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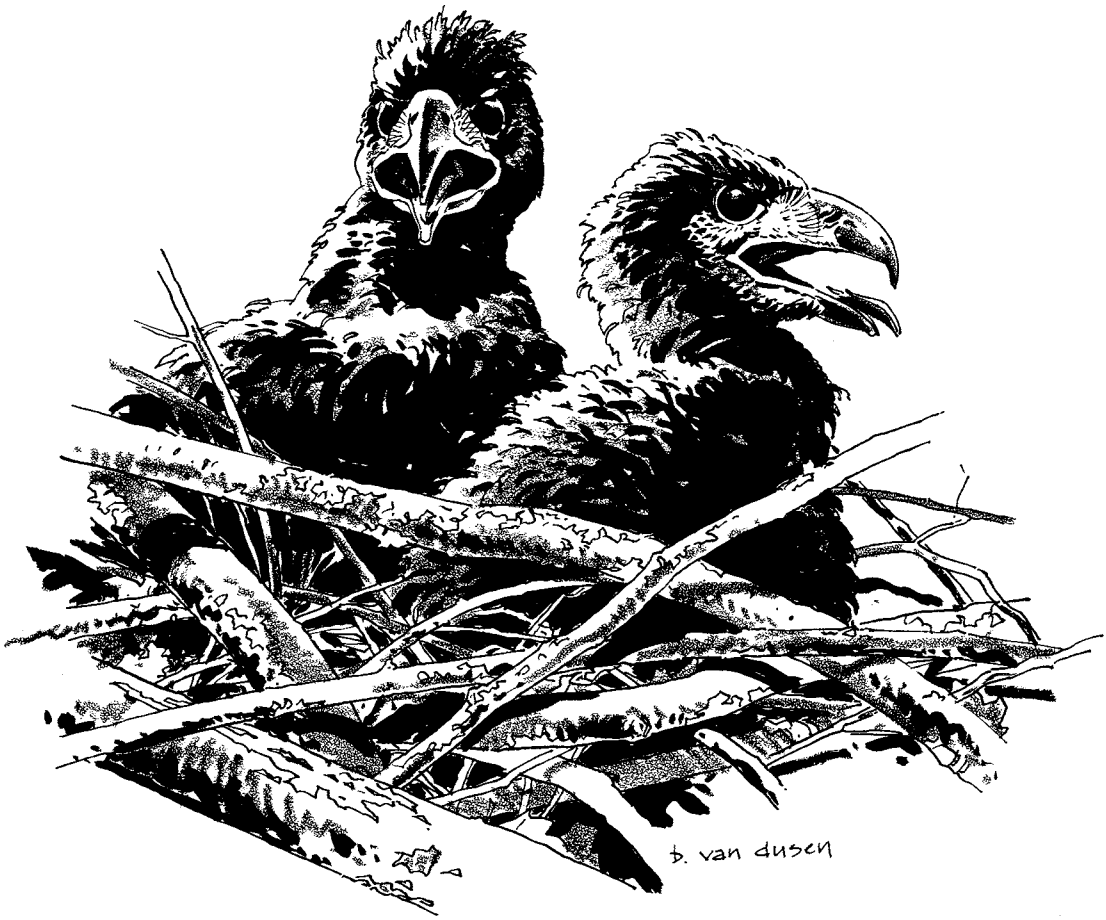

HOT BIRDS

Cathy Skowron of North Truro discovered this **Western Tanager** (left) at her feeder on January 16, 2006, and snapped this photograph.

At least four **Boreal Chickadees** have visited feeding stations in Massachusetts this winter. This Boreal Chickadee (right) in Rowley was photographed by Phil Brown on March 2, 2006.

On March 10, 2006, Gina Martel found a **Greater White-fronted Goose** at the UMass Amherst campus. On March 24, James Smith took this photo (left).

On April 1, 2006, Linda Ferraresso and Ann Smith found a **Black-necked Stilt** at Belle Isle Marsh in East Boston. Greg Dysart took this portrait (right) of the cooperative bird on April 3.

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ADULT BALD EAGLE BY JIM FENTON

Bird Observer

A bimonthly journal — to enhance understanding, observation, and enjoyment of birds

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Glass: A Deadly Conservation Issue for Birds

Daniel Klem, Jr.

Aside from habitat destruction that eliminates fundamental resources upon which life depends, it is my contention that clear and reflective sheet glass causes the deaths of more birds than any other human-related avian mortality factor. Although clear and irrefutable evidence to support this claim is currently not available, a vast amount of data and its interpretation overwhelmingly upholds this assertion. I have spent more than 30 years studying bird-glass collisions and human-related avian mortality in general, and this article presents an overview of the glass hazard for birds: its character, scale, and our current knowledge about how to mitigate, if not eliminate, this unintended killing of birds.

A Descriptive Overview

Glass in the form of windows has enriched and contributed to the aesthetic, cultural, economic, physiological, and psychological well-being of humans for at least 16 centuries (Klem 1979, 1989). Although glass in the form of window panes almost certainly has exacted an increasing toll on birds since its presence in the environment, at no time have I advocated the removal of windows from human structures, believing it is possible to protect birds and still retain the properties of glass that humans enjoy. No cost effective, universally accepted means of protecting birds from glass is yet known, although this is an active area of research, and several techniques to mitigate and eliminate lethal strikes already exist, and have proved acceptable at select locations. The amount of glass continues to increase in new and remodeled human dwellings, with new construction soaring worldwide. New, low-iron sheet glass is currently being manufactured with unprecedented clarity. All this portends an unrelenting and increasingly lethal hazard for common, as well as rare, threatened, and endangered species, and for bird populations in general (Figure 1).

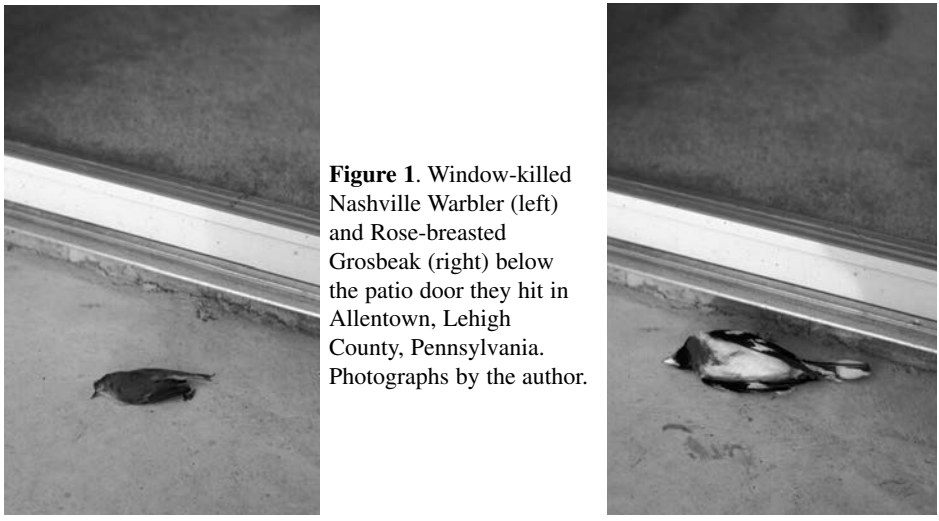

Figure 1. Window-killed Nashville Warbler (left) and Rose-breasted Grosbeak (right) below the patio door they hit in Allentown, Lehigh County, Pennsylvania. Photographs by the author.

Surveys of bird strike records from individuals and museums reveal that approximately 25 percent or 225 species in the United States and Canada, and 6 percent or 556 species of the world's birds have been documented striking windows. The species not recorded as window-kills are those that typically do not occur near human dwellings. The species recorded most often in order of documented frequency for North America are: American Robin, Dark-eyed Junco, Cedar Waxwing, Ovenbird, Swainson's Thrush, Northern Flicker, Hermit Thrush, Yellow-rumped Warbler, Northern Cardinal,and Evening Grosbeak. Half a hemisphere away, a globally endangered species, the Swift Parrot (*Lathamus discolor*) of Australia, is a prominently documented window-kill. According to Raymond Brereton, Manager of the Swift Parrot Recovery Program for the Parks and Wildlife Service of the State of Tasmania, 1.5 percent of the entire population of 1000 breeding pairs are annually killed striking windows. The vulnerability of this species to glass is especially noteworthy and troubling because it documents a specific human-related mortality factor as a threat to the overall health of a specific population. How many other species the world over are or will be affected by attrition resulting from glass strikes is yet to be determined.

Birds behave as if clear and reflective glass is invisible to them (Klem 1989, 1990b, O'Connell 2001). Primarily, they strike clear panes while attempting to reach habitat and sky seen through corridors, windows positioned opposite each other in a room, or where glass walls meet in corners. They also strike reflective panes of all colors, attempting to reach habitat and sky mirrored in the glass surface. The sex, age, or resident status of a bird in any locale has little influence on its vulnerability. Glass casualties have been recorded the world over at windows of all sizes, from tiny garage panes in residential homes to the glass walls of multistory buildings. Repeated observations and experiments reveal that lethal collisions are possible wherever birds and glass mutually occur, but landscape features such as lighting, internal and external vegetation, and flight paths created by the arrangement of structures can help explain the toll exacted at any one site. Given the nature of the hazard for birds, the best predictor of strike rate at any one site is the density of birds in the vicinity of glass. There are no times of the day, seasons of the year, or weather conditions during which birds are immune from glass. At the latitude of New England, strikes are more frequent during winter — when birds are attracted to feeders in large numbers —than at any other time of the year, including the spring and fall migratory periods when collision casualties typically attract the most human attention because they are often more visible on sidewalks and around workplaces. Writing in *Bird Observer,* Wiggin (1974) described noteworthy seasonal kills, many associated with glass strikes, at the Prudential Center in Boston. Glass victims are so consistently available at some sites that raptors and shrikes are known to regularly frequent the areas near windows to collect these vulnerable prey (Klem 1981).

A related but different phenomenon is when a bird interprets its reflection as a rival and repeatedly attacks a pane attempting to defend its territory from itself. These types of collisions are not the subject of my studies, however. I have no records of a bird being harmed in this practice; bloody and disheveled yes, but not otherwise harmed.

Dead and dying victims of glass collisions are most often hidden from view in vegetation surrounding human dwellings. Further, whether they are killed outright, or merely injured or stunned, they are quickly taken by scavengers and predators (Klem et al. 2004). Continuous monitoring at single homes, along with other field experiments, reveals that one out of every two strikes results in a fatality (Klem 1990a). The actual cause of death of strike victims is head trauma, intracranial pressure and blood in the brain, and not the often-cited and almost universally inaccurate "broken neck" explanation; in a fresh specimen, the special articulating surfaces of the avian cervical vertebrae effect a highly flexible neck that is easily thought to be broken (Klem 1990a, Veltri and Klem 2005).

In the late 1970s I used available U.S. Census data to estimate that approximately 100 million to 1 billion birds were killed annually by striking windows in the U.S., based on the assumption that 1 to 10 birds are killed at one building each year (Klem 1990b). An independent study of North American window-kills at homes where winter bird feeding was monitored supported and judged this range of annual mortality to be reasonable (Dunn 1993). Given what we currently know about the glass threat to birds, common sense suggests that even the upper range, 1 billion U.S. death toll estimate may be highly conservative.

Comparable annual U.S. bird deaths from other human-related sources include: 120 million from hunting, 60 million from vehicular collisions, 10,000 to 40,000 at wind power turbines, and as many as a billion by domesticated cats (American Ornithologists' Union 1975, Banks 1979, Klem 1990b, Klem 1991, Erickson et al. 2001). Even considering the remarkable number attributable to cats, this figure is more than likely to be far less than the annual kill at glass. Further, cats are active predators that most often capture vulnerable prey, while sheet glass is an indiscriminate killer that takes the strong as well as the weak and is astronomically more abundant than cats in the environment.

Raising Awareness

Only recently, within the last few years, has the glass threat to birds been acknowledged as a serious avian conservation issue by more than a few. For several decades prior to the spring of 2003, only a relatively meager collection of individuals took window-kills seriously or even acknowledged them.

When my doctoral adviser, William G. George at Southern Illinois University at Carbondale, recommended I look into bird kills at windows, I was struck almost immediately by the potential magnitude of loss from such a ubiquitous, invisible threat, installed in virtually every human structure. After a time, I adopted "sound bite" tactics to draw attention to the scale of the problem. One such attention-getter was: "if you accept my lowest attrition figure of 100 million annual kills at glass in the U.S. you would need 333 Exxon Valdez oil spills each year to match the carnage." It is ironic that the 100,000 to 300,000 marine birds estimated to have been killed by the 1989 Exxon Valdez oil spill in Alaska is still often cited by various media sources as a prime example of a world-class environmental disaster while the far greater toll exacted by glass every year largely goes unnoticed.

Since the 1980s, after I completed my doctoral work (Klem 1979), I have tried to enlist the aid of two principal constituencies, the building industry and the conservation community, in my efforts to save birds from glass collisions. It was my expectation that architects, in particular, were likely to offer creative solutions to the problem. Unfortunately, glass manufacturers, architects, developers, and landscape planners tended to view the issue as uncomplimentary, one that associated their work or product with death and destruction, and for many years I was unable to generate serious interest.

Within the conservation community, I was, and continue to be disappointed that federal, state, and regional governments charged with, or at least party to, protecting birds, respond to the issue of glass collisions with only mild interest, preferring to focus on other higher profile avian mortality causes such as domestic cats, power lines, communication towers, and wind turbines.

Interest in bird kills at glass seemed to change overnight, however, following a recent, two-year spate of prominent media coverage of the issue and my work. This included features in the *Philadelphia Inquirer* (Yakutchik 2003), and *Audubon Magazine* (Malakoff 2004), an article by AP reporter Joann Loviglio, that appeared in hundreds of newspapers and web media pages, and most recently, a spot on the National Public Radio (NPR) news program *Morning Edition* (Nielsen 2006). On the heels of this coverage, I began at last to make the sorts of contacts that had eluded me for decades: architects interested in helping birds, glass and glass-related product manufacturers willing to try to help me address key experimental questions by offering technical expertise and products. Local, national, and international conservation organizations also seemed willing now to address the topic.

Ten thousand birds killed on one foggy night at a communication tower is a horrific but rare event; while more than that number are almost certainly killed daily at residential and commercial buildings in North America alone, and tens of thousands more are likely killed each day elsewhere around the world. Addressing this carnage, in the face of the growing use of glass in a growing construction industry, is imperative to protect our current and future bird populations.

Seeking Solutions

Enforcement of the Migratory Bird Treaty Act (MBTA) of 1918, as amended, and the Endangered Species Act (ESA) of 1973 to protect the unintended killing of birds at glass is seen as impractical, even though this legislation has been used to address other unintended avian mortality, such as that associated with pesticides and power lines (Corcoran 1999). While no reasonable person would advocate prosecuting homeowners for birds killed by their windows, we *should* expect responsible government agencies to address those sites where hundreds of birds are killed by glass, in some cases, in a single day. These kills are substantial, foreseeable, and avoidable, and I believe that at such sites, birds do merit protection from glass under the purview of the MBTA and ESA. Minimally, we should expect the MBTA and ESA to be consistently enforced, no matter what the source of unintended mortality.

Although the issue went underappreciated and largely ignored for decades, there have been a select and distinguished number of individuals and organizations committed to, and advancing the cause of saving birds from glass collisions. As early as 1976, a Trent University undergraduate student, Michael Butler, began documenting and collecting window-kills in the downtown financial district of Toronto. Independently, some years later, in that same city a group of dedicated conservationists founded an organization in 1993 to address migratory bird kills associated with lighted buildings. They called themselves the Fatal Light Awareness Program (FLAP, <http://www.flap.org>) and they documented 10,000 annual deaths in the metropolitan area they surveyed. Partnering with the World Wildlife Fund of Canada, FLAP published a detailed account of their findings and interpretations in an attempt to draw attention to the collision killing that they believed was occurring in other urban centers worldwide (Ogden 1996).

Thanks to the efforts of FLAP and its collaborators, on January 31, 2006, the City of Toronto adopted formal guidelines to prevent bird collisions with buildings, making it the first city in the world to implement a migratory bird protection policy.

Following the example of FLAP, other organized efforts are now underway to address the connection of urban lighting and collision kills during migratory periods in New York City and Chicago. Rebekah Creshkoff, an amateur birder and activist, convinced the New York City Audubon Society of the importance of this issue for her city, and in turn they have been the leading force in establishing a Bird Safe Glass Working Group (BSGWG) composed of architects, ornithologists, artists with expertise in glass design, government officials committed to bird protection, legal council, and groups concerned with animal care such as the Humane Society of the United States. The BSGWG is committed to making glass and human structures in general safe for birds worldwide. Rebekah was also responsible for getting the building managers of the former World Trade Center to put up netting to help prevent bird-glass kills at their structures. She was also the originator of "Project Safe Flight," a program that enlists volunteers to collect collision victims during migratory periods in New York City.

Randi Doeker of the Chicago Ornithological Society, in cooperation with Mayor Richard Daley and the City of Chicago, the College of Architecture at the Illinois Institute of Technology (IIT), Robbie Hunsinger and her volunteer organization, The Chicago Bird Collision Monitors, and Libby Hill and the Evanston North Shore Bird Club, brought together architects, conservationists, and scientists to address the bird-glass issue in the first ever *Birds and Buildings Conference*, in Chicago in March of 2005. Since then, Ms. Doeker has established a website <www.birdsandbuildings.org> to inform and guide building professionals, especially on what can be done at existing structures. The architects at IIT describe this now as a cutting edge research topic in architecture.

Swarthmore College Project

After helping a student with a window-kill study on the campus of Swarthmore College in Philadelphia, I was invited by Dr. E. Carr Everbach, Professor of

Engineering and Chair of their Green Team, to advise them on how to make the glass in a proposed new science building safe for birds. They wanted their new facility to meet the criteria of the U.S. Green Building Council (USGBC) and serve as a model for environmentally responsible structures elsewhere. Based on my research, Swarthmore chose a patterned glass called "Ceramic Frit," manufactured by Goldray, Inc. of Calgary, Alberta, Canada (www.goldrayinc.com). The fritted glass is etched with a pattern of dots, but was acceptable in terms of aesthetics and clarity. My experiments have shown this glass to be an effective collision deterrent.

The USGBC consists of architects and other building professionals who have established a rating system called Leadership in Energy and Environmental Design (LEED). The LEED rating system is a voluntary set of national standards for evaluating how "green" a building is, and it includes assessments of the amount of recycled construction materials used, accommodation for natural lighting, attention to water runoff and erosion, and several other considerations addressing how a structure is likely to impact the specific environment in which it is set. While I could not be more supportive of this responsible approach to new or remodeled construction, I cannot think of any building as "green" if birds are routinely killed flying into its clear or reflective low-E (energy) glass, no matter how many other environmentally responsible features have been incorporated into the structure.

There currently is no specific LEED evaluation point for preventing bird kills at glass in new or remodeled structures. The fritted glass used in Swarthmore's new science center contributed to its LEED certification under a rating category addressing innovative design. This was the first time bird-glass collisions were factored into an LEED evaluation, and the hope is that the latest LEED 3.0 or future versions will include a formal rating item addressing the degree to which a structure is designed to prevent bird strikes at glass.

Available Solutions

Homeowners and managers of commercial and other buildings can mitigate or eliminate bird-glass collisions in a number of ways (Klem 1990b, Klem et al. 2004). Window screens designed specifically for this purpose are available (www.windowscreen.com), but other physical barriers, such as garden netting or insect screening can work to equal effect.

Decals of any shape and size work to eliminate bird strikes when applied to uniformly cover the glass surface, separated by 5-10 cm (2-4 in). (Decals must be applied on the outside surface of reflective glass.) The falcon silhouette, a popular window-kill preventive decal, is no more effective than any other shape. In one of my first field experiments I found that a single falcon silhouette applied to a window resulted in nine deaths over a 54-day period compared with 12 deaths at an unaltered control window. The window with the falcon silhouette decal killed fewer birds, but it was not a significant reduction. The more decals, the fewer strikes and the fewer deaths. Include enough decals on a pane to uniformly cover the entire surface such that they are separated by the 5-10 cm (2-4 in) distance and you eliminate strikes altogether. Mylar strips, feathers on monofilament line, maple leafs that have a

translucent appearance and reflect UV are all effective if applied in an amount that uniformly covers the glass surface, and spaced 10 cm. (4 in.) apart when oriented vertically, and 5 cm. (2 in.) apart when oriented horizontally. Why a smaller horizontal spacing is required is not clear, but it may be that birds are more apt to give wider clearance flying around vertical tree trunks than over and under more closely spaced horizontal branches.

A simple but effective way to reduce window-kills around bird feeders is to move the feeder to within 1 m (a bit more than 3 ft.) from the glass surface (Klem et al. 2004). Birds come and go from feeders; only rarely will they pass by at full speed to strike glass. The results of feeder placement experiments conducted by my research group has prompted many conservation organizations to adopt feeder placement as recommended method for preventing millions of bird fatalities at glass (Figure 2).

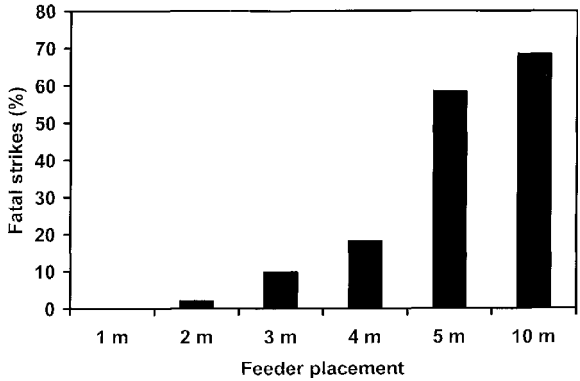

Figure 2. The proportion of bird fatalities (%) at windows increases as bird feeders are placed farther from the glass surface. Data are from field experiments at Germansville, Lehigh County, Pennsylvania, 1991-1992 (Published as FIG. 1 in Klem et al 2004 and reprinted here with permission from The Wilson Journal of Ornithology).

Ideally, we need plate glass manufactured and installed that retains all the qualities of existing panes but which flying birds can see and avoid. Such a glass currently does not exist. For some time now I have advocated the manufacture of a "one-way" type pane which, when viewed from the inside, appears the same as conventional glass, but from the outside shows visible patterns that birds will avoid. Perhaps the optimal solution would be to apply patterns to glass that either reflects or absorbs ultraviolet (UV-A) wavelengths (ranging from 300-400 nanometers), a range of wavelengths that birds see but we do not. Of the relatively few but diverse bird species tested so far, it is hypothesized that just about all birds see UV light (perhaps nocturnal species are exceptions). The question of UV light serving as a signal to alert birds to the danger of glass is currently an active area of my research; however, as I write this, existing literature on the topic and my preliminary results are not encouraging (Graham 1997).

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Daniel Klem, Jr*. is Professor of Biology, and The Sarkis Acopian Professor of Ornithology and Conservation Biology at Muhlenberg College in Allentown, Pennsylvania. In addition to his long-term and ongoing bird-glass studies, he is the Scientific Director of The Birds of Armenia Project. The goals of the Birds of Armenia Project are to promote and establish a conservation*

and overall environmental ethic among the citizenry of this developing nation, and former Soviet Republic, through the appreciation and study of birds, and to inform western cultures about ornithology in a part of the world where, until recently, little was made available. Among other accomplishments, the project resulted in the publication of three books co-authored by M. S. Adamian and D. Klem, Jr.: A Field Guide to Birds of Armenia *(1997 English and 2003 Armenian editions), and a comprehensive ornithological monograph* Handbook of the Birds of Armenia *(1999).*

Impression of bird (likely a Mourning Dove) left on window after a collision; photograph © 2003 by Janie Johns.

May Workshop Will Probe Sudden Wetland Dieback at Coastal Refuges

The Rachel Carson and Parker River National Wildlife Refuges are organizing a workshop on May 24 to increase and share information about "sudden wetland dieback" at eastern coastal refuges, characterized by death of vegetation and loss of organic matter.

Rachel Carson Refuge organized a workshop on sudden wetland dieback last year, resulting in the creation of a Web site and electronic listserv to share information. This year's meeting will build on that information and introduce a wider audience to the issue, obtain an update from New England states on observations and research, visit affected sites on Cape Cod, and recommend next steps.

The workshop will be held at the Wellfleet Senior Center in Wellfleet, Massachusetts, from 9 a.m. to 4 p.m. For more information about the meeting, contact Susan Adamowicz, Biologist, Rachel Carson National Wildlife Refuge, Wells, Maine, 207-646-9226, ext. 31; e-mail, susan_adamowicz@fws.gov. For more information about sudden wetland dieback, go to <http://wetland.neers.org>.

Recovery and Biology of the Common Raven (*Corvus corax*) in Massachusetts

Tom French

At the time of the European settlement, the Common Raven was apparently widespread and common in Massachusetts, and probably bred here, although no nests were actually reported (Forbush 1927). The raven had completely disappeared as a breeding species, however, by the mid-1800s, probably due to large-scale deforestation. Other species which also disappeared around this time were Wild Turkey, Bald Eagle, black bear, fisher, and beaver. From the mid 1800s through 1933, nine raven specimens were collected in Massachusetts but no other specific sight records were reported (Bailey 1955, Griscom and Snyder 1955, Flanagan 1993, Veit and Petersen 1993).

From the mid-1930s through the 1960s, there were only nine reports of individual ravens, six from towns east of Worcester County and two seen together in Dedham, Norfolk County, on February 8, 1951 (Bailey 1955, Flanagan 1993, Veit and Petersen 1993). The literature reports 11 more ravens in the 1970s, six from towns east of Worcester County (Veit and Petersen 1993, *Bird Observer*).

The first recent report of two ravens in appropriate nesting habitat was in Savoy State Forest, Berkshire County on May 29, 1977 (Quinlan 1978, *Bird Observer* vol.5, no. 4) and three years later a pair was seen in courtship flight near Mt. Watatic in Ashburnham, Worcester County on April 12, 1980 (Veit and Petersen 1993). The first clearly territorial pair was found in Cheshire, Berkshire County in 1981, and their nest, found on a cliff in 1983, became the first nest actually documented in the state (Flanagan 1993). Only a year later, three other apparent breeding pairs were found in New Salem and Shelburne, Franklin County, and on Mt. Greylock, Berkshire County. These signs of nesting, two and a half decades ago, marked the beginning of a strong recovery in Massachusetts that continues today.

