

# BIRD OBSERVER



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# BIRD OBSERVER

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To enhance understanding, observation, and enjoyment of birds.

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## BIODIVERSITY DAY

by Marjorie W. Rines

What was percolating in Peter Alden's mind when he decided to organize "Biodiversity Day?" He had only recently completed a series of books covering the plants and animals of various regions of the country, and had consulted with experts in many disciplines to do this. Perhaps it was an epiphany — the discovery of the joy inherent in the universe. Or perhaps it was Peter's natural propensity to organize things.

The problem is, Peter never goes about these things in a halfhearted way, and it mushroomed into an event that must have taxed even his boundless energy. The day arrived, July 4, 1998, the anniversary of the day that Thoreau moved into his Walden Pond home and, not just coincidentally, the only day E. O. Wilson could attend the gathering. E. O. Wilson may have been the best known of the participants, but many of the other experts who gathered in Concord were no less skilled in their fields.

Spiders and sedges, sparrows and spruces, salamanders and slime molds: there was an expert on almost every living thing. And the goal was to exceed 1,000 living things in Concord and Lincoln on Independence Day.

I participated as a "bird expert," probably the only one who couldn't boast expertise in some other field as well. When the alarm went off at 4:00 a.m., I was ready to go, car loaded with field guides, and at 4:30 a.m. I was standing at the edge of a wooded area in Lincoln, imitating a screech-owl. It was dark, the owls weren't buying it, and I felt like an idiot. I tried a few other places, but no luck.

By now the songbirds were getting cranked up, so I headed to a thicket I had staked out to look for Least Flycatchers. I'd heard them the week before, and this species isn't common in the area, so I was pleased when I heard them che-becking in the distance. A tom Wild Turkey gobbled, and a Blue-winged Warbler bee-buzzed. I checked off a few more species, then headed to Hanscom Field to meet Bob Stymeist and Ted Raymond at 6:00 a.m.

Hanscom is a military airfield that is a breeding ground for a number of grassland species. Access to the field is usually limited to peering through the chain-link fence that surrounds it, but for this occasion we had received special permission to enter the airfield itself. The airport official handed us a two-way radio to alert us in case of air traffic headed our way (a somewhat disconcerting idea), and then drove us onto the runways toward the grassy areas where the birds breed, and dropped us off.

Walking along the edge of the uncut grass, we watched Upland Sandpipers skitter off the runway, hovering with their shallow wingbeats, hooting their "wolf-whistle" songs. Savannah Sparrows, Eastern Meadowlarks, and Bobolinks

sang. Finally, a tiny sound reached our ears, and we watched a Grasshopper Sparrow, teed up on a spear of grass, vibrating as it belted out its ear-stretching song.

Bob had to leave at that point, but Ted and I continued on. On a hill overlooking Hanscom, we could hear a chorus of songbirds. An Indigo Bunting sang, and then flew to the top of a tower beside us so we could admire both his song and his still-immaculate plumage. Walking down the hill, we startled an American Woodcock from a wet area, and flushed a family of Ruffed Grouse from a thicket. Tiny golden butterflies fluttered by, which we identified with confidence as . . . skippers. There are lots of yellow skippers, but they are frustratingly difficult to identify. We studied their field marks, but when we consulted the field guide back in the car, they remained "skipper species."

Thoreau's birthplace was next, more in celebration of the day than in search of new species, but an Eastern Bluebird sang for us, and an attractive moth landed on Ted's fern field guide. It seemed happy there, so Ted carried it to the car and laid the book gently on the floor, for identification later by someone who knew what they were doing. On to Estabrook Woods, where we tallied a variety of woodland bird species. As we ambled along, we also examined dragonflies, plants, and mushrooms. Ted had a little knowledge of each of these, and we tentatively identified as many as we could. We collected a number of the mushrooms, including a fine specimen carrying a slug as cargo.

We also got lost. We were wandering south on a lightly wooded path trying to find our way back to the car, when a large, hairy black mammal lumbered off the path into the adjacent bushes. "Ted, it's a bear!" I yelled before I realized what a preposterous statement that was. Everyone knows there are no bears in Concord. We searched the area, but it had disappeared into the bushes by the side of the path. Ted had missed it, and tried to talk me into any variety of alternate species, from coyote to mirage. Later, we found out that bears had, indeed, been seen in Concord, and we added it later to our otherwise-paltry mammal list.

We finally relocated the car, and were feeling virtuously biodiverse as we stowed the mushrooms (and the slug) into a bag on the back seat of the car.

At noon in Concord, participants were gathering at the home of John Stevens and Virginia McIntyre to compare notes. Both the moth and the slug had disappeared from their original locations in the car, and could not be relocated, despite careful searching. We gave up and carried our bag of fungal trophies inside to find the mushroom expert.

We were greeted by an onslaught of excited voices exchanging highlights of their explorations. Most of the species being named were incomprehensible, and gave me new appreciation of a nonbirder's feelings when plunged into a group of enthusiastic birders. We joined in the cacophony, accosting others to hear of their discoveries, and telling of our own.

Our bag of mushrooms was our only show-and-tell (too bad the slug disappeared), and we handed them over to Noble Proctor, an ornithologist from Connecticut who is also an expert on fungi. He put a name to each one, and somehow made us feel as if each of these were important, although I am sure none of our discoveries were unique. One item we had collected was a web of black, with golden beads suspended throughout it, discovered hanging from a rotten stump. It was a slime mold (*Leocarpus fragile*), and I was delighted that such an unpleasant name could describe such a lovely living thing.

People loitered over lunch. The company was too good, and the conversation too interesting, to rush off to find more. Birder and newly converted entomologist Vern Laux had decided to experiment in an entirely new field, and spent the morning up to his neck in water, helping Karsten Hartel find and identify fish. Suffering obvious butterfly withdrawal, he gravitated to the field below and started calling out species to whoever would listen. Soon a dozen people were wandering about, looking for great-spangled fritillaries and more of those damn skippers.

Ted and I finally decided we'd better go out and at least try to find a gull for the day; so we headed to Great Meadows. We watched painted turtles, bullfrogs, green frogs, and a mysterious dark snake that poked its head out of the weeds. It didn't matter that we couldn't name the snake; enough that it was there and we saw it. But our task was birds: Wood Duck, Great Blue Heron, and (finally) a Ring-billed Gull were new for the day. An American Coot was out of season, but an atrophied leg suggested that its presence wasn't voluntary. In the nearby sewer treatment plant we discovered Least and Spotted sandpipers.

At 4:00 p.m. we were birded out, and Ted reluctantly returned home to family obligations. I went home, showered and changed, and headed to Lincoln again for dinner at Winty and Andrea Harrington's. I took a couple of detours en route, hoping to find a Rock Dove, which we had missed for the day. I looked for appropriate habitat, but couldn't locate any dumpsters or road overpasses.

Climbing out of my car at the Harrington home, the first thing I heard was a loud "Hey bluebirds, come and get it," followed by a series of whoops. I followed the sound, and found Winty with a group of people watching a fencepost right in front of the house. Another set of whoops brought a bluebird into a tree above the post. It flew down, picked something up, and flew off. Meal worms. They loved them. So, evidently, did many of the other birds in the area, which recognized the invitation to the bluebirds and took the opportunity to gatecrash the party.

People continued to arrive; folks mingled, ate, and compared notes again. It grew darker, fireflies glimmered at the edge of the woods, and mosquitoes joined the feast. After dessert Peter called the group to attention, and asked for reports from participants in various specialties. E. O. Wilson started. He had

identified thirty-six species of ants, including two species new to science. His enthusiasm was infectious as he described his excitement about Peter's project.

"The identification of species, group after group, is good science again. It's badly needed that we map the world of biodiversity, because that's the only way we're going to save it. If we don't know what it is and where it is, everywhere in the world, then you can't save it . . . You can make a kind of sport out of it and a



E. O. Wilson checks out an ant.

communal activity — a gathering of experts to put knowledge together, mosaic-like — a piece here and a piece there. It fits together, and suddenly there is a big picture emerging that you can only get with this kind of expertise . . . It's just the tip of the iceberg, these larger organisms. If you will pick up one pinch of soil — one gram of soil from those woods — you

will have in your hand ten billion bacteria, representing four to five thousand species, virtually all unknown to science."

Others were called to report on the number of species discovered in each of their fields of expertise. One group, comprising Noble Proctor, Wayne Petersen, Betty Anderson, and Dotsy Long, boasted an impressive concentration of plant and animal expertise and tallied over 850 species.

A man introduced as "the spider guy" had been attending the spider congress in Chicago that morning (along with all the spider experts in the country), but had promised to get back in time to add spiders to the list of wildlife. He was scheduled to arrive at Logan Airport by 3:00 p.m., but encountered mechanical failures, delaying his arrival by a couple of hours. Despite that, he managed to spend an hour and a half in the field and identified twenty-five species of spiders from six or seven families.

When Dick Walton was asked to report on butterflies and dragonflies, he declined to give a total, but instead spoke of the pleasure of spending the day with Jay Shetterly (tiger beetles) and his young daughter, Daisy. "These kids are fantastic learners — they are sponges — and we have to just motivate them . . . There's a story about a daisy. John Bartram, one of the important naturalists in our history, started out as a farmer, and one day he was plowing a field, and stopped, put down his plow, and literally sat by the side of the field and picked up a single daisy. He started taking that daisy apart, and from that one moment it

really changed his life, and it changed the history of natural history in North America. We need to encourage other people to pick up a daisy and look at it."

Finally, Peter stood up again to announce the total species for the day. The total, from a preliminary count, was 1620. A new Guinness World Record. But then, no one had ever done this before. Wait 'till next year.

### Afterword

Well, I never did find that slug. But the following weekend was the annual butterfly census, and despite being a total neophyte, I decided to tag along and see whether I could learn something. The following week I spent time poking around places near home to discover more butterflies, and even identified several species of skipper. I started paying more attention to the dragonflies, and looking under rotten stumps for slime molds. I want to put a name to each living thing I see, but I realize that's too much to bite off, so I've settled for learning butterflies, at least for now. Is this new interest because of Biodiversity Day — or is it because I was ready to start exploring something new? Interesting question.

**Marjorie W. Rines** is the president of *Bird Observer*, and is rapidly becoming a convert to searching for butterflies. Wayne Petersen, Jay Shetterly, and Bob Stymeist, who also participated in Biodiversity Day, are also members of *Bird Observer's* staff.

**Note:** Quotations from E. O. Wilson and Dick Walton were transcribed from a videotape loaned to the author by Peter Alden. The final total for Biodiversity Day was 1904 species (including the bear).

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# EVOLUTIONARY LAG IN COWBIRD NESTLING RECOGNITION BY OVENBIRDS

by F.E. Wasserman, M.J. Hersek, M.A. Frankel,  
J.A. Cigliano, D.C. Morimoto, J. Moran

The phenomenon of brood parasitism was well known to Aristotle centuries ago (Davies and Brooke 1988), and it is even mentioned by the king's jester in William Shakespeare's *King Lear* (I, iv): "For, you know, nuncle,/ The hedge-sparrow fed the cuckoo so long,/ That it had it[s] head bit off by it[s] young." The basic description of this unusual reproductive strategy is quite simple. Parasitic birds lay their eggs in the nests of other species. The host species will incubate the eggs and raise the young of the parasite. While Europe has its parasitic cuckoos, in Massachusetts the Brown-headed Cowbird (*Molothrus ater*) is an obligate brood parasite that is known to parasitize a wide range of passerine species. The Ovenbird (*Seiurus aurocapillus*) is one of the species commonly parasitized by cowbirds in Massachusetts and throughout the Ovenbird's North American range (Friedmann et al. 1977).

Ornithologists are intrigued by the evolutionary "arms race" between the brood parasite and the host, and have devised a vernacular to describe the adaptations and counteradaptations. In the case of brood parasitism, it seems obvious that spending time and energy to raise the young of another species is maladaptive. Therefore, when counteradaptations have not evolved in the host, researchers wonder why. One proposed theory is the "evolutionary-lag" hypothesis, which suggests that there has been insufficient time for counteradaptations to evolve (Rothstein 1975b). An alternative explanation for the lack of counteradaptations is the "evolutionary-equilibrium" hypothesis, which suggests that the costs of rejection are greater than the costs of acceptance of parasitism, and, therefore, acceptance is more adaptive than rejection (Rohwer and Spaw 1988, Lotem et al. 1992). This paper will review some of the current research investigating the evolutionary "arms race" between parasite and host, describe the relationship between the cowbird and Ovenbird, and present data collected in 1996 and 1997 that suggest Ovenbirds are acting in a manner that lends support to the evolutionary-lag hypothesis, at least where Ovenbirds and cowbird nestlings are concerned.

## Rejecters versus Acceptors

Experiments introducing foreign eggs into the nests of potential hosts have been carried out for over 200 years (Payne 1977), but Rothstein (1975a, b, 1976, 1982a, b, 1986) pioneered the technique of parasitizing host nests with model cowbird eggs. Since cowbirds usually deposit one egg per nest and remove one host egg, this is the approach Rothstein (1975 a, b) used. Rothstein (1975, 1976,

1982) found that North American passerines separate into two groups, rejecters or acceptors. Most species are acceptor species, and in these species nearly all the individuals accept cowbird eggs. In the remaining species, almost all the individuals reject the cowbird eggs. There is very little in-between. For example, Rothstein (1976) found that in six rejecter species, 88 - 100 percent of the individuals reject model or real cowbird eggs, and in twelve acceptor species about 90 percent of the individuals accept the eggs. Since there is a tremendous selective advantage for individuals that recognize and reject a parasitic egg, a genetic basis for the behavior will quickly spread throughout the population.

Only about a dozen species are known to reject cowbird eggs (Rothstein 1975a, Rohwer and Spaw 1988, Lowther 1993, Regosin 1994, Sealy and Neudorf 1995; Table 1). This seems like a small number of species considering that cowbirds are known to lay their eggs in nests of over 210 species, with at least 139 of these species successfully rearing cowbirds (Friedmann et al. 1977). Some larger rejecter species grasp cowbird eggs in their bills and carry the eggs away from the nest (Rohwer and Spaw 1988). This technique is known as "grasp-ejection." Smaller hosts, including the three smallest of the rejecter species — Warbling Vireo (*Vireo gilvus*), Cedar Waxwing (*Bombycilla cedrorum*), and Baltimore Oriole (*Icterus galbula*) (Rothstein 1976, Rohwer et al. 1989, Sealy 1996) — can puncture or break eggs (the "puncture-ejection" method), but may be too small to use grasp-ejection. After puncturing the eggs, birds carry them away, either with the bill spiked in the egg ("spike-removal"), or piecemeal.

**Table 1. Species that reject Cowbird eggs.**

Common Name	Scientific Name
Yellow Warbler	<i>Dendroica petechia</i>
Californian Gnatcatcher	<i>Poliophtila californica</i>
American Robin	<i>Turdus migratorius</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Western Kingbird	<i>Tyrannus verticalis</i>
Blue Jay	<i>Cyanocitta cristata</i>
Brown Thrasher	<i>Toxostoma dorsale</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Baltimore Oriole	<i>Icterus galbula</i>
Marsh Wren	<i>Cistothorus palustris</i>
Scissor-tailed Flycatcher	<i>Tyrannus forficata</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Warbling Vireo	<i>Vireo gilvus</i>
Loggerhead Shrike	<i>Tyrannus tyrannus</i>

There are potential costs to hosts that use the puncture-ejection method. There could be accidental breakage of host eggs, or contamination of their eggs by the contents of broken cowbird eggs. Cowbird eggshells are especially thick (Spaw and Rohwer 1987), and presumably resistant to puncture, so smaller hosts may suffer a greater cost by trying to puncture-eject cowbird eggs than by accepting them. If the costs of rejection are higher than the costs of raising the parasite chicks, we have the possibility of "evolutionary equilibrium," with the adaptive response being the acceptance of cowbird eggs by the host. This equilibrium hypothesis is known as the "puncture-resistance" hypothesis (Spaw and Rohwer 1987, Rohwer and Spaw 1988). When he tested this hypothesis, however, Sealy (1996) did not find support for it. He artificially parasitized nests of the Warbling Vireo, a species that uses the puncture-ejection method, and did not see an increase in breakage or spoilage of host eggs due to puncture-ejection of cowbird eggs.

Other responses to parasitism include nest desertion or covering the parasitized clutch with new nest material and starting a new clutch. For example, Yellow Warblers (*Dendroica petechia*) will bury cowbird eggs under new nest linings. Host species may also behave aggressively toward cowbirds and guard the nest when it is most vulnerable. Unfortunately for the host, aggressive responses may be an indication to the parasite that a nest is nearby and vulnerable to parasitism (Hobson and Sealy 1989). Scientists have been able to test aggressive responses toward cowbirds by presenting hosts with cowbird models near the nest before, during, and after egg-laying (Payne 1977). Most species, including Ovenbirds, do not perceive cowbirds as a threat.

The evolutionary-lag hypothesis assumes that the evolution of egg recognition is in the realm of possible responses of birds to parasitism. While phylogenetic constraints (i.e., constraints on a group of organisms due to their evolutionary history) could preclude certain behaviors from evolving, Rothstein (1982) has pointed out that in the case of cowbird brood parasitism, phylogenetic constraints most likely do not restrict the evolution of recognition. He notes that acceptor species are capable of various levels of recognition. For example, when clutch size is drastically reduced, birds often desert the nest and attempt renesting. It is also not unusual for individuals to remove broken eggs from their nests, an indication of the recognition of problems with their eggs. Finally, there are examples of species in the same taxa, one of which is an acceptor and the other a rejecter. So there are different types of recognition even in acceptor species, and there may be an evolutionary-lag before rejection techniques evolve in more species. The bottom line is that recognition of brood-parasite eggs is possible, and there may just not have been sufficient time for recognition to evolve in species for which exposure to parasitism is relatively recent.

## Parasite Counteradaptations

The host-parasite interaction is an evolutionary "arms race," and if the host evolves techniques to avoid parasitism, natural selection will also be acting on the parasite to overcome the host's actions. Since hosts can reproduce, even if parasitized, the selective pressure on the parasite may actually be even stronger than that on the host. If counteradaptations do not evolve in the parasite, it will be unable to reproduce. Some counteradaptations that have evolved in brood parasites include (1) reducing the time needed for egg laying, in some instances to 30 seconds or less; (2) removing a host egg to reduce the chance of detection or to decrease competition for the parasitic nestling; (3) the evolution of mimetic eggs or nestlings; (4) laying eggs with thick shells, making puncture-ejection difficult, (5) evolving adult plumage that reduces conspicuousness, or in the case of some cuckoos, evolving plumage that mimics that of hawks (Payne 1977); and (6) laying large eggs that contain ample nutrients, allowing parasitic nestlings to hatch at a large size, giving them an advantage over the hosts nestlings.

### The Relationship Between Ovenbirds and Cowbirds

The detailed observations of Hann (1937) form the foundation of what we know about the relationship between Ovenbirds and cowbirds. The following account of this relationship is based upon his work and our own observations.

It is expected that cowbird laying coincides with the egg-laying period of the host. Parasitizing nests after incubation begins would not be beneficial to cowbird nestlings because the typical parasite strategy is to hatch earlier and develop more quickly than the host. Laying eggs early is particularly important for the cowbird when it chooses an Ovenbird as a host because even though the time for incubation is about the same for cowbirds and Ovenbirds, the typical nestling stage for Ovenbirds is only eight days while the cowbird nestling stage is 10 - 12 days (Hann 1937, Lowther 1993; personal observation). Conceivably it would be maladaptive to lay an egg in a host's nest before any of the hosts eggs are laid because there is the risk of the host abandoning the nest. Apparently, Ovenbirds have not yet evolved this level of recognition, since cowbirds have been known to lay eggs in Ovenbird nests even before Ovenbirds lay their own (Hann 1937)

In our study in Weston, Massachusetts, we often observed female cowbirds moving throughout our study sites, apparently searching for nests. Hann (1937) discusses two instances where he observed a cowbird quietly watching an Ovenbird building a nest. In one case the cowbird was "spying on a nest" for twenty-two minutes and approached within 4.5 meters before flying off. In both cases the Ovenbird appeared not to recognize the cowbird as a threat. Hann believes that the cowbirds generally find Ovenbird nests during nest-building.

As a group of researchers that seems to be constantly searching for Ovenbird nests, we marvel at how adept cowbirds are at finding them!

On two occasions Hann (1937) actually observed a female cowbird depositing an egg in an Ovenbird nest. Both observations occurred about thirty minutes before sunrise. The first of these nests had one Ovenbird egg when a cowbird egg was laid. Later on the same day that the first cowbird egg appeared, the Ovenbird egg disappeared, apparently removed by the cowbird. The next day Hann set up a blind and witnessed a second cowbird egg being laid in the nest. The cowbird took less than a minute to lay its egg. Within six minutes of the cowbird's departure, the Ovenbird was back on the nest. She proceeded to take one hour to lay one of her own eggs. The second time Hann witnessed a Cowbird parasitizing an Ovenbird nest, the cowbird approached the nest while the Ovenbird was on it. The Ovenbird left the nest with a "screech" and remained agitated while the cowbird entered her nest and took about thirty seconds to lay an egg. At this point the nest contained two cowbird eggs but no Ovenbird eggs. Two days later the Ovenbird laid its first egg in the nest.

Hann (1937) found that on numerous occasions eggs would disappear from Ovenbird nests on the day a cowbird egg appeared in a nest, or on the day before it appeared. In 23 instances of egg removal, 10 eggs were removed on the day before a cowbird egg was laid, 10 were removed on the same day, and 3 on the day following parasitism. Over the course of his study about 30 Ovenbird eggs and 4 cowbird eggs disappeared from nests during the egg-laying period. Only one of these eggs disappeared from an Ovenbird nest that was not parasitized. Therefore, it seems that a common cowbird strategy is to remove an Ovenbird egg and replace it with one of its own. At one nest, Hann observed a cowbird approach the nest on the day on which a cowbird egg had appeared early in the morning. The cowbird removed an egg and flew off with it; Hann noted that the cowbird's bill was "sunk deeply into the shell." On a second occasion he observed a cowbird remove an egg from a nest and carry it to about fifteen meters from the nest, where it then ate the egg. He also reports two deserted nests that had the remains of broken eggs in the nest.

