BIRD OBSERVER



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BIRD OBSERVER

· a bimonthly journal ·

To enhance understanding, observation, and enjoyment of birds.

VOL. 24, NO. 4 AUGUST 1996

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Manuscripts should be typed double-spaced on one side only of 8.5-by-11-inch paper. Manuscripts longer than 15 typed pages (about 4500 words) may be shortened when edited. Use the current A.O.U. Check-List for bird names and sequence. Type tables on separate pages. Black-and-white photographs and graphics are best. Include author's or artist's name, address, and telephone number and information from which a brief biography can be prepared. Indicate whether an IBM-compatible 5.25-inch diskette containing the article in ASCII or Microsoft Word can be supplied. Scientific and technical articles are peer reviewed. Views expressed in BIRD OBSERVER are those of the authors and do not necessarily reflect an official position of Bird Observer of Eastern Massachusetts, Inc.

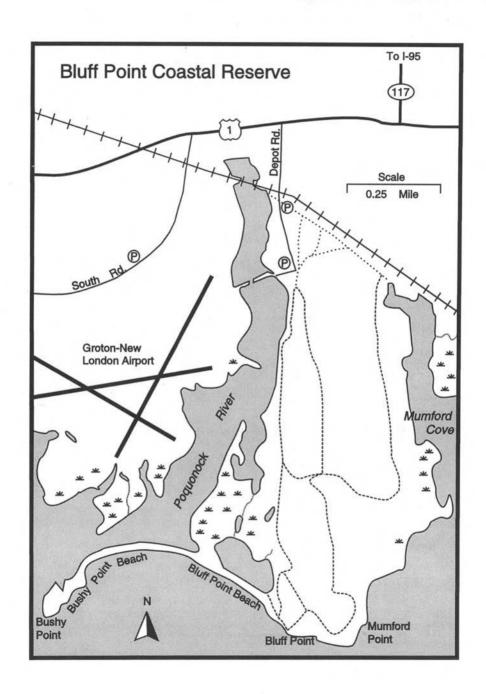
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Volunteer Hawkwatchers Sought

The Eastern Massachusetts Hawk Watch (EMHW) seeks volunteers of every level of skill and experience to cover hawkwatch sites this fall, from well known sites such as Mount Watatic, Bolton Flats, and Wachusett Mountiain, to your own backyard. We especially seek observers for Wachusett Mountain and Mount Watatic on weekdays during September and October. Experience is not required, and you do not have to "be sure" you can identify all the hawks. Reporting the volume of hawks, including those that may not be easily identified, is most important. For more information, contact Paul M. Roberts, 254 Arlington Street, Medford, MA 02155; telephone 617-483-4263 after 7 PM.



BLUFF POINT COASTAL RESERVE

by Arnold Devine and Dwight G. Smith

Editor's Note. All of the birding sites in this article and some eighty-two other sites are featured in the authors' forthcoming book, *Connecticut Birding Guide*. Please contact Dwight Smith, 241 Shepard Avenue, Hamden, Connecticut 06514, to obtain a copy of the book.

Located in Groton, Connecticut, this 806-acre coastal reserve is best known for impressive fall migrations of warblers and other songbirds, but its varied coastal habitats can attract an assortment of birds throughout much of the year. Bluff Point was first established as a state park and later designated as a coastal reserve by the Connecticut legislature in 1975. Its status as a coastal reserve preserves the unique wildlife, geological features, and scenic qualities of the area.

Bluff Point is a peninsula that juts southward into Fisher's Island Sound. The peninsula is bordered on the east by Mumford Cove, on the west by the Poquonock River, and to the south by Fisher's Island Sound. The northern boundary of the coastal reserve is formed by the Amtrak railroad line. Some unique geological features of the reserve include the rocky promontory known as Bluff Point at the reserve's southern terminus, and a narrow, mile-long sand spit that extends westward from the peninsula out into the confluence of the Poquonock River and Fisher's Island Sound.

Bluff Point Coastal Reserve offers an interesting mix of coastal habitats including open water, a 100-acre tidal marsh, beach, mudflats, river, fields, thickets, and coastal woodland. A well-maintained network of trails provides access to all of the major habitats within the coastal reserve. A 3.5-mile loop trail to the point and back offers varied birding opportunities in most of the park's habitats. A straight walk to the point and return by the same route is about two miles. A spur trail that begins near the headland provides access to the sandy spit and good views of the salt marsh. Several trails access the coastal reserve. A few trails are dead ends but most cut back to the main loop trail.

Bluff Point Coastal Reserve is open to birders and others throughout the year. There is no fee for birding. Picnic benches and pit toilets are located adjacent to the parking area. Additional pit toilets are near the headland just before the spur trail to the sand spit. Bluff Point also offers saltwater fishing, shellfishing, hiking, and mountain biking opportunities throughout much of the year. In winter cross-country skiing is a popular pastime, along with hiking.

To reach the reserve, take Exit 88 (Route 117) of Interstate 95, and follow Route 117 south for 1.0 mile. Turn right onto Route 1, go 0.3 mile, and turn left at the first traffic light onto Depot Road (adjacent to the Groton Town Hall).

Continue for 0.3 mile on Depot Road, and go under the railroad overpass. Just beyond the trestle, the road becomes dirt. Continue on the dirt road for another 0.3 mile to the gravel parking area. To bird the northwest corner of Bluff Point Coastal Reserve, park on the left just beyond the railroad overpass, but do not block the barrier gate.

BIRDING

Birding at the Bluff Point Coastal Reserve can be superb or very slow depending on time of year, tides, and weather. Late summer and fall usually provide the best birding, especially following the passage of a cold front, which often creates a burst of migrant songbirds and other upland species.

Northwest Corner. From August through September the northwest corner of Bluff Point is undoubtedly the best spot to view migrants. Often after a cold front passes, hundreds of migrants funnel down to the headland of Bluff Point Coastal Reserve, then retreat through the northwest corner of the reserve before resuming their southward migration. After a cool, clear night the influx of migrants can produce fast and furious birding activity during the first hours of daybreak. For example, in September 1994 a big-day birding team, virtually standing in one spot, counted seventy species, including nineteen species of warblers, in this part of the reserve.

To bird the northwest corner, walk around the bar-way and explore the grassy patches, small stands of trees, and scrubby growth in the area just to the south of the railroad tracks. On a good morning the area can be teeming with flycatchers, vireos, warblers, tanagers, and other species. On some peak days in September and October, you may spot twenty or more warbler species, including Golden-winged, Tennessee, Cape May, Orange-crowned (rare), Baybreasted, Mourning (rare), and Wilson's, as well as the more common species. Philadelphia Vireo, an uncommon to rare migrant in the state, is annual in mid-September along with the more numerous Red-eyed and Solitary vireos. Sparrow migration peaks from mid-to-late October, when good numbers of White-throated, Song, Swamp, and Savannah sparrows pass through. Uncommon or rare species that may also occur at this time include Dickcissel, Blue Grosbeak, and White-crowned, Lincoln's, Fox, and Clay-colored sparrows.

Loop Trail. To bird the rest of Bluff Point Coastal Reserve, hike the dirt road that begins just beyond, or south of, the bulletin board by the barrier gate at the southeast corner of the main parking lot. This dirt road parallels the Poquonock River on the right. Check the river, mudflats, and salt marsh for shorebirds, waders, and waterfowl.

In spring, summer, and early fall, some shorebirds to look for include Killdeer; Semipalmated and Black-bellied plovers; Ruddy Turnstone; Greater and Lesser yellowlegs; Spotted, Least, and Semipalmated sandpipers; and occasionally other species. Waders such as Snowy and Great egrets, Great Blue

and Green herons, and Black-crowned Night-Heron are often present in the shallows along the river. The nocturnal night-heron is more often seen in the twilight hours of dawn and dusk. Clapper Rail is a locally uncommon breeder in the salt marsh but is normally heard rather than observed in early morning hours. Osprey nest in the area from April through September and can usually be spotted as they forage along the river.

In the nesting season the thickets and tangles of bittersweet, cat-brier, rose, and poison ivy that border the trail to the point can harbor many elusive species. Check these trailside habitats for Carolina Wren, House Wren, Gray Catbird, Brown Thrasher, Common Yellowthroat, White-eyed Vireo, Northern Cardinal, Rufous-sided Towhee, and other skulkers. During fall migration Mourning Warblers (September) and Orange-crowned Warblers (most records from late September and October) are rare, but regular. The Yellow-breasted Chat is an annual visitor and is most often recorded in September.

In late spring and summer the fields and wetter areas farther along the trail should produce Eastern Kingbird, Willow Flycatcher, Northern Mockingbird, and Chipping and Field sparrows. Northern Bobwhite is a resident that can be quite vocal from April through July.

The upland woods of oak and aspen just beyond the trailside tangles host the usual variety of deciduous woodland birds. Breeding species often spotted are Red-bellied Woodpecker, Eastern Wood-Pewee, Eastern Phoebe, Tufted Titmouse, Wood Thrush, Veery, Red-eyed Vireo, various warblers (Bluewinged, Chestnut-sided, Black-and-white, and Ovenbird), Rose-breasted Grosbeak, and Northern Oriole. Both cuckoos (Yellow-billed and Black-billed) occur, but populations are irregular and closely associated with gypsy moth infestation, and during many years the birds are scarce or absent.

Fall migration can fill the woodland and thickets with an assortment of flycatchers (Great Crested, *Empidonaxes*, and the rarer Olive-sided), vireos (Yellow-throated, Solitary, Warbling, and the rarer Philadelphia), and warblers (Northern Parula, Yellow, Magnolia, Yellow-rumped, Blackpoll, American Redstart, and Canada, among others).

Sand Spit. Just before the headland, a trail diverges on the right to the sand spit. The sand spit offers a pebble beach to explore on the seaward side and also provides a good view of the marsh and mudflats along the bayside. NOTE: Please refrain from walking on the dune grass and associated vegetation when exploring the sand spit, as this vegetation is fragile and easily destroyed. Crosswalks have been spaced along the spit to facilitate the passage of visitors from the seaward side to the bay side of the spit (or vice versa). The Connecticut Department of Environmental Protection has initiated a Dune Grass Restoration Project along the spit and requests that visitors adhere to the posted "keep off" policy.

During August and September the mussel beds and mudflats that are

exposed at mid- and low tides attract shorebirds. Species to search for include all shorebirds identified previously and Sanderling (along beach), Dunlin, and Short-billed Dowitcher, as well as the rarer American Golden-Plover, Buff-breasted Sandpiper, and Hudsonian Godwit. Recently the postbreeding dispersal of American Oystercatcher has resulted in the sighting of impressive numbers foraging on the mussel beds. A total of forty-two oystercatchers was observed on September 6, 1992! The endangered Piping Plover has nested on the spit in the past, but not since 1986. With luck, the species will return to nest in the future. Terns (Common, Least, which formerly nested, and the rarer Roseate) are casual throughout the summer and are joined by Forster's in early fall. Small flocks of American Pipits are generally spotted during early October. In winter the Ipswich race of the Savannah Sparrow is sometimes observed scurrying through the dune vegetation. A Snowy Owl perched on a post or sand dune is always a winter possibility as well.

Check the promontory for an unobstructed view of Fisher's Island Sound and the waterbirds that are associated with this ecosystem. From October through April various species of grebes (Horned and the uncommon Rednecked), cormorants (Double-crested are common most of the year but displaced in abundance by Great during winter), waterfowl (American Black Duck, Greater Scaup, Common Goldeneye, Bufflehead, Oldsquaw, Whitewinged and Surf scoters, and Red-breasted Merganser), and gulls (Ring-billed, Herring, Great Black-backed, Bonaparte's, and the occasional Glaucous or Iceland) may be found. Strong northeast or easterly winds in November and December have blown in rare pelagic visitors such as Northern Gannet and Black-legged Kittiwake.

Continue along the loop trail from the headland back to the parking lot. Again, the woodlands, fields, and shrub thickets host many of the passerines previously listed. At the first Y intersection, a left takes you back to the main trail (about halfway between the headland and the parking lot). If you bear right, you will shortly come to a second Y. The left trail returns to a point near the parking lot, and the right path will bring you along the eastern part of the peninsula to Mumford's Cove and eventually the former railroad bed at the north end of the park. During August and September a variety of wild fruit trees and shrubs are available to attract birds and hungry birders. Be on the lookout for wild grape, wild black and choke cherries, black raspberry, and apple. If the birding is slow, at least you can have an inexpensive lunch.

Groton - New London Airport. A birding trip to the nearby Groton-New London Airport can also be worthwhile when visiting Bluff Point Coastal Reserve. Located on the west side of the Poquonock River, the habitats around the airport frequently yield open grassland species. To get to the airport from the Coastal Reserve, return to Route 1, turn left, and drive 0.3 mile to South Road. Turn left (sign posted for Groton-New London Airport), and follow South Road

0.6 mile. When you see the airport runway and surrounding grassland, park at the pulloff on the right.

The lawns and grassy fields around the airport often produce a variety of grassland shorebirds, especially during the fall migration from August through October. Killdeer and Black-bellied Plover are usually common, while Upland and Buff-breasted sandpipers and American Golden-Plover are rarer, but sometimes occur. A flock of twelve or more Buff-breasted Sandpipers was present at the airport in September 1995. In winter the airport environs often hosts flocks of Horned Lark and Snow Bunting (more regular in November and early December, sporadic thereafter). Check the flocks carefully for the occasional Lapland Longspur. Snowy Owl and Rough-legged Hawk irregularly overwinter in the area.

Nearby Birding Sites. Several important birding sites are located within ten miles of Bluff Point Coastal Reserve. Just a few miles to the east is the Mystic River, which can be good from October through April for waterbirds. Nearby is the Denison-Pequopsos Nature Center, a small preserve with a nice mix of woodland, field, and wetland habitats good for nesting birds. Barn Island Wildlife Management Area is slightly farther to the east. Barn Island WMA is an important complex of extensive salt marsh bordered landward by coastal deciduous woodlands. A few miles to the west of Bluff Point Coastal Reserve is the Connecticut College Arboretum in New London, which provides varied habitat for spring and summer nesting species. Impressive winter concentrations of waterfowl can often be observed along the Thames River and at Smith Cove.

Other Area Attractions. The area within ten miles of Bluff Point Coastal Reserve hosts many important and varied tourist attractions. Mystic Seaport Museum and Mystic Marinelife Aquarium are just a few miles to the east at Exit 90 on Interstate 95. To the west is the equally historic Groton-New London area. Groton is home to the Electric Boat Division, responsible for the Seawolf class of submarines, and a major U.S. Naval submarine base. The world's first nuclear-powered submarine, the Nautilus, was also built by Electric Boat in the early 1950s. Today, the Nautilus is on permanent display and may be visited at the USS Nautilus Memorial in Groton. Along with many other attractions, New London features the U.S. Coast Guard Academy, which lies just north of the bridge over the Thames River. The tall ship Eagle, the training ship for cadets, is often berthed at the Coast Guard Academy dock and can sometimes be visited.

LODGING

This eastern Connecticut area is a popular tourist spot in summer, and there is abundant lodging in the immediate area, with easy access from Interstate 95. Fairly large complexes of motels and historic bed-and-breakfast inns are located at Mystic (Exit 90), New London, and Waterford. Stonington and Old Lyme are especially noted for their historic bed-and-breakfast inns.

ARNOLD DEVINE is an environmental analyst with the Connecticut Department of Environmental Protection. He is a member of the Connecticut Ornithological Association (COA) board of directors and the Connecticut Rare Records Committee. DWIGHT SMITH is a professor of biology at Southern Connecticut State University in New Haven. Dwight is also a member of the COA board of directors and editor of the COA Bulletin.

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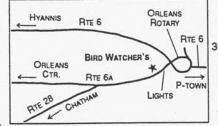
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BREEDING BIRDS OF THE MASSACHUSETTS MILITARY RESERVATION

by Paul M. Cavanagh, Karen A. Wilson, and Peter B. Trimble

Articles in *Bird Observer* generally focus on places where interested readers can go birding. This article is unusual in that we report on the birdlife of a place inaccessible to birders. The Massachusetts Military Reservation (MMR) has been off-limits to the general public since its establishment in 1935. Because of this and an historic lack of systematic surveys, little information is available on its birdlife. This lack of information is exemplified by the absence of MMR data from *Birds of Massachusetts* (Veit and Petersen 1993). In 1994 the Massachusetts Army National Guard began conducting systematic bird surveys as part of a comprehensive program to inventory and monitor natural resources (Tazik et al. 1992). Results of these and related surveys provide the first information on the MMR's birdlife. Here, we report on the Reservation's breeding birds.

The MMR is a 22,000-acre reservation located in the towns of Bourne, Sandwich, and Mashpee on Cape Cod. Often mistakenly called Otis Air Force Base, the Reservation comprises Camp Edwards; Otis Air National Guard Base; Veterans Administration, Massachusetts National Cemetery; and U.S. Coast Guard, U.S. Marine Corps, and U.S. Air Force facilities. The Reservation is bordered on the north by the Sandwich moraine and on the west by the Buzzards Bay moraine. To the south and east of the moraines is a large, relatively flat glacial outwash plain. Most of the Reservation comprises forested uplands dominated by pitch pine and a mixture of white, black, and scarlet oaks. Large burn areas dominated by live scrub oak and numerous pine and oak snags provide habitat for cavity nesting birds. Wetlands and deep water habitats are rare on the Reservation, comprising less than one-half of one percent of the total land area. Dirt roads and power lines pass through forested and burn areas providing edge habitat. Surrounding the runways at Otis are grasslands, dominated by little bluestem in various stages of succession. Bird surveys were conducted in all of these habitats.

We used a variety of techniques to survey birds. Land Condition-Trend analysis (LCTA) surveys (Tazik et al. 1992), a combination of two fifty-meter radius point counts and a 100 x 100 meter transect, were used in 1994 and 1995 to survey permanent study plots located in forest, grassland, and burn habitats. Secretive waterbird surveys (Gibbs and Melvin 1993) were used in 1995 to detect the presence of rails, herons, and associated species in eighteen wetlands (Wilson and Cavanagh 1996). Grasslands were spot-mapped (White and Melvin 1985) in 1995 to determine the numbers and species of nesting birds present. Limited Whip-poor-will and owl surveys were conducted over two evenings in

July 1995. We drove roads (nine kilometers) between sundown and two hours after sundown, stopping every 500 meters to listen for singing birds. At each stop we spent three minutes listening for Whip-poor-wills and owls, then played two minutes of taped owl calls (either Eastern Screech or Northern Saw-whet). Following broadcast of the calls we spent another three minutes listening for vocalizing birds. Finally, a study of the effects of military activities on the presence and abundance of scrubland birds resulted in 132, twenty-five-meter fixed radius point counts being conducted in 1995. Data from this study have been incorporated into this article. Species identified from incidental observations have also been included.

The breeding status of species identified on the MMR are listed as either confirmed, probable, or possible, in accordance with Veit and Petersen (1993). These terms were defined by the Massachusetts Audubon Society (1974) for use in the Massachusetts Breeding Bird Atlas (results from the atlas have not yet been published). We introduce a fourth category, nonbreeder, for those species that occur on or over the MMR and whose nesting habitat does not occur on the reservation (e.g., Common Tern).

We have also provided information on the relative abundance of each species. We considered a species to be common if it was likely to be encountered in suitable habitat. Uncommon species were those that were unlikely to be encountered in suitable habitat or those for which suitable habitat was lacking.

Eighty-nine species of birds were identified on or flying over the MMR during our surveys (Table 1). Of these birds eight species were nonbreeders, seventeen were considered possible breeders, twenty-three were probable breeders, and forty-one were confirmed as breeding on the Reservation. Our ability to accurately determine a species' breeding status differed among categories. Those birds considered to be nonbreeders were coastal nesters or wetland species and could not breed on the MMR due to a lack of suitable habitat. We believe that all species in this category have been accurately identified. Similarly, accurate determinations of breeding status were made for those species listed as confirmed breeders. Inclusion in this category required observation of a species' nest, eggs, or young, observation of adults carrying food for young or fecal sacs, or adults exhibiting distraction displays, injury feigning, or coition (MAS 1974). In contrast, the status of possible and probable breeders is less definite. These species may have bred on the MMR but were simply not observed in enough detail to be either confirmed or ruled out as breeders. It is also possible that some of these species may not breed on the MMR, but may have bred near the Reservation or have been late migrants. It is likely that the breeding status of species identified as either possible or probable will change over time as more information becomes available.

