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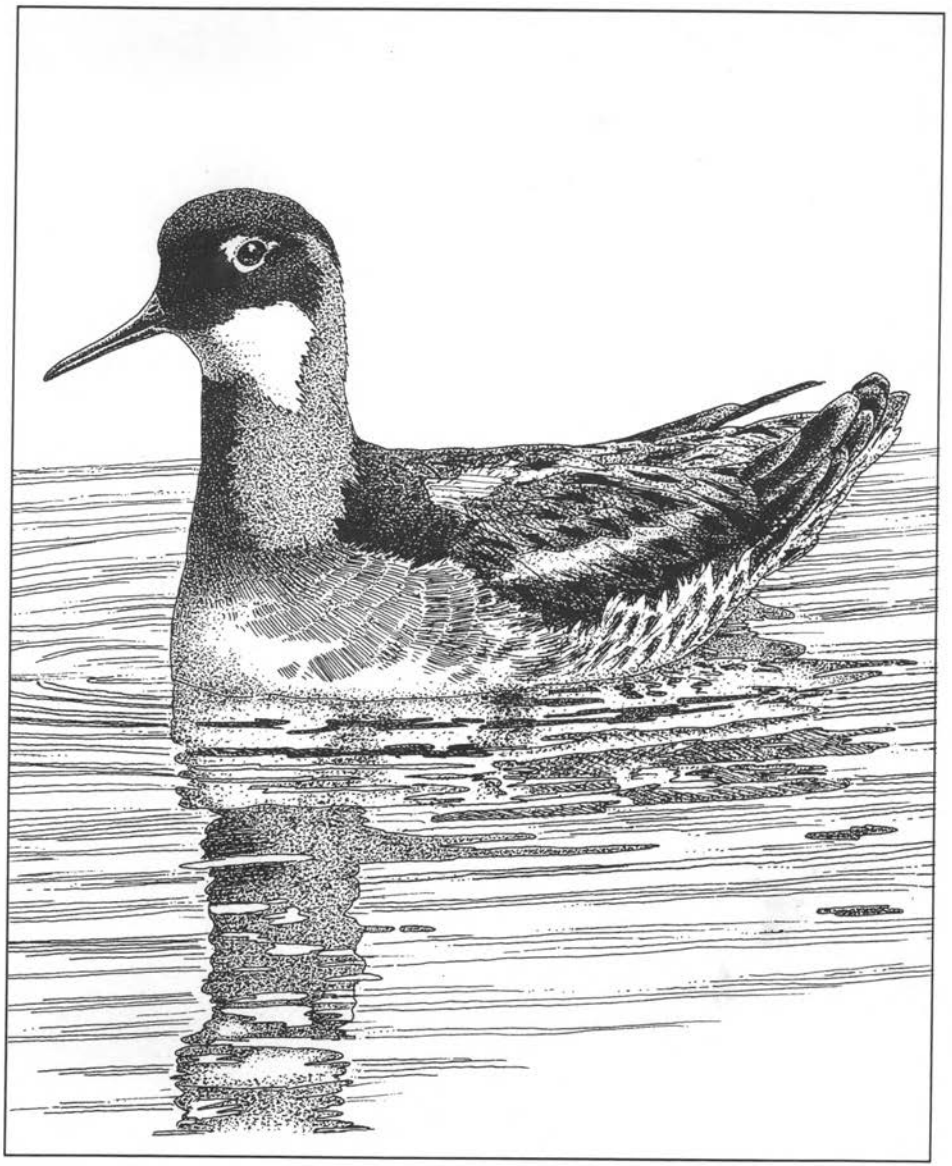

VOL. 23 NO. 4

AUGUST 1995

BIRD OBSERVER

• a bimonthly journal •

To enhance understanding, observation, and enjoyment of birds.

VOL. 23, NO. 4 AUGUST 1995

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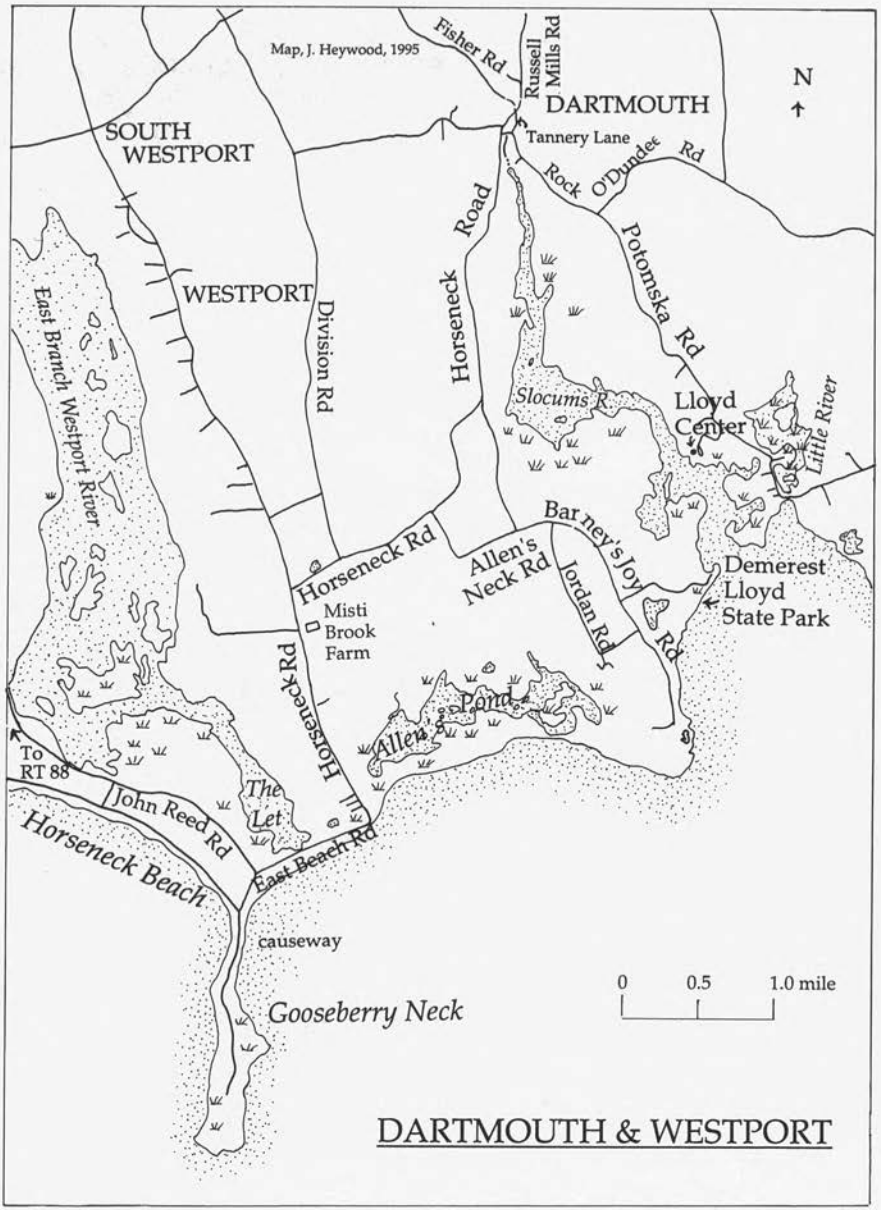
SNEAKY, STREAKY BROWN JOBS: a workshop on sparrows revisited

By popular demand, *Bird Observer* is pleased to once again offer a workshop on fall sparrows, one of the most challenging groups of birds to confront Massachusetts birders. Sparrows occur seasonally in weed fields, gardens, and salt marshes, along woodland edges, and at bird feeders. Their conservative plumages and often furtive habits make them both a challenge to identify and a task to locate. Yet, their songs are among the richest in the bird world. Participants will be introduced to various facets of sparrow natural history, including habitat preferences, breeding behavior, status in Massachusetts, and both song and field recognition characteristics. A field trip will provide direct field experience during the height of fall sparrow migration.

Leader: Wayne R. Petersen. Seminar: Friday, October 6, 1995 (7:30-9:30 PM). Field Trip: Saturday, October 7, 1995. Cost: $35. The seminar session will be held in Needham, MA. Location of the field trip will be announced at the seminar. If you have questions, please call 617-666-8934 (evenings).

To register, send your name, address, and phone numbers with your check (payable to *Bird Observer*) to Bird Observer Workshops, c/o H. D'Entremont, 45 Montrose Street, Somerville, MA 02143.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DARTMOUTH & WESTPORT

BIRDING IN DARTMOUTH AND WESTPORT DURING FALL AND WINTER

by Michael A. Boucher

Dartmouth and Westport, Massachusetts, are great places to bird throughout the year. This article will discuss where to find specific species during the fall migration and winter along coastal habitats including beaches, salt marshes, coastal thickets, and woods.

Start from Interstate 195 east of Fall River, and take Route 88 south for eleven miles through Westport. Park safely along the road as soon as you pass the entrance to Horseneck Beach. Look toward the east, and you will see a large salt marsh with Osprey platforms, which have been erected over the years by Jo and Gil Fernandez. This is a good spot for lingering Ospreys in the fall. Continue about two miles, and take a right onto East Beach Road. After a short distance, you will come to a causeway that brings you to Gooseberry Neck. While crossing the causeway, look to your right at the large rocky formation just offshore. You may occasionally find Harlequin Ducks here in the winter.

Gooseberry Neck is a seventy-five acre island with a rocky shoreline and a small sandy beach. Its vegetation consists of beach rose, bayberry, sumac, and American beach grass, with a few cedar trees toward the middle of the island. One main path cuts through the center of the island, and a number of short paths branch off allowing access to the shoreline.

The last week in August and the entire month of September can be quite productive for shorebirds. At either high or low tide, the southern tip of the island can yield birds such as Ruddy Turnstone, Pectoral Sandpiper, Buff-breasted Sandpiper, and Red Knot. They can be seen working the wrack line in search of food. At low tide a rocky mudflat is exposed. Birds seen here can include Whimbrel, Willet, Black-bellied Plover, American Golden-Plover, and peeps such as Least, Semipalmated, and White-rumped sandpipers. At this time of year Common and Least terns can be seen from the causeway and the sandy beach adjacent to the parking lot. Gooseberry Neck is also a wonderful place to view wintering sea ducks, and by late September all three scoter species, Common Eider, and Red-breasted Merganser are present.

Late September through mid-October can yield a number of passerines during favorable migration weather, which is usually right after a cold front. Most of the vegetation is at eye level or below, with a few small trees, so viewing these birds is a real treat. Many areas along the path are productive for passerines. From the parking lot, walk past the metal gate and head south down the main path. The bushes on either side of the path for a few hundred feet will harbor a variety of species. Palm and Yellow-rumped warblers are good possibilities. When the thicket ends and the rocky path turns to sand, look for

sparrows such as White-crowned, Swamp, Savannah, and Chipping. Another sparrow of mention is the "Ipswich" Savannah Sparrow, which can be seen at the southern tip of the island from mid-October through the winter.

After a short distance the sandy path turns back into a more easily traveled road and goes for a few hundred yards. You will see two buildings at the center of the island, one of which is an observation tower built during World War II. In this area, which supports the few trees on the island, you might see Solitary, Red-eyed, and Yellow-throated vireos. Cape May, Black-throated Blue, Black-throated Green, Prairie, and Wilson's warblers, and Yellow-breasted Chat can be viewed at close range as they dart back and forth across the bayberry and sumac.

Gooseberry Neck is home to the area's largest Tree Swallow roost, which numbers in the tens of thousands. Another impressive congregation is that of monarch butterflies, which can also number in the thousands. By mid-October Peregrine Falcons and Merlins usually make an appearance along with Sharp-shinned and Cooper's hawks. At the center of the island next to the tower, a dirt mound over an abandoned concrete building affords a fantastic view of the entire island and surrounding Buzzards Bay. From this vantage point, any migrating raptors can easily be seen. Come late October, many Yellow-rumped Warblers are feeding on the remaining insects before turning to their winter diet of bayberries. In the area of the parking lot, American Pipits can be seen, and the first Dark-eyed Juncos appear.

From early November through the winter months, Gooseberry Neck is known for its abundance of sea ducks. As mentioned earlier, all three scoter species can be seen along with large rafts of Common Eider numbering in the thousands. Occasionally, King Eider is seen at the southern tip. Common and Red-throated loons are easily seen along with Horned and periodically Red-necked grebes. On November 14, 1993, a Western Grebe was sighted from the parking lot on the northern tip of the island. Shorebirds at this time of year can become scarce, but Gooseberry Neck usually has Dunlin, Sanderlings, Purple Sandpipers, and occasionally Ruddy Turnstones.

One of the most intriguing birds to arrive during the winter is the Snowy Owl. For the last nine years one has been on the island starting in late December, and it can be seen off and on until late February. Bonaparte's, Iceland, and Common Black-headed gulls usually put in an appearance along with Northern Gannets and Black-legged Kittiwakes. Oddly enough, alcids are quite rare and are not to be expected.

When you have finished birding at Gooseberry Neck, head back out over the causeway, and continue east for one-half mile along East Beach Road. On your left will be a large body of water locally known as The Let. A number of ducks, such as Canvasback, Common Merganser, and Common Goldeneye, can concentrate here in late fall. Mute Swans are also present and can number in the hundreds. Continue a short distance, and on your left you will see a tidal pool.

Shorebirds can be seen at low tide during the early fall. It is a good idea to check out the gulls that rest along the south side during the winter because you never know what will show up.

Continue down East Beach Road for a few hundred yards, and park at the sharp bend in the road next to the Massachusetts Audubon sign. This is the entrance to Allen's Pond, one of the area's premier birding spots.

Allen's Pond is a saltwater marsh with tidal flats. The Massachusetts Audubon Society (MAS) owns part of the property leading to Allen's Pond, but to get access to some sections, you have to cross private property, and the residents closely guard their privacy. Fortunately, two local groups have permission to bird these areas and conduct many field trips in the fall when birding is at its best. You can contact the Lloyd Center for Environmental Studies at 508-990-0505 and the Paskamansett Bird Club at 508-636-3954 for information on walks. The land owned by MAS still gives you access to areas where you can bird and view the pond itself.

The pond is bordered on the south by a barrier beach and on the north by forests and agricultural land. From where you have parked along the road, head east along the shoreline for a few hundred yards until you arrive at a large rocky outcrop. Once you have passed this formation, bear to your left, and head north for a short distance and up a rocky path to a dirt road. This road parallels Allen's Pond, and from this spot in late summer Clapper Rails have occasionally been brought in with tape recordings of their calls. Throughout the fall and winter, you can easily see a variety of ducks and usually a Great Blue Heron. Heading east, the road is bordered on both sides by thickets, which, in late September and early October, can harbor a variety of sparrows including Lincoln's and Vesper. Just south of the thicket is a rocky area where Horned Larks and Snow Buntings can be found quite easily during the winter.

A short distance down the road, you will come to a sign that states that the MAS property has ended and beyond this area is private property. Residents would appreciate anyone who wishes to bird beyond this area do so with people who have permission. To bird the rest of Allen's Pond, follow the road past the summer cottages; it turns into a grassy path at this point. The path soon forks slightly to the left, which is a good spot to look for Northern Harriers and Short-eared Owls in late fall and winter. Snowy Owls occasionally roost on top of the cottages, so keep your eyes open for this special winter visitor.

While walking east, you will come to a wide channel which has a path to the left side of it. Head north, keeping your eyes open for Seaside and Sharp-tailed sparrows, the latter being present throughout the winter. At the end of the path, you will come to an extensive mudflat which can be quite productive for shorebirds during fall migration. The best time to view them will be when the tide is low inside the marsh. This usually occurs about two hours after the time for the New Bedford Harbor low tide. Hudsonian Godwits, Long-billed

Dowitchers, Red Knots, and a variety of sandpipers can be seen along with Forster's Terns. This is a great area to find egrets, Little Blue Herons, and possibly a Yellow-crowned Night-Heron. Late fall can bring flocks of ducks and Canada Geese with the occasional Snow Goose. A few years ago a flock of Snow Geese came in that numbered over 150 individuals, with a few "Blue" Geese mixed in. In winter this is the spot where you might see immature Bald Eagles feeding on the remains of ducks and geese.

After you have finished birding this spot, return south along the channel to the end. Straight ahead on the beach you will see signs indicating that Least Terns and Piping Plovers nest, but by early fall all have fledged their young so trampling nests is not a concern. Early fall will bring a number of shorebirds and terns to this area. Walk east along the beach, and you will see a channel on your left. This is open to the ocean, and it is what keeps Allen's Pond from becoming a stagnant body of water. During fall migration, one might encounter Black Skimmers gliding low over the channel in search of a meal. On some occasions they fly so close that you can hear their bills slicing through the water. On the north side of the channel there is a sandy area with beach grass, where one might encounter a Buff-breasted Sandpiper foraging for insects. Farther down the beach, during late September, many species of shorebirds will roost during high tide. Whimbrel, Black-bellied Plover, and various sandpipers can be seen. Common and Least terns are still around at this time of year, and looking out toward the ocean will give you wonderful views as they dive for fish just offshore. Raptors migrating along the coast fly right over this area, and species such as Cooper's and Sharp-shinned hawks, Merlin, and Peregrine Falcon should be expected. Throughout October and into early November, most migrants will move out from this area and leave behind the winter residents such as gulls and Sanderlings.

When you return to your car from Allen's Pond, head north on Horseneck Road (East Beach Road ends at the MAS sign) for about 1.3 miles, and park along the road just past **Misti Brook Farm.** During the winter, large flocks of Red-winged Blackbirds and Common Grackles can usually be seen. For the last two years a Yellow-headed Blackbird has mixed in with the flock. The fields on both sides of the road are private property, but from the edge you can see Horned Larks and, preferably with a spotting scope, pick out the occasional Lapland Longspur. During mild winters Killdeer can be seen feeding in the fields.

A short distance past the farm, take your first right, and continue east on Horseneck Road. At the bottom of the hill, a small pond will be on your left. Wood Ducks are a good possibility here if the water is not frozen. Continue east for 0.9 mile, and take a right onto Allen's Neck Road. Stay on this road for a little less than a mile, and stop just past the farmhouse on your left. Thickets along the road here usually harbor White-crowned Sparrows from December

through March. During the winter of 1994, a Harris' Sparrow kept company with a variety of other sparrows a few yards down the road. Continue east for another mile until you reach the entrance to Demerest Lloyd State Park. Park along the side of the entrance, being careful not to block the gates.

Demerest Lloyd State Park comprises oak and pine coastal forests with two brackish ponds and areas of phragmites marsh with overgrown thickets and open grassy areas. Continuing down the road will lead to a large parking lot, just east of which is the shoreline. From the entrance, walk down the road, and stop by the small shed on your right. In the early fall during migration, this area will have warblers and vireos. A short distance past the shed is one of the best spots for wintering Rufous-sided Towhees. Carolina Wrens can be seen throughout the year on either side of the road.

A few hundred feet farther, you will notice a gate on your left. Beyond this gate is a weedy field occasionally used to grow corn. During late fall and winter, this is one of the best spots to find sparrows. Another field beyond the thicket to the west should be just as good for sparrows. Vesper, Grasshopper, White-crowned, and Chipping sparrows have been seen during the winter with Swamp, Field, and American Tree sparrows being quite common. A Dickcissel was seen here during the winter of 1994-1995.

After birding this section, continue down the road. After a short distance you will see a picnic area on the right. Brown Thrashers can be seen in fall, and when winter arrives Hairy and Red-bellied woodpeckers occasionally put in an appearance. At the south side of the picnic area is a path that leads to one of the brackish ponds. In early fall Pied-billed Grebes are usually present along with Gadwalls and various other ducks. If the pond is not frozen, Great Blue Herons and Belted Kingfishers can be seen.

As you return to your car and continue down the road, you will come to a large parking lot. The land bordering the parking lot to the west is sparsely grassed with a few trees. This can be a great area for flycatchers during early fall migration. Eastern Phoebes and Eastern Kingbirds can be seen along with the difficult *Empidonax* flycatchers. To the south you will see two buildings with a path between them. This path will lead you to the east side of the brackish pond. You will go through an area of pitch pine and tall grasses in which Ring-necked Pheasants and Northern Bobwhites can be seen. The trees bordering the pond on the ocean side are another spot in the early fall for migrating warblers and vireos. Early October will bring in large concentrations of Yellow-rumped Warblers and Golden-crowned Kinglets, both quite approachable.

Go back to the parking lot, and head toward the ocean, watching the grassy thicket before the beach for Eastern Meadowlarks. During the fall shorebirds can be seen at low tide. Both yellowlegs species are to be expected along with many Semipalmated Plovers. During the winter at low tide, Dunlins and gulls congregate on the sand flats. Be sure to study the gulls, as Iceland and Glaucous

have been recorded. At any time during the winter, Red-necked Grebes and Common and Red-throated loons are also present. All three scoter species and other sea ducks can be seen here.

When you have finished birding this area and you still have time on your hands, you should drive out to the **Lloyd Center for Environmental Studies.** Upon leaving the park, drive west for one mile, and take a right onto Barney's Joy Road. In less than a mile this road turns into Horseneck Road. Continue down Horseneck Road for 1.9 miles, and take a right onto Tannery Lane. Bear right at the stop sign onto Rock O'Dundee Road. Continue down this road for one mile, and take a right onto Potomska Road. Travel down this road for 1.7 miles, and take a right at the sign for the Lloyd Center. Go to the end of the gravel road, and follow the signs for parking.

The trails here are open from dawn to dusk and mainly traverse fifty acres of deciduous forest bordered to the south and east by a saltwater marsh. During the fall one might encounter a fair number of migrants, but the Center is known for the birds that come to its feeders during winter. Rufous-sided Towhees, Purple Finches, Red-bellied Woodpeckers, and Fox Sparrows usually put in an appearance at this time of year. The occasional Pine Siskin or Common Redpoll might show up at the thistle feeder. The bird feeders are placed close enough to the windows for easy viewing from inside. Eastern Screech-Owls nest on the property and might be seen roosting in one of the Wood Duck nesting boxes at the bottom of the hill near a small pond. The Center is open Tuesdays through Sundays from 9 AM to 5 PM. They have many exhibits on natural history, and the view of Buzzards Bay from the top floor alone is worth the trip.

MICHAEL A. BOUCHER has been birding for ten years and is a past president of the Paskamansett Bird Club. He is one of the coordinators of the New Bedford Christmas Bird Count and contributes to field sightings for *Bird Observer*. Mike would like to thank Ken Machado for his help in reviewing an earlier draft of this article.

SEVENTH ANNUAL MASSACHUSETTS BIRDERS' MEETING

The Massachusetts Audubon Society (MAS) and the South Shore Bird Club will cosponsor this year's Massachusetts Birders' Meeting to be held at Stonehill College, North Easton, on Saturday, November 18, 1995. The day's events include identification workshops, lectures, and an evening banquet featuring Pete Dunne as the dinner speaker. For further information or to register, call 617-259-9506, ext. 7401, or write to Birders' Meeting, MAS, 208 South Great Road, Lincoln, MA 01773.