We videotaped 22 Ovenbird nests during the 1996 and 1997 breeding seasons. Ten of 22 (45 percent) Ovenbird nests were parasitized with an average of 1.5 cowbird eggs per parasitized nest. In Hann's (1937) study, 22 of 42 nests (52 percent) were parasitized, with parasitized nests containing an average of 1.8 cowbird eggs. The data are comparable even though Hann worked primarily in Michigan and we conducted our research in Weston, Massachusetts. In 6 of the 10 parasitized nests we videotaped, we discovered that baby cowbirds remained in the nest for at least 24 hours after the Ovenbird nestlings had fledged. These cowbird nestlings continued to be fed in the nest by the Ovenbird adults even while the Ovenbird adults were feeding their own Ovenbird fledglings. The other four parasitized Ovenbird nests were subjected to predation, so we do not

know whether the cowbirds would have remained in the nest for a period of time after the Ovenbirds fledged.

There are many cues that could be used by Ovenbird parents to distinguish one of their own eggs or offspring from a parasite. Ovenbird eggs are smaller than cowbird eggs, and they are differently colored (personal observation; Hann 1937). Cowbird nestlings are considerably larger than Ovenbird nestlings. Their down and beak feathers are substantially different, as are the color and shape of their beak. Cowbirds beg more vigorously and call more loudly than Ovenbird nestlings and fledglings (personal observation; Hann 1937). At first, cowbird nestlings reach for food from above rather than to the front of the dome-shaped Ovenbird nest, and when they defecate they do not turn to the front as do Ovenbird nestlings (Hann 1937). Finally, cowbirds remain in the nest for at least one day after the Ovenbirds have fledged. In three instances in which we observed fledging on videotape, all Ovenbird nestlings fledged within minutes of each other. Two of these nests had only Ovenbirds, and the third had three Ovenbirds and two cowbirds. In the nest with both Ovenbirds and cowbirds, the Ovenbirds bolted from the nest within seconds of each other, and the cowbirds remained unaffected and stayed in the nest. The Ovenbird parents continued to return to the nest to feed the cowbirds while also feeding the Ovenbird fledglings. This represents unusual behavior for Ovenbirds: because Ovenbird nestlings apparently fledge within minutes of each other, adult Ovenbirds would not normally have to return to the nest to feed a partial brood.

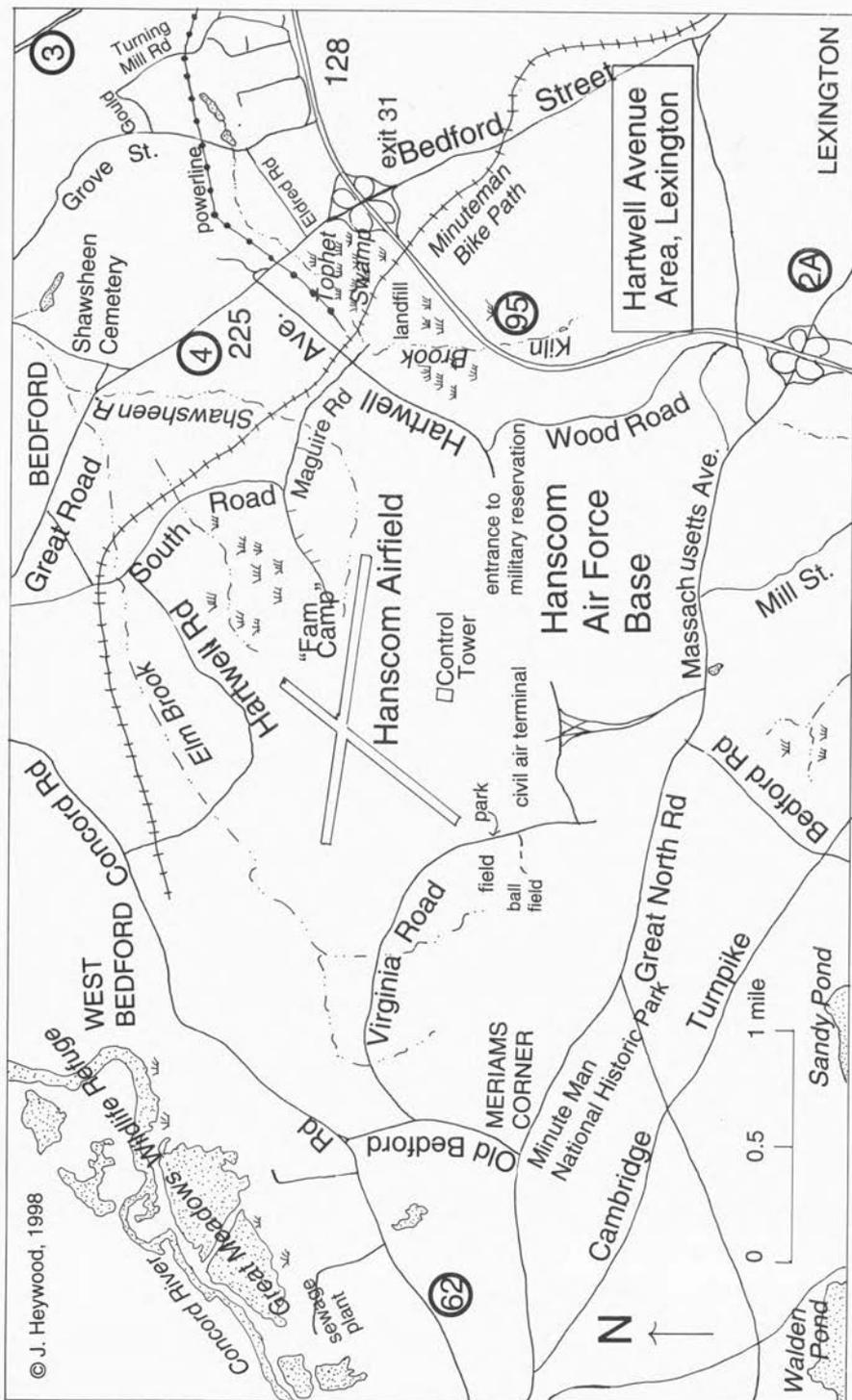
What could be more maladaptive than the relationship between Ovenbirds and cowbirds (at least from the standpoint of the Ovenbirds)? Here we have members of one species, Ovenbirds, returning to feed nestlings of another species for up to two days after their own young have fledged. The nestling cowbirds look and behave distinctly differently from Ovenbird nestlings, yet Ovenbird hosts continue to care for them. Evolutionary lag? Possibly. The problem with suggesting that a behavior doesn't exist because there has not been sufficient time for its evolution, is that such an hypothesis cannot be tested. That is, no one can predict when or whether such recognition will ever evolve — it depends upon random genetic change. Evolutionary equilibrium? We don't think so. To us the feeding of cowbird nestlings after their own young have fledged seems clearly maladaptive, and there is no need to invoke an evolutionary-equilibrium hypothesis to explain the behavior.

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## SANDWICHES AND SPARROWS: Lunch-Hour Birding in Lexington

Marjorie W. Rines

As the eastern Massachusetts high-tech community has grown, businesses have moved farther away from the Boston business center. Route 128 appears to have been developed as far as it can be: yet within just minutes' drive of most of these office parks, you can find plenty of habitat suitable for birding. For two years I worked on Hartwell Avenue, on the western edge of Lexington and just outside of Route 128; I spent many hours before work and on lunch hours exploring the areas nearby looking for birds. Most of the places described here are within two miles of Hartwell Avenue, and are easily explored in the constraints of a lunch hour.

Access to this area is easy. Take Route 128 (Route 95) to Exit 31B (Route 4 north and Route 225 west). This puts you on Bedford Street (also called Routes 4 and 225) heading toward Bedford. Stay in the right lane, and drive 0.4 mile to a sign for Hartwell Avenue and Hanscom Field. Bear right onto a "jug-handle" to make the left turn on to Hartwell. The Minuteman Bike Path crosses Hartwell Avenue at a traffic light 0.5 mile down the road, and this light is the starting point directions to the locations mentioned in this article.

**Tophet Swamp** is bordered on its four sides by Route 128, Bedford Street, Hartwell Avenue, and the Minuteman Bike Path. Probable breeding birds in the marsh include Wood Duck, Spotted Sandpiper, Virginia Rail, Sora, Willow Flycatcher, Warbling Vireo, Yellow Warbler, Common Yellowthroat, and Swamp Sparrow. As you walk east from Hartwell Avenue along the bike path, the songbirds are obvious, but rails can normally only be heard if you are willing to bushwhack down the bank. Another strategy to view the marsh is simply to pull into the back of the parking lots along Hartwell Avenue. Most have "No Parking" signs, but if you just cruise through the back and don't leave your car, no one seems to mind. This is the easiest way to see Willow Flycatchers and sometimes rails. To view the marsh from the Bedford Street side, drive down Hartwell Avenue toward Bedford Street, turn right, and then turn right into the Denny's/Holiday Inn parking lot. Drive to the very back where the parking lot borders the marsh. I have often seen Virginia Rails here, and Soras can be seen occasionally, as well.

In the fall, Tophet Swamp hosts a wonderful blackbird and starling roost. In October, try visiting the Hartwell Avenue parking lots just before sunset to watch these birds flying in. Good numbers of Rusty Blackbirds are included in these flocks, and they seem to congregate near the Hartwell parking lots. They are extremely vocal: so if you know their song, it is easy to locate them.

Across the bike path from Tophet Swamp is the **Lexington Landfill**, which is a fine place to look for sparrows in the fall. This is where people bring their

leaves and yard waste, which are put out in huge piles to compost into dirt. By fall, weeds that have grown up on these piles are like a magnet to seedeaters. The character of the landfill changes constantly; one year's leaf pile is next year's dirt, and they have just recently paved a road leading to a toxic waste disposal site for town residents; so a detailed description of how to bird this area would be outdated almost immediately. Some guidelines, however, are useful. First of all, the hours of operation somewhat irregular. There is a pull-off near the entrance on Hartwell Avenue where I park when the gate is closed. You can walk around the fence to gain access (I have spoken with the workers there who have said this was OK). If the gate is open, check the sign at the gate to be sure the landfill is "officially" open. If it is not, you may be able to drive in anyway, but check with a worker to be sure you don't get locked in. When you enter the gate, drive past a small, wet area, then pull over and park on the right before you get into the working part of the landfill. Trucks barrel through here all the time, so be sure your car is *well* out of the way. The workers here have been consistently birder-friendly, but it doesn't hurt to check with one to be sure it is all right with them to park here. As you walk the main road through the landfill, you will see some "No trespassing" signs on the right. These refer only to the police shooting range, which is self-evident, and not to other areas of the landfill.

Birds seen in the landfill during the fall include large flocks of Yellow-rumped and Palm warblers; Blue Grosbeak, Indigo Bunting, and Dickcissel; and Field, Vesper, Lark, Savannah, Fox, Lincoln's, and White-crowned sparrows. Look for these in the weedy dirt piles and along the edges of the landfill. In the spring I've seen Solitary and Spotted sandpipers (and, once, a Vesper Sparrow) in puddles in the flat areas toward the back of the landfill. In the winter I've seen flocks of Snow Buntings working the back of the landfill.

Several grassland species breed at **Hanscom Field**, including Upland Sandpiper, Savannah and Grasshopper sparrows, Eastern Meadowlark, and possibly Bobolink. Wild Turkeys frequent the runway edges on the west side, and in the early morning you can sometimes see an airport employee trying to flush them off the runways into the adjacent woods. There is no public access to the airfield, but there are several locations where you can look through the fence. April is the ideal time of year to try these locations because birds are more likely to be moving around before setting up territories. This is also a good time of year to see American Kestrels, which often congregate here in large numbers during migration, and on a memorable April 21, 1998, I saw a Gyrfalcon fly down the runway, scattering kestrels like gnats. A very early morning visit can catch the Upland Sandpipers displaying and giving their "wolf whistle" call.

From the bike path traffic light, head west on Hartwell Avenue, and take your first right on Maguire Road opposite the landfill (less than 0.1 mile). Drive

0.6 mile to the "yield" sign at the intersection of South Road and stay left on the dead-end section of South Road. At the end of the road (0.5 mile) you come to the entrance of Hanscom AFB's "Fam Camp." The "welcome" sign is a fine thing in a world of too many "no trespassing" signs. Through the fence, you get a good view of the west end of the airfield from here. The pine woods opposite the airfield look ideal for owls (I suspect the airfield provides wonderful hunting for an owl), but I have not found any here yet. These woods are part of the Bedford town forest, so feel free to explore the paths that lead through them.

If you are willing to break the "two-mile" limit for lunch-hour birding, you can explore other views of the airport. Drive back down South Road, and turn left at the stop sign onto the continuation of South Road where it meets Maguire. Drive 0.8 mile, and turn left on Hartwell Road. Drive 1.0 mile till you see the sign reading "Gate 6" on the left at the Raytheon plant, then turn onto the road immediately after (Independence Court). Jog left again quickly onto a dirt road that leads up to the fence of the airfield. Check the edges of the runways here, especially off to the right, for Upland Sandpiper. Meadowlarks often sing in the fields right beside the dirt road.

Return to Hartwell Road, turn left, and continue to the intersection with Route 62 (0.9 mile), and turn left. Drive 2.0 mile, bear left onto Bedford Road, and then take a hard left onto Virginia Road in 0.3 mile. A nice view of Hanscom is available 2.5 mile down the road on the left, and the woods and wetlands anywhere this stretch of Virginia Road are worth looking over.

OK, you're more than two miles away from work, but you're there, so you might as well do a little more exploration. Drive a little farther down Virginia Road, until you see a dirt turnoff on the right, just past the cleared approach to the runway (less than 0.25 mile, but it really depends on where you pulled over to look at the airport). Pull in and park right away, then walk up the dirt road and check out the thickets on the left for cuckoos, migrant flycatchers, and "winged" and Prairie warblers. Wood Thrushes breed nearby and can often be heard singing; Eastern Meadowlarks often sing from the grassy field to your right, and in late October of 1997 I counted over 200 American Pipits feeding and flying through this field.

A short distance along the dirt road, you will go through a short wooded area (listen for Black-and-white Warblers), and then out onto a ball field. Check out the edges for wrens, warblers, grosbeaks, and whatever else you might find. In 1998, a pair of Least Flycatchers lingered in this area well into July, an unusual species to be presumed breeding in this far east in Massachusetts.

In the spring, when migrant warblers are on your mind, head to **Shawsheen Cemetery**. From the bike path, take Hartwell back to Bedford Street and turn left. The well-marked entrance to the cemetery is a bit over a half-mile down the road on the right, immediately before a traffic light. Drive through to the back, and then turn left at the end and left again, which leads you to the spot where the

cemetery dumps waste brush and grass clippings. There is a steep bank here with a depression below it. This makes an excellent vantage point from which to look for birds in the tops of the trees, which are at eye level. When it is windy, try going down into this depression, where birds often seek shelter. Another good spot for migrants is a pond hidden in the pine woods to the right of the brush dump. Walk straight into the woods and follow the path down the hill to the pond. There are paths that go beyond the pond, and further exploration can be rewarding. In addition to migrants, the breeding birds at Shawsheen are delightful. Yellow-billed Cuckoo, Fish Crow, Pine Warbler, Ovenbird, Rose-breasted Grosbeak, and Indigo Bunting are just a few of the species I have enjoyed here during breeding season.

A favorite location of mine, with a good variety of breeding species, is the **power line** that runs from Bedford Street northwest toward Route 3. Along most areas of this power line you can expect to see or hear Blue-winged, Yellow, and Prairie warblers, Common Yellowthroats, Scarlet Tanagers, Rose-breasted Grosbeaks, Indigo Buntings, and Field Sparrows. From the bike path, take Hartwell to Bedford Street, and turn right. Jockey yourself into the left lane, and turn left immediately into the Lexington Club parking lot (immediately after the turnoff for Hartwell Avenue from the other direction). Drive to the back of the parking lot on the right-hand side and park. The path under the power lines is a Lexington town conservation area. Willow Flycatchers breed in the marshy area a short distance along, as well as a single pair of Alder Flycatchers. I had suspected breeding on the Alders for several years, and in 1998 I found an adult (singing) and two young birds calling. I inferred the age from the fresh plumage and yellow coloring on the young birds.

The path continues through to the Grove Street intersection of the power lines, and is well worth the walk, or you can drive to Grove Street and walk in from that end. When you exit the Lexington Club parking lot, you have to turn right, so take the Hartwell Avenue turn, and then turn left at the traffic light so that you are heading back toward Route 128. Turn left on Eldred Road (0.3 mile), and then left on Grove Street (0.4 mile). The power lines are 0.2 mile down the road, where you can get out for further exploration. On the right side of the road, the path under the power lines detours through the woods around a marshy area, but I have not found it productive enough to offset the mosquitoes. It's better to drive to the next intersection with the power lines on Turning Mill Road.

Continue down Grove Street 0.2 mile and turn right onto Gould Road; then in 0.3 mile, turn right on Turning Mill (listen for the resident Carolina Wren singing at the corner). The power lines are 0.3 mile down Turning Mill Road. A pair of Broad-winged Hawks probably nests somewhere nearby, as evidenced by frequent sightings, including an adult carrying a dead chipmunk into the woods. On the left side of the road is Grimes Road, which parallels the power lines. In

the spring, try walking to the end and listening for Winter Wren, which I suspect breeds in the woods here, and keep your eyes open for Pileated Woodpecker, which I have seen fly across the road. On the right side of the road, Wild Turkeys can occasionally be seen, and in 1996 a female Golden-winged Warbler was breeding with a Blue-wing. In 1998 a Louisiana Waterthrush was noted singing in the woods at the bottom of the hill on May 15, a date by which any respectable Louisiana Waterthrush should be on territory. However, additional visits to the area were unsuccessful in relocating the bird.

Perhaps the most tantalizing bird here was a Yellow-breasted Chat on June 13, 1996. It responded to my spishing by popping up in a bush with a large green worm in its bill, and then sang and called intermittently. A June record of this species, carrying food, created visions of sugarplums and breeding birds, but despite many more visits, I could never relocate this bird.

In the fall, I would occasionally take a detour home from work via the **Cambridge Reservoir**, which, although it falls well outside the 2-mile lunch-hour limit, is an easy stop for any commuter traveling the Route 128 perimeter. The water level in the reservoir varies tremendously, and can affect its productivity, but it is well worth a try any time from mid-July through the end of October. The standard inland ducks and sandpipers are relatively common here, but the fun part is looking for an oddball sandpiper or heron. Both Great and Snowy egret often stop here in August and September, and once there was an immature Little Blue Heron. Killdeer, Semipalmated Plovers, and Solitary, Spotted, Semipalmated, Least, and Pectoral sandpipers are regular. Much less common species include Stilt, Western, White-rumped, and Baird's Sandpiper, and once an unidentified dowitcher was seen here. American Pipits are often seen feeding on the mudflats, and the wide open sky makes it easy to spot the occasional raptor.

From the bike path, take Hartwell Avenue back to Bedford Street, turn right at the traffic light, and then take the first entrance to Route 128 (south). Take the exit for Route 2 west (approximately 5 miles), slow down on the exit ramp, take a deep breath, and pull over onto the shoulder immediately after you merge onto Route 2 (watch out for a low curb). There is plenty of room to pull well off the road; so pull right up to the trees and park. You will see a wide path leading into the woods, which opens up almost immediately into a great view of the reservoir. Once you have checked this out, get back on Route 2, and take your first right turn onto Mill Street. Bear right at the fork in the road (Lincoln Street), and pull over to the side when the reservoir appears on your right. Be sure to check the small stream on your left, as well. I have seen as many as eight Solitary Sandpipers feeding here when the conditions are right.

There is nothing unique about the birding places near Hartwell Avenue. I suspect that anyone who works outside Route 128 would find similar treasures within a couple of miles of their own office. Life is too short to spend your

lunch hour eating a sandwich at your desk, so go out and find your own lunch-hour places.

**Marjorie W. Rines** is president of Bird Observer of Eastern Massachusetts, Inc., and also serves as the Associate Editor of *Bird Observer*. She birds enthusiastically throughout Massachusetts, but takes particular pleasure in finding good birds in ordinary places, especially close to her home in Arlington.

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### ABA COMMENDATION FOR LOCAL BIRDER

Words never do justice to a good bird, and when it made it into the pages of *Bird Observer* (26:156), the story of one of last winter's best birds seemed pretty simple: "A male **Bullock's Oriole** was well fed at a feeder in Wakefield until the homeowner had to leave town for a week. A week later, undoubtedly the same individual found its way to a similarly hospitable feeder in Reading, only five miles away."

Hospitable indeed. The bird remained for several weeks, providing one of the high points of an exciting winter for scores of area birders. Donna Schromm, the owner of the feeder, welcomed the visiting birders, guided them to better looks, and sometimes even provided coffee to stave off the winter chill!

Ms. Schromm recently received a Commendation from the American Birding Association, "in recognition and appreciation of her gracious hospitality and service to the birdwatching community." *Bird Observer* congratulates Ms. Schromm for receiving this award, and we add our thanks for her kindness. Massachusetts birders were fortunate to have this rare visitor to enjoy, and fortunate, also, to have so fine an example of the of the generosity and cooperative spirit that is the soul of birding. The episode of the Bullock's Oriole reminded us of what it's all about.

