

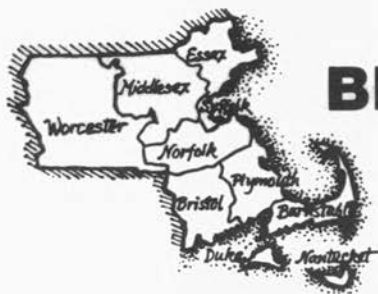
BIRD OBSERVER

OF EASTERN MASSACHUSETTS



OCTOBER, 1980

VOL. 8 NO. 5



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OF EASTERN MASSACHUSETTS

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GREATER BOSTON CHRISTMAS BIRD COUNT

Anyone interested in participating in the 1980 Greater Boston Christmas Bird Count should contact Bob Stymeist, 358 Tappan St., Brookline, MA 02146, for further details.

1980-81 SEAL CENSUS

The Harbor Seal (*Rhoca vitulina concolor*) winters along the New England coast, and remains here until early March or April. Carol Price, of the University of Rhode Island, with the cooperation of the Manomet Bird Observatory, is continuing a Harbor Seal census which was initiated in 1975 by Dr. Howard E. Winn. The purpose of this census is to obtain information about population dynamics of these pinnepeds, including over-all distribution, migratory behavior, consistency in location preference, and characteristics of preferred "haul-out" sites.

This census relies heavily on public response. Birders interested in participating should contact Carol Price, Seal Census, Graduate School of Oceanography, University of Rhode Island, Narragansett, R.I. 02882, for further details and Seal Sighting Forms.

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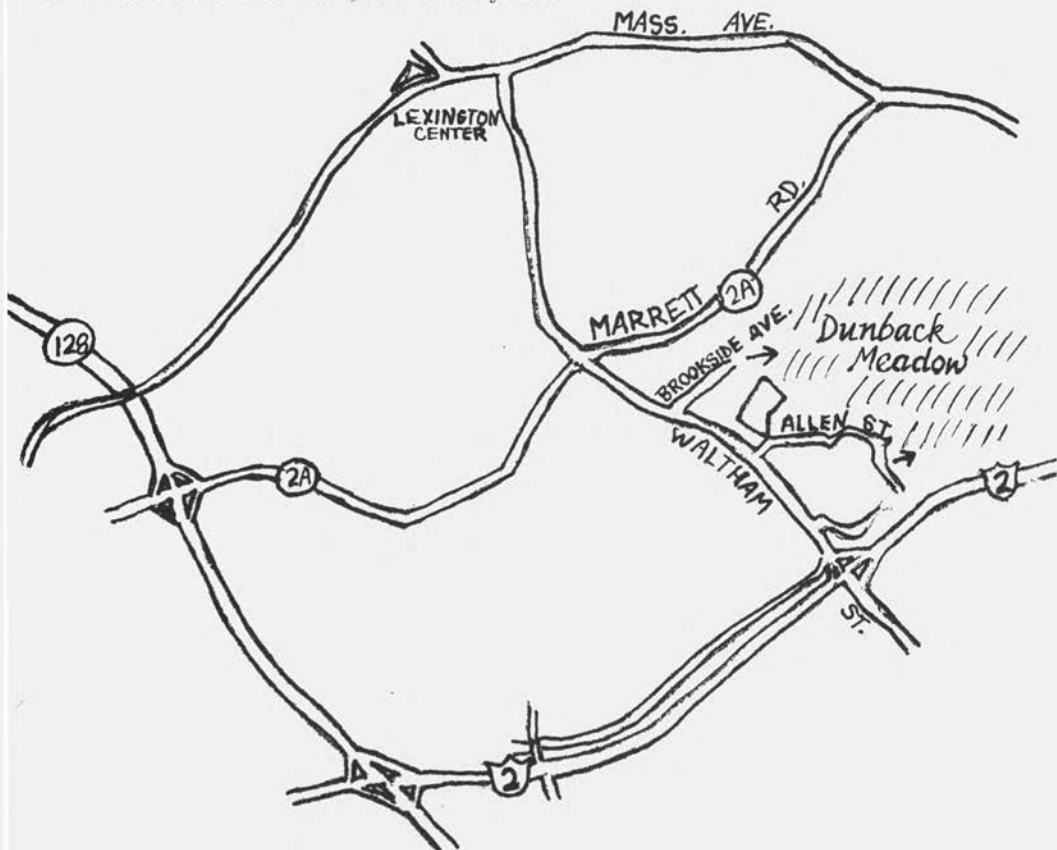
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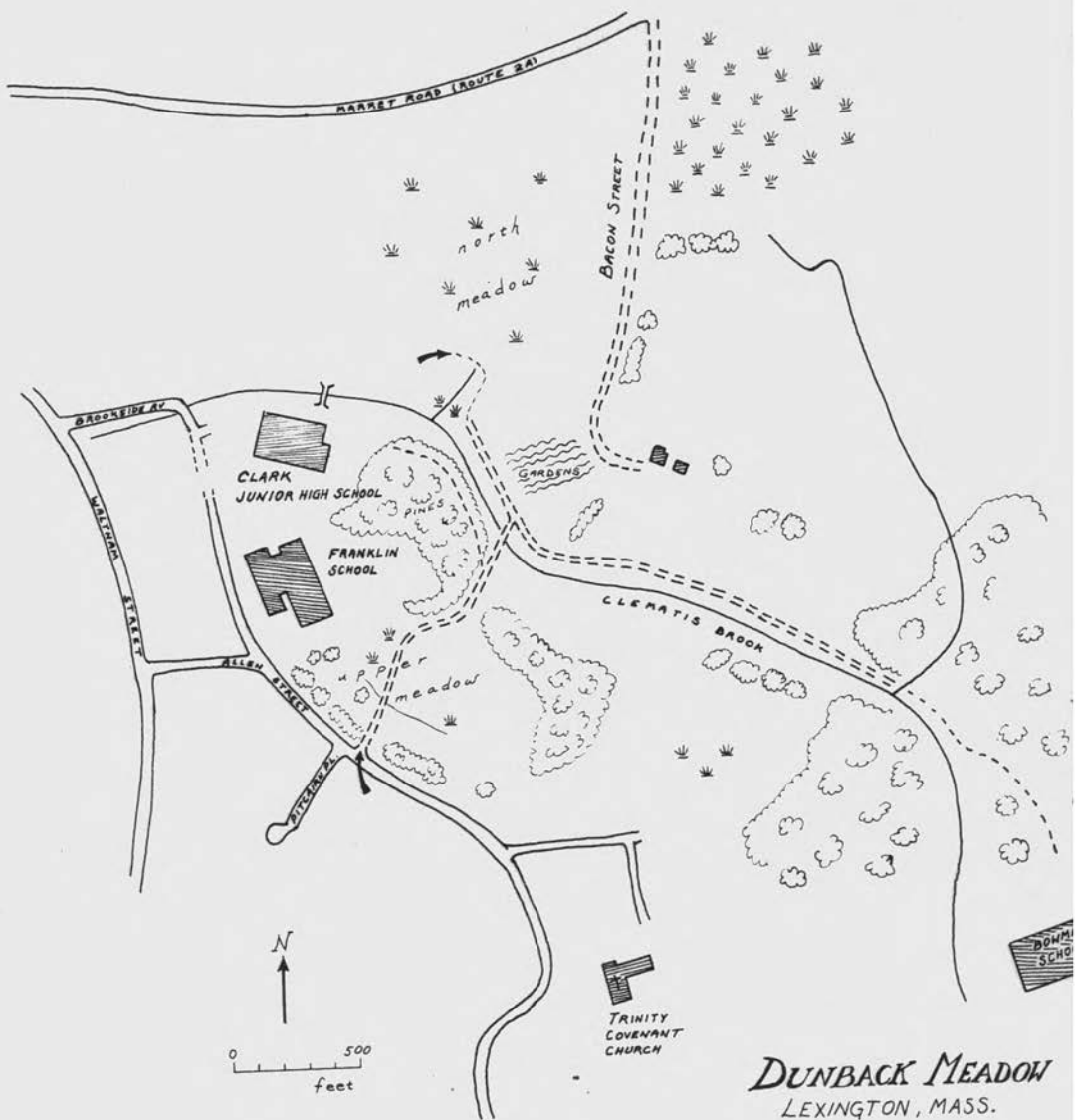
BIRDS OF DUNBACK MEADOW

by John W. Andrews, Lexington

Have you ever seen ten hummingbirds take over a thicket - chasing each other at breakneck speeds and terrorizing other birds many times their size? Or three solemn Long-eared Owls peering down from the pine in which they rode out a great blizzard? Or an ungainly Woodcock spiral up on twittering wings to perform his sky dance against a fading sunset? Anyone who appreciates the beauty and intrigue of wild birds might travel far for such experiences. But my memories of such scenes are associated with a site in Lexington easily reached by MBTA bus lines. It is known as the Dunback Meadow Conservation Area.

Dunback Meadow is probably the choicest piece of wildlife habitat remaining in Lexington and its reputation as a good place for birdwatching has spread far beyond the borders of the town. One event which put it on the map, ornithologically, was the discovery of a MacGillivray's Warbler there in November, 1977. (See R.H. Stymeist, "A MacGillivray's Warbler in Lexington, Massachusetts," Bird Observer of Eastern Massachusetts, Vol. 7, No. 1, Jan-Feb 1979) That western species had never before been recorded in Massachusetts and bird enthusiasts from all over the state came to view the find. Over 120 other species have been recorded at the site over the past three years.





This guide to avian activities at the Meadow begins with a description of the principal features of the site. It then provides an account of the birdlife according to the natural divisions of the year as the birds experience them. This approach is necessitated by the fact that the lives of wild birds are driven by the changing of the seasons; differences of even a few weeks can produce dramatic changes in the avian population. Finally, a brief summary of the conservation history of the site is provided.

FEATURES OF THE SITE

Entrance to Dunback Meadow can be obtained by parking at Clark Junior High School, crossing the footbridge over Clematis Brook, and finding the dry path across the drainage channel. Alternatively, one can park on Allen Street (across from Pitcairn Place) and enter at the Dunback Meadow sign. Most of Dunback Meadow was formerly farmland, and the cart roads once used to carry produce to market remain the best means of traversing the area.

From the junior high school one can survey a large open meadow (which is identified on the map as the north meadow). This area is transected by several drainage channels. At the southerly end of this meadow are over 100 small garden plots which the Lexington Conservation Commission leases to individuals as part of a community gardening program. The Clematis Brook flows past the junior high school, largely paralleling the cart road. Across the brook from the cart road is a grove of conifers consisting mostly of Red Pines, but including a few White Pines and Spruce. This grove is bordered by deciduous trees (primarily Wild Cherry, Red Oak, and Glossy Buckthorn).

One branch of the cart road turns southwest at the pine grove. This branch skirts the edge of the woodlot and soon passes the main side trail into the pines. It continues through a scrubby area and emerges into the upper meadow near the Franklin School. Here a marshy area with scattered Red Pines and Sumac extends to Allen Street.

The main branch of the cart road continues to run parallel to the brook until it terminates at a drainage channel, which is difficult to cross except during periods of low water. If one succeeds in crossing here, the trail may be followed through deciduous woods to the Bowman School.

THE SEASONS OF THE YEAR

Remembers two things: First, birds can fly. Second, they live quickly. Today there are warblers in every tree. Tomorrow there may only be the wind. Birds move. And they keep one eye on the calendar.