In 1987, MassWildlife, with the help of many others, began an effort to monitor the return and expansion of Common Ravens, largely because of concerns that their recovery might interfere with that of Peregrine Falcons. Since Massachusetts cliffs are not very large by northern New England standards, and since ravens initiate nesting earlier in the spring than Peregrine Falcons, there were concerns that ravens might prevent prospecting falcons from nesting on the same cliffs.

The earliest searches for ravens were restricted to the fourteen historic Peregrine Falcon nesting cliffs and were part of a multi-state coordinated effort to monitor the return of Peregrines. During spring surveys in 1980, 1985, 1988, and 1989, we were surprised to find Common Ravens at eight of the fourteen historic falcon nesting cliffs. Although our first interest was to determine the effects of raven nesting on falcons, we soon became interested in documenting the remarkable recovery of the ravens themselves.

Our greatest efforts were devoted to locating raven nests and banding the chicks. During nest visits, observations were made on the nest location, construction materials, and food items left near the nest.

Banding

In the first year of banding (1987), the only nest visited was at the historic Peregrine eyrie at Lighthouse Hill, on the west shore of the Prescott Peninsula at Quabbin Reservoir (Davis 1989). These four chicks were the first Common Ravens ever banded in Massachusetts.

Between 1987 and 2005, a total of 549 chicks from 147 clutches were banded at 30 different nest sites (mean = 3.7 chicks/clutch). Twenty of these bands (3.6%) were later recovered. Three of these came from chicks that were discovered dead, below or within 0.5 km of their nests, two to three months after they were banded. (On about six other occasions, feathers of a large dead chick were found near a nest during the next year's nest visit, but no bands were located.)

Seventeen band recoveries were made away from the nest site, including six which were observed on healthy, live birds. These 17 band recoveries occurred between 3 months and 5 years, 7 months after banding, and occurred in Massachusetts (8), Vermont (4), New Hampshire (3), Connecticut (1), and New York (1). At least two were shot (1 by a crow hunter, 1 by a turkey hunter), one was struck by a vehicle, and one was found with at least four other ravens that died at a landfill in a probable poisoning event. The cause of death for the other birds was unknown. Five band returns (2 alive and 3 dead) were from adult birds that were probably on their breeding territories. Three of these had remained in Massachusetts, and the other two had dispersed to Vermont. The 12 juvenile birds (3 months to 1 year, 10 months postbanding) had dispersed from 4 to 156 km away from the nest site.

Family Groups

At some Massachusetts cliffs, the same nest has been used year after year. At most sites, however, the actual location of the nest on the cliff changes fairly often. In many cases the nest comes down over the winter and has to be rebuilt. At some sites, the heaps of five or six previous nests can be found at the base of the cliff. Alternate nests used by raven pairs in Britain were also usually at different locations on the same cliff, but could be as much as 10 km apart (Ratcliff 1997). For the purpose of this report, each nesting cliff was considered a single nest site, regardless of how many actual locations on a cliff were used. A nest found more than 1 km away from a previously known nest was counted separately, even though some nearby nests may have been alternate nests of known pairs.

In the 22 years from 1983 through 2005, a total of 72 separate nest sites representing at least 68 different pairs were found. MassWildlife staff also found probable territorial pairs and family groups in 12 additional towns, but their nests were not found. Figure 1 shows the distribution of these birds and how the nesting range of the raven has expanded across the state since the first nest was discovered in 1983.

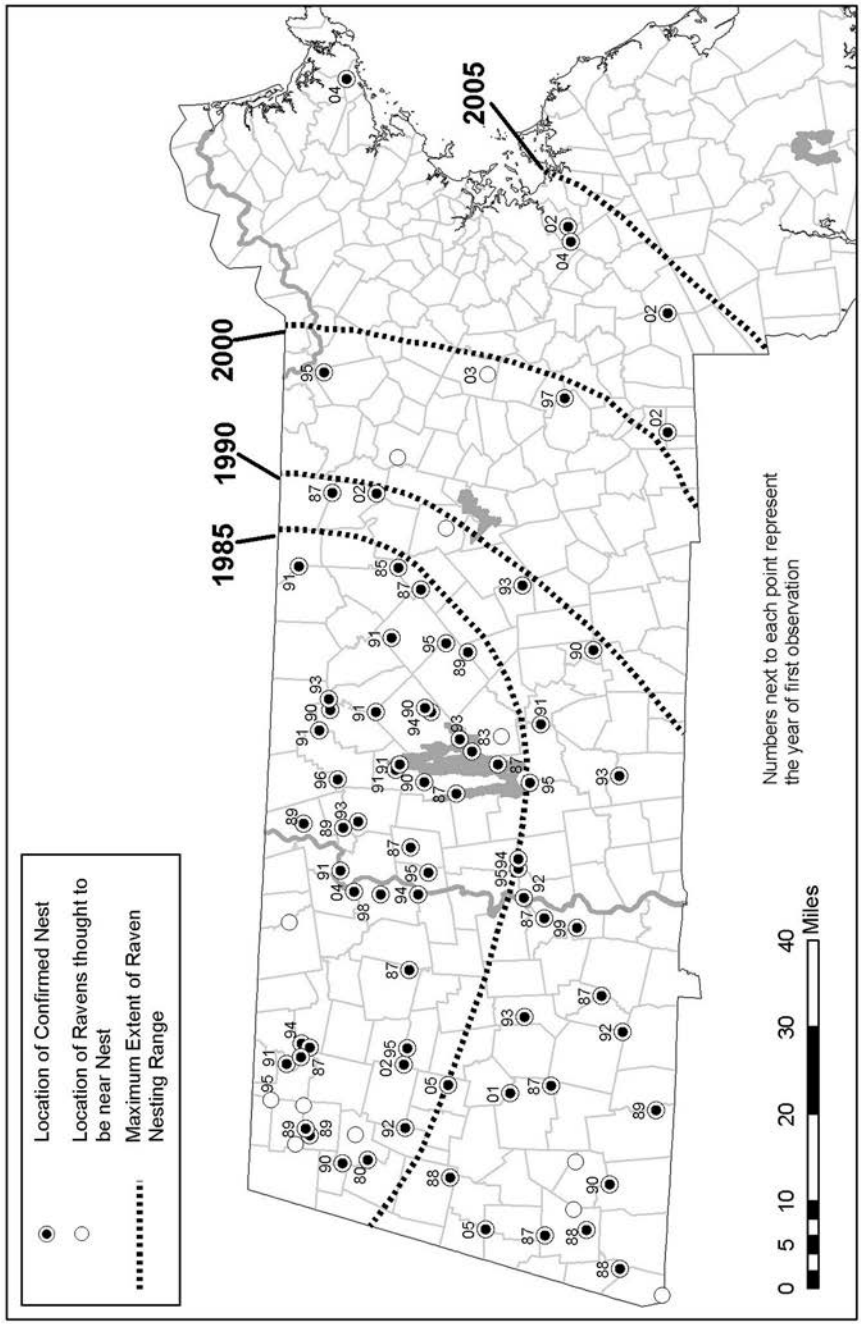

Figure 1: Raven nests in Massachusetts. Map by Dave Szczebak.

During this period, *Bird Observer* reported a total of 56 sightings of groups of three to eight birds during the period of May through August, which may have represented family groups. Forty-three were in towns with known nesting pairs: 30 of these were presumed family groups, and 13 were known family units. The remaining 13 records were from nine towns from which no nests were known:

County	**Location**	**Year**
Berkshire	Sheffield	2000
Berkshire	Windsor	2002, 2004
Franklin	Hawley	2001, 2004
Hampshire	Chesterfield	2002
Hampden	Blandford	2001
Hampden	Springfield area	2005
Worcester	Oxbow NWR, Harvard	1978
Middlesex	Townsend	1999, 2001

These sightings probably represented resident pairs with nests that have not yet been discovered, or pairs with nests nearby in adjacent towns, but not included on the map in Figure 1.

Nonbreeding Groups

After fledging, ravens stay with their parents as a family group until August or September. Some birds disperse individually, but most probably join other young birds to form small groups and, occasionally, large winter flocks. These flocks are composed of nonbreeding birds, including many nonbreeding pairs. In some areas, the number of nonbreeding birds may equal the number of breeding adults in the region (Ratcliffe 1997). When adult members of established pairs die, even during nesting season, replacements come from this floating pool of nonbreeders. Other young birds from this pool pair with each other and establish new nesting territories of their own.

Most ravens first breed at three years of age, but a few breed at two, and others do not breed until four or older (Ratcliffe 1997). Because of this large, year-round floating pool of nonbreeding birds, including pairs, it is difficult to know when sight records are indicative of a nesting territory. However, groups of three to eight ravens seen from May through August are often family units composed of the adult pair and their recently fledged young.

Juveniles may disperse long distances from traditional breeding areas. Ravens have been reported from every Massachusetts county except Suffolk and Nantucket. However, Dukes County is only represented by one bird, in May of 1984 on Martha's Vineyard. Reports of single birds from Cape Cod, Barnstable County, have occurred in four years (1975, 1983, 1992, 2000) and in 2002 one or two birds apparently spent six consecutive months (April 30-October 14) on the Cape. Single birds have been reported from Bristol County in only two years (1973 and 2002), and in Plymouth County in five years (1984, 1995, 1997, 1999, 2002). Although there are no records from Suffolk County, a Common Raven was found dead in nearby Newton, Middlesex County, on August 28, 2000 and is the only raven in Massachusetts that

has tested positive for West Nile Virus. Single ravens were reported from Essex County in 10 different years from 1933 through 1991 and included some of the state's earliest modern reports (1933, 1946, 1948, 1971, 1973, 1974, 1982, 1985, 1986, 1991). Two ravens were first seen together in Essex County in 1992 and then every year since 2003. The first nest was discovered in the county in 2004 (Berry 2005). These coastal records are probably juveniles dispersing from natal sites to our north.

Other Groups

A review of *Bird Observer* records from 1972 to 2005 was undertaken to look for patterns of flocking, dispersal of nonbreeding birds outside of the nesting range, and possible family units that might indicate the presence of undiscovered nests nearby. Additional records were drawn from personal observations and those received from others. There was a total of 63 reports of groups of nine or more ravens, from 17 locations. Thirty-one of these reports came from the Worcester County hawk-watch sites at Mt. Watatic, Wachusett Mountain, and Barre Falls. Many of these birds were deemed by the hawk-watchers to be migrants. The remaining 32 reports were from Worcester county and west, with the exception of one from Middlesex County. Eighteen of these records are of groups of 20 or more birds, and five are reports of 30 or more birds, distributed as follows: Becket, Berkshire County (53 in December 1999, 30 in September 2003, 55 in November 2004); Athol, Worcester County (30+ in December 2003); and Plainfield, Hampshire County (75 in May 2001).

From the winters of 1983/84 through 1995/96, MassWildlife maintained an observation blind on the east side of the Prescott Peninsula at Quabbin Reservation, where deer and other animal carcasses were set out to attract Bald Eagles for the purposes of reading leg bands. Groups of 20 or more ravens were frequently present in the winter, but the highest number counted on a single day was 42, on February 6, 1994.

Nest Sites

Of the 72 known nest sites discovered in Massachusetts, four were believed to have been alternate nest sites of known pairs but located a considerable distance from the previous nest. In two cases, both nest sites were on natural cliffs, 2.1 and 2.4 km apart. In another case, both sites were railroad bridges over the Millers River, 1.8 km apart. In the final case, one site was under a highway bridge over a brook, and the second site was on the face of a road cut, 2.4 km away.

There were four raven pairs that moved from one type of nest site to another type very close by, and a fifth pair that tried (note: because these were less than 1 km away, they were considered the same site for the purposes of this report). A pair that nests on the face of the Tully Dam spillway in Athol has used at least four different locations on the spillway walls, but in 1997, after an earlier nest failure, they moved to a nearby small white pine. The next year they were back at the spillway. When first discovered in 1993, a pair at Chicopee Mountain in Monson was nesting in a scraggly white pine right up against the cliff. This nest was so close to the cliff that to band the chicks, a MassWildlife biologist rappelled down the cliff and then reached over to the

nest which was less than an arm's length away. In more recent years, this pair moved to a location on the cliff itself.

In the third case, on Chapel Ledge, Ashfield, the nest was well placed on the cliff, but the site was badly disturbed by early spring weekend rock climbers. When the site was visited on the afternoon of April 23, 1994, two climbers were within ten feet of the nest, and had been at the site most of the day. They said they had not even noticed the nest which contained three completely chilled young chicks that did not survive. Fortunately, in about half the years from 1987 through 1994, after failing at this site the pair moved to a large white pine. (A nearly identical situation was encountered at Rattlesnake Gutter, Leverett, in 1990, when two chilled one-day-old chicks and two unhatched eggs were found on April 14 in a nest near rock climbers. These chicks also died, and this pair has moved to a larger cliff.)

The fourth case may have actually involved two different pairs of ravens. In 1991, a pair was found nesting in a red pine along Moosehorn Brook on the Quabbin Reservation in New Salem. This nest was apparently only used one year. Fourteen years later in 2005, a nest was discovered on a cliff only 1 km east of the tree nest site. Although this area was not actively searched during the intervening years, the second nest was probably built by a new pair, and its close proximity to the 1991 tree site was probably just a coincidence.

At a fifth site on Brush Mountain, Northfield, sticks were found at the base of a small cliff, indicating that the pair had attempted to build on the cliff, but they finally settled on a black birch right in front of the cliff. After a few years, they switched to another black birch about 50 feet away but still located directly in front of the cliff, about 20 feet from the rocks. This site was only counted as a tree nest since they were not successful in their attempts to build on the cliff. However, cases like these support the belief that cliffs are the preferred nest site choice for Massachusetts ravens. These last two cases from Monson and Northfield show that the pair was attracted to the cliff, but when they were unable to find a good location for the nest on the cliff, they nested in a tree, as close to the cliff as they could.

A review of the 76 known nest site selections (72 separate nest sites plus the four cases of birds switching from a tree to rock at the same location) reveals the following nest site types:

Nest site selections	
Natural rock cliff	37
Man-made rock cliff (quarry, dam spillway, road cut, railroad cut)	14
Tree (white pine, red pine, black birch, sugar maple)	14
Bridge (railroad, highway, catwalk at dam)	5
Actual structure of a small dam	1
Wireless communications towers	5

The five wireless towers were first occupied in 1987 (Princeton), 1991 (Ashburnham), 2002 (Foxboro and Paxton), and 2003 (Blackstone). Four are self-supporting lattice towers that range from 38 to 982 meters (125 to 269 feet) tall. The Princeton tower is

a 60.7 meter (190 ft) H-Frame tower consisting of two lattice towers connected at the top and supported by guy wires.

Foods

Although an effort was always made to look for evidence of food, no significant numbers of regurgitated pellets or other food items were found, as I have seen at roost sites near a couple of raven nest sites along the rocky coast of Quebec. The greatest number of food pellets found at any Massachusetts nest site was 10, but some amount of discarded food material was collected during 23 visits to the nests of 13 different pairs. Flanagan (1993) previously reported the foods of Massachusetts ravens to include shrews, chipmunks, squirrels, rabbits, skunks, songbird adults, nestlings and eggs, mice, fish, wood frogs, and a snake. Some of these animals were captured while others were found dead on roads or, in the case of fish, found dead on the shore. The foods discovered in this study are listed in Table 1. Ravens are very effective predators of small mammals and birds, but a large portion of their diet is found dead. All of the larger mammals were certainly scavenged, and others, as small as chipmunks, may well have been. Flanagan (1993) observed ravens collecting dead wood frogs from roads in the spring, after a night of warm rain. Evidence from discarded food materials suggests that most of the mammal fur found lining nest cups represented animals that were also eaten. In 1995, a nest in Cheshire was lined with large amounts of raccoon fur. Below the nest was a raccoon skin which was picked clean of meat and much of its hair. However, sheep wool and horse-tail hair, which was used to line nest cups, did not represent food items. At two sites, ravens were observed collecting these materials from barbed-wire fences. Ravens are incredibly resourceful opportunists. The variety of foods they are known to eat is impressive (Ratcliffe 1997), and in any particular area, what they eat usually reflects what is easily found nearby.

Over the next decade, I expect that the croaking call of the raven will become an increasingly common sound in eastern Massachusetts, as its breeding range continues to expand. The question in my mind is how far can the raven go? Although Wood (1634) and Josselyn (1674), cited in Forbush (1927), reported that ravens were numerous on Cape Cod when the Pilgrims arrived, it remains to be seen if they are adaptable enough to move back onto the Cape. In any case, I have no doubt that ravens will continue to move further southeast, where they will be forced to nest more frequently in trees, especially large white pines, and on structures such as towers, and under bridges. Now that they have returned, I am certain that ravens are here to stay.

Acknowledgements

This project would not have been possible without the help of many people. Several deserve special recognition. Tim Flanagan graciously shared his knowledge of ravens in Berkshire County and guided me to all of the nests that he had discovered. David Taylor was my primary partner on most of my trips to locate nests and band chicks during the first ten years of this effort. His backup was an essential component to safely rappelling into cliff nest sites. Others who helped during numerous trips and were a great encouragement included Diane Pence, Tony Gola, Bill Davis, Bill Byrne,

and Liz Glass. In recent years all of the climbing and banding has been undertaken by staff of MassWildlife's Connecticut Valley District office, including Ralph Taylor, Dave Basler, Mike Cibrowski, and Dave Fuller. Dave Szczebak produced the distribution map and Kim Ausmus helped prepare the manuscript. Many others helped in a variety of ways. I am particularly grateful to all the people who told me about new nests they had discovered or gave me tips about where a nest might be.

Table 1: Raven Foods at Massachusetts Raven Nests with the minimum number of individuals found in parentheses.

Mammals
Northern Short-tailed Shrew (4)
Hairy-tailed Mole (2)
Star-nosed Mole (3)
cottontail (1)
Eastern Chipmunk (11)
Eastern Gray Squirrel (7)
Red Squirrel (5)
White-footed Mouse (13)
Southern Red-backed Vole (1)
Meadow Vole (1)
Common Porcupine (1)
Raccoon (5)
Ermine (1)
White-tailed Deer (8)
Unidentified, raccoon/skunk-size (3)
Duck (1)
Turkey (1 young)
Mourning Dove (1)
Barred Owl (1)
Hairy Woodpecker (1)
Blue Jay (2)
American Robin (1)
European Starling (1)

Birds and their Eggs
Warbler (1)
Common Grackle (1)
Sparrow (1)
Unidentified Passerines (6)
Bird Eggs
brown chicken egg (1)
white goose, duck or chicken (9)

Fish and Amphibians
Fish (13 large, 1 small)
Frog (1)

Beetles
burying beetle, Nicrophorus spp. (1)
unidentified (1 black)

Plants
grass (3 balled up bunches)
seeds (2-1 Fabacae, 1 wild grape?)

Human trash
chicken wing (1)
plastic bag fragments (6)
hard plastic container (1 fragment)
aluminum foil (2)
Styrofoam (1)

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Tom French *is an Assistant Director of the Massachusetts Division of Fisheries and Wildlife and is responsible for the Natural Heritage and Endangered Species Program. His previous contributions to* Bird Observer *have included articles on the Peregrine Falcon, Leach's Storm-petrel, and Whooper Swan.*

Adult Raven at a nest with chicks by Bill Byrne

Adult Raven in flight by Tom French

Pair of Ravens courting at Quabbin by Bill Byrne

Six Ravens and three Bald Eagles at a deer carcass at Quabbin by Bill Byrne

Raven chicks in a nest begging for food by Tom French

Tenth Annual Report of the Massachusetts Avian Records Committee (MARC)

Marjorie Rines, Secretary

In the December 2004 issue of *Bird Observer* (Vol. 32, No. 6), a panel of experts combined to predict the next new species to appear in Massachusetts. Since the last Annual Report in April 2005 the MARC has accepted three new species, two of which appeared on this list: Bell's Vireo (third on the list) and Black-tailed Gull (fourth on the list), along with a 2001 report of a European Turtle-Dove. This brings the state total to 483 species. A copy of this list can be seen at <http://massbird.org/marc/MARCstatelist.htm>.

Records accepted by the MARC

Cackling Goose (*Branta hutchinsii*), #05-27, Great Meadows NWR Concord (Middlesex), D. Scott, many photographers @. As was noted in the Ninth Annual Report (see *Bird Observer*, Vol. 33, No. 2) in 2004, Cackling Goose was split from Canada Goose (*B. canadensis*). Each of the resulting species has numerous subspecies, and differentiation is difficult, particularly since many birders have given little attention to these prior to now. The Concord goose was photographed extensively and seen by many birders, and the Committee was convinced that it was correctly identified as the *hutchinsii* subspecies of Cackling Goose. (First ballot. Vote: 8-1)

Ross's Goose (*Chen rossii*), #04-24, October 21-23, 2004, Gill (Franklin), M. Fairbrother, M. Taylor*, S. Smolen-Morton*, P. Brown @, et al. This individual was discovered at Turners Falls, a lake-like opening in the Connecticut River only ten miles north of the location of the first occurrence of this species in Massachusetts, in Sunderland, in March of 1997. Written documentation and photographs clearly eliminated Snow Goose or a hybrid individual. Only one other Ross's Goose has been reported between these two sightings, an individual at Chilmark, Martha's Vineyard in October of 2001. (First ballot. Vote: 9-0)

Barnacle Goose (*Branta leucopsis*), #04-05, April 15-16, and 24, 2004, West Newbury (Essex), T. Wetmore*, D. Larson @. The identification of this bird was never in question, but as with all uncommon waterfowl its origin had to be considered. The first record of Barnacle Goose to be unconditionally accepted by the MARC was in February of 2002, a winter when there was a rash of sightings along the eastern seaboard, and the Committee believed this demonstrated a pattern of true vagrancy. The timing of this sighting during spring waterfowl migration also indicated the probability of wild origin. (Second ballot. Vote: 9-0)

Pacific Loon (*Gavia pacifica*), #04-26, November 17, 2004, Mashpee (Barnstable), M. Lynch and S. Carroll.* The description clearly eliminated the possibility of other loon species, and the timing of the sighting was appropriate for its occurrence in the state. (First ballot. Vote: 9-0)

Yellow-nosed Albatross (*Thalassarche chlororhynchos*), #05-06, May 29, 2005, Tuckernuck Island (Nantucket), R. R. Veit @. The observer described how he was casually observing some gulls and recalled mentally thinking how much a Great Black-backed Gull resembles an albatross, when he suddenly realized one *was* an albatross. The bird was cruising along the southern shore of Tuckernuck Island, making at least five round trips, even occasionally vocalizing. He also took a number of diagnostic photographs, the first photos ever taken of an albatross in Massachusetts (see *Bird Observer*, Vol. 33, No. 5). (First ballot. Vote: 9-0)

Band-rumped Storm-Petrel (*Oceanodroma castro*), #05-25, August 27, 2005, Hydrographper Canyon, G. Tepke* @. An astute birder reviewing photographs taken on a deepwater pelagic birding trip realized that he had fortuitously obtained a series of images of a Band-rumped Storm-Petrel. Only a handful of other birders had noticed this bird during the cruise, and given the brief view that they had, were left with the unsatisfying feeling of seeing "something different." Once again, a digital camera in the hands of a skilled photographer and an observant birder nailed another Massachusetts rarity. (First ballot. Vote: 9-0)

American White Pelican (*Pelecanus erythrorhynchos*), #04-22, December 5, 2004, Provincetown (Barnstable), S. Landry @, et al. (First ballot. Vote: 9-0). #04-21, December 7, 2004, Woburn (Middlesex), M. Rines* (First ballot. Vote: 9-0). #05-17, June 29, 2005, Plum Island, J. Nelson*, D. Noble (First ballot. Vote: 9-0). A report of five birds in Provincetown was unquestionably substantiated by a photograph of three of the birds flying by Provincetown's signature building, the Pilgrim Monument. The individual seen in Woburn two days later may well have been part of this group, as may have been other undocumented sightings that were reported in and around Massachusetts at this time. Observers at Plum Island specifically watched a single bird standing and preening and generally giving excellent views of all field marks.

Magnificent Frigatebird (*Fregata magnificens*), #05-21, July 22, 2005, South Beach Chatham (Barnstable), G. Hirth, R. Merrill* @. The observers discovering this female frigatebird were lucky enough to not only find it, but to photograph it through binoculars. They were aware of other frigatebird species previously recorded in North America and carefully noted the black head and throat and white breast patch, marks that effectively eliminated Lesser Frigatebird (*F. ariel*) and Great Frigatebird (*F. minor*) as alternative possibilities. (First ballot. Vote: 8-1).

Least Bittern (*Ixobrychus exilis*), #05-03, February 23, 2005, Boston (Suffolk), D. Swenson @. A male captured on Commonwealth Avenue and later delivered to the Tufts Wildlife Clinic was only the second January record of this species for Massachusetts. (First ballot. Vote: 9-0)

White-faced Ibis (*Plegadis chihi*), #05-12, April 25-28, 2005, Plum Island, D. Noble et al., J. Berry*, T. Wetmore*, P. Brown @ (First ballot. Vote: 9-0). #05-13, May 5-28, 2005, Newbury and vicinity, F. Vale*, P. Brown @, (First ballot. Vote: 9-0). This western vagrant is extremely rare in Massachusetts, with only four or five previous records (all but one in Essex County). It was therefore big news when the Plum Island bird was discovered in April. Only a week later, birders closely

examining a flock of Glossy Ibises in Newbury picked out a White-faced Ibis and assumed that it was the same individual, until photographs revealed that two individuals were involved. The probability of two White-faced Ibises occurring so close to one another, both geographically and temporally, yet not associated, practically defied belief. Fortunately, photography of rare birds has become so commonplace that, combined with the advent of digital imagery and digiscoping (digital photography through a telescope), confirmation of such an unlikely coincidence was able to be established beyond a doubt.