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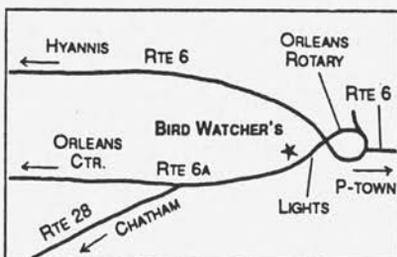
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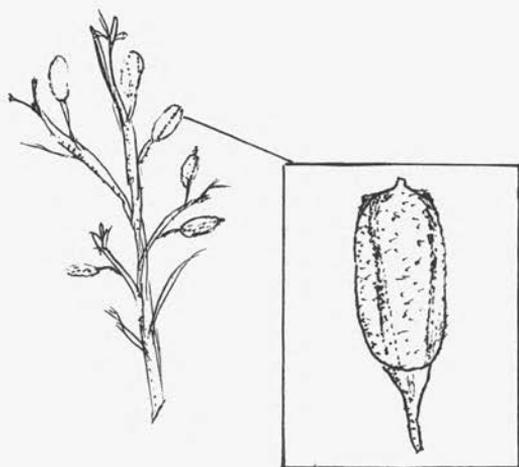
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## PINE GROSBEAKS EATING *ELAEAGNUS UMBELLATA* SEEDS

by Alan E. Strauss

During the winter of 1997-1998, there were large flocks of winter finches throughout New England, including the southern states of Massachusetts, Rhode Island, and Connecticut. This "invasion" made it possible to study some of these irruptive migrants as they fed on various trees, shrubs, and other plants. On January 3, 1998, I had the opportunity to watch twelve Pine Grosbeaks (*Pinicola enucleator*) as they fed along Kelton Road in Gardner, Massachusetts. I saw few birds feeding at the tops of maple trees, eating buds. This is apparently a favorite food source for Pine Grosbeaks. A few birds were also seen feeding on old apples remaining on trees in one of the yards along this street. This is also apparently typical of Pine Grosbeaks, which are said to especially favor crab apples, mountain ash, pine seeds, and maple buds (Ehrlich et al. 1988), and I have seen Bohemian Waxwings (*Bombycilla garrulus*) and Pine Grosbeaks feeding on apples in orchards in Maine in past years.

Most interesting, however, was that Pine Grosbeaks were also feeding in some low bushes close to Route 140. I watched carefully and noticed that the



Enlarged Detail

*Elaeagnus umbellata*, shown slightly smaller than actual size, with enlarged detail.

birds were feeding on some type of small, grayish to reddish seeds. The seeds were attached to the branches of the shrubs by small, woody stems. There were hundreds of seeds on the shrubs, and many more were lying on the snow beneath where the grosbeaks were feeding.

I collected some of the seeds and twigs for identification. In addition, Tom Pirro, a resident of the Gardner area, was kind enough to mail me some additional samples. I also took several photographs of

the Pine Grosbeaks as they fed in the shrubs at eye level.

I sent the seeds, twigs, and photographs to Dr. Ed Cope at the Bailey Hortorium at Cornell University for identification. Dr. Cope identified the seeds as those of autumn olive or autumn elaeagnus, known botanically as *Elaeagnus*

*umbellata*. This plant is not native to New England but is an introduced species originally from southeast Asia (E. Cope, pers. comm.) I did some further research to find out more about the autumn olive plant. It was introduced into the United States in 1830 from China, Japan, and Korea. autumn olive produces small (less than a quarter-inch long), fleshy fruits that range in color from pink to red. A single shrub can produce up to eight pounds of fruit (Szafoni 1989). Each fruit contains one soft, ridged pit.

These trees are commonly planted along highways as screens, and to stabilize and revegetate road banks. They are known to attract birds and wildlife. Each tree, which can reach a height of about twenty feet, can produce 20,000 to 50,000 seeds per year, and the seeds are widely distributed by birds.

It is interesting to note that birds such as Pine Grosbeaks, from northern New England and Canada, were feeding on introduced plants. There were also Evening Grosbeaks (*Hesperiphona vespertina*) feeding on these same plants. This suggests that these winter finches are generalists in terms of their diet, meaning that they eat any type of seeds or fruits available within the areas that they migrate to. It is unclear to me whether autumn olives are growing in Maine, Vermont, New Hampshire, and Canada, and how long these birds have been feeding on this Asian plant. It would be interesting to determine whether Pine Grosbeaks have been feeding on autumn olive on their breeding grounds, or whether this is a food source used only during their winter wanderings. Perhaps this is a food source that was only utilized this year? There are many interesting and unanswered questions related to my observations on the feeding behavior of last winter's Pine Grosbeak flocks. I would welcome any data that other observers may have on this subject.

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**Alan Strauss** has contributed several articles on bird behavior to *Bird Observer*. A resident of Providence, Rhode Island, he has a B.A. and an M.A. in Anthropology and Archaeology. Alan is the President of Cultural Resource Specialists of New England, a firm specializing in public archaeology.

The author thanks Tom Pirro, and Dr. Ed Cope of the Bailey Hortorium at Cornell University, for their help in preparing this article.

**BOOK REVIEW: *How to Spot an Owl; How to Spot Hawks and Eagles***

by Mark Lynch

*How to Spot an Owl*, by Patricia and Clay Sutton. Chapters Publishing, 1994. 144 pages (paper); \$14.95

*How to Spot Hawks and Eagles*, by Clay Sutton and Patricia Taylor-Sutton. Chapters Publishing, 1996. 144 pages (paper); \$15.95.

One of the most frequent requests I get from birding classes and groups is to "show them an owl." I long ago ceased to lead "owl prowls" for several reasons. First, no enterprise is better structured for failure than bringing a group into the forest in the dark in the hope of seeing and hearing a creature that is sensitive to human presence. For success at nocturnal owling, one needs absolute quiet, something that doesn't come easily to a gang waiting around with nothing to do for long intervals. You also need extraordinary patience, and you need to be satisfied with only hearing a distant hoot or squawk. Using tapes to bring owls closer, so the group can see the bird as opposed to only hearing it, easily veers into potentially destructive harassment.

*How to Spot an Owl*, by Patricia and Clay Sutton, is the perfect primer for those who have never, on their own, searched for an owl. The first section of the book covers all the "how to" owling basics. There are chapters on looking for owl signs, owl nests, and daytime roosts. There is a wonderful section on how to walk through the woods that every birder, potential birder, and anyone who has signed up for a natural history outing should read:

Where do you look when you walk through the woods? At your feet, lost in thought, but hoping not to trip? Or are you so distracted by your inner thoughts that you walk blindly, oblivious to your surroundings, not paying attention, remembering very little about what's around you. This is the first mistake if you are out for owls. Look ahead and around. Any evergreen or tangle is a potential owl roost. (38)

In a chapter on "Equipment Know-how," the Suttons discuss binocs, scopes, and even the pros and cons of various night-vision aids. They do talk about using tapes to get owls to respond, but add several strong caveats about overtaping and using tapes during the breeding season. The Suttons also state that the use of tapes is illegal in most national and state parks. Included is a fine one-page document titled "Owling Etiquette" that every birder and bird photographer needs to read. Example:

5. Upon discovery, sink slowly to the ground to appear less threatening. If the owl no longer feels threatened, you may get to watch it relax — a real treat.

6. If you are too close to the owl and it fidgets and continues to look alarmed (elongated), back off slowly and quietly, keeping your profile low.

The second half of the book is a species-by-species account of North America's owls, with lots of tips on where, when, and how to look for each species. The whole book is sprinkled with personal anecdotes and stories about finding owls. Though perhaps better known to the reading public as dedicated hawk enthusiasts, the Suttons are also passionate and experienced owl watchers. This makes the book an enjoyable read even if you are an old pro at owling. For example, it was interesting to learn that the Suttons make an annual pilgrimage to Plum Island over President's Day weekend, and that they have never failed to see a Snowy Owl at that time.

*How to Spot Hawks and Eagles*, also by the Suttons, follows the same format as the volume on owls. In Part One, there are good, concise discussions on general identification, where and how to search for hawks, and a good summary of the dynamics of raptor migration. In Part Two, there are species-by-species accounts, including two separate sections on "Southwestern Specialties" and "Florida Exclusives." Each account has information on lifestyle, migration routes, and best locations to see the birds, plus some basic identification clues. The Suttons' years of experience hawkwatching at Cape May Bird Observatory make this an interesting and informative book even for hard-core raptor-seekers. Clay Sutton was one of the authors (with Pete Dunne and David Sibley) of *Hawks in Flight*, the first "holistic" guide to looking a hawks in the air. Throughout *How to Spot Hawks and Eagles* are personal accounts of experiences with these raptors that really capture the magic of hawkwatching.

The "How to Spot" books are profusely illustrated with high-quality color photographs. These attractive books were originally published by Chapters Publishing, Ltd., of Vermont, but are now being published by Houghton Mifflin. There are no new titles for the series in the works. This is a shame because these books are perfect for serious beginners but can also be enjoyed by the more experienced naturalist, as well.

**Mark Lynch** is a teacher and environmental educator at the Broad Meadow Brook Massachusetts Audubon Society sanctuary in Worcester. He is also a teacher and docent at the Worcester Art Museum and host of the show "Inquiry" on WICN. Two of his favorite owls are the Little Owl found on an ancient Greek skyphos and the tethered owl in the Dutch painting by Hondius, both at the Worcester Art Museum.

# BIRD SIGHTINGS

## MAY/JUNE 1998

### SUMMARY

By Marjorie W. Rines, Simon A. Perkins, and Robert H. Stymeist

Spring of 1998 was wet, wet, and wet. Each of the first eleven days of May saw measurable rain, with a total of 6.85 inches for the entire month, roughly double the normal for May. This was NOT a birder's May, weatherwise. East or northeast winds persisted from May 2 to 14, and only three days brought southwest winds, on May 1, 15, and 29. On that last day severe squall lines swept the state with damaging thunderstorms and locally heavy rain and large hail. The storm brought down many trees causing many local power outages, particularly inland. The high temperature was 89 degrees on the 29th.

June was no better with 11.58 inches of rain, 8.49 inches more than normal, or nearly triple the average. Measurable amounts fell on 17 days. The most rain in 24 hours was 5.99 inches on June 13-14, a new June record. The month was also very foggy, with fog noted on 20 days and dense fog on 11 of these, another new record for June or any other month. The high was only 88 degrees on the 26th. Would summer ever come to New England?

R. H. S.

#### LOONS THROUGH WOODPECKERS

Of the hundreds of Red-throated Loons reported from the waters around Nantucket in April, roughly half were still at this staging area in mid-May, and a late Horned Grebe was found lingering at Gay Head in late May.

A census of the state's largest heronry at Kettle Island in Manchester yielded the following numbers and trends: 80 Great Egret nests (stable following six years of gradual increase), 176 Snowy Egret nests (stable), 21 pairs of Little Blue Herons (stable), 9 pairs of Black-crowned Night-Herons (stable), and 90 Glossy Ibis nests (continued increase). **Little Egret** has become nearly annual in New England. Two different birds, discovered May 16, only five hours and roughly 25 miles apart, included a bird in high breeding condition at Nantucket that possessed bright reddish-orange facial skin and toes, and a bird at North Monomoy that displayed gray facial skin and yellow toes. The Monomoy bird was not relocated, but the Nantucket bird was seen again in early June on Tuckernuck. During the interim, its facial skin faded to a color described by the observers as yellow-orange. The presence of two single Yellow-crowned Night-Herons in Fairhaven and Barnstable in late June suggested possible breeding somewhere near these two sites. But because this species is not a colonial nester, unlike Black-crowns, their nest sites in Massachusetts are rarely discovered.

**Black Vulture** reports included a single bird in Westport in early May, and a pair discovered nesting in the Blue Hills in Milton on June 23. This discovery represented the first breeding record in New England. Turkey Vulture is not known to nest on Cape Cod, so a count of 32 in Truro in Late May was noteworthy. This portion of the Cape is a known focal point for wind-drifted birds such as vultures, and kites, eagles and other raptors in spring. The vultures may have been late migrants or non-breeding individuals that had been concentrated there by southwest winds.

American Wigeon is a rare breeder in Massachusetts, so the presence of this species at two potential nesting sites (South Monomoy and Plum Island) in the third and fourth weeks of May was intriguing. A female Northern Shoveler at Revere in late June was oddly out-of-season, as were single Redheads at Ipswich and Nantucket, a Ring-necked Duck in West Bridgewater, a Hooded Merganser at Plum Island, and three Ruddy Ducks at Nantucket. Also late to depart were four Common Mergansers noted on the Weston Reservoir in early May. Two sightings of single female **King Eiders** in Winthrop and Nahant, roughly three miles apart, may have involved the same individual.

Single pairs of Ospreys in Westboro and Pepperell returned as the only inland-nesting Ospreys in the state. Continuing the trend in the increase in the number of local kite sightings were single **Swallow-tailed** and **Mississippi kites**, both seen on the outer Cape within two days of one another. Our least common breeding accipiter, Sharp-shinned Hawk is seldom detected in June away from the aforementioned raptor "funnel" on the outer Cape, so a Sharp-shinned in Lexington in late June was especially noteworthy. Though its age was not determined, this bird was most likely a wandering, non-breeding yearling. Red-shouldered and Broad-winged Hawks, two species that loathe crossing large water bodies, were seen on the same day on

Martha's Vineyard. Late Peregrine Falcons were noted at Nantucket and Plum Island, and the **Gyrfalcon** that spent much of the winter at Logan Airport was last seen there in early May.

The pair of Clapper Rails that bred at Nantucket last year (the second island nesting record) returned again this year, though, by the end of the reporting period, breeding had yet to be confirmed. Clappers were also noted in various traditional nesting sites. Confirmation of local nesting is even more seldom obtained for King Rail than it is for Clapper, though the presence of at least one King every year buoys the hope that they will continue to maintain a toehold in the Commonwealth. This year, a pair of Kings was noted in West Bridgewater, and another single was found in Middleboro. Two other state-listed species, American Coot and Common Moorhen, were worthy of note insofar as they were present in mid-to-late June, during a period when they are usually nesting; no evidence of breeding was found for either species.

Two different (?) American Golden-Plovers, a species seldom seen in spring as far east as New England, were reported in May. In spring, Semipalmated Plovers are annual yet uncommon inland, so reports from Bolton Flats and Groton were noteworthy, as were two reports in late June of several Semis apparently over-summering at the coast. As American Oystercatchers have continued to slowly expand their breeding range northward (within the last few years, they have nested in southern Maine and southern Nova Scotia, the only known nesting sites north of Boston), the frequency with which birds have been seen on the North Shore of Massachusetts has continued to increase. Among three North Shore sightings in May, a pair noted flying (apparently migrating) up the outer beach at Plum Island was last seen crossing the mouth of the Merrimac River, heading for New Hampshire. An above-average number of over-summering, and/or early southbound-migrant Lesser Yellowlegs were noted in Newburyport immediately following a spring in which the species appeared in below-average numbers (the maximum count in May was seven). A **Bar-tailed Godwit** that was assumed to be the same individual that spent part of the winter in Plymouth (the first in New England to over-winter), reappeared at North Monomoy in mid-May and mid-June, and an early Marbled Godwit spent two days in East Boston at the end of June. Very rare inland in spring, a White-rumped Sandpiper was noted in Concord, and the only **Ruff** of the spring was in West Bridgewater (not, surprisingly, in Newburyport). Among several hundred Short-billed Dowitchers in Newburyport in May was an individual of the central Canadian *hendersoni* race, the first in spring in New England. Coincidentally, New Jersey also recorded its first spring *hendersoni* this year. Common Snipe has rarely been confirmed breeding in Massachusetts, so late spring and summer records are always noteworthy. A single snipe seen in Lancaster in early June may have been breeding locally, though it was never relocated. Migrant Wilson's Phalaropes found inland in May included single birds in West Bridgewater and Concord, and a male Wilson's at Edgartown in June was surprisingly far from the nearest known breeding area (North Monomoy) for so late in spring. Reports of small numbers of Red and Red-necked phalaropes came from Cape Cod Bay near the end of the long stretch of northeast winds in the first half of May, and large numbers of both these species were noted migrating along the south shore of Nantucket as that weather pattern broke on the 16th of May.

A very late Iceland Gull was carefully studied in Salisbury in late June, and several Black-legged Kittiwakes also tarried. Typically, kittiwakes that are seen late in spring (or the few that occasionally linger into summer) are immature birds. Yet three kittiwakes seen in mid-May at Nantucket, and a single bird at Rockport in late June, were adults. A statewide total of 706 nesting Laughing Gulls included 211 pairs at Plymouth Beach, with the balance at a colony at New Island in Nauset Marsh in Orleans. The most sensational bird of the season this year was a breeding-plumage **Ross's Gull** seen by one lucky observer for a total of only fifteen minutes, as it stood on the Beach at Sandy Neck in Barnstable among a small flock of Bonaparte's Gulls. The appearance of this bird in Massachusetts (representing the fourth state record) was probably related to the seemingly interminable spell of northeast winds that prevailed through most of the first half of May.

In addition to the four pairs of Arctic Terns that returned to nest at Plymouth Beach, another four or five pairs nested at a newly discovered site at Penikese Island in the Elizabeth Islands. A single Forster's Tern, reported from Plum Island in early June, kept alive the hope that this species may continue to maintain a breeding toehold at this single New England outpost. Among this year's record number of 1,693 state-nesting Roseate Terns were at least 20 pairs within a new colony of roughly 2000 pairs of Common Terns at the north end of South Monomoy Island in Chatham. This was especially good news for this federally endangered species, because, until recently, Roseates had been nesting almost exclusively at one site in the state: Bird Island in Marion. The Bird Island colony still contains more than 65 percent of the total state population, but the species is in a less precarious position now that they have begun to put their eggs in other baskets, so to speak. Three Black Skimmers that settled into the aforementioned tern colony at South Monomoy Island were thought to have been the same individuals that abandoned the tern colony in Nauset Marsh in Orleans a week earlier. Another pair of skimmers established a territory late in the nesting season at Plymouth Beach.

A Black Guillemot was curiously late at Andrew's Point in Rockport at the end of June, and late Atlantic Puffins included two at Nantucket in mid-May and a single bird at the end of June in Chatham.

Both species of cuckoos were well reported at least through mid-June. The numbers of breeding Short-eared Owls have continued to decline, to the point that the only remaining nesting sites anywhere in New England are on Nantucket and Tuckernuck. For reasons that almost certainly relate to the ongoing building boom on Nantucket, Short-ears on that island have all but disappeared as a nesting species. Luckily, they still

appear to be finding sanctuary nearby on two-mile-long Tuckernuck, where an astonishing eleven nests were located this past season.

Counts of 30 and 34 Common Nighthawks from Wayland and Topsfield, respectively, represented fairly high spring tallies. Small numbers of **Chuck-will's-widows** have been present in Edgartown, MV, all summer for several years. They almost certainly breed there, though efforts to confirm this suspicion have failed thus far. Nearby, at Cape Cod, single Chucks that were heard singing in Bourne and Wellfleet further fueled the hope that this species will soon be added to the Commonwealth's list of breeding species. Meanwhile, Whip-poor-wills appear to be declining in the state, though a concentration of 54 in Lancaster was a healthy sign.

None of the three reports of Red-headed Woodpeckers included any indication that any of them were nesting.

Date	Location	Number	Observers	Date	Location	Number	Observers
<b>Red-throated Loon</b>				<b>Wilson's Storm-Petrel</b>			
5/3	Cumb. Farms	1	R. Finch	5/16	Nantucket	410 migr	S. Perkins#
5/9, 17	P.I.	75+, 19	R. Heil	6/14	Rockport (A.P.)	100's	J. Soucy#
5/13	W. Bridgewater	16	T. Raymond	6/21	Stellw.	300+	S. Moore#
5/15-16	Nantucket	225	S. Perkins#	6/28	Newbypt	4	E. Tarry#
5/17	Westport	11	M. Boucher	<b>Leach's Storm-Petrel</b>			
6/5	Nantucket	1	E. Ray	5/12	Barnstable (S.N.)	6	P. Trimble
6/6	Nauset B.	1	M. Resch	5/13	Sandwich	1	R. Finch
6/13	P'town	2	M. Lynch#	6/27	Rockport (A.P.)	1	R. Heil
6/17	Wellfleet	1	C. Cook	<b>Northern Gannet</b>			
<b>Pacific/Arctic Loon (details submitted)</b>				5/9	P.I.	20	R. Heil
5/16	P.I.	1	J. Baird, M. Rines	5/9	Nantucket	145	fide E. Ray
<b>Common Loon</b>				5/10	Rockport (A.P.)	48	R. Heil
5/2	Worc. (BMB)	1	J. Liller	5/10	Barnstable (S.N.)	100	W. Petersen
5/3	Cape Ann	5	J. Berry	5/11	Orleans	200	B. Nikula
5/9	Gardner	2	T. Pirro	5/15-16	Nantucket	230+	S. Perkins#
5/13	Mt.A.	2	v.o.	6/13	Truro	86	M. Lynch#
5/13	W. Bridgewater	2	T. Raymond	6/17	Wellfleet	10	C. Cook
5/13	Medford	2 migr	BBC (M. Rines)	6/21	Stellw.	50 imm	S. Moore#
5/15-16	Nantucket	120	S. Perkins#	6/27	Rockport (A.P.)	34	R. Heil
5/16	Sharon	7	S. Arena#	<b>Great Cormorant</b>			
5/18	P.I.	8	R. Heil	5/15-16	Nantucket	5	S. Perkins#
6/5	Nantucket	2	E. Ray	5/25	N. Scituate	7	W. Petersen#
6/13	P'town	4	M. Lynch#	5/31	W. Newbury	1 imm	R. Heil
6/18	Clinton	2	S. Hennin	<b>Double-crested Cormorant</b>			
6/24	Buzzards Bay	102	R. Farrell	5/2	Essex	120	P. + F. Vale
<b>Pied-billed Grebe</b>				5/4	Groton	28	T. Pirro
5/9	P.I.	1	P. + F. Vale	5/9	Somerville	85	D. Oliver#
6/20	W. Bridgewater	1	S. Arena	5/18	DWWS	112	D. Furbish
<b>Horned Grebe</b>				6/27	Westport	92	M. Lynch#
5/31	Gay Head	1	A. Keith	<b>American Bittern</b>			
<b>Red-necked Grebe</b>				5/3	W. Brookfield	1	M. Lynch#
5/3	Chilmark	6	A. Keith	5/5	Concord (NAC)	1	V. Rule#
5/9	P.I.	1	R. Heil	5/9	Salem Woods	1	I. Lynch
<b>Greater Shearwater</b>				5/9	IRWS	1	K. Dorsey
6/6	off Katama	3	M. Pelikan	5/9	Gardner	2	T. Pirro
6/13	P'town	4	M. Lynch#	5/12	MBWMA	1	G. Bullock
6/21	Stellw.	40	S. Moore#	5/18	Barre	1	C. Phillips
6/25	Nantucket	6 dead	fide E. Ray	5/18	DWWS	2	D. Furbish
6/27	Rockport (A.P.)	72	R. Heil	5/23	Newbypt	2	M. Lynch#
6/28	Newbypt	1	E. Tarry#	5/25	Bolton Flats	1	M. Lynch#
<b>Sooty Shearwater</b>				5/30	WMWS	1	D. Addison
5/30	Stellwagen	11	M. Rines#	6/6	Pepperell	1	P. Duke
6/6	off Katama	70+	M. Pelikan	6/6	Westminster	1	T. Pirro
6/13	P'town	361	M. Lynch#	6/11	HRWMA	1	T. Pirro
6/13	Truro	347	M. Lynch#	6/29	S. Dart. (A.Pd)	1	LCES (J. Hill)
6/14	Rockport (A.P.)	100	J. Soucy#	<b>Least Bittern</b>			
6/15	Nauset	15	D. Larson#	5/7	GMNWR	1	I. Giriunas
6/21	Stellw.	175	S. Moore#	5/17	Salem	1	L. Healey
<b>Manx Shearwater</b>				5/25	Cumb. Farms	1	W. Petersen#
5/16	Nantucket	2	S. Perkins#	5/31	Cotuit	1	S. Miller
6/6	off Katama	2	M. Pelikan	6/14	Rowley	1	J. Berry
6/13	P'town	18	M. Lynch#	6/20	W. Bridgewater	1 m	S. Arena
6/27	Rockport (A.P.)	23	R. Heil	6/28	P.I.	1	P. Vale
6/28	Stellw.	3	E. Tarry#	<b>Great Blue Heron</b>			
6/28	Newbypt	2	E. Tarry#	5/31	Barre F.D.	6	M. Lynch#

