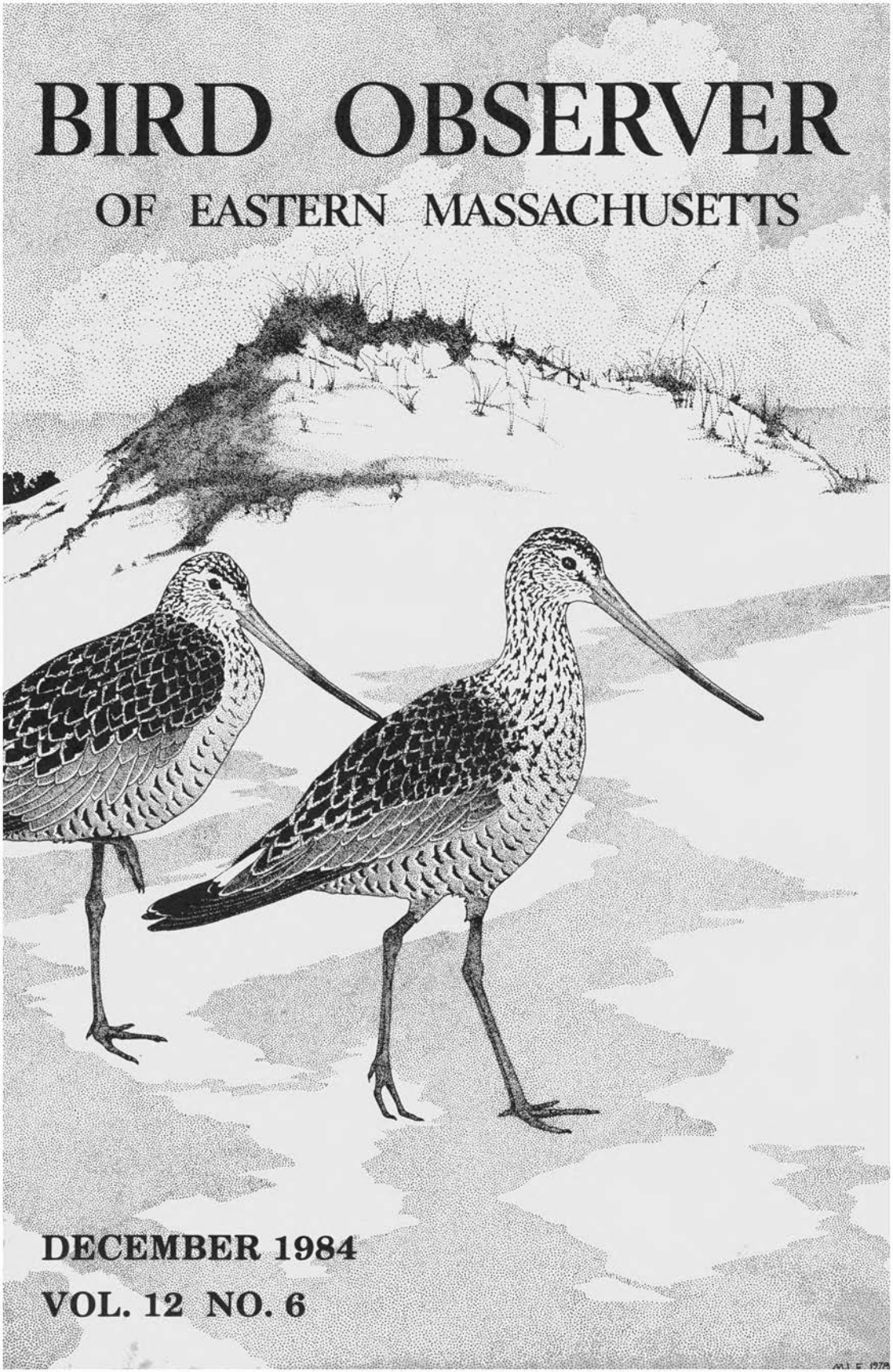
BIRD OBSERVER

OF EASTERN MASSACHUSETTS



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WINTER WORKSHOPS and 1985 PELAGIC TRIPS

This is the third year that Bird Observer has offered these workshops and pelagic trips. We feel they are a convenient way for birders of all skills and interests (including our own staff members) to learn more about birds and to gain practical field experience.

WINTER WORKSHOPS:	(Leader: Wayne R. Petersen)
Bird Biology	January 24 & 31, February 7 & 14
Workshop on Mass. Gulls	March 14, field trip-March 16
Fundamentals of Birding	March 21 & 28, April 4 & 11, field trip-April 27

GEORGES BANK TRIPS: May 31-June 2, August 18-20, September 6-8
These trips are an excellent, and possibly the only, way in New England for the general birding public to see marine birds and mammals not usually seen on Stellwagen Bank and are a good chance to spot rarities such as White-faced Storm-Petrel.

DRY TORTUGAS TRIP: April 28-May 1
The Tortugas trip is a special excursion we are trying this year, and so far the response has been extremely enthusiatic. This trip is a good opportunity for New England birders to see unusual birds in the Keys and to bird southern Florida.

These workshops and boat trips are filling rapidly. If you need more information or brochures, please call Martha Vaughan at (617) 244-0166, or send a self-addressed, stamped envelope to her at 15 Elmwood Park, Newton, MA 02160.

SPRING MIGRATION ON SAVIN HILL

by Kenneth I. Winston, Boston

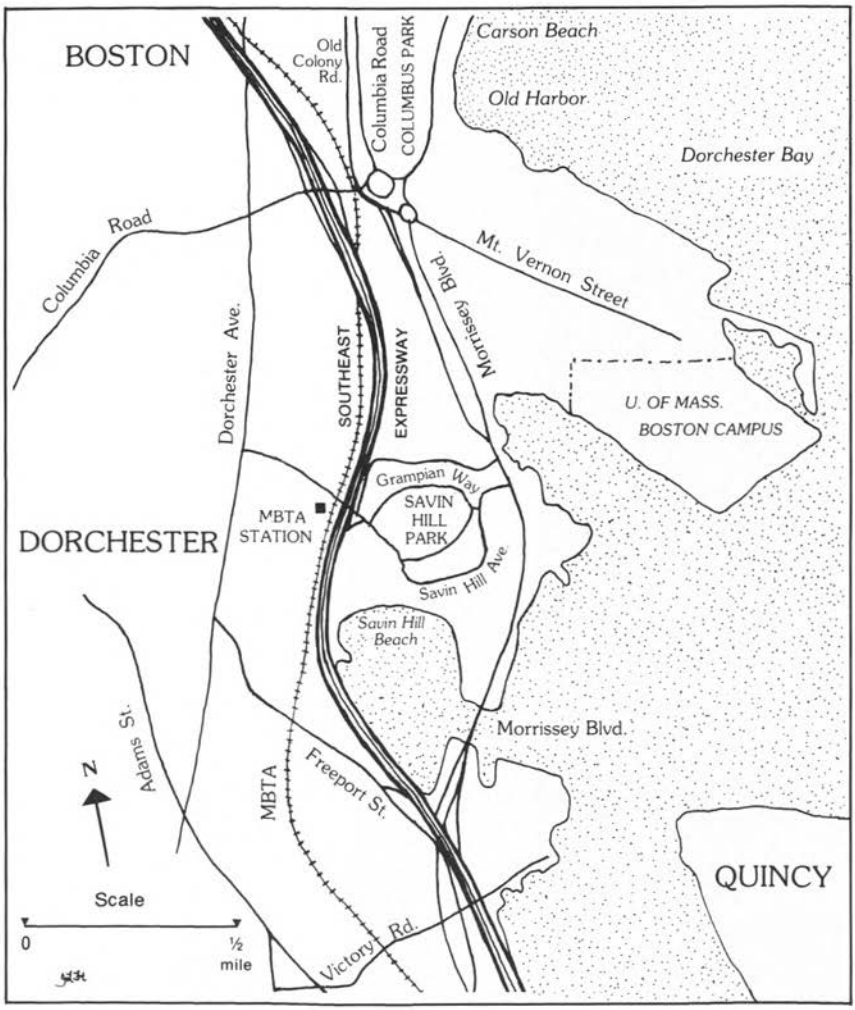
When the Puritans of the Massachusetts Bay Colony reached these shores in 1630, one group aboard the ship *Mary and John* decided to disembark at Savin Hill. The landing occurred in the middle of June, so they missed the spring migration by a few weeks. But as their plans were rather long-term, they stayed anyway and thus established the first settlement in Boston. The hill was favored apparently because its commanding view of the harbor made it an ideal place for defense. (The hill was fortified by the construction of a palisade in 1633 and again at the time of the American Revolution.) Also, the surrounding fields provided ample pasture for cows and were rich with native game, especially Wild Turkey. For this reason, I assume the Puritans took a lively interest in local bird life - even though handicapped by the nonexistence of Peterson's Field Guide to Eastern Birds - but I imagine them making a very sharp distinction between birding as a practical activity for obtaining food, which they would have approved, and birding as a leisure time activity, which they would perhaps have considered as frivolous as dancing - a worldly temptation that diverts people from the Lord's work.

All that remains today to remind the casual observer of these Puritan beginnings is a shabby commemorative plaque embedded in stone, placed at the eastern edge of Savin Hill in 1901, and a yearly reenactment of the landing at a nearby beach by local nostalgia buffs - in original costume. With the encroachment of modern urban civilization, the unencumbered part of the hill has diminished considerably, until it now consists of only a couple of acres of rocky outcropping with several dozen trees (mostly oak) on the slopes, surrounded by one-family houses and city-owned basketball and tennis courts on Grampian Way. The hill itself no longer serves any designated public function. It is too small and irregular to be a park, for example, though the view of the harbor still makes it a desirable (uncrowded) site for witnessing (at a distance) the occasional procession of Tall Ships. However, what is important now is that the hill is one of the few prominent oases of greenery in the contemporary city landscape and consequently has become a natural stopping place for land birds heading north in the spring. The avian invasion - in costumes much more colorful than those of the Puritans - has given Savin Hill a new significance.

I began birding the hill sporadically in the spring of 1980, shortly after moving to the area (known locally as St. William's parish). In 1981, I walked the hill for at least an hour or two, and sometimes more, each morning during the last two weeks of May. Then in 1982, and continuing through 1984,

I began my daily visits in the latter part of April, so they ranged over the better part of five or six weeks. (Occasionally I missed a day or two, I admit, when the weather was inclement or the demands of my job too pressing. Why must work get in the way of what's truly important!) The results of these forays were, to my mind, quite astonishing. I began to believe that almost any bird that ever migrated along the East Coast might be seen on the hill, if only one were sufficiently patient, listened carefully, and looked intently.

My habit is to approach the hill from the grassy skirt at the eastern end, which is the only extensive part where houses do not line the fringes. Behind the basketball court, a broken set of stairs carved out of the rock leads to a ledge along one side of the hill. This path is one of the most advantageous places for spotting warblers, since it



brings the observer almost level with the tops of a row of trees on the southern slope. This year (1984), for example, it yielded Blue-winged and Prairie warblers, among others. It's also the place, however, where one is first likely to encounter some of the hazards of birding the hill. For the path is strewn with broken beer bottles and cans and other litter left behind by teenagers from the neighborhood who use the hill (especially in warm weather) as a refuge from their families. Fortunately most of this activity occurs at night; in the morning one encounters, at worst, only its aftereffects - although one time I startled a young couple hidden among the rocks who had spent the night in a sleeping-bag. With the enactment of the bottle bill by the Massachusetts legislature a few years ago, I had hoped the situation on the hill would improve, but it seems that the tradition of littering is too deeply entrenched. (In the neighborhood, on the other hand, an annual clean-up campaign now enjoys wide support.) Beer drinking of course leads to urinating, at least among males, but I'm happy to report that no foul odors linger on the hill - unlike, for example, the Savin Hill subway station, which lacks natural drainage.

The path dips slightly as one walks west and leads to an area of shrubs and tall grasses, as well as a few trees. (To the right, the rock face is at its steepest and so has provided the most tempting place for graffiti. The observer needn't look too long in that direction.) This is a good spot for the mimics, thrushes, flycatchers, and sparrow. For example, Great Crested Flycatchers put in an annual appearance, and I've had visits from Yellow-bellied and Least flycatchers. Hermit and Swainson's thrushes show up in significant numbers, as well as Veery (two years), Wood Thrush (the following two years), and Gray-cheeked Thrush (in 1982). This is also one of two places where I came upon a Worm-eating Warbler. From here the path again rises as it curves around, and another set of steps leads to the northern edge of the hill. A row of trees and a considerable amount of underbrush make this one of the most productive areas. It's here, for example, that I saw a first-year male Cerulean Warbler (in 1982), a Yellow-breasted Chat (in 1984), and a couple of Indigo Buntings. This is also the best place for the kinglets, both Ruby-crowned and Golden-crowned, and for the two raptors I have spotted occasionally: American Kestrel and Sharp-shinned Hawk.

If one turns right, it's only a few dozen steps to the top of the hill, and though one is not likely to add anything to one's list, the view is always refreshing. Actually at lowtide the extensive mudflats in Dorchester Bay are in plain sight, and with a good telescope one might be able to pick out a number of shorebirds. However, since my aim has been to focus on what may legitimately be called the birds of Savin Hill, I have refrained from adding to my list in that way. I have made it a rule to count only birds that land on the hill or that fly directly overhead. Neverthe-

less, the proximity to the shore has had its advantages, for overhead flights have included Great Blue Heron, Green-backed Heron, Snowy Egret, Double-crested Cormorant, Greater Yellowlegs, and Short-billed Dowitcher (which, fortunately, was calling as it passed). In addition, a couple of Black-crowned Night-Herons have spent time sitting in the trees.

Returning to the northern edge, I usually continue walking east to the point where the path slopes back down to the grassy skirt. But instead of following it I clamber up a small outcropping to the right which puts one level again with a stand of trees. This area has also been good for warblers, as well as Rose-breasted Grosbeaks, Bobolinks, Cedar Waxwings, and a Warbling Vireo. In 1981 I disturbed the morning nap of a Common Nighthawk in this area. The next year I spotted a waterthrush in the same location, but unfortunately I could not further specify it, because it stayed for only a few seconds. It was also near here that I discovered a Black-billed Cuckoo and both White-breasted and Red-breasted nuthatches. As if this wasn't excitement enough, I spent considerable time one afternoon of an early June day trying to locate the source of a strange, plaintive cry high in the thick foliage of an oak tree, only to discover that one of my neighbors was missing a pet Cockatiel.

The only bird that I can say with confidence breeds successfully on the hill is the European Starling, though others seem to nest in the surrounding area, including Northern Cardinal, Northern Flicker, American Goldfinch, and Downy Woodpecker. There is probably too much human and animal disturbance for all but the most impervious of avian creatures. Even humans of a certain sensibility might find the hill hard to cope with after the ravages of summertime activity. But during the migration, when the blush of spring is still upon it, Savin Hill is a worthy place to train one's binoculars. Of course, it doesn't have the beauty of Mt. Auburn Cemetery, but then it doesn't have the crowds of people either. In the five years that I've been tracking the spring migration, I've seen another birder only once. In the same period of time, I've seen a total of ninety-seven species, including twenty-five species of warbler. The Puritans may not have approved, but as I see it, I'm only standing witness to one of the few glories of nature observable in the city on a hill.

KENNETH I. WINSTON writes that he "was born and raised in Boston and feels a special affinity with the Puritan spirit that lingers desultorily in the city." Dr. Winston is a professor of philosophy at Wheaton, educated at Harvard (A.B.) and Columbia (Ph.D.), whose research interests are in ethics and philosophy of law. Kenneth further states, "I became a serious birder in 1976 under the tutelage of my colleague at Wheaton, John Kricher. However, he should not be blamed for my literary proclivities."

THE FIELD IDENTIFICATION OF ARCTIC LOON

by Terence A. Walsh, Midland, Michigan

Winter-plumaged loons can provide the New England birder with some tricky identification problems. Viewing conditions are often less than ideal on a blustery winter's day, and even a close look at a solitary bird can be enigmatic unless the observer is keenly aware of specific differences and variability. In New England, the Common and Red-throated loons (Gavia immer and G. stellata) are familiar birds, and it is the Arctic Loon (G. arctica) that is searched for diligently. This article will attempt to clarify some of the problems associated with identifying this vagrant to our shores.

The subspecies that presumably occurs in Massachusetts is G. a. pacifica, although it can only be distinguished from the nominate Eurasian subspecies in breeding plumage by the purple gloss to the throat and the grayer nape. (Some authors consider pacifica to be a separate species.) My experience with Arctic Loon is predominantly with G. a. arctica in British coastal waters, but I have found little indication that there are any subspecific differences in winter dress, although the Eurasian form is a slightly larger bird by about 8 percent (Cramp and Simmons, 1977). The possibility that this subspecies could occur in New England cannot be ruled out, and a breeding-plumaged bird should be inspected closely.

I have attempted to give a critical summary below of the current literature on the field identification of Arctic Loon, stressing the features that are most reliable and least subjective.

Size. Although the average size of Arctic Loon falls between that of Red-throated and Common, size comparison is essential for this feature to become a primary identification tool. There is overlap between the three species, and solitary birds can be notoriously difficult to assess in terms of size, so that without direct comparisons, details of structure and plumage become critical.

Structure and general coloration. Familiarity with Common and Red-throated loon is obviously essential here. As a rule of thumb, Arctic Loons generally appear more contrasted black and white than the other two species, thus looking more clean-cut. Red-throated Loons usually appear the palest of the three at any range. The small head of this species, together with the slim, uptilted bill, accentuated by the habit of carrying it above horizontal, readily identify this loon. The adult Common Loon has a large, deep bill[1], a steep forehead

[1]Ed. note: It is well to remember that in this species, "birds of first year have smaller bill than adult." (See E. H. Forbush, Birds of Massachusetts, Part I, Mass. Dept. of Agriculture, 1925, page 17.)

with a typically flat crown, and a robust, thickset neck that combine to give the species a brutish look. The Common often, but not always, has the lower mandible rather more angled than the upper, to make the bill asymmetric in shape.

Arctic Loon is a more well-proportioned bird with a symmetrical dagger-shaped bill. The forehead is generally less steep than that of the Common and can appear sloping. The species has a smooth, rounded crown and a relatively thinner, more graceful neck. The characteristic angular shape of the Common Loon's head is lacking, while the thinner neck of the Arctic leads to its looking longer-necked than the sturdier Common. The difference in head structure of the two species is like the difference between Glaucous and Iceland gulls (Larus hyperboreus and L. glaucoides).

Head and neck pattern. Critical observation of the head and neck pattern of a loon will often clinch its specific identification without subjective estimations of bulk and proportion. The face and neck of a Red-throated appear strikingly pale, often silvery, due to the expanses of white around the eye and on the cheek and neck, the pale of the neck extending farther back than on the other species. The lores are often quite pale, making the eye appear prominent and staring.

In the Common Loon, there is almost always a pale area around the eye and on the lores, which is not present in Arctic Loons. Also the cheeks are dusky, and the dark of the hindneck extends forward around the lower neck to form a distinctive half-collar. The coloration of the crown and the hindneck is often shaded to give a patterned or blotched effect. However, the back of the head invariably appears darker than the mantle.

The head and neck pattern of Arctic Loon can appear quite distinctive. The demarcation between dark and light on the head and neck is relatively sharp and extends from the eye to the breast in a smooth curve, with no "semicollared" look as in the Common Loon. The forehead and lores appear very dark, with the crown and rear neck being paler and thus lighter than the mantle. There is a darker area that separates the pale foreneck and grayer hindneck, which can give the appearance of a stripe down the side of the neck. This apparently diagnostic feature and the other details are described well by Mullarney (1980).

Body plumage. Arctic Loons always appear darker than the other two species. Red-throated Loons have distinctive spangling all over the mantle (more prevalent in first-winter birds), whereas Commons appear somewhat mottled brown. First-winter Commons have pale feather edgings on the back to give a scaled appearance, often very pronounced in fresh plumage. Adult Arctic Loons have a uniformly dark mantle, although an occasional summer plumage feather or two is sometimes retained in the winter plumage (Palmer, 1962). First winter birds also

possess pale feather edgings on the upperparts but never appear as scaled or barred as the Common Loon.

