

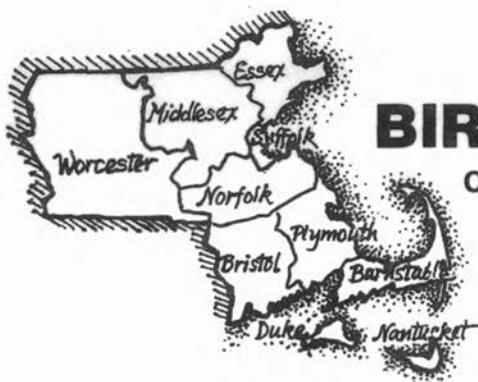
BIRD OBSERVER

OF EASTERN MASSACHUSETTS



OCTOBER, 1981

VOL. 9 NO. 5



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BOSTON HARBOR WATERFOWL CENSUS

On November 15, 1981, the TASL project of BOEM is conducting a survey and census of waterfowl of Boston Harbor. For more information, call Craig Jackson, 321-4382, or Soheil Zende, 628-8990.



CHRISTMAS BIRD COUNT

The Annual Greater Boston Christmas Bird Count will take place on Sunday, December 20, 1981. Interested birders should contact Bob Stymeist, 358 Tappan St., Brookline 02146. Many localities within Route 128 need coverage; if you could give even a few hours canvassing your own neighborhood, it would better reflect the bird populations within Greater Boston.



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SPARROWS AND WEEDS

by John W. Andrews, Lexington

Even the most casual birder soon learns that unmown fields are likely places for finding sparrows. But how many birders can look at fields in July and know which ones will be best for sparrows in October? In order to do this, we must know something about the ecological relationship of bird to habitat. In the case of sparrows, think first about food.

In order to survive a sparrow must consume a daily ration equal to one-sixth its body weight. Since a sparrow only weighs about 22 grams (3/4 ounce) this is not a great bulk of food per capita. But send the average birder into the field to find sparrow food and he may well meet with little success. Exactly what do sparrows eat?

The answer, of course, is weeds. Ralph Waldo Emerson once said: "What is a weed? A plant whose virtues have not yet been discovered." If this is so, then let us beware of dismissing any plant as a weed, for some of the most despised weeds are staples of bird diets.



*Swamp Sparrow
on Common Ragweed*

Weeds are plants which rapidly colonize newly created or disturbed habitat. Their strategy in the constant competition for growing space is to disperse their seeds widely in search of favorable ground. They specialize in temporary habitats where they can flourish briefly before being shaded out by taller vegetation. In order to succeed with this opportunistic lifestyle, they must produce seeds in abundance. Each seed is a tiny package of food. A bird can survive on weed seeds only if it can gather hundreds or thousands of seeds each day. Enter the sparrows. Sparrows are experts at gleaning tiny seeds from the fields. In the colder months of the year, weed seeds provide more than 90% of the food intake of sparrows.

It doesn't sound like an easy way to make a living, but apparently sparrows find it a piece of cake. After ten years of intensive observations of Song Sparrows in Columbus, Ohio, Margaret Nice could still write, "I have not known of a single Song Sparrow coming to its end through cold or starvation here." Columbus must be a very weedy place!

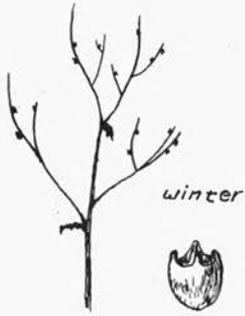
The value of particular types of seeds to sparrows depends upon the following factors: nutritional composition, abundance, ease with which they can be gathered, presence of hard shells or bristles, and availability with snow cover. Seeds which drop to the ground to be covered with snow are of little value in mid-winter, while seeds which persist on the plant above the snow are important at such times.

The weed groups which are truly important to sparrows are few in number and are easy to recognize. The accompanying illustrations depict the important weeds commonly found in eastern Massachusetts. It is generally necessary to recognize only the plant genus rather than the species. For more complete plant identification information, consult the field guides listed in the references.

Ragweed, bane of hay-fever sufferers, is probably the single most important winter food source for sparrows. Other important weeds, which every sparrow aficionado should learn to recognize, are Bristlegrass (Setaria sp.), Panicgrass (Panicum sp.), Crabgrass (Digitaria sp.), Smartweed (Polygonum sp.), and Sedges (Carex sp.).

Some common weeds are of little value to sparrows, although they may grow in association with more valued plants. Among these less useful weeds are the goldenrods, loosestrife, Joe-Pye weed, dandelions, and phragmites.

food plants



winter



grey knobby
fruit

RAGWEED

Ambrosia artemisiifolia

Probably the most important
winter food resource for
sparrows

Seeds are rich in oils, persist
on plant into winter

stiff
bristles

BRISTLEGRASS

Setaria sp.

widely used by
ground-feeding
songbirds



SMARTWEED

Polygonum sp.



fruit

Some species semi-
aquatic

Especially favored by
Fox, Swamp, White-throated
and Song Sparrows



wrap-around
leaf sheaths

CRABGRASS

Digitaria sp.

Most heavily used
by Savannah, Field,
and Tree Sparrows



PANICGRASS

Panicum sp.

flowers at end of
multi-branched "panicle"

A favorite of Tree
and Lincoln's Sparrows



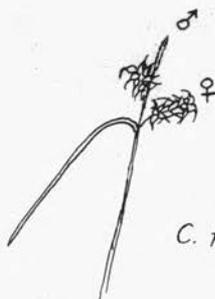
SEDGES

Carex sp.

separate male and female flowers
stem typically triangular and solid
tends to grow in colder, wetter places than grasses



C. laxiflora



C. flava

Important food for Swamp Sparrow

PIGWEED

Amaranthus

shiny black fruit

Thousands of seeds persist throughout winter inside the densely clustered spikes



DOCK

Rumex

three-sided fruit



R. crispus

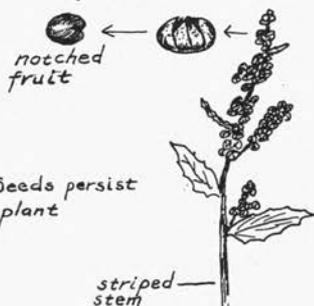
LAMBSQUARTERS

Chenopodium album

notched fruit

Seeds persist on plant

striped stem



VERVAIN

Verbena

seed

A wetland plant used mostly by Swamp Sparrow



V. hastata

winter



Stomach content records compiled in the Martin/Zim/Nelson book (reference 2) indicate that different sparrow species have distinct food preferences. In some cases the differences may be due to general habitat differences. For instance, Swamp Sparrows utilize more sedges, Smartweed, and Vervain - all of which grow in wetter habitat than most weeds. Other distinctive preferences can be noted. Fox Sparrows practically ignore crabgrass while Field and Savannah Sparrows love it. This raises the intriguing question of whether one could predict the species breakdown of sparrows in an area from a knowledge of the weed species present.

Sparrow Food Records

(From Martin, Zim and Nelson, Reference 2)

Rating System (Fraction of Total Diet):

- ▽ 0.5% to 2%
- 2% to 5%
- 5% to 10%
- 10% to 25%
- 25% to 50%

Sparrows	Ragweed	Bristlegrass	Smartweed	Panicgrass	Crabgrass	Sedges	Pigweed	Lambsquarters	Dock	Other
Savannah	■	■■	□	■	■■		▽			□ Wildmillet
Grasshopper		■■	□	▽						■ Sheepsorrel; ■ Oats
Vesper	■■	■■	■	□			□	▽	▽	□ Oats
D-e Junco	■■	■	□	□	■	▽	□	□		■ Dropseedgrass
Tree Sparrow	□	■■	▽	■■	■■	■	□	□		▽ Vervain
Chipping	▽	■	▽	□	■■		▽	▽		□ Timothy; □ Oats
Field	▽	■■		■	■■		▽	▽		■ Broomsedge
White-crowned	□	■■	■	■	□		□	▽	□	▽ Vervain
White-throated	■■■	□	■■	□			▽			□ Poison ivy; □ Oats
Fox	■■	□	■■■						▽	■■ Hawthorn; ■ Blackberry □ Virginia Creeper
Swamp	▽	▽	■■	■	□	■■		▽	□	■ Vervain; □ Rice Cutgrass
Song	■■	■■	■■	■	□	□	□	□	□	□ Oats; ▽ Vervain
Lincoln's	■	□		■■	■	■	□	□		

The best sites for finding sparrows are often those at which vegetative succession has been set back by the hand of man. For this reason good sparrow sites are scattered throughout the suburban landscape. Old landfills are among the best sparrow locations. These sites are usually covered with poor soil which supports an ideal assortment of sparrow weeds. Another likely sparrow spot is community garden sites where the non-mechanized form of agriculture creates a mix of open ground and weedy patches which sparrows love. Abandoned farm fields are also excellent for sparrows. Remember - if you find the right weeds, the sparrows are practically guaranteed!

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4. L. Brown, Weeds in Winter, W. W. Norton, 1976
5. L. Brown, Grasses, Houghton Mifflin Co., 1979
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JOHN W. ANDREWS, a Lexington resident for three years, is president of Citizens for Lexington Conservation and an associate member of the Lexington Conservation Commission. A research engineer at M.I.T., John is in the process of forming the Committee for Special Field Studies under the auspices of Bird Observer.



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WHERE TO FIND SPARROWS IN THE FALL

There are countless fine sparrow localities throughout eastern Massachusetts, each with its own featured group of sparrow visitors. Sparrows can often be found virtually anywhere that suitable cover exists or where appropriate weed seeds abound. In some cases, because of their location on coastal points of land, these spots can trap congregations of sparrows, among which rarities are often found. Many of these areas are discussed in "where-to-go" articles in past issues of Bird Observer as well as in the collected essays of Where To Find Birds in Eastern Massachusetts (BOEM, 1978). The following are brief descriptions and directions to some premier locations and were supplied by Glen d'Entremont, George Gove, Ollie Komar, Wayne Petersen, Martha Reinstein, Robert Stymeister, Lee Taylor and Soheil Zende.

Salisbury Beach State Reservation

From Newburyport go north on Route 1 to Salisbury Center; take a right on Route 1A and follow signs to the reservation. After taking a right on the access road, take another right to reach the campground. Check the thickets on the right and the weedy campground on the left for all the regular migrant sparrows, as well as Lark and Clay-colored sparrows. Later in the fall Lapland Longspurs and Snow Buntings appear in large flocks. (BOEM 9:1, Richard A. Forster, "Birding Newburyport Harbor and the Salisbury Beach Reservation.") (SZ)

"The Warden's" at Plum Island

This spot is 2.6 miles south from the entrance to the Parker River National Wildlife Refuge. The area around the buildings has short stubby grass attractive to all manner of common and uncommon sparrows, including Lark and Clay-colored sparrows and Lark Bunting. (BOEM 7:3, Herman D'Entremont et al, "The Four Seasons at Plum Island - Part II.") (SZ)

The "lime pits" at Peabody

Access is through Cedar Grove Cemetery at the end of Cedar Grove Avenue, off Lynn Street. The "lime pits" became ornithologically famous in 1979 when a tailless Green-tailed Towhee was found here. More common sparrows are always found here in the fall. (BOEM 4:4, Richard S. Heil, "Birds of the Springs Pond Area, Peabody-Salem.") (SZ)

Horn Pond - Woburn

From Route 128, take Route 38 south to the center of Woburn. Turn right on Lexington St., left on Arlington St., then right on Sturgis St. Park on Sturgis at the north end of the pond. Lincoln's, White-throated, Swamp and Song sparrows can be found in the upper area of the lagoon near the bridge over Fowle Brook. Savannah, Field, Chipping and White-crowned sparrows and juncos can be found in the public vegetable gardens and around the cattail marsh. Vesper and Fox sparrows should be looked for along the trails. (GG)

Army Camp - Middlesex Fells - Winchester/Medford

From Route 93, take the Fellsway/Route 28 exit in Medford. The Army Camp is about two miles up South Border Road on the left, just after a curve to the right on an uphill portion of the road. Savannah, Chipping, Field, White-crowned, White-throated, Fox, Lincoln's and Song sparrows, and juncos can be found. (GG)

Lincoln Street Fields - Lexington

From Route 128, take Route 2A toward Lexington. After 0.4 mile, at Lexington Five Corners, turn left onto Lincoln St. About 1/2 mile down some playing and sparrow fields will be on the right. In addition to most of the common sparrows, this area also attracts the scarcer species such as Grasshopper and Lincoln's (after which the street was no doubt named), as well as Vesper Sparrow and Snow Buntings. (LT)

Idylwild Conservation Land - Lexington

From Lexington Five Corners, continue east on 2A for 1/4 mile and take a right onto Middle St. After 0.4 mile the Conservation Area sign and the gate to the community garden plots are on the right. Regularly-occurring sparrows include Song, Tree, White-throated, Chipping, Field, Savannah and White-crowned. (LT)

Dunback Meadow - Lexington

From Route 2 take Waltham St. north 1/2 mile to Brookside Ave. Take a right and park at the Clark Junior High School. Weedy fields and community gardens lie to the east of the schoolgrounds. (BOEM 8:5, John W. Andrews, "Birds of Dunback Meadow.") (LT)

Newton South Marsh

Take Route 9 west from Chestnut Hill two miles to Parker St. Turn left on Parker St., then take the first left onto Hagen Rd. toward Newton South High School. Bear right on Great Meadow Rd., go to the end, then left on Brandeis Rd., still following signs for the high school. Turn right into the first parking lot; park near the back by the baseball diamond. Walk right along the marsh to grassy sparrow fields behind the second baseball diamond. Of eleven species of sparrows noted here in the past two years, Lincoln's, Grasshopper, Vesper and White-crowned are the most noteworthy. (OK)

Winchester Street Gardens - Newton

Take Center St. southwest from Route 9. At the first major intersection, continue straight on Winchester St. After a mile, past the Charles River Golf Course, pass one house on the right, then pull into the next driveway on the right. Follow the driveway down to the left, keep to the right at the first fork, then turn left at the next intersection, after the pavement ends. This road will take you by a small thicket on the right to the first garden plots. A second set of gardens is located farther up on the left. Lincoln's, Grasshopper, Field, Savannah, Chipping, and White-crowned sparrows all occur. (OK)

Fowl Meadow - Milton

Take Route 138 north from Route 128 into Milton. Turn left at the first lights at Brush Hill Road. The entrance is on the left; drive to the end of the road to park. Along the dike can be found Song, Swamp, White-throated, Chipping, Lincoln's and Field sparrows. Walk down past the "crossroad" to the first open area and you might find Lincoln's, Fox, Field and Chipping sparrows. (G d'E)

Squantum - Boston

Take Quincy Shore Drive to East Squantum St. Park at either Maswetuset Hummock on the right, or drive to the Boston Harbor Marina parking lot near the guard shack. At the marsh's edge you might see Sharp-tailed, LeConte's, Grasshopper or Savannah sparrows, and, at the seawall on the north side of the Marina, perhaps a Seaside Sparrow. Walk back along the Marina road to the thickets at the bend of the road, and then into the thickets along the old runways. Possibilities are Chipping, Vesper, Clay-colored, Fox, Lincoln's, White-crowned and Tree sparrows, as well as the more common ones. (G d'E)

Driftway Road and Kent Street - Scituate

From Route 3A directly across from where Route 123 enters from the west, follow Driftway Road until the Scituate Sewage Plant is reached on the right. Park on the road and enter the field just west of the sewer beds for best access to the marsh. A short distance beyond the sewer beds, Old Driftway Road will appear on the right. Follow this a few hundred yards to where Kent St. enters from the left. The large weedy garden plot on the corner of Kent St. can be one of the best sparrow areas on the South Shore. Sharp-tailed and Seaside sparrows are good possibilities along the marsh's edge. (WP)

Bridgewater Correctional Institute - Bridgewater

From Route 18 south of Bridgewater Center, turn left at the entrance to the Correctional Institute and follow the road to the farm fields. A large open hayfield complex criss-crossed with weedy-edged drainage ditches harbors Swamp, Song and Savannah sparrows, and is always apt to have more uncommon species on flight days. (WP)

Cumberland Farm Fields - Halifax

This enormous cornfield complex along Route 105 (Thompson St.) in Halifax and Middleboro is excellent in fall after the corn is cut. Scattered weed patches are left standing, and consequently produce islands for migrant sparrows to collect in. All open country species are likely, and later the open areas have longspurs and Snow Buntings. (WP)

Fort Hill, Cape Cod National Seashore - Eastham

From Route 6 turn right at Fort Hill sign, about 1-1/2 miles north of the Route 6 and Route 28 traffic circle. The road ends at the crest of Fort Hill, which provides a superb view of Nauset Marsh. Walk down to the edge passing a great thicket

with lots of Song and White-throated sparrows as well as an occasional Lincoln's. At the edge of the marsh are many Sharp-taileds and an occasional Seaside Sparrow. The Sharp-tailed breeds here and is especially easy to find at high tide. The fields surrounding the hill provide excellent food supplies for Savannah, Field and Chipping sparrows. (RS)