Great Blue Heron (continued)									
5/9	W. Newbury	6		P. + F. Vale					
5/10	Hopkinton	2 nests		E. Taylor					
5/17	Pepperell	20		E. Stromsted					
5/23	Wayland (WB)	3 pr		S. Perkins#					
5/30	Westboro	18		E. Taylor					
6/7	Boxford	59 nests		J. Berry					
Great Egret									
5/2	Essex	3		P. + F. Vale					
5/2	Westport	6		M. Lynch#					
5/7	Concord (NAC)	1		S. Perkins#					
5/15	Nantucket	5		S. Perkins#					
5/17	P.I.	14		R. Heil					
5/19	Manchester (KI)	80 nests		S. Perkins#					
6/5	Nantucket	8 + 3 yg		E. Ray					
6/27	Westport	28		M. Lynch#					
Little Egret									
5/16	Nantucket	1 ad br pl		S. Perkins#					
5/16	N. Monomoy	1 ad B.		Loughran, P. Trimble					
6/3	Tuckernuck	1 br pl		R. Veit#					
Snowy Egret									
5/2	Essex	2		P. + F. Vale					
5/18	P.I.	3 migr		S. Perkins#					
5/19	Manchester (KI)	176 nests		S. Perkins#					
6/25	Newbypt/P.I.	20+		S. Perkins#					
Little Blue Heron									
5/2	Essex	2		J. Hoye#					
5/3	Chilmark	1		A. Keith					
5/5	Nantucket	1		fide E. Ray					
5/13	Milton	1		D. Larson					
5/19	Manchester (KI)	21 pr		S. Perkins#					
6/9	Gloucester	3		M. Rines					
Tricolored Heron									
thr	P.I.	1-2		v.o.					
5/4	Nantucket	1		fide E. Ray					
5/9	Manchester	1		T. Raymond					
6/20	Hingham	1		K. Vespaziani#					
6/26	Manchester	1		C. Floyd					
Cattle Egret									
5/2	Ipswich	1		P. + F. Vale					
5/9	Nantucket	1		fide E. Ray					
5/23	Wenham	8		M. Lynch#					
5/24	Beverly	1		M. Rines#					
6/26	Danvers	1		L. Pivacek					
Green Heron									
5/1, 8	Stow	1, 5		S. + L. Hennin					
5/3	Newbury	4		S. Sweet#					
5/4	Marion	3		M. Maurer#					
5/7	Camb. (F.P.)	3		M. Rines					
6/7	S. Groveland	3		BBS (R. Stymeist)					
6/28	P.I.	5		P. + F. Vale					
Black-crowned Night-Heron									
5/3	Watertown	5		M. Rines					
5/16	Nantucket	15		S. Perkins#					
5/19	Manchester (KI)	9 pr		S. Perkins#					
5/25	Watertown	32		R. Stymeist					
5/27	Boston	20+		R. Mayer					
6/8	Arlington	123		M. Rines					
Yellow-crowned Night-Heron									
6/23-8	Fairhaven	1		M. Sylvia + v.o.					
6/23	Marstons Mills	1		G. Martin					
Glossy Ibis									
5/2	Concord (NAC)	1		S. Perkins#					
5/2	Essex	24		J. Hoye#					
5/14	Ipswich	40		D. Oliver#					
5/15	W. Bridgewater	5		T. Aversa#					
5/19	Manchester (KI)	99 nests		S. Perkins#					
5/24	Topsfield	8		J. Center					
5/26	Cumb. Farms	4		R. Finch					
6/2	Acton	1		N. Hicks					
6/17	N. Monomoy	5		B. Nikula					
6/24	P.I.	50		D. Hill					
6/27	S. Dart. (A.Pd)	12		R. Stymeist#					
<b>Black Vulture</b>									
6/1-30	Milton	pr n		N. Smith					
5/9	Westport	1		D. Furbish					
<b>Turkey Vulture</b>									
5/9	Nantucket	7		fide E. Ray					
5/18	S. Peabody	4		R. Heil					
5/26	N. Truro	32		F. Bygate#					
5/27	W. Newbury	7		R. Heil					
5/28	Nantucket	6		fide E. Ray					
5/30	P'town	9		R. Stymeist#					
5/31	Wellfleet	9		R. Stymeist#					
6/27	Westport	8		M. Lynch#					
<b>Snow Goose</b>									
5/2	Weymouth	1		S. Carey					
5/16	Cape Cod Canal	1		S. Hedman#					
<b>Brant</b>									
5/14	Hyannis	25		S. Perkins#					
5/16, 24	Newbypt	520, 133		R. Heil					
5/16	Squantum	96		G. d'Entremont#					
5/17	Duxbury B.	100+		L. Cleveland					
5/18	Nahant	60		R. Heil					
5/28	Nantucket	2		fide E. Ray					
6/6	Quincy	6		E. Taylor					
<b>Whooper Swan</b>									
5/1-6/9	P. I.	1-5		W. Drew#					
<b>Wood Duck</b>									
5/2	Concord (NAC)	4		S. Perkins#					
5/3	Cumb. Farms	11		R. Finch					
5/9	ONWR	6		E. Salmela#					
5/14	HRWMA	8		T. Pirro					
5/21	P.I.	4 migr		S. Perkins#					
5/27	GMNWR	5		S. Perkins#					
6/6	Quabbin (G45)	11		G. d'Entremont#					
<b>Gadwall</b>									
5/16	S. Monomoy	35		B. Nikula#					
5/8, 22	P.I.	13, 19		W. Drew#					
6/18	Nashawena I.	2		A. Jones					
<b>American Wigeon</b>									
5/16	S. Monomoy	1		B. Nikula#					
5/23	P.I.	2		M. Lynch#					
<b>Blue-winged Teal</b>									
5/19	W. Bridgewater	1		R. Finch					
5/22	P.I.	9		W. Drew#					
6/18	Nashawena I.	2		A. Jones					
6/25	Newbury	2		S. Perkins#					
6/28	P.I.	2		J. Paluzzi#					
6/28	E. Boston (B.I.)	1 m		S. Zende#					
<b>Northern Shoveler</b>									
5/16	S. Monomoy	6		B. Nikula#					
5/16	Boston	1		R. Stymeist#					
5/27	P.I.	4		S. Haydock					
6/27	E. Boston	1 f		G. Wood					
<b>Northern Pintail</b>									
5/5	Groton	1		T. Pirro					
5/5	Barre	2		C. Phillips					
5/8	Newbypt	1		D. Chickering					
5/16	S. Monomoy	2		B. Nikula#					
<b>Green-winged Teal</b>									
5/3	W. Bridgewater	1		S. Arena					
5/5	Concord (NAC)	2		S. Perkins#					
5/22	P.I.	15		W. Drew#					
6/1	Nantucket	1		E. Ray					
6/18	Nashawena I.	4		A. Jones					
6/29	P.I.	16		BBC (D. + D. Oliver)					
<b>Redhead</b>									
5/23-27	Ipswich	1 m		I. Giriunas + v.o.					
6/5	Nantucket	1		E. Ray					
<b>Ring-necked Duck</b>									
5/2	Braintree	1 pr		G. d'Entremont					
5/9	W. Newbury	4		R. Heil					
6/20	W. Bridgewater	1 m		S. Arena					

Greater Scaup									
5/2	Braintree	13	G. d'Entremont	5/9	Arlington	1		D. Oliver#	
5/16	P'town	1	J. Sones#	5/14	Melrose	1		D. + I. Jewell	
Lesser Scaup				6/25	Nantucket	3		fide E. Ray	
5/2	Braintree	1 pr	G. d'Entremont	6/21	W. Newbury	2		R. Heil	
5/17	Chilmark	2	A. Keith#	Osprey					
King Eider				5/28	S. Dart. (A.Pd)	6		LCES (J. Hill)	
5/14	Cape Cod Canal	1	W. Bosse#	5/22	Nauset Marsh	3		S. Perkins#	
5/15	E. Sandwich	1 m.	W. Petersen#	5/23	Newbypt/P.I.	2		J. Berry#	
5/16	Winthrop	1 f	R. Stymeist#	5/30	Westboro	pr nest		E. Taylor	
5/16	Nahant	1 f	R. Stymeist#	5/30	Pepperell	pr		E. Stromsted	
Common Eider				6/18	Nashawena I.	3		A. Jones	
5/2	Cape Ann	150	J. Brown#	6/22	Lynn	1 ad, 1 imm		J. McLaughlin	
6/6	Nauset B.	10	M. Resch	6/27	Westport	44		M. Lynch#	
6/18	Nashawena I.	6	A. Jones	6/28	P.I.	pr + 1-2 yg		P. + F. Vale	
6/27	Westport	19	M. Lynch#	Swallow-tailed Kite					
Harlequin Duck				5/29	Orleans	1		J. Sones	
5/3	Chilmark	6	A. Keith	Mississippi Kite					
5/26	Gay Head	1	A. Keith#	5/31	P'town	1		J. Trimble#	
Surf Scoter				Bald Eagle					
5/1	Rockport (A.P.)	27	R. Heil	5/16	P'town	1 imm		B. Nikula#	
5/2	Westport	4	M. Lynch#	5/18	Boxford	1 imm		R. Heil	
5/9	Magnolia	10	T. Raymond	5/20	P.I.	1 imm		R. Stymeist#	
5/14	Nantucket Sound	310	S. Perkins#	5/21	W. Newbury	2 imm		R. Heil	
5/16	Nantucket	12	S. Perkins#	5/22	ONWR	1 imm		M. Rines#	
5/25	N. Scituate	3	W. Petersen#	5/30	Orleans	1 imm		M. Lynch#	
6/5	Nantucket	1	E. Ray	5/30	P'town	1 imm		R. Stymeist#	
White-winged Scoter				5/31	Wellfleet	1		M. Rines#	
5/15-16	Nantucket	7000+	S. Perkins#	6/16	Dennis	1		W. Henchy	
5/17	P.I.	90	R. Heil	6/20	Ipswich	1 imm		S. Czerepak	
6/5	Nantucket	2	E. Ray	6/28	S. Dart. (A.Pd)	1 imm		D. Sandee	
6/28	Fairhaven	1	M. Rines	Northern Harrier					
Black Scoter				5/2	Barre F.D.	1		M. Lynch#	
5/10	Barnstable (S.N.)	15	W. Petersen	5/15-16	Nantucket	16		A. Jones#	
5/14	Cape Cod Canal	1	W. Bosse#	5/16	W. Bridgewater	1 m		S. Arena#	
5/16	Nahant	8	R. Stymeist#	5/17	Westport	1		M. Boucher	
5/18	P.I.	7	R. Heil	5/18	Newbypt-P.I.	4		R. Heil	
5/25	Sharon	1 m	S. Arena	5/20	Cumb. Farms	1 f		K. Anderson#	
6/28	Westport	1 m	G. d'Entremont	5/31	Wellfleet	1		M. Rines#	
Oldsquaw				6/17	Bedford	1 f		R. Lockwood	
5/8	Dennis	1	S. Miller#	6/18	Nashawena I.	4		A. Jones	
5/16	Nantucket	3	T. Maloney#	6/29	P.I.	1		BBC (D. + D. Oliver)	
5/17	Ipswich	140	J. Berry	Sharp-shinned Hawk					
5/17	P.I.	24	R. Heil	5/3	N. Truro	25		J. Trimble#	
6/6	Nauset B.	2	M. Resch	5/18	P.I.	17		T. Carrolan	
6/18	Nantucket	1 f	fide E. Ray	6/5	P.I.	1		W. Drew#	
Bufflehead				6/7	Sudbury	1		BBC (B. Howell)	
5/9	ONWR	9	E. Salmela#	6/18	Lexington	1		M. Rines	
5/15	Nantucket	3	S. Perkins#	Cooper's Hawk					
5/16	S. Monomoy	3	B. Nikula#	5/3	N. Truro	4		J. Trimble#	
6/2	Brockton	1 f	S. Arena	5/16	Easton	3		S. Arena#	
6/11	Beverly	2	R. Heil	6/3	Raynham	1		G. d'Entremont	
Hooded Merganser				6/10	Middleboro	1		G. d'Entremont	
5/16	Easton	1 f	S. Arena#	6/11	Brewster	1		B. Nikula	
5/20	HRWMA	6	T. Pirro	6/12	Groveland	pr		R. Heil	
5/23	Wayland (WB)	1 f	S. Perkins#	6/20	Easton	1		S. Arena	
6/6	N. Pepperell	2	E. Stromsted	6/21	W. Newbury	2 pr		R. Heil	
6/6	Quabbin (G45)	8	G. d'Entremont#	6/27	Concord	1		BBC (R. Lockwood)	
6/7	P.I.	1	D. + D. Oliver	6/28	Fairhaven	1 ad f		M. Rines#	
6/11	HRWMA	1 f	T. Pirro	6/28	Freetown	1 f		G. d'Entremont	
6/21	Rutland	1 f	M. Lynch#	5/1-31	Reports of indiv. from 21 loc.				
Red-breasted Merganser				Northern Goshawk					
5/15	Nantucket	11	S. Perkins#	5/3	N. Truro	1 imm		J. Trimble#	
5/17	Fairhaven	7	M. Boucher	5/3	Dedham	1		T. Raymond	
5/23	Newbypt/P.I.	4-5 f	J. Berry#	5/3	S. Dartmouth	1		T. Raymond	
5/27	Duxbury B.	12	W. Petersen	5/3	Boxford	1		R. Hodson	
5/28	S. Dart. (A.Pd)	9	LCES (J. Hill)	5/9	Gardner	1 ad		T. Pirro	
6/24	Buzzards Bay	2	R. Farrell	5/31	Barre F.D.	1		M. Lynch#	
Common Merganser				6/19	Lancaster	1		R. Lockwood	
5/3	Weston	4	G. Ferguson	Red-shouldered Hawk					
Ruddy Duck				5/3	E. Bridgewater	1		R. Finch	
5/2	Randolph	5	G. d'Entremont	5/4	Fall River	4		M. Boucher	
				5/6	Milton	1		A. Joslin	

Red-shouldered Hawk (continued)			
5/13	Barre	1	C. Phillips
5/16	Petersham	1	J. Center
5/18	Whitman	1	K. Holmes
5/20	Boxford	1	R. Stymeist#
6/9	E. Middleboro	2 yg	R. Brissette
6/10	Groton	1	M. Rines
6/21	Rutland	1	M. Lynch#
6/24	E. Boxford	1	J. Brown#
6/28	Berkley	1	G. d'Entremont
6/28	M.V.	1 imm	G. Daniels#
Broad-winged Hawk			
5/2	Barre F.D.	3	M. Lynch#
5/2	IRWS	1	P. + F. Vale
5/3	N. Truro	10	J. Trimble#
5/4	Fall River	1	M. Boucher
5/18	Maynard	2	L. Nachtrab
5/19	P'town	1 imm	J. Trimble#
5/20	Boxford	1	M. Rines#
5/20	Medfield	2	J. Weinmayr#
5/23	N. Middleboro	2	K. Holmes
5/30	Manchester	1	J. Berry
6/10	Groton	1	M. Rines
6/19	Lancaster	1 imm	R. Lockwood
6/28	Upton	1 pr	P. DeBruyn
6/28	Lakeville	1	G. d'Entremont
6/28	M.V.	3 imm	G. Daniels#
American Kestrel			
5/4	Nantucket	2	fide E. Ray
5/9	Lunenburg	2	R. Lockwood
5/9	Lancaster	6	R. Lockwood
5/18	P.I.	13	T. Carrolan
5/19	Rockport (H.P.)	4	D. Jacques
5/27	E. Boston (B.I.)	2	R. Cressman
Merlin			
5/3	Newbury	1	S. Perkins#
5/3	P'town	1	J. Trimble
5/5	Rockport (H.P.)	1 m	D. Jacques
5/8	Maynard	1	L. Nachtrab
5/15	W. Bridgewater	1	S. Arena#
5/16	Scituate	1	W. Petersen#
5/18	P.I.	1 migr	S. Perkins#
5/21	P.I.	1 migr	S. Perkins#
5/27	W. Newbury	1	R. Heil
Peregrine Falcon			
thr	Boston	2 pr	fide N. Smith
5/9, 18	P.I.	2, 1	R. Heil
5/9	Ipswich	1	J. Berry
5/15	Essex	1	A. McCarthy#
5/16	Newbury	2	A. McCarthy#
5/19	Rockport (H.P.)	1	D. Jacques
5/27	W. Newbury	1	R. Heil
6/1	Nantucket	1	E. Ray
6/7	P.I.	1	D. + D. Oliver
Gyr Falcon			
5/4	Boston (Logan)	1	N. Smith
Ruffed Grouse			
5/1	Barre	4	C. Phillips
5/1	Lancaster	1	R. Lockwood
5/3	Ipswich	1	J. Berry
5/3	ONWR	9	R. Lockwood
5/9	W. Newbury	1	P. + F. Vale
5/16	Sharon	1	S. Arena#
5/17	Princeton	3	M. Boucher
5/23	Blue Hills	1	SSBC (P. O'Neill)
5/31	Georgetown	1	D. Chickering
6/6	Quabbin (G40)	6	R. Lockwood
6/10	Plymouth (MSSF)	1	G. d'Entremont
6/17	E. Middleboro	1	P. Donahue
6/20	Ipswich	1	J. Berry
6/27	Concord	1	BBC (R. Lockwood)
6/27	Templeton	1	T. Pirro
6/27	Worc. (BMB)	1	S. Moore#
Wild Turkey			
5/1	Littleton	1	B. Stevens
5/1	Cummaquid	1	S. Miller#
5/3	Weston	1	G. Ferguson
5/5	Norton	4	J. Shea
5/9	Topsfield	1	P. + F. Vale
5/9	Easton	2	S. Arena
5/9	Newbury	6	D. Davis
5/13	Winthrop	1	F. Spillari
5/16	Quabbin	7	R. Lockwood#
5/17	Ipswich	1 f	J. Berry
5/25	P.I.	1	D. Chickering
5/25	Cumb. Farms	1	W. Petersen#
5/28	Norwell	1	W. Childs
6/2	E. Boxford	2	J. Brown#
6/3	Lincoln	1	R. Lockwood
6/15	Newton	1	R. Danca
6/19	Lancaster	1	R. Lockwood
6/27	Templeton	3	T. Pirro
Northern Bobwhite			
5/15	Eastham (F.H.)	2	L. de la Flor
5/25	Truro	1 m, 1 f	S. Carey
5/27	MSSF	3	G. d'Entremont
5/28	Cumb. Farms	1	K. Anderson#
6/7	S. Groveland	2	BBS (R. Stymeist)
6/7	Boxford	2 m	J. Berry
6/14	WBWS	4	D. Larson#
6/17	Falmouth	3	C. Cook
6/27	Orleans	3	S. + L. Hennin
6/27	Concord	1	BBC (R. Lockwood)
6/28	Raynham	1	G. d'Entremont
Clapper Rail			
5/9, 21	Nantucket	2	fide E. Ray
5/16-6/3	W. Harwich	2	J. Trimble#
5/16	W. Barnstable	1	B. Nikula#
5/24, 6/28	P.I.	1	R. Heil, F. Vale
6/3, 29	S. Dart. (A. Pd)	1	LCES (J. Hill)
King Rail			
5/26-30	Cumb. Farms	1	R. Finch
6/20	W. Bridgewater	2	S. Arena
Virginia Rail			
5/8	Harvard	6	S. + L. Hennin
5/9	Nantucket	2	fide E. Ray
5/9	Gardner	2	T. Pirro
5/21	Woburn	2	M. Rines
5/23	Wayland (WB)	4	S. Perkins#
5/24	DWWS	3	SSBC (D. Clapp)
5/25	Bolton Flats	3	M. Lynch#
5/31	W. Bridgewater	18	S. Arena#
6/7	S. Groveland	3	BBS (R. Stymeist)
6/7	Boxford	2	J. Berry
6/15	GMNWR	2	R. Lockwood
Sora			
5/9	Salem Woods	2	I. Lynch
5/9	Bolton Flats	1	E. Salmela#
5/15	ONWR	1	E. Neilsen
5/16	Ipswich	1	J. Berry
5/17	P.I.	3	R. Heil
5/19	Mashpee	1	S. Miller#
5/20	HRWMA	1	T. Pirro
5/23	Wayland (WB)	1	S. Perkins#
5/24	DWWS	2	SSBC (D. Clapp)
5/31	W. Bridgewater	5	S. Arena#
6/6	Westminster	1	T. Pirro
Common Moorhen			
5/31-6/13	WBWS	1	S. Clifton#
American Coot			
5/1	GMNWR	1	K. Dorsey
5/8	P.I.	1	W. Drew#
6/24	Marlboro	1	S. Hennin

