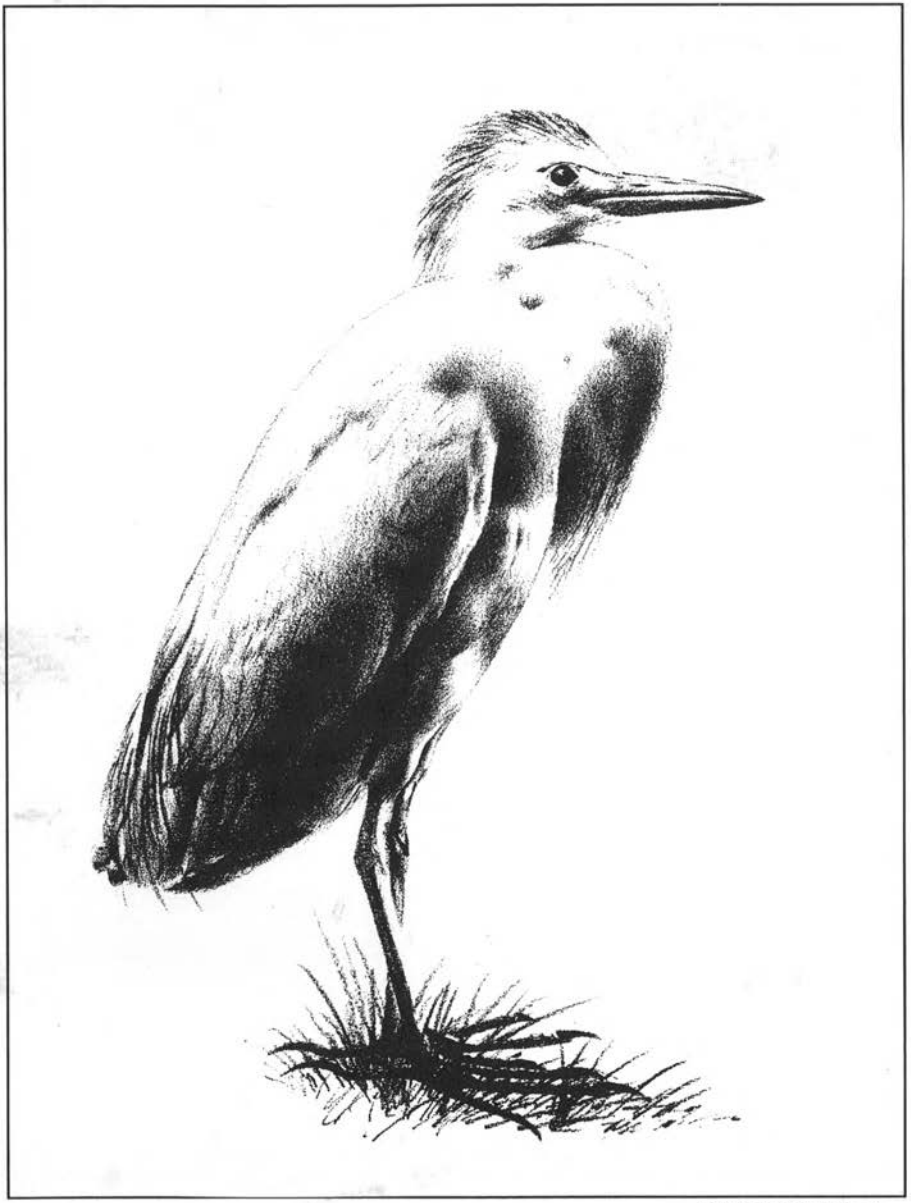
# BIRD OBSERVER



Richard Salvucci

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# BIRD OBSERVER

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*To enhance understanding, observation, and enjoyment of birds.*

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**NUTTALL ORNITHOLOGICAL CLUB**
**1998-99 REQUEST FOR PROPOSALS**
**CHARLES BLAKE FUND GRANTS**

The Nuttall Ornithological Club announces the availability of grants from the Charles Blake Fund. Annual grants will support ornithological research, conservation, and education, with particular emphasis on the birds of New England and the Northeast. The Fund will support grants for research, publication, education, and other worthy ornithology-related efforts. Applications must be from a 501(c)(3) organization and each applicant may request up to $15,000 for an annual grant (although it is most likely that several smaller grants will be distributed). Applications for multi-year projects will be considered. The postmark-date deadline for applications is September 15, 1998. For application guidelines, write to the committee chair, David E. Clapp, at the address below; or send e-mail to southshore@massaudubon.org.

David E. Clapp
Chair, Blake Fund Committee
2090 Main Street
Marshfield, MA 02050

## THE PURPLE MARTIN IN MASSACHUSETTS

By David E. Clapp

The members of the New World genus *Progne* are among the largest of the world's swallows, having wingspans of over twelve inches and weighing nearly two ounces. The Purple Martin (*Progne subis*) is a Neotropical migrant and winterer, and the only breeding martin in North America. The specific wintering grounds of this species are poorly known, but they are thought to include the tropical forest of the western Amazon basin.

The use of the words "swallow" and "martin" are not determined by any anatomical formula. Martins tend to be members of the family Hirundinidae that have squared off or blunt tails. The family is characterized by slender, streamlined bodies with short necks, short, compressed bills, and long, pointed wings with ten primaries. In most species, the sexes are simila,r and the young resemble adults (the Purple Martin represents an exception to this rule). In North America the term "martin" refers exclusively to members of the genus *Progne*, but elsewhere in the world there are martins that belong to other genera, i.e., *Hirundo*, *Delichon*, *Phedina*, *Pseudochelidon*, and *Riparia*.

The migration of the Purple Martin is an unusually leisurely process. Birds returning to North America fly across the Gulf of Mexico in late January, making them one of the earliest migrants to return to the U.S. From the southern U.S., the martins work their way northward, reaching the Carolinas by mid-February, New Jersey by late March, and New England in the middle or end of April. The males, which often arrive ahead of the females, are likely to be seen in eastern Massachusetts around the end of the second week of April.

The Purple Martin is a locally common breeder in southeastern Massachusetts, and at Plum Island and a few other locations in northeastern Essex County. Colonies in these areas reconstitute themselves in late April or early May. By late August, Purple Martins may be found roosting in conifers or dense deciduous trees within a few miles of their nesting sites. Soon after, they are gone: a nearly complete departure takes place by the end of August, and Purple Martins are uncommon in Massachusetts much later than Labor Day.

### Martins in Massachusetts

In eastern Massachusetts today, the Purple Martin is a rather uncommon bird; most estimates allow for only a few hundred nesting pairs in the state. Like many swallows, this species occasionally suffers high nesting mortality during cold rains of several days' duration. Apparently, Massachusetts swallows of all types were devastated by bad weather in 1903 and 1929 (Bent 1942). In both years, sustained cold rain virtually eliminated feeding opportunities for swallows, and many birds starved to death. Most swallow species recover

quickly fairly quickly from such episodes, but Purple Martins do not seem to be as resilient. One explanation commonly offered (Bent 1942, Terres 1980) for the continued low numbers of Purple Martins today is that House Sparrows (*Passer domesticus*) and European Starlings (*Sturnus vulgaris*) regularly usurp preferred martin nesting sites following periods of population depression. It is also likely that the decline of agriculture in Massachusetts limits the amount of habitat that is suitable for Purple Martins.

Purple Martins in the East appear to be totally reliant on man-made bird houses or strings of gourds for nesting. There have been a few reports over the past fifty years of martins nesting in cavities in dead pine trees in the South or among large boulders in Minnesota (Terres 1980). There are also many reports suggesting that martins were attracted by Native Americans who would hang gourds on trees or specially erected poles in order to attract the birds to their villages (Bent 1942). Today, people enjoy the presence of martins and their burbling song, and we assume they eat lots of mosquitoes. In former times, surprisingly, Purple Martins were valued as dooryard birds more because they would vigorously chase off birds of prey that might take domestic fowl than as a means of reducing the numbers of noxious insects.

The nests of Purple Martins are not elaborate and often consist of nothing more than a small jumble of grass stems. Tradition holds that a male establishes and defends a territory and then the female chooses a nest site, acquiring a mate in the process. Not too romantic, but at least they agree on the accommodations! The four or five eggs are incubated for just over two weeks, and the young birds remain in the nest for just over four weeks before fledging. The incubation period is only a few days longer than that of the Tree Swallow (*Tachycineta bicolor*), but the nest-bound development time is over two weeks longer. After the young martins leave the nest, mostly by mid-July in Massachusetts, the family group disperses during the day but roosts communally, often in a conifer.

### A colony in Marshfield, Massachusetts

Most Massachusetts birders have only limited opportunities to observe Purple Martins, seeing them along the road on Plum Island or during a quick visit to a golf course in Marshfield or Halifax. I have been fortunate in that the presence of a small colony at Massachusetts Audubon's Daniel Webster Wildlife Sanctuary (DWWS) in Marshfield has afforded me the opportunity to watch Purple Martins at leisure and with some regularity.

The colony at DWWS was started in April 1996, when twelve large, hollowed gourds were strung like a string of Christmas tree lights on wires between poles. Three poles were erected, with the generous help of Commonwealth Electric, forming the points of an equilateral triangle with sides of about twenty-five feet. Wire was strung between the poles; six gourds were strung on each of two sides of the triangle, while the third wire was left bare to

provide a perch. In the first season, we attracted six birds and had three nesting pairs that each fledged two young. What a great start!

In the first season, there was only one totally dark male bird among the six. Since first-year males have plumage very similar to females, we assumed that the colony initially consisted of one adult male, two yearling males, and three females.

In 1997, there were no birds at the colony until April 23. We were not too concerned, because Clyde Gurney, the manager of the very successful colonies at the Marshfield and Halifax Country Clubs, reported that he had no birds until the fourth week of April, although Bob Matthews and the golf course crew had prepared housing at both locations by April 1. Finally the birds arrived, and the small colony at DWWS ended up with at least fifteen birds. (The Marshfield and Halifax colonies are also off to a great start, with at least thirty occupied nest sites at each golf course in 1997.) The birds that arrived at DWWS in 1997 included five birds in adult male plumage, which seemed like a positive sign.

On several occasions, I have watched the birds at DWWS continuously for a period of about thirty minutes, and the birds exhibited behavior that was somewhat surprising. On July 3, 1997, I noticed that birds would sometimes "deflect" from one gourd to another, if there was already an adult in the opening of the first gourd. Thus, food headed for one brood would occasionally end up in another gourd. I also observed instances in which as many as three adults would enter a single gourd, all carrying food. Such behavior suggests, if not cooperative breeding efforts, at least a lack of rigorous competition among pairs. In addition, the sexual relationships among Purple Martins are a bit unclear. There are reports (Morton 1995) of females mating with more than one male. And in the DWWS colony, birds show a tendency early in the season to leave one gourd and enter another almost immediately, though this behavior seems to cease as nesting nears completion. My observations are quite limited, and it would be interesting to conduct more rigorous studies involving banded or color-marked birds, so that it would be possible to identify individuals. But it appears possible that the DWWS martin colony is to some extent a communal project, with individuals having at least a small stake in the success of the other members of the colony.

So far, there has been little evidence of interspecific territoriality among the martins at DWWS. On May 31, 1997, a Song Sparrow that perched and sang on a pole was chased off before he could finish his first aria. But in general, the martins have not been confronted with territorial challenges. Red-winged Blackbirds (*Agelaius phoeniceus*) frequently sing from the colony's poles in February, March, and early April, prior to the arrival of the martins, but I have never observed this species on the poles when martins were present. I have not yet seen a House Sparrow or European Starling attempt to enter one of the gourds.

It was also interesting to observe the process of getting nesting material into the gourds. The nests that I cleaned out after the 1996 breeding season were very simple, made almost entirely from pieces of grass stems, usually quite straight and stout, between four and six inches long. I watched a bird return to a gourd while holding a six-inch piece of grass stem by the middle in its beak. It landed and tried twenty-three times to enter the two-inch-diameter hole with the six-inch stem held crosswise in its beak. Each time, it tried to go straight in, and each time it bounced off when the stem spanned the hole. Twice it adjusted its body, apparently trying to find a better angle to enter from. Finally, it flew off and made a couple of loops before landing and trying again, six more times. Then it made another flight, another landing, and another series of attempts. I assumed that it would eventually insert one end of the stem into the hole, by accident if not by design, and then take advantage of the serendipity. But this never happened.

What finally happened came as a surprise: the stem finally bent in the middle and the bird entered the hole beak first. Subsequently I observed both softer grasses, and a few more stiff stems, entering gourds in the same manner. They never seemed to learn (as House Wrens [*Troglodytes aedon*] seem to) that by inserting the end they might facilitate the process; regardless of what sort of material they were carrying, the martins persisted in trying to go straight into the gourds.

I don't anticipate any great increase in the Massachusetts Purple Martin population occurring in the near future, but there certainly exists the opportunity for the establishment of new colonies near areas in which martins already breed. There are occasionally colonies on Cape Cod, and birds are often reported in the Connecticut River Valley. But at present, it seems that Plymouth, Bristol, and Essex counties are the only areas in the state in which energy spent establishing martin housing might be rewarded.

P.S.: Purple Martin's don't eat enough mosquitoes to make time spent observing them thoroughly enjoyable.

## References


Bent, A.C. 1942. *Life Histories of North American Flycatchers, Larks, Swallows, and Their Allies.* Smithsonian Institution, United States National Museum Bulletin 179. [Repr. Dover 1963].

Hill, J.R. 1998. Purple Martins Majesty. *Bird Conservation,* Late Winter/Early Spring 1998: 9.

Morton, R. 1995. Sex, Lies and DNA. *Birder's World,* October 1995: 28.

Terres, J.K. 1980. *The Audubon Society Encyclopedia of North American Birds.* New York: Alfred A. Knopf.

Turner, A., and C. Rose. 1989. *Swallows and Martins: An Identification Guide.* Boston: HoughtonMifflin.

Veit, R.R. and W. R. Petersen. 1993. *Birds of Massachusetts.* Massachusetts Audubon Society.

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## MARTIN HOUSING OPTIONS

At DWWS, gourds were by far the most popular housing option, highly desired by the martins and less likely than boxes to be used by invasive species (though Tree Swallows used a gourd in 1996). I originally bought the gourds from a farmer in Alabama, but unfortunately the farmer's failing health made this supply unreliable. Gourds purchased from a farmer require careful preparation. First, wash them and then abrade them with a wire brush and steel wool to remove dirt and blemishes. Cut a two-inch oval in the fat portion of the gourd; the contents of the gourd must be cut and chopped finely enough to be poured out of the hole. Soak each gourd in a copper sulfate solution to inhibit mold growth, and drill several drain holes in the bottom of each and another hole to hang the gourd from at the top. Prime the gourds and paint them with an exterior glossy enamel. When the paint is dry, the gourds are ready to be strung on wires and hung. The Purple Martin Conservation Society, and some birdwatchers supply and gardening stores and catalogs, sell gourds of the appropriate size. Prepared gourds cost somewhat more than those obtained from farmers, but these sources offer a dependable and trouble-free supply. For further information on gourds, and on efforts to sustain the population of this fascinating swallow, contact the Purple Martin Conservation Society, Edinboro University of Pennsylvania, Edinboro, PA 16444.

--David E. Clapp

# NOTES ON A WINTERING MIXED SPARROW FLOCK

By Matthew L. Pelikan

Becoming common is a rare trick for a species, far more unusual than going extinct, which is what most species in earth's history have done. How do common birds get that way? A simple answer is that many individuals of a species reproduce successfully. But in order for that to happen, many individuals must survive from one breeding season to the next in good enough condition to reproduce. Seen from this perspective, abundance demands year-round adaptability on the part of a species.

The rapidly changing, often harsh conditions of a Massachusetts winter pose a particular challenge for birds. In order to survive the winter with adequate breeding stock intact, a species needs efficient ways to forage, keep from freezing, and avoid predators. I've always had a fascination with common birds, especially with how they overcome adverse conditions. From late December 1996 to April 1997, I spent much of my birding time watching a flock of Song (*Melospiza melodia*) and Tree (*Spizella arborea*) sparrows confront the rigors of winter in Lexington, Massachusetts. Since the Song Sparrows in this flock were residents, I was also able to watch as this species made its gradual transition into the breeding season.

My methods were those of a curious birder, not a scientist. I visited the flock about twenty times during a three-month period. Visits ranged from no more than a few minutes in length to an hour and a half; on some, I merely gave a quick listen to hear who was singing, while on others, I birded the area thoroughly, counting the flock members and spending considerable time watching their behavior. I visited at various times of day, in various weather, whenever I had an opportunity; I managed to visit at least once each week during the three-month period.

I first encountered this sparrow flock on December 29, 1996, near the west end of the Arlington Reservoir on the border of Arlington and Lexington, Massachusetts. Warm, damp, overcast conditions and strong southerly winds sent all right-thinking birders into the field to look for vagrants or confused migrants. Around midmorning I encountered an astonishing concentration of bird activity centered on a weedy margin between woods and a stream on one side, and agricultural fields on the other. Over 200 individuals representing more than twenty species were present, among them an outstanding mixed sparrow flock: I counted about forty Tree, ten Song, three White-throated (*Zonotrichia albicollis*), and single Clay-colored (*S. pallida*) and Field (*S. pusilla*) sparrows. My next few visits to the area were made mainly in the hope of finding the Clay-colored Sparrow again, or perhaps discovering something even more unusual,

but my curiosity was rapidly drawn to the behavior of the "ordinary" birds in the flock.

**Overview**

By the time of my second visit, on January 3, a strong cold front had swept through the area, dropping temperatures to near 0° F and depositing an inch or two of dry snow. Predictably, numbers and diversity had decreased at this location. After this initial drop, however, numbers in the sparrow flock remained quite constant for much of the rest of the winter, with about thirty Tree Sparrows and five or six Song Sparrows present each time I visited. Based on the consistent numbers I observed, it seemed reasonable to suppose that the flock comprised a stable roster of individuals. The flock was not totally reliable, however, disappearing for almost three weeks of sustained cold weather during late January and early February. The sparrows may have withdrawn southward, dispersed into the surrounding neighborhood, or retreated into a dense tangle along a stream that runs through the adjoining woods. Reasoning that if the birds were hard to find, they probably didn't want to be disturbed, I elected not to bird the area with any intensity. But when the weather moderated in late February, the birds promptly reappeared in numbers and proportions indistinguishable from what I had last observed, suggesting that they had been entrenched nearby.

As March began, the flock I was following began to lose its cohesiveness. The numbers of Tree Sparrows steadily declined, while the Song Sparrows were often spread out along the entire margin, and sometimes elsewhere in the area, some of them singing. More Song Sparrows arrived: on March 9, at least nine were present, and at least seven were singing. But in the second half of March, either the numbers or the detectability of this species decreased markedly at the Arlington Reservoir. By the end of the month, there was essentially no sparrow flock left: just some lingering Tree Sparrows and a few Song Sparrows widely spaced around the area. This flock's dispersal, then, was finished prior to the arrival in eastern Massachusetts of what appeared to be the main wave of migrant Song Sparrows: on the morning of March 31, I noted "amazing densities in [the] Sudbury [River] Valley: hard to find a spot where you couldn't hear 3 or 4." Such an influx of migrant Song Sparrows at this time appears to be entirely typical (Veit and Petersen 1993), but whether because the movement of migrants was limited to river valleys, or because "my" sparrows had already established territories and were excluding newcomers, this wave produced no apparent effect at the Arlington Reservoir.

Throughout the period of my observations, both Tree and Song sparrows appeared to forage entirely on the ground, and it seemed likely that their presence in such numbers during this winter was made possible by the season's very light snowfall. (In some winters, Song Sparrows are absent at this location, and Tree Sparrows very scarce.) I occasionally observed Tree Sparrows in the

adjacent woods, using a double-footed kick, like a towhee, to turn over leaves. Tree Sparrows would sometimes perch in berry-laden multiflora rosebushes, which are common at this location; it is possible that they fed on the berries, but I never observed this.

**Benefits of flocking**

For the whole time that they were present, the Tree and Song sparrows in the Arlington Reservoir flock were invariably to be found in a single mixed flock, usually feeding in the weeds or on the edges of the fields but sometimes just roosting in weeds and bushes along the margin. Two advantages that individual birds are believed to gain from belonging to a flock are improved foraging opportunities and protection from predators. In the case of the Arlington Reservoir flock, I don't think that the first of these advantages could have figured strongly in the birds' behavior. Weeds, and presumably their seeds, were distributed densely all along the field edges (several hundred yards), so the richness of this location seems to rule out either species relying on the other to locate concentrations of food.

The behavior of the birds when disturbed, however, suggested that safety from predators may have been a factor that encouraged the birds to flock. If, in birding the margin, I flushed the entire sparrow flock, the birds often ended up segregated by species (or nearly so). Tree Sparrows were much more sensitive to disturbance, rarely allowing me to approach within about forty feet (even if I did my best "browsing herbivore" impersonation). Song Sparrows routinely allowed me to get within thirty feet, and sometimes as close as ten or twelve feet. As I approached, the Tree Sparrows would grow increasingly attentive and begin to curtail their foraging; when flushed, they scattered into the tree line or the larger bushes near the woods, with a good percentage of the flock usually ending up fairly high (15 to more than 30 feet), watching me from a commanding perch and, often, calling. The Song Sparrows, in contrast, seemed to ignore me until I was quite close, continuing to feed until they abruptly flipped farther back into the weeds and disappeared.

Reducing losses due to predation has been well documented as an advantage of flocking (e.g., Cresswell 1994, who found a close relationship between larger flock size and lower rates of predation in Redshanks, [*Tringa totanus*]), and the threat of predation was surely a real one for the Arlington Reservoir flock: Sharp-shinned (*Accipiter striatus*) and Cooper's (*A. cooperii*) hawks were occasionally observed here during my study, and over the years I have witnessed several raptor kills at this location (and found the remains of many more). Perhaps an even more dangerous threat to these sparrows came from the domestic cat. Though I observed a cat here only once during this study, cat tracks were invariably evident when light snow created good tracking

conditions, and the proximity of residential neighborhoods makes it likely that the area was routinely patrolled by one or more of these efficient hunters.

Rates of predation may be reduced for birds belonging to a flock either because more sets of eyes allow for earlier warning, or because the chaos of a large flock flushing confuses the predator (overall rate of predation and the success ratio of attacks are the easiest things to quantify in studying the subject, and these statistics say little about the mechanisms involved). The consistent size of the Arlington Reservoir flock suggests that this group of birds suffered few losses to predators (or, indeed, to any other cause), and it seems likely that the sheer size of the flock contributed to this outcome.

With respect to the threat posed by predators, there is a second, less direct advantage to belonging to a flock. Because the task of watching for predators can be divided up among many individuals, flock members can afford to be less vigilant than if they were alone. Because they can spend less time being alert, flock members can devote more time to other behavior such as foraging or maintaining their feathers by preening (important for the retention of body heat). Recent studies have demonstrated some degree of connection between flock size and decreased individual vigilance in species such as Tufted Titmouse (*Parus bicolor*) (Pravosudov and Grubb, Jr. 1995), Northern Cardinals (*Cardinalis cardinalis*), and Harris's Sparrow (*Zonotrichia querula*) (Shuman, Robel, and Zimmerman 1992). Small birds in cold weather necessarily operate on a precarious energy budget, and this benefit of flocking may have been important for the members of the Arlington Reservoir flock.

The interspecific nature of the flock may have magnified the benefits of flocking for these birds. In the simplest sense, the combined numbers of the two species allowed for a larger flock, presumably increasing whatever benefits derived from flocking in the first place. The presence of two species may have offered a particular benefit to the Song Sparrows: since the bulk of the early-warning duties seemed to be performed by the less tame Tree Sparrows, the Song Sparrows may have been able to gain a small amount of additional foraging time each time the flock was disturbed.