Early Spring (Late March - April)

Spring begins with the first Red-winged Blackbird flashing his red epaulets over the shrunken weeds of winter. Invariably, the first blackbirds to arrive each year are males, who immediately begin the serious business of establishing claim to some choice piece of marsh or wet meadow to be used as a breeding territory. This is an excellent time to observe all the aspects of bird behaviour entailed with territoriality. Much calling, displaying, and chasing back and forth ensues until territorial boundaries are gradually settled.



Redwinged Blackbird

Another breeder who becomes active long before the first green of spring is the Song Sparrow. This bird must be the most abundant species in the meadow during its breeding season. At times the persistent song of this sparrow seems to ring from every corner of the meadow. Nevertheless, its nest is extremely difficult to locate.

A much less conspicuous late March arrival is the American Woodcock. This "recluse of the boggy thicket" is seldom seen by day. But at twilight the nasal "peent" of the male bird issues from the shadows, and soon he spirals up across the fading sunset, his wings making a pleasant twittering sound, which supposedly is much admired by the female of the species. The flight displays, which are given well into May, last for about 40 minutes at dawn and at dusk. Flights can best be observed by looking westward toward the afterglow of sunset across the open meadow beside the community gardens.

As Spril progresses, the numbers of hardy migrants steadily increase. Fox Sparrows scratch beneath the shrubs. Northward-bound Evening Grosbeaks trill overhead. The laughing call of a recently-arrived Common Flicker comes from the woodlot. When the first tiny leaves are emerging from the buds, the floodgates of the main spring migration are about to open.

Spring Migration (Late April - May)

Sometime during the last week of April or the first week of May, the night winds blow dry and clear from the southwest. Riding this wind come the waves of insectivorous migrants: warblers, thrushes, catbirds, orioles - birds who bided their time in a Venezuelan jungle only a few weeks earlier

and are now racing spring northward. The prominent stand of pines in Dunback Meadow must be a welcome sight to a tired and hungry migrant who has been flying all night. After a southerly blow one can count upon finding modest numbers of warblers foraging in the pines and the surrounding deciduous trees. Likely species (in decreasing order of likelihood) are American Redstart, Tennessee Warbler, Blackpoll Warbler, Northern Parula, Black-and-white Warbler, Black-throated Green Warbler, Magnolia Warbler, Nashville Warbler, Ovenbird, and Black-throated Blue Warbler. Red-eyed Vireo, Warbling Vireo, and Ruby-crowned Kinglet are also to be expected. Mourning Warbler should be looked (or listened) for in the undergrowth. A walk along the drainage ditches in the north meadow produces an occasional shorebird such as Lesser Yellowlegs, Common Snipe, or Solitary Sandpiper. Bobolinks and migrating sparrows might also be found in the grass in this area.



American Woodcock.

Nesting Season (Mid-May - Early July)

Nature allows the small songbirds only about six weeks to establish territory, court, build a nest, lay eggs, incubate them, and fledging of young. Hence the nesting season is a time of intense activity for the 27 or so species that breed at Dunback Meadow.

In this season, Dunback Meadow hosts a substantial nesting population of Yellow Warblers, who are much in evidence along Clematis Brook and in the upper meadow. Several Willow Flycatchers can usually be heard giving their "fitz-bew" call in late May and June. Ring-necked Pheasants are plentiful - especially in the vicinity of the gardens. And a scan over the wide north meadow may reveal Barn Swallows in flight or Eastern Kingbirds perched upon shrubs.

I have found nests of Common Flicker, Black-capped Chickadee, American Robin, Northern Oriole, and Cardinal. Other breeders include American Kestrel, House Wren, Gray Catbird, Blue Jay, Common Crow, Wood Thrush, and Rose-breasted Grosbeak. The Wood Thrush is considered to be one of the best singers among North American birds. From the moist deciduous bottomlands on the southern portion of the site, his liquid notes may be heard late into the morning.

Summer (Mid-July - Mid-August)

Birds are more difficult to observe on hot summer days, when they retreat to the shade of the dense foliage. But important events are taking place. Young birds are learning to feed themselves while they grow toward the strength and skill required for total independence. Many birds undergo a "post-nuptial" molt in which the bright spring colors are replaced by the duller plumage of fall. These events take place while "the living is easy" - food is abundant and the weather suits their clothes. But in the life of birds, stability is only a pause between migrations.

Fall Migration (Late August - October)

In late August the birder begins to notice new arrivals - the insectivorous birds who sang their way north in spring now appear again heading south. They sing less now - and their ranks are swollen by numbers of immature birds whose plumages are often dull and cryptic in comparison to the adults. Identification of fall warblers can be a frustrating experience in which your usually trusty field guide seems to be utterly inadequate if not deliberately confusing. At times like these it is sometimes best to relax and simply value each immature warbler as proof that somewhere in the cool coniferous forests of the north, a nest in some fragrant bough accomplished its purpose.

In late August Dunback Meadow is the most reliable site I know for the Ruby-throated Hummingbird. These pugnacious little creatures are undoubtedly attracted to the area by the abundant golden blossoms of the Spotted Jewelweed (also known as Spotted Touch-me-nots), their favorite wildflower.

The Sparrow Migration (October - Early December)

With the first frosts, insect food becomes less available. Later migrants, who depend on plant foods more, begin to dominate the avian population. From early October through mid-November Dunback Meadow offers a splendid opportunity for the birder to become acquainted with our native sparrows. In well-defined flocks these unobtrusive little birds move through the open areas feeding on the seeds of ragweed, smartweed, and foxtail grass. Often it is productive to walk through the garden plots where, much to the sparrows' delight, the broken ground has allowed seed-bearing weeds to establish themselves. The marsh on the east side of Bacon Street may also harbor a foraging flock of sparrows (especially Swamp Sparrows). Figure 1 provides a relative abundance profile for some 797 fall (Sept.-Dec.) sparrow records from my journal. At least 12 species of sparrows have been recorded at Dunback over the past three years. (Chipping Sparrow is present in spring, but has not been recorded in the fall.) Among the less common species, the Grasshopper Sparrow appears to be a rare but

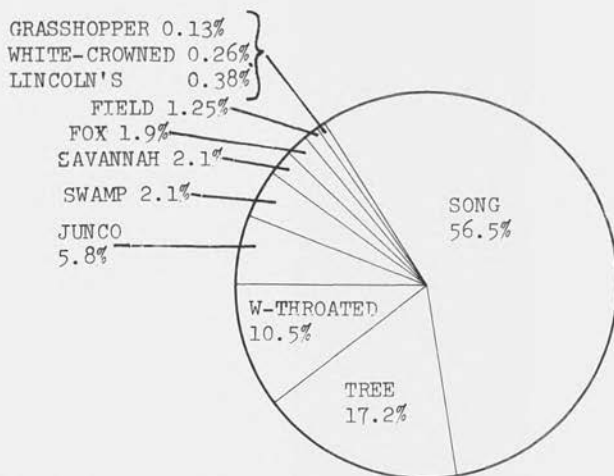


Figure 1. Relative Abundance of Sparrows

regular late fall transient in the garden plots. White-crowned Sparrows (usually immatures) might also appear there. Lincoln's Sparrow can be found in October if you are willing to carefully sort through the throngs of Song Sparrows.

Winter (December - March)

Although the total number of birds in the meadow dwindles during the coldest months of the year, the influx of special cold-weather species can make winter one of the more interesting seasons for bird observation. Winter is a good time of year for observing the birds of prey, for which the open expanses of the field provide excellent hunting territory. Sharp-shinned Hawk and American Kestrel are regular visitors. Red-tailed Hawks are often seen soaring overhead, or waiting patiently on a high perch for a sign of movement in the reeds below.

One winter visitor I find particularly interesting is the Northern Shrike - a robin-sized bird, who, upon casual inspection, looks rather like a very tough mockingbird. He has no strong talons for grasping prey, but his hooked bill is definitely hawk-like. Meadow mice and goldfinches know that he is to be taken seriously. If this bird is not seen from the cart roads, one should walk a short distance along Allen Street and scan the tops of the shrubs from the roadside.

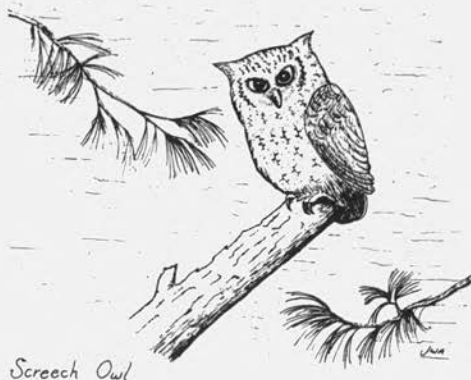
Where hawks hunt by day, owls are almost certain to hunt by night. Three species of owls can be found at Dunback Meadow. The most common is the Screech Owl, a permanent resident in the pine grove or on the wooded hillside below the Trinity Covenant Church. Our largest owl, the Great Horned Owl, may appear in either the pine grove or the deciduous bottomland along the southern portion of the site. The third species, the Long-eared Owl, occurs less commonly in the pines. One year three Long-eared Owls roosted communally in the same tree.

In flight years, winter visitors such as Evening Grosbeak, and Pine Siskin are frequently seen. One year a small flock of Pine Grosbeaks lingered in the meadow, feasting upon spruce cones and crabapple seeds. And you can be sure that no matter how deep the snow or cold the wind, somewhere in the frozen brush a Song Sparrow sits, with a song in his breast just waiting for the first warm day of March!

CONSERVATION HISTORY

To anyone who appreciates the treasures which Dunback Meadow has to offer, it is somewhat sobering to discover how close it all came to being lost only a few years ago. In the 1960s Lexington was in the midst of a building boom. Land prices were skyrocketing, housing developments were springing up like mushrooms, and farms and woodlots were disappearing at a rapid pace. In 1965 the Lexington Conservation Commission, which had been established only two years earlier, found that a large tract of land known as the Swenson Farm had been purchased by a developer who hoped to build apartment buildings on the site. The commission chairman, Jules Sussman, decided that it was time to make a forceful effort to save a part of Lexington's heritage which was about to be lost. After lengthy negotiations with the developer and much hard work within town government, the commission won approval for purchase of the 78-acre site. Additions to the original acquisition over the years have completed the 140-acre parcel of protected open space which we know today as Dunback Meadow.

Preparation of this article was sponsored by Citizens for Lexington Conservations, Inc., a non-profit citizens' organization concerned with issues of environmental quality in the Town of Lexington. For information on other publications, write C.L.C. Inc., P.O. Box 521, Lexington, Ma. 02173.



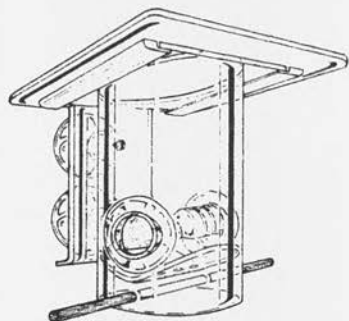
Screech Owl

(NOTE: To reach Dunback Meadow by MBTA, take the No. 528 Bus, Hanscom Field, from Harvard Square. Get off at Dunkin' Donuts on the corner of Waltham Street and Marret Road.)

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OBSERVATION OF A LITTLE STINT
(Calidris minuta) IN MASSACHUSETTS

by Blair Nikula, Chatham

On June 19, 1980, while birding the shorebird flats on Monomoy Island in Chatham, Massachusetts, I noticed a rather distinctly colored small Calidris sandpiper associating with a flock of 15-20 Semipalmated Sandpipers (C. pusilla). I soon realized that it was a species or, at least, plumage with which I was totally unfamiliar despite considerable experience with east coast shorebirds. The initial impression was of a bird that was somewhat smaller than a Semipalmated Sandpiper, with a very small bill, black legs, and, most notably, a rather bright orange-buff coloration on the head, neck, upper back, and sides of the breast. I began to suspect that it might be a Little Stint (C. minuta) or possibly a Rufous-necked Sandpiper (C. ruficollis). I decided to photograph the bird and managed to make three exposures from a distance of 50-60 feet with a 300 mm. lens. A review of the meager references available to me and a phone conversation with Dick Forster that night strengthened my suspicions that the bird might be a Little Stint.