Wilson's Plover (*Charadrius wilsonia*), #04-23, June 14, 2004, Ipswich Crane Beach (Essex), S. Maddock @ (First ballot. Vote: 9-0). #05-10, June 8, 2005, South Monomoy (Barnstable), R. Merrill* @ (First ballot. Vote: 9-0). #05-14, June 11, 2005, Nantucket (Nantucket), E. Ray @ (First ballot. Vote: 9-0). #05-18, July 5, 2005, South Monomoy (Barnstable), R. Merrill* (First ballot. Vote: 9-0). #05-18B, July 11-22, 2005, Chatham South Beach (Barnstable), J. Trimble @ (First ballot. Vote: 9-0). Wilson's Plover was at one time nearly annual in Massachusetts, but sightings have declined over the past ten years, with only five reports since 1994. The 1994 Crane Beach bird was discovered just over a year after one was reported from the same location on June 4, 2003 (although details were not submitted to the MARC). In 2005 there was a rash of sightings probably involving four individuals between Chatham and Nantucket. The first bird was a female at South Monomoy on June 8. The second was a male on June 11 at Nantucket. On July 5 another plover was discovered on South Monomoy, this time a male; then, from July 11-22 a male was seen regularly at South Beach in Chatham. All birds except the female were photographed, and minor plumage variations in these photos suggested that different individuals were involved.

Little Stint (*Calidris minuta*), #05-23, July 20-25, 2005, Chatham South Beach (Barnstable), R. Clem, N. Bonomo* @, J. Trimble @ (First ballot. Vote: 9-0). #05-24, July 24-25, 2005, Chatham South Beach (Barnstable), J. Trimble @, B. Nikula* @ (First ballot. Vote: 9-0). Several experienced birders observed a Little Stint on South Beach in Chatham, July 23-24. Personal observation and photographs taken on both days suggested that two different individuals might have been present; however, variations in light and angle in the photographs left room for question over how many birds were actually involved.

Curlew Sandpiper (*Calidris ferruginea*), #04-28, September 17, 2004, Scituate (Plymouth), D. Furbish* et al. This species is reported practically annually in Massachusetts, with sightings concentrated in late spring and early fall. It is interesting that a breeding-plumaged adult was reported at South Beach in Chatham in June of 2004, followed by another (?) adult between August 27 and September 7 at the same location. This molting adult was carefully described. (First ballot. Vote: 9-0)

Buff-breasted Sandpiper (*Tryngites subruficollis*), #05-20, July 10, 2005, Bolton Flats (Worcester), K. Hartel. Buff-breasted Sandpiper is an uncommon but regular fall migrant both along the coast and locally at inland locations; however, it is unprecedented in early July. This bird in adult plumage was carefully described. (First ballot. Vote: 8-1)

Black-tailed Gull (*Larus crassirostris*), #04-25, July 4, 2004, South Beach, Chatham (Barnstable), V. Laux*. This Asian larid has previously been reported from several locations along the Mid-Atlantic coast, with one report as close as Rhode Island and another in Nova Scotia, so its appearance in Massachusetts has long been anticipated. This basic-plumaged adult was carefully studied in comparison to several Lesser Black-backed Gulls (*L. fuscus*), and the observer specifically described its smaller size, slightly paler mantle, distinctive bill coloration, and broad, black, terminal tail band. This would have been a true Independence Day celebration had not nearby boaters set off a volley of fireworks that flushed all the gulls just before the observer was able to show it to a group of nearby tern wardens. This is a first Massachusetts state record. (First ballot. Vote: 8-1)

Franklin's Gull (*Larus pipixcan*), #05-28, August 6, 2005, Chatham South Beach (Barnstable)V. Laux*, P. Trimble @ (First ballot. Vote: 9-0). #05-29, August 20, 2005, Westport (Bristol), M. Lynch* (First ballot. Vote: 9-0). The Chatham bird was seen only briefly, but it was well described definitively photographed with a "point and shoot" camera. In Westport, observers were able to obtain excellent views, both at rest and in flight, with nearby Laughing Gulls for comparison.

California Gull (*Larus californicus*), #05-01, January 3-18, 2005, Nantucket (Nantucket), F. Gallo*, P. Dugan, many photographers @. (First ballot. Vote: 9-0). #05-07, April 29-May 5, 2005, Lynn/Nahant (Essex), J. Quigley*, C. Marantz*, J. Berry*.Many photographers @. (First ballot. Vote: 9-0). Prior to 2005, there were only two records of California Gull in Massachusetts. Then in 2005, a first winter California Gull was discovered resting in a mixed flock of gulls on a farm field at Nantucket, where numerous observers were able to see and photograph it over more than two-week period. A second California Gull in adult plumage was seen and photographed by many at Lynn Beach.

Forster's Tern (*Sterna forsteri*), #05-04, January 2, 2005, Freetown (Bristol), J. Berry* et al. *Sterna* species in Massachusetts rarely linger past November, and there are only four previous January sightings of Forster's Tern in the state prior to this report. Observers carefully noted the distinctive face pattern of this winter-plumaged bird. (First ballot. Vote: 9-0)

Sandwich Tern (*Sterna sandvicensis*), #05-19, July 21, 2005, Chatham South Beach, N. Bonomo, R. Merrill* @. Sandwich Terns are almost annual visitors to Massachusetts, and practically all occur on Cape Cod and the Islands. This individual was well described and photographed. (First ballot. Vote: 9-0)

European Turtle-Dove (*Streptopelia turtur*), #01-27, July 20, 2001, Tuckernuck Island, R. Veit, N. Brewer. A dead bird discovered as a road kill on Tuckernuck Island was fortunately shown to an ornithologist who recognized it as a European Turtle-Dove. Following an examination of specimens at the American Museum of Natural History, it was determined that the bird belonged to the nominate subspecies, *S. t. turtur*, the race that occurs in Britain and Western Europe and is a frequent vagrant to Iceland. There are only two previous North American records of this species, the first in Florida in 1990, and the second in Newfoundland in May of 2001. The specimen of

this first Massachusetts record is now in the Museum of Comparative Zoology at Harvard University. (First ballot. Vote: 8-1)

White-winged Dove (*Zenaida asiatica*), #04-29, November 23 to December 31, 2004, Nantucket (Nantucket), F. Karttunen* et al. (many photographers @) (First ballot. Vote: 8-1) #05-09, 4/22-5/1, Mount Auburn Cemetery, Watertown, R. Stymeist et al. (many photographers @) (First ballot. Vote: 9-0). The Nantucket individual was visiting a feeder and was photographed and seen by many. The Watertown bird was discovered at Mount Auburn Cemetery at a time of year when hundreds of birders visit the cemetery every day, so it was seen and photographed by many dozens of observers. The majority of roughly twenty previous Massachusetts reports of White-winged Dove have been from outer Cape Cod and the Islands, so the Mount Auburn location was exceptional.

Large Swift Species, #05-16, May 28, 2005, North Truro (Barnstable), B. Nikula* et al. Observers at a Cape Cod hawk-watch site were having a slow morning until they saw a large swift approaching from the south, at which point three of the observers followed it intently as it continued past them to the northwest and disappeared out of sight. One observer thought it was paler on the side of the throat, but another believed this might have been an illusion created by reflected light. All observers agreed, however, that it was larger than any *Chaetura* swift (e.g., Chimney Swift), with longer wings and slower wing beats. Given the brief view (as well as the differences in perception of the throat markings), it was impossible for the observers to identify the swift to genus, so the sighting remains one of those tantalizing and frustrating sightings similar to another "Large Swift Species" seen in July of 1996 at Chappaquiddick (see MARC Report #4, *Bird Observer*, Vol. 28, Number 1). (First ballot. Vote: 8-1)

Rufous Hummingbird (*Selasphorus rufus*), #04-31, November 10 to December 15, 2004, Ashfield (Franklin), E. Stewart, M. Szantyr* @ et al. (First ballot. Vote: 9-0). #05-30, October 8-19, 2005, Byfield (Essex), R. Crist, P. Brown* @ (First ballot. Vote: 8-1). A hatch-year male was netted and banded at a feeder in Ashfield, and measurements and photographs in the hand showed conclusively that the bird was a Rufous Hummingbird. Efforts to catch another hatch-year male at a feeder in Byfield were unsuccessful; however, photographs taken of the bird spreading its tail clearly conclusively showed R5 (i.e., the fifth rectrix) to be wide and rounded, unlike the narrow and pointed R5 of the very similar Allen's Hummingbird (*S. sasin*), a species that has also been previously recorded in Massachusetts.

***Selasphorus* species**, #05-31, September 19-21, 2005, Princeton (Worcester), D. + J. Choiniere* @. Homeowners noticed an unfamiliar hummingbird visiting their feeder, larger and more "orangey" than the Ruby-throateds that were still frequenting feeders in the yard. Photographs taken of the bird clearly indicated that it was a *Selasphorus* hummingbird. (First ballot. Vote: 9-0)

Ash-throated Flycatcher (*Myiarchus cinerascens*), #04-30, November 26 to December 19, 2004, Rockport (Essex. Vote: 9-0), T. Burke, J. Berry*, T. Spahr*, B. Volkle*, P. Brown @, et al. (First ballot) #05-22, May 20, 2005, Hingham (Plymouth),

G. d'Entremont* (First ballot. Vote: 8-1). *Birds of Massachusetts* (Veit and Petersen, 1993) cites only eight records of this species, but since the publication of that reference no fewer than a dozen more have been reported. All but three previous state records have been in November and December, and there is only one previous spring record.

Western Kingbird (*Tyrannus verticalis*), #04-40, December 17, 2004, Northampton (Hampshire), L. Therrien.* Although Western Kingbird is a relatively routine visitor in the fall, most sightings are from coastal locations between September and November. The MARC Bylaws state "species that are geographically or temporally rare will be evaluated at the discretion of the Committee," and this sighting falls into both categories. (First ballot. Vote: 9-0)

Fork-tailed Flycatcher (*Tyrannus savana*), #05-11, May 18, 2005, Nantucket (Nantucket), S. Finley, K. Blackshaw @. While no details were submitted, unambiguous photographs of this bird were posted on the Internet. (First ballot. Vote: 9-0)

Bell's Vireo (*Vireo bellii*), #05-32, October 24-26, 2005, Manomet (Plymouth), A. Graham, B. Flemer, T. Lloyd-Evans, et al. With three previous reports in New Hampshire and another in Connecticut, this species has seemingly been long overdue in Massachusetts. A hatch-year bird of unknown sex that was fortuitously captured in a mist net and carefully measured and photographed presented the Committee with unambiguous proof of its occurrence in Massachusetts. The vireo was actually mist-netted twice, once on October 24, and then again on October 26, but never seen in the field. It was definitively photographed in the hand. (First ballot. Vote: 9-0)

Cave Swallow (*Petrochelidon fulva*), #04-35, November 26, 2004, Cotuit (Barnstable), J. Trimble* @ et al. (First ballot. Vote: 9-0). #04-36, November 27, 2004, Chatham (Barnstable), J. Trimble, et al. (First ballot. Vote: 9-0). The first and long-anticipated record of Cave Swallow in Massachusetts occurred in November of 2003 following reports from coastal Rhode Island and Connecticut during November of previous years. This could herald an increasing trend, since Cave Swallows are appearing with increasing frequency on the Mid-Atlantic Coast, and the observers who discovered the birds this year specifically made a point of looking for them following favorable conditions for the second year in a row.

Northern Wheatear (*Oenanthe oenanthe*), #04-37, October 1-3, 2004, Plymouth Beach (Plymouth), J. Walter, P. Brown @. Although no written report was submitted for this report, photographs published on the Internet were diagnostic. (First ballot. Vote: 8-1)

Townsend's Solitaire (*Myadestes townsendi*), #04-16, November 27, 2004, Eastham (Barnstable), J. Hoye and A. McCarthy* (First ballot. Vote: 8-1). #04-34, December 19, 2004, Gloucester (Essex), S. Hedman*, B. Volkle* (First ballot. Vote: 9-0). There are roughly a dozen records of this western vagrant in Massachusetts, all of them in winter. In general these birds tend to linger throughout the winter, affording many birders the opportunity to see them. However, no doubt due to their

somewhat retiring behavior and habit of foraging deep in thickets and cedar groves, these individuals were never relocated.

Varied Thrush (*Ixoreus naevius*), #05-02, January 15 to March 10, 2005, Mendon (Worcester), G. Christianson, M. Lynch and S. Carroll*. A male visiting a feeder was one of a small irruption of Varied Thrushes in the winter of 2004-2005. Other undocumented individuals were reported from Newburyport, Concord, Sheffield, Nantucket, and Oak Bluffs. (First ballot. Vote: 9-0)

Townsend's Warbler (*Dendroica townsendi*), #04-17, December 19, 2004, Rockport (Essex), M. Goetschkes, I. Giriunas*. (First ballot. Vote: 8-1) #05-15, May 5, 2005, Ipswich (Essex), A. Burke* (First ballot. Vote: 8-1). The Rockport bird was discovered on the Cape Ann Christmas Bird Count, when the observers carefully noted the streaked yellow breast and the bold black eye patch set against a bright yellow face, thus eliminating other look-alike *Dendroica* warblers. The Ipswich bird was accompanied by few details, but an excellent accompanying field sketch showed all pertinent field marks. There are fewer than ten prior records for this western vagrant for Massachusetts.

Hermit Warbler (*Dendroica occidentalis*), #04-33, November 29-30, 2004, Holyoke (Hampden), L. + A. Richardson* et al. Two experienced observers following a noisy feeding flock of birds noted a small bird showing some yellow, and when they got a close look they were stunned to see the unmarked bright yellow head of a Hermit Warbler. They carefully noted all field marks and made a field sketch as soon as they returned to their car while impressions were still fresh in their minds. This is only the third record of this handsome western warbler for Massachusetts. (First ballot. Vote: 9-0)

Chestnut-collared Longspur (*Calcarius ornatus*), #04-18, December 15, 2004, Plum Island (Essex), D. Weaver @*, B. Gette*. A field trip group from the Joppa Flats Education Center was watching a small flock of American Tree Sparrows foraging at the edge of the road, when the group noted a different bird having a reddish-brown hind neck. The logical conclusion was that the bird was a Lapland Longspur, but when turned, it showed a buffy face and throat and black belly. As one observer consulted a field guide and called out field marks, the rest of the group confirmed the identification of the bird as Chestnut-collared Longspur. Photographs further confirmed this identification. This is only the fifth record of this prairie species for Massachusetts. (First ballot. Vote: 9-0)

Bullock's Oriole (*Icterus bullockii*), #03-42, December 27-31, 2003, Walpole (Norfolk), W. Barnes @. A single small photo was the only documentation submitted for this record. While it clearly depicted a female oriole, some members felt that the quality of the image was not sufficient to eliminate a Baltimore or a Baltimore X Bullock's Oriole hybrid. Nonetheless, after considerable discussion, all members voted to accept the report. (Third ballot. Vote: 9-0)

Records not accepted by the MARC

Barnacle Goose (*Branta leucopsis*), #05-05, March 29-31, 2005, Bolton Flats (Worcester). The identity of this goose was not in question, but since it was

associating with a goose that was thought by many to be a hybrid Barnacle x Canada Goose (*B. canadensis*), or possibly an aberrantly plumaged Canada Goose, its origin was considered suspect. Although the time of year was seemingly appropriate for the bird to be a Barnacle Goose of wild origin, the Committee believed that its association with the aberrant goose raised a legitimate question about its provenance. (Second ballot. Vote: 4-5)

Pacific Loon (*Gavia pacifica*), #04-27, November 17, 2004, Barnstable (Barnstable). The fact that this bird was seen only in flight caused some members to vote against this report. (Second ballot. Vote: 4-5)

Magnificent Frigatebird (*Fregata magnificens*), #03-09-R, September 27, 2003, Marblehead (Essex). This record had been previously submitted to the MARC when it was accepted only as "Frigatebird species" because details did not conclusively eliminate other species, however unlikely they might be (see MARC Report #8, *Bird Observer* Vol. 32, Number 2). Subsequently another observer submitted details in support of the same bird, but once again the Committee felt that the details failed to eliminate other *Fregata* species. (Second ballot. Vote 4-5)

Pacific Golden-Plover (*Pluvialis fulva*), #04-32, September 11, 2004, Chappaquiddick (Dukes). The description of an individual in juvenile plumage stressed the short primary length as well as the overall color. Several Committee members commented that they would always demand to see photographs in order to vote for a bird in this plumage, since descriptions of size, shape, and color are subjective even under the best of circumstances. (First ballot. Vote: 4-5)

Black-tailed Gull (*Larus crassirostris*), #04-14, June 11, 2004, Lynn Beach (Essex). The description of this adult, dark-mantled gull was extremely interesting and would have represented a first state record. Unfortunately, the details submitted were deemed insufficient for such a rarity, and after three ballots the report failed to achieve the minimum of eight votes required for acceptance. (Third ballot. Vote: 7-2)

Thayer's Gull (*Larus thayeri*), #04-38, November 23, 2004, Edgartown (Dukes). Details were determined to be too sketchy to confirm the identity of such a problematic species. (First ballot. Vote 1-8)

Eurasian Collared-Dove (*Streptopelia decaocto*), #04-20, August 22, 2004, Lynn Beach (Essex). The details on this report were insufficient to rule out the very similar Ringed Turtle-Dove (*S. risoria*), a species commonly kept in captivity. (First ballot. Vote 1-8)

Black-chinned Hummingbird (*Archilochus alexandri*), #05-26, August 28, 2005, Ashburnham (Worcester), A. Turner @. Photographs of a hummingbird with a suspiciously dark gorget were the only documentation on this submission. Although Committee members agreed it could have been a Black-chinned, there was nothing in the photos that would definitely rule out Ruby-throated. (First ballot. Vote 1-8)

Hoary Redpoll (*Carduelis hornemanni*), #04-11, March 10, 2004, Hinsdale (Berkshire). In the winter of 2004 there were an unusual number of Hoary Redpolls

reported, but the details on this description of two individuals could not rule out Common Redpoll. (Third ballot. Vote: 6-3)

For more information about the MARC, or to see copies of previous MARC reports, see <http://Massbird.org/MARC/>.Current members of the MARC are Dennis Abbott, David Clapp, Davis Finch, Erik Nielsen, Blair Nikula, Wayne Petersen (Chair), Robert Stymeist, Scott Surner, and Jeremiah Trimble. Marjorie Rines is Secretary.

The author thanks Wayne Petersen for editorial assistance.

* Details submitted
@ Photographs submitted or obtained on the Internet

City of Newburyport Acquires 102 Acres of Conservation Land
North Pasture Protected

Newburyport, Massachusetts: The City of Newburyport and the Trust for Public Land (TPL), a national nonprofit conservation organization, announced today [April 7, 2006] the acquisition and permanent protection of the 102-acre North Pasture property on Hale Street by the City of Newburyport. Working at the City's request and as part of a coalition to conserve the threatened and historically significant Common Pasture landscape, which includes the North Pasture property, TPL negotiated an agreement to purchase the land last August. Since then, project partners have been working to assemble the $1.575 million in funding needed to complete the purchase.

The North Pasture land has long been threatened by industrial development and has been a high priority for Essex County conservationists. The environmentally sensitive land includes open agricultural fields, wooded uplands, wetlands, and vernal pools, as well as existing hiking trails.

The North Pasture is one of the largest remaining pieces of the historic Common Pasture, which once stretched across Newbury, Newburyport, and West Newbury. While much of the original landscape has been lost to development over the years, more than 700 acres remain in their historic state as natural and agricultural land. The environmental, scenic, and recreational values of the area are recognized by many, including TPL, the Essex County Greenbelt Association (ECGA), the Parker River Clean Water Association, the City of Newburyport, and the Town of Newbury, all of which are part of a coalition formed to protect the area, and in 2005 Historic Massachusetts designated the Common Pasture as one of it's ten most threatened historic resources.

In addition to successfully protecting the North Pasture property, the coalition helped the City of Newburyport and the Town of Newbury acquire the 22-acre Coffin's Island (Herrick Property) on Scotland Road in December 2005. ECGA is working with the Colby family and the State Department of Agricultural Resources to protect the 50-acre Colby Farm, also on Scotland Road. These efforts are part of a larger vision for the Common Pasture that seeks to protect the landscape, and its working farms and wildlife habitat.

Massachusetts Important Bird Areas (IBAs) – The Greater Boston Region

Wayne R. Petersen and Brooke Stevens

The second in a continuing series of IBA site profiles looks at three sites located in the most urbanized region of Massachusetts. Despite the density of its human population, Greater Boston holds a number of outstanding areas for birdlife, including localities that are heavily used by both birds and people. It is a popular misconception that human use and use by birds are mutually exclusive. Hopefully, readers will note that in at least two of the following site profiles, this is clearly not the case. Implicit in this reality is the notion that individuals involved in bird conservation should, whenever possible, seek opportunities that will incorporate the common good of birds *and* people. With this dual benefit in mind, stakeholders are more inclined to support the management of a site for birds, than if conservation planning is solely targeted at bird conservation.

Boston Harbor Islands National Recreation Area IBA

Any reader who has ever flown into Boston's Logan International Airport has undoubtedly noticed the complex of 34 islands that comprise the National Park Service's Boston Harbor Islands National Recreation Area. Located in Suffolk, Plymouth, and Norfolk counties, this ancient drumlin field includes a variety of marine, rock cliff, cobble beach, salt marsh, and forested upland habitats. Several of the Boston Harbor Islands are readily accessible to human visitation (e.g., Georges and Peddocks), and some even support human habitation (e.g., Thompson). Other islands are sufficiently remote, difficult to land upon, or sensitive to human disturbance, that they are essentially off-limits to visitors, unless special permission is first obtained (e.g., Shag Rocks, Middle Brewster). For readers interested in obtaining more information about the Boston Harbor Islands, visit the website <http://www.BostonHarborIslands.com/>.

The total land mass of the Boston Harbor Islands IBA amounts to 1600 acres; however, the surrounding waters of the Boston Harbor Basin add considerably to the overall scale of the site. Because of the insularity and remoteness of many of the islands, many different bird species find the area attractive year-round. Thanks to the Take a Second Look (TASL) project, an extensive, 25-year-old, volunteer-based, waterbird monitoring effort, this IBA has one of the most complete, long-term databases of any IBA in Massachusetts. A look at TASL data (Hall and Zendeh, 2005) clearly reflects the importance of this IBA for Brant, American Black Duck, Greater Scaup, Common Eider, Bufflehead, Common Goldeneye, and Red-breasted Merganser, along with a number of less commonly occurring species. A valuable outcome of this monitoring scheme is the way changes in local species abundance can be tracked. A good example is the documentation of the decline in Boston Harbor Bonaparte's Gull numbers since 2000, when changes in sewage processing at the Deer Island treatment facility and construction of the sewage outfall pipe took place (Hall and Zendeh, 2005).

In addition to wintering waterfowl, a number of colonial nesting waterbirds are located on several of the Boston Harbor Islands (Harris, 2005; Paton et al., 2005). Sizable breeding colonies of Double-crested Cormorants exist on Green, Little Calf, Middle and Outer Brewster, and Sarah islands, and also on the Shag Rocks. Calf, Outer Brewster, and Sarah islands are notable for their rookeries of Snowy Egrets and Black-crowned Night-Herons, and Calf and Middle Brewster islands sustain significant numbers of breeding Common Eiders. This is close to the species' southern breeding terminus in North America. In addition to the aforementioned species, Great Black-backed and Herring gulls, as well as small numbers of state-listed Common and Least terns, utilize one or more of the small islands located in the Boston Harbor Islands IBA. The state-listed Barn Owl has bred in structures on several of the harbor islands (Georges, Thompson, Lovells, Long, and Deer islands).

Double-crested Cormorant nest with young. Approximately 1500-2000+ pairs of Double-crested Cormorants currently nest on seven of the Boston Harbor Islands, making this one of the largest cormorant nurseries in Massachusetts (all photographs by WRP).

During spring migration, it is well known that coastal hawk flights, especially those of Sharp-shinned Hawks and American Kestrels, regularly pass through this IBA, and migrant passerines are occasionally numerous during both spring and fall migration. The waters around the outer islands also provide regular seasonal habitat for Harlequin Ducks and Black Guillemots, along with interesting marine mammals such as harbor seals and harbor porpoises.

Conservation

The 34 islands surrounded by the marine waters of Massachusetts Bay and the Boston Harbor estuary are part of a drowned drumlin field, the only collection of glacial drumlins that intersects a coast in the United States. The islands are managed by a unique, thirteen-member partnership which includes the National Park Service and other public and private organizations. The Boston Harbor Islands Partnership and the Boston Harbor Islands Advisory Council hold regular meetings to discuss issues related to the park. The public is welcome to attend (see <http://www.BostonIslands.com>).

One of the most serious threats to the island complex is exemplified by the Commonwealth's recent proposal to sell off parts of the park system in order to provide deferred maintenance of its poorly-funded parklands. The proposal to lease Outer Brewster Island in Boston Harbor for the construction, operation, and maintenance of a liquefied natural gas (LNG) import facility for gas storage and regasification activities underscores the need for new

governance structures for the safeguarding of public lands and for managing the diversity of uses and the impacts of intensified development pressure on the marine ecosystem. Any major industrial development on Outer Brewster Island, for instance, would be inconsistent with the island's status as a national and state park and would be in direct conflict with the island's designation as part of the Boston Harbor Islands IBA, supporting the most diverse assemblage of breeding waterbirds in the Harbor, as well as other wildlife.

Other serious threats to the islands are invasive or non-native plants, water and air pollution, residential and commercial development, disturbance to birds or habitat, recreational development and overuse, and hydrologic changes such as drainage and damming. Moderate threats include introduced animals or feral pets, cowbird parasitism, succession, and excessive soil erosion and degradation.