<b>Black-bellied Plover</b>				5/24	P.I.	16	P. + F. Vale
5/2	Winthrop	100+	R. Cressman	6/28	E. Boston (B.I.)	6	S. Zende
5/22	P.I.	166	W. Drew#	6/30	Salisbury	1	S. Perkins#
5/15,31	N. Monomoy	300, 600	B. Nikula	<b>Lesser Yellowlegs</b>			
5/16	Newbypt H.	650	R. Heil	5/4	Nantucket	1	fide E. Ray
5/17	Ipswich	55	J. Berry	5/5	Concord (NAC)	5	S. Perkins#
5/19,28	S. Dart. (A.Pd)	24,40	LCES (J. Hill)	5/15	W. Bridgewater	7	S. Arena#
5/23	Nahant	20	P. + F. Vale	5/16	Sharon	5	S. Arena#
5/25	Hull	32	N. Swirka	5/18	Topsfield	2	R. Heil
5/24	Nauset Marsh	200	S. + L. Hennin	6/25	Newbypt/P.I.	21	S. Perkins#
5/27	Duxbury B.	75	W. Petersen	6/28	E. Boston (B.I.)	6	S. Zende
6/17	N. Monomoy	150	B. Nikula	6/30	Salisbury	5	S. Perkins#
6/25	Nantucket	6	fide E. Ray	<b>Solitary Sandpiper</b>			
6/28	Plymouth	9	E. Neumuth	5/8	Lincoln	3	S. Perkins#
6/29	P.I.	8	BBC (D. + D. Oliver)	5/8	Concord (NAC)	3	V. Laux#
<b>American Golden-Plover</b>				5/9	W. Newbury	3	P. + F. Vale
5/3	Edgartown	1	A. Keith#	5/16	Lancaster	3	R. Lockwood#
5/31	N. Monomoy	1 br pl	B. Nikula	5/18	P.I.	2	migr S. Perkins#
<b>Semipalmated Plover</b>				5/18	Cumb. Farms	2	R. Finch
5/8	DWWS	1	L. Cleveland	5/24	Topsfield	2	J. Center
5/15	Barnstable (S.N.)	15	W. Petersen#	5/24	Rockport (H.P.)	2	D. Jacques
5/16	Winthrop	8	R. Stymeist#	5/31	Winchester	2	M. Rines
5/17	Fairhaven	53	M. Boucher	<b>Willet</b>			
5/19	W. Bridgewater	6	R. Finch	5/3	S. Dartmouth	22	T. Raymond
5/22	Nauset Marsh	50	S. Perkins#	5/9	Newbury	2	D. Davis
5/23	Nahant	30	P. + F. Vale	5/15,31	N. Monomoy	10, 25	B. Nikula
5/24	Newbypt/P.I.	520+	R. Heil	5/15	Nantucket	8	S. Perkins#
5/24	N. Monomoy	75	H. Ferguson	5/15	Barnstable (S.N.)	18	W. Petersen#
5/24	W. Bridgewater	7	S. Arena	5/17	Fairhaven	2	M. Boucher
5/25	Bolton Flats	4	M. Lynch#	5/19,28	S. Dart. (A.Pd)	14, 18	LCES (J. Hill)
6/2	Groton	2	T. Pirro	5/27	Duxbury B.	8	W. Petersen
6/7	N. Monomoy	20	B. Nikula	6/3,29	S. Dart. (A.Pd)	19,22	LCES (J. Hill)
6/28	P.I.	6	P. + F. Vale	6/17	N. Monomoy	70	B. Nikula
6/28	Plymouth	2	E. Neumuth	6/24	P.I.	27	D. Hill
<b>Piping Plover</b>				6/24	Rowley	8	J. Berry
5/15	Barnstable (S.N.)	15	W. Petersen#	6/28	Plymouth	4	E. Neumuth
5/17	Ipswich	16	J. Berry	6/28	E. Boston (B.I.)	1	S. Zende
5/24	N. Monomoy	3	H. Ferguson	<b>Spotted Sandpiper</b>			
5/24	S. Monomoy	5	H. Ferguson	5/7	Concord (NAC)	7	S. Perkins#
5/27	Duxbury B.	6	W. Petersen	5/9	Newbury	4	P. + F. Vale
5/27	Essex River	2	J. McLaughlin	5/18	Topsfield	3	R. Heil
6/5	Plymouth	5	J. Hoye#	5/18	P.I.	6	R. Heil
6/5	P.I.	28	W. Drew#	5/22	Concord	3	S. + L. Hennin
6/8	Ipswich	15	J. Berry	5/23	Bolton Flats	4	J. Center
6/17	Nauset	8+	C. Cook	5/24	DWWS	5	SSBC (D. Clapp)
6/18	Nashawena I.	8	A. Jones	5/25,31	Hull	8, 3	N. Swirka
6/27	S. Dart. (A.Pd)	21	R. Stymeist#	5/29	Melrose	3	D. + I. Jewell
<b>American Oystercatcher</b>				5/30	Rockport (H.P.)	4	J. Berry#
5/1	Squantum	1	D. Larson	5/30	Plymouth B.	3	BBC (G. d'Entremont)
5/2	Winthrop	4	R. Cressman	5/31	W. Bridgewater	9	S. Arena#
5/4	W. Gloucester	1	S. Hecker	<b>Upland Sandpiper</b>			
5/4	Essex	3	J. MacDougall	thr	Lancaster	2-4	R. Lockwood
5/4	Marion	3	M. Maurer#	thr	Bedford	6-8	R. Lockwood
5/15	Nantucket	24	S. Perkins#	5/20	Newbypt	1	R. Stymeist#
5/15	Eastham (F.H.)	1	L. de la Flor#	5/27	GMNWR	1	S. Perkins#
5/17	Fairhaven	4	M. Boucher	5/28	Cumb. Farms	2	R. Finch
5/18	P.I.	2 migr	S. Perkins#	5/31	Falmouth	1	S. Clifton#
5/18	Marblehead	2	R. Heil	<b>Bar-tailed Godwit</b>			
5/25	Duxbury B.	3	S. Katz#	5/15, 6/17	N. Monomoy	1	basic pl B. Nikula
5/26	Squantum	5	C. Johnson	<b>Marbled Godwit</b>			
5/30	Nauset	30	M. Lynch#	6/28-29E	Boston (B.I.)	1	S. Zende + v.o.
5/31	N. Monomoy	24	B. Nikula	<b>Ruddy Turnstone</b>			
6/18	Nashawena I.	2	A. Jones	5/5	Winthrop	8	R. Cressman
6/28	E. Boston	1	M. Rines#	5/15,31	N. Monomoy	10, 650	B. Nikula
<b>Greater Yellowlegs</b>				5/15	Nantucket	4	S. Perkins#
5/2	GMNWR	1	S. Perkins#	5/17	Fairhaven	38	M. Boucher
5/3	P.I.	4	P. + F. Vale	5/24	Nauset Marsh	41	S. + L. Hennin
5/3	Newbypt	21	S. Perkins#	5/25	Hull	5	N. Swirka
5/14	Concord (NAC)	12	S. Perkins#	5/27	Duxbury B.	60	W. Petersen
5/15-16	Nantucket	13	S. Perkins#	5/30	Plymouth B.	32	BBC (G. d'Entremont)
5/15	W. Bridgewater	56	S. Arena#	5/31	P.I.	28	P. + F. Vale
5/16	Lancaster	5	R. Lockwood#	6/7, 17	N. Monomoy	200, 4	B. Nikula

<b>Red Knot</b>				5/19,31 N. Monomoy	6, 15	B. Nikula
5/15,31 N. Monomoy	4, 80	B. Nikula	6/5 Nantucket	3	E. Ray	
5/16 Newbypt	1	T. Raymond#	6/18 Nashawena I.	8	A. Jones	
5/24 Nauset Marsh	18	S. + L. Hennin	6/27 S. Dart. (A.Pd)	4	R. Stymeist#	
5/25 Duxbury B.	1	S. Katz#	6/28 P.I.	2	J. Paluzzi#	
5/27 P.I.	1	K. Disney	6/28 Plymouth	7	E. Neumuth	
6/6 Edgartown	2	G. Daniels#	6/30 Salisbury	2	S. Perkins#	
6/7, 17 N. Monomoy	40, 30	B. Nikula	<b>Short-billed Dowitcher (<i>hendersoni</i>)</b>			
6/7 S. Dart. (A.Pd)	1 pr	F. Thurber	5/24 Newbypt	1 br pl	R. Heil	
6/18 Nashawena I.	1	A. Jones	<b>Common Snipe</b>			
<b>Sanderling</b>				5/5 W. Bridgewater	15	G. d'Entremont
5/15,31 N. Monomoy	80, 500	B. Nikula	5/7 Concord (NAC)	2	S. Perkins#	
5/15 Barnstable (S.N.)	600	W. Petersen#	5/11 Rowley	1	D. + I. Jewell	
5/18 Lynn	600+	R. Heil	6/4 Lancaster	1	R. Lockwood	
<b>Semipalmated Sandpiper</b>				<b>American Woodcock</b>		
5/15,31 N. Monomoy	25, 500	B. Nikula	5/1 Lancaster	6	R. Lockwood	
5/19 P.I.	6	M. Rines	5/9 Nantucket	3	fide E. Ray	
5/23 Nahant	300+	P. + F. Vale	5/9 MBWMA	3	D. Davis	
5/24 Newbypt	70	R. Heil	5/15 Milton (F.M.)	4	A. Joslin	
5/27 Duxbury B.	15	W. Petersen	5/18 DWWS	13	D. Furbish	
6/5 Lynn B.	8	G. Wood	6/26 Lancaster	ad + 2 yg	R. Lockwood	
6/5 Plymouth	40	J. Hoye#	<b>Wilson's Phalarope</b>			
6/7 N. Monomoy	350	B. Nikula	5/9-6/31 P.I.	2-4	v.o.	
6/28 P.I.	2	M. Lynch#	5/10 W. Bridgewater	1 f	S. Arena	
<b>Least Sandpiper</b>				5/10 Newbury	2	R. Heil
5/2 Cumb. Farms	8	R. Finch	5/17 Concord (NAC)	1	L. Nachtrab	
5/5 Concord (NAC)	19	S. Perkins#	5/20 Rowley	1 m.	R. Hodson	
5/8 Arl. Res.	30	K. Hartel	5/24 Nauset Marsh	1 f	S. + L. Hennin	
5/12 Concord (NAC)	25	S. Perkins#	6/6 Edgartown	1 m	A. Keith#	
5/15 N. Monomoy	40	B. Nikula	<b>Red-necked Phalarope</b>			
5/15 W. Bridgewater	24	S. Arena#	5/12 Barnstable (S.N.)	6	B. Loughran	
5/17 Newbypt H.	1500	S. Perkins#	5/14 Cape Cod Canal	1	W. Bosse#	
5/17 Fairhaven	43	M. Boucher	5/16 Nantucket	142 migr	S. Perkins#	
5/20 Cumb. Farms	19	K. Anderson#	<b>Red Phalarope</b>			
6/25 Newbypt/P.I.	16	S. Perkins#	5/11 Rockport	2	J. Soucy#	
6/28 E. Boston (B.I.)	6	S. Zende#	5/13 Sandwich	1	R. Finch	
6/30 Salisbury	31	S. Perkins#	5/16 Nantucket	135 migr	S. Perkins#	
<b>White-rumped Sandpiper</b>				<b>phalarope species</b>		
5/15,31 N. Monomoy	6, 25	B. Nikula	5/16 Nantucket	292 migr	S. Perkins#	
5/15 Barnstable (S.N.)	4	W. Petersen#	<b>South Polar Skua</b>			
5/15 Nantucket	2	S. Perkins#	6/30 S. Great Channel	1	M. Gooley	
5/17, 24 Newbypt	16, 29	R. Heil	<b>Pomarine Jaeger</b>			
5/22 Nauset Marsh	6	S. Perkins#	6/23 Stellw.	2	H. D'Entremont	
5/22 Concord (NAC)	1	S. + L. Hennin	<b>Parasitic Jaeger</b>			
6/5 P.I.	53	W. Drew#	6/17 Wellfleet	1	C. Cook	
6/7, 17 N. Monomoy	20, 1	B. Nikula	6/27 Rockport (A.P.)	1	R. Heil	
<b>Pectoral Sandpiper</b>				<b>jaeger species</b>		
5/3 Cumb. Farms	4	R. Finch	6/18 Nantucket	1	fide E. Ray	
5/20 P.I.	2	D. Chickering	<b>Laughing Gull</b>			
<b>Purple Sandpiper</b>				thr Plymouth	211 pr	fide MAS
5/3 Cape Ann	4	J. Berry	5/2 Winthrop	1	R. Cressman	
5/16 N. Scituate	80	SSBC (B. Fox)	5/11 Rockport	2	J. Soucy#	
5/20 Nantucket	23	M. Sylvia	5/14 Barnstable	32	R. Lockwood	
<b>Dunlin</b>				5/31 P.I.	3	J. Center
5/2 Westport	200+	M. Lynch#	6/30 Salisbury	1 IS	S. Perkins#	
5/3 Newbypt	40	S. Perkins#	<b>Little Gull</b>			
5/3 S. Dart. (A.Pd)	114	T. Raymond	5/8 Nahant B.	1 imm	L. Pivacek	
5/15 Barnstable (S.N.)	500	W. Petersen#	5/17 Newbypt	1 IS	R. Heil	
5/17 Newbypt	375	R. Heil	6/5 Lynn B.	1	G. Wood	
5/17 Fairhaven	16	M. Boucher	<b>Bonaparte's Gull</b>			
5/19,31 N. Monomoy	250, 150	B. Nikula	5/7 Arlington	3	M. Rines	
5/25 Monomoy/S.B.	1200+	T. Raymond	5/13 Sandwich	65	R. Finch	
5/27 Duxbury B.	250	W. Petersen	5/14 Barnstable	21	R. Lockwood	
5/30 GMNWR	12	S. + L. Hennin	5/16 Newbypt	45	R. Heil	
6/7 N. Monomoy	4	B. Nikula	6/5 Lynn B.	20	G. Wood	
<b>Ruff</b>				6/8 Ipswich	37 imm	J. Berry
5/10-13 W. Bridgewater	1 f	W. Petersen + v.o.	6/28 P.I.	38	M. Lynch#	
<b>Short-billed Dowitcher</b>				<b>Iceland Gull</b>		
5/1 Newbypt	2	S. Perkins#	5/2 Chilmark	1	A. Keith	
5/2 Westport	2	M. Lynch#	5/9 P'town	1 IS	M. Lynch#	
5/15 Barnstable (S.N.)	1	W. Petersen#	5/10 Newbury	1 IS	R. Heil	
5/24 Newbypt	475+	R. Heil	5/16 Everett	1	P. + F. Vale	

Iceland Gull (continued)			
5/21	Newbypt	1	D. Jacques
6/28	Salisbury	1	S. Webb#
Lesser Black-backed Gull			
5/10	Rockport (A. P.)	1 3S	R. Heil
Glaucous Gull			
5/1	Salisbury	1	D. Chickering
5/15	Nantucket	1 1S	S. Perkins#
Black-legged Kittiwake			
5/9	P.I.	3 1S	R. Heil
5/15	Nantucket	3 ad	S. Perkins#
5/16	P'town (R.P.)	1	L. de la Flor#
6/27	Rockport (A.P.)	1 ad	R. Heil
Ross's Gull (details submitted)			
5/13	Barnstable (S.N.)	1 br pl	S. Miller
Caspian Tern			
5/9	Plymouth	1	D. Ludlow
5/12	W. Bridgewater	1	R. Finch
5/15	DWWS	2	D. Furbish
5/15	Nauset Marsh	1	R. Prescott
5/23	P.I.	1	J. Berry#
Roseate Tern			
5/10	Barnstable (S.N.)	2	W. Petersen
5/22	Nauset Marsh	6	S. Perkins#
6/1-30	Plymouth	10-12 pr	fide MAS
6/1-30	S. Monomoy	20+ pr	fide MAS
6/25	Nantucket	8	fide E. Ray
6/27	S. Dart. (A.Pd)	2	R. Stymeist#
Common Tern			
5/1	Marion	6	M. Maurer
5/3	S. Dart. (A.Pd)	2	T. Raymond
5/3	Squantum	3	D. Larson#
5/4	Nantucket	50	fide E. Ray
5/10	Barnstable (S.N.)	300	W. Petersen
5/14	Hyannis	125	S. Perkins#
5/16	Newbypt/P.I.	130+	R. Heil
5/22	Nauset Marsh	5000+	S. Perkins#
6/1-30	S. Monomoy	2000 pr	fide MAS
6/13	P'town	350+	M. Lynch#
Arctic Tern			
6/1-30	Plymouth	4 pr	fide MAS
6/1-30	Penikese I.	4-5 pr	fide T. French
Forster's Tern			
5/9	P.I.	2	R. Heil
6/7	P.I.	1	D. + D. Oliver#
Least Tern			
5/2	Westport	1	M. Lynch#
5/4	Nantucket	50	fide E. Ray
5/14	Hyannis	50	S. Perkins#
5/17	Ipswich	125	J. Berry
5/18	P.I.	7	R. Heil
5/25	Monomoy/S.B.	12	T. Raymond
5/31	Hull	5-7	N. Swirka
6/5	Plymouth	60	J. Hoye#
6/27	S. Dart. (A.Pd)	185+	R. Stymeist#
Black Tern			
5/8	Dennis	1	S. Miller#
5/11	Marshfield	1	D. Furbish#
5/12	Barnstable (S.N.)	1	P. Trimble
5/14	Cape Cod Canal	1+	W. Bosse#
5/16	Truro	1	L. de la Flor#
5/30	Plymouth	2 ad	BBC (G. d'Entremont)
6/7	Eastham	1	S. Smolen-Morton#
6/13	Orleans	1	M. Lynch#
6/17	Nauset	1	C. Cook
Black Skimmer			
5/22	Nauset Marsh	4	S. Perkins#
5/31	N. Monomoy	3	B. Nikula
6/28	Plymouth	pr n	M. Rines#
Razorbill			
5/3	West Chop	1	V. Laux#
5/9	Rockport	1	T. Raymond
5/20	Nantucket	1	M. Sylvia
Black Guillemot			
5/1	N. Scituate	3	G. d'Entremont
5/9	E. Gloucester	1	T. Raymond
6/27	Rockport (A.P.)	1 br pl	R. Heil
Atlantic Puffin			
5/16	Nantucket	2	S. Perkins#
6/26	Chatham	1	H. Davenport#
large alcid species			
5/16	Nantucket	3	S. Perkins#
Black-billed Cuckoo			
5/3	Medford	1	M. Rines
5/5	E. Bridgewater	1	K. Holmes
5/9	Jam. Plain	1	R. Stymeist#
5/16	Middleton/Tops	4	J. Berry/ECOC
5/17	ONWR	3	E. Salmela
5/17	MBWMA	4	L. Nachtrab
5/20	P.I.	4	M. Rines#
6/7	S. Groveland	3BBS	(R. Stymeist)
5/15-6/30	reports of 1 or 2 indiv.		from 40 loc.
Yellow-billed Cuckoo			
5/1	Mt.A.	1	v.o.
5/5	Hanson	1	W. Petersen
5/10	Ashland	1	fide MAS
5/15	Mt.A.	2	E. Neilsen
5/16	Mansfield	2	S. Arena#
5/17	Medford	2	M. Rines
5/22	GMNWR	2	S. Perkins#
5/23	Wayland	3	M. Rines#
5/24	Easton	2	S. Arena
5/25	Boxford	4	J. Berry#
5/28	Wakefield	2	F. Vale
5/31	W. Newbury	3	R. Heil
6/7	S. Groveland	5BBS	(R. Stymeist)
5/15-6/30	Reports of indiv.		from 18 locations
Barn Owl			
5/4	Nantucket	2	fide E. Ray
Great Horned Owl			
5/15	Easton	4	S. Arena#
5/19	Lexington	1 ad + 2 yg	S. Fuller
5/19	Rowley	3	J. Berry
5/31	Barre F.D.	ad + 2 yg	M. Lynch#
thr	Reports of 1-2 indiv.		from 11 locations
Barred Owl			
5/3	MBWMA	1	P. + F. Vale
5/9	IRWS	1	K. Dorsey
5/9	Boxford	2	R. Lewis
5/9	Ipswich	1	J. Berry
5/15	Lancaster	1	R. Lockwood
5/15	Sharon	1	S. Arena#
5/16	Middleboro	1	SSBC (B. Fox)
5/18	W. Newbury	1	R. Heil
5/18	Barre	2	C. Phillips
6/20	Bolton	1	R. Lockwood
6/20	Lincoln	3 imm	M. Schwoppe
Short-eared Owl			
5/1-6/30	Tuckernuck I.	11 pr n	R. Bowen
6/18	Nantucket	2	fide E. Ray
Northern Saw-whet Owl			
5/15	Plymouth (MSSF)	1	W. Petersen#
5/16	Petersham	1	S. Moore#
5/16	Middleboro	1	SSBC (B. Fox)
Common Nighthawk			
5/5	Nantucket	1 f	E. Ray
5/17	Barre	3	C. Phillips
5/18	DWWS	3	D. Furbish
5/18	P.I.	4	R. Heil
5/18	Lynnfield	3	R. Heil
5/19, 20	Wayland	30+, 11	N. Patterson
5/19	Wakefield	7	P. + F. Vale
5/20	IRWS	34	D. Brown
5/25	Lynn	4	D. Hill