Table 1. Species, breeding status, and relative abundances of birds identified on the Massachusetts Military Reservation during the 1994 and 1995 breeding seasons.

Relative

Abundance²

Breeding Status¹

Common Loon	Non-breeder	U	Barn Swallow	Possible	U
Great Blue Heron	Non-breeder	U	Blue Jay	Probable	C
Green Heron	Possible	U	American Crow	Possible	C
Mute Swan	Non-breeder	U	Fish Crow	Possible	U
Canada Goose	Non-breeder	U	Black-capped Chickadee	Confirmed	C
Wood Duck	Confirmed	U	Tufted Titmouse	Probable	C
Mallard	Possible	U	White-breasted Nuthatch	Probable	U
Red-b'ed Merganser	Non-breeder	Uı	Brown Creeper	Possible	U
Turkey Vulture	Possible	С	House Wren	Probable	C
Osprey	Confirmed	U	Eastern Bluebird	Confirmed	C
Northern Harrier	Confirmed	U	Hermit Thrush	Confirmed	C
Sharp-shinned Hawk	Possible	U	American Robin	Confirmed	C
Cooper's Hawk	Possible	U	Gray Catbird	Confirmed	C
Broad-winged Hawk	Probable	U	Northern Mockingbird	Probable	C
Red-tailed Hawk	Confirmed	С	Brown Thrasher	Confirmed	U
American Kestrel	Confirmed	U	Cedar Waxwing	Probable	C

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European Starling

Pine Warbler

Ovenbird

Prairie Warbler

Chestnut-sided Warbler

Black & White Warbler

Northern Waterthrush

Common Yellowthroat

Rufous-sided Towhee

Scarlet Tanager

Northern Cardinal

Chipping Sparrow

Field Sparrow

Song Sparrow

Swamp Sparrow

Vesper Sparrow

Savannah Sparrow

Grasshopper Sparrow

Red-winged Blackbird

Eastern Meadowlark

Common Grackle

Orchard Oriole

Purple Finch

House Finch

Baltimore Oriole

House Sparrow

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Species

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Ruffed Grouse

Northern Bobwhite

Spotted Sandpiper Upland Sandpiper

American Woodcock

Wild Turkey

Herring Gull Great Black-b'd Gull

Rock Dove

Common Tern

Mourning Dove

Whip-poor-will

Chimney Swift

Belted Kingfisher

Black-billed Cuckoo

Ruby-t'd Hummingbird

Downy Woodpecker

Eastern Wood-Pewee

N. Rough-w'd Swallow

Great Crested Flycatcher Probable

Hairy Woodpecker

Northern Flicker

Eastern Phoebe

Eastern Kingbird

Horned Lark

Tree Swallow

Great Horned Owl

Killdeer

^{1.} Status of breeding birds as defined by Massachusetts Audubon Society (1974).

^{2.} Common (C) birds are likely to be encountered in suitable habitat, while uncommon (U) birds are not.

Some of the species observed were not residents of the MMR but either flew over on their way to another destination or stopped to forage on the Reservation. Common Loons and Red-breasted Mergansers were periodically observed flying over shortly after sunrise during 1995 surveys. Because the MMR lies between Cape Cod and Buzzards bays, these movements may represent birds traveling between these two bodies of water. Common Terns, which were chiefly observed on foggy days, may also have been passing between the bays. Flocks of Herring Gulls were frequently observed passing over the MMR, occasionally with Great Black-backed Gulls. Flight directions suggest the gulls were traveling to and from the Bourne landfill, which abuts the western edge of the Reservation. Gulls were also observed foraging on fields and in dumpsters. Great Blue Herons were periodically observed foraging in wetlands, as were Mute Swans and Canada Geese. Flocks of Canada Geese are common on fields during late summer and early fall, but these birds represent a movement onto the MMR from off-Reservation nesting areas.

It is likely that two of the species listed as possible breeders, the Belted Kingfisher and Ring-necked Pheasant, were actually nonbreeders. Only one kingfisher was observed during the two years of surveys, and it occurred over a small scrub-shrub wetland on the eastern side of the Reservation, near Snake Pond in Sandwich. It is unlikely that this small vegetated wetland, surrounded by closed canopy forest, could support a kingfisher. We believe it more likely that the bird nested off the Reservation in the vicinity of Snake Pond. Only one male Ring-necked Pheasant was observed during our surveys. The absence of females and young suggests that pheasants did not nest on the MMR.

Several species identified as possible or probable breeding birds are considered rare or uncommon in Massachusetts or on Cape Cod. A singing male Orchard Oriole was recorded in 1995. Considered a local and uncommon breeder in Massachusetts (Veit and Petersen 1993), they have been recorded in the towns of Bourne and Falmouth, areas adjacent to the MMR. A Northern Waterthrush, a species described as "absent on the Cape and Islands" (Veit and Petersen 1993), was observed in an emergent wetland (Cowardin et al. 1979) on the northern portion of the MMR on May 25, 1995. Veit and Petersen (1993) reported egg dates of May 21 to June 15 for this species in Massachusetts. Although the bird observed on the MMR could have been an extremely late migrant, the timing and location of the observation suggest that it may have been nesting. Three species of forest hawks, the Broad-winged, Cooper's, and Sharp-shinned hawks, likely bred on the MMR. Broad-winged Hawks are considered rare breeders on Cape Cod, Cooper's Hawks rare and local breeders in Massachusetts, and Sharp-shinned Hawks very rare and local in the Commonwealth (Veit and Petersen 1993). Finally, although Wild Turkey is a "fairly common resident" in Massachusetts (Veit and Petersen 1993), it is uncommon on Cape Cod. Wild Turkeys were released on the MMR in 1989 by the Massachusetts Division of Fisheries & Wildlife (see Cardoza (1993) for an overview of state restoration efforts). Although the birds were not closely monitored following release, our periodic sightings of males with harems suggest that breeding occurs.

Most birds confirmed as breeders on the MMR are common on the Reservation. The abundance of these species increased the likelihood of finding nests or observing breeding behaviors while conducting surveys. Many of these species' nests were identified because they were associated with human structures. A nesting platform used by Osprey in 1994 was used by a Great Horned Owl in 1995. Nest boxes were used by Wood Ducks, American Kestrels, and Tree Swallows. Light poles and building ledges were used by European Starlings, House Sparrows, and House Finches. Intensive grassland bird surveys, conducted in 1995, permitted us to locate the nests and young of Upland Sandpipers, Northern Bobwhite, Chipping Sparrows, Field Sparrows, Savannah Sparrows, and Eastern Meadowlarks. All other nests, young, or nesting behaviors were incidentally observed. Of particular note was a pair of Northern Rough-winged Swallows, an uncommon and local species in Massachusetts (Veit and Petersen 1993), observed nesting in a sandpit in 1995.

We recorded similar numbers of uncommon (forty-four) and common (forty-five) species on the MMR. Causes of rarity on the MMR varied among taxa. Many of the uncommon species require habitats that are absent or poorly represented. For example, the number and sizes of the Reservation's wetlands and deep water habitats may not be suitable for nesting by birds such as Belted Kingfishers and waterfowl. Similarly, it is likely that some species of grassland birds were uncommon because of variable habitat quality and interspecific differences in tolerance to disturbance. For example, Upland Sandpipers require extensive open tracts of short grasslands for nesting (Carter 1992), while Killdeer nest in a variety of open habitats, including gravel rooftops (Veit and Petersen 1993). Coast species, such as Common Tern, are uncommon on the Reservation because of a complete lack of suitable habitat. Some species (e.g., Broad-winged and Cooper's hawks) are uncommon because they naturally occur at low densities. Finally, others are uncommon on the MMR because they are uncommon in the state (e.g., Orchard Oriole), and their regional abundances are reflected in our surveys.

Despite extensive surveys, we may have underestimated the relative abundances of some species and may have entirely overlooked others. With the exception of Whip-poor-will surveys, our methods focused on diurnal birds. As a result, crepuscular or nocturnal birds may not have been adequately surveyed. Although observed in small numbers, the presence of large areas of suitable habitat suggests that Woodcock and Great Horned Owls may be more abundant than indicated by our surveys. Two other owls, the Eastern Screech Owl and Northern Saw-whet Owl, may potentially breed on the MMR. Although

uncommon on Cape Cod (Hill 1965, Veit and Petersen 1993), Eastern Screech Owls have been confirmed as breeding immediately north of the MMR and probably also occur to the east (Veit and Petersen 1993). Northern Saw-whet Owls are uncommon Massachusetts residents but have been recorded in pitch pine barrens and on Cape Cod (Veit and Petersen 1993), suggesting that breeding is possible within the MMR's thousands of acres of pitch pine. Further surveys, focused specifically on singing owls, are necessary to determine if these species occur on the MMR.

The size and relatively undeveloped condition of the MMR make it an important area for many of Cape Cod's birds. The Camp Edwards Training site, which occupies almost three-quarters of the MMR's land area, may represent the largest tract of undeveloped forest lands on Cape Cod (Jenkins 1995). This area, along with other forested sections of the MMR, provides breeding habitat for several species that appear to be in decline (e.g., Rufous-sided Towhee [Hagan 1993]). Additionally, large burn areas that have resulted from a series of prescription burns and wildfires contain an abundance of snags that provide nesting habitat for cavity-nesting species such as Eastern Bluebirds, Great Crested Flycatchers, and Eastern Kingbirds. Finally, the Reservation's grasslands provide valuable nesting habitat for some of the state's rarest birds (e.g., Upland Sandpiper and Grasshopper Sparrow). Although the value of these grasslands has decreased over the years due to plant succession (Melvin 1994), they remain important for maintaining local and regional avian diversity. The ecological importance of the Massachusetts Military Reservation is likely to increase over time as the quantity and quality of breeding bird habitat off the Reservation continues to decline due to development and the associated habitat fragmentation.

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CAPE TIP BIRDING BY BIKE

by John C. Young

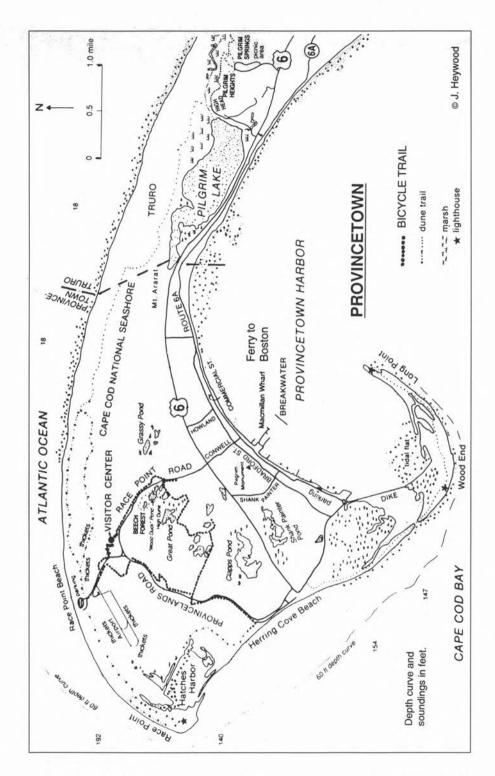
Bicycles have many advantages over automobiles when it is time to go birding. One benefit is the lower environmental impact. Driving way out to Truro counters this benefit; you will have to judge for yourself whether or not to venture out for this lovely ride.

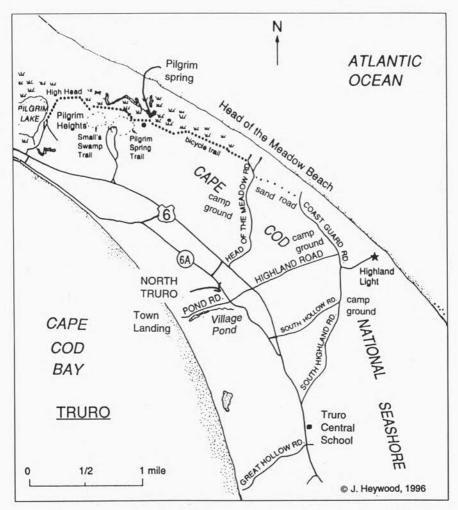
The route described here is about twenty-five miles long including five miles on bike paths and several miles on roads with narrow shoulders. The route may challenge inexperienced cyclists because it is quite exposed to wind. A helmet is advisable, of course. On a good day, bicycling in Truro and Provincetown can be a great pleasure. The best times are late April to mid-June and September through November, and an early morning start is best.

If arriving by car, follow Route 6 toward Provincetown. Just north of the Truro Central School, turn right on Highland Road. Assemble your bicycling gear at Highland Light (Cape Cod Light) where there is some parking. The lighthouse was moved back in summer 1996 to accommodate the loss to the sea of up to thirty feet of land each decade along the high bluffs. Bank Swallows nest out of sight along the top of the bluffs. Horned Larks and migrants such as Lesser Golden Plover can sometimes be seen before golfers tee up at the adjacent Highland Links.

Coast down the road past the golf course. Turn right onto Highland Road, and follow its bend to the left, passing through pitch pine woods with Pine Warblers, migrant kinglets, and Red-breasted Nuthatches. Instead of passing under Route 6, turn left up the ramp, and follow Route 6 north for a short stretch. The first right, at the information booth, will take you through continuous pitch pine forest to Head-of-the-Meadow Beach. At the end of the road, the right fork offers a handy low-level view of the ocean. Look for loons and scoters. At low tide the wreck of the Bark Francis is visible just to the north.

Just a short way down the other fork is the south end of the Pilgrim Springs bike trail. For two miles this trail follows a water-level route with short steep upward slopes on the left and swamp to the right. The waves of the Atlantic Ocean once crashed against land where you are now pedaling. Later, a barrier beach formed, dividing what became known as East Harbor (and later, Pilgrim Lake) from the ocean. The trail continues from the head of the former salt meadow to Pilgrim Lake, through highbush blueberries, shadbush, beach plum, and the like. This is an excellent place to see day-flying migrants, such as Tree Swallows, flickers, and accipiters. Close views of warblers are possible if they can be coaxed out of the dense thickets. The spring where the Pilgrims were so pleased to find fresh water is a good place to stop along the way and pish.





At the end of the bike trail, turn left on the hard-packed road that leads out to Route 6. Keep checking for migrants. The hill to the left is known as High Head. It is the end of land deposited directly by glacial action. The land beyond was raised by wave and wind action alone. Carefully cross the highway, and take the adjacent crossroad (just to the left) to Route 6A. A right turn on Route 6A takes you to Provincetown, visible beyond the row of beach cottages. The best stop along this stretch is at the Holiday Inn in Provincetown. In August and September the commoner shorebirds often congregate here at midtide. Sea ducks are offshore in December and January.

For a change of pace, take the left fork (Commercial Street) into Provincetown. Here, the curious observer will find the human residents and visitors of greater interest than the motley urban birds. In the very midst of footlong hot dogs shacks and tee-shirt emporiums, go left out onto McMillan Wharf where fish, humans, gulls, sea ducks, and loafing alcids all meet. Catch a bite to eat as well in preparation for pedaling in the Provincelands.

Continuing out on Commercial Street, you will find that pedestrians have never given up the right of way to vehicles. Beware too, for the street is one-way for cars but not your bicycling brethren. If no other spots look enticing to birders, the breakwater at the rotary at the end of Commercial Street surely will. Extensive sand flats are visible at low tide with the breakwater offering access to their midst. But let us continue.

The road to Herring Cove cuts through a very attractive mix of sand dunes vegetated with grass, pines, and hardwoods contiguous to salt marsh. A short bike path diverges left to the beach. Continue along the beach, past the Winnebago habitat. Northern Gannets and Roseate Terns sometimes fish offshore here.

The great Provincelands network of bike trails can be accessed at the north end of the Herring Cove Beach parking lot. The bike trail rolls over dormant dunes, then skirts a natural cranberry bog. A dirt road, scarcely passable by bicycle, runs northwest from this point to the Hatches Harbor dike, through habitat favored by Vesper Sparrows. The cyclist selecting a shorter route will continue on the bike trail through an underpass and take the right fork toward the Beech Forest rather than turning left toward Race Point. At the peak of each hill, scan for hawks. Rarely, in May or September, hawks funneled to the tip of the Cape ascend in kettles, until they head off toward the distant Manomet hills.

Suddenly the trail dips from sun-baked and windswept sand dunes into cool shadowy woods. The trail winds from pond to pond through this refreshing greenery. Small bands of warblers and other night-flying migrants may be encountered all along this trail in May or September. If the warblers are promising, a walk around the Beech Forest trail may be a worthwhile digression.

Leaving the Beech Forest, turn right on Race Point Road, and return to the center of Provincetown. Go left on Route 6A (Bradford Street), and continue for several miles to the flashing light marking the village of North Truro. Through the Beach Point cottage colonies, you will be retracing your route from earlier in the day. At North Truro, a right turn can be rewarding. Check the thickets along Village Pond, and look out over the Cape Cod Bay from the former railroad embankment. A small group of Common Eider may be present at any season.

Returning to the light at North Truro, turn right again. Look for Orchard Orioles in the elms beyond the Christian Union Church. Turn left just beyond the South Hollow vineyards onto South Hollow Road (currently unmarked). This road crosses Route 6 and ends at Highland Road. Turn left. The small woods at the top of the hill might shelter one last species before you turn right back to the parking lot at Highland.

The circuit passes three campgrounds in North Truro, motels, and

innumerable cottages for those choosing to stay in the area. One may begin the circuit at any point and add or skip detours, but the fine view at Highland Light over the route traveled should not be missed.

JOHN YOUNG previously wrote an article for Bird Observer about his birding experiences on the South Dakota plains. Recently he started to use an MBTA bicycle pass to extend his range of car-free birding from his home base in Boston. Other resources available for the birder who bikes on Cape Cod include maps of bike trails available at the National Seashore Headquarters in Eastham and Provincetown; a booklet titled The Cape Cod Bike Book: A Guide to the Bike Trails of Cape Cod (by William E. Peace and published by The Nantucket Book); Birding Cape Cod (1990, published by the Cape Cod Bird Club and the Massachusetts Audubon Society); and the chapters about Cape Cod in A Birder's Guide to Eastern Massachusetts (1994, published by the American Birding Association).

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THE IDENTIFICATION GUIDE SERIES: AN OVERVIEW (PART TWO)

by Mark Lynch

This is the second article in a series of three in which I review the books generally referred to as the "Identification Guides." In the first article I gave an overview and history of the series as well as a review of the first three releases in the series on seabirds, shorebirds, and waterfowl. In this article I review later releases in the series given in the order of their publication, many of which are not well known to the average birder in North America. In the third installment I will review the Pica Press series of "Identification Guides."

Swallows and Martins: An Identification Guide and Handbook by Angela Turner, illustrated by Chris Rose. 1989. Houghton Mifflin Company, Boston. Swallows and Martins seems like an odd choice for the next volume in the Helm Identification Guide Series. As a group, swallows do not present the identification challenges that pelagics or shorebirds do. Indeed, there are only seventy-four species of swallows in the world. With the publishing of this book, I believe the Helm Identification Guide Series more clearly defined its goals—namely, to not just produce world level field guides, but to create a series of monographs of birds that have rarely been dealt with completely. Although the identification details in both the plates and text are still top notch, each book in the series from this title on contains more written information on behavior, taxonomy, and others.

Because U.S. birders do not consider swallows as glamorous as, for example, raptors, many birders are not familiar with this book. This is a shame because this is one of the most thorough and beautiful books in the entire series. From the cover art through the plates, the illustrations are elegant, detailed, and alive. Because there are so few species to be dealt with, the plates are uncrowded, with lots of bits of background included. Maybe it is the natural "jizz" of swallows, but many of the birds pictured seem ready to flit off the page.

The written part of *Swallows and Martins* is likewise superb. The introductory chapters on morphology, plumage, classification, and behavior are longer and more informative than in other books in the series. Species writeups are more detailed and subheadings include the following: field characters, habitat, distribution and population, migration, foraging and food, social organization, sociosexual behavior, breeding, description, measurements, and races. To give you an idea of the completeness of the text, four densely printed pages are devoted to just the Tree Swallow.