### Relations in the flock

Surprisingly, I noticed virtually no interactions between members of the flock, either between or within species. Though certain behaviors, such as flushing or relocating along the margin, were synchronized, the birds appeared to behave as if they were unaware of the presence of other birds (this may, of course, simply reflect the obtuse sensibilities of a human observer). However, the distribution of species within the flock was not uniform. Generally, the Tree Sparrows fed in a fairly compact group, concentrated in perhaps fifty linear feet of margin habitat, while the Song Sparrows were almost invariably at one or both ends of the Tree Sparrows, on the edge of the flock. This distribution was

so consistent that it must have been in some sense deliberate, suggesting that the birds were aware that more than one species was present. It is likely that the middle of the flock is the "best" position, most insulated from predators and, if the flock centers on locally or temporarily abundant food, perhaps offering the best foraging. From this it would follow that the Tree Sparrows were socially dominant over the Song Sparrows, but if this was the case, such dominance had probably been established before I began watching the flock.

It is possible that the mixed nature of the flock may have contributed to the apparent lack of aggression that I observed among its members. Sasavi (1992) found such an effect in a study comparing Great Tits (*Parus major*) in mixed and single-species flocks. Sasavi postulates that interspecific hierarchies are more clearly defined than intraspecific ones; in a mixed flock, then, a certain percentage of interactions involve individuals between whom dominance is so well established as to preclude the need for aggressive behavior. But in any event, birds in the flock appeared to have worked out a social arrangement that minimized the amount of time and energy that was devoted to aggressive behavior.

## Vocalizations

The Tree Sparrows, particularly, were quite vocal during the winter, almost always easily detectable by their *tsip* or *tsi-dip* notes. I never heard this species sing at this location, however. In 1997, I first heard Tree Sparrow songs (in Wayland, Massachusetts) on March 31, by which time the Arlington Reservoir flock had largely dispersed. By far the most common Song Sparrow vocalization during the winter was a thin *tsee* note, suggestive of, but weaker than, a White-throated Sparrow's *tseep*. The louder and more distinctive *churk* or *chimp* call of this species was absent until around the time Song Sparrows started singing, during the second half of February.

During the period of this study, I was bicycling to work, which in effect meant that I rode a five-mile "birding by ear" survey route through parts of Arlington, Winchester, and Woburn twice a day, five days a week. I heard incomplete song attempts by Song Sparrows — brief and structurally simple, given in a peculiar muted tone — for the first time in the middle of February, despite early morning temperatures around 10° F, and I first heard complete songs a few days later, on the morning of February 19, in Winchester, as warmer air began to flow into the region. A little bike-birding that afternoon turned up several other singing Song Sparrows, including one in the Arlington Reservoir flock. My field notes describe the conditions on the 19th: "Warm — around 60 — with a pretty strong S[outh] wind, thin overcast. Yesterday was also pretty warm, and sunnier. Considerable melting, but the ground was mostly frozen just an inch or two down." On February 22, a day warm enough to bring out a Mourning Cloak (*Nymphalis antiopa*) butterfly at the Arlington Reservoir, a

bike-birding trip along the Minuteman Bikeway through Arlington and East Lexington turned up at least ten Song Sparrows singing, including at least two in the Arlington Reservoir flock.

The main functions of song in birds are generally considered to be advertising for a mate and marking territory, so the onset of singing suggests that relations within the flock underwent a qualitative change around this time, despite the fact that actual nesting and egg production were still at least five weeks away (Veit and Petersen 1993). The fact that members of the Arlington Reservoir flock were among the first Song Sparrows in the area to commence singing activity suggests that they emerged from winter in good condition, ready to begin the transition to the breeding season.

Early-season singing by members of the Reservoir flock was interesting to observe. Often, two or more birds would alternate singing what sounded to me like very similar songs:

> March 1, 1997: One bird was singing from along the road that passes by the [Arlington Reservoir]; a second was singing from the edge of the field, and matched the first song. The pattern sounded virtually identical to my ears, except it was slightly accelerated [in the second bird] and finished with a short flourish that was lacking in the first song, or at least inaudible to me. When I was returning to the car, the first bird was silent and the second bird was singing an entirely different song.

On other visits, I noticed even closer matches between the songs of different birds. Such song matching proves to be a well-documented behavior (e.g., Beecher 1996) that is integral to the social patterns of Song Sparrows (and perhaps to many other species, as well), and it is a behavior that will be readily noticed by the alert listener in areas where Song Sparrows are common. Field studies by Beecher (1996) revealed that young Song Sparrows acquire their repertoire of eight or nine songs by mimicking three or more adult males singing from nearby territories during the young bird's first summer, preferentially learning songs that are already shared by several "tutors." Songs are generally adopted intact, and intermixing elements from several songs to form "hybrid" songs is apparently quite rare. The result of this song-learning strategy is that males in adjoining territories share much of their vocal repertoires. Though the precise functions of this behavior are not known, it seems likely that song sharing allows Song Sparrows to distinguish familiar neighbors from transients (that is, potential interlopers), perhaps minimizing the energy that needs to be put into territorial defense. By early March, then, it seems that my Arlington Reservoir flock was already engaged in working out (or reestablishing) social relations for the upcoming breeding season.

A more unusual example of singing behavior took place on March 9. I heard what at first sounded like a bird singing a song composed of two iterations of the same "songlet," itself a song that sounded complete to me. As I started to zero in on the source of the vocalizations, it became clear that the second iteration of the song, which followed immediately on the heels of the first, was characterized by the thin tone that is typical of the the season's earliest song attempts (and of the incomplete songs given by juvenile birds during autumn). The vocalizations proved to be coming from two birds, one following another around, often perching within a few inches of the other; one bird was singing, and the bird with the weaker tone was instantly repeating the song, note for note. The two birds ranged around low weeds and bushes along a tree line, staying in a perhaps a ten-yard square. This behavior continued for at least fifteen minutes without cessation, and was still ongoing when I left the area. As nearly as I could tell, the song remained constant in structure during this entire period. There was no aggression evident between the birds, but the one singing first moved a yard or so away from the other bird after every few repetitions of the song, after which the following bird would flit back to within a few inches.

The following bird showed the muted streaking on the upperparts, weak malar stripe, and fine streaking with a weak central spot on the breast that I associate with juvenile and partially-molted first-year birds. Aging this species in the field can be problematic: Pyle et al. (1987) characterize the first post-breeding molt in this species as "highly variable and dependent on the race and brood sequence," while Byers et al. (1995) suggest that this molt is "generally incomplete, usually including the rectrices and tertials, plus a variable number of remiges" in "northern and migratory races," presumably including our local race, *M. m. melodia*. So it seems possible that the plumage characteristics I observed on this individual indicate a first-year bird, perhaps the result of an especially late clutch, though I can't rule out the possibility that I was seeing worn, perhaps parasite-damaged adult plumage. The leading bird, in any case, was a fine-looking specimen of what I consider the definitive plumage of the local race of this species: rich brown and gray above, with strong breast streaking, a well-defined central spot, and a bold malar stripe.

Song learning in Song Sparrows has been extensively studied. In a laboratory study, Marler and Peters (1987) demonstrated that most song learning in this species occurs during a "sensitive period" early in life, with seventy-nine percent of song learning complete by the age of fifty days and ninety percent complete by the age of ninety days. Some individuals, however, were found by Marler and Peters to be capable of learning songs until about 200 days of age. Subsequent to that age, Song Sparrows were found to pass through a period of "recall and rehearsal" of songs learned early in life, and then a period of "song stabilization" during which their repertoire becomes fixed. Studying a sedentary Song Sparrow population in the field in Washington state, Beecher (1996)

concluded that "the data implicate the bird's hatching summer as the key time for song learning but do not rule out further learning the following year (at least up to about April, after which the bird's repertoire appears to be fixed for life)." However, I was unable to find any account of what song-learning in the field actually looks like. Unfortunately, since I had no way of marking individual birds or recording their repertoires, I couldn't determine what actually transpired in the episode I have described. It seems likely, though, that this peculiar behavior was in some way related to the complicated process of song learning in this species.

Mild weather may have stimulated singing in these Song Sparrows, but my records suggest that this species begins singing in the Arlington area in the second or third week of February regardless of conditions, except when extremely harsh winters drive Song Sparrows out of the area. Perhaps day length (determined by date and not by variations in weather) plays a role in the onset of song in this species. On February 10, 1996, I noted two "nearly complete" Song Sparrow songs at the Arlington Reservoir on a day I described as "Sunny, [in the] 30s." This month as a whole was "a month of wide temperature swings and excess snowfall" (Stymeist 1996). On February 18, 1995, I heard two "almost complete" songs in Medford, Massachusetts, on a day I considered "unseasonably warm"; this month as a whole, however, averaged 2.8 degrees below normal (Stymeist 1995). In 1994, I failed to record any Song Sparrows at all during the month of February, despite a fairly active birding schedule; this month, part of an exceptionally harsh winter in the region, was "[s]nowy and cold . . . 3.4 degrees below normal" (Rines 1994).

## Conclusion

One should be wary of overgeneralizing on the basis of the behavior of the sparrows in the Arlington Reservoir flock. Winter conditions in eastern Massachusetts vary hugely from year to year, as do the movements and numbers of birds present. Undoubtedly a complex web of feedbacks between food supply, day length, temperature, and social factors governs sparrow behavior during the winter. But the impression I had was of a seamless process with its own distinct logic. Through much of the winter, I was convinced, the flock functioned as a tight social unit, with the same individuals generally present, near each other, and behaving in ways likely to enhance their chances of survival. Midwinter social patterns among the Song Sparrows merged insensibly into breeding patterns, the transition occurring (felicitously enough) just as the main wave of migrants arrived in eastern Massachusetts, some of them perhaps seeking territories. And the shift from winter to summer vocalizations among Song Sparrows was clearly a highly social process, characterized by the exchange (whether aimed at competition, education, or cohesion) of "culture" in

the form of song. They may be ordinary birds, but Tree and Song sparrows are superbly adapted to the lives they lead.

## References


Beecher, M. D. 1996. Song Learning in the Lab and Field. In *Ecology and Evolution of Acoustic Communication Birds* (D.E. Kroodsma and E.H. Miller, eds.). Ithaca, New York: Cornell University Press.

Byers, C., J. Curson, and U. Olsson. 1995. *Sparrows and Buntings: A Guide to the Sparrows and Buntings of North America and the World.* Boston, MA: Houghton Mifflin.

Creswell, W. 1994. Flocking is an Effective Antipredation Strategy in Redshanks (*Tringa totanus*). *Animal Behavior* 47(2): 433-442.

Marler, P,. and S. Peters. 1987. A Sensitive Period for Song Acquisition in the Song Sparrow, *Melospiza melodia*: A Case of Age-limited Learning. *Ethology* 76: 89-100.

Pyle, P., S.N.G. Howell, R.P. Yunick, and D.F. DeSante. 1987. *Identification Guide to North American Passerines.* Bolinas, CA: Slate Creek Press.

Pravosudov, V.V., and T.C. Grubb, Jr. 1995. Vigilance in the Tufted Titmouse Varies Independently with Air Temperature and Conspecific Group Size. *Condor* 97(4): 1064-1067.

Rines, M.W. 1994. Bird Sightings, January/February 1994 Summary. *Bird Observer* 22(3): 158.

Sasavi, L. 1992. Great Tits Benefit from Feeding in Mixed Species Flocks: A Field Experiment. *Animal Behavior* 43(2): 289-296.

Shuman, T.W., R.J. Robel, J.L. Zimmerman, and K.E. Kemp. 1992. Time Budgets of Confined Cardinals and Harris' Sparrows in Flocks of Different Size and Composition. *Journal of Field Ornithology* 63(2): 129-137.

Stymeist, R.H. 1995. Bird Sightings, January/February 1995 Summary. *Bird Observer* 23(3): 174.

Stymeist, R.H. 1996. Bird Sightings, January/February 1996. Summary. *Bird Observer* 24(3): 163.

Veit, R. and W. Petersen. 1993. *Birds of Massachusetts.* Lincoln, Massachusetts: Massachusetts Audubon Society.



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## BOOK REVIEW: A Field Guide To Warblers Of North America

By Mark Lynch

*A Field Guide To Warblers Of North America,* by Jon L. Dunn and Kimball L. Garrett. Illustrated by Thomas R. Schultz and Cindy House. New York: Houghton Mifflin Co. 1997. 656 pages, extensively illustrated.

I can remember a time in my callow youth when I actually thought that most field problems I would come up against could be answered by a single field guide. Of course I was naive. This was also the time when the details of migratory movements and subtleties of seasonal plumage variation were known only to a few seasoned veterans who had spent years in the field earning an intimate knowledge of the lives of birds. Today there is a veritable explosion of printed information on all aspects of birds' lives. Regional guides to every corner of the globe now compete for space on our bookshelves with identification guides to almost every group of birds imaginable. Consider the fact that there is now an entire "identification guide" to just the seven species of skuas and jaegers. This is in addition to an entire monograph on the group. It used to be we did not have enough time in the field to see the birds. Now we also don't have enough time to keep up with all the ornithological literature that is available.

In 1994, Houghton Mifflin was the American publisher of the British Book *Warblers of the Americas: An Identification Guide* by Curson, Quinn and Beadle. This beautiful volume illustrated all the warbler species of North, Central, and South America, as well as the Caribbean islands. The concise text covered plumage, behavior, and migration for all the species. Yet a mere three years later Houghton Mifflin has published an entirely new guide to the warblers of only North America as part of the Peterson Field Guide Series. Was there really a need for an entirely new book on this group of birds so soon? Most likely the reason was simply that a field guide by two of America's birding superstars, finally completed after years of anticipation, demanded to be published despite the recent British guide. Dunn and Garrett do pay their respects to Corson, Quinn, and Beadle, calling their book an "excellent guide."

*A Field Guide to Warblers of North America* is certainly packed with more detailed information. The layout is similar to other field guides, though the look is refreshingly different from *A Field Guide to Hawks of North America*, as well as all previous Peterson guides. The warbler guide does in fact represent a "new look" for the Peterson series, already used for other titles such as the guide to Eastern butterflies. There is an informative introductory chapter on the natural history of warblers, with general accounts of breeding biology and migratory patterns. This is followed by thirty-two plates, including two plates of undertail patterns. At first blush, these undertail plates may seem to be a boon to those of

us craning our necks to look up into the canopy, but I question how often we actually get good looks at the undertail patterns of the generally hyperactive warblers. It would seem that undertail patterns would be more useful for the bander than the birder.

The next section comprises the species accounts and forms the bulk of the book. Each account includes a thorough description of the plumage, an account of similar species, and sections on voice, behavior, habitat, distribution, conservation status, subspecies, taxonomic relationships, plumages and molts, and references. Although the plumage and range descriptions do not add substantially to the accounts in the "identification guide," there are numerous interesting details of behavior that make the new *Field Guide to Warblers* the definitive book on North American warblers. The color range maps are large and detailed but do not indicate wintering areas if these are not in North America. Also included in the species sections are good color photographs of each species, often of several different plumages.

Another reason for publishing yet another book on warblers so soon after the first is that this newer volume is considered by Houghton Mifflin to be a "field guide." Though field guide in size, and published in soft cover, *A Field Guide to Warblers* is too thick to slip easily into a back pocket. When I think "field guide," a concise text comes to mind. Frankly, the sheer amount of detailed information in this book makes it impractical for use as a "field guide" per se, but of more use as a home reference book or resource to keep in the car. A field guide also sinks or swims on the quality of its plates. The plates of *A Field Guide to Warblers* are very good, but I found them just a bit disappointing. Their style and execution breaks no new ground with previous Peterson field guide work, and the colors in a few plates seemed a bit chalky or washed out. The plates of *Warblers of the Americas* have better color and more lively looking birds. But this is a minor quibble. The text of *A Field Guide to Warblers* was so complete and authoritative that I expected something as extraordinary and innovative from the plates.

*A Field Guide to Warblers of North America* is an attractive, useful, and important volume. I would love to see similar volumes in this format on gulls and shorebirds of North America, though I doubt those would have the marketability of a book on warblers. The bad news for the overtaxed birder is that *Field Guide to Warblers of North America* is another "must have" volume for our ever-growing library of ornithology.

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# *Field Notes from Here and There*

## COOPERATIVELY HUNTING GREAT HORNED OWLS

*Editor's note: recently a lively discussion sparked by the discovery of several headless Ruffed Grouse (*Bonasus umbellus*) took place on MASSBIRD, our regional birding list-server. The identity of the predator(s) responsible for the wave of grouse decapitations was never determined, although Northern Goshawk (*Accipiter gentilis*), Great Horned Owl (*Bubo virginianus*), various carnivorous mammals, and automotive fan belts were all proposed as the culprit. But the exchange drew forth a wide range of recollections of unusual raptor behavior. One of the most striking of these accounts is reproduced below, lightly edited.*

There are more than birds that like the taste of brains; weasels will take just the head. The brains are nutritious and may fill the dietary needs of some animals. Great Horned Owls, as mentioned in other e-mail messages on the topic, are well known for decapitating.

About thirty years ago, I worked as an undergraduate assistant of Gary Donovan, trapping ducks for banding near Winterport on the Penobscot River in Maine.We had a pair of Great Horned Owls work cooperatively to get at the ducks in the wire trap. We arrived one morning to tend the traps and band the ducks. All twenty-six Black Ducks (*Anas rubripes*) were dead and without heads. That evening we sat in the truck and watched all night. An owl flew in and landed on the top of the trap, panicking the ducks inside. In their attempts to escape, they would stick their heads through the wire cage. The second owl landed on the beach by the trap, waded out, and began to pluck heads off and swallow them.

Having solved the mystery, we disrupted the owls, banded the ducks, and discontinued trapping in that area.

Under an owl nest on Averill's Island, in Topsfield, Massachusetts, I would find rails, moorhens, and ducks all without heads under the tree from the previous night's hunt.

--James MacDougall

## TAG-TEAM SCREECH-OWLS

It has certainly been my experience that the most electrifying wildlife encounters happen when you couldn't possibly expect them. This tale is a case in point.

On December 26, 1997, shortly after 5 p.m., I was driving home from an errand along a major road in my Arlington, Massachusetts, neighborhood. As I

rounded a bend, my headlights just happened to illuminate the last nanosecond in the life of what was probably a Mourning Dove, as it was smacked down onto the pavement by a gray-phase Eastern Screech-Owl! Perhaps in reaction to my squealing brakes, the owl overflew its inert prey and landed on the nearby sidewalk. But an eye-blink later, a red-phase screech-owl hurtled into the hapless MODO, driving its talons directly into the victim's head and back.

While the gray-phase owl stood watching, the red-phase one glared defiantly into my headlights and repeatedly footed the corpse. After perhaps 90 seconds (during which I doubt I breathed) another car came up the road, so I stepped out to flush the owls clear. The red-phase bird carried its bulky dinner up onto the utility wires like it was a tortilla chip. The gray-phase joined it, and they briefly perched side by side. Then off they flew together into the wilds of the Arlington night.

I returned the next day and found the prey's crop contents on the pavement: corn kernels, millet, and unhulled sunflower seeds. Mainly from this evidence I concluded that the victim was a Mourning Dove. While female Cardinal or Mockingbird also fit the general description of the deceased, I doubt either of these species would have eaten sunflower seeds whole.

Since Eastern Screech-Owls are known to remain paired throughout the year and to jointly defend territories, these two owls were probably mates. Conceivably, they were unmated birds interacting at a territorial boundary, but their behavior after the kill seemed to rule that out. And most sources agree that there is no correlation between color morph and mate preference in Eastern Screech-Owls.

Initially I thought perhaps I had seen an instance of cooperative hunting, but a brief foray into the literature quickly convinced me that screech-owls were much more likely to kill and eat one another than to hunt cooperatively. In fact, I could dredge up no record of cooperative hunting among any owl species. Besides, what use is teamwork to a 6-ounce Terminator that can single-handedly dispatch a Ring-necked Pheasant? Had it been springtime, the gray-phase bird might plausibly have been a parent giving its recently fledged offspring some killing practice, but that seems highly unlikely in winter.

I most probably observed a straightforward case of opportunistic usurpation of prey. In fact, Norm Smith has witnessed similar incidents: having trapped one screech-owl with a lure, he has seen another fly in to relieve its cohort of the would-be meal. No doubt the gray-phase screech-owl was also able to feed on that dove after its mate had eaten its fill. But I think the creature who benefited most from their hunting that night was I!

Thanks to Norm Smith and Simon Perkins of the Massachusetts Audubon Society, and Jim Belthoff of Boise State University's Raptor Research Center, for ideas and input.

--Scott Cronenweth

# *BIRD SIGHTINGS*

# *NOVEMBER/DECEMBER 1997*

# *SUMMARY*

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

November was cold, wet, and snowy, and December was dry, sunny and warmer than average. November's temperature at Boston averaged 41.7°, 3.6° less than normal, with a high of 66° on November 2 and a low of 22° on November 25. November's rainfall of 5.86 inches was 1.64 inches above average, and snowfall of 3.9 inches was 2.5 inches above normal. In December, Boston's temperature averaged 35.2°, 1.6° above normal. Rainfall measured 2.32 inches, 1.69 inches less than normal. Snowfall totaled 7.8 inches, about average. The most snow (6.8 inches) fell on December 23. Total snowfall was much greater northwest of Boston, with nearly two feet reported in Dracut. R. H. S.

## LOONS THROUGH WOODPECKERS

The fall passage of Red-throated and Common Loons was well documented this year, largely as a result of many of the birds being concentrated along the shore by easterly winds that coincided with the period of peak loon migration. A Pacific Loon was reported from the vicinity of the eastern end of the Cape Cod Canal in early December. A high count of Horned Grebes was tallied in the Bourne section of Buzzard's Bay, and an **Eared Grebe** in East Gloucester was no doubt the same individual that had spent several previous winter seasons in the same area. Large numbers of Greater Shearwaters that persisted off Cape Ann from earlier in the fall were most evident during a series of coastal storms. Two of these storms also produced the two highest counts of Northern Fulmar: 225 at Cape Ann, and 200 in Cape Cod Bay. Two late Cory's Shearwaters were noted off Provincetown at the end of November.

Very intriguing, but somewhat problematic, were two independent reports of an immature **Brown Booby** in Nantucket Harbor over a two-day span in mid-November. Both parties, during their respective, brief, fly-by encounters, noted the gannet-like shape and uniformly brown to gray-brown plumage. One observer, while scalloping in the harbor, also noted the size as being smaller than a gannet, and mentioned the bird as flying with quicker wing beats, interspersed with glides, low over the water, "shearwater-like," as it passed within thirty feet of his boat. This same observer reported recognizing it as a booby immediately, having seen others in the West Indies. All three observers were very familiar with gannets.

A late Little Blue Heron was reported from Nantucket, and a tardy Cattle Egret was found in New Bedford. The only **Tundra Swan** report came from Pembroke. The three Whooper Swans that originally escaped from an Essex County waterfowl collection several years ago can probably be held genetically accountable for the presence of the 8 Whoopers that were seen on Plum Island in November. Where will it all end? Much less questionable was the provenance three **Greater White-fronted Geese** in Framingham.

Though they were never seen together at one time, five Eurasian Wigeons were determined, on the basis of plumage differences, to have been present throughout the period on one pond in Carver. The **Tufted Duck** that spent the last several winters in the Sterling/West Boylston area returned again this year, and a second Tufted appeared at Great Herring Pond in Plymouth. Most noteworthy, among an above-average total of no fewer than 18 King Eiders, were a flock of five in Sandwich, and an adult male on Indian Lake, within the city limits of **Worcester**. This latter bird represented the first county record and one of very few records anywhere inland in the state. Hooded Merganser and Ruddy Duck were especially well reported.

Late Ospreys included single birds in Wayland and Braintree, and a very high count of 11 Northern Harriers came from the grasslands of the Daniel Webster Sanctuary in Marshfield. A **Golden Eagle** banded in Quincy comprised one of two migrants reported during this period, and another Golden, seen several times in the northeastern corner of Quabbin Reservoir, appeared to have settled in for the winter.