Common Nighthawk (continued)							
5/27	Rockport (H.P.)	4	D. Jacques				
5/17-6/30	Reports of 1-2 indiv. from 17 loc.						
<b>Chuck-will's-widow</b>							
5/5-31	Bourne	1	B. Reid				
5/30-6/30	Wellfleet	1	R. Stymeist + v.o.				
6/1-30	Edgartown	2+	V. Laux				
<b>Whip-poor-will</b>							
thr	MSSF	27	max G. d'Entremont				
5/8	S. Athol	5	D. Small				
5/20	Newbury	11	R. Stymeist#				
5/30	Wellfleet	6	R. Stymeist#				
6/10	Lancaster	54	R. Lockwood				
6/27	Easton	11	S. Arena				
thr	Reports of 1-3 indiv. from 10 locations						
<b>Chimney Swift</b>							
5/1	Brookline	1	S. Katz				
5/1	Barre	2	C. Phillips				
5/2	GMNWR	12	S. Perkins#				
5/8	Concord (NAC)	12	V. Laux#				
5/8	Melrose	15	P. + F. Vale				
5/8	Wakefield	15	P. + F. Vale				
5/9	W. Newbury	21	P. + F. Vale				
5/9	W. Bridgewater	50	S. Arena				
5/18	P.I.	42	migr S. Perkins#				
5/18	Essex County	300+	R. Heil				
<b>Ruby-throated Hummingbird</b>							
5/4	E. Bridgewater	1	R. Finch				
5/7	Middleboro	1 m	M. Maurer				
5/9	Scituate	1	D. Clapp				
5/9	IRWS	1	K. Dorsey				
5/13	Worcester	1	M. Lynch#				
5/16	P.I.	7	R. Stymeist#				
5/18	P.I.	12	T. Carrolan				
5/19	P.I.	10	J. Lounsbury#				
<b>Red-headed Woodpecker</b>							
5/3	W. Brookfield	1 ad	M. Lynch#				
5/5-6/30	Malden	1 m	D. + I. Jewell				
5/17	Mt.A.	1	C. Fiveash				
<b>Red-bellied Woodpecker</b>							
thr	Bolton	2	R. Lockwood				
5/2	Westport	2	M. Lynch#				
5/2	Nantucket	2	fide E. Ray				
5/4	Lexington	2	M. Rines				
5/9	Ipswich	2	J. Berry				
5/31	Medford	2	pr + yg M. Rines				
6/5	Billerica	2	F. O'Brian				
6/7	Boxford	3	J. Berry				
6/7	S. Groveland	5	BBS (R. Stymeist)				
6/18	Taunton	2	SSBC (A. Leggett)				
6/20	Lincoln	2-3	M. Schwoppe				
6/20	Worc. (BMB)	3	J. Liller				
<b>Yellow-bellied Sapsucker</b>							
5/1	Barre	5	C. Phillips				
5/5	Petersham	1	D. Chapman				
5/30	Templeton	1	T. Pirro				
6/27	Phillipston	1	T. Pirro				
<b>Hairy Woodpecker</b>							
5/23-24	Nantucket	2	fide E. Ray				
5/25	N. Middleboro	5	K. Holmes				
6/7	S. Groveland	5	BBS (R. Stymeist)				
6/20	Worc. (BMB)	5	J. Liller				
6/21	Quabbin (G40)	3	R. Lockwood				
<b>Pileated Woodpecker</b>							
5/1	Barre	2	C. Phillips				
5/1	Bolton	1	R. Lockwood				
5/3	Wellesley	1	J. Thompson				
5/6	W. Newbury	1-2	R. Heil				
5/14	Lexington	1	M. Rines				
5/15	Acton	1	J. Center				
5/22	Lancaster	1	R. Stymeist#				
5/25	Boxford	2	J. Berry#				
5/30	Templeton	1	T. Pirro				
6/1-30	Pepperell	3	E. Stromsted				
6/6	Westminster	2	T. Pirro				
6/21	Quabbin (G40)	1	R. Lockwood				

#### FLYCATCHERS THROUGH GROSBEAKS

Migration? What migration? May 1998 was very frustrating for every birder who looks forward to the month of May. There were fourteen straight days of rain and/or raw, cool easterly winds — every ingredient for a poor migration. Even if birders could locate a singing passerine, it was another thing altogether for them to actually see it; the record warm weather of late March jump-started the foliage, and by May Day most of the trees were fully leafed out. Many veteran birders echoed the same song: it was one of the least productive landbird migrations in recent memory. Nor was it any better in the western part of the state; birders in the Connecticut River Valley suffered the same bird drought. Where were the birds? Interesting was the report from John Kricher, birding in West Texas at the end of May. They were seeing our eastern warblers then!

Flycatchers provided some interesting reports. An Olive-sided Flycatcher in Rutland on June 14 was unusually late for a presumed migrant, but a Yellow-bellied Flycatcher reported in South Boston on June 18 was even later. A report of an Acadian Flycatcher in Easton on June 27 suggested that that bird might have been breeding locally. A **Western Kingbird** reported from East Boston on June 28 represented only the third spring record for this species, which is uncommon but regular in the fall. A nearly annual visitor from the west, a **Scissor-tailed Flycatcher** lingered at the Daniel Webster Sanctuary in Marshfield for four days, and a very obliging **Loggerhead Shrike**, appeared daily for nearly a week in the Plumbush area of Newburyport. A Philadelphia Vireo was reported throughout much of the period at Oxbow NWR in Harvard. This is the second consecutive year that a Philadelphia Vireo (presumably the same bird) has been reported from this location long after its normal migration window. Massachusetts is well south of its closest breeding area in northern New England, so its repeated appearance here is inexplicable. A spate of March and April Common Ravens sightings in Essex County was followed by two additional reports in May.

In West Newbury, a huge colony of Bank Swallows was discovered along the Merrimack River, and Cliff Swallows were also found nesting nearby. Another small Cliff Swallow colony was reported from Groton. Few *Catharus* thrush were detected during migration; most reports pertained to individuals already on territory. Even at Mount Auburn Cemetery, where numerous observers often produce excellent thrush numbers, the reports were lackluster. An exception was a good count of Veeries and Swainson's Thrushes on May 18 on Plum Island. These, however, were from a pre-dawn count of migrants flying overhead, birds that evidently chose not to pause in Massachusetts. A Bicknell's Thrush, identified by its song, was reported from

Worcester. The identification of Gray-cheeked and Bicknell's thrushes presents a very difficult field problem, and reporters are urged to include details with any reports of individuals within this complex.

Warbler reports for the first two weeks of May were pathetic, but the pace picked up a bit for a few days following a southwest wind on May 15. The only two Golden-winged Warblers reported during the period were in May. Taking into account five reports of "Brewster's" (the Blue-wing/Golden-wing hybrid) during the period, the future of the Golden-wing in Massachusetts looks bleak. Orange-crowned Warblers are not common during spring migration, but were unusually well represented this year. Cerulean Warblers were reported from four locations, including Boxford, where they have been suspected of breeding for the past couple of years. A pair in Taunton appeared to be on territory at what would be a new nesting locale for this rare and local breeder.

The various southern warblers, including **Yellow-throated**, **Prothonotary**, **Kentucky**, and **Hooded**, made their usual spring appearance as they overshoot the northern limits of their respective breeding ranges. At least a half-dozen **Summer Tanager** are usually reported each May (typically concentrated in the southeastern part of the state), though only two or three were reported this year; two reports from Plum Island could have involved the same individual.

Grasshopper Sparrows continue to thrive on Nashawena Island and at the old Fort Devens in Lancaster, and a handful of breeding pairs persist in Falmouth and at Hanscom Field in Bedford. No other breeding sites were reported. A researcher censusing the grasslands birds at Devens was surprised to discover a Lincoln's Sparrow June 18, but subsequent visits failed to relocate this bird. There are no more than two or three breeding records for this species in the state, all from western Massachusetts.

A **Yellow-headed Blackbird** visited the feeder at the Wellfleet Bay Audubon sanctuary for nearly two weeks during this period. This species is a very scarce but regular visitor to Massachusetts in both spring and fall, but they are rarely as cooperative as was this bird. Unlike many other songbirds species this year, orioles were plentiful. Orchard Orioles were reported in particularly good numbers. Winter finches, including both crossbills and Pine Siskins, lingered into May, and Evening Grosbeaks in June may have been breeding.

M. W. R., R. H. S.

Olive-sided Flycatcher			6/12	MNWS	2	J. Hoye#
5/19 Truro	1	J. Trimble#	6/27	Easton	1	S. Arena
5/19 P.I.	1	J. Lounsbury#	Alder Flycatcher			
5/21 WBWS	1	J. Sones	5/18	DWWS	1	D. Furbish
5/24 Nantucket	1	C. Jackson	5/20	Groveland	1	D. Chickering
5/24 Newbypt	1	D. Chickering	5/28	Cumb. Farms	4	K. Anderson#
5/25 P'town	1	B. Nikula	5/30	Templeton	3	T. Pirro
5/27 Ipswich	1 m	J. Berry	5/31	Barre F.D.	4	M. Lynch#
6/3 MNWS	1	C. Floyd	6/6	Westminster	3	T. Pirro
6/7 Newbury	1	D. + D. Oliver	6/6	Quabbin (G40)	3	R. Lockwood
6/14 Rutland	1	M. Lynch#	6/7	Boxford	5 m	J. Berry
Eastern Wood-Pewee			6/7	S. Groveland	5	BBS (R. Stymeist)
5/9 Lunenburg	1	R. Lockwood	6/11	HRWMA	2	T. Pirro
5/10 Worcester	1	M. Lynch#	6/18	Lexington	3	M. Rines
5/16 Medford	1	P. + F. Vale	6/21	Rutland	4	M. Lynch#
5/16 Easton	1	S. Arena	Willow Flycatcher			
5/16 Quabbin	1	R. Lockwood#	5/17, 29	P.I.	1, 8	R. Heil
5/25 Boxford (C.P.)	10	H. Miller	5/17	Westboro	1	E. Salmela
6/6 Quabbin (G40)	20	R. Lockwood	5/17	ONWR	2	M. Partridge
6/7 S. Groveland	19	BBS (R. Stymeist)	5/23	Wayland (WB)	4	S. Perkins#
6/18 Taunton	11	SSBC (A. Leggett)	5/25	Bolton Flats	11	M. Lynch#
6/20 Worc. (BMB)	14	J. Liller	5/27	Cambridge	4	M. Rines
6/21 Rutland	10	M. Lynch#	5/28	Lexington	9	M. Rines
6/21 Sharon	11	S. Arena	5/31	Barre F.D.	9	M. Lynch#
6/27 Easton	26	S. Arena	6/18	Lancaster	7	R. Lockwood
Yellow-bellied Flycatcher			6/20	Worc. (BMB)	5	J. Liller
5/24 P.I.	1	R. Heil	Least Flycatcher			
5/25 Chappaquiddick	1	A. Keith#	5/2, 31	Barre F.D.	1, 20	M. Lynch#
5/26 MNWS	1	L. Pivacek	5/2	Ipswich	1	R. Lewis
5/27 P'town	1	B. Nikula	5/5	Barre	1	C. Phillips
5/28 Manomet	3 b	T. Lloyd-Evans	5/5	Petersham	1	D. Chapman
5/30 Marshfield	1	R. Finch	5/9	Gardner	2	T. Pirro
6/1 Manomet	2 b	T. Lloyd-Evans	5/16	Quabbin(G45)	4	R. Lockwood#
6/2 MNWS	1	C. Floyd	5/17	P.I.	2	P. + F. Vale
6/18 S. Boston	1	R. Donovan	5/18	Barre	9	C. Phillips
Acadian Flycatcher			5/23	MNWS	5	P. + F. Vale
5/22-6/9 Barre	1	C. Phillips#	5/25	ONWR	3	M. Lynch#
5/28 Manomet	1 b	T. Lloyd-Evans	5/25	P.I.	3	M. Rines
6/2-3 Manomet	2 b	T. Lloyd-Evans	5/25	Bolton Flats	4	M. Lynch#
6/6 Quabbin (G45)	1	G. d'Entremont#	5/26	Mt.A.	4	M. Rines
6/7 Chilmark	2	A. Keith	6/7	S. Groveland	3	BBS (R. Stymeist)

Least Flycatcher (continued)			
6/21	Quabbin (G40)	19	R. Lockwood
6/21	Rutland	13	M. Lynch#
Great Crested Flycatcher			
5/2	Hamilton	1	I. Giriunas
5/4	Marshfield	1	F. Bygate
5/4	Sandwich	1	S. Miller#
5/16	Middleton/Tops	13	J. Berry/ECOC
5/23	Blue Hills	6	SSBC (P. O'Neill)
5/25	Boxford	8	J. Berry#
6/1-12	Manomet	16 b	T. Lloyd-Evans
6/7	S. Groveland	12	BBS (R. Stymeist)
6/18	Nashawena I.	6	A. Jones
6/21	Quabbin (G40)	7	R. Lockwood
6/21	Sharon	7	S. Arena
6/27	Easton	16	S. Arena
Western Kingbird			
6/28	E. Boston (B.I.)	1	S. Zende
Eastern Kingbird			
5/16, 6/20	Easton	20, 51	S. Arena#
5/18	P.I.	55	migr S. Perkins#
6/7	S. Groveland	32	BBS (R. Stymeist)
Scissor-tailed Flycatcher			
6/18-22	DWWS	1	D. Grimm# + v.o.
Loggerhead Shrike			
5/16-21	Newbypt	1	D. Davis + v.o.
White-eyed Vireo			
5/1, 13	P.I.	1, 1	D. Chickering
5/1-2	Nantucket	1	fide E. Ray
5/5	Rockport (H.P.)	1	D. Jacques
5/8	MNWS	1	BBC (L. de la Flor)
5/9	Medford	1	D. Oliver#
5/17	Fairhaven	1	M. Boucher
5/18	Nahant	1	N. Nash
5/20	Lincoln	1 m	S. Perkins#
5/24	N. Middleboro	1	K. Holmes
5/24	DWWS	3	SSBC (D. Clapp)
5/26	Mt.A.	1	M. Rines#
6/28	Westport	3	D. Sandee
Blue-headed Vireo			
5/1, 12	P.I.	6, 5	D. Chickering
5/1-22	Mt.A.	7	max v.o.
5/2, 31	Barre F.D.	12, 9	M. Lynch#
5/3	Boxford (C.P.)	5	E. Neilsen#
5/3	Lancaster	7	R. Lockwood
5/8	MNWS	10	BBC (L. delaFlor)
5/9	Ipswich	5	J. Berry
5/16	P'town	20	B. Nikula#
6/21	Quabbin (G40)	5	R. Lockwood
Yellow-throated Vireo			
5/2	ONWR	1	R. Lockwood
5/3	P'town	1	J. Trimble
5/4	Mt.A.	1	BBC (M. Rines)
5/8	Spencer	1	J. Hoye#
5/9	Boston	1	C. Floyd#
5/9	IRWS	1	K. Dorsey
5/14	Middleboro	1	K. Holmes
5/15	ONWR	5	E. Neilsen
5/16	Boxford	6	R. Heil
5/18	P.I.	1	R. Heil
5/31	W. Bridgewater	1	S. Arena#
6/7	Groveland	1	M. Rines#
6/21	Quabbin (G40)	6	R. Lockwood
6/21	Rutland	3	M. Lynch#
6/21	W. Newbury	3	R. Heil
6/27	Easton	2	S. Arena
Warbling Vireo			
5/3	Watertown	6	M. Rines
5/9	IRWS	7	K. Dorsey
5/16	Middleton/Tops	14 m	J. Berry/ECOC
5/16	Easton	10	S. Arena#
5/17	Pepperell	12	E. Stromsted
5/22	ONWR	12	M. Rines#
5/23	Wayland (WB)	8	S. Perkins#
5/25	Bolton Flats	9	M. Lynch#
5/26	Wakefield	8	P. + F. Vale
5/28	GMNWR	8	J. Center
5/31	Barre F.D.	10	M. Lynch#
Philadelphia Vireo			
5/15-6/28	ONWR	1	E. Neilsen + v.o.
5/19	P'town	1	J. Trimble#
5/21	Hingham (WE)	1	N. Swirka
5/21	P.I.	1	J. Hoye#
5/26	Gay Head	1	G. Daniels
Red-eyed Vireo			
5/18	Medford	8	BBC (M. Rines)
5/18	P.I.	7	R. Heil
5/25	Boxford	41 m	J. Berry#
5/31	Barre F.D.	68	M. Lynch#
6/6	Quabbin (G40)	34	R. Lockwood
6/7	S. Groveland	11	BBS (R. Stymeist)
6/21	Ipswich	11 m	J. Berry
6/21	Rutland	94	M. Lynch#
6/21	Quabbin (G40)	33	R. Lockwood
6/27	Easton	21	S. Arena
Blue Jay			
5/17	P.I.	72	migr S. Perkins#
5/18	P.I.	281	migr S. Perkins#
5/18	Rockport (H.P.)	154	migr D. Jacques
5/19	Rockport (H.P.)	300	migr D. Jacques
5/21	P.I.	130	migr S. Perkins#
Fish Crow			
thr	Mt.A.	2	prs v.o.
5/1	Salisbury	5	D. Chickering
5/3	P'town	2	J. Trimble
5/4	Fall River	3	M. Boucher
5/4	Worc. (BMB)	1	J. Liller
5/18	DWWS	5	D. Furbish
5/28	Bedford	2	R. Lockwood
5/30	Burlington	1	D. Oliver#
6/29	Woburn	3	S. Perkins#
Common Raven			
5/2	Ipswich	2	R. Lewis
5/14	HRWMA	1	T. Pirro
5/18	Athol	7	G. d'Entremont#
5/2, 31	Barre F.D.	1, 1	M. Lynch#
5/24	Quabbin	4	G. Leet#
5/25	Charlton	1	P. + F. Vale
5/30	Rowley	1	P. + F. Vale
Horned Lark			
5/7	Plymouth	4+	G. d'Entremont#
5/15	Nantucket	2	A. Jones#
5/17	Duxbury B.	1	L. Cleveland
6/27	Templeton	2	juv T. Pirro
6/27	Bedford	1	BBC (R. Lockwood)
Purple Martin			
5/3	Oak Bluffs	1 f	V. Laux#
5/8	Wakefield	1	P. + F. Vale
5/9	Nantucket	5	fide E. Ray
5/13	Arlington Res.	2	K. Barney#
5/18	Nahant	1	R. Heil
5/18	MNWS	1	R. Heil
5/18	DWWS	39	D. Furbish
5/25	Rochester	11	M. Boucher
5/30	Eastham	2+	B. Nikula
5/31	P.I.	50+	J. Berry
Northern Rough-winged Swallow			
5/3	Peabody	7	P. + F. Vale
5/3	Watertown	16	M. Rines
5/9	W. Bridgewater	15	S. Arena
5/10	Wakefield	30+	P. + F. Vale
5/25	Lakeville	9	M. Boucher
Bank Swallow			
5/2	GMNWR	8	S. Perkins#

Bank Swallow (continued)				5/9	W. Newbury	3	P. + F. Vale
5/9	Halifax	20	R. Finch	5/9	Gardner	1	T. Pirro
5/9	W. Bridgewater	8	S. Arena	5/23	Wayland (WB)	58	S. Perkins#
5/16	Lancaster	17	R. Lockwood#	5/24	DWWS	3	SSBC (D. Clapp)
5/24	P.I.	65+	R. Heil	5/28	GMNWR	16	J. Center
5/25	Bolton Flats	12	M. Lynch#	6/20	W. Bridgewater	15	S. Arena
5/30	Eastham	37 holes	J. Hanson	6/20	Salem Woods	7	BBC (I. Lynch)
6/13	W. Newbury	215	R. Heil	Blue-gray Gnatcatcher			
6/28	P.I.	20+	M. Lynch#	5/1	GMNWR	4	K. Dorsey
Barn Swallow				5/2	P.I.	8	J. Hoye#
5/8	Wakefield	25+	P. + F. Vale	5/3	Lancaster	5	R. Lockwood
5/8	Concord (NAC)	20+	S. Perkins#	5/9	MNWS	4	S. Carey#
5/9	W. Bridgewater	20	S. Arena	5/14	W. Newbury	4	S. Grinley
5/9	W. Newbury	32	P. + F. Vale	5/15	ONWR	10	E. Neilsen
5/13	Wayland (HP)	125+	S. Perkins#	5/16	Middleton/Tops	20	J. Berry/ECOC
5/15-16	Nantucket	60	S. Perkins#	5/23	Blue Hills	4	SSBC (P. O'Neill)
5/17	Ipswich	120	J. Berry	5/24	Medfield	6	G. Leet#
Cliff Swallow				5/25	Boxford	7	J. Berry#
5/6	W. Newbury	10	R. Heil	6/27	Easton	4	S. Arena
5/8	Wakefield	2	P. + F. Vale	Golden-crowned Kinglet			
5/10	P.I.	4	I. Giriunas	5/2, 31	Barre F.D.	4, 2	M. Lynch#
5/15	Nantucket	1	S. Perkins#	6/21	Rutland	6	M. Lynch#
5/15	W. Bridgewater	1	T. Aversa#	Ruby-crowned Kinglet			
5/17	Newbury	8	P. + F. Vale	5/5	Mt.A.	8	M. Rines
5/18	P.I.	5 migr	S. Perkins#	5/8	Lexington	4	M. Rines
6/13	W. Newbury	11 n	R. Heil	5/9	P.I.	3	P. + F. Vale
6/21	Pepperell	3	E. Stromsted	5/15	Medford	1	M. Rines
6/25	Groton	4-6 nests	T. Pirro	5/26	Chilmark	1	A. Keith#
Red-breasted Nuthatch				Eastern Bluebird			
5/2	Barre F.D.	5	M. Lynch#	5/3	W. Brookfield	3	M. Lynch#
5/13	Blue Hills	5	A. Joslin	5/6	Middleboro	4	M. Maurer#
5/15	Nantucket	6	S. Perkins#	5/23	Wayland (WB)	4	S. Perkins#
5/25	Boxford	3	J. Berry#	5/24	Easton	3	S. Arena
6/21	Quabbin (G40)	4	R. Lockwood	6/14	Ipswich	4-5	J. Berry
Brown Creeper				Veery			
5/9	Lunenburg	3	R. Lockwood	5/1	Mt.A.	1	S. Carey#
5/9	Boxford	6	R. Lewis	5/4	Marion	1	M. Maurer#
5/9	Ipswich	5	J. Berry	5/5	Brookline	1	F. Bouchard
5/2, 31	Barre F.D.	9, 6	M. Lynch#	5/15-28	Manomet	9 b	T. Lloyd-Evans
6/6	Quabbin (G40)	4	R. Lockwood	5/18	P.I.	40+	R. Heil
6/10	Groton	3	M. Rines	5/25	ONWR	6	M. Lynch#
6/21	Sharon	7	S. Arena	5/25	Boxford	16	J. Berry#
6/21	Rutland	10	M. Lynch#	5/31	Barre F.D.	27	M. Lynch#
Carolina Wren				6/2	Hamilton	7 m	J. Berry
5/2	Westport	26	M. Lynch#	6/6	Quabbin (G40)	20	R. Lockwood
6/8	Ipswich	6	J. Berry	6/6	Topsfield	7	J. Berry
6/20	Bolton	2	S. + L. Hennin	6/20	Halifax	10	SSBC (A. Leggett)
House Wren				6/20	Easton	47	S. Arena
5/8	Lexington	9	M. Rines	6/21	Ipswich	15	J. Berry
5/16	Easton	7	S. Arena#	6/21	Rutland	18	M. Lynch#
5/16	Sharon	8	S. Arena#	6/27	Groton	6	E. Stromsted
6/6	Quabbin (G40)	7	R. Lockwood	6/28	Fall River	6	G. d'Entremont
6/28	Freetown	6	G. d'Entremont	Gray-cheeked Thrush			
Winter Wren				5/22	Manomet	1	T. Lloyd-Evans
5/2, 31	Barre F.D.	1, 2	M. Lynch#	Bicknell's Thrush			
5/2	Bolton	1	R. Lockwood	5/19	Worcester	1	M. Lynch#
5/3	Lancaster	1	R. Lockwood	Gray-cheeked/Bicknell's Thrush			
5/8, 22	Harvard	1, 3	S. + L. Hennin	5/26	Mt.A.	1	M. Rines#
5/9	Topsfield	4	K. Dorsey	5/29	P.I.	1	R. Heil
5/9	Boxford	5	R. Lewis	Swainson's Thrush			
5/9	Ipswich	4 m	J. Berry	5/2	Mt.A.	1	T. Roberts#
5/9	Lunenburg	3	R. Lockwood	5/9	Topsfield	1	K. Dorsey
5/10	Natick	1	E. Taylor	5/15-29	Manomet	25 b, 14 max	5/28 T. Lloyd-Evans
6/21	Quabbin (G40)	2	R. Lockwood	5/16	Newbypt	2	J. Hoye#
6/21	Rutland	3	M. Lynch#	5/18	P.I.	8+	R. Heil
6/27	Concord	2	BBC (R. Lockwood)	5/19	Worcester	3	M. Lynch#
6/27	Groton	2	E. Stromsted	5/27	Arlington	2	M. Rines
Marsh Wren				6/2	MNWS	1	C. Floyd
5/1	GMNWR	2-3	K. Dorsey	Hermit Thrush			
5/3	Newbypt	2	E. Neilsen#	5/1-13	Mt.A.	8 max	v.o.
5/3	Lynnfield	3	E. Neilsen#	5/1	Barre	10	C. Phillips
5/4	Nantucket	2	fide E. Ray				

