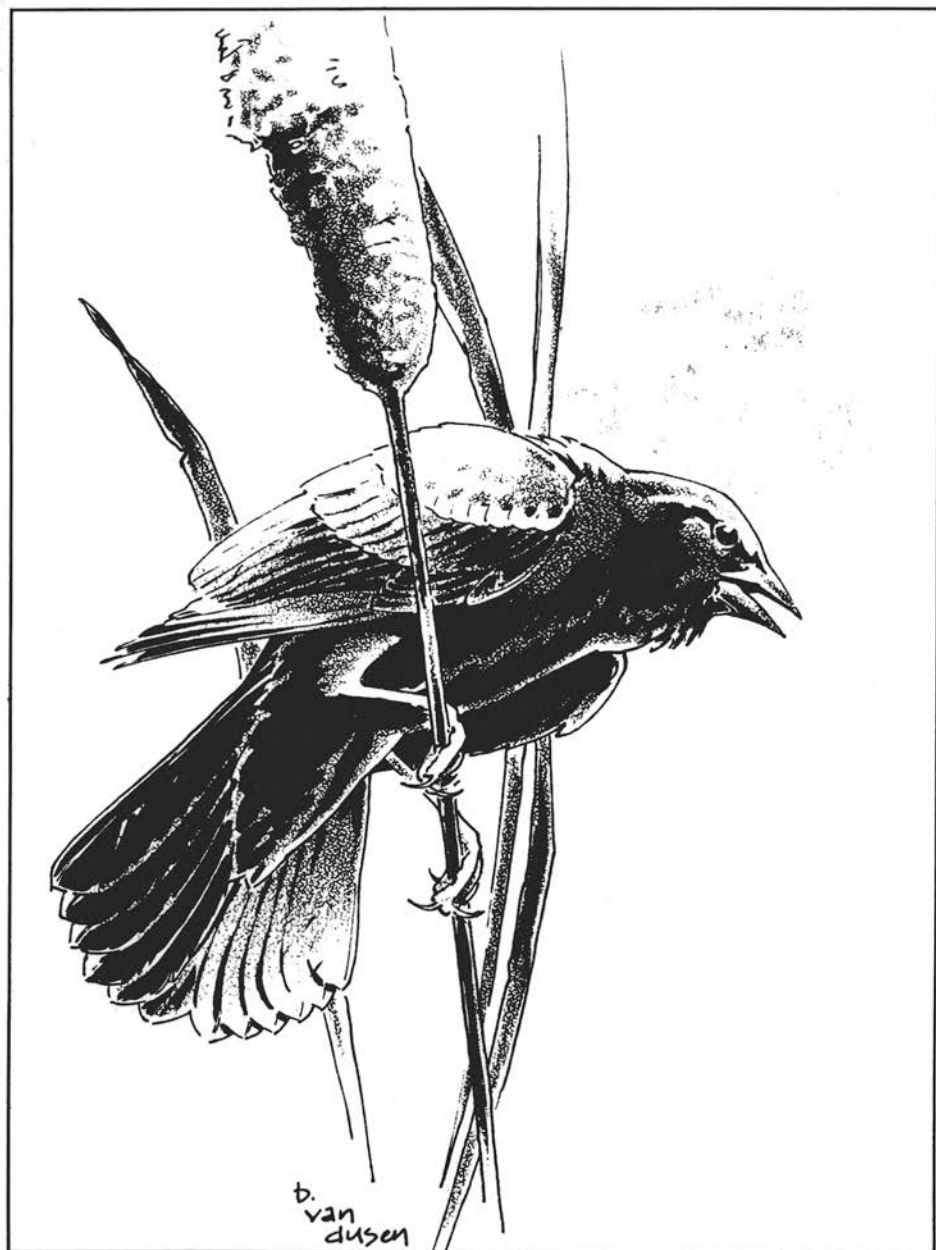


BIRD OBSERVER



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To enhance understanding, observation,
and enjoyment of birds.

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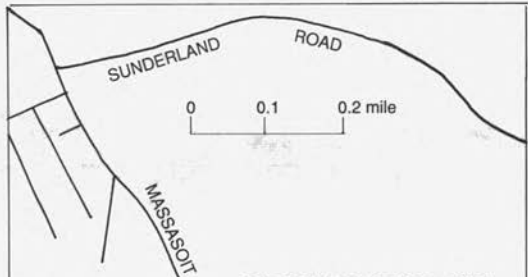
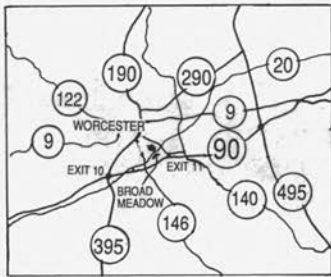
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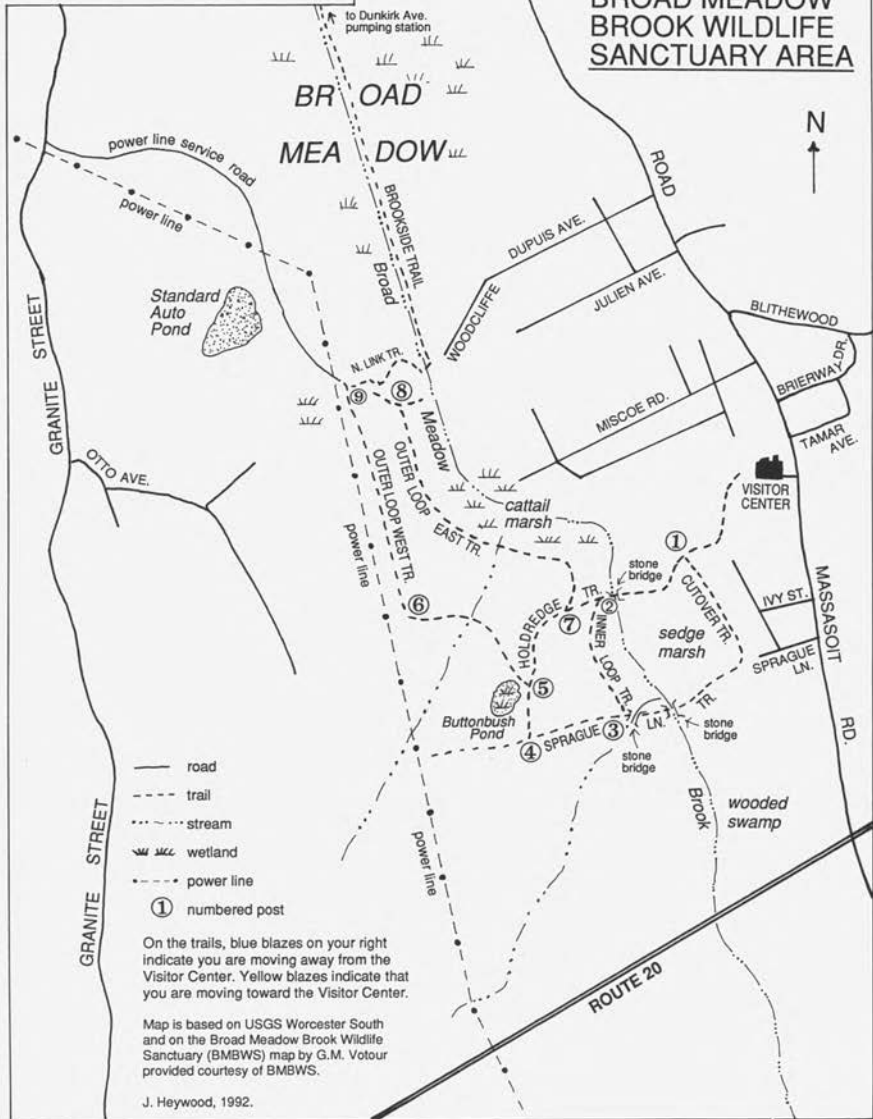
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BROAD MEADOW BROOK WILDLIFE SANCTUARY AREA



BIRDING AT BROAD MEADOW BROOK WILDLIFE SANCTUARY

by Christopher Phillips and Mark Lynch

Broad Meadow Brook Wildlife Sanctuary, formed in 1990, is a 277-acre urban wildlife sanctuary operated by the Massachusetts Audubon Society in the southeastern part of the city of Worcester, near the Millbury line. It is the largest urban wildlife sanctuary in New England and is laid out with a north-south orientation around the central spine of Broad Meadow Brook, which runs south through the sanctuary. Broad Meadow's miniature watershed is nestled in a horseshoe of small hills between the Blackstone River and Lake Quinsigamond watersheds. Three large marshes and ten wooded swamps of varying size are found within the sanctuary, and there is an open pond on the nearby property of Standard Auto.

The eastern side of the sanctuary is characteristically wet, while the western half is rocky and well-drained. A power line runs north and south parallel to the brook on the west. Frequent fires keep areas along the power line in the condition of a meadow. The woods are otherwise dominated by second-growth oak forest and associated species. The Broad Meadow at the northern end of the brook has been continuously open. Ancient peat deposits indicate an open wetland history extending as far back as the last glaciation. Draining and channelling of the north brook have reduced the floodplain and encouraged the growth of phragmites.

A Walk Through the Sanctuary

All walks through the sanctuary begin with the trail that starts behind the Visitor Center. As the trail descends, you first pass through what was once a horse pasture. Plants here include poison ivy, black cherry, and aspen. Farther down the hill, one encounters older growth, with ashes, oaks, hornbeam, jack-in-the-pulpit, and nodding trillium.

When you reach the boardwalk, you will see to your left an open area called the Cutover Trail. This area is often worth a look during migration when a variety of warblers, thrushes, and vireos can be found working the edges of the trail. Woodpeckers and flycatchers also find the many dead snags along the Cutover Trail attractive. As you continue, you will pass close by several houses, some of which have feeders, but PLEASE be discreet (yes, it is okay to be here). Just before the Cutover Trail intersects with the Sprague Lane Trail, there is an area of fruiting trees with grapevines, a hot spot for fall migrants.

Taking a right onto the Sprague Lane Trail, one finds a pleasant, shaded, and grassy path. The plant life here is a real mix, including honeysuckle, a few remnants of an apple orchard, and red maples. Wood Thrush and Rose-breasted Grosbeak are often seen here.

As the trail crosses the brook on a small stone bridge and climbs a gentle slope, it passes through red maples, many ferns, oaks, a grove of sassafras, and a few birches. This area is very good for migrant thrushes in the spring. When the Sprague Lane Trail connects with the Holdredge Trail, you are in an area of mature oaks, and the woods thin out with consequent thicker undergrowth. Here you can find Northern Orioles, Great Crested Flycatchers, Scarlet Tanagers, and Rufous-sided Towhees.

Heading right on the Holdredge Trail, you will soon see the small Buttonbush Pond on your left. Plants in this area include highbush blueberry, maleberry, sweet pepperbush, and lots of wintergreen. Because the pond is fed by groundwater and water levels fluctuate dramatically, it is a pond in May and a swamp by August. Migrants are often in the vicinity of this pond.

Just past the pond on your left, you will find the Outer Loop West Trail. This trail takes you through a wet wooded area that has had some good waves of migrants. As you get near the power lines, look for a trail on the right. This is simply the continuation of the Outer Loop West Trail. Here the oaks are smaller and stunted in appearance. Watch for Rufous-sided Towhee, Prairie Warbler, and in the fall, White-throated Sparrow. Eventually you will cross the Outer Loop East Trail and continue on the North Link Trail.

The North Link Trail winds down a hillside to the brook. Ferns are common here including Christmas and maidenhair. Be particularly careful not to trample the maidenhair ferns because this is the only place they occur in the sanctuary. The trail crosses the brook over a culvert and swings left onto an asphalt walk where it becomes the Brookside Trail and continues through an area of significant disturbance. In the late summer and fall, watch closely for the tick-trefoil along this trail, or you will leave the sanctuary with pants covered with their tenacious seeds. Eventually the trail passes into the Broad Meadow with a small marsh on your right and a wet meadow on your left. Two stands of phragmites on your right are separated by a small woodlot. This entire area is good for migrant warblers and sparrows and should be worked thoroughly. The trail ends at the Dunkirk Avenue pumping station.

To return to the Visitor Center without completely doubling back, retrace your steps along the Brookside and North Link trails, and take the Outer Loop East Trail back. This trail is wetter than the Outer Loop West Trail and passes close by a small cattail marsh. Plants along this trail include witch hazel, alders, and cinnamon and interrupted ferns. Birding may be slow along this trail, but watch for Eastern Wood-Pewee and Black-and-white Warbler. The Outer Loop East Trail ends at the Holdredge Trail, and you turn left at the Holdredge Trail, which takes you back to the Visitor Center.

Birds at Broad Meadow Brook Wildlife Sanctuary

Broad Meadow Brook Wildlife Sanctuary has been utilized as a birding area for many years, particularly by members of the Forbush Bird Club. Local birders have watched the woodcock displays in the spring and checked the roosting blackbird flocks in both spring and fall. In July 1989 more systematic surveys of the sanctuary were begun, particularly during the migration seasons. Between July 6, 1989, and October 12, 1990, Mark Lynch conducted seventeen surveys of the birdlife of the sanctuary, the results of which have been computerized. A total of 129 species was noted during these surveys.

In 1991 much more intensive ecological monitoring of the birds in the sanctuary was done. A dedicated volunteer force of more than twenty-five birders completed 275 surveys of the sanctuary during both spring and fall migrations, increasing our knowledge dramatically of how migrants utilize this urban oasis, and pushing the total number of species seen at the sanctuary up to 147. All of these results are still in the process of being computerized. This ecological monitoring during the migration periods will continue as an ongoing project of the sanctuary.

In June 1991 the first yearly breeding bird survey took place, the results of which are discussed below. In 1990 and 1991 Broad Meadow Brook was thoroughly covered for the Worcester County Christmas Count, and these counts revealed a few surprises, also discussed below.

Spring. Spring slowly begins at the sanctuary at the end of February with the arrival of the first migrant blackbirds, mostly Redwings and Grackles, but with regular sightings of Rusty Blackbirds as well. These birds are best seen in the Broad Meadow in the vicinity of the phragmites as they come to roost from late afternoon until dusk, especially in March and April. The birder will also see enormous flocks of starlings roosting in the same area. Interestingly, this urban bird is less often seen in the sanctuary during the breeding period.

Besides migrant blackbirds, the month of March brings the few woodcocks that display on the sanctuary. As many as five woodcocks have been noted in the spring, seen most often near the Standard Auto Pond and the Broad Meadow. To date, we have not been able to confirm that these woodcocks breed on the sanctuary.

Broad Meadow Brook is not known for its waterfowl, but during March, Wood Ducks are regular, along with the more common Mallards and American Black Ducks around the wet areas. The Wood Ducks linger and seem to be attempting to breed. Green-winged Teal and American Wigeon have also been spotted in March at the Standard Auto Pond, but are not to be expected. Killdeer, which breed close by, are often seen or heard flying over beginning in March and continuing throughout the breeding season.

Hawk migration is not as good in the spring as in the fall, but some interesting species appear to be regular. Beginning in mid-March single

migrating Turkey Vultures may be seen while birding along the power line and in the Broad Meadow. Other regular raptors seen in small numbers in the spring include Sharp-shinned Hawk, Northern Harrier, Broad-winged Hawk, and American Kestrel. The resident pair of Red-tailed Hawks can be expected to put in an appearance.

Landbirds, other than migrant blackbirds and the typical permanent residents, are thin in March. There are still flocks of American Tree Sparrows feeding in the northern, more open areas of the sanctuary. Winter Wren has been spotted at this time along the stone walls of the Sprague Lane Trail. Finally, by the end of March, the first Eastern Phoebes appear.

April brings many changes to the bird population of the sanctuary as migration approaches the climax of May. The American Tree Sparrows leave and are replaced by Field Sparrows, seen regularly in the vicinity of the Standard Auto Pond and power line. Good numbers of Northern Flickers appear and can be seen and heard in most areas of the sanctuary. Small numbers of Tree Swallows, which breed, can be seen around the Standard Auto Pond and the Broad Meadow. Regular migrants seen in April in fair to good numbers include Hermit Thrush (wooded areas), Palm Warbler (power line area), Yellow-rumped Warbler (northern areas of the sanctuary), and by the end of the month, Black-and-white Warbler.

When May arrives, Broad Meadow Brook Wildlife Sanctuary comes alive with breeding and migrant birds. A walk through the entire sanctuary in the early morning, especially on weekdays when there are fewer visitors, can be very rewarding and takes about four hours. Key areas to hit for migrants include the Cutover Trail, the Sprague Lane Trail, the Buttonbush Pond, the power line, and the Broad Meadow.

Regular breeding migrants to expect in May include Eastern Wood-Pewee, Great Crested Flycatcher, Warbling Vireo, Red-eyed Vireo, Blue-winged Warbler (north end of the sanctuary), Yellow Warbler (the Broad Meadow), Common Yellowthroat, Scarlet Tanager, Rose-breasted Grosbeak (Sprague Lane Trail), and Northern Oriole. Regular nonbreeding migrants seen in varying numbers include Solitary Vireo, Tennessee Warbler, Northern Parula, Chestnut-sided Warbler (probably breeds nearby), Magnolia Warbler, Black-throated Green Warbler, Bay-breasted Warbler (on one occasion we had eleven in one tree!), Blackpoll Warbler, and American Redstart. Other regular migrants reported with much less frequency include Nashville, Black-throated Blue, Blackburnian, and Canada warblers.

Woodland thrushes are well represented at the sanctuary. Wood Thrushes are commonly seen and heard and remain to breed. Veery are commonly seen in May, and a few stay to breed. Swainson's Thrushes put in a brief but regular appearance in mid-to-late May, when as many as four birds on one outing have been noted. There are three records of Gray-cheeked Thrush. With a list like

this, Broad Meadow Brook is rapidly gaining a reputation among central Massachusetts birders as a pleasant alternative to the usual coastal hot spots.

Summer. An early-morning walk through the sanctuary in June and early July reveals a population of birds typical of upland deciduous forest and edge habitats. In the wooded sections of the sanctuary one finds Eastern Wood-Pewee, Great Crested Flycatcher, Veery, Wood Thrush, a few Red-eyed Vireos and Ovenbirds, Scarlet Tanager, and Rose-breasted Grosbeak. With luck you may even see one of the resident Ruffed Grouse with young.

Along the power line and into the Broad Meadow one finds additional common species such as Eastern Phoebe, Eastern Kingbird, Gray Catbird, Brown Thrasher, Common Yellowthroat, Red-winged Blackbird, and American Goldfinch. A few Prairie Warblers can be found along the power line, and Blue-winged Warblers and Indigo Buntings breed in small numbers in the northern areas of the sanctuary. One pair of Willow Flycatchers was found during the breeding bird survey in the Broad Meadow near the area of phragmites. At least one pair of Eastern Bluebirds has bred in the same general area. Orchard Orioles must have bred somewhere nearby, because birds carrying food were reported on several occasions from people looking for Blue Grosbeak. A male Blue Grosbeak was seen in the Broad Meadow and remained until the end of July 1991, and appeared to be defending a nesting female Indigo Bunting (see Field Notes in this issue of *Bird Observer*). Rounding out our list is up to three pairs of Carolina Wrens, one of which can often be heard along the Cutover Trail.

Autumn. Autumn is the most exciting time to bird Broad Meadow Brook Wildlife Sanctuary, especially between mid-September and mid-October. Several hawk species are regular migrants best observed from the power line near the Standard Auto Pond. Broadwings regularly pass over. On one occasion in September 1990, we saw 1096 Broad-winged Hawks migrating overhead during one hour. Normally, one must be satisfied with a much more modest count. Turkey Vultures, Ospreys, Sharp-shinned Hawks, and American Kestrel are also to be expected. Typically, one or more Sharpies can be found hanging around the sanctuary (especially along the power line) harassing and being harassed by the flocks of jays and migrating flickers.

Most of the regularly occurring migrant warblers, vireos, and thrushes can be found by repeatedly checking areas like the Cutover Trail, the power line, and the Broad Meadow. Even when things seem quiet, sometimes a screech owl call can bring at least some interesting birds into view. Good numbers of Palm and Yellow-rumped warblers turn up in late September and early October along the power line and in the Broad Meadow. Some of the most uncommon birds of interest that have been found on the sanctuary include: Yellow-bellied Sapsucker, Olive-sided Flycatcher, Yellow-bellied Flycatcher, Philadelphia Vireo, Connecticut Warbler (check along the power line and the Broad Meadow), and Orange-crowned Warbler. Winter Wren appears to be an

uncommon but regular migrant along the power line, stone walls, and small streams throughout the sanctuary.

Sparrows can be found in modest numbers in the Broad Meadow, along the power line, and near the Standard Auto Pond. One of the best places to check for sparrows is along the Brookside Trail first thing in the morning. By approaching quietly, one can often get good views of the several species of sparrows feeding right on the path. It was here that we found a Grasshopper Sparrow in 1991. Regular migrants include Field, Chipping, Song, Swamp, and White-throated sparrows. Lincoln's Sparrows, as many as four in one day, can be found with a little hard searching, and several Whitecrowns also turn up every year.