The weather prevented another trip to Monomoy until late in the day on June 22 when I returned with Rick Heil. We had no difficulty in relocating the bird and were able to study it in detail through a 20X scope. After viewing the bird in flight and at rest for some time, there seemed to be little doubt that it was indeed a Little Stint. The following day it was seen by Dick Forster, Wayne Petersen, Peter Trull, Wallace Bailey and Carl Goodrich, all of whom concurred with the original identification. Additional observations were made on June 24 by several birders (at which time a Rufous-necked Sandpiper was also discovered!) and on June 25. No substantiated sightings were made after June 25. Additional photographs were obtained on June 23-25 with a variety of lenses and cameras.

Description. The bird was a small calidrid, intermediate in size between a Least Sandpiper (C. minutilla) and a Semipalmated Sandpiper. The head was a rather bright orange-buff, becoming slightly darker on the crown. The eye line was very indistinct and washed with buff. The lores were black. The orange-buff coloration extended down onto the neck and sides of the upper breast. The feathers of the upper back were black-centered with broad buff fringes, resulting in a scaly appearance. A distinct white line ran down each side of the upper back, forming a V. The lower back and wings were considerably darker, creating a pronounced two-toned effect from behind. In flight, the wing stripe was more prominent than that of the other calidrids present. At rest, the wings extended slightly beyond the tail. The chin, throat, and remainder of the underparts were whitish, the white throat being particularly conspicuous. Some light streaking was present on the sides of the upper breast, extending very faintly across the center of the breast (visible only at very close range). The legs and bill were black. The bill was short, thin and straight, with a slight, barely perceptible droop at the tip. No vocalizations could be discerned with any certainty.

Comparative identification. A unique opportunity for comparative study

was provided by the presence at one time or another during the Little Stint's seven day stay of five other species of Calidris sandpipers: Least, Semipalmated, Western (C. mauri), Rufous-necked, and White-rumped (C. fuscicollis). Indeed, it seems likely that never before, anywhere, have these six species been observed together as they were on June 24 and 25. The Little Stint's distinct coloration, size and bill structure distinguished it from all of the above species. In comparison to the Semipalmated and Western sandpipers, it was smaller, with orange-buff coloration, white streaks on the back, and a distinctly shorter and thinner bill. In comparison to the Rufous-necked Sandpiper, it was distinguished by a white throat, white streaks on the back, lack of a distinct eye line, and a thinner bill. In comparison to the Least Sandpiper, it was slightly larger, with orange-buff coloration, black legs, longer wings, and a rather prominent wing stripe.

North American records. This sighting apparently constitutes the sixth record of Little Stint in North America and the second record in the contiguous United States. Previous records are for the following dates and locations: 6/28/76, Alaska; 6/10/75, Bermuda; 5/28/79, Delaware; 7/10/19, Hudson's Bay, Canada; and 9/?/79, Alaska.



Little Stint on Monomoy, June 24, 1980
Photographed by Robert H. Stymeist, Brookline



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LEAD POISONING OF WATERFOWL

by Theodore H. Atkinson, Belmont

Every year an estimated 45 million waterfowl die from all causes during migration. Slightly less than half of this total is harvested by hunters. Of those which die from other causes, an estimated two million are needless victims of a disease induced by man, lead poisoning.

The cause of this disease is the estimated 3000 tons of spent lead bird shot which annually falls into waterfowl feeding areas where it settles into the mud and is ingested by waterfowl as food or gravel. When waterfowl ingest lead shot, the action of the gizzard grinds the shot into small particles. These are dissolved by gastric juices into lead salts which enter the blood stream with lethal effects. Hard food, such as corn, requires the gizzard to work harder and longer, putting a greater concentration of lead into the system in a given time span. Thus, ironically, the feeding of corn to starving waterfowl in winter may save them from starvation only to kill them through lead poisoning.

Waterfowl suffering from lead poisoning show varying degrees of emaciation, reduced activity with reluctance to fly, lowered food intake, wing droop, bile staining of the vent area, a tendency to seek isolation and cover, the inability to walk or stand, and internal disorders that a trained diagnostician can detect.

The direct effects of lead poisoning can kill birds outright, but insidious secondary effects may endanger an entire waterfowl population. Lead poisoning puts great stress on waterfowl, suppressing the immune response and allowing other diseases to overcome the birds' natural defense mechanisms. As a result, for example, avian cholera present in a few carriers, can spread more readily throughout an entire flock producing further die-offs and an increased number of carriers among the surviving waterfowl.

The ultimate effects of lead poisoning on a waterfowl population may be catastrophically epidemic. In one incident, 6000 Whistling Swans were lost to lead poisoning on the Mallowuskie National Wildlife Refuge in eastern North Carolina. On another occasion, 2500 Snow Geese died of avian cholera spread through a population affected by lead poisoning.

There is a common impression that lead shot disappears into the soft-bottom marshes and cannot be reached by waterfowl. However, die-offs caused by lead poisoning have occurred in deep mud marshes a number of years after they have been closed to hunting. This has been confirmed in wildlife refuges and other areas where the U.S. Fish and Wildlife Service examines waterfowl found dead to determine the cause of death. Additional evidence comes from examination of gizzards of waterfowl killed by hunters.

In one study based upon examination of 35,411 gizzards of hunter-killed birds, 6.7% contained lead shot with significant variations among species and locations. For example, less than 2% of Buffleheads, Green-winged Teal, mergansers, Wood Ducks, Northern Shovelers, and Gadwalls contained shot. But in Canvasbacks, Lesser Scaup, Redheads, and Ring-necked Ducks the incidence of ingested pellets ranged from 12%

to 14%. In the state of Massachusetts, 7.2% of the 1369 gizzards examined contained lead shot. Yet at some specific locations, spent shot is producing a much higher incidence of shot in gizzards. This may approach 100% in some species populations at these locations. The greatest danger of lead poisoning of waterfowl occurs after the hunting season, when the lead shot lies near the surface of the marsh mud before settling into its depths. Because hunters are drawn to the areas where the largest number of waterfowl are normally found, prime feeding areas tend to receive the greatest concentration of shot. During the hunting season the pressure of human activity keeps the birds moving and prevents normal feeding in the areas being hunted. Following the hunting season, the birds resume their normal feeding habits in the now lead-concentrated prime feeding areas.

Spring drought may aggravate the danger of a lead-poisoning epidemic. During spring droughts, waterfowl concentrate on limited marsh areas. These areas tend to be the deepest parts of the marsh and often the same prime feeding areas which contain major deposits of lead shot. As a result, many more waterfowl are lost to lead poisoning during spring seasons when drought conditions occur. Such spring losses are particularly significant if drought conditions prevail over a large area since they further reduce the population at a time when its reproductive potential is already curtailed by poor habitat conditions.

Although concern about lead poisoning focuses upon waterfowl (Anatidae), some other aquatic birds have been examined for the incidence of ingested lead pellets. Most of the information concerns Soras, in which the incidence of lead shot in the gizzards examined ranged from 1.8% to 13.1%, depending on where the birds were collected. Lead shot has also been found in gizzards of King, Clapper, and Virginia rails, Common Gallinules, and American Coots.

Secondary poisoning of species which feed on waterfowl also occurs. There are several records of lead poisoning of the endangered Bald Eagle. The source of such secondary poisoning is not ingested lead shot but lead salts in the devoured organs of the lead-poisoned waterfowl. Last year thirteen Bald Eagles were observed feeding on a goose die-off in southern Illinois. If a Bald Eagle consumes 15 to 20 lead-poisoned birds per day--not an uncommon occurrence at the site of an undisturbed die-off--lead salts in its system may quickly reach a lethal concentration.

What is being done to alleviate this problem? About five years ago, the U.S. Department of the Interior began a program to phase out the use of lead shot in waterfowl hunting by requiring the use of soft steel shot instead. At first this was done in selected areas along the Atlantic Flyway. Then it was expanded to include portions of the Mississippi Flyway. By the 1978-1979 hunting season, thirty-two states and parts of all four migratory waterfowl flyways were scheduled for such regulation. Unfortunately, expansion of steel-shot zones has been retarded by two problems. First, the shot manufacturers have been unable to produce enough steel shot to supply hunters on all the flyways. Secondly, there has been substantial hunter resistance to use of the new steel shot.

As a result of political pressure generated by this hunter resistance,

the Department of the Interior has been able to obtain passage of its budget only by agreeing not to enforce the steel-shot regulations in those states whose Fish and Wildlife Services do not concur with these regulations. The result for the 1979-80 hunting season was that 9 of the 32 states scheduled for such regulations did not approve their implementation in part or in total. In 1980 the same budgetary restriction was forced on the Department of the Interior with the same result in 12 of the 29 states scheduled for steel-shot regulations in 1980-81. However, some states not affected by the federal steel-shot regulations have instituted their own laws.

Hunters oppose the use of steel shot for several reasons. Some hunters believe that steel shot is ballistically inferior to lead shot and that its use will produce more waste kill of waterfowl from wounding than lead poisoning produces. The Fish and Wildlife Service has countered this belief with a study based upon use of steel shot in controlled harvesting of pen-raised Mallards and a study of the kill and wounding factors of both steel shot and lead shot on wild geese. Projections from these studies indicate that use of steel instead of lead would increase the annual number of birds downed but not retrieved by at most 377,000, which is much less than the two million killed annually by lead poisoning. Some hunters oppose the use of steel shot because it is markedly more expensive. Some are concerned that its use will damage their gun barrels. There does appear to be a potential for some choke expansion, but the Fish and Wildlife Service does not believe that the damage is sufficient to warrant withdrawal of the steel-shot regulations. Finally, some hunters do not believe that there is a significant lead-poisoning problem. The Fish and Wildlife Service has confirmed the extent of the problem with a great variety of evidence: studies of lead levels in the bones of hunter-harvested waterfowl; examination of approximately 100,000 gizzards for lead shot; tests for lead levels in blood samples drawn from live waterfowl; studies of the frequency of lead-poisoning deaths among waterfowl, and a survival study based on band returns from two groups of pintails, one group fed a quantity of lead shot and a control group fed none.

If the majority of hunters could be convinced that the true severity of the lead-poisoning problem justifies the use of steel shot in spite of some disadvantages, steel-shot regulations might become universal and massive lead poisoning of waterfowl might become only a memory. All who benefit from the welfare of waterfowl--hunters, professional wildlife personnel, naturalists, and birders--should support the achievement of this goal.