Although Swallows and Martins will never be commonly used as an identification guide, it is an important reference work that contains much

information on even familiar species that will be new to the reader. Travelers to Africa, Asia, South America, and Australia will of course find it an important source for pretrip research. Mostly, this is a book that by its well-written text and sheer beauty of its plates makes us look again at a group of birds that we often ignore.

Kingfishers, Bee-Eaters, and Rollers by C. Hilary Fry and Kathy Fry, illustrated by Alan Harris. 1992. Princeton University Press. Of all the books in the Helm Identification Guide Series, this title is probably of the least interest and use to birders who have not traveled outside North America. There are only three species of kingfishers in North America, and only one is widespread. Needless to say, there are no bee-eaters or rollers in the ABA area. The 123 species covered by this book are portrayed in forty color plates. The illustrations are excellent, almost as good as the plates in Swallows and Martins. Of all the books in the series up to this point, the species shown in Kingfishers, Bee-Eaters, and Rollers are certainly the most exotic looking, with their colorful plumage and unique jizz. There is a high degree of island endemism in the kingfishers, especially in the southeast Asian and South Pacific areas. This makes Kingfishers, Bee-Eaters, and Rollers a pleasure for "armchair" birders who like to dream of exotic birds in faraway places.

The choice of only dealing with kingfishers, bee-eaters, and rollers as the subject for this book is a bit strange. The order, Coraciiformes, also contains the todies, motmots, ground rollers, and the monotypic family of the cuckoo-roller. Coraciiformes is divided into two suborders of Alcedini and Corachii. Families were included and excluded from this book from both of the suborders. The species excluded do not number that many (eighteen), and I wish they had been included for completeness sake.

The format of the book follows that of previous titles, although the introductory chapters are more detailed. These include a concise but thorough explanation of the characters and relationships of the Coraciiformes, and good general notes on food, foraging and nesting, and social and breeding behavior. As can be imagined, birds this unique in plumage and distribution do not require the detailed plumage accounts of other groups of birds with many easily confused species. The written information is excellent, although sometimes spare, and includes full accounts of many poorly known and underdescribed species. Particularly well done is the complete illustrating and description of the huge Mangrove Kingfisher complex.

There is no doubt that *Kingfishers, Bee-Eaters, and Rollers* is an important contribution to ornithological literature but will be of very limited interest to the birder who does not stray from North America. This book also contains many wonderful illustrations of some of the most interesting, elegant, and beautiful birds of the world.

Crows and Jays: A Guide to the Crows, Jay, and Magpies of the World by Steve Madge, illustrated by Hilary Burn. 1994. Houghton Mifflin Company, Boston. Madge and Burn are the same team that wrote Waterfowl. This slim volume is an interesting addition to the series. The forty color plates illustrate the 120 species for consideration. The artwork is very good but lacks the drama and beauty of Swallows and Martins and even Kingfishers, Bee-Eaters, and Rollers. The plates are well designed and are not overcrowded. Actually, Hilary Burn does a good job with an unenviable task—illustrating the world's crows.

The taxonomy of *Crows and Jays* generally follows the then new work of Sibley, Ahlquist, and Monroe. The species for consideration were formerly included in the family Corvidae and are now relegated to the tribe Corvini within the subfamily Corvinae of the family Corvidae. Other tribes in this subfamily include the Paradisaeni (birds of paradise); Artamini (butcherbirds, currawongs, and woodswallows), and Oriolini (Old World orioles, minivets, and cuckoo shrikes).

The format of *Crows and Jays* remains true to the format of the series by starting with some short introductory chapters including conservation, relationships, and origins. This section is less informative than in the last two books in the series, which I found disappointing.

The species accounts are excellent and thorough. The Banggai Crow from a small island in the Sulawesi and previously known from only two specimens is fully described here for the first time. It is not known whether this bird still exists. Of more local interest, I found the discussion on the problems of the taxonomy and identification of American Crows to be very enlightening. It is interesting that the Northwestern Crow is labeled "one of North America's most controversial bird species" (and I thought it was the Cox's Sandpiper).

Crows and Jays is a fine addition to the Identification Guide Series. Although many birders will find it not as critical to own as Shorebirds or Seabirds, it does contain much information of interest to birders of the Americas.

Finches and Sparrows: An Identification Guide by Peter Clement, illustrated by Alan Harris and John Davis. 1993. Princeton University Press. This book focuses on the bird families Fringillidae, Estrildidae, and Passeridae. It does not cover what we in North America call "sparrows." A whopping 290 species are illustrated in 73 color plates, including four full plates of Australian finches and nineteen plates for just the "African finches." Although the plates are somewhat crowded, they are well laid out, and the artwork is of the usual high standard of the series.

The introductory chapters are minimal but do include a full page map of mountain ranges and principal lakes of the eastern Palearctic, where a number of the more interesting and little known species treated in this book are found. The species accounts are very complete. The written section ranks as one of the best and most detailed in the series. Particularly outstanding are the accounts and illustrations of little known species such as the snow finches or real rarities such as the Sao Tome Grosbeak.

Of course, all the species we in North America refer to as finches are included in this book. Clement still lists four species of crossbills: White-winged or Two-barred (*Loxia leucoptera*), Red or Common (*L. curvirostra*), Scottish (*L. scotia*), and Parrot (*L. pytyopsittacus*). He admits that the latter three may be a cline of forms. There is an excellent discussion of the problems of separating these three "un-barred" species of crossbill in the field. The Hoary Redpoll maintains its species level status, but the problems of separating this species in the field from pale forms of Common Redpoll are very completely presented. As of the writing of *Finches and Sparrows*, the rosy finch complex had not been resplit, and so *Leucostiete tephrocotis*, *L. atrata*, and *L. australis* are treated as recognizable subspecies, but Clement mentions that some authors treat them as three separate species.

I admit to a real interest in the family Passeridae (House Sparrow and relatives). The information in this volume on this often overlooked family is very complete, although it owes a lot to the research of J. Denis Summers-Smith. His *The Sparrows* (1988) still remains the single best source of information on this group. (Summers-Smith also wrote an amusing accounting of his travels while researching the Passeridae called *In Search of Sparrows*, which makes a good winter's night read.) When I read species accounts, I am always looking for tidbits of information that I did not previously know. In *Finches and Sparrows*, it is stated that one of the largest concentrations of House Sparrows was in London in August 1949, when 19,000 came to a single roost. But this is dwarfed by the report from Egypt in 1931 when 100,000 were reported in a single roost. And you thought there were a lot at your feeder.

Finches and Sparrows is an important reference book for any birder traveling to Asia, Africa, or Australia, although it is too heavy to consider carrying along. To a lesser extent, birders in North America will find its accounts of local species interesting and enlightening.

Warblers of the Americas: An Identification Guide by Jon Curson, illustrated by David Quinn and David Beadle. 1994. Houghton Mifflin Company, Boston. With this title I believe the series regained a lot of its North American audience, for obvious reasons, Indeed, this is the most geographically limited volume in the Helm Identification Guide Series. All of the 116 species of the subfamily Parulinae are illustrated in thirty-six color plates. Curson does not omit the Olive Warbler, but he does admit to its uniqueness and mentions Sibley and Monroe's moving this species to its own subfamily, Peucedraminae, within the Fringillidae family.

The illustrations are among the better in the series. The plates are uncrowded and usually show a good variety of plumages of each species.

Although the pictures of familiar North American species may not seem to break too much new ground, they are still a big improvement over the illustrations in all the popular field guides. Where this book really stands out is in the plates and accounts of Central and South American species and the Caribbean endemics. I found the plates of the Myioborus, Basileuterus, and Geothylpis species particularly good and useful. To bring home this point, compare plates 8 and 9 from *The Birds of South America Volume 1: The Oscine Passerines* by Robert Ridgely and Guy Tudor with the comparable plates in *The Warblers of the Americas*. The latter book's illustrations are larger, more lively, more fully realized, better colored, and show you more plumages. As for the Caribbean endemics, this was the first time I had seen decent illustrations of many of them. I even like the choice of using the Golden-winged Warbler for the cover.

The text is well written, yet concise. The book is one of the trimmest in the series, making it attractive to bring out into the field.

The American wood warblers are the favorites of many birders. The Warblers of the Americas belongs on the shelf of anyone who has spent an enjoyable May morning observing a wave of these feathered jewels.

Tits, Nuthatches, and Treecreepers by Simon Harrap, illustrated by David Quinn. 1996. Christopher Helm/A & C Black, London. Published in the United States by Princeton University Press. I have to admit that this volume took me by surprise. This was not one of the titles that I was eagerly awaiting. After all, just how many chickadees are there anyway? Well, Tits, Nuthatches, and Treecreepers ends up being one of the best volumes in the series, rivaling Swallows and Martins in the quality of the plates and text.

This book covers the Paridae (true tits), the Remizidae (the penduline tits), and the Aegithalidae (the long-tailed tits), which totals seventy-eight species. Also included are the twenty-four species of nuthatches and the eight species of treecreepers. The thirty-six plates by David Quinn are nothing short of superb. The colors are well reproduced, the plates often include some bits of background, and the birds (especially the nuthatches) are shown in a variety of poses. Some of the artwork, particularly the nuthatches, is of such quality as to take on the look of good photographs. A few of the plates may seem a bit crowded with too many look-alike species (e.g., Plate 9 of the treecreepers). In these cases the birds are shown in similar poses to enable the reader to better differentiate the subtle plumage characteristics. Numerous black-and-white drawings are found throughout the text, including amazingly detailed closeups of the upper wing patterns of the treecreepers.

The text more than matches the high quality of the plates. The species accounts are a neat synthesis of much of the current knowledge of these species. The writing is clear and concise, but includes an amazing amount of information. For instance, you may think there is not much you could learn

about the ubiquitous Black-capped Chickadee. In the eleven pages of dense text dedicated to this species, you are sure to find out an amazing variety of facts that you did not know about this common backyard species. First, there is a complete summary of the fascinating and unique dominance hierarchies of winter chickadee flocks, a must-read for anyone interested in the social life of birds. Even the "chick-a-dee" call is revealed to be exceedingly complex with an unlimited number of variations: "...Chick-adee can be used to convey much information and is the only known system of combinatorial animal communication, apart from human language" (page 267). The writing about Black-capped Chickadee geographical variation and hybrids is likewise thorough, although the average birder may find those sections heavy going.

We also learn that because the Red-breasted Nuthatch is one of the few nuthatches to undertake regular migrations, it is the only nuthatch to have crossed the Atlantic. This occurred on October 13, 1989, when two birders found a Red-breasted Nuthatch at Holkham Means, Norfolk, in Great Britain (see *British Birds*, volume 88, number 3, March 1995, for details).

The introductory section provides a good discussion of the trends of splitting and lumping and clarifies (as best as is possible) the concepts of superspecies, subspecies, and clines. Generally, Harrap uses the classification of Sibley and Monroe, although "purely for convenience." This chapter may be a bit technical for some birders but is further proof of the current dynamic (some may say confused) state of taxonomy and its importance to birders. After all, the concept of a "species" is the hook on which birding hangs its hat.

Tits, Nuthatches, and Treecreepers, although clearly the standard reference on these species, may not be that useful as an in-the-field guide. Certainly, no areas of the world have enough species of tits and nuthatches to require you to bring this book along. However, this book is essential for any pretrip research, whether you are off to the Petite Kabylie for the Algerian Nuthatch or simply traveling down the Delmarva Peninsula for your first Carolina Chickadee.

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MAJOR BROAD-WINGED HAWK FLIGHTS REPORTED BY THE EASTERN MASSACHUSETTS HAWK WATCH

The August 1995 issue of Bird Observer contains an article titled, "The Fall Hawk Migration—The Eastern Massachusetts Hawk Watch: Twenty Years and Counting." Through an inadvertent error, the table for the largest flights of Broad-winged Hawks reported by the Eastern Massachusetts Hawk Watch was omitted. The text below is reprinted from the article—only the first table (top ten flights) is new.

Broad-winged Hawks are clearly the stars of the migration season, with at times several hundred hawk watchers appearing at Wachusett Mountain in hopes of seeing one of those "monster" flights. Research by the NorthEast Hawk Watch (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 ever reported in New England. Subsequently, significantly 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, clearly indicates 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.

Table 1. Top Ten Broad-winged Hawk Flights, EMHW

<u>Date</u>	Location	Number
9/13/83	Wachusett Mountain	19,912
9/17/84	Wachusett Mountain	17,415
9/13/89	Wachusett Mountain	15,916
9/17/87	Wachusett Mountain	10,095

9/13/78	Wachusett Mountain	10,086
9/12/92	Wachusett Mountain	9692
9/15/94	Mount Watatic	9094
9/12/88	Wachusett Mountain	7554
9/16/87	Wachusett Mountain	5368
9/14/88	Wachusett Mountain	5326

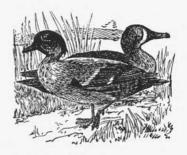
Although the largest single counts of Broad-winged Hawks have been seen at Wachusett Mountain, very large flights, and often the largest Broadwing flights of the year, have been reported from many other sites throughout eastern Massachusetts.

Table 2. Large Broad-winged Hawk Flights at Locations Other than Wachusett Mountain

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

For more information, contact Paul M. Roberts, EMHW, 254 Arlington Street, Medford, Massachusetts 02155.

BIRD SIGHTINGS MARCH 1996 SUMMARY



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

LOONS THROUGH WOODPECKERS

March is often a cruel month. Warmer weather and southwesterly winds offer birders hope that migration will begin in earnest, but the results rarely meet expectations. Nevertheless, by the end of the month, the early spring migration had dispelled the memory of the long winter.

Reports of both loon species increased at midmonth, but Red-necked Grebe reports seemed low for the season. Double-crested Cormorant reports began to dominate toward the end of the month. As is typical, both Great and Snowy egrets began appearing at month's end, but the scattering of Glossy Ibis reports on outer Cape Cod were early. Waterfowl appearance is a typical feature of the month. Species reported in good numbers included Northern Pintail, Ring-necked Duck, and Green-winged Teal. Less common duck species that were reported in lesser numbers from scattered locations included Northern Shoveler, Eurasian Wigeon, and Lesser Scaup. Among the more unusual winter mainstays, Harlequin Duck was reported only from traditional wintering areas. A sub-adult King Eider was unique at Squantum, and Barrow's Goldeneye was reported from only two locations.

Although no pronounced raptor movement was noted, the tally by the end of the month indicated that some early migrants were arriving. Turkey Vultures were everywhere, and Ospreys were well established in Westport. Both Sharp-shinned and Cooper's hawks were widely reported late in the month, although mainly as single individuals. An exceedingly early report of Broad-winged Hawk was undetailed. Rough-legged Hawk reports reflected their scarcity this past winter. A few Merlins and Peregrine Falcons appeared late in the month, and one Merlin was observed taking and carrying off a Killdeer.

The shorebird movement was normal, and featured the seasonal arrival of residents such as American Oystercatcher, Piping Plover, and American Woodcock. Both Killdeer and Common Snipe were widespread and occasionally in good numbers. Among the arriving Greater Yellowlegs were the usual scattering of Lesser Yellowlegs. The only reports that might be termed mildly surprising were Upland and Pectoral sandpipers.

Gulls were noteworthy this month, particularly in Newburyport Harbor and a nearby field on Little's Lane in Newbury. An astute observer commented on the fact that they were attracted to copious amounts of bone meal spread on the fields. This event coincided with the migration period for several species and produced some impressive tallies. Present among the assembled gulls were adults of both Lesser Blackbacked and Mew gulls. Another adult Mew Gull was present for a brief period early in the month in South Boston. A few Common Black-headed Gulls were reported in small numbers away from the Newbury gull assemblage. Notable among alcids was a Common Murre well observed close to shore in East Gloucester. An Atlantic Puffin in East Orleans appeared to be sick or partially oiled. A careful count of Razorbills passing the outer beach in Wellfleet during a two-and-a-half-hour period totaled an impressive 2,810.

A handful of reports of Short-eared Owls and only a single report of Snowy Owl reflect the scarcity of both species this winter. The **Great Gray Owl** in Rowley, originally discovered in February, continued to bring delight to many birders throughout March. Reports of Barred Owls reflected their strong showing last fall and winter. A Red-headed Woodpecker in Medfield was interesting both by date and location, and a **Black-backed Woodpecker** in Sharon, originally located in February, continued to be seen through midmonth.

R. A. F.

Date	Location	Number	Observers	Date	Location	Number	Observers
Red-throa	ated Loon			27	Essex	1	G. Soucy#
1	Newburyport H.	. 1	T. Aversa	28	Wareham	1	M. LaBossiere
9	Wellfleet	30	S. Arena#	29	P.I.	2	C. Leahy
10	P'town, Orleans	15, 12G	. d'Entremont#	30	W. Harwich	1	J. Trimble #
17	Boston H.	8 TA	SL (M. Hall)	Snowy E	gret		
29	Nantucket	300+	S. Perkins	28	Gloucester	2	G. Soucy#
Common	Loon			29	Rochester	1	M. LaBossiere
9	Wellfleet	10	S. Arena#	Glossy It	ois		
10	Truro, P'town	5, 7G.	d'Entremont#	23	Orleans	1	E. Winslow
10	Plymouth	10	M. Lynch#	24	Chatham	1	B. Nikula
17	Boston H.		SL (M. Hall)	Whooper	Swan		
23	Westport	8	M. Lynch#	thr	Ipswich	2	G. Soucy#
29	Nantucket	30	S. Perkins	1	P.I.	1	J. Brown#
31	P.I.	3 G.	d'Entremont#	Mute Sw			
Pied-bille		869	303725750000000	17	Westport	108	M. Lynch#
3	Lakeville	3	W. Petersen	Snow Go	ose		
10	Plymouth	1	M. Lynch#	10	Newyport	1 BBC	(D.+ D. Oliver)
25	GMNWR	1	R. Lockwood	15	Saugus	1	S. Hatch
26	P.I.	1	D. + I. Jewell	18	Wenham	2	J. Berry#
27	Lynnfield	1	C. Leahy	Brant			100000000000000000000000000000000000000
30	Arlington	1	K. Hartel	1	Newburyport	24	R. Heil
30	Nantucket	1	S. Perkins#	10	Plymouth	460+	M. Lynch#
31	IRWS	3	R. Heil	17	Boston H.	2368	TASL (M. Hall)
Horned C	Grebe			17	Salisbury	120	R. Heil
1	P.I.	51	R. Heil	30	Nantucket	11	S. Perkins#
10	Plymouth	18	M. Lynch#	Canada (Goose		
17	Boston H.	142 TA	SL (M. Hall)	3	Salisbury, P.I	. 700, 50	00 M. Lynch#
17	CapeAnn	6	J. Hoye#	23	W. Bridgewa	ter 2200	S. Arena#
23	Winthrop	32	G. Long	24	Bolton Flats	720	M. Lynch#
24	Lakeville	1	W. Petersen	Wood Dr	ick		
24	Scusset B.	15	M. Sylvia	10	Lakeville	20	R. Shore
29	Nantucket	6	S. Perkins	16	Acushnet	2	M. LaBossiere
Red-neck	ed Grebe			23	GMNWR	18	S. Perkins#
10	Manomet	5	M. Lynch#	24	Bolton Flats	10	M. Lynch#
12	Cape Ann	3	J. Brown#	25	Westboro	6	J. Coyne
17	Rockport	4	J. Hoye#	31	Sherborn	12	E. Taylor
17	Boston H.	21 TA	ASL (M. Hall)	31	IRWS	25	R. Heil
23	Lakeville	2	H. Ferguson	Green-w	inged Teal		
24	Truro	12	J. Hoye#	9	Cambridge	9	J. Campbell
24	Winthrop	36	M. Pelikan	10	Acoaxet	10	S. Hennin
24, 30) Lakeville	3, 2	W. Petersen	15	W. Roxbury	14	T. Aversa
29	Nantucket	6	S. Perkins	16-31	Arlington Re	s. 12 m	ax M. Pelikan
Northern	Gannet			17	W. Bridgewa	ter 15	R. Finch
9	Wellfleet	300	S. Arena#	17, 3	0 W. Harwich	7, 25	B. Nikula #
10	P'town, Orleans	75, 25G	. d'Entremont#	19	Concord (NA	(C) 20	R. Walton
17	Boston H.	2 TA	ASL (M. Hall)	25	GMNWR	20	R. Lockwood
30	Nantucket	25	S. Perkins#	25	Dorchester	15	R. Donovan
Great Co	rmorant			27	Arlington Re	s. 8	M. Rines
10	Plymouth	35	M. Lynch#	29	P.I.	400	C. Leahy
13	S. Carver	4	J. Shaw	3, 30	W. Bridgewa	ter 6, 60)+ W. Petersen
16, 23	3 Lakeville	11, 10	S. Arena#	30	Newbury	13	T. Young
17	Newburyport	60+	J. Berry	31	Bolton Flats	12	R. Bradbury
Double-c	rested Cormorant			America	n Black Duck		CONTRACTOR STATE
	Boston H.		ASL (M. Hall)	1	Newburyport	910	R. Heil
24	Squantum		d'Entremont#	10	Plymouth	1400	M. Lynch#
25	Dorchester	15	R. Donovan	10	Orleans		G. d'Entremont#
28	Wareham		M. LaBossiere	17	Boston H.		TASL (M. Hall)
30	Nantucket	4	S. Perkins	17	Westport	1720	M. Lynch#
American			D. 1 0111110	30	Salisbury	1100	M. Lynch#
19	Squantum	1	D. Brown	Northern			27
	ue Heron	•	D. Dionii	1	Newburyport	9	R. Heil
13	Acton	8	B. Colburn	3	P.I.	9	M. Pelikan
16	Yarmouth	14	M. Lynch#	10	Westport	130	S. Hennin
23	Chatham	11	J. Hoye#	17	W. Bridgewa		R. Finch
					1 Wayland	1, 2	N. Patterson
Crost Fo	Westboro	/ nest	s M. Lynch#			3	S. Perkins#
Great Eg		,	W Vaish		4 GMNWR	35	C. Leahy
23	Chilmark	1	W. Keith	29	P.I. W. Bridgewa		W. Petersen
24	Truro	2	K. Jones #	3, 30	w. Bridgewa	ter 5, 8	W. Petersen
25	Dorchester	1	R. Donovan				