Mount Auburn Cemetery IBA

Mount Auburn Cemetery is a well-known and historic garden cemetery located in the cities of Watertown/Cambridge (Middlesex County) on the outskirts of Boston. Situated in a region known as "Sweet Auburn" at the time of its consecration in 1831, today the cemetery represents approximately 175 acres of varied topography, including four ponds, a prominent elevation (125 feet) overlooking Boston, over 20 miles of beautifully maintained avenues and foot paths, more than 30,000 burial monuments, and a spectacular horticultural collection containing shrub and tree species from all over the world. Mount Auburn Cemetery's geographical location in an otherwise heavily urbanized landscape, along with its varied topography and remarkable assortment of trees and shrubs that afford food and shelter for migrating birds, make the site one of the more remarkable IBAs in The Greater Boston Region.

Famous as the site of interment for several prominent ornithologists (e.g., Glover M. Allen, Thomas Barbour, Thomas Brewer, William Brewster, Ludlow Griscom, and Richard Forster), Mount Auburn is equally legend in the annals of birders from far and wide as a spot to experience the magic of migration within a remarkably pleasing landscape, otherwise surrounded by a densely populated urban region. Besides its aesthetic qualities, Mount Auburn Cemetery concentrates migrants, particularly in spring, in a way that affords easy and systematic monitoring. Because of this, the cemetery has been a reliable site for tracking migration from day to day and from year to year over the course of many decades. The late Ludlow Griscom (1890-1959)

Mount Auburn Cemetery is well known for its scenic and historic attributes, as well as its horticultural and ornithological importance. Thousands of migratory songbirds and hundreds of birders from far and wide annually visit the cemetery each spring.

initiated the first really systematic monitoring of spring migration at the cemetery in the 1930s, noting that, "…thanks to careful planting and planning, the cemetery grounds are more attractive than ever. If [William] Brewster could revisit the cemetery today, he would deplore the scarcity of nesting and wintering birds, and the abundance of Starlings and English Sparrows, but he would rub his eyes in amazement at the spectacular concentrations of rare warblers, as nothing even remotely approximating them were known during the decades of his field work" (Griscom, 1940). For over half a century, legions of birders have provided copious information on the comings and goings of migratory birds at the cemetery. As a result of their efforts, "The current species tally for Mount Auburn Cemetery hovers around 225." (Leahy, 2004). In addition to the long list of regularly occurring species, the site has well-documented occurrences for such outstanding Bay State rarities as Swallow-tailed Kite, White-winged Dove, Ash-throated Flycatcher, Townsend's Warbler, Hermit Warbler, and Golden-crowned Sparrow.

The specific reasons for designating Mount Auburn Cemetery as an IBA were the exceptional number and diversity of landbirds that regularly use the area as a migratory stopover site, along with the cemetery's value as a location with a history of long-term songbird monitoring. The cemetery also has considerable educational value: the many field trips and programs about birds conducted regularly at the cemetery afford the site particular educational significance in heavily populated Greater Boston. In addition, a number of outstanding single-site concentrations of migrants (e.g., thrushes, warblers, and sparrows) in Massachusetts are on record for Mount Auburn Cemetery (Veit and Petersen, 1993; *Bird Observer* [Bird Sightings], 1973-present). Besides annually hosting such regionally uncommon species as Gray-cheeked/Bicknell's Thrush and Worm-eating, Cerulean, Kentucky, and Hooded warbler, Mount Auburn is one of the best localities in eastern Massachusetts for counting migrating Common Nighthawks in late summer.

Along with providing habitat for migratory songbirds, this IBA also regularly supports urban nesting Red-tailed Hawks, Eastern Screech-Owls, Great Horned Owls, and Fish Crows, in addition to sustaining at least one active vernal pool and, irregularly, visiting or breeding coyotes and red foxes.

Conservation

Mount Auburn Cemetery is a privately owned non-government organization (NGO). It was designated a National Historic Landmark in 2003, in recognition of its importance as one of the country's most significant designed landscapes. The horticultural collection includes many species and varieties of non-native plants that contribute to diversity and interest of the landscape. Threats to the Cemetery landscape and avifauna include invasive or non-native plants, introduced animals or feral pets, cowbird parasitism, and water and air pollution.

Plants identified as "invasive" are being carefully monitored and removed as needed. For example, yellow iris once edging the ponds is being removed and replaced with native species. A large numbers of Norway maples, planted

in the 1930s-1940s, are being removed and replaced with a greater diversity of tree species.

Although cats enter the Cemetery from nearby neighborhoods, there is no feral feline population on the grounds. Cowbirds appear to be relatively few in number. The condition of the water in the ponds is carefully monitored, and fortunately the ponds are relatively isolated. Testing of pond water and well water has not shown ground water contamination. Studies of the lichen populations indicate that these species reflect a typical urban lichen pattern.

The size and location of the site has meant that plant species are growing here in relative isolation from other populations. Nearly a dozen mature American elms still flourish in the Cemetery and are being carefully observed. Close inspections are carried out for hemlock woolly adelgid; individual trees are treated with safe oils and soaps as necessary. In 1986, the Friends of Mount Auburn Cemetery was established to promote the appreciation and preservation of the cultural, historic, and natural resources of the Cemetery (see <http://www.mountauburn.org/>). Inventory and monitoring of birds takes place on a regular basis.

Blue Hills Reservation IBA

The Blue Hills Reservation IBA is an extensive and biologically diverse, 7000-acre IBA, located in the towns of Milton, Quincy, Canton, and Randolph (Norfolk County), only ten miles south of metropolitan Boston. Early European explorers sailing along the coast named the region for the bluish color of the slopes of the 22 low-lying peaks comprising the reservation. Great Blue Hill (635 feet) is the highest point in eastern Massachusetts. The reservation's remarkable mix of habitats includes extensive upland acreage of mixed oak/conifer forest, topped with rocky summits, an abundance of granite outcrops, sheer and shaggy cliff faces on Great Blue Hill, abandoned stone quarries, a mix of forested and non-forested wetlands (e.g., Fowl Meadow), a locally rare quaking bog (i.e., Ponkapoag Bog), woodland streams, and a number of vernal pools.

The large extent and relatively intact nature of the forested habitat in the Blue Hills makes it an important nesting site for robust numbers of interior forest nesting species such as Eastern Wood-Pewee, Great Crested Flycatcher, Red-eyed Vireo, Wood Thrush, Black-and-white Warbler, Ovenbird, Scarlet Tanager, Baltimore Oriole, and Rose-breasted Grosbeak. Less common but nonetheless regular breeders in these forests are Cooper's, Red-shouldered, and Broad-winged hawks, Pileated Woodpecker, Worm-eating Warbler, and Louisiana Waterthrush. Particularly noteworthy among the breeding birds of this IBA are Turkey Vultures that have nested annually since 1982 and Common Ravens that have nested at least since 2003. In addition, the only confirmed nesting of Black Vulture in the Commonwealth to date occurred in the Blue Hills in 1998 (Perkins, 1998).

Birdlife on the shrubby and rocky tops of several of the Blue Hills includes significant numbers of shrubland birds (e.g., Brown Thrasher, Prairie Warbler, Eastern

Towhee, Field Sparrow) — a suite of species known to be declining throughout the Northeast. Hawk banding and hawk counting efforts conducted by Norman Smith and other Mass Audubon personnel at Chickatawbut Hill for a number of years have demonstrated that modest numbers of migrating raptors regularly pass the Blue Hills in spring and fall. This project has specifically resulted in the banding of a Golden Eagle and a Gyrfalcon, along with considerable numbers of Sharp-shinned and Cooper's hawks, Red-tailed Hawks, and lesser numbers of American Kestrels, Merlins, and Peregrine Falcons practically on an annual basis.

Great Blue Hill (625') is the highest point in eastern Massachusetts. Site of the only confirmed breeding of Black Vulture in the Commonwealth, the Blue Hills Reservation also supports a robust variety of other uncommon Massachusetts nesting species, including Pileated Woodpecker, Common Raven, Worm-eating Warbler, and Louisiana Waterthrush.

The Blue Hills Reservation IBA is also home to a number of rare or unusual organisms other than birds that are state listed in Massachusetts. These include some of the state's rarest reptiles and amphibians (e.g., marbled salamander), along with invertebrates like the endemic Hentz's red-bellied tiger beetle and the banded bog skimmer dragonfly (Leahy, 1996).

Conservation

The Blue Hills Reservation is owned by the Massachusetts Department of Conservation and Recreation (DCR), partly managed by Mass Audubon and dependent on annual state funding.

The Reservation, which includes the 22 hills in the Blue Hills chain, was purchased in 1893 by the Metropolitan Parks Commission and was one of the first areas in the state set aside for public recreation. Today the 7000-acre reservation is managed by the state, primarily for its recreation areas. Blue Hills Trailside Museum, managed by Mass Audubon, features cultural and natural history exhibits, including a display of live animals of the Blue Hills.

Prominent threats to birds and other wildlife in this large reservation, adjacent to a major metropolitan area, include free-roaming dogs, feral cats, and a wide range of illicit human activities in places where there are endangered species. Other threats include invasive or non-native plants and cowbird parasitism. This site requires management of diverse habitats — many of which are currently overgrown. In addition, the currently scattered data on monthly monitoring of birds and annual breeding bird surveys need integration.

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BIRDERS AT MT. AUBURN CEMETERY BY DAVID LARSON

PEREGRINE FALCON FEEDING BY JIM FENTON

FIELD NOTE

Ersatz Skimmers

Doug Chickering

The call caught us by surprise. Lois Cooper and I were standing on the Jodrey Pier in Gloucester, watching a striking Glaucous Gull on January 7, 2006. We were hardly expecting to hear the unmistakable chatter of a kingfisher in midwinter. Our surprise was compounded when we located the source of the call: a pair of female Belted Kingfishers, about fifteen feet above the water, face to face, engaged in some kind of confrontation. Hovering about fifteen feet above the slip to the right of the pier, they had a brief interchange, broke off from their squabble, and dropped toward the water. I expected them to dive or fly away. What they did was rather extraordinary, for they began to "skim." Both of them skittered over the water, so close that their wing tips made small splashes, then hesitated slightly in their flight to pick at the water, like Black Skimmers fishing along the surface. Each kingfisher was successful once and pulled up a small fish. They proceeded in this manner, skimming over the top of the water, across the slip and eventually under the far dock, disappearing among the pilings and into the darkness. It wasn't the classic skimmer style, since they weren't dragging their bills in the water, but it was a fishing behavior I had never witnessed in kingfishers. It also reminded me of a previous incident when I watched another bird fishing in true skimmer fashion.

In 1986 I was birding in Florida and happened to be at the edge of Echo Pond, down at the tip of the Everglades, near the small settlement of Flamingo. It was dusk, and as the twilight began to settle over the warm afternoon, a string of Black Skimmers came in from the ocean's edge and began to troll the still waters of the pond, dragging lower mandibles, then clamping down on fish with a skillful regularity. They had made a few passes when they were joined by a dozen or so Laughing Gulls, mimicking the skimmers' behavior perfectly. The gulls glided low, dropped their bills into the pond, and occasionally snapped at fish that they presumably encountered. Unlike the skimmers, however, the gulls appeared to be unsuccessful. What was amazing was that they had apparently watched the skimmers, were imitating their technique, and persisted even in the face of a complete lack of success. There must be an evolutionary message here somewhere. . . .

Editor's Note:

The following citations from existing literature on the behaviors noted are printed with permission from The Birds of North America Online <http://bna.birds.cornell.edu/BNA/>.

Belted Kingfisher: "Strong and direct but not always sustained; wing-flapping rates 2–3/s with gliding after every two or three strokes. Often flies so close to water that wingtips brush the surface. Capable of stalling in flight and hovering while searching for prey." (citing Blake, C.H. 1947. Wing-flapping rates of birds. *Auk* 64: 619–20.) Laughing Gull: "Under strong head winds, may skim surface of water by putting tip of lower mandible in water" (citing Stone, W. 1937. *Bird Studies at Old Cape May*. Philadephia: Delaware Valley Ornithological Club; Hailman, J.P. and J.R. Reed. 1982. Head wind promotes skimming in Laughing Gulls. *Wilson Bulletin* 94: 223–25).

In Memory of Steve Leonard

John Nelson

One morning in late August 2005, sixteen birders set off by boat for South Beach in Chatham on Cape Cod. We were a gaudy bunch, decked out in leis and mandatory Hawaiian shirts for the Brookline Bird Club's annual South Beach Safari. We felt exhilarated by the birds that might await us — Wilson's Plover, Black Skimmer, a fresh rarity concealed amid thousands of terns and shorebirds — and heartened by knowing that our scope-hauling trek and trudge across the beach would be lightened by camaraderie. We were also saddened by the loss of one of our own. Steve Leonard, a safari regular and good friend to many of us, had died two weeks earlier.

As we crossed the channel, Laura de la Flor, one of the trip leaders, floated a lei across the water and asked for a minute of silence. We bowed our heads. Some of us wept. Each passing bird summoned memories of birding with Steve — his grin as he pronounced "*Turdus migratorius*" to designate a gliding American Robin, or his assured declaration that the second skulking bird in the reeds at Plum Island was indeed a King Rail, not another Clapper.

Stephen Whitney Leonard was passionate about birding. He loved the birds themselves, their beauty, glorious or subtle, their vitality, their ingenuity, their pluck in the face of adversity. He loved the adventure of chasing birds — Northern Hawk Owl in New Hampshire, Yellow-billed Loon in New York — with birding pals like Joe Paluzzi and Susan Hedman. He loved the fullness of concentration, the acute sensitivity to light and sound and movement, and the sense of intimacy with the natural world that come from spending years in the field. Birding engaged his considerable intellect as well. He embraced the challenge of learning all he could about birds — their evolution, behavior, habitats, the fine points of identification — and then applying and amplifying his knowledge through careful observation. For those who birded with skill and intensity he held the greatest respect.

Steve also embraced the community of birders. "He found himself through birding," his mother Louise recalls, meaning both his passion for birds and the bond he felt with those who shared that passion. He liked finding birds but took greater pleasure in finding birds for others or, better yet, teaching them how and where to find birds on their own. With Susan Hedman, he guided me on my first birding excursion to Cape Cod, and I remember his delight as I saw my first Grasshopper Sparrow—a bird he'd scoped in a field and could see singing but couldn't hear. If he found a rare bird or re-found one that someone else had discovered, he'd use every means at his disposal — walky-talky, cell phone, computer, feet, Pony Express — to spread the word.

Like many birders, Steve had a solitary streak, and, though he belonged to several bird clubs, his connection to the growing multitude of birders was ambivalent. Joe Paluzzi recalls how Steve would resist invitations to join club outings. "Too damn many people," Steve would say. "I don't like birding in crowds." The next morning, when Joe would arrive at the meeting place — say, the fisherman's statue in

Gloucester — Steve would be nowhere in sight. Instead, he'd be waiting at what he knew would be the group's first stop, the fish pier, with a Glaucous Gull lined up in his scope. For the rest of trip Steve would say one step ahead — with a Barrow's Goldeneye at Rocky Neck, then the Eared Grebe at Niles Beach — not part of the group exactly, but the group's self-appointed scout. Any detachment faded away when he led trips of his own. Then he became as watchful and solicitous as a Mallard with ducklings. He wouldn't rest easy until everyone had gotten on every bird.

Steve wasn't nationally known as a birder. He never birded out of the country and only occasionally went out of state. His life list wasn't huge. Yet he was a vital part of birding in New England. Through his enthusiasm, his depth of knowledge about local birds, and his wide-ranging interactions with others, both in the field and online, he helped to turn a loose assortment of birders into a genuine, cohesive community. And for those willing to listen, and listen at length, he could be the best of mentors, combining learning, patience, humor, and an infectious love for his subject. I'm not the man to consult if you're looking to distinguish between dowitchers, but Steve tried his damnedest to make me the man. Throughout New England there are birders who will never see a Cerulean Warbler or Grasshopper Sparrow without thinking of Steve Leonard.

He was a good man, but he wasn't an easy man. He could be cantankerous and contentious, for starters. He didn't suffer fools gladly, especially birding fools, and he could be brutally funny at the expense of birders whose sightings were dubious. "He knew his birds and was not shy about calling them," Linda Ferraresso said at his memorial service. "He never hesitated to question others when they weren't certain of their ID (or maybe I should say, he wasn't certain of their ID)." Or, as his good friend Joe Paluzzi puts it, "Steve wasn't always right, but he was never wrong." No doubt he rubbed some birders the wrong way, but those closest to him knew that his stubbornness and sarcasm went hand in hand with a passion for birding and a belief in upholding high standards. He had a probing mind and a good heart.

The last time I saw Steve, he was sitting by a window at Beth Israel Hospital in Boston. He loved the panoramic view of the city, and the city's birds, from his eleventh floor room, and I'm sure that, had he stayed longer, he would have racked up an impressive hospital list. His mother and two sisters were there — a warm family full of heartiness and easy, intelligent humor — along with friends Susan Hedman and Laura de la Flor. We talked about birds, of course, and at one point Steve turned from the window and said, "Once you become a birder, it's something you'll always have." He meant, I think, that through birding we can be transformed, as he had been transformed. We can learn, again and again, to experience the world anew.

On December 3, 2005, Steve's family, friends and fellow birders gathered for a memorial service at the Old Pines observation deck in the refuge on Plum Island. It was a bright, brisk winter's day. Origami cranes, created by Denise Peloquin, were carefully scattered along the trail. Ian Lynch, a birder and an ordained minister in the United Church of Christ, officiated in a stole embroidered with an American Goldfinch and a Rose-breasted Grosbeak. In his invocation he read from Matthew 6-26: "Behold the birds of the air; they neither sow nor reap nor gather into barns, and

yet God in heaven feeds them." Linda Ferraresso spoke about Steve's fascination with birding technology, the aroma of Green Mountain coffee, and the strains of symphonic music wafting from his car as he rolled down his window to report his most recent sightings, and the day he closed debate on the identity of a puzzling bird by proclaiming, "Why is this bird *not* a Red Knot?" A memorial wreath was fixed on the observation deck. Afterwards, people talked about how gratified Steve would have been by the beauty of the service and the warm devotion of his friends. And, they agreed, he would have understood why some stopped first at Parking Lot #7 to check for a Snowy Owl.

I missed the service because I was leading a birding walk that morning at Halibut Point in Rockport. It was the last place I'd seen Steve in the field, shortly before he was hospitalized. He didn't look well that day. Each step was a struggle. He knew he had little time to live, and he spoke plainly about his prognosis, without bitterness or a display of stoicism. He didn't complain about the opportunities he'd miss, the birds he'd never see. He was grateful for the chance to see so many birds and for the gift to know them. As I left him, he resumed his search for an Ash-throated Flycatcher that had been spotted earlier. I'm not sure what brought him out on that cold, blustery day; he'd seen Ash-throated Flycatchers before. Maybe it was the thrill of the chase. Maybe he was working on his year list — he was pleased about a "classic" White-eyed Vireo he'd tracked down a few days earlier. Maybe he didn't know what else to do with himself. Or maybe it was simply the hope of running into an old friend, *Myiarchus cinarascens*, he hadn't seen for a while.

At a memorial service on Long Island, Steve's mother handed out a card with a painting of a Great Egret in flight and a passage from an unknown author: "When you come to the edge of all that you know, you must believe in one of two things: there will be earth on which to stand, or you will be given wings." At the Plum Island service, Laura de la Flor distributed a second card, with a picture of Steve bearded and smiling as he strides down a winter beach. He's wearing the cap he always wore, and he's carrying the Leica scope he loved the way B. B. King loves his guitar Lucille. Below his picture is the passage that Steve used to close his e-mail messages: "A society grows great when old men plant trees whose shade they will never know."

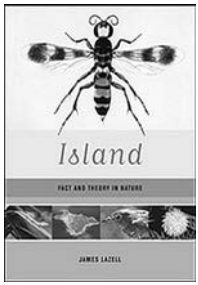
In his last days, his mother says, Steve didn't dwell on death but talked about the cycle of life, his hopes for the generations to come. He was excited about the upcoming birth of his twin great-nephews. His mother now goes birding with his binoculars in "a silent communion" with Steve. His final resting place is an aerie — literally, a crag where eagles nest — a niche in a wall at a burial spot high on a bluff at Fort Hill in Montauk. A Native American burial ground flanks the bluff. Distant seabirds glide across Block Island Sound. Great, weathered boulders transported by glaciers mark the passage of time. It's a place he chose, a place, his mother says, "where the hawks hang out and the deer graze, a perfect spot for a birder."

***John Nelson**, from Gloucester, is a retired English professor who has recently published a book about how to teach critical thinking skills,* Cultivating Judgment. *He would like to thank Louise Leonard, Joe Paluzzi, Linda Ferraresso, Susan Hedman, Laura de la Flor, Linda Pivacek, and Ian Lynch for their help in preparing this article.*

ABOUT BOOKS

Summer Isles of Eden

Mark Lynch



Island: Fact and Theory in Nature. James Lazell. 2005. University of California Press. Berkeley and Los Angeles, CA.

The Sea, the Storm and the Mangrove Tangle. Lynne Cherry. 2004. Farrar Straus Giroux. New York, NY.

Summer isles of Eden, lying in dark purple spheres of the sea
– Alfred Lord Tennyson: *Locksley Hall (1842)*

Down where the Trade Winds play
Down where you lose a day
We found a world
Where Paradise starts
– Bugs Bunny: *Gorilla My Dreams (1948)*

Islands have captured our collective imagination probably ever since the first Australopithicine straddled a log and floated to a sandbar in mid-river and took a 360-degree look around. From Shakespeare (*The Tempest*) to Herman Melville (*Typee* and *Omoo*) and Paul Gauguin (his Tahiti canvases), islands have been appropriated as the locations of some of the most creative fantasies of continental-bound humankind. Everything about islands appears to be set in high relief. Life seems more exotic: bigger, odder, more extreme. Look around from the high point of a small island, and you will see life in a different perspective.

Artists are not the only ones who've been captivated by islands; in the variety of endemic life on islands biologists have found keys to understanding the processes of life on earth. Because islands are relatively small and isolated and subject to extremes of climate and geological forces, they are unique ecological laboratories and crucibles of evolution. Because of their size and clearly defined limits, islands can provide clues for life on the planet as a whole. For some of the most important researchers in evolution, Charles Darwin, Alfred Russel Wallace, Ernst Mayer, E.O. Wilson, to name only a few, islands have been where the action is.

James D. Lazell is one of those biologists who has heard the siren song of the islands and has always been willing to drop everything to respond. Lazell is probably best known to New England natural historians as the author of *This Broken Archipelago*, a fascinating account of the reptiles and amphibians of Cape Cod and the islands. This was the book that encouraged me, and many others, to engage in endless searches for hog-nosed snakes and four-toed salamanders among the cranberry bogs of our southeastern coast. Another local publication, his booklet on the reptiles and amphibians of Massachusetts, remains another classic of state natural

history. That book contained the following memorable lines about the extirpated five-lined skink in Massachusetts:

> Skinks are rigorously territorial. If you should find one in Massachusetts, don't worry about catching it; remember *exactly* where you saw it, and come running for help (p. 28 *Reptiles and Amphibians in Massachusetts*).

Inspired by that call to action, a small but dedicated group of budding naturalists (myself included) spent many happy hours searching appropriate habitat in central Massachusetts for that Holy Grail of state herpetology. No, of course we never found a skink, but we learned an awful lot about the other herps of our area.

Why do Lazell's books have this effect on readers? His writing has always had a wide appeal. He seamlessly combines interesting popular accounts of the thrill and joy of field research with a wider historical and biological perspective. Lazell never writes exclusively for an audience of academic herpetologists and ecologists. He writes for anyone who has ever caught a frog or marveled at the sight of a tanager.

> So I have written this book for people like me: those interested in the natural world and living things. "People like me" here includes my dentist, my lawyer, my cousin who runs a sports bar, a high school student I know, a lot of graduate students, bird-watchers, ecotourists, and almost every professional biologist I have met. Perhaps my aim is too broad, but because I am absolutely convinced that our salvation as a species depends on the conservation of biodiversity — and that few people understand that — I have to take my shot. (xiv *Island*)

Lazell has always gravitated towards research in geographically isolated areas: Cape Cod, the Outer Banks, and the Florida Keys. On March 24 1980, he fist stepped upon the very tiny (300 hectares), isolated island of Guana in the British Virgin Islands. "Guana" is pronounced like the last two syllables of "Iguana," for which the island was named. *Island*, the fruits of Lazell's research on Guana, is in reality, two books. The first half is a serious and thoughtful critique of modern ecological theory and research techniques. The second half is a species-by-species account of life on Guana, from plants and invertebrates through mammals.

There are several stated themes to *Island*. One of the most important is Lazell's assertion that an island with lots of biodiversity makes for a stable ecosystem. In other words, an area with a great variety of flora and fauna means that it can more easily recover from inevitable environmental disasters such as fire, flood, storm, or temporary human disturbance. But how do we determine the "richness" of a given area? Here *Island* becomes a bit of a "Stealth" book. Unlike anything in his other books written for a general audience, Lazell launches into an unexpected and sustained critique of ecological scientific field techniques. Though Lazell is never mean spirited or caustic, he most certainly "calls 'em like he sees 'em." At one point, for example, he flatly states that cladistics is NOT a science but merely a "philosophy."

One of *Island's* overarching themes is to warn against "ecological theories rendered as formula." Any recent issue of *The Condor* or *The Auk* contains complicated mathematical models of environmental assessment. Biologists, like other scientists, want hard formulas and predictable outcomes. Lazell is saying that we should treat these "glittering generalities," or "glitteralities" as he calls them, with a grain of salt. We are far, far from a Grand Unified Theory of ecology and island biogeography. Guana is a case in point. Guana is remarkably diverse in creatures, far more diverse than any existing model of island biology would have predicted. Though very tiny and very dry, it hosts eight species of lizard, several species of snakes, and even an amphisbaenid, an unusual variety of burrowing, legless reptile.