Marconi Station, Cape Cod National Seashore - South Wellfleet Entrance is on Route 6 in South Wellfleet, about 1-1/2 miles north of Wellfleet Drive-in Theater. Turn right at the traffic light, then left at the sign for Marconi Station. Park at the Administration Building, The fields around this building and the maintenance building are certainly the best in the state for Vesper Sparrow, which nests here. During October and November there are many Chipping, Field and Savannah sparrows as well as an occasional Lark or Clay-colored sparrow. (RS)

Corn Hill - Truro

From Route 6 north of the Truro Center sign, turn left on Corn Hill Road and continue west to the beach parking area. An abandoned railroad bed lies along the edge of a fresh-water marsh which borders the Hillside Farm ("chicken farm" to birders). This is a private farm and permission should be sought before entering. The fields are superb for sparrows, Dickcissels and other specialities like Blue Grosbeak, and Brewer's and Yellow-headed blackbirds. Sparrows are well-represented, with a good chance to find Lincoln's, Lark and Clay-colored. (RS)

Bartlett's Farm - Nantucket

From Main St., take Milk St. until, after about 1/4 mile, it becomes Hummock Pond Rd. Follow this to a road on the left marked "Ocean View Farm," which leads to fields and farmhouses where sparrows and other migrants abound. (BOEM 4:5, Richard R. Veit, "Where to go on Nantucket.") (SZ)



On October 18, 1981, the first annual sparrow survey, organized by Ollie Komar, was conducted in the Greater Boston area. A full report will appear in a later issue, but the preliminary counts showed the following:

Savannah Sparrow	332	Chipping Sparrow	29
"Ipswich" sparrow	3	Field Sparrow	117
Grasshopper Sparrow	1	White-crowned Sparrow	90
Henslow's Sparrow	1	"Gambel's" white-crowned	1
Sharp-tailed Sparrow	11	White-throated Sparrow	233
Vesper Sparrow	2	Fox Sparrow	4
Lark Sparrow	1	Lincoln's Sparrow	14
Dark-eyed Junco	455	Swamp Sparrow	132
Tree Sparrow	5	Song Sparrow	704



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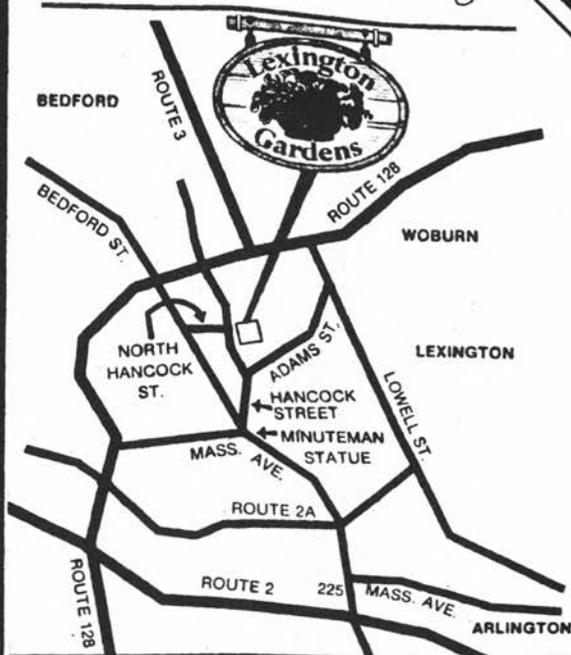
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BEHAVIOR-WATCHING FIELD NOTES

by Donald and Lillian Stokes, Carlisle

This new feature of Bird Observer is designed to encourage reader participation in watching the behavior of birds, and at the same time to build up a file of behavioral observations on the birds of our area. It will attempt to do this in three ways.

First, and most important, is by asking readers to submit descriptions of behavioral interactions that they observe, written on separate 3x5 cards for each incidence. A few of these will be printed along with the name of the observer in a section called "Field notes on behavior", and all notes will be kept on file. Send behavior observations to: Behavior-watching Field Notes, 52 Nowell Farm Road, Carlisle, MA. 01741.

Second, there will be a section called "Behavior-watching in the months ahead", which will point out some interesting feature of bird behavior that can be observed in the next one or two months and raise questions that will hopefully stimulate further observations.

Third, there will be a section on "Behavior research articles," which will summarize and comment on one or two particularly interesting articles from major bird journals. The topics chosen will be relevant to behavior-watching at that time of year and will be a stepping stone for your own original observations.

FIELD NOTES ON BEHAVIOR

For this premier installment, we have drawn upon our own field notes. In future issues we hope to feature mostly your observations.

5/18/81 Carlisle State Forest

10:17 Saw a pair of Chipping Sparrows near the center of their territory (limits determined from previous observations). Female was on a fence rail with head and tail raised and wings quivering. She was also giving a rapid high-pitched trill. Male flew at her, landed on her back, and mated. Male repeated this action four times in one minute, hopping to one side of the female each time after mating. He then flew into the grasses below and she preened.

10:22 Mating three more times on ground.

10:28 Male and female flew to blue spruce on a lawn.

10:30 Two more matings on ground beneath spruce.

10:34 Female picked up fishing line segment by road and flew with it to spruce. Male mated with her while she still had material in bill. Afterward, he flew higher in tree, and she dropped down to a lower branch and placed material in nest. This was our first sighting of the nest.

7/7/81 Old Dump Site near Routes 2 and 126

9:50 Found two Mourning Doves at the end of dump road building a nest on the horizontal limb of an oak. Nest branch 20 ft. high. Male picks up material off ground at road edge. He pecks at various pieces of grass before picking one up and flying to nest. He lands on branch near female who is sitting on nest and walks toward her from behind, sometimes even stepping on her tail feathers as he gives the single piece of material to her over her shoulder. She takes it in her bill and places it in the nest to one side of her without getting up. Male immediately flies off to collect more material. Male's trips averaged one per minute during the 20 minutes that we watched.

10:00 Another Mourning Dove flies up and lands near nest while the male was collecting material. Male immediately flies up from ground and approaches other bird like it was going to land on its back. The new bird flies off at the last possible instant, and the male flies after it and out of sight. Within a minute, the original male returns and continues collecting nesting material.

5/11/81 Drumlin Farm

12:55 to 1:25 We heard the "High-tsee-call" (a piercing, continuous, high-pitched call) of Tufted Titmice, and upon approaching we saw mate-feeding (one adult bird feeding another adult, usually male feeding female). After being fed, bird A flew down to a moss-covered rock and started to pull off a clump of the moss. It then flew up 15 feet with the moss and entered an oblong crevice. We had found the nest! While we watched, bird A made 25 more trips with moss to the nest.

Meanwhile, bird B stayed about 20 feet from the nest and mostly fed. Every so often it gave the High-tsee-call while quivering its wings. Once it chased off another titmouse from the area and once it brought food to the nest site and possibly fed it to bird A. At 1:20 bird A stopped building the nest and flew up into a nearby tree. It bill-wiped, preened, and

hopped about. Bird B immediately approached with food and fed it. Bird A continued bill-wiping and preening in the same spot, and bird B again fed it. Then both birds flew off and out of sight.

7/3/81 Corner of Routes 2 and 126

11:20 to 11:35 Heard two Cedar Waxwings give their high thin call as they flew up into a tree. As I approached, I noticed that they were near an Oriole nest and pulling strands of material from it. They then flew off to a horizontal limb over the road. I went closer and saw the start of their nest. The birds then made repeated trips from a pine forest to the nest, carrying small twigs that they broke from dead pine branches. Both birds participated in the building and almost continuously gave the typical high thin call.

COMMENTS ON THE FIELD NOTES.

These four observations were selected to highlight variations in social behavior during nest-building. First, it is interesting to compare how much work is done by each member of a pair in nest construction. The Tufted Titmouse and Chipping Sparrow are similar, in that one member collects material and builds while the other remains nearby. Mourning Dove males collect all the material and the female does all the building. Cedar Waxwings equally take part in collecting and building. Why have these different strategies evolved?

In two cases, the Tufted Titmouse and Mourning Dove, a third bird showed up during nest-building and was chased away by the male. Why do these other birds appear? Are they looking for nesting sites, nesting material, or mates?

The amount of vocal behavior differs in each example. The Mourning Doves were silent, the Cedar Waxwings both gave soft, high calls continuously, the Chipping Sparrow produced high trills before mating, and the male (?) Tufted Titmouse made high thin calls while the female (?) was silent.

Is it just a coincidence that all calls were high-pitched? Is there danger in attracting predators due to conspicuous nest-building activities? These are just a few of our thoughts and questions concerning these observations. Undoubtedly, you have your own observations of nest-building and associated behavior that would raise other questions or answer these.

BEHAVIOR-WATCHING IN THE MONTHS AHEAD

Some warm morning in Autumn you may walk outside and get a feeling of spring. It may be the angle of the sun, or the quality of the air, but it may also be the songs of birds. For the past month, practically no birds have given their

primary song - breeding is finished, many birds are molting, and song is no longer functional. But in some species the males and females start singing in fall, and the effect can make a warm autumnal day seem a little like spring.

Two species known for this behavior are the Mockingbird and Song Sparrow. With Mockingbirds, both the male and the female sing because both become involved with the formation of fall and winter feeding territories. This species also uses other calls at this time, including the Ch'ch'chick, Chick-chick, and Chewk. Neighboring Mockingbirds may be seen chasing one another or doing an elaborate display called the "border-dance" as they attempt to define territorial limits. Mockingbirds also become aggressive toward other species that feed on the same foods (mostly berries).

Song Sparrows also sing in fall on warm days. Some males winter on or near the breeding territory, and in the autumn they sing from perches and chase other males much as they did in spring. For more details of the winter and fall behavior of these birds, see A Guide to the Behavior of Common Birds by the first author of this article.

Very little is known about the singing behavior of birds in fall, and it would be a substantial gain in knowledge if, through reports to this column, we could gather information on such activities. If you hear birds giving their main song in fall, move to where you can see them and watch their behavior. Are they alone or near other birds? Are they using any other calls? Are there chases or other forms of aggression? If so, are they between the same or different species? For how many weeks do the birds sing? Are the singing birds male or female?

It should also be mentioned that not all members of a species share the same behavior. Many Mockingbirds gather into flocks and roam about. Many Song Sparrows migrate. Look for these differences within a species' behavior as well.

BEHAVIOR RESEARCH ARTICLES

"Territoriality and flocking by Buff-breasted Sandpipers: variations in non-breeding dispersion" J. P. Myers 1980, Condor 82: 241-250.

In this article the author discusses some previously unstudied aspects of Buff-breasted Sandpiper behavior on its wintering grounds in Buenos Aires Province, Argentina. Many of these sandpipers defend non-breeding territories while feeding in the short upland grass. However, when a predator appears, they gather into a flock, whirl over their feeding area, and resettle when the predator leaves. At night they roost communally at the edge of a short grass pasture.

Most wintering shorebirds feed in flocks. The unusual territorial behavior of this sandpiper raises some intriguing questions about how birds space themselves over an area. What is the purpose of the sandpipers' territorial behavior? Does it lower the risk of predation by reducing prey density, and thus make the area less attractive to predators? Or does their territorial behavior function mainly to increase food gathering ability? Tinbergen (*Behavior* 28: 307-321) theorizes that "certain predators exert pressure on individuals even of well-camouflaged prey species to live well spaced-out". On the other hand, Myers' observations showed that sandpipers flocked at the appearance of a predator, suggesting that flocking rather than territoriality was their defense. The function of territorial behavior may then be to reduce competition during foraging.

While defending territories the sandpipers used several displays that are employed in the same situation by other shorebirds, for example, Sanderlings and Pectoral Sandpipers. These are: "raising one wing vertically and running toward an intruder"; "erecting back feathers and depressing tail while moving slowly near a mutual boundary"; "crouching parallel close to neighbor at territorial boundary."

Although this article does not deal with a species we commonly see, it does present some interesting observations which we may be able to apply to behavior-watching of our own common species.

DONALD AND LILLIAN STOKES are naturalists, authors, and educators. Don's many works include A Guide to Nature in Winter, A Guide to the Behavior of Common Birds, and The Natural History of Wild Shrubs and Vines. He and Lillian are collaborating on a second volume soon to be published.

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HAWK WATCHING: STILL AN UNDEFINED WONDER

by Leif J. Robinson, Wellesley

Organized hawk watching is still young; as a popular activity, it is even younger. Our contemporary love affair with diurnal raptors began in Pennsylvania as recently as 1934, with the establishment of the sanctuary known as Hawk Mountain. In New England, the first blushes of observational activity centered on Mt. Tom, largely due to the efforts, also in the 1930's, of J. A. Hager.

This April the New England Hawk Watch, founded by Donald Hopkins and Gerald Mersereau, celebrated its 10th anniversary by sponsoring a day-long conference at Holyoke. About 300 raptor enthusiasts attended, crossing the spectrum from banders and rehabilitationists, to leaders of organized hawk-watching activities, to those who were just curious or whose interest had recently been sparked.

I wish some profound wisdom could be reported, such as the answer to why and how hawks migrate. There were no such papers. Instead, one heard many fragments of understanding that seem isolated today but which may find codification at some future time. This is not to say that certain facets of hawk-watching have not coalesced--they have; rather, the penetrating questions concerning raptor migration may still have to be asked. Let's check some highlights from that meeting.

Regional reports brought us up to date concerning activities in various states. Seth Kellogg (western Massachusetts) noted that even a valley location can provide good hawk watching, if the view is free of obstructions. Paul Roberts (eastern Massachusetts) stressed the history and importance of Wachusett Mountain as a premier lookout; he also suggested that autumn watches be continued into early November for a better census of Red-tails, Rough-legs, and eagles. Echoing growing sentiment among veteran observers, Roberts also suggested that hawk watchers broaden the kinds of data they record, such as timings to the minute, associations between different species, the number of birds in a kettle, and so on.

Neil Currie reflected on the importance and enigma of Lighthouse Point, near New Haven, Connecticut, as a major congregation area for accipiters from mid-September to mid-October. Many places along the north shore of Long Island Sound seem very attractive as hawk-watching sites, and as Currie pointed out, West Rock (also near New Haven) was visited by a thousand Red-tails in 1980.

In Vermont, 15 to 20 percent of the raptors seen are accipiters, reported Nancy Martin, with Sharp-shinned to Cooper's ratios running 10-20:1--perhaps a bit higher than the national average. A potentially important area, the Taconic Range, has no observers.

Not far from the resort town of Ogunquit, Maine, stands Mount Agamenticus, a conspicuous massif visible from Plum Island on a clear day. Rena Cote noted that this well-manned site in 1979 experienced two days with 2,000+ birds; overall, 68 percent arrive on northwest winds. Southern Maine, southeastern New Hampshire, and northeastern Massachusetts seem to be potentially prime territory that is merely awaiting proper sampling. Manpower is the problem; perhaps this autumn some Commonwealth hawk-watcher will take advantage of off-season rates and prove the point.

Attending the conference from Cape May, New Jersey, Peter Dunne tackled the perennial problem of Sharp-shinned and Cooper's identification. Here are some new wrinkles to think about this autumn.

One in ten Sharp-shins has a slightly rounded tail, and one in a hundred has a severely rounded tail. Immature Sharp-shins exhibit a brown belly; Cooper's appears white. Sharp-shins appear in two's and three's; Cooper's fly solo.

The inspirational highlight of the morning session involved Edwina Czajkowski's slide-filled account of hawk watching as part of the 4th-grade science curriculum in New Hampshire's Union School District. From "flight training" (silhouette identification) to data interpretation, the children are exposed to real scientific problems and explore them using information they themselves have gathered.

Seven schools have participated in this program, with daily watches (typically 8:30 a.m. to 4:30 p.m.) beginning on the second day of the autumn term and extending to the end of the main migratory season. In Czajkowski's words, the children experience "the greatest show above the earth."

To prove the success of this experiment in interdisciplinary education, a score of students traveled to the conference to entertain us with song, impress us with their knowledge and skill, and perk us with their enthusiasm. Creative teaching at its very best!

From his studies at Cape May last autumn, Paul Kerlinger reported that diurnal raptors are inhibited by strong winds from crossing Chesapeake Bay. His study of flight dynamics also revealed that the higher a migrating hawk is, the faster it flies in making the crossing. Finally, the presence of lateral winds seems to influence the bird's decision whether or not to cross.

The 10-year breeding success of Red-shouldered Hawks in Berkshire County was reviewed by Joseph MacDonald. Sadly, though in tune with contemporary experience, he stated that 1980 saw the least success of any year and culminated a three-year



downward trend. Successful nests raised fewer than two young, down from $2\frac{1}{2}$ in 1975.

MacDonald pointed out that beaver ponds are an important habitat factor. He also cautioned that his conclusions may be biased, for the originally discovered nesting sites were surveyed throughout the decade. Thus, natural or man-made alterations to once propitious habitat may have caused pairs to move to other locations and thus be lost from later censuses. In short, his results may not be indicative of Berkshire County as a whole.

The bastion of Bald Eagles remaining in the Northeast lies in Maine, and Francis Gramlich reviewed efforts to aid their breeding success since about 1955, when it was noticed that young were not being produced at occupied sites. In the 1960's there was an average of one egg per nest; now there are one to three. Despite this improvement, DDE still remains something of a problem, and the current normal production of 0.7 fledgling per nest is insufficient to maintain a stable population. Thus, the indigenous clutches are augmented with eggs from Minnesota and Wisconsin; foster young are introduced into active nests as well.