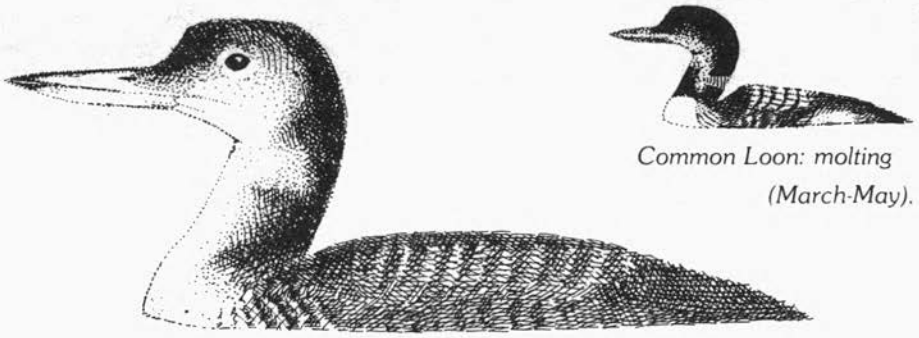
A feature that British birders have consistently used to pick out Arctic Loons at considerable distance is a white patch on the rear body due to an upward extension of white on the rear flanks (Dennis et al., 1978). This character is surprisingly good for the Eurasian subspecies at least, yet is not described in North American literature. Does the Pacific race exhibit this character as prominently? Limited pictorial evidence suggests that it might not;[2] compare the photographs in Armstrong (1980, p.16) and Farrand (1983, p.37) with those in Wallace (1978, p.75), Dennis et al. (1978, p.226), and Chandler (1981, p.64). Although the white flank patch is an excellent field character, it can be confused with the indistinct white blazes that appear on the sides of molting birds of both the other species, as in Red-throated Loons in October and November and in Common Loons in March and April. Be careful!

Flight and behavior. Several American and European field guides allude to the shallower wing beat of the Arctic Loon, as the wings are not raised as high as in the Red-throated. I think it is best to relegate such features to secondary identification points in New England. The white flank patch, if present, remains a good feature in flight. Jonsson (1976) mentions that the Arctic Loon uses a semisomersault technique to dive whereas the Common sinks straight down; however, this may depend on the prevailing sea conditions.

Pitfalls. The two biggest pitfalls in identifying Arctic Loon are probably (1) reliance on apparent size as the primary identification feature and (2) molting birds. Perhaps the simplest way to avoid the first problem is never to identify an Arctic Loon on overall size (or even bill size) alone. Back it up with critical observations of plumage. Loons molt their body plumage in September-November and again in February-April, prime time for misidentifications being perhaps March-April when Common Loons begin to acquire black feathers around the head, neck, and mantle, thus masking the typical winter plumage pattern and hinting at Arctic Loon plumage. It is wise to bear in mind what the emergent summer plumage of each species looks like. Even though your bird appears to have a black throat molting in, if it has spotted wing coverts or a hint of black and white striping on the lower neck, for example, it is a Common Loon! Furthermore,

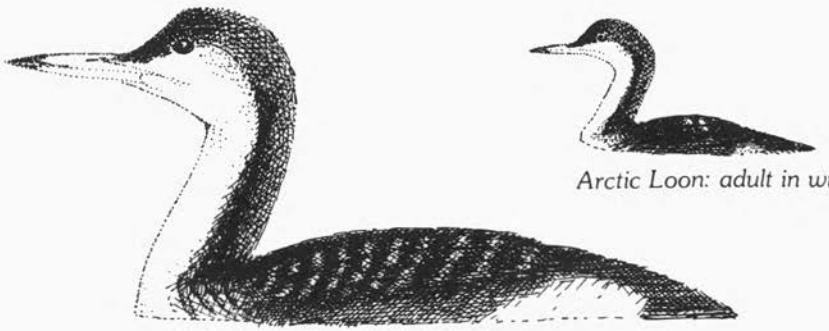
[2] Ed. note: None of the local experts consulted have ever observed the flank patch on G. a. pacifica. However, see J. T. Leverich, "Identification of Arctic Loons," BOEM 7: 186, October 1979, who points out that only one U.S. book has a picture depicting this white patch - Arnold Small's The Birds of California, and "it is (poorly) visible in the photograph." Bird Observer would welcome any information our readers can contribute about the presence of this characteristic in the North American subspecies.

FIGURES OF WINTER-PLUMAGED LOONS



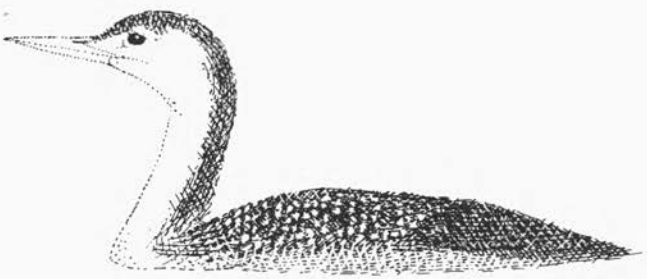
Common Loon: molting (March-May).

Common Loon: adult in winter plumage.



Arctic Loon: adult in winter.

Arctic Loon: first-winter bird.



Red-throated Loon: adult in winter plumage. TAW '84

if your bird is in primary molt in October-November, it is a Red-throated Loon as the other two species molt their primaries in February-April (Cramp and Simmons, 1977).

Summary. Arctic Loons in winter plumage are identifiable, even at considerable range, when appropriate field characters are noted. Confidence comes with either experience on the West Coast or diligent study of photographs in the literature (see references). The accompanying figures illustrate the winter plumage of all three species to show the features described in the text.

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TERENCE A. WALSH, a research biochemist by profession, has been a birdwatcher since childhood and has birding experience in the United States, South America, Britain, Europe, North Africa, and the Middle East. A native Britisher, Terry's expertise was much appreciated by New England birders when he was a resident here. Now working in Michigan, he sends greetings to Plum Island birders and wishes them to know that a recent visit home to England confirmed his view that "our" Buff-breasted Sandpiper (a western Arctic breeder) is much more readily seen "over there" in the Isles of Scilly than in New England. Terry has published papers in British Birds and in Sandgrouse and has promised BOEM another field identification paper in the future - on the subject of stints!

FURTHER NOTES ON THE FIELD IDENTIFICATION OF WINTER-PLUMAGED ARCTIC LOONS

In my article on "The Field Identification of Arctic Loon" [also printed in this issue of BOEM], I alluded to the possibility that the white flank patch that is often conspicuous in the winter plumage of the Eurasian subspecies of Arctic Loon, Gavia arctica arctica, is not present in the Pacific race, G. a. pacifica. I had a chance to confirm this on a recent trip to California where I saw eight winter-plumaged Arctic Loons. None of these birds exhibited the flank patch that I have invariably noted on birds seen in Britain. Therefore, it appears that the character is exclusive to the nominate race and should be a convenient method of separating the subspecies in winter plumage in the field (where the minor size difference will not be discernible). I should reiterate that both races could conceivably occur in Massachusetts, although pacifica is presumably more likely.

Further field observations also enable me to comment on the difference in diving techniques between Common and Arctic loons noted by Jonsson (1978). I watched Arctic Loons diving in smooth, open sea conditions and confirmed a distinctly different action from nearby Common Loons. The Arctics consistently stretched up their necks immediately prior to submerging as if putting in a special effort before "forcing" themselves underwater. Jonsson describes a semisomersault technique, but the Arctic Loons I observed did not lift their bodies out of the water (as cormorants often do when diving). They simply craned their necks up before diving. The Common Loons had the much more smooth and easy diving motion that is familiar to East Coast birders. They simply submerge their heads and slip underwater with little apparent effort. The diving motion of the Arctic Loon was surprisingly quite distinctive, even at long range, but I should again mention the cautionary note of my previous remarks that diving techniques often depend on the prevailing sea conditions and, perhaps, depth of dive.

Jonsson, L. 1978. Birds of Sea and Coast. Penguin Nature Guide, Harmondsworth.

Terence A. Walsh
Midland, Michigan
December 4, 1984

[Editor's Note: This material was received by BOEM just before press time, and we are pleased to be able to include it in the same issue as "The Field Identification of Arctic Loon" by the same author. The original article was given to us in June 1984 and scheduled for publication in a winter issue of BOEM.]

HOW THE COMMON BARN-OWL (Tyto alba) HUNTS IN DARKNESS BY HEARING

by H. Christian Floyd, Lexington

How do owls find and catch prey in darkness? Their large, frontally oriented eyes suggest keen night vision as a popular explanation. Owls do indeed have excellent night vision. Large pupils and retinas very densely packed with rods (light-sensitive cells) enable them to see in very dim light. The frontal orientation of their eyes gives them binocular vision - and, presumably, the accompanying advantage of depth perception - over a wide field of view. However, it is keen hearing that affords some owls their greatest sensory advantage for nocturnal hunting.

In experiments with the Common Barn-Owl (Tyto alba), Roger S. Payne, and later Masakazu Konishi and Eric I. Knudsen, demonstrated that this owl can determine the direction of sound produced by potential prey with an accuracy of one or two degrees in both azimuth (angle right or left) and elevation (angle up or down). Payne's observations showed as well how the barn-owl makes full use of auditory information in performing a strike. Konishi and Knudsen identified precisely the hearing mechanisms that permit such accuracy.

In this article, I will attempt to summarize and integrate the findings of these researchers as reported by Payne in The Journal of Experimental Biology and by Knudsen in Scientific American.

Location of prey by hearing alone.

Even before the work of these researchers, naturalists had evidence that owls must sometimes depend upon a sense other than vision in order to hunt. Calculations had shown that natural light levels must often be too low for an owl to see its prey, and rodents are often invisible targets for reasons other than lighting, e.g., the cover of snow or grass over their pathways. However, the capability of an owl to locate and strike prey in total darkness was first rigorously demonstrated in 1958 by R. Payne and W. H. Drury in researches begun at the Massachusetts Audubon Society in Lincoln.

The demonstration was performed in a light-tight room measuring twenty-five by twenty feet, with a seven-foot-high perch at each end and a two-inch layer of dry leaves on the floor. A Common Barn-Owl was introduced into the room and allowed to become familiar with the surroundings over a period of five weeks. The room was dimly lit during this period except for daily twelve-hour periods of total darkness during the fifth week. At the end of this time, the owl was deprived of food for two days. Then, with the room totally darkened, a mouse was released into the leaves. Although the mouse rustled

about in the leaves, the owl made no attempt to strike, and the mouse was removed after an hour. Similar results were obtained twenty-four and forty-eight hours later, but on the fourth trial, the owl attempted its first strike and promptly captured the mouse. In each of sixteen trials, the owl made a strike at a mouse at least twelve feet away. It missed in only four of these strikes and then by no more than two inches.

That the owl was not using senses other than hearing to locate its prey was demonstrated by variations on this experiment. When the live mouse was replaced by a mouse-sized wad of paper that was dragged through the leaves, the owl successfully struck that too. This demonstrated that the owl did not depend upon some characteristic of the living mouse such as odor or infrared radiation to locate its target, even assuming it could detect these stimuli. In another variation, the owl's hearing was impaired by placing a small cotton plug in one ear. The owl flew toward the mouse but landed short, showing that it depended upon intact ears for accurate location of the prey. Inasmuch as earlier experiments had demonstrated the inability of the barn-owl to avoid obstacles in darkness by echolocation, the experimenters concluded that the owl was relying on ordinary passive hearing.

Payne continued experimentation with barn-owls over a four-year period in another light-tight room, forty-two feet long and twelve feet wide. To observe the owl's behavior in total darkness, he illuminated the room with an infrared source, watched through an infrared viewer (sniperscope), and photographed experimental sequences with infrared film. Payne argues convincingly that the infrared illumination did not enable the owls to see the prey. As evidence, he exhibits a sequence of infrared photographs including a frame in which an owl directly faces a mouse just eight inches away. He recounts how the owl, which had just missed in an attempted strike, showed no interest in the prey until the lights were turned on, whereupon the owl immediately reacted and caught the mouse.

What the owl determines by hearing with respect to direction and distance.

Exactly what information about prey can the owl determine in darkness from what it hears? In order to fly to and strike a variably placed target, relying solely on hearing, an owl must be able to determine the direction to the sound source. Can the owl also determine the distance to the target by means of hearing only? Common sense suggests that the owl could not successfully conclude a strike without some perception of proximity to the target during the terminal portion of its flight; otherwise, the owl would merely collide with its prey. Given this, an owl's flight behavior in making a strike should reflect how well it perceives the distance remaining to the target. An owl making a successful strike in

adequate light, i.e., when it can see, may judge the distance to the target visually. Therefore, comparison of strike behavior under conditions of light and total darkness may suggest how well an owl perceives distance by means of hearing alone. Payne made just such a comparison and his observations are summarized below.

Both in darkness and in light, the owl usually turned to face the mouse directly as soon as the mouse rustled the leaves. Then the owl remained motionless on its perch for several seconds. Just before taking flight, it leaned forward, lowered its head, raised its wings, and, near the point of falling, pushed off from the perch with its feet. From this point on, the manner of flight varied with the light conditions. In light, the owl took a single wingstroke and then glided along a direct path toward the mouse. During the glide, only small balancing and steering motions were made using the wings; the feet remained tucked beneath the tail. In darkness, however, the owl flapped its wings rapidly all along the flight path to the target. The resulting speed of flight was half the speed of the owl's direct glide when it could see, and the feet swung "back and forth like a pendulum," giving the owl "the appearance of being constantly prepared to collide with an object or to land on the ground." Although it could see nothing, the owl constantly faced the area from which the sound had come and kept its eyes open until just before impact.

The movement of the feet just prior to impact was the same in light as in darkness. The owl brought its feet forward to a position just beneath the bill, then pulled its head back and turned "in mid-air, end for end, placing the talons so that they follow[ed] the trajectory formerly taken by the head." The spreading of the talons for the actual strike, however, occurred much sooner in the dark than in the light. The open talons were usually observed in the photographic sequences of strikes in darkness but were never caught on film in the sequences of strikes in light, not even in a photograph showing the feet just six inches away from the mouse.

How does the barn-owl perceive proximity to the target?

Payne's observation that the owl always brings its feet forward just before impact confirms the common-sense deduction that the owl must, even when it cannot see, have some perception of proximity to the mouse. However, the bird's slower, flapping flight in darkness with the feet dangling and the talons opening earlier suggests that its perception of nearness to the target is less certain in the absence of light. Awareness of approach to the target in darkness must be mediated by one or more of the following: by hearing, continually updated by the owl's kinetic sense of how far it has moved since it last heard the mouse; or by perception of closeness to the ground (where owls normally find prey), based on a sensation of increased back-pressure from wingstrokes

close to a surface; or by familiarity with the surroundings in combination with a kinetic sense of vertical displacement from the perch.

Payne performed some experiments to test whether the owl could judge the distance to the sound source by auditory means. He stretched a narrow strip of mist net horizontally between two supports. On this surface, the height of which he could vary, he placed a dead mouse with a leaf glued to it. By twitching a long string tied to the mouse, he made the leaf rustle until the owl took flight for a strike. The ability of the owl to judge distance accurately by means of hearing would be proven by a significant number of successful strikes at different heights. In the twelve trials performed, the position of the net was changed for each trial. In six trials, the owl flew past the net and struck the floor within six inches of the correct line of flight. In five trials, the owl alighted on the floor short of the mouse, and in one trial, the owl captured the mouse (perhaps due to an accidental collision with the net). The results were inconclusive.

What is the role of hearing in directional accuracy in strike tests?

To test this, Payne observed the accuracy of the owl's strikes in darkness. The error in the owl's perception of direction to a sound source should be no greater than the directional error of its strikes. Payne's experimental technique for determining the directional error of a strike was to locate the bird's impact point on the floor, measure the displacement of this from the target sound source, and compute from this displacement the azimuth and elevation errors. Azimuth error is the angular error right or left of the true direction to the target. Elevation error is the angular error above or below the true direction and is calculated from the position of the impact point beyond or short of the target. In the calculation of these angular errors, the displacement errors are divided by the strike distance, i.e., the distance to the target from the original position of the owl's head. For example, a one-inch miss of the target over a strike distance of ten feet produces the same angular error as a two-inch displacement over a distance of twenty feet, assuming that the angle of the owl's approach to the floor is the same in both instances. In the calculation of the strike elevation error, the angle of approach to the floor must be considered, because for near-horizontal angles, small errors above or below the true direction to the target result in large errors in impact beyond or short of the target. A familiar analogy is the stretching of our shadows when the sun is low in the sky.

The strike distance is a critical factor in the above calculations. The directional error varies approximately in inverse proportion to the strike distance. Because the

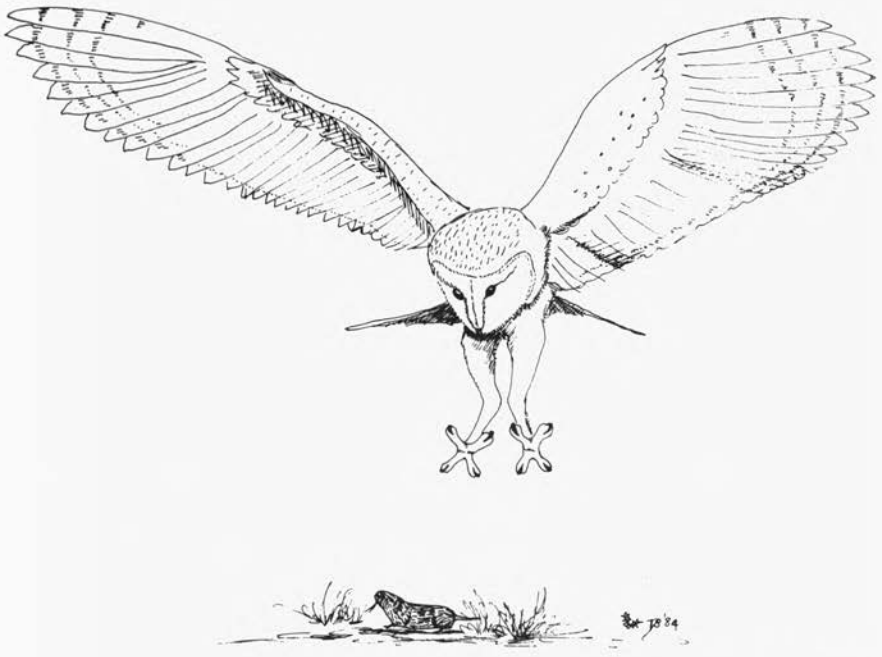

Illustration by Denise Braunhardt

original position of the owl's head when perched was the reference point for the calculation of direction, Payne had to design these directional accuracy experiments to prevent the target sound source from providing the owl with any additional information once the owl takes flight. To compute the mean error for a series of trials, Payne used only the data from strikes in which the owl missed its target and justified doing this "in order to exclude any trials in which the owl may have gained additional information during flight." In any case, as Payne points out, his averages probably overestimate the true error characteristic of the owl's strike. He further found that the owls would not strike at all beyond a distance of twenty-three feet. Instead, they would fly closer, alight on the floor, and listen for another sound from the intended prey.

Payne used two different setups for measuring strike accuracy. In one experiment, the target sound source was a small loudspeaker hidden under a layer of leaves. Recordings of leaf rustlings were played over the loudspeaker to induce the owl to strike. The error of the strike was determined by measuring between the center of the loudspeaker and the center of the owl's talon strike-pattern recorded on a sheet of Plasticene under the leaves in the vicinity of the loudspeaker. For one series of forty-four trials in which the owl missed

23 times, the experimenters reported the mean error of the misses as 2.9 ± 2.0 degrees in azimuth and 2.5 ± 1.6 degrees in elevation. Payne expressed some doubt about the results because of the poor quality of the loudspeaker, particularly at high frequencies. Generally, the owl waited longer to strike at recorded leaf noise. However, as we shall see later in another article, the speaker setup provided information on how the frequency composition of the sound affected the accuracy of the owl's directional perception.