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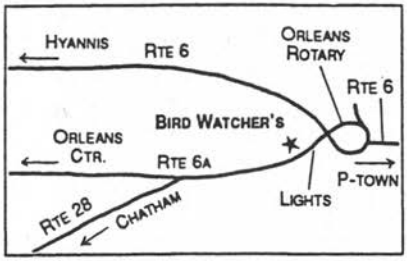

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THE MIGRATION OF RED-NECKED PHALAROPES: ECOLOGICAL MYSTERIES AND CONSERVATION CONCERNS

by Charles D. Duncan

Anyone who has had a car stolen will recognize the desperate feeling: you know you left it right here, RIGHT HERE, but it's certainly not here now. Our story is not one of car theft, however, but one of a million Red-Necked Phalaropes that are missing. The scene of the crime is not Boston, but a region along the border of Maine and New Brunswick, Canada, known variously as outer Cobscook Bay, Head Harbour Passage, or the Quoddy Region, comprising the waters from Eastport and Lubec, Maine, to the outer tip of Campobello Island, New Brunswick (Figure 1).

For years beyond memory, Red-necked Phalaropes gathered here in huge numbers during late summer, feeding and fattening for their migration south. Now, they are as absent as a hot-wired car. The "parking lot" looks normal to most of the summer tourists, but to those who have seen it when the birds were here, it is apparent that something is terribly wrong.

Red-necked Phalaropes, members of the shorebird order Charadriiformes, are atypical. They exhibit a breeding system based on "reverse sexual dimorphism," meaning that the females are more brightly colored than the males. The males incubate the eggs. After the breeding season, Red-necked Phalaropes behave more like seabirds than shorebirds. They spend their entire time on salt water, taking their food from the sea with no need to visit land until the next breeding season comes around.

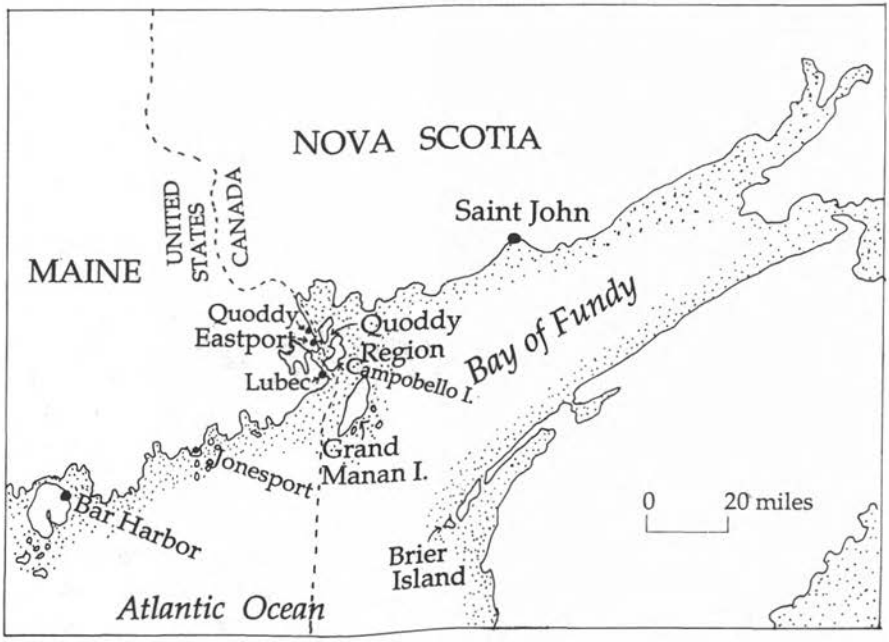
Another oddity of Red-necked Phalaropes concerns their wintering areas. While it has been known since the early 1900s (Murphy 1936) that vast flocks are found off the entire coast of Peru during the Northern Hemisphere's winter, the breeding zone for these birds is not certain. It seems certain that those individuals that breed in Alaska and western Canada end up off Peru. In contrast, the wintering grounds of the populations breeding in eastern Canada, Greenland, and even Iceland, are essentially unknown (Cramp 1983, Hayman et al. 1986). University of Guelph researchers Francine Mercier and David Gaskin (1985) suggested that the birds that pass through the Quoddy Region also winter off Peru, but this begs the question of where the birds cross to the Pacific Ocean. In fact, they are rare in the Caribbean, so the suggestion of a passage across Central America seems hard to support (Cramp 1983). There are no known wintering areas in the Atlantic. This level of ignorance about a North American breeding bird is virtually unique.

To understand both the historic pattern of Red-necked Phalarope migration, including the abundance of birds in the Quoddy Region, and the mystery of their current absence, it is worth examining the species' ecology in more detail. Red-

necked Phalaropes are circumpolar breeders, nesting on tundra, usually near pools, and often far from the sea. The southern limit of breeding is about 50oN (i.e., southern Labrador). Adult females leave the nesting ground at the end of June or early July, barely a month after arriving. Adult males depart after the eggs have hatched, followed lastly by a third wave, the juveniles.

It has been known for many years that the coastal area along the Maine-New Brunswick border hosted very large numbers of southward-migrating Red-necked Phalaropes in late summer and autumn. Knight (1897) quoted early Maine naturalist George A. Boardman, of nearby Calais, saying there were "plenty spring and fall." Norton (1907) described "thousands feeding" between Deer Island and Campobello Island, New Brunswick. Palmer (1949) characterized them more precisely as regular from the third week of July to September 22, with several hundred thousand present throughout August at West Quoddy Head, Maine. These localities fit in a circle only twelve miles in diameter. The density of so many birds in this area is hard to describe. Flocks ranged from hundreds to many thousands, resembling thin streams of smoke from a distance, rising from one feeding area and resettling on the water's surface at a new one as the tide changed.

Curiously, the closely related Red Phalarope has virtually never been found in these waters during July to October. It seems to prefer to stage some fifty miles to the southeast, off Brier Island, Nova Scotia. The exclusion is not mutual, however. Red-necked Phalaropes, sometimes in significant numbers, can indeed be found among the more numerous Red Phalaropes off Brier Island.



Mercier and Gaskin (1985) accomplished an admirably thorough study of the ecology of Red-necked Phalaropes in the Quoddy Region area during the time when no decline in numbers had yet occurred. They identified the major food of the birds as *Calanus finmarchicus*, a planktonic copepod, and showed that the flocks of phalaropes shift position to stay in the areas of greatest copepod density. They carefully estimated the total number of Red-necked Phalaropes passing through the area in 1992 at approximately one million individuals, according reasonably well with birdwatchers' guesses over the years. These guesses ranged from hundreds of thousands to a high of two million during 1976 and 1977 (Finch 1977, Vickery 1978, Forster 1984).

Of interest is a little-known study of plankton by Charles Fish and Martin Johnson (1937), part of the program of the International Passamaquoddy Fisheries Commission. (Passamaquoddy is the name of the tribe of Native Americans living in this area. It derives from *"Pestumokadyik,"* meaning "people who spear Pollack." Passamaquoddy Bay is the large body of water extending from Head Harbour Passage northward past St. Andrews, New Brunswick.) The Commission had the charge of investigating how fisheries might be affected by the construction of an ambitious series of hydroelectric dams to harness the tides for electrical generation, a project championed by Franklin Roosevelt. Although Passamaquoddy Bay is a remarkably rich ecosystem, Fish and Johnson found that the density of plankton in the water column was, in fact, higher in other places along the Maine coast where phalaropes do not mass and the fisheries are not so productive. They found, however, that in those areas the abundant plankton was not so available to surface feeders, such as phalaropes or, in fact, herring. Copepods normally perform a daily vertical migration, coming to the surface only at night. In the Quoddy Region, tides ranges to 24 feet (i.e., a foot of vertical change every fifteen minutes). The turbulence of the rising and falling tide apparently overpowers the normal vertical migration of the copepods, bringing them to the surface during daylight hours, "against their will." (Richard G.B. Brown has raised an interesting question: do phalaropes feed at night? While many species of shorebirds do, I don't think that anyone knows for phalaropes.) Taken together, the studies of Mercier and Gaskin (1985) and Fish and Johnson (1937) tie the presence of phalaropes to the availability of plankton at the surface. This conclusion is reinforced by a study showing that offshore of Brier Island, Nova Scotia, Red Phalaropes are found precisely where there are upwelling currents concentrating plankton at the surface (Brown 1980). By about 1984, then, the staging of Red-necked Phalaropes seemed well understood. Unfortunately, this was anything but the case.

There had been ups and downs in the numbers of phalaropes staging in the Quoddy Region, even the "bad" years had tens of thousands of birds (Vickery 1978). The magnitude of the migration is suggested when the mid-August

concentration of 300,000 individuals in Passamaquoddy Bay could be described as "lower than normal" (Forster 1984). A search of the literature revealed no evidence of any cyclic nature to the population.

In the mid-to-late 1980s, I spent many days birding this area in late summer, often aboard Captain Butch Huntley's 48-foot charter vessel, M.V. *Seafarer*. I kept field notes of each day's sightings, with very approximate estimates of the maximum numbers of phalaropes seen each day. Reviewing those field notes now makes it clear that by 1986 a significant drop-off in numbers was occurring. Where my one-day maximum in 1985 was 20,000, by 1989, it was 20! At first, on days when I found only scant phalaropes, I rationalized, saying things like "we must have been there on the wrong stage of the tide," or "well, we just never bumped into the really big flocks." By 1989, either Captain Huntley alone, or frequently both of us were in the area virtually daily during the entire period of phalarope migration. We have confidence in our estimates, now convinced that we were not overlooking birds. Instead, numbers were genuinely and alarmingly low. This decline has continued unabated to the present. Where annual totals (not one day counts) reached one or two million during the 1970s and early 1980s, they have not exceeded a few hundred individuals in the 1990s. It is even possible that in some years literally no Red-necked Phalaropes have staged in the Quoddy Region.

In 1989 my concern over the decline was such that I wrote a "red-flag" letter to researchers and resource managers to let them know of my counts. Because the birds using the Quoddy Region staging area represented a significant percentage of the world population of Red-necked Phalaropes, the possibility, even if remote, of a global crash could not be eliminated. I suggest three possible hypotheses for the causes of the decline.

1. The crash is prey-related. Densities of *Calanus* have been measured several times in this area. Current densities should be measured and compared with those of Mercier and Gaskin (1985) and even to Fish and Johnson (1937). This hypothesis is supported by the observations (Duncan and Huntley, unpublished) that when small flocks of phalaropes were found in the late 1980s, they were gone by the next day, as though arriving, sampling the area, and finding it unsatisfactory. Equally troubling, the concentrations of Bonaparte's Gulls, found for years at certain stages of tide off Deer Island Point, New Brunswick, also failed to reach historic levels. During the 1970s and early 1980s, flocks were estimated to reach 20,000 individuals. In 1989, there were seldom even 1000. There have been many guesses, some wild, about putative causes for a (still unproven) decline in plankton. These have included increasing shipping traffic into Eastport, increased salmon aquaculture, pesticide runoff, and even an increase in foggy days, changing the amount of sunlight reaching the water's surface. The possibility also exists that the abundance of plankton may be unchanged but that its availability may have decreased for some reason,

or that water quality may have been affected in some other fashion.

2. The crash is unrelated to conditions here. The possibility of problems associated with the breeding grounds across the Canadian low Arctic and sub-Arctic or the wintering grounds may be difficult to confirm or reject. The breeding grounds are vast, and the wintering area is uncertain. The number of northward-moving spring migrants if reliably tracked, may shed light on the subject.

3. The fall staging concentration has not collapsed, simply shifted slightly to less visible areas. Substantial numbers of Red-necked (and Red) Phalaropes occurred on the eastern and southern sides of Grand Manan Island, New Brunswick, during the 1970s and 1980s. Unfortunately these areas, less than twenty miles from the Quoddy Region, are not routinely visited by birdwatchers. The area around Mount Desert Rock, Maine, about ninety miles distant, has occasionally hosted flocks of up to a few thousand Red-necked Phalaropes in fall. Whale-and birdwatching boats do regularly make observations here.

In the years after I made these hypotheses, little progress has been made, although Red-necked Phalaropes have maintained their absence in the Quoddy Region with a vengeance. Systematic comparison of plankton density has not yet been accomplished. Richard Brown of the Canadian Wildlife Service (personal communication) made some surface plankton measurements in August 1990 and found very little zooplankton of any sort. Nonetheless, Captain Huntley, with Professor M. Gayle Kraus, a colleague of mine at the University of Maine at Machias, found plankton to be almost staggeringly abundant in the Quoddy Region during October 1990. They observed masses of plankton from the surface to below fifty feet! Unfortunately, this finding has been misrepresented in some newspaper and radio publicity as indicating that the plankton were exclusively at depth and out of reach of the phalaropes. This was not at all the case. Of greater significance is the date which is, in fact, ***after*** the migration of phalaropes has finished. The possibility that plankton have not disappeared but merely shifted by two or three months in their abundance could explain the paucity of staging phalaropes, but lacks convincing proof.

To gain information about the situation away from the Quoddy Region, I placed notices in several birding magazines and *The Ornithological Newsletter* (received by all subscribers to professional ornithological journals in the United States and Canada) seeking information on nesting success or changes in migration routes or numbers from other locales. Responses were few but indicated no changes in the small number of nest sites surveyed by respondents or in migration numbers on the west coast of the United States. Observations in the spring along the coast of Maine, where flocks of several hundred Red-necked Phalaropes are often found, seem not to have diminished over the years, a hopeful sign.

Perhaps the most tantalizing datum is from Raymond d'Entremont, a contributor to *Nova Scotia Birds*, after a May 1991 fishing trip to Georges Bank. He wrote to Richard Brown: "May 16 was definitely a phalarope day. From the first light of dawn, they began passing by. At noon small flocks were passing by all around. By sundown the procession had not slackened a bit. On May 17, it was more of the same, and they kept passing by until dark. On May 18 a few scattered flocks passed but the main movement was over. All that came close enough to be identified were Red-necked Phalaropes, but that is not to say that there were no Reds among them . . . During these two days my shipmates were amazed at the number of little birds that passed through." In a nutshell, although d'Entremont's observation was after Red-necked Phalaropes had vanished from the Quoddy Region during fall, there were still plenty moving northward in spring. This amazing passage is probably our best evidence that the collapse along the Maine-New Brunswick border doesn't indicate a collapse of the entire eastern Canadian and Greenland breeding populations.

Efforts to find a new staging area, as in my third hypothesis, have yielded only a little fruit. I have contacted charter boat captains from Bar Harbor to Eastport, Maine, who take visitors bird- and whalewatching, and requests for information have been sent to a variety of birding publications in the United States and in the Canadian Maritimes, without result. Counts at Mount Desert Rock, Maine, and Grand Manan, New Brunswick, have paralleled the decline at the Quoddy Region (Table 1). The story at Brier Island, Nova Scotia, is a little

TABLE 1. Fall Counts of Red-necked Phalaropes

Year	Mount Desert Rock, Maine	Grand Manan, New Brunswick	Brier Island, Nova Scotia
1987	4000	NR	NR
1988	NR	NR	NR
1989	164	2000	30
1990	124	NR	20,000
1991	NR	very few	250
1992	NR	50	NR
1993	NR	NR	100,000[a]

Other data from American Birds (New England and Maritime Regional Reports. NR = No report. [a] = Includes both Red-necked and Red phalaropes, "both abundant" (R.G.B. Brown, personal communication)

more intriguing, although not particularly regular. In at least two years, large numbers of Red-necked Phalaropes have been seen on the western side of the Bay of Fundy, opposite from the typical areas.

Can Brier Island be the new staging ground? If so, where were the birds in 1989 and 1991, well into the crash at the Quoddy Region? If indeed there has been a shift in the staging area rather than a collapse of the population, what caused it? Moreover, the number of birds at Brier Island still does not seem to account for all the phalaropes once found in the Quoddy Region. Are there other new still undiscovered staging areas? It seems premature to exonerate completely problems elsewhere. The huge James Bay Hydroelectric Project sponsored by Hydro-Quebec has inundated large areas where Red-necked Phalaropes nest. What effect has this had on the eastern Canadian population of Red-necked Phalaropes? And finally, where ***do*** these birds winter, and how do they get there from the Bay of Fundy?

I wish this story had a neat and convincing ending, and maybe some day it will. For the moment all I can offer beyond the facts is the same thing a Boston police officer told me when my car was stolen: "It's gonna take a lotta luck ta solve dis one. Don't getcha hopes up."

References

Brown, R.G.B. 1980. Seabirds as Marine Animals. In Burger, J., Olla, B.L., and H.E. Winn (eds.), *Behavior of Marine Animals. Volume 4, Marine Birds.* New York: Plenum Press.

Cramp, S. (ed.). 1983. *Handbook of the Birds of Europe, the Middle East and North Africa: the Birds of the Western Palearctic. Vol 3: Waders to Gulls.* Oxford: Oxford University Press.

Finch D.W. 1977. The Autumn Migration, New England Regional Report, *American Birds* 31(2):225-232.

Fish, C.J., and M.W. Johnson. 1937. The Biology of the Zooplankton Population in the Bay of Fundy and Gulf of Maine with Special Reference to Production and Distribution, *Journal of the Biological Board of Canada* 3(3):189-322.

Forster, R.A. 1984. The Autumn Migration, New England Regional Report, *American Birds* 38(2):175-179.

Hayman, P., J. Marchant, and T. Prater. 1986. *Shorebirds, an Identification Guide to the Waders of the World.* Boston: Houghton Mifflin Company.

Knight, O.W. 1897. *A List of the Birds of Maine.* Bulletin Number 3, University of Maine, Department of Natural History, Augusta.

Mercier, F.M., and D.E. Gaskin. 1985. Feeding Ecology of Migrating Red-necked Phalaropes *(Phalaropus lobatus)* in the Quoddy Region, New Brunswick, Canada, *Canadian Journal of Zoology* 63:1063-1067.

Murphy, R.C. 1936. *Oceanic Birds of South America, Volume 2.* New York: Macmillan Company and American Museum of Natural History.

Norton, A.H. 1907. Phalaropes Near Campobello Island, New Brunswick, *Journal of the Maine Ornithological Society* 9:81.

Palmer, R.S. 1949. *Maine Birds.* Bulletin of the Museum of Comparative Zoology, volume 102, Cambridge, Massachusetts.

Vickery, P.D. 1978. The Autumn Migration, New England Regional Report, *American Birds* 32(2):174-180.
Vickery, P.D. 1979. The Autumn Migration, New England Regional Report, *American Birds* 33(2): 154-158.

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SPECIAL HAWK WATCH PROGRAM

William S. Clark, one of the world's leading authorities on hawk identification, will be the special guest speaker at the annual meeting of the Eastern Massachusetts Hawk Watch on Friday, September 8, 1995. Clark, author, along with Brian Wheeler, of *A Field Guide to Hawks* and the new *Photographic Guide to North American Raptors*, will give a slide presentation on "Advances in Raptor Field Identification." Bill will be happy to autograph his books, copies of which will be available that evening. Doors open at 6:30, with refreshments provided for a social hour. A brief business meeting will begin at 7:30 PM followed by Bill's presentation. The program will be held at the Nature Center of the Massachusetts Audubon Society's Drumlin Farm Sanctuary in Lincoln. The public is invited, free of charge. For more information, call 617-483-4263.

VOLUNTEERS SOUGHT FOR FALL HAWK WATCH

The Eastern Massachusetts Hawk Watch (EMHW) will conduct coordinated hawk watches on Wachusett Mountain in Princeton and Mount Watatic in Ashburnham this fall. We seek volunteer observers (no experience necessary) to help cover these sites on any day from the beginning of September to mid-November, with special emphasis on weekdays in September and weekends thereafter. We also seek volunteers willing to hawkwatch anywhere in eastern Massachusetts on any fall date. If you would like more information on participating in a hawk watch, or on submitting reports of what you see, contact: Paul M. Roberts, 254 Arlington Street, Medford, MA 02155; telephone 617-483-4263 after 7 PM.

If you would like a copy of the Fall 1994 EMHW Report, complete information on the Fall 1995 watch, and fliers on "Where and When to Watch Hawks in Eastern Massachusetts" and "A Guide to Books on Hawks," please write Paul Roberts at the address given above and include a check for $2 (made out to EMHW) to defray costs.

BIRDER'S EXCHANGE

Manomet Observatory's Birder's Exchange collects new and used optics and field guides for distribution to Latin American ornithological groups. The Observatory has many pending requests for equipment, but our supplies are running low. Donations may be dropped off at our displays at: Partners in Flight Workshop and Exhibition, October 1 and 2, 1995, Convention Hall, Cape May, New Jersey, or the Massachusetts Audubon Birders' Meeting, November 18, 1995, Stonehill College, Easton, Massachusetts.

THE FALL HAWK MIGRATION
THE EASTERN MASSACHUSETTS HAWK WATCH: TWENTY YEARS AND COUNTING

by Paul M. Roberts

Twenty years ago this fall about a dozen people participated in the first Eastern Massachusetts Hawk Watch (EMHW). Little was known about hawk migration through Massachusetts at that time. Mount Tom in Easthampton had been discovered as an excellent hawkwatching site by Archie Hagar in the 1930s, but little hawkwatching had been done anywhere else in the state. The largest documented count in eastern Massachusetts prior to 1976 of which I am aware was 316 Broad-winged Hawks seen from a backyard in Wellesley in 1975. The very simple objectives of the watch in its first years were to ascertain what hawks migrate through our region, in what numbers, and when.

In its first year, the EMHW recorded 2074 hawks, including flights of 394, 476, and 713 hawks, more than anyone expected. The watch, therefore, attracted more volunteer observers and extended its coverage. In the third year, 1978, regular coverage began at Mount Wachusett, as it was called then. The result was the biggest single hawk flight ever reported in New England: 10,086 hawks! Some people found that number hard to comprehend, much less believe, but the count that day, September 13, 1978, demonstrated beyond any doubt that large numbers of hawks regularly migrated through eastern Massachusetts.

Such flights previously had not been observed, recorded, and reported in one of the most heavily birded areas of the country. Usually you have to look specifically for migrating hawks to see them. On that incredible September 13, visitors to the summit asked what we were looking at. They did not see the hawks until we loaned them binoculars and told them to look straight up.

The flight of September 13, 1978, altered our perspective. Not only did we want to maintain regular coverage at Wachusett Mountain, we wanted to distribute coverage across the region to see where these hawks and others were passing and in what number. That people now knew they could see hawks locally enabled us to expand our coverage considerably.

The potential magnitude of the migration was revealed on September 13, 1983, when 19,912 Broad-winged Hawks were reported from Wachusett Mountain, with more than 16,000 in little more than thirty minutes. This became the largest hawk flight ever reported in New England (subsequently, larger flights were reported from southwestern Connecticut).