But the western Maine population of Bald Eagles is gone, with the remaining stronghold being at Cob's Cook Bay in the east. This is a sedentary population; adults can be seen all year at the nesting sites but the young scatter. In all, 133 territories, historical and recent, have been incorporated into a management plan.

The most celebrated of all breeding raptor programs involves the Peregrine Falcon--1981 was also the 10th anniversary for the Cornell University Peregrine recovery project. Jack

Barclay said that it currently has 23 egg-laying females and that 269 birds have been released since 1975. At historic (inland) sites, Great Horned Owls present the greatest threat to young birds. Thus, coastal releases have been favored, and New Jersey has had the best success for introducing juveniles into the wild.

Here is some actuarial data: Peregrines suffer 65 percent mortality during their first year; adult mortality is 20 percent per annum. Thus, some threescore birds from the Cornell project should exist today in the wild. Though this seems like a small number, it represents a huge step in establishing a viable population of this falcon in the Northeast.

At times, all hawk watchers must fantasize soaring among the birds--being thrust skyward aboard heated columns of air and then charging the ground along gravity's slide. Glider pilots can mimic the hawks' experience, and one of the most active members of that fraternity to participate in the New England experience is William Welch. For years he has followed the Broadwing flight as it crosses southwestern New England, and at the conference he recalled (with movies) some of the birds' flight performance, statistics, and migratory habits. For example, the Broadwing averages about 40 miles per hour in a glide with a sink of about $2\frac{1}{4}^{\circ}$. Year after year, the Broadwings follow the same track, even to cutting a particular dogleg!

Fittingly, James Baird reflected on the past and thought about the future of raptors and the people who watch them. He stressed conservation--not only in North America but especially in South America, where so many of our breeders winter. Is hard science--the formal and controlled gathering of information, coupled with its processing and the derivation of conclusions therefrom--compatible with hobbyists and their (presumed) interests? Baird was not sure.

He did suggest two diverse areas where real help is needed: the compilation of bibliographical information about various species, and the assessment of the total numbers of raptors that annually cross the isthmus of Panama--the vast bulk of hawks that inhabit North America during the warm season.

Sobering thoughts, those of Baird, and interesting suggestions, too!

LEIF J. ROBINSON is editor of Sky and Telescope, an international popular magazine of astronomy and space science. He has been a bird student for 15 years with a principal interest in resident populations and the statistical means for assessing them. Mr. Robinson is also active in studying the migration of birds of prey.

FOR SALE: Roger T. Peterson's A Field Guide to the Birds, Eastern Edition, hard-cover, \$10.50 plus \$1.25 shipping and handling. Mass. residents add 5% sales tax. Contact: Herman D'Entremont, P.O. Box 207, Newton Centre, MA 02159.

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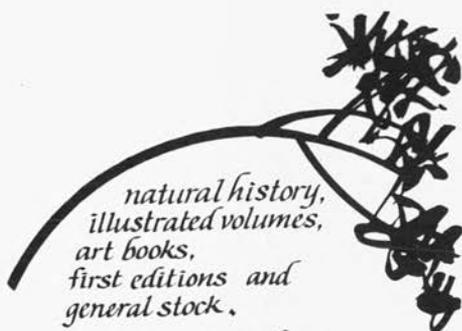
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ONE EXCITING HOUR AT GREAT MEADOWS, CONCORD

by H. Christian Floyd, Lexington

Thursday, October 30, dawned clear and crisp, and I looked forward expectantly to my lunch-hour hawk watch at Great Meadows. Having the advantage of working nearby at Hanscom Air Force Base, I had been enjoying the Great Meadows for lunch-hour birding on many of the fair-weather days during September and October. The highlight of September had been the locally famous immature Purple Gallinule, so unexpectedly lovely in its brown plumage glowing subtly with aquamarine, and so amusing with its antics of leaping to strip strands of wild rice among the cattails. As September had given way to October, my attention had turned more to the sky, and my lunch-time visits had become something of a hawk watch. The typical visit had produced a nice variety of hawks: a soaring group of local Red-tailed Hawks, a Northern Harrier quartering over the cattails, one or more Sharp-shinned Hawks migrating over the Concord River, an Osprey circling over the lower pool. Twice I had had a distant but clear view of a Goshawk soaring up and sailing away to the southwest over the sewer beds. The hawk-watch atmosphere had been increased on many of these visits by the company of fellow hawk watcher Paul Roberts, who had happened to choose the same days for his lunch-hour outings to Great Meadows.

The weather this Thursday morning promised a particularly good hawk day. Wednesday, a clearing front had just gone through, and the northwest wind had been so strong and gusty that I had decided to stay at the office. Today, the wind had moderated to about 5-15 mph and had shifted to the west, perhaps slightly south of west. As the morning advanced, huge fairweather clouds darkened the sky outside my office window; but, by noon, the trend had reversed, and the sky was again mostly clear. I wolfed down my sandwich, escaped from the office, and drove my ten-minute back-road route to the Meadows.

As I walked from the parking lot to the dike, scope over my shoulder, I thought back over the birds I had seen at Great Meadows this fall. A particularly exciting one from less than two weeks before was still vivid in my mind. On the fine Sunday evening of October 19, about half an hour before sunset, as Paul, Dave Lange, and I had stood talking just beyond the blind at the parking-lot end of the dike, an immature Bald Eagle had suddenly appeared at the east end of the lower pool, powered its way low over the trees toward the parking lot, and passed within just a couple hundred yards of a thrilled crowd of Great Meadows strollers. Since that evening, I had almost instinctively looked immediately off to the right whenever I walked past the blind and onto the open part of the dike. And to the right was where I looked immediately again this noon.

I must have doubted for an instant the reality of what I saw, for it was an image too similar to the one I had just been tracing in my mind--toward the eastern end of the lower pool, a huge dark bird flying low. But this was closer--maybe two hundred yards away--and lower--perhaps just twenty feet above the marsh. I hesitated a couple of seconds before lifting my binoculars--sometimes birds seen with naked eye seem more real. And then I was sure. "Eagle!" I shouted, partly to vent my excitement and partly to alert a gentleman with binoculars coming down the path behind me.

As I focused in on the bird, I became aware of some whiteness in the plumage, something I expected. But as my eye fixed that whiteness not as diffuse mottling, but as sharply defined white areas in the wings and tail, my excitement jumped another quantum leap. Could this really be? I repressed the thrilling temptation of the immediately obvious identification, and concentrated on absorbing every possible detail as the eagle drifted in leisurely circles low over the marsh. The tail was strikingly long when seen from the side, its extent at least twice as long as the head's projection from the leading edge of the wing. The upper surface of the tail was white for two-thirds of its length, with a broad dark band occupying the terminal third. The under surface was mostly dark, with the white of the upper surface replaced by a suggestion of several evenly spaced transverse gray bands. The white area in the wing appeared from below as a broad tapered stripe running through the bases of the flight feathers, its ends being difficult to determine clearly. My eye searched the wing linings and underside of the body for more white, but found only deep dark plumage.

As the bird turned away from me, my eye traced the broadly curving contour of the trailing edge of its wings--an S-shaped contour, tapering inward along the primaries near the wrist, outward along the middle secondaries, and deeply inward as the secondaries attenuated toward the body. Turning back toward me and into the wind, the bird soared upward on broad wings set in a pronounced dihedral which stretched not only upward but forward.

I had seen enough to let my sharply checked expectation explode. "My God, it's a Golden Eagle!" The other birder had now seen the eagle, too, but I probably distracted him with extravagant exclamations of my excitement. "I can't believe it!" I gasped several times. The gentleman accepted the identification and took in the scene with a composure which I found improper and impossible for myself.

The eagle was moving gradually to our right, toward the trees which line the south side of the lower pool. Now, about a minute after I had spotted the bird, it reached a position where the oaks next to the blind obscured it from us. I ran down the dike to a new position, setting up my scope as I



went. Unfortunately, my scope had not been ready to use in those precious first few seconds, and perhaps I had missed an opportunity to see the golden hackles of the nape, which may even be present in the immature plumage of the Golden Eagle, the plumage worn by this bird.

The eagle, still in view above the trees, was now powering upward and away to the southwest. Two of the soaring local red-tails took notice and closed rapidly on the intruder. As I watched in my scope, one of them swooped from above past the great bird, which continued its steady flight in seeming unconcern. It was now about half a mile to the southeast of us and passing from left to right at an altitude of about 500 feet. The effort of its flight soon diminished as, apparently finding a strong thermal, it began soaring upward toward the clouds on fixed wings.

As my excitement moderated, I voiced a thought of regret which came to me. "What a shame that Paul Roberts should miss being here today." A minute or so later, still enjoying the eagle through my scope, I heard footsteps on the path, and then a familiar voice. "What do you have, Chris?" "Paul, a Golden Eagle!" I shouted, somewhat amazed at the timing of his arrival. Paul quickly set his scope on the eagle, which was still in good enough view for him to enjoy and to confirm the identification on the basis of the head-tail proportions. We continued to watch as the eagle soared on motionless wings to an altitude of several thousand feet, and finally sailed away and vanished as a speck in the southwest sky. In all, the bird had been in view nearly fifteen minutes.



In the east, anything after a Golden Eagle may seem anticlimactic. But the parade of raptors which now followed was truly remarkable. Paul and I had hardly finished a ritual handshaking in celebration of the eagle when a Peregrine Falcon, a Great Meadows first for both of us, cruised over the parking lot and off toward the sewer beds. More handshaking, and an adult Red-shouldered Hawk appeared over the upper pool, drifted toward us in lazy circles, and passed just a hundred feet overhead. Then came a nice assortment of the more usual hawks: a juvenile Northern Harrier over the cattails, an Osprey over the lower pool, a Sharp-shinned Hawk flying along the river, and an American Kestrel hovering near the sewer beds.

It was now one o'clock, and both Paul and I would be back to work late. "Which of us is going to call this in to Audubon?" I asked, but then added, in answer to my own question, "Paul, you call. They're more likely to believe you." Paul laughed and replied, "I must admit that I would have had difficulty believing this if I hadn't seen it with my own eyes."

On December 1, I went to Great Meadows again. The first freeze-over had occurred a couple of weeks before, and most of the water birds had left. A remnant of fifty or so Canada Geese and a few ducks, unidentifiable in the glare, rested at the far end of the upper pool. Most of the marsh seemed lifeless, but still beautiful in the subdued browns and golds of late fall. The blue sky was empty of hawks, even the usually reliable local red-tails. But the day was fine, and I stood in the warmth of the sun, looked toward the east end of lower pool, and beheld in imagination the passage of an eagle.

H. CHRISTIAN FLOYD, a resident of Lexington for the past five years, is a devoted hawk-watcher. Chris is a systems engineer with Mitre Corporation and has been on the staff of Bird Observer for one year.

BOOK REVIEW

BIRDS OF PREY OF THE WORLD: A Coloured Guide to Identification of All the Diurnal Species Order Falconiformes. Friedrich Weick. Hamburg and Berlin: Verlag Paul Parey, 1980. 159 pp. Illus. \$48.00. (Order through your bookseller or directly from Paul Parey, Publishers, Park Avenue South, #903, New York, NY 10016; telephone 212/686-3605.)

You will not find this book in your local bookstore; apparently it is available only by mail or special order. This is regrettable, for you should be able to examine any book that costs \$48, and this book deserves examination.

Birds of Prey of the World, not to be confused with the Grossman and Hamlet volume of similar title, is in three major sections. The first is a text key for identification based on physical characteristics such as size; bill shape, size and color; cere color; plumage color; and crest shape. The second section is a "Compendium of the Order Falconiformes," containing a brief paragraph on the general characteristics of each genus. The 160 line drawing in these first two sections are superb - to some readers, they alone could be worth the price of the book.

The book's greatest value, however, is found in the third section: 40 full-color plates containing 1140 illustrations of every species of diurnal bird of prey. Each plate portrays similar species, all depicted to scale with the other birds on that specific plate. The birds are shown perched, as viewed from the left; there are no flight silhouettes. Plumage differences based on sex and age, some "color phases," and hundreds of subspecies are depicted e.g., 17 plumages of American Kestrel are shown. A table providing basic information - key features, distribution, and size - faces each plate.

The book is disappointing in several aspects. The text is in both German and English, to give the volume wider circulation at lower cost. This obviously limits the scope of the text. It also proves inconvenient for the English reader. Some tables contain descriptions in German only; the English reader must refer to a table that offers translations of all German terms used in such descriptions.

Second, the quality of the illustrations varies. That is to be expected when examining 1200+ illustrations, but the paper stock is not what one expects to encounter in a volume of such ambition and cost.

The price of the book might be considered a disappointment, but not withstanding the above, the book is worth it. Weick has filled a major void in raptor literature. No other volume illustrates so many species and subspecies of hawks, in-

cluding so many immature plumages. I'm not familiar with any volume that treats only North American species and subspecies so thoroughly. Nine Red-tailed Hawk, six Broad-winged Hawk, and ten Gyrfalcon plumages are presented. I've certainly not seen, in real life, most of the birds and plumages depicted here, so I cannot vouch for the accuracy of all the illustrations. They are, however, clearly superior to those provided in all but a few of the most recent regional, international, field guides.

Check with your friends and your local library to see if you can examine a copy before you invest \$48 in this book. People who hawkwatch casually, once or twice a season, probably will not want to invest the money. "World birders" and serious amateur as well as professional students of birds of prey will want this volume. There is no other hawk book like it.

Paul M. Roberts

HAWK PRINTS AVAILABLE

The Osprey and Red-shouldered Hawk illustrations in this issue are modest black-and-white reproductions of two full-color prints by Samuel Ward Warren of Freedom, New Hampshire. Full-color, 14" x 17" signed copies of these watercolor prints are available directly from the artist. Unmatted, each print is \$10.00; matted and shrink-wrapped, \$15.00. To order prints, send your name and address, noting which prints you desire (and how many of each), to:

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Please enclose a check for the appropriate amount, including \$1.00 postage and handling for each print. A portion of the proceeds of each sale will be donated to the Hawk Migration Association of North America.

Mr. Warren currently has watercolor prints of a Peregrine Falcon and a Cooper's Hawk in production; they will be available to the public in early 1982. For further information, please contact Mr. Warren at the above address.

REPORT OF THE NORTH DISTRICT TERN WARDEN: SEASON OF 1980

by Dennis Minsky, Long Beach, California

This report is an account of tern nesting and the tern protection program in the North District of Cape Cod National Seashore, for the season of 1980. The North District encompasses what is known as the Outer Cape; it begins at the Truro-Wellfleet town line and continues West/Northwest to the tip of Cape Cod.

There were 7 tern colonies in the North District during the 1980 season, representing 3 tern species: Least (*Sterna albifrons*), Arctic (*Sterna paradisaea*), and Common (*Sterna hirundo*). The only tern nesting on the Outer Cape outside Seashore boundaries was one Least Tern nest in Truro, just north of the mouth of the Pamet River (1 egg on 5/30/80; outcome unknown).

The single Arctic Tern nest at the Race Point Light colony represents the first attempted Arctic nesting in the district since 1976, and the first productive one (although 2 of the 3 fledged young were run over by vehicles) since records began.

The number of nesting Common Terns this season (15 June estimate: 30 pairs; season total: 48 nests) is nearly double last season's estimate for both nesting sites, and their production of fledged young (estimate: 22) increased in a like manner.

Least Tern nesting figures also show increases over last season, which was a record year. The number of pairs of Least Terns nesting on 15 June - 193 - is 18% higher than the 1979 count on that date. The total number of Least Tern nests for the 1980 season - 380 - represents a 36% increase over last season. Average clutch size (2.03), too, is up, due to an increase in 3-egg and decrease in 1-egg clutches this season. Least Terns in the North District produced a record 262 fledged young in 1980. Perhaps most important is the fact that the number of Least Tern colonies rose (50%) to 6.

There were no major storms this season; predation was low, moderate, or nonexistent; losses related to human activity were low due to beach closures; and food supply appeared very good.

The tern protection program was staffed by a tern warden, Dennis Minsky (18 May through 30 August), 2 Student Conservation Association assistants, Chuck Hoopes (8 June through 30 August) and George Madison (8 June through 20 August), and a volunteer from the Association for the Preservation of Cape Cod, Jeffrey Bryant (15 June through 15 August).

METHODS AND MATERIALS

In regard to methods, I quote from the 1979 Report of the North District Tern Warden a list compiled from the official position description. Further details will then be provided for some

activities.

- 1) Surveying and patrolling, establishing locations of all tern colonies and nesting terns.
- 2) Posting all tern colonies, as well as extra-colony posting.
- 3) Monitoring of posted areas to prevent intrusion.
- 4) Censusing of nesting terns.
- 5) Contact with the public and various media sources reinter-pretive and educational aspects of tern nesting.
- 6) Evaluation of production, including all relevant factors.

For additional background material, see Report of the North District Tern Warden: 1979 (Minsky); and Bird Observer, Vol. 8, No. 3, 1980, p. 102.