In the other experimental arrangement, the target was a dead mouse with a leaf tied to its body. The mouse was pulled by a thread tied to its tail over sand once every ten seconds for a period of one second. As the owl left the perch, a switch was thrown to signal the experimenter, who instantly stopped pulling on the thread and thus minimized the chance of an additional sound being heard by the owl during its flight. The location of the owl's strike was determined by imprints in the sand. In a series that included more than 200 successful strikes, the mean error of a set of just five misses analyzed was 0.8 ± 0.5 degrees in azimuth and 0.5 ± 0.3 degrees in elevation.

The directional error being measured in the above experiments has two sources: the error in the owl's hearing-based perception of direction to the target and the deviation of its flight path from a straight line toward the target. In total darkness and without additional sounds to guide it, the bird's ability to fly along a straight line to the goal would depend on flight motor skills, sense of direction, and a kinetic sense of deviation from a straight path. Therefore, these tests demonstrated that the Common Barn-Owl has not only a remarkably accurate perception of direction based on hearing alone but also an extraordinary ability to fly a straight line.

Directional accuracy of the barn-owl's hearing measured by head orientation in response to sound.

In Payne's experiments, the barn-owl revealed its perception of direction by means of a complex sequence of motions that contributed their own errors to the measurable result. Might the owl accurately reveal its perceived direction of a sound source by some simpler behavior? In fact, the owl does this in its very first movement in response to a sound from potential prey: it turns to face directly toward the source of the sound. Since the eyes of an owl are fixed in position in its skull, movement of the entire head is necessary to align the eyes in the direction of the prey and also, as we shall see in a second article on this subject, to bring the target into the region of the owl's best auditory reception. We might reasonably expect that a movement so simple yet so essential to the optimal use of the owl's senses should be executed with an accuracy at least as good as that of the strike itself.

On this basis, Konishi and Knudsen investigated the directional accuracy of the Common Barn-Owl's hearing by measuring the head orientation of a perched owl in response to variably placed sounds. The measurements were taken in a totally dark chamber lined with materials to eliminate echoes. The direction faced by the owl was determined precisely by means of signals from a lightweight electromagnetic "search" coil mounted on top of the owl's head. The procedure was as follows. First, a sound was generated from a stationary "zeroing" speaker located directly in front of the owl's perch. This initial sound caused the owl to face precisely the same spot at the start of each test. Then, a sound was generated from a movable "target" speaker, and the direction that the owl turned to face was measured and compared to the actual direction of the target speaker. This speaker was arranged on a semicircular track so that it could be rotated about a horizontal axis and positioned in almost any direction relative to the owl's head but always at the same distance from it. A computer was used to control the position of the target speaker and to record the head movements of the owl. Thus Konishi and Knudsen could conveniently and rapidly perform a large number of precise tests without disturbing the bird unduly.

The results obtained by Konishi and Knudsen in these head-orientation tests agreed with Payne's findings; all three researchers demonstrated that the barn-owl is "capable of locating the source of a sound within a range of one to two degrees in both azimuth and elevation." However, Knudsen describes the barn-owl's accuracy in enlightening comparative terms: "One degree is about the width of a little finger at arm's length. Surprsingly, until the barn-owl was tested, man was the species with the greatest known ability to locate the source of a sound; human beings are about as accurate as the owl in azimuth but are three times worse in elevation. Monkeys and cats, other species with excellent hearing, are about four times worse than owls in locating sounds in the horizontal dimension, the only one in which they have been tested."

Correlation of directional accuracy with talon spread, prey size, and maximum strike distance.

Several factors determine the limits of angular error allowable if an owl is to be successful in catching prey. A rough calculation involving several parameters - the size of the owl's talon spread, the size of the prey, and the distance beyond which the owl will not strike at all but simply fly closer - can be made to determine quantitatively what these limits are.

From photographs and from holes left by the owl's talons in sheets of paper in the target area, Payne found that the owl strikes with the spread talons of its two feet held in a particular pattern. Both feet are rotated outward so that

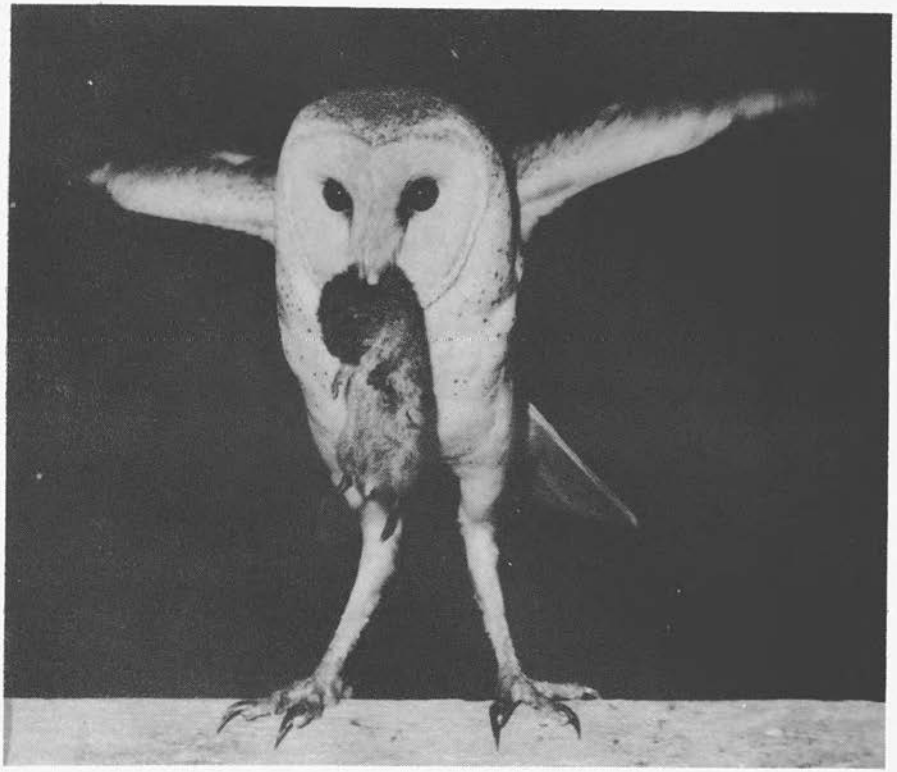

Photo by Hal H. Harrison
Courtesy of MAS

the separation between the two hind toes (halluces) is the same as that between the two inner toes, and the eight talons of the two feet together are spaced at regular intervals around the periphery of an ellipse. This strike pattern measures about six inches from side to side and three inches from front to back. The dimensions of a mouse body are about 3.5 inches by one inch. For the owl to make any contact at all with the body of a mouse, its six-by-three-inch talon strike pattern must intersect the 3.5-by-one-inch mouse. The accuracy required for this depends on the relative orientation between the long axis of the talons' pattern and the long axis of the mouse. Put roughly, the owl's strike pattern approximates a disk 4.5 inches in diameter, and the mouse's body a parallel disk roughly 2.25 inches in diameter. With these approximations, intersection results if the strike displacement perpendicular to the true path is no greater than 3.375 inches. At twenty-three feet, the distance beyond which Payne's owls would not strike, this displacement error results from an angular error of 0.7 degrees, a reasonable value in comparison to the experimentally measured directional errors.

Orientation of the talon strike pattern.

The directional accuracy of the barn-owl's hearing is further revealed in a fascinating manuever that it makes just before impact in a strike, a manuever first described by Payne. As the owl concludes a strike at a moving target, it rotates its body around the line of the strike so as to align the long axis of the talon strike pattern with the direction of movement of the prey, which usually corresponds to the prey's long axis. Payne performed an experiment to establish that the owl was controlling the orientation of its talons in darkness in accordance with a hearing-based perception of motion rather than a perception of prey body orientation based on some other sense.

The target in this experiment was a dead mouse with a leaf glued to its body. Two threads were tied to it so that the body could be pulled either perpendicular to the direction of the owl's strike or parallel to it. The threads were attached in such a way that the mouse would be dragged sideways or tumbling end over end unpredictably. The mouse was dragged only four inches at a time, with a pause of a few seconds before it was pulled back along the same path. This back-and-forth dragging was continued until the owl took flight to strike. In twelve such trials the owl always aligned the long axis of its talon strike pattern parallel to the path of dragging. Specifically, in the six trials in which the dragging path was parallel to the direction of the owl's approach, the owl rotated approximately ninety degrees for the strike; in the six trials with the dragging path perpendicular to the owl's approach, the owl made no detectable rotating maneuver. In some of these trials the mouse was dragged only a distance of two inches. With the owl 140 inches away, this indicates that this bird has the ability to determine the direction of an audible movement over an angle no larger than one degree.

In the orientation of its talons for the strike, the owl exhibits a complex but consistent behavior. The question immediately arises whether such a behavior gives the owl some survival advantage, most likely in this context an increased likelihood of capturing the prey. When the owl can see its prey clearly enough to execute its strike precisely on target, the behavior does seem advantageous, for it results in the owl's completely surrounding prey of mouse size by its talons so that it can grasp the prey securely with one or both feet. However, the advantage offered in a strike in darkness upon prey of uncertain position is not so clear-cut. In fact, the probability of the owl's talon pattern intersecting the body of a stationary mouse is maximized when the long axis of the pattern is perpendicular to the long axis of the mouse. On the other hand, Payne suggests that hitting the mouse with only one or two talons may expose the owl to the danger of being bitten and seriously injured. The parallel strike orientation may achieve the best balance between

maximizing the probability of an effective strike and minimizing the chance of injury from a marginal strike. Alternatively, since the mouse may move at the last instant, the probability of making contact may be maximized by aligning the long axis of the pattern with the most likely direction of movement. There seem to be no convincing arguments that the strike orientation behavior gives the owl any advantage at all in darkness.

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H. CHRISTIAN FLOYD, a member of the Bird Observer editorial board for four years, has been an avid birder since age thirteen and has particular interests in hawk migration and in bird banding. Chris is a "natural" choice to write on the subject of how birds reach their targets. In his work as a computer systems engineer, he helps design and test systems for directing fighter aircraft to their targets. But he has never had a good look at a barn-owl in the wild.

RESULTS OF THE 1984 CENSUS OF PIPING PLOVERS, AMERICAN OYSTERCATCHERS, AND WILLETS IN MASSACHUSETTS

by Scott Melvin, Massachusetts Natural Heritage Program

Piping Plovers (Charadrius melodus), American Oystercatchers (Haematopus palliatus), and Willets (Catoptrophorus semipalmatus) were systematically inventoried in Massachusetts for the first time in 1984. The statewide census was conducted by over thirty individuals, many of whom are also involved in tern census and management activities, and was coordinated by the Natural Heritage Program, a part of the Nongame and Endangered Species program of the Massachusetts Division of Fisheries and Wildlife.

An estimated 112 pairs of Piping Plovers were censused during the period of May 18 to July 1, 1984. Nesting or territorial birds were reported from over forty coastal locations, from Salisbury and Plum Island south to Westport and Dartmouth, and east to Cape Cod, Martha's Vineyard, and Nantucket. Most sites reported only one to four pairs; the exception was an estimated fourteen pairs at Sandy Neck in Barnstable.

As expected, the 1984 total of 112 pairs exceeds the 70-plus pairs that were reported incidental to tern censuses in 1983; many Piping Plovers not associated with tern colonies presumably went unreported in 1933. Thus, we believe that the difference between the 1983 and 1984 totals represents a sampling bias rather than a real increase and that the Piping Plover population in Massachusetts is actually stable or declining.

The majority of Piping Plover reports were for the period of May 18 to June 12; in fact, more observations were reported from the first two weeks in June than for the "official" census period of May 18 to 24. This suggests that future Piping Plover censuses can be timed to overlap censuses of colonial waterbirds, particularly terns, as long as complete coverage of potential Piping Plover habitat is achieved and inventory efforts go beyond traditional colonial waterbird nesting sites to check other areas of beaches and dunes where Piping Plovers may occur.

The Piping Plover has recently become an object of considerable concern to conservationists, as population declines have been documented or suspected over much of its breeding range in North America. It is currently under formal consideration for listing as a Federal Threatened Species by the U.S. Fish and Wildlife Service. Massachusetts' 1984 total of 112 pairs represents the largest breeding population in eastern North America. Piping Plovers nest from Newfoundland and Quebec south to Virginia, at a few sites on the Great Lakes, and west to Nebraska, Minnesota, the Dakotas, and the prairie

provinces of Canada. The entire North American breeding population is currently estimated at only 1600 pairs.

Declines in Piping Plover populations on the East Coast are attributed to loss of coastal nesting habitat to residential and recreational development and disturbance of nesting birds by beachgoers, off-road vehicles, and dogs. Conservation efforts for this species in Massachusetts are aimed at preserving coastal beach and dune habitat and protecting birds from disturbance during the May-June nesting season.

A total of 90-95 American Oystercatchers, including an estimated 42 pairs, was reported in the Massachusetts inventory during May and June 1984 (see Table 1). All breeding locations were in southeastern coastal areas. Thirty-two of 42 pairs (76 percent) were reported from three locations: Martha's Vineyard, Nantucket, and Monomoy National Wildlife Refuge (NWR).

Table 1. Results of inventory of breeding American Oystercatchers, May to June 1984.

Location	Estimated Pairs	Individuals
Little Beach, Dartmouth	1	2
Monomoy NWR, Chatham	12	25-30
North Beach, Chatham	1	2
Naushon Island, Gosnold	1	2
Weepecket Islands, Gosnold	1[a]	2
Penikese Island, Gosnold	1[a]	2
Cuttyhunk Island, Gosnold	2	4
Martha's Vineyard	14	28
Muskeget Island	1+	7
Whale Island	2	4
Nantucket	6	12
Totals	42	90-95

[a]Resident but apparently not nesting.

An estimated 85-94 Willets, including 37-39 pairs, were reported in 1984 (see Table 2). Breeding Willets currently have a more widespread distribution in the state than do American Oystercatchers, occurring from Plum Island south to Dartmouth and east to several locations on Cape Cod. Two locations, Monomoy NWR in Chatham and the general area of Plum Island and the Parker River NWR, accounted for over 55 percent of the pairs reported.

Table 2. Results of inventory of breeding Willets, May 21 to August 5, 1984.

Location	Estimated Pairs	Individuals
Woodbridge Island, Newburyport	1	2
Plum Island/Parker River NWR	7-9	14-18
Calf Island, Boston Harbor	0	1
West Island, Fairhaven	2	4
Barney's Joy, Dartmouth	2	4
E. Sandwich Beach, Sandwich	1	2
Sandy Neck, Barnstable	1	2
Gray's Beach, W. Yarmouth	1	2
West Dennis Beach, Dennis	1	2
Forest Beach, Chatham	2	4+
Harding's Beach, Chatham	2	4
Morris Island Causeway, Chatham	1	2
Monomoy NWR, Chatham	13	35-40
North Beach, Chatham	2	4
New Island, Orleans and Eastham	1	2
Cuttyhunk Island, Gosnold	0	1
Totals	37-39	85-94

Brad Blodget and I extend our thanks to all who contributed population data on breeding shorebirds this year. The total observer effort and resulting statewide coverage were outstanding, and we appreciate the individual efforts.

SCOTT MELVIN, Ph.D., the zoologist of the Massachusetts Natural Heritage Program, has been a birdwatcher most of his life. An easterner by birth and a graduate of the University of Maine, Scott earned his doctorate in the Department of Wildlife Ecology at the University of Wisconsin. He joined the Massachusetts Natural Heritage Program in 1983 directly after a period of postdoctoral research in the field of avian ecology. This research program was carried out at the University of Wisconsin.

Field Records

August 1984

by George W. Gove, Robert H. Stymeist, Lee E. Taylor

August 1984 was hot and humid and with little rain. The temperature averaged 74.6°, 2.7° more than the mean of prior years. This was the hottest August since 1973 and, with 1937, the third hottest in 114 years. Highs reached 90° or better on five days during the month, and 93° on the fifteenth was the highest temperature of the month. The low mark was 56° on August 21. Rain totaled 1.60 inches, 2.08 inches less than normal. This was the driest month since September 1983 when 1.06 inches fell. The month was quite humid with frequent fog; in fact heavy fog was observed on seven days in a row, from August 9-15, for a new record stretch. The summer of 1984 on the whole was the fourth warmest in 114 years of record, with rainfall near normal.

LOONS THROUGH CORMORANTS

The BOEM-sponsored two-day trip to Georges Bank and Hydrographer Canyon was again most successful. Both the variety of species and the quality of what was seen reflect the importance to marine birds of Georges Bank and the edge of the Continental Shelf. According to Wayne Petersen, one of the leaders, "Trips such as this should make the ecological importance of the region all the more obvious to those fortunate enough to experience it." Highlights included 15 Audubon's Shearwaters, all of which were carefully observed in the company of about 100 Leach's Storm-Petrels, one Band-rumped Storm-Petrel, and a possible White-tailed Tropicbird. The occurrence of the Band-rumped Storm-Petrel (Harcourt's or Madeira Storm-Petrel) was a first record for the North Atlantic (waters north of Delaware). In a recent article by David Lee,"Petrels and storm-petrels in North Carolina's offshore waters" (American Birds, 38: 151-163), he states that, with few exceptions, the 75 sightings of this species in North Carolina waters (off Oregon Inlet) were obtained in deep-water zones (500-1000+ fathoms) with surface sea temperatures of 80.2°-83.1° F. and were, therefore, "consistent with the idea that this storm-petrel is a highly pelagic, warm-water species." The depth at the Hydrographer Canyon area where the bird was seen was a mere 550 feet; the surface water temperature was 80° F. Because it is very difficult to arrange regular trips into deep-water areas, the true status of this bird off our coast is uncertain. The sighting of a tropicbird was made as the bird flushed from the water and flew directly in front of the boat, but no positive identification could be made due to the glare.

In waters closer to shore, as many as 15 Manx Shearwaters were seen on Stellwagen Bank where at least 2500 Wilson's Storm-Petrels were counted in early August. On a sea trip to waters southwest of Martha's Vineyard, 150 Cory's, 700 Greater, and 5 Manx shearwaters were recorded, along with at least 1300 Wilson's and 3 Leach's storm-petrels.

R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Common Loon:				
18	Manchester	1	E.Foster	
Cory's Shearwater:				
18,30	Stellwagen	3, 3	D.Lange, H.Wiggin	
20-21	Nantucket Shoals,S.W.Georges B.	40	BOEM (W.Petersen)	
25	S.W. of M.V.	150	BOEM (W.Petersen)	
Greater Shearwater:				
18,30	Stellwagen	300, 150	D.Lange, H.Wiggin	
20-21	Nantucket Shoals,S.W.Georges B.	275	BOEM (W.Petersen)	
25	S.W. of M.V.	700	BOEM (W.Petersen)	
Sooty Shearwater:				
18,30	Stellwagen	40, 15	D.Lange, H.Wiggin	
21	Nantucket Shoals	26	W.Petersen	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Manx Shearwater:				
1,4	Dux. Bay, Boston Harbor	2, 2	D.Clapp#, R.Stymeist#	
5,18,30	Stellwagen	5, 15, 1	J.Berry,D.Lange,H.Wiggin	
21	Chatham-Stellwagen	9	BOEM (W.Petersen)	
25	S.W. of M.V.	5	BOEM (W.Petersen)	
Audubon's Shearwater:				
20	Hydrographer Canyon	15	BOEM (W.Petersen)	
Wilson's Storm-Petrel:				
4,5,18	Stellwagen	2500+, 500+, 700	R.Stymeist#,J.Berry,D.Lange	
20,21	Nantucket Shoals,S.W.Georges B.	4000	BOEM (W.Petersen)	
25	S.W. of M.V.	1300	BOEM (W.Petersen)	
Leach's Storm-Petrel:				
20	Hydrographer Canyon	100	BOEM (W.Petersen)	
21	Stellwagen	1	BOEM (W.Petersen)	
25	S.W. of M.V.	3	BOEM (W.Petersen)	
Band-rumped Storm-Petrel:				
20	vic. of Hydrographer Canyon	1	BOEM (R.Veit,W.Petersen)	
tropicbird, species:				
20	Hydrographer Canyon	1	BOEM (R.Veit,W.Petersen)	
Northern Gannet:				
28	P.I. (Emerson Rock)	1	R.Forster#	
Double-crested Cormorant:				
1,5	Duxbury Bay, P.I. area	150, 500	D.Clapp#, BBC	
11,25	Monomoy, Newbypt.	200, 400+	BBC, J.Berry	

HERONS THROUGH RAPTORS

A pair of Least Bittern parents exhibited three downy young to hundreds of birders along the dike at Hellcat Swamp on Plum Island. There were no serious counts made at the Plum Island heron roost this year with the exception of seven Little Blue Herons noted on August 28. Tricolored Herons were found on South Monomoy, Plum Island, and in Duxbury. The roost of night-herons at Hemenway Landing in Eastham totalled a maximum of 166 Black-crowned and 5 Yellow-crowned on August 20.