It was now clear that we were establishing a significant database on migrating hawks, data that could be combined with those from other regions to help monitor raptor populations at a critical time period, when species such as Osprey, Bald Eagle, and Peregrine Falcon were beginning to come back from

the brink of extinction.

It was also evidence that when people saw hawks well or in major concentrations, they often encouraged others to look for, learn more about, and eventually help protect raptors.

For more than fifteen years, the possibility of seeing large Broad-winged Hawk flights has attracted large numbers of observers to Wachusett Mountain in mid-September. However, observers can see impressive numbers of Broadwings and other hawks in September at many other sites. Equally important is the possibility of seeing numbers of other migrant hawks in eastern Massachusetts during October and November. The satisfaction can be just as great then, although the totals are much smaller than in September.

This article briefly describes the nature and use of the data gathered by EMHW and other hawk watches and, by documenting peak fall flights, provides guidelines as to when and where you may see significant concentrations of migrating hawks. This information will, we hope, encourage you to go out hawkwatching for the sheer pleasure of it and to report on what you have seen.

Interpreting EMHW Data

EMHW data come from two types of sites. Three sites maintain relatively "continuous" coverage during the migration from year to year: Wachusett Mountain (Table 1), Mount Watatic (Table 2), and Lancaster (a banding station). All are covered during most of September when the weather seems favorable for migration, and on weekends in October and early November.

"Distributed sites" are covered one or more days a season, but not on any continuous basis. Bolton Flats in Bolton and the Page School in West Newbury are two leading distributed sites from which multiple reports have been received each fall, but some EMHW reports come from backyards in towns such as Acton and Sterling.

The continuous-coverage sites help provide a baseline by which to monitor the migration over a period of years. The distributed sites are covered primarily in September, when the largest numbers of hawks move through on a relatively broad front, and help plot the paths and relative magnitude of that migration.

The annual totals for all EMHW sites (Table 3) indicate what has been seen in our area. They do not represent a "census" of all hawks that pass through the region. The data from eastern Massachusetts should be interpreted with caution because they are limited in scope, geographically and temporally. Counts are biased toward the Broad-winged Hawk because an overwhelming majority of the coverage is conducted during the Broadwing migration period. However, a significant percentage of Ospreys, Bald Eagles, Sharp-shinned Hawks, and American Kestrels also migrate at that time, so our data are more indicative for those species than for species such as the Red-tailed and Red-shouldered hawk where peak migration is in October and November.

There is also variability in the coverage at our "continuous coverage" sites from year to year, due in part to the weather but also to the availability of volunteer observers. To help correct for the variability in coverage from year to year, the raw data shown in Tables 1-3 can be evaluated in terms of "hawks per hundred hours" of coverage (HPHH). Simply divide the total number reported of a species by the hours of coverage and multiply by 100. For example, the actual count of kestrels at Wachusett in 1994 (46) was the second lowest ever. However, when you compensate for the coverage that was also the second lowest in nineteen years (49 hours) by analyzing the data in terms of HPHH, we see that kestrels were seen at a rate of 94 HPHH, the second highest HPHH count of kestrels in Wachusett's history. Data for all EMHW sites and analyses of those data are published seasonally.

The EMHW data are then rolled in with data gathered from other sites in New England, eastern New York, and northern New Jersey by the NorthEast Hawk Watch (NEHW, founded in 1971 as the New England Hawk Watch). NEHW now has twenty-four years of data for the region, which makes it one of the most extensive and valuable regional raptor databases in the world.

At least thirteen hawk watch sites in the NEHW average over 250 hours of coverage a year, providing good coverage throughout the migration season from late August well into November. When data from these sites are compared with the data from all NEHW distributed sites covered only eight or more hours a season, on the basis of hawks per hundred hours of coverage, there are minimal differences in data trends, with the exception of the Broad-winged Hawk and, to a lesser extent, Cooper's Hawk and Northern Goshawk (NEHW 1995). NEHW data and analyses for spring and fall migrations are published every spring.

The NEHW data are then combined and evaluated with data gathered from across the continent from Canada to Mexico by the Hawk Migration Association of North America (HMANA). HMANA was established in 1974 to coordinate hawk-counting procedures and to centralize and share the data being gathered then by literally dozens of small, independent hawk watches springing up across the continent. Those watches now report in standardized fashion to HMANA, which publishes regional and continental summaries of the fall and spring migration each year. HMANA now has twenty years of data and has helped stimulate hawk migration research across the U.S.

The proliferation of personal computers during the last decade has facilitated the development of local and regional databases that are now analyzed with surprising sophistication by amateurs (professional raptor biologists will tell you that not enough money is available from government or business to pursue migration studies professionally on an ongoing basis).

Massachusetts' own Seth Kellogg, using EMHW, NEHW, and HMANA data from the eastern U.S. has been one of the pioneers in hawk migration data analysis. Recently, the U.S. National Biological Survey began to enter HMANA

TABLE 1. WACHUSETT MOUNTAIN FALL TOTALS (Averages are for 1977-1994 only.)

Year	Days	Hrs	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	M	P	U	TOTAL
1976	3	16	0	5	0	0	9	0	1	0	691	0	6	0	0	11	0	0	10	733
1977	19	83	3	47	1	13	379	9	1	6	2577	0	94	0	0	52	1	0	119	3302
1978	27	155	16	142	1	16	612	11	5	8	11856	0	122	0	0	88	5	0	264	13058
1979	22	125	32	163	3	34	788	8	2	13	6490	0	94	2	1	96	1	0	298	8025
1980	35	211	46	176	1	53	598	3	14	19	9282	0	77	1	0	111	1	1	393	10776
1981	27	147	29	115	1	31	586	7	6	5	2488	0	104	1	0	119	3	1	432	3928
1982	30	176	190	220	0	52	789	24	13	42	7172	0	165	0	0	152	1	2	354	9176
1983	47	278	112	340	5	124	867	4	12	19	26910	0	113	0	0	169	2	6	237	28920
1984	23	157	104	216	8	44	687	5	7	3	27090	0	37	0	2	114	4	2	162	28485
1985	29	194	19	312	6	65	1242	8	11	13	17193	0	77	0	2	181	9	1	293	19432
1986	34	183	144	335	9	53	752	6	3	10	11764	0	86	0	0	147	3	2	196	13510
1987	27	148	26	285	8	58	596	10	5	14	21704	0	101	0	1	109	0	2	160	23079
1988	25	132	61	363	14	40	561	18	4	8	19601	0	44	0	0	82	4	2	90	20891
1989	26	118	11	183	9	54	484	8	2	4	17863	0	11	0	0	172	4	4	56	18865
1990	26	146	39	195	8	21	418	54	6	29	6640	1	87	0	1	115	12	2	112	7740
1991	24	124	80	181	12	10	366	23	2	22	6481	0	25	1	1	91	2	2	45	7344
1992	21	102	50	157	16	19	316	9	6	11	10634	0	48	0	0	82	6	0	59	11413
1993	13	49	29	49	17	8	144	10	2	2	4127	0	20	0	0	46	1	1	27	4483
1994	23	113	95	108	20	22	152	16	7	13	9274	0	66	0	0	87	6	2	61	9929
Ave.	27	147	60	199	8	40	574	13	6	13	12175	0	76	0.3	0.3	113	4	2	186	13464
TOTAL	481	2653	1086	3591	139	717	10346	233	109	241	219837	1	1377	5	8	1936	65	30	3368	243082

TABLE 2. MOUNT WATATIC FALL TOTALS

Year	Days	Hours	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	M	P	U	TOTAL
1987	9	47	32	23	0	9	98	3	5	11	75	0	24	0	0	16	2	1	61	360
1988	21	151	36	79	2	51	355	4	3	2	861	0	89	0	0	163	2	2	57	1706
1989	28	182	70	172	8	47	554	10	3	7	9189	0	156	0	1	157	5	0	167	10546
1990	26	174	65	192	3	24	856	12	2	81	2122	0	162	1	0	193	6	1	140	3860
1991	22	158	42	151	2	18	714	15	3	61	5440	0	125	0	1	129	7	1	52	6761
1992	11	67	18	93	14	5	236	12	4	9	7678	0	34	0	1	84	3	2	13	8206
1993	14	105	104	106	7	25	340	7	5	39	2995	0	72	0	2	138	8	2	22	3872
1994	14	94	47	53	9	12	362	26	3	21	9997	0	76	0	1	98	6	2	7	10720
Ave.	18	122	51	108	6	23	439	11	4	28	4795	0	92	0.1	1	122	5	1	64	5754
TOTAL	145	977	414	869	45	191	3515	89	28	231	38357	0	738	1	6	978	39	11	519	46031

NOTES FOR TABLES 1 AND 2:

TV=Turkey Vulture; OS=Osprey; BE=Bald Eagle; NH=Northern Harrier; SS=Sharp-shinned Hawk; CH=Cooper's Hawk; NG=Northern Goshawk; RS=Red-shouldered Hawk; BW=Broad-winged Hawk; SW=Swainson's Hawk; RT=Red-tailed Hawk; RL=Rough-legged Hawk; GE=Golden Eagle; AK=American Kestrel; M=Merlin; P=Peregrine Falcon; U=Unknown.

Hours and averages rounded to nearest whole numbers.

TABLE 3. TOTAL FOR ALL EMHW SITES

Year	Sites	Hours	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	M	P	U	TOTAL
1976	26	128	0	44	1	25	131	0	2	2	1632	0	58	0	0	129	16	1	33	2074
1977	60	219	5	84	2	40	501	13	6	13	2944	1	199	0	0	117	10	9	170	4114
1978	109	467	26	250	2	57	1432	52	12	28	13411	0	336	0	0	268	30	7	433	16344
1979	72	373	53	264	4	55	1371	20	6	49	11218	1	216	3	4	234	8	1	601	14108
1980	61	327	63	229	2	75	789	9	18	21	9622	0	158	1	0	169	3	1	0	11160
1981	118	546	68	189	3	77	2325	29	13	6	5581	0	350	8	0	322	22	5	0	8998
1982	49	270	214	239	0	63	908	29	20	66	8430	0	204	0	0	231	2	3	0	10409
1983	107	595	129	475	5	41	1028	12	12	20	27329	0	198	0	0	323	12	8	0	29592
1984	71	493	127	353	8	57	937	14	9	5	29979	0	100	0	2	270	13	3	0	31877
1985	105	547	61	474	8	105	1876	18	13	15	20555	0	190	0	2	381	21	10	0	23729
1986	102	498	183	584	15	99	1248	19	5	15	24305	0	206	0	3	449	19	5	352	27507
1987	75	523	149	515	14	109	1136	23	18	28	28444	0	280	0	1	525	13	11	310	31576
1988	114	566	180	794	26	130	1463	40	11	17	33407	0	203	0	1	662	25	9	310	37278
1989	92	494	181	622	19	135	1557	28	7	20	31305	0	224	0	1	621	27	5	286	35038
1990	147	653	147	667	21	83	1920	85	11	112	28230	1	372	1	1	788	31	21	330	32821
1991	114	617	188	526	20	62	1511	64	8	94	14062	0	223	1	2	573	24	16	153	17527
1992	102	484	154	409	37	48	935	29	16	72	19417	0	304	1	1	394	29	5	111	21962
1993	107	472	216	411	32	80	1151	40	14	50	11868	0	248	0	2	707	37	16	135	15007
1994	91	365	186	262	44	98	923	66	13	37	21938	0	239	2	1	450	20	11	125	24418
Ave.	94	473	129	408	15	79	1278	38	12	37	19002	0.2	236	1	1	416	19	8	184	21859
TOTAL	1722	8636	2330	7391	263	1439	23142	590	214	670	343677	3	4308	17	21	7613	362	147	3349	395539

TV=Turkey Vulture; OS=Osprey; BE=Bald Eagle; NH=Northern Harrier; SS=Sharp-shinned Hawk; CH=Cooper's Hawk; NG= Northern Goshawk; RS= Red-shouldered Hawk; BW=Broad-winged Hawk; SW=Swainson's Hawk; RT=Red-tailed Hawk; RL=Rough-legged Hawk; GE=Golden Eagle; AK=American Kestrel; M=Merlin; P=Peregrine Falcon; U=Unknown. Hours and averages rounded to nearest whole numbers.

data from major sites across the country to enable researchers to take full advantage of the biggest and best hawk migration database in the world. (Everyone interested in hawks or the environment should urge Congress and the President to continue the National Biological Survey.)

Eastern Massachusetts birders can be proud of the significant contribution they have made to these databases, as well as to our understanding of the avifauna of Massachusetts. But the challenge is not over. Hawk watch coverage needs to be maintained, preferably expanded, in the years ahead. Our environment and hawk populations are not static entities. We see some worrisome trends for several species, and with the current political environment, we can expect increased threats to our physical environment, and to that of the hawks. The need for hawk migration counts is as great as ever. EMHW therefore needs more volunteers to maintain and extend its coverage, including exploring many potentially excellent sites that have rarely or never been covered. There is still abundant opportunity for anyone to discover something new about raptors in Massachusetts and to contribute to their conservation.

Peak Fall Flights

This section reports on the peak daily counts by species. The numbers reported below represent the peak official EMHW counts. Data that were entered into the hawk migration database. Official counts are submitted on standardized report forms, which request basic weather information and species counts on an hourly basis. These reports are entered into a local database and then copied and forwarded to the NEHW and HMANA for entry into their databases and for analysis.

In many instances, the EMHW records represent peak counts for eastern Massachusetts, and even the entire state, but in some instances they are not. Consult Veit and Petersen (1993) for the maxima field birding counts for all species. A number of our largest flights are from sites that are not covered frequently, including Bolton Flats, Bolton; Marconi Station, Wellfleet; Gooseberry Neck, Westport; the Middle School, Littleton; the Page School, West Newbury; Worcester Airport; Little Wachusett, Princeton; Silver Hill, Haverhill; and others. The population trends briefly described in the following species accounts are based on the much larger NEHW database (NEHW 1995), using numbers of hawks per hundred hours of coverage, not on the EMHW raw data presented in Tables 1-3.

Total Hawks. The largest single-day hawk flights ever reported in eastern Massachusetts have all occurred during the peak of the Broad-winged Hawk migration. Because the Broadwing is a complete migrant, totally evacuating its breeding range each year, it moves through relatively early, often in imposing concentrations. Although the overwhelming majority of the "total hawks" are Broadwings, when migratory conditions are right and excellent thermals exist,

the volume of Broadwings in the thermals attracts other, less numerous migrating species of hawks, so that almost anything is possible in a good kettle of Broadwings.

The maximum counts (all from Wachusett Mountain) were as follows: 20,106 (9/13/83); 17,517 (9/17/84); 16,062 (9/13/89); 10,226 (9/17/87); 10,213 (9/13/78); 9792 (9/12/92); 9238 (9/15/94); 7619 (9/14/88); 5455 (9/16/87).

Turkey Vulture. When the EMHW began, few Turkey Vultures were ever seen in eastern Massachusetts, and then primarily in spring. Over the past two decades, however, the Turkey Vulture has considerably expanded its range northward, so that they are now seen year-round in Boston and are probably the second most frequently seen raptor in the state throughout the year. Most daily, and therefore seasonal, totals indicate the maximum number of individuals, not confirmed migrants, seen at one time on any given day. Good numbers can be seen in September and October.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 33 (9/15/94); 25 (9/8/91); 24 (9/8/84, 9/27/86); 23 (9/15/83); 20 (9/5/93, Mount Watatic; 9/22/91, Wachusett Mountain Ledges); 19 (9/19/93, Mount Watatic); 18 (9/4/92; 9/16/89, Wachusett Mountain, Oxbow).

Osprey. Osprey, a predominantly eastern species, was seriously endangered in the mid-1900s. Its numbers bottomed out in the 1960s and early 1970s. During the late 1970s and early 1980s, we witnessed a major resurgence, including the expansion of the small breeding colony in southeastern Massachusetts, helped in part by the use of artificial nesting platforms. In the past several years, migrants have declined in numbers but are still close to average. Ospreys migrate from August through October, with the majority passing in the last three weeks of September.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 93 (9/14/88); 70 (9/13/83); 57 (9/12/83); 55 (9/17/85); 53 (9/22/85); 47 (9/16/88); 46 (9/13/78, 9/14/83; 9/16/89, Bolton Flats); 45 (9/16/90, Bolton Flats).

Bald Eagle. Bald Eagles were the most popular of the severely endangered species in the 1960s and 1970s. During the 1980s they made a significant comeback due to the ban of DDT and ambitious restoration programs in many states, including Massachusetts and New York. Overall counts have increased in the past decade, with the biggest numbers moving in the second and third weeks of September. There is a second peak in November, and the migration can continue into January. Increased counts are also due in part to more knowledgeable and experienced observers being able to identify eagles at some distance from the site. Less than ten years ago, few people knew how to identify eagles in immature plumage.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 12 (9/12/92); 6 (9/18/94); 4 (9/13/94, Wachusett Mountain, Oxbow);

3 (9/2/94, 9/4/94, 9/10/94).

Northern Harrier. Northern Harrier counts were low in the late 1970s, increased during the 1980s, and decreased in the early 1990s. EMHW and New England counts have returned to average in the past two years, but concern remains that the harrier is continuing to lose its limited breeding habitat. This species deserves special watching. We in Massachusetts are unusually fortunate to see this bird with some regularity in our coastal marshes during much of the year. The report of fifty harriers at Wachusett on September 13, 1983, is perhaps the most incredible of all the single-day reports provided here. Harrier migration spans the entire fall, with immatures moving early and adults, especially adult males, tending to move late in the season, which is why few adult males are seen migrating.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 50 (9/13/83); 13 (9/1/85); 12 (9/16/89, Bolton Flats; 9/17/86); 10 (9/13/89, Mount Watatic; 9/18/94, Bolton Flats); 9 (10/23/83).

Sharp-shinned Hawk. Historically, the Sharp-shinned Hawk has been our second most commonly seen migrant. At Wachusett, raw numbers peaked in the early 1980s and have been dropping continuously since then. These lower numbers are due, to some extent, to a decline in late September-through-November coverage of the mountain. Sharpshin counts have been below average in the northeast since 1987, with particularly low counts in three of the past four years. Speculation on the cause runs the gamut, from the decline of neotropical migrants (meaning there is less food to sustain Sharpshins) to "short-stopping" of traditional migrants that now stay farther north to feed off passerines using bird feeders. This decline may also be part of a standard population cycle for the Sharpshin because counts of the small accipiter dropped significantly in the 1960s and surged dramatically in the 1970s. Virtually no governmental research is being conducted on the status of the Sharp-shinned Hawk. Almost everything we know has been gathered by "amateur" hawkwatchers and banders. Locally, peak numbers have been reported in the last half of September, primarily immatures, but good flights continue into mid-October, the month when most adults are on the move.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 1009 (9/20/81, Marconi Station, Wellfleet); 198 (9/25/82); 167 (9/22/85); 162 (9/23/79); 160 (9/17/78); 159 (9/16/80); 158 (9/17/81); 157 (10/8/90, Mount Watatic); 156 (9/25/88); 151 (9/25/85); 133 (9/21/84; 10/14/90, Mount Watatic).

Cooper's Hawk. Cooper's Hawk declined during the 1950s, 1960s, and early 1970s, but experienced a resurgence as a breeding and migrating species in the state and throughout the northeast during the past decade. Large concentrations are not yet seen at any one time at any site in eastern Massachusetts. The migration is primarily from mid-September to late October,

with the immatures moving early in that period. Some of the early September sightings no doubt represent local birds, including immatures, hanging around watch sites.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 8 (9/18/94; 10/15/94, Mount Watatic); 6 (9/19/93); 5 (9/15/94, Mount Watatic; 9/17/82); 4 (9/4-9/25, many sites).

Northern Goshawk. Northern Goshawk is a fairly widespread, although never common, breeder in the state. Migration reports vary considerably from year to year, with a majority of sightings probably representing local birds, including immatures, hanging around sites. October and November birds are much more likely to be adult migrants.

The maximum counts (from Wachusett Mountain except where noted) were as follows: 5 (9/15/94, 9/17/82; 9/26/82, Little Wachusett); 3 (10/14/85; 10/27/79 and 10/29/79, Mount Watatic).

Red-shouldered Hawk. Red-shouldered Hawks, like the Cooper's Hawk, had seriously declined in numbers in the state for several decades. There was a very modest resurgence of the breeding population and migrants in the late 1970s and early 1980s. The following hawk counts are probably not very representative of the magnitude of the flight because very few observers hawk watch during the peak Redshouldered migration period from mid-October to mid-November.

The maximum counts (from Mount Watatic except where noted) were as follows: 32 (10/27/79); 29 (10/20/90); 26 (10/27/90); 23 (10/18/92, Page School, West Newbury); 22 (10/24/82); 19 (10/23/82, Wachusett Mountain); 17 (10/17/92); 16 (10/14/91); 15 (10/20/91 and 11/2/80, Wachusett Mountain); 14 (10/21/90).

Broad-winged Hawk. Broad-winged Hawks are clearly the stars of the migration season, with at times several hundred hawkwatchers appearing at Wachusett Mountain in hopes of seeing one of those monster flights. Research by the NEHW suggests that Broadwings may migrate on a fairly broad front, perhaps fifty miles wide at times, with denser currents in the stream, so good numbers can be seen virtually anywhere north or west of southeastern Massachusetts. The single most spectacular Broadwing flight in Massachusetts occurred on September 13, 1983, when more than 16,000 hawks were tallied in little more than thirty minutes! At the time, this was again the largest hawk flight every reported in New England. Subsequently, much larger single-day flights have been reported at several sites in southwestern Connecticut and eastern New York. An overwhelming majority of all the migrant Broad-winged Hawks seen in any one season may pass through southern New England in a single day or, as on September 13, 1983, pass a single site within an hour.

Originally, many observers questioned the accuracy of the large counts. Having been there for all the major Broadwing flights at Wachusett, I am

confident that the numbers reported below are conservative and reliable. Recent research in California and on a much larger scale in Veracruz, Mexico, suggests that even highly experienced observers significantly undercount huge kettles of hawks. The preponderance of migrant Broadwings passes through New England between September 12 and 19. Broad-winged Hawk counts vary considerably from year to year. Below average counts were reported throughout the NEHW region during the early 1990s, but a record Broad-winged Hawk flight was seen in the western half of the region in 1993, followed by an average flight in 1994.

Although the largest single counts of Broad-winged Hawks have been seen at Wachusett Mountain (Table 1), very large flights, and often the largest Broadwing flights of the year have been reported from many other sites throughout eastern Massachusetts.

