

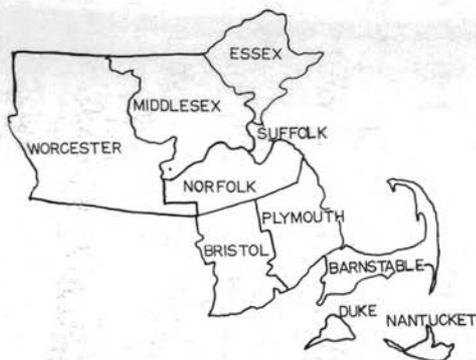
# BIRD OBSERVER

OF EASTERN MASSACHUSETTS



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MUDHEN



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## WHERE TO WATCH HAWKS IN MASSACHUSETTS:

### An Introduction

by Paul M. Roberts, Somerville

Traditionally during September most Massachusetts birders devote at least one day to hawk-watching. Usually that time is spent in the Connecticut River Valley at Mount Tom, long recognized as one of the best hawk observation points in the northeast. Not only is it an excellent place from which to watch the large broadwing flights of September, it usually produces good numbers of every species of hawk commonly seen in the northeast. Goat Peak Tower is the best observation point on the mountain during the fall migration. The birds often come in towards the tower at or below eye level. A new lookout has recently been cleared near the old steel structure but it does not offer the view available from the tower, which is often packed with birders during the season. (For specific directions to Mount Tom and the other lookouts mentioned below, see the conclusion of this article.)

If you want to avoid the crush on Goat Peak, there are two excellent but less famous observation sites within relatively short driving time of Mount Tom. Quabbin Reservoir is well-known among birders for its winter residents, Bald and occasionally Golden Eagles, but it is also an excellent location from which to observe the fall hawk migration. The best observation point there is the Quabbin Hill Lookout Tower. A less well-known site is "Blueberry Hill" in West Granville, approximately three miles west of Granville Center off Route 57. If you normally take the Mass. Pike to Mt. Tom, "Blueberry Hill" is not much farther from the Pike than Mount Tom, though in a different direction. It regularly produces some of the largest Broad-winged Hawk counts in the state, and offers plenty of space.

However, there is no need to drive to the Connecticut Valley or beyond to observe the hawk migration. Last year the Eastern Massachusetts Hawk Watch learned that there were substantial hawk flights through the eastern half of the state, especially the northeast quarter. Though our data is limited to one year's migration, probably the best observation point within an hour's drive of Boston is the Mount Wachusett State Reservation in Princeton. Wachusett possesses several advantages for the local birder, not the least of which is that it is relatively close to home. This prominent monadnock offers clear views in all directions and appears to be especially rewarding during the broadwing migration. One can drive to the summit, where there is ample space for a large number of birders. Picnic tables and charcoal grills are scattered about the mountain for those who enjoy leisurely hawk-watching. (The summit road does not open officially until 10 a.m. If you want to reach the summit before 10, park at the reservation gate, being careful to avoid blocking the road. Hike southeast down Mountain Road a short distance, past the park headquarters, and take your first obvious trail up the mountain to your right, Pine Hill Ski Trail. This trail follows a fairly steep old ski slope for 1/2 mile to the summit.)

Some fifteen miles to the north of Mt. Wachusett is Mount Watatic, off Route 119 in Ashburnham. The southern terminus of the Wapack Trail,

Watatic also offers clear views in all directions, but its summit is accessible by foot only. A steep half-mile hike to the summit is the quickest ascent. A much more gentle climb, 1 1/2 miles long, is furnished by an abandoned road up the west slope of the mountain.

If you are willing to drive a short distance into southern New Hampshire, the northern terminus of the Wapack Trail, Pack Monadnock, offers two excellent observation sites. Located on Route 101 east of Peterborough, South Pack Monadnock, in Miller State Park, has an auto road to the summit. The park charges a 50¢ per person admission fee, but the birder has the convenience of sitting at picnic tables with clear views to the north. Charcoal grills, water fountains and washrooms are close by. If you're an ambitious hiker, you might consider hiking slightly more than two miles across a ridge joining the south and north peaks of Pack Monadnock. One often finds the hawks swooping in quite close to the barren summit of North Pack.

Returning to Massachusetts, there are a number of good observation sites within half-an-hour's drive of Boston. Boston Hill in North Andover and Holt Hill (Charles W. Ward Reservation) in Andover both proved to be good locations last year. Boston Hill can be reached by an easy climb up a ski path from the Boston Hill Ski Area parking lot on Route 114, or by a more circuitous route from the Ward Reservation parking lot. Holt Hill is reached by a leisurely hike from the Ward Reservation parking lot on Prospect Road off Route 125. If you prefer a site wholly accessible by automobile, Silver Hill in Haverhill should prove worthwhile during September. Its one drawback is that its summit provides an unobstructed view of the less attractive features of the urban landscape.

During September and October, you may see good numbers of accipiters, eagles, northern harriers, Osprey and falcons from a number of locations along the coast, including Salisbury Beach State Reservation, Parker River National Wildlife Refuge on Plum Island and Crane's Reach, Ipswich. The salt pans on Plum Island are one of the best locations from which to spot Merlins.

Obviously, this is not an exhaustive list of good hawk observation sites in the state. There are a number of popular birding spots, such as Great Meadows National Wildlife Refuge in Concord, where good hawk flights are often seen. Any hill, ridge, dune or mountain which permits a clear view of the north, especially the northeast, is potentially a good site. (Although our knowledge of buteo flights in eastern Massachusetts is quite limited, it seems likely that large flights are less common in the southeast corner of the state than in the northeast. One of the goals of the hawk watch this year is to obtain more data on the southeast region, including Cape Cod and the islands.) Anyone interested in hawks should always keep one eye skyward during the months of September and October. Migrating hawks might be seen anywhere, in any weather, at any time of day. Two years ago a birder decided to spend the day repairing the roof of his house. While on the roof, he saw more than 4,000 Broad-winged Hawks and good numbers of several other species pass over his home. My first kettle of broadwings was seen coasting down Massachusetts Avenue, through Harvard Square, despite adverse winds. Another large flight was seen there

last year.

Wherever you go hawk-watching, there are several facts which you should keep in mind. The timing of hawk flights varies considerably from day to day. A site that does not yield a single hawk during the first eight hours of the day might produce a sizeable flight after 4 or even 5 p.m. Michael Harwood, President of the Hawk Migration Association of North America, fondly recalls one day spent at Hawk Mountain when only 21 hawks (including one Bald Eagle) passed over that famous sanctuary between 8 a.m. and 4 p.m. Shortly after a number of disappointed observers had retreated down the mountain, more than 1,000 broadwings passed the lookout in less than fifteen minutes. Similarly, a site which doesn't yield more than a handful of birds one day might produce hundreds if not thousands of birds the next day, depending on the vagaries of the weather and, of course, the hawks themselves. Never give up hope. Hawks are where you find them.

\* \* \* \* \*

MOUNT TOM: From Boston, take either the Mass. Pike or Route 2. From the Mass. Pike take Route 91 North out of Springfield. Turn off 91 at exit 17 W, and continue west on Route 141 until you see the reservation sign on your right. Take the park drive for a distance of 2.9 miles. Not far beyond the park headquarters you'll find a large parking lot on your right. Park here and walk up the surfaced road which climbs the hill at the rear of the parking lot. A fairly steep 10 minute hike will take you to the Goat Peak Observation Tower. To reach Mount Tom from Route 2, take Route 2 west to Route 202. Turn south on Route 202 to Pelham, where you will see a sign noting Amherst to the right. Take this right turn, which will eventually run into Route 9. Continue on Route 9 through Amherst to Northampton, where you will take Route 10 south. Continue on Route 10 until you reach Route 141. Turn left onto Route 141, and you will soon see the reservation sign on your left.

QUABBIN RESERVOIR: Take the Mass. Pike to Palmer and follow the signs to Route 181. Take 181 north to Route 9. (A cut-off marked on the right will reduce the distance to Route 9.) Follow Route 9 east (to the right) to the well-marked entrance to Quabbin, which will be on your left. Follow signs to the summit and the lookout tower. Maps and washrooms are available at the headquarters near Windsor Dam.

WEST GRANVILLE: Take the Mass. Pike west to Exit 3 at Westfield. Turn south onto Routes 10-202, to Southwick. Take Route 57 west to North Lane #2, a right turn about three miles west of the center of Granville. Take North Lane #2 about a mile north to what is locally known as Blueberry Hill, which will be obvious on your right. Park at the base and walk approximately 1/4 mile to the summit.

MOUNT WACHUSETT: From Boston, take Route 2 west to Route 140. Take Route 140 south to Wachusett Lake, where you will take a right turn, following the signs to the Mt. Wachusett Ski Area on Mile Hill Road. Drive past the ski area, to the park entrance on your right. Washrooms are available in the information center at the base of the mountain. Water is not available at the summit. Follow the road signs to the summit. Remember that this road is open to auto traffic from 10 a.m. to dusk and is closed for the season after October 30.

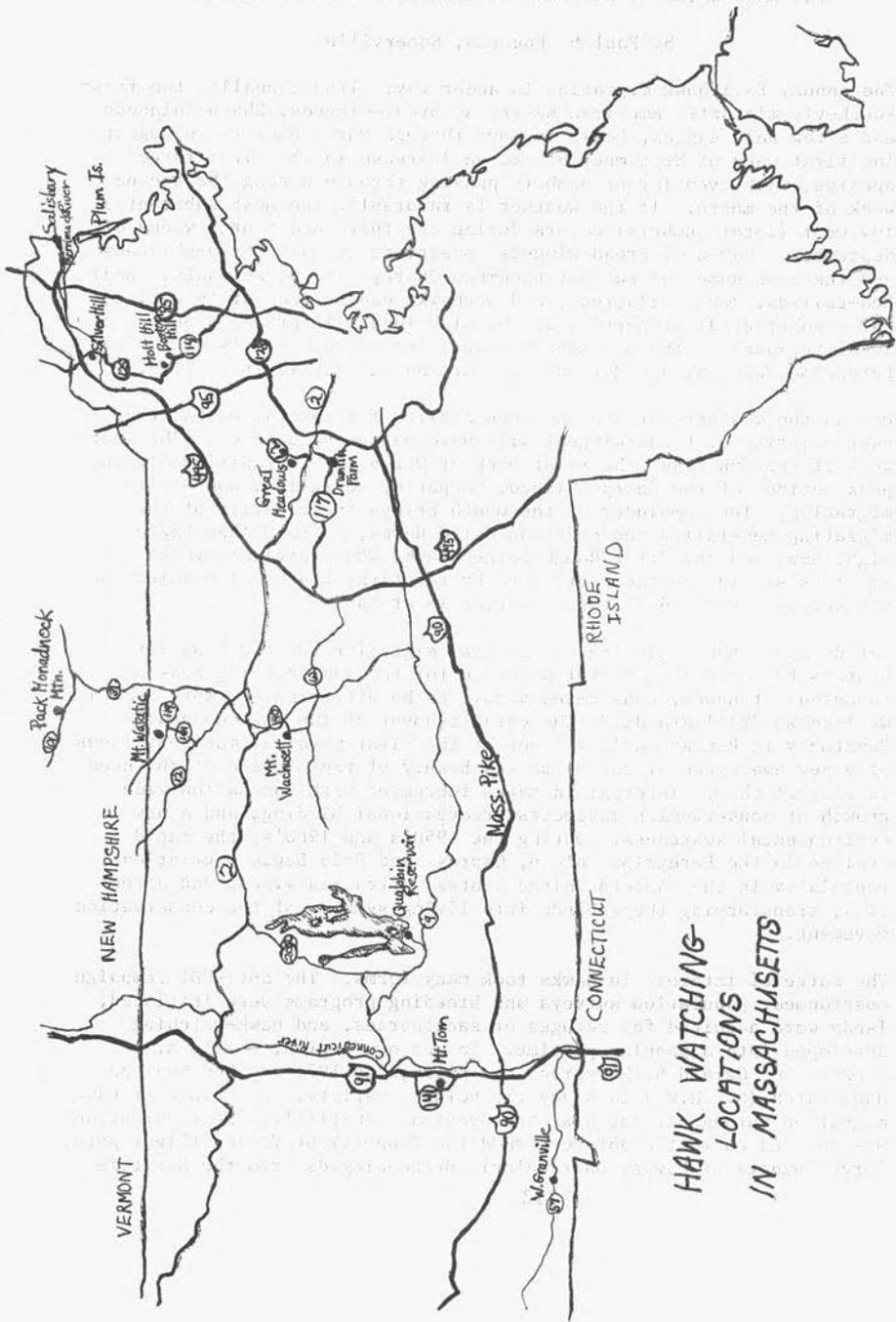
MOUNT WATATIC: Take Route 2 west to Route 31. Take Route 31 north to Route 12 (a very sharp turn). Follow Route 12 to Ashburnham, where you will make a right turn onto Route 101. Follow 101 to Route 119. Turn left on 119. About .7 mile on the right you will find the Wapack Trail, marked by yellow blazes, following power lines up the mountain. This is the quickest but also the hardest way to the summit. Park your car well off the road. If you prefer a less steep though longer hike, continue another .7 mile past the Wapack Trail until you see a dirt road turn off to the right. Park off the highway and follow the roadbed. After .75 mile, you will come to an intersection where the Wapack Trail intersects the road. Do not take the left turn downhill. Continue straight ahead. The trail will gradually turn to the right and take you into a clearing, Nutting Hill, with a view of Watatic. Follow the yellow blazes of the Wapack Trail down Nutting Hill and up the gentle northern slope of Mt. Watatic. This route is 3 miles long, round-trip.

PACK MONADNOCK: Take Route 2 west to Route 12. Follow Route 12 into Fitchburg, where you will turn right onto Route 31. This intersection is not well-marked. Route 31 north is found at the west end of the city center. Take Route 31 north onto Route 45 near Greenville, New Hampshire. Turn left onto Route 45 and continue through Temple to Route 101. Turn left on Route 101 and look for the entrance to Miller State Park on your right, just past the Temple Mountain Ski area on your left. Take the park road to the summit. (50¢ per person admission fee.) To reach North Pack Monadnock, follow the Wapack Trail blazes from the northern edge of the summit at South Pack. The trail to North Pack is 4 1/2 miles long, round-trip.