Hermit Thrush (continued)				Tennessee Warbler			
5/6	Milton	6	A. Joslin	5/8	W. Bridgewater	1	R. Finch
5/23	Easton	16	S. Arena	5/15	Newbypt	1	D. Chickering
5/23	Blue Hills	6	SSBC (P. O'Neill)	5/15	Arlington	1	M. Rines
6/21	Rutland	25	M. Lynch#	5/15	Newbypt	1	B. Drummond
6/21	Sharon	19	S. Arena	5/15-18	Mt.A.	1	v.o.
6/21	Quabbin (G40)	19	R. Lockwood	5/16	N. Middleboro	1	K. Holmes
Wood Thrush				5/19	Malden	1	P. + F. Vale
5/1	Barre	2	C. Phillips	5/23	Wellfleet	1	S. Miller#
5/1	Mt.A.	1	I. Giuinas#	5/24	P.I.	3	R. Heil
5/1	Brookline	1	S. Katz	5/25	N. Scituate	2	W. Petersen#
5/9	ONWR	9	E. Salmela#	Orange-crowned Warbler			
5/9	Ipswich	10	J. Berry	5/1	Chelsea	1	L. Pivacek
5/24	Milton (F.M.)	10+	A. Joslin	5/1	Marshfield	1	G. d'Entremont
5/15	Medford	9	M. Rines	5/1	Belmont	1 m	M. Rines
5/23	Blue Hills	12	SSBC (P. O'Neill)	5/2	S. Boston	1	R. Donovan
5/25	Boxford	16	J. Berry#	5/10	Worcester	1	M. Lynch#
5/9, 18	Barre	15, 18	C. Phillips	5/27	P.I.	1	K. Disney
6/7	S. Groveland	18	BBS (R. Stymeist)	Nashville Warbler			
6/20	Worc. (BMB)	14	J. Liller	5/1	Brookline	1	S. Katz
6/20	Easton	12	S. Arena	5/8	Lexington	4	M. Rines
Gray Catbird				5/9	Boston	3	R. Stymeist#
5/2	Westport	30	M. Lynch#	5/9	Gardner	4	T. Pirro
5/14	E. Gloucester	30	C. Leahy	5/15	Medford	7	M. Rines
5/15-16	Nantucket	60	S. Perkins#	5/15	P.I.	10-12	S. Grinley
5/17	P.I.	110+	R. Heil	Northern Parula			
5/23	Blue Hills	50	SSBC (P. O'Neill)	5/1	Topsfield	1	K. Disney
5/31	Barre F.D.	42	M. Lynch#	5/1	Hingham	3	N. Swirka
6/7	S. Groveland	95	BBS (R. Stymeist)	5/9	Boston	8	R. Stymeist#
6/18	Taunton	38	SSBC (A. Leggett)	5/9	Gardner	15	T. Pirro
6/20	Halifax	41	SSBC (A. Leggett)	5/15	Medford	30	M. Rines
6/20	Easton	128	S. Arena	5/16	Middleton/Tops	11 m	J. Berry/ECOC
6/21	Rutland	33	M. Lynch#	5/16	P'town	20	B. Nikula#
6/27	Westport	120	M. Lynch#	5/17	Newbypt	12	P. + F. Vale
Brown Thrasher				5/18	P.I.	5 migr	S. Perkins#
5/3	P.I.	6	D. Larson#	5/21	Nantucket	23	N. Brooks#
5/4	Medford	10	M. Rines	5/23	Nahant	8	P. + F. Vale
5/30	P.I.	8	P. + F. Vale	6/7	P.I.	1	R. Lockwood
American Pipit				6/8	Worcester	1	M. Lynch#
5/9	Concord (NAC)	1	S. Perkins#	6/23	S. Boston	1	R. Donovan
5/11	Groton	3	T. Pirro	Yellow Warbler			
5/16	S. Monomoy	1	B. Nikula#	5/1	Cambridge	4	M. Rines#
5/24	P.I.	1	R. Heil	5/2	Westport	7	M. Lynch#
Cedar Waxwing				5/16	Middleton/Tops	44 m	J. Berry/ECOC
5/18	P.I.	269 migr	S. Perkins#	5/16	W. Bridgewater	28	S. Arena#
5/21	P.I.	258 migr	S. Perkins#	5/17	P.I.	125+	R. Heil
5/27	P'town	60	B. Nikula	5/18	DWWS	69+	D. Furbish
5/27	N. Truro	50+	B. Nikula	5/25	Bolton Flats	47	M. Lynch#
5/29	P.I.	175+	R. Heil	6/7	S. Groveland	61	BBS (R. Stymeist)
Blue-winged Warbler				6/20	Easton	76	S. Arena
5/2	Westport	1	M. Lynch#	6/27	Westport	38	M. Lynch#
5/2	Ipswich	1	I. Giuinas	Chestnut-sided Warbler			
5/3	ONWR	2	R. Lockwood	5/2, 31	Barre F.D.	1, 38	M. Lynch#
5/9	W. Newbury	16	P. + F. Vale	5/3	Ipswich	1 m	J. Berry
5/9	ONWR	13	E. Salmela#	5/8	MNWS	2	L. Pivacek
5/25	Boxford	9	J. Berry#	5/9	MBWMA	4	D. Davis
5/28	Bedford	12	R. Lockwood	5/18	Barre	10	C. Phillips
6/7	S. Groveland	28	BBS (R. Stymeist)	5/25	P.I.	9	M. Rines
6/20	Easton	23	S. Arena	5/25	ONWR	8	M. Lynch#
6/20	Worc. (BMB)	12	J. Liller	5/25	Boxford	8 m	J. Berry#
6/21	Rutland	8	M. Lynch#	6/6	Quabbin (G40)	16	R. Lockwood
6/23	Lancaster	6	R. Lockwood	6/7	S. Groveland	20	BBS (R. Stymeist)
Golden-winged Warbler				6/21	Rutland	27	M. Lynch#
5/16	W. Brookfield	1	S. Moore#	6/23	S. Boston	1	R. Donovan
5/16	Westboro	1	F. McMenemy	Magnolia Warbler			
"Brewster's" Warbler				5/8	MNWS	1	L. Pivacek
5/9	Groveland	1	R. Lewis	5/8	Arlington	1	K. Dorsey
5/15	Shrewsbury	1	K. Machado	5/9	Barre	1	C. Phillips
5/16	Sharon	1	S. Arena#	5/9	Gardner	2	T. Pirro
5/28	Bedford	1	R. Lockwood	5/9	Boston	1	M. Rines#
6/21	W. Newbury	1	R. Heil	5/14-31	Manomet	115 b, 44 max	5/28 T. Lloyd-Evans

<b>Magnolia Warbler (continued)</b>				5/31	Barre F.D.	15	M. Lynch#
5/18	P.I.	29 migr	S. Perkins#	5/31	Wellfleet	6	M. Rines#
5/18	Gloucester (E.P.)	12	D. Jacques	6/4	Lancaster	8	R. Lockwood
5/21	P'town	10	B. Nikula	6/7	Falmouth	6	T. Collins
5/23	MNWS	22	P. + F. Vale	6/7	S. Groveland	28 BBS	(R. Stymeist)
5/24	P.I.	46	R. Heil	6/9	Lancaster	7	R. Lockwood
6/1-10	Manomet	11 b	T. Lloyd-Evans	6/17	Woburn	7 m	M. Rines
6/1	Mt.A.	6	M. Rines	6/20	Easton	26	S. Arena
6/2	MNWS	5	C. Floyd	6/20	Worc. (BMB)	12	J. Liller
6/15-16	S. Boston	1	R. Donovan	<b>Palm Warbler</b>			
6/21	Rutland	10	M. Lynch#	5/5	Mt.A.	10	M. Rines
<b>Cape May Warbler</b>				5/8	Boston (A.A.)	8	A. Joslin
5/15	Worcester	1	M. Lynch#	5/11	Winchester	4	M. Rines
5/16-21	Mt.A.	1-3	v.o.	5/23	P.I.	1	M. Lynch#
5/16	W. Newbury	1	D. Oliver#	<b>Bay-breasted Warbler</b>			
<b>Black-throated Blue Warbler</b>				5/15	Medford	3	M. Rines
5/3	Reading	2	D. Williams	5/16	Newbypt	5	R. Heil
5/4	P.I.	2	D. + I. Jewell	5/23	MNWS	2	P. + F. Vale
5/4	HRWMA	2	T. Pirro	5/24	P.I.	8	R. Stymeist#
5/9	Gardner	10	T. Pirro	5/24	Gloucester (E.P.)	3T.	+ D. Brownrigg
5/15	Medford	8	M. Rines	<b>Blackpoll Warbler</b>			
5/20	Marshfield	8	N. Swirka	5/15-16	Nantucket	1	T. Maloney#
5/23	MNWS	7 f	P. + F. Vale	5/15	Gloucester (E.P.)	2	M. Baldock#
6/6	Quabbin (G40)	6	R. Lockwood	5/20-31	Manomet	13 b	T. Lloyd-Evans
<b>Yellow-rumped Warbler</b>				5/21	Nantucket	37	N. Brooks#
5/2	Barre F.D.	400	M. Lynch#	5/30	P.I.	40+	P. + F. Vale
5/3	P'town	60	B. Nikula	6/1	Mt.A.	6	M. Rines
5/4	Mt.A.	54	BBC (M. Rines)	6/2	MNWS	6	C. Floyd
5/5	Winchester	40	M. Rines	6/28	P.I.	1	F. Vale
5/8	Worcester	150+	M. Lynch#	<b>Cerulean Warbler</b>			
5/8	Lexington	34	M. Rines	5/10	ONWR	1	Jean Nichols
5/9	Newbypt-P.I.	85+	R. Heil	5/17	N. Middleboro	1 m	K. Holmes
5/9	Boston	173	R. Stymeist#	5/18	Boxford	1 m	R. Heil
5/15-16	Nantucket	28	S. Perkins#	6/10	Taunton	pr	A. Leggett
6/21	Quabbin (G40)	15	R. Lockwood	<b>Black-and-white Warbler</b>			
6/21	Rutland	11	M. Lynch#	5/1	Barre	19	C. Phillips
<b>Black-throated Green Warbler</b>				5/8	MNWS	25	BBC (L. delaFlor)
5/2, 31	Barre F.D.	12, 21	M. Lynch#	5/9	Ipswich	18	J. Berry
5/8	MNWS	20	BBC (L. delaFlor)	5/9	Gardner	28	T. Pirro
5/9	Ipswich	21	J. Berry	5/9	Salem Woods	12	I. Lynch
5/15	Medford	24	M. Rines	5/9	ONWR	25	E. Salmela#
5/16	Newbypt-P.I.	23	R. Heil	5/9	Boston	23	R. Stymeist#
5/16	P'town	40	B. Nikula#	5/15	Medford	21	M. Rines
6/6	Quabbin (G40)	21	R. Lockwood	5/16	P'town	15	B. Nikula#
6/21	Rutland	12	M. Lynch#	5/31	Barre F.D.	22	M. Lynch#
<b>Blackburnian Warbler</b>				5/25	Boxford	11 m	J. Berry#
5/3	Boxford (C.P.)	2	E. Neilsen#	6/27	Easton	16	S. Arena
5/15	Mt.A.	4	E. Neilsen	<b>American Redstart</b>			
5/18	Boxford	7	R. Heil	5/4	Fall River	3	M. Boucher
5/23	MNWS	9	P. + F. Vale	5/9	Gardner	6	T. Pirro
5/23	Nahant	4	P. + F. Vale	5/16	Quabbin	68	R. Lockwood#
5/24	Gloucester (E.P.)	2T.	+ D. Brownrigg	5/18-31	Manomet	42 b,	19 max 5/28
5/24	P.I.	8	R. Stymeist#	<b>Prothonotary Warbler</b>			
6/21	Quabbin (G40)	8	R. Lockwood	5/23	MNWS	20	P. + F. Vale
<b>Yellow-throated Warbler</b>				5/25	Boxford	14	J. Berry#
5/28	Nantucket	1	M. Green	5/25	P.I.	55	M. Rines
<b>Pine Warbler</b>				5/31	Barre F.D.	33	M. Lynch#
5/4	Fall River	27	M. Boucher	6/21	Quabbin (G40)	14	R. Lockwood
5/9	Ipswich	9 m	J. Berry	6/21	Rutland	51	M. Lynch#
5/15-16	Nantucket	10	S. Perkins#	6/27	Westport	7	M. Lynch#
5/30	MSSF	13	BBC (G. d'Entremont)	<b>Worm-eating Warbler</b>			
5/31	Barre F.D.	12	M. Lynch#	5/1	Mt.A.	1	I. Giriunas#
6/21	Rutland	27	M. Lynch#	5/4, 13	Medford	1, 1	M. Rines
6/21	Quabbin (G40)	8	R. Lockwood	5/15	Worcester	1	M. Lynch#
6/27	Concord	9	BBC (R. Lockwood)	5/16	Milton	1	BBC (G. d'Entremont)
<b>Prairie Warbler</b>				5/16	Sharon	1	S. Arena#
5/2	Hingham	1	S. Carey	5/19	Sandwich	1	S. Miller#
5/3	W. Newbury	1	E. Neilsen#	5/23	P.I.	1	M. Lynch#
5/3	MBWMA	1	E. Neilsen	5/24	Medfield	2	G. Leet
5/4	Fall River	6	M. Boucher				
5/28	Bedford	6	R. Lockwood				
5/30	MSSF	19	BBC (G. d'Entremont)				

Ovenbird	5/21	Nantucket	1 m	N. Brooks#
5/2, 31	Barre F.D.	3, 54	M. Lynch#	
5/4	Fall River	32	M. Boucher	
5/9	Ipswich	58 m	J. Berry	Wilson's Warbler
5/9	Boxford	40	R. Lewis	5/5 Norton
5/9	ONWR	27	E. Salmela#	5/14-28Manomet
5/15	Medford	24	M. Rines	
5/25	Boxford	41 m	J. Berry#	5/17-30Mt.A.
6/21	Ipswich	17 m	J. Berry	5/18 Gloucester (E.P.)
6/21	Rutland	53	M. Lynch#	5/19 Newbury
6/21	Sharon	79	S. Arena	5/25 P.I.
6/21	Quabbin (G40)	47	R. Lockwood	5/30 Rockport (H.P.)
6/27	Easton	64	S. Arena	6/6 P.I.
Northern Waterthrush				Canada Warbler
5/2	Bedford	4	M. Rines	5/9 Gardner
5/3	W. Bridgewater	4	S. Arena	5/15-31Manomet
5/4	Fall River	5	M. Boucher	
5/9	Ipswich	7 m	J. Berry	5/17-31Mt.A.
5/9	Gardner	4	T. Pirro	5/18 E. Middleboro
5/18	Barre	3	C. Phillips	5/23 Newbypt/P.I.
5/23	Newbypt/P.I.	3	J. Berry#	5/24 Rockport (H.P.)
6/20	Easton	9	S. Arena	5/25 Boxford
6/20	Halifax	9	SSBC (A. Leggett)	5/25 P.I.
Louisiana Waterthrush				5/27 MNWS
5/1-2	Bolton	1	R. Lockwood	5/31 Barre F.D.
5/3	ONWR	1	R. Lockwood	6/6 Topsfield
5/3	Lancaster	1	R. Lockwood	6/7 MNWS
5/12	Groton	1	T. Pirro	6/21 Rutland
5/14	Harvard	1	S. + L. Hennin	6/23 S. Boston
5/14	Lexington	1	M. Rines	Yellow-breasted Chat
5/15	Uxbridge	1	T. Raymond	5/2 Nantucket
5/16	Quabbin (G45)	1	R. Lockwood#	5/2 P. I.
5/16	Petersham	2	J. Center	5/16 Newbypt
5/2, 31	Barre F.D.	1, 1	M. Lynch#	5/17 P.I.
5/25	Boxford	5 m	J. Berry#	5/28 Truro
Kentucky Warbler				5/28 Nantucket
5/2	Nantucket	1	fide E. Ray	warbler species
5/12	Mt.A.	1 m	B. Volkle + v.o.	5/18 P.I.
Mourning Warbler				5/21 P.I.
5/19	Wayland	2	N. Patterson	Summer Tanager
5/21	Marshfield	1	T. O'Neil	5/9 P.I.
5/26	Oak Bluffs	1	V. Laux	5/15 P.I.
5/27	P'town	1	B. Nikula	5/17 Duxbury
5/28	WBWS	1	S. Miller	Scarlet Tanager
5/28	Rockport (H.P.)	1	D. Wood	5/2 Nantucket
5/29	Hingham	1	H. Cross	5/8 MNWS
5/30	N. Middleboro	1	K. Holmes	5/16 P'town
5/30	Sandwich	1	K. Holmes	5/25 Boxford
5/31	MNWS	2	R. Heil	5/31 Barre F.D.
6/7	P.I.	1	J. Hoye#	6/7 S. Groveland
6/16	S. Boston	1	R. Donovan	6/21 Rutland
6/16	Manchester	1	R. Heil	6/21 Sharon
Common Yellowthroat				6/21 Ipswich
5/2, 31	Barre F.D.	2, 65	M. Lynch#	6/21 Quabbin (G40)
5/2	Westport	9	M. Lynch#	Eastern Towhee
5/16	W. Bridgewater	24	S. Arena#	5/2 Westport
5/16	Middleton/Tops	53 m	J. Berry/ECOC	5/18 Medford
5/18	DWWS	48+	D. Furbish	5/30 MSSF
5/23	Blue Hills	30	SSBC (P. O'Neil)	6/7 S. Groveland
5/24	P.I.	39	R. Stymeist#	6/20 Worc. (BMB)
5/24	ONWR	24	R. Lockwood#	6/21 Rutland
5/25	Bolton Flats	23	M. Lynch#	6/21 Sharon
5/28	Lexington	22	M. Rines	6/27 Easton
6/7	S. Groveland	51	BBS (R. Stymeist)	Clay-colored Sparrow
6/18	Taunton	40	SSBC (A. Leggett)	5/24 P.I.
6/20	Easton	132	S. Arena	Field Sparrow
6/21	Rutland	52	M. Lynch#	5/9 MBWMA
6/27	Westport	31	M. Lynch#	6/7 S. Groveland
Hooded Warbler				6/17 Woburn
5/4	MNWS	1	R. Heil	6/18 Lancaster
5/4	Tuckernuck	1	R. Bowen	6/20 Easton
5/9	Rockport (H.P.)	1	S. Carey#	6/20 Worc. (BMB)
				6/27 Newbury