A lone male Greater Scaup was unusual for mid-August, seen at close range at Hellcat Swamp on Plum Island for at least four days. Two hundred twenty-five Common Eider in Duxbury Bay were mostly young males.

A Turkey Vulture was observed over North Monomoy on August 18, and a migrating Broad-winged Hawk was noted in Brookline on August 30. The six Peregrine Falcons released on the Post Office Building in downtown Boston started to fly during August, and on the fourth several observers saw four birds at once. The captive-bred falcons, two females and four males, were brought to Boston on July 17 by the Peregrine Fund of Cornell University as part of a national program to reestablish the species in the eastern United States. Unfortunately, not all six survived. The first mishap occurred on August 21 when a male crashed against windows on a courtyard on top of the Bank of New England building. The falcon was paralyzed and was treated for three days at the Tufts University School of Veterinary Medicine but did not survive. The next accident was on August 29 when a female was found with a broken wing by members of Logan Airport's bird patrol near the ocean shore. This bird underwent surgery at Tufts and was flown to Cornell to recuperate. The same day, remains of a tiercel (a male) were found on a runway at Hanscom Field in Bedford. The bird was apparently struck by a plane. The death of one third of the birds was unfortunate but is the typical mortality rate according to Thomas W. French, assistant director, Nongame and Endangered Species, Massachusetts Division of Fisheries and Wildlife. R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
American Bittern:				
thr.	P.I.	1+	v.o.	
Least Bittern:				
thr.	P.I. (Hellcat)	max. 2 ad., 3 yg.	v.o.	
Great Blue Heron:				
thr.	P.I.	max. 18	G.d'Entremont + v.o.	
12,18,21	GMNWR	17, 9, 11	B.Phillips	
21,28	Eastham, Saugus	31, 10	R.Titus, J.Berry	
Great Egret:				
12-31	P.I.	max. 6 (8/16)	M.Lynch# + v.o.	
16,18	Westport, S.Dartmouth	30, 24	R.Laubach, G.Gove#	
Snowy Egret:				
thr.	P.I.	max. 150	J.Grugan + v.o.	
5,6	Squantum, Duxbury	75, 200	R.Abrams, D.Clapp	
11,23	Monomoy, Beverly Harbor	36, 24	R.Stymeist#, J.Berry	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Little Blue Heron:				
thr.	P.I.	max. 7 (8/28)	G.Bertrand + v.o.	
thr.	Monomoy	max. 2	R.Humphrey + v.o.	
5,26	Wareham, Mashpee	1 imm., 1	L.Robinson, P.Trimble	
Tricolored Heron:				
3,6	Duxbury	1, 1	K.Anderson#, D.Clapp	
5,18	P.I.	1 ad.	J.Grugan, W.Regan	
26	S.Monomoy	1	B.Nikula + v.o.	
Cattle Egret:				
6,9	Ipswich	3, 15-20	J.Berry	
Green-backed Heron:				
thr.	P.I., GMNWR	max. 6, max. 5	v.o.	
5,27	Lancaster (Bolton Flats)	5, 8	M.Lynch, S.Carroll	
26, 31	Scituate, Wayland	5, 9+	D.Clapp, R.Forster	
Black-crowned Night-Heron:				
thr.	P.I.	max. 29 (8/6)	v.o.	
thr.	Eastham (Hemenway)	max. 166 (6/20)	B.Nikula# + v.o.	
31	Wayland	9	R.Forster	
Yellow-crowned Night-Heron:				
thr.	Eastham (Hemenway)	max. 5 (8/20,27)	B.Nikula# + v.o.	
thr.	P.I.	max. 2	v.o.	
Glossy Ibis:				
thr.	P.I., S.Monomoy	max. 15 (8/19), max. 5	v.o.	
Mute Swan:				
18	Westport	114	G.Gove#	
Canada Goose:				
thr.	P.I., Sherborn	max. 150, 350	v.o., E.Taylor	
Wood Duck:				
5,18	Lancaster (Bolton Flats)	18, 20	M.Lynch, S.Carroll	
5	Ipswich (Norman's Pd.)	12	J.Berry	
26	GMNWR	15	BBC	
Green-winged Teal:				
thr.	P.I.	max. 20 (8/5, 8/26)	v.o.	
Northern Pintail:				
16,25	P.I.	3, 5	J.Nove#,G.d'Entremont#	
Blue-winged Teal:				
thr.	P.I.	max. 80 (8/28)	R.Forster# + v.o.	
Northern Shoveler:				
28	P.I.	1	R.Forster#	
Gadwall:				
9	P.I.	1 f. w/llyg.	D.Arvidson#	
American Wigeon:				
thr.	P.I.	max. 16 (8/26)	v.o.	
Greater Scaup:				
16-19	P.I.	1	J.Nove# + v.o.	
Common Eider:				
1	Duxbury Bay	225	D.Clapp#	
Surf Scoter:				
thr.	Scituate	1	W.Petersen + v.o.	
19,25	Wareham, off Fairhaven	1, 7	L.Robinson, W.Petersen#	
White-winged Scoter:				
13,16	Westport	3	R.Laubach	
Common Scoter:				
20	Eastham	2 f.	B.Nikula#	
Turkey Vulture:				
18	N.Monomoy	1	B.Nikula	
Northern Harrier:				
thr.	P.I.	max. 5 (8/25)	G.d'Entremont # + v.o.	
Sharp-shinned Hawk:				
20	Middleboro	1	R.Titus	
Northern Goshawk:				
10,13	E.Middleboro	1 ad.	K.Anderson#	
Red-shouldered Hawk:				
17-29	E.Middleboro	1	K.Anderson	
Broad-winged Hawk:				
30	Brookline	1 ad. mig.	R.Stymeist#	
American Kestrel:				
19	Newbypt.	4 ad., 3 yg.	R.Stymeist#	
Peregrine Falcon:				
thr.	Boston	max. 4 (8/4)	C.Floyd# + v.o.	
	These are hacked birds / Cornell's Peregrine Fund			
17	Wareham	1	L.Robinson	

Five Lesser Golden-Plovers were reported this month. Reports and numbers of Piping Plover were down this year with only ten reported from North Monomoy and one from Plum Island for the month. This species may be in trouble due to loss of or competition for appropriate habitat. An American Avocet spent the month's end at Plum Island, mostly in Stage Island Pool. The highest August count of Willets in the last 12 years was reported from North Monomoy with 75 birds present. Ten Upland Sandpipers were at Hanscom Air Force Field, and one was seen in Watertown, an unlikely spot. The count of Whimbrels at North Monomoy eclipsed last month's unprecedented numbers with 230 observed going to roost. On Nantucket, 75 Whimbrels were seen and a "Eurasian" Whimbrel was also reported from there; there have been five previous records of this whimbrel since 1973. The Eurasian Whimbrel is conspecific with our Whimbrel and is identified by the white "vee" on the rump and lower back, similar to that mark on dowitchers.

Reported numbers of Hudsonian Godwit are down from the usual August peak counts. August and September are the big months for Marbled Godwits. Three were present on North Monomoy, and two singles were reported from Newburyport this month. The report of 3000 Sanderlings constitutes the highest total for that species in twelve years. Numbers of Western Sandpiper are below usual as totals for August are generally 3-20, maxima up to 50 birds. Also sparse are reports and numbers of Baird's Sandpiper. A few Dunlin are starting to trickle in indicating the approach of winter. The Curlew Sandpiper continued into early August at Squantum. The number of reports of Buff-breasted Sandpipers and the number of birds is about average with one from each of four locations. Reports of American Woodcock are unusual for August, but there were two reports this month. Reports of Red Phalaropes are unusual anytime.

There were two reports this month from Plum Island of very unusual birds that were not seen subsequent to the initial report, and there were no photographs or substantiating details. The first was of a Little Stint that may have actually been a juvenile Least Sandpiper. People are looking more closely at shorebirds of late and the juvenile plumage of most shorebirds is ephemeral. Thus when we see juvenile birds in bright, crisp, clean plumage, we are sometimes baffled. They do not look like anything we are familiar with and we try to make something else of them. The other bird was identified as a Spoon-billed Sandpiper, and it, too, could not be found subsequent to its initial appearance. In the area where the bird had been, there were one or two Semis feeding in the mud. It is possible that one of these birds had a bill aberration, or the mud was extremely tenacious and stuck to and accumulated on the bill.

The above is not to say that those birds were not actually there; they were simply not seen by others and thus not substantiated. Remember the Spotted Redshank of two years ago. Only two people (from New Jersey) saw it but they took photos!

A South Polar Skua was seen on the BOEM Hydrographer Canyon trip as were two Pomarine Jaegers. A skua species, probably a South Polar Skua, was seen on the BOEM Nantucket Shoals trip. A Gull-billed Tern was reported from Eastham, and Caspian and Royal terns were seen during the month. "Portlandica" Arctic Terns and Forster's Terns were present on North Monomoy. A Bridled Tern was reported from Stellwagen Bank (see field report elsewhere in this issue). The adult and immature skimmers at Monomoy and Orleans represented post-breeding dispersal from more southerly breeding areas and probably included the young fledged at Monomoy. A sub-adult Atlantic Puffin was seen on a whalewatch trip out of Boston, and another was found injured on Plum Island.

Again, as in past years, Lars Anderson Park in Brookline was carefully monitored during the Common Nighthawk migration, and a total of 1035 were counted there during August. Complete results of the nighthawk migration survey can be obtained from the Natural History Services of M.A.S.

At least ten Ruby-throated Hummingbirds were seen at Bolton Flats and a Pileated Woodpecker appeared in Dover. G.W.G. & R.H.S.

SPECIES/DATE	LOCATION	NUMBERS	OBSERVERS	AUGUST 1984
Virginia Rail:				
5,13	P.I., Lancaster	7-8 heard, 8	J.Berry, M.Lynch#	
26	GMNWR	4	BBC	
Sora:				
19,26	GMNWR	8, 2	D.Gibson, BBC	
Common Moorhen:				
26	GMNWR	1	BBC	
Black-bellied Plover:				
thr.	N.Monomoy, P.I.	max. 1000 (8/19), max. 1200 (8/29)	B.Nikula#, v.o.	
8,31	Squantum	32, 175	W.Reagan	
29	Scituate	300	W.Petersen	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Lesser Golden-Plover:				
8,18	Squantum, Scituate	2, 1	W.Reagan, W.Petersen	
25	P.I.	2 ad.	v.o.	
Semipalmated Plover:				
thr.	N.Monomoy, P.I.	max. 800 (8/19), max. 400 (8/5)	B.Nikula#, v.o.	
4,6	Squantum, Scituate	200, 400	G.d'Entremont, D.Clapp	
13,30	Westport, Boston	20, 27	R.Laubach, J.Carter	
Piping Plover:				
thr.	N.Monomoy	max. 10 (8/20)	B.Nikula#	
20	P.I.	1	F.Bouchard	
Killdeer:				
6,16,21	Bedford	17+, 12, 16	J.Carter	
29	P.I.	10	W.Reagan	
American Oystercatcher:				
thr.	N.Monomoy	max. 32+ (8/20)	B.Nikula#	
American Avocet:				
25-31	P.I.	1	C.Casas + v.o.	
Greater Yellowlegs:				
3,5-19	Duxbury, P.I.	200, max. 200 (8/5)	K.Anderson#, v.o.	
11,29	N.Monomoy	200, 60	R.Stymeist#, P.Trimble	
Lesser Yellowlegs:				
thr.	Halifax	max. 19 (8/1)	K.Anderson	
5-19	P.I.-Newbypt.	max. 450 (8/11)	v.o.	
29,31	N.Monomoy, Squantum	20, 45	P.Trimble, W.Reagan	
Solitary Sandpiper:				
1,18	Halifax, P.I.	2, 1	K.Anderson, J.Grugan	
16,26	GMNWR	1, 1	J.Carter, BBC	
Willet:				
thr.	N.Monomoy	max. 75 (8/1)	B.Nikula#	
5-19	P.I.	max. 2	v.o.	
6,26	Scituate, Mashpee	2, 3	D.Clapp, P.Trimble	
Spotted Sandpiper:				
1,4	Halifax, Wareham	2, 3	K.Anderson, L.Robinson	
5,12	Westport, P.I.	12, 3	R.Stymeist#, BBC	
26	Mashpee	3	P.Trimble	
Upland Sandpiper:				
5-19	Newbypt.	max. 5 (8/19)	v.o.	
8-29	Bedford	max. 10 (8/29)	J.Carter	
31	Watertown	1	R.Stymeist	
Whimbrel:				
thr.	N.Monomoy	230 (counted going to roost)	B.Nikula#	
5,9	Chatham, Nantucket	42, 75	F.Bouchard, K.Harte	
16-28,29	P.I., Scituate	max. 6 (8/28), 5	v.o., W.Petersen	
26	Mashpee	4	P.Trimble	
"Eurasian"Whimbrel:				
9,10	Nantucket	1 (verbal details given to M.A.S. over phone)	K.Harte	
Hudsonian Godwit:				
thr.	N.Monomoy	max. 100 (8/1)	v.o.	
thr.	P.I.-Newbypt.	max. 31 (8/29)	v.o.	
Marbled Godwit:				
thr.	N.Monomoy	max. 3 (8/26-31)	v.o.	
18,22	Newbypt.	1, 1	R.Forster#, W.Reagan	
Ruddy Turnstone:				
4,5-29	Wareham, P.I.	60, max. 20 (8/12+19)	L.Robinson, v.o.	
5	S.Dartmouth, Chatham	15, 27	R.Stymeist#, F.Bouchard	
11,29	Monomoy, P.I.	100, 15	BBC, W.Reagan#	
Red Knot:				
5-29	P.I.	max. 15 (8/29)	W.Reagan#	
6	Scituate	1300	D.Clapp	
5-29	N.Monomoy	max. 400 (8/11)	v.o.	
Sanderling:				
thr.	N.Monomoy	max. 3000 (8/4)	B.Nikula#	
Semipalmated Sandpiper:				
thr.	N.Monomoy	max. 2400 (8/4)	B.Nikula#	
5,19;5	P.I.; Orleans	1500, 250; 1800	BBC; B.Nikula	
25,28	P.I., Halifax	1000+, 100	J.Berry#, W.Petersen	
Western Sandpiper:				
18	P.I.	1	W.Reagan	
Least Sandpiper:				
11,29	N.Monomoy	250, 100	R.Stymeist#, P.Trimble	
28,29	Halifax, P.I.	150, 100	W.Petersen, B.Cassie#	
White-rumped Sandpiper:				
5-29	P.I.	max. 20 (8/28)	v.o.	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
White-rumped Sandpiper (cont.):			
17,19	S.Monomoy	40, 50	B.Nikula#
Baird's Sandpiper:			
20-29	P.I.	max. 2 (8/25)	v.o.
26	S.Monomoy	1	B.Nikula#
Pectoral Sandpiper:			
thr.	Halifax	max. 10 (8/28)	K.Anderson, W.Petersen
26,29	P.I., N.Monomoy	4, 4	G.d'Entremont, P.Trimble
Dunlin:			
26;28,29	Scituate; P.I.	1; 1, 4	W.Petersen#;R.Forster,B.Cassie
Curlew Sandpiper:			
2,3 (from July)	Squantum	1	W.Reagan, R.Abrams
Stilt Sandpiper:			
5-28	P.I.	max. 21 (8/16)	v.o.
2;17,19	N.Monomoy; S.Monomoy	25; 8, 8	R.Heil; B.Nikula#
Buff-breasted Sandpiper:			
25,26	P.I., N.Monomoy	1, 1	J.Berry#, J.Russell#
26,27	Scituate, Marblehead	1, 1	W.Petersen#, J.Smith
Short-billed Dowitcher:			
thr.	N.Monomoy	max. 1200 (8/1)	v.o.
5-29	Newbypt.-P.I.	max. 150 8/5)	v.o.
3	Duxbury	150	K.Anderson#
Long-billed Dowitcher:			
5-28	P.I.	max. 63 (8/11)	v.o.
Common Snipe:			
19,29	P.I.	1, 1	BBC, B.Cassie#
26	GMNWR	4	BBC
American Woodcock:			
5,27	Lancaster, Ipswich	2, 1	S.Carroll#, J.Berry
Wilson's Phalarope:			
17,19	S.Monomoy	4, 4	B.Nikula#
26,29	N.Monomoy	1, 2	B.Nikula#, P.Trimble
Red-necked Phalarope:			
18,21	Stellwagen	3, 12	D.Lange, W.Petersen#
25,30	P.I., off Gloucester	1, 10	J.Berry, H.Wiggin
Red Phalarope:			
18,21	Stellwagen, Nantucket Shoals	1, 120	D.Lange, W.Petersen#
Pomarine Jaeger:			
20	Hydrographer Canyon	2	BOEM
25	S.W. of M.V.	7	BOEM
Parasitic Jaeger:			
1,21	N.Monomoy, Stellwagen	1, 7	B.Nikula#, W.Petersen#
Skua sp.:			
25	S.W. of M.V.	1	BOEM
South Polar Skua:			
21	Nantucket Shoals	2 imm. (ph.)	BOEM(W.Petersen,R.Veit#)
Laughing Gull:			
18	Rockport	4 imm.	J.Berry
11,29	N.Monomoy	450, 60	BBC, P.Trimble
26,28	Scituate, P.I.	5 imm., 3 imm.	D.Clapp, R.Forster#
Little Gull:			
12-28	Newbypt.	max. 3 (1 ad. + 2 sub-ad.)(8/28)	R.Forster#
Common Black-headed Gull:			
thr.	N.Monomoy	2 ad.	D.Holt#
16	Yarmouthport	1	P.Trull
Bonaparte's Gull:			
thr.	Newbypt.	max. 275 (8/11)	v.o.
Ring-billed Gull:			
11	Newbypt.	350	R.Forster#
Herring Gull:			
11	N.Monomoy	2000+	BBC
Great Black-backed Gull:			
11	N.Monomoy	3000	BBC
Gull-billed Tern:			
25	Eastham	1 (no details)	F.Bouchard
Caspian Tern:			
1,8	Wollaston	1, 2	W.Reagan
Royal Tern:			
18	Newbypt.	1	J.Grugan
Roseate Tern:			
11,29	N.Monomoy, Scituate	30, 250	BBC, W.Petersen

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Common Tern:				
11,18	N.Monomoy, Rockport	300, 265	BBC, J.Berry	
21,29	Eastham, Scituate	1500, 650	R.Titus, W.Petersen	
Arctic Tern:				
1	N.Monomoy	25 Portlandica	B.Nikula	
5	Stellwagen	2 ad.	J.Berry	
29,30	N.Monomoy, Stellwagen	1 br. pl., 1	P.Trimble, H.Wiggin	
Forster's Tern:				
thr.	N.Monomoy	max. 7 (8/11)	BBC + v.o.	
17	S.Monomoy	11	B.Nikula	
27,30	Scituate, Stellwagen	1, 1	W.Petersen, H.Wiggin	
Least Tern:				
12,28	P.I.	9, 5	BBC, R.Forster	
Bridled Tern: (Details elsewhere in this issue.)				
25	Stellwagen	1	W.Ellison	
Black Tern:				
6,20	P.I., Georges Bank	1, 1	BBC, BOEM	
29	Scituate	1	W.Petersen	
Black Skimmer:				
thr.	N.Monomoy	max. 9 (4 ad. + 5 imm.)	v.o.	
thr.	Orleans	max. 10 (3 ad. + 7 imm.)	B.Nikula	
24	P.I.	2	I.Giriunas#	
Atlantic Puffin:				
4	Stellwagen	1 sub-ad.	R.Stymeist#	
9	P.I.	1 imm.	fide D.Taylor	
Mourning Dove:				
22	Stoughton	106	R.Titus	
Yellow-billed Cuckoo:				
29	E.Middleboro	1	K.Anderson	
Eastern Screech-Owl:				
thr.	Ipswich	1-2	J.Berry	
Short-eared Owl:				
thr.	N.Monomoy	max. 5	D.Holt#	
Common Nighthawk:				
18	Beverly, Watertown	2, 2	S.Loring, R.Stymeist	
21,31	Brookline	total 1035	R.Stymeist#	
21-24	Worcester	total 197	M.Lynch#	
21	Melrose	48 (1 hr.)	C.Jackson	
24,28	Milford,Winchester	255, 10	G.Gove	
24	Wareham, New Bedford	3, 3	R.Stymeist, G.Gove	
Whip-poor-will:				
9	Sharon	1	R.Titus	
Chimney Swift:				
7,21	Bedford, Marshfield	50+, 60+	J.Carter, D.Clapp	
Ruby-throated Hummingbird:				
13	Lancaster (Bolton Flats)	10+	M.Lynch, S.Carroll	
Pileated Woodpecker:				
27	Dover	1	P.Hallowell	

FLYCATCHERS THROUGH PURPLE FINCH

A telephone survey of persons known to maintain Purple Martin houses at South Shore locations indicated good breeding success compared to recent years. Martin productivity as measured by average number of fledged young per nest was high and was attributed to favorable weather conditions, in particular low rainfall during the period when the young would be susceptible to exposure.