So how do we refine our biological monitoring techniques to arrive at better theories? In *Island*, Lazell is up front about the seemingly intractable problems he found in counting and measuring life on tiny Guana. For instance, after all his years of field work, he has yet to invent a good method for taking a census of the tiny *Typhlops*, a common species of fossorial blind snakes. He has excavated pit traps, laid out boards, and dug for them. None of these usual methods for assessing a population of under-ground creatures has proven satisfactory. The shortcomings of another standard habitat monitoring technique are revealed in this amusing anecdote:

> An urbane and sophisticated, if somewhat acerbic European guest of the Guana Island Hotel was ensconced in the lounge when we began our gecko roundup one evening. We eagerly seized a great fat gecko and prominently branded his rump with a grand red dot.
>
> "What are you doing that for?" queried the guest.
>
> "We're marking him so we can recognize him when we see him again" we said. "Now we'll let him go." Which we did. The gecko promptly disappeared into the ceiling.
>
> "That is ridiculous," said the guest. "That is much worse than your proverbial needle in the hay stack. Now you have let it go, you will never see that lizard again."
>
> "Hah-Silly Man" thought we, and we set to catching more. We marked 11 house geckos in the lounge, bar, and dining room that evening. The next evening the walls were well decorated with house geckos, as ever. In fact we counted 14. One was marked. After that we never saw another marked gecko, although there was no diminution of general gecko numbers. (p. 46)

Clipping the hallux (tiny toe) of the house geckos had the same result: lots marked, but none seen again. And this took place in a confined area on a tiny island. It is not that Lazell is against these standard field methods, but he wants it understood that they can be of extremely limited value. Lazell worries that these short-cut mathematical models used to assess biodiversity may, in fact, short change a place, creating a false picture and making it seem not worth "saving." According to models of island biodiversity, Guana should have been much poorer in species, so why not develop it? As Lazell points out time and again, no two islands, no two places, are

alike. This is a valuable lesson for all folks attempting quick, one season biological assessments of any parcel of land.

This leads us to another of Lazell's laws: "research intensity elucidates a habitats' richness." Simply put, the more time, the more people, the more effort you put into any single field project to assess biological richness, the more species you will find. Even conducting several years' worth of research in any one area may only scratch the surface of what actually lives there. Odonates (dragonflies) are uncommon on Guana. Years went by and very few species were ever noted, until an El Nino year, when Guana was suddenly swarming with huge numbers of several previously unrecorded species. If Lazell and his fellow researchers had not been there that season, they would have concluded that odonates were always very uncommon.

The second half of *Island* is a classic Lazellian species by species account with all the humor, digressions, anecdotes, and endless questions readers of his books have come to enjoy. Lazell can never simply write a dry annotated checklist when there are so many interesting tidbits to relate. In a sidebar titled "Beware the Bannanaquit", he writes:

> Adorable as these pretty little birds are most of the time, they can be a nuisance around the dining area, hopping in food (especially cut fruit) and perching on the rims of glasses of fruity drinks. The problem is not so much that they imbibe. The problem arises when, satiated, they reverse direction on the rim preparatory to departure and decide to jettison a bit of excess weight before flying off (p. 231).

Lazell gives the reader a wonderfully intimate sense of how Guana's creatures live and behave. By the time you finish *Island*, you will have a feeling you could land on Guana, walk to any rock or shrub, and know what you would be likely to find under or on it. Lazell instills in the reader a sense of excitement about getting down and dirty, doing the hard work of field research. It's positively inspiring. You too will want to get out there and be part of the process of discovery and understanding of our environment, whether on some far-flung island or looking at the amazing diversity of life in your own home patch. Finally, *Island* is an important and perhaps controversial assessment of the science of ecology, an honest appraisal of its theoretical shortcomings, and the start of a blueprint to create a more effective and accurate science.

> How I wish that somewhere there existed an island for those who are wise and of good will. (Albert Einstein)

Probably no other children's author has consistently worked harder at writing and illustrating books about the environment than Lynne Cherry. Her research for each book is considerable and impeccable. She seems to spend an inordinate amount of every year either in the field with research scientists or running workshops on environmental issues. In the past year, she spent considerable time on site with anthropologists studying Paleolithic cave art in Lascaux, France. She then wrote, painted, and drew with the ornithologists at the Cornell Labs while helping to

organize efforts to stop environmental degradation in the mangroves. Somehow Cherry still manages to write and illustrate her many wonderful books.

Her illustrations are always based on real birds, animals, and plants with the gentle touch of a seasoned writer of young people's books. She has tackled such varied subjects as water pollution (*A River Ran Wild* about the Nashua River), avian migration (*Flute's Journey*), and ethnobotany (*The Shaman's Apprentice*). Her bold intention is to create an audience of environmentally well-informed, inspired and motivated children that will hopefully change the future of our planet.

Her latest book is *The Sea, the Storm and the Mangrove Tangle*. This is the story of the complex ecology of coastal mangrove islands and how they protect countless creatures from violent storms while acting as a nursery for fish and shrimp. Cherry has woven this compelling story of evolution and interdependence with gently detailed paintings that bring the young reader down and among the maze of roots and branches of this endangered ecosystem. Indeed, the book is crammed with creatures found both above and below the waters in the mangroves of Belize, the U.S. Virgin Islands, and Biscayne Bay, Florida. Readers will learn how manatees, Brown Pelicans, night herons, anoles, tree snails, anemones, and many others live around and depend on these tangled islands. The amount of hard "scientific" information she crams into each of her small colorful books is staggering. The inside front and back covers contain two different maps of the locations of mangrove swamps around the world. Small carefully labeled paintings of the denizens of the mangroves surround each map. An Author's Note alerts adult readers to the current pressing problems facing mangroves and describes where families can visit them. She also encourages folks to get involved and describes what they can do to help preserve mangrove habitat.

Lynne Cherry's books should be in the library of every natural historian who has children, nieces, nephews, or (as in my case) grandchildren. These are the kinds of books that are perfect to enjoy with your kids and that will encourage both of you to go out and explore some natural spot together. That's how change happens.

> In a sense, each of us is an island. In another sense, however, we are all one. For though islands appear separate, and may be situated at great distances from one another, they are only extrusions of the same planet Earth.
> (J. Donald Wilson)

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From *The Birding Community E-Bulletin* for April 2006

The Boreal Forest, stretching in North America from interior Alaska across Canada, all the way to the Atlantic Ocean, forms one of the largest intact ecosystems remaining on earth. With billions of breeding birds nesting in the region, it is important to realize that the future of the Boreal Forest ecosystem will be determined over the next several years. There is a great opportunity ahead for large-scale conservation involving cooperative efforts between countries, corporations, and the public.

With that opportunity in mind, North America's Boreal Forest will be this year's theme for International Migratory Bird Day (IMBD), 13 May. (While the IMBD is 13 May, it may be celebrated at any time, depending on the local migratory bird schedule.) All around the U.S. and Canada, as well as in Central and South America — at zoos, schools, parks, refuges, and more — you will find events focusing on the Boreal Forest and the billions of migratory birds that breed there.

Boreal bird habitat is being destroyed — at the rate of half a million acres a year — to make facial tissues, toilet paper, paper towels, and other disposable paper products. Bird enthusiasts can help address this issue and make the Boreal Forest safe for birds by becoming more informed on this issue, making smart shopping decisions, and participating in IMBD.

For more information see these two sites: <http://www.birdday.org/> and <http://www.borealbirds.org/events.html>

You can access an archive of past E-bulletins on the National Wildlife Refuge Association (NWRA) website at <http://www.refugenet.org/birding/birding5.html> or on the birding pages for the E-bulletin's corporate sponsor, Steiner Optics <http://www.steiner-birding.com/bulletin.html>.

IMBD at Silvio O. Conte National Fish and Wildlife Refuge, Turners Falls, Massachusetts: This four-state refuge, protecting the Connecticut River watershed, launched an 18-month program on migratory birds last May, entitled "Wings Over the Watershed." Free events, special programs and children's activities continue, with special emphasis on Migratory Bird Day. Go to <http://www.greatfallsma.org>, or contact Kevin Lowry, Silvio O. Conte National Fish and Wildlife Refuge, 802-649-5775.

BIRD SIGHTINGS

November/December 2005

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

November was a bit on the mild side, with near normal precipitation for Boston; the temperature averaged 45.9°, one degree above average, with a high of 70° on November 1 and a low of 21° on November 25 in Boston. Rainfall totaled 3.71 inches, just a tad under normal. Measurable amounts were noted on 11 days in Boston, but many suburban areas experienced more rain. Snowfall in Boston was just a trace or 1.3 inches below normal. Thanksgiving Day was cold with the temperature 7° below normal in Boston, with some measurable wet snow that changed to rain in the Boston area and to the south. Western and northern areas of the state picked up 2-5 inches of snow on Thanksgiving Day.

December turned cold and produced above-average snowfall. In Boston the temperature averaged 32.5°, 2.3° below normal. The first half of the month was much colder than the last half in the metropolitan area, as temperatures ran 7-10° below the average for December. The low in Boston reached 10° on December 14, while the high mark was 51° on both December 24 and 29. Precipitation totaled 2.88 inches in Boston, with measurable amounts falling on eight days. Snowfall was recorded at 10.7 inches in Boston, nearly four inches above average for December. Much higher amounts were recorded in many of the surrounding communities. A storm on December 9 intensified off the coast and generated thunderstorms and blizzard conditions with 2-4 inches accumulating in just a two-hour period, that, coming during the commuting hours that afternoon, caused many accidents. *R. Stymeist*

WATERFOWL THROUGH ALCIDS

November opened this year with many interesting reports. First among them, taxonomically at least, were a couple of interesting goose species. Two **Greater White-fronted Geese** spent a few weeks around Concord and Acton. The recent split of the Canada Goose complex has opened up a whole new world of identification challenges for anyone perusing a large flock of geese. Whether people are just more aware, or if there is a growing tendency amongst the smaller, western **Cackling Goose** to stray our way, there seemed to be more sightings than usual of this species in Massachusetts. There were a number of sightings, totaling 6 individuals. The size and plumage variation in the Canada Goose complex will continue to be a field identification challenge, and observers are encouraged to take extreme care in their identification. A **Tundra Swan**, always an interesting find, spent much of late November and December in North Truro. Eurasian Wigeon were reported in typical numbers throughout eastern Massachusetts. An unusual number of Redheads was reported during November and December. The flocks of 16 found in West Newbury and Cambridge are among the larger flocks seen in Massachusetts during the last few years outside Nantucket. An immature **Tufted Duck**, virtually an annual visitor to the state, was discovered in Plympton on November 16.

Pacific Loon records during the period came in from Race Point in Provincetown, where they have been seen annually in recent times, and from Salisbury Beach. The **Eared Grebe** of Gloucester was reported on the two widely separated dates of November 6 and December 28. In the middle of those dates, a **Western Grebe** was found at Plum Island and enjoyed by many observers over a two-day period. A pelagic trip sponsored by the Brookline Bird Club on November 13 turned up some interesting finds, including a few Northern Fulmar, 1100 Greater

Shearwaters, 1 Sooty Shearwater, and 4 Manx Shearwaters. A lingering Snowy Egret at Plymouth Harbor on November 28 was the one notable heron report during the period.

Fair numbers of Black Vultures, including 3 reports of 5 individuals and a single individual in North Scituate, were reported during November. Osprey lingered in the state until at least December 17 when one was recorded on Mashpee/Wakeby Lake in Mashpee. One of the most interesting stories of the season was a white **Gyrfalcon** which escaped when it was being trained at Plum Island on December 11. Later the same day, a white Gyrfalcon seen at Plum Island was undoubtedly the same bird.

The **Purple Gallinule** found in Holyoke on November 3 was an interesting inland find, representing only the fifth record for western Massachusetts. Good numbers of Semipalmated Plovers lingered in November, but a record from Plum Island from December 28 was exceptional for the late date and northerly location. It represents one of the latest records for the state. Also unusual for December were the two Lesser Yellowlegs at Wellfleet and White-rumped Sandpiper in West Gloucester.

Possibly in the wake of Hurricane Wilma, an unprecedented incursion of Franklin's Gulls occurred in northeastern North America and Europe. Massachusetts hosted as many as 4 individuals during the period. There have been fewer than 5 records for this species in the state during the last 10 years. A total of 62 Lesser Black-backed Gulls at Nantucket was quite respectable. A rash of sightings of Caspian and Royal Terns during early November was quite unexpected. *Birds of Massachusetts* (Veit & Petersen, 1993) lists only one previous November record of Caspian Tern and only a small handful of Royal Terns. There have been no November reports since that time. These are likely the result of Hurricane Wilma's passing. Similarly, there was an unusual record of a Black Skimmer at Plum Island on 2 November.

J. Trimble

Greater White-fronted Goose

11/1-13	Concord/Acton	2	S. Perkins#

Snow Goose

thr	P.I.	3-12	v.o.
11/1-6	Chilmark	16	A. Keith#
11/8	Millbury	4	D. Berard
11/11, 12/3	Granville	40, 165	J. Weeks
11/13	S. Monomoy	15	BBC (R. Heil)
12/5	Marlboro	2	B. deGraaf
12/6	Whately	200	B. Benner
12/17	S. Boston	5	D. Sullivan
12/18	Nantucket	2	K. Blackshaw

Brant

11/2	P.I.	150	T. Wetmore
11/2	Granville	70	J. Weeks
11/9-15	Cambr. (F.P.)	1	B. Miller
11/11	Nantucket	335	E. Ray
11/17	Oak Bluffs	45	A. Keith
11/19	Bourne	127	BBC (Stymeist)
11/20	Boston H.	335	TASL (M.Hall#)
11/22	Brewster	149	M. Keleher
12/8	Osterville	119	M. Keleher

Cackling Goose (no details) *

11/1, 13	Concord	1, 2	Perkins, Pirro
11/5	W. Newbury	1	MAS (D. Weaver)
11/20	Winthrop	1	TASL (Jackson)
12/5, 11	Marlboro	2, 1	deGraaf, Liller

Mute Swan

12/2	Turners Falls	20	H. Allen
12/10	Marlboro	28	M. Lynch#
12/11	Westport	66	M. Lynch#

Tundra Swan

11/19-12/11	N. Truro	1	G. d'Entremont + v.o.

Wood Duck

11/1, 13	Winchester	35, 4	R. LaFontaine
11/5	DWWS	4	CCBC (G. d'E)
11/6	Marstons Mill	9	M. Lynch#
11/12	Quabbin (G29)	4	J. P. Smith
11/26	Gay Head	11	A. Fischer
12/7	Boston (Fens)	60	R. Stymeist
12/20	Hadley	5	J. Smith

Gadwall

thr	P.I.	55 max 11/8	v.o.
11/5, 16	Woburn	2, 6	M. Rines
11/6, 16	Pittsfield (Pont.)	3, 2	Allen, St. James
11/21	Swansea	35	R. Farrell
11/27, 12/26	Plymouth	54, 14	G. d'E., Furbish
12/3	Marstons Mills	16	SSBC (Kenneally)
12/3	Dennis	33	D. Silverstein#
12/28	E. Gloucester	26	R. Heil

Eurasian Wigeon

11/19	Eastham	1	D. Furbish#
11/20-12/1	P.I.	2 m	T. Wetmore
11/21	Swansea	1 m	R. Farrell
12/18	Nantucket	1 m	K. Blackshaw
12/29	Chilmark	1	V. Laux

American Wigeon

11/1-12/3	P.I.	96 max 11/8	v.o.
11/1, 26	W. Barnstable	51, 39	M. Keleher
11/2	Turners Falls	5	J. Smith
11/6, 16	Pittsfield (Pont.)	2, 3	Allen, St. James
11/12	Arlington Res.	41	M. Rines
11/12	Sandwich	32	CCBC (M. Keleher)
11/21	Swansea	97	R. Farrell
12/30	Nantucket	30	G. d'Entremont#

Blue-winged Teal

11/1	Nantucket	6	E. Ray
11/1, 26	W. Barnstable	3, 10	M. Keleher
11/2	Wayland	2	T. Spahr#
11/12	Amesbury	1	S. McGrath
11/16	GMNWR	1	M. Lynch#
11/26	Gay Head	3	A. Keith
12/1	P.I.	1	MAS (D. Weaver)

Northern Shoveler

11/18	Pittsfield (Onota)	4	J. P. Smith
11/12-26	Arlington Res.	3	M. Rines#

Northern Shoveler (continued)

11/19	Winthrop	3	P. Peterson
11/20	Newbypt H.	2	P. Meleski#
11/25, 12/29	Boston	2, 4	Griswold, Morgan
11/26	W. Barnstable	3 f	M. Keleher
12/3	Dennis	2 f	D. Silverstein#
12/31	Harwich	2	E. Banks#

Northern Pintail

thr	Turners Falls	1-3	J. Smith
thr	P.I.	94 max 11/8	v.o.
11/5, 24	GMNWR	16, 18	S. Perkins
11/12	Acoaxet	57	M. Lynch#
11/18	Northampton	8	C. Gentes
12/21	Attleboro	14	K. Ryan
12/30	Marlboro	10	T. Spahr

Green-winged Teal

thr	P.I.	260 max 11/24	v.o.
11/5, 25	GMNWR	5, 225	S. Perkins
11/11	E. Orleans	45	B. Nikula
12/10	Newbypt H.	5	S. Mirick#
12/10	Waltham	4	J. Forbes
12/24	Gloucester	1	P. + F. Vale
12/30	Marlboro	1 f	T. Spahr

Canvasback

thr	Cambr. (F.P.)	42 max 11/10	v.o.
11/8	Nantucket	23	K. Blackshaw
11/16	Waltham	2 m	M. Daley
11/17	Millbury	1	D. Berard
11/25	Chilmark	1	T. Rivers
12/21	Falmouth	7	G. Hirth

Redhead

11/1-12/22	Reports of 1-2 indiv. from 7 locations		
11/1-19	W. Newbury	12-16	v.o.
11/2-26	Eastham	3-5	v.o.
11/3, 12/28	Cambr. (F.P)	1, 16	Stymeist, Simpson
11/5-24	GMNWR	2-4	S. Perkins#
11/5, 12	P.I.	2, 6	Miller, Wetmore
11/12	Acoaxet	7	M. Lynch#
11/28	Lincoln	4	M. Rines
12/10	Woburn	10	M. Rines
12/30	Marstons Mills	3	G. Hirth

Ring-necked Duck

11/1-28	Cambr. (F.P.)	175 max 11/6	v.o.
11/5	W. Newbury	660	J. Berry
11/9	Amesbury	171	J. Berry#
11/9	GMNWR	90+	P. Morlock
11/10	Gloucester	125	R. Heil
11/13	Sutton	137	M. Lynch#
11/20	Sudbury	70	J. Liller#
12/1	Ludlow	52	H. Allen
12/30	Waltham	6	J. Forbes

Tufted Duck

11/16	Plympton	1 imm	K. Anderson

Greater Scaup

11/3, 17	P.I.	33, 31	T. Wetmore
11/11	Southwick	1	S. Kellogg
11/19	Truro	50	G. d'Entremont
11/20	Boston H.	719	TASL (M.Hall#)
11/20	Clinton	43	M. Lynch#
11/26	N. Truro	62	M. Lynch#
11/27	Falmouth	600	G. d'Entremont
12/30	Nantucket	380	G. d'Entremont#

Lesser Scaup

thr	P.I.	3-6	v.o.
thr	Nahant	60 max	L. Pivacek
11/5	N. Scituate	5	CCBC (Gd'E)
11/12	Acoaxet	324	M. Lynch#
11/20	Clinton	8	M. Lynch#
11/20	Sudbury	20	J. Liller#
11/26	N. Truro	3	M. Lynch#
12/4	Swampscott	3 f	S. Perkins#

King Eider

11/11	Boston H.	1 f	K. Hartel#
11/12-24	Sandwich	1 m	CCBC (Buckner)
11/13-12/30	Rockport	3-4	v.o.
12/8, 24	Newbypt H.	1	S. McGrath
12/10-26	P.I.	1-2	v.o.

Common Eider

11/6	Falmouth	2323	M. Lynch#
11/7	N. Scituate	2000+	S. Maguire#
11/12	Westport	3000+	M. Lynch#
11/13	Nant. Sound	1000	BBC (R. Heil)
11/15, 12/31	Rockport (A.P.)	4250, 246	R. Heil
11/20	Boston H.	7318	TASL (M.Hall#)
11/22	Brewster	1200	M. Keleher
12/23	P.I.	1300	R. Heil

Harlequin Duck

thr	Cape Ann	82 max	v.o.
thr	Scituate	21 max	v.o.
11/4	Eastham	1 m	MAS (S. Ellis)
11/8	Nantucket	4	E. Ray
11/11	Boston H.	1	K. Hartel
11/12	Acoaxet	1	M. Lynch#
11/20	Orleans	1 m	M. Tuttle
12/12	Sandwich	1 m	K. Doyon
12/29	M.V.	281	v.o.

Surf Scoter

11/5	N. Truro	648	M. Lynch#
11/7	N. Scituate	327	S. Maguire#
11/12	Brookline	6	M. Edmonds
11/12	Westport	600+	M. Lynch#
11/13	Nant. Sound	2100	BBC (R. Heil)
11/15, 12/6	Rockport (A.P.)	65, 23	R. Heil
11/16	Ludlow	1	H. Lappen
11/20	Boston H.	357	TASL (M.Hall#)
11/29	Stockbridge	1	T. Collins

White-winged Scoter

thr	P.I.	390 max 12/29	v.o.
11/4	S. Quabbin	3	L. Therrien
11/5	P'town	86	M. Lynch#
11/6	Falmouth	286	M. Lynch#
11/7	N. Scituate	298	S. Maguire#
11/7	Buzzards Bay	98	R. Farrell
11/12	Westport	900	M. Lynch#
11/15, 12/28	Cape Ann	70, 120	R. Heil
11/20	Boston H.	779	TASL (M.Hall#)
11/26	N. Truro	91	M. Lynch#
12/30	Nant. Sound	325	G. d'Entremont#

Black Scoter

thr	P.I.	60-80	v.o.
11/3	S. Quabbin	3	L. Therrien
11/7	N. Scituate	178	S. Maguire#
11/12	Westport	950++	M. Lynch#
11/15	Rockport (A.P.)	205	R. Heil
11/27	Sandwich	50	G. d'Entremont
12/8	Nantucket	550	E. Ray

Long-tailed Duck

thr	P.I.	115 max	v.o.
11/5	Duxbury B.	63	R. Bowes
11/13	Nant. Sound	1800	BBC (R. Heil)
11/15	Rockport (A.P.)	1150	R. Heil
11/20	Boston H.	132	TASL (M.Hall#)
11/27	Sandwich	30	CCBC (D. Furbish)
11/5, 28	S. Quabbin	1, 1	Smith, Therrien

Bufflehead

11/8	P.I.	82	R. Heil
11/12	Acoaxet	333	M. Lynch#
11/20	Boston H.	1019	TASL (M.Hall#)
11/20	Fairhaven	146	BBC (Stymeist)
12/11	Westport	181	M. Lynch#
12/23	Newbypt	120	R. Heil
12/28	Cape Ann	155	R. Heil

Common Goldeneye

thr	P.I.	90 max	v.o.
11/20	Boston H.	161	TASL (M.Hall#)
11/20	Sudbury	52	J. Liller#
11/22	Harwich	49	M. Keleher
12/1	Turners Falls	25	J. Smith
12/8	Osterville	50	M. Keleher
12/23	Newbypt	100	R. Heil
12/28	Cape Ann	90	R. Heil

Barrow's Goldeneye

11/12	Westport	1f	M. Lynch#
11/19-27	Falmouth	2	G. Gove#
11/20	Fairhaven	1 m	BBC (Stymeist)

Barrow's Goldeneye (continued)

11/21-12/30	Turners Falls	1	J. Smith
12/5	Osterville	1 f	A. Curtis
12/8	Nantucket	1 m	E. Ray
12/10	Cotuit	1 m	M. Keleher
12/15	Sandwich	1 m	E. Banks
12/28	Gloucester	1 m	R. Heil
12/30	Plymouth	1 m	MAS (D. Clapp)

Hooded Merganser

thr	P.I.	50 max	v.o.
11/14	Pittsfield	60	R. Laubach
11/20	Weymouth	82	TASL (M.Hall#)
11/20	E. Quabbin	136	T. Gagnon#
11/26	Groveland	94	D. Chickering
11/27	Peabody	58	D. + I. Jewell
11/29	W. Barnstable	49	M. Keleher
12/11	Medford	61	M. Rines#

Common Merganser

11/4	Waltham	12	M. Rines
11/25, 12/30	Marlboro	53, 2	Lynch, Spahr
11/25	Southwick	100	S. Kellogg
11/27	Peabody	300+	D. + I. Jewell
12/1, 11	Medford	24, 91	M. Rines
12/1	Ludlow	106	H. Allen
12/8	Northampton	106	C. Horn

Red-breasted Merganser

thr	P.I.	175 max	v.o.
11/2-8	Turners Falls	1	J. Smith
11/12	Westport	120+	M. Lynch#
11/19	P'town	500	G. d'Entremont
11/26	N. Truro	415	M. Lynch#
11/27	Winthrop	1015	BBC (Stymeist)
12/3	Mashpee	500+	M. Keleher
12/28	Cape Ann	170	R. Heil

Ruddy Duck

thr	Cambr. (F.P.)	82 max 11/28	v.o.
11/1-12/6	Melrose	161 max	D. + I. Jewell
11/5	W. Newbury	320	J. Berry
11/12	Acoaxet	117	M. Lynch#
11/16	Ludlow	150	H. Allen
11/19	Chilmark	157	A. Keith
11/20	Sudbury	213	J. Liller#
11/25	Marlboro	169	M. Lynch#
11/26	Eastham	104	R. Stymeist
12/30	Marstons Mills	70	G. Hirth

Ruffed Grouse

11/10	Millbury	1	D. Berard
11/14	Windsor	3	M. Lynch#
11/14	Monroe	1	M. Lynch#
11/20	Sudbury	1	D. Chauls
11/20	E. Quabbin	6	T. Gagnon#
12/18	Woburn	1	CBC (M. Rines)

Wild Turkey

11/8	Granville	35	S. Kellogg
11/14	Shelburne	20	M. Lynch#
11/18	Petersham	80	M. Lynch#
11/27	Colrain	41	M. Lynch#
12/1	Stoughton	24	A. Johnston
12/17	Winchester	16	M. Rines

Red-throated Loon

thr	P.I.	52 max 11/26	v.o.
11/3-8	S. Quabbin	1	L. Therrien
11/5	P'town (R.P.)	27	M. Lynch#
11/5, 26	N. Truro	58, 56	M. Lynch#
11/5	Duxbury B.	24	R. Bowes
11/12	Dennis (Corp. B.)	40	G. Gove#
11/15, 12/6	Rockport (A.P.)	820, 41	R. Heil
11/19	Eastham	50	G. d'Entremont
11/20	Wachusett Res.	1	M. Lynch#
11/20	Boston H.	106	TASL (M.Hall#)
11/23	Wellfleet H.	35	G. LeBaron#
11/24	N. Scituate	20	D. Whipple

Pacific Loon *

11/5	P'town (R.P.)	1	M. Lynch#
12/11	Salisbury B.	1	J. P. Smith

Common Loon

thr	P.I.	147 max	v.o.
11/5	Wellfleet	56	M. Lynch#
11/13	to Nant. Shoals	140	BBC (R. Heil)
11/15, 12/6	Rockport (A.P.)	62, 20	R. Heil
11/19	P'town	50	G. d'Entremont
11/20	Wachusett Res.	13	M. Lynch#
11/20	Boston H.	35	TASL (M.Hall#)
11/20	Quabbin	16	H. Allen
12/11-31	Cambr. (F.P.)	2	L. Drane#
12/30	Nant. Sound	37	G. d'Entremont#

Pied-billed Grebe

11/1, 23	P.I.	5, 2	T. Wetmore
11/6	Eastham	5	D. Silverstein#
11/9	Amesbury	4	J. Berry#
11/12	Acoaxet	9	M. Lynch#
11/12	Sandwich	6	CCBC (M. Keleher)
11/19	Yarmouth	6	CCBC (Silverstein)
12/7	Gloucester	3	MAS (Gette)
12/23	Arlington Res.	1	I. Davies

Horned Grebe

thr	P.I.	37 max 12/23	v.o.
11/6	Falmouth	20	M. Lynch#
11/12	Westport	47	M. Lynch#
11/18	New Salem	5	B. Lafley
11/20	Boston H.	232	TASL (M.Hall#)
11/20	E. Quabbin	11	T. Gagnon#
11/27	Winthrop	26	BBC (Stymeist)
11/27	Swampscott	5	J. Berry
12/31	Petersham	8	B. Lafley

Red-necked Grebe

thr	P.I.	33 max 12/23	v.o.
11/8	N. Scituate	9	C. Nims
11/20, 12/23	Quabbin	1, 1	Gagnon, Smith
11/20	Boston H.	45	TASL (M.Hall#)
11/27	Swampscott	39	J. Berry
11/27	Winthrop	124	BBC (Stymeist)
12/28	Cape Ann	29	R. Heil

Eared Grebe *

11/6, 12/28	Gloucester	1	Liller, Heil

Western Grebe (no details) *

11/25-26	P.I.	1	K. Hartel + v.o.

