendon-11	7	C. Caron
7/17	Petersham	6	M. Lynch#
7/20	Winchendon-8	6	C. Caron

Black-throated Green Warbler (continued)

7/23	Wales	8	M. Lynch#
8/27	Petersham	13	M. Lynch#

Canada Warbler

7/14	Winchendon-11	1	C. Caron
8/1	Ashburnham-2	2	C. Caron
8/14	Mashpee	2	M. Keleher
8/14	Medford	6	M. Rines#
8/20	Mt. Greylock	2 imm	M. Lynch#

Wilson's Warbler

8/11	Hadley	1	P. Yeskie
8/23	P.I.	2 b	B. Flemer
8/26	Medford	1	R. LaFontaine
8/26	C. Quabbin	1	L. Therrien

Yellow-breasted Chat

8/14	Nahant	1	J. Hoye#
8/18	Manomet	1 b	T. Lloyd-Evans

Eastern Towhee

7/2	Quabbin (G10)	24	SSBC (GdE)
7/6, 8/3	Ipswich (C.B.)24,	19	J. Berry
7/17	Petersham	38	M. Lynch#
7/23	P.I.	24	D. Bates#
8/13	Quabbin (G35)	16	B. Zajda

Clay-colored Sparrow

7/7-21	P'town	1	P. Champlin
7/16	Falmouth	1	M. Keleher

Field Sparrow

7/4	Saugus	3	D. + I. Jewell
7/10	Wachusett Res.	7	K. Bourinot#
7/16	Falmouth	13	M. Keleher
7/23	Ashburnham-6	5	C. Caron
8/2	P.I.	2	T. Wetmore

Lark Sparrow

8/26	W. Roxbury (MP)	1 imm	M. Iliff
8/29	Manomet	1	K. Doyon

Savannah Sparrow

7/3	Beverly	17	P. + F. Vale
7/3	Leicester	6	M. Lynch#
7/27	Chatham (S.B.)	3	B. Zajda#
7/29	P.I.	6	R. Schain
8/29	W. Roxbury (MP)	11	P. Peterson

Grasshopper Sparrow

7/9	Tyringham	2	S. Wheelock
7/16	Falmouth	14	M. Keleher
8/26	Northampton	1 juv	B. Zajda

Saltmarsh Sparrow

thr	P.I.	20 max	v.o.
thr	E. Boston (B.I.)	7 max	v.o.
7/22	N. Monomoy	28	R. Schain
7/29	Acoaxet	14	M. Lynch#
8/13	Chatham (S.B.)	21	SSBC (GdE)
8/22	Squantum	3	V. Zollo

Sharp-tailed Sparrow

7/1	S. Dart. (A.Pd)	9	R. Stymeist
7/31	Chatham (S.B.)	12	BBC (GdE)
7/7-31	WBWS	1	M. Faherty

Seaside Sparrow

7/1	S. Dart. (A.Pd)	2	R. Stymeist
7/12	P.I.	6	R. Heil

Swamp Sparrow

7/3	Brookfields	57	M. Lynch#
7/4	Wakefield	16	BBS (Vale)
7/21	Winchendon-8	10	C. Caron
7/23	W. Bridgewater	16	S. Arena
7/30	Konkapot IBA	49	M. Lynch#
8/2	Ashburnham-2	10	C. Caron

White-throated Sparrow

7/21	Winchendon-8	13	C. Caron
8/1	Ashburnham-2	8	C. Caron

White-crowned Sparrow

7/12	P.I.	1 ad ph	R. Heil

Dark-eyed Junco

7/19	Boston (PG)	1 juv	T. Factor
7/24	Petersham	1	M. Lynch#
7/28	Mt. Wachusett	3	D. Logan
7/30	Winchendon-11	4	C. Caron

Scarlet Tanager

7/2	Quabbin (G10)	16	SSBC (GdE)
7/3	Boxford	11 m	J. Berry
7/12	Marlboro-4	16	C. Caron
7/24	Petersham	21	M. Lynch#

Rose-breasted Grosbeak

7/3	Brookfields	9	M. Lynch#
8/17	GMNWR	6	W. Hutcheson
8/17	Lexington	6	M. Rines

Indigo Bunting

7/3	Brookfields	22	M. Lynch#
7/10	Wachusett Res.	7	K. Bourinot#
7/24	Ipswich	7	J. Berry
8/21	Cumb. Farms	21	S. Arena
8/26	Northampton	5	B. Zajda
8/thr	Wayland	9 max	B. Harris

Dickcissel

7/25	P'town	1	J. Hoye#
8/11	Concord	1	D. Sibley
8/13	WBWS	1	M. Faherty
8/17	Essex	1 f ph	P. Brown
8/18	Boston (Fens)	1 m	R. Schain
8/19	Hadley	1	P. Yeskie
8/27	P.I.	1	W. Tatro
8/27	P'town	1	B. Nikula
8/29	Eastham (F.E.)	1	B. Nikula

Bobolink

7/3	Brookfields	37	M. Lynch#
8/6	P.I.	35	T. Wetmore
8/17	HRWMA	40	T. Pirro
8/21	Cumb. Farms	35	S. Arena
8/23	GMNWR	65	W. Hutcheson#
8/31	Wayland	30	G. Long
8/31	Northampton	353	T. Gagnon