A remarkable flock totaling 110 individual Eastern Kingbirds was observed assembling at dusk on August 13 in Lancaster. The fall passerine migration was noticeable by the third weekend of the month, with reports of Blue-gray Gnatcatcher, Philadelphia Vireo, Nashville, Magnolia, Black-throated Blue, and Bay-breasted warblers from migrant-trap sites.

Rarities for the month were comparatively scarce. Two Jackdaws, the second of which was initially detected in July, remained on Nantucket. Both "Brewster's" and the less common "Lawrence's" hybrids of Blue-winged and Golden-winged warblers were reported. An immature Yellow-headed Blackbird was seen by many observers for a period of over a week at Plum Island. L.E.T.

Eastern Wood-Pewee:			
17-28,18	E.Middleboro, ONWR	1, 2	K.Anderson, M.Lynch#

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
Alder Flycatcher:			
5	Lancaster	2	S.Carroll#
Willow Flycatcher:			
5;5,18	P.I., Lancaster	5; 7, 2	BBC, M.Lynch#
Eastern Phoebe:			
26, 27	GMNWR, ONWR	1, 4	BBC, S.Carroll#
Eastern Kingbird:			
thr.,13	P.I., Lancaster	max. 20 (8/19), 110	v.o., M.Lynch#
Purple Martin:			
thr.	P.I., South Shore	max. 100 (8/5), 175+ pr.	v.o., fide D.Clapp
31	E.Middleboro	2	K.Anderson
Tree Swallow:			
5,19,26	P.I.	100, 5000+, 3000	v.o.
Cliff Swallow:			
16	Stoughton	1	R.Titus
Barn Swallow:			
12,31	Bedford, Wayland	150+, 89	J.Carter, R.Forster
Fish Crow:			
27,29	Norwell, Whitman	1, 1	R.Forster, W.Petersen
Jackdaw:			
thr.(from 7/11)	Nantucket	2	v.o.
Red-breasted Nuthatch:			
26	Ipswich	2	J.Berry
Carolina Wren:			
6-12	Hopkinton	1	J.Gordon
Marsh Wren:			
thr.,26	P.I., GMNWR	max. 20 (8/5), 8	v.o., BBC
Blue-gray Gnatcatcher:			
5,18	Natick, MNWS	1 ad. + 2 yg., 1	E.Taylor, M.Martinek
Cedar Waxwing:			
12,29	P.I., Annisquam	8, 6	BBC, H.Wiggin
White-eyed Vireo:			
18	Westport	1 imm.	G.Gove#
Yellow-throated Vireo:			
5,23	Lancaster, Lincoln	2, 1	M.Lynch#, J.Carter
Philadelphia Vireo:			
18,28	Medfield, MNWS	1, 1	W.Reagan, J.Smith
Blue-winged Warbler:			
12,17	Hopkinton, Wayland	2, 2	J.Gordon, B.Howell
18,24	ONWR, MNWS	7, 4	S.Carroll#, M.Martinek
Golden-winged Warbler:			
12,28	P.I., MNWS	1, 1	BBC, J.Smith
"Lawrence's" Warbler:			
24	MNWS	1	M.Martinek
"Brewster's" Warbler:			
17,24	Wayland, MNWS	1, 1	B.Howell, M.Martinek
Tennessee Warbler:			
24,29	MNWS, P.I.	1, 1	M.Martinek, B.Cassie#
Nashville Warbler:			
18,24	P.I., MNWS	1, 1	J.Grugan, M.Martinek
Magnolia Warbler:			
18	P.I.	1	S.Carroll#
Cape May Warbler:			
21,26	P'town, P.I.	2, 2	R.Titus, BBC
Black-throated Blue Warbler:			
18,28	MNWS, P.I.	1, 1	M.Martinek, R.Forster#
Blackburnian Warbler:			
8,28	Sharon, P.I.	1, 1	R.Titus, K.Holmes
Pine Warbler:			
7	Concord	1 ad. + 2 yg.	J.Carter
Bay-breasted Warbler:			
18,18,21	P.I., MNWS, P'town	2, 2, 5	M.Lynch#, M.Martinek, R.Titus
Black-and-white Warbler:			
18,19	P.I.	1, 2	M.Lynch#, BBC
American Redstart:			
17,19	Wayland, P.I.	1, 3	B.Howell, BBC
Ovenbird:			
17	Wayland	2	B.Howell
Northern Waterthrush:			
4,21	Sharon, WBWS	3, 2	R.Titus
25,28	Annisquam, P.I.	2, 1	H.Wiggin, K.Holmes
Louisiana Waterthrush:			
6	Rockport	1 imm. b.	R.Norris

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	AUGUST 1984
Wilson's Warbler:				
26	Mt.A.	1	J.Heywood	
Canada Warbler:				
17,28	Wayland, P.I.	4, 1	B.Howell, K.Holmes	
Rose-breasted Grosbeak:				
26	Newbypt., Mashpee	3, 1 f.	J.Grugan, P.Trimble	
Indigo Bunting:				
19	Concord	6	J.Carter	
Savannah Sparrow:				
10	Bedford	25+	J.Carter	
Grasshopper Sparrow:				
10	Bedford	1	J.Carter	
Sharp-tailed Sparrow:				
5,29	P.I., Monomoy	15, 40+	BBC, P.Trimble	
Seaside Sparrow:				
5,22	Hyannis, Newbypt.	1, 1	G.Wilson, H.Wiggin#	
White-throated Sparrow:				
8	Sharon	3-4	R.Titus	
Bobolink:				
13,31	Lancaster, Wayland	86, 370	S.Carroll#, R.Forster	
Red-winged Blackbird:				
13,31	Lancaster, Wayland	60, 1467	M.Lynch#, R.Forster	
Eastern Meadowlark:				
26	Lincoln	30+	J.Carter	
Yellow-headed Blackbird:				
19-28	P.I.	1 imm. m.	v.o.	
Purple Finch:				
24	Annisquam	3	H.Wiggin	
House Finch:				
29	P.I.	400	B.Cassie#	

LIST OF ABBREVIATIONS

ad.	adult	F.E.	First Encounter Beach, Eastham
alt.	alternate (plumage)	F.H.	Fort Hill, Eastham
b.	banded	F.M.	Fowl Meadow, Milton
br.	breeding	gr.	greater as in Gr. Boston area
dk.	dark (phase)	I.	Island
f.	female	M.V.	Martha's Vineyard
fl.	fledge	Mt.A.	Mt. Auburn Cemetery, Cambridge
imm.	immature	Nant.	Nantucket
ind.	individuals	Newbypt	Newburyport
loc.	locations	P.I.	Plum Island
lt.	light (phase)	P'town	Provincetown
m.	male	R.P.	Race Point, Provincetown
max.	maximum	S.N.	Sandy Neck, Barnstable
migr.	migrating	Stellw.	Stellwagen (Bank)
N.S.E.W.	direction	BBC	Brookline Bird Club
ph.	photographed	BOEM	Bird Observer of Eastern Massachusetts
pl.	plumage	CCBC	Cape Cod Bird Club
pr.	pair	DFWS	Drumlin Farm Wildlife Sanctuary
thr.	throughout	GMNWR	Great Meadows National Wildlife Refuge
v.o.	various observers	IRWS	Ipswich River Wildlife Sanctuary
W	winter (2W = second winter)	MAS	Massachusetts Audubon Society
w/	with	MBO	Manomet Bird Observatory
yg.	young	MNWS	Marblehead Neck Wildlife Sanctuary
#	additional observers	ONWR	Oxbow National Wildlife Refuge
A.A.	Arnold Arboretum	PRNWR	Parker River National Wildlife Refuge
A.P.	Andrews Point, Rockport	SRV	Sudbury River Valley
Buzz.	Buzzards (Bay)	SSBC	South Shore Bird Club
C.	Cape as in C.Cod or C.Ann	WBWS	Wellfleet Bay Wildlife Sanctuary
E.P.	Eastern Point, Gloucester		

ALCID POSTER AVAILABLE

A 15" x 21" poster titled Alcids of the North Atlantic featuring excellent black and white line drawings of these seabirds by the Canadian artist, Ian L. Jones, can be ordered for $5.50, including postage and handling, from

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39 South Main Street Ipswich, MA 01938

Sabine's Gull. Churchill
Photo by R. R. Lowell
Courtesy of MAS

Field Records

September 1984

by George W. Gove, Robert H. Stymeist, Lee E. Taylor

September was a very pleasant month with the temperature averaging 62.1°, 2.5° below normal and the first cooler-than-normal month since May. The high mark for the month was 85°, set on both September 11 and 24. The lowest temperature was 40° on September 27, when the mercury rose to just 52°, a record low value for the date; the prior record low was 54° in 1893.

Rainfall totaled only 1.22 inches, 2.19 inches under the normal for September. Sunshine on the other hand prevailed 67 percent of the possible time. R.H.S.

LOONS THROUGH CORMORANTS

By midmonth migrating loons were noted flying past coastal locations. On September 15 winds were out of the northeast, and at Sandy Neck in Barnstable, observers noted 17 Common Loons, 2 Cory's, 17+ Greater, and 8 Manx shearwaters, as well as two Leach's Storm-Petrels. A Brookline Bird Club trip to Stellwagen logged in 16 Manx Shearwaters on September 9. Double-crested Cormorants were moving all month with many migrating flocks reported. R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
Common Loon:			
2,15	Wareham,Barnstable(S.N.)	9, 17	L.Robinson,R.Heil
22,27	Salisbury,P.I.	51 mig., 5 mig.	R.Heil,R.Forster
Pied-billed Grebe:			
thr.	P.I.	max. 3	v.o.
2,24	S.Monomoy	5 yg., 17	W.Petersen#,B.Nikula
5,15	W.Newbury,Harwich	1, 1	R.Forster,P.Trimble
24	Nantucket	6	P.Stangel
Horned Grebe:			
22	Wollaston	1	SSBC
Cory's Shearwater:			
15	Barnstable(S.N.)	2+	R.Heil
Greater Shearwater:			
9,15	Stellwagen,Barnstable(S.N.)	45, 17+	BBC,R.Heil
15,16	Nauset,P'town	2, 3	P.Trimble,R.Heil
Sooty Shearwater:			
9,15	Stellwagen,Nauset Beach	5, 2	BBC, P.Trimble
16	Eastham(F.E.)	1	W.Petersen#
Manx Shearwater:			
9,15	Stellwagen,Barnstable(S.N.)	16, 8	BBC,R.Heil
Wilson's Storm-Petrel:			
3,15	Hyannis,Nauset Beach	5, 2	G.Wilson,P.Trimble
Leach's Storm-Petrel:			
15	Barnstable(S.N.)	2	R.Heil#,C.Jackson#
Northern Gannet:			
2,6	Monomoy,Stellwagen	1, 2	W.Petersen#,A.Williams
29	Scituate	3	R.Abrams
Great Cormorant:			
15,23	P.I.,Wenham	2 imm., 1 ad.	W.Petersen#,J.Berry
Double-crested Cormorant:			
1,15,29	P.I.	230, 500, 450	BBC
1,2	Sherborn	5	E.Taylor
16,23	Ipswich(Castle Neck),Wenham	650, 200+	J.Nove,J.Berry

Other flocks of migrating cormorants containing 40-150 birds.

HERONS

A late Least Bittern was seen in Rowley on September 26. Generally very few are ever reported after August. In 1978 one was noted at Plum Island as late as September 27; the only comparable record in the last six years was of a bird at Great Meadows on September 5, 1981.

A count of herons coming to roost at Plum Island on September 24 yielded 30 Great Egrets, over 700 Snowy Egrets, 6 Little Blue and 3 Tricolored herons. Other heron highlights included a high count of about 35 Cattle Egrets in Ipswich, and Yellow-crowned Night-Herons in Eastham and Monomoy.

R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
SEPTEMBER 1984			
American Bittern:			
1	Wayland,Lakeville	1, 1	R.Forster,K.Holmes
2,16,23	Monomoy	1, 1, 1	W.Petersen,H.Wiggin#,M.Lynch#
30	Lancaster,Bolton Flats	2	M.Lynch#
Least Bittern:			
26	Rowley	1	G.Gavutis
Great Blue Heron:			
thr.	P.I.,Saugus	max. 28 (9/29), max. 14 (9/19)	G.Gove#+v.o.,J.Berry
22	Hingham,Duxbury,Marshfield	7, 20, 22	SSBC
Great Egret:			
thr.	P.I.	max. 30 (9/24)	B.Cassie#
thr.	Monomoy	2+	v.o.
2	Wareham,Westport	1, 18	L.Robinson,R.Laubach
22	Hingham,Marshfield	2, 9	SSBC
Snowy Egret:			
thr.	P.I.	max. 700±	B.Cassie#+v.o.
thr.	Saugus,Monomoy	max. 25 (9/18), max. 75 (9/23)	J.Berry,R.Prescott#+v.o.
2,15	Westport,Scituate	25, 65	R.Laubach,SSBC
22	South Shore	142	SSBC (Roundup)
Little Blue Heron:			
thr.	P.I.,Monomoy	max. 6 (9/24), 1-2	B.Cassie#+v.o., v.o.
15	Marshfield,Eastham	1, 1 ad.	SSBC,H.Coolidge#
25,30	Chilmark M.V.,Scituate	1 imm., 1	V.Laux,M.Litchfield
Tricolored Heron:			
1-24	Monomoy	1	v.o.
9,24	Rowley,P.I.	1, 3	M.Lynch#,B.Cassie
Cattle Egret:			
thr.	Ipswich	max. 35± (9/6)	J.Berry
Green-backed Heron:			
29	P.I.,W.Newbury	1, 1	G.Gove#,R.Stymeist#
29,30	Westport,Woods Hole	1, 1	R.Laubach,P.Trimble
Black-crowned Night-Heron:			
1	Wayland	20	R.Forster
11,21	Eastham(Hemenway)	117, 176	B.Nikula
22	Squantum,Duxbury	60, 16	SSBC (Roundup)
Yellow-crowned Night-Heron:			
11,21	Eastham(Hemenway)	2, 5	B.Nikula
23	S.Monomoy	1	J.Barton#
Glossy Ibis:			
1	Rowley,P.I.	12, 1	BBC,G.d'Entremont
2,13,23	Monomoy	7, 6, 2	W.Petersen#,J.Russell,J.Barton#

WATERFOWL

The first fall Snow Geese arrived on the fifteenth at Plum Island on brisk northwest winds. Counts of ducks at Monomoy's south island were noteworthy with the following totals tallied: over 400 Green-winged and 400 Blue-winged teal, 20 Northern Pintail, 30 Northern Shoveler, and 40 Ruddy Ducks. A pelagic trip off Provincetown on September 23 provided an interesting report of 6 Harlequin Ducks. R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
SEPTEMBER 1984			
Mute Swan:			
29,30	Scituate,Acoaxet	2, 78	G.d'Entremont#,J.Marshall
Snow Goose:			
13	S.Monomoy	1	J.Russell
15,30	P.I.,Ipswich	5, 17	D.Morimoto,J.Berry
Canada Goose:			
23,30	Wenham,Ipswich	280, 450	J.Berry

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Wood Duck:				
thr.,1	Lancaster,Lakeville	6-8, 7	M.Lynch#,K.Holmes	
2,3	P'town,Ipswich	13, 10	F.Bouchard,J.Berry	
22,24	Essex,Nantucket(Long Pond)	8, 14	R+D.Hale#,P.Stangel	
Green-winged Teal:				
1,23	P.I.	50+, 35	G.d'Entremont,A.Blaisdell	
2,23	Monomoy	300, 400	W.Petersen#,J.Barton#	
Northern Pintail:				
1,2	Rowley,Monomoy	12, 20	R+D.Hale#,W.Petersen#	
Blue-winged Teal:				
2,3	Monomoy,Ipswich	400, 250+	W.Petersen#,BBC	
Northern Shoveler:				
2,23	Monomoy	5, 250+	W.Petersen#,J.Barton#	
Gadwall:				
2,23	Monomoy	50, 200	W.Petersen#,R.Prescott#	
3	Ipswich	108	BBC	
American Wigeon:				
thr.	P.I.	max. 95 (9/22)	J.Cumming#+v.o.	
30	Ipswich	130	J.Berry	
Canvasback:				
30	Cambridge(Fresh Pond)	4	F.Bouchard	
Ring-necked Duck:				
9	Lakeville	45	W.Petersen	
23,30	W.Newbury,Cambridge	40, 9	BBC,F.Bouchard	
Greater Scaup:				
23	S.Monomoy	3	R.Prescott#	
Lesser Scaup:				
2	Monomoy	2	W.Petersen#	
Harlequin Duck:				
23	off Provincetown	2 m., 4 f.	B.Cassie#+v.o.	
Black Scoter:				
2	Wareham	2 m., 5 f.	L.Robinson	
Surf Scoter:				
2,23	Wareham,S.Monomoy	1 m., 50	L.Robinson,J.Barton#	
White-winged Scoter:				
1,2	Scituate,Wareham	3, 26	W.Petersen#,L.Robinson	
Ruddy Duck:				
23	S.Monomoy	40	J.Barton#	

TURKEY VULTURE THROUGH COOT

The hawkwatch on Mt. Wachusett reported many birds for September, particularly around midmonth. A total of 58 Ospreys was seen on September 16 and 17 as were 94 Sharp-shinned Hawks. Two adult and one subadult Bald Eagles were seen at Mt. Wachusett on September 17. At Mt. Wachusett 5039 Broad-winged Hawks were seen on September 16 and elsewhere in eastern Massachusetts an additional 3895 were seen. On the seventeenth, 17,414 Broad-wingeds were counted at Mt. Wachusett. A Golden Eagle was reported on September 13 and 17, possibly the same bird, for the location was practically the same. A total of 26 Peregrine Falcons was reported.