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Publication Available

Avian Abodes. "Homes for Birds," one of the Federal Government's most popular wildlife publications, has just been revised and reprinted by the U.S. Fish and Wildlife Service. The new version, an update of the 1969 edition, offers tips to bird enthusiasts on building and placing the various types and styles of houses for the most common species of American songbirds. Simple blueprints, complete with dimensions and instructions for the novice carpenter, are provided in the 22-page brochure. It also suggests ways to protect songbirds and their homes from natural predators during nesting season. "Homes for Birds" (Conservation Bulletin 14) is available for \$1.75 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

SEXUAL DIMORPHISM IN THE ANATIDAE

by Tad Lawrence

The fall waterfowl migration has rekindled my interest in the subject of sexual dimorphism in the Anatidae. Specifically, why do the Anserinae (geese and swans) and the Anatinae (ducks), despite the appearance of superficial similarities in ecology, exhibit such divergence in the degree of sexual dimorphism? First, other differences in their breeding systems should be considered. The following life history summaries of several representatives of the Anserinae and the Anatinae are based on material taken primarily from Palmer¹ and Johnsgard.²

In general, the Anserinae are large, long-lived, migratory birds that are monogamous and mate for life. Typical of the group are Cygnus buccinator (Trumpeter Swan) and Branta canadensis (Canada Goose). In C. buccinator the average weight of males is about 12,247g., of females, 10,357g. Both sexes have uniform white definitive basic plumage which is molted once per annual cycle. It takes several years to obtain this definitive plumage. Once birds reach the age of 6-10 weeks, life expectancy is 6 years. Pair formation usually takes place during the second winter, and breeding may start the next summer. Eggs are laid and young are reared during the short northern summer before the birds return to their primary wintering grounds in southern Canada.

The situation is very similar in B. canadensis. The average weight of males is 4,300g., and of females, 3,550g. Both sexes share the same mottled gray definitive basic plumage and have black heads and necks with white chin patches. This plumage, molted once annually, is obtained in the Basic II molt. Life expectancy is greatly affected by hunting pressure. Although 60-70% of the yearling birds may be killed by hunters, the possibility of a long life exists, however. Most birds breed in their second winter although many do not. Pair bonds are formed for life. Eggs are laid in the summer, and the young make the long migration to their wintering grounds with their parents.

In general, the Anatinae are medium-sized, often migratory birds that usually show sexual dimorphism, and mate for only one season with the males sometimes helping in the protection of the young but more frequently deserting after mating. Typical of the group are Anas platyrhynchos (Mallard) and Anas acuta (Northern Pintail). In A. platyrhynchos males have an average weight of about 1,240g. and females 1,080g. The plumage of both sexes is very different, with the males having a gray back, chestnut breast, and iridescent greenish head in the definitive alternate plumage, obtained in the second fall. This gaudy breeding plumage is contrasted with the definitive basic plumage or eclipse brownish plumage present for a short time during the summer. Females are a uniform mottled cryptic brown. Both sexes have two molts per annual cycle. Life expectancy is greatly determined by hunting - mortality runs about 50% per year. Pair bonds are usually formed in the late fall and terminate just after incubation is started.

In A. acuta sexual dimorphism is even more pronounced. Males weigh at least 928g., while females weigh approximately 762g. The pattern of plumage cycles resembles that in Mallards for both sexes. However, in the male the definitive alternate plumage is a pearl-gray back, vermiculated sides, white breast

and neck, brown head, and a long extension of the central tail feathers - a very elegant bird. The female is much like the female Mallard. It is believed that these birds live for less than three years. Pair termination takes place about a week after incubation starts.

From these life history outlines it can be seen that the Anserinae show little sexual dimorphism. This is accompanied by less promiscuity (pair bonds often being formed for life) and by both parents' contributing to the raising of offspring. The Anatinae exhibit marked sexual dimorphism, greater promiscuity (pair bonds usually terminating just after the start of incubation), and little or no male participation in the rearing of offspring. Clearly on examination, superficial similarities between these two closely related groups of birds break down.

Most authors agree that a review of the Anseriformes phylogeny indicates that the monomorphic condition as well as multi-seasonal pair bonds and male participation in the raising of offspring is the ancestral primitive condition.³ Hamilton and Barth⁴ have compiled a number of possible causes of sexual dimorphism, and several of these are particularly relevant in the evolution of the Anatinae. These theories include the following:

1. Species recognition and hence hybridization minimization⁵
2. Enhanced mate selection⁶
3. Rapid pair formation⁷
4. Rapid sex recognition⁸
5. Predator avoidance⁹
6. Avoidance of competition¹⁰

Enhanced species recognition and the accompanying lessening of hybridization do not seem to be responsible for the occurrence of sexual dimorphism in the Anatinae. In fact, the evidence indicates that hybridization occurs frequently in this group in association with high fertility.¹¹ This indicates that not only did sexual dimorphism in this group not evolve due to selection pressures favoring species recognition, but also existing dimorphism serves only a limited recognition function.

The degree to which sexual dimorphism occurs due to selective pressures favoring the female's choice of an optimum mate is extremely difficult to measure. Clearly if secondary sexual characteristics come to reflect accurately the fitness of an individual, then selection can start to take place independently with regard to secondary characteristics. This fact has been substantiated by O'Donald.¹² It follows that in mating systems that involve competitive mate selection the occurrence of sexual dimorphism may be promoted. This must partially account for the lack of dimorphism in the long-pair-bonding Anserinae and the presence of dimorphism in the Anatinae. Reasons for the differences in degree of mate competition will be considered later.

Rapid pair formation seems of little significance in either the Anatinae or the Anserinae as pair formation occurs on the wintering grounds where time pressures are minimal. A similar pressure - rapid mate recognition for pair bond maintenance - has not been satisfactorily considered and may be of some importance in the Anatinae due to the males' rapid mating and nest desertion after arrival on the breeding grounds.

When Hamilton¹³ proposed rapid sex recognition as a factor promoting sexual selection, he was considering specifically the Parulidae (wood warblers) and the Icteridae (orioles). In these species dimorphism has evolved from an ancestral state in which both sexes were brightly colored, and hence as territoriality evolved so did more cryptic female plumage, thus minimizing aggressive interaction between the sexes. Exactly the opposite conditions prevail among the Anatidae as the more primitive Anserinae show little sexual dimorphism and much greater territoriality than do the Anatinae. The existence of long pair bonds in the Anserinae and short bonds in the Anatinae suggests that rapid sex recognition is not a primary selective pressure favoring sexual dimorphism in the Anatidae.

Predator avoidance must serve to reinforce the cryptic coloration of Anatinae females but cannot account for its occurrence as more bland plumage seems to be the ancestral norm. However, this conclusion is possibly contradicted by experiments indicating that the male plumage is acquired by both sexes after castration has taken place.¹⁴ Among the Anserinae predation may serve to reinforce ancestral cryptic coloration of both sexes.

Instead of these theories I propose that differences in the degree of sexual dimorphism found in the Anserinae and the Anatinae are primarily the result of the differential effect of high latitude breeding due to differences in biology. Specifically, the Anserinae have maintained the more primitive monomorphic condition due to the requirements of raising their offspring. On the other hand, in the Anatinae a decrease in the investment necessary for the raising of young has caused other selective pressures, namely sexual selection, to favor sexual dimorphism.

In the Anserinae discussed breeding takes place in small northern ponds and tundra puddle-holes during the short northern summer. Trumpeter Swans take 34 days on the average to incubate their eggs, and another 97 days pass before the young are fully fledged and flying! This is a long time in a climate such as Churchill's where only in July and August are the average daily temperature minimums above freezing. Furthermore, before the young migrate, substantial body weight and fat reserves must be built up. This is a substantial job for birds as large as these. In addition, to ensure adequate nest defense and care of the young, the involvement of two parents is required. This may be particularly important with regard to incubation since cold temperatures early in the season could make it unsafe to leave the nest for long periods. Since predation may also be significant, male presence for defense is favored and cryptic coloration reinforced. Thus, environmental factors in conjunction with species biology have favored the maintenance of strong pair bonds and male investment in the care of the young. These factors have served to minimize the selection for sexual dimorphism caused by some of the pressures previously considered, including rapid pair formation and rapid sex recognition. On the other hand, mate selection and predator avoidance exert selection for the maintenance of plain plumage monomorphism due to species biology and breeding requirements.

In the Anatinae, despite similar breeding conditions, time pressures are not so keenly felt. On the average it takes only 27 days for the Anatinae to incubate their eggs and another 55 days until the young are fully fledged and flying. This allows for much greater choice regarding the time of nesting initiation. Furthermore, much less body weight must be put on in

these birds than in the larger Anserinae. Since males are too small to aid effectively in nest defense, cryptic coloration of the females is maintained by selection and male nest desertion is promoted. Thus, since the male is of little use after the initiation of nesting, the emphasis of selective pressures favors dimorphism. Specifically, bright plumage is selected for to increase the chance of attracting the optimal female, and strong pair bonds are selected against as the presence of a brightly colored male near the nest serves only to attract predators. In short, enhanced mate selection, mate recognition, and predation avoidance exert substantial selective pressures toward dimorphism.

In summary, the differences in the degree of sexual dimorphism found in the Anatinae and the Anserinae are caused by differences in biology that work through differences in breeding systems induced by environmental conditions. The result is differential sexual selection that favors the development of sexual dimorphism in order to maximize individual fitness in ducks but not in geese.

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3. J. Kear, "The Adaptive Radiation of Parental Care In Wildfowl," Social Behavior in Birds and Mammals: Essays on the Social Ethology of Animals and Man (J. H. Crook, ed.) (London: Academic Press, 1970), pp. 357-91.
4. T. H. Hamilton and R. H. Barth, "The Biological Significance of Season Change in Male Plumage Appearance in Some New World Migratory Bird Species," American Naturalist 96 (1962), pp. 129-44.
5. G. G. Sibley, "The Evolution and Taxonomic Significance of Sexual Dimorphism and Hybridization in Birds," Condor 59 (1957), pp. 166-91.
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8. T. H. Hamilton, "On the Function and Causes of Sexual Dimorphism in Breeding Plumage Characters of North American Species of Warblers and Orioles," American Naturalist 95 (1961), pp. 121-3.
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13. T. H. Hamilton, "On the Function and Causes of Sexual Dimorphism in Breeding Plumage Characters of North American Species of Warblers and Orioles," American Naturalist 95 (1961), pp. 121-3.
14. B. Lofts, and R. K. Murton, "Photoperiodic and Physiological Adaptations Regulating Avian Breeding Cycles and the Ecological Significance," Journal of Zoology 155 (1968), pp. 327-94.

BOOK REVIEW

The Complete Outfitting and Source Book for Bird Watching, Michael Schofield. 1978. Marshall, California, Great Outdoors Trading Company, 192 pages, \$12.95 hard cover, \$6.95 paperback.

This book, which describes itself as the basic access tool for the more than 8,000,000 birders in North America, is divided into nine sections: an introduction; a history of bird watching from 10,000 B.C. to the American Birding Association; a section on basic equipment; a section with reviews of publications available, such as American Cage Bird Magazine; a chapter on clubs and organizations listed by state or country; eighteen pages of birding sites by state; nineteen pages of tours and expeditions; listings of zoos, museums, rare bird alerts, and official state birds; and a glossary for birdwatchers.

In the introduction, we are told that birds resemble people--we both can sing. If you intend to be an expert, you must "dress in colors that harmonize with nature--no blacks and whites, no fluorescent knits," and don't forget to "fill one of your pockets with raisins."

In the historical section, we learn of Roger Tory Peterson's "fluctuating home life," and that Arnold Small, the former infantryman, has tallied 4,410+ species and photographed 100 percent of these.

The basic equipment section does not give a clue about the cost of binoculars, spotting scopes, cameras, tape recorders and microphones depicted because the prices "are subject to frequent changes." Yet the chapter on tours and expeditions cites specific prices!

The prices are omitted again in the publication section, and several major works are not mentioned. Birds of North America by Chandler Robbins, et al., is listed as "no publication date given." There is no attempt to identify the best publications available; for example, Edwards' Field Guide to the Birds of Mexico is included, but Peterson's Mexican guide is not even mentioned.

In the section on clubs and organizations, under Massachusetts we find the Michigan Audubon Society but not the Brookline Bird Club.