Winter. By the beginning of November, things have quieted down considerably in the sanctuary, and generally only the permanent residents remain. These include Hairy and Downy woodpeckers, Black-capped Chickadee, Tufted Titmouse, and White-breasted Nuthatch. Some unusual species we have seen are Common Snipe (along the more northern parts of the Broad Meadow Brook) and Eastern Bluebird (along the power line). A late-afternoon vigil at the phragmites in the Broad Meadow during the 1991 Christmas Count found a Red-winged Blackbird, several Common Grackles, and several Brown-headed Cowbirds all coming to roost. One or two Swamp Sparrows also lingered in the same area. Several Eastern Screech-Owls, which probably breed, and Great Horned Owls have been found on nocturnal outings.

Working peripheral areas of the sanctuary, where neighborhood feeders are close, like the Cutover Trail, can turn up the usual sparrows: Song, Tree, and White-throated sparrows, and Dark-eyed Juncos. Sharp-shinned Hawks may also turn up in these areas for obvious reasons. Small flocks of American Tree Sparrows can be found in the Broad Meadow and along the power lines.

Access to the Sanctuary

The Visitor Center, housed in a renovated barn at the gateway to the sanctuary, is located at 414 Massasoit Road, one-half mile north of Route 20 in Worcester. There is a twenty-car gravel parking lot. Other access points are available for seeing certain birds, or for wheelchair access with a personal attendant. For more information, call the Visitor Center at 508-753-6087.

Conclusion

Although the Broad Meadow Brook Wildlife Sanctuary is by no means a hot spot for rarities, its unique situation as a green island in an urban sea makes it very attractive to a wide variety of birds, especially migrants. In only a few years of monitoring the migration and breeding periods, the list of species found is quite impressive, and makes Broad Meadow Brook one of the more important birding areas of Worcester County.

CHRISTOPHER PHILLIPS is the director of the Broad Meadow Brook Wildlife Sanctuary. He is currently completing *Wilds of Worcester*, a collection of profiles of Worcester's open spaces.

MARK LYNCH is an ecological monitor for the sanctuary, where he also teaches an intensive "Beginning Birding" course. He is eternally grateful that a birding spot like Broad Meadow Brook now exists so close to home.

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**ANYTHING BUT BARREN: THE SEARCH FOR PATTERNS
IN THE BREEDING BIRD COMMUNITY
OF THE MASSACHUSETTS PINE BARRENS**

by David C. Morimoto

Several thoughts bombarded me that early morning in late May 1985, while I was standing amid a tangled sea of waist-high scrub oak, the sunlight just beginning to penetrate the patchy fog and set the pitch pines aglow. I was in Myles Standish State Forest (MSSF) in Plymouth, Massachusetts, but I felt as though I was in the middle of nowhere, lost in a wilderness. As I experienced the beauty of the coastal plain pitch pine-scrub oak forest at dawn, I was haunted by the words of Walt Whitman: "You must not be too precise or scientific about birds and trees and flowers," and I remembered Lewis Thomas' elation as he watched animals playing at the Tucson Zoo: "I wanted no part of the science of beavers and otters . . . All I asked for was their full hairy complexity." I was tempted to just stand there and wax poetic, but I realized I had work to do.

Somewhat reluctantly, I relegated those thoughts to the recesses of my mind and began to address the primary reason for my visit. I was beginning a three-year study of the breeding birds of the southeastern Massachusetts pine barrens. From the very start it was abundantly clear that the descriptive, "barrens," was inappropriate: the vegetation was alive with bird activity, and the air was full of song (see Massachusetts Audubon Society 1983, for more reasons why the adjective, barrens, is misleading).

I began this study because of my interest in the conservation of the unique pine barrens ecosystem, a love of birds, and an interest in addressing an important problem being explored by community ecologists.

The prevailing view among ornithologists of previous decades had been that competition between individuals of different species, or interspecific competition, was of primary importance in influencing the distribution and abundance of individuals. Among the strongest challenges to this view were the results of detailed studies by John Wiens and John Rotenberry conducted on the breeding birds of the sagebrush-dominated shrubsteppe of the northwestern United States (see Wiens 1984 for a review). Their research indicated that interspecific competition was probably not important. Indeed, the major assumptions of competition theory, namely that resources are limited (e.g., food, territories) and the community has as many species as it can possibly hold (referred to as "equilibrium" in ecological jargon), did not hold for the shrubsteppe bird community.

Wiens (1984) proposed that bird communities vary dramatically in the degree to which they are influenced by competition among species. Some are stable, resource-limited communities in which processes such as competition are

important. These bird communities are characterized by "tight structure." When one species changes in abundance, other species also change in a predictable way. In other words, if one species becomes scarce, its competitor species would become more abundant. Ecologists would say that these species covary in distribution and abundance.

At the other end of the spectrum are communities that inhabit unpredictable environments. These bird communities are characterized by "loose structure," with random factors (often related to severity of climate) being more important and species being distributed independently of one another in space and time. The result is that few patterns are evident in these loosely structured (nonequilibrium) communities.

The results of many other studies, such as the long-term study of the breeding birds of the northern hardwood forests by Richard Holmes and colleagues (Holmes et al. 1986), added to this changing view of biological communities. A new picture was emerging in which many factors, including not only competition, but also predation, spatial and temporal variation in food supply and quality, climatic conditions, the structure and dynamics of the surrounding landscape, events on the wintering grounds and during migration, and even evolutionary history and biogeography, were seen as relevant in determining just why certain species of birds occur in certain habitats. What is most important is that the relative influence of these many interacting factors seemed to vary from community to community.

Although the picture of bird community structure seemed to be getting more, not less complicated, some researchers soon learned that it was helpful to recognize what they called "scale" (Allen and Starr 1982; O'Neill et al. 1986). For instance, in a given year (a time scale of one season), food may be abnormally scarce and competition thus abnormally severe. However, if viewed over a hundred years (a time scale of many bird generations), competition may be far less important than, say, periodic unpredictable cold snaps that can quickly kill large numbers of birds. Scale can also apply to such things as habitat size. A small habitat may be more subject to certain events (such as cowbird parasitism) than a large habitat (small-scale area versus large-scale area). The recognition that the many factors important to birds operated at different spatial and temporal scales was important, because it meant that in order to determine the factors responsible for the complex patterns in a particular system, one must study that system at many scales (Maurer 1985; Wiens et al. 1986; Urban and Smith 1989). A given community may appear to be limited by interspecific competition at one scale but not at another.

It was in this unfolding climate of ecological inquiry that I began my study of the pine barrens bird community. I sought to relate patterns of bird occurrence to patterns of habitat variation. I hoped to learn whether the bird community is more or less tightly structured, and whether the birds seem to be

responding more or less independently of one another and to factors such as habitat variation.

I established eight plots, each ranging in area from seven to nine hectares, in the southeastern Massachusetts pine barrens (five in Plymouth: three in MSSF, one in Plymouth County Wildlands Trust's West Shore Preserve, and one on nearby private land; and three on Cape Cod: one in Bourne near Otis Air Force Base and two on municipal land in Mashpee). These sites represented an array of post-fire successional stages, having been burned from fewer than five to more than thirty years previous to the onset of my study (see also Kerlinger 1984). I mapped territories of breeding birds and surveyed vegetation on each plot for three years. I then performed several complex statistical analyses on the large volume of data collected. My statistical tests facilitated the detection and interpretation of the major patterns in the bird communities.

Bird Patterns. Rufous-sided Towhees, Common Yellowthroats, and Prairie Warblers were the three most numerous and widespread of the thirty-one breeding bird species detected (Table 1). When I searched statistically for patterns, I did find some relatively well-defined ones, most of which were consistent with what was known of the birds' habitat affinities. For instance, Prairie Warblers, Field Sparrows, Gray Catbirds, and House Wrens, all birds of shrubby habitats, were strongly correlated with each other across the eight study sites. If I knew the abundance of catbirds, I could pretty well predict the abundance of Field Sparrows. In contrast, many other species, including towhees and yellowthroats, were only weakly associated with other species. So, while some small groups of species did seem related in their abundance patterns, there were also many species that were distributed independently of one another. In no case did I need to invoke interspecific competition as an explanation for any of the patterns I detected. In fact, very few negative associations (six of forty-two significant correlations) were evident, and each of these could be explained by habitat preferences alone (see also Finch 1991).

Vegetation Patterns. My analyses of vegetation uncovered strong patterns of variation in both structure and composition across study sites. Large changes occurred from open habitats with few trees to those with numerous tall pitch pines, from habitats with few oak trees to those with relatively high coverage of black oak and white oak (particularly on one Mashpee site), and from those with low coverage of shrubs (scrub oak, sheep laurel, blueberry, black huckleberry) and herbs to those with relatively high shrub and herb coverage. The eight study sites exhibited considerable variation in vegetation, and this variation largely reflected the gradient in post-fire successional stages. Were the birds responding to this variation, and if so, were they responding independently of one another, with no apparent influence by other species?

Bird-Vegetation Patterns. When I statistically compared bird abundances with the major patterns in vegetation, I found a mixed bag. Roughly two-thirds

Table 1
Breeding Birds Recorded in the Southeastern Massachusetts Pine Barrens
1985-1987

Species	% Surveys (N=24) Occurring On	Density Range Where Occurring (territories/ha)
Rufous-sided Towhee	100	1.19-3.13
Common Yellowthroat	100	1.20-2.64
Prairie Warbler	100	0.29-2.46
Brown-headed Cowbird	100	0.26-1.02
Black-capped Chickadee	100	0.07-0.83
Pine Warbler	96	0.12-0.70
American Goldfinch	92	0.04-1.15
Black-and-white Warbler	83	0.07-0.91
Gray Catbird	75	0.05-0.53
House Wren	71	0.04-0.58
Field Sparrow	67	0.14-0.43
Hermit Thrush	67	0.07-0.35
Northern Flicker	58	0.06-0.20
Blue Jay	54	0.07-0.14
Tree Swallow	46	0.05-0.43
Nashville Warbler	46	0.04-0.40
Cedar Waxwing	46	0.03-0.14
American Robin	33	0.03-0.14
Black-billed Cuckoo	25	0.07-0.14
Northern Bobwhite	25	0.04-0.07
Ruffed Grouse	21	0.05-0.14
Eastern Wood-Pewee	21	0.04-0.24
Chestnut-sided Warbler	17	0.11-0.29
Eastern Kingbird	17	0.14
Mourning Dove	17	0.05-0.14
Eastern Bluebird	12	0.14
Brown Thrasher	12	0.07-0.14
Hairy Woodpecker	12	0.07
Northern Mockingbird	8	0.04-0.05
Downy Woodpecker	8	0.14
House Finch	8	0.04-0.14

of the species exhibited statistically significant habitat associations, although some were difficult to interpret, probably due to small population sizes of certain species. These results began to give me the sense that the pine barrens bird community did, indeed, exhibit some patterns, but nonetheless, the two most widespread and abundant species (towhees and yellowthroats), among others, exhibited no or just a few weak associations.

I concluded that the bird community was not as "loosely structured" as that of the shrubsteppe (which was marked by an extreme lack of pattern), a

conclusion supported by the results of my analyses of temporal variation. Bird densities and species composition on study plots were unchanged from one year to the next, despite significant annual differences in vegetation caused by a late frost and gypsy moth outbreak in 1985. Birds stayed on their territories despite these disturbances, so that although habitat associations were different between 1985 and the next two years, all birds exhibited similar shifts between years, giving rise to the appearance of stability over the three years of the study.

The patterns detected in these initial analyses suggested that while some species seemed to be responding similarly to habitat variation, many other species were distributed independently of one another and had only weak habitat associations. That this system exhibited stronger patterns than the shrubsteppe system can be explained in part by the fact that there was more marked habitat variation (caused by the different fire histories of the eight sites) encompassed in my study than in the shrubsteppe study (shrubsteppe habitat was relatively homogeneous among study plots), and at least some of the birds were responding to this variation. In addition, it seems likely that this system is less physically harsh and experiences fewer unpredictable environmental perturbations than the shrubsteppe system. In the shrubsteppe, severe climatic events tend to keep population numbers low, so the habitat is never really saturated with birds, and habitat associations and distributional patterns among bird species of the shrubsteppe are therefore weak at best and quite inconsistent from year to year.

That interspecific competition was not needed to explain any of the patterns uncovered does not suggest that it is absent in the pine barrens. It may simply occur at smaller or larger scales and not be evident at the among-plot scale investigated here. One might have to look very carefully at habitat associations within plots, or at patterns of reproductive success or foraging behavior in sites varying in species composition and abundance.

The analyses related here were only preliminary, and many questions remained, particularly with respect to the species for which few relationships were detected. Were these species responding in ways such that patterns were not evident at the scale used in my study? Would the effects of interspecific competition become evident in an analysis of the foraging behavior of individuals? In a future article I will relate the results of more refined analyses of the three most abundant species in an attempt to address these questions. I will also look at community-wide patterns and discuss the implications of the results of this study for conservation and management.

I often think back to the first day of my study, and the same thoughts I had that morning furtively creep back into my mind, tempting me to give up my scientific pursuit in favor of a more wholly Zen-oriented existence. But too many questions need to be explored, and too many secrets remain to be told about the world in which we live. It is our nature to care and dare to be "too

precise or scientific about birds and trees and flowers." Indeed, our knowledge of them is necessary for our own survival. And although we are met with dazzling complexity and uncertainty, we must strive, as Melvin Konner says, "with all our stumbling, and in the midst of our dreadful confusion," to seek the answers if we are to survive to experience fully the wonders of nature.

References

- Allen, T.F.H., and T.B. Starr. 1982. *Hierarchy: Perspectives for Ecological Complexity*, Chicago: University of Chicago Press.
- Finch, D.M. 1991. Positive Associations Among Riparian Bird Species Correspond to Elevational Changes in Plant Communities, *Canadian Journal of Zoology* 69:951-963.
- Holmes, R.T., T.W. Sherry, and F.W. Sturges. 1986. Bird Community Dynamics in a Temperate Deciduous Forest: Long-term Trends at Hubbard Brook, *Ecological Monographs* 56:201-220.
- Kerlinger, P. 1984. Avian Community Structure Along a Successional Gradient in the New Jersey Pine Barrens, *Records of New Jersey Birds* 9:71-78.
- Massachusetts Audubon Society. 1983. The Massachusetts Pine Barrens. *Sanctuary*, 23(1): 2-17.
- Maurer, B.A. 1985. Avian Community Dynamics in Desert Grasslands: Observational Scale and Hierarchical Structure, *Ecological Monographs* 55:295-312.
- O'Neill, R.V., D.L. DeAngelis, J.B. Waide, and T.F.H. Allen, 1986. *A Hierarchical Concept of Ecosystems*. Princeton: Princeton University Press.
- Urban, D.L., and T.M. Smith. 1989. Microhabitat Pattern and the Structure of Forest Bird Communities, *American Naturalist* 133:811-829.
- Wiens, J.A. 1984. On Understanding a Nonequilibrium World: Myth and Reality in Community Patterns and Processes, In: *Ecological Communities: Conceptual Issues and the Evidence* (D.R. Strong, Jr., D. Simberloff, L.G. Abele, and A.B. Thistle, editors), Princeton: Princeton University Press.
- Wiens, J.A. J.F. Addicott, T.J. Case, and J. Diamond. 1986. Overview: The Importance of Spatial and Temporal Scale in Ecological Investigations, In: *Community Ecology* (J. Diamond and T.J. Case, editors), New York: Harper and Row.

DAVID C. MORIMOTO, assistant professor of biology at Regis College, obtained a Ph.D. from Boston University in 1989. David is currently studying the breeding birds of Weston and participating in the Neotropical Migratory Bird Conservation Program. He would like to thank the following people for their assistance: Sandi and Justin Morimoto, Fred Wasserman, John Kricher, Richard Forman, Robert Tamarin, Stewart Duncan, Thomas Kunz, Trevor Lloyd-Evans, Ollie Jarvinen, Barry Noon, John Dunning, Richard Holmes, Thomas Sherry, Russell Greenberg, Greg Adler, two anonymous reviewers of earlier manuscripts, Duncan Phillips, LeBaron Briggs and the Plymouth County Wildlands Trust, Les and Judy Plimpton, Louis DeChico, Edward Wasil, Bobbie and Jerry Smith, Kiyu Morimoto, and the Massachusetts Division of Forest and Parks. Funding was provided by the Frank M. Chapman Memorial Fund, the E. Alexander Bergstrom Fund, the Thornton W. Burgess Society, the Society of Sigma Xi, the Boston University Graduate School, and Sandi Morimoto.

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THE GREAT GANNET WRECK OF '91

by Blair Nikula

"Skua!" arose the cry from the small group of birders assembled on the sands of First Encounter Beach. Normally such a pronouncement would have engendered a frantic pressing of eyeballs to oculars and skeptical "where's," as anxious birders struggled to spot the specter, sure that such an apparition, if it existed at all, in an instant would be nothing more than a rapidly disappearing speck on the horizon. But not this time. These birders had heard this same call several times previously this damp October morning, and, perhaps somewhat numbed and jaded by what they had so far witnessed, their response was almost casual as they trained a battery of optics on the heavy, dark form powering its way before them just beyond the tidal flats. As the imposing bird continued southward, the white semaphores of its primaries flashing conspicuously, it dropped low, changed course slightly, and pumped its way toward several Pomarine Jaegers that were resting on the flats. Taking no chances with this oceanic bully, the jaegers rose to avoid its threatening approach. Just beyond, several more jaegers followed suit, then several more, and more still. In an instant the air was filled with a swirling mass, as some sixty Pominines and a myriad of gulls prudently avoided challenging the pelagic pecking order. His authority effortlessly asserted, the avian Darth Vader continued on and was gone, leaving his human admirers amazed and applauding this once-in-a-lifetime spectacle.

One of the most exciting birding features in eastern Massachusetts is the frequent appearance of seabirds close to shore. Indeed, nowhere else on the East Coast, and in few other sites anywhere in North America, can pelagic birds be seen with such frequency from land. The long, hooked arm of Cape Cod creates a natural trap, snaring southbound seabirds blown shoreward by easterly gales. When conditions are right, which happens all too rarely to suit most of us, Cape Cod Bay can become a seething caldron boiling over with windblown pelagics. In late October 1991, conditions were right—very right.

During Sunday, October 27, the remains of marginal Hurricane Grace merged with a deepening low pressure system north of Bermuda. Simultaneously a strong high pressure system became nearly stationary over eastern Canada. An intense pressure gradient developed between the two systems, and an upper level block in the atmosphere resulted in a slow and most unusual westward movement of the storm over the next three days. Late in the day on October 30, the potent storm passed to the south of Cape Cod headed for the New Jersey shore. Three days of northeasterly gales had generated huge seas (over thirty-foot waves), and the storm passage and peak winds coincided with high tide along most shorelines facing east and north, resulting in the most

extensive coastal flooding in memory. Although not as intense, this storm was of greater duration and created even more devastation than the blizzard of 1978. It also produced one of the most memorable pelagic shows ever recorded from these shores. The following chronology summarizes that week's avian events. A complete accounting of all the sightings is not possible here, but *Bird Observer's* October 1991 and November 1991 Bird Sightings will provide the interested reader with additional specifics.

Pelagics were extremely scarce throughout the summer and fall of 1991, both from shore and on Stellwagen Bank. Thus, we had little reason to think that this storm was going to produce much in the way of birds, and observations during the first two days of the storm tended to confirm the low expectations. On Monday, October 28, under overcast skies, northeast winds picked up rapidly in the early morning and were soon gusting over forty-five miles per hour. Dick Forster spent two hours at Sandy Neck in the morning, visited several other sites along the Cape Cod Bay shore, and ended up in Provincetown. Although large numbers of gannets (about ten thousand) were passing and scoters were numerous, he saw little else except a handful of jaegers and several shearwaters. He returned to Sandy Neck for two and one-half hours again the following morning (October 29), but saw even fewer birds, although at Corporation Beach in Dennis that same morning, Bob Pease estimated that gannets were passing at the rate of six thousand per hour. Later in the day, Dick discovered some sixty gannets in Town Cove (an inland bay), Orleans—an unprecedented sight and the first indication that something out of the ordinary was in the works. However, even more incredible was Hugh Ferguson's report of another sixty gannets on Lake Wequaquet in Barnstable, two and one-half miles south (i.e., inland) of the tip of Sandy Neck!

Early on Wednesday morning, October 30, the wind, although still of gale force, had subsided somewhat, and the sun was breaking through the clouds. Wayne Petersen spent an hour at Sandy Neck early in the morning, and I went to Corporation Beach for about forty-five minutes before work. Although gannets were still moving in modest numbers, and some were passing over land behind the parking lot at Corporation Beach, there again was little indication that anything significant was imminent. However, by midmorning the skies had darkened again, it began to rain, and the winds increased. Bob Abrams and Tom Cameron arrived at Sandy Neck around 11:00 A.M., and during the next hour, they saw eighty jaegers passing. After breaking for lunch, they returned to find jaegers streaming past and during the next hour recorded three hundred more jaegers in flocks containing up to fifty-six birds. Some of the birds were being blown over land and were passing over and behind the parking lot. Regrettably, at about 2:30 P.M., their jaeger total at 440 birds (virtually all Pomarines), the police forced them to leave. They then went to Scorton's Creek in Sandwich, and during the next hour or so recorded another 120 jaegers.