HOLT HILL, ANDOVER: Take Route 125 north from Route 93. Several miles past Route 28 you will see Prospect Road on your right. Look for the sign to the Charles W. Ward Reservation. Take Prospect Road to the reservation parking lot. Carefully read the maps posted in the parking lot and select your trail to the summit of Holt Hill, an easy hike.

BOSTON HILL, NORTH ANDOVER: Take Route 114 south from Route 495, or from the intersection of Route 125 and 114. Southeast of the intersection with Route 125 you will see the Boston Hill Ski Area on your right. Park alongside the road or in the parking lot (if open) and hike up the ski trail to the summit. If the owner of the ski shop is present, it would be advisable to ask his permission, though he has indicated that he doesn't mind birders using his slopes. Boston Hill can also be reached by trails from the Ward Reservation parking lot.

SILVER HILL, HAVERHILL: From Boston, take Route 93 north to Route 495. Take 495 east to the intersection of Routes 110 and 113 in Haverhill. Take Route 110 south a number of blocks to Maxwell Street, which will be on your left. Take Maxwell north several blocks to Washington Street. Turn right onto Washington and continue to Observatory Avenue, which will be on your left. Turn left and follow Observatory Drive to the summit. No facilities are available at the summit, Be careful to avoid broken glass and ruts.



**HAWK WATCHING  
LOCATIONS  
IN MASSACHUSETTS**

## THE HAWK WATCH IN EASTERN MASSACHUSETTS AND NEW ENGLAND

by Paul M. Roberts, Somerville

The annual fall hawk migration is under way. Traditionally, the first southerly migrants, American Kestrels, Broad-wingeds, Sharp-shinneds, and a few Bald Eagles, begin to move through Massachusetts in August. The first week of September brings an increase in the first three species, with even larger numbers passing through during the second week of the month. If the weather is favorable, the most substantial movement (total numbers) occurs during the third and fourth weeks of September. Waves of Broad-wingeds appear, as do many Sharp-shinneds and the less numerous but not uncommon Ospreys and Marsh Hawks. Many Red-taileds, Red-shouldereds, and Goshawks can be seen at this time, but a substantial proportion of the sightings will probably be of local residents. The uncommon species, including Cooper's Hawks, Peregrine Falcons, and Merlins, are around but difficult to find.

Unless the weather pattern has been stalled for several weeks, the vast majority of Broad-wingeds will have passed by October. The last week of September and the first week of October is traditionally the peak period of the Sharp-shinned, Cooper's, Peregrine, and Merlin migration. The remainder of the month brings the majority of the migrating Red-tailed and Red-shouldered Hawks, a few Golden Eagle sightings, and the first Rough-legged Hawk, whose arrival evokes emotions similar to those produced by the first Blackpoll Warbler in the spring. The end of the migration is at hand.

For decades, the beginning of the hawk migration was a signal for hunters to begin live target practice for the game hunting season. Thousands of hawks, considered vermin to be exterminated, were shot at well-known "kill stands." The establishment of the Hawk Mountain Sanctuary in Pennsylvania was one of the first physical manifestations of a new awareness of the value and beauty of raptors and of the need to protect them. Interest in hawks increased with the nation-wide growth of conservation movements, recreational birding, and a new environmental awareness. During the 1950's and 1960's, the rapid decline in the Peregrine Falcon, Osprey, and Bald Eagle populations, especially in the eastern United States, attracted widespread attention, transforming these birds into living symbols of the conservation movement.

The surge of interest in hawks took many forms. The anti-DDT campaign mushroomed, population surveys and breeding programs were initiated, lands were acquired for refuges or sanctuaries, and hawk-watching developed into a popular pastime. In our own region, Donald A. Hopkins and Gerald S. Mersereau established in 1971 the New England Hawk Watch (N.E.H.W.) to study the volume, variety, and nature of hawk migration throughout the six-state region. Initially, their attention was focused on what might be termed the Connecticut Valley flight path. Large numbers of hawks, particularly Broad-wingeds from the Maritime

Provinces of Canada and northern New England, have long been known to use the thermals and updrafts produced along that valley's ridges to carry them southwestward across Massachusetts and Connecticut to the Kittatinny Ridge. Relying entirely on volunteers, the watch established many observation sites on a weekend in the spring and several weekends in the fall.

This intense new interest in hawks was evident in many other regions. Observer participation in hawk watches increased not only at Hawk Mountain, but at Cape May, Hawk Cliff, Point Pelee, and Duluth. In 1974, the Hawk Migration Association of North America (H.M.A.N.A.) was founded. Among its many functions, this organization seeks to encourage observation of hawk movements throughout the entire United States and Canada and to disseminate its findings. The United States Fish and Wildlife Service is now computerizing the data compiled from the hawk watches conducted by H.M.A.N.A. from 1974 through 1976.

The H.M.A.N.A. has just published a 24 page report on the Fall 1976 Hawk Migration; its findings can be summarized on a species-by-species basis. The Turkey Vulture appears to continue its range expansion northwards throughout the eastern two-thirds of the nation, including Massachusetts. The Goshawk's status remains stable throughout its range. There appears to be good news regarding the Cooper's Hawk, which was reported in increased numbers in New England, the Eastern Great Lakes, the Northern Great Plains, and the Southern Great Plains regions. However, as Eric Single points out in the current H.M.A.N.A. Newsletter, field identification of the Cooper's remains a major problem. (In New Jersey, two sites within view of each other reported Cooper's/Sharp-shinned ratios of 1:133 and 1:277. Reports from Canada indicate that some observers there probably confused Red-shouldered Hawks, especially immatures, with Cooper's.) The buteo populations appeared stable. Red-tailed Hawks were reported in average numbers, and Red-shouldered reports were lower in the south and slightly up in Ontario. Broad-winged flights were average, but one site in southern Texas counted more than 220,000 during one week in September. No trend in Rough-legged Hawks was discernible, but increased numbers of Swainson's Hawks were reported in the east. Marsh Hawk numbers were down in New England but average elsewhere. Osprey counts were also down in New England, but no significant change in the status of this species is evident (Cape May reported more than 1,200). The Peregrine, Merlin, and Kestrel flights were as expected. Eagle counts were up, but as in the case of the Swainson's Hawk, this was probably due to increased coverage throughout the nation. Rarities for the season included some Gyrfalcons, a Prairie Falcon in South Carolina, a Black Hawk in Minnesota and a Zone-tailed Hawk in Nova Scotia.

The 1976 N.E.H.W. report can be dealt with more thoroughly. The spring watch was virtually washed out, and the fall watch was affected by unfavorable weather on three of its four weekends. Despite the poor weather, a record number of volunteers participated. The following summary is based on incomplete returns representing 86 sites and 322 reports, primarily from Connecticut, Massachusetts and New Hampshire.

NEW ENGLAND HAWK WATCH, FALL, 1976

		G	SS	C	RT	RS	BW	RL	GE	BE	MH	O	P	M	K	U
Sept. 18	36 sites	1	130	1	34	7	1,404	--	1	--	19	77	1	14	79	72
19	40 sites	8	1,007	34	145	11	12,702	--	1	2	73	403	7	53	656	346
Sept. 25	27 sites	1	520	23	67	7	2,299	--	--	2	21	106	-	8	98	168
26	19 sites	1	204	6	8	1	120	--	--	--	15	55	-	3	43	55
Oct. 2	11 sites	1	164	4	3	3	31	--	--	--	16	89	-	1	194	29
3	8 sites	-	56	2	2	1	80	--	--	--	3	8	1	9	29	29
Oct. 30	12 sites	-	19	1	71	6	2	1	--	2	4	--	-	3	18	23
Oct. 31	3 sites	-	--	1	1	3	--	--	--	--	1	1	-	--	--	5

(G = Goshawk, SS = Sharp-shinned Hawk, C = Cooper's Hawk, RT = Red-tailed Hawk, RS = Red-shouldered Hawk, BW = Broad-winged Hawk, RL = Rough-legged Hawk, GE = Golden Eagle, BE = Bald Eagle, MH = Marsh Hawk, O = Osprey, P = Peregrine Falcon, M = Merlin, K = American Kestrel, U = unidentified)

Two aspects of this report require additional comment. At least 20 eagles were reported throughout New England last autumn, only eight of which were recorded on watch weekends. Thirteen Bald Eagles were seen, including four adult, eight immatures and one unidentified. At least seven Golden Eagles were reported, including one adult, five immatures and one unidentified. Obviously, there are substantial numbers of eagles moving through the region. The number of immatures is particularly encouraging and should prompt people to review carefully the differences between immature Bald and Golden Eagles.

Secondly, the Broad-winged Hawk total was much lower than in 1975. There is no evidence to indicate that this reflects any decline in the total population, although one can't be quite certain as to the effects of the spraying in New Brunswick. The lower total appears to be the result of weather conditions, which encouraged an early, prolonged, and disparate migration. Significant flights of Broad-winged were reported in Connecticut as early as mid-August and in the second week in September. There did not appear to be any "big wave" in September. The 1976 totals might be put in better perspective when compared with the report for the 1975 watch, which had very good weather in early September only to suffer through adverse winds, and often rain, for the last three weeks.

NEW ENGLAND HAWK WATCH, FALL, 1975

		<u>G</u>	<u>SS</u>	<u>C</u>	<u>RT</u>	<u>RS</u>	<u>BW</u>	<u>RL</u>	<u>SW</u>	<u>GE</u>	<u>BE</u>	<u>MH</u>	<u>O</u>	<u>P</u>	<u>M</u>	<u>K</u>	<u>U</u>
Sep.13	58 sites	26	344	17	122	19	22675	4	1	--	3	74	222	2	11	439	910
	14 60 sites	22	658	22	104	11	41760	11	--	--	6	123	225	9	14	961	583
Sep.20	13 sites	2	29	--	4	--	7	--	--	--	--	8	3	-	2	8	19
	21 30 sites	20	400	71	47	12	4462	12	--	--	--	36	76	2	23	178	266
Oct.	4 25 sites	18	1174	25	119	9	245	4	--	--	--	59	97	1	24	734	119
	5 21 sites	15	480	11	44	2	14	2	--	--	--	24	92	1	7	220	197
Nov.	1 16 sites	1	18	1	137	3	--	11	--	--	--	2	2	-	--	4	79
	2 13 sites	3	9	1	69	11	6	2	--	1	5	--	2	-	--	4	37

The totals for 1975 are quite impressive, but they represent only one aspect of the N.E.H.W. Responsible interpretation of the totals is difficult due to a number of variables, including weather, the number of observers in the field, their location, the number of man-hours invested in observation, and count duplication. The N.E.H.W. has, therefore, sought to expand and refine our knowledge of the nature of hawk migration, especially that of the Broad-wingeds. Since 1973, the watch has employed aircraft (including gliders) and radar to monitor flights down the Connecticut Valley and across southwestern Connecticut. Their reports are contributing to our understanding of the mechanics of the Broad-winged Hawk migration. That same year also signaled the beginning of the close-site watch, which may answer basic questions regarding the Broad-winged flight. Does this species move across a wide front or en masse down a narrow corridor? What effect does the weather have on the shape of their flights? Do the hawks tend to follow specific topographical features every year, despite the wind direction? In 1974, the N.E.H.W. began to conduct watches to study hawk movement, primarily accipiters, falcons, and harriers, along the coast. Additional data is required before any conclusions from the close-site or shore line watches can be drawn.

In 1976 another innovation was added to the N.E.H.W. Prior to that year, the watch was essentially a western New England activity. There was little published data or local knowledge available regarding the size, paths, and nature of hawk migration in the eastern half of the six state area, particularly in eastern Massachusetts, which is perhaps the most thoroughly birded region in the nation. During September and October, most local birders appear to have concentrated on the shorebird migrations. Occasional Sharp-shinneds, Cooper's, Ospreys, Marsh Hawks, and Peregrines were reported, usually from the coast. However, there were some tantalizing bits of information which indicated that hawk movements in eastern Massachusetts might be more substantial than most people thought. Mt. Desert Island, Maine, is known to have good accipiter and falcon flights. Where do these birds go? The same

question was asked by George Appell, who recorded large Broad-winged, accipiter, and falcon flights at Harpswell, Maine. Arnold Johnson found a possible explanation in September 1975, when he counted more than 4,000 Broad-wingeds and a number of other hawks pass over his Groveland, Massachusetts, home in a single day. This information and the continued growth of interest in hawks inspired several birders in eastern Massachusetts to organize that region's first coordinated hawk watch.

EASTERN MASSACHUSETTS HAWK WATCH, FALL, 1976

		<u>G</u>	<u>SS</u>	<u>C</u>	<u>RT</u>	<u>RS</u>	<u>BW</u>	<u>RL</u>	<u>SW</u>	<u>GE</u>	<u>BE</u>	<u>MH</u>	<u>O</u>	<u>P</u>	<u>M</u>	<u>K</u>	<u>U</u>	
Sept. 18	2 sites	-	-	-	-	-	2	-	-	-	-	7	-	-	-	9	-	
19	7 sites	-	75	-	24	2	1,515	-	-	-	-	9	29	1	11	71	19	
Sept. 25	4 sites	1	35	-	22	-	17	-	-	-	1	1	7	-	-	20	1	
26	1 site	-	-	-	-	-	-	-	-	-	-	4	2	-	1	-	-	
Oct. 2	3 sites	1	8	-	-	-	24	-	-	-	-	1	3	-	1	8	7	
3	3 sites	-	13	-	2	-	73	-	-	-	-	3	2	-	1	13	5	
Oct. 30	4 sites	-	-	-	10	-	-	-	-	-	-	-	-	-	2	8	1	
31	2 sites	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
Totals		2	131	-	58	2	1,631	-	-	-	1	25	44	1	16	129	33	2,074

The weather was unsuitable for substantial hawk movement on seven of the eight watch dates. Only September 19th enjoyed favorable conditions.

On that date, observers in the northeastern half of the state were rewarded with good flights.