The Massachusetts "Best Bet Birding Sites" are poorly described, to say the least. Listed are: Great Meadows, where you look for "Hooded Merganser, Osprey, Goshawk, and Herring Gull"; Monomoy, where you find "Great Black-backed Gull, Wilson's Phalarope, and Cape May Warbler"; and Parker River, where the specialties are "Semi-palmated Sandpiper, Myrtle Warbler, White-throated Sparrow, Hooded Merganser, and Hudsonian Godwit."

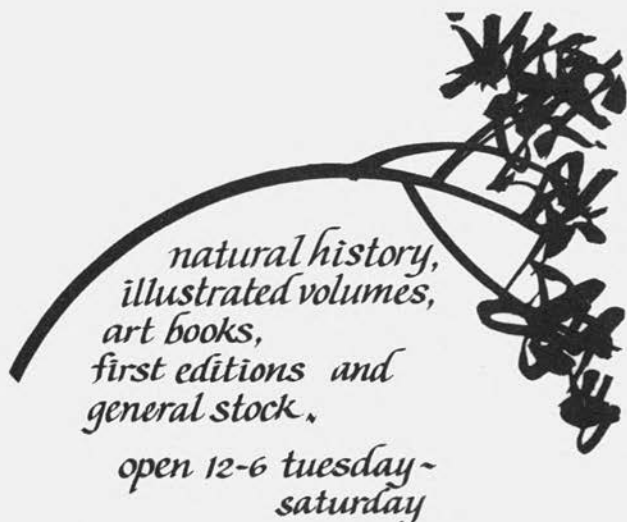
In the appendix, we find: "how to ask birds to your home and how to suggest they leave"; that the state bird of Massachusetts is the Veery (our poor little chickadee); and a list of 718 species of North American birds listed alphabetically by name "according to the Linnean system of taxonomy."

The final chapter is a glossary where we learn that a birder is: "One who seeks out uncaged birds to watch or listen to. A birder's skill lies primarily in identification. He or she often keeps a list of the birds

identified." On the other hand, a bird watcher is: "Same as BIRDER except implies less aggression. A bird-watcher may watch (or listen to) birds in his or her garden; no birder ever would."

This is a great book to take on a long drive; it provides lots of laughs with fellow birders, but really, what a tragic waste of trees.

Robert H. Stymeist



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A SUMMER SIGHTING OF PINE GROSBEAK
(Pinicola enucleator) IN MASSACHUSETTS

by Sheila Carroll and Mark Lynch, Worcester

During our annual summer Berkshire birding weekend this year, we had the good fortune to see several Pine Grosbeaks at several locations. Because we saw a total of eight individuals in a variety of sites, we did not think at the time that the sightings would be considered unusual, particularly in an area where other high-altitude or northern birds (such as the Raven) are known to occur. It wasn't until we returned to Worcester and talked with Seth Kellogg and Brad Blodget that we were informed that there were few, if any, summer records of the Pine Grosbeak in Massachusetts.

All our sightings occurred at good to excellent range and left no doubt in our minds that the birds were in fact Pine Grosbeaks. It should be noted that in 1978 and 1979 we made our summer trip to the Berkshires at approximately the same time of the season, hiked the same trails, and yet never came across a single Pine Grosbeak. Detailed notes on our sightings are given below.

7/19/80: Early in the morning at Savoy State Reservation (Florida State Forest) in a stand of conifers on a small trail that runs west off Florida Road under the power lines, while we were observing a group of warblers and chickadees, a large, almost robin-sized, grayish bird with white wing bars, rather chunky in appearance (especially compared to the warblers) and with a heavy bill was noted. All these characteristics convinced us that this was a Pine Grosbeak female.

About an hour later, proceeding down a dirt road to Tannery Falls, Savoy State Reservation, we stopped the car when we spotted three large red birds on the road eating something. When we stopped, the birds flew a very short distance to some roadside shrubbery. From inside the car we quietly observed from a distance of about 10-15 feet using binoculars. The large size, red back, red and gray breast, white wing bars, dark wings, and the bill (which we were able to observe very closely) convinced us they were adult male Pine Grosbeaks. After approximately 3-4 minutes the birds flew across the road into a small stand of conifers. We got out of the car and watched them for a few minutes among the upper branches, then lost them as they moved further back into the woods.

7/20/80: About 10 a.m. on Falls Road, south of Bashbish Falls, while watching a large group of warblers (including Blackpoll and Black-throated Green), vireos, and chickadees, we again saw a large grayish bird with white wing bars. It appeared in the same plumage as the first bird seen the previous day. We had good views at a reasonable range. It was undoubtedly a female Pine Grosbeak.

7/21/80: Two more adult males were seen at Notchview Reservation, Windsor, on the Mushroom Trail. The striking red color, red and grayish breast, wing color, hefty appearance, wing bars, and bill were all easily observed. Just as we were leaving the trails at Notchview Reservation, we spotted another adult male preening in the red spruce grove. All details mentioned above were noted.

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THE BREEDING SEASON JUNE—JULY 1980



by Richard S. Heil and Robert H. Stymeist

June temperatures averaged on the cool side with near normal rain and sunshine. The average temperature was 66.3° , 1.7° below normal; the low mark was 47° on the 9th which tied the record set in 1905 as the all time low; the high mark was 96° on the 25th. This was the highest in Boston since 99° on July 23, 1978. Rain totaled 3.05 inches, 2.19 inches more than June 1980 and fog was frequent early in the month.

July was hot, sunny and dry. The temperature averaged 75.8° , 2.5° above normal. This was the seventh hottest July in 110 years of record. The high mark was 99° on the 21st; the 98° on the 16th tied the record for that date set in 1968. In all, 10 days reached 90° or more, the most in July since 1963. The low temperature was 57° on the 1st and total rainfall was 2.20 inches. A major rainstorm involving a tropical depression brought 1.36 inches in less than 24 hours on the 29-30th. Many suburban areas received much more than this, especially in the Natick-Framingham area where some totals ranged from 3 to 5 inches. As most of the rain fell in a few hours, many communities experienced local flooding. Fog was fairly frequent.

In late July, thousands of menhaden were washing ashore on the beaches of Revere and Winthrop and littering the banks of the Merrimack River. The accumulation in Newburyport Harbor sent a strong odor of decay wafting inland. It presented a great attraction for gulls, however, with thousands present in the harbor for several weeks.

This was the fourth year of the Greater Boston Breeding Bird Census (GBBCC) and the second year of the Newburyport Breeding Bird Census (NBBC). In the following record summary will be found many records attributed to those counts. The areas covered are the same as in the annual Christmas Bird Count.

LOONS THROUGH HERONS

A moderate concentration of tubenoses was noted in late July about 15-20 miles east of Chatham where much feeding activity on the part of the birds as well as the numerous whales in the area attest to a locally abundant food supply. Shearwater maximums of 30 Cory's, 5000+ Greater, 580 Sooty and 9 Manx, as well as 5 Leach's Storm-Petrels and 3800+ Wilson's Storm-Petrels, were estimated in the area. Two Audubon's Shearwaters were found in the warm Gulf Stream waters ca. 55 miles south of Nantucket on July 27. Continued MBO surveys have proved this species to be of regular occurrence in those waters in late summer and fall.

An investigation of three formerly active heronries, Dead Neck (Osterville), House I. (Manchester), and Big Ram I. (Westport), revealed a drastically reduced population of night herons and a total absence of nesting egrets or ibis at all three colonies (see table under gulls). Furthermore, no new colonies were found though Clark's I. (Duxbury) and Appledore I. (Isle of Shoals, Maine) were said to be active and healthy. Are egret and ibis populations on a downward trend locally? A roost count of 868 Snowy Egrets at P.I. on August 30 falls only slightly short of the 985 counted there on August 26, 1978 and is nonetheless impressive.

Common Loon:

6/5

Southboro Reservoir

1 br. pl.

W. Evill

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Pied-billed Grebe:			
6/7,7/19	P.I., Lakeville	2+, 1 ad.	BBC, W.Petersen
Northern Fulmar:			
6/1	Pollock's Rip	11	BBC
Cory's Shearwater:			
7/14	8 mi. SW Gay Head (M.V.)	20	R.Heil
7/30	15-20 mi. E of Chatham	30	R.Heil
Greater Shearwater:			
6/1,7/12	Pollock's Rip, off Gloucester	2, 400	BBC, S.Garrett#
7/22	15 mi. E of Chatham	1750	P.Trull
7/30	15-20 mi. E of Chatham	5000+	R.Heil
7/31	Stellwagen Bank	300	J.Grugan
Sooty Shearwater:			
6/1,13	Pollock's Rip, Stellw. B.	40, 50	BBC, J.Aylward
7/12	off Gloucester	60	S.Garrett#
7/22	15 mi. E of Chatham	580	P.Trull
7/30	15-20 mi. E. of Chatham	150+	R.Heil
Manx Shearwater:			
7/12	off Gloucester	1	S.Garrett#
7/22	15 mi. E of Chatham	4	P.Trull
7/30	15-20 mi. E of Chatham	9	R.Heil
7/31	Stellwagen Bank	2-3	J.Grugan
Audubon's Shearwater:			
7/27	55 mi. S of Nantucket	2	R.Heil
Leach's Storm-Petrel:			
6/22	off Gloucester	1	E.Pyburn#
7/30	15-20 mi. E of Chatham	5	R.Heil
7/31	Stellw. B.	1	J.Grugan
Wilson's Storm-Petrel:			
6/1,22	Pollock's Rip, off Gloucester	150, 1000+	BBC, S.Garrett#
7/22	15 mi. E of Chatham	1100	P.Trull
7/30	15-20 mi. E of Chatham	3800+	R.Heil
Gannet:			
7/1	Brant Rock, Scituate	1 ad. caught alive	fide W.Petersen
Double-crested Cormorant:			
6/7,14	Monomoy, GBBBC	40, 340	SSBC, S.Zendeh#
7/5	Monomoy	200	W.Petersen#
Great Blue Heron:			
7/24	S.Hanson	5	W.Petersen
7/26,27	GMNWR, P.I.	14, 12	BBC
Green Heron:			
6/14,15	GBBBC, NBBC	11, 13	v.o.
7/21,24	Eastham, S.Hanson	15, 15	R.Forster, W.Petersen
Little Blue Heron:			
6/4,15	Chatham	1 ad.	B.Nikula#
7/4-7,19	P.I., Scituate	1 ad., 3 ad.+5 imm.	G.Gove, B.Cassie
7/20,26	Boston, Rowley	3, 1 ad.	TASL, J.Berry
Cattle Egret:			
6/5,11	Ipswich, Cohasset	10-12, 1	J.Berry, G.Wilson
6/30	Nantucket	1	M.Litchfield
Great Egret:			
6/9,12	P.I., Salem	1, 1	BBC, J.Berry
7/12,19	P.I., GMNWR	8, 2	R.Stymeist#
7/20,31	Boston, W.Duxbury	3, 3	TASL, B.Sorrie
Snowy Egret:			
6/2,7/19	P.I., Lakeville	47, 2	BBC, W.Petersen
7/26	GMNWR	2	BBC
7/30	P.I. dusk roost	868	R.Stymeist, R.Emery, D.Arvidson
Louisiana Heron:			
6/16,22	P.I., Nantucket	1, 1	BBC, R.Veit#
7/10,30	Monomoy, P.I.	1, 3	P.Trull#, R.Stymeist#
Black-crowned Night Heron:			
6/14	GBBBC	109	v.o.
7/12,21	GMNWR, Eastham	22, 58	BBC, R.Forster
Yellow-crowned Night Heron:			
6/30	P.I.	1	BBC
7/4,21	P'town, Eastham	1 ad., 3 imm.	W.Petersen#, R.Forster

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Least Bittern:			
June-July, 6/21	P.I., Wayland	max. 2, 1	v.o., R.Forster
6/28, 30	GMNWR, Nantucket	1, 1	BBC, N.Claflin
7/10, 24	Wayland, GMNWR	1, 1	R.Forster, B.Byrne
American Bittern:			
6/21	W.Newbury	1	H.Weissberg
7/6, 20	Bolton, Boston	1, 1	BBC, TASL
Glossy Ibis:			
6/15, 28	Topsfield, P.I.	6, 18	R.Heil#, BBC
7/4, 27	Monomoy, P.I.	11, <u>115</u>	v.o., D.+D.Oliver

WATERFOWL

A drake Eurasian Wigeon was a late visitor to Newburyport June 2-5 (there are two prior records: June 6, 1941 and June, 1960) as was a drake Harlequin Duck that apparently summered locally off Manchester with several White-winged Scoters. In July and August of 1974, an immature drake summered at Plymouth. R.S.H.