Sandpipers made headlines with the discoveries of two very late Whimbrels, four Marbled Godwits, and a **Bar-tailed Godwit**, the latter being the first in the state in winter. Adding to the significance of the Whimbrel record was the fact that one of the two birds belonged to the rarely seen Eurasian race, *phaeopus*. Also, a very late Least Sandpiper was present with the two curlews, and other tardy sandpipers included a Lesser Yellowlegs in Orleans and a Spotted Sandpiper in Amesbury. The extraordinary shorebird show at the Great Meadows Refuge in Concord (see the previous September and October summaries) finally wound down in early November.

Some of the coastal storms that produced the high counts of tubenoses at Cape Ann and Cape Cod also yielded large numbers of gannets, jaegers, and kittiwakes. Especially impressive were flights on or around the Thanksgiving and Christmas holidays in Cape Cod Bay. Note, particularly, the total of nearly 250 jaegers Thanksgiving day, and 8,700+ kittiwakes Christmas Eve. A well-described **Great Skua** was also part of the Thanksgiving flight, and five late Pomarine Jaegers were part of the Christmas Eve show. Another storm-related Great Skua was at Rockport November 1. A large concentration of Bonaparte's Gulls off the east shore of Nantucket in late December was estimated to contain at least 3,000 birds, and an early Glaucous Gull was noted at Rockport.

Vying for Best Bird of the fall season was a Roseate Tern meticulously studied and photographed at Indian Lake in **Worcester**. This bird was both the latest ever recorded in Massachusetts (but see below), and the first found inland. Its appearance coincided with the passage of a storm that moved from the coast northward through the interior of the state. This, or perhaps another, Roseate was seen nearly two weeks later at Martha's Vineyard. Modest numbers of Forster's Terns typically linger into November in Massachusetts. The single report in November reflected this species' poor showing, overall, this past fall.

Early alcids included a Common Murre and **Atlantic Puffin** seen from Rockport during an early November storm, and another puffin was blown into Cape Cod Bay during the aforementioned Christmas Eve storm; so too were 2,300+ large unidentified alcids, most, if not all, of which were probably Razorbills. Two hundred Razorbills off the east side of Martha's Vineyard represented a high count for that locale. S. A. P.

| Date | Location | Number | Observers |
|---|---|---|---|
| **Red-throated Loon** | | | |
| 11/1 | Rockport (A.P.) | 870 | R. Heil |
| 11/8 | Dennis (C.B.) | 1900+ | B. Nikula |
| 11/8 | Rockport (A.P.) | 1095 | S. Perkins# |
| 11/8 | Barnstable (S.N.) | 3350 | V. Laux# |
| 11/8 | Marshfield | 775 | G. d'Entremont# |
| 11/9 | Manomet Pt. | 449 | G. Levandoski |
| 11/9 | Eastham (F.E.) | 700+ | B. Nikula# |
| 11/9 | Dennis (C.B.) | 1000 | A. Strauss |
| 11/22 | Rockport (A.P.) | 1350 | R. Heil |
| 11/23 | Rockport (H.P.) | 2000 | G. Levandoski# |
| **Pacific Loon** (details)* | | | |
| 12/4-5 | Sandwich | 1 ad | M. Sylvia + v.o. |
| **Common Loon** | | | |
| 11/8 | Marshfield | 37 | G. d'Entremont# |
| 11/8 | Rockport (A.P.) | 231 | S. Perkins# |
| 11/8 | Barnstable | 30 | M. Lynch# |
| 11/9 | Manomet Pt. | 31 | G. Levandoski |
| 11/9 | Rockport (A.P.) | 121 | S. Perkins# |
| 11/10 | Eastham (F.E.) | 70 | R. Stymeist# |
| 11/15 | Brookfield | 2 | M. Lynch# |
| 11/15 | Wachusset Res. | 3 | R. Lockwood |
| 11/23 | Quabbin (G43-35) | 15 | S. Surner |
| 11/28 | Camb. (F.P.) | 2 | R. Stymeist |
| **Pied-billed Grebe** | | | |
| 11/2 | Camb. (F.P.) | 3 | R. Stymeist |
| 11/2 | Raynham | 6 | W. Petersen |
| 11/2 | Worcester | 6 | M. Lynch# |
| 11/7 | Carver | 3 | M. Sylvia |
| 11/8 | Arlington | 5 | K. Hartel |
| 11/11 | Lakeville | 7 | M. Sylvia |
| 11/28 | Wareham | 5 | M. Sylvia |
| 12/27 | Marstons Mills | 3 | M. Partridge |
| **Horned Grebe** | | | |
| 11/8 | Barnstable | 2 | M. Lynch# |
| 11/8 | Rockport (A.P.) | 2 | S. Perkins# |
| 11/10 | Cambridge (F.P.) | 2 | J. Barton |
| 11/15 | Gloucester | 4 | J. Soucy |
| 11/15 | Lynnfield | 2 | P. + F. Vale |
| 11/16 | Peaboby | 2 | D. + I. Jewell |
| 11/18 | P.I. | 11 | S. Perkins# |
| 11/23 | Quabbin (G43-35) | 12 | S. Surner |
| 11/26 | Nantucket | 50 | E. Andrews |
| 11/28 | Bourne | 257 | M. Sylvia |
| 11/28 | P.I. | 61 | J. MacDougall |
| 11/30 | Winthrop | 55 | BBC (R. Stymeist) |
| 12/6 | Quincy | 59 | G. d'Entremont |
| 12/27 | Barnstable (S.N.) | 15 | M. Partridge |

| Date | Location | Number | Observers |
|---|---|---|---|
| **Red-necked Grebe** | | | |
| 11/7 | Rockport (A.P.) | 34 | R. Heil |
| 11/8 | Barnstable | 6 | M. Lynch# |
| 11/10 | Cambridge (F.P.) | 1 | J. Barton |
| 11/23 | Bourne | 13 | BBC (R. Stymeist) |
| 11/30 | Winthrop | 142 | BBC (R. Stymeist) |
| 12/26 | Hull | 25 | G. d'Entremont# |
| 12/26 | N. Scituate | 22 | G. d'Entremont# |
| 12/27 | P'town | 20+ | B. Nikula |
| **Eared Grebe** (no details)* | | | |
| thr | E. Gloucester | 1 | J. Soucy + v.o. |
| **Northern Fulmar** | | | |
| 11/1 | Rockport (A.P.) | 225 | R. Heil |
| 11/8 | Barnstable (S.N.) | 6 | V. Laux# |
| 11/8 | Dennis (C.B.) | 55 | B. Nikula |
| 11/9 | Eastham (F.E.) | 75 | M. Sylvia |
| 11/9 | Rockport (A.P.) | 19 | S. Perkins# |
| 11/22 | Rockport (A.P.) | 10 lt | R. Heil |
| 11/27 | Eastham | 200 | J. Askilsen |
| 12/24 | Eastham (F.E.) | 1 | J. Trimble |
| **Cory's Shearwater** | | | |
| 11/8 | Barnstable | 1 | M. Lynch# |
| 11/8 | Dennis (C.B.) | 1 | B. Nikula |
| 11/9 | Eastham (F.E.) | 4 | M. Sylvia |
| 11/28 | P'town | 2 | S. Hennin# |
| **Greater Shearwater** | | | |
| 11/1 | Rockport (A.P.) | 2130 | R. Heil |
| 11/2 | P'town (R.P.) | 332 | R. Lockwood |
| 11/7 | Rockport (A.P.) | 390 | R. Heil |
| 11/8 | Rockport (A.P.) | 361 | S. Perkins# |
| 11/9 | Gloucester (E.P.) | 60 | M. Lynch# |
| 11/9 | Rockport (A.P.) | 124 | S. Perkins# |
| 11/9 | Eastham (F.E.) | 73 | M. Sylvia |
| 11/22 | Rockport (A.P.) | 33 | R. Heil |
| 11/23 | P'town | 8 | B. Nikula |
| 11/27 | Eastham | 5 | J. Askilsen |
| **Sooty Shearwater** | | | |
| 11/1 | Rockport (A.P.) | 2 | R. Heil |
| 11/2 | P'town (R.P.) | 1 | R. Lockwood |
| 11/7 | Rockport (A.P.) | 1 | R. Heil |
| **Manx Shearwater** | | | |
| 11/2 | Rockport (A.P.) | 3 | M. Sylvia |
| 11/8 | Rockport (A.P.) | 1 | R. Donovan# |
| 11/19 | Barnstable (S.N.) | 1 | R. Heil |
| **Leach's Storm-Petrel** | | | |
| 11/7 | Rockport (A.P.) | 7 | R. Heil |
| 11/8 | Barnstable | 9 | M. Lynch# |
| 11/8 | Dennis (C.B.) | 2 | B. Nikula |

Leach's Storm-Petrel (continued)

| | | | |
|---|---|---|---|
| 11/8 | Barnstable (S.N.) | 12 | V. Laux# |
| 11/8 | Rockport (A.P.) | 3 | S. Perkins# |
| 11/9 | Rockport (A.P.) | 3 | M. Sylvia |
| 11/10 | Eastham (F.E.) | 2 | R. Stymeist# |

**Brown Booby** (details) *

| | | | |
|---|---|---|---|
| 11/12 | Nantucket | 1 imm | E. Ray, J. Papale |
| 11/13 | Nantucket | 1 imm | B. Perkins |

Northern Gannet

| | | | |
|---|---|---|---|
| 11/1 | Rockport (A.P.) | 2560 | R. Heil |
| 11/2 | Eastham (F.E.) | 5000 | R. Lockwood |
| 11/2 | P'town (R.P.) | 2000 | R. Lockwood |
| 11/7 | Rockport (A.P.) | 1180 | R. Heil |
| 11/8 | Barnstable | 1695 | M. Lynch# |
| 11/9 | Dennis (C.B.) | 500+ | A. Strauss |
| 12/2 | Wellfleet | 150+ | A. Strauss |
| 12/6 | Truro | 50 | M. Lynch# |
| 12/24 | Eastham (F.E.) | 40 | J. Trimble |

Great Cormorant

| | | | |
|---|---|---|---|
| 11/1 | Marshfield | 50 | G. d'Entremont# |
| 11/1 | Rockport (A.P.) | 30 | R. Heil |
| 11/28 | Bourne | 48 | M. Sylvia |
| 12/26 | Hull | 150 | G. d'Entremont# |
| 12/26 | N. Scituate | 20 | G. d'Entremont# |

Double-crested Cormorant

| | | | |
|---|---|---|---|
| 11/1 | Marshfield | 10 | G. d'Entremont# |
| 11/1 | Rockport | 25 | J. Berry |
| 11/3 | Lakeville | 11 | M. Boucher |
| 11/16 | Belmont | 26 | R. Stymeist |
| 11/28 | E. Gloucester | 5 | S. Perkins# |
| 12/7 | P'town H. | 2 | B. Nikula |
| 12/27 | Plymouth | 1 | R. Finch |

American Bittern

| | | | |
|---|---|---|---|
| 11/2 | Camb. (F.P.) | 1 | R. Stymeist |
| 11/2 | Katama | 1 | M. Pelikan |
| 11/4 | Salisbury | 1 | D. + I. Jewell |
| 11/16 | P.I. | 2 | R. Heil |
| 11/16 | Lynnfield | 1 | D. + I. Jewell |
| 11/19 | Nantucket | 1 | fide E. Ray |
| 11/21 | Dorchester | 1 | R. Donovan |
| 11/25 | Newbypt | 1 | R. Heil |
| 11/28 | Wellfleet | 1 | M. Sylvia |
| 12/8 | Chilmark | 1 | M. Pelikan# |
| 12/16 | Eastham (F.H.) | 1 | J. Trimble# |

Great Blue Heron

| | | | |
|---|---|---|---|
| 11/2 | Worcester | 8 | M. Lynch# |
| 11/2 | GMNWR | 28 | S. Perkins# |
| 11/3, 12/18 | Waltham | 9, 4 | M. Rines |
| 11/16 | Nantucket | 21 | fide E. Ray |
| 11/23 | Essex | 10 | R. Heil |
| 11/30 | E. Boston | 8 | BBC (R. Stymeist) |
| 12/6 | Westport | 8 | M. Boucher |
| 12/7 | Sandwich | 11 | G. Levandoski# |

Little Blue Heron

| | | | |
|---|---|---|---|
| **11/26** | Nantucket | 1 | S. Langer |

Cattle Egret

| | | | |
|---|---|---|---|
| **11/3** | New Bedford | 1 | G. Levandoski |

Black-crowned Night-Heron

| | | | |
|---|---|---|---|
| 11/9 | Gloucester | 1 imm | M. Lynch# |

**Tundra Swan**

| | | | |
|---|---|---|---|
| 11/2 | Pembroke | 1 imm | W. Petersen |

Whooper Swan

| | | | |
|---|---|---|---|
| 11/5 | P.I. | 8 | W. Drew# |

**Greater White-fronted Goose**

| | | | |
|---|---|---|---|
| 11/13 | Framingham | 3 | S. Hennin |

Snow Goose

| | | | |
|---|---|---|---|
| 11/12 | Rochester | 1 | M. Boucher |
| 11/16 | P.I. | 20 | BBC (I. Giriunas) |
| 11/18 | Gay Head | 26 | V. Laux |
| 11/20-30 | Nantucket | 6 | D. Sutherland |
| 11/24 | Ipswich | 7 | J. Soucy |
| 11/28 | Truro | 28 | S. Hennin# |
| 12/16-21 | Chatham | 2 | R. Clem |
| 12/28 | P.I. | 6 | P. + F. Vale |

Brant

| | | | |
|---|---|---|---|
| 11/11 | **Sterling** | 1 | R. Stymeist# |
| 11/14 | Duxbury B. | 208 | D. Furbish |
| 11/19 | Nantucket | 119 | fide E. Ray |
| 11/30 | E. Boston | 180 | BBC (R. Stymeist) |
| 12/27 | Mattapoisett | 60+ | F. Smith |

Wood Duck

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 8 | S. Perkins# |
| 11/2 | Worcester | 39 | M. Lynch# |
| 11/23 | Wakefield | 5 | D. Williams |
| 12/19 | P.I. | 2 | W. Drew# |

Green-winged Teal

| | | | |
|---|---|---|---|
| 11/2 | Worcester | 17 | M. Lynch# |
| 11/2 | GMNWR | 200+ | S. Perkins# |
| 11/2 | DWWS | 85 | D. Furbish |
| 11/7 | Arlington Res. | 70 | R. Stymeist |
| 11/16 | P.I. | 1100 | R. Heil |
| 11/20 | E. Boston | 45 | R. Cressman |
| 12/5 | P.I. | 26 | W. Drew# |
| 12/13 | Seekonk | 16 | M. Sylvia |
| 12/28 | Marlboro | 9 | B. Parker |

American Black Duck

| | | | |
|---|---|---|---|
| 11/15 | P.I. | 5000 | R. Heil |
| 11/16 | Rowley | 350 | J. Berry |
| 12/6 | Westport | 302 | M. Boucher |

Northern Pintail

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 16 | S. Perkins# |
| 11/5 | P.I. | 120 | W. Drew# |
| 11/7 | Arlington Res. | 7 | R. Stymeist |
| 11/29 | Marlboro | 8 | E. Taylor |
| 12/19 | P.I. | 15 | W. Drew# |
| 12/28 | Halifax | 7 | R. Finch |

Blue-winged Teal

| | | | |
|---|---|---|---|
| 11/10 | GMNWR | 1 | S. Perkins# |
| 12/7 | Falmouth | 1 f | S. Miller |

Northern Shoveler

| | | | |
|---|---|---|---|
| 11/2-10 | GMNWR | 4 | S. Perkins# |
| 11/2, 12/14 | Worcester | 1 | M. Lynch# |
| 11/5, 28 | P.I. | 2 | W. Drew# |
| 11/7 | Waltham | 7 | R. Stymeist |
| 11/15 | E. Boston (B.I.) | 2 | R. Cressman |
| 11/15, 12/1 | Melrose | 1 | D. + I. Jewell |
| 11/16 | Winthrop | 2 | P. + F. Vale |
| 11/21 | W. Newbury | 1 imm | R. Heil |
| 11/22 | DWWS | 1 | D. Furbish |
| 11/24 | Marstons Mills | 3 | S. Clifton |
| 12/1-31 | Kingston | 1 | D. Ludlow |
| 12/13 | Seekonk | 1 m | M. Sylvia |
| 12/13 | Duxbury | 1 f | D. Furbish |
| 12/28 | Halifax | 1 | R. Finch |

Gadwall

| | | | |
|---|---|---|---|
| 11/7 | Waltham | 12 | R. Stymeist |
| 11/15 | Arlington | 12 | K. Hartel |
| 11/29 | Marstons Mills | 50 | M. Partridge |
| 12/5 | P.I. | 128 | W. Drew# |
| 12/20 | Gloucester | 35 | J. Berry |
| 12/26 | Barnstable | 55 | R. Finch |
| 12/26 | DWWS | 31 | G. d'Entremont# |
| 12/27 | Mill Pond | 30 | M. Partridge |
| 12/27 | P.I. | 14 | M. Lynch# |

Eurasian Wigeon

| | | | |
|---|---|---|---|
| thr | Carver | 5 max | M. Sylvia |
| 11/5-6 | Arlington Res. | 1 m | S. Cronenweth |
| 11/15-25 | P.I. | 1 m | R. Heil |
| 11/22 | East Chop | 1 m | M. Pelikan |
| 12/7 | W. Barnstable | 1 m | C. Bergfors |
| 12/21 | Chatham | 2 m | B. Nikula# |

American Wigeon

| | | | |
|---|---|---|---|
| 11/2 | Worcester | 24 | M. Lynch# |
| 11/7 | Arlington Res. | 65 | C. Floyd |

American Wigeon (continued)

| | | | |
|---|---|---|---|
| 11/10 | Camb. (F.P.) | 40 | J. Barton |
| 11/11 | Carver | 79 | M. Sylvia |
| 11/12 | P.I. | 76 | W. Drew# |
| 12/7 | Wareham | 63 | M. Boucher |
| 12/11 | Manomet | 20 | M. Faherty |
| 12/12 | P.I. | 17 | W. Drew# |
| 12/14 | Duxbury | 19 | D. Furbish |
| 12/27 | Carver | 20 | R. Finch |

Canvasback

| | | | |
|---|---|---|---|
| 11/10 | Camb. (F.P.) | 170 | J. Barton |
| 11/21 | W. Newbury | 4 | R. Heil |
| 11/30 | Lakeville | 35 | W. Petersen |
| 12/6 | Braintree | 14 | S. Carey |
| 12/6 | Westport | 7 | M. Boucher |
| 12/13 | Falmouth | 15 | SSBC (P. Trimble) |
| 12/21 | Braintree | 5 | T. Raymond |
| 12/21 | Wareham | 71 | M. Sylvia |

Redhead

| | | | |
|---|---|---|---|
| 11/28 | Falmouth | 1 | J. Eddy |
| 12/27 | Falmouth | 1 | R. Finch |

Ring-necked Duck

| | | | |
|---|---|---|---|
| 11/3 | Lakeville | 189 | M. Boucher |
| 11/7 | Arlington Res. | 225 | C. Floyd |
| 11/15 | Southboro | 856 | M. Lynch# |
| 11/16 | Camb. (F.P.) | 124 | H. Miller |
| 11/23 | Lynnfield | 39 | D. Williams |
| 12/27 | Falmouth | 7 | R. Finch |

**Tufted Duck**

| | | | |
|---|---|---|---|
| 11/2-26 | Sterling | 1 | F. McMememy + v.o. |
| 12/13 | Wachusett Res. | 1 | F. McMememy |
| 12/29-31 | Plymouth | 1 m | CBC |

Greater Scaup

| | | | |
|---|---|---|---|
| 11/8 | Rockport (A.P.) | 110 migr | S. Perkins# |
| 11/20 | Revere | 30 | R. Cressman |
| 12/6 | Winthrop | 29 | J. Barton |
| 12/6 | Nahant | 100 | J. Barton |
| 12/6 | Quincy Bay | 150 | G. d'Entremont |
| 12/13 | Falmouth | 800+ | SSBC (P. Trimble) |

Lesser Scaup

| | | | |
|---|---|---|---|
| 11/2 | E. Gloucester | 1 imm m | J. Berry |
| 11/2 | Pembroke | 35 | W. Petersen |
| 11/3 | Lakeville | 74 | M. Boucher |
| 11/15 | Southboro | 12 | M. Lynch# |
| 11/18 | P.I. | 1 f | S. Perkins# |
| 12/7 | Winthrop | 2 | C. Floyd |
| 12/14 | Newbypt | 2 imm m | J. Berry |

Common Eider

| | | | |
|---|---|---|---|
| 11/7 | Rockport (A.P.) | 4650 | R. Heil |
| 11/8 | Barnstable | 1820 | M. Lynch# |
| 11/10 | Eastham (F.E.) | 600 | R. Stymeist# |
| 11/30 | Winthrop | 2100 | BBC (R. Stymeist) |
| 12/3 | M.V. | 25,000 | G. Daniels# |
| 12/6 | Quincy Bay | 500 | G. d'Entremont |

**King Eider**

| | | | |
|---|---|---|---|
| thr | Cape Ann | 1-3 | J. Berry + v.o. |
| thr | Nahant | 1 m | L. Pivacek |
| 11/8 | Barnstable | 1 | L. Hennin |
| 11/16 | Nahant | 1 sub ad | R. Stymeist# |
| 11/17 | Plymouth | 1 | E. Neumuth |
| 11/19 | Salem | 1 | L. Healy |
| 11/22-23 | **Worcester** | 1 ad | F. McMenemy + v.o. |
| 12/4 | Scusset B. | 5 | M. Sylvia |
| 12/21-31 | Orleans | 1 imm. m | v. o. |
| 12/21 | Eastham | 1 f | W. Petersen# |
| 12/28 | Ipswich | 2 | J. Berry |

Harlequin Duck

| | | | |
|---|---|---|---|
| thr | Rockport (A.P.) | 30 max | v.o. |
| 11/10 | Eastham (F.E.) | 1 | R. Stymeist# |
| 11/15 | Winthrop | 1 | P. + F. Vale |
| 11/16 | Revere B. | 1 m | P. + F. Vale |
| 11/17 | Plymouth | 2 | E. Neumuth |
| 11/18 | Nantucket | 6 | fide E. Ray |
| 11/18 | Chilmark | 52 | V. Laux |
| 11/29 | N. Scituate | 13 | W. Petersen |
| 12/18 | Orleans | 1 ad m | A. Strauss |
| 12/27 | P'town H. | 1 f | B. Nikula |

Oldsquaw

| | | | |
|---|---|---|---|
| 11/2 | **Gardner** | 1 | T. Pirro |
| 11/2 | **W. Newbury** | 2 | D. Larson |
| 11/8 | Marshfield | 500 | G. d'Entremont# |
| 11/8 | Barnstable (S.N.) | 3000 | V. Laux# |
| 11/9 | Rockport (A.P.) | 1419 migr | S. Perkins |
| 11/15 | **Brookfield** | 1 | M. Lynch# |
| 11/22 | Rockport (A.P.) | 1560 migr | R. Heil |
| 12/7 | Nantucket | 165,000 | K. Blackshaw# |

Black Scoter

| | | | |
|---|---|---|---|
| 11/2 | Manomet Pt. | 80 | G. Levandoski |
| 11/7 | Rockport (A.P.) | 980 migr | R. Heil |
| 11/7 | Gardner | 75 | T. Pirro |
| 11/8 | Barnstable | 3123 | M. Lynch# |
| 11/15 | Revere | 150 | P. + F. Vale |
| 11/15 | **Brookfield** | 1 | M. Lynch# |
| 11/18 | Nant. Sound | 275 fide | K. Blackshaw |

Surf Scoter

| | | | |
|---|---|---|---|
| 11/1 | Marshfield | 1130 | G. d'Entremont# |
| 11/1 | Rockport (A.P.) | 1040 | R. Heil |
| 11/2 | Manomet Pt. | 30 | G. Levandoski |
| 11/4 | Salisbury | 25+ | D. + I. Jewell |
| 11/8 | Barnstable (S.N.) | 3500 | V. Laux# |
| 11/16 | Revere B. | 1000 | P. + F. Vale |
| 11/18 | Nant. Sound | 385 fide | K. Blackshaw |