POSTING

Posting a colony is done as quickly and expeditiously as possible. Disturbance of nesting terns can be counterproductive, and in extreme cases may cause desertion. If there are no other factors - such as access-ways, ORV (off-road vehicle) passage, and high tide routes - posting does not proceed if it is disturbing the terns. It must be remembered that recreational activity will go on right up to a KEEP OUT sign. If the posting itself causes no disturbance, a buffer zone will have been created between nesting terns and beach users. Colonies may sometimes expand, however, and outer boundaries may need to be moved - three or four times in a season, sometimes.

Signs are evenly spaced, as a visual aid in censusing and nest watches. The actual distance between signs is a product of the need for them and their availability. Reflective signs are used where night ORVs are a factor. Nylon twine has proved most effective and durable over time. Reflective tape is affixed to this twine at regular intervals.

Large interpretive signs (with picture and text) are posted at either approach to each colony. As chicks begin to appear, CAUTION: YOUNG BIRDS IN TRACKS signs are also posted at either approach, on the lower beach. They are helpful in reminding beach-walkers and horsebackriders of the presence of the young birds.

Vehicles are another matter. Once again this season, areas in the vicinity of tern colonies were closed to all vehicular traffic - with the exception of the Wood End colonies, beyond the Cut. Three separate areas, encompassing approximately 2.7 miles and 5 of the 7 colonies, were posted with cedar posts and wire cable from the rear dune to the low water line. This posting began on 3 July and remained as long as pre-fledged young birds were in evidence. In future years posting should begin with the first hatching chick, and should be applied at all colonies. Prior notification of this situation should be achieved through press releases and public contacts via the Oversand Booth and all sand patrol rangers. It should

be emphasized that vehicles only are excluded; all foot use of these beaches is permitted.

A simpler posting operation is the placing of shelter boxes throughout tern colonies. These boxes were wooden pint-sized strawberry boxes, upturned, with openings cut out, staked in the sand with shards of shingles. They provide shade and shelter from the elements and must enhance chick survival and fledging.

CENSUSING

Censusing method is by direct count. Each nest is marked with a shingle, placed approximately four feet away - always forward of the nest and to the left. On the shingle is marked (using a waterproof marker) a number, date of discovery of the nest and its contents; any changes in the nest - hatching, abandonment, etc. - are also recorded as they occur. These data can be read from outside the colony with 7X binoculars.

Daily censusing is attempted, but heat waves, inclement weather, posting priorities, and vehicle breakdowns interfere. Colonies are never entered during the heat of mid-day or during showers or heavy fog.

Direct nest counts are complemented by nest watches from a vehicle or blind. These watches determine whether nests are active (i.e., being tended); chicks and fledged young can be accurately counted or observed only from a blind or vehicle; behavioral observations, too, are possible.

Table 1: Number of Censuses
(Data Sheets
Completed), Season
of 1980

Colony	
High Head (S)	39
Charlies	36
Exit #9	57
Exit #8	29
Race Point Light	36
Wood End Outside	37
Wood End Inside	25
Total	259

Table 2: Number of Recorded
Visitor Contacts,
Season of 1980

Positive:	64
Negative:	113
Breakdown of Negative	
Contacts Re Cause:	
Dog:	8
People:	6
Vehicle:	99

While the program cannot afford the hundreds of hours of observation-time necessary for behavioral research, still, periodic nest watches are valuable for the information they provide, and - more importantly - for the bonds they create between tern-watcher and tern.

All data collected are entered on a standardized data sheet (see Table 1) - one for each census - and then transferred to a master sheet for future compilation.

PREFACE TO RESULTS AND DISCUSSION, COLONY PROFILES, AND
EVALUATION

Unless otherwise noted, all numbers refer to active nests. It is our assumption that each nest represents a pair of terns.

Nests - or eggs in nests - referred to as abandoned are those that have been observed on two consecutive days to be unattended. The first day of such observation is recorded as the day of abandonment.

The numbers of hatched nests include only those that have been directly observed to hatch, i.e., chicks in the scrape - not just in the vicinity.

Likewise, the numbers for predation, tide/wind, and human-related mortality factors are all based on direct observation, i.e., tidelines, fox tracks, etc.

For a variety of reasons, our direct nest counts could not be total; consequently the outcome of some nests must be recorded "unknown". This is actually a measure of the effectiveness of our census efforts, rather than any intrinsic quality of the nests or terns. Known-outcome values range from 60% to 85%, with a mean of 74%. We fully believe - based on past seasons' observations - that the great majority of the outcome-unknown nests hatched.

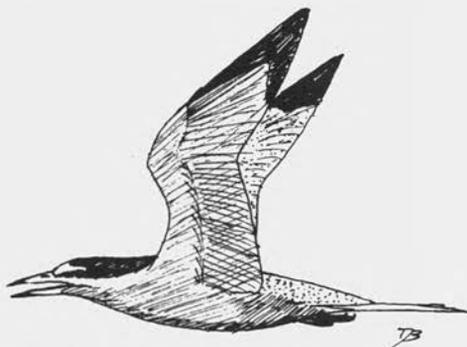
The peak hatch is defined as the date on which more nests contain chicks than eggs.

Production figures refer to number of fledged (=flying) young. Obviously, each one was not flushed into the air: with some experience, an accurate appraisal can be made according to plumage and development of primaries.

Production rate per se is defined as the number of fledged young per number of nests. Another parameter is survival rate - the number of fledged young per number of eggs hatched. This is meant to eliminate those mortality factors that ordinarily apply more to the egg-stage (tide/wind, and, presumably, most predation). These rates reflect phenomena about which we know very little. This season, of 457 eggs hatched, 23 chicks were found dead, and 262 were estimated fledged, leaving 172 with a fate unknown.

One approach to Least Tern census data employed in past seasons has been discontinued this year: the analysis of nest/renewal data. It had been assumed that any nest discovered before 15 June was a first nesting attempt, and any nest found thereafter was a renewal - a second or even third attempt after initial failure.

We have become increasingly uncomfortable with this analysis, as it is based largely on conjecture and not observation.



Obviously any nest discovered on 1 June represents an original effort, but are later nests the result of re-nesting or the first attempts of late-nesting pairs? The propensity of Least Terns to re-nest after initial nest failure is often cited in the literature (e.g., J. A. Hagar, Least Tern Studies-1935 and 1936, Bull. Mass. Aud. Soc. 21(4), 1937; or B. W. Massey, Breeding Biology of the California Least Tern, Proc. Linn. Soc. of N.Y., #72, 1974). Too, for the larger species of terns, a relationship has been established between late nests and first-time, young, less experienced breeders (e.g., I. C. T. Nisbet, Population Models for Common Terns in Massachusetts, Bird-Banding, 49(1), Winter 1978).

To further complicate the situation, the arrival patterns of Least Terns in May is by no means uniform. Colony formation in the South District of the Seashore (S. Wellfleet, Eastham, Orleans) has always preceded the North by a week or more. For instance, this season, on 27 May, there were 194 Least Tern nests on Nauset Spit, Eastham (Kathy Keane, personal communication) and only 3 in the entire North District (see tern reports of 1976, 1977, and 1978 for similar data). In light of this, the choice of 15 June as a cutoff date seems arbitrary.

For the purpose of continuity, we record 193 definite pairs of Least Terns on 15 June (see Table 3). We record also that there were a total of 380 Least Tern nests throughout the season, 60 of which were lost or abandoned; any nest/re-nest analysis of these data is conjectural.

Table 3: Comparison of North District Least Tern Data, Seasons 1976 through 1980

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
No. of nests (= pairs)	107	124	90	163	193
Initiated nesting	5/20	5/21 (storm)	6/4	5/26	5/26
First hatch	6/23	7/1	7/1	6/22	6/16
Peak hatch	7/14	7/15	7/21	7/2	6/24
Production	84	55	74	195	262
Production rate	--	--	--	0.70	0.69
Survival rate	--	--	--	0.63	0.57
Ave. clutch size	--	--	--	1.88	2.03

CENSUS DATA

The preceding data present a very positive picture of the 1980 nesting season. For Least, Common, and Arctic Terns, numbers of nesting pairs, total number of nests for the season, and total fledged young produced have increased over the 1979 season (itself a record year).

The 18% increase in the number of pairs of North District Least Terns is slightly higher than the estimated overall statewide increase of 15% (Brad Blodget, Mass. Div. of Fish and Wildlife, 1980 Tern Census and Inventory Data). Pairs of Common Terns almost doubled last season's estimate for the North District, and this far exceeds the 15% statewide increase projected for this species. And the single pair of Arctic Terns at Race Point Light - the first since 1976 - is noteworthy in light of their 13% decline (to just 39 pairs) this season in Massachusetts.

We can record these increases, but we cannot explain them. Certainly the tern population of Cape Cod is one of the best protected in the world. Over the years we must have added breeding individuals to this population and enhanced this area's attractiveness to nesting terns. At the same time, food supply (small baitfish) appeared abundant again this season, and this factor must also be involved.

COLONY FORMATION

The increase (50%, from 4 to 6) in the number of Least Tern colonies is especially heartening, but likewise inexplicable. We know very little about arrival patterns, colony formation, and intra-seasonal movements of Least Terns.

We do know - as mentioned earlier - that the large colonies of the South District (Eastham, Orleans) form at least a week in advance of the North District's colonies. The fact that High Head (S) - the southeasternmost Least Tern colony on the North District's Backshore - did not form earlier than others to the northwest and west indicates that colony site selection involves more than just a progressive movement along the Backshore.

Certainly one criterion for colony site selection must be beach width and height. The High Head (S) colony site had broadened considerably over the winter, while 0.7 miles to the northwest the High Head (N) colony site - which had continuous nesting since 1976 - eroded dramatically. Least Terns were first observed at that site this season, but never nested.

Beach dimensions cannot be the only factor, however. Wood End Outside - along with Exit #9 the only 5-year continuously-used nesting site - is no more than a sliver of upper beach; the terns nest right in the drift line and up the sharply sloping foredune.

Table 4: North District Least Tern Clutch Size Data, Survival Rate Data, and Production Data: Season of 1980

COLONY	CLUTCH SIZE			SURVIVAL RATE		PRODUCTION RATE	
	1 egg	2 egg	3 egg	# chicks fledged # eggs hatched	# chicks fledged # total nests		
Race Point Light	1	32	0	0.86	0.91		
Charlies	7	51	7	0.24	0.23		
Wood End Outside	6	86	10	0.56	0.73		
Exit #9	8	99	12	0.76	1.14		
High Head (S)	3	40	6	0.17	0.16		
Exit #8	0	12	0	0	0		
Total	25	320	35				
Average for total North District	2.03			0.57	0.69		
	1 egg clutches:	6.57% of total					
	2 egg clutches:	84.21% of total					
	3 egg clutches:	9.21% of total					

PRODUCTION

The increase in production of fledged young is, of course, encouraging. The single fledged Arctic Tern (last seen 27 July, 40 days old) is this season's brightest note.

While the total number of fledged young Least Terns increased this season (262 vs 195 last season), the production rate remained about the same (1979: 0.70; 1980: 0.69, see Table 4). This is also true for Common Terns, although census data are less detailed. This apparent constancy in production rate between seasons is interesting, since mortality factors were not the same.

TIDE/WIND

For the second consecutive season this area was spared a major storm. Only 2 nests were lost to high tides - both were initiated late in the season, outside the posted colonies, low on the beach. Other low nests survived and hatched. Storm/tide damage is often a major mortality factor, as all the colonies are extremely vulnerable.

On 6 July winds gusted to 40 mph on the Backshore. At High Head (S) we observed from a vehicle that 6 nests were covered by sand and were not attended. We recorded these nests as lost. The following day, all but one egg had been uncovered and were again being incubated.

The only other potentially adverse weather factor was the intense heat in July. There were numerous indications that the terns were stressed: panting individuals, adults standing over their eggs, adults brooding very large chicks, large numbers of adults and young on the lower beach by the water line. This heat may have contributed to egg and chick mortality.

PREDATION AND ABANDONMENT

Predation losses this season are the lowest ever recorded: less than 7% of Least Tern nests were taken by predators, compared with 28% last season. We have no explanation for this.

Known predators, in order of relative impact, were Red Fox (Vulpes fulva), gulls - either Herring Gull (Larus argentatus) or Great Black-backed Gull (Larus marinus) - and Common Crow (Corvus brachyrhynchos). Also operating in the vicinity of tern colonies were Marsh Hawks (Circus cyaneus), and American Kestrels (Falco sparverius); snake tracks were noted in Charlies colony.

Only 2 colonies were affected by fox predation this season: High Head (S) and Charlies; both have histories of heavy fox predation, and are close enough to each other (1.3 miles) that the same fox(es) could have been operating in both. Their rates of predation (14%) are twice the district average.

The puzzling aspect of the fox predation is its low intensity. In past seasons foxes would wipe out colonies in a single night. This season, only 11 nests were taken, and these gradually, although fox tracks were continually seen. Tracks often went right by nests and left them unharmed. Of course, we have no idea of the amount of predation on chicks. Both High Head (S) and Charlies have similarly low survival and production rates (see Table 4).

A probable consequence of the fox was the night desertion observed by Hoopes on 7 July at High Head (S), but its duration is unknown and incubation intervals there were not significantly longer than the district mean - although peak hatch was later there and at Charlies.

There was no sign at all of fox until 5 July, long after peak hatch. In past seasons fox predation usually occurred around 20 June. Because of the late timing and low intensity, we decided that an electric fence was not necessary.

A dead fox was found on the Point in early June; no other sign of fox was found there all season.

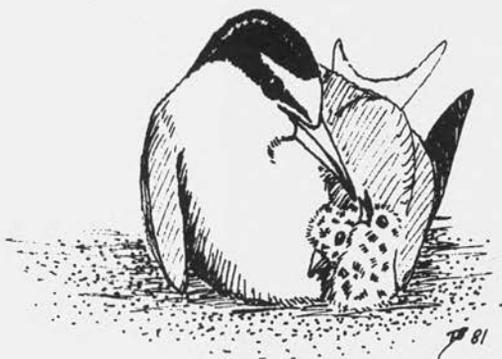
1980 is the first season that both gull and crow predation have been documented in the North District. It is unlikely that these are new phenomena, but they were not observed in past seasons, with an equal number of observers in the field. Such predation was always being looked for, too.

Perhaps the level of gull and/or crow predation has increased - due to increases in predator and/or prey populations, decrease in alternative food sources, and/or decrease in competing (fox, owl) predator populations - and is therefore more noticeable.

Still, the number of nests taken - 5 by crows and 9 by gulls - is small. Of course, once again the large unknown is the number of chicks and fledged young taken by these avian predators.

Almost every nest lost to gull or crow was on the extreme perimeter of the colony. Five of the nests lost to gulls were in the same area (northernmost perimeter of Exit #9), and lost on the same day (6 August) late in the season, leading us to believe that they may not have been vigorously defended.

The fact that the percentage of 1-egg clutches lost to predators is so much higher than the mean percentage of all clutches lost also leads us to the hypothesis that they were not as well placed (in relation to predator-avoidance) as 2 and 3-egg clutches. And the fact that the 1-egg clutches evidence such a high level of abandonment, compared with the all-size-clutch mean percentage, seems to indicate that perhaps the



above 1-egg clutches taken were already abandoned - or at least not vigorously defended. It has often been suggested that 1-egg clutches are the result of younger, inexperienced, first-year breeders, with very low nesting success.

Other than the preponderance of 1-egg clutches, there is little else we are able to say about abandonment. What causes terns to abandon their eggs? Two abandoned eggs were found with chicks that had died during pipping. Why do abandonment levels vary between colonies? Abandoned eggs at Charlies and High Head (S) may have been taken by predators before we recorded them. One reason for the relatively high level at Wood End Outside is the sharply sloping foredune there. Several nests were irretrievably disrupted when the eggs rolled down this slope and were abandoned. (An interesting note: one such egg was "adopted" by a neighboring pair of birds that already had 2 chicks; the egg was rolled approximately one foot into their previously-used scrape and was incubated from 22 June until 25 July, outcome unknown.)

LOSSES RELATED TO HUMAN ACTIVITY

Losses related to human activities were very low, in fact the lowest since recording began. The one glaring exception is the loss of 2 of the 3 fledged Arctic Terns (and 1 Least chick) to an ORV on 13 July. The fact that these birds were already fledged and were "protected" by the regular colony posting and a cedar post and wire cable barrier around that, that they were found run down in the colony just a few feet from where they hatched, makes it all the harder to accept. There can be no protection against acts like that, other than 24-hour watches on each colony.

Total known lost to vehicles: 1 Least Tern nest, 5 Least Tern chicks, and 2 Arctic Tern fledglings. The probability of finding a crushed chick in the sand is low, so our figures are the very minimum. With the exception of the above incident, all these losses occurred before the posting of barriers to vehicles. These losses could have been avoided if the barriers were erected from the day of first hatching.

The single nest lost to a pedestrian was on the very edge of Exit #9, just outside the posted area. The 5 nests lost to horseback riders represent a special case, and can be remedied next season by closer contact with the riding stable involved.

Beyond these direct losses, we believe the indirect effect of human disturbance on tern nesting was also very low. There were fewer instances of people in or near colonies, and fewer cases of dogs (see Table 2). This may have contributed to the pronounced synchrony of nesting this season.