Broadwing High Counts from Other Eastern Massachusetts Sites

Count	Date	Place
4527	9/15/88	Page School, West Newbury
4524	9/17/87	Lancaster
3990	9/13/92	Mount Watatic
3828	9/15/89	Mount Watatic
3776	9/13/89	Mount Watatic
3242	9/12/92	Mount Watatic
2440	9/14/86	Page School, West Newbury
2195	9/19/93	Mount Watatic
2070	9/14/86	Bolton Flats
1993	9/14/88	Worcester Airport
1725	9/15/85	Bolton Flats
1708	9/12/88	Worcester Airport
1633	9/15/87	Bolton Flats
1512	9/19/93	Fales School, Westboro
1479	9/13/86	Middle School, Littleton
1159	9/16/84	Page School, West Newbury

Swainson's Hawk. Only three Swainson's Hawks have been reported from official hawk watches, although several others have been reported in late fall. A complete migrant, like the Broad-winged Hawk, most of these western hawks leave the country in September and early October, with an occasional straggler discovered in New England into November. Single Swainson's Hawks were reported on 9/15/79 (Framingham), 9/27/90 (Wachusett Mountain), and 10/5/77

(Braintree).

Red-tailed Hawk. Red-tailed Hawks are the most commonly seen hawk in the state. Juveniles are on the move already in August, and temporary residents may be found anywhere over the next several months. The most significant migration is from mid-October to mid-November, when relatively substantial numbers of undeniable migrants may be seen. Few hawkwatching sights are more spectacular than numbers of Redtails, often accompanied by Redshoulders, seen well in the superb light of late fall. Totals reported have been erratic, due in part to some observers counting only visibly migrating hawks, while others report a maximum number of individuals seen, including locals.

Maximum counts (from Mount Watatic except where noted) were as follows: 58 (10/23/82, Wachusett Mountain); 57 (11/1/92, Wachusett Mountain, Oxbow); 39 (10/27/90); 36 (10/21/90); 33 (10/20/90, 11/5/89); 32 (10/23/93); 28 (10/10/94; 11/11/94, Wachusett Mountain, Oxbow); 27 (10/12/87, Wachusett Mountain).

Rough-legged Hawk. With relatively few hawk watches conducted in October and November, few Rough-legged Hawks are reported each year. No EMHW site has ever reported more than one. November is the peak migration period. Increased coverage might yield slightly larger counts.

Golden Eagle. With few hawk watches conducted in October and November, their peak migration time, few Golden Eagles are reported in any year. Thus, the dates given below are somewhat misleading. Golden Eagles can be seen anytime, but are most likely to be seen migrating inland in late fall. Increased coverage would probably produce only one or two more per year. The small eastern population of Golden Eagles migrates primarily along the Appalachian ridge. Three birds were seen on 9/16/79 in Littleton, and two on 9/12/85 (Wachusett Mountain) and 10/11/93 (Mount Watatic).

American Kestrel. Kestrels migrate primarily in late August and September, when there is generally broad-based coverage, but the flight continues well into October. Wachusett's raw counts have been dropping for the past five years, but when adjusted for coverage, they have been average, as counts have been throughout the northeast region. Many of the largest kestrel flights are reported from sites that are not covered frequently (the same applies to counts of all falcons).

Maximum counts (from Wachusett Mountain except where noted) were as follows: 71 (9/18/94, Bolton Flats); 53 (9/17/81); 46 (9/24/87, Lancaster); 43 (9/23/79); 38 (9/16/90, Page School, West Newbury; 10/8/90, Mount Watatic); 37 (9/16/89, Mount Watatic); 32 (9/17/78, Silver Hill, Haverhill; 9/22/88, Page School, West Newbury); 29 (9/12/89, 9/12/84, 9/30/84).

Merlin. Merlins have been seen in above average numbers at EMHW watches since 1988, although large numbers have not been reported at any

single site. Peak migration time is late September and October. The largest Merlin flight ever reported in Massachusetts was fifty seen on October 3, 1990, at Gay Head on Martha's Vineyard (not an EMHW report). Anecdotal reports suggest that more Merlins have been seen migrating inland during the fall than were reported there in the 1970s and early 1980s. Part of this may be due to more experienced birders correctly identifying this small, dark, and very fast-moving falcon.

Six birds were seen on 9/25/85 (Marconi Station, Wellfleet), five on 9/23/78 (Nantucket), and four on 9/8/90 (Wachusett Mountain), 9/22/88 (Wachusett Mountain, Oxbow), and 9/23/78 and 9/28/91 (Mount Watatic).

Peregrine Falcon. The largest concentration of migrating Peregrines ever reported in the state was thirty-two, seen on October 3, 1990, at Gay Head, Martha's Vineyard (not an EMHW report). Regrettably, no one has regularly covered or reported from this site. Certainly Cape Cod, including Monomoy, is fertile ground during the peak Peregrine migration period from late September to mid-October.

Maximum counts were as follows: 7 (10/9/93, Fort Hill, Eastham); 5 (10/2/90, Gooseberry Neck, Westport); 3 (10/1/88, Cisco Beach, Nantucket); 2 (10/6/87, Lancaster); 2 (10/5/86, Wachusett Mountain).

Final Notes

Generally, the biggest hawk flights in the fall are reported on the first or second day of a cold front, when winds are somewhere out of the north, from northeast to northwest. However, many hawks, especially Broad-winged Hawks, will continue to move as long so they are not flying into rain or strong headwinds. Some excellent flights have been seen on weak southeast winds. Peregrine Falcons and Merlins often migrate over water along the coast and may be found in good numbers on at east wind.

If you would like more information on hawk migration or hawkwatching, please write EMHW at 254 Arlington Street, Medford, MA 02155 or call 617-483-4263 evenings or weekends.

References

EMHW. 1976-1994. Eastern Massachusetts Fall Hawk Watch Reports. Eastern Massachusetts Hawk Watch.

NorthEast Hawk Watch, Inc. 1995. 1994 NorthEast Hawk Watch Report.

Robbins, C.S. 1975. A History of North American Hawkwatching. In *Proceedings of the North American Hawk Migration Conference 1974*. Hawk Migration Association of North America.

Veit, R.R., and W.R. Petersen. 1993. *Birds of Massachusetts*. Lincoln, MA: Massachusetts Audubon Society.

PAUL M. ROBERTS, founder of the EMHW, is currently president of that organization and of the NEHW. Paul served four years as chair of the Hawk

Migration Association and recently received that organization's highest honor, the Maurice Broun award, for outstanding service to further hawk migration study and conservation, as well as the Massachusetts Audubon Society's "A Award" for his work on hawk migration research and education. Paul notes that this article would not have been possible without the efforts of literally hundreds of people who have contributed their time and data to the EMHW over nineteen years. Thanks go to all these individuals, and special thanks go to those who have invested literally hundreds of hours over the years, including the following: Bart Kamp, Tom Lipsky, Katie Durham, Donna Schilling, Tom and Linda McCullough, Mike Olmstead, Lloyd Bushey, Eliot Taylor, and Nancy and Alden Clayton. Paul dedicates this article to Richard Butler, who was a key supporter of the EMHW in its formative years and a valued birding companion.

BOOK REVIEW: *Handbook of the Birds of the World, Volume 1*

by John C. Kricher

Handbook of the Birds of the World, Volume 1, edited by J. del Hoyo, A. Elliott, and J. Sargatal, illustrations by five artists. Barcelona: Lynx Editions (for ICBP, now Birdlife International). 1992. 686 pages with 50 artist color plates of bird species, 14 anatomical plates, and 382 color photographs. $165.

Birders are faced with expensive choices: where to travel to augment the life list; what optics to choose; and what books to add to one's birding library. Items in these categories generally do not come cheap. It is now normal to commit four or five grand for a good trip, a couple of grand for the best optics (binoculars and scope), and a potentially bottomless financial pit for books, many of which are now priced with three figures before the decimal. Bird books represent substantial monetary investments, so it is wise to select with care.

That said, it is a pleasure to recommend that any serious birder, especially one with global interests, consider the purchase of the quarto-sized volume *Handbook of the Birds of the World, Volume 1*. It is a magnificently produced book with extraordinary art work and photographs as well as lucid, accurate, and highly informative text. As its title makes clear, it is not a regional handbook but treats all of the world's species of birds. Volume 1 deals with ten orders and twenty-seven families, from ostrich to duck. Orders included are Struthioniformes (ratites, such as ostrich), Tinamiformes (tinamous), Sphenisciformes (penguins), Gaviiformes (loons), Podicipediformes (grebes), Procellariiformes (tubenoses), Pelecaniformes (tropicbirds and allies), Ciconiiformes (herons and allies), Phoenicopteriformes (flamingos), and Anseriformes (screamers, ducks, and allies). There are altogether 568 species accounts. To assure completeness of coverage, in cases where there is evidence that a subspecies may be elevated to species status, it is so treated.

The taxonomic sequence adopted is taken from Morony, Bock, and Farrand (which is the classification typically used in current field guides) and does not reflect the major changes suggested by Sibley, Ahlquist, and Monroe based on DNA similarities. The reasoning behind the decision to retain the more traditional, conservative classification is clearly explained in the introduction. In chapter 1 there are two well-designed charts that allow the reader to compare the classification of Morony, Bock, and Farrand with that of Sibley and Monroe. In addition, there are references throughout the text to the controversies that currently exist among taxonomists regarding classification. For example, in the account of the Ciconiiformes, there is discussion of the fact that some systematists regard New World vultures as belonging within this group. As another example, the account of the family Anhimidae (screamers) discusses the DNA evidence that suggests that the Australian Magpie Goose *(Anseranas*

semipalmata) is more closely related to screamers than to ducks and geese, although the Magpie Goose is not lumped with the screamers in this volume, remaining among the Anatidae. Any reader will soon conclude that avian systematics is intellectually turbulent.

To readers familiar with noted North American and British ornithologists, this book will come as a surprise. Most of the editors and authors are from Spain, and thus probably unknown to an American audience. Do not let this dissuade you. The book is published in clear English prose, and these authors perform their duties with distinction.

The first chapter in Volume 1 is a highly readable account of birds as a class of vertebrates. The thirty-eight-page chapter includes fourteen color plates of bird anatomy, which, along with the text, will serve well as a basic primer in ornithology. Reading parts of this section might prove a challenge to some with little background in biology. For example, in the discussion of avian gas exchange, "The principal or primary bronchi are subdivided according to a very definite pattern, with a medioventral series (4-6 bronchi), a mediodorsal one (7-10), and some other bronchi, which are labelled as lateralventral and lateraldorsal." While this sentence may seem a bit obtuse, a glance at the accompanying diagram will make clear what is meant. It is undeniable that the authors have summarized avian biology in a capable, well-illustrated chapter.

The main text of the book is organized by family. Each family account begins with a range map showing the total geographic representation of the family followed by a highly coherent, detailed essay that includes discussion of systematics, morphology, habitat, general habits, voice, food and feeding, breeding, movements, relationship with man, status and conservation, and a general bibliography. Individual species accounts follow. These accounts are in smaller print than the family essays. Each species account includes English and scientific names, plus French, German, Spanish, and additional English common names, plus taxonomy, subspecies and distribution, descriptive notes, food and feeding, breeding, movements, status and conversation, and bibliography. If status and conservation are insignificantly known, it is so designated in red. Endangered or threatened species are also noted in red. Finally, each species account has a range map with color coding.

The species accounts contain a wealth of information. There are comments about range expansions and contractions, estimates of population sizes throughout the species' range, behavioral characteristics, nest colony sizes, and migration patterns. As one example, the species account of Flightless Cormorant *(Phalacrocorx harrisi)* describes the dramatic population reduction attributed to effects of a severe El Niño, as well as the apparent rapid recovery of the population in post-El Niño years. Only the section on descriptive notes is perhaps overly brief, but it nonetheless includes the key field marks that distinguish each species. Most species accounts have in excess of twenty key

references. Indeed, there are over 7000 literature citations in this book, a remarkably complete set of citations.

The *Handbook* is illustrated by five artists, most prominently Francesc Jutglar, who contributed thirty-eight of the fifty color plates of bird species. These artists, to my eye, are uniformly excellent. There are rather small differences in the artists' style, which gives good consistency to the plates. Each plate in this oversized volume has anywhere from ten to twenty-five species illustrated, depending on family. The colors are faithfully reproduced, each plate is extremely sharp, and the artists seem to have a very strong grasp of what these species actually look like. Normally only the adult plumage is illustrated. In cases where species show high levels of sexual dimorphism in plumage, both the male and female are illustrated. Juvenile plumages are not illustrated. In addition to the artwork, there are extraordinary color photographs interspersed throughout the text. The quality with which these are reproduced is second to none. This book is truly a visual treat.

Volume 2 in this series, dealing with New World Vultures through Guineafowl, was published this spring. It looks to be every bit the equal of Volume 1. Ten additional volumes are promised, with Volume 3 expected in the fall or winter of 1996. Should one decide to invest in the entire series, the estimated total cost is conservatively between $1700-2000. If the other books in the series maintain the current quality, the entire set would, in my opinion, qualify as a bargain (it is, after all, $3000 for the *Birds of North America* series). This is an utterly superb reference and will serve as such for the indefinite future. The *Handbook* was produced by ICBP (International Council for Bird Preservation), now renamed Birdlife International. BI is certainly to be commended for organizing such a splendid effort.

JOHN KRICHER serves on the board and as a department head for *Bird Observer*. He is currently at work revising and enlarging his book, *A Neotropical Companion* (Princeton University Press).

BIRD CLUBS IN MASSACHUSETTS

Editor's Note: Bird Observer *asked bird clubs from throughout Massachusetts to send information on their clubs for publication. For representatives of those clubs who have not yet responded, we would be happy to print at a later time, as space permits, a description of your club. Clubs from other New England states are also welcome to send descriptions of their club activities.*

Allen Bird Club

Founded in 1912 in Springfield, Massachusetts, Allen Bird Club is one of the country's oldest and most respected societies for the amateur study of birds and related natural history. The Club honors Dr. Joel A. Allen (1838-1921), a Springfield native and prominent scientist for whom Allen Street in Springfield was also named. An associate of Agassiz and Chapman, Dr. Allen became curator of birds and mammals at the Harvard Museum of Comparative Zoology and later chief ornithologist at the American Museum of Natural History in New York City. One of three founders of the American Ornithologists' Union, Dr. Allen was its first president. He was also editor of *The Auk* for nearly thirty years and a leader in bird protection efforts.

Allen Bird Club serves area birders and all those concerned with the appreciation of nature by providing a forum in which to meet and develop their common interests. The Club advances the pleasures of birding by sharing knowledge with the larger community of naturalists and with the general public, to whom most Club activities are open without charge. Through Club participation, members are kept current about interesting and unusual bird sightings as well as about topics and issues pertaining to bird identification, behavior, habitat, and environment. These interests are supported by an extensive and varied program.

In addition to providing lectures and presentations at its monthly meetings from October through May, the Club sponsors an annual public film series, maintains the Stebbins Memorial Wildlife Refuge in Longmeadow, schedules frequent local and distant field trips year-round, conducts annual bird censuses, and enjoys an annual banquet. The Club publishes an annual program booklet-membership directory as well as the quarterly *Bird News of Western Massachusetts*, which includes seasonal field records. The Club also makes appropriate contributions for the support and recognition of conservation efforts, especially those affecting bird ecology. With a membership of approximately 300, Allen Bird Club takes pride in its continuing record of service to nature study, education, and habitat preservation in the region.

For further information, contact Dr. Nancy Eaton, 465 The Meadows, Enfield, CT 06082.

Brookline Bird Club

The Brookline Bird Club (BBC) is the largest of the many bird clubs in Massachusetts. It was founded in 1913, and its membership is now over 1300. Its charter is to stimulate interest in bird life and the protection of local wild birds. The Club sponsors an active program of year-round field trips, covering the entire state from the Berkshires to Provincetown. The listing for the field trips is published three times a year. Typically, field trips are scheduled for almost every weekend day throughout the year. During the peak of spring migration, walks are scheduled for each day of the week at Mount Auburn Cemetery in Cambridge. Pelagic bird trips are also organized, as are overnight trips to birding sites in Maine, New Hampshire, and Vermont. Two evening lecture meetings are held each year, one in spring and one in fall. Guests are always welcome on field trips and at meetings.

A special tradition of BBC trips has been to encourage new birders, both young and old, to learn about birds and the pleasures of birding through active participation in seeking and identifying birds in various habitats and during all seasons of the year. A number of world-class trip leaders and ornithologists birded with the BBC in their childhood years.

The origin of the BBC traces back to the spring of 1913, when a notice in the *Brookline Chronicle* and the *Boston Transcript* invited all those who might be interested in the study of wild birds to attend a meeting at the Brookline Public Library. The result was the founding of the BBC. The first annual meeting was held in Brookline, the first President was a resident of Brookline, and most of the Club's early members were from Brookline. Today, Club membership reaches far beyond Brookline to all of Massachusetts and to many other states as well. For more information about joining the BBC, please contact Mr. Steven Arena at 3 Kenneth Road, North Easton, MA 02356-1004. Membership runs from January to December at a cost of $10 per year.

Cape Cod Bird Club

The CCBC was established in 1971 and has over 480 members. Members are mostly Cape residents, but the CCBC includes members from 13 other states and England. The purpose of the CCBC is to promote education about, appreciation for, and conservation and enjoyment of birds and the natural history of Cape Cod. The Club publishes five newsletters a year about upcoming programs, field walks, news and announcements, guest articles, and reports of bird sightings and bird count summaries (e.g., breeding bird census). The Club also organizes four to six field walks a month on the Cape except in the summer months. Trips outside of the Cape (e.g., Quabbin, out of state) are occasionally organized, and every Saturday and Sunday in May, trips to the Provincetown Beech Forest are held.

The CCBC also helps co-manage a 5.5 acre former truck farm overlooking

Town Cove in Orleans. This pocket sanctuary is known as Sea-Call Farm and has trails along the periphery of the property as well as a picnic area on top of a hill with spectacular views of the cove.

The CCBC meets every second Monday of the month from September through May at 7:45 PM at the Cape Cod Museum of Natural History in Brewster. The meetings, which are generally attended by ninety to one hundred people, feature guest speakers and one members night.

Annual dues are $10 for an individual, $15 for a family. For further information, contact the CCBC at the Cape Cod Museum of Natural History, Box 1710, Brewster, MA 02631.

Essex County Ornithological Club

The ECOC was founded in 1916 and has been active ever since. The purpose of the ECOC is to promote interest and engage members in ornithological study in Essex County. More specifically, the Club seeks to maintain a long tradition of holding an annual May bird census by canoe and on foot along the Ipswich River, to periodically revise the official checklist of the birds of Essex County, and to organize or participate in other such projects and field trips with the above purposes.

Historically the ECOC published annual bulletins, which included notes on regional sightings and summarized the results of the annual canoe trip. The Club no longer produces the bulletins. The only consistent field trip is the Ipswich River canoe trip. Other field excursions usually include an owl prowl and a woodcock walk. The Club typically meets the first Thursday of every month from October through April at the Peabody Essex Museum. Each meeting has a lecture, hands-on workshop (using mounts, study skins, and recordings), or other bird-focused event. A calendar of events is available by contacting the Natural History Department at the museum (Peabody Essex Museum, East India Square, Salem, Massachusetts 01970-3783). Membership is $6, and meetings are free and open to the public. The ECOC presently has about 100 members.

Needham Bird Club

The Needham Bird Club was formed in the early 1960s, when a group of people from Needham interested in birds decided to meet periodically and to organize birding trips. The group was very active during the 1960s and 1970s, but as the members grew older, participation in field trips dropped. Recently, field trips are once again stressed as we seek new members. Only fifty-six percent of our membership is from Needham. Any person with any interest in birds is welcome. Field trips are run about once a month.

The Club has excellent indoor programs nine times a year from September through May on the second Friday of the month. All but the May meeting are at the Deaconess/Glover Hopsital in Needham. Topics range from Antarctica to

the Arctic, from Massachusetts to China, from birding your backyard to world travel, and from archeology to zoology. Individual dues are $10 per year, and families can join for $16. For additional information contact Mary Alice MacVeigh (president) at 617-444-8891 or Dot Spaulding (treasurer), 619 Great Plain Avenue, Needham, MA 02192 (617-444-9059).

Paskamansett Bird Club

The PBC covers the Bristol and Plymouth county areas and has about 160 members. It was established in 1963, and Club members Jo and Gil Fernandez were instrumental in restoring the Osprey to the Dartmouth and Westport area by installing over one hundred Osprey platforms and monitoring their nesting success.

The PBC enables people with a similar interest and appreciation of birdlife to express concerns and ideas, and to share information on bird sightings. Once a year, the Club publishes a complete listing of walks, gatherings, and meetings. The Club has numerous field trips in the area and to other birding hot spots. Spring, summer, and fall trips usually are held about two times a week, but fewer trips are held in winter. From September through May, regular meetings are held on the second Wednesday of each month at 7:30 PM. The meetings are located at Friends Meeting Hall on Horseneck Road in Dartmouth. No meeting is held in December, but the PBC holds an annual dinner after the New Bedford Christmas Bird Count, which the Club conducts.

Annual dues are $5 per year. For further information on the club, contact Ruth Edwards at 508-636-4567.

Cape Cod Natural History Weekend

Saturday and Sunday, September 23 and 24

sponsored by the Massachusetts Audubon Society's
Wellfleet Bay Wildlife Sanctuary

Workshops include
Wayne Petersen on Seabirds
Bob Prescott on Marine Mammals
Bob Oldale on Cape Geology
Mario DiGregorio on Coastal Plants
also shorebirds, shellfish, reptiles,
and more!

Whale Watch and Pelagic Birds Trip
Tours of Monomoy National Wildlife Refuge
Pleasant Bay Cruises, Canoe Trips
Keynote Speaker, Banquet Dinner

For registration information call the
Wellfleet Sanctuary at (508) 349-2615

CAPE COD NATURAL HISTORY HOTLINE

Call 508-349-WING. (508-349-9464)

Massachusetts Audubon Society's Wellfleet Bay Wildlife Sanctuary has started a Cape Cod Natural History Hotline, updated weekly, to list the latest bird sightings and nature happenings on the Cape. You can also leave a message about birds, butterflies, or other animals or natural history events you've see. The hotline is sponsored by the Bird Watcher's General Store in Orleans.

HARVARD ENCEPHALITIS STUDY SEEKS VOLUNTEER BIRDERS

In an effort to elucidate the role of certain birds in the ecology of eastern equine encephalitis, the Harvard School of Public Health seeks volunteers to submit observations of communally roosting crows, robins, grackles, Red-winged Blackbirds, Brown-headed Cowbirds, and European Starlings. Observations should include the date and time, precise location, number of birds and species composition of any flock (more than ten individuals), and if flying, direction of flight. For additional information, contact: Dr. Richard Pollack or Nicholas Komar, Department of Tropical Public Health, Harvard School of Public Health, 655 Huntington Avenue, Boston, MA 02115. Tel: 617-432-1587 or 432-2064. Fax: 617-738-4914. E-mail: *nkomar@hsph.harvard.edu* or *rpollack@hsphsun2.harvard.edu.*

BIRD SIGHTINGS
MARCH 1995
SUMMARY

by Richard A. Forster, Marjorie W. Rines, and Robert H. Stymeist

March 1995 was very cloudy with normal temperatures and very little snow. The average temperature in Boston was 38.8°. The high of 67° on March 8 set a new record for that date, exceeding the 65° mark set in 1973. The lowest temperature recorded was 19° on March 10, just two days after the high mark for the month. Rainfall totaled 2.2 inches, 1.49 inches less than average, and snowfall was only 0.4 inch, 7.6 inches less than normal. The seasonal snowfall totaled only 14.9 inches, 25.8 inches less than normal, and the fourth lowest seasonal snowfall in 105 years. Southerly winds on March 10-11 marked the return of the first migrants with American Oystercatchers, Piping Plovers, Eastern Phoebes, and Tree Swallows all reported from various locations. R. H. S.