White-winged Scoter

| | | | |
|---|---|---|---|
| 11/8 | Barnstable | 1314 | M. Lynch# |
| 11/9 | Rockport | 1500+ | BBC (D. Peloquin) |
| 11/16 | Revere B. | 4000 | P. + F. Vale |
| 11/18 | Nant. Sound | 440 fide | K. Blackshaw |
| 11/23 | **Quabbin (G43-35)** | 3 | S. Surner |
| 12/6 | Quincy Bay | 500 | G. d'Entremont |

Common Goldeneye

| | | | |
|---|---|---|---|
| 11/9 | Rockport (A.P.) | 4 | S. Perkins# |
| 11/16 | Braintree | 15+ | S. Carey |
| 11/28 | Gloucester | 15 | S. Perkins# |
| 11/30 | Winthrop | 38 | BBC (R. Stymeist) |
| 12/6 | Braintree | 15+ | S. Carey |
| 12/7 | Quabbin (G37) | 11 | E. Nielsen# |
| 12/12 | P.I. | 35 | W. Drew# |
| 12/27 | Wareham | 115 | R. Finch |
| 12/28 | Amesbury | 40 | P. + F. Vale |

Barrow's Goldeneye

| | | | |
|---|---|---|---|
| 11/28-12/27 | Wareham | 1 m | M. Sylvia + v.o. |
| 11/30-12/14 | Winthrop | 1 | R. Stymeist + v.o. |
| 12/31 | Gloucester | 1 m | R. Stymeist |

Bufflehead

| | | | |
|---|---|---|---|
| 11/14 | Duxbury B. | 70 | D. Furbish |
| 11/18 | Newbypt H. | 100 | S. Perkins# |
| 11/19 | Barnstable | 230 | R. Heil |
| 11/28 | Wareham | 233 | M. Sylvia |
| 12/6 | Westport | 139 | M. Boucher |

Hooded Merganser

| | | | |
|---|---|---|---|
| 11/3 | Lakeville | 27 | M. Boucher |
| 11/3 | Waltham | 24 | M. Rines |
| 11/8 | Saugus | 56 | P. + F. Vale |
| 11/16 | Braintree | 70+ | S. Carey |
| 11/23 | Winchester | 80 | M. Rines |
| 11/23 | Falmouth | 55 | BBC (R. Stymeist) |
| 11/23 | Quabbin (G43-35) | 73 | S. Surner |
| 11/26 | Pembroke | 150 | W. Petersen |
| 11/28 | Belmont | 67 | R. Stymeist |
| 12/3 | M.V. | 40 | G. Daniels |
| 12/6 | Framingham | 70 | E. Taylor |
| 12/24 | Wareham | 58 | M. Sylvia |
| 12/27 | Carver | 66 | R. Finch |

Common Merganser
11/15 Wakefield 250+ P. + F. Vale
11/16 Lincoln 100 K. Calmer
11/23 Southboro 180 E. Taylor
11/23 Worcester 120+ M. Lynch#
11/26 Pembroke 60 W. Petersen
11/30 Lakeville 100 W. Petersen
12/3 W. Newbury 44 R. Heil
12/7 Quabbin (G37) 80 E. Nielsen#
12/8 Marlboro 100 B. Parker
Red-breasted Merganser
11/1 Rockport 155 J. Berry
11/8 Barnstable 422 M. Lynch#
11/8 Marshfield 300 G. d'Entremont#
11/10 Eastham (F.E.) 350 R. Stymeist#
11/23 Bourne 950 BBC (R. Stymeist)
11/23 Rockport (H.P.) 70 G. Levandoski#
11/28 W. Dennis 300 H. Miller
12/6 Westport 194 M. Boucher
Ruddy Duck
11/2 Camb. (F.P.) 64 BBC (R. Petersen)
11/2 Worcester 38 M. Lynch#
11/2 Pembroke 105 W. Petersen
11/3 Lakeville 119 M. Boucher
11/7 Waltham 52 R. Stymeist
11/13 Melrose 94 D. + I. Jewell
11/15 Southboro 210 M. Lynch#
11/15 Brookfield 87 M. Lynch#
11/15 Lynnfield 200+ P. + F. Vale
11/16 W. Newbury 200+ J. Kuivenhoven#
11/16 Peabody 150+ D. + I. Jewell
11/17 Brighton 92 H. Miller
11/17 Braintree 100 S. Carey
11/23 Winchester 68 M. Rines
11/24 Marlboro 250 B. Parker
12/27 Plymouth 16 R. Finch
**Black Vulture**
12/28 Marshfield 1 D. Ludlow#
Turkey Vulture
11/5 Wayland 3 N. Patterson
12/15 Westport 71 M. Boucher
Osprey
11/1-30 Wayland 1 N. Patterson
11/2 Worcester 1 M. Lynch#
11/2 Raynham 1 W. Petersen
11/3 Lakeville 2 M. Boucher
11/15 Nantucket 1 fide E. Ray
11/16 Lincoln 1 K. Calmer
11/16 Braintree 2 S. Carey
12/14 Braintree 1 S. Carey
Bald Eagle
11/10 Yarmouth 1 ad R. Stymeist
11/16 Lincoln 1 imm K. Calmer
11/16 Rowley 1 imm J. Berry
11/17-18 Waltham 1 imm M. Partridge
11/18 Groton 2 imm T. Pirro
11/23 Quabbin (G43-35) 4 S. Surner
11/25 Andover 1 A. Peal
12/5 Gardner 1 ad T. Pirro
12/7 Quabbin (G37) 4 E. Nielsen#
12/13 Lakeville 3 R. Finch
12/13 Haverhill 1 S. Grinley
12/18 Westborough 1 ad P. DeBruyn
12/26 Newbypt 1 ad J. McLaughlin
Northern Harrier
11/16 GMNWR 1 S. Perkins
11/16 Salisbury/P.I. 10 P. Roberts
11/30 E. Boston 1 BBC (R. Stymeist)
12/1-31 DWWS 11 max D. Furbish
12/6 Lexington 1 M. Rines#
12/9 Cumb. Farms 5 G. Levandoski
12/27 Barnstable (S.N.) 2 M. Partridge
Sharp-shinned Hawk
thr Reports of 1-2 indiv. from 36 locations
Cooper's Hawk
thr Reports of indiv. from 32 locations
Northern Goshawk
11/2 Bolton 1 S. Hennin#
11/6 Lexington 1 M. Rines
11/7 Gardner 1 ad T. Pirro
11/21 W. Newbury 1 imm R. Heil
11/27 Waltham 1 imm C. Ralph
11/27 P.I. 1 D. Chickering#
11/29 Salisbury 1 imm R. Heil
12/7 Petersham 1 SSBC (N. Swirka)
12/14 Quabbin (G40) 1 S. + L. Hennin
Red-shouldered Hawk
11/8 Holliston 1 J. Howe
11/21 Pembroke 1 G. Levandoski
11/28 Marstons Mills 1 imm M. Partridge
11/28 Gardner 1 ad T. Pirro
12/27 Westminster 1 G. + S. Bullock
Red-tailed Hawk
11/7 Lexington 6 M. Rines
11/16 Salisbury/P.I. 7 P. Roberts
12/14 DWWS 7 D. Furbish
Rough-legged Hawk
11/4 Raynham 1 M. Sylvia
11/15 P.I. 1 lt R. Heil
11/16 Rowley 1 lt J. Berry
11/16 Nantucket 1 fide E. Ray
11/22, 12/7 Wakefield 1 P. + F. Vale
12/14-31 DWWS 1 dk D. Furbish
12/27 Salisbury 1 M. Lynch#
Golden Eagle
11/18 Groton 1 imm T. Pirro
11/22 Quincy 1 b N. Smith
11/29 Quabbin (G40) 1 imm E. Neilsen#
12/7 Quabbin (G37) 1 imm E. Nielsen#
American Kestrel
11/4 Brockton 1 M. Rines
11/5 P.I. 2 W. Drew#
11/16 Salisbury 1 J. Kuivenhoven#
11/17 Newbury 1 R. Stymeist#
12/6 Belmont 1 C. Cook
12/28 Halifax 2 T. Raymond
12/28 Hudson 1 B. Parker
Merlin
11/1 M.V. 2 M. Pelikan
11/16 P.I. 2 J. Kuivenhoven#
11/21 Melrose 2 D. + I. Jewell
thr Reports of indiv. from 15 locations
Peregrine Falcon
11/3 Saugus 1 J. Berry
11/7 Waltham 1 R. Stymeist
11/8 Salem 1 L. Healy
11/10 GMNWR 1 imm S. Perkins#
11/16 Wareham 1 M. Sylvia
11/16 Rowley 1 imm J. Berry
11/16 Newbypt area 3 R. Heil
11/16 Lynn 1 ad R. Stymeist#
11/19 Edgartown 1 V. Laux
11/23 Nantucket 1 fide E. Ray
12/20 Boston 2 D. Larson#
12/26 Worcester 1 ad M. Lynch#
12/26 Marstons Mills 1 M. Partridge
12/29 Bridgewater 1 ad M. Sylvia
12/1-31 Revere 1 L. Pivacek
Ruffed Grouse
11/1 Middleton 4 J. MacDougall
11/16 Hardwick 1 D. Larson#
11/21 Weston 1 D. Larson
11/23 Quabbin (G43-35) 2 S. Surner
11/23 Barre 2 M. Lynch#

Ruffed Grouse (continued)

| | | | |
|---|---|---|---|
| 11/24 | Boylston | 1 | B. Parker |
| 11/30 | Saugus | 1 | D. + I. Jewell |
| 12/3 | Maynard | 1 | L. Nachtrab |
| 12/14 | Essex | 1 | D. Chickering |
| 12/14 | Quabbin (G40) | 2 | S. + L. Hennin |

Wild Turkey

| | | | |
|---|---|---|---|
| 11/13 | Lincoln | 1 | S. Perkins |
| 11/16 | Acton | 6 | M. Rines |
| 11/17 | Hanover | 4 | J. Hoar |
| 11/19 | Gardner | 1 | T. Pirro |
| 11/21 | W.Gloucester | 1 | J. MacDougall |
| 11/23 | Petersham | 12 | D. Larson# |
| 12/7 | Chelmsford | 1 m | D. Sandee |
| 12/14 | Stoneham | 1 | D. + I. Jewell |
| 12/17 | E. Middleboro | 1 | K. Anderson |
| 12/20 | Melrose | 1 | D. + I. Jewell |
| 12/26 | W. Newbury | 8 | R. Heil |
| 12/27 | Petersham | 15 | R. Lockwood |
| 12/28 | Marshfield | 7 | D. Ludlow# |

Northern Bobwhite

| | | | |
|---|---|---|---|
| 12/1 | Hyannis | 1 | S. + E. Miller |

Virginia Rail

| | | | |
|---|---|---|---|
| 11/15 | P'town | 1 | J. Trimble |
| 11/19 | Cotuit | 1 | R. Heil |
| 11/30 | Gay Head | 1 | M. Pelikan |
| 12/28 | DWWS | 1 | D. Ludlow# |

Sora

| | | | |
|---|---|---|---|
| 11/15 | Eastham (F.H.) | 1 | J. Trimble |
| 11/15 | P'town | 1 | J. Trimble |

American Coot

| | | | |
|---|---|---|---|
| 11/2 | Worcester | 12 | M. Lynch# |
| 11/7 | Waltham | 52 | R. Stymeist |
| 11/16 | GMNWR | 47 | S. Perkins |
| 11/17 | Braintree | 100+ | S. Carey |
| 11/23 | Acton | 30+ | J. Melithoniotes# |
| 11/24 | Marlboro | 20 | B. Parker |
| 11/27 | Plymouth | 15 | M. Faherty |
| 11/29 | Arlington | 159 | K. Hartel |
| 12/6 | Braintree | 50+ | S. Carey |
| 12/11 | Manomet | 30 | M. Faherty |

Black-bellied Plover

| | | | |
|---|---|---|---|
| 11/2 | Ipswich | 125 | J. Berry |
| 11/2 | GMNWR | 3 | S. Perkins# |
| 11/14 | Duxbury B. | 6 | D. Furbish |
| 11/15 | Wellfleet | 75 | M. Sylvia |
| 11/16 | P.I. | 20 | BBC (I. Giriunas) |
| 11/16 | Rowley | 6 | J. Berry |
| 11/16 | Salisbury | 3 | J. Kuivenhoven# |
| 11/17 | Plymouth | 36 | E. Neumuth |
| 11/23 | Bourne | 3 | BBC (R. Stymeist) |
| 11/23 | Katama | 40 | M. Pelikan |
| 12/3 | P.I. | 1 | W. Drew# |
| 12/7 | Sandwich | 3 | G. d'Entremont# |

American Golden-Plover

| | | | |
|---|---|---|---|
| 11/2 | Ipswich | 1 | J. Berry |
| 11/2 | GMNWR | 1 | S. Perkins# |
| 11/3 | Plymouth | 1 | E. Neumuth |
| 11/6 | P.I. | 2 | L. Healy |
| 11/8 | Edgartown | 4 | V. Laux# |

Semipalmated Plover

| | | | |
|---|---|---|---|
| 11/2 | Rowley | 2 | J. Berry |
| 11/3 | Duxbury | 3 | G. Levandoski |
| 11/3 | Eastham (F.E.) | 3 | M. Sylvia |

Killdeer

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 10 | S. Perkins# |
| 11/7 | Arlington Res. | 1 | C. Floyd |
| 11/15 | Wakefield | 1 | P. + F. Vale |
| 11/16 | Quincy | 1 | B. Zuzevich |
| 11/20 | Cumb. Farms | 4 | G. Levandoski |

American Oystercatcher

| | | | |
|---|---|---|---|
| 12/3 | M.V. | 5 | G. Daniels |

Greater Yellowlegs

| | | | |
|---|---|---|---|
| 11/1 | Rockport | 4 | P. + F. Vale |
| 11/2 | E. Boston | 41 | R. Stymeist |
| 11/2 | GMNWR | 10 | S. Perkins# |
| 11/3 | Waltham | 29 | M. Rines |
| 11/5 | P.I. | 18 | W. Drew# |
| 11/6 | Lakeville | 3 | K. Anderson |
| 11/9 | Eastham (F.E.) | 72 | M. Sylvia |
| 11/16 | Rowley | 3 | J. Berry |
| 11/16 | P.I. | 5 | R. Heil |
| 11/17 | Plymouth | 4 | E. Neumuth |
| 11/19 | Edgartown | 5 | M. Pelikan |
| 11/23 | Falmouth | 1 | BBC (R. Stymeist) |

Lesser Yellowlegs

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 4 | S. Perkins# |
| 11/2 | Katama | 1 | M. Pelikan |
| 11/7 | Arlington Res. | 1 | R. Stymeist |
| 11/16 | Newbypt | 1 | R. Heil |
| 12/21 | Orleans | 1 | R. Heil |

Spotted Sandpiper

| | | | |
|---|---|---|---|
| 11/2 | Chilmark | 1 | A. Keith |
| 11/3 | Waltham | 1 | M. Rines |
| 11/25 | Amesbury | 1 | D. + I. Jewell |

Whimbrel (phaeopus)

| | | | |
|---|---|---|---|
| **12/9-10** | Yarmouth | 1 | J. Potter |

Whimbrel (hudsonicus)

| | | | |
|---|---|---|---|
| **11/9** | Eastham (F.E.) | 1 | J. Trimble |
| **12/9-31** | Yarmouth | 1 | J. Potter + v.o. |

**Bar-tailed Godwit** (details) *

| | | | |
|---|---|---|---|
| 12/29-31 | Plymouth | 1 | J. Sones, J. Trimble |

Marbled Godwit

| | | | |
|---|---|---|---|
| 11/29 | Chatham | 3 | W. Bailey |
| **12/21** | Eastham | 1 | W. Petersen# |

Ruddy Turnstone

| | | | |
|---|---|---|---|
| 11/3 | Plymouth | 1 | E. Neumuth |
| 11/15 | Ipswich | 1 | BBC (S. Hedman) |
| 12/13 | Duxbury B. | 1 | F. Bouchard |
| 12/26 | Sandwich | 6 | R. Finch |
| 12/26 | N. Scituate | 7 | G. d'Entremont# |

Sanderling

| | | | |
|---|---|---|---|
| 11/3 | Plymouth | 418 | E. Neumuth |
| 11/15 | Wellfleet | 225 | M. Sylvia |
| 11/28 | P.I. | 121 | J. MacDougall |
| 11/30 | Revere | 280 | BBC (R. Stymeist) |
| 12/7 | Salisbury | 20 | J. Berry |

Least Sandpiper

| | | | |
|---|---|---|---|
| **12/10-30** | Yarmouth | 1 | M. Kaspryzyck + v.o. |

White-rumped Sandpiper

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 8 | S. Perkins# |
| 11/5 | Arlington Res. | 1 | C. Floyd |
| 11/16 | Rowley | 1 | J. Berry |
| 11/18 | P.I. | 2 | S. Perkins# |
| 11/27 | Cumb. Farms | 1 | M. Faherty |
| 11/28 | Edgartown | 1 | V. Laux |

Pectoral Sandpiper

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 10 | S. Perkins# |
| 11/5 | Arlington Res. | 2 | C. Floyd |
| 11/27 | Cumb. Farms | 1 | M. Faherty |

Purple Sandpiper

| | | | |
|---|---|---|---|
| 11/8 | Dennis (C.B.) | 1 | J. Trimble# |
| 11/13 | Salem | 12 | L. Healy |
| 11/25 | Salisbury | 30 | D. + I. Jewell |
| 11/28 | P.I. | 2 | S. Perkins# |
| 11/29 | N. Scituate | 60 | W. Petersen |
| 12/1 | Rockport (A.P.) | 25 | R. Heil |
| 12/3 | M.V. | 12 | G. Daniels |
| 12/7 | Manomet | 25+ | G. Levandoski |
| 12/9 | Sandwich B. | 2 | S. Miller |
| 12/26 | Hull | 200 | G. d'Entremont# |
| 12/28 | Marshfield | 16 | D. Ludlow# |

Dunlin

| | | | |
|---|---|---|---|
| 11/2 | GMNWR | 6 | S. Perkins# |

Dunlin (continued)
11/3 Plymouth 505 E. Neumuth
11/3 Duxbury 100+ G. Levandoski
11/12 P.I. 540 W. Drew#
11/14 Duxbury B. 300 D. Furbish
11/15 Wellfleet 295 M. Sylvia
11/30 Revere 230 BBC (R. Stymeist)
12/7 Westport 250 M. Boucher
12/30 Eastham 600 M. Lynch#
Short-billed Dowitcher
11/8 Edgartown 1 V. Laux#
Long-billed Dowitcher
11/2 Edgartown 1 V. Laux
11/6 P.I. 7 R. Heil
Common Snipe
11/2 Worcester 1 M. Lynch#
11/2 GMNWR 2 S. Perkins#
11/7 Arlington Res. 3 R. Stymeist
11/12 Newbury 2 S. Perkins#
11/13 Rochester 1 M. LaBossiere
11/17 Newburyport 1 M. Rines#
11/21 Dorchester 1 R. Donovan
11/26 Nantucket 1 fide E. Ray
11/26 Pembroke 2 W. Petersen
12/7 Cumb. Farms 1 R. Finch
12/15 S. Dart. (A.Pd) 1 LCES (J. Hill)
American Woodcock
11/1 Newton 2 D. Larson
11/13 Rockport (A.P.) 1 J. Soucy#
11/23 Falmouth 1 BBC (R. Stymeist)
11/30 Gay Head 2 M. Pelikan
12/21 S. Dartmouth 2 M. Boucher
Red-necked Phalarope
11/8 Dennis (C.B.) 1 B. Nikula
Red Phalarope
11/7 Rockport (A.P.) 5 R. Heil
11/8 Dennis (C.B.) 2+ B. Nikula#
phalarope species
11/9 Eastham (F.E.) 325 B. Nikula#
11/15 Eastham (F.E.) 70 B. Nikula
Pomarine Jaeger
11/1 Rockport (A.P.) 13 R. Heil
11/2 Eastham (F.E.) 2 R. Lockwood
11/7 Rockport (A.P.) 22 R. Heil
11/8 Barnstable 1 M. Lynch#
11/8 Rockport (A.P.) 7 S. Perkins#
11/9 Eastham (F.E.) 9 M. Sylvia
11/15 Eastham (F.E.) 10 B. Nikula
11/22 Rockport (A.P.) 5 lt R. Heil
11/27 Orleans 150+ B. Nikula
11/27 Eastham 80+ J. Askilsen
12/24 Eastham (F.E.) 5+ J. Trimble
Parasitic Jaeger
11/7 Rockport (A.P.) 1 R. Heil
11/8 Rockport (A.P.) 1 S. Perkins#
11/9 Eastham (F.E.) 1 B. Nikula#
11/15 Wellfleet 1 dead M. Sylvia
jaeger species
11/8 Dennis (C.B.) 4 B. Nikula
11/27 Eastham 25 J. Askilsen
12/24 Eastham (F.E.) 9 J. Trimble
**Great Skua** (details)*
11/1 Rockport (A.P.) 1 R. Heil
**Great Skua** (no details)*
11/27 Eastham 1 J. Askilsen
Laughing Gull
11/2 E. Boston 35 R. Stymeist
11/8 Rockport (A.P.) 2 S. Perkins#
11/15 Wellfleet 12 M. Sylvia
11/19 Edgartown 4 M. Pelikan
Little Gull
11/9 Eastham (F.E.) 1 imm B. Nikula#
12/3 Oak Bluffs 1 imm V. Laux#
12/13 Nantucket 2 E. Ray#
Black-headed Gull
11/2 E. Boston 1 ad R. Stymeist
11/12 P.I. 1 ad S. Perkins#
11/29 Chatham 1 W. Bailey
12/1 Essex 1 ad R. Heil
12/10, 28 Winthrop 1, 3 R. Cressman
12/21-28 Eastham 1 ad W. Petersen#
12/31 Plymouth 1 T. Mongeon
Bonaparte's Gull
11/4 Gardner 2 T. Pirro
11/7 Rockport (A.P.) 290 R. Heil
11/14 Duxbury B. 30 D. Furbish
11/16 Nahant 500 R. Stymeist#
11/27 Plymouth 50 M. Faherty
11/28 Newbypt 30 S. Perkins#
11/29 N. Scituate 75 W. Petersen
12/17 Nantucket 3000 E. Ray
Iceland Gull
11/2 Raynham 1 W. Petersen
11/9 Rockport (A.P.) 1 1W S. Perkins#
11/23 Acton 1 J. Melithoniotes
11/23 Newbypt 1 imm G. Levandoski#
11/28 E. Gloucester 2 J. Askilsen#
12/13 P'town 5 J. Hoye#
12/17 Nantucket 10 E. Ray
12/24 Lynn 1 J. Quigley
12/27 Salisbury 2 M. Lynch#
Lesser Black-backed Gull
11/2 Concord 1 J. Liller
11/3 Acton 1 ad B. Parker
11/8 Gloucester H. 2 ad C. T. Lee
11/19 Gardner 1 T. Pirro
11/27 Nantucket 1 3W C. Jackson
12/17 Nantucket 1 E. Ray
Glaucous Gull
11/2 Rockport 1 2W M. Sylvia#
11/20 Vineyard Haven 1 imm M. Pelikan
11/22 Oak Bluffs 1 V. Laux
11/23 Acton 2 imm J. Melithoniotes
11/23 P.I. 2 R. Donovan
11/28 P'town 1 S. Hennin#
12/21 Ipswich 1 imm J. Berry
12/27 E. Gloucester 1 1W J. Berry
12/28 Marshfield 1 D. Ludlow#
Black-legged Kittiwake
11/1 Rockport (A.P.) 1220 R. Heil
11/7 Rockport (A.P.) 840 R. Heil
11/8 Dennis (C.B.) 550 B. Nikula
11/8 Barnstable (S.N.) 300 V. Laux#
11/8 Rockport (A.P.) 522 S. Perkins#
11/9 Dennis (C.B.) 400+ A. Strauss
11/9 Rockport (A.P.) 369 M. Lynch#
11/10 Eastham (F.E.) 225 B. Nikula
11/22 Rockport (A.P.) 620 R. Heil
11/27 Orleans 250+ B. Nikula
11/29 Rockport (A.P.) 10+ R. Cressman
12/2 Eastham (F.E.) 30 A. Strauss
12/3 Oak Bluffs 25 V. Laux#
12/6 Truro 20 M. Lynch#
12/24 Eastham (F.E.) 8700+ J. Trimble
Roseate Tern
**11/2-3 Worcester** 1 ph S. Carroll#
11/15 Edgartown 1 V. Laux#
Common Tern
11/10 Eastham (F.E.) 18 R. Stymeist#
11/16 Edgartown 20 G. Daniels#
11/19 Barnstable 7 R. Heil
11/24 Edgartown 1 V. Laux
Forster's Tern
11/10 Eastham 1 R. Stymeist#