	nged Teal		D 1/7 1 #	30	Nantucket	40	S. Perkins#
	W. Harwich	2, 4	B. Nikula #	Common	Eider		
25	Dorchester	12	R. Donovan	1	P.I.	530+	R. Heil
26	Chatham	2	R. Hall	10	Plymouth	3800+	M. Lynch#
26	P.I.	2	L. Healey	17	Boston H.	2007/00/00/00	TASL (M. Hall)
31	Bolton	1	S. Hennin	King Eid		7110	rast (M. Hall)
	Shoveler	•	J. Heimin				
		2 2	D F "	19	Squantum	1 im	m m D. Brown
	9 Sudbury	2, 3	R. Forster#	Harlequi			
27	Lynnfield	2	C. Leahy	2	Rockport	18	BBC (J. Nove)
28	Arlington Res.	1 m	M. Rines	10	Manomet	9	M. Lynch#
28	Wayland	2	N. Patterson	23	N. Scituate		SBC (D. Clapp)
30	Wakefield	ī	D. + I. Jewell	Oldsquav		, 3	obc (D. Ciapp)
Gadwall	Wandicid		D. T. JEWEII				202 20
	01			3	Newburyport	300+	M. Lynch#
18	Gloucester	8	G. Soucy#	17	Woods Hole	400	N. Komar
22	GMNWR	2	R. Lockwood	30	Nantucket :	200,000	S. Perkins#
29	Ipswich	77	C. Leahy	Black Sco			O. I VIALLED
Eurasian			0. 2001.	10	Orleans	50 0	ditt-t
24	Quincy	1 f	D. Brown#			30 0	d'Entremont#
26				10	Plymouth	80+	M. Lynch#
	Arlington Res.	1 m	M. Pelikan	16	Sandwich	30+	M. Lynch#
30	Chatham	2	E. Banks	17	Boston H.	1 7	TASL (M. Hall)
American	n Wigeon			Surf Scot	er		(/
3	W. Bridgewater	2	W. Petersen#	10	Plymouth	50+	M Lynch#
15	Newburyport H.		R. Heil	10	Nahant		M. Lynch#
16		6				20	R. Lockwood
17	Arlington Res.		M. Pelikan	16	Sandwich	70+	M. Lynch#
	Marlboro	4	S. Hennin	17	Boston H.	78 1	ASL (M. Hall)
23	GMNWR	6	S. Perkins#	28	Nant Sound	720	S. Perkins
24	Wakefield	4	P. + F. Vale	31	P.I.	6	D. Brown#
29	Nantucket	8	S. Perkins		nged Scoter		D. DIOWIII
30	Newbury	6	J. Berry#	16	Sandwich	1201	
Canvasba		U	J. Delly#			130+	M. Lynch#
				17	Boston H.	179 T	ASL (M. Hall)
3	Nantucket	66	E. Andrews#	Common	Goldeneye		
10	Westport	4	S. Hennin	1, 17	Newburyport	260, 360	R. Heil
16	Falmouth	40	J. Hoye#	10	Plymouth	135+	M. Lynch#
16	Lakeville	2	S. Arena#	17	Boston H.		ACI (MA LIGHT
17	Newburyport	1 m	J. Berry	29		150	ASL (M. Hall)
	Westport				Nantucket	150	S. Perkins
		53, 55	M. Lynch#		Goldeneye		
20	Wareham	17	M. Sylvia	17	Newburyport	1 m	R. Forster
25	GMNWR	1m	J. McLaughlin	17, 30	Newburyport	H. 1f	J. Berry#
26-31	Arlington Res.	1	M. Pelikan		Squantum	7, 1	D. Brown
30	Nantucket	14	S. Perkins#	23	M.V.	i	
Redhead			O. I CIRILISH	Bufflehea		1	A. Keith#
23	Yarmouth		T 17				NAME OF STREET
		pr	J. Hoye#	17	Boston H.	1929 T	ASL (M. Hall)
29	Nantucket	43	S. Perkins	20-24	GMNWR	5	S. Perkins#
30	Arlington	1	K. Hartel	Hooded N	1erganser		
Ring-neck	ked Duck				Melrose	15	D + I Invell
		100	S Hennin	1	Melrose	15	D. + I. Jewell
10	Wayland	100	S. Hennin	1 2, 24	Wakefield	11, 4	P. + F. Vale
10 17	Wayland Waltham	30	E. Taylor	1 2, 24 3	Wakefield Lakeville	11, 4 25	P. + F. Vale W. Petersen#
10 17 17	Wayland Waltham Halifax	30 25	E. Taylor R. Finch	1 2, 24 3 9	Wakefield Lakeville W. Brookfield	11, 4 25	P. + F. Vale W. Petersen#
10 17 17 19	Wayland Waltham Halifax Concord (NAC)	30 25 35	E. Taylor	1 2, 24 3	Wakefield Lakeville W. Brookfield	11, 4 25	P. + F. Vale W. Petersen# M. Lynch#
10 17 17	Wayland Waltham Halifax	30 25	E. Taylor R. Finch	1 2, 24 3 9 16	Wakefield Lakeville W. Brookfield Arlington	11, 4 25 1 22 31	P. + F. Vale W. Petersen# M. Lynch# K. Hartel
10 17 17 19 23	Wayland Waltham Halifax Concord (NAC)	30 25 35	E. Taylor R. Finch R. Walton S. Perkins#	1 2, 24 3 9 16 16	Wakefield Lakeville W. Brookfield Arlington Yarmouth	11, 4 25 1 22 31 27	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch#
10 17 17 19 23 24, 30	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax	30 25 35 48 125, 90	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen	1 2, 24 3 9 16 16 17	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook	11, 4 25 1 22 31 27 2	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins#
10 17 17 19 23 24, 30	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res.	30 25 35 48 125, 90 98	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines	1 2, 24 3 9 16 16 17 25	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR	11, 4 25 1 22 31 27 2 4	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin
10 17 17 19 23 24, 30 27	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro	30 25 35 48 125, 90 98 50	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne#	1 2, 24 3 9 16 16 17 25 29	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket	11, 4 25 1 22 31 27 2	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins#
10 17 17 19 23 24, 30 27 27	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket	30 25 35 48 125, 90 98 50 15	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins	1 2, 24 3 9 16 16 17 25 29 Common	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR	11, 4 25 1 22 31 27 2 4	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin
10 17 17 19 23 24, 30 27 27 29 31	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton	30 25 35 48 125, 90 98 50 15 28	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne#	1 2, 24 3 9 16 16 17 25 29	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket	11, 4 25 1 22 31 27 2 4 2	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin
10 17 17 19 23 24, 30 27 27	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket	30 25 35 48 125, 90 98 50 15	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins	1 2, 24 3 9 16 16 17 25 29 Common	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland	11, 4 25 22 31 27 2 4 2	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson
10 17 17 19 23 24, 30 27 27 29 31 31	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS	30 25 35 48 125, 90 98 50 15 28	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena#	1 2, 24 3 9 16 16 17 25 29 Common thr 1	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston	11, 4 25 22 31 27 2 4 2 19 ma 26	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn
10 17 17 19 23 24, 30 27 27 27 29 31 31 Greater Sc	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS	30 25 35 48 125, 90 98 50 15 28 17	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson	11, 4 25 22 31 27 2 4 2 19 ma 26	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x. N. Patterson C. Hepburn W. Petersen#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville	30 25 35 48 125, 90 98 50 15 28 17	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth	30 25 35 48 125, 90 98 50 15 28 17 240 70	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye#	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H.	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T.	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw
10 17 17 19 23 24, 30 27 27 27 29 31 31 Greater Sc 16 16 17	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T.	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye#	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 10	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T.	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 10 2, 30 24	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T.	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 10 2, 30 24 24	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T 4 72 290	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena#	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26 30	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T 4 72 290	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# J. Hoye# J. Hoye#	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26 30	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16 16 23	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth User Bedford Lakeville Falmouth Lakeville Falmouth Waltham	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# J. Hoye# J. Hoye# R. Forster	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26 30 Red-breas	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury ted Merganser	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75 40 80	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins x N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne# J. Berry#
10 17 17 19 23 24, 30 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16 16 23 24	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth Halifax	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290 36 60 3 2	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# R. Forster W. Petersen	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 10 2, 30 24 24 25 26 30 Red-breas 10	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury ted Merganser Plymouth	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75 40 80 490+	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne# J. Berry# M. Lynch#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16 16 23 24 27	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth Waltham Halifax W. Newbury	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290 36 60 3 2	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# R. Forster W. Petersen R. Forster	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26 30 Red-breas 10 17	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury ted Merganser Plymouth Boston H.	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75 40 80	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne# J. Berry# M. Lynch# ASL (M. Hall)
10 17 17 19 23 24, 30 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16 23 24 27 30	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth Waltham Halifax W. Newbury Arlington Res.	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T 4 72 290 36 60 3 2 1 f	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# R. Forster W. Petersen R. Forster M. Pelikan	1 2, 24 3 9 16 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 24 25 26 30 Red-breas 10 17 23	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury ted Merganser Plymouth	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75 40 80 490+	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne# J. Berry# M. Lynch#
10 17 17 19 23 24, 30 27 27 29 31 31 Greater Sc 16 16 17 17 23 30 Lesser Sca 16 16 23 24 27	Wayland Waltham Halifax Concord (NAC) GMNWR Halifax Arlington Res. Westboro Nantucket Brockton IRWS caup Lakeville Falmouth Boston H. Newburyport New Bedford Nantucket aup Lakeville Falmouth Waltham Halifax W. Newbury	30 25 35 48 125, 90 98 50 15 28 17 240 70 666 T. 4 72 290 36 60 3 2	E. Taylor R. Finch R. Walton S. Perkins# W. Petersen M. Rines J. Coyne# S. Perkins S. Arena# R. Heil S. Arena# J. Hoye# ASL (M. Hall) J. Berry M. Sylvia S. Perkins S. Arena# J. Hoye# R. Forster W. Petersen R. Forster	1 2, 24 3 9 16 16 17 25 29 Common thr 1 3 1, 30 10 2, 30 24 24 25 26 30 Red-breas 10 17	Wakefield Lakeville W. Brookfield Arlington Yarmouth Wash Brook GMNWR Nantucket Merganser Wayland Boston Hanson Pepperell S. Carver Lakeville Arlington Randolph GMNWR Dorchester Westboro W. Newbury ted Merganser Plymouth Boston H.	11, 4 25 22 31 27 2 4 2 19 ma 26 17 62, 6 71 42 62, 2 30 17 75 40 80	P. + F. Vale W. Petersen# M. Lynch# K. Hartel M. Lynch# S. Perkins# J. McLaughlin S. Perkins X. N. Patterson C. Hepburn W. Petersen# E. Stromsted J. Shaw R. Shore K. Hartel G. d'Entremont S. Perkins# R. Donovan J. Coyne# J. Berry# M. Lynch# ASL (M. Hall)

Ruddy Du	ck			17	Newbypt area	9	J. Berry
26	P.I.	1	K. Disney	23	Bridgewater	9	S. Arena#
30	Pembroke	12	W. Petersen	31	Wayland	8	G. Long
Turkey Vi		12	W. I Cleisen		ged Hawk	0	G. Long
14	Milton	19	N. Smith	9, 24	Middleboro	1, 4	W. Petersen#
16	Taunton	3	M. Lynch#		Cumb. Farms	2, 1	C. Ralph
16	Lynnfield	7	S. Hepburn#	16	W. Bridgewater	1	S. Arena#
17	GMNWR	3	M. Pelikan	17	P.I.		k D. + I. Jewell
17		4		22	P.I.	1 lt	
	Westport		M. Lynch#			1 11	IVI. PEHKAH
	Newbury	1,		American	Kestrei		I D
22	Concord	5	A. Hirschkop	1	Newburyport	1	J. Brown#
23	Bridgewater	3	S. Arena#	9	Wakefield	1	P. + F. Vale
25	Randolph	26	N. Smith	10	S. Boston	1	R. Lockwood
29	Rochester	4	M. Sylvia	10	Salisbury	1	P. + F. Vale
30	Fall River	3	P. O'Neill	27	Wayland	1	N. Patterson
31	Bolton	3	S. Hennin	Merlin			
thr	Reports of 1-2 in	divid	luals from 18 loc.	2	Melrose	1	P. + F. Vale
Osprey				20	Salisbury	1	C. Ralph
14	Chilmark	1	R. Conway	27	Newbury	1	R. Forster
17	Malden	2	J. Burns	29	Nantucket	1	S. Perkins
	Westport		33 M. Lynch#	Peregrine		•	o. remins
21	Wareham	1		1	Newton	1	C. Hepburn#
		2		10		i	
23	Lakeville		S. Arena#		Provincetown H.		J. Trimble #
28	Wareham	2	M. Sylvia		Boston	2 pi	r K. Hudson
30	Nantucket	1	S. Perkins#	22	P.I.	1	M. Pelikan
Bald Eagle				23	Orleans	1	J. Hoye#
13	Wareham	1	ad R. Turner	23	W. Bridgewater	1	S. Arena#
15	Athol	1	C. Paine	30	Nantucket	1	S. Perkins#
17	Newburyport	3	J. Berry	Ruffed Gr	ouse		
17	M.V.	1	T. Lubin	16	Canton	1	G. d'Entremont
22	GMNWR	1	2yr S. Perkins#	23	Sharon	1	G. d'Entremont
23	Lakeville		ad S. Arena#	24	Worc. (BMB)	1	J. Liller
25	Sudbury	î	R. Walton	28	Westford	i	C. Paine
30	W. Newbury	1077	ad J. Berry	31	IRWS	î	R. Heil
		1	au J. Belly	Wild Turk			R. Hen
Northern 1		-	N. I 1-44			<i>(</i> 1	n Ch
17	Westport	2	M. Lynch#	thr	Middleboro	61 m	
23	W. Bridgewater	2	S. Arena#	1-13	Braintree	1	R. Campbell#
27	P.I.	4	R. Forster	21	Holliston	1	J. Hoye#
29	W. Newbury	1	m R. Heil	22	Wayland	1	M. Fraser
30	Lexington	1	M. Pelikan	Northern	Bobwhite		
30	Nantucket	5	R. Clem#	10	Plympton	2	W. Petersen
	nned Hawk			Virginia F			
31	Arlington	2	K. Hartel	27	P.I.	1	G. Leet
thr	Reports of individ			American		•	G. Door
Cooper's H		uuan	nom to loc.	5	Boston	12	T. Aversa
		2	A. Jones	15		1	C. Packard
	Lincoln				Lynn		
thr	Reports of indivi	duai	s from 1 / foc.	22	Arlington	22	M. Rines
Northern					lied Plover	-	
16	Cumb. Farms		ad S. Arena#	16	Sandwich	1	S. Hennin
25	Maynard	1	imm L. Nachtrab	Piping Plo			5 520.00
30	Boxford	1	J. Brown#	1	M.V.	1	R. Culbert
31	Wayland	1	G. Long	20	Centerville	1	fide S. Hecker
Red-shoul	dered Hawk			24	Provincetown	1	J. Hove#
thr	E. Middleboro	pr	K. Anderson	24	Scusset B.	1	M. Sylvia
1	Acushnet	1	M. Sylvia	27	P.I.	ĩ	G. Soucy#
3	Lakeville	î	W. Petersen#	Killdeer		-	G. Statj.
	** **C	07	IV D.	2	Rowley	2	F. Garretson
10	Halifax	1	w. Petersen	2		7	
10	Harwich	1	B. Zusavich	15	W. Roxbury		T. Aversa
17	Newbury	1	R. Heil	17	W. Bridgewater	17	R. Finch
17-26	Taunton	2	R. Dillon	17	Cumb. Farms		G. d'Entremont#
22	Sudbury	1	A. Hirschkop	17	Boston H.		TASL (M. Hall)
22	Hanover	2	W. Petersen	20	Bedford	4	M. Rines
23	Sharon	1	immG. d'Entremont#	21	M.V.	4	fide S. Hecker
27	Northboro	1	C. Paine	26	Concord	10	R. Forster
30	Wareham	î	M. Sylvia	27	Newbypt area	35	R. Forster
30	Newton	î	S. Hepburn#	30	W. Harwich	11	B. Nikula #
		2	E. Nielsen	31	Wayland	12	A. Hirschkop
31	Petersham	2	E. NICISCII	31			G. d'Entremont#
	nged Hawk		DDC (C. C-i-1)		Newburyport	23	G. a Engemont#
17	W. Newbury	1	BBC (S. Grinley)		Oystercatcher		1.0
Red-tailed				14	M.V.	1	J. Cressey
16	Cumb. Farms	8	S. Arena#	22	S. Dart. (A. Pd)	2	fide S. Hecker