A total of four Yellow Rails were reported this month! George Gavutis, former manager of the Parker River NWR, flushed (using dogs) one Yellow Rail, four Virginia Rails, and five Soras on the fourteenth at Rowley and then on September 29, he flushed two Yellow Rails there. Another Yellow Rail was seen at Bolton Flats on the thirtieth. The observer furnished a sketch of the bird and details which are given below.

The bird flew out from in front of the observer from an area of dense grasses and sedges growing in the water. The rail was smaller than a Sora. It had a small, chickenlike bill, and its feet dangled as it flew. It was basically golden-brown to buffy in color with an effect of dark blackish stripes alternating with brownish-buff stripes, extending from the head to the tail. The black stripes were flecked with white. The outer primaries appeared darker than the rest of the brownish wing. It had definite white areas on the inside trailing edge of the wings (the sketch gave the appearance of the speculum on a Gadwall) that contrasted with the surrounding darker wing. The observer, Mark Lynch, noted that he is very familiar with both the Virginia Rail and the Sora as he has been monitoring the populations of these two species at Bolton Flats. Based on the field marks, especially the white in the wings, he concluded that it was indeed a Yellow Rail. He searched in vain for the bird after the initial sighting. G.W.G.

Turkey Vulture:			
2	Ipswich,Dover	1, 2	J.Berry,E.Taylor
16,17	Mt.Wachusett	4, 3	P.Roberts

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS

SEPTEMBER 1984

Osprey:			
3,4	P.I.,Saugus	4, 1	J.Grugan,J.Berry
4,16	SRV	8, 10	R.Forster
13,16,17	Mt.Wachusett	38, 39, 19	P.Roberts
Other reports of single individuals from many locations.			
Bald Eagle:			
17	Mt.Wachusett	3 (2 ad.)	P.Roberts#
22	Nantucket	1 imm.	R.Bushnell#
Northern Harrier:			
thr.	P.I.	max. 9 (9/3)	v.o.
Daily sightings at Plum Island of a minimum of 3 birds.			
13,16	Mt.Wachusett	3, 3	P.Roberts#
Sharp-shinned Hawk:			
16	Concord,Chatham	4, 4	R.Walton,W.Petersen
16,17	Mt.Wachusett	37, 57	P.Roberts#
21,30	N.Monomoy,Lancaster	10, 3	J.Russell,M.Lynch#
Cooper's Hawk:			
11,17	Millis,Mt.Wachusett	1 imm., 2	B.Cassie,P.Roberts
19,20;22	Westport;Essex	1, 1; 1	R.Laubach;BBC(Hales)
22,23	Framingham,Canton	1, 1	R.Forster,R.Abrams
23,30	P.I.,Monomoy	2, 1	E.Morrier,C.Floyd#+v.o.
Northern Goshawk:			
15	OxbowNWR,Marshfield	1 ad., 1	M.Lynch#,SSBC
16,19	Lakeville, Middleboro	1, 1	K.Holmes,K.Anderson
Red-shouldered Hawk:			
11,16	Lancaster,Mt.Wachusett	1, 2	M.Lynch#,BBC
19,22;26	E.Middleboro;Westport	1, 1; 1 imm.	K.Anderson,R.Laubach
Broad-winged Hawk:			
16	Concord,SRV;Ashby,W.Newbury	717, 750; 425, 2000	R.Walton,R.Forster;fide P.Roberts
15,16	P.I.,Falmouth	1 imm., 2	W.Petersen,P.Trimble
12,13,16,17	Mt.Wachusett	2000, 1000, 5039, 17,414	fide P.Roberts
Red-tailed Hawk:			
2,9	S.Monomoy,Middleboro-Foxboro	1, 3	W.Petersen,K.Anderson
16	Brighton,Mt.Wachusett	3, 4	J.Paputseanos,BBC
17,22	Princeton,E.Middleboro	5, 2	P.Roberts,K.Anderson
Golden Eagle:			
13,17	Mt.Wachusett,Princeton	1, 1	fide R.Forster,P.Roberts#
American Kestrel:			
thr.	Everett-Beverly	max. 5 (9/5)	J.Berry
8,16	Concord,Mt.Wachusett	4, 9	J.Carter,BBC
17,23	Princeton,N.Monomoy	6, 2	P.Roberts,P.Trimble
Merlin:			
16,6-30	Ipswich,Monomoy	2, max. 5	BBC,v.o.
22,29	N.Monomoy,P.I.	2, 1	BBC,E.Morrier
Twelve reported from twelve locations throughout the month.			
Peregrine Falcon:			
3,9	P.I.,Scituate	1, 1 imm.	BBC,D.Clapp
16-27	N.Monomoy	total 9	v.o.
21-29	8 locations	15	v.o.
Ring-necked Pheasant:			
24	Nantucket	5 + 6 chicks	P.Stangel
Ruffed Grouse:			
22,24	E.Middleboro	1, 1	K.Anderson
Northern Bobwhite:			
18	Westport	6	R.Laubach
Yellow Rail:			
14,29	Rowley	1, 2	G.Gavutis
30	Lancaster	1	M.Lynch
Clapper Rail:			
21	Eastham	1	B.Nikula#
Virginia Rail:			
1,8	P.I.,M.V.	1, 1	G.d'Entremont,V.Laux#
14,22	Rowley,Marshfield	4, 2	G.Gavutis,D.Clapp#
29	GMNWR	3	J.Heywood
Sora:			
6,14	Yarmouthport,Rowley	1, 5	J.Aylward,G.Gavutis
16,30	Lancaster	2, 2	M.Lynch,S.Carroll
22,29	Marshfield,GMNWR	4, 2	D.Clapp,J.Heywood
Common Moorhen:			
thr.	P.I.	max. 6 (9/29)	v.o.
American Coot:			
30	Cambridge	3	F.Bouchard

BLACK-BELLIED PLOVER THROUGH PHALAROPES

Lesser Golden-Plover put in their usual appearance, and American Oystercatchers were present at Monomoy in the highest September number published in twelve years of BOEM records. The American Avocet continued from August at Plum Island through midmonth. Only one Willet (western race) was reported from Scituate, but the other Willets reported at Monomoy may well have been lingering breeders of the eastern race. The count of Whimbrels at Monomoy remained high and constituted the highest September count.

A Eurasian Curlew was seen at Tuckernuck Island early in the month, and then one was seen at Monomoy from midmonth on. Presumably, it was the same bird. This is the fourth occurrence of this species in the U.S. and the third for Massachusetts. The two previous records were September 9 through October 12, 1976 at Monomoy and February 18 through March 18, 1978 at Martha's Vineyard. These latter two occurrences were presumed to be the same individual both years. The present bird, although somewhat timid, provided many observers with spectacular views of it, both in flight and standing.

Hudsonian Godwits were present in good numbers at Newburyport-Plum Island and a maximum of six Marbled Godwits was at North Monomoy throughout the month. High counts of Sanderling were made at Duxbury and at North Monomoy, and the highest September count of Semipalmated Sandpipers in BOEM records was made at Newburyport. Two Purple Sandpipers were reported from Scituate.

Baird's Sandpipers continue to be noted in low numbers as are Buff-breasted Sandpipers. A Ruff, not a usual autumn bird, was seen in Halifax. Red and Red-necked phalaropes were seen in Cape Cod Bay on September 15 and 16, possibly as a result of northeast winds on the fifteenth. G.W.G.

SPECIES/DATE	LOCATION	NUMBER	OBERVERS	SEPTEMBER 1984
Black-bellied Plover:				
1-23	P.I.,N.Monomoy	max. 650 (9/3),	max. 2000 (9/22)	v.o.
18,24	Plymouth,Duxbury	200, 1500	K.Anderson#,D.Clapp	
Lesser Golden-Plover:				
thr.	P.I.,N.Monomoy	max. 14,	max. 20+(9/16)	v.o.
8,12	M.V.,Halifax	30, 12	V.Laux#,W.Petersen#	
22,27	Plymouth,Nantucket	16, 11	SSBC,P.Stangel	
Many other reports of 1-15 birds.				
Semipalmated Plover:				
2,3	M.V.,Halifax	37, 3	W.Reagan,K.Anderson	
thr.	N.Monomoy	max. 200 (9/2)	v.o.	
9-23,18	P.I.,Plymouth	max. 100 (9/9),	25	v.o.,K.Anderson
Piping Plover:				
thr.	N.Monomoy	max. 8 (9/2)	v.o.	
1,21;8	Scituate;Barnstable	1, 1; 10	W.Petersen;J.Aylward#	
Killdeer:				
3-15,8	P.I.,Halifax	max. 24 (9/15),	2	BBC,K.Anderson
24	Lincoln	11	J.Carter	
29	Woburn,Scituate	8, 12	J.Cumming,R.Abrams	
American Oystercatcher:				
thr.	N.Monomoy	max. 45 (9/13)	v.o.	
8,23	M.V.,Nantucket	10, 4	V.Laux#,C.Floyd#	
American Avocet:				
1-18	P.I.	1	v.o.	
Greater Yellowlegs:				
thr.	E.Boston	max. 65 (9/23)	J.Cumming	
8-22	P.I.	max. 250 (9/9)	v.o.	
Lesser Yellowlegs:				
2	N.Monomoy	175	W.Petersen#	
8-30	P.I.	max. 100 (9/8)	v.o.	
6-23	Halifax	max. 16 (9/6)	K.Anderson	
Solitary Sandpiper:				
2	Milton,N.Monomoy	8, 2	G.d'Entremont#,W.Petersen#	
4,5	Halifax,Medfield	3, 6	W.Petersen#,B.Cassie#	
Willet:				
thr.	N.Monomoy	max. 12 (9/5,9)	v.o.	
"Western" Willet:				
1	Scituate	1	W.Petersen#	
Spotted Sandpiper:				
5,11	W.Newbury,Westport	8, 2	R.Forster,R.Laubach	
16,29	Harwich,Woburn	1,1	P.Trimble,J.Cumming	
Upland Sandpiper:				
1,3	Lincoln,Ipswich	2, 1	J.Carter,BBC	
5-8,15	M.V.,Nantucket	max. 12, 1	V.Laux#,R.Stymeist	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Whimbrel:				
thr.	P.I.,N.Monomoy	max. 14 (9/23),	max. 70 (9/5)	v.o.
2,15	W.Falmouth, Eastham	2, 5	P.Trimble	
2	M.V.,Wellfleet	10, 12	W.Reagan,F.Bouchard	
Eurasian Curlew:				
5,7,13	Tuckernuck I.	1	R.Veit,B.Braun,S.Perkins	
16-30	N.Monomoy	1	W.Petersen#+v.o.	
Hudsonian Godwit:				
thr.	Newburyport-P.I.	max. 20 (9/8)	v.o.	
2,8	E.Boston	1, 2	J.Cumming	
1-23	N.Monomoy	max. 15 (9/5)	v.o.	
23,23-30	M.V.,GMNWR	2, 1	W.Manter#,R.Walton#+v.o.	
Marbled Godwit:				
thr.	N.Monomoy	max. 6 (9/16)	B.Nikula#+v.o.	
15,27	P.I.,Newburyport	1, 1	I.Giriunas,J.Smith	
22,24	S.Monomoy,Duxbury	3, 1	BBC,D.Clapp	
Ruddy Turnstone:				
2	M.V.,Truro,N.Monomoy	22, 6, 5	W.Reagan,F.Bouchard,BBC	
15,16	Eastham,Westport	10, 13	P.Trimble,R.Laubach	
29	Scituate	3	R.Abrams	
Red Knot:				
3-15	P.I.	max. 17 (9/15)	BBC	
22,29	N.Monomoy,Scituate	200, 100 imm.	BBC,R.Abrams#	
Sanderling:				
4	Wayland	1	R.Forster	
18	Plymouth	500	D.Evered#	
2,22	N.Monomoy	2000	BBC	
24	Duxbury	2000	D.Clapp	
Semipalmated Sandpiper:				
4,15	Halifax,Scituate	300, 400	W.Petersen,SSBC	
18	P.I.-Newburyport	6000	R.Heil	
22	Salisbury-P.I.	400	R.Heil	
Western Sandpiper:				
1,4	Scituate,Halifax	1, 5	W.Petersen	
8-29,8	P.I.,Orleans	max. 4 (9/8), 8	v.o.,B.Nikula	
24,27	Wellfleet,N.Monomoy	2, 4	B.Cassie#,B.Nikula	
1-3 individuals from 8 locations.				
Least Sandpiper:				
1,3	P.I.,W.Yarmouth	50, 35	BBC,P.Trimble	
6,9	Halifax,Bridgewater	50, 75	K.Anderson,R.Abrams	
White-rumped Sandpiper:				
thr.	P.I.,N.Monomoy	max. 16 (9/29),	max. 19 (9/16)	v.o.
4,18	Halifax,Plymouth	2, 4	W.Petersen,D.Evered#	
Baird's Sandpiper:				
2;16,22	S.Monomoy;N.Monomoy	1; 1, 1	W.Harrington;B.Nikula#	
15,25	P.I.	1, 2	BBC,B.Cassie#	
15	E.Middleboro,Halifax	1, 1	K.Holmes	
Pectoral Sandpiper:				
thr.	N.Monomoy,P.I.	max. 30 (9/23),	max. 12 (9/25, 29)	v.o.
6-26	Halifax	max. 15 (9/3)	K.Anderson#	
9,26	Bridgewater,GMNWR	12, 12	R.Abrams,G.Gove	
Purple Sandpiper:				
15	N.Scituate	2	SSBC	
Dunlin:				
9-29	Newburyport-P.I.	max. 500 (9/29)	v.o.	
22,24	N.Monomoy,Duxbury	300, 600	BBC,D.Clapp	
Stilt Sandpiper:				
3-22	P.I.	max. 11 imm. (9/5)		v.o.
3-17	Halifax	max. 4 (9/3)	K.Anderson#	
29	W.Newbury	2	R.Stymeist	
Buff-breasted Sandpiper:				
1,2	Scituate,Plymouth	1, 1	W.Petersen#,K.Anderson#	
2,23	N.Monomoy	2, 1	BBC,B.Nikula#	
5,20-23	M.V.,Nantucket	4, 1	V.Laux#,N.Waldron#	
9,25	P.I.	1, 2	v.o.	
Ruff:				
15,17	Halifax	1 imm.	K.Holmes,K.Anderson	
Short-billed Dowitcher:				
thr.	P.I.	max. 40 imm.	v.o.	
Long-billed Dowitcher:				
8-30	Newburyport-P.I.	max. 90 ad. (9/18)	R.Heil+v.o.	
Common Snipe:				
3-17	Halifax	max. 5 (9/4)	W.Petersen#	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS SEPTEMBER 1984
Common Snipe (continued):			
2,3	Monomoy,Framingham	2, 5	W.Petersen#,R.Forster
4,25	Concord,Nantucket	3, 1	R.Forster,P.Stangel
American Woodcock:			
2,15	Squantum,Middleboro	3, 1	G.d'Entremont,W.Petersen#
15,16	P.I.,Falmouth	1, 1	I.Giriunas,P.Trimble
22,23	Halifax,N.Monomoy	1, 1	K.Anderson,M.Lynch#
Wilson's Phalarope:			
1-22,3	N.Monomoy,P.I.	max. 2 (9/2), 1	v.o.,J.Grugan
Red-necked Phalarope:			
1,15	Buzzard's Bay,Barnstable	2, 40	P.Hallowell,R.Heil
16	P'town,Eastham	80, 30	R.Heil,W.Petersen
Red Phalarope:			
16	p'town	3	R.Heil
phalarope sp.:			
15	Barnstable	60	R.Heil

GULLS THROUGH WOODPECKERS

Up to 1000 Laughing Gulls were present on North Monomoy at the beginning of the month. A hooded adult Franklin's Gull was reported from Tuckernuck Island on September 5. A total of six Lesser Black-backed Gulls was reported this month; these birds are now definitely regular but uncommon in Massachusetts. The occurrence and increasing numbers of this bird in Eastern North America is an interesting subject. Four reports of Sabine's Gull are in this month's records. It is difficult to tell if these are the same four birds or up to ten different birds since they were all seen in or around Cape Cod Bay within one week. The people on the September 9 BBC pelagic trip were treated to spectacular views of two adult Sabine's Gulls followed a while later by equally fine sightings of two young birds. All four of these birds were seen by many observers and photographs were taken of at least some. The date is rather early for juvenile Sabine's Gulls; therefore, if anyone has photos of these, BOEM and MAS would like to have copies of the photos to be filed with the records.

A number of Caspian Terns was seen late in the month, and Royal Terns were present on North Monomoy. Two Sandwich Terns were reported from Martha's Vineyard; an immature bird was seen begging food from an adult, which is typical of post-breeding terns. The nearest breeding locations are Maryland, where they are occasional breeders, and Virginia, where they are annual breeders (twenty pairs at the most). One or two other Sandwich Terns were reported from Chatham but no details of the sightings were submitted. Reports causing some concern are those of Arctic Terns on September 2 and 15. These are late dates for Arctic Terns and this species is not easily and readily identifiable by everyone. According to Bailey, "In late summer, bill coloration has changed enough to make field identification extremely difficult..." Griscom noted that "...many birds believed to be Arctic Terns in winter plumage have been collected and prove to be Common Terns." Thus, late summer reports of this species need verifying details.

Roseate Terns accumulated at North Monomoy where ten to fifteen thousand Common and Roseate terns were present. Forster's Terns were also present there with a maximum of fifteen counted on September 22. Skimmers were present at North Monomoy until September 23 and two adults plus twelve juveniles were seen at Orleans on September 8.

After six days of strong southwest winds, fog and northeast winds on September 15 produced many seabirds in Cape Cod Bay on the fifteenth and sixteenth from such vantage points as Sandy Neck and First Encounter Beach. These included approximately 13,000 terns, 11 Black Terns, 1 Razorbill and 1 unidentified alcid, 15 unidentified jaegers, and 117 Parasitic Jaegers.

An adult dark morph Long-tailed Jaeger was reported on a BBC pelagic trip. Several observers submitted details emphasizing the buoyant flight, slim build, and overall dark plumage with long central tail feathers. Jaegers are among the most difficult groups of birds to identify. An adult dark morph Long-tailed Jaeger is virtually unknown, allegedly occurring in a small population in Greenland. In light of this and the fact that other observers present did not agree with the identification, it is best considered an intriguing but inconclusive report.