Dovekie

| | | | |
|---|---|---|---|
| 11/1 | Rockport (A.P.) | 12 | R. Heil |
| 11/9 | Eastham (F.E.) | 5 | B. Nikula# |
| 11/9 | Dennis (C.B.) | 1 | A. Strauss |
| 11/9 | Rockport (A.P.) | 1 | S. Perkins# |
| 11/10 | P'town | 1 | R. Stymeist |
| 12/2 | Eastham (F.E.) | 2 | A. Strauss |
| 12/6 | Truro | 1 | M. Lynch# |
| 12/20 | Rockport | 1 | J. Berry |
| 12/24 | Eastham (F.E.) | 2 | J. Trimble |

**Common Murre**

| | | | |
|---|---|---|---|
| 11/7 | Rockport (A.P.) | 1 | R. Heil |
| 11/21 | Rockport (A.P.) | 1 | J. Soucy |

Thick-billed Murre

| | | | |
|---|---|---|---|
| 11/21 | Rockport (A.P.) | 7 | J. Soucy# |
| 12/6 | Truro | 1 | M. Lynch# |
| 12/20 | Rockport (A.P.) | 1 | J. Berry |

Razorbill

| | | | |
|---|---|---|---|
| 11/1 | Rockport (A.P.) | 73 | R. Heil |
| 11/7 | Rockport (A.P.) | 133 | R. Heil |
| 11/9 | Rockport (A.P.) | 67 | S. Perkins# |
| 11/10 | Eastham (F.E.) | 38 | R. Stymeist# |
| 11/22 | Rockport (A.P.) | 61 | R. Heil |
| 11/26 | Rockport (H.P.) | 60 | J. Liller |
| 11/28 | P'town | 30 | S. Hennin# |
| 12/1 | Rockport (A.P.) | 54 | R. Heil |
| 12/2 | Wellfleet | 150-200 | A. Strauss |
| 12/3-9 | Oak Bluffs | 200 | V. Laux# |
| 12/6 | Sandwich | 14 | M. Lynch# |
| 12/7 | Truro | 20 | B. Nikula |
| 12/13 | P'town (R.P.) | 60 | J. Hoye# |
| 12/17 | Wellfleet | 250 | J. Trimble |
| 12/24 | Eastham (F.E.) | 125+ | J. Trimble |
| 12/29 | Rockport (A.P.) | 100 | J. Soucy |

Black Guillemot

| | | | |
|---|---|---|---|
| 11/1 | Rockport (A.P.) | 10 | P. + F. Vale |
| 11/16 | Nahant | 2 | R. Stymeist# |
| 11/19 | Gloucester | 23 | M. Rines |
| 11/29 | N. Scituate | 3 | W. Petersen |
| 11/30 | Rockport (A.P.) | 10+ | J. Brown# |
| 12/21 | Gloucester | 15 | S. + L. Hennin |
| 12/26 | N. Scituate | 1 | D. Brown |
| 12/27 | P'town | 1 | B. Nikula |

**Atlantic Puffin**

| | | | |
|---|---|---|---|
| 11/7 | Rockport (A.P.) | 1 | R. Heil |
| 12/24 | Eastham (F.E.) | 1 | J. Trimble |

large alcid species

| | | | |
|---|---|---|---|
| 11/9 | Eastham (F.E.) | 98 | B. Nikula# |
| 11/10 | Eastham (F.E.) | 45 | B. Nikula |
| 11/15 | Eastham (F.E.) | 35 | B. Nikula |
| 12/7 | Truro | 90+ | B. Nikula |
| 12/24 | Eastham (F.E.) | 2300+ | J. Trimble |

Barn Owl

| | | | |
|---|---|---|---|
| 11/30 | Gay Head | 3 | M. Pelikan |

Eastern Screech-Owl

| | | | |
|---|---|---|---|
| 11/9 | Gloucester | 1 | BBC (D. Peloquin) |
| 11/19 | Winchester | 1 | D. + I. Jewell |
| 11/21 | Oak Bluffs | 2 | M. Pelikan |
| 11/25 | Woburn | 1 | J. Davis |
| 11/30 | Mt.A | 2 | R. Stymeist# |
| 12/18 | Newbypt | 1 | K. Disney |
| 12/19 | DWWS | 1 | D. Furbish |
| 12/25 | Arlington | 2 | S. Cronenweth |

Great Horned Owl

| | | | |
|---|---|---|---|
| thr | DWWS | 2 | D. Furbish |
| 11/9 | Gloucester | 2 | BBC (D. Peloquin) |
| 11/15 | M.V. | 2 | R. Shriber# |
| 11/30 | Cumb. Farms | 2 | W. Petersen |
| 11/30 | E. Middleboro | 2 | K. Anderson |
| 12/9 | Bolton | 2 | S. + L. Hennin |
| 12/20 | S. Dartmouth | 2 | M. Boucher |

Snowy Owl

| | | | |
|---|---|---|---|
| 11/14 | Logan | 1 | N. Smith |
| 11/17 | Duxbury B. | 1 | F. Bygate |
| 11/26 | Nantucket | 1 | fide E. Ray |
| 11/27 | Salisbury | 1 | M. Doden |
| 11/28-12/31 | P.I. | 1 | W. Drew# |
| 11/28 | Gloucester | 1 | J. Askilsen# |
| 12/13 | Salisbury | 1 | D. Chickering |

Barred Owl

| | | | |
|---|---|---|---|
| 11/1 | Gardner | 1 | T. Pirro |
| 11/8 | Lexington | 1 | M. Rines |
| 11/11 | W. Boylston | 1 | R. Stymeist# |
| 11/30 | Petersham | 1 | M. Sylvia |
| 12/2 | Melrose | 1 | D. + I. Jewell |
| 12/7 | Clinton | 1 | fide B. Volkle |
| 12/28 | Royalston | 4 | M. Lynch# |

Long-eared Owl

| | | | |
|---|---|---|---|
| 12/17 | Nantucket | 1 | E. Ray |

Short-eared Owl

| | | | |
|---|---|---|---|
| 11/16 | Rowley | 1 | J. Berry |
| 11/28 | Gloucester | 1 | J. Askilsen# |
| 11/29 | Cumb. Farms | 2 | R. Finch |
| 12/1-31 | DWWS | 5 max | v.o. |
| 12/7 | S. Dart. (A.Pd) | 1 | LCES (J. Hill) |
| 12/22 | P.I. | 1 | V.+ J. Kowski |

Northern Saw-whet Owl

| | | | |
|---|---|---|---|
| 12/9 | MNWS | 1 | L. Healey |
| 12/28 | Royalston | 2 | M. Lynch# |

nightjar species

| | | | |
|---|---|---|---|
| **11/11** | Nantucket | 1 | G. Perkins |

Belted Kingfisher

| | | | |
|---|---|---|---|
| 11/23 | Bourne | 6 | BBC (R. Stymeist) |
| 11/24 | Marlboro | 2 | B. Parker |

Red-bellied Woodpecker

| | | | |
|---|---|---|---|
| 12/2-16 | W. Newbury | 4 | R. Heil |
| thr | Reports of 1-2 indiv. from 21 locations | | |

Yellow-bellied Sapsucker

| | | | |
|---|---|---|---|
| 11/16 | Petersham | 1 | D. Larson# |
| 11/20 | Winchester | 1 | M. Rines |
| 11/23 | S. Dartmouth | 1 | W. Gill |
| 11/28 | Falmouth | 1 | J. Eddy |

Hairy Woodpecker

| | | | |
|---|---|---|---|
| 11/17 | Melrose | 2 | D. + I. Jewell |
| 11/23 | Bourne | 5 | BBC (R. Stymeist) |
| 11/30 | Worc. (BMB) | 3 | J. Liller |
| 12/20 | Pepperell | 2 | D. Maynes |

Northern Flicker

| | | | |
|---|---|---|---|
| 11/15 | Braintree | 6 | G. d'Entremont |
| 11/21 | W. Newbury | 5 | R. Heil |
| 11/30 | Holliston | 2 | F. + M. Howes |
| 11/30 | Worc. (BMB) | 5 | J. Liller |
| 11/30 | Newbury | 4 | R. Heil |

Pileated Woodpecker

| | | | |
|---|---|---|---|
| 11/6 | Phillipston | 1 | D. Small |
| 11/7 | Gardner | 1 | T. Pirro |
| 11/9 | Gloucester | 2 | BBC (D. Peloquin) |
| 11/15 | Wellesley | 1 | J. Titus |
| 11/18 | Maynard | 1 | L. Nachtrab |
| 11/23 | Barre | 1 | M. Lynch# |
| 11/23 | Quabbin (G43-35) | 2 | S. Surner |
| 11/29 | Petersham | 1 | J. Hoye# |
| 12/16 | Groton | 1 | T. Pirro |
| 12/24 | Westford | 1 | D. + S. Selesky |
| 12/24 | Boxboro | 1 | F. Roth |

## FLYCATCHERS THROUGH GROSBEAKS

Five Western Kingbirds were reported from Cape Cod and Nantucket, three more than during the same period in 1996. Horned Larks, Snow Buntings, and Lapland Longspurs were found in large flocks from a wide area in open areas such as fields, farms, airports and beaches. Carolina Wrens have recovered from their recent decline in population; good numbers were tallied in traditional area in the southern part of the state, with scattered reports from the rest of the area showing the expanding range.

This season produced an array of rarities, including a **Sedge Wren**, which was present for nearly a month at Eastern Point in Gloucester and was successfully located for the Christmas Bird Count. A **Townsend's Solitaire** was reported from Truro, and **Bohemian Waxwings** were seen in Holliston and Provincetown. The bird of the season was the **Hermit Warbler** found in the Manuel F. Correllus State Forest in Edgartown on Martha's Vineyard. This is just the third confirmed record for this species in Massachusetts, the first being a spring bird at Mt. Auburn Cemetery in Cambridge in 1964, and the second from Amherst in October of 1995. This bird was associated with a small flock of Golden-crowned Kinglets in a large stand of spruces, and many birders were able to add this vagrant to their state and life lists. R. H. S.

Eastern Phoebe
- 11/1 Winchester 1 M. Rines
- 12/6 Gardner 1 T. Pirro
- 12/18 Falmouth 1 B. Good

Western Kingbird
- 11/9 Orleans 2 M. Sylvia#
- 11/10 Eastham 2 R. Stymeist#
- 11/26 Nantucket 1 fide E. Ray

Horned Lark
- 11/2 Bolton 55 S. Hennin#
- 11/3 Plymouth 17 E. Neumuth
- 11/14 Duxbury B. 50 D. Furbish
- 11/15 P.I. 50 R. Heil
- 11/16 Salisbury 25 J. Kuivenhoven#
- 11/16 Winthrop 200 P. + F. Vale
- 11/17 Newbury 50 H. D'Entremont#
- 11/20 Cumb. Farms 100+ G. Levandoski
- 11/23 Worc. Airport 22 M. Lynch#
- 12/7 Charlton 100 S. + L. Hennin
- 12/31 Hanscom AFB 25 R. Lockwood

Tree Swallow
- 11/8 Eastham 1 M. Lynch#
- 11/23 Chilmark 10 V. Laux
- 12/7 Westport 25 M. Sylvia

Barn Swallow
- 11/8 Eastham (F.E.) 1 J. Trimble#

American Crow
- 11/8 Framingham 2600+ E. Taylor
- 11/27 Woburn 2500+ D. + I. Jewell
- 11/29 Framingham 10000+ E. Taylor

Fish Crow
- 11/1 Mt.A. 2 R. Stymeist
- 11/1 Marshfield 1 G. d'Entremont
- 12/27 Gloucester (E.P.) 2 J. Soucy#

Common Raven
- 11/7 Gardner 1 T. Pirro
- 11/16 Athol 2 R. Lockwood#
- 11/23 Barre 3 M. Lynch#
- 11/23 Quabbin (G43-35) 3 S. Surner
- 12/7 Quabbin (G37) 4 E. Nielsen#
- 12/7 Petersham 1 SSBC (N. Swirka)
- 12/14 Quabbin (G40) 1 S. + L. Hennin
- 12/14 Worcester 1 M. Lynch#

Red-breasted Nuthatch
- 11/11, 12/6 Bedford 26, 19 M. Rines
- 11/19 Gay Head 3 M. Pelikan
- 11/23 Barre 19 M. Lynch#
- 11/30 Marion 3 R. Finch

Brown Creeper
- 11/11 Bedford 6 M. Rines
- 11/23 Barre 8 M. Lynch#
- 12/16 W. Newbury 4 R. Heil
- 12/27 Wakefield 2 P. + F. Vale
- 12/27 Mattapoisett 2 D. Lounsbury

Carolina Wren
- 11/4 Bridgewater 5 M. Rines
- 11/10 Eastham 6 R. Stymeist#
- 11/19 Barnstable 9 R. Heil
- 11/21 Lexington 2 K. Dorsey
- 11/23 Bourne 22 BBC (R. Stymeist)
- 11/23 Falmouth 12 BBC (R. Stymeist)
- 11/28 Rockport (H.P.) 2 S. Perkins#
- 12/11 Lincoln 3 M. Rines
- 12/13 Westport 4 R. Finch
- 12/18 Weston 3 M. Rines
- 12/18 Natick 2 E. Taylor
- 12/1-31 Ipswich 2 J. Berry

House Wren
- 11/10 N. Dartmouth 1 M. Boucher
- 11/30 Gay Head 2 M. Pelikan

Winter Wren
- 11/19 Barnstable 2 R. Heil
- 11/23 Falmouth 2 BBC (R. Stymeist)
- 11/23 Bourne 3 BBC (R. Stymeist)
- 11/24 Medford 2 M. Rines
- thr Reports of indiv. from 8 locations

**Sedge Wren**
- 11/28-12/21 E. Gloucester 1 S. Perkins + v.o.

Marsh Wren
- 11/6 Newbypt 2 R. Heil
- 11/19 Cotuit 2 R. Heil
- 11/19 Squibnocket 1 M. Pelikan
- 11/21 Dorchester 1 R. Donovan
- 11/28 Wareham 1 M. Sylvia
- 12/3 Marion 1 M. Sylvia
- 12/8 Chilmark 1 V. Laux#
- 12/15 S. Dart. (A.Pd) 1 LCES (J. Hill)

Golden-crowned Kinglet
- 11/3 Lakeville 8 M. Boucher
- 11/19 Barnstable 22 R. Heil
- 11/23 Bourne 18 BBC (R. Stymeist)
- 11/23 Falmouth 10 BBC (R. Stymeist)
- 11/23 Barre 12 M. Lynch#
- 11/25 Newbypt 14 R. Heil
- 12/12 Reading 6 D. Williams
- 12/13 Westport 7 R. Finch
- 12/21 M.V. 12 M. Pelikan
- 12/27 Mattapoisett 7 D. Lounsbury

Ruby-crowned Kinglet
- 11/1 Marshfield 2 G. d'Entremont#
- 11/1 Winchester 1 M. Rines
- 11/2 WBWS 1 J. Hoye#
- 11/2 Truro 1 J. Hoye#
- 11/3 Lakeville 3 M. Boucher
- 11/10 Wellfleet 1 R. Stymeist#
- 11/14 Mattapoisett 1 F. Smith
- 11/19 Barnstable 1 R. Heil
- 11/23 Bourne 2 BBC (R. Stymeist)

Ruby-crowned Kinglet (continued)

| | | | |
|---|---|---|---|
| 11/23 | Falmouth | 2 | BBC (R. Stymeist) |
| 11/23 | Malden | 1 | P. + F. Vale |
| 12/1 | Arlington | 1 | M. Rines |

Eastern Bluebird

| | | | |
|---|---|---|---|
| 11/2 | E. Middleboro | 8 | K. Anderson |
| 11/7 | Lincoln | 7 | S. Perkins# |
| 11/16 | GMNWR | 30 | K. McLoud |
| 11/18 | Rowley | 7 | D. Alexander |
| 11/18 | Groton | 10 | T. Pirro |
| 11/22 | DWWS | 9 | D. Furbish |
| 11/26 | Hopkinton | 10 | M. Rines |
| 11/30 | Concord (NAC) | 19 | E. Salmela# |
| 11/30 | Gay Head | 18 | M. Pelikan |
| 12/2-17 | W. Newbury | 10 | R. Heil |
| 12/5 | Mattapoisett | 11 | F. Smith |
| 12/13 | Halifax | 11 | R. Finch |
| 12/28 | E. Bridgewater | 7 | E. Giles |

**Townsend's Solitaire** (details) *

| | | | |
|---|---|---|---|
| 11/2 | Truro | 1 | J. Hoye# |

Hermit Thrush

| | | | |
|---|---|---|---|
| 11/3 | Medford | 1 | M. Rines |
| 11/10 | Eastham | 2 | H. D'Entremont |
| 11/10 | Wellfleet | 3 | R. Stymeist# |
| 11/14 | Mattapoisett | 1 | F. Smith |
| 11/16 | Camb. (F.P.) | 1 | J. Hoye# |
| 11/17 | Melrose | 1 | D. + I. Jewell |
| 11/19 | Barnstable | 5 | R. Heil |
| 11/23 | Falmouth | 3 | BBC (R. Stymeist) |
| 11/23 | Bourne | 8 | BBC (R. Stymeist) |
| 11/26 | MNWS | 2 | L. Healy |
| 12/5 | Lexington | 1 | K. Dorsey |
| 12/6 | Truro | 1 | M. Lynch# |
| 12/28 | Marlboro | 1 | B. Parker |

American Robin

| | | | |
|---|---|---|---|
| 11/29 | Boston (Fens) | 500 | K. Hudson |
| 11/thr | N. Dartmouth | 225+ | M. Boucher |
| 12/7 | Halifax | 200+ | R. Finch |

Gray Catbird

| | | | |
|---|---|---|---|
| 11/2 | Worcester | 1 | M. Lynch# |
| 11/18 | P.I. | 1 | D. + I. Jewell |
| 11/23 | Bourne | 1 | BBC (R. Stymeist) |
| 11/23 | Chilmark | 4 | M. Pelikan |
| 12/6 | Belmont | 1 | C. Cook |
| 12/13 | Westport | 3 | R. Finch |
| 12/28 | Halifax | 1 | T. Raymond |

Brown Thrasher

| | | | |
|---|---|---|---|
| 11/19 | Nantucket | 1 | fide E. Ray |
| 11/23 | Bourne | 1 | BBC (R. Stymeist) |

American Pipit

| | | | |
|---|---|---|---|
| 11/2 | Rowley | 2 | J. Berry |
| 11/2 | Bolton | 2 | S. Hennin# |
| 11/16 | Salisbury | 7 | J. Kuivenhoven# |
| 11/25 | P.I. | 5 | R. Heil |

**Bohemian Waxwing**

| | | | |
|---|---|---|---|
| 11/18 | Holliston | 1 | B. Dackowski |
| 12/20 | P'town | 3 | R. Heil |

Cedar Waxwing

| | | | |
|---|---|---|---|
| 11/15 | Petersham | 125+ | R. Finch |
| 11/18 | Holliston | 200 | B. Dackowski |
| 11/19 | Sherborn | 200+ | A. Bliss |
| 11/20 | Wayland | 100 | N. Patterson |
| 11/21 | Lexington | 200+ | K. Dorsey |
| 11/21 | Athol | 200 | D. Small |
| 11/23 | Petersham | 255 | M. Sylvia |
| 11/28 | Gardner | 350 | T. Pirro |
| 11/30 | Barre-Hardwick | 525+ | M. Lynch# |
| 11/30 | HRWMA | 200 | T. Pirro |
| 12/16 | W. Newbury | 135 | R. Heil |
| 12/20 | Orleans | 100-150 | K. McGinley |

Northern Shrike

| | | | |
|---|---|---|---|
| 11/1-30 | Wayland | 1-2 | N. Patterson |
| 11/12-12/31 | P.I. | 1 ad | v.o. |
| 11/16 | Royalston | 1 imm | R. Lockwood# |
| 11/16 | W. Roxbury | 1 | J. Hoye# |
| 11/26 | Nantucket | 1 | fide E. Ray |
| 11/28 | GMNWR | 1 | J. Melithoniotes |
| 12/17 | Chilmark | 1 | V. Laux# |
| 12/19 | Salisbury | 1 | D. Chickering |

Blue-headed Vireo

| | | | |
|---|---|---|---|
| **12/7** | Chilmark | 1 | S. Whiting# |

Red-eyed Vireo

| | | | |
|---|---|---|---|
| **11/19** | Melrose | 1 | D. + I. Jewell |

Orange-crowned Warbler

| | | | |
|---|---|---|---|
| 11/2 | Chilmark | 1 | A. Keith |
| 11/10 | Eastham | 1 | R. Stymeist# |
| 11/18 | Gay Head | 2 | S. Yurkus# |
| 11/19 | Barnstable | 1 | R. Heil |
| 11/25 | Fairhaven | 1 | M. Boucher |
| 11/28 | Nantucket | 1 | C. Jackson |
| 12/16 | Salem | 1 | L. Healey |
| 12/24 | Orleans | 2 | J. Talin |
| 12/30 | Hyannis (CBC) | 1 | B. Nikula |

Yellow Warbler (details)

| | | | |
|---|---|---|---|
| **11/19** | Barnstable | 1 f | R. Heil |

Yellow-rumped Warbler

| | | | |
|---|---|---|---|
| 11/1 | P.I. | 230 | R. Heil |
| 11/2 | E. Boston | 30 | R. Stymeist |
| 11/2 | Worcester | 12 | M. Lynch# |
| 11/16 | Billerica | 3 | M. Rines |
| 11/17 | Salisbury | 4 | M. Rines |
| 11/17 | Rowley | 6 | M. Rines# |
| 11/28 | Rockport (H.P.) | 12 | S. Perkins# |
| 11/28 | P.I. | 3 | T. Maloney# |
| 11/30 | Gay Head | 500 | M. Pelikan |
| 12/6 | Truro | 40 | M. Lynch# |
| 12/21 | S. Dartmouth | 26 | M. Boucher |
| 12/27 | Barnstable (S.N.) | 25 | M. Partridge |

**Hermit Warbler** (details) *

| | | | |
|---|---|---|---|
| 12/21-31 | Edgartown | 1 | M. Pelikan + v.o. |

Pine Warbler

| | | | |
|---|---|---|---|
| 11/12 | Wenham | 1 | N. Nash |
| 11/28 | Marstons Mills | 1 | M. Partridge |

Prairie Warbler

| | | | |
|---|---|---|---|
| **11/10** | Wellfleet | 1 | R. Stymeist# |

Palm Warbler

| | | | |
|---|---|---|---|
| 11/1 | Marshfield | 1 | G. d'Entremont# |
| 11/2 | Gloucester | 1 | R. Cressman |
| 11/2 | Truro | 1 | J. Hoye# |
| 11/2 | Rockport | 1 | J. Berry |
| 11/10 | Pepperell | 1 | M. Rines |
| 11/15 | Wellfleet | 1 | M. Sylvia |
| 11/19 | Gay Head | 5 | M. Pelikan |
| 11/21 | Nahant | 1 | L. Healy |
| 11/26 | Nantucket | 4 | fide E. Ray |
| 11/29 | Marstons Mills | 1 | M. Partridge |
| 12/10 | Boston | 1 | R. Lewis |
| 12/18 | Dennis | 1 | S. + E. Miller |
| 12/28 | Pembroke | 1 | D. Ludlow |