EASTERN MASSACHUSETTS BY SITE, September 19, 1976

	<u>SS</u>	<u>RT</u>	<u>RS</u>	<u>BW</u>	<u>MH</u>	<u>O</u>	<u>P</u>	<u>M</u>	<u>K</u>	<u>U</u>
Canton	17	3	-	-	2	1	-	5	31	-
Groveland*	6	1	-	66	-	3	-	-	2	-
Haverhill	14	-	-	436	2	6	-	3	10	5
North Andover*	29	-	-	327	1	14	1	1	18	3
Norwell	-	19	2	3	2	-	-	1	2	3
Princeton (Mt. Wachusett)	9	-	-	683	-	5	-	-	7	8
Sharon	-	1	-	-	2	-	-	1	1	-

\* Indicates only partial coverage

The September 19th Broad-winged total at Mt. Wachusett exceeded the highest daily total at Mount Tom for the entire season! Of course, no firm conclusions can be drawn from the first years data. It is conceivable, but unlikely, that last years eastern migration was atypically large. Rather, the evidence tends to indicate that it was a poor year for total numbers. In all likelihood, good weather with moderate northwest winds might tend to drive the Broad-wingeds farther east into our region in greater numbers.

On the basis of last years work, three goals have been set for this falls Eastern Massachusetts Hawk Watch, which will be conducted on September 17-18, 24-25, October 1-2 and 29-30, and during the interval September 17-25 at Mt. Wachusett. The watch hopes to place as many observers in the field as possible and to expand coverage along the coast, including Cape Cod and the islands. The latter locations are not expected to have large autumnal buteo flights, but falcon and accipiter numbers could be substantial, especially in the second and third weeks of the watch. Secondly, the watch plans to station observers on a semi-close-site basis in the northeast corner of the state from Salisbury to Ashburnham and south to Princeton. This would seem to be particularly important during the first two weeks of the watch when the major Broad-winged flights are likely to occur. Finally, the watch hopes to maintain a consecutive day watch at Mt. Wachusett (Princeton) from September 17-25. This will help gauge the magnitude of the flights through the region.

In order to be a success, the Hawk Watch requires not only good weather and hawks, but volunteers as well. Observers are needed for whatever time they might be able to spare, from a few hours to the entire day on any or all watch dates. Volunteers are invited to work sites of their own choice, or they might use sites recommended by the watch co-ordinator. Do not hesitate to volunteer merely because you do not feel confident identifying hawks in the field. Field experience is the best teacher. If you have doubts about identification, you can be stationed with more experienced observers who would benefit from your help in spotting hawks while they would aid you in identifying them.

Individuals wishing to participate in the Eastern Massachusetts Hawk Watch (east of the Quabbin Reservoir), or desiring additional information, should contact the author at 24 Pearson Road, Somerville, Mass. 02144 (telephone 617-776-8566). Those wishing to participate west of Quabbin should write to Mr. Moreton Bates, 1341 Plum Tree Road, Springfield, Mass. 01101.

\* \* \* \* \*

The author will be grateful if anyone who sees significant hawk flights or uncommon raptors such as eagles, Peregrines, Merlins, Cooper's or Goshawks at any time during the season would drop him a brief note. Describe what was seen, where, how many of each species (including unidentifieds), the direction of flight, and the weather conditions (including estimates of wind direction and speed).

SOME THOUGHTS ABOUT COUNTING BIRDS

by Leif J. Robinson, Wellesley

In preparation for revising Charlotte E. Smith's An Annotated List of the Birds of Weston, Massachusetts (1952), I have examined several methods for estimating the abundance of species. Adjectives such as "common," "rare," "increasing," or "decreasing" are insufficient to describe the status of a species; such terms are relative and largely subjective.

Imagine yourself in 1900 trying to characterize the numbers of House Sparrows. "Abundant" would have been an obvious choice, just as it still is today! But, in fact, the House Sparrow has decreased markedly since the automobile replaced the horse. Thus, the same adjective would have been used to describe two very different population densities.

For several years I have surveyed various Weston habitats, recording the number of each species seen as well as the exact time spent afield. From this data, the number of birds per hour (BPH) can be calculated. As I subsequently learned, this technique is not new. In a news-letter dated November 1, 1963, Allen H. Morgan of Massachusetts Audubon Society compared his BPH estimates in the Sudbury Valley for 1949 and 1963, in an effort to assess the effect of pesticides. He also compared his data with the weighted opinions of 26 active birders, who were asked whether they thought various species had increased, decreased, or remained the same.

Reexamining Morgan's summary, I find that the birders' opinions concur only vaguely with his quantitative data. In Fig. 1 is plotted an abundance (Morgan) index for 28 species (for which Morgan recorded at least 0.5 BPH in 1949) against the percent of birders who believed a decrease had taken place between 1949 and 1963. The abundance index derived from Morgan's data is  $2 \times (\text{BPH in 1963}) / (\text{BPH in 1949}) + (\text{BPH in 1963})$ . (If this index is 0, the species was not seen in 1963; 1 indicates no change; values greater than 1 reveal an increase.)

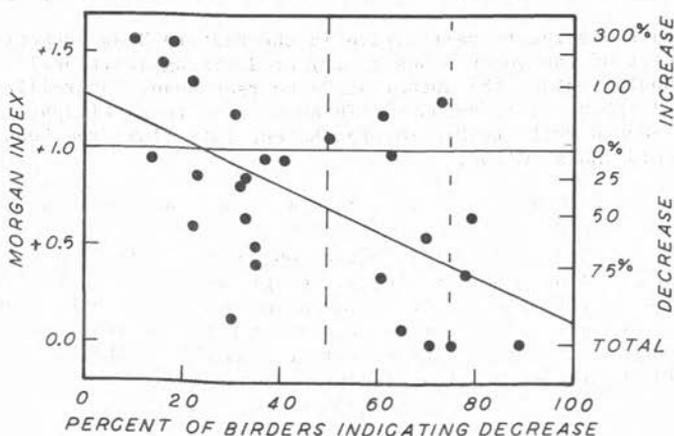


Fig. 1. The degree of decline of 28 species between 1949 and 1963 (Morgan Index) is compared to the percent of birders who believed that a decline had taken place (line of long dashes, 50 percent; short dashes, 75 percent). Note that three species which Morgan found absent in 1963 were still not regarded as declining by 29, 25, and 11 percent of the birders!

Two species on this graph deserve special mention, for they show the greatest difference between Morgan's data and the collective opinion of the birders. Why, for example, did 73 percent of the birders believe that Barn Swallow had decreased, while Morgan found an increase of 71 percent? And why did only 30 percent of the birders note the decline of Chimney Swift, while Morgan found 93 percent fewer birds in 1963 than in 1949? Why should these two aerial insect-catching species, with presumably similar "visibility profiles," also produce the most discordant data?

The diagonal line shows the best fit to the data. Though there is great scatter (coefficient of determination,  $r^2 = 0.32$ ), there does seem to be a weak correlation; that is, species for which Morgan found the greatest decrease also tended to receive the greatest percentage of "decline" opinions. But let's look more closely at what the diagram implies.

In Table I are compared the number of species for which Morgan found various degrees of decline to those for which 50 percent or more and also 75 percent or more of the birders agreed. In parentheses is the percent of agreement between Morgan and other birders. Clearly, the greater the decline of a species in BPH, the more unanimous is the consensus among birders.

Table I. Comparison of Morgan's and birders' estimates of decline in species numbers.

		50% or more birders agree	75% or more birders agree
All species Morgan found declining	20	9 (45%)	4 (20%)
Morgan decline:			
25% or more	15	8 (53%)	4 (27%)
50% or more	13	8 (62%)	4 (31%)
75% or more	7	6 (86%)	3 (43%)
Total	3	3 (100%)	2 (67%)

But what does this prove: that 26 expert birders collectively had a greatly inferior idea of population changes than did one individual who kept meaningful records? If so, how do we know that Morgan's data are correct?

I believe that the validity of the BPH method is proven in Fig. 2, which shows the average number of Hairy and Downy Woodpeckers seen in Massachusetts per party hour during Christmas counts from 1946 through 1975 (except 1949) for which I had no data.

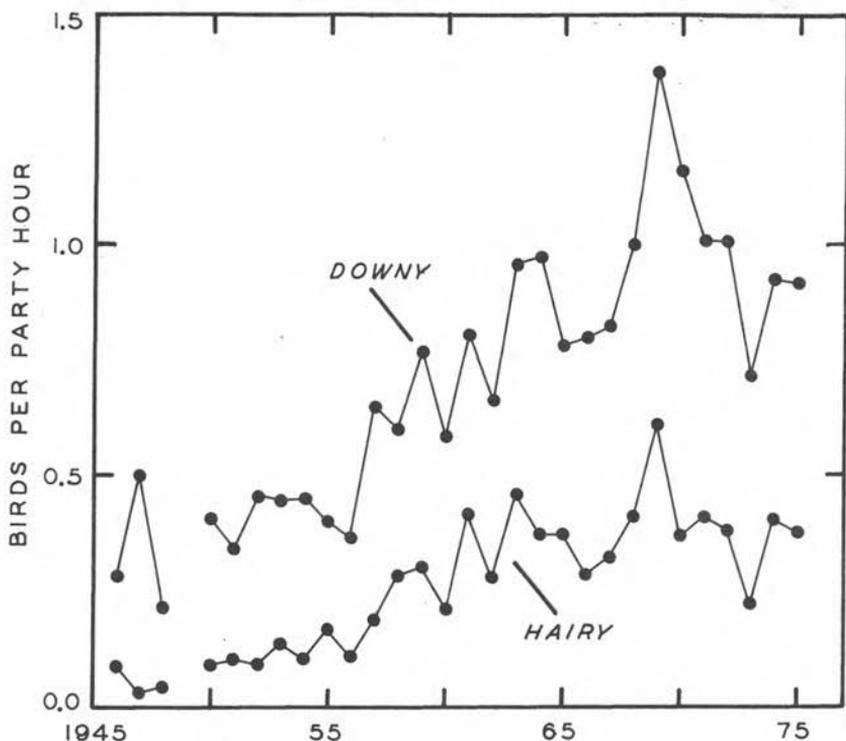


Fig. 2. The number of Hairy and Downy Woodpeckers seen per party hour on Christmas censuses from 1946 to 1975.

These averages stem from the efforts of many individuals: 186 partaking in 13 counts in 1946 to 666 in 22 counts in 1975. But that is my point! Though the personnel have completely changed during the past three decades and the participation has more than tripled, the curves for both species are remarkably similar: when Downys increase or decline, so do the Hairys. This is exactly what one would expect for two very closely related species that depend largely on the same habitats and foodstuffs and should be similarly affected by weather or disease.

Mathematically, the correlation coefficient for the two curves is +0.94, indicating excellent agreement. (+1.00 would be a perfect match--as one species increased or decreased, so would the other in proportion; 0.00 would indicate no correlation; -1.00 would indicate perfect opposites--as one species increased, the other would decrease, or vice versa.)

Why both Downy and Hairy Woodpeckers exhibit a gradual increase during

the past three decades is not clear, though it is probably due to more thorough coverage than any real increase in population. Any why was the pronounced dip from 1964 to 1967 followed by the peak in 1969? Are we now on the downslope of a very long cycle? Only continued monitoring will yield answers.

One other result gleaned from Morgan's data deserves mention. That is, the average abundance index for families of birds seems somewhat correlated with the rank of the family in the evolutionary hierarchy. In general, the less evolved the family, the smaller is its abundance index. In Table II, note that all nine families from Ardeidae (herons) through Parulidae (wood warblers) had depressed populations, whereas two of the three highest families i.e., Icteridae (blackbirds) and Fringillidae (finches) showed gains.

Table II. The average abundance index for families of birds and the abundance index for each species, as determined from Allen H. Morgan's data in 1949 and 1963.

<u>Family</u>	<u>Av. Abund.</u> <u>Index</u>	<u>Species</u>	<u>Abund.</u> <u>Inaex</u>
ARDEIDAE	0.19	Green Heron	0.56
		B.-c. Night Heron	0.00
		American Bittern	0.00
APODIDAE	0.13	Chimney Swift	0.13
TYRANNIDAE	0.60	Eastern Kingbird	0.87
		Gr. Cr. Flycatcher	0.61
		Eastern Phoebe	0.08
		Least Flycatcher	0.37
		E. Wood Peewee	1.07
HIRUNDINIDAE	0.96	Tree Swallow	0.65
		Barn Swallow	1.26
TROGLODYTIDAE	0.64	House Wren	0.64
MIMIDAE	0.94	Gray Catbird	0.94
TURDIDAE	0.79	Wood Thrush	1.19
		Veery	1.18
		Eastern Bluebird	0.00
VIREONIDAE	0.72	Red-eyed Vireo	0.50
		Warbling Vireo	0.93
PARULIDAE	0.82	Bl. & Wh. Warbler	0.41
		Yellow Warbler	0.95
		Ovenbird	0.33
		N. Yellowthroat	1.44
		American Redstart	0.99
ICTERIDAE	1.57	Common Grackle	1.57

	<u>Av. Abund.</u> <u>Index</u>	<u>Species</u>	<u>Abund.</u> <u>Index</u>
THRAUPIDAE	0.85	Scarlet Tanager	0.85
FRINGILLIDAE	1.24	Rose-br. Grosbeak	1.35
		Swamp Sparrow	0.81
		Song Sparrow	1.55

It is tempting to imagine that this result illustrates the progressive inability of primitive life forms to cope with alterations of habitat or environment. Though that explanation is surely oversimplified, the trend of the data is provocative.

I believe Morgan appreciated the power of the BPH method and the failing of many birders to supply meaningful information. In his 1963 newsletter he wrote: "This survey data also seems to bear out the opinion long [and still] held by professional biologists that a major decline can take place in a bird population without being detected by active birders until it has become very great indeed . . . . It is my most earnest plea that anyone who is active in the field take the very small amount of time necessary to keep accurate and complete notes. They are of crucial value, and should include notation of the route covered, the time of day and temperature [also wind velocity] at start and end of the trip, and your best estimate of the number of all birds seen! . . . Such data can be reduced to a 'birds per hour' basis and will reveal general trends in bird populations even when observers and routes vary considerably."

As a final example of the usefulness of BPH data, I present Fig. 3, a preliminary year-round curve for Blue Jay based on my three years of observations in Weston. Each point is the monthly average BPH, and the vertical bars are one standard deviation long. This curve shows the annual ebb and flow of Blue Jays--or more accurately, the variation in the number of birds and their conspicuousness (a male defending territory is more noticeable than a bird half-frozen inside the canopy of a pine!).