Meanwhile, Ken Hamilton was at Gray's Beach in Yarmouth Port, on the southeast corner of Barnstable Harbor, where jaegers were also streaming by in flocks. Eventually, however, he too was forced to leave by the police, but not before he had recorded 420 jaegers. By late afternoon winds were regularly gusting over sixty miles per hour, with the peak gust of seventy-eight miles per hour recorded in Chatham just after 5:00 P.M. We can only wonder how many more jaegers would have been tallied had the local constabulary not been so excessively protective!

As word of the day's events spread that night, discussions centered around whether any birds would still be around the next morning and where they would be seen. This storm, with its backward progression, was clearly not typical, and the standard "Sandy Neck during the storm, First Encounter the next day" rule of thumb was much in question.

I opted for First Encounter Beach and arrived there the next morning (October 31) at 6:15 A.M. The storm, somewhat weakened, was at this time off the New Jersey coast well to our southwest, but winds were still out of the northeast, occasionally gusting to gale force, and the skies remained overcast and threatening. During the first forty-five minutes a few distant jaegers appeared, but there was little else and virtually no gannets; not a good sign, I incorrectly surmised. By 7:00 A.M., my optimism waning, I began debating whether or not to head for work, when suddenly a string of seventeen Pomarine Jaegers materialized before me. Accompanying the jaegers were not one, but two skuas, one leading the flock and the second bringing up the rear. Although I had seen skuas at this site on a number of occasions, two at once was a first for me and probably anyone. Perhaps work could wait.

More jaegers and small numbers of gannets and kittiwakes appeared. Then, fifteen minutes after the first sighting, two more skuas arrived. The jaegers began appearing in bunches, frequently a dozen or more in a flock, and there was a great deal of milling about. By 9:00 A.M. the jaeger total was approaching three hundred, and two more skuas had brought that total to six birds. Finally, to my relief, after almost three hours alone other birders began to arrive.

By this time jaegers were almost everywhere: flying every which way out over the water; sitting on the now-exposed flats; and one group after another heading directly over land (in some cases low overhead) on a direct course to the ocean three miles to the east. Over the next couple of hours, several more skuas cruised past, their numbers culminating in a group of three birds that flew in and landed on the flats in front of us! This trio spent several minutes resting and preening, affording most of us the best views we have ever had of these exalted birds, and allowing us to confidently identify two of them as Great Skuas (as was at least one, if not all, of the earlier birds). The third bird of this group, however, appeared somewhat smaller and was uniformly dark, lacking

the mottling present on the other two, raising suspicions that it might have been of another form.

The pace slackened by noon, although there was still a fairly steady stream of jaegers. By 1:30 P.M., when most of us had reached our saturation point and decided to leave, the jaeger count stood at approximately eleven hundred birds, virtually all Pomarines as best we could determine; we had identified only thirteen Parasitics. The skua totals numbered ten sightings involving seventeen individuals that, because we could not be certain that some were not repeats (though we had no sense that there was any repetition), we decided to report very conservatively as twelve or more birds.

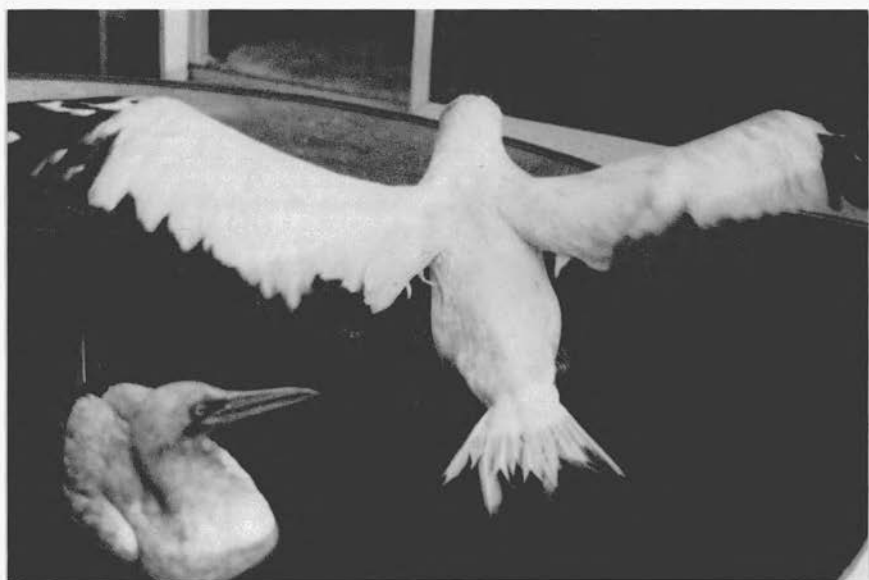
The jaeger count is one of the largest one-day totals ever recorded anywhere in the world, while twelve or more skuas is probably the largest number ever seen from land in North America. Although the stercorarids stole the show, there were other birds moving, including about 105 phalaropes (apparently both species, though only Red was positively identified), two Dovekies, one large alcid species, fifteen hundred kittiwakes, and two thousand gannets.

Meanwhile, Bob Abrams (to his eternal regret) spent the day at Sandy Neck, but amazingly in seven hours saw only six jaegers. He and others, however, did record an impressive three hundred Leach's Storm-Petrels, while we saw no storm-petrels at First Encounter Beach. How could the species composition on the same body of water at two sites only about twenty miles apart (as the jaeger flies) have been so radically different?

On Friday, November 1, skies were still overcast and the wind still northeast at moderate speeds, but apparently few birders were out. One local birder, who spent a short time at First Encounter around midday, saw several jaegers, so it seems that there may have been a fair number of birds still in the bay.

The sun finally broke through the clouds early on Saturday, November 2, and the wind was light out of the west, a pleasant day. Yet a few pelagics still lingered; in two hours at First Encounter, I and many others recorded several jaegers, several storm-petrels, and about one thousand gannets. Some of the gannets headed overland to the east, and at least three or four were seen to come in from the east and head out over the bay—most bizarre behavior for this species. The most remarkable sighting this day, however, came from Dorothy Arvidson and Becky Barber who counted some three hundred gannets on Lake Wequaquet! A couple of fishermen told them that even larger numbers had been present during the previous days. They found at least fifty birds still present on November 3.

As amazing and exciting as the jaeger and skua flight was, the most significant aspect of the week-long storm was probably the impact it had on gannets. Never before in this area, or anywhere else apparently, have numbers of gannets been found away from the immediate shoreline. Normally even one



Gannet Photos Courtesy of the Orenda Wildlife Trust

gannet on a freshwater lake would be remarkable; hundreds staggers the imagination. In addition to the birds on Lake Wequaquet, five gannets were seen on just one corner of Long Pond in Harwich early on October 31, but unfortunately no search of any other large ponds on the Cape was undertaken, so we will never know the full extent of this unprecedented phenomenon. Scores of incapacitated gannets were reported as well, including one in the Burger King parking lot in Barnstable, another on the grounds of Barnstable High School in Hyannis, and yet another that surprised a jogger on a bicycle path in Barnstable. The Orenda Wildlife Trust, a nonprofit organization that now handles virtually all wildlife rehabilitation on Cape Cod, treated seventy exhausted gannets, fifty-two of which survived to be released. Most of these birds were recovered on October 31 and November 1; they were force-fed herring and then released as quickly as possible, most within a day or two, as they apparently do not adapt well to captivity. One fulmar and two Leach's Storm-Petrels (but no jaegers) were also treated by Orenda, but none of the three survived.

Obviously, any seabird in the North Atlantic encounters severe weather regularly; gale force winds are a routine event, and hurricane force winds occur at least a few times a year. Undoubtedly, these birds have evolved some means to deal with heavy winds and seas, although just what these adaptations are remains for the most part a mystery to we littoral humans. It does appear that many (if not all) seabirds generally ride out these storms on the wing rather than in the water. Nonetheless, some of the smaller species do succumb to the elements from time to time. Dovekie "wrecks" are the best known and most frequent (historically at least) example, but phalaropes and storm-petrels are occasionally reported in numbers far ashore as well. The larger species, on the other hand, even though regularly blown close to shore, seem able (except for the odd individual or two) to avoid being blown over land. Gannets are routinely present in large and sometimes spectacular concentrations along Massachusetts' outer coast during migration, often very close to shore. They are in fact less pelagic than many seabirds. Yet, despite their tendency to hug the shore, these impressive birds are extremely rare even a short distance inland.

Why were gannets so affected by this storm? Although it was a powerful gale, the wind speeds certainly set no records. Two aspects of the tempest were, however, exceptional: its duration and its movement. Most northeasters develop to our south and move steadily up the coast, passing fairly rapidly. Consequently, gale force winds rarely last more than twenty-four hours. This storm, in sharp contrast, developed to our east and moved very slowly westward toward land, generating three days of gales and heavy seas. It also struck at a time when gannet (and apparently Pomarine Jaeger) migration was peaking.

However, several aspects of this gannet wreck suggest that other factors contributed to the bird's predicament. Displaced gannets were first noted as early as midday on the second day (October 29) of the storm, when winds (on

shore at least) had not yet exceeded fifty miles per hour. Jaegers, on the other hand, did not appear in numbers until the storm peaked on the third day (and no incapacitated jaegers were reported). It therefore seems doubtful that either the storm's strength or duration was, initially at least, the primary factor in the extreme displacement of these powerful sulids. This was also not simply a case of inexperienced youngsters being caught in their first major blow; the vast majority of the gannets, both over Cape Cod Bay and inland, were adults, and only four of the seventy incapacitated birds brought into Orenda were classified as "immature" birds.

Thus, the gannets must have been considerably stressed before the storm developed. The most likely source of stress would be a widespread food shortage. Indeed, most of the birds brought in for rehabilitation showed no signs of ill health, appearing simply exhausted and hungry; once fed, they recovered rapidly. The general paucity of fish-eating seabirds throughout the fall on Stellwagen Bank and elsewhere off southern New England is consistent with this supposition, as is the fact that in the weeks following the storm, exceptional numbers of gannets were noted off the Connecticut coast far into Long Island Sound, where they are normally quite rare. It is also very curious that the birds on Lake Wequaquet remained in this presumably inhospitable environment for so long, some of them for at least four days after the storm passed. Were they simply too weakened or disoriented to leave? Or were they able to find food on the lake, perhaps more food than they could find along the coast? (The fishermen at the lake indicated that they had seen the gannets diving and catching fish, and they expressed concern that the birds would eat all the fish!) The storm may have simply exacerbated what was already a difficult situation for gannets.

The 1991 Halloween northeaster wreaked great havoc upon a variety of coastal inhabitants, some of whom had no business being there in the first place. But for a handful of birders, fortunate enough to be in the right places at the right times, it provided some incredible, imperishable memories.

BLAIR NIKULA, when not birding, works as general manager of Cape Cod Wind and Weather Indicators in Harwich Port. He is a regional editor for *American Birds* and is particularly interested in shorebirds and Monomoy Island. Blair would like to thank Bob Abrams, Dorothy Arvidson, Dick Forster, Simon Perkins, and Wayne Petersen for sharing their sightings and insights; Chris Brothers and Diane Reynolds for information they furnished; and Cynthia Maxim and the Orenda Wildlife Trust for their information and efforts.

SKUA IDENTIFICATION

by Simon Perkins

Thus far, the only two skua species that have been positively identified in the North Atlantic are Great Skua (*Catharacta skua*) and South Polar Skua (*C. macormickii*). These two species present one of the more difficult identification problems of any species pair. The reasons relate, in part, to their oceanic habits and to the fact that even to seagoers skuas rarely offer themselves to close scrutiny. Below, I review methods by which Great and South Polar skuas may be separated at sea, and report on two recent skua sightings in New England waters.

Great Skua nests from April to August in the British Isles and Iceland and winters throughout the North Atlantic. South Polar Skua nests throughout coastal Antarctica from September to March and winters in our summer, primarily north of the equator in the Pacific and Atlantic oceans. Therefore, most skuas that occur in New England waters in winter are probably Greats, while those in summer are probably South Polars. During spring and autumn, at a time when one species is returning *to* its breeding ground as the other is returning *from* its breeding grounds, the potential is greatest for seeing either skua species, and birders may be faced with the problem of distinguishing between the two.

South Polar Skua is a polymorphic species that exhibits at least three distinct morphs, while Great Skua possesses only one known color morph. Light morph South Polar Skuas are essentially unmistakable being pale gray from the head and nape through the underparts. The darker morphs of South Polar more closely resemble the wholly brown plumage of the Great Skua, with the darkest morph being most similar. The only completely diagnostic difference between dark South Polar Skuas and Great Skuas is the appearance of their mantles (the area including the scapulars and upper back). In an adult Great Skua the mantle is variably, but always conspicuously, streaked with yellowish buff. The mantle feathers on an immature Great Skua are boldly margined with pale buff, and these pale margins impart a scalloped or mottled appearance. In comparison, the mantle of a South Polar Skua of any age or morph is relatively dark and uniform. Balch (Balch 1981) points out that in light or intermediate morph South Polars, the dark mantle contrasts with a relatively paler nape, and he claims that this contrast is diagnostic.

Other differences often cited in the literature include a more extensive area of white in the outer wing of the Great Skua, a larger average bill size in the Great, and a body plumage that tends to appear more reddish brown in the Great Skua versus a colder, gray brown in the South Polar Skua. Observers should bear in mind, however, that these three characters are subject to vagaries of light

and molt, and should be used with caution.

At least two times in the fall of 1991, birders reported Great Skua sightings in New England waters. On a boat trip to Cashes Ledge in the Gulf of Maine, September 7 and 8, 1991, one adult Great Skua was identified and two or three other dark skuas were seen. On October 31, during a coastal storm at First Encounter Beach in Eastham, three or four additional Great Skuas were identified from an estimated twelve skuas sighted that morning (see page 84 for a description of the birds seen during the coastal storm).

Many observers on the Cashes Ledge trip agreed that all the skuas sighted that day appeared wholly warm brown. But most of the skuas remained sufficiently far from our boat that conclusive identification was not possible. We observed the one identified Great Skua from two to three hundred yards through binoculars, and only then were its diagnostic mantle streaks visible.

In Eastham, the Great Skuas were also identified on the basis on mantle streaks. Birders observed these skuas from distances of 150 to 250 yards through fifteen to twenty power spotting scopes. All other skuas either were too distant or failed to provide views adequate for making positive identifications.

The most intriguing sighting in Eastham involved three skuas that landed on the sand flats at a distance of roughly 150 yards. Two of these birds showed bold mantle streaks and were thus recognizable as adult Great Skuas. The third bird, however, lacked any visible dorsal markings and appeared uniformly blackish brown. Since this individual appeared different from, yet associated closely with, the two Great Skuas, observers wondered if the bird may have been a Great Skua in immature plumage. However, the apparent lack of any dorsal markings remained puzzling. A bird at the Museum of Comparative Zoology at Harvard University, labeled as a juvenile Great Skua and collected in November, still retains very broad pale feather edges despite a moderate amount of feather wear on the mantle. Therefore, this explanation seems implausible when applied to the Eastham bird observed in October. The bird best fits the description of a dark morph South Polar Skua, but, like many skuas, it remains unidentified.

In summary, assessing the appearance of the mantle is the only definitive way of separating Great Skua from dark morph South Polar Skua. Other characters are highly variable, and they must be used with extreme caution. Great Skuas tend to be more readily identifiable at greater distances due to their relatively conspicuous mantle markings. Dark morph South Polar Skuas must be seen more closely in order to determine that an observer's failure to detect streaking, scalloping, or mottling on the mantle is actually due to a lack of such markings.

There is still much to learn about the precise status of skua species in the western North Atlantic, and as we begin to fill in the picture, birders should remain very conservative in their approach to skua identification.

Reference and Suggested Additional Reading

- Balch, L.G. 1981. Identifying Skuas in the ABA Area, *Birding* 13:190-201
Devillers, Pierre. 1977. The Skuas of the North Pacific Coast, *Auk* 94: 417-429.

SIMON PERKINS is a field ornithologist with the Massachusetts Audubon Society. He wishes to thank Richard Veit for his helpful comments, Wayne Petersen for his review of a draft of this article, and Dr. Raymond Paynter for the use of specimens in his care at the Museum of Comparative Zoology at Harvard University.

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The Audubon Society of New Hampshire (ASNH) is seeking qualified volunteers to assist with a monitoring program in the White Mountain National Forest (WMNF). The program includes surveys of habitat and breeding activity, Whip-poor-will populations, high-elevation birds, and wetlands wildlife. Prospective volunteers should be experienced in the identification of northern birds by sight and sound, in excellent physical condition, and available during June and early July. For further information, please contact: WMNF Surveys, ASNH Wildlife Department, P. O. Box 528-B, Concord, NH 03301. Telephone: 603-224-9909.

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BOOK REVIEW: *BIRDS OF PREY IN CONNECTICUT*

by H. Christian Floyd

Birds of Prey in Connecticut: A Guide to Finding and Understanding Hawks, Eagles, Vultures and Owls by Gene Billings, illustrated by Julie Zickefoose. 1990. Torrington, Connecticut: Rainbow Press. 461 pages.

Although the author states that "this guide is written for amateur birders who live in Connecticut or who visit the state," one would not have to be concerned with Connecticut at all to find this book worthwhile. The highly readable text contains much general information that should be of interest to anyone for whom finding and understanding raptors has appeal. Raptor enthusiasts with particular interest in Connecticut will be additionally rewarded with both general information about the distribution of the state's raptors and a very comprehensive guide to the sites where they can be observed.

The guide is intelligently organized into major parts that begin from the most general points of view and focus finally on the species, habitats, and sites of Connecticut. Part 1 (thirty pages) is a discussion of the general ecological issues associated with raptors, with separate sections on predation, habitat, territoriality, and conservation. Particularly interesting in this part are the discussions of prey species and populations, and of how long-term habitat changes in Connecticut have affected each raptor species.

Part 2 (ninety-one pages) focuses on the general characteristics of the hawks, eagles, and vultures (the order Falconiformes). Topics include physical characteristics, hunting techniques, diet, flight, migration, and nesting. New England hawkwatchers will be pleased by the excellent extensive (forty-four pages) treatment of flight and migration that gives clear explanations of the general phenomena involved in hawk migration and then interprets those explanations specifically for the Connecticut geography. A list of 108 hawk watching locations in Connecticut is provided, organized by county, with detailed descriptions and directions easily found in Part 5.

Part 3 (forty-three pages) similarly focuses on the owls (the order Strigiformes). The same general topics are covered, but with appropriately different emphases. Migration is deemphasized because many owl species do not migrate and so little is known about the migratory behavior of those that do. On the other hand, the fascinating physical characteristics of owls are concisely but comprehensively discussed. Only the true owl expert will not learn something new in this section. This reviewer learned another reason why (in the sense of adaptive correlation) many owls have feathered tarsi and toes whereas many hawks do not. In swallowing many prey items whole, owls avoid much of the messiness around their feet occasioned by ripping prey to pieces as hawks do. The final section of this part, covering strategies for finding owls, will be

useful to many birders.

Part 4 (seventy-six pages) comprises species accounts for the twenty-four raptor species that occur regularly in Connecticut, plus brief summaries of the occurrences of seven additional species characterized as accidental. Topics covered in the accounts include range, migration, habitat, hunting behavior, diet, nesting behavior for Connecticut breeders, population both in Connecticut and generally, and suggested strategies and Connecticut locations for finding the species at various times of the year. Conveniently the locations are identified and ordered just as they are in the following Part 5.

Part 5 (154 pages) contains brief write-ups of 218 Connecticut locations where raptors may be found. These are grouped by county and then alphabetically by town within each county. Each write-up consists of a general description of the location, a list of the raptor species to look for, and directions on how to get there. The descriptions are variable and generally interesting, and cover such topics as geology, habitat, local abundance of raptors, management, access, facilities, and other public uses of the site. The species lists show occurrence for each of the four seasons. The directions are very clear and precise with road distances stated to the tenth of a mile. Where appropriate, separate directions are given for each of the major routes of approach. In addition, each county section in Part 5 begins with an overview of general information on the county.

Part 6 (thirty-two pages) contains a variety of additional general information for birders: comparisons of the major field guides, focusing on those specializing on raptors; lists of other books on raptors, ornithology, bird finding, and sites and trails in Connecticut; lists of maps useful for birding in Connecticut; lists of local, state, and national birding organizations, with extra attention to those specializing in raptors; discussions of significant bird censusing activities in the state; descriptions of rare bird alert services for Connecticut; and advice on birding optical equipment.

The sixteen sensitive drawings by Julie Zickefoose are a big plus. Accompanying each drawing is her evocative commentary, such as the one for the Red-tailed Hawk that appears on the cover: "What sky is complete without one?"