Ovenbird

| | | | |
|---|---|---|---|
| **12/31** | Athol | 1 | D. Small |

Common Yellowthroat

| | | | |
|---|---|---|---|
| 11/19 | Gay Head | 1 | M. Pelikan |
| 11/28 | Truro | 1 | S. Hennin# |
| 11/30 | Rockport | 1 | M. Rines |
| 12/6 | Westport | 1 | M. Boucher |

Yellow-breasted Chat

| | | | |
|---|---|---|---|
| 11/9 | S. Boston | 1 | R. Donovan |
| 11/21 | Dorchester | 1 | R. Donovan |
| 12/8 | Chilmark | 1 | V. Laux# |

Rose-breasted Grosbeak

| | | | |
|---|---|---|---|
| **12/7** | Halifax | 1 | R. Finch |

**Painted Bunting**

| | | | |
|---|---|---|---|
| 12/25-31 | Seekonk | 1 m | R. Leonard |

Dickcissel
11/1 Marshfield 1 imm G. d'Entremont#
Eastern Towhee
11/16 Ipswich 1 BBC (I. Giriunas)
11/19 Gay Head 2 M. Pelikan
11/28 Falmouth 1 S. Hennin#
11/30 Worc. (BMB) 1 J. Liller
11/30 Nahant 1 f S. Cronenweth
12/13 Westport 1 R. Finch
12/31 W. Bridgewater 1 D. Furbish
American Tree Sparrow
11/12 Newton 30 H. Miller
11/16 W. Roxbury 60 J. Hoye#
11/23 Marshfield 130 D. Clapp
11/24 Cumb. Farms 20+ G. Levandoski
11/25 Newbypt/P.I. 52 R. Heil
12/13 Brookfield 60 M. Lynch#
12/17 Cumb. Farms 50 M. Faherty
Chipping Sparrow
11/3 Lakeville 6 M. Boucher
11/19 Gay Head 5 M. Pelikan
11/19 Barnstable 3 R. Heil
Field Sparrow
11/1 Marshfield 6 G. d'Entremont#
11/17 Newbury 6 M. Rines#
11/19 Barnstable 9 R. Heil
11/20 Edgartown 5 M. Pelikan
11/26 Holliston 5 M. Rines
12/7 Manomet 3 G. Levandoski#
12/16 Groton 2 T. Pirro
12/26 Newbury 2 R. Heil
Vesper Sparrow
11/3 Cumberland f 2 M. Boucher
**Lark Sparrow**
12/29 Wellfleet 1 M. Lynch#
Savannah Sparrow
11/4 Bridgewater 20 M. Rines
11/14 Katama 10 M. Pelikan
11/30 Cumb. Farms 12 W. Petersen#
12/13 P.I. 2 D. Chickering
12/28 Halifax 10 T. Raymond
"Ipswich" Sparrow
11/12 Katama 1 M. Pelikan
11/14 Duxbury B. 2 D. Furbish
11/15 P.I. 2 J. Hoye#
11/15 Wellfleet 1 M. Sylvia
11/16 Salisbury 1 R. Heil
11/29 Cumb. Farms 1 W. Petersen#
11/30 E. Boston 1 BBC (R. Stymeist)
12/11 P.I. 1 J. Stein#
Grasshopper Sparrow
11/15 P.I. 1 R. Heil
sharp-tailed sparrow species
11/15 P'town 4 J. Trimble
Saltmarsh Sharp-tailed Sparrow
12/16 Eastham (F.H.) 2 J. Somes#
Nelson's Sharp-tailed Sparrow
11/6 Newbypt 4 R. Heil
11/15 P.I. 1 R. Heil
Seaside Sparrow
11/15 P'town 4 J. Trimble
12/16 Eastham (F.H.) 5 J. Somes#
12/28 Newbypt 1 R. Heil
Fox Sparrow
11/1-26 Reports of 1-2indiv. from 30 loc.
11/29 Wakefield 2 fide MAS
12/7 Salisbury 1 J. Berry
12/9 Melrose 1 D. + I. Jewell
12/10-31 Kingston 1 D. Ludlow
Lincoln's Sparrow
11/1 Newton 2 D. Larson
**12/21** Chatham 1 P. Trimble#
Swamp Sparrow
11/18 P.I. 5 S. Perkins#
11/23 Marshfield 18 D. Clapp
11/28 GMNWR 3 J. Melithoniotes
11/30 E. Boston 7 BBC (R. Stymeist)
12/6 Lincoln 2 M. Rines
12/27 Malden 2 P. + F. Vale
White-crowned Sparrow
11/4 Bridgewater 1 M. Rines
11/10 Newton 3 L. Ferraresso
11/23 Dartmouth 1 M. Boucher
Dark-eyed Junco
11/1 Mt.A. 102 R. Stymeist
11/23 Marshfield 105 D. Clapp
**"Oregon" Junco**
11/1 Marshfield 1 G. d'Entremont#
11/14-12/31 Maynard 1 L. Nachtrab
11/15-16 Bedford 1 C. Roth
11/16 Hardwick 1 D. Larson#
12/3 W. Newbury 1 R. Heil
12/20 Wareham 1 W. Petersen
Lapland Longspur
11/1 Eastham (F.E.) 2 J. Eddy
11/15 P.I. 15 R. Heil
11/15 Salisbury 2 J. Hoye#
11/30 Newbury 30 R. Heil
11/30 Cumb. Farms 12 W. Petersen
12/9 Edgartown 1 M. Pelikan#
12/31 Hanscom AFB 1 R. Lockwood
Snow Bunting
11/8 Edgartown 250 V. Laux#
11/10 P'town 162 R. Stymeist#
11/10 Rockport (H.P.) 75 C. Cook
11/12 P.I. 800 S. Perkins#
11/14 Duxbury B. 50 D. Furbish
11/14 Boston (Logan) 700 N. Smith
11/16 Quincy 90 B. Zuzevich
11/16 Bolton 100 S. + L. Hennin
11/17 Salisbury 60 M. Rines#
11/17 Nantucket 200 fide E. Ray
11/23 Quabbin (G43-35) 125 S. Surner
11/24 Katama 250 M. Pelikan
11/29 Chatham 220 W. Bailey
12/7 Cumb. Farms 150+ R. Finch
Red-winged Blackbird
11/1 Hardwick 80+ M. Lynch#
12/14 DWWS 16 D. Furbish
12/28 Halifax 22 T. Raymond
12/31 W. Bridgewater 41 D. Furbish
Eastern Meadowlark
11/2 E. Boston 4 R. Stymeist
11/11 DWWS 53 D. Furbish
11/16 Rowley 2 J. Berry
11/23 Chilmark 6 M. Pelikan
11/30 Cumb. Farms 1 W. Petersen
11/30 Newbury 2 R. Heil
12/7 S. Dart. (A.Pd) 3 LCES (J. Hill)
Rusty Blackbird
11/10 Lincoln 5 M. Rines
11/30 Cumb. Farms 20 W. Petersen
12/25 Bolton 1 S. + L. Hennin
12/26 Maynard 1 L. Nachtrab
12/27 Wakefield 25 D. + I. Jewell
12/28 DWWS 1 D. Ludlow#
Common Grackle
11/3 Cumb. Farms 100 K. Anderson
12/26 Maynard 1 L. Nachtrab
Brown-headed Cowbird
11/15 P.I. 5 J. Hoye#
12/21 N. Dartmouth 47 M. Boucher
12/27 Petersham 2 R. Lockwood
12/29 DWWS 5 D. Furbish

Baltimore Oriole
11/2 Truro 2 J. Hoye#
11/9 Burlington 1 M. Rines
11/10 Wellfleet 1 R. Stymeist#
11/10 Nantucket 1 fide E. Ray
11/11 Dracut 1 R. LeTender
11/18 Gay Head 1 V. Laux#
11/23 Watertown 1 L. Cocca
11/30 Chilmark 1 T. Rivers
12/6 Belmont 3 C. Cook
12/20 Arlington 2 f G. Washburn

**Bullock's Oriole**
12/22-31 Wakefield 1 m vid P. Stark#

Pine Grosbeak
11/2 Camb. (F.P.) 4 BBC (R. Petersen)
11/19-12/31 Gardner 10 max T. Pirro
11/23 Falmouth 6 BBC (R. Stymeist)
11/23 Barre 2 M. Lynch#
12/27 Petersham 12 R. Lockwood
12/27 Royalston 32 F. Bouchard

Purple Finch
11/1 Middleton 7 J. MacDougall
11/5 Lexington 5 M. Rines
11/12 E. Middleboro 1 K. Anderson
11/16 Athol 1 R. Lockwood#
11/16 Petersham 1 R. Lockwood#
11/16 Ipswich 2 J. Berry
11/16 Hardwick 6 D. Larson#
11/18 Nantucket 3 fide E. Ray
11/28 GMNWR 2 J. Melithoniotes
11/30 Gay Head 1 M. Pelikan
12/7 Mattapoisett 1 F. Smith
12/13 W. Newbury 2 D. Chickering

Red Crossbill
11/16 Salisbury 1 J. Kuivenhoven#
11/17 Middleton 2 J. MacDougall
11/29 Quabbin (G40) 6 E. Neilsen#
11/29 Pepperell 3 M. Resch
12/16 W. Newbury 1 m R. Heil
12/31 Salisbury 1 f R. Stymeist

White-winged Crossbill
thr Salisbury 43 max v.o.
11/1-16 Rockport (H.P.) 1-2 v.o.
11/9 Orleans 2 M. Sylvia
11/11 Petersham 26 R. Stymeist#
11/11 Lexington 10 C. Cook
11/14 Wayland 1 H. Norwood
11/15 Wenham 2 N. Nash
11/18 Gay Head 160 V. Laux
11/25 Newbypt 10 R. Heil
11/26 Nantucket 14 fide E. Ray
11/29 Pepperell 3+ M. Resch
12/6 Gardner 3 T. Pirro
12/7 P.I. 28 BBC (G. Leet)
12/16 W. Newbury 5 R. Heil
12/19 Marion 21 M. Sylvia

Common Redpoll
thr Reports of 1-20 ind. from 34 locations
11/5-12/8 Groton 125 max T. Pirro
11/5-26 Lexington 19 max M. Rines
11/15 P'town 23 B. Nikula
11/20 Worcester 60 F. McMenemy
11/23 Harvard 100 R. Lockwood
11/23 Barre 60 M. Lynch#
11/23 Quabbin (G43-35) 761 S. Surner
11/25 Newbypt 75 R. Heil
11/26 Nantucket 87 fide E. Ray
11/30 Gay Head 30 M. Pelikan
11/30 Worc. (BMB) 26 J. Liller
11/30 HRWMA 100 T. Pirro
12/6 Salisbury 50 D. Chickering
12/7 Quabbin (G37) 40 E. Nielsen#
12/7 Charlton 33 S. + L. Hennin
12/13 Brookfields 200 M. Lynch#
12/13 Petersham 100+ B. + K. Principe
12/14 Quabbin (G40) 42 S. + L. Hennin
12/16 Wellfleet 35 J. Trimble#
12/21 Ipswich 90 J. Berry
12/29 Truro 25 S. + L. Hennin

Pine Siskin
11/11 Melrose 3 R. Heil
11/11 Hardwick 4 R. Stymeist#
11/11 Petersham 10 R. Stymeist#
11/17 P.I. 3 R. Stymeist#
11/17 Winchester 20 M. Rosenthal
11/18 Gay Head 6 V. Laux
11/18 Nantucket 3 fide E. Ray
11/23 Quabbin (G43-35) 6 S. Surner
11/27 Plymouth 5 M. Faherty
11/28 E. Gloucester 4 S. Perkins#
11/28 Rockport (H.P.) 5 S. Perkins#
11/30 Gay Head 6 V. Laux#
12/15 Wareham 3 M. Sylvia
12/31 Upton 20 P. DeBruyn
thr Reports of indiv. from 20 locations

Evening Grosbeak
11/10 Nantucket 4 fide E. Ray
11/13 N. Middleboro 10 W. Taylor
11/15 Hardwick 32 R. Finch
11/16 Royalston 58 R. Lockwood#
11/16 Rockport 14 R. Finch
11/16 Andover 5 M. Timko
11/16 Upton 8 P. DeBruyn
11/20 Wayland 25 H. Norwood
11/23 Quabbin (G43-35) 8 S. Surner
11/23 Barre 10 M. Lynch#
11/28 Gardner 60 T. Pirro
11/28 HRWMA 40 T. Pirro
11/29 Chatham 1 W. Bailey
12/14 Quabbin (G40) 7 S. + L. Hennin
12/14 Petersham 40+ L. Ferraresso#
12/14 Ashburnham 25 J. Paluzzi

## 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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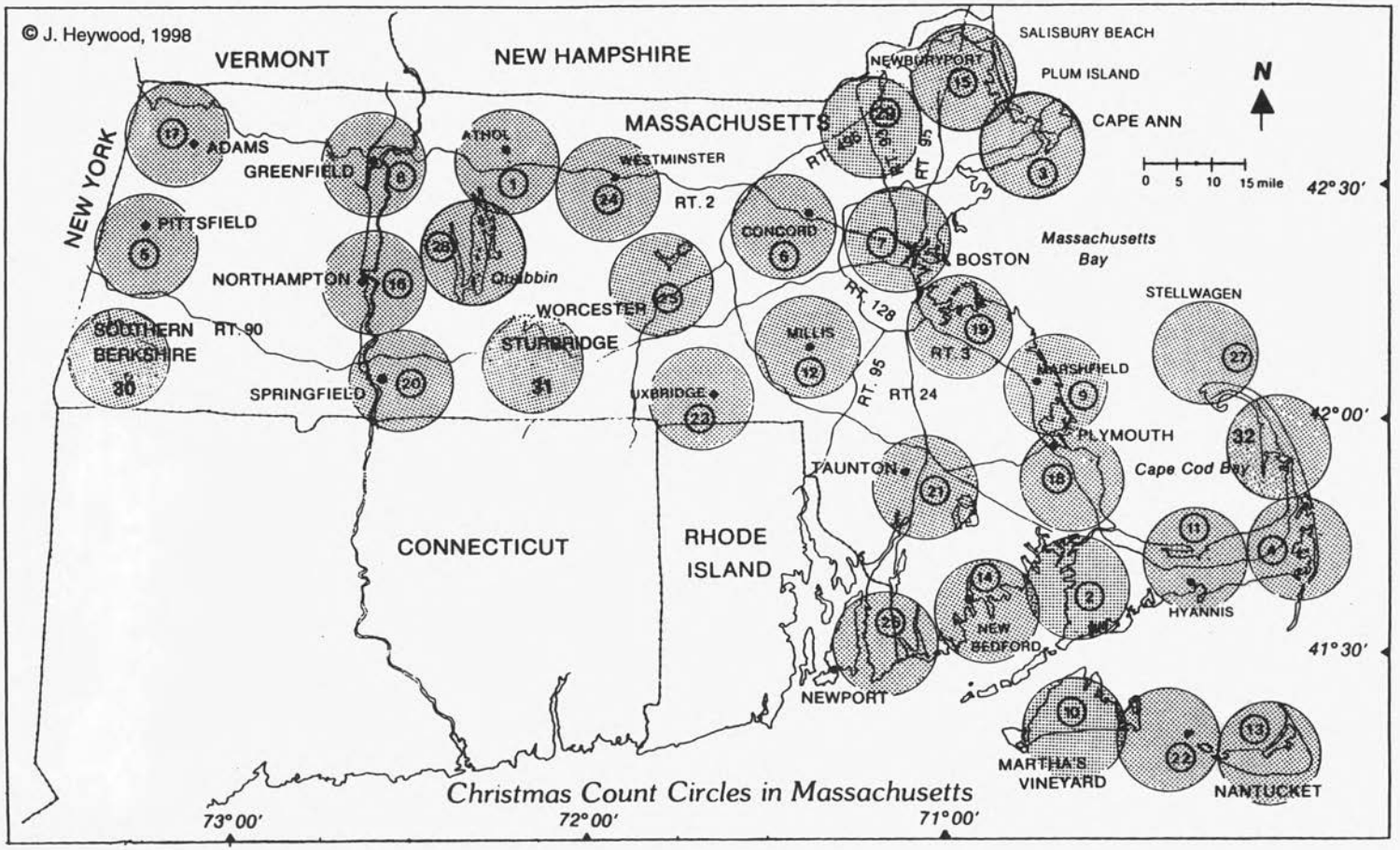
**Addenda:** The following records were received too late for inclusion in the appropriate issue.

| | | | | |
|---|---|---|---|---|
| Spotted Sandpiper | 3/21/97 | Sudbury | 1 | S. Arena |
| Franklin's Gull | 10/26/97 | W. Bridgewater | 1 | S. Arena |
| Laughing Gull | 10/26/97 | W. Bridgewater | 1 | S. Arena |

## 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 |
| alt | alternate |
| b | banded |
| br | breeding |
| dk | dark (phase) |
| f | female |
| fl | fledged |
| imm | immature |
| ind | individuals |
| juv | juvenile |
| loc | location |
| lt | light (phase) |
| m | male |
| max | maximum |
| migr | migrating |
| n | nesting |
| ph | photographed |
| pl | plumage |
| pr | pair |
| S | summer (1S = first summer) |
| thr | throughout |
| vid | videotaped |
| v.o. | various observers |
| W | winter (2W = second winter) |
| w/ | with |
| yg | young |
| # | additional observers |
| A.A. | Arnold Arboretum, Boston |
| A.P. | Andrews Point, Rockport |
| A.Pd | Allens Pond, S. Dartmouth |
| Arl. | Arlington |
| B. | Beach |
| B.I. | Belle Isle, E. Boston |
| B.R. | Bass Rocks, Gloucester |
| Cambr. | Cambridge |
| C.B. | Crane Beach, Ipswich |
| Corp. B. | Corporation Beach, Dennis |
| C.P. | Crooked Pond, Boxford |
| Cumb. Farms | Cumberland Farms, Middleboro-Halifax |
| E.P. | Eastern Point, Gloucester |
| F.E. | First Encounter Beach, Eastham |
| F.H. | Fort Hill, Eastham |
| F.M. | Fowl Meadow, Milton |
| F.P. | Fresh Pond, Cambridge |
| F.Pk | Franklin Park, Boston |
| G40 | Gate 40, Quabbin |
| G45 | Gate 45, Quabbin |
| H.P. | Halibut Point, Rockport |
| H. | Harbor |
| I. | Island |
| L. | Ledge |
| M.V. | Martha's Vineyard |
| Mt.A. | Mount Auburn Cemetery, Cambridge |
| Nant. | Nantucket |
| Newbypt | Newburyport |
| P.I. | Plum Island |
| Pd | Pond |
| P'town | Provincetown |
| Quab. | Quabbin Reservoir |
| Res. | Reservoir |
| R.P. | Race Point, Provincetown |
| S.B. | South Beach, Chatham |
| S. Dart. | South Dartmouth |
| S.N. | Sandy Neck, Barnstable |
| Stellw. | Stellwagen Bank |
| Worc. | Worcester |
| BBC | Brookline Bird Club |
| BMB | Broad Meadow Brook, Worcester |
| CCBC | Cape Cod Bird Club |
| DFWS | Drumlin Farm Wildlife Sanctuary |
| DWWS | Daniel Webster Wildlife Sanctuary |
| EMHW | Eastern Massachusetts Hawk Watch |
| GMNWR | Great Meadows National Wildlife Refuge |
| HRWMA | High Ridge Wildlife Management Area, Gardner-Westminster |
| IRWS | Ipswich River Wildlife Sanctuary |
| LBS | Local Bird Survey |
| LCES | Lloyd Center for Environmental Studies |
| MARC | Massachusetts Avian Records Committee |
| MAS | Massachusetts Audubon Society |
| MBO | Manomet Observatory |
| MBWMA | Martin Burns Wildlife Management Area, Newbury |
| MDFW | MA Division of Fisheries and Wildlife |
| MNWS | Marblehead Neck Wildlife Sanctuary |
| MSSF | Myles Standish State Forest |
| NAC | Nine Acre Corner, Concord |
| NBC | Needham Bird Club |
| NEHW | New England Hawk Watch |
| ONWR | Oxbow National Wildlife Refuge |
| SRV | Sudbury River Valley |
| SSBC | South Shore Bird Club |
| TASL | Take A Second Look Harbor Census |
| USFWS | US Fish and Wildlife Service |
| WBWS | Wellfleet Bay Wildlife Sanctuary |
| WMWS | Wachusett Meadow Wildlife Sanctuary |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VERMONT
NEW HAMPSHIRE
MASSACHUSETTS
NEW YORK
CONNECTICUT
RHODE ISLAND
ADAMS
GREENFIELD
ATHOL
WESTMINSTER
PITTSFIELD
NORTHAMPTON
Quabbin
WORCESTER
SOUTHERN BERKSHIRE
RT. 90
STURBRIDGE
SPRINGFIELD
UXBRIDGE
CONCORD
MILLIS
RT. 2
RT. 95
RT. 128
RT. 3
RT. 24
BOSTON
Massachusetts Bay
SALISBURY BEACH
NEWBURYPORT
PLUM ISLAND
CAPE ANN
N
0 5 10 15 mile
42° 30'
42° 00'
41° 30'
STELLWAGEN
MARSHFIELD
PLYMOUTH
Cape Cod Bay
TAUNTON
NEW BEDFORD
HYANNIS
NEWPORT
MARTHA'S VINEYARD
NANTUCKET
73° 00'
72° 00'
71° 00'
Christmas Count Circles in Massachusetts

## CHRISTMAS BIRD COUNT 12/19/97-1/4/98

Compiled by Marjorie W. Rines and Robert H. Stymeist

The ninety-eighth annual Christmas Bird Count (CBC), sponsored by the National Audubon Society, was held from December 19, 1997, to January 4, 1998. Eastern Massachusetts and a portion of Rhode Island contain twenty-six count areas (see map). Results from these counts (except Westminster and Tuckernuck, which were not received) are summarized in the following pages. The count totaled 191 species, plus "Blue" Goose, "Ipswich" Sparrow, and "Oregon" Junco. Two species were found during the CBC period but not on count day: a Laughing Gull in Greater Boston and a Red-headed Woodpecker in Sturbridge. Whooper Swans were counted on the Newburyport CBC, but are not recognized as a "wild" species. On Nantucket, a "Yellow-shafted/Red-shafted" Northern Flicker was noted.

Tufted Ducks and Black Vultures are noteworthy any time, but two of each were reported this CBC period. Shorebirds made an astonishing showing, with Lesser Yellowlegs, Whimbrel, Marbled Godwit, and a show-stopping Bar-tailed Godwit being counted. The gull show on Nantucket is always impressive, and this year was no exception, with seven Little Gulls, nearly 10,000 Bonaparte's Gulls, and a well-documented Thayer's Gull. A Hermit Warbler, discovered on Martha's Vineyard on December 21, obligingly showed up for CBC counters. Winter finches made a very respectable showing.

In the following table birds identified only by species type, such as "scaup species," are not shown. Therefore the totals of individuals supplied by the compilers may not add up with the numbers on the charts.