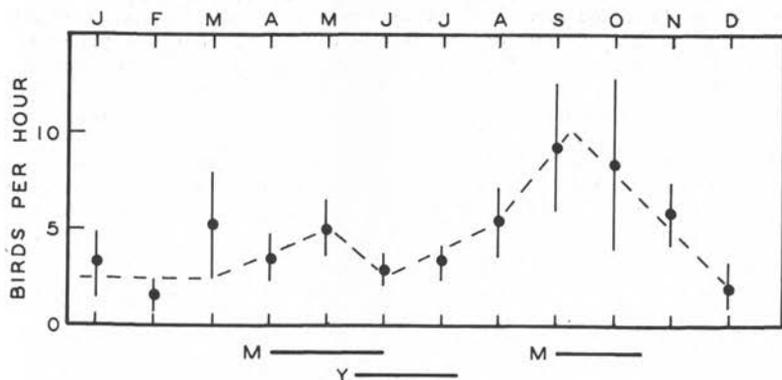


Fig. 3. Monthly averages of Blue Jays recorded per hour in Weston, Massachusetts, derived from 246 field trips between April, 1974, and December, 1976. The symbols across the top represent mid-month. For an interpretation of the dashed line, see text. "M" indicates usually cited periods of migration, "Y" fledging.

From December through February, about 2 1/2 Blue Jays per hour represent the local winter population. Spring migration seems to begin in mid-March, culminates in May (some 5 BPH), and is over by July. Then the curve rises again, slowly at first as local young are fledged, and then faster as autumn migrants begin to appear. From mid-September through mid-October, Blue Jays reach their annual peak numbers (about 10 BPH), after which they decline to the winter-population level.

For comparison, the bars below the curve indicate the limits of migration and fledging usually cited for Massachusetts. The only apparent difference between the curve and common experience is that my limits for migration seem somewhat broader. Yet, this would be expected in a quantitative survey--recall Morgan's comments regarding the degree of population change necessary for an increase or decrease in numbers to become widely evident.

In time, as more data are accumulated and better statistical procedures are used, I hope curves such as the one for Blue Jay will yield information about breeding success and mortality for local residents as well as for migrants. Even in its preliminary form, the Blue Jay curve is provocative. Imagine that the spring migration peak of 5 BPH represents one pair of birds. The autumn peak of 10 BPH, therefore, equals two pairs--that is, two adults plus two young, the average nesting success for Blue Jays that migrate through our region. The same relation seems to hold for Weston: if the June average of about 2 1/2 BPH represents the local breeding population and the August average of 5 1/2 BPH the local adults and their young, the fledging success again equals about two young per pair.

But is an average production of two young per nest reasonable? I could find no concrete data--how little we know about our most common birds--but consider the following: average clutch 4.5 eggs, one brood per year in northern latitudes, assumed egg success 0.5. The result is 2 1/4 young per nest, in substantial agreement with my BPH curve.

Though the above discussion is preliminary and oversimplified, it seems to indicate that BPH data and what we "know" about birds are not inconsistent. Hopefully, some birder 50 or 75 years hence will duplicate my Weston census, thereby revealing any quantitative change in the quality of bird life. I wish such comparative data were available to me today for the revision of the town's checklist.

But more important, both surveys would measure birds, not the fadisms of birders! Recently, a long-time birder told me of the difficulty the BBC once had (even with Ludlow Griscom's support) in getting leaders to record numbers of each species as well as the species themselves. Perhaps the next generation will record the hours afield as well. Incidentally, in revising the Massachusetts Audubon Society Daily Field Card, the editors removed the "Time" entry provided on earlier editions. I hope they put it back!

"HOW WE SAW THE BLACK-WINGED KITE" or What Channel 8 Did for Me"

by Ned Mueller, Wellesley

Saturday, September 12th, 1979: what a day! I even remember the weather. We'd had four days of Nor'easter, with Herman reporting lots of shearwaters at First Encounter Beach. Then the wind shifted to north-west and the sky was bright clear blue. We had to get Bob's kid to hockey and mine to soccer and swimming; so we didn't leave for Newburyport 'til about 10. But the trip up went quick enough, with I-95 finally finished. For years we'd had to weave back-and-forth between the old and new lanes, while Massachusetts politicians debated the merits of finishing the job. Politics here are one thing that never changes!

We weren't after any particular bird that day; we hadn't even bothered to call the Voice of Audubon. Besides, even with their new 7-line service, the line was still always busy. It being a weekend, there'd be a lot of birders ahead of us, and we'd soon know what was around. When I saw the Scotland Road exit, I got antsy to get the local information:

"Hey Bob. Let's swith on Channel 8. I think we're close enough."

"Sur-ah."

"(static noises) ... crackle, crackle ... so if anybody has a loaded camera, get yaselves here rightaway, and let's get some picture proof on this Black-winged Kite. (wind noises) ... now it's finished hunting over the dunes ... It's gonna land, it's landed at the same place. Oh, why did I forget my film! ... This is Willet 5, and I'll be wating for ya ... crackle ... (static noises)."

"Hey, is this guy for real? I'll try to get his 10-20, and you check the foreign field guides."

We soon knew that the Black-winged Kite was from Portugal, and that it had never been recorded in North America! Checking the ABA listing, we found that Willet 5 was none other than Joseph Sailor, the respected New York City birder with over 800 North American species! I could feel my excitement growing when Bob mentioned the size of Willet's list. This was no beginner yelling "fire." Before I had noticed, the speedometer had inched above the President's 40-mile-per-hour limit.

"Breaker 8 for that ol' Willet 5. You ... "

But I couldn't finish the message; the Tulsa Nature Club caravan was already on the channel:

" ... now on your left is the famous clam shack; Prudence and John saw Ross' Gull from right here back in '75; and to think they just were coming to Boston for the Elks convention! Praises be!

"The large bird in the meadow grass is an American Egret. Now I know that most of you learned it as the "Great" Egret; but the ornithologists' union has gone and changed the name again. Why folks, the funny thing is that they changed it back to the way I learned it, goin' on twenty-five years ago.

"Birders, remember that we'll turn left at the beach. Then watch for a church with a parking lot beside it. I'll bet you'll be ready for those coffee and doughnuts we've promised. This is Dickcissel 21. We're standing by and prayin' for pipits."

By this point we had reached the Newburyport exit. Tree Swallows were hunting across the broad grassy right-of-way. We knew we could still head up to Salisbury Beach, on back roads, if Willet 5 were there rather than on Plum Island. Bob had loaded high-speed color film into his Nikon, and was busy attaching it to his 10-60X zoom telescope.

"Here goes Bob," I began. "Breaker 8 for that ol' Willet 5. How about a come back to that ol' Skimmer number 1."

"Go ahead Skimmer 1."

"Surely do appreciate that comeback good buddy. We tuned in late on that ol' kite report. We can take pictures but we need your 10-20."

"Good to hear about that picture machine, Skimmer. We're at the state park headquarters building at the end of the island. You familiar with it?"

"That's a big 10-4 Willet, and we know your 10-20 well; we've got our pedal to the metal, and we're skimmin' to ya."

Well we almost broke our springs in the muddy ruts on the Plum Island Road. Why I even cleaned mud off the top of the car the next day. But we eventually reached the state park at the south end of Plum Island. The radio hummed the whole way as news of the sighting spread as far as the Rowley dump. Needless to say, the Tulsa Nature Club never got their coffee and doughnuts. Indeed considerable confusion resulted when half the caravan, hearing the report, turned right to get to the state park, while the other half proceeded faithfully to the church yard. We were able to redirect them as we came onto the island.

Besides half the Tulsa caravan, a lot of other birders had arrived at the state headquarters building ahead of us ... but none had a camera. The kite, a beautiful light gray with black wing shoulders, was sitting on the radio antenna tower right beside the headquarters building.

Bob was out of the car and clicking away with his camera before I could turn off the ignition and find my binoculars. The light was perfect and he took a whole role at every magnification, of the bird flying and sitting. The professionals wanted to see every one and chose a flying shot to publish (Auk, 712, (1980), page 1047). I always preferred the sitting shots myself, like the one the Bird Observer published in color.

At 3 o'clock about seventy-five birders were at the site. By this time, local CB birders, hearing the reports at home, had phoned in the info to the Voice, and a special alert was out. But it didn't do much good except for people close by. For at ten minutes past three, that beautiful little kestrel-sized hawk took out and started gainin' altitude. While hunting, it had always remained near the ground. Now it coasted south, out over the inlet; the last scopes lost it over Crane's Beach. It was never seen again.

by J. Robinson, Wellfleet

Since the birders coffee shop and supply house had opened in '77 it was a tradition to end North Shore birding days there, both the good and bad ones. It was a happy group of birders that assembled before the giant fireplace at the "Ross' Gull" that afternoon. Everybody seemed to have a different field guide picture of the kite; we looked at them and watched the Bonie flock still workin' the harbor. Bob couldn't relax though, until he knew his pictures were O.K. Everybody knew that our sighting wasn't worth much without them. So he got a healthy share of kidding:

"I didn't see a cap on that camera lens, did I?"

Well, it isn't every day that you're involved in a first North American sighting, and we all were pretty anxious to have it counted. And to think we had planned to spend the day off the island! Without the MBH (Mobile Birding Hotline), we might not have heard about it until it was too late.

That reminds me that Paula said that some of you new to birding might not even know about MBH yet, so I said I'd give a little history. Two birding clubs took credit for the idea, but I have my doubts about both claims. The name "hotline" was supposed to come from the DVOC telephone recording in Philadelphia. Travis Audubon in Austin used Channel 8 as early as anyone can remember. The "8" was supposed to look like a binocular head-on. This always seemed rather corny and we stuck to "5" for several years. But "8" was being used everywhere else, so Massachusetts finally switched, too.

Anyway, the active birders in both these clubs started using CB's during the winter of '76-'77 They were on sale that winter because dealers were unloading them before CB switched to 40 channels. At first it was all very hush-hush. Ordinary CB handles were used. But it grew very fast. Less avid birders got tired of "just missing" good birds for want of a CB radio.

The ABA directory to birder handles just came out last year. I don't like the number part of each handle. It seems too formal. But the directory is nice, particularly for identifying out-of-state birders in our area.

There were a lot of worries about the system when it started. Birders thought that regular CBers would show up in droves at sightings. But it hasn't happened. Nobody but other birders know what we mean by the "boat yard" or the "salt pans." Also most CBers are still hooked on Channel 19, listenening for smokie bear reports, particularly since the 40-mile-per-hour limit was imposed.

Well, that's about it, I guess. I'll sign off in my usual way: "You keep your ears on and your eyes open; I'll be standin' by and skimmin' for scarcities."

<p>FOR SALE</p> <p>a 3/12" field model Questar, with pyrex mirror, broad-band and low reflection coatings, fast focus, quick change filter holder, J.V. empty filter mount, Barlow lens 1 1/2x, and a Canonflex adapter. Like new \$1,000. Call Milford 473-6826 after 5:30 P.M.</p>
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## SUMMARY FOR MAY, 1977

The month of May had record sunshine, near normal precipitation and remarkable warmth. The temperature averaged 62.6°, 4.0° above normal. This tied with May 1959 as the fifth warmest May in 107 years of official record keeping. The highest temperature was 92° on the 17th, and a 90° reading on the 24th, was just 3° shy of that day's record. The mercury dropped to 35° on the 9th, breaking the 37° record set in 1947.

Precipitation totalled 3.52", most of it (3.09") fell during the storm of May 9-10. May 9 and 10 also brought Boston its only officially measured snow in 106 Mays on record. The previously recorded latest seasonal measured snow was on April 28, 1916. Trace amounts have fallen in 12 of the 106 Mays. Heavier snow fell inland only short distances from Boston, and around 8" fell in the Bedford-Acton-Billerica area. The wet, sticky snow clung to newly leafed out trees to topple so many limbs and even whole trees that some areas suffered damage rivaling that of the 1938 hurricane. Massive power outages occurred, especially in the Newton area, where it took 3 days to restore power in some sections. The heavy snow extended remarkably far south, with up to 11" reported in some hilly sections, even in Rhode Island! The wind speed on the 9th was 44-58 m.p.h. from the NE.

The weather had its effect upon the birds, and the storm of the 9th-10th drove thousands of sea birds along the coast, with exceptional numbers in Cape Cod Bay. Note especially the careful estimate of 10,000 Leach's Storm-Petrels there on May 10. Petrels, phalaropes and kittiwakes were present in every marsh and estuary from Sandwich to Eastham on the 10th, and phalaropes were seen flying over Route 6 in Barnstable and Eastham!

Southwest winds, that special wind direction we all wait for during the spring migration occurred on May 2,4,6,16,20-24 and on the 31st. The real peak days were May 6, with a strong southwest wind of 38 m.p.h., and May 16, with a wind speed of 28 m.p.h. On May 7 the wind direction changed to the northwest, enabling many migrants to stay after the great showing on May 6.

On Cape Cod, the presence of good numbers of passerines during the first half of the month can probably be attributed to the advanced foliage which "held" the birds longer than normal. For the second straight year the late spring waves failed to materialize in spite of warm southwest winds during the period. The spring migration on the Cape continues to baffle - there seems to be very little rhyme or reason to it. Also on the Cape, herons continued to be scarce and shorebird numbers were very low. The only significant hawk movement occurred on the 12th when over 100 individuals of 10 species were recorded. Landbird waves occurred on the 1st,7th,13th,17-18th and on the 27th, the last date being exceptional on Cape Cod.

In all, including a few specialities in western Massachusetts, a total of 276 species were observed during the month of May, 1977.

### LOONS THROUGH GREBES

Four Common Loons occurred inland at Clinton, with the last individual departing May 29 (HWM), and Red-throated Loons numbered 40 on P.I. May 26, a particularly high count for such a late date (WRP#). Thirty-one Red-necked Grebes, assumedly blown inland by the northeasterly storm of May 9-10, alighted on a lake at Southwick May 10 (SK#).