Vesper Sparrow									
5/13	S. Peabody	1		R. Heil					
5/31	Wellfleet	4		R. Stymeist#					
6/23	Lancaster	5		R. Lockwood					
Lark Sparrow									
5/21-24	Hingham (WE)	1		N. Swirka + v.o.					
Savannah Sparrow									
5/3	Weston	25		G. Ferguson					
5/3	W. Bridgewater	25		S. Arena					
5/9	Concord (NAC)	20		S. Perkins#					
5/9	Lancaster	16		R. Lockwood					
5/18	DWWS	20		D. Furbish					
6/10	Bedford	154		R. Lockwood					
6/18	Lancaster	33		R. Lockwood					
Grasshopper Sparrow									
5/9	Lancaster	8		R. Lockwood					
5/18	Wellfleet	1		S. Miller#					
5/31	Falmouth	6		J. Eddy					
6/10	Bedford	9		R. Lockwood					
6/18	Nashawena I.	90 m		A. Jones					
6/23	Lancaster	56		R. Lockwood					
Sharp-tailed Sparrow Species									
5/15	Nantucket	1		T. Maloney#					
Saltmarsh Sharp-tailed Sparrow									
5/17	Newbypt	4		M. Lynch#					
5/19,21	S. Dart. (A.Pd)	9,21		LCES (J. Hill)					
5/30	P.I.	12		R. Lockwood#					
6/25	Newbury	12		S. Perkins#					
6/27	Westport	2		M. Lynch#					
6/27	S. Dart. (A.Pd)	15		R. Stymeist#					
6/28	P.I.	12		M. Lynch#					
6/28	E. Boston	6		M. Rines#					
Seaside Sparrow									
5/16	W. Barnstable	1		S. Miller#					
5/23	P.I.	1		M. Lynch#					
6/27	S. Dart. (A.Pd)	16		R. Stymeist#					
Lincoln's Sparrow									
5/9	Boston	1		M. Rines#					
5/14	Topsfield	1		J. Brown#					
5/21,25	P.I.	1, 1		D. Chickering					
5/24	Mt.A.	1		v.o.					
5/26	MNWS	1		L. Pivacek					
6/18	Lancaster	1		R. Lockwood					
Swamp Sparrow									
5/3	Lynnfield	28		E. Neilsen#					
5/3	ONWR	32		R. Lockwood					
5/2, 31	Barre F.D.	13, 22		M. Lynch#					
5/23	Wayland (WB)	12		S. Perkins#					
5/25	Bolton Flats	12		M. Lynch#					
5/31	W. Bridgewater	16+		S. Arena#					
6/20	Easton	11		S. Arena					
White-throated Sparrow									
5/7	Rockport (H.P.)	130		D. Jacques					
5/9	Boston	112		R. Stymeist#					
5/9	Gardner	32		T. Pirro					
5/25	P.I.	2		M. Rines					
6/6	Quabbin (G40)	3		R. Lockwood					
6/6	Chappaquiddick	1		A. Keith					
6/21	B. F. D.	11		M. Lynch#					
White-crowned Sparrow									
5/3	Cumb. Farms	3		R. Finch					
5/5	Mt.A.	2		M. Rines					
5/9	Rockport (H.P.)	3		S. Carey#					
5/19	P.I.	8		J. Lounsbury#					
5/1-19	Reports of indiv. from	12		locations					
Dark-eyed Junco									
5/1	Barre	4		C. Phillips					
5/4	Mt.A.	2		BBC (M. Rines)					
5/14	Rockport (H.P.)	1		D. Jacques					
5/30	Templeton	3		T. Pirro					
Rose-breasted Grosbeak									
5/2	Nantucket	4		fide E. Ray					
5/15	ONWR	8		E. Neilsen					
5/16	P'town	8		B. Nikula#					
5/16	Middleton/Tops	20 m		J. Berry/ECOC					
5/16	Easton	12		S. Arena#					
5/16	Newbypt-P.I.	13		R. Heil					
5/19	Milton (F.M.)	5		A. Joslin					
5/23	Blue Hills	6SSBC		(P. O'Neill)					
5/25	Boxford	6 m		J. Berry#					
5/28	Lexington	5		M. Rines					
6/7	S. Groveland	20BBS		(R. Stymeist)					
6/20	Worc. (BMB)	8		J. Liller					
Blue Grosbeak									
5/1	East Chop	1		S. Yurkus					
5/1	Vineyard Haven	2+		S. Mathews					
5/2	Chilmark	2		E. Duram					
5/2	Nantucket	1		fide E. Ray					
5/3-7	Acoaxet	1		J. Marshall					
5/4	Plymouth	1 f		J. Cook					
5/4	Tuckernuck	1		R. Bowen					
5/9-12	Upton	1 f		N. Paulson					
5/9	Nantucket	1		fide E. Ray					
5/16	Wellfleet	1		L. de la Flor#					
Indigo Bunting									
5/2	Nantucket	12		fide E. Ray					
5/6	M.V.	15+		V. Laux#					
5/17	MBWMA	10		L. Nachtrab					
5/25	Saugus	4 m		D. + I. Jewell					
5/28	Wakefield	4		P. + F. Vale					
5/31	Barre F.D.	8		M. Lynch#					
6/7	S. Groveland	5BBS		(R. Stymeist)					
6/15	Burlington	4 m		M. Rines					
6/18	Taunton	4SSBC		(A. Leggett)					
6/27	Newbury	4 m		J. Berry					
Bobolink									
5/2, 22	Wayland	1, 100+		N. Patterson					
5/2	Essex	3		J. Hoye#					
5/4	Nantucket	3		fide E. Ray					
5/10,15	P.I.	4, 50+D.		Chickering					
5/15	E. Boston (B.I.)	8		R. Cressman					
5/17	Pepperell	165		E. Stromsted					
5/18	DWWS	50		D. Furbish					
6/6	Westminster	15-20		T. Pirro					
6/10	Bedford	16		R. Lockwood					
6/14	Rowley	20		J. Berry					
6/18	Lancaster	52		R. Lockwood					
Eastern Meadowlark									
5/9	Lunenburg	6		R. Lockwood					
5/15	Easton	2		S. Arena#					
5/24	Pepperell	6		E. Stromsted					
5/30	Essex	4		J. Berry					
5/31	P.I.	3		J. Berry					
6/10	Bedford	25		R. Lockwood					
6/23	Lancaster	7		R. Lockwood					
6/25	Newbury	4		S. Perkins#					
6/29	S. Dart. (A.Pd)	54		LCES (J. Hill)					
Yellow-headed Blackbird									
5/28-6/9	WBWS	1		E. Winslow + v.o.					
Rusty Blackbird									
5/2	Mt.A.	1		R. Finch					
5/3	Chappaquiddick	1 m		A. Keith					
5/4	Medford	1		M. Rines					
Brown-headed Cowbird									
5/1	GMNWR	65		S. Perkins#					
6/7	S. Groveland	60BBS		(R. Stymeist)					
Orchard Oriole									
5/12-18	Mt.A.	1-3		v.o.					
5/16	Hingham	7		R. Finch					
5/17	Winchester	5		M. Rines					
5/20	Newbury	3		R. Stymeist#					
5/23	Melrose	3		D. + I. Jewell					
5/23	Wayland (WB)	5		S. Perkins#					
5/6, 31	W. Newbury	1 m, 3 m		R. Heil					

Orchard Oriole (continued)				5/11	Hopkinton	10	B. Hehn
6/24	Nashawena I.	5	A. Jones	Common Redpoll			
thr	Reports of 1-2 indiv.			5/15	Nantucket	5	S. Perkins#
Baltimore Oriole				5/30	Mt.A.	2	v.o.
5/1-31	Mt.A.	max 20	v.o.	Pine Siskin			
5/8	Lexington	23	M. Rines	5/1-2	E. Boxford	1	J. Brown#
5/9	Boston	27	R. Stymeist#	5/3	Oak Bluffs	2	V. Laux#
5/9	Ipswich	22	J. Berry	5/9-12	Bolton	6	S. + L. Hennin
5/16	Middleton/Tops	64	J. Berry/ECOC	5/13	Mt.A.	1	R. Stymeist
5/16	Easton	43	S. Arena#	5/15	Arlington	1	M. Rines
5/16	Sharon	27	S. Arena#	5/15	Nantucket	2	T. Maloney#
5/23	Blue Hills	21	SSBC (P. O'Neill)	5/16	Topsfield	2	J. Berry/ECOC
5/25	Boxford	20	J. Berry#	5/19	P'town	1	J. Trimble#
6/7	S. Groveland	61	BBS (R. Stymeist)	American Goldfinch			
Purple Finch				5/18	P.I.	1460 migr	S. Perkins#
5/1, 09	Barre	5, 7	C. Phillips	5/21	P.I.	63 migr	S. Perkins#
5/2	Ipswich	1 pr	P. + F. Vale	Evening Grosbeak			
5/3	ONWR	4	R. Lockwood	5/1	Petersham	1	D. Chapman
5/4	P.I.	8	D. + I. Jewell	5/1	Mt.A.	1-2	v.o.
5/8	Lexington	3	M. Rines	5/2	Nantucket	10	fide E. Ray
5/9	Ipswich	2 m	J. Berry	5/2	Barre F.D.	5	M. Lynch#
5/16	Quabbin	2	R. Lockwood#	5/3	Ipswich	1 pr	I. Girunas#
5/25	Boxford	3 m	J. Berry#	5/4	Saugus	1	J. Kierstead
6/6	Quabbin (G45)	3	G. d'Entremont#	5/4	HRWMA	2	T. Pirro
6/17	Falmouth	2	C. Cook	5/9	Gardner	1	T. Pirro
6/21	Rutland	1	M. Lynch#	5/13	Newbury	1	D. + I. Jewell
6/28	Fall River	2	G. d'Entremont	5/19	P'town	1	B. Nikula
Red Crossbill				5/21	Nantucket	3	N. Brooks#
5/2	W. Newbury	2	R. Heil	6/21	Rutland	4	M. Lynch#
5/13, 14	Holden	10, 19	W. Starbard	6/21	Quabbin (G40)	2	R. Lockwood
White-winged Crossbill							

#### 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. Send to Bird Sightings, Robert H. Stymeist, 94 Grove Street, Watertown, MA 02172. Please organize reports by month and by species in current A.O.U. checklist order. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, number of observers, and information relevant to age, sex, morph, etc.

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## LIST OF ABBREVIATIONS

\* Indicates a species on the review list of the Massachusetts Avian Records Committee (MARC). Because these sightings are generally published before the MARC votes, they normally have not been approved by the MARC. The editors publish records which are supported by details, multiple observers, or both.

ad	adult	H.	Harbor
alt	alternate	I.	Island
b	banded	L.	Ledge
br	breeding	M.V.	Martha's Vineyard
dk	dark (phase)	Mt.A.	Mount Auburn Cemetery, Cambridge
f	female	Nant.	Nantucket
fl	fledged	Newbypt	Newburyport
imm	immature	P.I.	Plum Island
ind	individuals	Pd	Pond
juv	juvenile	P'town	Provincetown
loc	location	Quab.	Quabbin Reservoir
lt	light (phase)	Res.	Reservoir
m	male	R.P.	Race Point, Provincetown
max	maximum	S.B.	South B., Chatham
migr	migrating	S. Dart.	South Dartmouth
n	nesting	S.N.	Sandy Neck, Barnstable
ph	photographed	Stellw.	Stellwagen Bank
pl	plumage	Worc.	Worcester
pr	pair	Barre F.D.	Barre Falls Dam, Barre, Rutland, Oakham
S	summer (1S = first summer)	BBC	Brookline Bird Club
thr	throughout	BMB	Broad Meadow Brook, Worcester
vid	videotaped	CCBC	Cape Cod Bird Club
v.o.	various observers	DFWS	Drumlin Farm Wildlife Sanctuary
W	winter (2W = second winter)	DWWS	Daniel Webster Wildlife Sanctuary
w/	with	EMHW	Eastern Massachusetts Hawk Watch
yg	young	GMNWR	Great Meadows National Wildlife Refuge
#	additional observers	HRWMA	High Ridge Wildlife Management Area, Gardner-Westminster
A.A.	Arnold Arboretum, Boston	IRWS	Ipswich River Wildlife Sanctuary
A.P.	Andrews Point, Rockport	LBS	Local Bird Survey
A.Pd	Allens Pond, S. Dartmouth	LCES	Lloyd Center for Environmental Studies
Arl.	Arlington	MARC	Massachusetts Avian Records Committee
B.	B.	MAS	Massachusetts Audubon Society
B.I.	Belle Isle, E. Boston	MBO	Manomet Observatory
B.R.	Bass Rocks, Gloucester	MBWMA	Martin Burns Wildlife Management Area, Newbury
Cambr.	Cambridge	MDFW	MA Division of Fisheries and Wildlife
C.B.	Crane B., Ipswich	MNWS	Marblehead Neck Wildlife Sanctuary
Corp. B.	Corporation B., Dennis	MSSF	Myles Standish State Forest
C.P.	Crooked Pond, Boxford	NAC	Nine Acre Corner, Concord
Cumb. Farms	Cumberland Farms, Middleboro-Halifax	NBC	Needham Bird Club
E.P.	Eastern Point, Gloucester	NEHW	New England Hawk Watch
F.E.	First Encounter B., Eastham	ONWR	Oxbow National Wildlife Refuge
F.H.	Fort Hill, Eastham	SRV	Sudbury River Valley
F.M.	Fowl Meadow, Milton	SSBC	South Shore Bird Club
F.P.	Fresh Pond, Cambridge	TASL	Take A Second Look Harbor Census
F.Pk	Franklin Park, Boston	USFWS	US Fish and Wildlife Service
G40	Gate 40, Quabbin	WBWS	Wellfleet Bay Wildlife Sanctuary
G45	Gate 45, Quabbin	WMWS	Wachusett Meadow Wildlife Sanctuary
H.P.	Halibut Point, Rockport		

## ABOUT THE COVER: YELLOW-RUMPED WARBLER

The Yellow-rumped Warbler (*Dendroica coronata*) is a familiar bird during migration, the first warbler to arrive in the spring and the last to leave in the fall. They are friendly and conspicuous, occur in a wide variety of habitats, and are the only regularly occurring warblers on coastal Massachusetts Christmas Bird Counts (CBC), often appearing in large flocks. This charming warbler's name has proved ephemeral: many of today's birders learned this species as the Myrtle Warbler, but its "new" name actually reflects the resumption of one of its oldest designations. Since there are several warblers with yellow rumps, perhaps another one of the old names, "Yellow-crowned Warbler," would be more appropriate, and would match the scientific name of the species (which refers to the "coronet" that marks the crowns of adults, and some young, of this species).

The taxonomy of this warbler is as problematic as its name. What is now considered a single, continent-wide species was once split into the Myrtle Warbler of eastern North America and northern Canada and Alaska, and Audubon's Warbler (*D. auduboni*) of southwestern Canada and the western U.S., south to Guatemala. Both were considered polytypic, with Alaskan birds a subspecies (*D. c. hooveri*) of the Myrtle, and Audubon's divided into three subspecies, including two north of Mexico: Audubon's (*D. a. auduboni*) and the Black-fronted (*D. a. nigrifrons*) of the interior mountains. Then, with the lumping to form a single species, *hooveri* disappeared altogether, and the remainder of the races became subspecies of *coronata*. However, some current taxonomists think these subspecies are more appropriately considered full species — allo-species — of a superspecies complex. What an ugly mess for so beautiful a bird!

Our eastern Yellow-rumps, with their white throats, are separated from the western race ("Audubon's," about a dozen of which have been reported in Massachusetts) by the latter's yellow throat and more white on wings and tail. They all have yellow crowns, rumps, and breast patches; grayish backs; and black breast bands. However, females are duller than males and have a brownish cast and black streaks for a breast band. Juveniles are duller still and often have little or no yellow on the crown or breast. Winter plumage is duller than the crisp breeding plumage, and blacks and grays have been replaced with browns.

Yellow-rumped Warblers winter mostly in the southeastern U.S. south to Central America and the Greater Antilles, but along the east coast flocks winter in bayberry thickets as far north as Nova Scotia. They are gregarious and may roost communally. In Massachusetts they are the most numerous warbler migrants beginning in mid-April, and again from late September through November. The state's high count came on a Nantucket CBC during which over 3000 were tallied.

Yellow-rumped Warblers breed mostly in the coniferous forests of Canada, where they are the most common warbler species. In Massachusetts they breed

primarily at higher elevations in central and western parts of the state, but also locally in the east in pine forests on the coastal plain. They are seasonally monogamous and may rear two broods. The Yellow-rump's song has been described as a "silver trilling" rising or falling at the end; the song has been transliterated as *wheedle wheedle wheedler* or *ching ching wheedle wheedle weet*. They give a *tsee* or *tseet* flight song and various metallic *chep* or *chek* notes. In courtship the male fluffs his feathers, displaying his yellow crown and breast patches, raises his wings, flutters, and sings.

The males spend much of their time defending the nesting territory while the female incubates. They nest mostly on horizontal branches of spruce and other conifers as high as 50 feet, but usually 5-20 feet above the ground. The nest is a cup of twigs, shredded bark, and roots, often lined with feathers. The usual clutch is 4-5 creamy-white eggs, marbled brown or gray. Incubation, mostly by the female, lasts 12-13 days, and within two weeks the young have fledged. Yellow-rumps will give elaborate "broken wing" distraction displays near the nest, and both parents feed the young.

Yellow-rumped Warblers are foraging generalists, hawking, hovering, and gleaning a bewildering assortment of insects and spiders out of the air, from the ground, or from the branches, trunks, and foliage of trees. Males forage higher than females, a partitioning of resources that may serve to provide a food supply for the female near the nest. Although insectivorous during the breeding season, they may shift to "bugs and berries" at other seasons. In winter they often subsist largely on Bayberry, Wax Myrtle (hence the origin of the name "Myrtle" Warbler), cranberries, red cedar berries, and even Poison Ivy.

Yellow-rumped Warblers are often victims of Brown-headed Cowbird nest parasitism, and many thousands die during migration in collisions with radio towers and other structures, a problem made worse by the proliferation of towers related to cellular telephone transmission. However, these spritely birds remain our most common migrant warbler and add a cheery note to many otherwise bleak winter days.

--W.E. Davis, Jr.

### ABOUT THE COVER ARTIST

Louise Zemaitis, a freelance artist and naturalist, is a regular exhibitor at the "The Loft," Cape May Bird Observatory's gallery. Her illustrations have appeared in a wide variety of books, magazines, brochures, and newsletters, and on T-shirts. She also leads bird and butterfly trips for Cape May Bird Observatory. Louise lives in Cape May Point, New Jersey, with her naturalist sons, Bradley and Alec, and her husband, Michael O'Brien. Louise and her husband have recently opened their own studio, Swallowtail Studio, in Cape May Point, which can be reached at (609) 898-9578.



*Photo by Alfred M. Bailey*

Yes, it's another sneaky, streaky brown job! This month's mystery bird's conical bill, overall streaked appearance, and general shape all point to its being some type of sparrow. Because the bird in the picture is feeding young, it is reasonable to assume that it is an adult, not a bird in some obscure juvenal plumage. (Use every bit of evidence you can when trying to identify an unfamiliar bird, not just its appearance! This maxim holds for both photo identification and identification of birds under field conditions.)

Among the useful features to be considered when trying to identify sparrows are the breast pattern and the pattern of the head and face. Since the bird in the photograph is obviously an adult, the fact that it has a streaked breast and flanks is noteworthy. Knowing that the bird is not a juvenile is important because many juvenile sparrows have streaked underparts, even if they are plain-breasted as adults. Besides the prominent ventral streaking, the bird's broad, pale eyebrow stripe, thin, whitish eye ring, and lack of an apparent central spot on the breast are all features of significance for sparrow identification.

Of the various sparrow species that occur in Massachusetts, the best candidates for the mystery bird are Vesper, Savannah, Henslow's, Nelson's and Saltmarsh Sharp-tailed sparrows, Fox, Song, and Lincoln's sparrows. The Fox Sparrow can be eliminated at once because the pictured bird is not nearly robust enough; the markings on the underparts are not heavy and arrow-shaped, and they do not converge into a central spot; and the nuchal collar (nape) is streaked,

not clear gray. Both sharp-tailed sparrow species possess a distinct gray cheek patch bounded not only by the eyebrow stripe above the cheek, but also by a buffy-orange crescent below it. In addition, sharp-tailed and also Henslow's sparrows have stubbier tails than the pictured bird. Henslow's Sparrow also has a large-billed, flat-headed appearance, an unmarked dark nape, and less extensive flank stripes. Although the Vesper Sparrow has an eye ring, it does not have a broad eyebrow stripe and possesses conspicuous white outer tail feathers.

With Savannah, Song, and Lincoln's sparrows left as possibilities, identification becomes easier. Savannah Sparrows have a distinct, white, median crown stripe; a fairly short, notched tail; and no semblance of an eye ring. The choice now becomes one between Song and Lincoln's sparrow. Again, the presence of an eye ring is important because Song Sparrows do not show this feature; also, Song Sparrows have heavy malar (jaw) stripes, bold and blurry breast and flank streaks, and a conspicuous dark spot in the middle of their breast. Lincoln's Sparrow, on the other hand, typically exhibits fine breast and flank streaks overwashed with buff. Although it isn't the case in the picture, Lincoln's Sparrows often elevate their crown feathers when agitated. The bird in the picture is a Lincoln's Sparrow (*Melospiza lincolni*).

Lincoln's Sparrows are uncommon spring migrants and occasionally fairly common fall migrants in Massachusetts. There are a handful of nesting records from the western part of the state, and the species has several times been identified on local Christmas Bird Counts.

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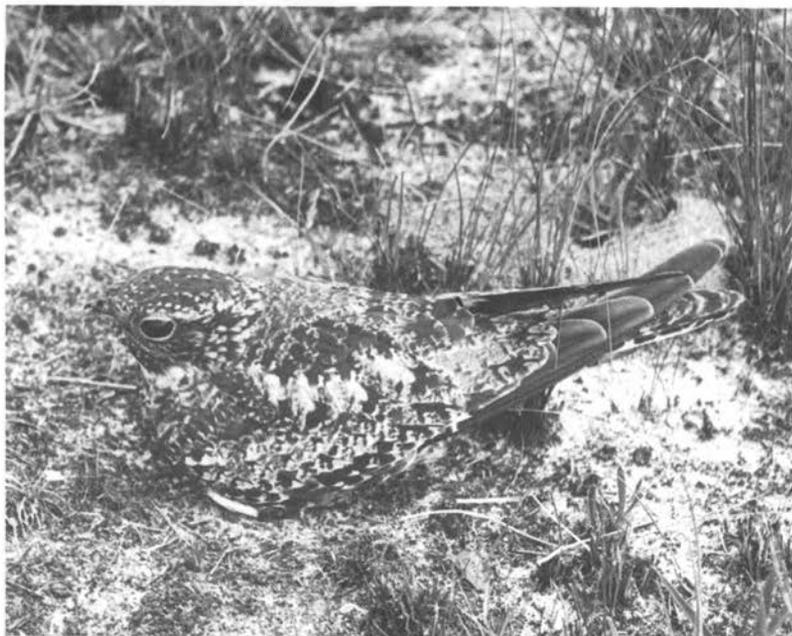
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Photo by Hugh H. Schroder



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