	n Oystercatcher (co			17	Newby/Newbypt	1400	R. Heil
30	Nantucket	14	S. Perkins#	Herring	Gull	· valenta over v	
31	Chatham	2	J. Sones #	17	Newby/Newbypt		R. Heil
	Yellowlegs			20	GMNWR	300	S. Perkins#
24	Newburyport	3	R. Heil	Iceland (Gull		
25	Fairhaven	1	M. LaBossiere	1	Newburyport	23	R. Heil
	W. Harwich	5, 8	J. Sones #	17	Winthrop	3 7	ASL (M. Hall)
29	W. Bridgewater	3	S. Arena	17	Newby/Newbypt	15	R. Heil
31	P.I.	2 (6. d'Entremont#	24	Provincetown	5	J. Hoye#
Lesser Y	ellowlegs			30	Nantucket	42	S. Perkins#
23	Newbury	2	P. + F. Vale	Lesser B	lack-backed Gull		
27	P.I.	1	R. Forster	10	Harwich	1	B. Zusavich
29	W. Bridgewater	4	S. Arena	12, 30	Newburyport H.	1 ad	
Upland S	Sandpiper			16	Yarmouth	1 ad	
28	Wayland	1	N. Patterson	17	Sandwich	1 ad	
Ruddy Tr					Newbury	1 ad	
16	Sandwich	5	M. Lynch#	26	Gloucester	1 3 W	
Sanderlin		-)	Glaucous	1-75-75 V (77-75, 77-37-75)		O. Doddy
10	Westport	60	S. Hennin	11	Scusset B.	1	M. LaBossiere
	Sandpiper	00	o. Hellini	12	Sandwich	î	T. Aversa
	W. Harwich	1	J. Sones #	16	Provincetown	1	
29	P.I.	1		17			A. Hirschkop
Purple Sa		1	C. Leahy	17	Quincy		ASL (M. Hali)
		4	M. Lamabill		Newby/Newbypt		
3	Salisbury	4	M. Lynch#		1 Newburyport	2 I W	/, 1 1W R. Heil
10	Manomet	6	M. Lynch#		ack-backed Gull		
10	Westport	1	S. Hennin	15	Newby/Newbypt	850	R. Heil
17	Nahant		FASL (M. Hall)		gged Kittiwake	754.7	00.000000000000000000000000000000000000
28	Nantucket	20	S. Perkins	3	Rockport (A.P.)	2	M. Pelikan
Dunlin				9	Wellfleet	3	S. Arena#
10	Westport	50	S. Hennin	Common			
Common	Snipe			21-22	Gloucester	1	G. Soucy + v.o.
17	Cumb. Farms	2 (d'Entremont#	Razorbill			
26	Rowley	4	K. Disney	9	Wellfleet	2810	S. Arena#
26	Concord (NAC)	2	R. Forster	23	M.V.	32	A. Keith
29	W. Bridgewater	63	S. Arena	29	Nantucket	320	S. Perkins
29	Wayland	1	N. Patterson	Black Gu		5572	5
30	Wakefield	3	D. + I. Jewell	9	Wellfleet	2	S. Arena#
31	Bolton Flats	3	R. Bradbury	9	Rockport	2	R. Lockwood
31	W. Harwich	8	J. Sones #	17	Boston H.		ASL (M. Hall)
31	Cumb. Farms	20		22			
		20	C. Ralph		Rockport (A.P.)	1	M. Pelikan
	n Woodcock	1	D t I Jamell	Monk Pa		2	ccpc
1	Concord	1	D. + I. Jewell	30	Taunton	3	SSBC
7	W. Peabody	1	R. Heil	Atlantic			
9	Wellfleet	1	S. Arena#	13			Von den Deale
15	Belmont	8	R. Martel	_ 24	Gay Head	1	A. Keith
16	Arlington Res.	3	M. Pelikan		Screech-Owl		
17	Wayland	3	N. Patterson	thr	Mt.A.	pr	R. Stymeist
17	W. Newbury	3	R. Heil	1	Newburyport	1	J. Brown#
20	DWWS	18	D. Clapp	11	Arlington	1	G. Benson
24	Boxboro	3	R. Lockwood	23	Westport	1	M. Lynch#
25	Belmont	8	R. Hartel	28	Ipswich	1	D. + I. Jewell
30	Newton	3	C. Hepburn#	Great Ho	rned Owl		
	Reports of 1-2 inc	dividua		thr	Mt.A.	1 or	2 v.o.
Laughing		- 1		4	Boxboro	1	C. Paine
31	Chatham	8	J. Sones #	19	Melrose	î	D. + I. Jewell
	Black-headed Gull		J. DOLLOS II	24	Westboro	î n	M. Lynch#
		1 ad	R. Heil				
thr 9	Newburyport S. Boston			Spons O	Ipswich	3-4	J. Berry
		1	R. Donovan	Snowy O		1	V MoNor
10	Plymouth	2 ad		9	Nantucket	1	V. McNay
13	New Bedford	1	M. Sylvia	Great G			C 111
	5 E. Boston	1, 3	J. Quigley	thr	Rowley	1 N.	Sullivan +v.o.
_ 17	Winthrop	2 7	TASL (M. Hall)	Barred O			
Bonapart				3	Sharon	1	J. Hoye#
17	Newburyport	5	J. Berry	10	W. Newbury	1	R. Heil
26	Newburyport	15	J. Brown#	10	Rowley	1	C. Ralph
Mew Gul				12-14	Bedford	1	A. Maier
	Newbypt, Newby	1 ad	R. Heil	15	W. Roxbury	1	T. Aversa
27	Newbury	1 ad		16	Arlington	1	R. Penkala
5-9	S. Boston	î	R. Donovan	17	Boston	1	T. Aversa
Ring-bill			Moran	17	W. Bridgewater		. d'Entremont#
	Newburyport	610,	660 R. Heil	17	Reading	i	C. Wing
1, 13	rewoutyport	010,	ood it, rich	17	reading		C. Wing

Barred O	wl (continued)			Red-belli	ed Woodpecker		
18-31	Lincoln	1	C. Leahy	thr	Maynard	pr	L. Nachtrab
18, 2	5 Melrose	1	D. + I. Jewell	thr	Pepperell	pr	E. Stromsted
21	IRWS	1	D. + I. Jewell	thr	Mt.A.	1 or 2	V.O.
23	Middleboro	1	S. Arena#	thr	Boxford	2	J. Brown#
24	Acushnet	1	M. LaBossiere	3	Ipswich	1 m	J. Berry
24	Reading	1	V. Stasiak	10	Westport	1	S. Hennin
31	Ipswich	1	J. Berry	28	Hingham	1	J. Norton
Short-ear	red Owl		22.622.5	30	Taunton	1	P. O'Neill
thr	Katama	5	V.O.	30	Westwood	1	E. Nielsen
10	N. Scituate	1	R. Renaud	Hairy Wo	oodpecker		
22	P.I.	1	M. Pelikan	thr	Boxford	3	J. Brown#
24	Scusset B.	1	M. Sylvia	3	Pepperell	2	E. Stromsted
31	Middleboro	2	C. Ralph	Black-ba	acked Woodpecke	er	
31	Cumb. Farms	2	C. Ralph	3-16	Sharon	1 f	D. Lahaise
Northern	Saw-whet Owl		**************************************	Northern	Flicker		
2	P.I.	1	J. Berry#	30	Nantucket	18	S. Perkins#
20	Needham	1 d	ead W. Petersen	Pileated	Woodpecker		
27	Braintree	1 d	ead W. Petersen	thr	Pepperell	2	E. Stromsted
30	Lexington	1	C. Paine#	1	Wayland	1	N. Patterson
Belted K	ingfisher			1	Newburyport	1	R. Heil
30	Wayland	2	R. Forster	14	Lincoln	1	A. Jones
	ded Woodpecker			31	IRWS	1	R. Heil
24	Medfield	1	W. Nightingale				

FLYCATCHERS THROUGH GROSBEAKS

The severe winter weather had its toll on several normal hardy winterers, most notably Carolina Wrens, which have been decimated over the years in bad winters. A concerted search for Carolina Wrens on March 30 in Westport yielded just three individuals, surprising for a location where casual birding typically results in far more wrens. Equally poorly represented were Hermit Thrushes, Gray Catbirds and Eastern Towhees.

On the plus side, spring does return and the first Eastern Phoebes were noted on March 22, and the first Tree Swallows after March 17. Large flocks of blackbirds were everywhere.

Boreal Chickadees continued at feeders in Groveland and Wakefield, and Northern Shrikes continued in large numbers throughout our area. The Bohemian Waxwings seen in January and February just disappeared with no reports for the month. Likewise, there were fewer reports of redpolls, siskins, and Evening Grosbeaks.

An adult Yellow-headed Blackbird in Danvers, and an early Northern Parula on Martha's Vineyard on March 28 were unusual. Fox Sparrows were noted from a wide area from midmonth on.

R. H. S.

Eastern Ph	oebe			25	Sudbury	2	R. Walton
22	Marshfield	1	D. Clapp	25	GMNWR	6	J. McLaughlin
22	Sudbury	1	J. Hoye#	27	Maynard	6	L. Nachtrab
24	Lakeville	1	W. Petersen	27	Easton	30	K. Ryan
25	E. Middleboro	1	K. Anderson	28	Rochester	10	M. LaBossiere
25	Boxford	1	J. Brown#	28	Wayland	250+	R. Forster
26	P.I.	4	K. Disney	30	Lakeville	75	M. Sylvia
26	Lexington	1	M. Rines	30	W. Bridgewater	100	W. Petersen
26	Gloucester	1	J. Soucy	Barn Swa			
28, 31		1, 2	N. Patterson	23	Chatham	1	J. Hoye#
30	SRV	5	R. Forster#	American	Crow		
30	Arlington Res.	1	M. Pelikan	1-18	Framingham	7200	E. Taylor
30	Lakeville	2	M. Sylvia	21-31	Framingham	15	E. Taylor
30	W. Bridgewater	1	W. Petersen	Fish Crov	V		2
31	Topsfield	5	R. Heil	16	Braintree	1	G. d'Entremont
31	Bolton	1	S. Hennin	21	Wareham	2	M. Sylvia
Horned La	ark			24	Milton	5+	G. d'Entremont#
3	Ipswich	40	M. Pelikan	30	Needham	1	G. d'Entremont
3	Salisbury, P.I.	50, 10	M. Lvnch#	Black-cap	ped Chickadee		
3	Newbury	20	M. Pelikan	1	Newburyport	76	R. Heil
5	Cumb. Farms	100	K. Anderson	Boreal C	hickadee		
30	Nantucket	5	S. Perkins#	1	Wakefield	1	C. Neeley
31	Newburyport	50 G	d'Entremont#	Red-breas	sted Nuthatch		
Tree Swal				1	Brookline	2	H. Wiggin#
17	Middleboro	1	R. Finch	22	E. Middleboro	1	K. Anderson
17	Wash Brook	10	S. Perkins#	30	Needham	1	G. d'Entremont
18-31		max 3/3	1 N. Patterson	Brown Cr	reeper		
24	Harvard	3	S. Hennin	thr	Boxford	2	J. Brown#

22	reeper (continued) E. Middleboro	1	K. Anderson	3 Chipping	Ipswich Sparrow	20	J. Berry
22	Halifax	i	K. Anderson	27	Falmouth	3	J. Smith
24	27212737777					3	J. Simu
	Milton		G. d'Entremont#	Field Spa			01.1
30	Needham	1	G. d'Entremont	27	Lynnfield	1	C. Leahy
Carolina				Savannah			
17	Lexington	1	M. Pelikan	31	IRWS	1	R. Heil
24	Worc. (BMB)	1	J. Liller	Fox Sparr		1	
30	Westport	3	M. Rines#	15	Medford	2	D. Wilkerson
31	Sherborn	1	E. Taylor	15	Lincoln	2	K. Calmer
Golden-c	rowned Kinglet			16	WBWS	12	J. Hoye#
11	Marshfield	1	D. Furbish	16	P.I. 4	BBC (V	V. Drummond)
20	Rochester	6	M. Sylvia	22	Rockport (H.P.		D. + I. Jewell
Eastern B				25	S. Boston	3	R. Donovan
14	Milton	9	N. Smith	25	Bedford	3	M. Rines
17	E. Middleboro		K. Anderson	26	P.I.	3	D. + I. Jewell
21	Rochester	pr		26		6	
		3	M. Sylvia		Boxboro		C. Paine
22	Concord	1	J. Hoye#	26-31		7 ma	
24	Wayland	3	M. Pelikan	27	Easton	3	K. Ryan
24	Lincoln	3	M. Pelikan	28	Harvard	12	E. Salmela
30	Maynard	5	L. Nachtrab	29	Bolton	4	S. Hennin
Hermit T				30	Westwood	7	E. Nielsen
9	Wellfleet	1	S. Arena#	31	IRWS	4	R. Heil
29	Nantucket	4	fide E. Ray	31	Concord	6	M. Pelikan
American		6500	0.600 (0.00 ± 5.000 (0.00 € 0	31	Wayland	5	G. Long
23	Westport	80	M. Lynch#		Reports of 1-2		
31	Cumb. Farms	500	C. Ralph	Song Spar		indiv. IIO	11 24 100.
31	Middleboro	500	C. Ralph	21	Lincoln	1	S. Perkins#
		300	C. Raipii	and the second of the second of the second of		1	S. PCIKIIIS#
Gray Catl		2	C Deal-in-4	Lincoln's		-	T P11
30	Nantucket	2	S. Perkins#	19	Norfolk	1	J. Fuller
Brown Tl				Dark-eyec			** ***
8	Brookline	1	H. Wiggin#	28	Brookline	21	H. Wiggin#
Americar				"Oregon"			
17	Cumb. Farms	1	G. d'Entremont#	1	Uxbridge	1	J. Huntington
29	W. Bridgewater	3	S. Arena	Lapland I	ongspur		
31	Cumb. Farms	6	C. Ralph	3	Salisbury	2	M. Lynch#
Cedar Wa	axwing			17	Cumb. Farms	2 G	. d'Entremont#
26	Taunton	25+	G. d'Entremont		Newbury	2, 6	R. Forster
29	W. Acton	60	C. Paine	31	Newburyport		. d'Entremont#
30	Nantucket	17	S. Perkins#	Snow Bur			
Northern		1,	S. I CIKIIIS	1	P.I.	34	R. Heil
	Wakefield	2	P. + F. Vale	3	Lakeville	20	W. Petersen#
2							
3-17	P.I.	1-3		15	W. Roxbury	1	T. Aversa
3	Mt.A.	1	R. Stymeist	20	P.I.	200	C. Ralph
			N. Patterson				A. Fischer
5, 26	Wayland	1		22	Gay Head	1	A. I Ischel
5, 26 6	Maynard	1	L. Nachtrab	Red-wing	ed Blackbird	199193	202
				Red-wing 2		200	M. Lynch#
6	Maynard	1	L. Nachtrab	Red-wing	ed Blackbird	199193	202
6 10 16	Maynard Lincoln Cumb. Farms	1	L. Nachtrab M. Pelikan S. Arena#	Red-wing 2	ed Blackbird Lancaster	200	M. Lynch#
6 10 16 16	Maynard Lincoln Cumb. Farms GMNWR	1 1 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood	Red-wing 2 3 24	ed Blackbird Lancaster Harvard	200 200	M. Lynch#
6 10 16 16 16	Maynard Lincoln Cumb. Farms GMNWR Taunton	1 1 2 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch#	Red-wing 2 3 24 Eastern M	ed Blackbird Lancaster Harvard Bolton Flats feadowlark	200 200 2390	M. Lynch# C. Kopkowski M. Lynch#
6 10 16 16 16 16	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury	1 1 2 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster	Red-wing 2 3 24 Eastern M	ed Blackbird Lancaster Harvard Bolton Flats Jeadowlark Cumb. Farms	200 200 2390 5	M. Lynch# C. Kopkowski M. Lynch#
6 10 16 16 16 17 17	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich	1 1 2 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell	Red-wing 2 3 24 Eastern M 10 18	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland	200 200 2390 5 3	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson
6 10 16 16 16 17 17 17	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester	1 1 2 1 1 1 1 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia	Red-wing 2 3 24 Eastern M 10 18 31	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn	200 200 2390 5 3 2	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson
6 10 16 16 16 17 17 18 19, 31	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kd	1 1 2 1 1 1 1 2 oc.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird	200 200 2390 5 3 2	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor
6 10 16 16 16 17 17 18 19, 31	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kd IRWS	1 1 2 1 1 1 1 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers	200 200 2390 5 3 2	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor
6 10 16 16 16 17 17 18 19, 31 21	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kd IRWS Chilmark	1 1 2 1 1 1 1 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla	ed Blackbird Lancaster Harvard Bolton Flats fleadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird	200 200 2390 5 3 2 d	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor m J. Fox
6 10 16 16 16 17 17 18 19, 31 21 24 25	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kd IRWS	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury	200 200 2390 5 3 2 d lad	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor J. Fox T. Aversa
6 10 16 16 16 17 17 18 19, 31 21	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kt IRWS Chilmark	1 1 2 1 1 1 1 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22	ed Blackbird Lancaster Harvard Bolton Flats fleadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird	200 200 2390 5 3 2 d 1ad	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor m J. Fox T. Aversa R. Lockwood
6 10 16 16 16 17 17 18 19, 31 21 24 25	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kt IRWS Chilmark Dorchester	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury	200 200 2390 5 3 2 d lad	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor m J. Fox T. Aversa R. Lockwood
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR	200 200 2390 5 3 2 d 1ad	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor J. Fox T. Aversa R. Lockwood M. Pelikan
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kt IRWS Chilmark Dorchester Swampscott Peabody Wellesley	1 1 2 1 1 1 1 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird W. Roxbury GMNWR Lexington	200 200 2390 5 3 2 d 1ad	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor m J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson
6 10 16 16 17 17 18 19, 31 24 25 25 29 30 30	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 kt IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins#	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 22 24	ed Blackbird Lancaster Harvard Bolton Flats fleadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown	200 200 2390 5 3 2 dd ladd	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 30 31	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton	1 1 2 1 1 1 1 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 22 22 24 27	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield	200 200 2390 5 3 2 d lad t	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 30 31 Northern	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland	200 200 2390 5 3 2 dd ladd: 2 6 1 1 m 1 10 12	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin
6 10 16 16 16 17 17 18 19, 31 24 25 25 29 30 30 30 31 Northern 28	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown	1 1 2 1 1 1 1 2 2 0c.)1, 2	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich	200 200 2390 5 3 2 d lad t	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 30 31 Northerm 28 Yellow-n	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester I Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler	1 1 2 1 1 1 1 2 0c.)1, 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert#	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31 Brown-he	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird	200 200 2390 5 3 2 dd ladd 2 6 1 1 m 1 10 12 30	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 31 Northern 28 Yellow-re 28	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler Wayland	1 1 2 1 1 1 1 1 2 2 2 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert# R. Forster	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 22 24 27 30 31 Brown-he 2	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird Lancaster	200 200 2390 5 3 2 d lad i 2 6 1 1 m 1 10 12 30	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry M. Lynch#
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 30 31 Northern 28 Yellow-ru 28 30	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler Wayland Nantucket	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert# R. Forster S. Perkins#	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31 Brown-he 2 23	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird Lancaster Westport	200 200 2390 5 3 2 d 1ad 1 1 m 1 10 12 30	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry M. Lynch# M. Lynch#
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 31 Northern 28 Yellow-rn 28	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler Wayland	1 1 2 1 1 1 1 1 2 2 2 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert# R. Forster	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31 Brown-he 2 23 25	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird Lancaster Westport Dorchester	200 200 2390 5 3 2 d 1 lad 1 1 m 1 10 12 30 60 52 10	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry M. Lynch# M. Lynch# R. Donovan
6 10 16 16 16 17 17 18 19, 31 21 24 25 25 29 30 30 31 Northern 28 Yellow-ru 28 30	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler Wayland Nantucket Bolton	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert# R. Forster S. Perkins#	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31 Brown-he 2 23	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird Danvers ckbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird Lancaster Westport	200 200 2390 5 3 2 d 1ad 1 1 m 1 10 12 30	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry M. Lynch# M. Lynch#
6 10 16 16 16 17 17 18 19, 31 21 24 25 29 30 30 31 Northern 28 Yellow-re 28 30 31	Maynard Lincoln Cumb. Farms GMNWR Taunton Salisbury Ipswich Rochester Middleboro (2 k IRWS Chilmark Dorchester Swampscott Peabody Wellesley Nantucket Bolton Parula Edgartown umped Warbler Wayland Nantucket Bolton	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L. Nachtrab M. Pelikan S. Arena# R. Lockwood M. Lynch# R. Forster D. + I. Jewell M. Sylvia R. Shore D. + I. Jewell A. Keith R. Donovan L. Healey R. Heil R. Forster S. Perkins# R. Bradbury E. Silbert# R. Forster S. Perkins#	Red-wing 2 3 24 Eastern M 10 18 31 Yellow-h 20 Rusty Bla 15 22 22 24 27 30 31 Brown-he 2 23 25	ed Blackbird Lancaster Harvard Bolton Flats feadowlark Cumb. Farms Wayland Sherborn eaded Blackbird W. Roxbury GMNWR Lexington E. Middleboro Provincetown Lynnfield Wayland Ipswich eaded Cowbird Lancaster Westport Dorchester Wayland	200 200 2390 5 3 2 d 1 lad 1 1 m 1 10 12 30 60 52 10	M. Lynch# C. Kopkowski M. Lynch# R. Shore N. Patterson E. Taylor M. J. Fox T. Aversa R. Lockwood M. Pelikan K. Anderson A. Hirschkop C. Leahy S. Hennin J. Berry M. Lynch# M. Lynch# R. Donovan

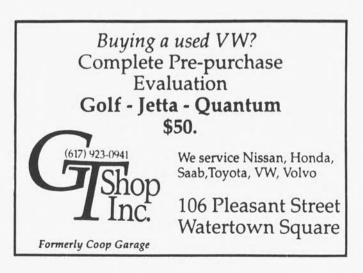
Purple F	inch (continued)			5	Lincoln	20	N. Sullet + v.o.
17	E. Middleboro	1 m	K. Anderson	6	Sudbury	16	B. McHugh
30	Wayland	1 m	R. Forster	14	Milton	12	N. Smith
30	Ipswich	1 m	J. Berry#	16	Pepperell	10	E. Stromsted
31	Sherborn	2	E. Taylor	28	Framingham	1	K. Hamilton
Red Cro	ssbill			Pine Sisl	kin		
27	P.I.	8	G. Leet	thr	Duxbury	2	E. Cleveland
29	Harwich	3	T. Noonan	25	Royalston	27	D. Clapp
31	Quabbin (G40)	3	E. Nielsen	Evening	Grosbeak		
Common	n Redpoll			5	E. Middleboro	pr	K. Anderson
1	Uxbridge	30	J. Huntington	31	Quabbin (G41)	2	E. Nielsen

HOW TO CONTRIBUTE BIRD SIGHTINGS TO BIRD OBSERVER

This publication prints monthly compilations of reports of birds seen in the ten counties of eastern Massachusetts (Worcester County and east) and offshore waters. Space does not permit the inclusion of all material submitted. However, bird sightings sent to Bird Observer are archived at the Massachusetts Audubon Society. Our compilers select and summarize for publication sightings that provide a snapshot of birdlife during the reporting period. These sightings include early and late dates for migratory species, maximum counts of migrants and some common birds, and species found beyond their normal ranges.