Eastern Meadowlark

7/7	Bedford	4	P. Peterson
7/9	Tyringham	2	S. Wheelock
7/9	Harvard	2	BBC (P. White)
7/17	Northampton	2	T. Gagnon
8/14	Saugus (Bear C.)	3	S. Zendeh#

Orchard Oriole

7/6	Ipswich (C.B.)	5	J. Berry
7/8	Sheffield	3	T. Gagnon
7/16	Falmouth	18	M. Keleher
7/23	Belmont	2	D. Logan
8/19	Wayland	1	B. Harris

Baltimore Oriole

7/3	Boxford	9	J. Berry
8/19	P.I.	14	T. Wetmore
8/20	Mt. Greylock	11	M. Lynch#

Purple Finch

7/1	S. Dart. (A.Pd)	2	R. Stymeist
7/16	Richmond	4	M. Lynch#
7/24	Hubbardston	5	C. Caron
8/3	Ipswich (C.B.)	5	J. Berry
8/6	Sheffield	4	M. Lynch#
8/7	Westminster	3	C. Caron
8/7	P.I.	4	N. Landry

Pine Siskin

7/27	Kingston	3	fide E. Dalton

Evening Grosbeak

7/8	S. Quabbin	1	L. Therrien
7/29	Royalston	1	C. Caron

Errata: the following 2011 records were printed in error

Dunlin			
1/1	Amherst	1	T. Gagnon
Caspian Tern			
5/15-19	Truro	1	J. Young#
Cape May Warbler			
5/30	Granville	1	S. Kellogg
Clay-colored Sparrow			
5/22	C. Quabbin	1	L. Therrien

ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, up to the 52nd Supplement, as published in *Auk* 128 (3): 600-13 (2011) (see <http://www.aou.org/checklist/north>).

Location-#	MAS Breeding Bird Atlas Block
ABC	Allen Bird Club
A.P.	Andrews Point, Rockport
A.Pd	Allens Pond, S. Dartmouth
B.	Beach
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
Corp. B.	Corporation Beach, Dennis
Cumb. Farms	Cumberland Farms, Middleboro
DFWS	Drumlin Farm Wildlife Sanctuary
DWMA	Delaney WMA Stow, Bolton, Harvard
DWWS	Daniel Webster WS
E.P.	Eastern Point, Gloucester
F.E.	First Encounter Beach, Eastham
F.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
MAS	Mass Audubon
M.P.	Millennium Park, W. Roxbury
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.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
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 observer

HOW TO CONTRIBUTE BIRD SIGHTINGS TO *BIRD OBSERVER*

Sightings for any given month must be reported in writing by the eighth of the following month, and may be submitted by postal mail or email. Send written reports to Bird Sightings, Robert H. Stymeist, 36 Lewis Avenue, Arlington, MA 02474-3206. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, other observer(s), and information on age, sex, and morph (where relevant). For instructions on email submission, visit: <http://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 Matt Garvey, 137 Beaconsfield Rd. #5, Brookline, MA 02445, or by email to <mattpgarvey@gmail.com>.

ABOUT THE COVER

Northern Cardinal

The male Northern Cardinal (*Cardinalis cardinalis*) is a brilliant red and shimmers like a Christmas tree ornament when seen at a winter bird feeder or against the green of a holly or fir. Males are unmistakable with their vivid color, black face, and thick red bill. Females display more muted colors with less black on the face, red wings and tail, light olive brown on the back, orangey breast, and light gray underparts. Juveniles resemble females but have a black bill rather than red, lack black on the face, and have muted red crests, wings, and tail. The Northern Cardinal is largely a resident species, which may at least partially explain why it shows such pronounced geographic variation with a whopping 18 subspecies recognized. The race *C. c. cardinalis* occurs over most of the eastern United States.

The breeding range of the Northern Cardinal covers all of the eastern United States from Maine and southeastern Canada west across the Great Lakes and diagonally south through Texas. Cardinals also occur in Arizona and south through eastern Mexico to Belize. In Massachusetts the species is a widespread common resident. This nonmigratory species was only occasionally seen in the Northeast until the 1940s when a gradual northern range expansion that began in the 1930s eventually reached Massachusetts. The first breeding record for the state was not until 1958. A number of factors account for this expansion, but chief among them is probably the increase in winter bird feeders. By the 1970s the Northern Cardinal had become a common bird in Massachusetts, breeding in every county of the state. Although resident, cardinals may form feeding flocks in winter and the dispersal of young birds may mimic migratory behavior.

The Northern Cardinal is considered a socially monogamous species, but studies have recorded that up to 35% of young are sired by a male other than a female's mate. They may produce multiple broods, although two is usual. Pairs often stay together during the winter. Northern Cardinals prefer habitats with shrubs and second-growth woodland, edge habitats, and certain open areas such as successional fields. They also do well in suburban areas.