Four to five Great Horned Owls were heard calling in the early morning hours in Ipswich and two to three were heard in Wenham. A Barred Owl and a Northern Saw-whet Owl were seen in Lakeville. Common Nighthawks continued their migration and were noted from several locations including a high number from Nantucket on the late date of September 25. Ruby-throated Hummingbirds put in an impressive showing this fall with the majority passing through by mid-month. Seventeen kingfishers were seen together at Falmouth, an impressive collection of those birds. Yellow-bellied Sapsuckers were also evident in migration with one seen hanging on the wall of the 19th floor of the McCormack Building in downtown Boston. G.W.G.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
SEPTEMBER 1984			
Laughing Gull:			
2,4	Woods Hole,N.Monomoy	83, 1000	W.Reagan,B.Nikula
8,16	Westport,Mashpee	21, 25	R.Laubach,P.Trimble
30	Winthrop	35	J.Cumming
Franklin's Gull			
5	Tuckernuck I.	1 ad.	R.Veit#
Little Gull:			
2-22	Newburyport-P.I.	2 ad. + 1 juv.	v.o.
15	Barnstable	1 juv.	R.Heil
Bonaparte's Gull:			
3,15	Newburyport-P.I.	50, 40	BBC
Ring-billed Gull:			
18,19	Westport	210	R.Laubach
Lesser Black-backed Gull:			
5,27	N.Monomoy	1 ad.	B.Nikula
18,19	Plymouth,Annisquam	2, 1 (2S)	T.Lloyd-Evans,H.Wiggin
21;24,26	Nantucket	1 ad.; 1 (3W)	R.Stymeist#;P.Stangel
Black-legged Kittiwake:			
9,30	Stellwagen,Eastham	2, 4	BBC
Sabine's Gull:			
9,14	Stellwagen	2 ad. + 2 imm., 1	BBC,T.Rumage
15,16	Barnstable,P'town	2 ad. + 1, 1 ad. + 1	R.Heil#
Caspian Tern:			
22,24	Squantum,Plymouth	3, 2 ad. + 1 imm.	SSBC,A.Bennett
30	P.I.,Scituate	4, 1	BBC,SSBC(M.Litchfield)
Royal Tern:			
2,13	N.Monomoy	2, 1	BBC,B.Nikula#
Sandwich Tern:			
5,16	M.V.,Chatham	2, 1-2 (no details)	V.Laux#,D.Evered
Roseate Tern:			
4,19	N.Monomoy	15,000, 10,000	B.Nikula#
23	Orleans	60	P.Trimble
Common/Roseate terns:			
15	Barnstable	12,750	R.Heil
Common Tern:			
1,3;9	P.I.;Scituate	12, 16; 100	BBC;R.Abrams#
15	Orleans	150	P.Trimble
Arctic Tern:			
2,15	N.Monomoy,Orleans	2, 2	BBC(J.Barton),P.Trimble
Forster's Tern:			
2-22	N.Monomoy	max. 15 (9/22)	v.o.
2,23	S.Monomoy	8, 5	W.Petersen#,v.o.,P.Trimble
8,15	M.V.,Nantucket	8, 15	V.Laux#,G.Gove#
Least Tern:			
1,15	P.I.,Orleans	1, 30	BBC,P.Trimble
Black Tern:			
2,15	S.Monomoy,Orleans	7, 2	W.Petersen#,P.Trimble
15,23	Barnstable,N.Monomoy	11, 2	R.Heil,M.Lynch#
3,8,15	P.I.	1, 1, 1	BBC
Black Skimmer:			
1-23	N.Monomoy	max. 10 (9/1)	B.Nikula#
8	Orleans	2 ad. + 12 juv.	B.Nikula#
alcid species (large):			
15	Barnstable	1	R.Heil#
Razorbill:			
15	Barnstable	1	R.Heil#
jaeger species:			
15	Barnstable	15	R.Heil#
Parasitic Jaeger:			
9,15	Stellwagen	14, 45	BBC,R.Heil#
15,16	Eastham	35, 20	B.Nikula#
16	P'town	17	R.Heil
Mourning Dove:			
27	Nantucket	270	P.Stangel
Black-billed Cuckoo:			
1-17,15	Middleboro,Bridgewater	1, 1	D.Briggs,K.Holmes
16;22,23	Nantucket	1;1	R.Stymeist;J.Heywood
Yellow-billed Cuckoo:			
5,16	Medfield,Falmouth	1, 5	B.Cassie,P.Trimble
19-22,30	Nantucket,Cambridge	1, 1	R.Stymeist#,F.Bouchard
Eastern Screech-Owl:			
8	Lancaster	5	M.Lynch#
thr.	8 from 8 locations		

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Great Horned Owl:				
7,18;16	Ipswich;Wenham	4-5, 2; 2-3	J.Berry	
15;16	P.I.;E.Middleboro,Falmouth	1; 1, 1	BBC;K.Holmes,P.Trimble	
Barred Owl:				
8;16,25	Lakeville;E.Middleboro	1; 1, 1	K.Homes;K.Holmes,K.Anderson	
Short-eared Owl:				
thr.	N.Monomoy	2	v.o.	
Northern Saw-whet Owl:				
2	Lakeville	1	K.Holmes	
Common Nighthawk:				
1,2	Brookline	59, 79	R.Stymeist	
1,10,12,19,21,30	Sandwich	8, 5, 3, 43, 2, 1	R.Pease	
8,9	M.V.,GMNWR	40, 24	V.Laux#,G.Gove	
25	Nantucket	55	N.Waldron	
Whip-poor-will:				
3,8	Pocasset,M.V.	1, 1	P.Hallowell,V.Laux#	
Chimney Swift:				
11,16	Lancaster,Mashpee	70, 2	S.Carroll#,P.Trimble	
25,30	Wellesley,Outer Cape	100, 1	M.Murphy,BBC	
Ruby-throated Hummingbird:				
3,4	Framingham,Sudbury	3, 4	R.Forster	
5,6,13	MNWS	7, 4, 8	R.Heil	
1,15	Lakeville	3, 5	K.Holmes	
16	Lancaster,Mt.Wachusett	3, 3	M.Lynch#,BBC	
5 other individuals reported.				
Belted Kingfisher:				
thr.	Revere-Beverly	max. 4	J.Berry	
15,22	Falmouth,Marshfield	17 + 2, 11	A.Clarke,D.Clapp#	
22	P.I.-Newburyport,Essex	6, 5	G.d'Entremont#,BBC	
Red-headed Woodpecker:				
8	Millis	1 ad.	B.Cassie	
15	Chatham	1 imm.	R.Comeau	
Red-bellied Woodpecker:				
8	M.V.	1	V.Laux#	
Yellow-bellied Sapsucker:				
17,29	P.I.	2, 4	J.Grugan,BBC	
22,27	Salisbury,P.I.	2, 2 imm.	R.Heil,R.Laubach#	
22-29	8 from 8 locations			
Hairy Woodpecker:				
2,22	E.Middleboro	1 f.	K.Anderson	
Northern Flicker:				
16,17	Wenham,P.I.	28, 25	J.Berry,J.Grugan	
16,22	Ipswich,Essex	11, 11	BBC	
29,30	P.I.,Ipswich	35, 5	BBC,J.Berry	
Pileated Woodpecker:				
16,27	Wenham,Manchester	1, 1	J.Berry,BBC	

FLYCATCHERS THROUGH VIREOS

Several Northern Rough-winged Swallows were seen, all constituting late occurences for this species which tends to depart by mid-August. A few Red-breasted Nuthatches were reported, all from or near known breeding sites, indicating no early movement by this irruptive species. Good counts of Eastern Bluebird, totaling forty-one individuals, were tallied at Wachusett Meadow in Princeton and the Middlesex Fells in Medford. The thirty Veerys at the Marblehead Neck sanctuary on September 5 constitute an excellent count. Blue-gray Gnatcatcher reports for the month totaled thirty-two individuals, more than four times the highest September count (eight) in the last seven years. September saw several records of comparatively unusual species. A good count of Fish Crows was made in North Attleborough, a site from which they had been previously unreported. Common Ravens were reported from two sites, where they are now routine, although they are still very rare in eastern Massachusetts. The September total of three Loggerhead Shrikes is high compared to the typical single report from recent years, and stands up well against the average of five during 1973-1975. Always a treat for lucky observers, a Sedge Wren was unique at Plum Island on September 25. Twenty-three Golden-crowned Kinglets at P.I. on the twenty-seventh were earlier indications of a good flight year for this species. L.E.T.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Olive-sided Flycatcher:				
7	P.I.,Chatham	1, 1	M.Lynch#,W.Petersen#	
5-8,12	M.V.,S.Peabody	8, 2	V.Laux#,R.Heil	
Eastern Wood-Pewee:				
4,8	Wayland,M.V.	5, 10	R.Forster,V.Laux#	

Eastern Wood-Pewee (continued):			
15-27,27	P.I.,Manchester	7 max., 1	v.o., BBC
Empidonax sp.:			
2,5	Monomoy, P.I.	9, 4	W.Petersen#,J.Grugan
Yellow-bellied Flycatcher:			
1,5;7,8,18	Millis,P.I.;Nant.(all b.)	1, 1; 3, 4, 2	B.Cassie,J.Grugan;E.Andrews
Acadian Flycatcher:			
4	Nantucket	1 b.	E.Andrews
Least Flycatcher:			
8,27	Nantucket (both b.)	2, 1	E.Andrews
Eastern Phoebe:			
16,24	ONWR,E.Middleboro	6, 3	S.Carroll#,K.Anderson
27,30	Manchester,Belmont	3, 5	BBC,L.Taylor
Great Crested Flycatcher:			
3,16	Ipswich,MNWS	1, 1	BBC,J.Cumming
Western Kingbird:			
8,22-24	M.V.,Truro	1, 1	V.Laux,v.o.
Eastern Kingbird:			
1-8,8	P.I.,Scituate	10 max. (9/1), 4	v.o.,W.Petersen
22,24	Nantucket,Chatham	4,2	R.Stymeist,B.Nikula
Horned Lark:			
15,25	Orleans,Nantucket	15, 2	P.Trimble,P.Stangel
Purple Martin:			
3,11	Ipswich,Millis	175+, 1	BBC,B.Cassie
Tree Swallow:			
1-15,16	P.I.,Falmouth	10000 max. (9/8),	10000+ v.o.,L.Robinson
22	E.Middleboro,Chatham	10000, 5000+	K.Anderson,B.Nikula
Northern Rough-winged Swallow:			
4,8	Wayland,P.I.	1, 1	R.Forster,BBC
11	Millis	1	B.Cassie
Bank Swallow:			
3,23	Ipswich,N.Monomoy	1, 5	BBC,P.Trimble
Cliff Swallow:			
3	Ipswich	1	BBC
Barn Swallow:			
11,23	Lancaster,N.Monomoy	110, 10	M.Lynch,P.Trimble
Blue Jay:			
23,30	Wenham,Falmouth	36, 55	J.Berry,P.Trimble
Fish Crow:			
3,30	Whitman,N.Attleboro	1, 45	W.Petersen,B.Sorrie
Common Raven:			
7,17	Athol,Princeton	1, 3	A.Williams,P.Roberts#
Red-breasted Nuthatch:			
9,16	E.Middleboro,Ipswich	1, 4	K.Anderson,BBC
21	Milton	2	R.Abrams
Carolina Wren:			
4-30,13	5 locations,Westport	5 singles, 2	v.o.,R.Laubach
House Wren:			
15,23	Scituate,Newton	1, 1	SSBC,J.Barton
Winter Wren:			
14,18;17,25	MNWS; Nant. (both b.)	1, 1; 1, 1	J.Smith,E.Andrews
Sedge Wren:			
25	P.I.	1	B.Cassie#
Marsh Wren:			
1-22,29	P.I.,Marshfield	5 max. (9/1), 1	v.o.,G.d'Entremont#
Golden-crowned Kinglet:			
27	Annisquam,P.I.	6, 23	H.Wiggin,R.Forster
Ruby-crowned Kinglet:			
3-29,16	P.I.,Ipswich	6 max. (9/27), 3	v.o.,BBC
Blue-gray Gnatcatcher:			
thr.	P.I.,9 locations	5 total, 17 total	v.o.
5,16	MNWS,Chatham	6, 4	R.Heil,B.Nikula
Eastern Bluebird:			
13,18	Princeton,Medford	29, 12	L.Robinson,P.Roberts
Veery:			
2	MNWS,Monomoy	7, 8	R.Forster,W.Petersen#
5,3-17	MNWS,P.I.	30, 3 singles	R.Heil,v.o.
Gray-cheeked Thrush:			
13,17	MNWS,P.I.	1, 1	J.Smith,J.Grugan
Swainson's Thrush:			
2;6	Nant.,Monomoy;E.Orleans	3 b., 2; 1	E.Andrews,BBC;A.Williams
23;29	Nant.;MNWS,P.I.	4 b., 1, 1	E.Andrews;J.Cumming,BBC

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Wood Thrush:				
16,30	Wenham,Outer Cape Cod	7, 1	J.Berry, BBC	
Gray Catbird:				
16	Falmouth,Ipswich	40, 12	P.Trimble, BBC	
22,29	Marshfield,P.I.	30, 40	D.Clapp,BBC	
Northern Mockingbird:				
12,16	S.Peabody,Falmouth	50±, 15	R.Heil,P.Trimble	
Brown Thrasher:				
16,29	Ipswich,P.I.	10, 2	BBC	
Water Pipit:				
2,16	Truro,Chatham	3, 2	F.Bouchard,H.Wiggin#	
18-29,21	P.I.,Scituate	38 max. (9/23), 8	v.o.	
Cedar Waxwing:				
2,3	Provincetown,P.I.	11, 15	F.Bouchard,BBC	
3,29	Ipswich,Canton	35, 8	BBC,R.Abrams	
Loggerhead Shrike:				
1,4	Chatham,M.V.	1, 1	W.Harrington,W.Manter#	
8-9	P.I.	1	BBC	
White-eyed Vireo:				
21	Scituate	1	W.Petersen	
Solitary Vireo:				
5-23,29	P.I.,MNWS	3 singles, 1	v.o.,J.Cumming	
30	Falmouth	1	P.Trimble	
Yellow-throated Vireo:				
5,30	Medfield,Falmouth	1, 1	B.Cassie,P.Trimble	
Warbling Vireo:				
3,16-17	Framingham,Chatham	2, 1	R.Forster,B.Nikula	
Philadelphia Vireo:				
2,3-22,13-21	Nant.,9 locations,Chatham	1 b.,11 total, 10+	E.Andrews, v.o.	
16-17,20	Chatham, Nantucket	3, 2 b.	B.Nikula,E.Andrews	
Red-eyed Vireo:				
2,13;30	MNWS,Falmouth	8, 35; 2	v.o.,P.Trimble	

WARBLERS THROUGH PURPLE FINCH

The best flight of wood warblers occurred during the first week of the month as exemplified by the dates for Yellow-rumped, Cape May and Blackburnian warblers, and American Redstart. A total of thirty-two warbler species was observed for the month. Nashville Warbler reports were conspicuously low; conversely the single-day total of two hundred Cape May Warblers on Monomoy on the early date of September 2 overshadowed the previous recent high-count of 150 in September 1978. Among the less common warbler species, the sighting of two Yellow-throated Warblers was the best in recent years, and the trend is moving upward. Two Worm-eating Warblers and singles of Kentucky and Hooded warblers were about average. Yellow-breasted Chats also occurred in approximately typical numbers. Remarkably, no Connecticut Warblers were reported; the previous September low-count for this species since 1975 was five!

Blue-winged Warbler:			
5,9	P.I.,MNWS	1, 1 m.	J.Grugan,J.Cumming
21,25	Chatham,Rockport	2, 1 b.	W.Petersen#,R.Norris
Golden-winged Warbler:			
4,5	Sudbury,MNWS	1 f., 1 m.	R.Forster,R.Heil
16,27	Chatham,Nantucket	1 m., 1 m.	W.Petersen,P.Stangel
"Brewster's" Warbler:			
7	MNWS	1	R.Heil
Tennessee Warbler:			
2,8	Monomoy,Lancaster	5, 8	W.Petersen#,M.Lynch#
16,23	P.I.,Littleton	1, 1	K.Holmes,J.Baird
Orange-crowned Warbler:			
11,22	Annisquam,Essex	1, 1	H.Wiggin,BBC
27	P.I.	1	I.Smith
Nashville Warbler:			
18	Medford	1	P.Roberts
Northern Parula:			
1;17,22	Scituate,P.I.	2; 1, 1	W.Petersen#,J.Grugan#
29	MNWS	1	J.Cumming
Yellow Warbler:			
6,7	Nantucket (both b.)	1, 1	E.Andrews
Chestnut-sided Warbler:			
1,27	Scituate,Nantucket	2, 1	W.Petersen#,P.Stangel
Magnolia Warbler:			
2,3-22	N.Monomoy,P.I.	2, 5 max.(9/22)	BBC,v.o.
23,25	Littleton,Nantucket	1, 2 b.	J.Baird, E.Andrews

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
SEPTEMBER 1984			
Cape May Warbler:			
1,2	SRV,Monomoy	45, 200+	R.Forster,W.Petersen#
9,30	Scituate,Falmouth	20, 6	R.Abrams#,P.Trimble
Black-throated Blue Warbler:			
2;8,17	MNWS;P.I.	4; 1, 1	R.Forster:v.o.
Yellow-rumped Warbler:			
2,4	Monomoy,Wayland	1, 2	W.Petersen#,R.Forster
13,29	Millis,P.I.	80, 150	B.Cassie,BBC
Black-throated Green Warbler:			
22,29;29	P.I.;Brookline	2, 1; 1	J.Cumming,J.Paputseanos
Blackburnian Warbler:			
2	Monomoy,Annisquam	1, 1	W.Petersen#,H.Wiggin
3	Newburyport,Princeton	3, 7	J.Grugan,J.Heywood#
Yellow-throated Warbler:			
1,12	M.V.,S.Peabody	1, 1	W.Manter,R.Heil
Pine Warbler:			
5,16	P.I.,Ipswich	1, 2	J.Grugan,BBC
23,30	S.Monomoy,Falmouth	2, 12	J.Barton#,P.Trimble
Prairie Warbler:			
2,16	Monomoy,Falmouth	5, 1	W.Petersen#,P.Trimble
17	P.I.,Westport	1, 1 f.	J.Grugan,R.Laubach
Palm Warbler:			
18,22;23	Nant.(b.);Halifax,N.Monomoy	4, 7; 1, 1	E.Andrews;K.Anderson,P.Trimble
30	Falmouth,Ipswich	1, 3	P.Trimble,J.Berry
Bay-breasted Warbler:			
1,2	Scituate,MNWS	3, 7	W.Petersen#,R.Forster
3,4	Princeton,Sudbury	5, 18	J.Heywood#,R.Forster
9,29	Scituate,P.I.	10, 8	R.Abrams,M.Argue
Blackpoll Warbler:			
3,16	P.I.,Falmouth	1, 5	BBC,P.Trimble
16,22	Wareham,Essex	14, 10	L.Robinson,BBC
23,30	Littleton,N.Scituate	6, 2	J.Baird,SSBC
Black-and-white Warbler:			
13-22	P.I.,4 locations	1, 6 total	BBC,v.o.
23	Marshfield	4	D.Clapp#
American Redstart:			
2,29	MNWS	25, 1	R.Forster,J.Cumming
Worm-eating Warbler:			
2,8	Chatham,M.V.	1, 1	W.Bailey,V.Laux#
Ovenbird:			
2,18	Nantucket,P.I.	2 b., 1	E.Andrews,G.d'Entremont
Northern Waterthrush:			
2,8	Monomoy,Lancaster	7, 3	W.Petersen#,M.Lynch#
15,23	Eastham,P.I.	3, 1	H.Wiggin#,BBC
Kentucky Warbler:			
11	Millis	1 imm.	B.Cassie
Mourning Warbler:			
8	Nant.,Lancaster,M.V.	1 b., 1, 1 imm.	E.Andrews,S.Carroll#,V.Laux#
7,13;16	MNWS;Nantucket	1, 2; 1	R.Heil;B.Sorrie
23;22,28	Littleton,M.V.;Nant.(b.)	1, 1; 1, 1	J.Baird,V.Laux#;E.Andrews
Common Yellowthroat:			
16,27	Ipswich,E.Middleboro	3, 2	BBC,K.Anderson
Hooded Warbler:			
2	Chatham	1	W.Bailey
Wilson's Warbler:			
1,29	Scituate,Woburn	5, 1	W.Petersen#,J.Cumming
Canada Warbler:			
1,3;2,4	Scituate,Newbypt;Nant.	2, 1; 3 b., 2 b.	W.Petersen#,J.Grugan;E.Andrews
16,22,23	Chatham,Nant.,Marshfield	1, 1 b., 1	W.Petersen#,E.Andrews,D.Clapp
Yellow-breasted Chat:			
1,5;5,6	Scituate,P.I.;Nant.(b.)	1, 1; 1, 1	W.Petersen#,J.Grugan;E.Andrews
5-6,6	E.Orleans,Chatham	1, 1	E.Williams#,B.Nikula
8,18	Millis,Annisquam	1, 1	B.Cassie,H.Wiggin
19,21	MNWS,Scituate	1, 1	J.Smith,D.Clapp

TANAGER THROUGH PURPLE FINCH

In major irruption years, a few Evening Grosbeaks show up in September; no luck this year. Great Meadows in Concord was an unusual inland site and an early date for the Lapland Longspur seen on September 23.