Gadwall:			
6/30	P.I.	25+	BBC
Green-winged Teal:			
6/18, 24	Millis, Naushon I.	pr., 1 m.	B.Cassie, B.Sorrie
6/28, 7/4	GMNWR, Mashpee	30, pr.	BBC, W.Petersen
Blue-winged Teal:			
6/15, 28	Newburyport, GMNWR	14, 8	v.o., BBC
Eurasian Wigeon:			
6/2-5	Newburyport Harbor	1 m. (from 5/31)	BBC (P.Arrigo)
American Wigeon:			
7/5	P.I.	2	R.Forster+K.Hamilton
Wood Duck:			
6/14, 15	GBBBC, IRWS	41, 30	v.o., R.Heil#
7/19	GMNWR	100	BBC
Oldsquaw:			
6/30	Chatham	4	v.o.
<u>Harlequin Duck:</u>			
6/23	Manchester	1 m.	H.Weissberg
Common Eider:			
6/19	Muskeget I.	20+ ad.m.	R.Heil+S.Perkins
White-winged Scoter:			
7/27	Scituate	2	W.Petersen#
Surf Scoter:			
7/20	Boston Harbor	1	TASL
Ruddy Duck:			
6/16	P.I.	5	BBC
Hooded Merganser:			
6/15	Topsfield	1 m. calling	R.Heil, B.Nikula#
Red-breasted Merganser:			
7/5, 26	P.I.	4, 8	R.Forster#, G.Gove#

VULTURES THROUGH RAILS

Statistically, May and June are the best months to watch for vagrant kites in Massachusetts. This season a Swallow-tailed Kite at Marion June 11 and another at Sandwich June 12 represent the fourth and fifth state records since 1973. A Mississippi Kite at Morris I., Chatham, was the second June record there in as many years:

Swallow-tailed Kite: (since 1973, BOEM)

May 6, 1973, South Westport

April 14 or 15, 1974, Braintree (specimen)

May 30, 1975, Orleans

Mississippi Kite:

May 23 - June 11, 1976, Eastham to Provincetown

June 1, 1979, Morris I., Chatham

The increase in extralimital kite records in recent years is perhaps best explained by a continued range expansion in the south (see Am. Birds: 33, No. 2, 119-129).

R.S.H.

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Turkey Vulture: 7/5	S.Dartmouth	2	T.Raymond
<u>Black Vulture:</u> 6/8	P'town	1	S.Minsky
7/12	Norwell	1 ph.	fide W.Petersen
<u>Swallow-tailed Kite:</u> 6/11	Marion	1	P.Webber#
6/12	Sandwich	1	L.Files
<u>Mississippi Kite:</u> (details submitted) 6/25	Chatham (Morris I.)	1 (not aged)	R.Heil + P.Trull
Goshawk: 6/2-14	Framingham	pr. w/ 2 yg.(fl. 6/14)	R.Forster
Red-tailed Hawk: 6/15	NBBC	6	v.o.
Red-shouldered Hawk: 6/5,25	Rockport, Chatham	1, 1	R.Heil
6/7,8	Rowley, Bridgewater	1, 1	R.Campbell, W.Petersen
6/12-16,28	E.Middleboro, GMNWR	1-2, 1	K.Anderson, BBC
7/21	Medfield	1	R.Emery#
Bald Eagle: 6/13-14	Provincetown	2 imm.	fide R.Forster
6/30-7/18	Nantucket	1 imm.	N.Claflin#
Northern Harrier: 6/19,24-25	Muskeget I., Naushon I.	pr., 1 f.	R.Heil, B.Sorrie
7/27	P.I.	1	BBC
Osprey: 6/22,7/19	Lakeville	1-2	W.Petersen#
Peregrine Falcon: 6/5,16	Templeton	1, 1	J.O'Regan
Rallus sp.: 6/14-15	P.I.	1 Clapper call	G.Soucy
King Rail: 6/14-15,7/7	P.I.	1, 1	M.Lynch#, P.Parsons
Virginia Rail: 6/29	GMNWR	3 ad. 6 chicks	R.Stymeist
Common Gallinule: 7/27	GMNWR	10 (including yg.)	BBC
American Coot: 7/21	P.I.	25	BBC

SHOREBIRDS

Shorebird enthusiasts will long remember the summer of 1980 for the unprecedented appearance of two species of Palearctic stints. First, a Little Stint (Calidris minuta) was discovered and identified on Monomoy I., June 19, and was subsequently seen and photographed by numerous observers until June 25 documenting the fourth confirmed North American record and the first for the northeast. On June 24, a Rufous-necked Stint (Calidris ruficollis) in either winter or first summer plumage was found associating with the Little Stint at Monomoy constituting a first record for Massachusetts. A second Rufous-necked Stint, an adult in breeding plumage, was located at Third Cliff, Scituate, July 17, where it remained until July 22.

Rufous-necked Stint: (for Northeastern Maritime Region)

August 25, 1975, Guilford, Connecticut (Am. Birds: 30, p. 31)

July 16-21, 1977, Biddeford Pool, Maine (Am. Birds: 31, p. 1112)

Little Stint: (North America records)

June 10, 1975, Bermuda (photo - Am. Birds: 30, p. 918)

June 28, 1976, Barrow, Alaska (photo - Am. Birds: 30, p. 991)

July 10, 1979, James Bay, Ontario (specimen - Am. Birds: 34, p.157)

The appearance of both Rufous-necked Stint and Little Stint together seems to be highly coincidental and unrelated since the breeding and winter ranges as well as the migrational routes of the two stints are virtually disjunct from each other.

A male Wilson's Phalarope flushed from a nest with three eggs in the salt marsh at Monomoy on June 7 was the second Massachusetts and East Coast breeding record following closely on the heels of last summer's nesting record from Plum Island. R.S.H.

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
American Oystercatcher:			
thr. June, 7/5	Monomoy	max. 14+, 23	B. Nikula#
6/18, 19	Nant. (Coatue), Muskeget I.	8, 8	R. Heil + S. Perkins
7/9, 26	Nant. (Eel Pt.), M.V.	12, 2	M. Litchfield, V. Laux#
American Avocet:			
7/26-30	P.I.	2 br. pl.	G. Gove#
Semipalmated Plover:			
6/30, 7/20	P.I., Boston Harbor	1, 71	BBC, TASL
Piping Plover:			
6/23, 7/5	Ipswich (Crane's B.), Monomoy	8, 25	J. Berry#, G. Gove
7/25, 28	Nauset I., Scituate	25, 16	R. Forster, W. Petersen#
Killdeer:			
6/28, 7/21	GMNWR, W. Newbury	30+, 40	BBC, R. Stymeist
American Golden Plover:			
6/14-15, 21	P.I.	1 br. pl.	J. Berry#
6/19-29	Monomoy	max. 2 (6/29)	B. Nikula#
Black-bellied Plover:			
6/2, 7	Newburyport, Monomoy	42, 50	BBC, SSBC
Ruddy Turnstone:			
6/7, 7/27	Monomoy, Scituate	25, 60	SSBC, W. Petersen
Common Snipe:			
7/14, 27	P.I., GMNWR	2, 1	BBC, R. Forster
Whimbrel:			
7/5, 6	Monomoy, Nantucket	28, 5	v.o., M. Litchfield
7/20, thr. June	Boston, 3 other locales	7, singles	TASL, v.o.
Upland Sandpiper			
6/15, 7/12	Newburyport	11, 13	NBBC, R. Stymeist#
7/14, 21	P.I.	1	BBC
Spotted Sandpiper:			
7/20	Boston Harbor	28	TASL
Solitary Sandpiper:			
7/26, 27	M.V., GMNWR	2, 11	V. Laux#, G. Gove
Willet:			
thr. June, 7/5	Monomoy	max. 10+, 20 (+ 1 chick)	v.o., W. Petersen + B. Nikula
thr. June, 7/7	P.I.	max. 4, 8	BBC
Greater Yellowlegs:			
6/12, 30	Nantucket, P.I.	2, 8	M. Litchfield#, BBC
7/20, 21	Boston Harbor, P.I.	111, 30	TASL, BBC
Lesser Yellowlegs:			
6/28, 7/5	P.I., Newbypt	12, 160	R. Stymeist#, R. Forster#
7/19, 27	Newbypt, GMNWR	270, 32	R. Stymeist, R. Forster#
Red Knot:			
6/7, 7/26	Monomoy, Nauset I.	75, 750	SSBC, P. Trull+B. Nikula
7/17, 23, 27	Scituate	150, 900, 2500	W. Petersen#
Pectoral Sandpiper:			
6/12, 30	Monomoy	2, 1	B. Nikula, W. Petersen
7/23, 27	Scituate, GMNWR	3, 23	W. Petersen, G. Gove
White-rumped Sandpiper:			
thr. June, 7/20	Monomoy, Boston Harbor	max. 23(6/6), 9	B. Nikula, TASL
Rufous-necked Stint:			
6/24-28	Monomoy (north end flats)	1	V. Laux, R. Veit#
7/17-22	Scituate (Third Cliff)	1 ad.	W. Petersen#
Little Stint:			
6/19-25	Monomoy (north end flats)	1 ph.	B. Nikula#
Least Sandpiper:			
7/27, 31	GMNWR, Scituate	75, 235	R. Forster, W. Petersen
Curlw Sandpiper:			
6/3	Nauset I.	1	B. Nikula+P. Trull
7/22	Scituate	1	B. Horn+R. Davis
Dunlin:			
6/2, thr. July	Newbypt, Scituate	29, 1	BBC, W. Petersen
Short-billed Dowitcher:			
6/30, 7/18	Monomoy	350, 2000	B. Nikula#
7/19, 20	Newbypt, Boston Harbor	395, 1116	R. Stymeist, TASL
Long-billed Dowitcher:			
7/27, 30	P.I.	1, 1	D.+O. Oliver, R. Stymeist

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Stilt Sandpiper:			
7/5,26-27	Monomoy, Dartmouth	1, 5	v.o., T.Raymond
7/12,30	P.I.	8, 23	R.Stymeist#
Semipalmated Sandpiper:			
6/2	P.I.	1297	BBC
7/20,23	Boston Harbor, Scituate	523 ⁴ , 1200	TASL, W.Petersen
Western Sandpiper:			
6/24	Monomoy	1 br. pl.	R.Heil#
7/17;20,31	Nauset; Scituate	2; 1 ad.	B.Nikula; W.Petersen
Marbled Godwit:			
6/12,7/10	Monomoy	1, 1	B.Nikula#
Hudsonian Godwit:			
6/25,29	Monomoy	1, 4	W.Bailey#
thr.July,13	Monomoy, P.I.	max.85(7/27), 15	v.o., R.Forster
7/20,23	E.Boston, Scituate	30, 100	TASL, W.Petersen
Ruff:			
6/6	Monomoy	1	C.Goodrich+W.Bailey
Wilson's Phalarope:			
thr.June	P.I., Monomoy	max.5, 2	v.o.
6/7	Monomoy	m. flushed from nest w/ 3 eggs	W.Petersen+SSEC
7/5,13	P.I.	1 m.	R.Forster
Northern Phalarope:			
7/31	Stellwagen	9	J.Grugan

JAEGERS THROUGH TERNS

A census of gulls and other colonial nesting waterbirds during June and July is summarized in the table below. Figures represent numbers of pairs. Note the high proportions of Great Black-backed Gulls at Nantucket and Muskeget, both relatively undisturbed areas that this species seems to prefer.