We wish to thank all of the compilers who contributed their time to prepare the results for this summary: **Lou Wagner**, Andover; **Dave Small**, Athol; **Richard Harlow**, Buzzards Bay; **Dick McHale**, Cape Ann; **Blair Nikula**, Cape Cod; **Richard Walton**, Concord; **Robert Stymeist**, Greater Boston; **Warren Harrington**, Marshfield; **Robert Culbert**, Martha's Vineyard; **Peter Trimble**, Mid-Cape Cod; **Elissa Landre**, Millis; **Edith Andrews**, Nantucket; **Michael Boucher**, New Bedford; **Tom Young**, Newburyport; **Trevor Lloyd-Evans**, Plymouth; **Scott Surner**, Quabbin; **Glenn d'Entremont** and **Patty O'Neil**, Quincy; **Simon Perkins**, Stellwagen; **Mark Lynch**, Sturbridge; **Steve Arena**, Taunton-Middleboro; **Tom Lipski**, Truro; **Richard Hildreth**, Uxbridge; **Fran McMenemy**, Worcester; **Dave Emerson**, Newport, RI/Westport, MA.

*Map on facing page*: Each Christmas Count Circle was located by the latitude and longitude (in degrees and minutes) of its center. Athol (1), Buzzards Bay (2), Cape Ann (3), Cape Cod (4), Concord (6), Greater Boston (7), Marshfield (9), Martha's Vineyard (10), Mid-Cape Cod (11), Millis (12), Nantucket (13), New Bedford (14), Newburyport (15), Plymouth (18), Quincy (19), Taunton-Middleboro (21), Uxbridge, MA/RI (23), Worcester (25), Newport County, RI/Westport, MA (26), Stellwagen Bank (27), Quabbin (28), Andover (29), Sturbridge (31), Truro (32).

| species | And. | Athol | B. B. | C. Ann | C. Cod | Conc. | Gr. Bos. | Marsh. | M. V. | Mid-C. | Millis |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Red-throated Loon | 0 | 0 | 5 | 6 | 37 | 0 | 19 | 9 | 158 | 5 | 0 |
| Common Loon | 0 | 2 | 48 | 42 | 45 | 0 | 4 | 25 | 324 | 69 | 0 |
| Pacific/Arctic Loon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pied-billed Grebe | 0 | 0 | 17 | 0 | 25 | 0 | 3 | 0 | 4 | 5 | 0 |
| Horned Grebe | 0 | 0 | 117 | 43 | 71 | 0 | 43 | 3 | 57 | 70 | 0 |
| Red-necked Grebe | 0 | 0 | 1 | 15 | 7 | 0 | 38 | 26 | 10 | 4 | 0 |
| Eared Grebe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Northern Gannet | 0 | 0 | 0 | 17 | 357 | 0 | 0 | 5 | 105 | 14 | 0 |
| Great Cormorant | 9 | 0 | 8 | 185 | 22 | 0 | 11 | 2 | 102 | 27 | 0 |
| Double-cr. Cormorant | 1 | 0 | 3 | 1 | 5 | 1 | 14 | 1 | 12 | 0 | 0 |
| American Bittern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Great Blue Heron | 2 | 1 | 29 | 0 | 104 | 21 | 30 | 24 | 40 | 45 | 4 |
| Black-cr. Night-Heron | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 |
| Mute Swan | 0 | 0 | 51 | 22 | 14 | 2 | 20 | 21 | 217 | 84 | 20 |
| Snow Goose | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 15 | 0 | 1 |
| "Blue" Goose | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Brant | 0 | 0 | 26 | 0 | 2068 | 0 | 991 | 335 | 20 | 190 | 0 |
| Canada Goose | 1849 | 138 | 803 | 1282 | 2790 | 1876 | 3688 | 1061 | 2150 | 993 | 2127 |
| Wood Duck | 0 | 1 | 1 | 0 | 0 | 3 | 8 | 6 | 4 | 1 | 0 |
| Green-winged Teal | 0 | 0 | 2 | 0 | 22 | 9 | 16 | 4 | 32 | 24 | 0 |
| American Black Duck | 18 | 60 | 529 | 353 | 2965 | 225 | 802 | 1361 | 1100 | 2453 | 94 |
| Mallard | 645 | 12 | 417 | 765 | 291 | 855 | 2513 | 421 | 950 | 605 | 671 |
| Northern Pintail | 0 | 0 | 1 | 0 | 1 | 5 | 2 | 1 | 5 | 9 | 0 |
| Northern Shoveler | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 |
| Gadwall | 0 | 0 | 14 | 40 | 9 | 0 | 17 | 24 | 12 | 168 | 0 |
| Eurasian Wigeon | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| American Wigeon | 0 | 0 | 7 | 0 | 104 | 0 | 16 | 0 | 18 | 147 | 0 |
| Canvasback | 0 | 0 | 64 | 0 | 59 | 0 | 0 | 0 | 21 | 37 | 0 |
| Redhead | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 |
| Ring-necked Duck | 0 | 0 | 123 | 8 | 1 | 2 | 28 | 118 | 31 | 133 | 8 |
| Tufted Duck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Greater Scaup | 0 | 0 | 1600 | 1 | 89 | 0 | 41 | 0 | 220 | 8 | 0 |
| Lesser Scaup | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 12 | 32 | 0 |
| Common Eider | 0 | 0 | 3516 | 1257 | 5050 | 0 | 3904 | 4239 | 23500 | 3637 | 0 |
| King Eider | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harlequin Duck | 0 | 0 | 0 | 40 | 2 | 0 | 1 | 2 | 54 | 2 | 0 |
| Oldsquaw | 0 | 0 | 92 | 105 | 127 | 0 | 3 | 106 | 220 | 752 | 0 |
| Black Scoter | 0 | 0 | 4 | 2 | 82 | 0 | 2 | 3 | 3950 | 7 | 0 |
| Surf Scoter | 0 | 0 | 59 | 19 | 86 | 0 | 18 | 4 | 52 | 59 | 0 |
| White-winged Scoter | 0 | 0 | 570 | 86 | 384 | 0 | 326 | 199 | 575 | 117 | 0 |
| Common Goldeneye | 173 | 5 | 683 | 324 | 392 | 41 | 318 | 134 | 975 | 242 | 5 |
| Barrow's Goldeneye | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| Bufflehead | 0 | 0 | 1078 | 375 | 1286 | 1 | 620 | 342 | 1700 | 1191 | 2 |
| Hooded Merganser | 6 | 2 | 238 | 0 | 132 | 24 | 136 | 12 | 150 | 87 | 13 |
| Common Merganser | 29 | 106 | 89 | 5 | 152 | 90 | 182 | 10 | 6 | 105 | 51 |
| Red-br. Merganser | 0 | 0 | 707 | 334 | 1057 | 0 | 414 | 259 | 890 | 301 | 0 |
| Ruddy Duck | 0 | 0 | 72 | 1 | 35 | 2 | 118 | 0 | 49 | 0 | 4 |
| Black Vulture | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Turkey Vulture | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bald Eagle | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| Northern Harrier | 0 | 0 | 5 | 4 | 14 | 0 | 4 | 15 | 9 | 29 | 0 |
| Sharp-shinned Hawk | 3 | 1 | 7 | 6 | 8 | 11 | 7 | 6 | 9 | 5 | 5 |
| Cooper's Hawk | 1 | 2 | 10 | 1 | 7 | 8 | 5 | 5 | 7 | 5 | 2 |

| species | And. | Athol | B. B. | C. Ann | C. Cod | Conc. | Gr. Bos. | Marsh. | M. V. | Mid-C. | Millis |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Northern Goshawk | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Red-shouldered Hawk | 1 | 1 | 0 | 1 | 0 | 5 | 0 | 4 | 0 | 0 | 0 |
| Red-tailed Hawk | 16 | 12 | 10 | 31 | 18 | 107 | 95 | 29 | 53 | 12 | 44 |
| Rough-legged Hawk | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Golden Eagle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| American Kestrel | 1 | 0 | 4 | 0 | 1 | 1 | 9 | 0 | 0 | 1 | 0 |
| Merlin | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 2 | 0 | 0 |
| Peregrine Falcon | 1 | 0 | 0 | 1 | 0 | 0 | 6 | 1 | 2 | 2 | 0 |
| Ring-necked Pheasant | 4 | 3 | 8 | 1 | 0 | 10 | 6 | 1 | 2 | 1 | 8 |
| Ruffed Grouse | 0 | 2 | 1 | 1 | 1 | 5 | 0 | 1 | 1 | 0 | 15 |
| Wild Turkey | 4 | 180 | 0 | 0 | 0 | 9 | 1 | 7 | 46 | 8 | 100 |
| Northern Bobwhite | 0 | 0 | 26 | 0 | 6 | 10 | 0 | 1 | 6 | 16 | 0 |
| Clapper Rail | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Virginia Rail | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 2 | 0 |
| Sora | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| American Coot | 0 | 0 | 12 | 0 | 45 | 0 | 175 | 1 | 15 | 2 | 7 |
| American Oystercatcher | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Black-bellied Plover | 0 | 0 | 5 | 0 | 7 | 0 | 1 | 0 | 37 | 0 | 0 |
| Killdeer | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Greater Yellowlegs | 0 | 0 | 1 | 0 | 10 | 0 | 2 | 0 | 2 | 4 | 0 |
| Lesser Yellowlegs | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Whimbrel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Bar-tailed Godwit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marbled Godwit | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ruddy Turnstone | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| Sanderling | 0 | 0 | 38 | 14 | 1273 | 0 | 448 | 25 | 390 | 394 | 0 |
| Least Sandpiper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Purple Sandpiper | 0 | 0 | 0 | 48 | 0 | 0 | 57 | 54 | 5 | 0 | 0 |
| Dunlin | 0 | 0 | 8 | 109 | 3761 | 0 | 247 | 880 | 95 | 221 | 0 |
| Common Snipe | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 2 | 6 | 2 | 0 |
| American Woodcock | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 1 | 0 |
| Pomarine Jaeger | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Little Gull | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black-headed Gull | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 |
| Bonaparte's Gull | 0 | 0 | 46 | 345 | 133 | 0 | 36 | 115 | 88 | 34 | 0 |
| Ring-billed Gull | 106 | 0 | 328 | 569 | 175 | 495 | 3622 | 254 | 214 | 466 | 259 |
| Herring Gull | 376 | 76 | 872 | 3665 | 2072 | 2251 | 6429 | 5395 | 1630 | 1701 | 315 |
| Iceland Gull | 0 | 0 | 0 | 3 | 4 | 0 | 2 | 0 | 2 | 0 | 0 |
| Thayer's Gull | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lesser Bla.-bac. Gull | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Glaucous Gull | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Great Bla.-bac. Gull | 50 | 6 | 92 | 1036 | 1382 | 131 | 582 | 2227 | 360 | 470 | 19 |
| Black-legged Kittiwake | 0 | 0 | 0 | 16 | 320 | 0 | 0 | 0 | 32 | 40 | 0 |
| Dovekie | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Common Murre | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Thick-billed Murre | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Razorbill | 0 | 0 | 0 | 36 | 481 | 0 | 0 | 9 | 8 | 80 | 0 |
| Black Guillemot | 0 | 0 | 1 | 28 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| Rock Dove | 581 | 988 | 407 | 1643 | 129 | 502 | 4110 | 506 | 215 | 63 | 668 |
| Mourning Dove | 367 | 311 | 237 | 233 | 182 | 949 | 449 | 185 | 350 | 135 | 482 |
| Barn Owl | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Eastern Screech-Owl | 0 | 0 | 16 | 10 | 1 | 14 | 32 | 14 | 2 | 3 | 2 |
| Great Horned Owl | 0 | 4 | 13 | 5 | 9 | 15 | 6 | 5 | 0 | 3 | 0 |

| species | And. | Athol | B. B. | C. Ann | C. Cod | Conc. | Gr. Bos. | Marsh. | M. V. | Mid-C. | Millis |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Snowy Owl | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Barred Owl | 0 | 6 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 1 |
| Long-eared Owl | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Short-eared Owl | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 |
| North. Saw-whet Owl | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Belted Kingfisher | 3 | 0 | 21 | 9 | 21 | 10 | 11 | 8 | 13 | 14 | 7 |
| Red-bel. Woodpecker | 3 | 0 | 3 | 3 | 7 | 31 | 10 | 5 | 24 | 1 | 11 |
| Yellow-bel. Sapsucker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Downy Woodpecker | 67 | 119 | 73 | 66 | 66 | 323 | 185 | 62 | 160 | 22 | 175 |
| Hairy Woodpecker | 11 | 39 | 9 | 7 | 10 | 86 | 19 | 3 | 20 | 4 | 21 |
| Northern Flicker | 8 | 1 | 44 | 15 | 46 | 10 | 30 | 37 | 74 | 24 | 31 |
| Pileated Woodpecker | 0 | 7 | 0 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| Eastern Phoebe | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Horned Lark | 0 | 6 | 6 | 79 | 6 | 0 | 27 | 12 | 3 | 2 | 0 |
| Tree Swallow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| Blue Jay | 340 | 1251 | 168 | 217 | 175 | 1531 | 418 | 371 | 285 | 47 | 709 |
| American Crow | 2493 | 397 | 2355 | 774 | 442 | 2962 | 5638 | 930 | 1520 | 825 | 1602 |
| Fish Crow | 3 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 |
| Common Raven | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black-cap. Chickadee | 375 | 1913 | 1104 | 686 | 1237 | 2425 | 1220 | 658 | 950 | 790 | 1237 |
| Tufted Titmouse | 152 | 190 | 200 | 169 | 126 | 1164 | 279 | 198 | 0 | 50 | 593 |
| Red-br. Nuthatch | 11 | 80 | 9 | 6 | 14 | 80 | 7 | 5 | 31 | 6 | 12 |
| White-br. Nuthatch | 72 | 183 | 71 | 68 | 68 | 540 | 198 | 87 | 100 | 27 | 285 |
| Brown Creeper | 4 | 16 | 9 | 7 | 1 | 38 | 5 | 4 | 8 | 1 | 17 |
| Carolina Wren | 3 | 0 | 156 | 3 | 80 | 40 | 13 | 43 | 94 | 33 | 34 |
| Winter Wren | 0 | 0 | 12 | 0 | 1 | 3 | 3 | 0 | 5 | 5 | 2 |
| Sedge Wren | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marsh Wren | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 |
| Golden-cr. Kinglet | 12 | 38 | 118 | 19 | 55 | 39 | 3 | 28 | 94 | 20 | 13 |
| Ruby-crowned Kinglet | 0 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 |
| Eastern Bluebird | 0 | 0 | 4 | 6 | 3 | 49 | 0 | 18 | 28 | 6 | 44 |
| Hermit Thrush | 0 | 0 | 24 | 0 | 26 | 2 | 2 | 2 | 7 | 2 | 0 |
| American Robin | 55 | 41 | 225 | 107 | 381 | 125 | 5204 | 627 | 95 | 195 | 330 |
| Gray Catbird | 0 | 0 | 10 | 1 | 9 | 0 | 1 | 1 | 13 | 9 | 0 |
| Northern Mockingbird | 32 | 9 | 71 | 68 | 78 | 160 | 194 | 63 | 73 | 33 | 59 |
| Brown Thrasher | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 1 | 0 |
| American Pipit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 |
| Bohemian Waxwing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cedar Waxwing | 58 | 929 | 13 | 85 | 165 | 120 | 3 | 56 | 82 | 295 | 96 |
| Northern Shrike | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 0 |
| European Starling | 2153 | 2075 | 1486 | 12704 | 551 | 5431 | 103450 | 1056 | 1500 | 1051 | 2475 |
| White-eyed Vireo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orange-cro. Warbler | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Yellow-rumped Warbler | 0 | 0 | 172 | 134 | 414 | 0 | 47 | 206 | 970 | 209 | 0 |
| Hermit Warbler | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Pine Warbler | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Palm Warbler | 0 | 0 | 13 | 0 | 5 | 0 | 4 | 1 | 21 | 0 | 0 |
| Black-and-white Warbler | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Common Yellowthroat | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Yellow-breasted Chat | 0 | 0 | 2 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Northern Cardinal | 43 | 45 | 334 | 98 | 322 | 404 | 216 | 134 | 210 | 180 | 130 |
| Dickcissel | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Eastern Towhee | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 8 | 2 | 0 |

98th CHRISTMAS BIRD COUNT, December 19, 1997-January 4, 1998

| species | And. | Athol | B. B. | C. Ann | C. Cod | Conc. | Gr. Bos. | Marsh. | M. V. | Mid-C. | Millis |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Amer. Tree Sparrow | 99 | 169 | 76 | 134 | 46 | 427 | 309 | 182 | 61 | 35 | 184 |
| Chipping Sparrow | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Field Sparrow | 0 | 0 | 81 | 0 | 13 | 6 | 1 | 14 | 65 | 1 | 8 |
| Vesper Sparrow | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lark Sparrow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Savannah Sparrow | 0 | 0 | 81 | 0 | 12 | 3 | 11 | 15 | 14 | 24 | 0 |
| "Ipswich" Sparrow | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 10 | 0 |
| Sharp-tailed Sparrow sp. | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 |
| Seaside Sparrow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fox Sparrow | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 6 | 0 | 4 |
| Song Sparrow | 12 | 6 | 455 | 74 | 265 | 170 | 235 | 124 | 240 | 138 | 64 |
| Lincoln's Sparrow | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Swamp Sparrow | 0 | 0 | 42 | 4 | 63 | 11 | 13 | 24 | 18 | 18 | 2 |
| White-thr. Sparrow | 2 | 7 | 306 | 23 | 245 | 134 | 174 | 93 | 330 | 204 | 36 |
| White-cr. Sparrow | 2 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark-eyed Junco | 176 | 332 | 306 | 122 | 29 | 1152 | 920 | 249 | 143 | 33 | 601 |
| "Oregon" Junco | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lapland Longspur | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snow Bunting | 0 | 20 | 0 | 53 | 68 | 0 | 31 | 127 | 15 | 22 | 0 |
| Red-winged Blackbird | 0 | 0 | 7 | 0 | 22 | 0 | 5 | 61 | 20 | 118 | 1 |
| Eastern Meadowlark | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 20 | 58 | 20 | 0 |
| Rusty Blackbird | 0 | 0 | 0 | 0 | 1 | 46 | 0 | 18 | 0 | 0 | 0 |
| Common Grackle | 1 | 0 | 2 | 2 | 0 | 6 | 14 | 1 | 2 | 0 | 0 |
| Br.-headed Cowbird | 0 | 1 | 2 | 0 | 0 | 4 | 60 | 0 | 0 | 0 | 0 |
| Baltimore Oriole | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| Pine Grosbeak | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Purple Finch | 6 | 0 | 0 | 3 | 0 | 11 | 0 | 1 | 0 | 0 | 4 |
| House Finch | 59 | 181 | 225 | 132 | 392 | 625 | 507 | 244 | 175 | 197 | 310 |
| Red Crossbill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 |
| White-winged Crossbill | 0 | 0 | 0 | 0 | 0 | 11 | 8 | 0 | 17 | 7 | 0 |
| Common Redpoll | 3 | 343 | 6 | 98 | 165 | 5 | 5 | 0 | 0 | 0 | 3 |
| Pine Siskin | 0 | 73 | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| American Goldfinch | 375 | 314 | 388 | 193 | 582 | 1212 | 474 | 238 | 120 | 94 | 647 |
| Evening Grosbeak | 0 | 426 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| House Sparrow | 362 | 532 | 634 | 1326 | 563 | 1313 | 2073 | 718 | 470 | 408 | 1026 |
| Number of species | 54 | 60 | 112 | 91 | 123 | 82 | 114 | 106 | 125 | 110 | 62 |
| Total birds | 11239 | 11746 | 22506 | 30642 | 34756 | 28414 | 152748 | 25267 | 49578 | 20509 | 15768 |

| | | |
|---|---|---|
| And. = | Andover CBC | December 27, 1997 |
| Athol = | Athol CBC | December 20, 1997 |
| B. B. = | Buzzards Bay CBC | December 20, 1997 |
| C. Ann = | Cape Ann CBC | December 21, 1997 |
| C. Cod = | Cape Cod CBC | December 21, 1997 |
| Conc. = | Concord CBC | December 27, 1997 |
| Gr. Bos. = | Greater Boston CBC | December 21, 1997 |
| Marsh. = | Marshfield CBC | December 28, 1997 |
| M. V. = | Martha's Vineyard CBC | December 28, 1997 |
| Mid-C. = | Mid-Cape Cod CBC | December 30, 1997 |
| Millis = | Millis CBC | December 20, 1997 |

| species | Nant. | N.B. | Nbpt. | Ply. | Quab. | Quin. | Stell. | Sturb. | Tau/Mb. | Truro | Uxbr. | Worc. | Nwp,RI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTLO | 108 | 2 | 5 | 16 | 0 | 4 | 11 | 0 | 0 | 17 | 0 | 0 | 59 |
| COLO | 136 | 17 | 58 | 113 | 10 | 9 | 94 | 0 | 0 | 20 | 0 | 5 | 76 |
| AR/PALO | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PBGR | 13 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| HOGR | 30 | 39 | 41 | 57 | 195 | 34 | 4 | 0 | 0 | 8 | 0 | 0 | 377 |
| RNGR | 63 | 0 | 5 | 89 | 1 | 49 | 28 | 0 | 0 | 2 | 0 | 0 | 16 |
| EAGR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NOGA | 41 | 0 | 5 | 4 | 0 | 0 | 620 | 0 | 0 | 1028 | 0 | 0 | 0 |
| GRCO | 66 | 16 | 13 | 29 | 1 | 83 | 44 | 0 | 0 | 43 | 0 | 0 | 359 |
| DCCO | 1 | 2 | 1 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| AMBI | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GBHE | 37 | 18 | 7 | 13 | 0 | 10 | 3 | 3 | 5 | 9 | 4 | 5 | 36 |
| BCNH | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MUSW | 12 | 85 | 13 | 120 | 0 | 27 | 0 | 0 | 45 | 0 | 0 | 7 | 157 |
| SNGO | 7 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BLGO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BRAN | 312 | 54 | 2 | 152 | 0 | 566 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CAGO | 818 | 796 | 3628 | 1124 | 0 | 1658 | 2 | 1840 | 3080 | 52 | 765 | 749 | 5695 |
| WODU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 5 | 1 | 2 |
| GWTE | 9 | 12 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 54 |
| ABDU | 485 | 523 | 3555 | 1006 | 79 | 912 | 310 | 145 | 333 | 205 | 228 | 140 | 886 |
| MALL | 1064 | 333 | 1017 | 462 | 96 | 614 | 9 | 1259 | 552 | 34 | 589 | 1641 | 864 |
| NOPI | 6 | 0 | 17 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 18 |
| NSHO | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GADW | 4 | 26 | 13 | 16 | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 34 |
| EUWI | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMWI | 21 | 0 | 0 | 37 | 0 | 1 | 0 | 0 | 17 | 0 | 0 | 1 | 50 |
| CANV | 169 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 103 | 0 | 0 | 0 | 265 |
| REDH | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RNDU | 79 | 0 | 1 | 45 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 47 | 0 |
| TUDU | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| GRSC | 767 | 22 | 3 | 45 | 1 | 246 | 1 | 0 | 3 | 0 | 0 | 8 | 796 |
| LESC | 34 | 141 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| COEI | 11694 | 453 | 1055 | 2473 | 0 | 5425 | 952 | 0 | 0 | 91 | 0 | 0 | 1612 |
| KIEI | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HADU | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| OLDS | 89046 | 42 | 193 | 141 | 0 | 191 | 13 | 0 | 0 | 15 | 0 | 0 | 0 |
| BLSC | 1404 | 1 | 11 | 69 | 0 | 78 | 3 | 0 | 0 | 8 | 0 | 1 | 234 |
| SUSC | 111 | 21 | 2 | 532 | 0 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 54 |
| WWSC | 814 | 62 | 200 | 647 | 0 | 580 | 1120 | 0 | 0 | 192 | 0 | 0 | 107 |
| COGO | 1310 | 559 | 349 | 317 | 35 | 350 | 62 | 2 | 229 | 132 | 0 | 97 | 786 |
| BAGO | 3 | 1 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| BUFF | 1380 | 500 | 265 | 222 | 0 | 471 | 75 | 1 | 89 | 42 | 0 | 0 | 456 |
| HOME | 47 | 0 | 11 | 129 | 17 | 27 | 0 | 27 | 30 | 6 | 14 | 88 | 54 |
| COME | 40 | 13 | 57 | 233 | 539 | 29 | 24 | 10 | 480 | 23 | 38 | 169 | 482 |
| RBME | 1114 | 151 | 405 | 415 | 0 | 406 | 2480 | 0 | 19 | 88 | 5 | 3 | 608 |
| RUDU | 8 | 0 | 0 | 14 | 0 | 1 | 0 | 1 | 9 | 0 | 0 | 9 | 283 |
| BLVU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TUVU | 0 | 8 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| BAEA | 0 | 0 | 5 | 1 | 28 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 |
| NOHA | 30 | 1 | 9 | 3 | 0 | 1 | 3 | 0 | 2 | 9 | 0 | 0 | 14 |
| SSHA | 11 | 4 | 9 | 4 | 7 | 3 | 2 | 5 | 3 | 4 | 3 | 6 | 17 |
| COHA | 7 | 2 | 5 | 2 | 4 | 4 | 1 | 7 | 3 | 1 | 1 | 7 | 9 |