### TUBENOSES

On Georges Bank, an observer for MBO noted 100+ Northern Fulmars, four of them dark-phased, and also reported the region's first Cory's Shearwater of the season May 31 (fide MBO staff). Sightings from shore of Sooty Shearwaters were sparse: one was seen at M.V. May 27-29 (JFK#), one from Provincetown May 29 (FJG) and one from Monomoy May 28 (RRV,MJL). Eleven reports of Manx Shearwaters during the month included one at Rockport May 9 (NC), 6 sightings of singles May 24-31 on Georges Bank (MBO staff), two off P.I. May 21 (RRV#), and singles at Barnstable (RFP) and Provincetown (FJG), both on May 24. Clearly in the wake of the aforementioned northeaster, a black-and-white shearwater, identified as an Audubon's, was studied as it rested upon a lake in Southwick, where it remained for that day only (SK#). Most spectacular was a careful estimate of 10,000+ Leach's Storm-Petrels observed entrapped in Cape Cod Bay May 10 (WRP,RAF,KSA). Apparently intercepted at the height of their northeastward migration along the continental slope, the birds were blown first inshore, and then south into Cape Cod Bay as the winds shifted to the northwest on the 10th. Additional reports of Leach's Storm-Petrels include one off Provincetown May 5 (HD'E), 600+ off Barnstable May 9 (WRP), 18 in Newburyport Harbor May 10 (NC), 400+ still off Barnstable May 11 (TL) and 6 from Marshfield (Brant Rock) May 11 (WRP). Amongst the multitudes of Leach's, 12 Wilson's Storm-Petrels were carefully identified (WRP,RAF,KSA), while 30+ were estimated the next day (BN), representing the earliest inshore records for that species locally. The actual arrival date of Wilson's Storm-Petrel on the productive waters of the continental slope is not as of yet clearly defined, but these reports indicate an arrival by the second week of May.

### GANNETS THROUGH HERONS

Although Gannets were unreported from Cape Cod Bay during the storm, 65 passed Rockport and 8-9 were in W. Gloucester May 9 (NC). Lingering Great Cormorants of unreported ages were noted in Wollaston May 1 (JJC) and as late as May 31 in Plymouth Harbor (MBO staff). Data for occurrence of Great Blue and Green Herons are rather superficial and perhaps of negligible value; reports totalled 12 and 35, respectively, for each species. Eight Little Blue Herons, all but one of them adults, were reported from as many localities along the outer coast from Nantucket to P.I. (v.o.), while 3 Cattle Egrets occurred at Nantucket May 1-3 (Katie Gibbs,EFA), 6 in Ipswich May 1 (MFL,BAL) and 7 in Marshfield May 11(WRP). Great Egrets numbered 8 from as many localities throught the month, while the higher counts of snowies were 40 at P.I. May 22 (HWM) and 35 at Martha's Vineyard May 27-29 (JFK#). Louisiana Herons totalled a near average 5 this month, following a

high total of 12 in May 1976. This year's birds appeared at Marion May 1 (GBM), at Neponset May 6 (SH), 2 at E. Boston May 1 (SZ) and one at Marshfield May 22 (WRP). A Yellow-crowned Night Heron at Nauset May 5 was unique in the state in May (GC,HC). A Least Bittern first appeared at P.I. May 7 (v.o.), and one was seen perched in a flowering shrub in Mt. Auburn Cemetery May 17 (PMR). Other singles occurred at Marshfield May 21 (WRP) and S. Peabody May 25 (RSH). Glossy Ibis, inclusive of local breeders as well as summering non-breeders, numbered roughly 248 this month, a substantial increase over the last 4 year's totals of 120,119,110 and 168.

#### WATERFOWL

Lingering flocks of Brant included 1700 at Barnstable May 1 (WRP), 200-300 at Plymouth May 16-21 (v.o.) and 12 continuing until May 28 at Newburyport (HW). Two Snow Geese remained at P.I. until May 20 (v.o.), a single (possibly a winterer) was in Chatham May 15 (Jeff Bryant) and a flock of 30 flew over Lexington May 13 (PS), surprisingly late. Two American Wigeon were at Newburyport May 15 (RHS,TL) and one at the same locality May 28 (WRP). Two Northern Shovelers at Cambridge May 8 were rather unusual for that locality (LT). A number of additional species of late lingering waterfowl included 2 Ring-necked Ducks at Newburyport (WRP#), 5 Greater Scaup at Squantum May 28 (JM), a Common Goldeneye at Plymouth May 21 (WRP), a Bufflehead at P.I. May 15 (TL), 500+ Oldsquaw at Newburyport May 15 (MK) and 3 at Chatham May 30 (AAC). Two of the 3 Harlequin Ducks that wintered off the beach at E. Orleans remained until at least May 7 (RAF,CAG,BN). Common Eider numbered 125 at P.I. May 7 (SZ), and 20 were seen at Scituate May 22 (JNi). An adult drake King Eider was seen May 21 at Scituate (WRP#). On May 8, several thousand scoters, 3000 of these identifiably White-winged, were observed flying northeastward past Gooseberry Neck in Westport into Buzzard's Bay (RRV,MJL). Up to 3 Hooded Mergansers were sporadically observed at Bolton May 18-30 (HWM), while the latest Red-breasted Mergansers reported were 5 at P.I. May 14 (JN).

#### RAPTORS

A decided increase of vagrant Turkey Vultures is evident in eastern Massachusetts in spring as well as in the fall. Some 21 individuals were reported from 12 localities in May (cf. 3,3,12,10 May totals since 1973). Goshawk nests were located in Weston and Boxford, with 2 young noted in each (LJR,v.o.). In addition, 2 adults were present at Andover May 1 (BM), one adult was at Lancaster May 8 (HWM), and a bird of unreported age was seen at Sherborn May 8 (PRB). Coastal flights of migrant accipiters and falcons occurred following SW winds on the 12th, and, to a lesser extent, on the 1st (actually a carry-over from the major movement April 30), although generally, this year's raptor migration was considered poor. Fifteen Sharp-shinned Hawks were counted at P.I. May 1 (PMR) and 20 at Truro on the 12th (WWB,CAG). Also on the 1st, Cooper's Hawks (please report ages!) occurred in Provincetown (1) and Newburyport (1-2). An adult was observed chasing a Green Heron in Norwell May 1 (BAL#), and one occurred at Truro on the 12th (BN). Six Red-shouldered Hawks were reported from suitable nesting habitats; one at Middleboro May 8 (WRP), one at Milton May 21 (SH),

one at Marshfield May 22 (JNi) and 2 at M.V. May 27-29 (JFK#). Four Broad-winged Hawks were observed May 1 at Provincetown (HD'E) and 50 were counted over Truro May 12 (WWB). The late spring concentrations of immature buteos, mostly Broad-winged Hawks, unique to the Cape in recent years, never materialized in 1977. Late Rough-legged Hawks included one at Newburyport May 1 (PMR) and one at Truro May 12-15 (BN,CAG). An immature Bald Eagle was noted at Monomoy May 28 (BN,CAG). Also on May 12, 8 Marsh Hawks were noted migrating along the outer coast at N. Scituate (GRF). About 10 Osprey nests are active along the Westport River, and 15-17 individuals were reported from 12 additional non-nesting localities throughout the state, indicating a slow increase in recent years (cf. 7,2,6,6 totals of migrants since 1973). Two adult Peregrine Falcons were observed over a field in Halifax May 8 (WRP,KSA) and two separate adults occurred in the Newburyport-P.I. region May 12-14 (WRP,RAF). Lingering migrant Merlins numbered a comparatively high 12 May 1-15 (v.o.), and two were still at P.I. May 21 (RRV,SAP,HM). Migrant American Kestrels at Truro May 12 numbered 12 (BN#).

#### CRANES THROUGH SHOREBIRDS

A Sandhill Crane was seen flying over Plymouth Beach May 28 (MBO staff), for the second state occurrence this year and at least the third, maybe the 6th, since 1973. The only King Rails reported were 1-2 from GMNWR at Concord May 1-3 (BM#). This species, at the northern periphery of its breeding range in Massachusetts, has not been recorded from P.I. or Lynnfield, two supposed breeding areas, since 1975. A Clapper Rail was heard calling at P.I. May 12 (RAF). The peak of the shorebird migration occurred on May 25 for most species, somewhat later than last year, as monitored from Newburyport and Monomoy. The now well-established American Oystercatcher numbered 10+ at Monomoy throughout the month and 5 at M.V. May 27-29 (JFK#). The first Semipalmated Plovers to arrive were singles May 10 at Eastham and May 14 at Newburyport (WRP); the peak occurred on the 25th with 60 at Newburyport (RRV#). Inland, 3 were at Lancaster May 21 (HWM#). An unusual report was that of a flightless young Killdeer begging for food from its parents in a wooded, suburban section of Waltham in RHS's back yard! Black-bellied Plovers were once again particularly abundant as a spring migrant and roughly 2/3 as numerous as last spring with the peak occurring around May 25 (cf. May 19 in 1976). The higher counts were 4100 at Newburyport May 25 (RRV,SAP), 1800 at Plymouth May 27 (JJC), 415 at Monomoy May 28 (RRV,MJL) and 300 at E. Boston May 30 (SZ). Inland, 9 occurred at Lancaster May 12 (HWM), 35 at Rochester May 28 (DB) and 4 at Bolton May 29 (HWM). Ruddy Turnstones were distributed most heavily on the sand flats of the south shore and outer cape, numbering 60 at Plymouth Beach May 16 (RHS), 80 there May 27 (v.o.), 210 on Monomoy May 28 (RRV,MJL) and 44 at Squantum May 28 (BM). One was at Bolton May 27 (HWM). Whimbrel reports included 3 at P.I. May 19 (John Kieran), 3-5 at Monomoy May 28 (RRV,MJL) and one at M.V. May 28 (JFK#). Upland Sandpipers totalled 11 from 6 localities, all (at least) presumptive breeding areas. The last Solitary Sandpipers seen were 2 at Lynnfield and one at Rowley May 21 (RHS,RRV#). Of 16 Willets reported, 10 occurred as bona fide migrants or vagrants coastally from Newburyport-Plymouth May 5-29; 6 on Monomoy

May 28 may have been breeders. As Willets did nest at Monomoy in 1977, eventual recolonization of the entire east coast from Florida-Nova Scotia seems imminent. Greater Yellowlegs totals for Newburyport Harbor May 1,12,28,31 were 185,320,150,5, respectively (RRV,MK,HW#) and elsewhere 60+ were at Scituate May 2 (GRF) and 8 at Lancaster May 21 (HWM). Always uncommon as a spring migrant, Lesser Yellowlegs seemed particularly scarce this month, with a total of 13 reported [cf. 26,22,16,72(high?) totals since 1973] from coastal localities, predominately Newburyport, May 1-21 (v.o.). Surprisingly, two appeared inland at Lancaster May 21 (HWM) despite their scarcity elsewhere. Red Knot reports included 1 at Scituate May 15 and 3 there May 22 (GRF), 2 on M.V. May 27-29 (JFK#), 20 on Monomoy May 28 (RRV,MJL) and 4 at Newburyport May 31 (RRV). Purple Sandpipers remained at least until the third week of May with 120 at Lynn (HM,SAP,RRV,MJL) and 125+ at N. Scituate (WRP), both May 21. The last Pectoral Sandpipers were 2 at Newburyport May 17 (RHS). White-rumped Sandpipers, apparently more numerous on sand than on mud, numbered 25 at Scituate May 21 (RAF), 15 at Newburyport May 25 (RRV,SAP) and 35 at Monomoy May 28 (RRV,MJL). Totals of Least Sandpipers for Newburyport May 1,25,31 were 85,1300,250, respectively, (RRV,SAP,MJL), showing a migratory pattern similar to Black-bellied Plover and Greater Yellowlegs, and 11 were recorded at Lancaster May 21 (HWM). A Curlew Sandpiper in almost complete alternate plumage was found at Newburyport Harbor May 28 (PA,GT), where it remained for that day only. This brings to a total of 6 the Curlew Sandpipers observed in the period May 12 - June 2 in Massachusetts since 1973. Higher counts of Dunlin were 150 at Nauset May 4 (RAF), 300+ at Newburyport May 12 (MK), 125 there May 25 (RRV) and 225 at Monomoy May 28 (MJL#). Five Short-billed Dowitchers arrived on Nauset May 4 (RAF), 300 were at Newburyport May 25 (RRV,SAP) and a peak of 700 there May 27 (RRV,SAP); by May 31, they had dwindled to 100. The Stilt Sandpiper from April remained at Newburyport until at least May 14 (v.o.). Semipalmated Sandpipers reached peak concentrations in Newburyport somewhat later than most other species, on May 21, when 2750 were counted there (RRV). Other high counts include 700 in Newburyport May 25 (SAP#) and 400 on Monomoy May 28 (RRV,MJL). A Marbled Godwit was observed in Newburyport Harbor May 29 (J.Nove). Recent spring records of Marbled Godwit in the area are of particular interest in light of the recently-discovered breeding colony near James Bay, Manitoba, far to the northeast of their previously defined breeding range. A Ruff was on Monomoy May 6 (Peter Cannell), a female was in Wellfleet May 15 (BN#) and a second female was on Plymouth Beach May 21 (RAF,WRP). A count of 1150 Sanderlings was made on Monomoy May 28 (RRV,MJL). Following the easterly gale of May 9-10, 148 Red Phalaropes were observed off 1st Encounter Beach (RAF#), 2 were in Scituate (MFL,BAL) and one female was in Lynnfield (MLG) May 10. On the 11th, 5 were observed in Plymouth (MBO staff), and on the 27th and 28th 1440 and 2416, respectively, were observed along the continental slope on the southern edge of Georges Bank (MBO staff). On the 9th, 157 Northernns were counted in Cape Cod Bay from Barnstable (WRP), 75 were in Scituate on the 10th (MFL,BAL), 300 in Gloucester May 10 (CWL) and 633 in Cape Cod Bay on the 10th (WRP,KSA,RAF). One thousand were seen off Plymouth Beach on the 11th (MBO staff). Reds show a pronounced pelagic distribution compared to Northernns, being virtually confined to the waters of the

continental slope during the spring migration. This was the strongest spring flight of Wilson's Phalaropes ever recorded in Massachusetts; the total of 12 reported included 8 on P.I. May 18 (v.o.), and singles at Orleans May 7 (BN,CAG), S. Dartmouth May 8 (RRV,MJL), WBWS May 14-16 (WBB) and Clinton May 21 (HWM).