LOONS THROUGH WOODPECKERS

There was a noticeable buildup of loons and grebes from favored coastal localities with a scattering of inland reports of Pied-billed Grebes. This month marks the appearance of the vanguard of the heron group. Early arrivals were a Snowy Egret at Plum Island on the 10th and a Yellow-crowned Night-Heron in Cotuit on the 30th. A Cattle Egret on Martha's Vineyard was both early and at an unusual location.

March is the month of waterfowl migration with the closest scrutiny given to inland wetlands. Reports were widespread and relatively numerous for Wood Duck, Green-winged Teal, Northern Pintail, American Wigeon, and Ring-necked Duck. The only Eurasian Wigeon report was from Lynnfield, an unusual location. The small numbers of scattered Northern Shovelers were fairly typical. The Lakeville ponds hosted Canvasback, Redhead, and both species of scaup. Both Hooded and Common mergansers were widespread and fairly numerous. A **Greater White-fronted Goose** continued in Newburyport from the winter months as did **Tufted Ducks** from Taunton and the Wachusett Reservoir.

Raptor reports were somewhat sparse, but early migrants, notably Turkey Vulture and Red-shouldered Hawk, were relatively widespread. The arrival of a resident Osprey on Martha's Vineyard on the 3rd was quite early. Reports of Rough-legged Hawk continued scarce after a rather poor winter showing. The good March presence of Merlin probably represented either successful overwinterers or birds that wintered to our immediate south. The Virginia Rails in Salem were slightly on the early side, and American Coots were numerous and widespread following an exceptional fall migration and wintering season.

The shorebird group presented no surprises. Each year a few resident Piping Plovers and American Oystercatchers appear in March, and this year proved no exception. Killdeer and American Woodcock were well represented with an impressive count of the latter species in Wayland on the 14th. The few Greater Yellowlegs were fairly typical for the season as were the Common Snipe at the end of the month. Gulls were sparsely reported. The **Mew Gull** was reported consistently from Winthrop. Iceland Gulls continued scarce from winter. Lesser Black-backed and Glaucous gulls appeared inland as well as at the coast. Alcid reports were meager.

The few reports of Snowy Owls reflect their scarcity this past winter, but Short-eared Owls continued in impressive numbers at the Cumberland Farms fields in Middleboro. The scattering of reports of Northern Saw-whet Owl is probably typical. The reports of Red-headed Woodpecker were overwintering birds. The few reports of Red-bellied Woodpecker probably represent observer apathy because the species is now established as a resident species, albeit locally and in small numbers, and continued to show signs of slow but steady expansion. R. A. F.

Date	Location	Number	Observers
Red-throated Loon			
11	Katama	100	V. Laux#
12	P.I.	4	BBC (D. + D. Oliver)
19	Boston H.	10	TASL (M. Hall)
Common Loon			
4	Provincetown	12	M. Lynch#
18	Newbypt	20	BBC (W. Drummond)
Pied-billed Grebe			
11	Belmont	1	M. Pelikan
25	Lakeville	1	S. Arena#
26	W. Bridgewater	1	G. d'Entremont#
31	Harvard	1	S. + L. Hennin
Horned Grebe			
11	Katama	175+	V. Laux#
12	P.I.	14	BBC (D. + D. Oliver)
12	Westport	14	E. Nielsen
19	Boston H.	81	TASL (M. Hall)
Red-necked Grebe			
11	N. Scituate	6	W. Petersen#
19	Winthrop	77	TASL (M. Hall)
26	Hull/Cohasset	52	M. Hall
Great Cormorant			
4, 12	Westport	80, 30	E. Nielsen
25	Lakeville	9	S. Arena#
Double-crested Cormorant			
19	Squantum	4	TASL (M. Hall)
23	Falmouth	3	S. + E. Miller
29	Felix Neck	4	A. Ben David
31	W. Roxbury	1	T. Aversa
American Bittern			
12	Dartmouth	1	E. Nielsen
18	P.I.	1	v. o.
23	Nantucket	1	E. Andrews
24	Chappaquiddick	1	L. Johnson
Great Blue Heron			
4	Chatham	12	M. Lynch#
11	Westboro	6	E. Taylor
12	Westport	5	E. Nielsen
15	S. Dart. (A.Pd)	6	LCES (J. Hill)
Great Egret			
23	Chatham	1	W. Bailey
29	Salisbury	1	G. Leet
Snowy Egret			
10	P.I.	1	D. + I. Jewell
21	Salem	1	J. Berry
31	Revere	1	J. Nove
Cattle Egret			
21-25	W. Tisbury	1	S. Bowan + v. o.
Black-crowned Night-Heron			
4	Eastham (F.H.)	1	K. Weinheimer#
11	Vineyard Haven	8	A. Brown
Yellow-crowned Night-Heron			
30	Cotuit	1 ad	K. Walcott
Whooper Swan			
16-31	P.I.	1-3	v. o.
Mute Swan			
4	Westport	89	E. Nielsen
18	Yarmouth	28	I. Lynch#
Greater White-fronted Goose			
12	Newbypt	1	BBC (D. + D. Oliver)
Snow Goose			
12	Concord (NAC)	1	J. Center
12	Salisbury	1	BBC (D. + D. Oliver)
12	Lakeville	1	W. Petersen#
18	P.I.	2	K. Weinheimer#
Brant			
18	Salisbury	400	H. Wiggin#
19	Boston H.	3449	TASL (M. Hall)
Barnacle Goose (origin unknown)			
5	S. Dartmouth	1	F. Carney
Wood Duck			
11	Wakefield	10	D. + I. Jewell
13	W. Newbury	12	R. Heil
14	Harvard	12	S. + L. Hennin
16	IRWS	15+	R. Heil
17	Wayland	20+	S. Perkins
18	Randolph	7	G. d'Entremont
18	Topsfield	8 m	H. Wiggin#
18	Worcester	20	M. Lynch#
20	E. Middleboro	12	K. Anderson
22	GMNWR	28	S. Perkins
Green-winged Teal			
11	Middleboro	75	W. Petersen#
12, 23	W. Bridgewater	35, 200	W. Petersen#
16	P.I.	33	W. Drew#
19	Bolton Flats	24	M. Lynch#
19	GMNWR	101	M. Pelikan
24	Ipswich	65	T. Aversa
American Black Duck			
10, 16, 29	P.I.	195, 983, 284	W. Drew#
12	Westport	450	S. Perkins#
12	Dartmouth	250	S. Perkins#
12	Middleboro	350	W. Petersen#
19	Boston H.	1240	TASL (M. Hall)
Northern Pintail			
4, 25	Cumb. Farms	11, 24	S. Arena
7	Wayland	7	N. Patterson
10, 16, 29	P.I.	20, 36, 2	W. Drew#
14	GMNWR	24	D. Diggins
18, 26	Randolph	5, 8	G. d'Entremont
20	W. Bridgewater	28	K. Weinheimer
24	Ipswich	4	T. Aversa
26	Bolton Flats	6	M. Lynch#
Blue-winged Teal			
18	Randolph	1 m	G. d'Entremont
18	P.I.	2	BBC (W. Drummond)
29	E. Brookfield	1	J. Baird
Northern Shoveler			
thr	Marlboro	1 m	S. + L. Hennin
1	Edgartown	3	H. Smith
12, 25	Dartmouth	2	E. Nielsen
19	Westport	1 f	E. Nielsen
21	W. Harwich	2	K. Hamilton
29	Boston (F.Pk)	1 f	T. Aversa
Gadwall			
4	Seekonk	45	R. Stymeist#
11	Plymouth	44	W. Petersen#
19	Westport	4	E. Nielsen
Eurasian Wigeon			
25	Lynnfield	1	P. + F. Vale
American Wigeon			
thr	Marlboro	23 max 3/20	S. + L. Hennin
4, 25	Cumb. Farms	2, 10	S. Arena
11	Arlington	10	M. Pelikan
12	Hanson	3	W. Petersen#
12	Dartmouth	6	E. Nielsen
16	P.I.	14	W. Drew#
19	Westport	9	E. Nielsen
19	Salem	4	I. Lynch#
25	W. Bridgewater	6	S. Arena#
Canvasback			
5	Westport	38	M. Lynch#
11	Randolph	1	G. d'Entremont
12	Lakeville	50	W. Petersen#
Redhead			
11	Yarmouth	3	E. Winslow#
12	Lakeville	4	L. Nachtrab#
18	Falmouth	1	B. Good

Ring-necked Duck
11 Framingham 141 E. Taylor
12 S. Hanson 300+ W. Petersen#
12 Halifax 30 W. Petersen#
16, 20 GMNWR 90, 140 S. Perkins#
16 IRWS 36 R. Heil
18 Ipswich 30 H. Wiggin#
19 Wachusett Res. 110 M. Lynch#
26 W. Newbury 70 J. Hoye#
27 Marlboro 97 R. Graefe
28 Arlington Res. 50 M. Pelikan

Tufted Duck
thr Wachusett Res. 1 m v.o.
1-5 Taunton 1 m S. Arena#

Greater Scaup
4, 12 Westport 20, 4 E. Nielsen
12 Lakeville 300 W. Petersen#
19 Boston H. 610 TASL (M. Hall)

Lesser Scaup
11 Plymouth 6 W. Petersen#
18 Randolph 5 G. d'Entremont#
18 Ipswich 6 H. Wiggin#
19, 25 Westport 16, 18 E. Nielsen
25 Lakeville 35 S. Arena#

Common Eider
3 Rockport 1300 R. Heil
12 S. Monomoy 2000 J. Sones#
19 Boston H. 8230 TASL (M. Hall)
26 P.I. 3000 M. Pelikan

Harlequin Duck
3 Rockport 26 R. Heil
11 Scituate 6 W. Petersen#

Oldsquaw
12 S. Monomoy 800 J. Sones#

Black Scoter
16 P.I. 15 W. Drew#
19 Boston H. 12 TASL (M. Hall)

Surf Scoter
19 Boston H. 29 TASL (M. Hall)

White-winged Scoter
3 Rockport 470 R. Heil
12 S. Monomoy 2500 J. Sones#
19 Boston H. 279 TASL (M. Hall)

Common Goldeneye
3, 25 Westport 90, 55 E. Nielsen
12 Newbypt 75 BBC (D. + D. Oliver)
19 Boston H. 816 TASL (M. Hall)
19 Wachusett Res. 40 M. Lynch#
25 Lakeville 20 S. Arena#

Barrow's Goldeneye
1-19 Newbypt 1-2 v. o.
3 Rockport 1 m R. Heil
3-21 M.V. 1-2 A. Brown#
4 Westport 1 E. Nielsen
19 Nahant 1 R. Stymeist#

Bufflehead
19 Boston H. 1459 TASL (M. Hall)
25 Westport 325 E. Nielsen

Hooded Merganser
5 Taunton 6 S. Arena
5 Wakefield 7 P. + F. Vale
9 Newton 14 C. Hepburn
10 Melrose 6 D. + I. Jewell
11 Braintree 20 G. d'Entremont
14 Stow 8 S. + L. Hennin
16 P.I. 14 W. Drew#
16 IRWS 17 R. Heil
17 Wayland 6 S. Perkins#
25 Randolph 10 G. d'Entremont

Common Merganser
10 Lynn 32 I. Lynch
11 Medford 30 M. Pelikan
11 Braintree 44 G. d'Entremont
11 Randolph 53 G. d'Entremont
18 Worcester 178 M. Lynch#
20 Harvard 30 S. + L. Hennin
21 Wayland 71 N. Patterson
21 Acton 30 M. Resch
26 Wachusett Res. 70+ M. Lynch#

Red-breasted Merganser
15, 22 S. Dart. (A.Pd) 63, 42 LCES (J. Hill)
19 Boston H. 1752 TASL (M. Hall)
25 Westport 240 E. Nielsen
31 Magnolia 80 J. Brown#

Ruddy Duck
24 Melrose 2 D. + I. Jewell
28 Arlington Res. 5 M. Pelikan
31 Boston 5 T. Aversa

Turkey Vulture
18 Lincoln 6 M. Pelikan
19 Athol 37 G. d'Entremont#
22 Salisbury 8 G. Leet
25 Byfield 6 S. Haydock
25 Dartmouth 16 E. Nielsen
25 Westport 6 E. Nielsen
26 W. Newbury 4 J. Brown#
26 Groveland 6 D. Chickering
27 Wayland 4 N. Patterson
28 Gloucester 5 J. Brown#

Osprey
3 Oak Bluffs 1 D. Smith#
19, 25 Westport 6, 39 E. Nielsen
25 Lakeville 1 S. Arena#
31 Wareham 1 J. Griffith

Bald Eagle
thr Brewster/Harwich 2 v. o.
4, 19 Newburyport 2, 1 D. Chickering
7 Wayland 1 B. Howell
11 Wachusett Res. 1 ad M. Lynch#
13-24 Waltham 1 ad F. Gray + v. o.
15 Ipswich 1 imm S. Clemson
25 Lakeville 2 S. Arena#

Northern Harrier
18 P.I. 2 W. Drummond#
19 Dartmouth 2 E. Nielsen
25 W. Bridgewater 4 S. Arena#
25 Bridgewater 3 S. Arena#
25 Cumb. Farms 13 S. Arena#

Sharp-shinned Hawk
thr Reports of 18 indiv. from 17 locations

Cooper's Hawk
thr Mt. A. 1 J. Heywood
6 Waltham 1 D. Meehan#
8 E. Middleboro 1 K. Anderson
9 Nantucket 1 B. Perkins
17 Bridgewater 1 K. Weinheimer#
20 GMNWR 1 S. Perkins#

Northern Goshawk
5 Hopkinton pr n R. Wolanin
11 Boxford pr R. Heil
21 Salisbury 1 G. Leet
25 Petersham 1 ad M. Lynch#

Red-shouldered Hawk
thr E. Middleboro pr K. Anderson
11 N. Attleboro 1 M. Resch
11 W. Roxbury 1 H. Miller
12 S. Hanson 2 W. Petersen#
12 Lakeville 1 L. Nachtrab#
18-31 E. Boxford 1-2 J. Brown#
22 GMNWR 1 S. Perkins
31 W. Bridgewater 1 G. d'Entremont

Red-tailed Hawk
19 Newbypt area 12 BBC (S. Grinley)
23 Wayland 5 N. Patterson
25 Cumb. Farms 6 S. Arena#
Rough-legged Hawk
4 P.I. 1 H. Wiggin#
10 Cumb. Farms 3 K. Anderson
12 P.I., Newbypt 1, 1 BBC (D. Oliver)
20 W. Bridgewater 1 K. Weinheimer
American Kestrel
25 Cumb. Farms 6 S. Arena
Merlin
8 Wayland 1 N. Patterson
10 Ipswich 1 H. Wiggin#
21 Newton 1 R. Forster
23 Salisbury 1 J. Center
25 Cumb. Farms 1 E. Weinheimer#
25 Westport 1 A. Hirschkop#
31 Rowley 1 m D. + I. Jewell
Peregrine Falcon
thr Boston pr fide T. French
8 Saugus 1 ad J. Berry
18, 26 P.I. 1, 1 v. o.
26 Mt. A. 1 G. Gove#
Ruffed Grouse
3 Rockport 1 R. Heil
8 IRWS 2 D. + I. Jewell
11 Pepperell 1 E. Stromsted
21 Stow 1 S. + L. Hennin
27 Mashpee 1 E. + S. Miller
30 E. Middleboro 2 K. Anderson
Wild Turkey
thr Sherborn 20 E. Taylor
7 Danvers 6 D. + I. Jewell
15 E. Middleboro 8 K. Anderson
16 Natick 3 E. Taylor
18 E. Boxford 6 J. Brown#
25 Petersham 120 M. Lynch#
Virginia Rail
29 Salem 3 I. Lynch
American Coot
10 Lynn 20 I. Lynch
11 Braintree 17 G. d'Entremont
11 Randolph 13 G. d'Entremont
13 Newton 27 C. Hepburn
15 Taunton 19 K. Anderson
19 Westport 16 E. Nielsen
30 Nantucket 27 E. Andrews
Piping Plover
19 Gay Head 2 R. Richards#
21, 26 P.I. 1. 2 J. Brown#
22 S. Dart. (A.Pd) 1 LCES (J. Hill)
Killdeer
8 Mt. A., Arlington 1, 1 R. Stymeist#
8, 24 Easton 1, 24 S. Arena
13 W. Bridgewater 20+ K. Anderson
14 Boston (Logan) 20 N. Smith
16 Wayland 22 S. Perkins
25 Cumb. Farms 13 S. Arena#
26 Newbury 60 J. Brown#
American Oystercatcher
11 Edgartown 1 R. Hope
13 Katama 1 P. Schultz
26 Chatham 2 R. Prescott
Greater Yellowlegs
11 Newburyport 1 S. + L. Hennin
18 P.I. 2 D. + I. Jewell
22 Salisbury 3 G. Leet
Ruddy Turnstone
11 Minot 1 W. Petersen#
Red Knot
11 Minot 5 W. Petersen#
Sanderling
19 Boston H. 272 TASL (M. Hall)
Purple Sandpiper
12 Dartmouth 6 E. Nielsen
12 Westport 31 E. Nielsen
Dunlin
19 B. Nikula 48 TASL (M. Hall)
22 S. Dart. (A.Pd) 119 LCES (J. Hill)
Common Snipe
22 Yarmouthport 3 E. + S. Miller
23 Cumb. Farms 12 S. Perkins#
25 W. Bridgewater 5 S. Arena
29 Newbury 35 C. Ralph#
American Woodcock
13 W. Newbury 3 R. Heil
14 Worc. (BMB) 4 C. Phillips#
14 Wayland 60+ migr N. Patterson
16 IRWS 6+ R. Heil
19 Lexington 3 M. Rines
19 Salem 4 I. Lynch#
19 Bolton Flats 10+ M. Lynch#
25 Middleboro 3 S. Arena#
26 Boxboro 3 C. Paine
Common Black-headed Gull
10-12 Newburyport 1 v. o.
17 E. Boston 7 J. Quigley
Mew Gull
thr Winthrop 1 v. o.
Iceland Gull
9 Medford 1 ad M. Rines
10-13 Nantucket 4 E. Andrews
11 Quincy 2 ad G. d'Entremont
12 Newbypt area 8 R. Forster#
17 Acton 2 M. Resch
20 Medford 1 imm J. Ludwig
Lesser Black-backed Gull
24, 30 Acton 1 1W, 1 3W M. Resch
Glaucous Gull
thr Acton 1 M. Resch
8 Wachusett Res. 1 C. Ralph#
11 Newburyport 1 1W I. Lynch
25 Salisbury 1 M. Rines#
28 Wayland 1 2W R. Forster
Razorbill
19 Edgartown 18 S. Perkins#
Black Guillemot
3 Gloucester 9 R. Heil
Barn Owl
thr Nantucket 3 E. Andrews
Eastern Screech-Owl
6 Ipswich pr J. Berry
7 Wayland 4 S. Arena#
14 Worc. (BMB) 3 C. Phillips#
Great Horned Owl
thr Ipswich 2-3 J. Berry
4 Lakeville 3 S. Arena
4 Middleboro 3 S. Arena
19 Bolton Flats 3 M. Lynch#
Snowy Owl
12 Orleans 1 S. Thompson#
24 P.I. 2 T. Aversa
28 Barnstable 1 K. Hamilton
Barred Owl
11 Middleboro 2 W. Petersen#
24 Boxford 1 S. Arena#
25 Ipswich 2 J. Berry
28 Holliston 1 T. Aversa
Short-eared Owl
10 Katama 2 V. Laux#
12 Orleans 1 S. Thompson#

Short-eared Owl (continued)

12	Cumb. Farms	17	T. Raymond
18	Salisbury	1	H. Coolidge#
18-31	P.I.	1	v. o.
22	S. Dart. (A.Pd)	1	LCES (J. Hill)

Northern Saw-whet Owl

4	S. Middleboro	1	S. Arena
8	Bridgewater	1	E. Weinheimer
12	Petersham	1	M. Lynch#
21	Ipswich	1	J. Berry

Red-headed Woodpecker

thr	Petersham	1	D. Small
1-12	Georgetown	1	v. o.
19	Falmouth	1 imm	E. Pellegrini

Red-bellied Woodpecker

7	Ipswich	1	D. + I. Jewell
11	Holden	pr	M. Lynch#
18	Westport	2	W. Petersen#

Hairy Woodpecker

thr	Boxboro	2	C. Paine
thr	Boxford	2	J. Brown#
4	Ipswich	2	H. Wiggin#
18	Lincoln	pr	M. Pelikan

Pileated Woodpecker

5	Quabbin (G37)	1	E. Nielsen
8	Weston	1	S. McLean
8	Bedford	2	A. Devaux

FLYCATCHERS THROUGH GROSBEAKS

The first Eastern Phoebes arrived about 5 days earlier than last year on the 15th, although the bulk arrived after March 25. Tree Swallows, another hardy early spring migrant, arrived a little earlier on March 8, although good numbers did not appear until late in the month. Other typical March arrivals and their general arrival dates included Red-winged Blackbirds on March 19, Rusty Blackbirds on March 26, and Common Grackles on March 19. One observer at Bolton Flats spent two days specifically concentrating on counting the blackbirds flying overhead, sorting out the grackles from the Redwings. All the birds came from the north and all headed directly south on both days.

An exceptionally early sighting was of a Louisiana Waterthrush reported from Oxbow National Wildlife Refuge on March 28, the earliest report of this species on record. Several vagrants continued into March. The three **Mountain Bluebirds** first found in January continued at Marconi Station in Wellfleet through March 14. A **Western Tanager** in Belmont, a **Painted Bunting** in Brewster, and **Harris' Sparrows** on Nantucket and in Hopkinton continued at feeders since December.

Single **Bohemian Waxwings** were noted from Middleboro and Eastham, while other winter finches went virtually unreported from eastern Massachusetts. Other noteworthy reports included good numbers of Eastern Bluebirds, a Clay-colored Sparrow, a Lark Sparrow, a Grasshopper Sparrow and a **Yellow-headed Blackbird** from Cumberland Farms.