| species | Nant. | N.B. | Nbpt. | Ply. | Quab. | Quin. | Stell. | Sturb. | Tau/Mb. | Truro | Uxbr. | Worc. | Nwp,RI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOGO | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| RSHA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| RTHA | 30 | 1 | 85 | 15 | 22 | 13 | 1 | 26 | 16 | 8 | 35 | 35 | 26 |
| RLHA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| GOEA | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMKE | 1 | 1 | 5 | 3 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 12 |
| MERL | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| PEFA | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| RIPH | 21 | 0 | 13 | 1 | 2 | 2 | 0 | 7 | 0 | 0 | 3 | 0 | 2 |
| RUGR | 0 | 0 | 0 | 3 | 29 | 1 | 0 | 10 | 0 | 0 | 4 | 5 | 0 |
| WITU | 0 | 0 | 14 | 0 | 35 | 0 | 0 | 122 | 5 | 0 | 133 | 8 | 0 |
| NOBO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CLRA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VIRA | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| SORA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMCO | 107 | 14 | 0 | 30 | 0 | 2 | 0 | 0 | 26 | 0 | 1 | 8 | 98 |
| AMOY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BBPL | 4 | 3 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| KILL | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 12 |
| GRYE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| LEYE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WHIM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BRTG | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAGO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RUTU | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| SAND | 595 | 38 | 16 | 54 | 0 | 0 | 40 | 0 | 0 | 25 | 0 | 0 | 139 |
| LESA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PUSA | 2 | 10 | 47 | 20 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 321 |
| DUNL | 12 | 92 | 31 | 16 | 0 | 0 | 25 | 0 | 0 | 26 | 0 | 0 | 346 |
| COSN | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 29 |
| AMWO | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| POJA | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGU | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| BHGU | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BOGU | 9119 | 3 | 5 | 68 | 0 | 81 | 1 | 0 | 0 | 4 | 0 | 0 | 162 |
| RBGU | 45 | 1220 | 437 | 394 | 139 | 1153 | 58 | 311 | 395 | 59 | 114 | 1227 | 1337 |
| HEGU | 7981 | 375 | 2864 | 1081 | 29 | 3019 | 800 | 515 | 2338 | 838 | 74 | 493 | 1004 |
| ICGU | 90 | 0 | 4 | 1 | 0 | 1 | 24 | 1 | 1 | 2 | 0 | 0 | 0 |
| THGU | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LBBG | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| GLGU | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| GBBG | 1804 | 66 | 447 | 325 | 4 | 346 | 980 | 46 | 555 | 425 | 62 | 78 | 260 |
| BLKI | 271 | 0 | 1 | 3 | 0 | 0 | 3013 | 0 | 0 | 849 | 0 | 0 | 0 |
| DOVE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 |
| COMU | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 |
| RAZO | 66 | 0 | 10 | 2 | 0 | 1 | 335 | 0 | 0 | 4162 | 0 | 0 | 2 |
| BLGU | 3 | 0 | 1 | 0 | 0 | 2 | 4 | 0 | 0 | 11 | 0 | 0 | 0 |
| RODO | 327 | 837 | 680 | 160 | 149 | 1067 | 72 | 1236 | 280 | 67 | 810 | 860 | 409 |
| MODO | 535 | 160 | 631 | 176 | 215 | 123 | 5 | 523 | 629 | 29 | 211 | 386 | 485 |
| BNOW | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESOW | 0 | 0 | 5 | 1 | 0 | 13 | 0 | 4 | 16 | 2 | 50 | 4 | 7 |
| GHOW | 0 | 2 | 8 | 1 | 8 | 8 | 0 | 9 | 14 | 1 | 24 | 2 | 5 |

| species | Nant. | N.B. | Nbpt. | Ply. | Quab. | Quin. | Stell. | Sturb.Tau/Mb. | Truro | Uxbr. | Worc. | Nwp,RI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNOW | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BDOW | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 0 |
| LEOW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SEOW | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NSWO | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 0 |
| BEKI | 4 | 2 | 6 | 7 | 3 | 6 | 0 | 7 | 4 | 3 | 1 | 10 | 7 |
| RBWO | 0 | 3 | 13 | 1 | 2 | 0 | 0 | 10 | 9 | 0 | 13 | 5 | 10 |
| YBSA | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| DOWO | 18 | 25 | 156 | 48 | 125 | 73 | 6 | 213 | 77 | 18 | 124 | 134 | 55 |
| HAWO | 2 | 3 | 29 | 3 | 48 | 4 | 0 | 42 | 10 | 4 | 26 | 24 | 4 |
| NOFL | 150 | 20 | 27 | 23 | 8 | 27 | 3 | 24 | 47 | 15 | 19 | 11 | 43 |
| PIWO | 0 | 0 | 1 | 0 | 15 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| EAPH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HOLA | 10 | 0 | 362 | 65 | 8 | 0 | 0 | 46 | 0 | 18 | 1 | 33 | 87 |
| TRSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| BLJA | 88 | 63 | 854 | 153 | 876 | 171 | 5 | 1528 | 883 | 70 | 1198 | 640 | 161 |
| AMCR | 695 | 842 | 1335 | 267 | 247 | 781 | 28 | 947 | 418 | 155 | 674 | 1682 | 1685 |
| FICR | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CORA | 0 | 0 | 1 | 0 | 24 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| BCCH | 408 | 160 | 1716 | 708 | 1356 | 558 | 52 | 1914 | 642 | 445 | 1431 | 899 | 484 |
| TUTI | 0 | 46 | 438 | 181 | 296 | 160 | 6 | 557 | 297 | 30 | 651 | 239 | 74 |
| RBNU | 88 | 3 | 48 | 6 | 56 | 4 | 0 | 59 | 12 | 2 | 20 | 17 | 4 |
| WBNU | 17 | 20 | 277 | 67 | 261 | 69 | 3 | 367 | 76 | 15 | 254 | 179 | 41 |
| BRCR | 0 | 3 | 14 | 7 | 29 | 6 | 0 | 43 | 5 | 4 | 14 | 13 | 1 |
| CAWR | 55 | 16 | 4 | 53 | 0 | 12 | 2 | 5 | 45 | 11 | 12 | 5 | 90 |
| WIWR | 1 | 0 | 0 | 8 | 4 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 3 |
| SEWR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAWR | 8 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| GCKI | 42 | 20 | 26 | 40 | 25 | 9 | 0 | 22 | 15 | 0 | 24 | 4 | 18 |
| RCKI | 3 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| EABL | 0 | 6 | 13 | 11 | 17 | 20 | 0 | 50 | 33 | 0 | 87 | 0 | 0 |
| HETH | 2 | 0 | 0 | 11 | 0 | 3 | 0 | 1 | 0 | 5 | 1 | 0 | 4 |
| AMRO | 394 | 228 | 467 | 226 | 479 | 213 | 62 | 2375 | 315 | 588 | 625 | 201 | 1458 |
| GRCA | 5 | 2 | 0 | 3 | 1 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 18 |
| NOMO | 42 | 23 | 92 | 51 | 21 | 71 | 3 | 27 | 80 | 20 | 55 | 46 | 124 |
| BRTH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMPI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| BOWA | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| CWAX | 117 | 54 | 308 | 154 | 550 | 7 | 0 | 1104 | 83 | 145 | 375 | 1272 | 107 |
| NSHR | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| EUST | 2705 | 1731 | 9117 | 1032 | 649 | 41726 | 110 | 7472 | 1987 | 235 | 2639 | 4429 | 15817 |
| WEVI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| OCWA | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| YRWA | 3245 | 52 | 64 | 369 | 1 | 133 | 147 | 0 | 57 | 129 | 7 | 2 | 492 |
| HEWA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIWA | 1 | 1 | 0 | 18 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| PAWA | 15 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| BAWW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| COYE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| YBCH | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| NOCA | 146 | 97 | 210 | 195 | 42 | 90 | 11 | 113 | 187 | 43 | 139 | 72 | 191 |
| DICK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| EATO | 14 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 4 |

98th CHRISTMAS BIRD COUNT, December 19, 1997-January 4, 1998

| species | Nant. | N.B. | Nbpt. | Ply. | Quab. | Quin. | Stell. | Sturb. | Tau/Mb. | Truro | Uxbr. | Worc. | Nwp,RI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ATSP | 3 | 6 | 495 | 110 | 293 | 109 | 13 | 398 | 284 | 58 | 148 | 221 | 132 |
| CHSP | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| FISP | 5 | 2 | 4 | 13 | 2 | 8 | 0 | 1 | 90 | 14 | 28 | 9 | 17 |
| VESP | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LASP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| SASP | 26 | 1 | 10 | 2 | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 0 | 20 |
| IPSP | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| STSP sp | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SESP | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FOSP | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOSP | 276 | 42 | 112 | 192 | 36 | 133 | 11 | 119 | 145 | 38 | 106 | 65 | 335 |
| LISP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SWSP | 24 | 0 | 4 | 27 | 1 | 4 | 6 | 6 | 31 | 1 | 6 | 0 | 53 |
| WTSP | 90 | 80 | 65 | 214 | 17 | 73 | 21 | 89 | 112 | 20 | 56 | 32 | 375 |
| WCSP | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| DEJU | 130 | 104 | 618 | 218 | 386 | 128 | 11 | 1010 | 671 | 15 | 691 | 510 | 142 |
| ORJU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LALO | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNBU | 18 | 0 | 56 | 52 | 2 | 6 | 70 | 4 | 0 | 50 | 0 | 1 | 88 |
| RWBL | 163 | 0 | 10 | 4 | 0 | 0 | 0 | 19 | 13 | 1 | 0 | 1 | 23 |
| EAME | 10 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| RUBL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| COGR | 16 | 3 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 36 |
| BHCO | 9 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 5 | 0 | 4 | 3 | 498 |
| BAOR | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIGR | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PUFI | 1 | 0 | 11 | 3 | 0 | 0 | 0 | 10 | 1 | 0 | 1 | 2 | 16 |
| HOFI | 135 | 49 | 329 | 164 | 91 | 145 | 5 | 572 | 308 | 48 | 319 | 309 | 268 |
| RECR | 6 | 0 | 1 | 0 | 19 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 |
| WWCR | 46 | 0 | 51 | 0 | 10 | 5 | 0 | 8 | 0 | 0 | 0 | 5 | 30 |
| CORE | 84 | 0 | 88 | 0 | 1357 | 22 | 0 | 22 | 0 | 42 | 97 | 105 | 4 |
| PISI | 4 | 0 | 0 | 1 | 66 | 0 | 3 | 47 | 0 | 0 | 3 | 0 | 0 |
| AMGO | 199 | 192 | 707 | 292 | 336 | 112 | 13 | 779 | 425 | 55 | 614 | 616 | 141 |
| EVGR | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 3 | 0 | 0 | 4 | 25 | 0 |
| HOSP | 296 | 290 | 1574 | 451 | 464 | 650 | 5 | 1065 | 477 | 183 | 1071 | 878 | 526 |
| # species | 127 | 85 | 111 | 111 | 69 | 91 | 72 | 76 | 83 | 80 | 72 | 76 | 116 |
| # birds | 142226 | 10967 | 36034 | 16880 | 9941 | 63247 | 11836 | 27218 | 17151 | 11038 | 14901 | 18802 | 43232 |

| | | |
|---|---|---|
| Nant. = | Nantucket CBC | January 3, 1998 |
| N. B. = | New Bedford CBC | December 20, 1997 |
| Nbpt. = | Newburyport CBC | December 28, 1997 |
| Ply. = | Plymouth CBC | December 29, 1997 |
| Quab. = | Quabbin CBC | January 3, 1998 |
| Quin. = | Quincy CBC | December 20, 1997 |
| Stur. = | Sturbridge CBC | December 19, 1997 |
| Stell. = | Stellwagen CBC | December 20, 1997 |
| Tau/Mb. = | Taunton-Middleboro CBC | December 27, 1997 |
| Truro = | Truro CBC | December 29, 1997 |
| Uxbr. = | Uxbridge, MA/RI CBC | January 3, 1998 |
| Worc. = | Worcester CBC | December 20, 1997 |
| Nwp,RI = | Newport, RI/Westport, MA CBC | December 20, 1997 |

## ABOUT THE COVER: CATTLE EGRET

The Cattle Egret (*Bubulcus ibis*) is the most gregarious and terrestrial of the North American herons. It is a relative newcomer, however, having colonized our continent since about midcentury. Cattle Egrets are medium sized, short-legged, thick-necked white herons. They have yellow bills, lores, and irises that during the height of breeding season turn bright yellow, and for short periods, red. Their legs, which are usually dark, also turn yellow or reddish while in breeding condition. In Europe they are called buff-backed herons because during breeding season their crown and back feathers, and often their breast feathers, take on a rich buff-orange color.

Their habitat and foraging behavior are as distinctive as their plumage. Cattle Egrets, as their name implies, are usually seen associated with cows, horses and other large grazing animals. In Africa, their continent of origin, they have local names including elephant bird, hippopotamus bird, or rhinoceros heron, indicating their large-mammal associations. They frequently follow a particular cow or horse, using these large mammals as "beaters" to stir up the grasshoppers and other invertebrates that constitute the principal food of these largely terrestrial birds. When not foraging they often hitch a ride atop the back of their beater.

The Cattle Egret is in the monotypic genus *Bubulcus*, but is taxonomically controversial, having been placed at one time or another in the genera *Ardeola* and *Egretta*. Three subspecies are recognized worldwide. The Cattle Egret is an enormously successful species that has undergone an explosive range expansion in historic times. From its African origins it has spread throughout the tropical and temperate regions of the world, following and exploiting the massive habitat destruction and deforestation that have inevitably accompanied the range expansion of mankind. Cattle Egrets apparently colonized South America via transatlantic flights in the nineteenth century, then spread through the Caribbean Islands and finally to the U.S. by midcentury. Their rapid and sporadic dispersal resembles a forest fire that, driven by high winds, "spots" ahead. The extensive and sometimes long-distance postbreeding dispersal that characterizes this species has been influential in its range expansion.

First reported in Florida in the 1940s, the Cattle Egret was recorded breeding in the mid-1950s, and was well established in the southeastern United States by the end of that decade. Cattle Egrets have established widely scattered colonies in most of the rest of the contiguous United States. They winter in the southeastern and southwestern U.S., the Caribbean, and south through Central America to northern South America.

The first Cattle Egret collected in the United States was in 1953 in Wayland Massachusetts, by three Nuttall Ornithological Club members, Allen Morgan, Richard Stackpole, and William Drury. The first breeding record for

Massachusetts was in 1974 on House Island off Manchester, and a maximum of ten pairs was recorded in this colony. The number of Cattle Egrets sighted in Massachusetts in spring migration fluctuates from year to year but has reached over 100 birds. An influx of birds during postbreeding dispersal tapers off in fall, with a few stragglers recorded in November and December.

Cattle Egrets are monogamous, producing a single brood, but will renest after nest failure. They tend to nest in heronries established by native heron species, frequenting swamps, islands, and other places where they gain some protection against mammalian predators and human disturbance. They have a broad repertoire of aggressive and nuptial displays. The aggressive "forward display" employs an upright stance with crown, neck, and back hackles raised, and sometimes ends in stabbing and counterstabbing with bills. Nuptial displays include the "stretch display" that shows off the highly colored soft parts and plumes, and exaggerated flapping-flight displays. These nuptial displays are frequently accompanied by a variety of vocalizations: *Ow-roow*, *rick-rack*, *rooo*, and at nest relief a deafening *kakakakakakaka*.

Nests are platforms of sticks, twigs, and vines, located in shrubs or trees, often above water. Both sexes build the nest, with the male doing most of the stick collection and the female most of the actual construction. They often reuse and refurbish the nest of the previous year. The usual clutch is three or four light blue eggs. Both parents incubate, usually beginning with the first egg. Thus, young hatch asynchronously, and the youngest chick may starve if food is scarce — thought to be a reproductive strategy to maximize the number of young produced in years of abundant food. Adults may stand in the nest and shade the eggs or chicks with partially open wings on hot days. The eggs hatch in 3-4 weeks, and at about three weeks the chicks become "branchers," leaving the nest but staying nearby. They fledge in about six weeks.

Both parents feed the chicks — a very demanding job — with chicks constantly uttering begging calls and, when older, harassing parent birds unmercifully. It has been calculated that each parent Cattle Egret must capture more than 1500 grasshoppers per day to feed itself and a brood of three nestlings! Although grasshoppers are the preferred prey, Cattle Egrets take crickets and a wide variety of other invertebrate animals, and sometimes frogs. They tend to feed in loose flocks and will often "leapfrog," with birds in the rear of the flock flying over foraging birds and landing in the front of the flock so that everyone gets a turn at stirring up prey.

Despite being preyed upon by accipiters, owls, raccoons, and Peregrines, among others, Cattle Egrets have been steadily increasing in numbers. Breeding Bird Survey data indicate a 2.4 percent annual increase from 1966 to 1992. They have become a nuisance species in some areas where thousands of pairs of nesting birds have caused environmental damage and successfully competed for nest sites with native herons. Because of its exploitation of habitats disturbed by

cattle grazing, farming, and high pesticide use, the Cattle Egret has become a virtual "reverse" bioindicator — its presence indicates human disturbance and habitat degradation! Whatever we might think of this recent immigrant, it is most certainly a highly successful, remarkable, and ecologically fascinating bird.

--William E. Davis, Jr.

## ABOUT THE COVER ARTIST

**Richard Salvucci**, of Brighton, Massachusetts, began his career as an artist by illustrating books, book covers, and even a children's book. But a visit seven years ago to an exhibit coordinated by the Society of Animal Artists opened a door to a new world: since then, Richard remarks, he has "only wanted to paint or draw animals, particularly birds." His greatest satisfaction comes in attempting to capture the personality of any animal he paints or draws, and this approach has earned him a number of awards in juried wildlife art shows. Richard's work has appeared in publications as diverse the Manomet Observatory newsletter and *The New York Times*, and he has shown his art at numerous museums, galleries, and conventions. The National Alliance for Animal Legislation commissioned him to crate a drawing of two chimpanzees, which was presented to Dr. Jane Goodall as an award for the eminent primatologist's life's work. Richard will be the guest artist at the Wildlife Art and Carving Expo in Byfield, Massachusetts, in November, and his originals are exhibited at the Francesca Anderson gallery in Lexington, Massachusetts.

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## KESTREL STUDY SEEKS VOLUNTEERS

In order to assess the current status of American Kestrel breeding and wintering populations in southern New England, I am looking for volunteers to collect information, share data on kestrel nest boxes, and conduct roadside surveys of raptors in open areas of Connecticut, Massachusetts, and Rhode Island. All birders who enjoy watching kestrels are urged to participate in this study. If you are interested in participating, please contact: Tom Harrington, 30 South Windham Road, Willimantic, CT 06226, (860) 423-2041, e-mail: tomh@neca.com

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## ERRATUM: BIRD OBSERVER TIDE CHART

The tide chart published in the December issue of *Bird Observer* is off by one hour for the period of daylight savings time. In order to correct, please **subtract** one hour from the listings. We blame it entirely on *El Nino.*

*Photograph by Leslie A. Campbell*

Certain bird groups "just have a look about them" that is often as helpful in identifying them as are their specific field marks. This month's At a Glance bird is in such a group.

To anyone who sees a member of the wren family, regardless of where in the world it may be, there are a few features that invariably give the identity of the family away. Perhaps the most consistent trait within the wren family is the habit of keeping the often short, stubby tail cocked over the back, especially when not postured for advertising or territorial singing. During these times, the short tail is sometimes angled downward, but during most other activity it is held at a distinct upward angle, sometimes 90 degrees or more, over the back.

In addition to their tail posture, wrens tend to be small, especially the eastern wrens, and predominantly brownish in color, often with distinct barring on their tails, wings, or flanks. Some wren species possess distinct superciliary stripes (i.e., eye stripes), back stripes, or spots in the tail. Furthermore, all wrens have thin, relatively long, decurved bills. While the mystery bird can't be heard singing, song is another easy way to distinguish wrens, since all species are highly vocal and have distinctive songs.

Now that we know the bird in the photograph is a wren, the question becomes "which species?" Recalling the list of variable features described above, it appears that the wren in the picture does not have a distinct superciliary stripe, nor does it appear to have striping on the back or white spots in the tail. It

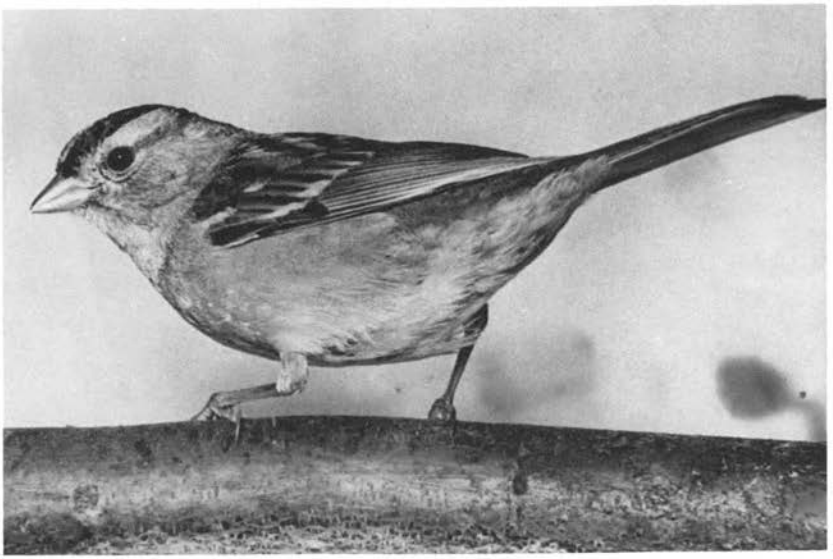
does, however, show a distinct pale eye-ring, and it appears to be rather pale on the underparts.

Of the eastern wren species, the absence of an eye stripe, back stripes, and tail spots at once eliminates the Carolina, Marsh, Sedge, and Bewick's wrens as possibilities. This leaves only the Winter Wren and the House Wren as likely candidates. The Winter Wren is our smallest wren species and is characterized by its overall dark coloration, very stubby tail, and prominently barred flanks. Although the flanks are mostly concealed in the photograph, the decidedly pale underparts and medium-length tail are very obvious. When these latter features are combined with the presence of a distinct pale eye-ring, the only remaining possibility is House Wren (*Troglodytes aedon*).

The House Wren is a widespread and common summer resident and migrant throughout most of the lower elevations of Massachusetts, although it is scarce or lacking as a breeder on the islands of Martha's Vineyard and Nantucket. As their name suggests, House Wrens will often nest in birdhouses close to human habitation.

Correction: The House Wren photograph in the February issue was incorrectly credited to Wayne Petersen. As the photo credit indicates, this photograph was taken by Leslie A. Campbell.

# AT A GLANCE



Can you identify this bird? *Photograph by M. G. Smith*
Identification will be discussed in next issue's AT A GLANCE

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Cover Illustration: Cattle Egret by Richard Salvucci