#### JAEGERS, SKUAS, GULLS, TERNS

A storm blown Pomarine Jaeger was observed off Eastham in Cape Cod Bay May 10 (RAF), and 11 were noted "on Georges Bank" May 30 (MBO staff). Two adult Parasitic Jaegers flew by Manomet Pt. May 5 (MBO staff), two were seen at Barnstable May 9 (RFP) and one was off Eastham on the 10th (RAF#). Consistent with our conception of the coastal nature of the migration of Parasitic vs. the pelagic nature of that of the Pomarine, all jaegers identified on Georges Bank in May were Pomarines. A total of 10 sightings of skuas (sp?) were made on Georges Bank in the period May 24-31 (MBO staff). On the 10th, a Glaucous Gull was seen at Provincetown, one at Barnstable and two at Eastham, all in Cape Cod Bay (WRP,RAF). Five or more Iceland Gulls lingered around Provincetown for the entire month (BN) and 1,3 and 1 birds were observed at Marblehead on May 10,19 and 21, respectively. An Iceland Gull was observed inland at Clinton May 8 (HWM) and finally, one occurred May 26 on Georges Bank (MBO staff). Rather scarce all winter, the only Black-headed Gulls in May were one immature at Squantum May 12 (SZ) and an adult at Newburyport May 28 (WRP). A Laughing Gull in Newburyport May 26-28 was the only one north of Cape Cod (WRP,RPE). Bonaparte's Gulls numbered 180 in Winthrop throughout the month (SZ), and 46 in Falmouth May 1-3 (AAC). Five adult and one immature Little Gulls appeared in Newburyport Harbor May 1 (WRP,RRV) and 3 were still there May 14 (J.Nove). Eighty-five Black-legged Kittiwakes were observed in Cape Cod Bay on the 9th and 63 on the 10th (WRP,RAF,KSA). The first Common Terns on the north shore were 2 in Newburyport May 1 (WRP#). Migrant Arctic Terns blown into Cape Cod Bay, mostly adults, numbered 200 May 10 off Eastham (WRP#) and 4 were seen on Plymouth Beach May 21 (RF). Two Caspian Terns were observed in Hingham May 15 (NO,SO). Finally, on the 10th, 2 Black Guillemots were seen in Rockport and one in Beverly (CWL).

#### CUCKOOS THROUGH WOODPECKERS

Yellow-billed Cuckoos totalled 11 from 6 localities May 21-31, while Black-billed totalled 18 from eleven localities, somewhat earlier, May 7-30. A Barn Owl nest with two young was found on Martha's Vineyard May 28 (JFK#), where they have bred regularly in recent years. A Horned Owl with young was noted occupying an Osprey nest in the Westport area May 6 (F.Marsh). Whip-poor-wills were particularly numerous in the Rowley-W. Newbury area in the early hours of May 21, when 35 were estimated calling (RHS,RRV#). The earliest Common Nighthawk was one on Gooseberry Neck, Westport, May 8, and migrants otherwise numbered 17+ throughout the state. The first Ruby-throated Hummingbird arrivals were two in South Middleboro on May 5 (Hwi), a female banded at MBO May 7, and 1 in Mt. Auburn the same day (PRB). A pair of Red-bellied Woodpeckers has been frequenting a feeder in Plainville, near the Rhode Island border, and suspected of possibly breeding there (WRP#).

Two vagrant Red-headed Woodpeckers were noted: one at WBWS May 18 (CAG,WWB) and one on M.V. May 27-29 (JFK#). Yellow-bellied Sapsuckers remained quite late; until May 21 at Plum Island (DH,RCH) and at Mt. Auburn (RHS), both singles.

#### FLYCATCHERS THROUGH SWALLOWS

In a pattern similar to last year, the most pronounced wave of passerine migrants occurred on May 6-7, while waves subsequent to that were ill-defined and localized. The first wave marked the arrival of many routine species such as Eastern Kingbird, Great Crested Flycatcher, Wood Thrush, Veery, most species of warblers, Chipping Sparrow and White-crowned Sparrow. About 16 Yellow-bellied Flycatchers were noted in the period May 18-31, all coastally with the exception of one at Weston May 27 (LJR). The peak appeared to occur May 27, when 8 were noted along the north shore from Nahant-P.I. (RRV,SAP). MBO banded 4 of the now to-be-expected Acadian Flycatchers; one on the 22nd, 2 on the 25th and one on the 29th, and another was seen at M.V. May 27-29 (JFK#). An Alder Flycatcher at Nantucket May 6-8 predated that species' typical migration period by some two weeks (EFA#). Somewhat less surprising, an E. Wood Peewee May 7 at Falmouth (AAC) was nonetheless quite early. Six reports of single Olive-sided Flycatchers were received in the period May 13 (Mt. Auburn) - 26, that total being somewhat lower than average. A pair of Cliff Swallows was noted nest building near their former colony site on P.I. May 31 (WRP). The nest was eventually abandoned, however. A count of 12 Cliff Swallows at Newburyport May 12 was rather high for recent years (MK), and may suggest the species' eventual return to Essex County as a more widespread breeder.

#### RAVEN THROUGH THRUSHES

Although outside of our region, in Berkshire County, the report of two Common Ravens from the Savoy State Forest is of sufficient interest to warrant inclusion in this report. Two birds were carefully studied May 29 by R. Ferren, D. McNair, A. Sanborn# and I quote from their report, "Two (Common Ravens) seen simultaneously by two groups of experienced observers . . . . One croaked many tunes as it flew about, meanwhile being dive-bombed by a crow. All observers familiar - only previous records this century are of one seen by Ferren in New Ashford 1973 and one seen in Richmond in April 1967 and Feb. 1968, but these birds were not heard. The Savoy area is a very wild spruce swamp with a steep mountain rising nearby, the base elevation being over 2000'." Two Fish Crows were seen at E. Bridgewater May 29 (WRP). The latest migrant thrushes included a Gray-cheeked May 7 at Mt. Auburn (HC) and a Veery May 2 at Marblehead (MK). Banding data from MBO show that the majority of Swainson's and Gray-cheeked Thrushes went through in the period May 23-28. An adult Eastern Bluebird was observed feeding young at Woburn May 7 (CJ), and other reports include one in Cambridge May 1 (CM), one at N. Scituate May 6 (WRP), two at Boxford May 21 (RHS), two at Sherborn May 21 (EWT) and 3 at Holliston May 26 (PH).

A King Rail was heard GNATCATCHERS THROUGH WAXWINGS on the 29th to 30th (RSH). A Sora Rail at Breakheart Reservation in Saugus was an Nesting Blue-gray Gnatcatchers were found in Bridgewater May 8 (1 pr., WRP), in Boxford May 5 (1 pr., MLG), in the Middlesex Fells Reservation (4 prs., PMR) and in Falmouth May 17 (1 pr., AAC). A Golden-crowned Kinglet was particularly late at Lancaster May 21 (HWM), and the last Ruby-crowned Kinglet to be reported was one May 22 on P.I. (v.o.). Water Pipits remained on P.I. until May 21, when 2 were observed (VA#). About 150 Cedar Waxwings were reported from diverse localities following a winter of virtual absence from eastern Massachusetts.

WARBLERS

Piping  
the

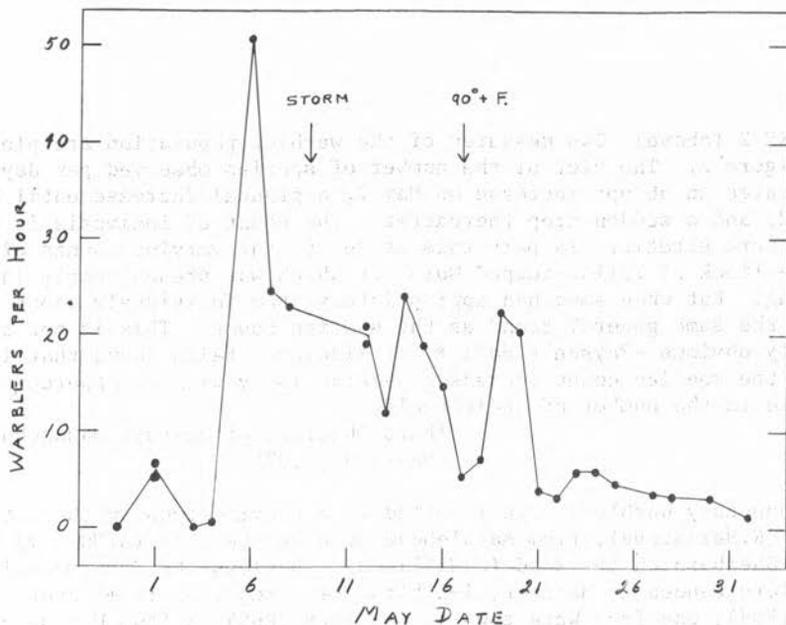
The warbler migration seems to generate the most interest among birders during the month of May. At Mount Auburn Cemetery in Cambridge, hundreds of observers came each day to watch the tree tops, and some of us got the annual "warbler neck" syndrome on busy days. Southwesterly winds, the most favorable for migrants occurred on May 2,4,6,16,20-24 and 31st. Southeasterly winds were blowing on May 1,8,14 and 30th. The best days were May 6,16,and 21st at Mount Auburn.

A total of 35 species were recorded during the month, with 32 alone at Mount Auburn. Several observers kept daily records at their favorite locations and the results were remarkably similar. We would like to thank John Andrews and Craig Jackson, who reported from Pine Banks Park in Melrose, Rick Heil for South Peabody, Mark Kasprzyk for Marblehead Neck, Harold Merriman for Lancaster, Leif Robinson for Weston, and Bob Stymeist for Mt. Auburn.

Manomet Bird Observatory banded the following warblers during the month:

<u>Species</u>	<u>Number banded</u>	<u>Dates(May)</u>
Black-and-white Warbler	27	13th only
Worm-eating Warbler	3	5th-25th
Nashville Warbler	8	6th only
Magnolia Warbler	63	throughout
Blackpoll	54	13th on
Ovenbird	87	6th on
Northern Waterthrush	77	6th on
Common Yellowthroat	168	throughout
Yellow-breasted Chat	4	17th-25th
Wilson's Warbler	12	13th-17th
Canada Warbler	94	throughout
American Redstart	22	25th only

The following graphs were submitted by John Andrews, Melrose, and Leif Robinson, Weston, and they show a remarkable similarity, despite the difference of total species and individuals of Andrews, versus that of birds per hour by Robinson.



L. J. Robinson

FIGURE 1 (above) From a purely quantitative view, the May, 1977 warbler migration as observed in Weston was classic. Except for the interval immediately following the "white 10th", the warbler waves flowed at 4 or 5 day intervals: May 1 (minor), 6 (best of season), 14, 19-20, 23-25 (minor). This spacing approximates the average rate of cyclonic activity through our region at this time of year. This pattern is in direct contrast to May, 1976, when virtually no wave of activity occurred. Specifically, the May 6 wave was dominated by Yellow-rumpeds, with large flocks of birds scattered throughout the woodlands. May 14 and 19-20 contained a good mixture, with Tennessee Warblers highlighting the latter.

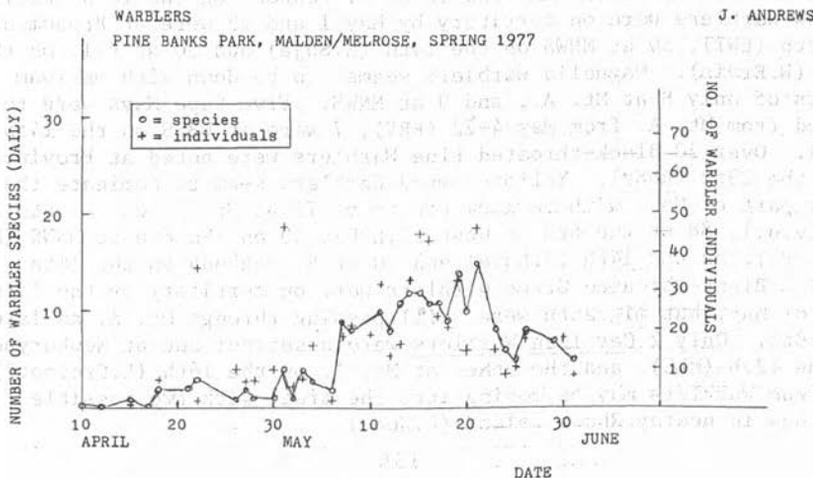


FIGURE 2 (above) Two measures of the warbler population are plotted in Figure 2. The plot of the number of species observed per day indicates an abrupt increase on May 7, a gradual increase until May 21-22, and a sudden drop thereafter. The count of individuals is somewhat more erratic. In part this is due to the varying counts of a large flock of Yellow-rumped Warblers which was present early in the spring. But when smoothed appropriately, the individuals count follows the same general trend as the species count. This is not necessarily obvious - Payson's data \* for Middlesex Fells found that in the fall the species count increases substantially with no apparent increase in the number of individuals.

\*Bird Observer of Eastern Massachusetts  
May-June, 1975

Prothonotary Warblers were reported from Provincetown on the 12th and 13th (N.Mazzarese), from Marblehead Neck on the 17th (A.Murphy) and from Sherborn on the 22nd (J.Willison). Besides the 3 Worm-eating Warblers banded at Manomet, 1-2 birds were reported from Dover on the 4th (FRH), one from Watertown on the 11th (RHS), 2 from Weston on the 13th (LJR), one from Mt. Auburn on the 20th (L.Taylor) and one in Stoneham on the 24th-26th (M.Martinek). Golden-winged Warblers continue to decrease with only 10 individuals reported, four from the West Newbury area (v.o.). Blue-winged Warblers continue to increase with as many as 8 in Lancaster throughout the month (HWM). "Brewster's Warblers" were reported from 5 localities, but no "Lawrence's Warblers" were noted.

Tennessee Warblers peaked on the 20th at Mt. A. with 26 being noted (v.o.) and 21 from Bedford-Lincoln on the same day (RAF). Only 3 Orange-crowned Warblers were noted, 1 each from Mt. A. (v.o.), MNWS (MK) and N. Scituate (BAL). Fifteen Nashville Warblers were noted at Mt. A. on the 8th (v.o.) and 20 were counted at MNWS on the 6th (MK). Northern Parulas peaked on the 7th-8th at Mt. A. where 15 were noted, 13 at MNWS on the 15th (MK) and 16 at S. Peabody on the 16th (RSH). Yellow Warblers were on territory by May 1 and 25 were at Broadmoor on the 7th (EWT), 50 at MNWS on the 14th (E.Soja) and 50 at P.I. on the 15th (W.Ervin). Magnolia Warblers seemed to be down with maximum counts of only 8 at Mt. A., and 9 at MNWS. Five Cape Mays were reported from Mt. A. from May 4-22 (RRV), 7 were at WBWS on the 14th (WWB). Over 20 Black-throated Blue Warblers were noted at Provincetown the 19th (RHS#). Yellow-rumped Warblers seem to dominate the early part of May, with maximum counts of 75 at Mt. A. on the 6th and 7th (v.o.), 88 on the 6th in Weston (LJR), 30 on the 6th at MNWS (MK), 40 on P.I. on the 14th (J.Nove) and 70 at S. Peabody on the 16th (RSH). Black-throated Green Warblers were on territory by the first week of May, but migrants were still passing through Mt. A. as late as the 28th. Only 2 Cerulean Warblers were observed; one at Newburyport on the 12th (MLG), and the other at Mt. A. on the 16th (L.Crofoot#). Cerulean Warblers may be moving into the area, with two possible nestings in nearby Rhode Island (C.Wood).