CONCLUSION

This has been an extremely productive season for tern nesting and for the tern program. But one season in itself is not important. Tern nesting on Cape Cod is an ongoing process - with fluctuations, good years and bad, with new factors affecting breeding success, or perhaps new combinations of the old factors. Any program on behalf of tern nesting must retain at its core this ongoing quality, an ability to perceive the process and not overconcentrate on one season, one beach, one nest.

It is in this spirit that we present this account of the 1980 season. It is our hope that workers in future seasons will find herein things of value: perhaps the cumulative data, perhaps our methodology, or some of the questions and hypotheses we raise.

Questions and hypotheses abound. We have tried here to underline how much is not known, how much remains to be learned. Certainly, protection is our first priority. But informed action is effective action. Research must continue and expand. Important contributions this season were Mrs. Erma J. (Jonnie) Fisk's banding program and Chuck Hoopes' colony mapping-both should continue. And once again this season we earnestly request criticism and comments from the scientific community, so that the research aspect of the program may grow and improve.

The season closes; the work is done; the birds are gathering or gone; the beaches quiet. Now is the time to acknowledge the effective support of North District Ranger Irving Tubbs. Now, too, we mention Jonnie Fisk's energy and work; she is a constant inspiration.

The SCAs, Chuck Hoopes and George Madison, and the APCC volunteer, Jeffrey Bryant, all devoted time, energy, and ideas beyond what was expected. Their work was good, and they may take pride in its results. They take their reward - as I do, as Jonnie does - in the brief association that we are privileged to have with these intense and beautiful birds.

DENNIS MINSKY is currently doing tern research at California State University, Long Beach. He was the Tern Warden at the Cape Cod National Seashore from 1976 to 1980 and wrote the Tern Report for those years.

DENISE BRAUNHARDT, M.S. in Wildlife Biology from Northeastern University, is a free-lance illustrator, writer, and wildlife photographer. She is a 4H agent for Suffolk County.

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1981-1982 DUCK STAMP

by Theodore H. Atkinson, Actor

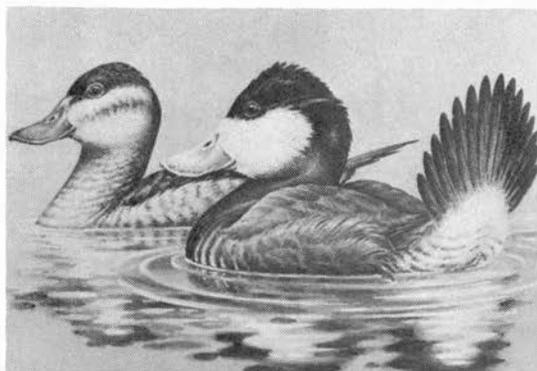
A tempera painting of male and female Ruddy Ducks sitting on the water won the 1981-1982 federal Duck Stamp competition. John S. Wilson's entry topped a record 1,507 paintings in the federal government's only regularly sponsored art contest. The 51-year-old self-taught artist, sign painter, and designer from Watertown, South Dakota, had competed unsuccessfully in the last two federal contests.

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Though the winner will receive no prize other than a sheet of the following year's Duck Stamp, the financial reward is significant. In the past commercial wildlife art dealers have been eager to market limited edition reprints of the design. The prestige of winning the contest has enhanced the reputation of established artists and has elevated otherwise unknown artists to public acclaim.

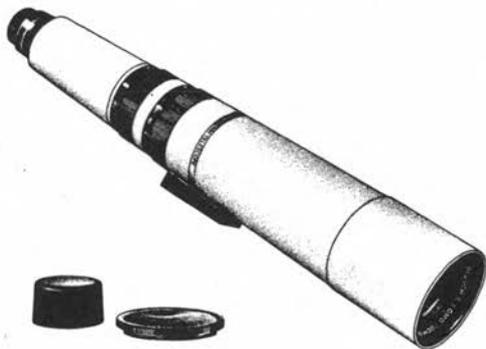
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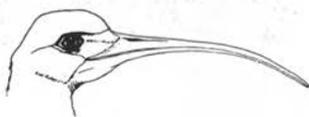
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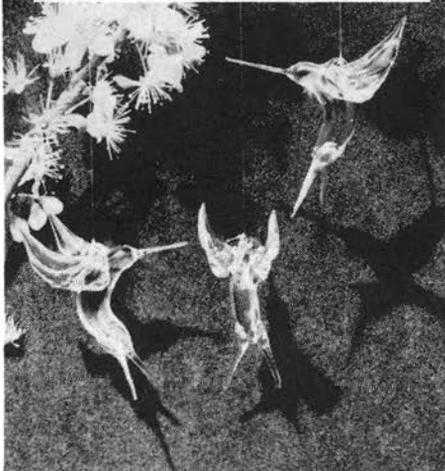
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Field Records:

June 1981



by Robert H. Stymeist, Lee E. Taylor

June, 1981, was warm, sunny and dry; the temperature averaged 70.7° , 2.7° above normal, and the highest since the record warm June of 1976 (73.4°). The high mark was 92° on the 16th and the lowest, 54° , on the 2nd. Rain totaled only 1.65 inches, 1.54 below normal for Boston. Rain in the greater Boston area and the rest of Massachusetts was quite variable, ranging to well above normal in some places. Washing and flooding rains came on the 20th to Cape Cod where some reports were in excess of $\frac{1}{4}$ inches that day alone. Many north shore areas also had excessive rain on the 20th. A passage of a squall on the 22nd brought a damaging tornado to the Hubbardston area.

Another nature highlight for the month was the record outbreak of gypsy moths this year. Officials at the Bureau of Insect Pest Control estimated that half the land in our commonwealth was defoliated. They estimated that the caterpillars munched through 2.5 million acres this year compared with 907,000 acres damaged last year. This must surely have had a damaging effect on the breeding success of a number of woodland passerines. The Greater Boston Breeding Bird Census was held on June 13 and recorded 110 species. Most of the results are included in the records below. It is interesting to note that several birds did in fact show a marked decrease compared with the censuses of other years suggesting a relationship to the gypsy moth infestation; e.g., Red-eyed Vireos were reported in far fewer numbers within the oak-dominated Middlesex Fells Reservation and also in the extensive oak areas of Waltham. It is hoped that more thorough breeding bird censuses can be carried out in future years patterned on the areas covered by the Christmas Count circles with more individuals participating. Bird Observer wants your records! Observations of numbers (actual counts) whether high or low as well as sightings of unusual birds whether it is the species, number, location, or time of year that seems notable are welcome. We want to hear about them. Please send all your reports to Ruth P. Emery, 225 Belmont St., Wollaston, MA, 02170.

LOONS THROUGH HERONS

A Red-necked Grebe was well described off Rockport on the unusual date of June 21. The only other recent June record was a partially breeding-plumaged bird found at Westport on June 7, 1975 (SSBC-S.Higginbotham). The month of June marks the general arrival of the southern hemisphere pelagic species in New England waters; note the high count of 2000 Cory's Shearwaters recorded off Martha's Vineyard. This is by far the largest concentration of this species so early in the season.

An adult White Pelican was seen for twelve straight days on Plum Island. This is the first record for June and the second record for Plum Island; the first was October 26, 1946. The only recent spring record was on May 12, 1975, at Wareham. The bird this year was seen in various parts of the island, often harassed by the gulls.

Great Egrets probably nested on Spectacle Island in Boston Harbor, and Snowy Egrets were found breeding on Monomoy; other breeding reports included at least six nests of Black-crowned Night Herons on Plum Island, and a Least Bittern was heard calling from the reeds in Hammond Pond in Chestnut Hill during the breeding bird census. R.H.S.

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Common Loon:			
13	Revere-Winthrop	3	GBBBC
<u>Red-necked Grebe:</u>			
21	Rockport	1	P.Stangel
<u>Pied-billed Grebe:</u>			
29	P.I.	1	BBC
<u>Cory's Shearwater:</u>			
28	50 mi. south of M.V.	<u>2000</u>	V.Laux

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Greater Shearwater: 26,28	off Gloucester, off M.V.	1, 200	H.Wiggin#, V.Laux
Sooty Shearwater: 28	50 mi. south of M.V.	15	V.Laux
Manx Shearwater: 14	Stellwagen	1	B.Nikula
Wilson's Storm-Petrel: 20	off Gloucester	50	J.Grugan#
<u>White Pelican:</u> 4-15	P.I.	1 ad.	v.o. + refuge personnel
Gannet: 20	off Gloucester	2	J.Grugan#
Double-crested thr.	Cormorant: Belmont	max. 9	L.Robinson
6,9	Wayland, Newton	1, 1	R.Forster, N.+ O.Komar
13	Gr.Boston, P.I.	800, 100+	GBBBC, J.Berry
Great Blue Heron: thr., 5	P.I., Belmont	max. 5, 2	v.o., L.Robinson
Green Heron: thr., 13	P.I., Gr.Boston	max. 5, 7	v.o., GBBBC
Little Blue Heron: thr., 13	P.I., Boston	max. 3, 2 ad.	v.o., P.Stevens
17,26	W.Harwich, Westport	1, 1	B.Nikula, A.Ellis
Cattle Egret: thr., 12	Ipswich, Muskeget	max. 5, 1	v.o., R.Heil
Great Egret: 3	Milton, Westport	3, 2	T.Raymond, M.Argue#
5,9	Wayland, Harwich	1, 1	R.Forster, D.Arvidson#
13,21	Squantum, Newton	3, 2	GBBBC, N.+ O.Komar
Snowy Egret: thr., 13	P.I., Gr.Boston	max. 75, 54	v.o., GBBBC
22	Monomoy	breeding	P.Trull
Louisiana Heron: thr., 13	P.I., Sandwich	max. 2, 2	v.o., J.Aylward#
Black-crowned Night Heron: thr.	Belmont (Alewife)	max. 45	L.Robinson
thr.	Newton, P.I.	11, 6+ nests	N.+ O.Komar, J.Berry
13,29	Gr.Boston, P.I.	84, 38	GBBBC, BBC
Yellow-crowned Night Heron: thr.	P.I.	max. 3 ad.	v.o.
4,9	Annisquam, Sandwich	1 imm., 1	H.Wiggin, J.Aylward
Least Bittern: thr., 13-21	P.I., <u>Chestnut Hill</u>	1+, 1	v.o., N.+ O.Komar + v.o.
13	Wayland	1	R.Forster
American Bittern: 3, 13	Stow, Wayland	1, 1	D.Roy, R.Forster
Glossy Ibis: thr.	P.I., Revere	max.22, max. 13	v.o., J.Berry

WATERFOWL

The European Wigeon continued at Plum Island through the 12th; it was found on May 23. The American Wigeon remained at Plum Island only through the 1st, and a female with young was noted from Monomoy. An immature male King Eider was observed among summering Common Eiders off Wasque, Martha's Vineyard, on the 20th. A Hooded Merganser with ten young was noted at the Oxbow National Wildlife Refuge. R.H.S.

Mute Swan: thr.	Ipswich	2 ad. + 1 yg.	J.Berry
Pintail: 13	P.I.	2 m. + 1 f. w/ 11 yg.	J.Berry
Green-winged Teal: thr., 13	P.I., Wayland	max. 20+, 1	v.o., R.Forster
European Wigeon: 1-12	P.I.	1	v.o.
American Wigeon: 1,24	P.I., Monomoy	2, 1 f. w/ yg.	BBC, A.French
Northern Shoveler: thr.	P.I.	2	v.o.

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Wood Duck:			
13	Waltham, P.I.	29, 19	R.Stymeist, J.Berry
21,27,30	Newton,GMNWR,Woburn	12, 50, 9	N.+ O.Komar,J.Kenneally,G.Gove
	All the above totals include young birds.		
Common Eider:			
12,13	Muskeget I., Boston	35+, 9	R.Heil, GBBBC
<u>King Eider:</u>			
20	M.V.	1 imm. m.	V.Laux
White-winged Scoter:			
13	Revere, Rockport	26, 4	GBBBC, P.Stangel
Surf Scoter:			
13	Rockport	4	P.Stangel
Ruddy Duck:			
thr.	P.I.	max. 7	v.o.
Hooded Merganser:			
20	Harvard (Oxbow)	1 w/10 yg.	G.Soucy#
Red-breasted Merganser:			
thr.,24	P.I., Monomoy	max. 10, 19	v.o., B.Nikula

RAPTORS THROUGH COOT

An immature Golden Eagle was observed several times over Plum Island on June 1, and immature Bald Eagles were noted in Westboro and Lakeville. A Yellow Rail was reported flying across Pike's Bridge Road in West Newbury on June 2.

Turkey Vulture:			
7	W.Newbury, Barnstable	1, 14	R.Emery#, D.Reynolds
14,24	Muskeget, Essex	2, 1	R.Heil, P. Stangel
Goshawk:			
1,18	E.Townsend, E.Middleboro	pr.nesting, 1	J.Quinn, K.Anderson
Red-tailed Hawk:			
thr.	Ipswich, Newton	nest w/3 yg., 3 ad.+ 1 imm.	J.Berry, N.+ O.Komar
Red-shouldered Hawk:			
7	Framingham,Littleton,W.Newbury	1 ad., 1, 1	R.Forster,J.Baird,D.+ D.Oliver
Broad-winged Hawk:			
13,15	Gr.Boston, Muskeget	9, 1 imm.	GBBBC, R.Heil
<u>Golden Eagle:</u>	(well described)		
1	P.I.	1 imm.	H. D'Entremont#
Bald Eagle:			
25,29	Lakeville, Westboro	1, 1 imm.	J.Fernandez, B.Blodget
Osprey:			
thr.,12	Nantucket, P.I.	1 pr.nesting, 1	Nan Jenks-Jay,F.Bouchard
American Kestrel			
thr.,13	Newton, Gr.Boston	4, 21	N.+ O.Komar, GBBBC
Ruffed Grouse:			
13,21	Middlesex Fells, Newton	1, 1	P.Roberts#, N.+ O.Komar
Bobwhite:			
14,19	Boxford, Lincoln	1, 1	W.Drummond, R.Forster
Virginia Rail:			
13,22	Saugus, P.I.	4, 1 ad. + 2 yg	G.Jackson, W.Drummond
<u>Yellow Rail:</u>	(no details received)		
2	W.Newbury	1	E.Pyburn+S.Garrett+J.Soucy
Common Gallinule:			
thr.	P.I.	max. 8+w/chick	J.Berry + v.o.
American Coot:			
thr.	P.I.	2	v.o.

SHOREBIRDS THROUGH TERNS

American Oystercatchers were doing well on Monomoy where at least seven territorial pairs were noted and four nests were located. A Lesser Golden Plover was well described in full breeding plumage on June 6 at Rowley. Willets were present on Monomoy and a maximum of five were noted in the Plum Island area where hope for the presence of breeding Wilson's Phalaropes continued; at least five individuals were reported though no nest was found. The report of two Ruffs on Plum Island June 28 was interesting! The fifteen Red Knot noted on Monomoy on June 6 included one color-marked bird banded in Argentina by MBO in mid-April!

A Great Black-backed X Herring Gull was present throughout the month at Muskeget further complicating the picture of Lesser Black-backed Gull identification.

A Thayer's Gull was reported from Low Beach, Nantucket, where one was seen earlier this year. A Sandwich Tern found on Monomoy on the 6th was a winter-plumaged bird and hence not the same individual as either of the adult-plumaged terns reported in late May from Muskeget and Plymouth Beach. It is interesting that one was reported from Monomoy on the same date last year. It is discouraging to note the reduced number of breeding terns on Monomoy. A total of only 1975 pairs of Common Terns was censused compared to over 3000 pairs last year. Black-crowned Night Herons, Great Horned Owls, and gulls have apparently taken a toll of them this year. Southern terns included twelve Royal Terns and three Black Skimmers.

A census of terns on the cape and at Plymouth Beach resulted in the following numbers:

	Plymouth Beach	New I. Nauset	Monomoy	Grays Beach, Yarmouth	Bird I. Marion	
Common Tern	550 prs.	520 prs.	1975 prs.	860 prs.	600 prs.	
Arctic Tern	13	-	6	-	-	
Roseate Tern	5	-	35	40	1500	R.H.S.