Northern Fulmar

11/13	to Nant. Shoals	2-3	BBC (R. Heil)
12/16	Rockport (A.P.)	3 lt	R. Heil

Greater Shearwater

11/2	off Gay Head	1	L. McDowell
11/5	Wellfleet	1	M. Lynch#
11/5	N. Truro	1	M. Lynch#
11/5	Chatham (S.B.)	4+	B. Nikula#
11/5	Truro	4	M. Lynch#
11/11	Eastham (F.E.)	1	B. Nikula#
11/13	to Nant. Shoals	1100	BBC (R. Heil)

Sooty Shearwater

11/13	to Nant. Shoals	1	BBC (R. Heil)

Manx Shearwater

11/13	to Nant. Shoals	4	BBC (R. Heil)

Northern Gannet

thr	P.I.	65 max 11/9	v.o.
11/5	Truro	130	M. Lynch#
11/6	Eastham (F.E.)	400+	C. Franklin#
11/12	Dennis (Corp. B.)	3000	G. Gove#
11/13	to Nant. Shoals	2400	BBC (R. Heil)
11/15, 12/16	Rockport (A.P.)	3100, 320	R. Heil
11/19	P'town	125	G. d'Entremont
11/23	Wellfleet H.	100	G. LeBaron#
12/3	off Wasque Pt.	750+	A. Keith
12/30	Nantucket	500	G. d'Entremont#

Double-crested Cormorant

11/5	Eastham	257	M. Lynch#
11/5	P.I.	550+	P. + F. Vale
11/6	P'town	200	B. Nikula
11/6	Falmouth	481	M. Lynch#
11/16	Cape Ann	34	BBC (B. Volkle)
11/20	Southwick	1	S. Kellogg
11/20	Boston H.	74	TASL (M.Hall#)
11/25	P.I.	40	D. Chickering
12/thr	Gloucester H.	2-7	v.o.

Great Cormorant

11/7	P.I.	1 juv	T. Wetmore
11/12	Quabbin (G29)	1 imm	J. P. Smith

Great Cormorant (continued)

11/20	Boston H.	16	TASL (M.Hall#)
12/25	Nahant	35	R. Heil
12/28	Cape Ann	89	R. Heil

American Bittern

thr	P.I.	1-2	v.o.
11/1-27	Edgartown	1	A. Keith# +v.o.
11/6	Pittsfield (Pont.)	1	H. Allen
11/10	Gloucester	1	R. Heil
12/10	Swampscott	1	S. Hedman
12/10	E. Boston (B.I.)	1	MAS (Larson)
12/14	W. Tisbury	2	A. Keith

Great Blue Heron

11/1	Chappaquiddick	17	A. Keith#
11/2	Truro	12	P. Bono#
11/20	Boston H.	14	TASL (M.Hall#)
11/26	Eastham	14	R. Stymeist
12/3	Milton	6	A. Joslin
12/28	Cape Ann	2	R. Heil
12/28	Arlington	2	M. Rines

Great Egret

11/1	Ipswich	5	R. Heil
11/1-11	P.I.	2-7	v.o.
11/2	Nantucket	4	L. Morgan
11/5	DWWS	4	CCBC (Gd E)
11/5	Duxbury B.	2	R. Bowes
11/8	Scituate	3	D. Furbish
11/13	Westport	5	K. Anderson
11/21	Muskeget	1	S. Perkins

Snowy Egret

12/28	Plymouth H.	1	K. Anderson

Cattle Egret

11/3	Turners Falls	1	J. van Heerden
11/8	W. Newbury	1	M. Nolan
11/11	Hadley	1	J. Smith
11/16-18	Carlisle	1	T. Brownrigg#

Black-crowned Night-Heron

11/2	Ipswich	1 imm	J. Berry
11/9	Boston	1	P. Griswold
11/9	P.I.	1 juv	T. Wetmore
11/27	Winthrop	2	BBC (Stymeist)

Black Vulture

11/12, 12/2	Granville	5, 1	Hawkcount (JW)
11/18	Williamstown	1	G. Soucie
11/19	Great Barrington	5	M. Lynch#
11/19	Sheffield	5	M. Lynch
11/19	Egremont	1	D. St. James
11/26	N. Scituate	1	ABC (D. Furbish#)

Turkey Vulture

thr	P.I.	5-6	v.o.
11/1-19	Barre Falls	20	Hawkcount (BK)
11/1	Ipswich	6	R. Heil
11/12	Westport	12	M. Lynch#
11/19	Bourne	8	BBC (Stymeist)
12/5	Ipswich	3	J. Berry#

Osprey

11/3, 9	N. Falmouth	2, 1	I. Nisbet
11/9	Woburn (H.P.)	1	R. LaFontaine
11/10	P.I.	1	T. Wetmore
11/13	Wachusett Res.	1	S. Sutton
11/20	Granville	1	Hawkcount (JW)
11/27	Worcester	1	B. Mulhearn
11/27	Swampscott	1	S. Mirick#
12/17	Mashpee	1	CBC (R. Heil)

Bald Eagle

11/1-20	Granville	6	Hawkcount (JW)
11/2-23	Barre Falls	8	Hawkcount (BK)
12/17	Braintree	1 imm	Quincy CBC
12/19	Framingham	1 ad	R. Messer
12/24	Gloucester	1 imm	F. Vale
12/27	Amesbury	2	J. Fenton
12/30	Plymouth	1	MAS (D. Clapp)
12/31	Quabbin CBC	16	S. Surner compiler

Northern Harrier

thr	P.I.	6-11	v.o.
11/1-17	Granville	17	Hawkcount (JW)
11/1-17	Chatham	3	Hawkcount (DM)
11/1-25	Barre Falls	21	Hawkcount (BK)
11/1	Ipswich	2	R. Heil
11/10, 12/1	DWWS	6, 5	D. Furbish
11/11	Gay Head	12	V. Laux#
11/13	S. Dart. (A.Pd)	6	E. Nielsen
11/26, 12/18	Duxbury B.	2, 2	Furbish, Bowes
12/22	Salisbury	4	J. P. Smith

Sharp-shinned Hawk

11/1-17	Chatham	136	Hawkcount (DM)
11/1-18	Granville	22	Hawkcount (JW)
11/1-25	Barre Falls	50	Hawkcount (BK)
11/1	Ipswich	2 imm	R. Heil
11/5	N. Truro	3	M. Lynch#
11/20	Fairhaven	3	BBC (Stymeist)
11/27	Westboro	2	T. Spahr
12/28	Cape Ann	2	R. Heil

Cooper's Hawk

11/1	Ipswich	2	R. Heil
11/1-17	Chatham	14	Hawkcount (DM)
11/2-18	Granville	4	Hawkcount (JW)
11/2-25	Barre Falls	21	Hawkcount (BK)
11/7	P.I.	2	D. Larson
11/13	Westport	2	K. Anderson
12/11	Truro	2	T. Murray
12/27	Quincy	3	H. Robinson

Northern Goshawk

11/5	Sandwich	1	MAS (Wheelock)
11/8	Chatham	1	Hawkcount (DM)
11/11	Gay Head	1	S. Anderson
11/12	Barre Falls	1	Hawkcount (BK)
11/13	Tuckernuck	2 imm	R. Veit#
11/14	Windsor	1	M. Lynch#
11/15	Greylock	1	D. St. James
11/18	Granville	1	Hawkcount (JW)
11/26	Hubbardston	1	F. Bouchard#
11/28	Medford	1 f	P. Roberts
12/3	Ipswich	1 ad	J. Berry#
12/10	Eastham (F.H.)	1 imm	J. McCoy#
12/12	Chappaquiddick	1	G. Ben David

Red-shouldered Hawk

11/2-25	Granville	26	Hawkcount (JW)
11/4-27	Barre Falls	36	Hawkcount (BK)
11/13	S. Dart. (A.Pd)	1	E. Nielsen
11/20	Wareham	1	R. Farrell
12/5	P.I.	1	J. Ciriello
12/10	DWWS	1 imm	D. Crockett#
12/14	Springfield	1	R. Baumhauer
12/14	Marlboro	1 ad	T. Spahr
12/21	Attleboro	1	K. Ryan
12/28	Gloucester	1 imm	R. Heil
12/31	Duxbury	1	R. Bowes

Red-tailed Hawk

11/thr	Granville	335	Hawkcount (JW)
11/1-17	Chatham	18	Hawkcount (DM)
11/1-27	Barre Falls	545	Hawkcount (BK)
11/4	Barre Falls	30	Hawkcount (BK)
11/10	Russell	51	T. Swochak
12/1-15	Granville	52	Hawkcount (JW)
12/1-20	Barre Falls	65	Hawkcount (BK)

Rough-legged Hawk

11/2	Granville	1	Hawkcount (JW)
11/3-27	Barre Falls	4	Hawkcount (BK)
11/10-12/31	P.I.	1-2	v.o.
11/13	S. Dart. (A.Pd)	1	E. Nielsen
11/25	DWWS	1 lt	D. Furbish
12/19	Danvers	1	J. MacDougall
12/23	Boston (Logan)	1	N. Smith

Golden Eagle

11/3	Barre Falls	1	Hawkcount (BK)
11/9, 10	Granville	1, 1	Hawkcount (JW)
11/17, 12/11	Granville	1, 1	Hawkcount (JW)

American Kestrel

11/1-17	Chatham	3	Hawkcount (DM)
11/11	Gay Head	3	V. Laux#
11/12	Acoaxet	2	M. Lynch#
11/12	Jamaica Plain	2	J. Miller
11/23	P.I.	2	MAS (Gette)
12/11	Saugus	3	R. Stymeist#
12/21	Boston (Logan)	2	N. Smith

Merlin
11/1-17 Chatham 5 Hawkcount (DM)
11/5 Wellfleet 2 M. Lynch#
11/5 P.I. 2 S. Grinley#
11/11 Gay Head 2 V. Laux#
11/19 Bourne 2 BBC (Stymeist)
11/26 Duxbury B. 3 R. Bowes
11/29 Marblehead 3 R. Heil
12/4 P.I. 2 T. Wetmore
12/16 Newbypt 2 J. Fenton
12/17 Medford 2 J. Crystal
12/24 Arlington 2 R. LaFontaine
Gyrfalcon (probably escape) *
12/11 P.I. 1 white BBC (Grinley)
Peregrine Falcon
11/1-17 Chatham 5 Hawkcount (DM)
11/3, 12/3 P.I. 3, 3 T. Wetmore
11/7, 12/12 Amherst 2, 2 R. Packard
11/8 Nantucket 2 E. Ray
11/11 Gay Head 6 V. Laux#
11/27 Winthrop 3 BBC (Stymeist)
11/28, 12/23 Boston (Logan) 2, 5 N. Smith
12/17 Newbypt 1 ad P.+ J. Roberts
Virginia Rail
11/5 N. Truro 1 M. Lynch#
11/6 GMNWR 1 J. Reddoch
11/19 Stockbridge 2 M. Lynch#
11/22 Swampscott 3 R. Heil
11/23 Nantucket 2 K. Blackshaw#
11/27 W. Harwich 2 M. Garvey
12/3, 24 Mashpee 1, 10 M. Keleher
Sora
11/24 GMNWR 1 S. Perkins#
Purple Gallinule
11/3 Holyoke 1 L. Richardson
Common Moorhen
11/26-12/1 Chilmark 1 A. Keith#
American Coot
11/1-12/2 Eastham 211 max 11/26 v.o.
11/1 Sudbury 100 G. Gove#
11/2 Wayland 50 T. Spahr#
11/5, 28 GMNWR 94, 190 S. Perkins#
11/5, 12/10 W. Newbury 28, 35 Berry, Chickering
11/6 Richmond 24 H. Allen
11/8 Randolph 65 S. Walker
11/12 Acoaxet 395 M. Lynch#
11/13 Westport 350 K. Anderson
11/19 Bourne 82 BBC (Stymeist)
11/22 Harwich 57 M. Keleher
11/27 Southwick 20 S. Kellogg
12/25 Lynn 18 R. Heil
12/30 Nantucket 39 G. d'Entremont#
Black-bellied Plover
11/1-23 P.I. 23 max v.o.
11/1 Marshfield 3 D. Furbish
11/1, 12/18 Ipswich 65, 4 Heil, Berry
11/5, 19 Chatham (S.B.) 1800, 1000 B. Nikula#
11/19 Westport 7 J. Hoye#
11/27 Winthrop 5 BBC (Stymeist)
12/18 Duxbury 4 R. Bowes
12/23 Sandwich 3 D. Furbish
American Golden-Plover
11/1-12 P.I. 1-2 v.o.
11/5 Chatham (S.B.) 1 V. Laux#
11/13 Westport 1 M. Boucher#
11/13 Brewster 1 C. + S. Thompson
11/16 Wellfleet 1 G. Page
Semipalmated Plover
11/1 Ipswich 6 R. Heil
11/1 Marshfield 16 D. Furbish
11/2 Eastham (F.E.) 30 P. Bono#
11/4, 12/28 P.I. 52, 1 Bronson, Larson
11/5, 19 Chatham (S.B.) 95, 1 B. Nikula#
11/5 Duxbury B. 3 R. Bowes
11/12, 27 Truro 2, 2 J. Young
Killdeer
11/1 Acton 52 S. Perkins#
11/1, 11 Concord 70, 55 S. Perkins#
11/2 Northampton 15 C. Gentes
American Oystercatcher
11/5 Chatham (S.B.) 57 B. Nikula#
11/11 Nantucket 3 E. Ray
11/11 Boston H. 2 R. Stymeist#
11/20 Fairhaven 2 BBC (Stymeist)
Greater Yellowlegs
11/1 Ipswich 42+ R. Heil
11/2 Eastham (F.E.) 70 P. Bono#
11/5 Duxbury B. 7 R. Bowes
11/7, 29 Falmouth 5, 1 R. Farrell
11/8, 12/1 P.I. 40, 1 Heil, Wetmore
11/12 Westport 4 M. Lynch#
11/20 Bolton Flats 1 M. Lynch#
11/26 Wellfleet 4 J. Young
11/30 Edgartown 2 A. Keith
12/3 Mashpee 2 M. Keleher
12/11 W. Gloucester 1 R. Heil#
Lesser Yellowlegs
11/2 Ipswich 1 J. Berry
12/10 Wellfleet H. 2 R. Merrill#
Whimbrel
11/1 Oak Bluffs 1 R. Culbert#
Marbled Godwit
11/5, 19 Chatham (S.B.) 14, 4 B. Nikula#
11/6 WBWS 1 S. Ellis
Ruddy Turnstone
11/3 Ipswich 1 S. McGrath
11/5 Chatham (S.B.) 6 B. Nikula#
11/14 P.I. 1 C. Caron
11/20 Hull. 22 TASL (M.Hall#)
12/8 Osterville 1 M. Keleher
Red Knot
11/1 Ipswich 48 R. Heil
11/5 Chatham (S.B.) 225 B. Nikula#
11/6 P.I. 20 J. Baur
11/19 Chatham (S.B.) 270 B. Nikula
Sanderling
thr P.I. 205 max 11/9 v.o.
11/1 Ipswich 25 R. Heil
11/5, 19 Chatham (S.B.) 1100, 700 B. Nikula#
11/5 Duxbury B. 300 R. Bowes
11/6 Mashpee 28 M. Lynch#
11/26 Eastham 180 R. Stymeist
Semipalmated Sandpiper
11/1, 9 P.I. 5, 1 T. Wetmore
11/5 Chatham (S.B.) 12 B. Nikula#
Western Sandpiper
11/1 P.I. 1 C. Lipson
11/5 Chatham (S.B.) 5 B. Nikula#
11/13 Truro 1 MAS (S. Ellis)
Least Sandpiper
11/6 Chilmark 1 S. Whiting#
White-rumped Sandpiper
11/2, 12 P.I. 30, 1 Wetmore, McGrath
11/5 Chatham (S.B.) 35 B. Nikula#
11/6 Chilmark 1 S. Whiting
12/11 W. Gloucester 1 juv R. Heil#
Baird's Sandpiper
11/1-14 P.I. 1-2 v.o.
Pectoral Sandpiper
11/1, 11 Concord 10, 7 S. Perkins#
11/11 Chilmark 4 S. Anderson
11/12 Acoaxet 1 M. Lynch#
11/13 Westport 1 M. Boucher#
Purple Sandpiper
11/11 Boston H. 75 R. Stymeist#
11/15, 12/11 Rockport (A.P.) 75, 50 R. Heil
11/26 N. Scituate 30+ ABC (D. Furbish)
12/13 E. Gloucester 60 J. Berry#
12/21 Marstons Mills 10 J. Young
12/25 Nahant 60 R. Heil
12/30 Nantucket 20 G. d'Entremont#
Dunlin
11/1, 12/18 Ipswich 440, 105 Heil, Berry
11/1 Quabbin Pk 1 J. P. Smith
11/1 Marshfield 110 D. Furbish
11/4, 12/3 P.I. 300, 25 T. Bronson

Dunlin (continued)
11/5, 12/1 Duxbury B. 80, 175 R. Bowes
11/5, 19 Chatham (S.B.) 4200, 4500 B. Nikula#
11/19 P'town 50 G. d'Entremont
11/19 Westport 300 J. Hoye#
11/26 Eastham 390 R. Stymeist
Stilt Sandpiper
11/5 Chatham (S.B.) 1 V. Laux#
Long-billed Dowitcher
11/1-12/11 P.I. 6-18 v.o.
11/11 W. Harwich 2 B. Nikula
11/19 Chatham (S.B.) 1 B. Nikula
11/26 Duxbury 2 MAS (D. Clapp)
Wilson's Snipe
11/1 Ipswich 8 R. Heil
11/3 Northampton 3 J. Smith
11/4 Cumb. Farms 20 N. Bonomo
11/13 Bolton Flats 5 T. Pirro
12/10 Amherst 1 J. Smith
12/15 P.I. 1 T. Wetmore
American Woodcock
11/1 Southwick 1 S. Kellogg
11/7 Medford 1 R. LaFontaine
11/13 Harwich 1 B. Nikula#
11/19 Bolton Flats 1 S. Sutton
11/29 Malden 1 D. + I. Jewell
12/3 Belmont 1 R. Stymeist#
Red Phalarope
11/1 off Chappaquiddick 6 A. Keith
Pomarine Jaeger
11/5 P'town (R.P.) 1 M. Lynch#
11/13 to Nant. Shoals 12+ BBC (R. Heil)
11/15, 12/16 Rockport (A.P.) 23, 3 R. Heil
11/17 Edgartown 1 V. Laux#
Jaeger species
11/12 P'town 2 B. Nikula#
11/14 P.I. 1 C. Caron
Laughing Gull
11/5 P'town 474 M. Lynch#
11/12 Acoaxet 78 M. Lynch#
11/20 Wellfleet H. 75+ B. Nikula
11/27 Sandwich 4 G. d'Entremont
11/29 P.I. 1 ad T. Wetmore
Franklin's Gull *
11/1 Ipswich 1 R. Heil
11/10-12 Turners Falls 1 J. Smith
11/19 Truro 1 2W G. d'Entremont
11/26-12/13 Wellfleet H. 1 2W S. Jaffe + v.o.
Little Gull
11/5 Bourne 1 ad MAS (Wheelock)
Black-headed Gull
11/18 Magnolia 1 A. Merritt
11/23 Sandwich 1 1W G. LeBaron#
11/26-12/7 Wellfleet H. 2 1W S. Jaffe#
12/3-31 Gloucester H. 2 1W J. Young
Bonaparte's Gull
thr P.I. 110 max v.o.
11/1 Ipswich 100+ R. Heil
11/11 Eastham (F.E.) 800 B. Nikula
11/20 Boston H. 57 TASL (M.Hall#)
11/26 Wellfleet H. 250+ B. Nikula
12/8 Nantucket 1100+ E. Ray
12/16 Rockport (A.P.) 33 ad R. Heil
12/25 Nahant 35 R. Heil
Iceland Gull
11/1-26 Turners Falls 1-2 J. Smith
11/29 Holyoke 3 J. Smith
12/6 P.I. 3 T. Wetmore
12/7-31 Gloucester 2-5 v.o.
12/8 Nantucket 7 E. Ray
12/16 Rockport (A.P.) 2 1W R. Heil
12/22-23 Turners Falls 2 T. Pirro
12/30 Nantucket 11 G. d'Entremont#
Lesser Black-backed Gull
thr Nantucket 62 max 12/8 E. Ray
11/1 Boston 1 R. Stymeist
11/8 Turners Falls 1 J. Smith
11/12 P.I. 1 2W S. Perkins#
11/13 to Nant. Shoals 5 BBC (R. Heil)
11/20 S. Barre 1 juv J. P. Smith
11/22 Brewster 1 M. Keleher
12/26 Plymouth 2 D. Furbish
12/28 Acton 1 ad M. Resch
Glaucous Gull
11/29 Seekonk 1 1W ph R. Farrell
12/13 Turners Falls 1 J. Smith
12/22-31 Gloucester H. 1 1W v.o.
12/30 Hardwick 1 H. Allen
Black-legged Kittiwake
thr P.I. 53 max 12/23 v.o.
11/5 Truro 25+ M. Lynch#
11/13 to Nant. Shoals 2300 BBC (R. Heil)
11/15, 12/16 Rockport (A.P.) 175, 730 R. Heil
11/24 N. Scituate 25 D. Whipple
11/24 Cohasset 40+ D. Whipple
12/3 P'town 20+ ABC (S. Kellogg)
Caspian Tern
11/1-4 P.I. 1-2 T. Wetmore
11/1 Nantucket 2 E. Ray
11/1 Ipswich 1 R. Heil
11/1 Woburn 1 A. Bragg#
11/11 Lynn (Flax Pd.) 1 J. Quigley
11/15 P'town 1 D. Sprang
Royal Tern
11/1 Nantucket 1 E. Ray
11/4 P.I. 1 T. Wetmore
Common Tern
11/5 Chatham (S.B.) 30+ V. Laux#
11/11 Eastham (F.E.) 350 B. Nikula
11/11 Barnstable 40 E. Jedrey
11/13 Muskeget 40 R. Veit#
11/23 Wellfleet H. 15 G. LeBaron#
11/26 P.I. 1 S. McGrath
11/27 Sandwich 4 CCBC (D. Furbish)
11/29 Northampton 1 B. Bieda
12/3 Wellfleet 2 ABC (S. Kellogg)
12/31 N. Truro 2 C. Skowron
Arctic Tern
11/13 Muskeget 1 juv R. Veit#
Forster's Tern
11/1 Marshfield 2 D. Furbish
11/2 Truro 2 P. Bono#
11/11 Eastham (F.E.) 15+ B. Nikula
11/13 Muskeget 1 R. Veit#
11/19-30 Wellfleet H. 3-6 v.o.
11/26 Sandwich 3 M. Lynch#
Black Skimmer
11/2 P.I. 1 T. Wetmore
Dovekie
11/26 N. Truro 1 M. Lynch#
12/12 Gay Head 1 in woods! T. Kozul
12/16 Rockport (A.P.) 1 R. Heil
Common Murre
11/15, 12/16 Rockport (A.P.) 13, 27 R. Heil
11/26 N. Truro 3 M. Lynch#
11/27 Essex 1 D. Brown
12/25 P.I. 1 T. Wetmore
Thick-billed Murre
11/15, 12/31 Rockport (A.P.) 4, 1 R. Heil
11/19 P'town 1 G. d'Entremont
12/10 Wellfleet H. 1 J. McCoy#
12/30 Hyannis 1 G. d'Entremont#
Razorbill
11/13 to Nant. Shoals 31 BBC (R. Heil)
11/15, 12/16 Rockport (A.P.) 120, 530 R. Heil
11/23 Truro 10 C. Dalton
11/24 Vineyard Sound 4 A. Keith
11/26-12/31 P.I. 46 max 12/23 v.o.
11/26 Cohasset 7 ABC (D. Furbish)
11/27 P'town (R.P.) 70+ M. Garvey
12/3 Falmouth 28 SSBC (Kenneally)
12/30 Nant. Sound 21 G. d'Entremont#
Black Guillemot
11/11 Boston H. 32 R. Stymeist#
11/15, 12/16 Rockport (A.P.) 12, 13 R. Heil
11/20 Hull. 8 TASL (M.Hall#)

Black Guillemot (continued)				Atlantic Puffin			
11/26	Cohasset	2	ABC (D. Furbish)	11/15, 12/16	Rockport (A.P.)	1, 1	R. Heil
12/3	Gloucester	12	J. Young				
12/25	Nahant	2	R. Heil				

CUCKOOS THROUGH FINCHES

There were three reports of Yellow-billed Cuckoos during November. This is unusually late for this species, which is rarely reported after early October. Perhaps this can be attributed to Hurricane Wilma, which came from the Yucatan, and then tracked up the east coast in late October.