Sightings for any given month must be reported in writing by the eighth of the following month. Send to Bird Sightings, Robert H. Stymeist, 94 Grove Street, Watertown, MA 02172. Please organize reports by month and by species in current A.O.U. checklist order. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, number of observers, and information relevant to age, sex, morph, etc.

Reports of difficult identifications, vagrants, rarities, or species unusual as to place, time, or prior nesting activity in Massachusetts also should be reported promptly to the Massachusetts Avian Records Committee, c/o Wayne Petersen, Massachusetts Audubon Society, South Great Road, Lincoln, MA 01773. Include, in addition to the above information, time of day and light available, weather conditions, the optics used and approximate distance from the bird, length of observation, observer's prior experience with the species, and field guide or other references used. Provide a description of the bird based solely on personal observation. Comment on the distinguishing field marks (observed and unobserved), vocalizations, activity, general behavior, habitat, and other birds present. Include with your report copies of any field notes and sketches.



BIRD SIGHTINGS APRIL 1996 SUMMARY



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

The first half of April was snowy, wet, and dreary, not conducive to good birding. A warm wave took over the rest of the month, when temperatures averaged 5° above normal. The month's average was 47.9°, just 0.2° below normal. The high mark reached 83° in Boston on April 23, and the low was 32° on April 4. Snow was the big story of the month, with 7.3 inches, 6.4 inches above average. Six inches fell on April 9 and 10, making the history books as the second greatest snowfall so late in the season. These April snows were wet and heavy, causing considerable damage to trees and power lines as the storm included strong northeasterly winds. All this snow set a new record for the season with 107.6 inches, eclipsing the previous high of 99.3 inches set just two years ago. Rainfall was also frequent, with measurable amounts falling on 13 days and totaling 4.37 inches, 0.77 inches above average. Winds were out of the southwest on just two days, April 19 and April 23, and many migrants were found after these dates.

R. H. S.

LOONS THROUGH WOODPECKERS

A major movement of Red-throated Loons occurred at midmonth on Martha's Vineyard, but Common Loons were scarce. There were scattered reports of Pied-billed Grebes. Red-necked Grebes were rather sparsely reported but did include three inland sightings. Northern Gannets were well reported off Wellfleet at midmonth. American Bitterns were scarce, and the balance of the heron group seemed to filter in slowly with few appreciable numbers. Notable exceptions were an excellent count of Great Blue Herons at Plum Island on the 12th and Glossy Ibis in general. Tricolored Herons were reported from three locations, and Cattle Egrets were confined to the general Ipswich area in limited numbers. Snow Geese were widely reported and were present in Newburyport the better part of the month. Green-winged Teal numbers were down from the previous month but included two reports of the Eurasian subspecies. Otherwise ducks were rather generally reported. After a season of scarcity, the nine Barrow's Goldeneyes at Newburyport harbor were obviously migrants, as was a single female in Acton, carefully studied and in direct comparison with female Common Goldeneyes. Judging from the reports, the hawk migration was average or slightly below par, but hawkwatch observations are unavailable. Counts of weather-grounded American Kestrels at Hanscom Field and Logan Airport on the 28th were clearly indicative of significant movement.

Numbers in the rail family were scarce. Shorebirds receive careful scrutiny in April, as observers scan through the typical migrants for unusual species. As a result, early arriving shorebirds are often discovered. Examples of early arrivals, none unprecedented, were American Golden-Plover, Semipalmated Plover, Whimbrel, White-rumped Sandpiper, and Wilson's Phalarope. Apparently only one Ruff graced our shores this month, that one in the Newburyport/Plum Island area for five days. The only other unusual shorebird was a Stilt Sandpiper, which is almost annual in occurrence in spring with most reports in May. The bulk of the gull reports were carryovers from March in the Newburyport/Newbury area, with continued reports of Mew, Lesser Black-backed, Glaucous, and Iceland gulls. Otherwise, gull reports were thin and highlighted by a single Little Gull in Newburyport and three Black-headed Gulls in Plymouth. A few terns moved in late in the month, highlighted by several Caspian Terns, all but one of which were at surprising inland locations. A small tern observed at the Arlington Reservoir, although not conclusively identified, was thought to be a Forster's Tern. A strong flight of Razorbills accompanied the Red-throated Loon movement on Martha's Vineyard, and a few Black Guillemots lingered at traditional wintering areas. A late Snowy Owl at Logan Airport was especially surprising due to their scarcity this past winter. Other owl reports likely represent lingering winterers, although some reports were suggestive of migrants. There was a scattering of reports of Yellow-bellied Sapsuckers throughout the month, with no clearly defined peak as happened with Northern Flicker at midmonth.

R. A. F.

Date	Location	Number	Observers	Date	Location	Number	Observers
Red-thro	ated Loon			27	Chappaquiddic		A. Keith#
14	Katama	1000+	V. Laux	27	P.I.	1	V.0.
28	Cape Ann	1	J. Berry	28	Scituate	1 a	d D. Brown
Common	Loon			Cattle Eg	gret		
6	Quabbin (G35)		M. Lynch#	19	Ipswich	1	J. Soucy
14	Lakeville	2	M. Boucher	20	Beverly	4	M. Lynch#
21	P.I.		. d'Entremont#	28	Ipswich	2	M. Rines
28	N. Scituate		. d'Entremont#	Green He			
28	Cape Ann	3	J. Berry	22	P.I.	1	D. + I. Jewell
Pied-bille				23	Wareham	1	M. LaBossiere
4	GMNWR	3	J. Hoye#	23-30		1-3	
7	Lincoln	3	S. Perkins	26	Cambridge	1	J. Campbell
thr		ividuals fr	om 11 locations	27	Bolton	1	M. Lynch#
Horned C				27	P.I.	2	P. + F. Vale
6	Lakeville	1	W. Petersen	28	Newburyport	2	C. Paine
11	Manchester	26	M. Rines		owned Night-Her		
13	Newburyport	5	M. Argue#	12	Wellesley	1	R. Forster
13	P.I.	19	M. Lynch#	13	P.I.	4	M. Pelikan
14	Danvers	1	J. Berry	17	Harwich	22	R. Turner
28	N. Scituate	5 G	d'Entremont#	28	Hingham		G. d'Entremont#
28	Cape Ann	1	J. Berry	Yellow-c	rowned Night-He	ron	
Red-neck	red Grebe			19	Quincy	1 a	d J. Paluzzi
6	Quabbin (G35)) 1 br	pl M. Lynch#	Glossy It	ois		
13	Acton	1	R. Lockwood	8	Danvers	1	C. Leahy
13	Middleboro	2	R. Shore	13	Ipswich	5	M. Lynch#
14	Lakeville	2	M. Boucher	19	Essex	25	J. Soucy
21	Nahant	4	P. + F. Vale	20	Rowley	17	M. Lynch#
28	Squibnocket	2	A. Keith#	22	P.I.	48	D. + I. Jewell
28	N. Scituate	15 G	. d'Entremont#	24	W. Bridgewate	r 78	G. d'Entremont#
Northern	Gannet			25	Hingham	28	S. Birch
11	Rockport	14	M. Rines	Whooper			
16	Boston Harbor	12	R. Donovan	thr	Ipswich	2	fide J. Berry
17	Wellfleet	1000	DRA	Mute Sw			
21	Nahant	3	P. + F. Vale	28	Westport	119	M. Lynch#
Great Co		-		Snow Go		7.7.5	
28	N. Scituate	6 G	d'Entremont#	3	W. Bridgewate	r 75	G. d'Entremont
armount to the first fellow and	Crested Cormorai		. u zamoniom.	5	Marshfield	4	D. Ludlow
7	Melrose	11	P. + F. Vale	6	Concord (NAC		R. Walton
20	Wellesley	131	R. Forster	12	Worc. (BMB)	90	F. McMenemy
20	Newburyport	250+	S. Perkins#	12	Acton	35	J. Horowitz
28	Cape Ann	500+	J. Berry	12	Duxbury	28	S. Hecker
American			201.	13	Newburyport	120	R. Forster#
6	Nantucket	1	C. Jackson	13	Salisbury	150	M. Pelikan
9	GMNWR	i	S. Hennin	14	Concord	42	M. Pelikan
22	P.I.	3	D. + I. Jewell	26	Bolton	4	S. Hennin
27	Dorchester	1	R. Donovan	28	DWWS		G. d'Entremont#
Great Blu			It. Donovan	28	Newburyport	58	M. Rines
12	P.I.	94	D. + I. Jewell	Brant	riewouryport	-	Tra. Tullio
14	Westboro		sts M. Lynch#	27	Newburyport	250	M. Lynch#
Great Eg		I / Ho.	oto IVI. Lyttelin	Canada (200	Lymon
6	DWWS	1	W. Petersen#	13	Ipswich	1200	M. Lynch#
13	P.I.	3	R. Forster	Wood D		1200	Symon.
13	Essex	1	M. Lynch#	thr	Wayland	14 n	nax N. Patterson
20		7	S. Perkins#	5	Worcester	23	M. Lynch#
21	Newburyport Fairhaven	7	M. Boucher	7	E. Middleboro	24	K. Anderson
		,	M. Doucher		/inged Teal	24	K. Allucison
Snowy E	Hingham	1	R. Richmond	5	Wayland	55	G. Long
8	Gloucester	2	C. Leahy	6, 13			
0				7	Wakefield	19	P. + F. Vale
12	Squantum	1 3	M. Rines	7, 26	Concord (NAC		
12	Essex		M. Lynch#	7, 20	W. Harwich	80	B. Nikula
13	Rowley	12	J. Berry				
13 13			M. Rines	13	Rowley	50	J. Berry
13 13 13	P.I.				P.I.	180+	M. Lynch#
13 13 13 13	P.I. Pocasset	1	L. Cocca	13			
13 13 13 13 Little Bh	P.I. Pocasset ue Heron	1		13	GMNWR	12	S. Perkins
13 13 13 13 Little Bh	P.I. Pocasset ue Heron Marshfield	1 1 ad	D. Ludlow	13 14	GMNWR Middleboro	12	S. Perkins M. Boucher
13 13 13 13 Little Bh 5 6	P.I. Pocasset ue Heron Marshfield Nantucket	1 1 ad 1	D. Ludlow C. Jackson	13 14 20	GMNWR Middleboro Newburyport	12 6 40	S. Perkins
13 13 13 13 Little Bh 5 6 19	P.I. Pocasset ue Heron Marshfield Nantucket Essex	1 1 ad 1 2	D. Ludlow C. Jackson J. Soucy	13 14 20 "Eurasia	GMNWR Middleboro Newburyport n" Green-winged	12 6 40 Teal	S. Perkins M. Boucher S. Perkins#
13 13 13 13 Little Bh 5 6	P.I. Pocasset ue Heron Marshfield Nantucket	1 1 ad 1 2	D. Ludlow C. Jackson	13 14 20	GMNWR Middleboro Newburyport	12 6 40 Teal 1 n	S. Perkins M. Boucher S. Perkins#

	" Green-winged			Barrow's	Goldeneye		
20	Newburyport	1 m	S. Perkins#	6	Acton	1f	J. Kenneally
	Black Duck		22.2	13	Newburyport	9	M. Lynch#
13	P.I.	400+	M. Lynch#	Bufflehe			141
Northern			2.22	7	Wakefield	37	P. + F. Vale
3	Boston	1	J. Young	13	GMNWR	3	S. Perkins
4	Concord (NAC)	2	J. Hoye#	28	Westport	118	M. Lynch#
13, 27	P.I.	20+, 3	M. Lynch#	29	Waltham	5	R. Forster
Blue-wing		2.0	221		Merganser		
13	Concord (NAC)		C. Paine	14	Westboro	23	M. Lynch#
14	Middleboro	2	M. Boucher	14	Cambridge (F.I		M. Rines
17	W. Bridgewater		G. d'Entremont	15	Sudbury	3	S. Perkins#
20	Newbury	3	P. + F. Vale	19	Attleboro	5 f	T. Aversa
23	Yarmouthport	4	S. + E. Miller	Common	Merganser		
28	Natick	2	G. Long	5	Worcester	98	M. Lynch#
28	P.I.	10	R. Lockwood	14	Southboro	65	M. Lynch#
Northern		_		14	Milton 72		 d'Entremont)
7	Wayland	5	G. Long	16	Dorchester	90	R. Donovan
20	P.I.	2	J. Brown#	20	Wayland	30	E. Taylor
Gadwall	***			3, 23		26, 6	E. Stromsted
1	Woburn	2	D. + I. Jewell	7	Acton	20	R. Lockwood
1	GMNWR	2	R. Lockwood		sted Merganser		
13, 27		6, 4	M. Lynch#	13	Rowley	32	J. Berry
28	DWWS	2	D. Brown#	27	P.I.	45	M. Lynch#
American		120	245 0122 (234)	28	Cape Ann	50	J. Berry
5	Newbury	3	P. + F. Vale	28	Westport	112	M. Lynch#
6	Sudbury	4	E. Taylor	Ruddy D			
7	Wakefield	3	P. + F. Vale	6, 15	Pembroke	8, 3	W. Petersen
9	Wayland	2	C. Paine	18	Arlington Res.	1	M. Rines
13	Newburyport	3	H. Wiggin#	Turkey V	/ulture		
21	Concord (NAC)	2	S. Perkins	3	Wayland	4	J. Hoye#
Canvasba	ck			4	Bolton	2	C. Paine
1-14	Arlington Res.	1	M. Pelikan	4	Boxboro	4	C. Paine
6	Arl. Res.	1	C. Seggelin	6	Holliston	4	J. Hove#
Ring-neck	ked Duck			6	Quabbin (G35)	21	M. Lynch#
1-23	Arlington Res.	80 ma	x 4 M. Pelikan	13	Peabody	5	D. + I. Jewell
5	Wayland	8	G. Long	15	Concord (NAC) 3	S. Perkins#
6	Halifax	48	W. Petersen	17, 27		6, 5	M. Pelikan
7	Wakefield	17	P. + F. Vale	20	Maynard	6	L. Nachtrab
7, 15	Concord (NAC)	16, 16	S. Perkins	20	E. Middleboro	3	K. Anderson
10	GMNWR	75	M. Rines	Osprey			
13	Lakeville	30	R. Shore#	1	Westport	81	G. Fernandez
14	Sudbury	57	M. Lynch#	15	Sudbury	1	S. Perkins#
14	Westboro	23	M. Lynch#	28	Rowley	pr n	J. Berry
20	Southboro	20	E. Taylor	Bald Eag			
Greater Se	caup				Quabbin (G35) 2	ad + 3 in	am M. Lynch#
thr	Randolph 16 r	nax 4/6 (G. d'Entremont	11	Rockport	1 imr	
13	Lakeville	60+	R. Shore#	Northern			
13, 27	Newburyport	65, 33	M. Lynch#	5	Wayland	2	G. Long
Lesser Sca	aup	100	1000	6	Cumb. Farms	2	W. Petersen
1-21	Arlington Res.	2-4	M. Pelikan	7	Wayland	2	G. Long
5	Worcester	3	M. Lynch#	13	P.I., Newbypt	5, 4	M. Lynch#
13	Lakeville	18	R. Shore	16	Dorchester	2	R. Donovan
13	P.I.	1 m	M. Argue	27	P.I.	2	P. + F. Vale
15	Pembroke	37	W. Petersen		inned Hawk	-7	
24	W. Newbury	1 m	R. Forster	28	N. Truro	8 (11	hr) B. Nikula#
29	Marstons Mills	1	S. + E. Miller	6-28	Reports of indiv		
Common		•	D D. IVIIICI	Cooper's	Hawk	riddais iic	mi ro iocations
27	Cape Ann	500+	J. Brown#	13	E. Bridgewater	1	W. Petersen
Harlequin		500.	J. DIOWIN	14	Weston	î	M. Pelikan
15	N. Scituate	6	W. Petersen	14	N. Dartmouth	î	M. Boucher
	Squibnocket	16, 4	A. Keith	15	Wayland	1	N. Patterson
Oldsquaw		10, 4	A. Keitii	15	Concord (NAC		D. Diggins
13	P.I.	470	M. Lynch#	19	Woburn	1	M. Pelikan
27		1580		20		2	
Surf Scote	Newburyport	1300	M. Lynch#		Maynard		L. Nachtrab#
1100000		1	I Down	20	Harvard	1	M. Pelikan
28	Cape Ann	1 m	J. Berry	27	Newburyport	1	M. Lynch#
	Goldeneye		E T. I	28	Mt.A.	1 ad	V.O.
9	Sherborn	220, 25	E. Taylor	28	N. Truro	3	B. Nikula #
	Newburyport	220, 25	M. Lynch#		Goshawk		W 4 .
19	Attleboro	2	T. Aversa	5	E. Middleboro	1	K. Anderson