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
American Oystercatcher:			
thr.	Monomoy	15+ (7+ terr.prs. + 4 nests)	v.o.
14	Nauset	15	P.Trull
Semipalmated Plover:			
6	P.I.	1	BBC (McHales)
Piping Plover:			
thr., 3,13	P.I., Dartmouth, Revere	2, 2, 2	v.o., R.Emery#, S.Zendeh
Killdeer:			
13	Gr. Boston	50	GBBBC
Lesser Golden Plover:	(excellent description)		
6	Rowley	1 ad. br. pl.	J.Berry
Black-bellied Plover:			
13	Boston Harbor	27	GBBBC
Ruddy Turnstone:			
13	Boston Harbor	2	GBBBC
American Woodcock:			
8,13	Ipswich, Neponset	3, 3	J.Berry, D.Brown
Whimbrel:			
1	Muskeget	1	R.Heil
Upland Sandpiper:			
thr.	Newbypt	max. 8	v.o.
Spotted Sandpiper:			
13,27	Gr. Boston, P.I.	10, 2 ad. + 4 yg.	GBBBC, G.Gove
Willet:			
thr.	Monomoy, P.I.	max. 20+, max. 5	v.o., v.o.
13,14	Squantum, Muskeget	1, 1	D.Brown, R.Heil
Greater Yellowlegs:			
6;13,27	P.I.	9; 2, 10	R.McHale; J.Berry
13	E. Boston	3	GBBBC
Lesser Yellowlegs:			
1+6,13	P.I., E. Boston	1 + 1, 2	BBC, GBBBC
Red Knot:			
1,6,20	Muskeget, Monomoy, Ipswich	3, 15, 1	R.Heil, W.Petersen#, J.Nove#
White-rumped Sandpiper:			
thr., 1,6	Monomoy, P.I., Newbypt	max. 8+, 3, 2	B.Nikula#, H.D'Entremont, BBC
Dunlin:			
13	P.I.	5-6	J.Berry
Stilt Sandpiper:			
22+24	Monomoy	1	P.Trull, B.Nikula
Semipalmated Sandpiper:			
1,13	P.I., Boston Harbor	11, 9	BBC (Hales), GBBBC
Marbled Godwit:			
10	Monomoy	1	B.Nikula
Ruff:			
28	P.I.	2	N.Mueller
Wilson's Phalarope:			
thr., 29	P.I., Monomoy	max. 5, 1	v.o., H.D'Entremont#
Parasitic Jaeger:			
14	P'town	2	B.Nikula
Great Black-backed X Herring Gull:			
thr.	Muskeget	1 ad. ph.	R.Heil, R.Veit

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
<u>Thayer's Gull:</u>			
24	Nantucket (Low Beach)	1	Nan Jenks-Jay
<u>Bonaparte's Gull:</u>			
thr.	P.I.	max. 250+ imm.	6/23 v.o.
<u>Black-legged Kittiwake:</u>			
6,29	Monomoy	9 imm., 6	W.Petersen, N.+ O.Komar
20	off Gloucester	1 imm.	J.Grugan#
<u>Sandwich Tern:</u>	(carefully described)		
6	Monomoy	1 winter pl.	W.Petersen + B.Harrington
<u>Forster's Tern:</u>			
2,23-29	Monomoy	1, 1	B.Nikula, P.Trull + v.o.
13	P.I.	1 winter pl.	G.Gove
<u>Common Tern:</u>			
thr.,29	Nantucket, Great Pt.	1 pr. nesting, 27	Nan Jenks-Jay
13,27	P.I.	100+, 20+	J.Berry
8,13	Ipswich, E.Boston	24, 32	J.Berry, S.Zendeh
<u>Arctic Tern:</u>			
thr.	Monomoy	max. 100+	portlandica v.o.
<u>Roseate Tern:</u>			
29	Nantucket	9	Nan Jenks-Jay
<u>Least Tern:</u>			
thr.,8	P.I., Ipswich	max. 8+, 10+	v.o., J.Berry
<u>Royal Tern:</u>			
1,13,18	Muskeget	1, 1, 2	R.Heil
6	Marion (Bird I.)	2	I.Nisbet
9,23	Monomoy, Nantucket	1, 1	P.Trull, Nan Jenks-Jay
25,29	Woods Hole, P.I.	4, 1	G.Kelley, D.Spencer#
<u>Black Tern:</u>			
6,29	Monomoy	2, 1	W.Petersen#,H.D'Entremont#
10,12	Chatham, Plymouth	1, 3	D.Arvidson, W.Petersen
27	Newburyport	1	G.Gove
<u>Black Skimmer:</u>			
23-29,24	Monomoy, Yarmouth	1-2, 1	P.Trull# + v.o., P.Trull

CUCKOOS THROUGH WOODPECKERS

There were many cuckoos reported but fewer this year than last; one explanation suggests that the gypsy moth caterpillar infestation south of New England kept them satisfied there. A Barn Owl was seen flying over Quincy Market on the 19th. Four juvenile Saw-whet Owls were present at IRWS, Topsfield. At least three Chuck-will's-widows were present throughout the month at Chappaquiddick and another was found on the mainland of Martha's Vineyard at Katama. R.H.S.

<u>Yellow-billed Cuckoo:</u>			
thr.	Newton, Annisquam	7, 1+	N.+ O.Komar, H.Wiggin
13	Gr.Boston, Wayland	16, 4	GBBBC, R.Forster
			Many other reports of single birds from various locations.
<u>Black-billed Cuckoo:</u>			
thr.; 1	Newton; P.I., W.Newbury	6;1,2	N.+ O.Komar,D.Arvidson#,H.D'Entremont
6,9	Cambridge, Eastham	1, 1	F.Bouchard, D.Arvidson#
13	Gr.Boston, Wayland	17, 3	GBBBC, R.Forster
27	Wayland (different locs.)	1 ad. 3 yg.	J.Hines
			Other reports of single birds totalling 12 individuals.
<u>Barn Owl:</u>			
19	Boston (Quincy Market)	1	G.d'Entremont
<u>Screech Owl:</u>			
13	Gr.Boston	7	GBBBC
<u>Great Horned Owl:</u>			
13	Gr.Boston	4	GBBBC
<u>Short-eared Owl:</u>			
thr.	Monomoy, Muskeget	1, nest w/7 yg.	P.Trull + v.o., R.Heil
<u>Saw-whet Owl:</u>			
25	Topsfield IRWS	4 juv.	R.Scott
<u>Chuck-will's-widow:</u>			
thr.	Chappaquiddick, Katama	3, 1	V.Laux + v.o.
<u>Whip-poor-will:</u>			
1,8	Muskeget, Ipswich	1, 3	R.Heil, BBC
<u>Common Nighthawk:</u>			
thr.	Cambridge, Brookline	6, 8	R.Stymeist

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Ruby-throated Hummingbird:			
thr.,1	Duxbury, P.I.	pr.nesting, 1	fide W.Petersen, D.+ D.Hale
4,6	Stellwagen, Chatham	1, 1	W.Petersen
Common Flicker:			
thr.13	Newton, Gr.Boston	21, 84	N.+ O.Komar, GBBBC
Pileated Woodpecker:			
15,30	Canton, Carlisle	1, 1	F.Hamlen, C.Jung
Hairy Woodpecker:			
thr.,13	Newton, Gr.Boston	5, 10	N.+ O.Komar, GBBBC
Downy Woodpecker:			
thr.,13	Newton, Gr.Boston	27, 64	N.+ O.Komar, GBBBC

FLYCATCHERS THROUGH SPARROWS

The tail end of the spring migration continued through the first week in June. The 5th was a particularly good day for Mourning Warblers with good numbers seen at coastal sites. Empidonax flycatchers were also seen in numbers on that day and the next.

Population levels for some of our more common flycatcher species bear watching. Reports of Eastern Phoebe have been generally low all year and that trend continued in June. In addition, Eastern Wood Pewees were scarce. Pewees seem to prefer oaks as nesting sites and so may have been affected by the Gypsy Moth larvæ onslaught. Optimistically, it is possible that they simply shifted to areas less afflicted. Red-eyed Vireos' nesting success could also have been negatively affected by the munching hoards. The trend of slightly low counts of warblers continued from May with fewer than usual reports of Ovenbird and very few American Redstarts.

Rarities for the month were in the flycatcher and large fringillid departments. The Scissor-tailed Flycatcher at Rockport occurred at an unusual time of year for a vagrant. The Scituate Olive-sided Flycatcher was also a surprise, turning up in the eastern part of the state at breeding time.

Another species not expected near the coast in June is Evening Grosbeak, one of which was banded in Rockport. The Blue Grosbeak at World's End in Hingham was an interesting sighting though not too surprising in light of the several birds seen farther north in late May.

L.E.T.

Eastern Kingbird:			
1-15,8-20	P.I., Ipswich	75 max., 8 max.	BBC
13, thr.	Gr.Boston, Newton	54, 19	GBBBC, N.+ O.Komar
Scissor-tailed Flycatcher:			
26-27	Rockport	1	P.Stangel#
Great Crested Flycatcher:			
13, thr.	Gr.Boston, Newton	48, 15	GBBBC, N.+ O.Komar
Yellow-bellied Flycatcher:			
1, 2	P.I.	1, 3	BBC, L.Jodrey#
5	MNWS, Nahant	5, 1	R.Heil
13	Muskeget	1	R.Heil
Acadian Flycatcher:			
2,6	Mt.A., P.I.	1, 1	R.Stymeist#, G.Gove
Willow Flycatcher:			
thr.	P.I., Newton	3 max. 6/27, 4	v.o., N.+ O.Komar
thr.	Chatham	1	B.Nikula#
13	Gr.Boston, Wayland	12, 14	GBBBC, R.Forster
13,27	Newbury, GMNWR	7, 4	J.Berry, BBC
Older Flycatcher:			
2,7	P.I., W.Newbury	1, 1	L.Jodrey, W.Drummond#
5	MNWS, Nahant, S.Peabody	1, 1, 1 singing	R.Heil
13	Neponset, Waltham; Wayland	1, 1; 1	GBBC; R.Forster
Least Flycatcher:			
7,13	Boxford, Wayland	1, 1	T.Leverich#, R.Forster
14	N.Andover	2	BBC
Eastern Wood Pewee:			
7,13	W.Newbury, Gr.Boston	3, 9 (low)	R.Emery#, GBBBC
Olive-sided Flycatcher:			
thr.	Scituate	1 m. singing	G.Bartlett#
Tree Swallow:			
thr.,27	P.I., GMNWR	200 max. 6/15,, 25	v.o., BBC

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Bank Swallow: 20,27	Middleboro, P.I.	100+ pr., 15	W.Petersen#, J.Berry
Rough-winged Swallow: 13,29	Gr.Boston, W.Harwich	34, 8 (mostly juv.)	GBBBC, J.Hines
Cliff Swallow: thr.	P.I.	16 max.	v.o.
Purple Martin: 1-15, 5	P.I., S.Peabody	200 max., 4	v.o., R.Heil
Blue Jay: 11,13	Nantucket, Gr.Boston	45, 196	N.Jenks-Jay, GBBBC
Fish Crow: 13, thr.	Gr.Boston, Newton	15, 6 max.	GBBBC, N.+ O.Komar
Red-breasted Nuthatch: 1-6,20	Wayland, Ipswich	2 ad. 4 yg., 2 ad. 2 yg.	T.Hart, BBC
23	Weston	2 ad. 3 yg.	J.Hines
Brown Creeper: 23	Weston	1 ad. 1 yg.	J.Hines
House Wren: 7,13	W.Newbury, Gr.Boston	20, 42	T.Leverich#, GBBBC
thr.	Newton	10	N.+ O.Komar
Carolina Wren: 20,27	E.Middleboro, Weston	1, 1 singing	W.Petersen#, J.Brooly
Marsh Wren: (Long-billed Marsh Wren)			
1-6, thr.	P.I., GMNWR	50+, 30 max.	BBC
Mockingbird: thr., 13	Newton, Gr.Boston	34, 120	N.+ O.Komar, GBBBC
Gray Catbird: 6,13,20	P.I., Gr.Boston, Ipswich	27, 161, 26	BBC, GBBBC, BBC
Brown Thrasher: thr., 13	P.I., Gr.Boston	3 max., 41	v.o., GBBBC
American Robin: thr.,13	Newton, Gr.Boston	113, 299	N.+ O.Komar, GBBBC
Wood Thrush: thr.,13	Newton, Gr.Boston	16, 32	N.+ O.Komar, GBBBC
Gray-cheeked Thrush: 1	Muskeget	1	R.Heil
Veery: 8,13	Ipswich, Gr.Boston	2, 1	BBC, GBBBC
14	Topsfield, Boxford	2, 1	L.Taylor, BBC
Eastern Bluebird: thr.	WBWS, Sharon, Tyngsboro	1, 1, 3	v.o., W.Allen, L.Files
	All pairs nesting		
1,3	Rockport, Sudbury	1, 1	R.Norris, G.Abrahamson
4,10	Plymouth, Lynn	2 m., 1 pr. w/ yg.	R.Becchi, J.Roderick
Blue-gray Gnatcatcher: 3,5-21	Abington, Wayland	1, 1 pr. nesting	W.Petersen, R.Forster
28	GMNWR	2	BBC
Cedar Waxwing: thr.,13	Newton, Gr.Boston	9, 27	N.+ O.Komar, GBBBC
White-eyed Vireo: 3,26	Milton, Westport	1, 1	T.Raymond, A.Ellis
Yellow-throated Vireo: 1-13,20	Wayland, Harvard	1 pr. nesting, 1	R.Forster, L.Jodrey#
Red-eyed Vireo: thr.,13	Newton, Gr.Boston	10, 46	N.+ O.Komar, GBBBC
Philadelphia Vireo: 8	Chatham	1	R.Clem
Warbling Vireo: thr.;13	Newton; Wayland, Gr.Boston	10; 12, 43	N.+O.Komar;R.Forster,GBBBC
Black-and-white Warbler: 13	Wayland, Gr.Boston	1 m. w/ 1 yg., 3	J.Hines, GBBBC
Worm-eating Warbler: thr., 13	Weston, Acoaxet	2 pr., 2	L.Robinson, W.Drummond
26-28	Westport	2	A.Ellis
Nashville Warbler: 27	E.Middleboro	1 singing	K.Anderson
Golden-winged Warbler: 21,23	Ipswich, Newbury	1 m., 1 pr. w/ yg.	J.Berry, R.Heil

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Blue-winged Warbler:			
1-13,13	W.Newbury, Wayland	3 max., 1 pr.	v.o., J.Hines
14,21	Boxford, Lexington	1, 1	W.Drummond, J.Andrews
Northern Parula:			
12,14	Dedham, Topsfield	1, 1	J.Marshall, L.Taylor
29-30	W.Harwich	3 m. singing	J.Hines
Yellow Warbler:			
6,13	P.I.-W.Newbury, Gr.Boston	100+, 157	BBC, GBBBC
thr.	Newton	37	N.+ O.Komar
Magnolia Warbler:			
1,7	P.I., Newton	1, 1	BBC, N.+ O.Komar
Chestnut-sided Warbler			
21,23	Lexington, Newbury	2 feeding cowbirds, 7	J.Andrews, R.Heil
Pine Warbler:			
13,9	Gr.Boston, Cape Cod	4, 4	GBBBC, D.Arvidson#
18-26,23	Lincoln, Weston	2, 1	R.Forster, J.Hines
Prairie Warbler:			
13,14	Gr.Boston, Boxford	19, 4	GBBBC, BBC
21	Lexington	3 m. singing	J.Andrews
Ovenbird:			
13,21	Gr.Boston, Ipswich	3, 10 m.	GBBBC, J.Berry
Northern Waterthrush:			
20	E.Middleboro	1 m.	W.Petersen
Mourning Warbler:			
2,5	Rockport, Brookline	1 b., 1 singing	O.Norris, H.Coolidge
5	Dover, Wayland	1 singing, 1	F.Hamlen, R.Forster
5	Provincetown	1	B.Nikula
5;8	MNWS, Nahant; Chatham	7, 6; 1	R.Heil; R.Clem
Common Yellowthroat:			
6,13	P.I. + W.Newbury, Wayland	33, 32	BBC, R.Forster
13, thr.	Gr.Boston, Newton	126, 51	GBBBC, N.+ O. Komar
Yellow-breasted Chat:			
6-7,8	Wayland, Rockport	1 m., 1 b.	R.Forster, O.Norris
Hooded Warbler:			
3	Westport	1 m. singing	M.Argue#
Canada Warbler:			
1,20	P.I., Middleboro	1, 2 residents	BBC, W.Petersen#
American Redstart:			
13,27	Gr.Boston, P.I.	2, 4	GBBBC, J.Berry
Bobolink:			
6,20	W.Newbury, Rowley	41, 25	BBC, J.Berry
Eastern Meadowlark:			
13	Gr.Boston, Newbury	9, 9	GBBBC, J.Berry
Redwinged Blackbird:			
thr., 13	Newton, Gr.Boston	71, 568	N.+ O.Komar, GBBBC
Orchard Oriole:			
6-19,2	5 locations, Hingham	5 ind., 1 pr. nesting	v.o., R.Campbell
13,21-30	Gr.Boston, Newton	7, pr. w/ 4 yg.	GBBBC, N.+ O.Komar
Northern Oriole:			
thr. 13	Newton, Gr.Boston	33, 134	N.+ O.Komar, GBBBC
Common Grackle:			
thr., 13	Newton, Gr.Boston	108, 510	N.+ O.Komar, GBBBC
Brown-headed Cowbird:			
thr., 13	Newton, Gr.Boston	25, 64	N.+ O.Komar, GBBBC
Scarlet Tanager:			
thr. 13	Newton, Gr.Boston	5, 19	N.+ O.Komar, GBBBC
14,21	Boxford, Ipswich	4, 6	BBC, J.Berry
Summer Tanager:			
12	Cambridge	1 m.	J.Clancy
Cardinal:			
thr.,13	Newton, Gr.Boston	38, 105	N.+ O.Komar, GBBBC
18	Muskeget	1 f.	R.Heil
Rose-breasted Grosbeak:			
thr., 13	Newton, Gr.Boston	20, 17	N.+ O.Komar, GBBBC
Blue Grosbeak:			
1	Hingham (World's End)	1 m.	R.Campbell
Indigo Bunting:			
thr., 13	Newton, Gr.Boston	19, 79	N.+ O.Komar, GBBBC
Evening Grosbeak:			
12	Rockport	1 b.	O.Norris

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
Purple Finch: thr., 13	P.I., Newton	5 pr., 4	R.Stymeist#, N.+ O.Komar
House Finch: thr.	Newton, Annisquam	50, 40	N.+ O.Komar, H.Wiggin
13,14	Gr.Boston, Haverhill	101, 18	GBBEC, BBC
Pine Siskin: 13,24	Rockport, Wayland	1 b., 1	O.Norris, T.Hart
American Goldfinch: thr., 13	Newton, Gr.Boston	21, 106	N.+ O.Komar, GBBEC
Rufous-sided Towhee: 1,8	P.I., Ipswich	4, 10	BBC, J.Nove
13, thr.	Gr.Boston, Newton	69, 7	GBBEC, N.+ O.Komar
Grasshopper Sparrow: 1,8 on	Squantum, Medfield	1, 2	D.Brown, P.Hallowell + v.o.
Sharp-tailed Sparrow: 1,13	Muskeget, Gr.Boston	19, 15	R.Heil, GBBEC
Seaside Sparrow: thr.	Monomoy	1-2	v.o.
13	Neponset, S.Dartmouth	2, 4	GBBEC, W.Drummond#
15	Barnstable (S.N.)	1	D.Arvidson#
Field Sparrow: 13	Gr.Boston	19	GBBEC
White-throated Sparrow: 20,21	Ipswich (2 loc.)	1, 1	J.Berry, J.Nove#
Song Sparrow: thr.	Newton, Belmont	102, 19	N.+ O.Komar, L.Robinson
thr.	Annisquam	8-10	H.Wiggin
13,15	Gr.Boston, P.I.	384, 20	GBBEC, BBC

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Corrigenda

Field Records: April 1981

The April 25 records of O. Komar for Black-throated Blue, Bay-breasted, and Wilson's warblers in Newton and for Lincoln's Sparrow in Needham should read May 25.