Yellow-throated Warblers were noted at Mt. A. on the 2nd-5th (R.Timberlake, v.o.), one from Nantucket on the 8th (EFA) and a different bird at Mt. A. on the 12th-14th, and on the 17th (SAP, v.o.). This year at least 3, possibly 4 Yellow-throated Warblers were seen at Mt. Auburn, tying the record number of sightings at the Cemetery. Blackburnian and Chestnut-sided Warblers were reported near normal numbers; early Bay-breasted Warblers were reported on the 8th in Lancaster (HWM) and in Hingham (NO, SO). As many as 7 were noted at Mt. A. (RRV, v.o.) and 8-12 individuals from MNWS on the 24th (MK).

Blackpolls dominate the last weeks of May, and as many as 18 were noted at Mt. A. on the 21st (R.Murphy, v.o.) and 7 at Annisquam on the 28th (HTW). Two pairs of Pine Warblers were breeding in Clinton (HWM) and 4 were found in the Westport area on the 22nd (BBC-SPG#). Twenty-six Prairie Warblers were noted on the BBC Westport trip on the 22nd (SPG) and 20 were found on Martha's Vineyard on the 28th-29th (BBC-JFK#). A late Palm Warbler was reported from Mt. A. on the 17th (SAP#), the largest flocks passing through during April. Ovenbirds were very much in evidence throughout with 14 reported from S. Peabody on the 16th (RSH) and 22 from MNWS on the 17th (RHS#). A Louisiana Waterthrush nest was found at Crooked Pond, Boxford with 5 eggs on the 21st (RHS#) and 5 young later (EWT#). There were probably 2 other pair breeding in the Crooked Pond area as well. Kentucky Warblers continue on the increase with 10 individuals noted:

KENTUCKY WARBLER:

<u>May</u>			
14, 16	Newburyport, Rockport	1, 1(b)	RSH, R. Norris
18-23, 18	Mt. A., MNWS	3 singles	RJH, LET, R. Rabinow; MK
21, 23	Dover, WBWS	1, 1	FRH#, CAG#
26, 31	P.I., Weston (1st record)	1, 1	JJC, J. Hines

Mourning Warblers are the last to arrive and continue through early June. Here are the totals:

MOURNING WARBLER:

<u>May</u>			
21-28, 21, 28	Mt. A., Lancaster	1-3, 1+1	HHD'E+v.o., HM
25, 26, 27	Manomet, Winchester, Chatham	1(b), 1, 1	staff, BN, GG
28-31, 31	P.I., Nahant, MNWS	1-2, 1, 2	v.o., RRV#, MK

Common Yellowthroats numbered over 50 at MNWS on the 14th (E. Soja) and 50 at P.I. on the 21st (RSH#). Besides the 4 Yellow-breasted Chats banded at Manomet, others were seen at MNWS from the 14th-18th (MK, v.o.), 21st-26th at W. Newbury (RRV, HM#; v.o.) and one at Fowl Meadow, Milton on the 21st (JDO'R). The bird at West Newbury was first found on a Big Day run at 2:30 AM singing, and was still singing at 7 PM that same day.

Hooded Warblers continue to increase each year, with at least 11 reported during the month.

HOODED WARBLER:

May	Location	Count	Observer
4,7	Melrose;Mt. A.,MNWS	2;1,1	J.Andrews;LC#,CB#
8,14-15,21-22	P.I.	1,1,1	CWL,J.Nove#,D.Hall#
14,15	Dover,WBWS	1,1	FRH,BN
18,21	S.Peabody,MNWS	1,1	RSH,K.Nappa

"Hundreds" of Wilson's Warblers were reported from P.I. on the 18th (MLG#,v.o.). Manomet banded 12 individuals between the 13th-17th (staff) and 13 were noted on the 17th at MNWS (MK). Thirteen Canada Warblers were recorded from MNWS on the 29th (RSH) and an early record of May 3rd at Mt. A. (O.Earle#). American Redstarts arrived later than usual with 22 being reported as a maximum for Mt. A. (J.Rabinow#,v.o.), and 15 from MNWS (MK#,v.o.). Over 250 American Redstarts were recorded from P.I. on the 31st (RRV#).

ORIOLES THROUGH PINE SISKINS

On Nantucket, 2 female Orchard Orioles were observed May 2-4 (EFA), an unusual record for the island. Elsewhere, Orchard Orioles numbered 19 from 14 localities (v.o.). Another record from Berkshire County is that of a Rusty Blackbird nest found abandoned in the Savoy State Forest May 15 (CQ,DM), for a first state nesting record. On the 29th, a nest with 4 eggs was discovered nearby in Florida, Mass. (RH#). Summer Tanagers totalled a rather high 7 for May (cf. 6,4-5,3,3 since 1973) from scattered localities, 3 of them on Cape Cod. The first was in WBWS May 1 (PB), one came to a feeder in Lexington May 12-18 (Mrs.D.Jenkins,fide RAF), one appeared in Sandwich May 16 (RFP), a male and a female were seen in Mt. Auburn May 17 and 20, respectively (JG,PMR) and singles were at Nahant May 18 (MLG) and Monomoy May 28 (BN,CAG). Two Blue Grosbeaks, a female and a male, were seen on Nantucket May 1-5 (Mrs.J.Oldham,fide EFA) and another bird was seen in Provincetown May 1-6 (BN). Evening Grosbeaks numbered 68 between Cambridge and N. Scituate between May 3-21 (v.o.). A pair of Pine Siskins was seen briefly (one day only) May 5 in Boxford (MLG), and were otherwise unreported.

SPARROWS

Grasshopper Sparrows first arrived on breeding sites May 8 in Dartmouth (RRV,MJL) and May 19 on M.V. (DB,DD). A Seaside Sparrow occurred on Plymouth Beach May 21 (WRP), and 2 in S. Dartmouth at a more traditional breeding locale May 26 (GLS,HLJ). The passerine rarity of the season was a Lark Sparrow in Provincetown May 15 (BN,CAG), the only spring record in recent years. Three Dark-eyed Juncos were present May 3 in Weston (LJR). Fifty-two White-crowned Sparrows from 14 localities were reported for a slightly higher than average spring flight. A count of 80 White-throated Sparrows May 14 at P.I. (JN) reflects that species' super-abundance in New England over the winter months. Finally, a total of 15 Lincoln's Sparrows were reported from 9 localities in the period May 13-31.

RRV,RHS

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### LIST OF ABBREVIATIONS

Mt. A. - Mount Auburn Cemetery, Cambridge  
MNWS - Marblehead Neck Wildlife Sanctuary  
WBWS - Wellfleet Bay Wildlife Sanctuary  
P.I. - Plum Island  
GMNWR - Great Meadows National Wildlife Refuge

## SUMMARY FOR JUNE, 1977

June averaged a bit below normal in temperature and below normal in rain, though light rains were frequent. The mercury averaged 67.4°, 0.6° below normal and 7.0° colder than the record-hot June, 1976. This was the first below normal month since January. The high temperature was 90° on the 28th, the low was 50° on the 4th and 8th. No temperature records were broken. Rain totaled only 2.49 inches, 0.7 inch below normal, but still the most in June since 1973. Heavier rain fell in many suburban areas, and fog was noted on twelve days. A storm on the 10th and 11th brought strong northeast winds, especially south of Boston. Many pelagics were noted in good numbers on those days from Cape Cod Bay.

### TUBENOSES

During the month of June, which marks the arrival of the southern hemisphere pelagic species to New England, we had the opportunity to view the ornithological events on Georges Bank as well as monitoring them from coastal vantage points. Northern Fulmar numbered 300, all but three in the light phase on Georges Bank in the vicinity of the Russian fleet June 1-14 (RRV). Cory's Shearwaters began arriving on the continental slope of Georges Bank during the first week of June, when 50 were counted there between June 1-14 (RRV), and built up to 200 between the 18-22 (VL). Greater Shearwaters numbered a staggering 20,000 in the close vicinity of the Soviet fishing fleet June 1-14 (RRV) and 30,000 were estimated in the vicinity of Hydrographic and Oceanographer Canyons along the southern edge of the Banks June 18-22 (VL). Inshore, 5 were noted at Pollock Rip on June 5 (BBC-HHD'E). Sooty Shearwaters numbered 60 off Chatham on the 5th (BBC-HHD'E#), 4 at Provincetown on the 3rd (RAF,WB), 11 off Rockport on the 10th (RSH), and 5 off Nahant on the same day (SZ). On Georges, 4000 Sooty Shearwaters were estimated among the Greaters June 1-14 (RRV), yet had apparently dwindled to 1000 by June 18-22 (VI). A total of 10 Manx Shearwater reports included singles at Provincetown June 4, 11 and 26 (FJG#,BN,WRP#), one at Barnstable (RFP), and 1-2 at Rockport (GLS,RSH) June 10, and four singles on Georges Bank June 1-14 (RRV). Leach's Storm-Petrels were uncommon but widespread on Georges Bank throughout the month, with some 200 reported (RRV,VL), and one was seen from shore June 10 at Rockport (GLS). A count of 200 from Barnstable June 11 (WRP#) was particularly surprising considering their relative scarcity in adjacent Gulf of Maine waters at this season. Some 50,000 Wilson's Storm-Petrels were feeding by the Soviet fleet June 1-14 (RRV), 1000 were seen off Chatham June 5 (BBC-HHD'E#), and 100 were estimated in Cape Cod Bay on the 11th (WRP#). Thirty Gannets were observed passing Rockport on the 10th (RSH), and 150 were in Cape Cod Bay the next day (v.o.).

## HERONS

Herons were nesting again at Clarks Island, Duxbury, House Island, Manchester and some of the Boston Harbor islands. Totals of success are not available at this time, however. Seven Great Blue Herons were noted at Nauset on the 5th (DTB#). An adult Little Blue Heron was found on the Greater Boston Breeding Bird Census (GBC) at Squantum (DTB#). As many as nine Cattle Egrets were found in Marshfield on the 4th (WRP), and 4 were present at Ipswich (EWT#) on the same day. Two pairs of Great Egrets were found nesting on Sampson's Island, Osterville on the 15th (RAF). Yellow-crowned Night Herons were reported from five locations, with singles at Dorchester on the 6th (J.Murphy), possibly the same bird at Wollaston on the 15th (DTB) and 1 at Annisquam on the 26th (H.French#). As many as 3 adult Yellow-crowns were found at P.I. (B.Morrissey# & v.o.), and 2 were present throughout the month in Centerville (VL).

## WATERFOWL

Brant were lingering at Plymouth, where five were observed on the 4th (BBC-HHD'E) and one was at Squantum on the 18th (GBC-DTB#). At Plum Island, 30 Gadwalls were noted on the 27th (BBC-RSH#), and 80 Blue-winged Teals were counted there on the 6th (BBC-WCD#). An American Wigeon was found lingering at Brookline Reservoir on the 18th (GBC-AA). A female Wood Duck with 10 young was observed at Milton on the 24th (RPE#). Other lingering ducks included one Ring-necked Duck at Lakeville on the 26th (WRP,KSA), three Greater Scaup at Squantum (GBC-DTB#), two Bufflehead at Squantum and one oiled bird at Revere on the 18th (GBC-DTB#,SZ#). Twenty-six Surf Scoter were observed off Rockport on the 11th during the storm (RSH), and one Black Scoter was seen there (RSH). A pair of Hooded Merganser were found nesting in Rowley on the 9th (DCA), and 26 Red-breasted Mergansers were counted in Ipswich on the 20th (BBC-J.Nove). Up to 5 Oldsquaw were present throughout the month in Stage Harbor-Mill Pond, Chatham (fide B.N.).

## RAPTORS - RAILS

Two Turkey Vultures were observed flying over at Hardwick on the 2nd (HM). Goshawks were successful in Weston (LJR), and another pair was found nesting in Hingham (fide WRP#). A Sharp-shinned Hawk was noted carrying food at Mt. Watatic on the 30th (PMR). Seven Red-shouldered Hawks were reported, two each from Annisquam on the 8th (HTW), Georgetown on the 14th (RSH), Waltham on the 18th (GBC-RHS#), and a single bird from Milton on the 19th (DTB#). An immature Bald Eagle was present in Orleans on the 4th and 5th (FJG,R.Norton); this same bird was noted at Monomoy on the 5th (CAG). Fifteen American Kestrels were noted in the Greater Boston area on the 18th (GBC-v.o.).

Ruffed Grouse were noted in Sherborn and Natick (EWT), Middlesex Fells (PMR), Milton (DTB#), and one was found with young at Mt. Watatic (PMR). Bobwhites continue to show up closer to Boston, with singles from Newton (MSM) and Squantum (DTB).

A King Rail was heard "calling" at Plum Island on the 29th to 30th (RSH). A Sora Rail at Breakheart Reservation in Saugus was an interesting find on the 18th (GBC-SZ & CJ).