The bona fide passerine rarity of the month was Western Tanager, with two turned up on the same day in the course of the South Shore Bird Club's fall roundup. The individual

on Long Island in Boston Harbor was a well-described immature male. A single Summer Tanager report was about average for recent years. Several other uncommon but expected species, including Dickcissel, Blue Grosbeak, Yellow-headed Blackbird, and Lark Sparrow, occurred in typical numbers for September. L.E.T.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Summer Tanager:				
16	Falmouth	1	P.Trimble	
Scarlet Tanager:				
18-23,27	P.I,Nantucket	2 max., 1	v.o.,P.Stangel	
Western Tanager:				
22	Boston,Middleboro	1 imm. m. (good details), 1	P.O'Neill#,D.Briggs	
Rose-breasted Grosbeak:				
2,4	Monomoy,Sudbury	3, 3	W.Petersen#,R.Forster	
5-29,8	P.I.,Lancaster	5 max. (9/22), 6	v.o.,M.Lynch#	
14,29	Annisquam,Marshfield	6, 2	H.Wiggin,R.Campbell#	
Blue Grosbeak:				
3,6	Halifax,M.V.	1-2, 1	W.Petersen,V.Laux#	
Indigo Bunting:				
3	Halifax,Millis	30, 6	W.Petersen,W.Reagan	
12,30	S.Peabody,Westport	7, 1	R.Heil,R.Laubach	
Dickcissel:				
2,17	Chatham	2, 1	A.Vose,B.Nikula	
22-30,22	Truro,Marshfield	1 max., 1	v.o.,SSBC	
Rufous-sided Towhee:				
3,16	P.I.,Falmouth	8, 40	BBC,P.Trimble	
Chipping Sparrow:				
15,16	Lakeville,Falmouth	35, 14	W.Petersen#,P.Trimble	
27,2	P.I.,Weston	6, 10	R.Laubach,L.Robinson	
Clay-colored Sparrow:				
22-24	Truro	1 (details)	M.Lynch#	
Field Sparrow:				
16,29	Falmouth,Weston	25, 15	P.Trimble,L.Robinson	
Vesper Sparrow:				
1,23-30	Millis,S.Wellfleet	1, 6 max.	B.Cassie,BBC	
30	ONWR	2	S.Carroll#	
Lark Sparrow:				
6,9	M.V.,Barnstable	1, 1	V.Laux#,R.Pease	
9-16	P.I.	1	v.o.	
Savannah Sparrow:				
29,30	Salisbury,Lancaster	56, 41	M.Lynch#,S.Carroll#	
Grasshopper Sparrow:				
16	Falmouth	3	P.Trimble	
Sharp-tailed Sparrow:				
2,23	Monomoy	45, 15	W.Petersen#,M.Lynch#	
15,30	Nauset,Newburyport	10, 20	P.Trimble,J.Berry	
Seaside Sparrow:				
3-30,22	Newburyport,N.Monomoy	2 max. (9/15), 1	v.o.,BBC	
Song Sparrow:				
16,30	Falmouth,Lancaster	10, 69	P.Trimble,S.Carroll#	
Lincoln's Sparrow:				
2,5	Belmont,P.I.	1, 1	L.Taylor,J.Grugan	
8,23	Millis,Truro	1, 1	B.Cassie,P.Trimble	
23,25	Newton,Sudbury	2, 4	J.Barton,R.Forster	
Swamp Sparrow:				
30	Lancaster	39	S.Carroll#	
White-throated Sparrow:				
13,17	Sudbury,P.I.	1, 10	R.Forster,J.Grugan	
22,30	Framingham,Scituate	21, 20	R.Forster,SSBC	
White-crowned Sparrow:				
24,27	Rockport,P.I.	1 b., 1 imm.	R.Norris,R.Forster	
Dark-eyed Junco:				
23,27	N.Monomoy,P.I.	1, 6	P.Trimble,R.Forster	
Lapland Longspur:				
21,22	Scituate,N.Monomoy	1, 1	D.Clapp,B.Nikula	
23,30	GMNWR,Scituate	1, 4	R.Walton,M.Litchfield#	
Bobolink:				
1,2	Wayland,N.Monomoy	200, 130	R.Forster,W.Petersen	
4,9	Halifax,Bridgewater	1500, 150	W.Petersen#,R.Abrams	
22	Marshfield	14	D.Clapp#	
Red-winged Blackbird:				
11,15	Lancaster,Harwich	65, 550	S.Carroll#,P.Trimble	
Eastern Meadowlark:				
28	Lincoln	18	J.Carter	

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1984
Yellow-headed Blackbird:				
1,6	Scituate,Tuckernuck	1 imm m., 1	W.Petersen,R.Veit#	
Rusty Blackbird:				
21,22	Lincoln,Framingham	1, 2	R.Forster	
30	Carlisle,Truro	35, 6	J.Heywood,BBC	
Common Grackle:				
15,29	Harwich,Marshfield	500, 6000	P.Trimble,G.d'Entremont#	
Brown-headed Cowbird:				
2,3	Westport,Ipswich	200, 200	R.Laubach,J.Berry	
22	Essex	55	BBC	
Northern Oriole:				
2	Monomoy	12	W.Petersen#	
Purple Finch:				
3,29	Medfield,P.I.	7, 2	W.Reagan#,BBC	

Erratum in September 1984 Records: jaeger sp. and Parasitic Jaeger can be found immediately following the Razorbill and are therefore out of order. The jaegers should come just before Laughing Gull.

BRIDLED TERN SIGHTING OFF GLOUCESTER, MASSACHUSETTS

by Walter G. Ellison, White River Junction, Vermont

Date: August 25, 1984.
Observer making report: Walter G. Ellison.
Other observers: Nancy L. Martin, Donna J. P. Crossman, and Glen Wood.
Number observed: one.
Habitat: Open ocean. Dark, rusty-brown bands of krill were visible in the waters of the area.
Observing conditions:
Sky cover - less than 10 percent.
Visibility - 70-80 kilometers (40-50 miles).
Wind - northeast at 8-13 km/hr (5-8 mph).
Temperature - about 25° C.
Sea conditions - seas running at 1.0-1.7 meters (3-5 ft.).
Location: 7 miles due east of Gloucester, Essex County.
Time: twelve noon.
Length of observation: about 2 minutes.
Distance from bird: minimum of 10 meters.
Optics used: 9 x 35 Bausch & Lomb Zephyr Binoculars.
Previous acquaintance with species: none.

Identification and behavior. I was on the whale watch vessel *Cetacea* in the capacity of bird leader for the chartering organization, the Vermont Institute of Natural Science of Woodstock, Vermont. We had come from Newburyport via the Annisquam River and Gloucester Harbor. At approximately 11:45-11:50 A.M. we began encountering pelagic birds including our first Greater Shearwater and a few Wilson's Storm-Petrels. A large number of Common Terns were also present in the area including a flock that had settled on the water. At about 11:55 a Leach's Storm-Petrel was observed flying right to left well off the bow. The craft was headed toward a group of three Humpback and two or three Finback whales when two terns appeared about a hundred meters off to starboard. The upper bird was an adult Common Tern; the lower bird was distinct from any tern I had previously seen. As the bird approached, I could clearly see that it had a much darker mantle and wings than the Common Tern flying above it. In general, it was roughly similar in shape to the Common Tern with long wings and a deeply forked tail, which it was holding in a folded position. Differences in shape and flight compared to the Common Tern included slightly larger size, broader wings, a longer bill, and a shallower, less choppy wingbeat. The bird possessed a black cap down to the forehead, sides of its face, and upper nape. There was a black line through the eye, and the forehead (lores and front) was white. The lower face, throat, nape, and underparts were white. The white on the nape separated the brown of the mantle from the black of the crown, appearing as a collar. The mantle was dark grayish-brown, ranging in tone from Smithe's colors 45 (smoke gray) to 28 (olive brown); Nancy Martin

25 Aug. 1984

mouth Annisquam R., Annisquam, Ma.

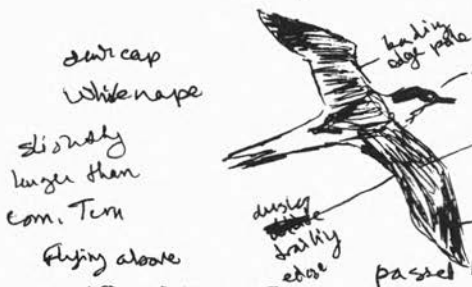
0900 hrs.

dist. Jav.

Bonaparte's

1200 hrs. 7 mi. due E. Gloucester Hbr.

broader wings than Com Tern, flying above, shallower slower wing beat



passed about at dist. 5

ca. 10m w/ com. Tern, duration observation 2 mins.

Weather: brisk NE winds, 5-8 mph

3-5' seas, clear, no haze vis. 40 miles

NEM - dark, sooty back, wing (serial) lighter in coverts

(large amount of white on head

black around eye + back to crown

long tail, folded

(flying away view)

FIELD NOTES MADE AT BRIDLED TERN SIGHTING AUGUST 25, 1984

Page from notebook of Walter G. Ellison

from her perspective on the deck - I was on the bridge - found the color nearer gray, Smithe's 80 (glaucous). The wing coverts were similar in color, but the flight feathers were more blackish; the leading edge of the coverts was whitish. From my position, the tail appeared largely white with some dark coloration although I could not be sure where. On deck, Nancy Martin perceived the tail as being largely dark. The bill was black. The birds passed by on a westward heading off the starboard. The bird did not vary its course nor did it call.

Similar species. Dark-backed terns that occur in the North Atlantic include Black, White-winged, Sooty, and Bridled terns and the Brown Noddy. Noddys are uniformly dark and are easily eliminated from consideration. Black and White-winged terns have only shallowly notched tails, incomplete caps, and paler mantles in non-breeding plumages. The Sooty Tern is similar in pattern and presents more problems. However, the bird in question was seen at close range; the back and wing coloration was clearly more brown than black; and the white collar characteristic of the Bridled Tern was seen well. I have no doubt as to our bird's identity.

Additional comments. The bird appeared to be an adult in breeding plumage. It is interesting to note the occurrence of the normally deep-water Leach's Storm-Petrel with this bird. Abundant krill in the water led to relatively large numbers of whales and seabirds feeding in this area. Scott Mercer, the marine mammalogist of New England Whale Watch, informed me that he had never seen krill in the Gulf of Maine. Other birds seen during the trip were 110 Greater Shearwaters, 30 Sooty Shearwaters, 5 Manx Shearwaters, 20 Wilson's Storm-Petrels, an adult Parasitic Jaeger in non-breeding plumage, and an adult Black-legged Kittiwake in worn breeding plumage. Most of the shearwaters were resting on the water and were so full of food they had difficulty rising off the water.

The report above was written from notes taken directly after the observation. (See the accompanying figure printed from the page in the author's notebook.)

WALTER G. ELLISON, a Vermonter since birth, has worked for the Vermont Institute of Natural Science (VINS) as a birding guide as well as contributing both field work and writing to the Atlas of Breeding Birds of Vermont, to be published in 1985. He plans soon to enter graduate school to continue his career in ornithology. Walter has authored A Guide to Bird-Finding in Vermont, available (as is the breeding bird atlas) from VINS, Church Hill Road, Woodstock, Vermont, 05091.

FIELD NOTES FROM HERE AND THERE

News about Jackdaws. Apparently the wind patterns in the spring of 1984 brought a number of Jackdaws to the northeast coast of North America. Three were seen from March 23 to April 6 on Miquelon Island (part of the French possession of St. Pierre et Miquelon, a group of islands south of Newfoundland). One of these birds was so exhausted that a child was able to pick it up. Four Jackdaws were "rediscovered" in a kittiwake colony at the Cape of Miquelon by Alain Desbrosse on July 18, 1984 (fide Roger Etcheberry) and were still present on September 21, 1984. In Nova Scotia, one Jackdaw put in a one-day appearance on May 6 on Brier Island. An apparently different bird was seen from May 20 to May 24 on Bon Portage Island, a hundred miles away. The latter bird was observed carrying a piece of plastic.

In April 1984, on Block Island off the Rhode Island coast, a Jackdaw was collected by a nonbirder who fortunately noticed that it was a different crow and put it in his freezer. This skin has been prepared by Martha McClellan of the Massachusetts Audubon Society, and P. William Smith of Manomet Bird Observatory is writing a paper on the origin of these Jackdaw vagrants appearing in North America.

One Jackdaw has been present on Nantucket since November 1982 and was joined by a second in July 1984. These birds have been most often seen on Low Beach foraging along the waterline. On August 18, 1984, Bruce Hallett, Macklin Smith, and I observed allopreening between the two Nantucket Jackdaws. As they were foraging actively on the ground, one paused for a moment. The second approached from the side and proceeded gently and slowly to preen the nape and back feathers of the first bird, which remained quiet and still during this time. For a few seconds, the second bird actually seemed to be resting its bill on the other's nape. The behavior occurred only once during our observation and lasted only for a moment or two. The two Nantucket Jackdaws were still present in December. Martha Vaughan, Newton

A leucistic Black-bellied Plover was seen on the beach at the south end of Plum Island by Hanson Robbins and Ted Raymond during a wet nor'easter on September 15. A flock of shorebirds feeding in the wrack included Sanderlings, Semipalmated and White-rumped sandpipers, Ruddy Turnstones, and Black-bellied Plovers. The birds flushed in front of the observers, flew out over the water, and returned to the beach, when a very white bird was noted. The bird was an ivory-cream color on the mantle with a darker tone at the carpal joints. The rest of the feathering was white except for the dusky-gray axillars that were darkest where the wing meets the body. The bill, the same size and shape as a Black-bellied's, was black, as were the legs. The jet-black eye appeared very large against the white head. The bird looked very exotic and beautiful, and the observers wondered how long it would escape the eye of a hungry Peregrine. George Gove, Winchester

At a Glance . . .

October 1984

Before getting to the specifics of October's mystery bird, I think it would be useful to review the circumstances under which we play this game. When we compare the activities of field identification and photo recognition, it becomes apparent that there are several distinct differences. Armchair birding often leaves us without the two important perspectives of time and place. In a real sense we can say we don't know what to expect. Another obvious problem is the one of feather coloration. Photo identification forces us to rely on silhouette, shape, and apparent size as well as the shading and pattern of feathers. If all goes well, recognition of the more general characteristics brings us to the correct family and the details lead to specific identification.

And what of October's bird? As our subject is neatly perched on a stick and shows three toes facing forward and one backward, we can reasonably be assured we are dealing with a passerine. The conical bill shape leads us to the fringillid or finch family. Unfortunately for us (and, no doubt, to the glee of the editor) we have landed in the largest family (86 species) in North America. Included in this group are the buntings, grosbeaks, finches, sparrows, and longspurs. As Chris Floyd pointed out in the previous photo quiz, this "still leaves a lot of field guide pages . . ."

In the best of all possible worlds, the next step would be to identify the group to which this bird must belong. That we can accomplish this, i.e., eliminate all but one of these subgroupings simply on the basis of external characteristics obvious from the photograph, is problematic. Although we can safely eliminate grosbeaks (and cardinal) and many of the "finches" on the basis of their relatively larger and heavier bills, and perhaps the bunting (Passerina) group because of the wintry scene, our technique at this point becomes somewhat less "pure." Judged by the general size and shape of our bird, some of the finches, the sparrows, and the longspurs are still possible. At this stage we need to rely on our own field experience or trial and error, or some combination of these, move forward.

After flirting with various finches and a longspur or two, you will probably have to entertain the possibility that this beast may be a sparrow. To those of you who at this point (or several paragraphs earlier) have thrown up your hands and said, "Of course, the bird is a sparrow," I urge you to remember the time when such things weren't so obvious. The experienced observer relies on years of fumbling around field guides, mistakes, questions, and successes to develop a repertoire that leads to correct identification. We know what it is, not because its general bill shape, relatively short tail, and streaking disqualify it from being a longspur, but

rather from a combination of positive characters we attribute to this species.

Apart from its "finchness," this bird shows a prominent, white chin patch (with whisker), streaking on the breast (with a hint of a darker central chest spot), a broad sweep of gray over the eye which joins a similar swath along the side of the neck, and a relatively short tail. The crown (with a barely discernible median stripe) and wings seem very dark. The problem from here is to eliminate the less useful characters, or conversely, to focus on the useful ones. Assuming that we are searching in the sparrow sections of various field guides, we might eliminate the tail as something we can key on. Most sparrows have relatively short tails, and the angle of the bird in the photograph presents problems. We have noticed by now that several field guides divide sparrows on the basis of whether or not the breast is streaked. Further study, however, informs us that most (Henslow's Sparrow is an exception) immature sparrows have streaked breasts and that some species show a rather diffuse streaking in winter. The presence or absence of a central chest spot is a variable character in many species. We might next concentrate on the chin spot. This does eliminate quite a few species - but by no means all but one. White-throated, Lincoln's, Swamp, and Song sparrows, along with a few others, are still in the running. What about combining the throat patch with the broad gray areas over the eye and around the side of the neck? Now we seem to be getting somewhere. Two species remain as possible candidates: Lincoln's Sparrow and Swamp Sparrow. Characteristics shared by these congeners (Melospiza) include breast-streaking (fine streaks in Lincoln's and diffuse in Swamp), possible central chest spot, whitish chin, grayish areas above eye and on sides of neck, a gray median stripe, and a narrow white eye-ring.

The dark crown and wings of our bird contrast strongly with the lighter areas. Also, the breast streaking seems blurred rather than defined. The white chin area is clear rather than spotted or streaked. These final considerations lead us to the conclusion that our bird is a Swamp Sparrow. Negative evidence which argues against this being a Lincoln's Sparrow include the winter scene and the lack of a raised crest (a commonly observed display in this furtive species).

Although the setting of this photograph might not be the optimal one for this species, Swamp Sparrows are regular overwinterers in Massachusetts in small numbers in some wetland areas. Lincoln's Sparrow is rare in winter.

Richard Walton, Concord

RICHARD WALTON, whose forthcoming book, Birds of the Sudbury River Valley, may be in print before this issue, is a teacher and naturalist in Concord and has been interested in birds for fifteen years.

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At a Glance . . .

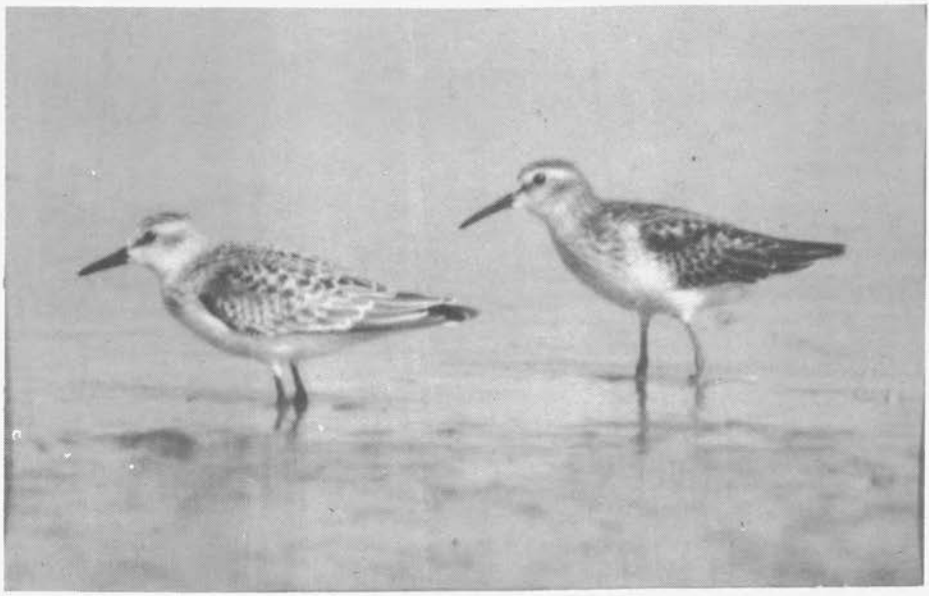

Photo by Roger Everett.

Can you identify this bird? Identification will be discussed in next issue's *At a Glance*. Bird Observer will again award a PRIZE to the reader who submits the most correct answers in 1984. Please send your entry on a postcard to Bird Observer, 462 Trapelo Road, Belmont, MA 02178 before the answer is published in the next issue.

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