A significant disappointment in the guide is the minimal information presented in the maps. More elaborate maps would have been a valuable complement to the text in several contexts. Maps 1 and 2, which represent the fall migration routes of raptors over New England and Connecticut, respectively, do so in relation to coastline and political boundaries. How interesting it would have been to see these routes in relation to topographic features such as ridges and rivers! Instead the reader who does not have an image of the Connecticut River in his mind's eye will be puzzled by the hook in the most easterly of the north-south routes shown in Map 2. The text should be

faulted also, because it offers no explicit discussion whatsoever of the routes depicted in these maps. Likewise, a map showing the four migration data regions identified in Table 4—shore, east, west, and southwest—and the reporting sites contained in each region would have helped make meaningful this table's breakdown of species totals by region. Furthermore, the regions are not defined in the text. An enlightening complement to the habitat section of Part 1 would have been a map of Connecticut depicting the five ecological regions described in that section. The maps of the eight Connecticut counties in Part 5 have the barest utility. They show the treated locations in relation to town boundaries.

The text has some additional shortcomings. Its scientific utility is diminished by the absence of supporting references for the many interesting facts presented. There are numerous references to unidentified studies, tests, and measurements. For example, on page 53, we read, "Several studies indicate that the rate of [hunting] success varies quite widely among raptor species, and depends on a number of variables, principally the kind of prey and the method of attack." The scientifically oriented reader might be motivated to look up these studies, but they are not identified. Other examples are the nesting data provided without sources in Tables 7 and 8 for diurnal raptors and in Table 12 for owls; one would like to know the geographic extent from which the data were taken.

While the above shortcomings make the book less authoritative than it might have been, they probably do not diminish its value for most birders. It provides much enjoyable reading and much useful reference information. It is highly recommended to the New England raptor enthusiast, or to anyone planning to look for birds in Connecticut.

H. CHRISTIAN FLOYD has been a member of the *Bird Observer* staff for over ten years and has served as corporate clerk for the past seven years. A raptor enthusiast, Chris enjoys watching the Massachusetts hawk migration at Wachusett Mountain and at Plum Island. He has some familiarity with Connecticut from his student days at Yale, but these were unfortunately before the discovery of the spectacular migration at Lighthouse Point in New Haven.

FIELD NOTES FROM HERE AND THERE _____

TERRITORIAL BLUE GROSBEAK AT BROAD MEADOW BROOK

On May 23, 1991, Francis McMenemy found a singing male Blue Grosbeak at Broad Meadow Brook Wildlife Sanctuary in Worcester. Many birders saw the bird until it was last seen on July 30. The grosbeak was a first-year bird, with the brown plumage on the upper back, nape, and wings.

I observed the Blue Grosbeak for more than thirteen hours on twelve different days. The bird actively defended a territory consisting of a large overgrown meadow with tall deciduous trees on one side and a brook with thick bushes and medium deciduous trees on the other side. It vigorously chased a male Indigo Bunting for several hours on several occasions: June 7, 24, and 25, and July 10, 14, and 17 (June 7 and July 10 observations by McMenemy). It sang often, primarily from high perches, but the singing was seldom heard after mid-July. Its characteristic chip note often identified its presence when hidden in the tall grass or bushes.

The grosbeak fed primarily on red raspberries (see photograph) in late June and early July. It also ate weed seeds occasionally during this time period, and more often after mid-July. It was perched on black raspberry and other berry bushes in late July, but I did not see it eating these berries.

This is the seventh record of a Blue Grosbeak in Worcester County in the sixty years that the Forbush Bird Club has published records in *The Chickadee*. It is the first record of a territorial bird, as all other reports were one day sightings. Four records occurred in May (1932, 1948, 1969, and 1982), and the other two in September (1960 and 1980).

Robert Bradbury, Worcester, Massachusetts



*Blue Grosbeak
Worcester, MA
June 18, 1991
Photo by Robert Bradbury*

Townsend's Warbler
 Falmouth, MA
 December 1, 1991
 Photo by Robert Bradbury



BIRD SIGHTINGS

NOVEMBER/ DECEMBER 1991

SUMMARY

by Marjorie W. Rines and Robert H. Stymeist

November was a dreary month, with 40 percent of possible sunshine and only seven clear days all month. The temperature averaged 45.2 degrees, normal for the month. The first half of November averaged 4 degrees below normal, but warm weather set in, reaching 68 degrees on the 19th and 73 degrees on the 20th, both near-record levels. Rainfall totaled 4.06 inches, with measurable amounts falling on ten days. Strong northeast winds on November 9-11 produced a good seabird flight.

December was mild and dry with temperatures averaging 36.0 degrees, 2.3 degrees above normal. The high mark was 64 degrees on December 1, with above 60 degree readings on the 9th and 13th. Rainfall totaled 2.58 inches, 1.9 inches below normal, with measurable amounts on twelve days. Snowfall totaled 5.8 inches, 1.6 inches below normal. It seemed the worst weather occurred on Christmas Bird Count (CBC) weekends. On December 14 there was heavy fog, sleet, and rain. Strong winds on the 15th peaked at 66 mph. Sleet and high westerly winds occurred on the 21st, and December 29 was foggy.

In the reports that follow sightings from the Christmas Bird Counts (CBC) are for the most part not included. A full tally of the CBC results appears elsewhere in this issue. Results of the annual Cape Cod Bird Club's Lake and Pond Waterfowl Survey (CCBC-LPWS) are included in the following summary. Now in its ninth year, this survey covered 317 ponds, recording 10,678 birds of twenty-seven species. R. H. S.

LOONS THROUGH WATERFOWL

Three days of strong northeast winds resulted in a good showing of storm-related birds on November 11. At First Encounter Beach in Eastham, observers tallied over 145 Northern Fulmars, 22 Leach's Storm-Petrels, and 3000 Northern Gannets, along with hundreds of migrating Red-throated Loons, Oldsquaws, eiders and scoters. A very late Wilson's Storm-Petrel was carefully noted at First Encounter on November 2.

After a summer with few Least Bittern reports, a very late individual at Broadmoor Sanctuary in South Natick was noteworthy. Other late herons included a Cattle Egret in Edgartown, and Glossy Ibises at Plum Island and at Belle Isle Marsh in East Boston.

The **Greater White-fronted Goose**, first found on October 20, continued in the Concord area through November, and another was present from November 30 through the end of December along the Acushnet River in New Bedford. An adult **Tundra Swan** was found on the Vineyard in mid-November and was seen again on the CBC. A **Tufted Duck** found in early December remained in a Brewster pond through the end of the year. A November 14 estimate of 12,000 White-winged Scoters may be a high record for Essex County, and a Common Eider at Wachusett Reservoir in Clinton was a fourth record for Worcester County. R. H. S.

Red-throated Loon			
thr	Edgartown, P.I.	250 max 11/20, 12 max 11/16	V. Laux, v. o.
11/11	Eastham, Barnstable	300-400, 500+	S. Perkins#, P. Trimble
11/30	Situata, Rockport	65, 40	J. Hoye, BBC (S. Bolton)
Common Loon			
thr, 11/2	P.I., Rockport	54 max 11/6, 35+ v. o.,	M. Lynch#
11/2, 11/3	Ipswich, Lakeville	22, 5	BBC (J. Berry), W. Petersen
11/9, 11/11	Quabbin (G37), Barnstable (S.N.)	9, 30	M. Lynch#, P. Trimble
11/13, 11/30	Braintree, Nantucket Sound	2, 55	R. Abrams#, J. Papale
Pied-billed Grebe			
11/1, 11/4	GMNWR, Lakeville	4, 6	BBC (J. Center), M. Boucher
11/9, 11/13	Arlington, Braintree	4, 6	L. Taylor, R. Abrams#
11/17, 12/7-8	Nantucket, Cape Cod	6, 60	J. Papale, CCBC-LPWS
Horned Grebe			
11/16, 11/28	Lakeville, Quabbin (G37)	26, 22	BBC (D. Davis), S. Perkins
11/24	Boston Harbor	169	TASL (M. Hall)

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Red-necked Grebe				
11/2, 11/10	Gloucester (E.P.), Arlington	5, 5	M. Lynch#, L. Taylor	
11/23, 12/8	N. Scituate, Winthrop	6, 15	W. Petersen, BBC (R. Stymeist)	
12/23, 12/26	P.I., Hull	27, 157	W. Drew#, R. Abrams	
Northern Fulmar				
11/11, 11/23	Eastham, Rockport	145 (5 dk), 2	S. Perkins#, H. Wiggin#	
Cory's Shearwater				
11/9	Nantucket Sound	10	G. d'Entremont#	
Greater Shearwater				
11/2, 11/5	Rockport (A.P.), P'town (R.P.)	1, 3	M. Rines#, K. Jones#	
11/19, 11/30	Stellwagen, Rockport	3-400, 1	S. Highley, BBC (S. Bolton)	
Wilson's Storm-Petrel				
11/2	Eastham (F.E.)	1	B. Nikula	
Leach's Storm-Petrel				
11/2, 11/11, 11/12	Eastham	3, 22, 6	B. Nikula#, S. Perkins#, K. Jones#	
11/10, 11/11	Barnstable (S.N.)	3, 55	B. Nikula#, S. Perkins#	
storm-petrel species				
11/2, 11/12	Eastham (F.E.)	2+, 3+	B. Nikula#	
Northern Gannet				
11/3, 11/11	Boston Harbor, Eastham (F.E.)	5, 3000	R. Donovan, S. Perkins	
11/11	Barnstable (S.N.), Rockport	1200+, 150	P. Trimble, J. Brown#	
11/12, 11/15	Wellfleet, Westport	200, 500	K. Jones, R. Abrams	
12/7, 12/20	Sandwich, N. Truro	50, 150	G. d'Entremont, K. Jones	
Great Cormorant				
11/29, 11/30	Lakeville, Rockport	4 imm, 120	W. Petersen, BBC (S. Bolton)	
Double-crested Cormorant				
11/16, 12/1	Lakeville, Falmouth	7, 25	BBC (D. Davis), G. d'Entremont#	
12/3, 12/8	Newton, Cape Ann	1, 2	J. Hepburn, J. Berry	
American Bittern				
11/1-12/4, 11/3	Eastham, Salisbury	4 max 11/10, 1	v. o., R. Masturzo	
11/11; 11/3-24, 12/23	Boston (Logan); P.I.	2; 1 or 2, 1	N. Smith; v. o.	
Least Bittern				
11/2-3	S. Natick	1	fide E. Landre	
Great Blue Heron				
11/1-30	Marlboro, Saugus	5 max, 7 max	R. Graefe, J. Berry	
11/1-30	P.I., S. Dart. (Allens Pd)	7 max, 8 max	W. Drew#, LCES (J. Hill)	
11/2, 11/24	Ipswich, Boston Harbor	8, 31	BBC (J. Berry), TASL (M. Hall)	
12/7, 12/8	Eastham (F.H.), Westport	25, 11	G. d'Entremont, M. Boucher	
Cattle Egret				
11/6	Edgartown	1	V. Laux	
Green-backed Heron				
11/1	Wayland	1	S. Arena	
Black-crowned Night-Heron				
11/16, 12/1-31	Nantucket, Boston	3, 3 max 12/8	J. Papale, K. Hudson	
Glossy Ibis				
11/6, 11/11	E. Boston (B.I.), P.I.	1, 1	T. Aversa, J. Murray	
Tundra Swan				
11/18-21	Chilmark	1 ad	V. Laux	
Mute Swan				
12/7-8, 12/29	Cape Cod, Wareham	261, 23	CCBC-LPWS, M. Maurer	
Greater White-fronted Goose				
11/1-12/1	Lincoln/Concord	1	v. o.	
11/30-12/31	New Bedford	1	D. Zimmerlin	
Snow Goose				
11/1-12/7, 11/1	P.I., Lincoln	46 max 11/2, 2	v. o., BBC (J. Center)	
12/1-31, 12/23	Essex, Middleboro	1, 4	T. Young, K. Anderson	
Brant				
11/24	Boston Harbor	1959	TASL (M. Hall)	
11/24, 11/30	Eastham (F.E.), Bourne	1500, 95	R. Abrams#, S. Arena	
Canada Goose				
11/1-30, 11/20	P.I., GMNWR	500 max 11/29, 600	W. Drew# + v. o., E. Taylor	
12/7-8	Cape Cod	659	CCBC-LPWS	
Wood Duck				
11/1, 11/6	GMNWR, Stoneham	2, 3	BBC (J. Center), T. Aversa	
11/18-12/2, 12/8	Boston (F.Pk), Westport	2 m, 1 f	T. Aversa, M. Boucher	
12/30, 31	Rowley, Arlington	1 m, 2 m	M. Rines	
Green-winged Teal				
11/1-30	P.I., Arlington Res.	250 max 11/6, 19	max 11/17 v. o.	
11/5, 11/10	Nantucket, Quabbin (G41)	13, 6	J. Papale, M. Lynch#	
11/14, 12/7-8	S. Monomoy, Cape Cod	25, 11	B. Nikula, CCBC-LPWS	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
American Black Duck				
thr, 11/24	P.I., Boston Harbor	1550 max, 1282	v. o., TASL (M. Hall)	
12/7-8, 12/8	Cape Cod, Westport	1047, 1477	CCBC-LPWS, M. Boucher	
Northern Pintail				
thr, 11/1	P.I., GMNWR	60 max 11/6, 6	W. Drew# + v. o., BBC (J. Center)	
11/14, 12/8	S. Monomoy, Westport	15, 25	B. Nikula, M. Boucher	
12/7-8	Cape Cod	32	CCBC-LPWS	
Blue-winged Teal				
11/1, 11/12	GMNWR, Nantucket	1, 4 f	BBC (J. Center), J. Papale	
Northern Shoveler				
11/3-12/12, 11/6	Arlington Res., P.I.	1 f, 4	L. Taylor, W. Drew# + v. o.	
11/6, 14	E. Boston, S. Monomoy	2, 1 f	T. Aversa, B. Nikula	
11/30-12/31	Boston (Fenway)	1 or 2	K. Hudson + v. o.	
Gadwall				
11/3, 11/14	Ipswich, S. Monomoy	80+, 60	J. Berry, B. Nikula	
11/23	DWWS, P.I.	3, 15	G. d'Entremont#, W. Drew#	
12/1-31, 12/7-8	Boston, Cape Cod	1 f, 81	K. Hudson, CCBC-LPWS	
Eurasian Wigeon				
11/30	S. Monomoy	3 imm	W. Harrington#	
12/1-31, 12/7	Chatham, Sandwich	3 m, 1 m	R. Hall#, F. Caruso	
12/8, 12/27	Provincetown, Nantucket	1 m, 2 m	K. Jones, K. Jones#	
American Wigeon				
11/2, 11/3	Ipswich, Nantucket	55, 12	BBC (J. Berry), J. Papale	
11/10, 11/14	W. Newbury, S. Monomoy	19, 25	BBC (S. Charette), B. Nikula	
12/7, 12/7-8	Arlington, Cape Cod	64, 92	L. Taylor, CCBC-LPWS	
Canvasback				
11/17, 11/18	Nantucket, Cambridge (F.P.)	40, 220	J. Papale, J. Barton	
12/7-8, 12/19	Cape Cod, Lakeville	141, 300	CCBC-LPWS, K. Anderson	
12/21, 12/29	Brewster, Wareham	330, 159	B. Nikula, M. Maurer	
Redhead				
11/2-3	Cambridge (F.P.)	1 f or imm	R. Bradbury + v. o.	
11/17, 27	Nantucket, Plymouth	2 m, 2	J. Papale, T. Aversa	
12/7-8	Cape Cod	6	CCBC-LPWS	
Ring-necked Duck				
11/1, 11/3	Marlboro, W. Newbury	390, 500	R. Graefe, BBC (D. + D. Oliver)	
11/10, 11/14	Cambridge, S. Monomoy	121, 95	J. Hepburn#, B. Nikula	
11/28, 12/7-8	Newton, Cape Cod	40+, 272	O. Komar, CCBC-LPWS	
Tufted Duck				
12/7-31	Brewster	1 m	R. Comeau# + v. o.	
Greater Scaup				
11/3, 11/24	Nantucket, Boston Harbor	50+, 1059	J. Papale, TASL (M. Hall)	
12/3, 12/8	Falmouth, Brewster	940, 20	T. Aversa, M. Lynch#	
12/8, 12/16	Westport, Lakeville	89, 5	M. Boucher, K. Ryan#	
Lesser Scaup				
11/3	W. Newbury, Lakeville	1, 200+	BBC (D. + D. Oliver), W. Petersen#	
11/15, 11/29	Westport, Falmouth	15, 5+	R. Abrams, G. d'Entremont	
11/30, 12/23	Plymouth, Brewster	4, 1 m	S. Arena, D. Brown#	
Common Eider				
11/2	Rockport, Wachusett Res.	600+, 1 ad m	M. Lynch#, E. Nielsen#	
11/9, 11/11	Nantucket, Barnstable	3000, 800	G. d'Entremont, P. Trimble	
11/11, 11/24	Westport, Boston Harbor	184, 9497	M. Boucher, TASL (M. Hall)	
12/8, 12/24	Wellfleet, P.I.	250, 110	J. Hepburn#, T. Young	
King Eider				
11/17, 11/23	N. Scituate, Rockport	3 ad m, 1 f	W. Petersen#, H. Wiggin#	
11/27, 12/2-31	Plymouth, Revere	1 m, 1 m	T. Aversa, R. Stymecist# + v. o.	
Harlequin Duck				
thr, 11/4	Rockport, P'town (R.P.)	7 max 11/30, 1 f	v. o., K. Jones	
11/15-12/8	Nantucket	3 max	P. Vennema	
11/16-23, 11/17	Wellfleet, N. Scituate	4 max, 6	K. Jones, W. Petersen#	
11/27, 12/9, 12/10	Plymouth, Hull, M. V.	1 m, 1 m, 22	T. Aversa, R. Abrams, V. Laux	
Oldsquaw				
11/11	Wakefield, Barnstable (S.N.)	27, 650	BBC (D. Williams), P. Trimble	
11/11, 12/31	Rockport, Nantucket	100, 150,000	J. Brown#, E. Andrews	
Black Scoter				
11/6, 11/9	P.I., Nantucket Sound	65, 50	W. Drew#, G. d'Entremont#	
11/11	Rockport, Barnstable (S.N.)	30, 200	J. Brown#, P. Trimble	
Surf Scoter				
11/2, 11/11	Rockport, Barnstable	30+, 500	M. Lynch#, P. Trimble	
11/26, 11/30	P.I., Nantucket Sound	15, 600	W. Drew#, J. Papale	
White-winged Scoter				
11/9, 11/11	Quabbin (G37), Barnstable (S.N.)	1, 350	M. Lynch#, P. Trimble	
11/14, 11/30	Nahant, Nantucket Sound	15,000, 2400	R. Forster, J. Papale	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Common Goldeneye				
11/8, 11/9	Brewster, Quabbin (G37)	30+, 41	M. Lynch#	
11/24, 12/7-8	Boston Harbor, Cape Cod	618, 338	TASL (M. Hall), CCBC-LPWS	
12/23, 12/27	P.I., Nantucket	128, 600	W. Drew#, K. Jones#	
Barrow's Goldeneye				
11/30, 12/26	Hull, Marshfield	pr, pr	R. Abrams, S. Arena#	
Bufflehead				
11/12, 11/24	Nantucket, Boston Harbor	250, 1916	J. Papale, TASL (M. Hall)	
11/14, 12/7-8	Lakeville, Cape Cod	147, 2173	BBC (D. Davis), CCBC-LPWS	
12/8, 12/12	Westport, Newburyport	102, 50	M. Boucher, J. Brown#	
Hooded Merganser				
thr, 11/1-12/12	Winchester, Arlington	73 max, 53 max	M. Rines, L. Taylor	
11/9, 11/10-12/16	Quabbin (G37), Newton	22, 32 max	M. Lynch#, J. Hepburn#	
11/14, 11/17	S. Monomoy, Lynnfield	15, 37	B. Nikula, P. + F. Vale	
12/7-8, 12/11	Cape Cod, Nantucket	567, 21	CCBC-LPWS, E. Andrews#	
Common Merganser				
11/11, 11/30	Wakefield, Plymouth	79, 130+	BBC (D. Williams), S. Arena#	
12/5, 12/7-8	Marlboro, Cape Cod	24, 515	R. Graefe, CCBC-LPWS	
12/8, 12/16-21	Lakeville, Winchester	275, 43 max	K. Anderson, M. Rines	
Red-breasted Merganser				
thr, 11/17	P.I., Nantucket	140 max 11/20, 250	W. Drew#, J. Papale	
11/24, 12/7	Boston Harbor, Cape Ann	2378, 20	TASL (M. Hall), J. Brown#	
Ruddy Duck				
11/1-30	W. Newbury, Arlington Res.	225 max, 73 max v. o.		
11/3, 11/10	Lakeville, Cambridge (F.P.)	20, 41	W. Petersen, J. Hepburn#	
11/13, 11/14	Braintree, S. Monomoy	300, 160	R. Abrams#, B. Nikula	
11/15, 11/23	Nantucket, Chilmark	12, 80	J. Papale, V. Laux	

RAPTORS THROUGH ALCIDS

Consistent with the last few years, Ospreys and Turkey Vultures lingered into December, and there were widespread reports of both Sharp-shinned and Cooper's hawks. A pair of Red-shouldered Hawks visited a feeder in Lincoln, where the owner provided a buffet of chicken and table scraps. Single Golden Eagles were observed at Quabbin and over Wachusett Mountain. A grey adult Gyrfalcon was present at Plum Island on November 17, seen by over seventy birders from a canceled pelagic trip. A total of 28 reports of Peregrine Falcons is a very encouraging sign.