#### SHOREBIRDS

American Oystercatchers were present throughout the month at Nauset Beach, but there is no evidence of nesting (fide BN). Two Oystercatchers were found at Sandy Neck, Barnstable (WRP), and four were present at Barney's Joy, S. Dartmouth on the 19th (Mrs. Henry Bragdon). Oystercatchers were also present in usual numbers at Monomoy, Martha's Vineyard, Nantucket, Tuckernuck and Muskeget. Piping Plovers totaled 19, with three nests at Crane's Beach, Ipswich on the 4th; on the 11th, 11 were noted but the nests were washed out; on the 20th, 16 were counted (JWB & J.Nove). Ten pipers were recorded at Plymouth Beach on the 4th (BBC-HHD'E), and a pair with three young were observed at Scituate (WRP). A Wilson's Plover was found at Nauset Beach on the 1st and 2nd (Dave Fisher, D. Taylor, WWB); traditionally, this species is often recorded near the last week of May-early June and should be looked for (May 27, 1974, May 24, 1975). A Golden Plover was noted at Nauset on the 5th (DTB#), and 90 Black-bellied Plovers were counted at Crane's Beach, Ipswich, on the 4th (BBC-JWB). An American Woodcock was banded at Manomet on the 4th (Staff), and five Common Snipe were observed in Bolton on the 29th. Two Willets present at Sandy Neck were strongly suspected of nesting (RFP), as were the two-four Willets near Plum Bush (RMB & v.o.); another two were found at Scituate's Third Cliff on the 14th (GRF). White-rumped Sandpipers numbered 10 at Plymouth Beach on the 4th (BBC-HHD'E), one at Nauset on the 5th (DTB#), and two were present at P.I. on the 6th (BBC-WCD). Shorebirds were returning by month's end in low numbers. On the 27th at P.I., four Greater Yellowlegs, 40 Lesser Yellowlegs, four Short-billed Dowitchers, eight Semipalmated Sandpipers were counted (RSH). The first returning Hudsonian Godwits were reported from Monomoy on the 27th (CAG, BN). A "juvenile" Ruff was observed at P.I. on the 29th & 30th (RSH#). Two Wilson's Phalaropes were reported from P.I. on June 4-6 (MJL), and another was seen at Nauset on the 5th (DTB#); a single Northern Phalarope was noted off Provincetown on the 4th (FJG, R.Norton).

#### SKUAS, JAEGERS

During the June 1-14 patrol of Georges Bank, RRV noted 25 Skuas feeding in the close vicinity of the Russian fleet. Of these, at least 8-10 were identified positively as the SOUTH POLAR SKUA (Catharacta macormickii), those that could be identified as to age were juveniles. RRV feels that the likelihood of the remaining 15 Skuas observed being C. macormickii is great; we saw no individuals resembling any of the forms of C. skua. Roughly 20 Pomarine Jaegers, mostly sub-adults, were observed in that area as well, June 1-14. Single Pomarine Jaegers were seen at Provincetown June 1 (CAG, VL) and off Provincetown June 5 (RN). On June 5, Parasitic Jaegers were seen off Chatham (HHD'E) and from E.

Orleans (WRP). Following the storm of June 9-10, 14 adult Parasitic Jaegers were counted in Cape Cod Bay June 10 (RFP), and 20 adults the next day (WRP). Five Parasitic Jaegers were seen at Provincetown June 5 (BN). RRV noted adult Long-tailed Jaegers on June 7 and 8, both of which were photographed, and a first winter bird June 12. All of these were seen harrassing storm-petrels in the wake of Soviet vessels.



South Polar Skua (Catharacta maccormickii)  
photographed by Richard R. Veit, Georges Bank, June, 1977

#### GULLS - TERNS

Iceland Gulls lingered at Nauset, where one was observed on the 1st, and two were noted on the same day in Provincetown (CAG, BN); another one was observed off Chatham on the 5th (BBC-HHD'E). Over 300 Laughing Gulls were present at Monomoy throughout the month and nesting was well underway. An immature Little Gull was noted off Sandy Neck during the storm of the 11th (WRP#), where as many as 30 Black-legged Kittiwakes were also noted (WRP#). Kittiwakes were also reported from Rockport during the storm when four were counted on the 10th (MK).

Common Terns totaled over 1000 at Plymouth Beach on the 4th (BBC-HHD'E), where three Arctic, three Roseate, and 20 Least Terns were also noted. Over 300 portlandica Arctic Terns were observed at Monomoy on the 25th (I.Nisbet); portlandica is a plumage assumed to occur among aberrant second year birds. In Ipswich, over 150 Least Terns were counted at Crane's Beach on the 4th, after the storm on the 10th and 11th, only 40

were noted, and by the 20th, the count climbed to 90 (JWB, J.Nove). The largest Least Tern colony seemed to have been destroyed by the tide and storm, and the other two colonies apparently were abandoned. Other Least Tern reports were 20 from Plymouth (HHD'E), 120 from Nauset (JM#), 40 from West Dennis Beach (C&B Holdridge), and between 40-50 at Plum Island (RSH). Royal Terns were noted at Monomoy on the 5th (CAG), Provincetown on the 12th (BN) and another from Nauset on the 30th (BN). Two Caspian Terns were seen at P.I. on the 27th (RSH). Black Terns were noted off Monomoy on the 5th (BBC-HHD'E), four from Squaw Rock, Squantum on the 18th (GBC-DTB#). Black Skimmers were observed at West Dennis Beach and on Monomoy on June 21 (I.Nisbet).

Two alcid (species) were recorded, one large unidentified off First Encounter, Eastham on the 12th, and two thought to be murre (species) off Andrews Point, Rockport on the 10th (MK). A summer plumage Black Guillemot was noted on the 10th at Andrews Point, Rockport (MK).

#### CUCKOOS - FLYCATCHERS

Cuckoo reports seem to increase each year. Herewith are the reports received:

##### Yellow-billed Cuckoo:

3,12-19	Wellesley, Westwood	1,5(all different)	RAF, JJC
19	Milton, Georgetown	2,1	BBC(DTB), RSH
20	Topsfield(IRWS)	1	DCA

##### Black-billed Cuckoo:

5,15	Westwood, Plymouth	1,pair copulating	JJC, WRP
16,18	E.Bridgewater, Newburyport	1,1	WRP, S.Garret#
19	Milton, Ipswich	2,2	BBC(DTB), JWB
21,26	Topsfield, Newburyport	3,1	RSH, GLS

A family of 4-5 Screech Owls and a family of 5-6 Saw-whet Owls were found in Ipswich during the month (JWB). Other Saw-whet Owl reports came from Centerville (VL), two in Brewster (CAG, BN), and two adults and three young from Wellfleet (DMcN).

A Chuck-wills'Widow was present on the 13th at WBWS, Wellfleet (PB, v.o.), however, none was found on either Nantucket or Martha's Vineyard as in the past four years. Seven Whip-poor-wills were calling at Crane's Beach on the 20th (JWB), and as many as eight Common Nighthawks were reported in Cambridge (RHS).

A Ruby-throated Hummingbird's nest was found in Norwell with two young on the 21st (BL & v.o.). Red-bellied Woodpeckers were finally confirmed nesting in both South Natick (Richard Lent, EWT, LJR) and at Adamsdale (C.Wood & RAF); see this report on these discoveries elsewhere in this issue. Another Red-bellied Woodpecker was found in Milton on the 15th (DTB). Two adult Yellow-bellied Sapsuckers were found feeding young in nest at Mt. Watatic on the 25th (PMR).

Yellow-bellied Flycatchers were migrating in early June with one-two individuals reported from MNWS (MK#), one from Nahant on the 5th (RSH), from Topsfield on the 8th (RSH), and a very late migrant from the Middlesex Fells on the 18th (GBC-PMR).

Acadian Flycatchers were found nesting in Middleboro by months end (WRP, KSA, RAF). One bird was singing on the 26th, there were two pairs on the 29th, and one pair started building a nest ten feet up in a tupelo on the 30th. This is the only breeding record since 1888. Other Acadian Flycatchers were as follows:

June

3-6,4 MNWS, Sandwich	1-2(on June 6),1	MK# & v.o., RFP
4,9,19 P.I.,Manomet,Mashpee	1,1(b.),1	CJ#, Staff, WRP

Six Willow Flycatchers were noted at Great Meadows on the 9th (EWT#); another six were found within Greater Boston on the 18th (GBC). Alder Flycatchers were noted in Topsfield on the 8th (RSH), in Newburyport on the 18th (S.Garret) and 26th (GLS), and in Milton, two were noted on the 19th (DTB). A Least Flycatcher was found nesting in Hamilton (JWB); and Olive-sided Flycatchers continued at MNWS until the 7th (C.Blaszczak#); another was observed at East Orleans on the 5th (WRP). On the 30th, three Olive-sided Flycatchers were noted at Mt. Watatic and presumably were nesting (PMR).

SWALLOWS - PIPIT

The Bank Swallow colony in Rowley contained over 100 birds, down from last year (JWB & v.o.), and another colony of 50 was found in Marion (G. Mock). A Cliff Swallow was nesting at the Warden's on P.I. (v.o.), and eight were found in Gloucester on the 8th (RSH). Eight colonies of Purple Martins, totaling over 100 birds, were located in Middleboro (D. Briggs), while 60+ were nesting on P.I. (v.o.).

Fish Crows were found in Plymouth, where six-eight birds were located on the 12th (WRP), two in East Bridgewater on the 16th (WRP), three in the Boston area on the 18th (GBC), and two in West Wareham on the 19th (D.Briggs). A Winter Wren was found in Halifax on the 19th (WRP), and three were present at Mt. Watatic on the 25th (PMR). Two Short-billed Marsh Wrens were found building a nest in Hadley on the 26th (RRV,MJL), and possibly another pair was present there.

A Swainson's Thrush was banded at Manomet on the 9th (Staff), and a Gray-cheeked Thrush was noted at Nahant on the 4th (RSH). Two Eastern Bluebirds were found in Westboro (HM), one in Woburn (RRV#), and four in Bourne on the 26th (AAC). Gnatcatchers continue to increase as breeding birds each year; five were found in the Middlesex Fells (PMR), five-six in Harvard (ONWR)-(HM); a pair in Milton (DTB), and singles in Hardwich (HM) and Boxford (EWT#). Two or three singing Golden-crowned Kinglets were found in Lakeville from the 26th (WRP, KSA). An even more startling find was two singing Ruby-crowned Kinglets on Hog Island,

Essex on the 18th (JWB). Although this kinglet has been known to nest in Massachusetts, it has not been confirmed in over 50 years. A Water Pipit was found in Provincetown on the 3rd (RAF); late stragglers have, however, occurred before in June (6-25-63 S. Wellfleet and the latest, 6-28-51 Nantucket).

#### VIREOS - WARBLERS

White-eyed Vireos were recorded from Marion (G.Mock), E. Orleans (WRP#), a pair in Abington (WRP), and three-five in Marshfield (WRP). A pair of Yellow-throated Vireos was present throughout the month in Lincoln (WWH), and a single bird was noted in Hardwick on the 4th (HM). A Solitary Vireo was still present at MNWS on the 3rd (RSH).

Six Black-and-white Warblers were found in Fowl Meadow on the 19th (DTB#). A Worm-eating Warbler was banded at Manomet during the month, and one was found in Dover on the 18th (J.Hallowell). Other late migrants included a Tennessee Warbler at MNWS on the 5th (MK), a Magnolia Warbler in Melrose on the 18th (GBC - J.Andrews), three Blackpoll Warblers on the 12th in Annisquam (HTW), and one very late Blackpoll on the 20th in Ipswich (J.Nove#). The biggest news was the discovery of a Yellow-rumped Warbler's nest in Plympton on the 19th (P.D'Neil,SH,RAF,WRP). The last recorded breeding in eastern Massachusetts was in 1920-21. Other Yellow-rumped Warblers were noted in Hardwick carrying food on the 4th (HM), another singing male in Lakeville on the 26th & 29th (WRP,KSA), and four on Mt. Watatic on the 30th (PMR). Four Pine Warblers were observed in Hardwick on the 4th (HM), two in the Middlesex Fells (GBC-PMR), two with food in South Peabody on the 24th (RSH). A total of eight Mourning Warblers were reported during the month, with three at MNWS on the 6th (RWS), and a very late migrant on the 18th in Saugus (GBC-SZ,CJ). A Yellow-breasted Chat was banded with a brood patch at Manomet on the 9th (Staff).

#### BLACKBIRDS - SPARROWS

Orchard Orioles continue to increase. Below is the summary for the month of June.

##### June

1-14, 3	S.Peabody, E.Bridgewater	1, 1	RSH, WRP
5, 9	Rowley, Concord	1, 1	JWB, EWT
12, 15	Plymouth, Manomet	1, 1 (b.)	WRP#, Staff
15, 16, 18	Scituate, Lancaster, Woburn	1, 1, 3	GRF, HM, RRV#
23	Hardwick	female & fledged yg.	RAF
	(first confirmed breeding for Worcester County)		

A female Summer Tanager was found in the Middlesex Fells on the 1st (SZ), and an adult male was seen at sea off Monomoy on the 5th (BBC-HHD'E).

Two Grasshopper Sparrows were found in Dartmouth on the 1st (J.Grugan); two in West Newbury on the 5th (MJL), and three from the Worcester

Airport on the 18th (EWT). A Sharp-tailed Sparrow was banded at Manomet during the month (Staff). Three Vesper Sparrows were located in Plymouth on the 12th (WRP). Dark-eyed Juncos were suspected to be nesting in the Fells, where three were recorded on the 18th (GBC-PMR). Two White-throated Sparrows found in Brookline on the 18th (GBC-AA) were also suspected of nesting. A late Lincoln's Sparrow was found in Boxford on the 8th (RSH).

RHS, RRV

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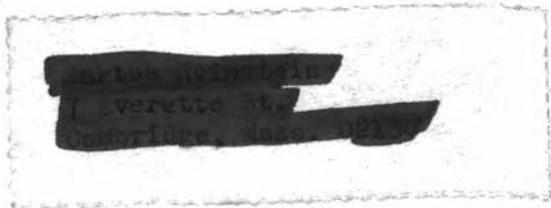
TIDE TABLE

Here is the tide table for Newburyport Harbor, accurate to the nearest half hour for Daylight Saving Time. For best shorebird viewing be at the harbor approximately four hours before or after high tide. An outgoing tide is usually better.

	<u>High Tide</u>	<u>High Tide</u>
Sat. September 17	2:30 a.m.	3:00 p.m.
Sun. September 18	3:30 a.m.	3:30 p.m.
Sat. September 24	9:30 a.m.	10:00 p.m.
Sun. September 25	10:30 a.m.	11:00 p.m.
Sat. October 1	2:30 a.m.	2:30 p.m.
Sun. October 2	3:00 a.m.	3:30 p.m.
Sat. October 8	8:00 a.m.	8:30 p.m.
Sun. October 9	9:00 a.m.	9:30 p.m.

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