R. H. S.

Eastern Phoebe

15	Wayland	1	N. Patterson
16	E. Boxford	1	J. Brown#
18	Worcester	1	M. Lynch#
18	Topsfield	1	H. Coolidge#
19	GMNWR	1	M. Pelikan
19	Georgetown	1	D. Chickering
19	E. Middleboro	1	K. Anderson
26	Framingham	15	R. Stymeist#

Horned Lark

12	P.I. 12	BBC	(D. + D. Oliver)
18	Concord (NAC)	80	K. Hamilton
19	Salem	5	T. Young#
23	Cumb. Farms	70	S. Perkins#
26	W. Bridgewater	8	G. d'Entremont#

Tree Swallow

8	Mashpee	3	E. + S. Miller
11	Cumb. Farms	1	K. Weinheimer
12	Lakeville	6	L. Nachtrab#
12	Chilmark	1	A. Keith
16	Concord (NAC)	2	S. Perkins#
16, 28	GMNWR	1, 300	S. Perkins#
19, 31	Wayland	2, 300	N. Patterson

American Crow

11, 31	Framingham	1500, 440	E. Taylor

Fish Crow

12	Halifax	1	W. Petersen#
14	Milton	2	W. Petersen
25	Holbrook	10+	G. d'Entremont
26	W. Bridgewater	1	G. d'Entremont#
29	Hanson	1	W. Petersen
30	E. Middleboro	3	K. Anderson

Common Raven

5	Quabbin (G37)	3	E. Nielsen

Red-breasted Nuthatch

5, 26	Wenham, Ipswich	1, 1	J. Berry
6	E. Middleboro	1	K. Anderson
11	Boxford	12	R. Heil
18, 19	Lincoln, Concord	2, 1	M. Pelikan
27	Mashpee	1	E. + S. Miller

Brown Creeper

18, 19	Lincoln, Concord	2, 2	M. Pelikan
19	Boxford	4	D. Chickering
26	Quabbin (G40)	3	E. Nielsen
31	Harvard	5	S. + L. Hennin

Carolina Wren

3	Rockport	1	R. Heil
11	Hanson	2	W. Petersen
12	Lexington	1	M. Pelikan
18	Worcester	2	M. Lynch#
20	Marlboro	1	R. Graefe
23	Wayland	1	N. Patterson
29	Arlington	1	M. Rines

Winter Wren

11	Boxford	1	R. Heil
19	Salem	1	I. Lynch#
21	W. Roxbury	1	T. Aversa
21	S. Boston	1	R. Donovan
22	Yarmouthport	1	E. + S. Miller

Marsh Wren

13, 25	GMNWR	1	D. + I. Jewell

Ruby-crowned Kinglet

24-29	Wellesley	2	B. Weinig

Eastern Bluebird

4	S. Wellfleet	20+	M. Lynch#
4	Dighton	7	R. Stymeist#
11	Vineyard Haven	12	N. Abbott
thr	Reports of 1-3 indiv. from 7 locations		

Mountain Bluebird
1-14 S. Wellfleet 3 v. o.
Hermit Thrush
10-28 Brookline 4 indiv. B. Reilly#
19 Nantucket 1 J. Papale#
25 Westport 2 E. Nielsen
American Robin
2 Maynard 75+ L. Nachtrab
3 Rockport 210+ R. Heil
4 Ipswich 50 J. Berry
18 Worcester 200+ M. Lynch#
Gray Catbird
12 Westport 3 E. Nielsen
31 W. Roxbury 1 T. Aversa
Brown Thrasher
12 Dartmouth 1 S. Sweet#
19 Boston 1 T. Aversa
28 Natick 1 E. Landre#
American Pipit
22 Concord (NAC) 2 S. Perkins#
24 Ipswich 6 T. Aversa
26 Bolton Flats 1 M. Lynch#
Bohemian Waxwing
12 Middleboro 1 T. Raymond
14 Eastham 1 K. Hamilton
Cedar Waxwing
2 Maynard 200+ L. Nachtrab
3 Rockport 60 R. Heil
5 Westport 51 M. Lynch#
12 Middleboro 120 T. Raymond
19 Oak Bluffs 100+ Shirley Miller
25 Ipswich 72 J. Berry
Northern Shrike
1-14 Eastham 1 ad v. o.
1-24 Wayland 1 N. Patterson
4 Cumb. Farms 1 imm S. Arena
12-26 P.I. 1-2 v. o.
13 WBWS 1 J. Sones
25 S. Wellfleet 1 A. King
Yellow-rumped Warbler
4 S. Wellfleet 40+ M. Lynch#
12 Westport 8 E. Nielsen
12 P.I. 15 G. d'Entremont#
18 Randolph 2 G. d'Entremont
21 W. Roxbury 2 T. Aversa
26 Sudbury 1 R. Forster
Pine Warbler
thr Brewster 2 A. King
3 Edgartown 1 R. Shea#
11 Spencer 1 M. Lynch#
30 Hanson 1 W. Petersen
Louisiana Waterthrush
28 ONWR 1 E. Salmela
Western Tanager
1-18 Belmont 1 G. Speck
Painted Bunting
1-10 Brewster 1 m A. Furman
Dickcissel
4-25 Dartmouth 1 E. Nielsen
Rufous-sided Towhee
3 Rockport 1 f R. Heil
12 Brewster 1 A. King
12 Westport 4 E. Nielsen
20 Charlestown 1 M. Hall
American Tree Sparrow
thr Cumb. Farms 175 max S. Arena#
4 Dartmouth 70 E. Nielsen
Chipping Sparrow
thr Brewster 13 max A. King
Clay-colored Sparrow
4, 25 Cumb. Farms 1 S. Arena#
Field Sparrow
4 Cumb. Farms 12 S. Arena
4 Raynham 25 S. Arena
12 Dartmouth 4 E. Nielsen
19 Salem 3 I. Lynch
26 Framingham 1 M. Rines#
Vesper Sparrow
29-31 DWWS 1 v. o.
Lark Sparrow
14-25 W. Peabody 1 R. Heil + v. o.
Savannah Sparrow
12 Dartmouth 15 E. Nielsen
26 Middleboro 15 G. d'Entremont#
26 W. Bridgewater 5 G. d'Entremont#
"Ipswich" Savannah Sparrow
26 P.I. 2 A. Hirschkop#
Grasshopper Sparrow
12 Dartmouth 1 S. Perkins#
Fox Sparrow
8 IRWS 2 D. + I. Jewell
11 Walpole 1 B. Hall
12 Westport 1 E. Nielsen
13 W. Peabody 1 R. Heil
15 Maynard 1 L. Nachtrab
21 S. Boston 4 R. Donovan
25 Hardwick 4 M. Lynch#
27 Medford 2 J. Kennedy
29 Boston (F.Pk) 2 T. Aversa
18-31 Reports of indiv. from 7 locations
Swamp Sparrow
4 Cumb. Farms 4 S. Arena
4 Dartmouth 5 E. Nielsen
25 Randolph 1 G. d'Entremont
White-throated Sparrow
4 Dartmouth 60 E. Nielsen
White-crowned Sparrow
thr DWWS 2 v. o.
9 Nantucket 1 B. Perkins
12 Chilmark 1 A. Keith
Harris' Sparrow
thr Hopkinton 1 G. Gove
thr Nantucket 1 L. Van Duyne
Lapland Longspur
1 Eastham (F.E.) 1 E. + S. Miller
Snow Bunting
4 Nauset 19 K. Weinheimer
5 S. Boston 28 M. Hall
5 Truro 7 T. Raymond
10 P.I. 25+ D. + I. Jewell
14 Boston (Logan) 500 N. Smith
18 Concord (NAC) 1 K. Hamilton#
19 Hull 20 TASL (M. Hall)
Red-winged Blackbird
19, 26 Bolton Flats 8830, 7210 M. Lynch#
25 Westport 235 E. Nielsen
Eastern Meadowlark
1-15 Spencer 1 D. Mainville
10 P.I. 1 D. + I. Jewell
11 Katama, Chilmark 7, 5 A. Keith
11 Spencer 1 M. Lynch#
13 DWWS 11 E. Weinheimer#
21 W. Roxbury 1 T. Aversa
25 Cumb. Farms 20 S. Arena#
25 Bridgewater 8 S. Arena#
26 Framingham 1 R. Stymeist#
26 Ipswich 3 J. Berry
28 S. Dart. (A.Pd) 40+ A. Jones#
Yellow-headed Blackbird (details submitted)
26 Cumb. Farms 1 J. Hepburn#
Rusty Blackbird
5 Petersham 3 E. Nielsen

Rusty Blackbird (continued)			
12	S. Hanson	2	W. Petersen#
22	GMNWR	1	L. Nachtrab
25	Topsfield	1	M. Argue#
25	Petersham	2	M. Lynch#
26	Framingham	3	R. Stymeist#
26	Wakefield	1	D. + I. Jewell
27	Wayland	10	R. Walton#
29	Salisbury	1	C. Ralph#
31	E. Sandwich	3	E. + S. Miller
Common Grackle			
19, 26	Bolton Flats	16570, 3860	M. Lynch#
10, 29	Framingham	400, 1960	E. Taylor
26	Littleton	3000	E. Nielsen
Brown-headed Cowbird			
9	W. Bridgewater	50	E. Weinheimer#
19	Bolton Flats	150+	M. Lynch#
25	Cumb. Farms	300	S. Arena
25	Westport	90	E. Nielsen
Purple Finch			
19-31	Boxford	1-6	J. Brown
24-29	Wellesley	2	B. Weinig
25	E. Barnstable	1	E. + S. Miller
25	Pepperell	1	M. Resch
26	W. Newbury	1 m	R. Heil
26	P.I.	6	M. Pelikan
26	E. Middleboro	2	K. Anderson
27	Concord	1	R. Forster
29	Hanson	1	W. Petersen
Evening Grosbeak			
5	Royalston	1	E. Nielsen
25	Petersham	11	M. Lynch#

BIRD SIGHTINGS
APRIL 1995
SUMMARY

by Richard A. Forster, Marjorie W. Rines, and Robert H. Stymeist

April in eastern Massachusetts was cool and dry. On April 5, the temperature never went above the freezing mark, and overall the temperature averaged 46.1° for the month at Boston, with a high of only 68° on April 13. Rainfall was only 1.4 inches, 2.2 inches below normal. This was the fifth driest April in 125 years. Winds were out of the southwest on only two days: April 8 and April 12. R. H. S.

LOONS THROUGH WOODPECKERS

Loon numbers built up appreciably during the month in about average numbers. An Arctic/Pacific Loon was reported from Boston Harbor late in the month, but no details were submitted. Pied-billed Grebe numbers were less than impressive, but large numbers of Horned Grebes were seen at Marblehead Neck early in the month. Herons were well represented throughout the month, with numbers typically increasing in the latter half. In general American Bittern and Cattle Egret were scarce, while there was an excellent showing of Glossy Ibis in the Essex/Ipswich area on the 22nd.

Waterfowl pass through in good numbers during April. A **Tundra Swan** was a rare and unexpected spring migrant in Auburn, and the **Greater White-fronted Goose** lingered in the Newburyport vicinity until late in the month, when some black mottling was evident on the belly. Snow Geese were notably scarce. The duck migration proceeded with relatively few noteworthy sightings. Most interesting were a total of three **"Eurasian" Green-winged Teal**, the continued presence of a **Tufted Duck** at Wachusett Reservoir in early April, a single King Eider at Nahant, and a fairly late Barrow's Goldeneye in Newburyport. Green-winged Teal appeared in good numbers and there was a modest Ruddy Duck flight. Good numbers of Harlequin Ducks at Rockport were holdovers from the winter season.

In spite of the usually good coverage by hawkwatchers, the spring migration was disappointing with the exception of small falcons. The American Kestrel flight totaled over 1600 individuals, roughly twice the previous high spring flight in 1978 and triple the seasonal average (Paul Roberts, pers. comm.). The best day was April 20, when 550 were observed at Plum Island, far surpassing the previous single day total. There were four additional single day totals exceeding 100 individuals at Plum Island. Of the approximately 50 Merlins, 32 were observed at Plum Island from April 20-23. On the down side, Sharp-shinned Hawks were as scarce as kestrels were abundant. Several of the winter's Rough-legged Hawks lingered into the month. The scattering of Virginia Rail reports was typical for early spring, but Soras were scarce.

The early season shorebird migration was slow and disappointing. The good numbers of Piping Plovers at Plum Island, however, were particularly encouraging. Most of the usual early migrants didn't put in an appearance until late in the month. Included in this group were Lesser Yellowlegs, and Pectoral and Least sandpipers. A Short-billed Dowitcher, seen on April 20, was presumably identified by voice. Two recognizably different male **Ruffs** were present in Newburyport Harbor. Purple Sandpipers were much better reported than usual, and careful monitoring of the American Woodcock flight in Wayland yielded impressive results. Both Glaucous and Iceland gulls were reported from inland locations. Bonaparte's Gulls arrived late in the month, and a few Common Black-headed Gulls lingered at East Boston. The Caspian Terns in Scituate appeared during the brief window when spring migrants occur. Almost no alcids lingered.

A few Snowy Owls lingered until early in the month. The Northern Saw-whet Owls in Plymouth may have been local breeders. Chimney Swifts showed up on time and in fairly good numbers. The Red-headed Woodpecker in Sherborn was an arriving resident, while the rest were birds undoubtedly present from late winter. Both Yellow-bellied Sapsucker and Northern Flicker were moving throughout most of the month in fairly typical numbers.

R. A. F.

Date	Location	Number	Observers
Red-throated Loon			
30	Westport	12	M. LaBossiere
30	P.I.	10	S. Perkins#
Arctic/Pacific Loon			
30	Boston H.	1	R. Donovan
Common Loon			
22	Cape Cod Bay	32	S. Arena#
30	P.I.	12	S. Perkins#
30	Westport	12	M. LaBossiere
Pied-billed Grebe			
7	Medford	2	L. Beattie
10-11	Lincoln	2	S. Perkins#
15	Petersham	4	M. Lynch#
16	Boston (F.Pk)	1	T. Aversa
17	W. Newbury	1	S. Perkins#
23	S. Hanson	1	W. Petersen
1-12	Reports of single ind. from 8 loc.		
Horned Grebe			
2	Westport	19	M. Lynch#
7	Marblehead	210	T. Aversa
12, 25	P.I.	12, 2	W. Drew#
30	GMNWR	3 br pl	S. Perkins
Red-necked Grebe			
2	Marblehead	55	F. Bouchard
12	Hull	50	J. Norton
Northern Gannet			
5	Winthrop B.	2	R. Lockwood
17	Eastham	21	I. Lynch
17	P.I.	90	S. Perkins#
22	Cape Cod Bay	80	S. Arena#
29	Gloucester	8	J. Brown#
Great Cormorant			
30	Cape Ann	3	J. Berry
30	P.I.	1	S. Perkins#
Double-crested Cormorant			
22	Lynnfield	31	P. + F. Vale
30	Cape Ann	450	J. Berry
30	P.I.	350+	S. Perkins#
American Bittern			
9	P.I.	1	J. Smith
10	Wayland	1	N. Patterson
13	Boxboro	1	C. Paine
18	GMNWR	1	S. Perkins#
22	Mt.A.	1	R. Stymeist#
Great Blue Heron			
4	S. Carver	2 pr n	K. Anderson
8	Acton	28BBC	(R. Stymeist)
9	Spencer	4 pr n	M. Lynch#
10	Essex	11	R. Young#
12	P.I.	6	W. Drew#
29	Sudbury	10+ nests	W. Petersen#
Great Egret			
2	Westport	4	M. Lynch#
8	P.I.	3	M. Argue#
10	Gloucester	2	J. Kierstead
15	Essex	5	S. Arena#
19	Rehoboth	1	K. Anderson
20	Harwich	2	B. Nikula
30	GMNWR	2	BBC (S. Hepburn)
Snowy Egret			
1	Winthrop	2	T. Hall
2	Westport	2	M. LaBossiere
12, 25	P.I.	1, 7	W. Drew#
14	Squantum	6	M. Rines
19	Swansea	1	K. Anderson
22	Hingham	34	K. Weinheimer#
22	Essex	12	E. Nielsen#
28	Mt.A.	4	S. Zendeh#
30	Gloucester	20	J. Berry
Little Blue Heron			
10	Scituate	1	S. Hecker
9	Squantum	1 ad	G. d'Entremont#
14-15	WBWS	1 ad	v.o.
28	E. Sandwich	1 ad	S. + E. Miller
29	Manchester	2	M. Lynch#
30	Bolton Flats	1	fide B. Van Duesen
Cattle Egret			
8	Chatham	1	W. Bailey
18, 27	Ipswich	1, 4	J. Berry
23	Concord	1	B. Lee
29	Beverly	3	M. Lynch#
Green Heron			
20	Easton	1	G. d'Entremont
22	Brookline	1	F. Bouchard
22, 28	Mt.A.	1, 4	v.o.
Black-crowned Night-Heron			
11	Plymouth	1	G. d'Entremont
12	P.I.	4	W. Drew#
14, 27	Mt.A.	1, 2	R. Petersen
29	Manchester	3+	M. Lynch#
Glossy Ibis			
8	Chatham	1	W. Bailey
13	P.I.	27	R. Forster
22	Essex, Ipswich	30, 200	S. Perkins#
26-27	Revere	8	J. Berry
Tundra Swan			
12	Auburn	1	T. Mongeon
Whooper Swan			
thr	P.I.	5 max 4/1	v.o.
4/1	Ipswich	4	J. Berry
Greater White-fronted Goose			
1-24	Newbury	1	R. Forster + v.o.

Snow Goose
22 Middleboro 1 W. Petersen
23 Newburyport 30 J. Brown#
Brant
9 Barnstable (S.N.) 200+ G. Ferguson
22 Plymouth Bay 450 S. Arena#
30 Squantum 500 G. d'Entremont#
9, 29 Newburyport 130, 80 M. Lynch#
30 P.I. 250 S. Perkins#
Wood Duck
thr GMNWR 55 max 4/8 v.o.
thr Sherborn 20 E. Taylor
6 Wayland 20+ N. Patterson
8 Holden 33 M. Lynch#
15 Holliston 15 E. Taylor
15-16 Petersham 16 M. Lynch#
15-30 Provincetown 14 max B. Nikula#
Green-winged Teal
thr W. Harwich 45+ max B. Nikula#
1 Topsfield 19 P. + F. Vale
3, 16 Wayland 50, 100 N. Patterson
7, 16 GMNWR 40, 90 S. Perkins
12, 25 P.I. 495, 144 W. Drew#
17 W. Newbury 25 S. Perkins#
"Eurasian" Green-winged Teal
7 P.I. 1 N. Nash
17 Lakeville 2 K. Weinheimer#
American Black Duck
2 Westport 330+ M. Lynch#
9 Newbypt, P.I. 900, 140 M. Lynch#
Northern Pintail
1 GMNWR 14 J. Hoye#
7 Wayland 5 N. Patterson
9, 29 Newburyport 13, 1 M. Lynch#
12, 25 P.I. 26, 2 W. Drew#
15 W. Newbury 7 S. Arena#
Blue-winged Teal
8 Wayland 5 E. Taylor
9 Newbury 17 P. + F. Vale
18, 25 GMNWR 8, 2 R. Lockwood
22 Ipswich 3 S. Perkins#
22 Plymouth B. pr S. Arena#
25 N. Dartmouth pr M. Boucher
26 Wayland 2 S. Perkins#
27 Wellfleet 3 S. + E. Miller
Northern Shoveler
1-19 Boston 1 f T. Aversa
9 Wayland 1 m R. Forster
2-13 GMNWR 1 S. Perkins + v.o.
12 P.I. 2 W. Drew#
Gadwall
thr P.I. 50 max W. Drew#
16 Bolton Flats 4 M. Pelikan
22 Rowley 7 J. Berry
30 S. Dartmouth 5 M. Boucher
American Wigeon
8 Marlboro 6 E. Taylor
17 Lexington 8 M. Pelikan
Ring-necked Duck
1 Halifax 125 S. Arena#
1, 8, 22 GMNWR 60, 100, 2 E. Taylor
2 Framingham 50 E. Taylor
2 S. Hanson 125 W. Petersen
8, 15 Petersham 43, 16 M. Lynch#
13, 30 Arlington Res. 50, 1 M. Pelikan
17 W. Newbury 15 S. Perkins#
23 Harvard 11 S. + L. Hennin
Tufted Duck
1-8 Wachusett Res. 1 R. Stymeist + v.o.
Greater Scaup
2 Westport 60+ M. Lynch#
8 Wachusett Res. 15 BBC (R. Stymeist)
17, 30 Newbypt, P.I. 15, 2 S. Perkins#
23 Lakeville 5 M. Boucher
Lesser Scaup
3 E. Boston 2 G. Ferguson
8 Pembroke 16 W. Petersen
8 Wachusett Res. 10 BBC (R. Stymeist)
9 Lakeville 16 W. Petersen
17, 23 Newburyport 20, 5 S. Perkins#
3-15 GMNWR 1 S. Perkins
Common Eider
2 Westport 800+ M. Lynch#
15 Salisbury 500+ D. Chickering
30 Cape Ann 150 J. Berry
King Eider
2 Nahant 1 M. Rines#
Harlequin Duck
8 Nahant 3 W. Petersen#
9 Rockport 23 M. Lynch#
Oldsquaw
the Newbypt H. 700 max v. o.
Black Scoter
2 Westport 6 M. Lynch#
22 Cape Cod Bay 15 S. Arena
30 Cape Ann 40+ J. Berry
30 P.I. 6 E. Nielsen#
Surf Scoter
2 Westport 37 M. Lynch#
22 Cape Cod Bay 60+ S. Arena#
24 M. V. 750 V. Laux
30 Cape Ann 50+ J. Berry
White-winged Scoter
2 Westport 50+ M. Lynch#
9 P.I. 40+ M. Lynch#
22 Cape Cod Bay 3500+ S. Arena#
Common Goldeneye
2 Westport 90+ M. Lynch#
2 GMNWR 3 S. Perkins#
17, 23 Newburyport 150, 30 S. Perkins#
Barrow's Goldeneye
22-29 Newburyport 1 v.o.
Bufflehead
2 Westport 230+ M. Lynch#
9, 29 Newbypt, P.I. 90+, 8 M. Lynch#
30 Squantum 35 G. d'Entremont#
Hooded Merganser
1 Westport 7 R. Stymeist#
14 Quabbin (G45) 5 T. Aversa
15-16 Petersham 8 M. Lynch#
20 Brookline 1 f T. Aversa
22 P.I. 2 S. Perkins#
Common Merganser
4 Wayland 19 N. Patterson
7 GMNWR 30 S. Perkins
7 Acton 30 M. Resch
8 Petersham 28 M. Lynch#
16 Waltham 6 E. Taylor
29 N. Andover 9 J. Berry
30 Pepperell 3 E. Stromsted
Red-breasted Merganser
2 Westport 300+ M. Lynch#
29 Newburyport 40+ M. Lynch#
27 Barnstable H. 400+ S. + E. Miller
Ruddy Duck
thr Arl. Res. 8 max 4/15 M. Pelikan
8, 30 Pembroke 7, 5 W. Petersen
24 Falmouth 1 m S. + E. Miller
30 Boston 4 J. Renee
Turkey Vulture
1 Westport 9 R. Stymeist#
2 Plainville 13 S. Arena#