For the past decade or more, Norman Smith and his daughter Danielle have been banding owls at the Daniel Webster Wildlife Sanctuary (DWWS). It started with Danielle's freshman science fair project and hasn't stopped. She was interested in what migratory Saw-whet Owls were doing, and there was no one collecting data, and only infrequent and scattered banding efforts. Over the years, they have banded more than 1500 Saw-whet Owls (among an array of other owls) at DWWS. In November they banded 89 Saw-whet Owls for a total of 241 banded there this fall alone! In the Blue Hills, Norman banded 28 Saw-whets during November. One interesting fact is that there were five other Saw-whets captured in the Blue Hills that had been banded elsewhere. That is 5 of 63 total captures, almost 8 percent. At DWWS, only one bird of 242 captures was previously banded, less than one-half of a percent. That bird was banded in late September of 2003 in northern Montana! At Lookout Rock in Northbridge, a total of 45 Saw-whets were banded in November; the season total for this location was 158. Strickland Wheelock, who has run this banding station for the last three years was overjoyed when on November 7 at 8:10 p.m., the station recaptured one of their previously banded birds. Coincidentally, that owl was originally banded at 8:15 p.m. on November 7th of 2003 as a hatch-year bird.

Other owl reports included a fledgling Barn Owl in Edgartown. The recent hard winters on the Cape and Islands have devastated this species, but it is encouraging to know that they still are breeding in the state. As many as eight Snowy Owls were noted from Boston's Logan Airport, and birders enjoyed seeing as many as three Snowies on Plum Island throughout the month of December. At Dunback Meadow in Lexington, as many as five Long-eared Owls were located in the Red Pines, and as many as six were noted on November 11 at Daniel Webster.

A late Common Nighthawk was seen in Ipswich on November 1, perhaps another blowback from Hurricane Wilma at the end of October. The previous late date for this species was October 25, 1977, in Eastham. Chimney Swifts have routinely been recorded late in the fall under similar conditions of reverse migration, and this fall several were noted in early November, and one bird was noted in Worcester on the late date of November 14. The previous late date was November 11, 1977.

A **Rufous Hummingbird** was banded in South Hadley during November; this was the 15th record in western Massachusetts alone of a Rufous/*selasphorus* type hummingbird just since 1992! Other *Selasphorus* hummingbirds were noted from feeders in Carlisle and in Boxford. Perhaps most interesting is the report of a **Ruby-throated Hummingbird,** that was identified by photographs, coming to a feeder in West Tisbury from December 1-7. In *Birds of Massachusetts* the latest date for Ruby-throat is November 20, 1950. Late hummingbird reports are more likely *Selasphorus*, confirmed by photography and video as well as an advance in birders' knowledge about birds and their movements.

Red-bellied Woodpeckers have truly invaded Massachusetts, evidenced by a total of 102 recorded on the Northampton CBC. Yellow-bellied Sapsuckers continue the recent trend of

extending their winter range in southern New England. For the first time in several years during this period, there were no reports of Red-headed Woodpeckers in Massachusetts. A **Yellow-bellied Flycatcher** was banded at the Wings Island banding station in Brewster on November 4. This represents the latest record in Massachusetts, the previous late date being October 26, 1969. Almost an annual fall vagrant is the **Ash-throated Flycatcher**, and this year one was seen and photographed on Plum Island for several days (November 6-12). The flashiest bird of the period was a fairly cooperative **Scissor-tailed Flycatcher** that frequented a stretch of beach in Swampscott from November 21 until December 7. This was the seventh year in a row for a good late fall movement of Northern Shrikes, with reports from no fewer than 30 locations. Many of these shrikes were observed singing!

Common Ravens were reported from several eastern Massachusetts locations including Plum Island, Rowley, and Gloucester. Fish Crow reports continue to increase south of Boston, and their numbers totaled over 100 on the Greater Boston CBC. For the third year in a row **Cave Swallows** were reported. The word is out that these birds are to be expected if the weather conditions are right in late October and early November, and this year, reports came in from 10 different locations, almost all of them in a short period from November 8-12. The theory is that the swallows ride moderate-to-strong southwest winds ahead of cold fronts that stretch from the Texas/Gulf of Mexico region up toward the Great Lakes. This scatters them throughout the interior north, especially around the Great Lakes. The swallows then ride the northwest winds that occur behind the fronts bringing them to the coast. Birders near Rochester, NY, reported close to 600 Cave Swallows in early November that immediately put everyone in the northeast on notice that a major invasion had occurred. Barn Swallows also were noted in exceptional numbers during this period. Historically the Barn Swallow has regularly shown up along the coast following extended periods of southwest winds.

Boreal Chickadees were noted from the Quabbin area, and a very cooperative bird spent most of December coming to a feeder in Orange. The only other period reports of this species in western Massachusetts since 1993 were three individuals in 2001. Another boreal species, **Bohemian Waxwing**, also appeared at five coastal locations.

There were two **Townsend's Solitaires** noted at High Head in Truro for nearly two months, and another solitaire was found in Barnstable on the Mid-Cape CBC. A very obliging **Varied Thrush** took up residence in the Fenway and could almost be guaranteed to be found behind the Vietnam Memorial; another Varied Thrush was located in New Salem. The bird of the period was a **Sage Thrasher** found on Plum Island on November 6. This represents only the second record of Sage Thrasher for Massachusetts. The first record on October 26, 1965, was also found on Plum Island. Unfortunately the thrasher could not be located the next day, despite weather conditions that would have discouraged movement. In a more recent Sage Thrasher report, a bird from Nubble Light in Maine was present for nearly a month in November-December 2001. A **Townsend's Warbler** was found in the village of Marstons Mills in mid December. In recent years this vagrant has been noticed with some regularity during this period. A **MacGillivray's Warbler** was found working the goldenrod and other weeds on a farm in Ipswich. This is yet another vagrant warbler that has appeared during this period in excess of 10 times. Rounding out this incredible period were a **Western Tanager** in Chatham and a **Painted Bunting** in Eastham.

Unlike last year, reports of Ruby-crowned Kinglet, Hermit Thrush, Eastern Towhee, and especially Gray Catbird were widespread and in exceptional numbers during this period. Carolina Wrens, on the other hand, were noted in much reduced numbers, especially on Cape Cod and in Bristol County, still recuperating from the past two severe winters in those areas. The milder weather also contributed to an array of birds that were noted on much later dates. In Marstons Mills for example, observers searching for the Townsend's Warbler also found a Blue-

gray Gnatcatcher, a Brown Thrasher, and an array of other warblers, including individual Orange-crowned, Yellow, Cape May, Pine, Palm, and Black-and-white warblers, along with several Yellow-rumped Warblers and an American Redstart, all within a very short stretch of road alongside Hamblin and Middle ponds. Other late reports include a Blue-headed Vireo (11/27), a Red-eyed Vireo (11/28), a Wood Thrush (11/15), a Northern Parula (11/19), and a Scarlet Tanager that appeared at a feeder in Falmouth and stayed until the end of the year. It was a different story in western Massachusetts. Mark Lynch reported low numbers of birds throughout the area as compared with other years; he wrote: "Part of the reason for the low numbers and poor variety may be the food crop. The cone crop was very local and mostly not happening in these towns and the other food plants were middling or poor, and very local. Also, it was obvious that parts of these towns were hit hard by the heavy rains of the last few months, with roads washed out. This may have driven birds to lower elevations. Lastly, feeders were few and far between, and many feeder spots we have sought out in years past either had empty feeders or were no longer feeding the birds."

A few winter finches were noted, though not in any great numbers; there were larger groups of redpolls noted than of Pine Siskins; unlike this period last year, both Red and White-winged crossbills were reported; and good flocks of Evening Grosbeaks were noted in scattered locations, mostly in northern Franklin and in Berkshire counties. *R. Stymeist*

Yellow-billed Cuckoo
- 11/2 Oak Bluffs 1 dead W. Winkleman
- 11/5 Plymouth 1 A. Jones
- 11/12 P.I. 1 S. McGrath

Barn Owl
- 11/22 Edgartown 1 fl A. Ben David

Eastern Screech-Owl
- thr Reports of indiv. from 18 locations
- 11/10 DWWS 2 D. Furbish
- 12/3 Belmont 2 R. Stymeist#
- 12/11 Saugus 2 R. Stymeist#
- 12/11 Westport 4 M. Lynch#
- 12/18 Northampton CBC 69 v.o.

Great Horned Owl
- thr Reports of indiv. from 11 locations
- 11/10 Newbury pr L. Leka
- 11/26 Boston (A.A.) 2 A. Joslin
- 11/27 DWWS 2 G. d'Entremont
- 11/27 Dracut pr D. Fallon
- 12/5 Sturbridge 2 I. Lynch
- 12/17 W. Harwich pr D. Silverstein#
- 12/18 Northampton CBC 37 v.o.
- 12/24 Wayland 2 J. Andrews

Snowy Owl
- 11/14-12/31 Boston (Logan) 8 max 12/23 N. Smith
- 11/18 Chappaquiddick 1 P. Shultz
- 11/22 Westwood 1 M. Kolodney#
- 11/25 Blue Hills 1 b N. Smith
- 12/thr P.I. 1-3 v.o.
- 12/18 Ipswich (C.B.) 2 CBC (J. Berry)
- 12/18-31 Nahant 1 v.o.
- 12/31 N. Scituate 1 S. Hill#

Barred Owl
- thr Reports of indiv. from 15 locations
- 11/14 Petersham 2 M. Lynch#

Long-eared Owl
- 11/11 DWWS 6 N. Smith
- 11/21-12/31 Lexington 1-5 R. LaFontaine#
- 12/5 Sturbridge 1 f I. Lynch

Short-eared Owl
- 11/10 DWWS 1 D. Furbish
- 11/14 Pittsfield 1 M. Thorne
- 11/27 DWWS 1 G. d'Entremont
- 12/thr P.I. 1 v.o.

Northern Saw-whet Owl
- 11/thr Blue Hills 28 b N. Smith
- 11/thr DWWS 89 b N. Smith
- 11/1-19 Northbridge 45 b S. Wheelock#
- 11/14 Petersham 1 M. Lynch#
- 11/20 P.I. 1 P. Meleski#
- 12/thr Lexington 1-2 M. Rines
- 12/11 Boston 1 L. Pivacek
- 12/23 Weymouth 1 S. Hill#
- 12/28 New Salem 1 B. Lafley

Common Nighthawk
- 11/1 Ipswich 1 R. Heil

Chimney Swift
- 11/3 Gay Head 1 A. Keith
- 11/3 Nantucket 1 K. Blackshaw
- 11/5 Wellfleet 2 M. Lynch#
- 11/5 P.I. 1 P. + F. Vale
- 11/11 Hyannis 1 P. Guidetti#
- 11/14 Worcester 1 P. Meleski

Ruby-throated Hummingbird
- 12/1-7 W. Tisbury 1 ph M. Rogers# + v.o.

Rufous Hummingbird *
- 11/1-13 S. Hadley 1 b A. Hill

***Selasphorus* species** *
- 11/1-7 Carlisle 1 J. Keskulla
- 11/20 Boxford 1 f ph P. Brown

Belted Kingfisher
- 11/1 P.I. 2 T. Wetmore
- 11/12 Acoaxet 2 M. Lynch#
- 11/18 Essex 2 J. Berry
- 11/19 Bourne 6 BBC (Stymeist)
- 12/24 Mashpee 4 M. Keleher

Red-bellied Woodpecker
- 11/5 Marshfield 3 CCBC (Gd'E)
- 11/19 Bourne 4 BBC (Stymeist)
- 11/26 Eastham 3 R. Stymeist
- 12/7 Boston (Fens) 3 R. Stymeist
- 12/18 Lancaster 3 S. Sutton
- 12/18 Northampton CBC 102 fide M. Wilson

Yellow-bellied Sapsucker
- thr Gloucester 1 D. Sandee#
- thr Medford 1 R. LaFontaine
- 11/5 P.I. 1 L. Ferraresso
- 11/5 Truro 1 J. Young
- 11/5 DWWS 1 D. Furbish
- 11/11 Nahant 1 R. Stymeist#
- 11/23 Harwich Port 1 B. Nikula
- 11/24 Amherst 1 S. Surner
- 12/31 Mt.A. 2 R. Stymeist

Hairy Woodpecker
11/19 Stockbridge 4 M. Lynch#
12/11 Royalston 4 SSBC (E. LeBlanc)
12/17 Barnstable 4 F. Bouchard#
12/18 Lancaster 3 S. Sutton
Northern Flicker
11/1 Ipswich 5 R. Heil
11/3 Chatham 26 D. Manchester
11/26 N. Truro 16 M. Lynch#
12/11 Cape Ann 9 R. Heil#
Pileated Woodpecker
11/6 Hancock 1 R. Stymeist#
11/14 Windsor 2 M. Lynch#
11/18 Royalston 1 M. Lynch#
11/27 Milton 1 m A. Joslin
11/27 Colrain 1 M. Lynch#
12/2 Stoneham 1 m D. + I. Jewell
12/4 Leicester 2 M. Lynch#
12/7 Burlington 1 m J. Mullen
12/8 Wayland 1 R. Nava
12/11 Baldwinville 1 T. Pirro
12/17 Athol CBC 12 D. Small compiler
12/18 Quabbin (G52) 1 A. Strauss
12/27 Royalston 2 C. Criscitiello#
Yellow-bellied Flycatcher
11/4 Brewster 1 b S. Finnegan
Eastern Phoebe
11/1-11 P.I. 1-2 v.o.
11/3 Cambridge 3 R. Stymeist#
11/4 S. Quabbin 1 L. Therrien
11/9 Woburn (H.P.) 1 R. LaFontaine
11/24 Mattapan 1 A. Joslin
12/8 Marstons Mills 1 M. Keleher
12/14 W. Tisbury 1 A. Keith
12/25 Westboro 1 T. Spahr
Ash-throated Flycatcher *
11/6-14 P.I. 1 ph P. Brown + v.o.
Myiarchus species
11/22 Hingham 1 C. Dalton
Western Kingbird
11/4-6 Scituate 1 D. Furbish + v.o.
11/15-23 Amherst 1 L. Gierasch
11/26 Truro 1 Adam Dudley
12/25 Edgartown 1 ph L. + D. Reese
Eastern Kingbird
11/12 Chatham 1 D. Manchester
Scissor-tailed Flycatcher
11/21-12/7 Swampscott 1 ph L. Pivacek + v.o.
Northern Shrike
thr Reports of indiv. from 29 locations
11/20 E. Quabbin 2 T. Gagnon#
12/28 P.I. 3 imm MAS (Larson)
Blue-headed Vireo
11/2 Becket 1 R. Laubach
11/8, 12 P.I. 2, 1 Wetmore, McGrath
11/19 Chilmark 1 T. Rivers
11/19 Westboro 1 T. Spahr
11/19 Arlington 1 K. Hartel
11/27 Wellfleet 1 J. Young
Philadelphia Vireo
11/5 Scituate 1 CCBC (Gd'E)
Red-eyed Vireo
11/5 N. Truro 1 M. Lynch#
11/5 P.I. 1 L. Ferraresso#
11/7 Medford 1 R. LaFontaine
11/12 Truro 1 J. Young
11/27 Rockport 1 R. Heil
11/28 Nahant 1 D. Wilkinson
Fish Crow
11/6 Dalton 1 H. Allen
11/7 Brockton 12 K. Holmes
11/8 Mashpee 28 M. Keleher
11/19 Bourne 2 BBC (Stymeist)
11/24 Mattapan 15 A. Joslin
12/3 Milton 33 A. Joslin
Common Raven
11/5 P.I. 1 S. Moore#
11/14 Windsor 5 M. Lynch#
11/25 Wilbraham 2 G. d'Entremont
11/27 Gloucester 1 R. Heil
12/11 Granville 10 J. Weeks
12/17 Athol CBC 20 D. Small compiler
12/22 Rowley 1 J. MacDougall
12/31 Quabbin CBC 18 S. Surner compiler
Horned Lark
11/1-12/11 P.I. 15-60 v.o.
11/5 Newbury 100 C. Floyd
11/13 S. Quabbin 85 S. Surner
11/21 Duxbury B. 40 R. Bowes#
12/7 Westport 80 G. Gove#
12/10 Ipswich 200+ J. Berry
12/17 Longmeadow 60 S. Svec
12/20 Hadley 180 H. Allen
12/31 Hardwick 120 J. Tuttle
Tree Swallow
11/1-12/3 Reports of 1-8 indiv. from 11 locations
11/1-12/26 P.I. 1-6 v.o.
11/2 Chatham 164 D. Manchester
11/4 Cumb. Farms 150+ N. Bonomo
11/13 Tuckernuck 1000 R. Veit#
11/29 Gay Head 25 A. Fischer
12/4 Nantucket 100 K. Blackshaw
12/18 Chilmark 20 A. Keith
Cave Swallow (no details) *
11/8, 11 P.I. 4, 1 Heil, Wetmore
11/10, 11 Lynn B. 5, 2 L. Pivacek
11/10 Gloucester 1-2 R. Heil
11/11 S. Boston 2 B. Zuzavich
11/11 Gay Head 3+ V. Laux#
11/11 Salisbury 1 B. Drummond
11/11 Hyannis 1 P. Guidetti#
11/18, 19 Westport 2, 1 Bonomo, Hoye
11/21 Swampscott 2 C. Floyd
Cave Swallow (details submitted) *
11/11 Cotuit 3+ M. Keleher
11/12 Westport 9 M. Lynch#
Barn Swallow
11/thr Reports of 1-2 indiv. from 10 locations
11/1-26 P.I. 1-3 v.o.
11/4, 7 Chatham (MI) 12, 5 D. Manchester
11/6 Truro 7 D. Furbish#
11/11 Gay Head 4 V. Laux#
11/12 Acoaxet 5 M. Lynch#
11/12 Hyannis Port 5 N. Bonomo#
12/1 Barnstable 3 M. Keleher
Boreal Chickadee
11/4 S. Quabbin 1 L. Therrien
12/9-31 Orange 1 ph A. Heinricher + v.o.
Red-breasted Nuthatch
11/18 Royalston 11 M. Lynch#
11/20 E. Quabbin 11 T. Gagnon#
11/26, 12/24 Boston (A.A.) 3, 6 A. Joslin
11/27 Winchester 6 A. Ankers
11/27 Colrain 9 M. Lynch#
12/11 Westport 7 M. Lynch#
12/18 Lancaster 7 S. Sutton
12/24 Mashpee 14 M. Keleher
Brown Creeper
11/6 Topsfield 3+ S. Hedman
11/13 Northampton 4 C. Gentes
11/14 Windsor 5 M. Lynch#
12/11 Westport 4 M. Lynch#
12/18 Lancaster 6 S. Sutton
12/24 Mashpee 5 M. Keleher
Carolina Wren
11/5 Belmont 8 M. Rines#
11/19 Lexington 6 M. Rines#
11/19 Bourne 16 BBC (Stymeist)
11/20 Fairhaven 29 BBC (Stymeist)
11/26 Eastham 16 R. Stymeist
11/27 Cape Ann 23 R. Heil
11/29 Marblehead 10 R. Heil
12/11 Westport 14 M. Lynch#
House Wren
11/11 Gay Head 4 V. Laux#
11/12 Nahant 1 E. Nielsen

House Wren (continued)

11/14	Newbypt	1	S. McGrath
11/20	Fairhaven	1	BBC (Stymeist)
11/25	Ellisville	1	C. Dalton
12/6	Groton	1	T. Pirro
12/11	Rockport	1	R. Heil#

Winter Wren

11/19	Bourne	5	BBC (Stymeist)
11/20	Fairhaven	8	BBC (Stymeist)
11/27	Sandwich	4	CCBC (D. Furbish)
11/27	Cape Ann	8	R. Heil
11/29	Marblehead	10	R. Heil
11/29	Nahant	4	R. Heil

Marsh Wren

thr	P.I.	3010	T. Wetmore
11/12	Acoaxet	2	M. Lynch#
11/19	Stockbridge	1	M. Lynch#
11/19	Truro	2	D. Furbish#
11/22	Swampscott	4	R. Heil
11/23	Nantucket	2	K. Blackshaw#
11/27	Gloucester	1	R. Heil
12/24	Mashpee	3	M. Keleher

Golden-crowned Kinglet

11/5	S. Quabbin	13	L. Therrien
11/19	Stockbridge	9	M. Lynch#
11/19	Bourne	8	BBC (Stymeist)
11/20	Fairhaven	9	BBC (Stymeist)
11/29	Marblehead	10	R. Heil
12/4	Leicester	10	M. Lynch#
12/11	Westport	15	M. Lynch#

Ruby-crowned Kinglet

11/3	Cambridge	4	R. Stymeist#
11/5	N. Truro	6	M. Lynch#
11/6	Lexington	4	M. Rines#
11/8	E. Sandwich	4	D. Furbish
11/15	Hadley	14	J. Smith
11/26-27	Truro	5	J. Young
12/11	Saugus	3	R. Stymeist#
12/31	Mt.A.	1	R. Stymeist

Blue-gray Gnatcatcher

11/3-13	Cambr. (F.P.)	1	S. Simpson
11/11	Rockport	1	R. Heil
12/11	Barnstable	1	J. Hoye#

Eastern Bluebird

11/1	Ipswich	18	R. Heil
11/3	Northampton	12	H. Allen
11/4	Scituate	15	D. Furbish
11/5	S. Quabbin	17	L. Therrien
11/6	Wellfleet	25	A. Curtis
11/7	Hadley	15	H. McQueen
11/8	E. Sandwich	14	D. Furbish
11/9	Sheffield	12	J. Alexander
11/12	Eastham	14+	D. Clapp#

Townsend's Solitaire (details submitted) *

11/5-12/27	N. Truro	2	B. Nikula + v.o.
12/27	Barnstable	1	M. Kelleher#

Hermit Thrush

11/3	Wakefield	6	F. Vale
11/5	N. Truro	9	M. Lynch#
11/8, 12/12	P.I.	9, 4	Heil, Larson
11/12	Acoaxet	7	M. Lynch#
11/26	Eastham	10	R. Stymeist
11/27	Cape Ann	7	R. Heil
12/thr	Reports of 1-3 indiv. from 18 loocations		
12/5	Medford	9	M. Rines#
12/10	Nahant	4	MAS (Larson)
12/11	Westport	13	M. Lynch#
12/18	Northampton CBC	9	Wilson and Ortiz

American Robin

11/5	Wellfleet	260	M. Lynch#
11/5	DWWS	280	CCBC (Gd'E)
11/13	S. Dart. (A.Pd)	1200	E. Nielsen
12/11	Westport	458	M. Lynch#
12/11	Truro	1000+	T. Murray
12/31	Quabbin CBC	720	S. Surner compiler

Varied Thrush

12/thr	New Salem	1	via H. Allen
12/2-31	Boston (Fens)	1	G. Jones + v.o.

Gray Catbird

11/19	Bourne	18	BBC (Stymeist)
11/20	Fairhaven	24	BBC (Stymeist)
11/25	Ellisville	6	C. Dalton
11/26	Eastham	9	R. Stymeist
11/26	N. Truro	20	J. Young
11/27, 12/11	Cape Ann	46, 37	R. Heil
11/29	Marblehead	16	R. Heil
12/10	Nahant	9	MAS (Larson)
12/11	Westport	14	M. Lynch#
12/12	P.I.	20	D. Larson

Sage Thrasher (details sumitted) *

11/6	P.I.	1 ph	T. Spahr#

Brown Thrasher

11/1-12/19	P.I.	1	v.o.
11/1	Belmont	2	S. Simpson
11/5	Marshfield	3	CCBC (Gd'E)
11/11	Nahant	1	R. Stymeist#
11/19	Hancock	1	K. Wienke
11/27	Rockport	1	R. Heil
12/6	DWWS	1	D. Furbish
12/6	Holyoke	1	D. Schell
12/11	Barnstable	1	J. Hoye#

American Pipit

11/1, 12/19	P.I.	36, 1	Wetmore, Larson
11/1	Ipswich	17	R. Heil
11/3	Northampton	30	J. Smith
11/6, 12/18	Hadley	25, 3	Surner, CBC
11/13	Quabbin Pk	6	S. Surner#
12/10	Amherst	1	J. Smith
12/11	Westport	2	M. Lynch#

Bohemian Waxwing

11/6	N. Truro	1	B. Nikula#
11/13	Nantucket	1	P. Guidetti#
12/17	Bourne	1	K. Hartel#
12/19	Rockport (H.P.)	2	B. Harris
12/29	W. Tisbury	1	G. Manter

Cedar Waxwing

11/14	Amherst	200	R. Packard
11/18	Pelham	150	S. Hardy
11/27	Hadley	80	C. Gentes
11/27	Wellfleet	80	J. Young
12/4	Royalston	80	J. Young
12/6	Cape Ann	110	R. Heil
12/11	Baldwinville	80	T. Pirro
12/27	Northfield	78	C. Criscitiello#

Orange-crowned Warbler

thr	Reports of indiv. from 11 locations		
11/6	P.I.	2	T. Wetmore
11/12	Westport	2	M. Lynch#

Nashville Warbler

11/9, 20	Boston (P.G.)	1	M. Garvey
11/9	Cambridge	1	K. Hartel
11/12	Salisbury	1	A. + G. Gurka
11/12	Acoaxet	1	M. Lynch#
11/19	Gloucester	1	R. Heil

Northern Parula

11/19	Westboro	1 f ph	T. Spahr

Yellow Warbler

11/19	Belmont	1 ph	J. Sutherland
12/11-13	Barnstable	1	J. Hoye#

Magnolia Warbler

11/1	Ipswich	1	R. Heil

Cape May Warbler

12/12-13	Marstons Mills	1	A. Strauss#

Black-throated Blue Warbler

11/3	P.I.	1	T. Wetmore
11/3	Nantucket	2	E. Andrews
12/18-31	Annisquam	1 m	J. Standley

Yellow-rumped Warbler

11/5	Scituate	15	CCBC (Gd'E)
11/6	Falmouth	36	M. Lynch#
11/8, 12/23	P.I.	60, 27	R. Heil
11/12	Acoaxet	28	M. Lynch#
11/19, 12/18	Ipswich (C.B.)	36, 110	J. Berry#
11/26	N. Truro	150+	M. Lynch#
11/26	Eastham	30	R. Stymeist

Yellow-rumped Warbler (continued)

11/27	P'town (R.P.)	50	M. Garvey
11/28	S. Quabbin	2	L. Therrien

Black-throated Green Warbler

11/1	P.I.	2	T. Wetmore
11/21	Lexington	1	C. Cook
12/4-5	Medford	1	R. LaFontaine

Townsend's Warbler (details submitted) *

12/11-15	Marstons Mills	1 f	J. Hoye + v.o.