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List of Abbreviations

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

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Field Records:

July 1981

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

July 1981 was warm and wet. The temperature averaged 74.6°, 1.3° above normal. The month's high of 99° on the 9th tied the record for that date set in 1912. The month's low was 56° on July 1. Rain totaled 3.47 inches, 0.73 inch above normal and the most in July since 1976. This was the first wet month since last February. Much more rain fell in many suburban areas; Hingham recorded 3.12 inches in one hour on July 18 during a washing and flooding storm that hit some southern suburbs. This much rain in an hour would be expected only once in more than 100 years. Thunder was heard on four days and scattered wind damages were reported from the squall of a thunderstorm on the 13th.

LOONS THROUGH COOT

A great concentration of shearwaters was found during the month off Martha's Vineyard where 4000 Cory's and 15000 Greater were estimated on July 15. These counts overshadow all others and must be attributed to the locally abundant food supply. Two adult Great Cormorants were carefully studied at Straitsmouth Island just off Rockport on the 18th.

Heron counts were considerably lower this month compared with the last two years with a maximum of 250 Snowy Egrets found roosting at Plum Island on the 27th. Generally the concentration and maximum counts are in August or early September. A new colony of Black-crowned Night Herons were found nesting near Stage Island on Plum Island. A total of nine nests were located with many juveniles present. Yellow-crowned Night Herons were found in many locations with at least three at Plum Island and six at Tastham.

As many as 1200+ Common Eider were found on July 25 at Great Brewster Island in Boston Harbor. This is the largest reported summering group for Massachusetts waters. A female Common Merganser was found in Lakeville on the 4th.

Raptor highlights included a Black Vulture reported from Nantucket on the 17th and a high count of 20+ Northern Harriers, also on Nantucket on the July 24-25. R.H.S.

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Common Loon:			
11,12	Lakeville, P.I.	1 W pl., 3	W.Petersen, BBC(Nove)
Pied-billed Grebe:			
10-31	P.I.	max. 5 7/10	v.o.
Cory's Shearwater:			
9,19	off Plymouth, Stellw.	2, 3	J.Clancy, R.Heil
15	off M.V.	<u>4000</u>	V.Laux
Greater Shearwater:			
15	off M.V.	<u>15,000</u>	V.Laux
Sooty Shearwater:			
9,19	off Plymouth, Stellw.	2, 15	J.Clancy, R.Heil
Manx Shearwater:			
7,15,19	Buzz.Bay, off M.V., Stellw.	2, 1, 3	P.Hallowell, V.Laux, R.Heil
Wilson's Storm-Petrel:			
19,25	Stellw.	175+, 3-4	R.Heil, J.Berry
Gannet:			
6,9	Rockport, off Monomoy	4, 2	J.Berry, J.Clancy
Great Cormorant:			
18	Rockport (Straitsmouth I.)	2 ad.	C.Leahy
Double-crested Cormorant:			
6,9	Rockport, Wayland	100±, 1	J.Berry, R.Forster
19,20	Salem-Beverly, P.I.	3000±, 50+	R.Heil, C.Corley#

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Great Blue Heron:			
26	Westboro	6 active nests w/	13 yg. J.Hines
thr.	9 locations	42 individuals	v.o.
Green Heron:			
thr., 13	P.I., Wayland	30+, 6	R.Heil, J.Hines
22,24	Eastham	12, 13	R.Forster
Little Blue Heron:			
thr.	P.I.	max. 8(4 ad., 4 imm.)	7/26 R.Stymeist + v.o.
17+22,25	Scituate, Woburn	3 ad., 1 imm.	W.Petersen, BBC(V.Day)
30	Marshfield	3 ad.	R.Emery, M.Argue
Cattle Egret:			
28	Ipswich	5	J.Berry
Great Egret:			
4,6	S.Hanson, P.I.	1, 3	W.Petersen, J.Foley#
Snowy Egret:			
thr.	P.I.	max. 250+ 7/27 (roost)	W.Petersen# + v.o.
Louisiana Heron:			
thr.	P.I.	max. 3	v.o.
Black-crowned Night Heron:			
thr.	P.I.	max. 45+ 7/10	R.Heil
5,24	9 nests found with many juveniles near Stage I.	23, 28	D.Brown, R.Forster
Yellow-crowned Night Heron:			
thr.	P.I.	2 ad., 1 imm.	R.Heil + v.o.
5+19,12	Squantum, Barnstable	1 ad., 2	D.Brown + A.Ellis, R.Pease#
22	Eastham (Hemenway Rd.)	5 ad., 1 imm.	R.Forster
Least Bittern:			
10-31	GMNWR	2-3	v.o.
13+14,24+25	Wayland	2+	J.Hines
15-17,20	W.Harwich	1-2	J.Hines
17,19	Hingham, Dedham	1, 1	D.Brown
American Bittern:			
3,13	Lynnfield, Wayland	1, 2	L.Taylor, J.Hines
Glossy Ibis:			
10,27	P.I.	50+, 65 (roost)	R.Heil, W.Petersen#
Gadwall:			
10	P.I. (Stage I. Pool)	250+	R.Heil
Green-winged Teal:			
12,26	P.I., Westboro	14, 6	J.Nove#, J.Hines
American Wigeon:			
15	P.I.	4	R.Heil
Wood Duck:			
13,26	Wayland, GMNWR	20, 56	J.Hines
27,30	P.I., W.Harwich	6, 10	BBC, J.Hines
Common Eider:			
25	Great Brewster Island	1200+	W.Petersen
White-winged Scoter:			
14,18	Swampscott, M.V.	2, 2	W.Foley, V.Laux
Black Scoter:			
18	M.V.	1	V.Laux
Ruddy Duck:			
thr.	P.I.	max. 11	v.o.
Hooded Merganser:			
23-31,27	P.I., S.Peabody	1 f., 2 juv.	v.o., R.Heil
Common Merganser:			
4	Lakeville	1 f.	W.Petersen + K.Anderson
Red-breasted Merganser:			
thr.	P.I.	max. 15	v.o.
Turkey Vulture:			
4	Sherborn	2	E.Taylor
Black Vulture:			
17	Nantucket	1	J.+ M.Dennis, E.Andrews
Goshawk:			
early July,6	Fall River, Lawrence	1, 1	T.Lloyd-Evans, R.Stymeist
31	Norwell	1	W.Hanley
Cooper's Hawk:			
6	Tyngsboro	1	R.Stymeist, R.Emery
Red-tailed Hawk:			
2,4	Essex, Lakeville	2 ad. 2 yg., 2 yg.	P.Stangel, W.Petersen
9,17	Marshfield, Norwell	2 yg., 1-2 yg.	W.Petersen

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Red-shouldered Hawk: 24+28	Norwell	1	W.Petersen
Marsh Hawk: 24-25	Nantucket	<u>20+</u>	A.Ellis
Osprey: thr.	Lakeville	pr. nesting w/ 2 yg.	v.o.
Virginia Rail: 18	GMNWR	16	BBC (Lynch + Carroll)
14-25	Wayland	2-6	J.Hines
Sora: 13-14,25	Wayland	3	J.Hines
Common Gallinule: 18,26	GMNWR	3 ad. 7 yg.	J.Hines
American Coot: 12+27	P.I.	2	v.o.

SHOREBIRDS THROUGH ALCIDS

Autumn migration starts in July with the southward movement of the shorebirds and this July was no exception as good variety and numbers these birds were observed. A maximum of 2500 Red Knots was seen in Scituate. Of particular interest were 300 knots netted on Monomoy on the 28th, five of which had been banded at Scituate in August of 1980. On July 30, in Scituate, 306 knots were banded and 20 additional birds which had been previously banded were recovered. Of these latter, one had been banded in New Jersey, one in Argentina, and 18 in Scituate in August of 1980. One of the Scituate birds had been recaptured in Argentina earlier this year. Thus this bird had been captured three times on two continents within one year by MBO personnel. Banding is an important means of assessing bird populations and determining their migration routes. An associated program, that of dyeing birds, is important in those respects and also in determining feeding areas along the migration routes. This program allows participation of all birders as the orange dye is easily seen. Observers noting these birds should record species, the color and position of bands if observable, date, time, location, associated species and any other information which seems appropriate. This information should be sent to Manomet Bird Observatory, Manomet 02345, or to Bird Observer or Massachusetts Audubon Society who will forward the reports to MBO.

Long-billed Dowitchers were early with five reported from Plum Island on July 10, and Hudsonian Godwits were first reported on the 4th from Monomoy. Stilt Sandpiper numbers increased throughout the month at Plum Island with a maximum of 40 on the 29th. Two early Western Sandpipers were reported. At least two individual Ruffs were reported in the Plum Island-Newburyport area and one was observed in Scituate.

A first-summer-plumaged Thayer's Gull was observed in Newburyport Harbor on the 26th and details are on file. The bird was similar in appearance to nearby young Herring Gulls but considerably paler with pale primaries and a worn and paler mantle and wing coverts. The bill was pale at the base with a dark tip and the legs were a neutral gray. When the bird flew, the outer four or five primaries appeared slightly browner than the rest of the wing and back and were white beneath giving the impression of a "white-winged" gull. The tail had a distinct gray-brown, clean-cut band on an otherwise white tail. In flight and sitting, even at a great distance, the bird could be readily spotted due to its frosty appearance. The above description was taken from details provided by Wayne R. Petersen who speculated as to how many of these young, unobtrusive birds might be escaping notice.

An adult Gull-billed Tern was observed on the 14th at Plum Island as was a portlandica Arctic Tern. Only 100 portlandica were seen on Monomoy, down from several hundred last year. For a discussion of portlandica terns, see BOEM, vol. 8, p. 91 (1980) by Richard A. Forster. Royal Terns were reported from five locations, and only one Black Skimmer was reported. Ten Black Guillemots were noted in the vicinity of Stellwagen Bank (south) on the 24th. G.W.G.

American Oystercatcher: 5,19;8	Chatham; Monomoy	8, 16; 8	P.Roberts,J.Andrews;K.Anderson
15,17,24	Nantucket	max. 4	v.o.
19	M.V.	20	V.Laux
Semipalmated Plover: 8,28	Monomoy	10, 25	K.Anderson
10,26	Scituate	2, 150	W.Petersen, SSBC
13;26,27	P.I.	6; max. 10	BBC

SPECIES/DATE	LOCATION	NUMBER	OBSERVERS
Piping Plover:			
thr.	P.I.	max. 5	v.o.
6;26,30	Ipswich; Scituate	pr.; 3 ad., 1 yg.	J.Berry; SSBC
4	Monomoy	10	G.Gove
Killdeer:			
6,13	P.I.	max. 12	BBC
23,26	GMNWR, Westboro	3, 5	M.Baird#, J.Hines
Black-bellied Plover:			
8,28;6,27	Monomoy; P.I.	9, 3; 26, 100	BBC; K.Anderson
4,26	Scituate	10 imm., 6	W.Petersen, SSBC
Ruddy Turnstone:			
27,29	P.I.	1, 35+	BBC, R.Heil
26,28	Scituate, Monomoy	30, 50	SSBC, K.Anderson
American Woodcock:			
6,13;7	Wayland; Weston	1 each	J.Hines
19	Canton, Chatham	4, 1	D.Brown, J.Hines
25,29	Manomet, E.Middleboro	1, 1	K.Anderson.
Whimbrel:			
3,12	Nantucket	1, 5	E.Andrews
5,7	Chatham, Plymouth	20, 3	W.Bailey, K.Anderson
10,23;27	P.I.	2, 2; 4	R.Heil; W.Petersen#
19,21	Chatham, S.Wellfleet	8, 25	J.Hines, R.Forster#
17	Scituate	2	W.Petersen
17,19	Nantucket	5	E.Andrews, H.Ellis
Upland Sandpiper:			
4;12,13;27	Newbypt	6; 7, 1; 2	R.Stymeist;M.+ R.Barnett;J.Andrews
23	Newbypt; P.I.	2 ad., 3 imm; 1 imm.	R.Stymeist
28	Scituate	1	B.Harrington
Spotted Sandpiper:			
6,12	P.I.	2, 3	BBC
5	Bolton Flats	1 + 3 young	BBC
18, 23	GMNWR	6, 2	BBC, M.Baird#
25,31	Woburn, Chatham	2, 7	BBC, J.Hines
Solitary Sandpiper:			
13,14;26	Wayland; Westboro	1, 2; 3	J.Hines
18,26	GMNWR	1, 2	BBC, L.Taylor
16,18	S.Peabody, WBWS	4, 1	R.Heil, J.Hines
Willet:			
thr.	P.I.	max. 3	v.o.
thr.	Monomoy	max. 20	v.o.
19,21	Chatham, S.Wellfleet	21, 1	J.Hines, R.Forster
19	M.V., Squantum	1, 1	V.Laux, D.Brown
Spotted Redshank: (details and photographs) See article elsewhere in this issue.			
28	P.I.	1 ph.	Joyce Cloughly + Peggy Bayer
Greater Yellowlegs:			
12,20	P.I.	15,25	BBC
4,18	S.Hanson, GMNWR	3, 2	W.Petersen, BBC
Lesser Yellowlegs:			
11;26,27	Newbypt	250+; 800	W.Petersen
6,12	Newbypt, P.I.	60, 12	R.Stymeist, BBC
8,28;18	Monomoy; M.V.	15,-25; 60	K.Anderson; V.Laux
14,18	Wayland, GMNWR	2, 1	J.Hines, BBC
6	WBWS	2	W.Bailey
Red Knot:			
12,17,24,29	Scituate	6, 250, 1000, <u>2500</u>	W.Petersen
27	P.I.	4	R.Stymeist
28	Monomoy	300	K.Anderson
30	Scituate	326	K.Anderson
Pectoral Sandpiper:			
2,16,26	P.I.	1	v.o.
26	Westboro	11	J.Hines
White-rumped Sandpiper:			
26,27	P.I.	1, 3	R.Stymeist, W.Petersen
29	Scituate	3	W.Petersen
Baird's Sandpiper:			
23,31	P.I., Squantum	1 ad., 1	R.Heil, E.Nielsen
Least Sandpiper:			
6,8	WBWS, Monomoy	1, 150	W.Bailey, K.Anderson
18,23	GMNWR	15, 2	BBC, M.Baird#
20,26	P.I., Scituate	30, 100	BBC, SSBC