	Black-crowned Night Heron	Great Black- backed Gull	Herring Gull	Common Tern	Least Tern
June 18	2	550	850	0	possible
Coatue, Nant.					
June 19	-	600	200	0	possible
Muskeget I.					
June 23	25+	70	1300	50	70
Wood End, P'town					
June 24	23	7	75	65	35
Dead Neck, Osterville					
June 29	-	0	0	110	8
Snake I., Winthrop					
July 1	-	1	15+	185	0
Woodbridge I., Newbypt					
July 4	50+	80	400	-	-
House I., Manchester					
July 9	15+	0	0	-	-
Big Ram I., Westport					

Assemblages of 1350 non-breeding immature Ring-billed Gulls at Newburyport and 630 immature (including 9 dead) kittiwakes at Provincetown were impressive. Southern terns included a nearly breeding plumaged Sandwich Tern at Monomoy I. on June 6, twelve Royal Terns, and four Black Skimmers. R.S.H.

Pomarine Jaeger:				
7/12,30	off Gloucester, 15-20 mi. E. of Chatham	1, 1 sub-ad.	S.Garrett#, R.Heil	
Parasitic Jaeger:				
6/23,26	P'town, Monomoy	2, 1	R.Heil, D.Stemple	
<u>skua sp.:</u>				
7/27	Nant. Shoals	1	R.Heil	
Glaucous Gull:				
6/3	Nauset	1 imm.	P.Trull	
<u>Lesser Black-backed Gull:</u>				
6/21	Nant. (Bel Point)	1 (2S)	R.Veit+M.Litchfield	
7/27	Scituate	1 (entering 2W)	W.Petersen, R.Veit#	

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Ring-billed Gull:			
6/8,7/5	Newbypt	1350 imm., 500	R.Heil, R.Forster
Black-headed Gull:			
6/3,29	Nauset, Winthrop(Snake I.)	1, 1 (both 1S)	P.Trull, R.Heil
Laughing Gull:			
thr.June	Monomoy	800 pr.	I.Nisbet
6/23	Provincetown, Nauset	150, 175+	R.Heil, B.Nikula
Little Gull:			
6/3,28;7	Nauset; Monomoy	1 (1S); 2 (1S)	B.Nikula#; SSBC
6/8,23,29	Newbypt, P'town, Winthrop	3, 1, 1 (all 1S)	R.Heil
7/5	P.I.(Stage I. Pool),Nauset	6, 1 (1S)	R.Forster#, B.Nikula#
Black-legged Kittiwake:			
6/7,23	Monomoy, P'town Harbor	10, 630 imm.(9 dead)	W.Petersen, R.Heil
7/25	Nauset I.	3	R.Forster
Forster's Tern:			
thr.June, thr.July	Monomoy	1, 1	B.Nikula#
7/5-26,7	Nauset, Yarmouth	1-2, 1	B.Nikula#, P.Trull
Arctic Tern:			
thr.June,5	Monomoy, Plymouth	200"portlandica", 6	R.Forster#, B.Sorrie
6/23,7/7	P'town, Yarmouth	15+"portlandica", 1	R.Heil, P.Trull
Roseate Tern:			
6/5,7/31	Plymouth, Scituate	15+, 50+	B.Sorrie#, W.Petersen
Least Tern:			
6/5,thr.June	Plymouth,Ipswich(Crane's)	25, 1 pr.	B.Sorrie#, J.Berry
Sandwich Tern:			
6/6	Monomoy	1 ad.(nearly br.pl.)	W.Petersen + SSBC
Royal Tern:			
6/18,23	Nant.(Coatue), P'town	4, 1	R.Heil
6/24,28	Monomoy	1, 1	V.Laux#, M.Lynch#
7/2,5	P.I., Monomoy	2, 1	R.Heil, S.Surner#
7/16,22	Nantucket	1, 1	M.Litchfield
Black Tern:			
6/2,7/5	Wachusett Res., Monomoy	1, 1	F.McMenemy, G.Gove
7/5,7	P'town, Yarmouth	1, 1	W.Petersen, P.Trull
Black Skimmer:			
6/23	Monomoy, Dennis	1-2, 1	W.Petersen#, R.Scott
7/14	Nauset	1	P.Trull

DOVES THROUGH WOODPECKERS

A White-winged Dove was seen at the WEWS, S. Wellfleet, July 2 and 4. A second sanctuary record, a White-winged Dove was encountered there on the same date (July 4) in 1974.

Following the observation of a Burrowing Owl on Plymouth Beach in May came sightings from the south end of Monomoy on June 6 and then from Katama, Martha's Vineyard, from July 12 on. That only one bird was involved would seem likely in light of the uni-directional movement of the sightings as well as the reasoning that Burrowing Owl is not a species one would expect to be displaced this far in numbers. Yellow-bellied Sapsuckers noted at Mt. Wachusett, Worcester County, this summer should be considered potential breeders there.

R.S.H.

<u>White-winged Dove:</u>			
7/2,4	WBWS	1	W.Bailey
<u>Yellow-billed Cuckoo:</u>			
6/12,14	Milton (F.M.), GBBBC	8, 12	G.d'Entremont, v.o.
6/15,21	NBBC, Oxbow NWR	10, 4	v.o., R.Stymeist
7/6	Bolton	5 (1 nest)	M.Lynch#
<u>Black-billed Cuckoo:</u>			
6/12,14	Milton (F.M.), GBBBC	7, 12	G.d'Entremont, v.o.
6/15,21	NBBC, Oxbow NWR	12, 5	v.o., R.Stymeist
<u>Barn Owl:</u>			
thr.June,7/25	Somerville,Middleboro	pr., 1 yg.(oiled)	fide R.Forster,K.Anderson
<u>Burrowing Owl:</u>			
6/6	Monomoy (south end)	1	W.Bailey, C.Goodrich
7/12-22	Katama (M.V.)	1	V.Laux#

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Barred Owl:			
thr. June	Bridgewater	nesting pr.	W.Petersen
Short-eared Owl:			
thr. June	Monomoy (south end)	max. 6	C.Goodrich#
6/19	Muskeget I.	pr.	R.Heil#
Whip-poor-will:			
6/15	West Newbury	22	R.Stymeist + R.Veit
Common Nighthawk:			
7/13,21	Nantucket, Eastham	1, 2	M.Litchfield,R.Forster
Pileated Woodpecker:			
6/15	Topsfield (IRWS)	2	R.Heil#
Red-bellied Woodpecker:			
6/22	Middleboro	1	W.Petersen+K.Andersen
Red-headed Woodpecker:			
6/1	Chelmsford	1	J.Cook
Yellow-bellied Sapsucker:			
7/4,6	Princeton (Mt.Wachusett)	1 ad., 1 imm.	D.Crompton#



Bald Eagle (immature) at Sicaonset, Nantucket, July 12, 1980
 Photographed by Nan Jenks-Jay, Williamstown

FLYCATCHERS THROUGH SPARROWS

A total of 11 Yellow-bellied Flycatchers at Manomet this spring was 10 more than reported there last June. Only three Acadian Flycatchers were reported and were only seen once; none lingered as they did last year when 11 were noted. Blue Jays were reported migrating later in June with 100 flying north on June 28; more Red-breasted Nuthatches were noted this year than the last two. A Short-billed Marsh Wren* built a nest in Framingham but was unable to attract a mate; another was found in Westboro in late July. (*Sedge Wren in Peterson: A Field Guide to the Birds, 1980).

The highlight of the season was a Northern Wheatear at Newbury seen on two different occasions. Just last May one was reported from Cape Cod. The number of gnatcatchers was down from last year's reported high total.

The Prothonotary Warbler found in Needham in early May was still present through at least the 26th of June. Perhaps the highlight of the warblers was a Tennessee Warbler banded at Rockport in July. An immature Louisiana Waterthrush was banded on July 24 at Manomet, clearly one of the earliest migrants. R.H.S.

<u>SPECIES</u> <u>DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Eastern Kingbird:			
6/9+7/21	Newbypt area, P.I.	300+, 60	BBC(Jodrey),BBC(Drummond)
6/14,15	Gr.Boston, Newbypt region	88, 73	GBBBC, NBBC
Great-crested Flycatcher:			
6/14,15	Gr.Boston, Newbypt region	43, 28	GBBBC, NBBC
Yellow-bellied Flycatcher:			
6/3	MBO	11 b.	MBO staff
6/5,8	P.I.	2, 2	R.Sommers#,R.Heil
6/14	Woburn	1	E.Riggs
Acadian Flycatcher:			
6/1,15,21	P'town, P.I., Boxford	1, 1, 1	R.Vernon#,G.Soucy#,T.Leverich#
Willow Flycatcher:			
6/1,3	Eastham, MBO	2-3, 18 b.	R.Vernon#, MBO staff
6/12,15	Milton(FM), Newbypt region	5, 25	G.d'Entremont, NBBC
6/15,28	Framingham, GMNWR	4, 6	R.Forster, BBC
7/10,27	Wayland, Canton(FM)	5, 5	R.Forster, D.Brown#
Alder Flycatcher:			
6/6,8	W.Newbury, Eastham	1, 1	G.Soucy#, P.Hallowell
6/15,16+18	Newbypt region, Millis	4, 1	NBBC, B.Cassie
7/21	Canton(FM)	2	D.Brown#
Least Flycatcher:			
6/2-14	Wayland	1	R.Forster
	First in location in about 6 years.		
6/14,15	Cambridge, Topsfield	1, 6	L.Robinson, R.Heil#
Eastern Wood Pewee:			
6/15	Newbypt region	33	NBBC
Olive-sided Flycatcher:			
6/4,8	MBO, P.I.	1 b., 2	MBO staff, R.Heil
6/14	Middlesex Fells	1	GBBC (P.+J.Roberts)
Tree Swallow:			
6/16,7/7	P.I.	250, 500	BBC, BBC
Bank Swallow:			
thr June	Millis, Medfield	100+ pr., 100+ pr.	B.Cassie, H.Robbins
	Millis colony abandoned	nest site after erosion destroyed holes.	
Rough-winged Swallow:			
6/22,7/21	Manchester, Eastham	2 prs. nesting, 9	H.Weissberg, R.Forster
Cliff Swallow:			
July	P.I.	20 (including yg.)	H.Weissberg + v.o.
Purple Martin:			
6/9,7/21 on	P.I.	60, 120+	L.Jodrey#, W.Drummond#
6/12	Mashpee	5	W.Petersen
Blue Jay:			
6/28	Chatham	100 flying north	G.Gove, B.Schlinger
Fish Crow:			
6/14,7/1	Gr.Boston, Plymouth	6, 9	GBBC, B.Sorrie
Black-capped Chickadee:			
6/15	Newbypt region	90	NBBC