Pine Warbler

11/4	S. Quabbin	1	L. Therrien
11/8	P.I.	1	M. Daley
12/4	Hardwick	1 m	C. Buelow
12/30	N. Carver	15	K. Anderson

Palm Warbler

11/1	Ipswich	6	R. Heil
11/2	Granville	1	J. Weeks
11/3	Cambridge	3	R. Stymeist#
11/4	Brewster	3 b	S. Finnegan
11/8	E. Sandwich	4	D. Furbish
12/21	Marstons Mills	3	J. Young

Blackpoll Warbler

11/1	Ipswich	2	R. Heil
11/4	Brewster	2 b	S. Finnegan
11/9	Boston	2	D. Whipple
11/12, 27	Truro	2	J. Young
11/26	Westwood	1	E. Nielsen

Black-and-white Warbler

11/4	Holyoke	1	J. LaPointe
11/5	Quabbin Pk	1	J. Smith
11/8	Mattapoisett	1 f	M. Sylvia
12/11	Marstons Mills	1 f	J. Hoye#

American Redstart

12/11	Marstons Mills	1 f	J. Hoye#

Ovenbird

11/22	Hingham	1	C. Dalton
11/27	Rockport	1	R. Heil

Northern Waterthrush

11/6	Truro	1	J. Young
11/12	Marblehead	1	E. Nielsen
12/29	Oak Bluffs	1	fide A. Keith

MacGillivray's Warbler *

11/1	Ipswich	1	R. Heil

Common Yellowthroat

11/3	Cambr. (F.P)	3	R. Stymeist
11/8	P.I.	2	R. Heil
11/12	Nahant	2	E. Nielsen
11/13	S. Dart. (A.Pd)	2	E. Nielsen
11/20	Fairhaven	4	BBC (Stymeist)
11/27	Sandwich	2	CCBC (D. Furbish)
12/11	W. Gloucester	1 f	R. Heil#

Wilson's Warbler

11/1-12/6	Winchester	1	R. LaFontaine
11/11	Gay Head	1	V. Laux#

Yellow-breasted Chat

11/6	Barnstable	1	M. Lynch#
11/11	Scituate	1	MAS (D. Clapp)
11/12	Nahant	1	D. Wilkinson
11/19	Chilmark	1	A. Keith
11/27	Rockport	1	R. Heil
12/4-22	Boston	1-2	v.o.
12/12	P.I.	2	D. Larson

Scarlet Tanager

11/3-12	P.I.	1 f	T. Wetmore
11/9	Nantucket	1	T. Ramos
12/thr	Falmouth	1 m ph	J. Gill

Western Tanager *

12/25-31	Orleans	1 f	S. deWitt
12/31	Chatham	1	P. Bailey

Eastern Towhee

11/19	Bourne	5	BBC (Stymeist)
11/20	Fairhaven	10	BBC (Stymeist)
11/29	Marblehead	2 m	R. Heil
12/10	Boston	2	J. Dibbell#
12/11	Westport	5	M. Lynch#
12/24	Mashpee	3	M. Keleher
12/25	Newbury	1 f	L. Leka
12/25	Nahant	1 f	R. Heil
12/28	Acton	1 f	A. Magee

American Tree Sparrow

thr	P.I.	40-45	v.o.
11/13	Bolton Flats	50	T. Pirro
11/21	Lexington	35	M. Rines#
12/11	Baldwinville	83	T. Pirro
12/11	Saugus	60+	R. Stymeist#

Chipping Sparrow

11/4	P.I.	8	T. Wetmore
11/5	P'town	5	M. Lynch#
12/17	Waltham	1	R. Haaseth#
12/20	Pittsfield	1	N. Mole

Clay-colored Sparrow

11/1	Ipswich	1	R. Heil
11/4-7	P.I.	1	T. Bronson + v.o.

Field Sparrow

11/1	Ipswich	3	R. Heil
11/8, 12/6	P.I.	6, 1	Heil, Wetmore
11/9	Woburn (H.P.)	5	R. LaFontaine
11/20	Fairhaven	8	BBC (Stymeist)
11/25	Ellisville	1	C. Dalton
12/25	Westboro	2	T. Spahr

Vesper Sparrow

11/1	Ipswich	1	R. Heil
11/2-14	P.I.	1	v.o.
11/2	Truro	1	P. Bono#
11/3	Northampton	5	J. Smith
11/11	Chilmark	1	S. Anderson
11/16	Scituate	1	D. Furbish

Savannah Sparrow

11/1	Ipswich	155	R. Heil
11/5, 12/4	P.I.	8, 3	Grinley, Wetmore
12/5	Hadley	20	H. Allen
12/11	Westport	43	M. Lynch#

Ipswich Sparrow

11/1	Edgartown	6	A. Keith
11/5	Duxbury B.	2	R. Bowes
11/8	P.I.	2	R. Heil
11/13	Brewster	1	C. + S. Thompson
11/20	Fairhaven	1	BBC (Stymeist)

Grasshopper Sparrow

11/1-2	Ipswich	2	R. Heil
11/5-8	P.I.	1	L. Ferraresso#

Saltmarsh Sharp-tailed Sparrow

11/1	Chappaquiddick	1	A. Keith

Seaside Sparrow

11/26	Eastham	2	R. Stymeist
12/23	Newbypt	1	R. Heil

Fox Sparrow

11/5	Mattapan	7	A. Birch
11/6, 12/10	Lexington	30, 2	M. Rines#
11/9	Belmont	9	R. Stymeist
11/9	Groton	5	T. Pirro
11/16	Lincoln	6	M. Rines
11/16	Newton	9	M. Kaufman
12/10	Boston	6	J. Dibbell#
12/11	Wakefield	2	F. Vale
12/23	Springfield	1	E. Rutman

Lincoln's Sparrow

11/1	Ipswich	2	R. Heil
11/6	Lexington	3	M. Rines#
11/9, 23	Boston (PO SQ)	1	M. Garvey
12/22	Westford	1	L. Clark

Swamp Sparrow

11/2	Ipswich	8	J. Berry
11/3	Cambridge	9	R. Stymeist#
11/13	Bolton Flats	20	T. Pirro
11/16	GMNWR	16	M. Lynch#
11/29	Marblehead	9	R. Heil
12/11	Cape Ann	4	R. Heil#
12/26	P.I.	4	T. Wetmore

White-throated Sparrow

11/5	N. Truro	138	M. Lynch#
11/27	Cape Ann	182	R. Heil
11/29	Marblehead	111	R. Heil
12/11	Westport	85	M. Lynch#

White-crowned Sparrow

11/1	Southwick	1	S. Kellogg

White-crowned Sparrow (continued)

11/1	Ipswich	3 1W	R. Heil
11/2	Truro	1	P. Bono#
11/6	Hadley	2	S. Surner
11/14	Whately	1	B. Benner
11/27	Nahant	1 imm	D. Wilkinson
12/7	Westport	2	G. Gove#
12/8	Boston	1 imm	S. Jaffe#

Dark-eyed Junco

11/3	Wakefield	143+	F. Vale
11/5	P.I.	466+	P. + F. Vale
11/5	N. Truro	134	M. Lynch#
11/6	Stoneham	120+	P. + F. Vale#
11/9	Groton	200	T. Pirro

Lapland Longspur

11/1	Edgartown	1	G. Daniels#
11/5	P'town (R.P.)	1	M. Lynch#
11/8	P.I.	40	R. Heil
11/10	Millbury	3	D. Berard
11/11	Hadley	15	J. Smith
11/16	N. Scituate	1	D. Furbish
12/10	Ipswich	7	J. Berry
12/12-15	Granville	1	J. Weeks

Snow Bunting

thr	P.I.	265 max	v.o.
11/2	Eastham (F.E.)	75	P. Bono#
11/2	Salisbury	100	MAS (Gette)
11/6	Deerfield	60	H. Allen
11/9	Groton	50	S. Goehringer
11/11	Nantucket	34	E. Ray
11/12, 12/18	Ipswich (C.B.)	250, 118	Perkins, Berry
11/14	Scituate	70	S. Maguire
11/27	Bolton Flats	75	J. Moosbruker
12/12	P.I.	100	D. Larson
12/31	Montague	150	J. Tuttle

Indigo Bunting

11/3	Cambr. (F.P.)	2	R. Stymeist

Painted Bunting

11/18	N. Eastham	1 f ph	L. Budnick

Dickcissel

11/1-3	Cambr. (F.P.)	1	K. Hartell#
11/2-13	Nantucket	1	L. Morgan
11/2-6	Stoneham	1	D. + I. Jewell
11/13	Groveland	1	D. Chickering

Bobolink

11/1	Ipswich	1	R. Heil

Red-winged Blackbird

11/1	Ipswich	750	J. Berry
11/16	Lincoln	150	M. Rines
11/20	Bolton Flats	2337	M. Lynch#
12/6	DWWS	700	D. Furbish

Eastern Meadowlark

11/2	E. Boston (B.I.)	1	J. Miller
11/3	Natick	1	D. Gibson
11/5	Truro	4	M. Lynch#
11/5	Scituate	6	CCBC (Gd'E)
11/8	P.I.	2	R. Heil
11/10	DWWS	12	D. Furbish
12/22	Quabbin Pk	1	L. Therrien

Rusty Blackbird

11/8	Nantucket	3	E. Andrews
11/12	Marblehead	1	E. Nielsen
11/19	Stockbridge	3	M. Lynch#
11/20	Bolton Flats	8	M. Lynch#
11/26	Williamstown	50	A. Werner
12/3	Wakefield	4	P. + F. Vale
12/25	Westboro	1	T. Spahr

Common Grackle

11/3	Chilmark	5000+	A. Fischer
11/9	Groton	4000	T. Pirro
11/13	Pepperell	2000	E. Stromsted
11/20	Bolton Flats	2529	M. Lynch#
12/7	Boston (Fens)	16	R. Stymeist
12/7	Westport	200	G. Gove#

Brown-headed Cowbird

11/1	Ipswich	140	R. Heil
11/3	Hadley	600	H. Allen
11/15	Rowley	100	J. Berry
12/4	S. Lancaster	20	S. Sutton
12/6	DWWS	200	D. Furbish
12/23	P.I.	45+	R. Heil
12/29	Northfield	2	M. Taylor

Baltimore Oriole

thr	Reports of indiv. from 13 locations		
11/11	Gay Head	4	V. Laux#
11/26	Chilmark	2	T. Rich
12/2	Mt.A.	2	R. Stymeist#

Purple Finch

11/10	Millbury	3	D. Berard
11/13	S. Dart. (A.Pd)	12	E. Nielsen
11/19	Stockbridge	3	M. Lynch#
12/2-14	S. Lancaster	max 3	S. Sutton
12/17	Walpole	7	V. Zollo
12/17	Athol CBC	7	D. Small compiler

Red Crossbill

11/2	Harwich Port	1	B. Nikula
11/8	Millbury	6 m	D. Berard
11/27	Springfield	1	R. Titus
12/31	Quabbin CBC	16	S. Surner compiler

White-winged Crossbill

11/8	P.I.	2	R. Heil
11/13	Quabbin Pk	1	S. Surner#
11/20	Sterling	1	M. Lynch#

Common Redpoll

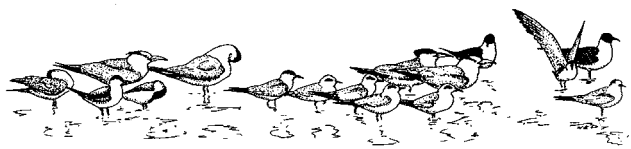
11/8	Pittsfield	50	A. Rennie
11/18	Williamstown	25	G. Soucie
12/thr	P.I.	30 max	v.o.
12/1	Hinsdale	24	L. Roberson
12/15	Granville	24	J. Weeks
12/19	Ashfield	18	S. Sauter
12/28	Gloucester	24	R. Heil
12/30	Northfield	20	M. Taylor

Pine Siskin

11/1-12/17	P.I.	1-2	v.o.
11/10	Merrimac	2	B. + B. Buxton
11/13	Washington	12	M. Wiley
11/14	Florida	4	M. Lynch#
11/14	Windsor	2	M. Lynch#
11/16	Northfield	20	M. Taylor
11/18	Royalston	2	M. Lynch#
12/11	Baldwinville	2+	T. Pirro
12/17	Salisbury	3	P.+ J. Roberts
12/19	Rockport (H.P.)	2	B. Harris

Evening Grosbeak

11/1	Quabbin Pk	1	J. P. Smith
11/5	Berlin	12	F. + M. Howes
11/10	Merrimac	1	B. + B. Buxton
11/12	P'town	1	R. Merrill#
11/14	Greylock	20	D. St. James
11/17	Monterey	20	K. Ryan
11/18	Royalston	27	M. Lynch#
11/21	Williamstown	50	A. Werner
11/26	Mattapoisett	1	M. LaBossiere
12/23	Ashfield	25	S. Sauter
12/29	Chilmark	1	D. Bryant



WILLIAM E. DAVIS, JR.

HOW TO CONTRIBUTE BIRD SIGHTINGS TO BIRD OBSERVER

Sightings for any given month must be reported in writing by the eighth of the following month, and may be submitted by postal mail or e-mail. Send written reports to Bird Sightings, Robert H. Stymeist, 94 Grove Street, Watertown, MA 02172. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, other observer(s), and information on age, sex, and morph (where relevant). For instructions on e-mail submission, visit: <http://massbird.org/birdobserver/sightings/>.

Species on the Review List of the Massachusetts Avian Records Committee (indicated by an asterisk [*] in the Bird Reports), as well as species unusual as to place, time, or known nesting status in Massachusetts, should be reported promptly to the Massachusetts Avian Records Committee, c/o Marjorie Rines, Massachusetts Audubon Society, South Great Road, Lincoln, MA 01773, or by e-mail to <marj@mrines.com>.

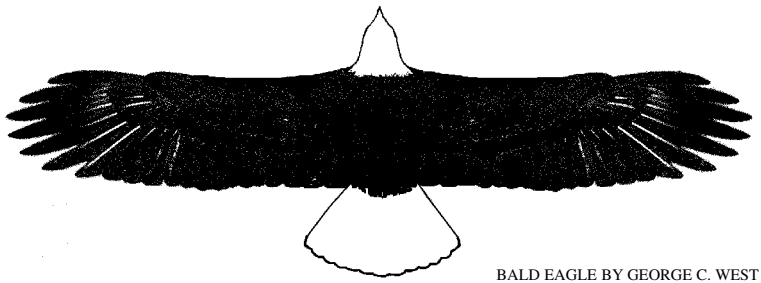
ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, 44th Supplement, as published in *The Auk* 117: 847-58 (2000); 119: 897-906 (2002); 120: 923-32 (2003).

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

Other Abbreviations

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



BALD EAGLE BY GEORGE C. WEST

ABOUT THE COVER

Bald Eagle

The Bald Eagle (*Haliaeetus leucocephaleus*) has been the national emblem of the United States since 1782. To see one soaring above the landscape is invariably a thrilling experience. Attaining its adult (definitive) plumage at five to six years of age, the Bald Eagle is unmistakable with a white head and tail and brown body. Up to that time its plumage is highly variable, dependent on age and stage of molt. A young Bald Eagle can be confused with an immature Golden Eagle. In soaring Bald Eagles, however, white on the underside of the wings is always close to the body, not in the primaries and secondaries as in the Golden Eagle. Bald Eagles also soar with wings held nearly straight out from the body, while Golden Eagles soar with wings held in a shallow dihedral. Sexes are similar in plumage but females average 25 percent larger than males. Two subspecies, a northern and southern, have been tentatively accepted.

Bald Eagles breed from the Aleutian Islands across Canada to Newfoundland, and in all forty eight contiguous states except Rhode Island and Vermont. In most states the breeding populations are very local. Northern populations, which are very large, especially in Alaska and the northern Pacific coast, tend to be migratory, but patterns of migration are complex and vary according to latitude and age of individual. Some eagles congregate at communal feeding and roosting sites, particularly in the far Northwest, where they exploit salmon runs. Immature birds tend to leave the breeding grounds first and migrate farthest south. They move north again from January to March. Bald Eagles are diurnal migrants that exploit thermals, columns of warm, rising air, to reduce energy expenditure in flight.

In Massachusetts Bald Eagles are considered rare migrants and breeders. They had been long extirpated as a regular Massachusetts breeding species, but during the 1980s the Massachusetts Division of Fisheries and Wildlife "hacked" 41 Bald Eagle chicks from artificial nests in the Quabbin Reservoir area. Their efforts were rewarded when in 1989 two pairs of wild birds fledged three young, thus reestablishing the Bald Eagle as a Massachusetts breeding bird. By the beginning of the new millennium there were about a dozen breeding pairs in the state.

Bald Eagles are an uncommon winter resident in Massachusetts, but in the past half century as many as 50 birds have wintered in the Quabbin Reservoir area, feeding mostly on deer carcasses. More recently, they have wintered in the Merrimac River/Newburyport area and at the Lakeville ponds.

Bald Eagles are monogamous and produce a single brood per year. Male/female pair bonds may persist for life. They do not breed until the fifth year, and sometimes as late as the sixth or seventh, but they are long-lived — the longest record in the wild is 28 years. Bald Eagle nesting is associated with aquatic habitat, particularly large lakes or river systems, or coastal areas. Their nests are among the largest built by birds and thus require big sturdy trees, typically with major forking branches. Nests may be reused and added to for years, resulting in huge structures, sometimes more

than eight feet in diameter and ten feet in depth; they can weigh nearly two tons. Nest building begins one to three months before egg laying, but nest maintenance may occur throughout the year for southern, non-migratory birds. Both adults contribute to the nest building, but the female does most of the stick placement. A Bald Eagle nest is constructed of interwoven sticks and may include a broad range of debris, including moss and corn stalks. The nest is lined with fine twigs, and feathers, and may be decorated with a sprig of greenery. A pair of eagles may have more than one nest in its territory and may use different nests in alternate years.

The clutch consists of one to three dull white eggs. Incubation lasts about five weeks and is shared by the pair, although the female does most of the work. The young hatch asynchronously, one to four days apart, resulting in the first hatched being larger and better able to compete for food. The adults attend the chicks constantly during the first several weeks but roost away from the nest after the fifth or sixth week. The female does most of the brooding but both parents hunt and feed the chicks. The largest chick gets most of the food, thus growing faster. In times of poor food supply the youngest chick may starve. The first flight comes at eight to fourteen weeks, depending on the young bird's sex and hatching order, which affect growth and development. Chicks practice flying by flapping their wings in the nest. The first fight often fails and chicks end up on the ground where their parents continue to feed them, sometimes for extended periods. Even after fledging, the parents will feed the young for weeks. Fledglings stay with their parents for several months before dispersing.

Bald Eagle vocalizations include gull-like cries and a chatter call with various *kee*s and *keer*s, often given when a bird approaches its nest or enters a communal roost. Bald Eagles defend their nesting territory; threat displays involve crouching, extending the neck and head, raising the wings above the body, and vocalizing. Aerial courtship displays are spectacular, involving acrobatic flights accompanied by vocalizations. In the "cartwheel display" the courting pair grasps talons and tumbles towards earth. Other displays involve chases, swoops, and dives with wings folded.

Bald Eagles are opportunistic feeders, preying on mammals, birds, reptiles, and especially fish. In one study of regurgitated pellets at a communal roost, remains of thirty-four bird species were found. Eagles hunt from perches, or while soaring, and take most prey on the wing. Bald Eagles feed extensively on carrion, especially in winter and during migration. Kleptoparasitism, where eagles steal prey that another has caught, is common, especially upon Ospreys and herons, and cooperative hunting has been reported.

Bald Eagle populations have fluctuated widely over the past two centuries. Habitat loss and human settlement, combined with persecution, significantly reduced many populations. In Alaska, for example, nearly 130,000 bounties on eagles were paid until the species was given federal protection in the 1950s. From the 1950s to the 1970s, the species' population crashed in the lower forty-eight states, due to DDT and other pesticides, which caused eggshell thinning and disrupted reproductive timing. The Bald Eagle was declared endangered under the Endangered Species Protection

Act in 1967 and the Endangered Species Act of 1973. With the banning of DDT in the early 1970s and active management, eagle populations began to recover, and the total population is now estimated at about 100,000 birds. It appears that our national emblem is back to stay.

William E. Davis, Jr.

THIRTEEN BALD EAGLES BY DAVID LARSON

About the Cover Artist: Barry Van Dusen

Once again *Bird Observer* is happy to offer a cover by wildlife artist Barry Van Dusen. His work has appeared on our cover more often than that of any artist. Barry is well known in the birding world. He has illustrated several nature books and pocket guides, and his articles and paintings have been featured in *Birder's World, Birding, and Bird Watcher's Digest*. Barry became drawn to nature subjects through an association with the Massachusetts Audubon Society, which began in 1982. He has been influenced by the work of European wildlife artists and uses their methodology of direct field sketching. His skill as a field artist has enabled Barry to participate abroad in projects sponsored by the Netherlands-based Artists for Nature Foundation. With this organization he has traveled to India, Peru, Ireland, and Spain, working with other artists to raise funds for conservation of threatened habitats. In 1994 he was elected a full member of London's Society of Wildlife Artists and is a frequent contributor to its exhibitions. His work has been shown also in Ireland, Scotland, France, and Holland. In the U.S. Barry frequently exhibits in New England and at prestigious national shows such as *Birds in Art* in Wausau, Wisconsin, and *Art of the Animal Kingdom* in Bennington, Vermont. Barry resides in the central Massachusetts town of Princeton. His website is <http://www.barryvandusen.com>.

AT A GLANCE

February 2006

RICHARD JOHNSON

Here we go again. This time we are looking at a swimming bird that resembles a duck but isn't! Anyone who has taken a close look at a duck should know that ducks typically have relatively flattened and rounded bills, not sharp and pointed like the bill of this month's mystery swimmer. An exception would be any of the merganser species (i.e., Hooded, Common, Red-breasted), all of which have somewhat narrow, tapered bills; however, the bills of all mergansers have a tiny hook at the tip and fine serrations along the sides of the upper mandible. The females of all species have a more or less crested head. Male mergansers in breeding plumage are easily distinguished.

So, what have we? A thoughtful run-down of various other groups of swimming birds should readily eliminate the heavier-billed loons; the relatively long-necked and more uniformly-colored grebes; any of the hook-billed tube-nosed seabirds, cormorants, or jaegers; and all the gulls, which have conspicuously laterally compressed bills. While a juvenile tern could be a remote possibility, such a bird would exhibit a white or lightly streaked forehead with a black band across the nape, and the wings and tail would be considerably longer and more pointed. We are left only with a species of alcid as a realistic possibility.

Assuming that our mystery bird is an alcid, we can at once eliminate several species (i.e., Dovekie, Razorbill, and Atlantic Puffin) on the basis of bill shape alone. Dovekies have short stubby bills, and both Razorbills and Atlantic Puffins have thick, laterally compressed beaks. This leaves Common Murre, Thick-billed Murre, and Black Guillemot as possibilities.

The white patch crossed with dusky bars on the folded wing is a solid indication of the bird's identity, since only the Black Guillemot (*Cepphus grille*) shows a white wing patch, a feature visible on both flying and swimming birds. A close look at the pictured bird's plumage suggests that the bird may not be fully adult — an impression derived from the soft, fluffy appearance of the feathers on the sides and beneath the folded wings, as well as the barring on the wing patch. The plumage itself is an important piece of information, since the only alcid ever seen in juvenal plumage in Massachusetts waters is the Black Guillemot, a species that nests as close to the Bay State as the Isles of Shoals in New Hampshire. In northern Maine and eastern Canada, where Common Murres and Razorbills both nest, one occasionally encounters juveniles of both species at the end of summer as they swim to the open sea with their attendant fathers. In these situations, the identity of the accompanying adults, combined with longer and heavier bills and lack of a white wing patch, will serve to identify them.

Black Guillemots are relatively common winter visitors to the rocky shores of Essex County and the South Shore, as well as around the outer islands of Boston Harbor. They typically arrive in late fall and depart by early May. Richard Johnson captured this digital image of a juvenile Black Guillemot on the coast of Maine.

Wayne R. Petersen

RED-TAIL IN THE SNOW BY JIM FENTON

AT A GLANCE

DAVID LARSON

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

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