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Short-billed Dowitcher:			
6,11	Newbypt-P.I.	275, 350	R.Stymeist, W.Petersen#
9-17;18	Nantucket; M.V.	max. 8; 80	E.Andrews; V.Laux
7;8,28	Plymouth; Monomoy	33; 300, 75	K.Anderson
Long-billed Dowitcher:			
10; 11,16	P.I.	max. 5 (early)	R.Heil, v.o.
26	Newbypt-P.I.	30	R.Heil
Stilt Sandpiper:			
10-29	P.I.	max. 40 7/29	v.o.
Semipalmated Sandpiper:			
26	Newbypt, Scituate	55, 2000	BBC, SSBC
28	Monomoy	3000	K.Anderson
Western Sandpiper:			
14,17	Nantucket	1	E.Andrews
19	Monomoy	1	P.Yaukey#
Hudsonian Godwit:			
4;8,28	Monomoy	2; 14, 7	G.Gove; K.Anderson
15,16,27	P.I.	8, 7, 2	v.o.
23	Newbypt	15	R.Heil
Ruff:			
11	P.I., Newbypt	1, 1	G.Gove, W.Petersen#
15,22	Newbury	2	D.+ R.Alexander
23	Plumbush	2	R.Heil
28	Scituate	1	B.Harrington
Sanderling:			
8,28	Monomoy	2, 200	K.Anderson
26	Scituate	125	SSBC
Wilson's Phalarope:			
thr.	P.I.	max. 3	v.o.
16,17	Nantucket	1 f.	E.Andrews#
19	M.V.	1	V.Laux
Parasitic Jaeger:			
7	M.V.	1	P.Hallowell
Thayer's Gull:			
26	Newbypt	1 (details)	W.Petersen#
Ring-billed Gull:			
6,14	Ipswich, P.I.	30, 125	J.Berry, R.Heil
Bonaparte's Gull:			
thr.	P.I.	max. 300	v.o.
Laughing Gull:			
14	Lynn	100	W.Foley
Little Gull:			
14	P.I.	3 sub-ad.	R.Heil
Black-legged Kittiwake:			
4	Monomoy	8	G.Gove
Gull-billed Tern:			
14	P.I.	1 ad.	R.Heil
Forster's Tern:			
1-9	Monomoy (from June)	1	v.o.
31	Nantucket	1	N.Jenks-Jay
Common Tern:			
19	M.V.	500	V.Laux
Arctic Tern:			
thr.	Monomoy	max. 100 "portlandica"	B.Nikula
10,14,26	P.I.	1 "portlandica"	R.Heil
Roseate Tern:			
27,29	P.I.	2 ad., 10 ad.	R.Heil
26	Ipswich	2	J.Berry
26,29	Scituate	5, 50	SSBC, W.Petersen
19	M.V.	500	V.Laux
Least Tern:			
thr.	Scituate	100 pr.	W.Petersen
13,6	P.I., Ipswich	6, 50	BBC, J.Berry
Royal Tern:			
thr.	M.V.	max. 4	V.Laux
10,22	P.I., Scituate	2, 1	R.Heil, W.Petersen
19, 27	Monomoy, Sandwich	1, 1	B.Nikula, P.Trull
Black Tern:			
4,31	Nantucket	1, 2	N.Jenks-Jay
16,27	P.I.	1	v.o.
8	Monomoy	1	K.Anderson

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Black Skimmer:			
9	Monomoy	1	B.Nikula, P.Trull
Black Guillemot:			
24	Stellwagen	10	D.Lange

CUCKOOS THROUGH SPARROWS

Several species began their post-breeding wanderings and migration during the last week of July. On the 28th, two Swainson's Thrushes were first heard and then later carefully observed at a site on the Wayland-Weston line. This date is several weeks ahead of their normal arrival. On the last day of the month, there were interesting reports from a variety of areas. A House Wren and Northern Waterthrush seen by a regular observer at the Alewife Reservation in Belmont were not the result of local breeding. Two Veeries at Nahant and a Bay-breasted Warbler at Rockport were probably early migrants. It is difficult to ascribe any of these early movements to weather effects present at the time.

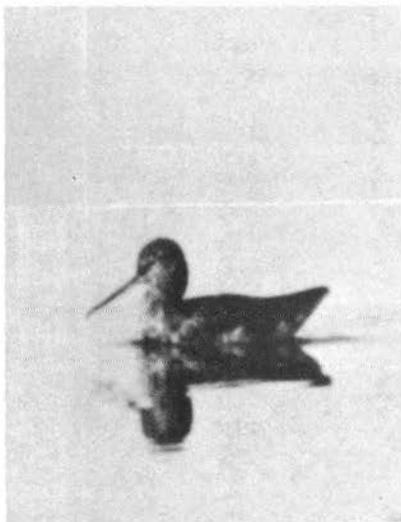
There were no great rarities for the month, but some birds did turn up at unusual locations and times. Land birds observed at unexpected coastal sites included the Black-capped Chickadee seen on Great Brewster Island and a Cardinal at Crane's Beach. The Cardinal was the first ever seen by the observer at Crane's Beach and constitutes the second surprising coastal record for this species in as many months. The Tennessee Warbler sighted at Annisquam during the middle of the breeding season was also unusual.

L.E.T.

Yellow-billed Cuckoo:			
4-26	7 loc.	7 ind.	v.o.
5	Harvard	5	BBC
Black-billed Cuckoo:			
1-31	8 loc.	9 ind.	v.o.
5	Harvard	4	BBC
Barn Owl:			
19	Medford	1	C.Jackson
Short-eared Owl:			
24	Nantucket	5	A.Ellis
Whip-poor-will:			
16,19	Chatham, Newton	2, 1	J.Hines, J.Paputseanos
Red-billed Woodpecker:			
20	Wellesley	1	C.Quinlan#
Eastern Kingbird:			
thr.	P.I., Newton	34 max., 17 max.	v.o., N.+ O.Komar
Eastern Phoebe:			
2, thr.	W.Harwich, Newton	pr., 6 imm.	J.Hines, N.+ O.Komar
Willow Flycatcher:			
thr., 10-12	GMNWR, Wayland	5 max., 16	v.o., J.Hines
19,20	Canton, Newton	3, 4	D.Brown, N.+ O.Komar
Least Flycatcher:			
4	Halifax	3	W.Petersen
Empidonax, sp.?			
19,25	F.M., Great Brewster I.	5, 1	D.Brown#, W.Petersen
Horned Lark:			
21	S. Wellfleet (Marconi)	7	R.Forster
Tree Swallow:			
thr., 11	P.I., GMNWR	1100 max., 25	v.o., BBC
Bank Swallow:			
5,6	Harvard, Ipswich	100+, 10	BBC, J.Berry
26,30	Scituate, Middleboro	40, 60 nesting	SSBC, S.Peak
Rough-winged Swallow:			
3,11	Belmont, Newton	10, 10	L.Robinson, BBC
19, thr.	Chatham, W.Harwich	3, 14 max.	J.Hines
Cliff Swallow:			
thr., 25	P.I., Marshfield	5 max. nesting, 3	K.Anderson#, v.o.
17,26	M.V., Middleboro	1, 200+	V.Laux, E.Akers
Fish Crow:			
24	W.Roxbury	1	W.Petersen
Black-capped Chickadee:			
25	Great Brewster I.	1	W.Petersen
Red-breasted Nuthatch:			
4, thr.	Lakeville, E.Middleboro	5+, 1	W.Petersen#, K.Anderson
18-21, thr.	S.Wellfleet, Annisquam	2, 3 max.	v.o., H.Wiggin

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
Brown Creeper:			
thr., 18-21	Norwell, S. Wellfleet	2-3, 2 max.	W. Petersen, v.o.
House Wren:			
11	GMNWR, Newton	2, 2	BBC, N.+ O. Komar
31	Belmont	1 migr.	L. Robinson
Carolina Wren:			
1	Manomet	1	K. Anderson
Long-billed Marsh Wren (Marsh Wren):			
thr.	GMNWR, P.I.	50 max., 8 max.	v.o.
13	Wayland, W. Harwich	25+, 6	J. Hines
Hermit Thrush:			
9, 20	Weston, Brewster	1, 1 (both singing)	J. Hines
Swainson's Thrush:			
28-29	Wayland-Weston line	2	J. Hines
Veery:			
31	Nahant	2	R. Heil
Eastern Bluebird:			
thr.	9 loc.	11 pr. nesting	v.o.
Blue-gray Gnatcatcher:			
12, 20	Wayland, Wellesley	1, 2	J. Hines, C. Ewer#
Golden-crowned Kinglet:			
thr.	Lakeville	1-2 pr. breeding	K. Anderson#
White-eyed Vireo:			
5	Acoaxet	1	J. Marshall
Yellow-throated Vireo:			
5	Harvard (ONWR)	3	BBC
Blue-winged Warbler:			
24, 31	MBO, Nahant	1 b., 4	K. Anderson, R. Heil
Tennessee Warbler:			
11	Annisquam	1 m. singing	H. Wiggin
Nashville Warbler:			
10	Ipswich	1 m. singing	J. Berry
Northern Parula:			
1-20	W. Harwich	4 m. singing	J. Hines
Yellow Warbler:			
25, 26	Woburn, P.I.	10, 10	BBC
Yellow-rumped Warbler:			
thr., 26	Lakeville, Westboro	2 m. (possibly br.), 1 m.	W. Petersen#, J. Hines
Black-throated Green Warbler:			
8	Weston	9 singing	J. Hines
Bay-breasted Warbler:			
31	Rockport	1 b.	R. Norris
Pine Warbler:			
1, 12	E. Middleboro, Hopkinton	1 singing, 1	K. Anderson, J. Marshall
Northern Waterthrush:			
31	Belmont, Nahant	1, 4	L. Robinson, R. Heil
Common Yellowthroat:			
11, 26	GMNWR, P.I.	40, 10	BBC
Canada Warbler:			
17	Norwell	1 resident	W. Petersen
Bobolink:			
11, 12	Newton, Rowley	1, 3 m.	N.+ O. Komar, J. Berry
25, 26	Rowley, Westboro	42, 4	J. Berry, J. Hines
Eastern Meadowlark:			
6	Newbypt	9	R. Stymeist
Orchard Oriole:			
6, 15	Newton, MBO	4 imm., 1 m. feeding	1 yg. N.+ O. Komar, K. Anderson
Northern Oriole:			
thr.	Newton	14	N.+ O. Komar
Scarlet Tanager:			
11	GMNWR, Newton	1, 1 m.	BBC
Cardinal:			
6	Ipswich (Crane's Beach)	1 m. singing	J. Berry
Rose-breasted Grosbeak:			
thr.	Newton	5	N.+ O. Komar
Indigo Bunting:			
3, 5	E. Middleboro, Harvard	3 m. singing, 3	K. Anderson, BBC
11, 25	Newton, Woburn	2 m., 6	N.+ O. Komar, BBC
Purple Finch:			
3, 27	Annisquam, Cambridge	3, 2	B. Reilly#, F. Bouchard

<u>SPECIES/DATE</u>	<u>LOCATION</u>	<u>NUMBER</u>	<u>OBSERVERS</u>
House Finch: thr.,25	Newton, Gr.Brewster I.	19, 10	N.+ O.Komar, W.Petersen
Rufous-sided Towhee: 6,11	Ipswich, Newton	15±, 3	J.Berry, N.+ O.Komar
Savannah Sparrow: 12,13	Rowley, P.I.	3-4, 3	J.Berry, BBC
Grasshopper Sparrow: 4,24	Squantum, Nantucket	1, 3	D.Brown, A.Ellis
Sharp-tailed Sparrow: 6-13,23	P.I., Newbypt	11 max., 50+	v.o., R.Heil
17,25	Barnstable, Rowley	40, 3	J.Hines, J.Berry
Seaside Sparrow: 4,17	Monomoy, Barnstable	2, 2	G.Gove, J.Hines
Vesper Sparrow: 18-21	S.Wellfleet (Marconi)	13 max. (incl. 6 m.)	v.o.
Field Sparrow: 6,25	Newbypt, Woburn	1, 4	R.Stymeist, BBC
White-throated Sparrow: 8	Weston	1 singing	J.Hines
Swamp Sparrow: 11,30	Newton, W.Harwich	2, 6	BBC, J.Hines
Song Sparrow: 11,25	Newton, Woburn	27, 12	BBC
26	GMNWR	48	L.Taylor



SPOTTED REDSHANK, Tringa erythropus, photographed by
Joyce Cloughly at Plum Island, July 28, 1981.

DOROTHY R. ARVIDSON, Ph.D. in Zoology, is a former teacher at the University of Wisconsin, Grinnell College, and Simmons College. She works in the Natural History Services at Massachusetts Audubon, is an associate member of the Brookline Conservation Commission, on the board of The Friends of Hall's Pond. Her interests are field biology, photography, travel, and conservation.

SPOTTED REDSHANK: THE ONE THAT NEARLY GOT AWAY

by Dorothy R. Arvidson, Brookline

As we approached the dike at Hellcat in the late morning of July 28, people rushed past us shouting, "Redshank at the salt pannes! They photographed it."

"They" proved to be two visitors from New Jersey on the last day of a birding holiday who stated to us that they had indeed seen, identified, and photographed a Spotted Redshank around 7:30 that morning. They seemed confident, were well-equipped with telescopes and long-lens camera, and quickly provided a description which we noted down. When asked if it might have been a Ruff, they acknowledged that that possibility occurred to them, but when the bird emerged from the water and revealed its legs, they had no question about the identification. About 8:15, the bird had flown to the back of the tidal pool and they could see it no longer. A promise was extracted that any pictures resulting would be sent to Dick Forster at Massachusetts Audubon, and the visitors departed.

Two months later, color slides arrived with a letter from which the following amplified description has been excerpted. The bird photographed was seen in the first large tidal pool close to the road in the salt pannes. It was in the company of Greater and Lesser yellowlegs and approximated the larger bird in size. The bill was long, slightly narrower than that of the yellowlegs, red at the base to about one-half the length and black towards the tip which showed a noticeable hook. The legs were dark red. The bird was dark gray to black with very mottled plumage overall and the wing-linings were white, the bird being in mid-molt between summer and winter plumage. A narrow white eye-ring was present and the tail was narrowly barred.

Congratulations should be extended to Joyce Cloughly and Peggy Bayer, the competent birders who identified and reported the bird. Joyce, who generously shared her color slides (see Field Records section), is staff artist and naturalist at the Somerset County Environmental Education Center in Basking Ridge, New Jersey. She became interested in birds at Beloit College where she majored in biology (in a department developed by Dr. Joel Carl Welty, author of The Life of Birds, a leading ornithology text). The slides sent to us attest to her skill in photography, and she is also very interested in wild orchids.

The sighting of a Thayer's Gull on July 26 had produced an influx of birders to the Plum Island area during the ensuing week so that on Tuesday, July 28, a number of experienced observers were canvassing the island, senses sharpened by a determined search for the Thayer's Gull and keener still after learning of the rare visitor. Despite the number of

people actively birding, the Spotted Redshank was only spotted by the camera-ready ladies from New Jersey. Furthermore, without the pictures, this bird would have passed through one of the most intensively birded areas on the coast noted only by two people--a "non-record" report to use Dick Forster's term. Instead, it is a first record for the state and the second regional record verified by photographs. (See Am. Birds, March 1979, p.161, for the report of a bird seen and photographed at Brigantine N.W.R., September 14, 1978.)

Tringa erythropus (from the Greek for white-rumped shorebird with red feet) is a Eurasian bird with a breeding range mostly north of the Arctic Circle in northern Norway, Sweden, Finland, and Russia. The winter quarters range through the Mediterranean and Black Sea regions, Africa north of the equator, and south Asia, including India, Burma, Malaysia, Sumatra, southern China, and Japan. During migration, the birds flow overland rather than just hugging the coast, the Scandinavian breeders apparently using Great Britain as a late summer staging area with an occasional bird overwintering there. The Siberian breeders follow an easterly route south and overwinter from Pakistan south to Sumatra.

How does such a bird reach Plum Island? Several theories to explain the occurrence of Curlew Sandpiper on our northeast coast (see John Bull: Birds of the New York Area, Dover, 1975, p. 207) might presumably apply to other Old World shorebirds: (1) a direct east-west crossing during migration, (2) being swept across the tropical Atlantic by fall hurricanes when en route to Africa, and (3) a migration from Siberian nesting grounds east via Alaska and Canada to the Atlantic seaboard. Whatever the route taken, the Spotted Redshank has not made it to this continent very often. This species, not included in Bent or the 1957 A.O.U. Checklist, has been reported about ten times in the last quarter century. The most recent appearance of this redshank (see Am. Birds, May 1981, p.276) occurred this winter in South Carolina on February 21 and in Oregon on February 21 and 23 to March 1. (An interesting sidelight is that a Spotted Redshank was also seen at 11:30 AM, March 1, in Vancouver, B.C., which might mean that the Oregon bird, last seen at 8:30 AM, skedaddled 200 miles over the Olympic Mountains in three hours!) The South Carolina sighting may be more relevant to our story. Dick Forster speculates that this bird might have moved north with migrating flocks in the spring in search of breeding ground and then returned with them in late July, stopping at the Plum Island staging area en route. If this reasoning should prove true, we can hope the bird may repeat its route (as some people feel the Chatham Fork-tailed Flycatcher did) and will visit Massachusetts again. Picture with me, please, this redshank's dismay when, after a cold winter in South Carolina and a hapless search for a mate in the Nearctic, the bird landed at Plum Island amid a flock of yellowlegs, nary a red- nor a Greenshank in sight. He may have buried his head neath a weary wing and sighed in Tringan dialect: "Good Grief! I've boarded the wrong flight again!"

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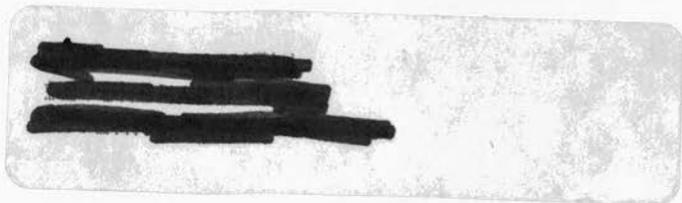
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