A Clapper Rail was noted several times in November from Fort Hill in Eastham. Only one Common Moorhen was found in this period, a juvenile on Nantucket. An immature Sandhill Crane was seen in late December, probably the same individual present in Rhode Island earlier in the month.

Among the less typical lingering shorebirds were Semipalmated Plover and Lesser Golden-Plover. A Baird's Sandpiper was well described from Newburyport on the very late date of November 17. Large flocks of Common Snipes were counted in West Newbury and Middleboro early in November.

Two dead Great Skuas were picked up on area beaches, probably victims of the Halloween storm, and a live skua was seen at Sandy Neck during the November 11 storm. During that storm, over 300 Pomarine and at least 3 Parasitic jaegers were tallied at First Encounter Beach. There was also an impressive show of kittiwakes, but surprisingly few alcids. An adult Franklin's Gull was found in Chatham, and a few Laughing Gulls lingered into December. As many as 14 Common Black-headed Gulls were found at their Winthrop stronghold, where a Little Gull was also present. There were 4 reports of Lesser Black-backed Gulls, and only one report of a Glaucous Gull. On December 28, a Common Murre was carefully described from Salisbury, and as many as 35 Dovekies were tallied at Andrews Point in Rockport. R. H. S.

Turkey Vulture				
11/6, 11/20	S. Dartmouth, Milton	30, 4	J. Hill, T. Aversa#	
11/21, 12/12; 12/8	Randolph; Westport	5, 7; 6	N. Smith; M. Boucher	
Osprey				
11/16, 11/19	Mashpee, Lexington	1, 1	P. Trimble, W. Petersen	
11/20, 11/25	Winchester, Lakeville	1, 1	M. Rines, M. Boucher	
12/8, 12/23	N. Monomoy, Chatham	1, 1	B. Nikula, G. d'Entremont	
Bald Eagle				
11/2, 3	Rockport (A.P.), Amesbury	1 imm, 2	M. Lynch#, T. Young	
11/6, 11/9	P.I., Quabbin (G37)	1, 3 ad + 2 imm	W. Drew#, M. Lynch#	
11/14, 11/20	Eastham, Martha's Vineyard	1 imm, 1	K. Jones, V. Laux	
12/11, 12/16	Middleton, Lakeville	1 ad, 1	J. Toomey, K. Ryan#	
12/19, 12/23	Wakefield, Brewster	1 ad, 1 imm	J. Young, G. d'Entremont#	
Northern Harrier				
11/14, 11/19	S. Monomoy, Sandwich	4, 2	B. Nikula, P. Trimble	
12/23, 12/28	P.I., Middleboro	5, 4	T. Young, R. Abrams	
12/29, 30	E. Orleans, W. Barnstable	4, 4	A.+ E. Williams, P. Trimble	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Sharp-shinned Hawk				
Reports of 33 individuals from 27 locations.				
Cooper's Hawk				
Reports of 15 individuals from 12 locations.				
Northern Goshawk				
11/3-12/21, 11/3	Boxford, E. Middleboro	1, 1	J. Brown#, K. Anderson	
11/7-11, 11/19-30	W. Wareham, Sandwich	1 ad, 1 or 2	M. Maurer#, P. Trimble	
11/26, 11/27	Hubbardston, Halifax	1 ad, 1 ad	T. Aversa#, T. Aversa	
Red-shouldered Hawk				
thr, 11/9	Lincoln, Wachusett Mt.	1 or 2, 3	v. o., P. Roberts	
11/13; 11/16, 12/28	Braintree; Middleboro	1 imm; 1, 1	R. Abrams#; v. o.	
11/28, 12/31	Wayland, Worcester	1, 1	S. Arena, R. Bradbury	
Rough-legged Hawk				
thr	P.I., Middleboro/Halifax	1 or 2, 1 or 2	v. o.	
11/2, 11/4	Ipswich, Milton	2 lt, 1 lt	BBC (J. Berry), N. Smith	
11/9, 11/27	Wachusett Mt., DWWS	1 lt, 2 dk	P. Roberts, T. Aversa	
12/28	Salisbury	1	T. Aversa	
Golden Eagle				
11/9, 11/30	Wachusett Mt., Quabbin (G37)	1 ad, 1	P. Roberts, R. Bradbury	
Merlin				
Reports of 16 individuals from 14 locations.				
Peregrine Falcon				
Reports of 28 individuals from 18 locations.				
Gyr Falcon (details submitted)				
11/17, 12/23	P.I.	1 ad (grey), 1	R. Donovan + v. o., T. Young#	
12/10	Boston (Logan)	1	N. Smith#	
Ruffed Grouse				
11/10, 11/13	Quabbin (G41), Braintree	5, 2	M. Lynch#, R. Abrams#	
11/17, 11/25	Newburyport, Lakeville	2 or 3, 2	J. Center, M. Boucher	
11/30, 12/28	Quabbin (G37), N. Dartmouth	3, 2	R. Bradbury, M. Boucher	
Wild Turkey				
11/28, 12/22	Petersham, Barre	24, 6	S. Perkins#, M. Lynch#	
Northern Bobwhite				
11/28	N. Easton	5	S. Arena#	
12/7, 12/28	Millis, Dartmouth (DLSP)	8, 8	P. Iarrobino, M. Boucher	
Clapper Rail				
11/3, 11/11, 11/16	Eastham (F.H.)	1	K. Jones + v. o.	
Virginia Rail				
11/15-22, 12/8	Nantucket	2-5, 1	J. Papale, E. Andrews	
Sora				
11/21	Marshfield (DWWS)	1	D. Ludlow	
Common Moorhen				
11/3	Nantucket	1 juv	J. Papale	
American Coot				
11/1-12/12, 11/1-30	Arlington, W. Newbury	54 max, 31 max	v. o.	
11/1, 11/3	GMNWR, Nantucket	30, 12+	BBC (J. Center), J. Papale	
11/3, 11/13	Lakeville, Braintree	12, 45	W. Petersen, R. Abrams#	
11/14, 12/7-9	S. Monomoy, Cape Cod	15, 29	B. Nikula, CCBC-LPWS	
Sandhill Crane				
12/8-30	S. Dartmouth	1 imm	M. Boucher + v. o.	
Black-bellied Plover				
11/3, 11/3-22	Ipswich, P.I.	130+, 23 max	J. Berry, v. o.	
11/4, 11/5	Nantucket, Halifax	46, 11	J. Papale, K. Anderson	
11/6, 11/16	Winthrop, N. Monomoy	50+, 170	T. Aversa, B. Nikula	
12/1, 12/8	Revere, Wellfleet	10+ imm, 6	J. Berry, J. Hepburn#	
Lesser Golden-Plover				
11/1, 11/1-8	Halifax, Edgartown	1 juv, 1	S. Perkins#, V. Laux	
11/7-22, 11/11	Newbury/P.I., Boston (Logan)	1 or 2; 17	v. o.; N. Smith	
Semipalmated Plover				
11/3, 11/14	Nahant, Chatham	2, 2	G. Wood, B. Nikula	
Killdeer				
11/15	Westport, Newbury	20, 12	R. Abrams, M. Rines	
12/5, 12/31	Marlboro, Rockport	3, 1	R. Graefe, M. Rines#	
American Oystercatcher				
11/1-26, 11/17	Edgartown, Nantucket	2, 1	V. Laux, J. Papale	
Greater Yellowlegs				
11/20, 11/24	P.I., Eastham (F.E.)	2, 2	W. Drew#, R. Abrams#	
11/13, 11/23	Squantum, Salisbury	20, 1	R. Abrams, A. + B. Delorey	
Lesser Yellowlegs				
11/6, 11/20	P.I.	5, 2	W. Drew#	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Hudsonian Godwit				
11/3	Newburyport, Salisbury	2, 9	R. Masturzo, BBC (D. + D. Oliver)	
11/5-6, 11/7	Edgartown, Newbury	1, 3	V. Laux, R. Forster	
Ruddy Turnstone				
11/2, 11/6	Nantucket, Winthrop	19, 75	S. Arena, T. Aversa	
11/23, 12/19	N. Scituate, Scituate	50, 53	W. Petersen#, R. Abrams#	
Red Knot				
11/16, 11/23	N. Monomoy, N. Scituate	70, 40	B. Nikula, W. Petersen#	
11/30, 12/19	N. Scituate, Scituate	3, 16	J. Hoye, R. Abrams#	
Sanderling				
11/16, 11/20	N. Monomoy, P.I.	350, 60	B. Nikula, W. Drew#	
12/1, 12/9	Revere, Nahant	170+, 245	J. Berry, G. Wood	
White-rumped Sandpiper				
11/3, 11/7	Salisbury, Newburyport	2, 3	BBC (D. + D. Oliver), R. Forster	
11/11, 11/16	Edgartown, N. Monomoy	1, 5+	V. Laux, B. Nikula	
11/20, 11/24	P.I., Eastham (F.E.)	2, 1	W. Drew#, R. Abrams#	
Baird's Sandpiper (details submitted to MARC)				
11/17	Newburyport	1 juv	T. Leukering	
Pectoral Sandpiper				
11/3, 11/12	P.I., Middleboro	1, 2	R. Masturzo, T. Aversa	
11/12, 11/24	Nantucket, Eastham (F.E.)	3, 2 juv	J. Papale, R. Abrams#	
Purple Sandpiper				
11/23, 12/7	N. Scituate, Eastham	900, 225	W. Petersen, K. Jones	
12/8	Winthrop	60	BBC (R. Stymeist)	
Dunlin				
11/3, 11/16	Ipswich, Newburyport	300, 426	J. Berry, J. Brown#	
11/16, 11/23	N. Monomoy, Duxbury	1000, 2000+	B. Nikula, W. Petersen#	
11/24	Eastham (F.E.), Boston Harbor	150, 313	R. Abrams#, TASL (M. Hall)	
Long-billed Dowitcher				
11/2, 11/24; 11/3	Eastham; P.I.	4, 2; 11	v. o.; BBC (D. + D. Oliver)	
Common Snipe				
11/3, 11/4	W. Newbury, Middleboro	60, 45	BBC (D. + D. Oliver), S Perkins#	
11/7, 12/7	Nantucket, Sandwich	4, 5	J. Papale, P. Trimble	
American Woodcock				
11/2, 11/23	Nantucket, N. Middleboro	1, 4	J. Papale#, K. Holmes	
12/8	Boston (F.Pk), Eastham (F.H.)	1, 1	T. Aversa#, K. Jones	
Red-necked Phalarope				
11/3	Barnstable (S.N.)	1	T. Prince	
Red Phalarope				
11/1, 11/11	Eastham, Barnstable (S.N.)	50, 3	K. Jones, P. Trimble	
Great Skua				
mid-Nov., 11/21	Duxbury, Nantucket	1 dead, 1 dead	fide D. Clapp, C. Andrews	
skua species				
11/11	Barnstable	1	K. Jones	
Pomarine Jaeger				
11/11, 11/12	Eastham (F.E.)	300+, 7	S. Perkins#, K. Jones#	
11/11, 11/19	Rockport, Stellwagen Bank	1 or 2, 12	J. Brown#, S. Highley	
11/29, 11/30	Sandwich, S. Monomoy	1 imm, 1	G. d'Entremont, V. Laux#	
Parasitic Jaeger				
11/11	Eastham (F.E.), Rockport	3, 1 or 2	K. Jones, J. Brown#	
11/19	Stellwagen Bank	18	S. Highley	
jaeger species				
11/11, 11/12	Eastham (F.E.)	55, 2	K. Jones#, B. Nikula#	
11/11	Barnstable (S.N.), Rockport	24, 12	A. Strauss, J. Brown#	
11/19, 11/24	Stellwagen Bank, P.I.	20, 1	S. Highley, S. Perkins	
Franklin's Gull				
11/2	Chatham	1 ad	R. Andrews	
Laughing Gull				
11/1-26, 11/15	Vineyard Haven, Westport	6, 2	V. Laux, R. Abrams	
11/19, 12/1	Sandwich, Winthrop	2, 1 ad	G. d'Entremont, J. Berry	
Little Gull				
11/8-10, 11/24	N. Scituate, Winthrop	1 imm, 1	R. Abrams + v. o., P. Vale#	
Common Black-headed Gull				
11/5, 11/6	Provincetown, E. Boston (B.I.)	1 1W, 1 ad	K. Jones, T. Aversa	
11/20, 12/9	Revere, Lynn	1 adW, 1 ad	J. Quigley	
12/8, 12/16	Winthrop, Newburyport	14, 2	BBC (R. Stymeist), K. Jones	
Bonaparte's Gull				
11/11, 11/24	S. Dart., Boston Harbor	75, 1497	M. Boucher, TASL (M. Hall)	
12/8	Lakeville, Winthrop	3, 75	K. Anderson, BBC (R. Stymeist)	
Ring-billed Gull				
11/5, 11/10	Halifax, E. Middleboro	300, 400	K. Anderson	
11/16, 12/10	Hamilton, Halifax	1500+, 200	J. Berry, K. Anderson	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Herring Gull 12/7, 12/9	Cape Ann, Nahant	2000, 1250	J. Brown#, G. Wood	
Iceland Gull 11/1-30, 11/16 12/24, 12/31	P'town/Truro, Hamilton P'town/Truro, Gloucester	3 max, 2 imm 10, 4	K. Jones, J. Berry K. Jones, J. Berry	
Lesser Black-backed Gull 11/4-12/12 11/8, 12/9 12/7	P'town/Truro Nahant Barnstable	1 1 1 ad	K. Jones G. Wood S. Clifton	
Glaucous Gull 12/7	Cape Ann	1 imm	J. Brown#	
Black-legged Kittiwake 11/11 11/11, 11/19 11/24, 11/30	Rockport, Barnstable (S.N.) Eastham (F.E.), Stellwagen P.I., Nantucket Sound	80, 30 2000+, 1800 50, 30	J. Brown#, A. Strauss S. Perkins, S. Highley S. Perkins, J. Papale	
Common Tern 11/2, 11/9 11/15, 11/20	Chatham, Nantucket Westport, Acoaxet	15+, 2 imm 3, 2 juv	B. Nikula, G. d'Entremont# R. Abrams, T. Aversa	
Forster's Tern 11/2, 11/15	Ipswich, Westport	2, 5	BBC (J. Berry), R. Abrams	
Dovekie 11/2, 12/27 12/30	Rockport, Nantucket Sound Eastham (F.E.)	1, 1 1	M. Lynch, E. Nielsen# K. Jones	
Common Murre (details submitted) 12/28	Salisbury	1	A. + B. Delorey	
Thick-billed Murre 11/29, 12/4	Sandwich, Provincetown	1, 1	D. Brown#, T. Aversa	
Razorbill 11/2, 11/30 11/11, 11/30 11/23, 11/30 11/29, 12/7	Rockport Eastham (F.E.) N. Scituate, Nantucket Sound Sandwich	3, 11 8, 9 2, 2 5, 12	M. Lynch#, BBC (S. Bolton) K. Jones# W. Petersen, J. Papale D. Brown#, G. d'Entremont	
Black Guillemot 11/10, 11/17 11/30 12/8, 12/22	Barnstable (S.N.), N. Scituate Rockport E. Gloucester	1, 4 6 8, 14	B. Nikula#, W. Petersen# BBC (S. Bolton) J. Berry, J. Hepburn#	
large alcid species 11/12, 11/30	Eastham (F.E.), Scituate	3+, 8	B. Nikula, J. Hoye	

DOVES THROUGH FINCHES

A **White-winged Dove** showed up at a Nantucket feeder where it was seen for nearly two weeks. Snowy Owls were back early, and at Logan as many as 7 individuals were seen on November 16. A total of 22 was banded by Norm Smith for the period. The biggest news of the period was the mini-invasion of **Boreal Owls**, with 6 sightings reported. One owl was found on Long Island in Boston Harbor at the end of October. An exhausted bird that later died was found at Cordage Park in Plymouth. One owl, the second found by one lucky observer, was seen in a residential area of South Boston. A bird in Dedham was apparently hit by a car. Another exhausted bird was captured in Brookline, treated, and later released. One bird in Canton seemed to be healthy.

A **Red-headed Woodpecker** remained for five days at Wachusett Meadows Sanctuary in Princeton. Cape Cod played host to several unusual passerines during the period. An **Ash-throated Flycatcher** at Wellfleet Bay Wildlife Sanctuary, first seen on November 1, was not positively identified until early December, when the bird's condition weakened and it disappeared. A **Rock Wren**, only the second state record, was discovered in South Orleans on November 2 where it remained until January 1992. This bird was quite cooperative at first, but became increasingly hard to find among the rocks. In Falmouth a **Townsend's Warbler** was discovered December 1, where it remained until at least December 12. This was just the second record for the state; the first record was at Mount Auburn Cemetery on May 4, 1978.

A **Sprague's Pipit**, first found in October, was still present through November 2 at Wachusett Reservoir in Clinton. A **Yellow-throated Warbler** showed up at the same Essex feeder after a two-year absence. It disappeared for about two weeks, then turned up at another feeder in the neighborhood where it remained into January. Other highlights included 2 **Varied Thrushes**, a **Bohemian Waxwing**, and late reports of Tree Swallow; Loggerhead Shrike; two Solitary Vireos, including the "cassinii" or western race; Cape May, Black-throated Blue, Blackpoll, and Wilson's warblers; a Rose-breasted Grosbeak; and Clay-colored, Grasshopper, and Lark sparrows.

The winter finch prognosis looked good at mid-November, when small flocks of Common Redpolls, Pine Siskins and Evening Grosbeaks arrived; however, it fizzled in December. A single Pine Grosbeak was noted from Royalston on December 3.

R. H. S.

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
White-winged Dove				
11/2-13	Nantucket (Smith's Point)	1	B. Vigneau + v. o.	
Barn Owl				
11/2-16, 11/12	Salisbury, Nantucket	1, 3	B. Lawson + v. o., J. Papale	
12/6	Boston (Logan)	1	N. Smith	
Eastern Screech-Owl				
Reports of 12 individuals from 8 locations.				
Great Horned Owl				
thr, 11/8	Essex, DWWS	2, 4	T. Young, R. Abrams	
11/16, 11/29	P.I., N. Middleboro	2, 2	T. Young, K. Holmes	
11/23, 11/27	Marshfield, N. Dartmouth	3, pr	W. Petersen, M. Boucher	
12/12, 12/17	Boston (F.Pk), Boston (Fenway)	1, 1	T. Aversa, K. Hudson	
Snowy Owl				
thr	P.I.	7 max 11/15	v. o.	
11/1-30	Boston (Logan)	11 b (9 max 11/16)	N. Smith	
12/1-31	Boston (Logan)	11 b (7 max 12/10)	N. Smith	
Reports of individuals from Salisbury, Nahant, Concord, Boston(Fenway), N. Scituate, Westport, Hyannis,, Eastham (F.E.), P'town(R.P.), N. Monomoy and Nantucket.				
Barred Owl				
11/30, 12/22	Quabbin (G37), E. Middleboro	1, 1	R. Bradbury, K. Anderson	
Long-eared Owl				
11/16-12/22, 12/18	Essex, Ipswich	1-3, 3	T. Young + v. o., T. Aversa	
Short-eared Owl				
11/4, 11/24	Middleboro, Eastham (F.E.)	1, 1	S. Perkins#, R. Abrams#	
12/10; 12/18, 12/28	M. V.; Salisbury	3; 1, 1	V. Laux; T. Aversa, J. Berry	
Boreal Owl				
11/5, 11/6	Plymouth, South Boston	1, 1	B. Litchfield, R. Donovan	
11/8, 11/19	Dedham, Brookline	1, 1	fide M. Pokras, A. Nordquist	
12/27	Canton	1 b	N. Smith	
Northern Saw-whet Owl				
11/3, 11/10	Wayland, Petersham	1, 3	K. Hamilton, M. Lynch# + v. o.	
11/15, 11/18	P.I., Nantucket	1, 1	M. Rines#, E. Ray#	
11/23, 11/27	Hamilton, Charlestown	1, 1	BBC (I. Giriunas), K. Garland	
Red-headed Woodpecker				
11/1-5	Princeton (WMWS)	1 imm	J. Choiniere	
Red-bellied Woodpecker				
11/3, 11/3-30	Lincoln, Boston	1 f, pr max	S. Hecker, T. Aversa	
Yellow-bellied Sapsucker				
11/2, 11/7	Framingham, S. Boston	1, 1 imm	K. Hamilton, M. Rines#	
Hairy Woodpecker				
11/2, 11/18	Ipswich, Nantucket	1 f, 1	BBC (J. Berry), J. Papale	
11/21	S. Sandwich	1	P. Trimble	
Northern Flicker				
11/16, 11/23	Eastham (F.H.), Scituate	5, 5	J. Hoye, G. d'Entremont#	
12/7, 12/29	Falmouth, Topsfield	3, 2	M. Lynch#, J. Brown#	
Pileated Woodpecker				
11/9, 11/28; 11/10	Quabbin (G37); Quabbin (G41)	1, 3; 1	M. Lynch#, S. Perkins; M. Lynch#	
Eastern Phoebe				
12/1, 12/8	Falmouth, Chatham	1, 1	S. Arena#, W. Harrington#	
Ash-throated Flycatcher				
11/1-12/9	Wellfleet (WBWS)	1 ph	M. Ensor + v. o.	
Western Kingbird				
11/6, 11/8	Eastham (F.H.), Ipswich	1, 1	W. Petersen#, K. Noonan	
12/7, 12/12	Chatham, N. Truro	1, 1	B. Nikula, K. Jones	
Horned Lark				
11/4, 11/6	Rochester, P.I.	40+, 65	M. Boucher, W. Drew#	
11/12, 11/18	W. Roxbury, Middleboro	10, 125	T. Aversa, K. Ryan	
11/23, 11/24	Newburyport, Eastham	100, 75	BBC (I. Giriunas), R. Abrams#	
12/18, 12/31	Ipswich, Halifax	80, 100	T. Aversa, T. Aversa	
Tree Swallow				
11/24, 29; 11/28	Wellfleet; Nantucket	52, 4; 1	K. Jones + v. o.; D. Harper	
12/12, 12/15	N. Truro, Eastham	2, 50	K. Jones, W. Petersen#	
American Crow				
thr, 12/28	Framingham, Middleboro	4000+ max, 300	E. Taylor, R. Abrams	
Fish Crow				
11/18-12/31, 12/9	Framingham, Millis	20+, 2	E. Taylor, P. Jarrobin	
Common Raven				
11/9	Quabbin (G37), Wachusett Mt.	2, 9	M. Lynch#, P. Roberts	
Rock Wren (details submitted to MARC)				
11/2-12/31	S. Orleans	1 ph	C. + S. Thompson + v. o.	