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Red-breasted Nuthatch:			
6/12,15	Annisquam, Newbypt region	1, 6	H.Wiggin, NBBC
6/20,22	Wareham, Lakeville	2, 2	B.Sorrie, W.Petersen#
7/14,17	Lincoln, Framingham	1, 1	R.Forster, R.Forster
7/29	Wayland	2 ad., 3 yg.	T.Hart
Brown Creeper:			
6/12,21	Mashpee, Ipswich	Pr. w/ yg., 6+(2 fam.)	W.Petersen, J.Berry
House Wren:			
6/14,15	Gr.Boston, W.Newbury	58, 30	GBBBC, NBBC(R.Stymeist)
Carolina Wren:			
6/23-25	Naushon I.	10+	B.Sorrie
7/25 on	Nantucket (town)	1	M.Litchfield
Long-billed Marsh Wren:			
6/15,28	Newbypt region, GMNWR	52, 15+	NBBC, BBC
7/19,27	GMNWR, P.I.	50, 10	BBC, BBC
<u>Short-billed Marsh Wren:</u> (Sedge Wren)			
6/7-22	Framingham	1 m.	R.Forster
7/26	Westboro	1	M.Lynch,S.Carroll+v.o.
Gray Catbird:			
6/14,15	Gr.Boston, Newbypt region	244, 180	GBBBC, NBBC
Brown Thrasher:			
6/14,15	Gr.Boston, Newbypt region	42, 12	GBBBC, NBBC
American Robin:			
6/14	Gr.Boston	523	GBBBC
Wood Thrush:			
6/14,15	Gr.Boston, Newbypt region	22, 43	GBBBC, NBBC
Hermit Thrush:			
6/14	Middlesex Fells, Medfield	1, 1	GBBBC(Roberts),H.Robbins
7/3, 6	E.Middleboro	1 singing	K.Anderson
Swainson's Thrush:			
6/9, 14	MBO, Gr.Boston	2 b, 2	MBO staff, GBBBC
Veery:			
6/15	Newbypt region	39	NBBC
Eastern Bluebird:			
6/5,20	Rockport, Jamaica Plain	2 b, 1	R.Norris, K.Tremblay
7/1-26	Annisquam	pr.	H.Wiggin
7/5+17	E.Middleboro	1 m., pr.w/1 yg.	K.Anderson
<u>Northern Wheatear:</u>			
6/6	Newbury	1	G.Soucy
	Presumably the same bird was reported at nearby Pine I. Rd. on the 5th or 6th. fide R.Forster		
Blue-gray Gnatcatcher:			
6/2-5,2	Bridgewater, Braintree	pr., pr.	W.Petersen, R.Campbell#
6/15	Topsfield, Groveland	8(1 nest found), 1	R.Heil#, R.Stymeist#
6/22-7/19	Concord(GMNWR)	2	C.Turin#+v.o.
Cedar Waxwing:			
6/15	Newbypt region	70	NBBC
7/27	P.I., Canton(F.M.)	20, 85	BBC, BBC
White-eyed Vireo:			
early June	Plymouth	4 singing m.	MBO staff
6/15	Westport, W.Newbury	1, 1	J.Hays, R.Stymeist#
6/22+7/27	Hamilton	2	J.Berry
Yellow-throated Vireo:			
6/4,7+8	Concord, Wayland	1, 1	J.Kenneally, R.Forster
6/15	Topsfield, Andover(Harold Parker St. For.)	1, 1	R.Heil#, G.Soucy#
7/27	N.Andover	1	H.Weissberg
<u>Solitary Vireo:</u>			
6/2-14	Framingham	1	R.Forster
Red-eyed Vireo:			
6/14,15	Gr.Boston, Newbypt region	63, 88	GBBBC, NBBC
Warbling Vireo:			
6/14,15	Gr.Boston, Newbypt region	48, 20	GBBBC, NBBC
Black-and-white Warbler:			
thr.June	Millis	25+ pr.	B.Cassie
<u>Prothonotary Warbler:</u>			
6/1-26	Needham	1 (from 5/11)	J.Marshall

<u>SPECIES</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Golden-winged Warbler:			
6/2,7	Framingham, Ipswich	1, 2	R.Forster, J.Berry
6/10,14	Bedford, Dover	1, 1	F.Bouchard, F.Hamlen
6/15	Newbypt region	9	NBBC
"Brewster's Warbler:"			
6/1-22,15	W.Newbury, Topsfield	1, 1	v.o., R.Heil#
Tennessee Warbler:			
7/24	Rockport	1 b	R.Norris
Nashville Warbler:			
6/15,21,22	W.Newbury,Middleboro,Ipswich	1, 1, pr.	R.Stymeist#,W.Petersen,J.Berry
7/1	Manomet	1	MBO staff
Northern Parula:			
6/21	W.Harwich	3 singing m.	J.Aylward
6/23+24	Naushon I.	2 m. on territory	B.Sorrie
Yellow Warbler:			
6/14,15	Gr.Boston, Newbypt area	180, 89	GBBEC, NBBC
6/28	Concord (GMNWR)	30+	BBC
Black-throated Blue Warbler:			
7/6	Princeton	1	D.+V.Crompton
Black-throated Green Warbler:			
6/9	Nantucket	1	M.Litchfield
Blackburnian Warbler:			
6/15,24+25	Newbypt region, MBO	2, 1	NBBC, MBO staff
Chestnut-sided Warbler:			
6/15	Newbypt region	30	NBBC
Blackpoll Warbler:			
6/2-5,19	Newton, MBO	1, 1 b	O.Komar, MBO staff
Pine Warbler:			
6/5,14	W.Newbury, Framingham	1, 1	L.Jodrey#, R.Forster
Prairie Warbler:			
6/14,15	Gr.Boston, Newbypt region	25, 15	GBBEC, NBBC
Ovenbird:			
6/15	Newbypt region	16	NBBC
Northern Waterthrush:			
thr.June,6/7	Millis, Ipswich	3 m., 1	B.Cassie, J.Berry
7/9	Lincoln	1 (window kill)	P.Swift
7/21,27	Eastham, Framingham	1, 1	R.Forster, R.Forster
Louisiana Waterthrush:			
6/15	Newbypt region	1	NBBC
7/24	Manomet	1 imm. b	MBO staff
Mourning Warbler:			
6/1-11,4	MBO, Rockport	22 b, 2 b	MBO staff, R.Norris
6/3-7,3	Salem, Lexington	1, 1	C.Blaszczak, E.Leyenaer
6/5+8	P.I.	3, 2	R.Sommers#, R.Heil
Common Yellowthroat:			
6/14,15	Gr.Boston, Newbypt region	100, 212	GBBEC, NBBC
Canada Warbler:			
6/8,15	Ipswich, Newbypt region	1, 7	J.Nove#, NBBC
Bobolink:			
thr.June	<u>Nantucket</u>	5+ pr.	M.Litchfield+v.o.
	Not known to nest on Nantucket.		
6/15	Newbypt region	114	NBBC
Red-winged Blackbird:			
6/14	Gr.Boston	673	GBBEC
Orchard Oriole:			
6/2 on,5	Wayland, Duxbury	2 pr., 1	R.Forster, B.Sorrie
6/7-15,8-14	Sudbury, Framingham	2 imm., 1 ad.m.	R.Forster, R.Forster
6/14,15	Gr.Boston, W.Newbury	10 pr., 2	GBBEC, R.Stymeist#
7/10-22	Manomet	10 b (6 imm.)	MBO staff
7/27	Concord	1	R.Forster
Northern Oriole:			
6/14,15	Gr.Boston, Newbypt region	197, 59	GBBEC, NBBC
Common Grackle:			
late June	Millis	300+ in evening flights	B.Cassie
Scarlet Tanager:			
thr.June	Millis	9 pr.	B.Cassie

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
6/14,15	Gr.Boston, Newbypt region	21, 36	GBBEC, NBBC
6/19	Nantucket (does not breed here)	1	M.Litchfield
Rose-breasted Grosbeak:			
6/14,15	Gr.Boston, Newbypt region	29, 28	GBBEC, NBBC
7/27	Canton(FM)	14	BBC(D.Brown)
Indigo Bunting:			
6/14,15	Gr.Boston, Newbypt region	49, 12	GBBEC, NBBC
Purple Finch:			
6/9,15	P.I., Newbypt region	10, 14	L.Jodrey#, NBBC
American Goldfinch:			
6/15,28	Newbypt region, GMNWR	51, 25	NBBC, BBC
7/19,27	GMNWR, Canton(FM)	40, 27	BBC, BBC
Grasshopper Sparrow:			
thr.June-7/13	Medfield	1-3	H.Robbins+v.o.
6/19,23-25	M.V.(Katama), Naushon I.	6, 40+	R.Forster#, B.Sorrie
Sharp-tailed Sparrow			
6/7,15	Monomoy, S.Dartmouth	8, 15	SSBC, J.Hoye
6/15,19	Newbypt area, Muskeget I.	7, 15	NBBC, R.Heil
7/5,20	P.I., E.Boston	15, 4	R.Forster, R.Stymeist#
Seaside Sparrow:			
6/7,15	Monomoy, S.Dartmouth	4, 2	G.Gove#, J.Hoye
Vesper Sparrow:			
6/30,7/1	P.I., Plymouth	1, 2-3	R.Heil, B.Sorrie
7/21	S.Wellfleet(Marconi)	9	R.Forster
Field Sparrow:			
6/14	Gr.Boston	19	GBBEC
White-throated Sparrow:			
6/6	MBO	1 b	MBO staff
Lincoln's Sparrow:			
6/9	MBO	1 b	MBO staff
Swamp Sparrow:			
6/12,28	Canton(FM), GMNWR	20+, 20	G.d'Entremont, BBC
Song Sparrow:			
6/14	Gr.Boston	293	GBBEC

List of Abbreviations

ad.	adult	I.	Island
b	banded	M.V.	Martha's Vineyard
br.	breeding	Mt.A.	Mt. Auburn Cemetery, Cambridge
dk.	dark phase	Nant.	Nantucket
f.	female	Newbypt	Newburyport
fl.	ledge	ONWR	Oxbow National Wildlife Refuge
imm.	immature	P.I.	Plum Island
ind.	individual	P'town	Provincetown
lt.	light phase	R.P.	Race Point, Provincetown
m.	male	S.N.	Sandy Neck, Barnstable
max.	maximum	Stellw. B.	Stellwagen Bank
migr.	migrating	ABC	Allen Bird Club
ph.	photographed	BEC	Brookline Bird Club
pl.	plumage	BOEM	Bird Observer of Eastern Massachusetts
pr.	pair	CBC	Christmas Bird Count
thr.	throughout	DFWS	Drumlin Farm Wildlife Sanctuary
v.o.	various observers	FBC	Forbush Bird Club
W	winter (e.g., 2W = second winter)	GBBEC	Gr.Boston Breeding Bird Census
w/	with	GMNWR	Great Meadows National Wildlife Refuge
yg.	young	IRWS	Ipswich River Wildlife Sanctuary
#	additional observers	MAS	Massachusetts Audubon Society
A.A.	Arnold Arboretum	MBO	Manomet Bird Observatory
A.P.	Andrews Point, Rockport	MNWS	Marblehead Neck Wildlife Sanctuary
C.Cod	Cape Cod	NBBC	Newburyport Breeding Bird Census
E.P.	Eastern Point, Gloucester	SSBC	South Shore Bird Club
F.E.	First Encounter Beach, Eastham	TASL	Take A Second Look
F.H.	Fort Hill, Eastham	WBWS	Wellfleet Bay Wildlife Sanctuary
F.M.	Fowl Meadow, Milton	WMWS	Wachusett Meadows Wildlife Sanctuary
Gr.	greater as in Gr. Boston area	*	Boston Harbor project sponsored by BOEM



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