	Goshawk (continu			27	WBWS	5	B. Parker
15 20	Boxford Sherborn	2	D. + I. Jewell E. Taylor	Clapper F	Rail S. Yarmouth	1	S. + E. Miller
20	ONWR	î	C. Paine	Virginia			S. I E. WHITE
27	Cape Ann	8	J. Brown#	21	GMNWR	1	J. Hoye#
27	Provincetown	limm.		Sora	OMITTE		J. Hoyen
29	Lincoln	2	G. McGean	5	P.I.	1	P. + F. Vale
	dered Hawk			Common	Moorhen		
thr	Sherborn	4	E. Taylor	27	W. Newbury	1	J. Hoye#
thr	E. Middleboro	pr n	K. Anderson	American	Coot		
6	DWWS	1	W. Petersen#	10	GMNWR	1	M. Rines
13	Danvers	1	M. Pelikan	14	Westboro	1	M. Lynch#
14	Lakeville	1	M. Boucher	Black-bel	lied Plover		
21	Hanover	2 pr	W. Petersen	13	Salisbury	2	M. Pelikar
27	Taunton	1	J. Young	13	P.I.	3	M. Pelikar
28	Natick	1	G. Long		Golden-Plover		
28	Wenham	1-2	J. Berry	28	Newburyport	2	M. Pelikan#
28	N. Truro	1 imm	n. B. Nikula#		nated Plover		
Broad-win			101	27	Newburyport	1	H. Wiggin
5-28	Reports of indivi			28	P.I.	1	C. Paine
26	Harvard	2	M. Lynch#	28	Westport	1	M. Lynch#
28	N. Truro	18 1 hr	. B. Nikula #	28	M.V.	1	V. Laux
Rough-leg		1	D Ch#	Piping Pl		2	D . F Wala
13	Cumb. Farms	1	R. Shore#	5	P.I.	2	P. + F. Vale
14 American	Middleboro	1 dk	M. Boucher	28 28	Westport	1	M. Lynch#
14	Cumb. Farms	4	J. Hove#	Killdeer	Ipswich (CB)	28	E. House
	Bedford (Hansco		M. Rines	5	West Newbury	12	P. + F. Vale
21	P.I.	ли)+, ээ	M. Pelikan	13	Newbypt/P.I.	14	M. Lynch#
28	Middleboro	6	R. Shore#	15	Ipswich	33	J. Hoyes
29	Boston (Logan)	50	N. Smith		Oystercatcher	33	J. Hoyen
Merlin	Dosion (Logan)	50	14. Silitin	2	Orleans	3	S. + E. Miller
7	Danvers	1	J. Hoye#	16	Boston Harbor	1	R. Donovan
11	Rockport	î	M. Rines	21	Fairhaven	2	M. Boucher
12	Concord (NAC)		D. Diggins	23	Yarmouthport	1	S. + E. Miller
13	P.I.	1	P. + F. Vale	28	Westport	4	M. Lynch#
20	Newburyport	1	P. + F. Vale	29	Logan	2	N. Smith
23	Mt.A.	1	v.o.	Greater Y	ellowlegs		
27	Arlington Res.	1 f	M. Pelikan	13, 27	Newburyport	11, 24	0+ M. Lynch#
27	Dorchester	1	R. Donovan	22	W. Bridgewater	11	K. Andersor
27	Newburyport	1	P. + F. Vale	28	Rowley	22	J. Berry
28	Petersham	1	S. Hennin	28	Concord (NAC)	30	L. Harvey
29	Boston (Logan)	2	N. Smith	Lesser Yo			
Peregrine		120		20	Newburyport	9	P. + F. Vale
20	P.I.		A. McCarthy#	28	Rowley	1	J. Berry
21	Chilmark	1	A. Keith	6, 18	W. Bridgewater	4, 6	W. Peterser
28	Newburyport	2	M. Pelikan		Sandpiper		
28	Mt.A.	1	V.O.	19	Newbury	2	J. Soucy
28	N. Truro	1	J. Sones #	20	W. Newbury	2	M. Lynch
Ruffed Gr			C P-1	20	Newbury	1	P. + F. Vale
4	Boxboro	1	C. Paine	27	Chilmark	1	A. Keitl
13	Wayland	1	R. Lockwood	Willet 24	Monthymmort	1	R. Forste
13	Randolph	3 G	d'Entremont	27	Newburyport P.I.	2	M. Lynch
15	W. Newbury	1	J. Hoye# E. Stromsted	27	Fairhaven	1	M. LaBossiero
18 20	Pepperell	2	S. Hennin		Sandpiper	1	IVI. Labossicio
	Quabbin (G40)				0'''	1	S. Hennir
21 27	Hardwick Sharon	1	M. Lynch# D. Furbish	26 28	Newburyport	î	E. Crowley
28	E. Middleboro	1	K. Anderson	30	Arlington Res.	3	M. Pelikar
Wild Turk			ix. Anderson		Sandpiper	-	IVI. I CIIIMI
thr	Middleboro	50+ ms	ax R. Shore#	27	Newburyport	2	M. Lynch
5	Athol	23	W. Petersen	28	Cumb. Farms	5	R. Shores
19	Worc. (BMB)		B. Estabrooke	29	Bedford (Hansco		M. Rine
20	West Newbury	1	P. + F. Vale	Whimbre		, .	1111
22	P.I.		ide A. Clayton	27	P.I.	1	D. + I. Jewel
23-26	Mt.A.	1 m	V.O.	Least Sar			
25	W. Brookfield	1	M. Lynch#	27	GMNWR	1	S. Perkin
26	Easton		. d'Entremont#	28	Newburyport	28	C. Pain
27	ONWR	1	M. Lynch#	28	W. Harwich	7+	B. Nikula
		5	HISAN AND AND CO.		mped Sandpiper		
Northern	Bobwhite			W IIIIC-IU	mipou Sanupipoi		

Pectoral S 19	andpiper Newburyport	3	J. Soucy	24 25	Quincy Wayland	1 1	B. Zusavich K. Hamilton
Purple San	ndpiper			Roseate T	'ern		
15	N. Scituate	200	W. Petersen	28	M.V.	4	V. Laux
26	Sandwich	15	S. + E. Miller	Common	Tern		
28	Westport	21	M. Lynch#	24	Newburyport	1	R. Forster
Dunlin	· · · · · · · · · · · · · · · · · · ·		1711 25 3 11011	28	M.V.	î	V. Laux
24	Newburyport	100	R. Forster	Least Ter			V. Daux
CALL STREET, S		100	IC. I OISIOI	27	Katama	3	A Vaith#
Stilt Sand			D. F.	10200		3	A. Keith#
24	Newburyport	1	R. Forster	Sterna sp		327	
Ruff	50 5 7		2.21 -10	23	Arlington Res.	1	M. Pelikan
17-22	Newburyport	1	J. Soucy + vo	Razorbill			
18	P.I.	1	D. + I. Jewell	14	Katama	300 (1 hr	V. Laux
Common	Snipe			Black Gu	illemot	200,000,000,000,000	TA DOMESTICA
3, 15	Cumb. Farms	100, 13	K. Anderson	11	Magnolia	1	M. Rines
5	West Newbury	12	P. + F. Vale	28	N. Scituate	2	D. Brown#
9	Wayland	2	C. Paine	28	Rockport	ĩ	J. Berry
13		4					J. Delly
	Westboro		E. Taylor		creech-Owl	7.02.02.V	
13	P.I.	2	P. + F. Vale	thr	Mt.A.	pr	V.O.
14	Middleboro	27	M. Boucher	21	Marlboro	1	B. Parker
15	Ipswich	34	J. Hoye#	Great Ho	rned Owl		
15	Concord (NAC)	38	S. Perkins#	1, 13	Bolton	1, 2	S. Hennin
15	Wayland	15	S. Perkins#	thr	Mt.A.	1 or 2	V.O.
19	GMNWR	3	S. Hennin	6	Holliston	1 n	J. Hoye#
20	W. Newbury	15	M. Lynch#	Snowy O		1.11	J. 110yC#
							N. C
22	Plympton	25+	R. Turner	29	Boston (Logan)	1	N. Smith
	Woodcock			Great G			
4	Reading	2	P. + F. Vale	7	Rowley	1 fi	de S. Grinley
14	Westboro	6	M. Lynch#	Barred O	wl		
17	Concord (NAC)	3	L. Nachtrab	thr	Lincoln	2	G. Bertrand
28	Wayland	4	G. Ferguson	1-11	Melrose		D. + I. Jewell
5-30	Concord	3	D. Lange	5	Allston	î	B. Keaveny
		3	D. Lange	6			
Wilson's F			11.511		Camb. (F.P.)		 B. Constance
21	P.I.	1 f	M. Pelikan	13	W. Roxbury	1	T. Aversa
24	Newburyport	2	R. Forster	13	Lexington	1	fide MAS
Laughing	Gull			21	Milbury	1	C. Phillips
28	Westport	1	M. Lynch#	21	Petersham	2	M. Lynch#
Little Gull		- 2	7101.000	Long-eare		570	1000
24	Newburyport	1 ad	R. Forster	18	Revere	1	L. Vargus
	Black-headed Gu		IC. I OISIGI	Short-ear			L. vargus
		3 ad	W. Petersen#	1-8		5	
13	Plymouth	3 au	W. Petersen#	(5) (3) (7)	Katama		V.0.
Bonaparte				7	Halibut Pt	1	J. Nove
21	Newburyport	52	J. Berry	12	Duxbury	1	S. Hecker
Mew Gull				13	Ipswich	2	C. Leahy
6, 13	Newburyport	1 ad	V.O.	27	M.V.	1	V. Laux
Ring-bille				Northern	Saw-whet Owl		
5	Worcester	308	M. Lynch#	3-7	Lexington	1	V.O.
13	Westboro	350+	M. Lynch#	9	Cummaquid		S. + E. Miller
				20			
26	Bolton Flats	350+	M. Lynch#		Melrose		D. + I. Jewell
Herring G				21	Petersham	3	M. Lynch#
14	Ipswich	2500	J. Berry	Chimney		20.00	
Iceland G	ull			23	Westwood	2	E. Nielsen
13	Newburyport	10	M. Lynch#	27	Newburyport	1	M. Lynch#
16	New Bedford	1	J. Horowitz	27	GMNWR	1	S. Perkins
28	Oak Bluffs	î	A. Keith	28	M.V.	15	V. Laux
			A. Keitii				V. Date
	ck-backed Gull				ated Hummingbir		
2-13	Acton		. Forster + v.o.		Mt.A.	1	V.0.
13	Newbury	l ad	R. Forster	Belted Ki		12	12/12/12/12
14	W. Concord	1 ad	M. Pelikan	15	Sudbury	2	S. Perkins#
18	Newburyport	1 ad	J. Soucy + vo	Red-bellie	ed Woodpecker		
Glaucous		100000		thr	Pepperell	pr	E. Stromsted
12	Taunton	1 im	m D. Cabral	thr	Mt.A.	1 or 2	V.O.
		100					
13	Newburyport	1	R. Forster#	14	Westboro	1 m	M. Lynch#
16	Boston Harbor	1	R. Donovan		Provincetown	2+	V.0.
27	Chappaquiddick	(1	A. Keith#	27	Medford	1	M. Rines
28	P.I.	1	C. Paine	28	Westport	2	M. Lynch#
	ck-backed Gull				ellied Sapsucker		
		1500	I Does	4	S. Dartmouth	1	M. Boucher
14	Ipswich	1300	J. Berry			97.000	
	ern	N 954	-	10	Acton	1 m	M. Rines
Caspian T							
	Concord (NAC)	1 2	D. Lange + vo	12 15	Gloucester Boxford	1	C. Leahy D. + I. Jewell

Yellow-	bellied Sapsucker (c	continue	ed)	6	IRWS	2	P. + F. Vale
17	Framingham	1	K. Hamilton	Northern	n Flicker		
19	S. Boston	1	R. Donovan	19	Wellesley	12 migr	R. Forster
20	E. Gloucester	1	C. Leahy	20	P.I.	20 migr	J. Hoye#
22	Maynard	1	L. Nachtrab	Pileated	Woodpecker	-	
22	Boston (F.Pk)	1 f	T. Aversa	thr	Pepperell	1	E. Stromsted
25	Hingham	2	S. Birch	20	Acton	1	M. Pelikan
Hairy W	/oodpecker			21	Hardwick	1	M. Lynch#
1	Woburn	3	D. + I. Jewell	28	Boxford (C.P.)	1	M. Rines
1	Melrose	2	D + I lewell		Service of Contract of Contrac		

FLYCATCHERS THROUGH GROSBEAKS

A good wave of migrants followed southwest winds on April 19 and April 23 and continued to be seen through the end of the month. Early migrants, such as Ruby-crowned Kinglet, Hermit Thrush, American Robin, Yellow-rumped Warbler, Pine Warbler, Palm Warbler, Eastern Towhee, and Chipping Sparrow had been seen in limited numbers earlier in the month, but were noted in much greater numbers after April 19. Unlike April 1995, no unusual passerines were noted, although there were some interesting location and date observations. A Purple Martin on Martha's Vineyard was a rarity in spring, and Pine Siskins were observed exhibiting nest building behavior at the same location. A Yellow-throated Vireo on Nantucket was reported on the extremely early date of April 6, nearly a month before the normal arrival date. Other early arrivals included Worm-eating Warblers from Provincetown and Oak Bluffs. April sightings of Summer Tanager and Blue Grosbeak are standard for the islands and were noted again this year.

Northern Shrikes were reported from 8 locations, holdovers and returning migrants from this past winter's invasion. A variety of hardier migrants often overwinter, such as Carolina Wren, Hermit Thrush, Gray Catbird, and Eastern Towhee, but these were extremely sparse before the first "wave" after April 19th. This seems a likely result of this year's rugged winter conditions.

R. H. S.

Least Flyc	atcher			25	N. Braintree	4	M. Lynch#
27	Newburyport	1	M. Lynch#	Cliff Sw	allow		
30	ONWR	1	B. Parker	20	M.V.	1	V. Laux
Great Cres	sted Flycatcher			27	Newburyport	1	M. Lynch#
29	Boston (F.Pk)	1	T. Aversa	Barn Sw	allow		
Eastern K				15	Wayland	1	S. Sweet#
23	Westwood	1	E. Nielsen	19	Rochester	1	M. LaBossiere
26	Bolton Flats	1	M. Lynch#	19	GMNWR	4	S. Hennin
28	Chilmark	1	A. Keith	28	Westport	27	M. Lynch#
29	Sudbury	1	R. Forster	Fish Cro	w		
29	M.V.	1	V. Laux	thr	Mt.A.	5 p	rn v.o.
Horned La	ark			6	DWWS	4	W. Petersen#
13	Middleboro	50	R. Shore#	11	Hanson	3	W. Petersen
Purple Ma	rtin		220 (30000000000000000000000000000000000	11	Brookline	1	H. Wiggin
17	S. Carver	1	H. Davidson	24	Chatham	1	R. Clem
17	Rochester	2	M. LaBossiere	27	WBWS	2	B. Parker
21	P.I.	1	M. Pelikan	Commo	n Raven		
21	Newburyport	6	S. Perkins#	6	Quabbin (G35)	2	M. Lynch#
21	Quincy	1	R. Donovan	Red-brea	asted Nuthatch		7073 No. # 007000
27	P.I.	15	M. Lynch#	15	W. Newbury	1	J. Hoye#
28	Oak Bluffs	1	V. Laux	18	E. Middleboro	1	K. Anderson
Tree Swal				21	Boxford (C.P.)	4	J. Berry
5	Worcester	55+	M. Lynch#	White-B	reasted Nuthatch		222.22.20.00.00
5	Wayland	300	M. Pelikan	28	N. Truro	2 n	nigr B. Nikula#
5	Arlington Res.	80	M. Pelikan	Brown C			
9	Wareham	75	M. LaBossiere	7	Wakefield	2	P. + F. Vale
13	GMNWR	300	S. Perkins	13	Wayland	3	J. Hove#
14	Westboro	460+	M. Lynch#	20	E. Gloucester	4	C. Leahy
	-winged Swallow			21	Boxford (C.P.)	9	J. Berry
17-30	Arlington Res.	6 п	nax M. Pelikan	Carolina			
18, 21		1, 1		6	Boxboro	1	C. Paine
19	Rochester	7	M. LaBossiere	6	Newbury	1	M. Rines
19	GMNWR	2	S. Hennin	20	Concord	2	M. Pelikan
20	E. Gloucester	2	C. Leahy	27	MNWS	1	P. + F. Vale
27	Boston	2	R. Stymeist	28	Westport	6	M. Lvnch#
28	Maynard	4	L. Nachtrab	30	Bedford	1	M. Rines
28	Gloucester	3+	J. Berry	House V			
Bank Swa		-		21	Auburn	1	C. Phillips
20	P.I.	2	E. Nielsen#	23	Concord	1	R. Forster#
	Mt.A.	3	V.O.	24	Worc. (BMB)	2	M. Lynch#

House Wr 25	en (continued)	2	E Tanlan		Boston (F.Pk)	4 ma	x T. Aversa
	Natick	2	E. Taylor	Brown Th			
26	Bolton Flats	2	M. Lynch#	20	ONWR	2	M. Pelikan
28	Westport	2	M. Lynch#	21	P.I.	2	M. Pelikan
30	Concord	2	M. Rines	22	Boston (F.Pk)	3	T. Aversa
Winter W				24	Worc. (BMB)	4	M. Lynch#
16	S. Boston	1	R. Donovan	24, 30	Mt.A.	1, 1	V.0.
20	P.I.	1	J. Brown	27	P.I.	4	P. + F. Vale
22	Boxford	1	K. Disney	27	Medford	4	M. Rines
Marsh Wi		3		28	Natick	2	G. Long
22	Dorchester	1	R. Donovan	29	S. Yarmouth	ĩ	S. + E. Miller
28	Rowley	1 m	J. Berry	American			S. I L. WHITEI
	owned Kinglet	1 111	J. Delly	3	Cumb. Farms	2	V Andaman
5		1	C Poins			3	K. Anderson
	Boxboro		C. Paine	10	GMNWR	1	M. Rines
6	Quabbin (G35)	1	M. Lynch#	26	Bolton Flats	1	M. Lynch#
7_	Wakefield	2	P. + F. Vale	Cedar Wa			
15	N. Scituate	1	W. Petersen	7	Wakefield	47	P. + F. Vale
20	Boxford (C.P.)	9	J. Hoye#	13	Middleboro	30	R. Shore
20	E. Gloucester	4	C. Leahy	Northern	Shrike		
21	Wellesley	3	R. Forster	1	Wayland	1	N. Patterson
Ruby-croy	vned Kinglet			6	Nantucket	1	C. Jackson
	Boxboro	1, 6	C. Paine	13	P.I.	î	R. Forster#
20	Boxford (C.P.)	7	J. Hoye#	14	Essex	1 ad	L. Healy
20	ONWR	5	M. Pelikan	14	Chilmark	1	
20		3					T. Rivers
	Stow		J. Hoye#	18	W. Bridgewater	1	W. Petersen
20	Boxford (C.P.)	7	P. + F. Vale	21	Quincy	1	R. Donovan
20	E. Gloucester	25	C. Leahy	27	Dorchester	1	R. Donovan
20	W. Newbury	11	E. Nielsen#	White-eye	d Vireo		
21	P.I.	5	M. Pelikan	28	S. Dartmouth	1	M. Boucher
21	Nahant	4	P. + F. Vale	28	Westport	1	M. Lynch#
22	Boston (F.Pk)	13	T. Aversa	Solitary V	'ireo		CA 050 1000 A
25	Hingham	10	S. Birch	19	Boston (F.Pk)	1	T. Aversa
27	Woburn	5	M. Rines	- 20	Boxford (C.P.)	5	J. Hoye#
28	MNWS	6	M. Rines	20	Quabbin (G36)	2	T. Aversa
	Gnatcatcher		runes	20	ONWR (C50)	ĩ	M. Pelikan
23	Maynard	2	L. Nachtrab#	20	E. Gloucester	1	
24		1		22			C. Leahy
	Melrose		D. + I. Jewell		S. Boston	1	R. Donovan
25	Hingham	1	S. Birch	25	Hingham	5	S. Birch
26	Bolton Flats	4	M. Lynch#		roated Vireo		
26	ONWR	1	M. Lynch#	6	Nantucket	1	C. Jackson
27	Wayland	3	M. Pelikan	Warbling			
27	West Newbury	1	P. + F. Vale	27	Woburn	1	M. Rines
27	Woburn	1	M. Rines	Nashville	Warbler		
28	MNWS	2	M. Rines	30	Brookline	1	R. Stymeist#
28	Boxford (C.P.)	3	M. Rines	Northern	Parula		
Eastern B				26	M.V.	1	fide V. Laux
4	Boxboro	1	C. Paine		Mt.A.	1-3	V.O.
6	IRWS	2	P. + F. Vale	Yellow W		1-3	v.u,
13		1		21		1	M I b#
	Newburyport		M. Lynch#		Hardwick	1	M. Lynch#
19	Bolton	2	S. Hennin	26	Bolton Flats	4	M. Lynch#
19	Lincoln	2	S. Perkins	27	Woburn	2	M. Rines
25	Marlboro	1	B. Parker	29	Wayland	3	R. Forster
25	Hingham	12	S. Birch	29	M.V.	2	V. Laux
27	P.I.	1	M. Lynch#	Yellow-ru	mped Warbler		
Hermit Th	nrush		E-27 11 * 14 C 14 H	19	Wayland	4	R. Walton
5	Brookline	1	H. Wiggin#	20	E. Gloucester	16	C. Leahy
9	Westwood	1	H. Coolidge	21	Hardwick	20	M. Lynch#
	E. Middleboro	1, 3	K. Anderson	21	Wayland	4	J. Hoye#
	Boston (F.Pk)	4 max		26	Bolton Flats	22	
	Mt.A.				oated Green Warb		M. Lynch#
		9 max					T No1-41-4
19	S. Boston	5	R. Donovan	24	Boxford	4	L. Nachtrab#
20	Wellesley	4	R. Forster	27	W. Newbury	1	H. Wiggin#
	Boxboro	1, 3	C. Paine	28	Ipswich	2	J. Berry
20	E. Gloucester	4	C. Leahy	28	Petersham	1	S. Hennin
21	Petersham	20	M. Lynch#	30	Mt.A.	1	V.O.
Wood Th	rush			Pine Warl			
29	Mashpee	2	S. + E. Miller	5, 17	Boxboro	1, 2	C. Paine
American				13	Lincoln	i	S. Perkins
5, 13	Wayland	100, 100	M. Pelikan	14	Westboro	1	M. Lynch#
13			M. Lynch#	15-30			
Gray Cath	Newbypt, P.I.	120, 50	IVI. Lynch#				x K. Anderson
	11111			20	Boxford	5	BBC (J. Berry)