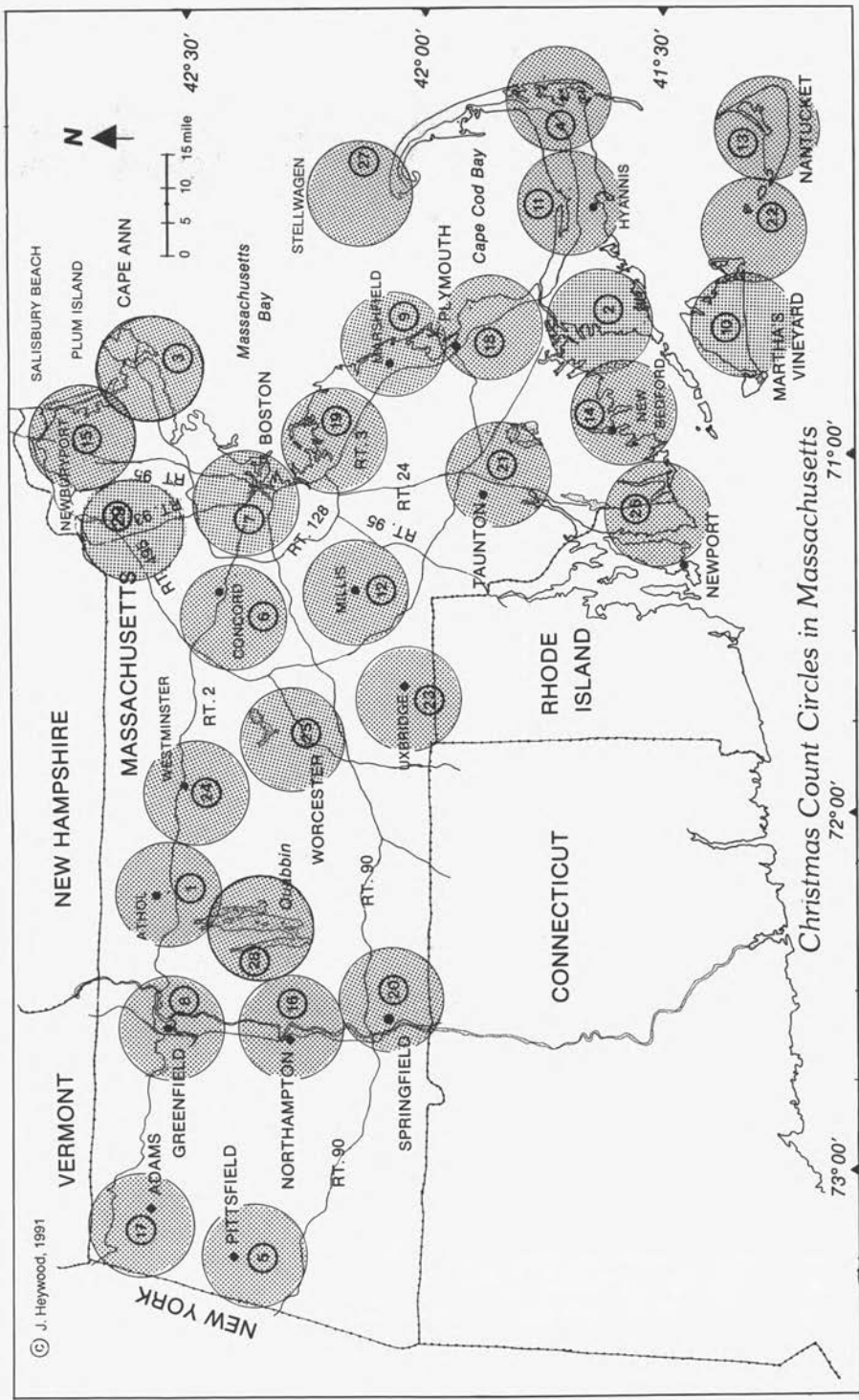
DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Carolina Wren				
11/1-30, 11/3	E. Middleboro, Eastham (F.H.)	2, 3	K. Anderson, M. Lynch#	
11/7-29, 11/14	Nantucket, Marblehead	12, 3	J. Papale, R. Forster	
12/1, 12/7	Medford, Falmouth	3, 5	R. Stymeist#, M. Lynch#	
12/23, 12/26	W. Newbury, Newton	3, 1	M. Rines, C. Hepburn#	
House Wren				
11/6, 11/13	Lexington, Easton	1, 2	C. Floyd, K. Ryan	
12/1, 12/8	Belmont, Mashpee	1, 1	L. Taylor, P. Trimble	
Winter Wren				
11/5, 11/6	Eastham (F.H.), Stoneham	2, 2	T. Aversa	
11/7-29, 11/14	Nantucket, Marblehead	4 max, 4	J. Papale + v. o., R. Forster	
11/25, 12/1	Lakeville, E. Middleboro	2, 2	M. Boucher, K. Anderson	
Reports of 15 individuals from 14 locations.				
Marsh Wren				
11/13, 11/24	P.I., Eastham	1, 1	T. Aversa, K. Jones	
11/15-22, 11/27	Nantucket, DWWS	4, 1	J. Papale, T. Aversa	
12/1, 12/13	Marshfield, Essex	1, 1	D. + N. Ludlow, T. Young	
Golden-crowned Kinglet				
11/2, 11/9	Ipswich, Quabbin (G37)	8, 22	BBC (J. Berry), M. Lynch#	
11/10, 11/16	Petersham, Mashpee	10+, 6	M. Lynch#, P. Trimble	
11/25, 11/29	E. Middleboro, Sandwich	5, 6	K. Anderson, P. Trimble	
Ruby-crowned Kinglet				
11/13, 11/14	Salisbury, Brookline	1, 1	T. Aversa, H. Wiggin	
11/16	Mashpee, P.I.	2, 1	P. Trimble, G. d'Entremont	
11/23, 11/28	N. Scituate, Belmont	1, 1	W. Petersen, L. Taylor	
12/5-8	Falmouth	1	v. o.	
Eastern Bluebird				
11/10	Quabbin (G41), Lincoln	1, 4	M. Lynch#, S. Perkins#	
11/29	Nantucket, E. Middleboro	4 ad, 3	P. Vennema, W. Petersen	
12/1; 12/21, 12/24	Bolton; Millis	1; 9, 7	R. Masturzo; P. Iarrobino	
Hermit Thrush				
11/5, 11/7	Eastham (F.H.), S. Boston	2, 2	T. Aversa, M. Rines#	
11/10, 11/16	Petersham, P.I.	2, 2	M. Lynch#, T. Young	
11/21	S. Sandwich	6	P. Trimble	
Reports of individuals from 7 locations.				
American Robin				
11/2	Framingham	85	K. Hamilton	
12/1-31, 12/29	Essex, W. Boylston	80 max, 100+	T. Young, R. Bradbury	
Varied Thrush				
11/19, 11/30-12/31	Spencer, Oakham	1 ph, 1 m	R. Ephraim, R. Crombie	
Gray Catbird				
11/16	Essex, Mashpee	1, 2	T. Young, P. Trimble	
12/4, 12/18	Eastham (F.H.), Ipswich	1, 2	T. Aversa	
Brown Thrasher				
11/7, 11/19	P.I., Sandwich	2, 1	R. Forster, P. Trimble	
American Pipit				
11/3, 11/4	Eastham (F.H.), Halifax	4, 250	M. Lynch#, E. Nielsen	
11/18, 11/29	Middleboro	50, 24	K. Ryan, W. Petersen	
Sprague's Pipit				
11/1-2	Wachusett Res.	1 ph	B. Blodget + v. o.	
Bohemian Waxwing (details submitted)				
12/9	Truro	1	K. Jones	
Cedar Waxwing				
11/2, 11/4	Framingham, Wellesley	220, 400	K. Hamilton, R. Forster	
11/5, 11/10	Acton, Hardwick	100, 80+	R. Forster, M. Lynch#	
11/13, 12/22	Lincoln, Hardwick	100, 57	W. Petersen#, M. Lynch#	
Northern Shrike				
Reports of 15 individuals from 14 locations.				
Loggerhead Shrike				
11/23	P.I.	1 ad	R. Abrams#	
Solitary Vireo (details submitted)				
11/16	Rockport (Halibut Point)	1 "cassini"	T. Leukering	
11/17, 12/12	Nantucket	1, 1	N. Brooks, P. Dunwiddie#	
Orange-crowned Warbler				
11/3, 11/6	Eastham (F.H.), Stoneham	3, 1	G. Gove#, T. Aversa	
11/7, 11/29; 11/18	Sandwich; Nantucket	1; 1	P. Trimble; E. Andrews	
12/1-2	Falmouth	1	G. d'Entremont + v. o.	
Nashville Warbler				
11/5, 11/29	Scituate, Nantucket	1, 1	R. Abrams, P. Vennema#	
Northern Parula				
11/2	Wellfleet	1	C. Floyd	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Magnolia Warbler 11/1	Nantucket	1	D. Harper	
Cape May Warbler 12/8	Hingham (World's End)	1 m	K. Godfrey	
Black-throated Blue Warbler 11/2, 11/29	Boston, Nantucket	1 m, 1 m	R. Lomar, P. Vennema#	
Yellow-rumped Warbler 11/3, 11/26	Ipswich, P.I.	15+, 7	J. Berry, BBC (J. + J. Nove)	
12/9	Squantum, Hingham	150, 50	R. Abrams	
Townsend's Warbler (details submitted to MARC) 12/1-12	Falmouth	1 imm m ph	G. d'Entremont# + v. o.	
Yellow-throated Warbler 11/7-30, 12/15-31	Essex	1 ph at feeders	M. Jordan, K. Gentlemen + v. o.	
Pine Warbler 11/12, 11/13	Yarmouthport, Salisbury	3, 1	K. Hamilton, T. Aversa	
11/16, 11/29	Mashpee, E. Middleboro	2, 6	P. Trimble, W. Petersen	
12/11, 12/29	Lakeville, E. Orleans	1, 1	K. Anderson, A. + E. Williams	
Palm Warbler 11/7, 11/13	Eastham (F.H.), Salisbury	20, 1	K. Jones, T. Aversa	
11/15, 11/18	Westport, Nantucket	1, 5	R. Abrams, J. Papale	
11/27, 11/29	DWWS, Sandwich	1, 30	T. Aversa, P. Trimble	
11/29, 12/7	Middleboro, Falmouth	7, 1	W. Petersen, M. Lynch#	
Blackpoll Warbler 11/2, 11/3	Lincoln, Arlington Res.	2, 1	G. d'Entremont#, L. Taylor	
11/29-12/15	Falmouth	2 or 3	G. d'Entremont# + v. o.	
Common Yellowthroat 11/2, 11/5	P.I., Eastham (F.H.)	1, 1 m	M. Rines, R. Bradbury	
11/19-30, 11/29	Sandwich, Nantucket	1, 1	P. Trimble, D. Harper	
Wilson's Warbler 11/21-24	Boston (F.Pk)	1	T. Aversa	
Yellow-breasted Chat 11/29-12/31, 12/6	Falmouth, Wellfleet	1, 1	G. d'Entremont# + v. o., D. Reynolds	
12/8, 12/13	Wellfleet, Nantucket	1, 1	R. Abrams, J. Van Vorst	
Rose-breasted Grosbeak 12/15-31	W. Barnstable	1 f ph	R. Williams + v. o.	
Dickcissel 11/5, 12/15	Scituate, Nantucket	1, 1 f	R. Abrams, E. Andrews#	
12/12, 12/19-21	Brookline, Norwell	1, 1	H. Wiggin#, M. + B. Litchfield	
Rufous-sided Towhee 11/2, 11/29	Medfield, Falmouth	2, 1 m	T. Aversa#, G. d'Entremont	
12/1, 12/30	Medford, W. Barnstable	1 m, 1	R. Stymeist#, P. Trimble	
American Tree Sparrow 11/1-11/31, 11/13 P.I., Braintree		20 max 11/15, 15 v. o.,	R. Abrams#	
12/1-12/31, 12/14	Wayland, Wakefield	26 max, 26	S. Arena, P. + F. Vale	
12/23, 12/29	Princeton, Topsfield	20+, 39	M. Lynch#, J. Brown#	
Chipping Sparrow 11/3, 11/12	P.I., Arlington	3, 1	BBC (D. + D. Oliver), L. Taylor	
11/19, 12/25	Sandwich, N. Dartmouth	1, 1	P. Trimble, M. Boucher	
Clay-colored Sparrow 11/19	Sandwich	1	P. Trimble	
Field Sparrow 11/3, 11/13	Wellfleet, Braintree	5+, 3	G. d'Entremont, R. Abrams	
11/16, 11/29	Middleboro, Sandwich	8, 10	BBC (D. Davis), P. Trimble	
12/22, 12/30	Peabody, W. Barnstable	6, 4	M. Rines, P. Trimble	
Vesper Sparrow 11/2, 11/12	P.I., Halifax	2, 1	M. Rines#, T. Aversa	
11/16, 11/29	Middleboro, Sandwich	1, 3	BBC (D. Davis), P. Trimble	
Lark Sparrow 11/5-12/19	Scituate	1	R. Abrams + v. o.	
Savannah Sparrow 11/3, 11/12	P.I., Middleboro	9, 30	BBC (D. + D. Oliver), T. Aversa	
11/29, 12/25	Sandwich, N. Dartmouth	22, 15	P. Trimble, M. Boucher	
"Ipswich" Savannah Sparrow 11/7, 11/16	Sandwich, N. Monomoy	2, 1	P. Trimble, B. Nikula	
11/20, 11/23	S. Dart. (Allens Pd), Eastham	2, 1	T. Aversa, B. Nikula	
11/24, 12/28	Salisbury, P.I.	4, 1	G. Gove#, J. Hepburn#	
Grasshopper Sparrow 11/7, 11/23	Sandwich, Marshfield (DWWS)	1, 1	P. Trimble, W. Petersen#	
Sharp-tailed Sparrow 11/11, 12/4; 11/6	Eastham (F.H.); E. Boston	15, 4; 2	v. o.; T. Aversa	

DATE	LOCATION	NUMBER	OBSERVERS	Nov./Dec. 1991
Seaside Sparrow 11/6, 11/24 11/24, 12/4	E. Boston (B.I.), Eastham (F.H.) P.I., Eastham (F.H.)	1, 10 5, 2	T. Aversa, R. Abrams# S. Perkins#, T. Aversa	
Fox Sparrow Reports of 21 individuals from 17 locations.				
Lincoln's Sparrow 11/3, 11/19	Truro, Sandwich	2, 1	J. Center, P. Trimble	
Swamp Sparrow 11/16, 11/21 11/26, 12/8 12/9, 12/19	Mashpee, S. Sandwich P.I., Boston Scituate, Scituate	2, 4 2, 1 3, 2	P. Trimble BBC (J. + J. Nove), K. Hudson R. Abrams	
Lapland Longspur 11/18, 11/19 11/23	Middleboro, Sandwich Newburyport	1, 1 6	K. Ryan, P. Trimble BBC (I. Giriunas)	
Snow Bunting 11/3-15, 11/4-18 11/5, 11/10 11/12, 11/18	P.I., Middleboro Nahant, Belmont P'town (R.P.), Westport	150 max, 25 27, 7 200, 13	v. o., S. Perkins + v. o. G. Wood, L. Taylor K. Jones, M. Boucher	
Bobolink 11/5	Scituate	1	R. Abrams	
Red-winged Blackbird 11/1, 11/19 12/9, 12/28	GMNWR, Sandwich Hingham, Middleboro	30, 4 25, 20	BBC (J. Center), P. Trimble R. Abrams	
Eastern Meadowlark 11/18, 11/23 11/23 11/23, 11/27 12/8, 12/28	Nantucket, Eastham (F.H.) Salisbury, Essex Scituate, DWWS Wellfleet, Middleboro	15-20, 21 12, 20 21, 34 9, 10	J. Van Vorst, B. Nikula A. + B. Delorey, BBC (I. Giriunas) G. d'Entremont, T. Aversa J. Hepburn#, R. Abrams	
Rusty Blackbird 11/21, 12/23	Nantucket, Princeton	1 m, 1 m	E. Andrews#, M. Lynch#	
Common Grackle 11/2, 11/16 12/1-31, 12/3	Clinton, Arlington Boston (F.Pk.), Sandwich	2000, 14 10, 9	G. d'Entremont, L. Taylor T. Aversa + v. o., T. Aversa	
Brown-headed Cowbird 11/22, 12/3 12/23, 12/30	Dedham, Sandwich Princeton, Newbury	100, 2 2, 6	W. Petersen, T. Aversa M. Lynch#, M. Rines	
Northern Oriole 11/5-12/2 11/5, 12/7-31 12/8 12/8, 12/9	Nantucket N. Truro, Eastham Wellesley, Wellfleet Orleans, Middleboro	4 1, 1 2, 1 m 1, 1 m	v. o. K. Jones, G. d'Entremont + v. o. C. Ewer, R. Abrams M. Rines#, D. Briggs	
"Bullock's" Oriole 11/3-22	DWWS	1 m	D. + N. Ludlow	
Pine Grosbeak 12/3	Royalston	1	K. Hamilton	
Purple Finch 11/5, 11/9 11/10 12/6, 12/9 12/9, 12/23	Truro, Winchester Hardwick, Holliston Millis (2 locations) Hingham, Princeton	2, 2 2, 2 1, 2 6 f, 2	T. Aversa, BBC (J. Kennedy) M. Lynch#, J. Hoye P. Iarrobino R. Abrams, M. Lynch#	
Reports of individuals from 10 locations.				
Common Redpoll 11/14 11/14 11/14, 11/15 11/18, 12/31	Marblehead (MNWS), Nahant Eastham, Truro Chatham, P.I. Westport, Ware	4, 12 2, 1 1, 1 5, 50+	R. Forster K. Jones W. Bailey, T. Leukering M. Boucher, R. Bradbury	
Pine Siskin 11/7, 11/16 11/17, 11/18 12/23	Salisbury, Nantucket Shrewsbury, Truro Princeton	1, 1 5, 2 2	R. Forster, E. Andrews M. Rines#, K. Jones M. Lynch#	
Evening Grosbeak 11/4, 11/10 11/18, 11/21 12/21, 12/22 12/23, 12/29	Acton, Hardwick Nantucket, Sharon Easton, Hardwick Princeton, Topsfield	3, 10+ 1, 15 8, 29 5+, 22	R. Forster, M. Lynch# J. Van Vorst, O. Komar K. Ryan, M. Lynch# M. Lynch#, J. Brown#	

LIST OF ABBREVIATIONS

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



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Christmas Count Circles in Massachusetts

CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

Compiled by Robert H. Stymeist

The Ninety-second Annual Christmas Bird Count (CBC) sponsored by the National Audubon Society was held from December 14, 1991, to January 2, 1992. In eastern Massachusetts and a portion of Rhode Island, there are twenty-four count areas (see map). The Plymouth count results were unavailable. A total of 189 species, plus "Ipswich" Savannah Sparrow and "Oregon" Junco, was recorded on these twenty-three counts. The Greater Boston CBC led the counts with 120 species. In the following table, birds identified only to species type, such as scaup species or scoter species, are not shown. These included a tern on the Cape Ann CBC and a crossbill on the Quabbin CBC. Five additional species were found during the CBC period but not recorded on any count day—Townsend's Warbler on the Buzzards Bay CBC, Barn Swallow on the Cape Ann CBC, Red-headed Woodpecker and Black-throated Blue Warbler on the Martha's Vineyard CBC, and Sandhill Crane on the New Bedford CBC.