Turkey Vulture (continued)

3	Lakeville	11	R. White#
10	Randolph	32	N. Smith
11	Ipswich	6	J. Berry
14	Fairhaven	9	M. LaBossiere
17	Mt. Watatic	26	EMHW
18, 26	N. Truro	10+, 17	J. Sones#
22	Sudbury	6	W. Petersen
29	Gloucester	6	J. Brown#
29	Manchester	8	M. Lynch#

Osprey

1	Westport	86	R. Stymeist#
7	GMNWR	3	S. Perkins
11	Lakeville	3 pr	K. Holmes
15, 16	P.I.	17, 21	EMHW
17	Eastham	3	I. Lynch
23	Mt. Wachusett	15	EMHW

Bald Eagle

1	Concord	1	J. Peterson
1	Lincoln	1	D. Picker
5	P.I.	1	C. Ralph
23	Lakeville	2	K. Weinheimer
30	Plymouth	1 ad	S. Arena#

Northern Harrier

1	Cumb. Farms	7	S. Arena#
16, 17	P.I.	12, 12	EMHW
23	Essex	2	D. Young
27	S. Monomoy	10+	R. Hall
30	S. Dart. (A.Pd)	2	A. Jones

Sharp-shinned Hawk

18	N. Middleboro	2	K. Holmes
22	Maynard	2	L. Nachtrab
17, 22, 23	P.I.	14, 14, 12	EMHW
23	Newbypt	32	EMHW
26	N. Truro	25	EMHW

Cooper's Hawk

6	N. Dartmouth	2	M. Boucher
22, 26	N. Truro	2, 4	B. Nikula#
thr	Reports of individuals from 12 loc.		

Northern Goshawk

thr	Boxford	pr n	v.o.
1	Hardwick	1 ad	M. Lynch#
2	Pepperell	1	M. Resch
8	Holliston	pr	T. Aversa
8	Petersham	1 ad	M. Lynch#
18	Lincoln	pr n	M. Rines
23	WBWS	1 ad	B. Nikula
30	Lancaster	1	C. Hepburn

Red-shouldered Hawk

thr	Boxford	1-2	J. Brown#
thr	Sherborn	3	E. Taylor
thr	Middleboro	pr	K. Anderson
8	Holliston	pr n	T. Aversa
9	Lakeville	6	W. Petersen
thr	Reports of individuals from 9 locations		

Broad-winged Hawk

17, 18, 22	Mt. Watatic	65, 35, 106	EMHW
17, 20, 23	Mt. Wach.	49, 122, 57	EMHW
22	Princeton	71	EMHW
20, 22	Maynard	3, 12	L. Nachtrab
22	Middleboro	2	K. Holmes
29	Quabbin (G40)	3	T. Aversa#

Red-tailed Hawk

thr	Sherborn	6	E. Taylor
17	Sudbury R.	10	J. Hoye#

Rough-legged Hawk

8	Middleboro	3	W. Petersen
8	Halifax	1	W. Petersen
20	Cumb. Farms	1 lt	T. Aversa

American Kestrel

4, 15, 20	P.I.	131, 109, 550	EMHW
22, 23	P.I.	193, 149	EMHW
20	Ipswich (C.B.)	18	K. Winkler
22	Middleboro	8	J. Hoye#
22	Maynard	8	L. Nachtrab

Merlin

4	Lynn	1	R. Forster
15, 20	P.I.	4, 9	EMHW
22, 23	P.I.	10, 13	EMHW
16, 30	Mt.A.	1, 1	J. Hoye#, W. Petersen#
22	Newbury	1	J. Berry#
29	Gardner	1	T. Aversa#

Peregrine Falcon

thr	Boston	pr n (4 eggs)	v.o.
13	WBWS	1	J. Sones
15	P.I.	1	H. Wiggin#
21	Waltham	1	C. Ralph
29	GMNWR	1	N. Komar

Ruffed Grouse

8	Holliston	2	T. Aversa
13-13	Chatham	1	D. Scott#
15-16	Petersham	4	M. Lynch#
16	Marstons Mills	2-3	S. + E. Miller
16	ONWR	2	M. Rines#
23	E. Middleboro	3	K. Anderson
29	W. Newbury	2	P. + F. Vale
30	Boxboro	2	C. Paine

Wild Turkey

thr	Sherborn	20	E. Taylor
4	Essex	10	T. Young
8	Barre	26	M. Lynch#
9	E. Freetown	50	R. Robbins
15	Petersham	9	M. Lynch#
17	Wenham	7	N. Nash
18	Gloucester	16	R. Medico#
22	Sherborn	6	M. Martinek
30	Truro	2 m	J. Young

Northern Bobwhite

20	Cumb. Farms	9	T. Aversa
21	Essex	2	D. Young
26	Norton	1 m	G. d'Entremont
27	Acushnet	1	M. LaBossiere
28	W. Roxbury	3	T. Aversa

Virginia Rail

thr	GMNWR	1-4	v.o.
thr	Yarmouthport	2	S. + E. Miller
17	Bolton Flats	2	J. Hoye#
17	Lynnfield	2	M. Rines
23	Randolph	4	G. d'Entremont#
25	Wayland	5	R. Forster

Sora

23	Randolph	1	G. d'Entremont#
26	Wayland	1	S. Perkins#

American Coot

2	Belmont, Medford	5, 3	BBC (D. Oliver)
2	Nantucket	56	E. Andrews
2	S. Carver	6	K. Anderson
8	Randolph	13	G. d'Entremont#
10	Boston	29	C. Hepburn
22	P.I.	2	BBC (J. Center)
23	Braintree	2	G. d'Entremont#

Black-bellied Plover

8-30	N. Monomoy	200 max	B. Nikula
22	Plymouth B.	4	S. Arena
29	Newburyport	30+	M. Lynch#

Piping Plover

2	S. Dartmouth	2	M. Boucher
3	Eastham	8	S. Hecker
8, 18, 29	N. Monomoy	7, 24, 14	B. Nikula
9	Barnstable (S.N.)	4	G. Ferguson
21, 25	P.I.	22 ,29	W. Drew#
30	Westport	4	M. LaBossiere

American Oystercatcher
8-30 N. Monomoy 18 max B. Nikula
11 Boston (Logan) 2 N. Smith
17 Eastham 9 I. Lynch
18 Fairhaven 2 M. Boucher
Greater Yellowlegs
9, 29 Newburyport 6, 300+ M. Lynch#
15 Essex 12 S. Arena
22 Middleboro 12 W. Petersen
30 Scituate 18 G. d'Entremont#
30 Squantum 15 G. d'Entremont#
Lesser Yellowlegs
22 Middleboro 1 W. Petersen
24 Rowley 2 R. Forster
29 Newburyport 20+ M. Lynch#
Solitary Sandpiper
17 Topsfield 1 S. Perkins#
27 W. Bridgewater 1 G. d'Entremont
29 P.I. 1 P. + F. Vale
Willet
29 N. Monomoy 1 B. Nikula
29 Newburyport 1 M. Lynch#
30 Westport 8 M. LaBossiere
Spotted Sandpiper
28 GMNWR 1 S. Perkins#
29 Groton 6 S. Perkins#
29 Arlington Res. 1 M. Pelikan
30 Sudbury R. 6 J. Hoye#
Upland Sandpiper
20 Duxbury 2 S. Hecker
20 Cumb. Farms 2 K. Holmes
27 Wayland 1 N. Patterson
28 W. Roxbury 1 T. Aversa
29 Newburyport 1 J. Hoye#
Ruddy Turnstone
22 Plymouth B. 1 S. Arena#
Red Knot
18 N. Monomoy 1 B. Nikula
Sanderling
2 Westport 70 M. Lynch#
Least Sandpiper
27 W. Bridgewater 3 G. d'Entremont
28 W. Roxbury 1 T. Aversa
30 P.I. 20 S. Perkins#
30 Rowley 10 M. Rines
Pectoral Sandpiper
15 Newbury 5 J. Hoye#
17 Newburyport 22 S. Perkins#
21 P.I. 1 W. Drew#
27 W. Bridgewater 4 G. d'Entremont
30 Rowley 1 M. Rines
Purple Sandpiper
2 Acoaxet 11 M. Lynch#
3 Lynn 65 G. Ferguson
9 Gloucester 13 M. Lynch#
12 Hull 50 J. Norton
26 Nahant 90+ I. Lynch
28 Sandwich 15 S. + E. Miller
30 Scituate 62 G. d'Entremont#
30 P.I. 30+ S. Perkins#
Dunlin
8-30 N. Monomoy 375 max B. Nikula
9 Barnstable (S.N.) 70 G. Ferguson
16 S. Dartmouth 26 J. Hoye#
22 Plymouth B. 75 S. Arena#
29 Newburyport 1500+ M. Lynch#
Ruff
23-24 Newburyport H. 1 m E. Pyburn + v.o.
29 Newburyport H. 1 m v.o.
Short-billed Dowitcher
20 Newburyport 1 C. Paine#
Common Snipe
thr Newburyport 35 max v.o.
(this is a Doug Chickering #)
1 Yarmouthport 4 S. + E. Miller
2 Rochester 6 M. LaBossiere
4 Wayland 2 N. Patterson
9 GMNWR 3 S. Perkins#
16 Cumb. Farms 25 S. Arena#
29 W. Bridgewater 28+ G. d'Entremont#
American Woodcock
6 Concord 3 BBC (D. Lange)
8 Groton 2 M. Resch
11 Plymouth (MSSF) 3 G. d'Entremont#
114 Wayland 60 N. Patterson
23 Brookline 3 F. Bouchard
24 Lexington 3 M. Rines
26 Beverly 2-3 J. Brown#
Laughing Gull
19 E. Boston 1 J. Quigley
22 Plymouth B. 9 S. Arena#
Common Black-headed Gull
9 E. Boston 2 ad, 1 1W J. Quigley
19 E. Boston 2 1S J. Quigley
Bonaparte's Gull
22 Newburyport H. 80 J. Berry
22 Lynn 351 J. Quigley
Ring-billed Gull
6 E. Boston 200+ J. Quigley
13 Ipswich 325 R. Forster
Iceland Gull
4 E. Boston 1 J. Quigley
8 Acton 2 J. Kenneally
18 Essex 1 1W S. Young#
21 Mt.A. 1 1W M. Pelikan
22 Concord (NAC) 1 1W R. Forster
30 Provincetown 1 1W S. + E. Miller
Glaucous Gull
2 Salisbury 1 ad G. d'Entremont#
10 Concord (NAC) 1 2W J. Kenneally
Caspian Tern
26 Scituate 2, 1 S. Hecker, D. Brown#
Common Tern
28 Wareham 3 M. LaBossiere
Razorbill
22 Provincetown 1 J. Sones#
Black Guillemot
29 Rockport 5 J. Brown#
Barn Owl
29 Nantucket 2 E. Andrews#
Eastern Screech-Owl
thr Mt.A. 2 pr n v.o.
28 Melrose 1 ad + 1 yg I. + D. Jewell
Great Horned Owl
thr Essex pr n T. Young
7 N. Middleboro 3 ad, 4 yg K. Holmes
10 Mt.A. 2 v.o.
27 S. Monomoy 1 R. Hall
28 GMNWR 2 S. Perkins
Snowy Owl
2 Westport 1 M. Lynch#
5 Nantucket 1 G. Frost
5 Eastham 1 D. Bates
8 P.I. 1 H. Wiggin#
11 Boston (Logan) 1 N. Smith
Barred Owl
thr Sherborn 4 E. Taylor
1 E. Middleboro 1 K. Anderson
9 Lakeville 1 W. Petersen
21 Marstons Mills 2 S. Miller
22 Boxford 3 J. Berry

Short-eared Owl

6	P.I.	2	C. Ralph
9	Middleboro	4	W. Petersen
10	Boston (Logan)	2	N. Smith

Northern Saw-whet Owl

11	Plymouth (MSSF)	2	G. d'Entremont#

Whip-poor-will

23	P.I.	1	F. Burrill

Chimney Swift

20	Maynard	1	L. Nachtrab
22	Wellesley	1	R. Forster
22	W. Newbury	2	S. Perkins#
23	Braintree	12	G. d'Entremont#
26-30	Mt.A.	4--15	v.o.
28	Mt.A.	15	M. Rines
30	Newton	30	C. Hepburn

Belted Kingfisher

thr	Mt.A.	pr n	v.o.
29	Groton	4	S. Perkins#

Red-headed Woodpecker

thr	Lakeville	1 m	F. Cushman#
thr	Provincetown	1 ad	T. McCanna
8, 15	Petersham	1 m	M. Lynch#
15-30	Sherborn	1	E. Taylor

Red-bellied Woodpecker

thr	Sherborn	2 pr	E. Taylor
1	Westport	1	R. Stymeist#
9	Ipswich	1	M. Lynch#
16-30	Burlington	pr n	M. Rines
16-30	Medford	2 pr n	M. Rines
17-30	Lincoln	pr n	S. Perkins
23	Braintree	2	G. d'Entremont#
25	Acushnet	1	M. LaBossiere

Yellow-bellied Sapsucker

6-21	Mt.A.	1-2	v.o.
8	Westminster	3	BBC (R. Stymeist)
9	Chatham	4	W. Bailey
13, 17	Pepperell	1, 3	E. Stromsted
17	Petersham	2	S. + L. Hennin
18	Boston (F.Pk)	3	T. Aversa
thr	Reports of individuals from 6 locations		

Hairy Woodpecker

thr	Boxboro	2	C. Paine
8	Westminster	4	BBC (R. Stymeist)

Northern Flicker

5	P.I.	12	C. Ralph
9	Mt.A.	20	R. Stymeist
16	Boston (F.Pk)	26	T. Aversa

Pileated Woodpecker

thr	Pepperell	1-2	E. Stromsted
thr	Sherborn	4	E. Taylor
7	Boxboro	1	C. Paine
8	Canton	1	G. d'Entremont#
8	Milton	1	BBC (S. Olanoff)
8	Petersham	1	M. Lynch#
14	Quabbin (G45)	5	T. Aversa
22	Wayland	1	J. Hoye#

FLYCATCHERS THROUGH GROSBEAKS

The migration begins in earnest during April. Greater numbers of phoebes and swallows arrive early in the month, and a variety of typical April migrants begin to arrive by midmonth. The last few days of April brought in a wave of early arrivals for a total of 5 species of vireo and 18 species of warblers sighted in eastern Massachusetts during the month. At Mount Auburn Cemetery alone, 14 species of warblers were counted during a spectacular early spring "wave" on April 29 and 30.

A Common Raven was observed being mobbed by crows in Newton, a surprising location for this species which is usually seen in or west of Worcester County. Other unusual reports included a **Prothonotary Warbler** on Nantucket, a **Kentucky Warbler** banded at Manomet Observatory, a **Painted Bunting** in Westport, a **Lark Sparrow** in Amesbury and a **Yellow-headed Blackbird** in Brookline. A **Green-tailed Towhee** in Marblehead could have been an overwinterer, but was not discovered until this month. It obligingly stayed in and around Marblehead Neck Wildlife Sanctuary for several weeks, allowing many birders the opportunity to see it. Holdovers from the winter included the **"Spotted" Towhee** (the western race of the Rufous-sided Towhee) in Acushnet, and **Harris' Sparrows** in Hopkington and on Nantucket Island.

R. H. S.

Least Flycatcher

29	Quabbin (G40)	1	T. Aversa#

Eastern Phoebe

thr	Mt.A.	25 max 4/4	v.o.
1	Hardwick	17	M. Lynch#
8	Holden	16	M. Lynch#
29	Groton	24	E. Nielsen#

Great Crested Flycatcher

27-30	Mt.A.	1-2	v.o.
30	Lexington	1	M. Pelikan

Eastern Kingbird

22	Lakeville	1	J. Hoye#
23	Provincetown	1	v.o.
27	Boston (F.Pk)	1	T. Aversa
28-30	Mt.A.	1-3	v.o.
29	Quabbin (G40)	2	T. Aversa#

Horned Lark

1	Newburyport	150	BBC (G. Gove)

Purple Martin

10	Rochester	1	M. LaBossiere
15	Middleboro	1 m	fide R. Turner
19	S. Carver	1	H. Davidson
29	P.I.	43	M. Lynch#

Tree Swallow

2, 8	GMNWR	100, 500	E. Taylor
9	Wayland	300	S. Perkins#

Northern Rough-winged Swallow

8-30	Arlington Res.	12 4/19	M. Pelikan
9	GMNWR	2	S. Perkins
9	Milton	3	T. Cameron
9	Lakeville	1	W. Petersen
9-30	Mt.A.	2-6	v.o.
23	Lakeville	8	M. Boucher
23	Milton	25+	G. d'Entremont#
24	P.I.	10	R. Lockwood
30	GMNWR	20	BBC (S. Hepburn)

Bank Swallow

12	Wayland	1	N. Patterson
19, 28	GMNWR	1, 15	S. Perkins
22	Lakeville	1	J. Hoye#
30	N. Braintree	1	M. Lynch#

Cliff Swallow
2, 28 GMNWR 1, 2 S. Perkins
22 P.I. 1 migr S. Perkins#
Barn Swallow
2, 28 GMNWR 1, 70 S. Perkins
9 Nahant 1 J. Center
11 Wayland 2 N. Patterson
13 W. Harwich 1 S. + E. Miller
30 Halifax 15 K. Anderson
Fish Crow
thr Mt.A. 6 pr n R. Stymeist
1 Waltham 1 C. Ralph
2 Wareham 1 M. LaBossiere
8 Ipswich 2 J. Berry
8 Pembroke 10 W. Petersen
9 E. Middleboro 2 K. Anderson
15 GMNWR 1 S. + L. Hennin
15, 18 WBWS 2, 4 J. Sones
18 Boston (F.Pk) 24 T. Aversa
23 Braintree 4 G. d'Entremont#
23 Randolph 2 G. d'Entremont#
26 N. Truro 11 B. Nikula
26 Wayland 2-3 S. Perkins#
29 Pepperell 1 M. Resch
30 DWWS 5 G. d'Entremont#
Common Raven
6 **Newton** 1 C. Hepburn
15 Petersham 1 M. Lynch#
Red-breasted Nuthatch
8 Westminster 4BBC (R. Stymeist)
9 MNWS 2 G. d'Entremont#
9 Boxford 3 J. Berry
19 Mt.A. 3BBC (R. Petersen)
Brown Creeper
8 Westminster 6BBC (R. Stymeist)
8 Petersham 7 M. Lynch#
16 ONWR 3 M. Rines#
22 Boxford 7 J. Berry
23 E. Middleboro 4 K. Anderson
Carolina Wren
1 Westport 23 R. Stymeist#
9 Wayland 1 J. Hoye#
9 Lexington 1 M. Pelikan
27 Stow 2 C. Paine
House Wren
24 Wareham 2 M. LaBossiere
26 Medford 1 M. Rines
26-30 Mt.A. 1-2 v.o.
27 N. Dartmouth 1 M. Boucher
27 E. Middleboro 1 K. Anderson
29 Quabbin (G40) 4 T. Aversa#
Winter Wren
7 MNWS 2 T. Aversa
8 Milton 2 BBC (S. Olanoff)
10 Wayland 2 M. Rines
12 Boxford 6 C. Ralph
15-16 Petersham 3 M. Lynch#
15-16 Provincetown 2+ B. Nikula#
22 Holliston 4 T. Aversa
thr Reports of individuals from 10 locations
Marsh Wren
thr GMNWR 1-3 v.o.
Golden-crowned Kinglet
4 MNWS 8 R. Forster
9 Mt.A. 18 R. Stymeist
Ruby-crowned Kinglet
1 Westport 1 R. Stymeist#
4 Wayland 1 N. Patterson
5-30 Mt.A. 14 max 4/24 v.o.
15-30 Provincetown 12 max Blair Nikula
22 MNWS 17 P. + F. Vale
25 Boxford 12 J. Brown#
Blue-gray Gnatcatcher
15 S. Orleans 2 S. Thompson
14-30 Mt.A. 8 max 4/29 v.o.
15-30 Provincetown 10 max Blair Nikula#
16 ONWR 2 M. Rines#
16 P.I. 2 D. Chickering
16 Medford 2 M. Rines
16-30 Boston (F.Pk) 6 max 4/30 T. Aversa
23 Boxford 6 M. Rines
26 Wayland 5 N. Patterson
29 Quabbin (G40) 10 T. Aversa
29 Groton 14 E. Nielsen#
Eastern Bluebird
thr Sherborn 25 E. Taylor
2 Pepperell 8 E. Stromsted
8 Westminster 10BBC (R. Stymeist)
Veery
28-30 Mt.A. 1 v.o.
29 Quabbin (G40) 1 T. Aversa#
Hermit Thrush
2 MNWS 1 C.Hepburn
4-30 Mt.A. 5 max v.o.
6 P.I. 2 C. Ralph
10-30 Boston (F.Pk) 13 max 4/23 T. Aversa
23 Wenham 3 J. Berry
22 MNWS 11 P. + F. Vale
24 Boxford (C.P.) 6 T. Young
Wood Thrush
27 Carlisle 1 R. Lockwood
29-30 Mt.A. 1 R. Stymeist#
30 Wayland 1 J. Hoye#
Gray Catbird
20 Taunton 2 K. Holmes
26 Wayland 2 N. Patterson
26-30 Mt.A. 2+ v.o.
28 Fairhaven 3 M. Boucher
28 W. Roxbury 3 T. Aversa
30 Boston (F.Pk) 6 T. Aversa
30 Arl., Lexington 4, 4 M. Pelikan
Northern Mockingbird
25 GMNWR 1 migr S. Perkins#
Brown Thrasher
1 Westport 1 M. Rines#
20 Freetown 2 T. Aversa
20, 29 P.I. 1, 4 C. Paine#
22 Topsfield 1 J. Brown#
24 Lexington 4 M. Rines
26-30 Mt.A. 1-3 v.o.
27 Wayland 1 N. Patterson
28 W. Roxbury 2 T. Aversa
American Pipit
1 Rochester 25 M. LaBossiere
Cedar Waxwing
9 Barnstable 75 G. Ferguson
15 Wayland 19 N. Patterson
18 Middleboro 16 K. Holmes
30 Halifax 20 K. Anderson
White-eyed Vireo
22 Halifax 1 E. Weinheimer
Solitary Vireo
15 Pepperell 1 M. Resch
18 Middleboro 1 K. Holmes
20-30 Mt.A. 15 max 4/29 v.o.
22 Holliston 4 T. Aversa
22 MNWS 14 P. + F. Vale
22 P.I. 6 S. Perkins#
23-30 Boston (F.Pk) 12 max 4/30 T. Aversa
23 Boxford (C.P.) 3 T. Young
29 Groton 6 E. Nielsen#