Although both sexes sing, males sing more than females. The song is a crisp, loud, repetitive whistle, variously recorded as *woit, woit, woit, chew, chew, chew,* or *cheer, cheer, cheer*. Development of cardinal song is strongly influenced by learning, while their calls are not. Isolated or deafened males develop atypical songs but typical call notes. In courtship display males fluff their breast feathers while twisting or rotating, spread their wings, and flatten their crest. In a similar display they hold the crest erect, sway back and forth, and sing. Males also courtship feed the females and they often sing from high perches as territorial advertisement. A male cardinal defends his territory with an aggressive display—body low to the ground, bill open, wings fluttering, crest flattened—accompanied by lunges at an intruding bird, who may respond with a submissive display involving a raised crest, bill pointed upward, and breast feathers fluffed. Fights are rare.

The pair selects the nest site but the female does the building. The nest is a cup of several layers, composed of rough twigs on the outside and fine vegetable material for a lining. The female chews twigs with her powerful bill and bends them into shape. The nest is usually well hidden by vines or leaves in the fork of a branch of a bush or a sapling. The usual clutch is two to three buffy white to greenish eggs spotted brown. Only the female has a brood patch, and she alone incubates for approximately 12 days prior to hatching. The male brings food to the female while she is incubating. The young are altricial, naked except for a bit of down, helpless, and with closed eyes. The female broods the young for five to ten days until fledging. Both parents feed the young primarily insects, and continue to feed them at least occasionally for four to eight weeks until they reach independence.

Northern Cardinals are opportunistic feeders that regularly forage from ground to canopy. Their large bills are adapted for cutting and crushing seed capsules, and on average they consume about 70% vegetable matter. They also consume a broad spectrum of invertebrate prey. Winter flocks of cardinals in fields may leapfrog feed, with birds in the rear of the flock flying up and over the other birds to form the front of the moving flock, thus producing a dynamic rolling effect. In fall they eat fruits that contain the carotenoids they need during molt to maintain their bright red plumage. They frequent birdfeeding stations in winter.

Northern Cardinals have a high nest failure rate caused by snakes as well as by avian and mammalian nest predators, but they will re-nest multiple times if predated. Nest parasitism by Brown-headed Cowbirds is often a severe problem, with up to 100% of nests parasitized in some areas. Nonetheless, cardinal populations have increased over the past two centuries, especially in north and northeastern areas, due in part to human factors that include conversion of forest to agricultural lands and establishments of suburbs, parks, and gardens. The future appears optimistic for this bright and "cheery" species.

William E. Davis, Jr.

About the Cover Artist: Barry Van Dusen

Our readers are certainly familiar with the work of Barry Van Dusen, who has created many covers for *Bird Observer* over the years. Barry is well known in the birding world, especially in Massachusetts, where he lives in the central Massachusetts town of Princeton. In late July 2011 Barry was an artist-in-residence at the Coastal Maine Botanical Gardens in Boothbay, Maine.

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* as well as *Bird Observer*. He has recently completed the illustrations for *Birds of Trinidad and Tobago*, which is awaiting publication. For more information about Barry's many achievements and activities, see <http://www.barryvandusen.com>.

AT A GLANCE

October 2011

WAYNE R. PETERSEN

What we see in the October mystery photo is another wonderfully disembodied view, this time of a strikingly dark (black?) and white bird. A comparison of the bird and the size of the tufts and lichens on the tree limb suggests that this is not a small bird. A more discerning look also reveals fairly hefty shafts on the bird's tail feathers (rectrices), not the toothpick-sized shafts typical of most small passerines.

The tail also affords another important clue to the bird's identity—the presence of decided points, at least on the two most visible tail feathers. This feature, while not unique, is a hallmark structure in the tails of woodpeckers. Following this clue should immediately lead the reader to the identity of this month's mystery bird. There is virtually no species other than the Red-headed Woodpecker that exhibits such a distinctive wing pattern, even when the wings are folded. It is true that many woodpeckers show prominent white somewhere on their upper wings or back in flight, for example, the white rump patch of a Northern Flicker or Red-bellied Woodpecker, the white bar across the base of the spread primaries of a Red-bellied Woodpecker, and the transverse white stripe on the mid-wing of a Yellow-bellied Sapsucker. No species, however, woodpecker or otherwise, shows the extensively white secondaries on the folded wing displayed by the Red-headed Woodpecker (*Melanerpes erythrocephalus*). The presence of dark spotting on the white secondaries and the pale tips on the back feathers indicate that the Red-headed Woodpecker in the picture is a juvenile wearing a plumage it will carry from midsummer until late winter, when it will begin to gradually replace the dark-spotted secondaries as it acquires a fully red head.

Red-headed Woodpeckers are rare to very uncommon migrants in Massachusetts. They are most likely to be encountered in September and October, or else found wintering at a birdfeeder almost anywhere in the state. That they are rare and irregular nesting birds in the state is evidenced by the absence of any confirmed breeders in Massachusetts during the 2007–2011 Mass Audubon Breeding Bird Atlas II. The author photographed this juvenile Red-headed Woodpecker in Middleboro on October 10, 2011.

Wayne R. Petersen

PURPLE SANDPIPER BY DAVID LARSON

AT A GLANCE

WAYNE R. PETERSEN

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

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