Carolina Wrens have exploded in our area. Recorded from all but three counts, a total of 887 individuals was tallied. Ten years ago only 64 birds were noted. Another southern invader, Red-bellied Woodpecker, was represented by 37 individuals, compared with just two ten years ago.

An array of rarities was found—Tundra Swan, Greater White-fronted Goose, Tufted Duck, Golden Eagle, Common Murre, and Brewer's Blackbird. Lingering species included Spotted Sandpiper, Laughing Gull, Forster's Tern, Tree Swallow, Solitary Vireo, Blackpoll Warbler, Rose-breasted Grosbeak, and Lincoln's, Lark, Grasshopper, and White-crowned sparrows. Some species appeared in unusually high numbers—89 Horned Grebes at Quabbin, 212 Great Blue Herons on Cape Cod, 29 Bald Eagles at Quabbin, 6500 Bonaparte's Gulls in Greater Boston, 42 Northern Saw-whet Owls and 28 Pileated Woodpeckers at Quabbin, and 1660 American Robins and 5 Orange-crowned Warblers in Greater Boston. The total of nine Yellow-breasted Chats on the Cape Cod CBC was only one less than the all-time national high.

We wish to thank all of the compilers who contributed their time to prepare the results for this summary. They are as follows: **Gene Ballard**, Andover; **Dave Small**, Athol; **Richard Harlow**, Buzzards Bay; **John Nove**, Cape Ann; **Blair Nikula**, Cape Cod; **Richard Walton**, Concord; **Robert Stymeist**, Greater Boston; **Warren Harrington**, Marshfield; **Whit Manter**, Martha's Vineyard; **Peter Trimble**, Mid Cape Cod; **Donna Lang**, Millis; **Edith Andrews**, Nantucket; **Ken Machado**, New Bedford; **Jim Berry**, Newburyport; **Scott Surner**, Quabbin; **Bob Abrams**, Quincy; **Simon Perkins**, Stellwagen; **John Kricher**, Taunton-Middleboro; **Richard Velt**, Tuckermuck; **Richard Hildreth**, Uxbridge, MA/RI; **John Williams**, Westminster; **Fran McMenemy**, Worcester; **Dave Emerson**, Newport County, 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), Central Berkshire (5), Concord (6), Greater Boston (7), Greenfield (8), Marshfield (9), Martha's Vineyard (10), Mid Cape Cod (11), Millis (12), Nantucket (13), New Bedford (14), Newburyport (15), Northampton (16), Northern Berkshire (17), Plymouth (18), Quincy (19), Springfield (20), Taunton-Middleboro (21), Tuckermuck Island (22), Uxbridge, MA/RI (23), Westminster (24), Worcester (25), Newport County, RI/Westport, MA (26), Stellwagen Bank (27), Quabbin (28), and Andover (29).

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	And.	Athol	B. B. C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.	Millis	
Red-throated Loon	0	0	6	10	29	0	8	42	66	4	0
Common Loon	0	0	19	17	48	0	5	85	252	43	0
Pied-billed Grebe	0	0	11	0	9	0	6	0	1	8	0
Horned Grebe	0	2	48	17	18	0	29	64	78	59	0
Red-necked Grebe	0	0	0	10	2	0	21	209	11	2	0
Northern Gannet	0	0	1	247	2261	0	5	0	0	3	0
Great Cormorant	1	0	78	117	53	0	25	19	83	17	0
Double-cr. Cormorant	0	0	35	6	6	0	53	0	1	3	0
American Bittern	0	0	0	1	1	0	2	0	0	0	0
Great Blue Heron	3	0	48	4	212	16	70	46	78	75	6
Black-cr. Night-Heron	0	0	1	0	1	0	3	0	16	1	0
Tundra Swan	0	0	0	0	0	0	0	0	2	0	0
Mute Swan	0	0	108	9	10	0	1	6	99	31	2
Gr. Whi-fro. Goose	0	0	0	0	0	0	0	0	0	0	0
Snow Goose	0	0	0	1	1	0	0	0	0	0	0
Brant	0	0	154	0	679	0	1825	465	25	134	0
Canada Goose	1086	1	539	989	1174	4343	2550	704	2279	859	2584
Wood Duck	2	0	0	1	5	2	1	3	6	0	1
Green-winged Teal	0	0	0	1	8	1	6	9	22	27	1
American Black Duck	27	5	526	648	2021	207	2078	1834	1125	1338	133
Mallard	553	12	367	504	296	1136	2622	301	520	727	638
Northern Pintail	0	0	0	1	0	0	0	0	3	37	4
Blue-winged Teal	0	0	0	1	0	0	0	1	1	0	0
Northern Shoveler	0	0	0	0	0	0	2	0	4	0	0
Gadwall	0	0	0	0	0	1	6	1	23	97	0
Eurasian Wigeon	0	0	0	0	3	0	0	0	0	1	0
American Wigeon	0	0	8	1	62	0	77	1	29	32	2
Canvasback	0	0	52	0	40	0	73	0	1	202	0
Redhead	0	0	3	0	0	0	0	0	2	2	0
Ring-necked Duck	0	11	51	0	108	26	42	2	2	174	156
Tufted Duck	0	0	0	0	1	0	0	0	0	0	0
Greater Scaup	0	0	2276	0	138	0	371	35	520	26	0
Lesser Scaup	0	0	160	0	6	0	4	0	12	23	0
Common Eider	0	0	22	1572	3826	0	2682	9870	5059	4233	0
King Eider	0	0	0	0	0	0	1	1	0	0	0
Harlequin Duck	0	0	0	6	1	0	0	0	20	0	0
Oldsquaw	0	0	52	64	38	0	15	176	16	223	0
Black Scoter	0	0	0	21	3	0	4	0	1581	11	0
Surf Scoter	0	0	4	28	9	0	4	23	183	132	0
White-winged Scoter	0	0	79	150	421	0	151	1107	2992	277	0
Common Goldeneye	46	2	382	237	135	31	224	325	1220	459	5
Barrow's Goldeneye	0	0	2	1	0	0	0	1	1	1	0
Bufflehead	0	1	1119	457	1099	1	454	338	1649	1260	12
Hooded Merganser	4	19	285	0	51	9	261	10	185	113	25
Common Merganser	40	454	42	0	563	33	344	24	66	115	22
Red-br. Merganser	0	0	826	301	2207	0	851	727	2206	944	0
Ruddy Duck	0	0	0	0	2	0	20	0	75	4	0
Turkey Vulture	0	0	0	0	0	0	0	0	0	0	0
Bald Eagle	1	1	0	1	0	0	0	0	0	0	0
Northern Harrier	0	0	2	6	20	2	3	11	14	11	1
Sharp-shinned Hawk	3	3	4	8	13	9	12	4	7	6	8
Cooper's Hawk	1	0	1	0	1	5	3	0	1	2	1

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	Nant.	N. B.	Newbpt.	Quab.	Quin.	Stell.	Tau-Mb.	Tuck.	Uxbr.	Wstm.	Worc.	Nwp.RI*
RTLO	95	0	21	0	5	2	0	10	0	0	0	29 / 11
COLO	103	3	95	5	12	15	1	21	0	0	9	37 / 10
PBGR	7	0	0	0	1	0	5	0	0	0	0	4 / 0
HOGR	15	23	77	89	31	1	0	1	0	0	7	62 / 18
RNGR	63	1	15	0	64	2	0	0	0	0	0	2 / 0
NOGA	361	0	2	0	0	245	0	1	0	0	0	39 / 10
GRCO	86	31	1	0	71	15	1	15	0	0	0	1094 / 22
DCCO	13	1	0	0	3	0	0	1	0	0	0	2 / 2
AMBI	2	0	0	0	0	0	0	0	0	0	0	1 / 0
GBHE	42	14	16	2	31	8	15	4	11	0	14	21 / 20
BCNH	2	0	0	0	4	0	0	0	0	0	0	0 / 0
TUSW	0	0	0	0	0	0	0	0	0	0	0	0 / 0
MUSW	25	163	5	0	11	0	11	2	0	0	0	70 / 107
GWFG	0	0	0	0	0	0	1	0	0	0	0	0 / 0
SNGO	0	1	2	0	0	0	0	0	0	0	0	0 / 0
BRAN	296	81	1	0	655	70	0	0	0	0	0	116 / 0
CAGO	647	661	1440	0	1189	0	2405	48	352	15	496	3043 / 423
WODU	4	0	0	0	0	0	1	0	9	0	0	1 / 0
GWTE	25	0	2	0	0	0	4	0	0	0	0	16 / 6
ABDU	582	509	2647	135	862	396	276	49	174	79	211	1144 / 392
MALL	499	290	446	147	258	5	709	1	346	346	771	873 / 63
NOPI	2	1	4	0	0	0	0	1	1	0	0	17 / 4
BWTE	0	0	0	0	0	0	0	0	0	0	0	0 / 0
NOSH	1	0	0	0	0	0	0	0	0	0	0	0 / 0
GADW	3	0	41	0	0	0	0	0	0	0	9	17 / 4
EUWI	2	0	0	0	0	0	0	0	0	0	0	0 / 0
AMWI	6	0	0	0	6	0	18	30	0	0	0	25 / 3
CANV	19	0	0	0	15	0	199	0	0	0	0	102 / 0
REDH	17	0	0	0	4	0	0	0	0	0	0	1 / 0
RNDU	13	0	0	0	14	0	15	0	0	0	0	10 / 0
TUDU	0	0	0	0	0	0	0	0	0	0	0	0 / 0
GRSC	183	472	1	0	417	22	2	175	0	0	42	908 / 75
LESC	6	272	0	0	0	0	11	26	0	0	1	17 / 43
COEI	15588	7	172	0	2361	351	0	1146	0	0	0	18 / 14
KIEI	0	0	0	0	0	0	0	0	0	0	0	1 / 0
HADU	3	0	0	0	1	0	0	0	0	0	0	53 / 0
OLDS	114869	56	89	0	230	173	0	50145	0	0	0	1 / 0
BLSC	82	0	23	0	1	6	0	33	0	0	0	17 / 19
SUSC	11	383	8	0	10	3	0	0	0	0	0	36 / 8
WWSC	1124	35	548	0	114	788	0	234	0	0	0	33 / 18
COGO	1247	312	812	15	454	59	109	680	1	0	24	719 / 68
BAGO	2	1	0	0	0	0	0	0	0	0	0	0 / 0
BUFF	437	481	362	17	511	35	157	41	0	0	1	356 / 180
HOME	51	0	1	119	65	0	93	0	1	0	75	27 / 0
COME	3	0	121	161	23	23	362	1	37	0	124	76 / 0
RBME	964	109	865	0	774	507	0	145	0	0	0	499 / 109
RUDU	4	0	0	0	2	0	0	0	1	0	0	121 / 0
TUVU	0	4	0	0	0	0	0	0	0	0	0	0 / 0
BAEA	0	0	0	29	0	0	2	0	0	0	0	0 / 0
NOHA	27	4	17	0	0	4	8	6	0	0	0	3 / 0
SSHA	4	4	13	2	1	1	4	1	3	1	1	5 / 0
COHA	1	2	1	3	0	1	1	0	1	1	1	0 / 0

* Figures shown in Newport County, RI/Westport, MA CBC column are broken down by state: RI / MA.

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

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	2	0	0	0	0	2
Red-shouldered Hawk	0	0	0	0	0	2	0	0	0	1	2
Red-tailed Hawk	31	4	2	15	13	77	51	15	21	16	40
Rough-legged Hawk	0	0	0	0	0	0	0	1	0	0	0
Golden Eagle	0	0	0	0	0	0	0	0	0	0	0
American Kestrel	2	0	2	4	6	7	4	9	4	3	3
Merlin	1	0	0	1	1	0	2	1	2	2	0
Peregrine Falcon	1	0	0	0	4	0	4	0	2	1	0
Ring-necked Pheasant	1	1	0	9	0	36	30	2	5	3	6
Ruffed Grouse	2	8	2	5	0	11	0	0	1	0	12
Wild Turkey	0	45	0	10	0	0	0	0	0	0	0
Northern Bobwhite	0	0	5	0	36	0	0	0	73	40	8
Clapper Rail	0	0	0	0	0	0	0	0	0	0	0
Virginia Rail	0	0	0	0	5	1	1	5	2	6	0
Sora	0	0	0	0	0	0	0	0	1	0	0
American Coot	0	0	1	0	11	0	55	0	0	0	0
Black-bellied Plover	0	0	7	0	3	0	7	4	39	0	0
Killdeer	0	0	4	1	7	0	6	0	0	1	2
Greater Yellowlegs	0	0	0	0	1	0	0	0	0	5	0
Spotted Sandpiper	0	0	0	0	0	0	0	0	0	0	0
Ruddy Turnstone	0	0	0	0	1	0	2	0	0	0	0
Red Knot	0	0	0	0	0	0	0	10	0	0	0
Sanderling	0	0	0	0	153	0	410	16	179	118	0
Purple Sandpiper	0	0	0	18	0	0	130	0	6	0	0
Dunlin	0	0	0	42	901	0	295	533	44	23	0
Common Snipe	0	0	2	0	4	0	10	1	2	8	0
American Woodcock	0	0	0	0	0	0	0	0	0	1	0
Laughing Gull	0	0	0	0	0	0	2	0	0	0	0
Little Gull	0	0	0	0	0	0	2	0	0	0	0
Common Bla.-hea. Gull	0	0	1	1	1	0	21	0	0	0	0
Bonaparte's Gull	0	0	129	595	90	0	6500	18	9	6	0
Ring-billed Gull	290	0	265	766	483	805	5617	307	137	414	376
Herring Gull	630	533	1380	8214	6576	1946	7337	5976	3975	3336	1233
Iceland Gull	0	0	0	3	1	0	2	0	0	0	0
Lesser Bla.-bac. Gull	0	0	0	1	0	0	0	0	0	0	0
Glaucous Gull	0	0	0	0	0	0	0	1	0	0	0
Great Bla.-bac. Gull	43	66	164	2190	2050	370	662	699	1248	720	133
Black-legged Kittiwake	0	0	0	117	542	0	2	0	3	0	0
Forster's Tern	0	0	1	0	0	0	0	0	0	0	0
Dovekie	0	0	0	0	0	0	0	1	0	0	0
Common Murre	0	0	0	0	0	0	0	0	0	0	0
Thick-billed Murre	0	0	0	1	0	0	0	0	0	0	0
Razorbill	0	0	0	2	838	0	0	9	20	179	0
Black Guillemot	0	0	0	19	0	0	1	3	0	0	0
Rock Dove	1395	381	176	489	22	1134	3315	260	84	467	236
Mourning Dove	283	330	272	197	257	1937	340	372	1037	237	502
Barn Owl	0	0	0	0	0	0	0	0	2	0	0
Eastern Screech-Owl	1	0	3	3	1	23	17	22	9	18	4
Great Horned Owl	1	3	2	7	3	13	2	12	0	13	6
Snowy Owl	0	0	0	2	4	0	8	3	0	1	0
Barred Owl	0	1	0	0	0	0	0	0	0	0	0
Long-eared Owl	0	0	0	0	0	0	0	0	0	0	0

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	Nant.	N. B.	Newbpt.	Quab.	Quin.	Stell.	Tau-Mb.	Tuck.	Uxbr.	Wstm.	Worc.	Nwp.RI
NOGO	1	0	0	1	0	0	1	0	0	1	0	0/0
RSHA	0	0	0	0	0	0	1	0	0	0	0	0/0
RTHA	34	4	53	24	17	0	28	4	30	10	25	12/2
RLHA	1	0	13	0	0	0	2	1	0	0	0	0/0
GOEA	0	0	0	1	0	0	0	0	0	0	0	0/0
AMKE	10	3	10	0	3	0	5	1	2	0	0	9/3
MERL	4	0	0	0	0	0	0	0	0	0	0	2/0
PEFA	4	0	0	0	0	0	0	2	0	0	0	0/0
RNPH	41	0	9	1	1	0	3	0	3	8	5	8/0
RUGR	0	2	16	16	0	0	3	0	17	2	7	0/0
WITU	0	0	12	72	0	0	0	0	3	0	0	0/0
NOBO	0	8	0	0	0	0	0	0	0	0	0	0/0
CLRA	0	0	1	0	0	0	0	0	0	0	0	0/0
VIRA	2	0	3	0	2	2	0	0	0	0	0	1/0
SORA	0	0	0	0	0	0	0	0	0	0	0	0/0
AMCO	20	3	0	0	15	0	2	0	0	0	0	195/0
BBPL	16	0	0	0	2	0	0	7	0	0	0	0/2
KILL	5	1	0	0	0	0	0	0	0	0	0	0/0
GRYE	0	2	0	0	0	0	0	0	0	0	0	0/0
SPSA	0	0	0	0	0	0	0	0	0	0	0	1/0
RUTU	39	0	0	0	4	0	0	0	0	0	0	12/0
REKN	0	0	0	0	0	0	0	0	0	0	0	0/0
SAND	235	0	14	0	2	9	0	60	0	0	0	27/34
PUSA	0	0	0	0	90	0	0	0	0	0	0	113/0
DUNL	12	0	20	0	178	0	0	5	0	0	0	53/61
COSN	3	0	6	0	1	0	2	0	0	0	1	27/2
AMWO	0	0	0	0	0	0	0	0	0	0	0	2/0
LAGU	0	4	0	0	0	0	0	0	0	0	0	0/0
LIGU	0	0	0	0	0	0	0	0	0	0	0	0/0
CBHG	0	0	1	0	0	0	0	0	0	0	0	0/0
BOGU	531	521	101	0	206	0	0	0	0	0	0	116/58
RBGU	30	705	370	1	1610	31	518	9	110	13	778	745/229
HEGU	8224	2387	3484	248	7812	874	1954	1006	373	805	2201	1479/115
ICGU	34	0	6	0	3	6	0	1	0	0	0	0/0
LBBG	0	0	0	0	0	0	0	1	0	0	0	0/0
GLGU	0	0	0	0	0	1	0	0	0	0	0	0/0
GBBG	2378	298	384	17	1837	855	442	447	79	257	418	276/39
BLKI	13	0	16	0	0	42	0	23	0	0	0	0/0
FOTE	0	0	0	0	0	0	0	0	0	0	0	1/0
DOVE	0	0	0	0	0	0	0	0	0	0	0	0/0
COMU	0	0	0	0	0	2	0	0	0	0	0	0/0
TBMU	0	0	0	0	0	0	0	0	0	0	0	0/0
RAZO	360	0	8	0	0	252	0	22	0	0	0	5/1
BLGU	0	0	0	0	0	20	0	1	0	0	0	0/0
RODO	63	457	681	108	323	301	253	0	777	343	414	572/55
MODO	365	112	1589	221	64	18	239	0	674	246	448	1093/123
BROW	7	0	0	0	1	0	0	0	0	0	0	2/0
EASO	0	0	24	0	11	0	7	0	38	0	7	5/3
GHOW	0	0	43	11	2	1	5	0	15	0	4	3/2
SNOW	2	0	13	0	3	1	0	0	0	0	0	0/1
BAOW	0	0	1	15	0	0	2	0	2	1	0	0/0
LEOW	0	0	2	0	0	0	1	0	0	0	0	0/0