Yellow-throated Vireo
29 Ipswich 1 BBC (J. Berry)
29-30 Mt.A. 2 v.o.
Warbling Vireo
30 Wakefield 2 M. Rines
Red-eyed Vireo
28 W. Roxbury 1 T. Aversa
Blue-winged Warbler
28 Stow 1 C. Paine
29-30 Mt.A. 1 v.o.
Tennessee Warbler
30 Mt.A. 1 R. Stymeist#
Nashville Warbler
28 W. Roxbury 1 T. Aversa
29-30 Mt.A. 1-2 v.o.
30 Wellesley 1 R. Forster
Northern Parula
27 Provincetown 1 B. Nikula#
27 Boston (F.Pk) 2 m T. Aversa
27-30 Mt.A. 1-3 v.o.
28 Medford 1 M. Rines
30 Arlington 2 M. Pelikan
30 Worcester 1 M. Lynch#
Yellow Warbler
23-30 Mt.A. 1 v.o.
23, 29 Wayland 1, 8 J. Hoye#, R. Forster
27 Halifax 4 K. Anderson
28 W. Roxbury 5 T. Aversa
29 P.I. 3 BBC (C. Paine)
Chestnut-sided Warbler
26-30 Mt.A. 1-3 v.o.
Yellow-rumped Warbler
8 Ipswich 4 J. Berry
8 Rochester 6 M. LaBossiere
8-30 Arl. Res. 100 max 4/30 M. Pelikan
11-30 Wayland 50 max 4/24 S. Arena
15-30 Provincetown 200 max B. Nikula#
18 Lincoln 37 M. Rines
23 Braintree 34 G. d'Entremont#
23-30 Mt.A. 80 max 4/30 v.o.
30 Petersham 60+ M. Lynch#
Black-throated Green Warbler
22 Boxford (C.P.) 3 H. Wiggin#
27 Pepperell 1 M. Resch
29, 30 Mt.A. 2, 5 v.o.
29 Quabbin (G40) 8 T. Aversa
30 Mattapoisett 1 M. LaBossiere
Pine Warbler
3 Carver 1 K. Anderson
7 Boxboro 2 C. Paine
8 Milton 6 BBC (S. Olanoff)
8 Middleboro 3 W. Petersen
9 S. Natick 5 J. Hoye#
9 Barnstable 5 G. Ferguson
15-30 Provincetown 15 max B. Nikula#
20 Freetown 54 T. Aversa
29 Groton 17 E. Nielsen#
Prairie Warbler
1 Nashum I. 1 J. McDougall
18 Bridgewater 1 K. Holmes
22 Topsfield 1 H. Wiggin#
29 MNWS 1 M. Rines
30 Boston (F.Pk) 2 T. Aversa
Palm Warbler
4, 25 Wayland 1, 30 R. Forster
5, 21 Andover 1, 5 D. Chickering
7 Arlington Res. 2 M. Rines
7, 25 Wayland 2, 30+ N. Patterson
8 Holliston 1 T. Aversa
10-30 Boston (F.Pk) 31 max 4/23 T. Aversa
14-30 Mt.A. 25 max 4/28 v.o.
15-30 Provincetown 25 max B. Nikula#
18 Lincoln 34 M. Rines
29 Newbury 23 T. Young
Black-and-white Warbler
22 Sudbury 1 W. Petersen#
22, 29 Provincetown 1, 3 v.o.
23 Acushnet 1 M. LaBossiere
23 Nahant 1 P. + F. Vale
23-30 Boston (F.Pk) 6 max 4/30 T. Aversa
23-30 Mt.A. 8 max 4/28 v.o.
24 Mashpee 1 S. + E. Miller
American Redstart
29 Quabbin (G40) 1 T. Aversa
29-30 Mt.A. 1-2 v.o.
Prothonotary Warbler
25-27 Nantucket 1 m L. Dunn
Ovenbird
26 Wareham 1 M. LaBossiere
26 Yarmouthport 1 S. + E. Miller
27-30 Mt.A. 1-2 v.o.
28 E. Middleboro 5 K. Anderson
28 Wellesley 1 R. Forster
29 Quabbin (G40) 2 T. Aversa#
30 N. Dartmouth 2 M. Boucher
Northern Waterthrush
20 Freetown 1 T. Aversa
22 Holliston 5 T. Aversa
25, 28 E. Middleboro 1, 3 K. Anderson
28 W. Roxbury 2 T. Aversa
28, 30 Mt.A. 1, 3 v.o.
29 Wayland 3 R. Forster
29 Arlington Res. 1 M. Pelikan
30 N. Dartmouth 2 M. Boucher
Louisiana Waterthrush
9-30 Boxford 7 max v.o.
15 Petersham 1 M. Lynch#
28 Boxboro 1 C. Paine
30 Nahant 1 P. + F. Vale
Kentucky Warbler
26 MBO 1 b fide T. Lloyd-Evans
Common Yellowthroat
28 W. Roxbury 1 T. Aversa
29 Mt.A. 1 v.o.
29 Groton 1 S. Sweet#
29 Wayland 2 R. Forster
30 Boston (F.Pk) 1 T. Aversa
30 Boxboro 1 C. Paine
Rose-breasted Grosbeak
16 Nantucket 1 m J. Papale
28-30 Mt.A. 1-4 v.o.
29 MNWMS 1 P. + F. Vale
30 Ipswich 1 m J. Berry
Indigo Bunting
27-28 Mt.A. 1 v.o.
27-30 Chatham 1 R. Hall
Painted Bunting
4-9 Westport 1 f A. Furman + v.o.
Green-tailed Towhee
1-28 Marblehead 1 J. Smith + v.o.
Rufous-sided Towhee
9 P.I. 1 P. + F. Vale
11 Natick 1 E. Taylor
14 Mt.A. 1 v.o.
16 Boston (F.Pk) 1 T. Aversa
20 Freetown 2 T. Aversa
23 E. Middleboro 2 K. Anderson
29 Quabbin (G40) 15 T. Aversa#
"Spotted" Towhee
1-15 Acushnet 1 M. LaBossiere
American Tree Sparrow
9 Middleboro 50 W. Petersen

American Tree Sparrow (continued)

15	Squantum	1	M. Rines
16	Wayland	1	M. Pelikan
17, 20	Lincoln	2, 1	S. Perkins#

Chipping Sparrow

5	Worcester	1	M. Lynch#
6	Maynard	3	L. Nachtrab
6-30	Mt. Auburn	5 max	v.o.
12-30	Boston (F.Pk)	1-3	T. Aversa
15	Cotuit	2	S. + E. Miller
17, 20	Boxboro	1, 10	C. Paine
23	Lakeville	9	M. Boucher

Clay-colored Sparrow

20	Cumb. Farms	1	T. Aversa
29	Truro	1	J. Young

Field Sparrow

8	Barre	2	M. Lynch#
8	Randolph	2	G. d'Entremont#
9	Mt.A.	2	R. Stymeist
16	P.I.	8	D. Chickering
29	MBWMS	3	P. + F. Vale

Vesper Sparrow

1, 22	Cumb. Farms	1, 2	S. Arena, J. Hoye
20-21	Wayland	2	M. Pelikan, S. Arena
22	Newton	1	G. d'Entremont#
25	Medford	1	M. Rines#

Lark Sparrow

22-25	Amesbury	1	R. Peacock

Savannah Sparrow

21	Wayland	85+	S. Arena
22	W. Bridgewater	65+	S. Arena
22	Newton	30	G. d'Entremont#
27	Cumb. Farms	30	K. Anderson
29	Newburyport	30+	M. Lynch#

"Ipswich" Savannah Sparrow

2	P.I.	1	G. d'Entremont#

Fox Sparrow

4	Boston	4	M. Rines
4-22	Mt.A.	10 max 4/7	v.o.
8	Barre, Petersham	3, 4	M. Lynch#
10	Woburn	4	M. Rines
1-15	Reports of 1-2 indiv. from 14 locations		

Lincoln's Sparrow

29	MNWS	1	T. Raymond
30	P.I.	1	M. Rines

Swamp Sparrow

14	W. Brookfield	5	M. Lynch#
16	Middleboro	6	S. Arena#
26	Wayland	15	S. Perkins#

White-throated Sparrow

23	Boston (F.Pk)	53	T. Aversa
28	E. Gloucester	450	J. Baird
28	Mt.A.	150+	S. Perkins#
29	Provincetown	40	B. Nikula#

White-crowned Sparrow

thr	DWWS	2	D. Ludlow
1	Westport	7	R. Stymeist#
20	Cumb. Farms	3	T. Aversa
28	Wellesley	1	J. Necurney
30	Essex	1 ad	J. Berry

Harris' Sparrow

thr	Hopkinton	1	J. Gordon#
1-25	Nantucket	1	E. VanDuyne

Dark-eyed Junco

9, 23	Mt.A.	70, 2	v.o.

Lapland Longspur

13	P.I.	1	R. Forster
16	Newburyport	2	S. + L. Hennin

Snow Bunting

11	Boston (Logan)	100	N. Smith

Bobolink

30	Cumb. Farms	1 m	K. Anderson

Eastern Meadowlark

9	Ipswich	6	M. Lynch#
20	Cumb. Farms	24	T. Aversa
20	Wayland	2	M. Pelikan
28	Boxboro	1	C. Paine

Yellow-headed Blackbird

23	Brookline	1	F. Bouchard

Rusty Blackbird

1	Lexington	2	M. Pelikan
3	Wayland	20	A. Hirschkkop
4	Wakefield	10	J. Young
8	Westminster	6	BBC (R. Stymeist)
8	Holliston	16	T. Aversa
9, 19	GMNWR	25, 80+	S. Perkins#
15	Boxford	3	G. d'Entremont#
23	Cumb. Farms	18	M. Boucher

Common Grackle

thr	Framingham	900	E. Taylor
16	N. Braintree	400+	M. Lynch#

Orchard Oriole

27	Nantucket	1	B. Dandarand
27	Provincetown	1	B. Nikula#
28	Manomet	2	MBO staff
30	Wellesley	1 m	R. Forster
30	N. Dartmouth	1	M. Boucher

Northern Oriole

2, 27-30	Mt.A.	1, 2-3	v.o.
28	W. Roxbury	1 m	T. Aversa
28	Lincoln	1	S. Perkins
30	Wellesley	3	R. Forster

Purple Finch

thr	E. Middleboro	2-3	K. Anderson
8	Wayland	3	R. Forster
8	Westminster	8	BBC (R. Stymeist)
15	Boxford	4	G. d'Entremont#
15-16	Petersham	26	M. Lynch#
16	ONWR	3	M. Rines#
19	Topsfield	9	J. Brown#
22	P.I.	10	S. Perkins#

White-winged Crossbill

8	Westminster	1	BBC (R. Stymeist)
9	Mt.A.	1	R. Stymeist

Evening Grosbeak

15-16	Petersham	6	M. Lynch#
19	Ipswich	1	T. Young

LIST OF ABBREVIATIONS

ad	adult
alt	alternate
b	banded
br	breeding
dk	dark (phase)
f	female
fl	fledged
imm	immature
ind	individuals
juv	juvenile
loc	location
lt	light (phase)
m	male
max	maximum
mi	mile
migr	migrating
n	nesting
ph	photographed
pl	plumage
pr	pair
S	summer (1S = first summer)
thr	throughout
v.o.	various observers
W	winter (2W = second winter)
w/	with
yg	young
#	additional observers
A.A.	Arnold Arboretum
A.P.	Andrews Point, Rockport
A.Pd	Allens Pond, S. Dartmouth
Arl.	Arlington
B.	Beach
B.I.	Belle Isle, E. Boston
B.R.	Bass Rocks, Gloucester
Buzz.	Buzzards Bay
Cambr.	Cambridge
C.B.	Crane Beach, Ipswich
Corp. B.	Corporation Beach, Dennis
C.P.	Crooked Pond, Boxford
Cumb. Farms	Cumberland Farms, Middleboro-Halifax
E.P.	Eastern Point, Gloucester
F.E.	First Encounter Beach, Eastham
F.H.	Fort Hill, Eastham
F.M.	Fowl Meadow
F.P.	Fresh Pond, Cambridge
F.Pk	Franklin Park, Boston
G40	Gate 40, Quabbin
G45	Gate 45, Quabbin
H.	Harbor
I.	Island
L.	Ledge
M.V.	Martha's Vineyard
Mt.A.	Mount Auburn Cemetery, Cambridge
Nant.	Nantucket
Newbypt	Newburyport
P.I.	Plum Island
Pd	Pond
P'town	Provincetown
Quab.	Quabbin
Res.	Reservoir
R.P.	Race Point, Provincetown
S.B.	South Beach, Chatham
S. Dart.	South Dartmouth
S.F.	State Forest
S.N.	Sandy Neck, Barnstable
S.P.	State Park
Stellw.	Stellwagen Bank
Worc.	Worcester
BBC	Brookline Bird Club
BMB	Broad Meadow Brook, Worcester
CBC	Christmas Bird Count
CCBC	Cape Cod Bird Club
DFWS	Drumlin Farm Wildlife Sanctuary
DWWS	Daniel Webster Wildlife Sanctuary
EMHW	Eastern Massachusetts Hawk Watch
GMNWR	Great Meadows National Wildlife Refuge
HRWMA	High Ridge Wildlife Management Area, Gardner-Westminster
IRWS	Ipswich River Wildlife Sanctuary
LCES	Lloyd Center for Environmental Studies
MARC	Massachusetts Avian Records Committee
MAS	Massachusetts Audubon Society
MBO	Manomet Observatory
MBWMA	Martin Burns Wildlife Management Area, Newbury
MDFW	MA Division of Fisheries and Wildlife
MNWS	Marblehead Neck Wildlife Sanctuary
MSSF	Myles Standish State Forest
NAC	Nine Acre Corner, Concord
NBC	Needham Bird Club
NEHW	New England Hawk Watch
ONWR	Oxbow National Wildlife Refuge
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
TASL	Take A Second Look Harbor Census
USFWS	US Fish and Wildlife Service
WBWS	Wellfleet Bay Wildlife Sanctuary
WMWS	Wachusett Meadow Wildlife Sanctuary

ABOUT THE COVER: RED-NECKED PHALAROPE

The dainty Red-necked (formerly Northern) Phalarope *(Phalaropus lobatus)* is the smallest, most widely distributed, and most abundant of the phalaropes. They are one of two pelagic species of phalarope and possess nasal salt glands, which enable them to drink sea water. A dimorphic, polyandrous species, the female is the more brightly colored and clearly patterned, and averages five percent larger than the male. This is an example of Darwinian "sexual selection," in which the most colorful females attempt to outcompete other females for access to males, or are preferentially chosen by them, and hence increase the frequency of their "colorful" genes in the population.

In breeding plumage the birds are unmistakable, with red on the front and sides of the neck, a white throat, gray head, and gray upperparts with buffy feather edgings. In winter plumage they are gray above with dark streaks and white below with a variable black cap and prominent line behind the eye. The thin neck and small, black, needle-like bill are distinctive. Immatures are browner. The species is monotypic.

The breeding range of the species is circumpolar, the birds nesting specifically on arctic coastal plain, tundra, and islands from Alaska across northern Canada, including Hudson Bay. In winter they are pelagic, with the North American population apparently wintering mostly off the coast of Peru. The wintering location for the Red-necked Phalaropes that congregate near the Bay of Fundy in the late summer and fall, however, is unknown. In Massachusetts they are a common offshore spring migrant, with recorded high counts of 3000 or more. They are occasionally observed from shore in large numbers, usually during stormy weather.

Red-necked Phalaropes have a polyandrous (literally: "many males") mating system, which is found in less than one percent of bird species. Females court males and mate with several males, while males mate with only one female. Females compete for mates and in courtship have an advertising flight consisting of a "wing-whirr" accompanied by vocalizations. Mating occurs on water, and during this phase of the nesting cycle, females may practice "mate-guarding," to prevent their mate from courting with other females. The female leads the male around, choosing nest sites by starting scrapes on which they both work, and finally the female chooses among the scrapes by laying her eggs in one. Typically she then abandons the incubation and raising of the young to the male (only males have brood patches), and sets off in search of another mate to repeat the process. If there are enough males available (about ten percent of the cases), she may establish up to three nests, thus practicing "sequential polyandry." The favored nesting habitat is grass and sedge borders of shallow bogs and pools. The nest is on the ground, sometimes sunk in moss, often sheltered by a grass tussock. The complete clutch is typically four olive, brown-

marked eggs. Incubation lasts up to three weeks, and the precocial young can swim immediately after hatching. Males may adopt orphans, and distraction displays involve partial extension of their wings.

Red-necked Phalaropes may feed while wading or walking, and sometimes take flying insects with "flutter-leaps," but they primarily forage while swimming. They eat mostly aquatic insects, zooplankton, and crustaceans, for which they forage by spinning like a top on the water surface, presumably to stir up bottom water in the vortex.

Although they rarely pass by our shores in breeding plumage, the sight of a flock of these dainty specks on the ocean surface or simply flying by, makes a day of pelagic birding very worthwhile. W. E. Davis, Jr.

ABOUT THE COVER ARTIST

Paul Donahue's artwork has frequently appeared on *Bird Observer*'s cover, much to our delight. In late 1991 Teresa Wood and Paul began construction of a rain forest canopy walkway at the Amazon Center for Environmental Education and Research (ACEER) off the Rio Napo in the Department of Loreto in northeastern Peru, finally finishing it in April 1994. This canopy walkway, the world's longest, is 450 meters long and 36 meters above the ground at its highest point. It connects thirteen large, canopy-emergent trees, with observation platforms in each tree, and is constructed of aluminum ladders, steel cable, polyester rope, and wooden planks. From late 1992 to 1994 they also worked as the Resident Directors of the ACEER facility.

After a winter in Paraguay painting and training Paraguayan biologists in methods to reach the rain forest canopy, in early June 1995 Teresa and Paul started construction of two new canopy walkways in the rain forests of the Fila Chonta in Puntarenas Province of western Costa Rica. Paul can be reached at P.O. Box 554, Machias, Maine 04654.

The Red-necked Phalarope drawing first appeared in a catalog of Victor Emanuel Nature Tours, Inc. (VENT). Victor Emanuel has kindly given *Bird Observer* permission to use this drawing. VENT conducts birding tours around the world. Their address is P.O. Box 33008, Austin, Texas 78764.

M. Steele

AT A GLANCE *June 1995* *Wayne R. Petersen*

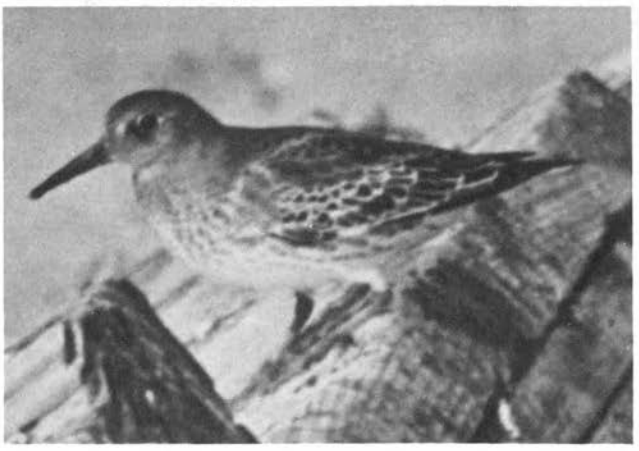
This month's photo quiz features the second consecutive mystery shorebird species. Some of the tips provided in last month's At A Glance analysis can be put to use in unraveling the identity of this month's mystery shorebird.

Last month's description included a discussion on determining the age and plumage of an unfamiliar shorebird before actually pinning it down to species. For example, shorebirds in juvenal plumage typically have broadly edged, or fringed, wing coverts, back, and scapular feathers. In addition, the presence of only a few fine breast streaks, largely confined to the sides of the breast, tends to be typical of sandpipers in this plumage.

Clearly, the mystery sandpiper is not so patterned, especially on the back and breast. Instead, it seems to have a peculiarly even-textured back, apparently devoid of conspicuous streaks, and is notably dark about the head and face, save for an indistinct light spot in front of the eye. Considering these facts, the presence of the bird's notably pale-fringed wing coverts, especially in contrast to the otherwise uniform back, indicate that the bird is in its first-winter (basic) plumage, a plumage in which the juvenal wing coverts are typically retained, even though the body plumage otherwise has the features of an adult in winter (basic) plumage.

Having determined that the mystery sandpiper is an individual in first-winter plumage, note that the legs appear to be light, although the photo rendition is ambiguous in this regard. More importantly, the bill is relatively long, curved, and stout; the flanks are prominently streaked; and the overall appearance of the bird is chunky, rather than slim and delicate as in last month's Semipalmated Sandpipers.

This combination of features, particularly the smooth, dark head and back; pale spot in front of the eye; stout and slightly decurved bill; and light-colored legs point to the identity of this bird as a Purple Sandpiper *(Calidris maritima)* in first-winter plumage.



While the Purple Sandpiper is not likely to be seen in summer in Massachusetts, it is locally common in winter on rocky islands off the coast.

Photo by William B. Long. Courtesy of MAS.

AT A GLANCE

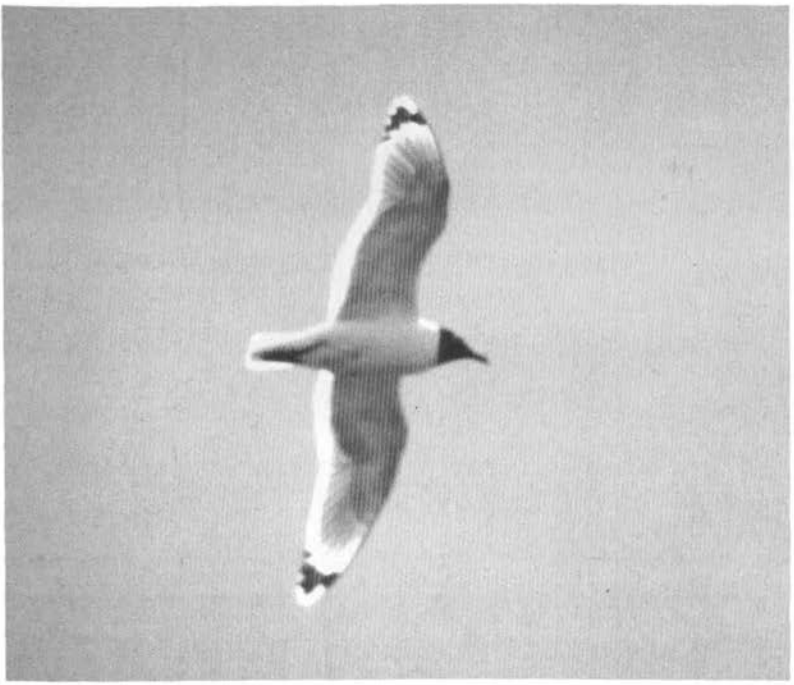


Photo by Wayne R. Petersen

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

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SNEAKY, STREAKY BROWN JOBS: a workshop on sparrows revisited OCTOBER 6 & 7, 1995
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Cover Illustration: Red-necked Phalarope by Paul Donahue