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92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	And.	Athol	B. B. C.	Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.	Millis
Short-eared Owl	0	0	0	0	0	0	2	0	0	0	0
Northern Saw-whet Owl	0	10	0	0	0	0	0	0	1	0	0
Belted Kingfisher	2	0	22	5	19	8	13	9	28	21	8
Red-bel. Woodpecker	1	0	0	0	0	1	4	0	18	0	0
Downy Woodpecker	61	41	46	47	29	478	91	55	69	61	159
Hairy Woodpecker	11	13	2	2	3	131	6	7	11	7	20
Northern Flicker	2	2	21	13	54	20	34	53	68	43	10
Pileated Woodpecker	0	1	0	3	0	9	0	0	0	0	0
Eastern Phoebe	0	0	1	0	2	0	0	0	0	1	0
Horned Lark	14	0	0	47	50	91	19	11	2	16	0
Tree Swallow	0	0	0	0	50	0	0	0	3	0	0
Blue Jay	328	487	81	120	52	1697	474	149	297	108	449
American Crow	929	247	480	728	465	2218	1923	520	984	554	1223
Fish Crow	0	0	0	0	0	93	0	0	0	0	2
Common Raven	0	0	0	0	0	0	0	0	0	0	0
Black-cap. Chickadee	495	1057	751	782	632	2927	876	529	855	691	1096
Tufted Titmouse	139	111	111	168	39	976	335	106	0	86	440
Red-br. Nuthatch	10	23	1	8	2	19	9	1	6	1	4
White-br. Nuthatch	66	73	20	73	9	585	130	43	106	36	142
Brown Creeper	4	19	6	3	0	44	4	10	4	6	15
Carolina Wren	2	2	170	3	43	16	9	31	133	87	18
House Wren	0	0	0	0	0	0	0	0	0	0	0
Winter Wren	0	0	18	0	5	2	1	1	3	11	0
Marsh Wren	0	0	0	1	0	0	0	1	0	10	0
Golden-cr. Kinglet	3	157	136	22	38	41	16	89	10	22	68
Ruby-crowned Kinglet	0	0	2	0	3	0	2	1	0	2	0
Eastern Bluebird	0	0	0	0	0	12	0	18	0	4	25
Hermit Thrush	0	0	16	0	4	0	2	1	1	8	0
American Robin	16	1	143	81	49	296	1660	82	73	140	37
Gray Catbird	0	0	2	0	4	5	2	1	9	5	0
Northern Mockingbird	67	14	79	50	52	301	189	72	25	106	104
Brown Thrasher	0	0	1	0	1	0	0	0	1	0	0
American Pipit	0	0	0	0	0	0	0	0	0	1	0
Cedar Waxwing	71	117	29	73	15	764	111	98	36	38	266
Northern Shrike	0	1	0	1	0	2	2	1	1	1	3
European Starling	1115	1239	415	5777	382	6590	187555	2240	1300	1156	2901
Solitary Vireo	0	0	0	0	0	1	0	0	0	0	0
Orange-cro. Warbler	0	0	2	0	0	0	5	0	0	0	0
Nashville Warbler	0	0	1	0	0	0	0	0	0	0	0
Yellow-rumped Warbler	1	1	36	84	677	5	129	66	731	65	1
Yellow-thr. Warbler	0	0	0	1	0	0	0	0	0	0	0
Pine Warbler	0	0	4	0	3	0	0	1	1	5	1
Prairie Warbler	0	0	0	0	0	0	0	0	0	0	0
Palm Warbler	0	0	46	0	4	0	3	0	24	27	0
Blackpoll Warbler	0	0	2	0	0	0	0	0	0	0	0
Common Yellowthroat	0	0	2	0	1	0	0	0	1	1	0
Wilson's Warbler	0	0	0	0	0	0	1	0	0	0	0
Yellow-breasted Chat	0	0	4	0	9	0	0	0	0	2	0
Northern Cardinal	42	31	299	86	201	567	213	76	141	193	217
Rose-br. Grosbeak	0	0	0	0	0	0	0	0	0	1	0
Dickcissel	0	0	0	1	1	0	0	0	0	0	0
Rufous-sided Towhee	0	0	5	1	1	1	2	1	6	2	0

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	Nant.	N. B.	Newbpt.	Quab.	Quin.	Stell.	Tau-Mb.	Tuck.	Uxbr.	Wstm.	Worc.	Nwp.RI*
SEOW	0	0	0	0	1	0	0	12	0	0	0	0/0
NSWO	5	0	2	42	0	0	1	0	1	0	0	0/0
BEKI	3	3	8	2	6	0	7	0	10	3	6	7/6
RBWO	0	0	3	1	1	1	0	0	5	0	0	2/0
DOWO	12	27	190	88	21	7	18	1	146	39	35	23/10
HAWO	0	1	31	40	1	1	2	0	26	8	13	0/0
NOFL	90	13	28	7	19	6	15	12	22	0	1	52/9
PIWO	0	0	1	28	0	0	0	0	0	0	1	0/0
EAPH	1	0	0	0	0	0	0	0	0	0	0	2/0
HOLA	3	0	330	0	0	5	35	0	0	0	0	60/4
TRSW	0	0	0	0	0	0	0	0	0	0	0	0/0
BLJA	62	30	1138	715	221	10	153	4	1396	292	295	160/30
AMCR	803	133	1040	248	285	55	415	28	614	437	472	391/51
FICR	0	0	0	0	2	0	0	0	0	0	0	0/0
CORA	0	0	0	28	0	0	0	0	0	0	3	0/0
BCCH	257	134	1739	1050	261	58	347	32	1010	537	597	318/98
TUTI	0	43	352	174	111	8	129	0	471	63	127	53/14
RBNU	21	0	22	82	2	9	0	0	12	2	6	0/0
WBNU	6	22	210	175	11	2	31	0	244	59	83	11/10
BRCR	0	0	18	37	0	1	1	0	9	5	7	3/0
CAWR	7	23	11	0	7	5	35	0	25	0	8	220/32
HOWR	0	0	0	0	0	1	1	0	0	0	0	1/0
WIWR	0	1	1	1	0	0	0	0	3	0	1	5/0
MAWR	0	0	5	0	0	0	1	2	1	0	0	6/0
GCKI	6	22	52	190	19	7	12	0	40	24	21	20/7
RCKI	0	1	0	0	0	0	0	1	2	0	1	4/0
EABL	0	0	4	7	0	0	11	0	7	8	4	0/3
HETH	0	0	4	0	0	0	0	0	0	0	0	5/11
AMRO	42	15	532	11	54	1	8	1	17	8	41	127/87
GRCA	2	0	1	0	3	0	0	0	1	0	0	42/9
NOMO	35	21	165	45	67	5	102	0	95	16	56	137/15
BRTH	0	0	0	0	0	0	0	0	0	0	0	0/1
AMPI	0	0	0	0	0	0	0	0	0	0	0	0/0
CEWA	0	3	424	180	29	0	17	0	353	80	382	66/30
NOSH	1	0	6	3	1	0	0	0	0	2	0	0
STAR	1660	872	16375	1421	46000	162	2791	9	2874	1292	5553	24358/435
SOVI	0	0	0	0	0	0	0	0	0	0	0	0/0
OCWA	0	0	0	0	0	0	1	0	0	0	0	1/0
NAWA	0	0	0	0	0	0	0	0	0	0	0	0/0
YRWA	1149	15	55	0	37	44	71	159	6	0	0	174/43
YTWA	0	0	0	0	0	0	0	0	0	0	0	0/0
PIWA	9	3	1	0	0	0	1	0	0	0	0	0/0
PRWA	0	0	0	0	0	0	0	0	0	0	0	1/0
PAWA	8	5	0	0	2	1	0	0	0	0	1	31/0
BLAC	0	0	0	0	0	0	0	0	0	0	0	0/0
COYE	0	0	1	0	0	0	0	0	0	0	0	1/0
WIWA	0	0	0	0	0	0	0	0	0	0	0	0/0
YBCH	0	1	0	0	0	0	0	0	0	0	0	3/0
NOCA	60	66	224	40	63	14	81	0	128	33	72	241/69
RBGR	0	0	0	0	0	0	0	0	0	0	0	0/0
DICK	0	0	0	0	0	0	0	0	0	0	0	0/0
RSTO	5	0	0	0	1	1	1	0	0	0	1	22/6

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92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	And.	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.	Millis
Amer. Tree Sparrow	46	120	53	53	7	861	142	50	11	12	244
Chipping Sparrow	0	0	1	0	1	0	0	0	0	3	0
Clay-colored Sparrow	0	0	0	0	0	0	0	0	0	0	0
Field Sparrow	3	2	79	2	11	31	14	13	4	30	31
Vesper Sparrow	0	0	1	0	0	0	1	0	0	0	0
Lark Sparrow	0	0	0	0	0	0	0	1	0	0	0
Savannah Sparrow	0	0	205	2	9	8	4	3	13	29	1
"Ipswich" Sparrow	0	0	1	2	4	0	2	4	0	7	0
Grasshopper Sparrow	0	0	6	0	0	0	1	0	0	0	0
Sharp-tailed Sparrow	0	0	0	0	3	0	0	0	0	7	0
Seaside Sparrow	0	0	0	0	0	0	0	0	0	1	0
Fox Sparrow	0	0	1	0	1	2	2	0	0	0	0
Song Sparrow	53	11	365	44	163	173	360	123	203	268	118
Lincoln's Sparrow	0	0	0	0	0	0	0	0	0	0	0
Swamp Sparrow	6	1	37	0	22	15	7	56	23	26	9
White-thr. Sparrow	11	3	202	74	119	189	258	51	82	84	84
White-cr. Sparrow	0	0	0	0	0	0	0	0	0	0	0
Dark-eyed Junco	180	344	151	215	26	1552	595	174	82	65	643
"Oregon" Junco	0	0	0	1	0	0	0	0	0	0	0
Lapland Longspur	0	0	0	0	2	0	3	0	0	0	0
Snow Bunting	0	0	1	45	0	0	85	0	0	23	0
Red-winged Blackbird	0	1	1	3	3	16	37	218	1	4	0
Eastern Meadowlark	0	0	1	20	15	0	32	72	5	42	0
Rusty Blackbird	0	0	0	0	0	3	0	0	0	4	0
Brewer's Blackbird	0	0	0	0	0	0	0	0	1	0	0
Common Grackle	0	0	1	1	0	14	13	2	23	0	0
Brown-headed Cowbird	0	39	0	0	0	3	4	0	0	0	3
Northern Oriole	0	0	0	0	0	0	0	0	1	0	0
Purple Finch	14	0	0	0	0	32	0	0	0	1	16
House Finch	145	284	241	347	363	1350	995	385	186	326	370
Common Redpoll	0	0	0	0	0	0	0	0	0	0	0
Pine Siskin	0	57	0	0	0	0	2	0	0	0	0
American Goldfinch	196	89	375	152	99	1034	320	169	114	290	308
Evening Grosbeak	6	273	0	0	0	13	0	0	0	0	0
House Sparrow	405	672	453	778	289	1564	1352	333	646	863	602
number of species	57	55	102	96	116	75	120	98	113	117	67
total birds	8892	7423	14858	28062	31631	36946	237800	30651	33784	22938	15804
	And.	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.	Millis

And. = Andover CBC
 Athol = Athol CBC
 B. B. = Buzzards Bay CBC
 C. Ann = Cape Ann CBC
 C. Cod = Cape Cod CBC
 Conc. = Concord CBC
 Gr. Bos. = Greater Boston CBC
 Marsh. = Marshfield CBC
 M. V. = Martha's Vineyard CBC
 Mid C. = Mid Cape Cod CBC
 Millis = Millis CBC

December 28, 1991
 December 14, 1991
 December 14, 1991
 December 15, 1991
 December 15, 1991
 December 27, 1991
 December 15, 1991
 December 29, 1991
 December 29, 1991
 December 22, 1991
 December 15, 1991

92nd CHRISTMAS BIRD COUNT, 12/14/91-1/2/92

species	Nant.	N. B.	Newbpt.	Quab.	Quin.	Stell.Tau-Mb.	Tuck.	Uxbr.	Wstm.	Worc.	Nwp.RI*	
ATSP	4	16	509	331	70	2	58	0	266	108	204	76 / 27
CHSP	0	0	0	0	0	0	0	0	0	0	0	0 / 0
CCSP	0	0	0	0	0	0	0	0	0	0	0	1 / 0
FISP	0	0	4	2	20	0	19	0	20	0	2	33 / 15
VESP	0	0	0	0	0	0	0	0	0	0	0	1 / 0
LASP	0	0	0	0	0	0	0	0	0	0	0	0 / 0
SASP	7	15	8	0	3	1	13	5	8	0	0	48 / 1
"IPS"SP	2	0	2	0	0	0	0	0	0	0	0	0 / 10
GRSP	0	0	0	0	1	0	0	0	0	0	0	0 / 0
STSP	1	0	0	0	0	0	0	0	0	0	0	0 / 0
SESP	0	0	4	0	0	0	0	0	0	0	0	0 / 0
FOSP	1	1	0	0	0	0	1	0	0	0	0	1 / 1
SOSP	132	49	150	44	96	17	125	69	206	11	74	433 / 35
LISP	0	0	1	0	0	0	0	0	0	0	0	0 / 0
SWSP	13	2	11	2	4	3	8	2	28	0	5	88 / 8
WTSP	36	105	88	5	34	8	34	3	74	5	24	384 / 55
WCSP	0	0	0	0	0	0	0	0	1	0	0	2 / 1
DEJU	24	111	608	515	105	23	372	0	1292	382	433	105 / 8
"ORE" JU	0	0	0	0	0	0	0	0	0	0	0	0 / 0
LALO	0	0	15	0	0	0	0	0	0	0	0	0 / 0
SNBU	0	0	15	2	0	0	1	0	0	0	0	0 / 0
RWBL	120	1	15	0	0	2	0	0	92	0	4	1274 / 300
EAME	6	0	4	0	0	0	39	18	0	0	0	15 / 9
RUBL	0	0	0	0	0	0	1	0	0	1	1	0 / 0
BRBL	0	0	0	0	0	0	0	0	0	0	0	0 / 0
COGR	14	2	2	1	0	1	2	0	3	1	6	2586 / 805
BHCO	1	1	0	5	6	0	154	0	141	1	30	562 / 1006
NOOR	0	0	0	0	0	0	1	0	0	0	0	0 / 0
PUFI	0	3	32	2	1	4	0	0	10	0	4	0 / 0
HOFI	87	85	888	188	93	18	79	0	754	156	273	556 / 24
CORE	0	0	5	15	0	1	0	0	0	0	0	0 / 0
PISI	0	0	0	104	0	0	0	0	0	0	0	0 / 0
AMGO	109	41	610	363	52	22	145	0	529	63	75	37 / 40
EVGR	0	0	85	120	0	0	0	0	71	256	0	0 / 0
HOSP	213	240	1531	542	263	113	565	0	933	337	434	387 / 50

# of species	108	77	107	66	92	73	85	56	67	44	65	118
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total birds	155041	10554	42288	8316	68360	5766	13782	54765	15006	6357	15450	53248
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	Nant.	N. B.	Newbpt.	Quab.	Quin.	Stell.Tau-Mb.	Tuck.	Uxbr.	Wstm.	Worc.	Nwp.RI
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* Figures shown in Newport County, RI/Westport, MA CBC column are broken down by state: RI / MA.

Nant. = Nantucket CBC	December 28, 1991
N. B. = New Bedford CBC	December 30, 1991
Newbpt. = Newburyport CBC	December 29, 1991
Quab. = Quabbin CBC	December 28, 1991
Quin. = Quincy CBC	December 14, 1991
Stell. = Stellwagen CBC	December 22, 1991
Tau-Mb. = Taunton-Middleboro CBC	December 23, 1991
Tuck. = Tuckernuck CBC	December 29, 1991
Uxbr. = Uxbridge, MA/RI CBC	December 29, 1991
Wstm. = Westminster CBC	December 21, 1991
Worc. = Worcester CBC	December 14, 1991
Nwp. RI = Newport County, RI/Westport, MA CBC	December 14, 1991

ABOUT THE COVER: RED-WINGED BLACKBIRD

The Red-winged Blackbird (*Agelaius phoeniceus*) is well-known as a harbinger of spring. Flocks of male Redwings begin to appear in Massachusetts by the first week in March, and by the end of the month, males are on territory in marshes and females have arrived. Redwings are among the most abundant birds in North America and perhaps the best studied. Nearly one thousand studies, including about a hundred master's theses and doctoral dissertations, have been conducted on Red-winged Blackbirds. Clearly the Redwing is no ordinary bird!

Male Redwings are easily identified with their glossy black plumage and bright red shoulders, or epaulets, edged with yellow. Occasionally, however, such as while feeding on the ground, they cover the epaulets with black feathers, and their "coverable badges" all but disappear. Since Redwings use these badges in territorial advertisement, covering them serves to reduce aggression when the birds are feeding in flocks. The females, which are about two-thirds the size of males, are cryptically colored, tawny, and heavily streaked with brown. Immature birds resemble females, but immature males have red shoulders.

Redwings breed throughout North America wherever suitable habitat occurs. They nest from the salt marshes of both coasts to prairie sloughs and upland meadows, most typically inhabiting cattail-choked marshes. Male Redwings are highly territorial, as everyone who has visited a marsh in spring knows. The male Redwing perches on a cattail stalk in his song-spread posture, with his body arched forward, tail spread, wings drooping to the side, red epaulets flashing, and bellowing forth his territorial song, "kong-qur-eeee." Males also have a song flight in which they flutter, tail and head drooping, again fully displaying their bright red epaulets, as they fly from one perch to another in their territory. At territorial boundaries you may witness two males in "bill-tilt" or "bill-up" posture, facing one another with bills pointing to the sky. Redwings will defend territories against hawks and crows, and have even been known to strike human intruders.

Redwings have a polygynous mating system in which one male may have as many as twelve females nesting in his territory, although two or three is the more usual number. Females are also territorial and squabble with other females while defending their turf. Field studies suggest that females choose territories on the basis of habitat characteristics, not the attractiveness of males. Males, however, compete for the best territories and thus indirectly compete for females. They usually produce a single brood and have a nest of woven reeds and grasses suspended from clumps, cattails, or other emergent vegetation. The nest, lined with fine grass, may be only a few inches above the water, but nests as high as thirty feet in trees have been reported. The usual clutch is three to five pale bluish-green eggs, blotched or spotted brown. Incubation is by the female alone for ten to twelve days. The young are fed a diet of insects provided mostly

by the female and fledge in ten to fourteen days. The male plays a greater role in feeding the young after they have fledged.

During the breeding season Redwings forage largely on emergent insects from the marsh, which they capture by gleaning foliage or by hawking. Outside of the breeding season they subsist mainly on vegetable material, such as weed seeds and crop residues. By forcibly opening their beaks, Redwings are able to prize apart vegetation or overturn stones, a process called gaping, which aids in finding prey in a wide variety of circumstances.

In August all the Redwings seem to disappear, as they undergo their annual molt inconspicuously, deep within the marshes. In the fall flocks of females and young forage in the uplands separately from the flocks of males, and all return to roost in marshes. The northern populations of Redwings are migratory and join huge mixed species flocks of blackbirds, some containing several million birds. They may do considerable damage to crops, particularly in the Midwest. Winter roosts of well over a million birds in the southern states have also caused a variety of problems, resulting in control measures and heated controversy.

Despite the economic problems which the vast numbers of these birds have caused, they remain a favorite with most people, their cheery song and handsome territorial displays epitomizing the vitality and productivity of the spring.

W. E. Davis, Jr.

MEET OUR COVER ARTIST

Barry Van Dusen's artwork has frequently appeared on *Bird Observer* covers, most recently for the December 1991 issue. He lives in Princeton, Massachusetts, and has been an independent professional artist for nearly fifteen years. For the past eight years, he has worked closely with Audubon societies and conservation organizations throughout New England, and he was named the Audubon Alliance Artist of the Year for 1992. His work has been featured in books, magazines, posters, and brochures involving many aspects of natural history, although his favorite subjects are birds.

Barry is currently working on a pocket guide for beachcombers (a Massachusetts Audubon Society project). The guide will include drawings and information on shells, seaweeds, and seabirds. His artwork will also be featured at two upcoming shows. He will have a special one-person art show, "Natural Impressions," at the Sterling Mill Works from May 2 through May 31, 1992. The Sterling Mill Works is located at 15 School Street, Sterling, Massachusetts, telephone 508-422-3200. He will also have artwork exhibited at the Lyme Invitational Wildlife Art Show, to be held on June 6 and 7, 1992, at the Lyme Art Association Gallery in Old Lyme, Connecticut, telephone 203-434-7802. For future scheduled exhibits or additional information, Barry can be reached at 13 Radford Road, Princeton, Massachusetts 01541.

M. Steele

Birds commonly manifest a host of physical abnormalities. Some of these are as subtle as deformed toes, feet, or bills; others may be as striking as totally white albino or totally black melanistic individuals. Birdbanders who have the opportunity to observe large numbers of birds at close range are particularly aware of the high incidence of such conditions in wild bird populations. In most cases, these minor abnormalities have little effect on the well-being of the bird displaying the condition. Perhaps of greater significance is the consternation that certain plumage abnormalities cause birders who are unprepared for bizarre coloration anomalies.

February's mystery photograph depicts an anomalous plumage. The overall shape of the bird, its large bill size, black-and-white wing pattern, and characteristic posture on a sunflower seed feeder all suggest that the bird is an Evening Grosbeak (*Coccothraustes vespertinus*). Lacking, however, are the normally black crown; yellow eyebrow stripe; dark brown head, chest, and back; and black tail. Even in the black-and-white photograph, there is little contrast between the yellow belly and normally darker colored areas. In reality, the bird in the picture is largely bright yellow and has contrasting black wings with white patches. This Evening Grosbeak displays a condition called xanthochroism—a situation in which its body has failed to produce the dark pigments which normally combine with yellow in some parts of its plumage. While this particular plumage abnormality is fairly common in cage birds, it is not frequent in the wild.

The point of this discussion is simply to highlight the fact that there are a number of related abnormal plumage conditions which can confound and confuse field observers who encounter them for the first time. Perhaps the most familiar of these plumage aberrations is leucism — a condition generally



manifested by an overall dilution of dark pigmentation or by the possession of varying degrees of abnormal white feathering (see *Bird Observer* 19:309).

The strikingly-colored Evening Grosbeak in the picture was photographed in New Hampshire at the feeder of David Rowell.

AT A GLANCE

Photo by Wayne R. Petersen



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