21 Hardwick 15 M. Lynch# Eastern Towhee 21 Melrose 2 P. + F. Vale 20 Quabbin (G40) 21 Quabbin (G40) 34 E. Nielsen# 20 ONWR 20 Maynard 3 L. Nachtrab 20, 28 Boxboro Prairie Warbler 28 M.V. 3 V. Laux 24 Worc. (BMB) 28 M.V. 3 V. Laux 24 Worc. (BMB) 30 Yarmouthport 1 S. + E. Miller 27 P.I. 21 Wayland 2 R. Walton 28 Westport 18 P.I. 1 D. + I. Jewell American Tree Sparrow 18, 20 Boxboro 1, 20 C. Paine 3 Wakefield 18, 27 Medford 1, 6 M. Rines 6 E. Sandwich 18 Arlington Res. 1 M. Rines 6, 15 Marshfield 19-30 Boston (F.Pk) 18 max 22 T. Aversa <t< th=""><th>3 1,2 1-3 6 8 11 4 1 12,2 4 mi 1 8,3 1</th><th>C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#</th></t<>	3 1,2 1-3 6 8 11 4 1 12,2 4 mi 1 8,3 1	C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
21 Quabbin (G40) 34 E. Nielsen# 20 ÖNWR 20 Maynard 3 L. Nachtrab 20, 28 Boxboro Prairie Warbler 20-30 Mt. A. 20-30 Mt. A. 28 M.V. 3 V. Laux 24 Worc. (BMB) 30 Yarmouthport 1 S. + E. Miller 27 P.I. 15 Wayland 2 R. Walton 28 Westport 18 P.I. 1 D. + I. Jewell American Tree Sparrow 18, 20 Boxboro 1, 20 C. Paine 3 Wakefield 18, 27 Medford 1, 6 M. Rines 6 E. Sandwich 18 Arlington Res. 1 M. Rines 6, 15 Marshfield 19-30 Boston (F.Pk) 18 max 22 T. Aversa 12 Wellesley 19 Wayland 7 R. Walton 13 Boxboro 20 Wayland 20 E. Taylor 14 Wayland	1 1, 2 1-3 6 8 8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 3 3 7	M. Pelikan C. Paine V.O. M. Lynch# P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
20	1, 2 1-3 6 8 11 4 12, 2 4 mi 1 8, 3 1 1 2 2 2 2 3 7	C. Paine v.o. M. Lynch# P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
Prairie Warbler 20-30 Mt. A. 28 M.V. 3 V. Laux 24 Worc. (BMB) 30 Yarmouthport 1 S. + E. Miller 27 Medford 15 Wayland 2 R. Walton 28 Westport 18 P.I. 1 D. + I. Jewell 28 Westport 18, 20 Boxboro 1, 20 C. Paine 3 Wakefield 18, 27 Medford 1, 6 M. Rines 6 E. Sandwich 18 Arlington Res. 1 M. Rines 6, 15 Marshfield 19-30 Boston (F.Pk) 18 max 22 T. Aversa 12 Wellesley 19 Wayland 7 R. Walton 13 Boxboro 20 Wellesley 8 R. Forster 13, 20 Lincoln 20 Wayland 20 E. Taylor 14 Wayland 20 ONWR 10 M. Pelikan Chipping Sparrow 20 W. Newbury 16 S. Perkins# 15 Maynard 21 Wayland 10 J. Hoye# 18 Mt.A. 26 Bolton Flats 21 M. Lynch# 19 E. Middleboro Black-and-white Warbler 19 Boxboro 20 ONWR 1 M. Pelikan 19 ONWR 22 Pepperell 1 M. Resch 20 Ipswich <td< td=""><td>1-3 6 8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 2 3 7</td><td>V.O. M. Lynch# P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#</td></td<>	1-3 6 8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 2 3 7	V.O. M. Lynch# P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
28 M.V. 3 V. Laux 24 Worc. (BMB) 30 Yarmouthport 1 S. + E. Miller 27 P.I. Palm Warbler 27 P.I. P.I. 27 Medford 15 Wayland 2 R. Walton 28 Westport 18 P.I. 1 D. + I. Jewell American Tree Sparrow 18, 20 Boxboro 1, 20 C. Paine 3 Wakefield 18, 27 Medford 1, 6 M. Rines 6 E. Sandwich 18 Arlington Res. 1 M. Rines 6, 15 Marshfield 19-30 Boston (F.Pk) 18 max 22 T. Aversa 12 Wellesley 19 Wayland 7 R. Walton 13 Boxboro 20 Wellesley 8 R. Forster 13, 20 Lincoln 20 Wayland 20 E. Taylor Chipping Sparrow 20 W. Newbury 16 S. Perkins# 15 Maynard	6 6 8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 3 3 7	M. Lynch# P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
Palm Warbler	6 8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 3 3 7	P. + F. Vale M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersenifer C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
Palm Warbler 27 Medford 15 Wayland 2 R. Walton 28 Westport 18 P.I. 1 D. + I. Jewell American Tree Sparrow 18, 20 Boxboro 1, 20 C. Paine 3 Wakefield 18, 27 Medford 1, 6 M. Rines 6 E. Sandwich 18 Arlington Res. 1 M. Rines 6, 15 Marshfield 19-30 Boston (F.Pk) 18 max 22 T. Aversa 12 Wellesley 19 Wayland 7 R. Walton 13 Boxboro 20 Wellesley 8 R. Forster 13, 20 Lincoln 20 Wayland 20 E. Taylor 14 Wayland 20 W. Newbury 16 S. Perkins# 15 Maynard 21 Wayland 10 J. Hoye# 18 Mt. A. 26 Bolton Flats 21 M. Lynch# 19 E. Middleboro Black-and-white	8 11 4 1 12, 2 4 mi 1 8, 3 1 1 2 2 2 2 3 7	M. Rines M. Lynch# P. + F. Vale S. + E. Miller W. Petersen# igr R. Forster C. Paine S. Perkins M. Pelikan L. Nachtrab R. Kelly# K. Anderson C. Paine S. Hennin M. Lynch#
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23 Yarmouthport 2 S. + E. Miller 21 Rochester 26 Bolton Flats 3 M. Lynch# 22 Wellesley	3 7	
26 Bolton Flats 3 M. Lynch# 22 Wellesley	7	M. Boucher
		R. Forster
		M. Lynch#
27 West Hollowy I III		IVI. Lynom
and the same	2	M. Pelikan
American Redstart 20 ONWR	2	
28 Wayland (HP) 1 L. Harvey 20 P.I.		J. Hoye#
Worm-eating Warbler 20, 21 Brookline	5, 8	H. Wiggin#
20 Oak Bluffs 2 A. Keith# 20 E. Gloucester	1	C. Leahy
28 Provincetown 1 S. Thompson 21 Boxford	1	J. Berry
Ovenbird 21 Boxboro	1	C. Paine
27 Mt.A. 1 T. Aversa 28 Nahant	1	M. Rines
27 S. Boston 1 R. Donovan Savannah Sparrow		
Northern Waterthrush 13 Wayland	2	M. Pelikan
22 E. Middleboro 1 K. Anderson 13 Newburyport	1	M. Rines
	20	P. + F. Vale
	12	P. Duffy
20 DO MAINE	7	M. Lynch#
	27	D. Furbish
13-30 Boxford (C.P.) 1-2 P. + F. Vale + v.o. 30 Marshfield		
14-15 W. Newbury 1 E. Salmela 30 Lexington	10	M. Rines
20 Petersham 1 S. Hennin Fox Sparrow		D 11 D
20-30 Worc. (BMB) 1 K. Mills + v.o. 1 Princeton	2	B. Van Dusen
22 Boxboro 1 C. Paine 3, 17 Wakefield	2, 1	P. + F. Vale
27 W. Bridgewater 5 J. Young 3 Attleboro	12	fide S. Sweet
28 Ipswich 1 m J. Berry 4 Boxboro	6	C. Paine
Common Yellowthroat 5 Boxford	1	D. + I. Jewell
24-30 Boston (F.Pk) 1 T. Aversa 6 DWWS	1	W. Petersen#
	2	J. Hoye#
	ĩ	D. + I. Jewell
	1	D. Small
1100000 11010101	3	M. Rines
24-27 Brookline 1 f P. Perry + v.o. 9 Lexington		M. Rines
Summer Tanager 11 Rockport	1	
28 Oak Bluffs 1 m V. Laux# 12 Wakefield	1	P. + F. Vale
Scarlet Tanager 12, 18 Mt.A.	1, 1	M. Rines
24 Mt.A. 2 m v.o. 12 Medford	4	M. Rines
Rose-breasted Grosbeak 13 Bolton	4	S. Hennin
10 Chappaquiddick 1 m R. + E. Potter 13 Worcester	2	M. Lynch#
25 Cummaquid 1 S. + E. Miller 15 Boxford	2	B. Parker
28 Dartmouth 1 T. Raymond 16 S. Boston	3	R. Donovan
20 Dartinoun	6	fide S. Sweet
Dide Grosseum		
	1	M. Rines
17	1	R. Walton
27 Mt.A. 1 M. Noland + v.o. 15 Wayland	/ 77	
Indigo Bunting 15 GMNWR	1	M. Rines
10 Chappaquiddick 1 R. + E. Potter 26 Bolton Flats	20	M. Lynch#
17 M.V. 10+ fide V. Laux White-Throated Sparrow		D . P
24 Beverly 1 J. Paluzzi 27 MNWS	30	P. + F. Vale

Dark-Eye	d Junco			5	West Newbury	4	P. + F. Vale	
6	IRWS	15	P. + F. Vale	18	Brookline	6	B. Reilly#	
17	Brookline	21	H. Wiggin#	27	P.I.	26	M. Lynch#	
27	Mt.A.	1	R. Lockwood	Baltimore	Oriole		*	
27	N. Dartmouth	4	M. Boucher	23	Wellesley	1	R. Forster	
	d" Dark-eyed Ju	inco		Purple Finch				
10	Hanson	1	W. Petersen	4, 22	E. Middleboro	1, 2	K. Anderson	
	ed Blackbird			15	Boxford	3	J. Hoye#	
5	Worcester	130	M. Lynch#	20	Maynard	2	L. Nachtrab	
	leadowlark			21	Acushnet	2	M. LaBossiere	
8, 14	Bedford (Hanso	com)1, 6	M. Rines	21, 28	P.I.	1, 7	M. Pelikan	
12	Bolton	1	S. Hennin	21	Quabbin (G41)	5	E. Nielsen#	
13	Concord	1	M. Pelikan	22	Boxboro	1	C. Paine	
13	W. Roxbury	1	T. Aversa	22	Dorchester	1	R. Donovan	
15	P.I.	2	J. Hoye#	25	Hingham	3	S. Birch	
17	Wayland	1	N. Patterson	27	W. Bridgewater	1	J. Young	
20	Harvard	1	C. Paine	28	Westport	1	M. Lynch#	
26	ONWR	2	M. Lynch#	28	S. Dartmouth	1	M. Boucher	
27	Newburyport	2 7	M. Lynch#	28	Weston	3	G. Ferguson	
28	Middleboro	12	R. Shore	Red Cross	sbill		(73)	
Rusty Bla	ckbird			21	Petersham	1	M. Lynch#	
5	Wayland	13	G. Long	28	P.I.	20	P. Roberts	
10	GMNWR	13	M. Rines	Pine Siski	in			
13	P.I.	3	H. Wiggin#	2-7	Weston	5	G. Ferguson	
14	Westwood	28	E. Nielsen	13-21	Oak Bluffs	10-12		
20, 21	Wellesley	2, 3	R. Forster	24	Marstons Mills	3	S. + E. Miller	
23	Yarmouthport	2	S. + E. Miller	27	Belmont	1	R. Meyer	
23	Westwood	58	E. Nielsen	28	Boston	2	R. Stymeist	
27	Newton	49	C. Hepburn#	28	Weston	3	G. Ferguson	
Common	Grackle		10000000	Evening (Grosbeak			
thr	Framingham	3500 ma	x E. Taylor	20	Petersham	50	T. Aversa#	
Brown-He	eaded Cowbird		5444 PHO # 1444	25	Hingham	1	S. Birch	
4	Wakefield	2	P. + F. Vale	30	Worc. (BMB)	1	B. Estabrook	

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LIST OF ABBREVIATIONS

ad	adult	yg young	
alt	alternate	# additional observers	
b	banded	A.A. Arnold Arboretum	
br	breeding	A.P. Andrews Point, Rockport	
dk	dark (phase)	A.Pd Allens Pond, S. Dartmouth	
f	female	Arl. Arlington	
fl	fledged	B. Beach	
imr	n immature	B.I. Belle Isle, E. Boston	
ind	individuals	B.R. Bass Rocks, Gloucester	
juv	juvenile	Buzz. Buzzards Bay	
loc	location	Cambr. Cambridge	
lt	light (phase)	C.B. Crane Beach, Ipswich	
m	male	Corp. B. Corporation Beach, Dennis	
max	x maximum	C.P. Crooked Pond, Boxford	
mi	mile	Cumb. Farms Cumberland Farms,	
mig	gr migrating	Middleboro-Halifax	
n	nesting	E.P. Eastern Point, Gloucester	
ph	photographed	F.E. First Encounter Beach, Eastham	
pl	plumage	F.H. Fort Hill, Eastham	
pr	pair	F.M. Fowl Meadow	
S	summer (1S = first summer)	F.P. Fresh Pond, Cambridge	
thr	throughout	F.Pk Franklin Park, Boston	
v.o.	various observers	G40 Gate 40, Quabbin	
W	winter $(2W = second winter)$	G45 Gate 45, Quabbin	
w/	with	School St. Co. Co. Co. Co. Co. Co. Co. Co. Co. Co	
H.	Harbor	GMNWR Great Meadows National Wildlife Refu	ge
I.	Island	HRWMA High Ridge Wildlife Management Area	1,
L.	Ledge	Gardner-Westminster	10
M.	 V. Martha's Vineyard 	IRWS Ipswich River Wildlife Sanctuary	
Mt.	 Mount Auburn Cemetery, Cambrid 	ge LCES Lloyd Center for Environmental Studie	s
Nai	nt. Nantucket	MARC Massachusetts Avian Records Committe	ee
Nev	wbypt Newburyport	MAS Massachusetts Audubon Society	
P.I.		MBO Manomet Observatory	
Pd	Pond	MBWMA Martin Burns Wildlife Management An	rea
P'to	own Provincetown	Newbury	
Qua	ab. Quabbin	MDFW MA Division of Fisheries and Wildlife	
Res	s. Reservoir	MNWS Marblehead Neck Wildlife Sanctuary	
R.P	Race Point, Provincetown	MSSF Myles Standish State Forest	
S.B	South Beach, Chatham	NAC Nine Acre Corner, Concord	
S. I	Dart. South Dartmouth	NBC Needham Bird Club	
S.F	. State Forest	NEHW New England Hawk Watch	
S.N	 Sandy Neck, Barnstable 	ONWR Oxbow National Wildlife Refuge	
S.P	. State Park	SRV Sudbury River Valley	
Ste	llw. Stellwagen Bank	SSBC South Shore Bird Club	
Wo	orc. Worcester	TASL Take A Second Look Harbor Census	
BB	C Brookline Bird Club	USFWS US Fish and Wildlife Service	
BM	Broad Meadow Brook, Worcester	WBWS Wellfleet Bay Wildlife Sanctuary	
CB	C Christmas Bird Count	WMWS Wachusett Meadow Wildlife Sanctuary	
CC	BC Cape Cod Bird Club		
DF	WS Drumlin Farm Wildlife Sanctuary		
DU	MVC Daniel Webster Wildlife Constron		

DWWS EMHW Daniel Webster Wildlife Sanctuary

Eastern Massachusetts Hawk Watch

ABOUT THE COVER: NORTHERN GOSHAWK

The largest North American representative of the genus Accipiter, the Northern Goshawk (A. gentilis) is a fearsome predator. No one who has wandered near the nest of this species will forget the ca-ca-ca-ca scream as the female streaks menacingly toward your head, red eyes glistening. Highly aggressive in defense of their territory, goshawks have attacked and injured humans on many occasions. Adult birds are unmistakable, large and blue-gray above with broad rounded wings and a wedge-shaped tail tip. The black cap and white eye stripe are distinctive, and white fluffy undertail coverts are prominent. Immature birds, like the one featured on this issue's cover, are brown above with brown streaking or spotting below. A large female Cooper's Hawk and a small male goshawk are similar enough in size that they may be confused. A wavy barring pattern in the tail feathers and a more pronounced white eye stripe help identify the immature goshawk. In flight the goshawk's wings are proportionally longer and more pointed and the tail shorter than a Cooper's Hawk. As in other accipiters, males are smaller than females. Northern Goshawks are circumpolar in distribution, with up to nine subspecies recognized worldwide, including two (and possibly three) in North America.

Northern Goshawks breed in stands of mature forest from Alaska across Canada to the maritime provinces, and south to Pennsylvania in the east and in the mountains to Mexico in the west. They are permanent residents throughout most of their range when their food supply is adequate, but become nomadic or migratory when the food supply fails. Some winter in the Midwest, and in Massachusetts migrants typically begin to arrive in late October. The eight to eleven year population cycle of the snowshoe hare affects northern populations. One study reported that when hares were most abundant, goshawks fledged an average of 2.8 young per nest, but after the hare population crashed, goshawks raised no young. When the winter food supply fails over wide areas of the north, goshawks may become irruptive into our area. In Massachusetts they are considered an uncommon migrant and resident, with nesting pairs more common in the western part of the state. At least thirty-three nests were recorded during the 1974-1979 breeding bird atlas project, but they are undoubtedly more common today. Goshawks migrate late in the season and hence are frequently overlooked at many hawk migration observation points.

Northern Goshawks are monogamous, and many mate for life. They produce a single brood and may nest at age one year, although most do not breed until their third year. They prefer mature stands of mixed conifer and deciduous trees with a closed canopy, and construct a large nest platform of sticks 20-75 feet from the ground, often where major branches join the trunk. They usually build their own nest, although they may use the nest of another hawk species as a platform, but rarely use the same nest in consecutive years.

Nests are often located near water, frequently in remote areas far from human habitations and roads. The female is the dominant bird of the pair, and she usually chooses the nesting site. Their nests are lined with bark strips and decorated with evergreen springs. In Massachusetts they nest in April or early May, and the usual clutch is 3-4 pale blue or off-white eggs.

Goshawks remain solitary for most of the year, but in spring the female calls *kee-a-ah* and assorted high pitch screams to call her mate back into their territory. Females are active in courtship, and one or both birds perform aerial displays involving slow flapping or undulating flight, often with tails fanned and with white undertail coverts conspicuously displayed. The female does most of the incubation and brooding, feeding the chicks prey brought in by the male who does most of the hunting. Incubation lasts for five to six weeks, and another five to six weeks is required for the chicks to reach independence.

The Northern Goshawk is an efficient predator, described as "bold and intrepid," and its attack as "swift, furious, and deadly." It is certainly a ferocious predator flying low along a forest edge, killing prey by grasping with its talons. Goshawks are enormously persistent in their pursuit of prey—one followed a hen into a farmer's kitchen! They often will pursue rabbits on foot through brambles too thick to fly through. Goshawks use their long tail as a rudder when negotiating a branch-filled forest. They eat chipmunks, rabbits, hares, squirrels, and birds up to the size of grouse, crows, and ducks. In the higher latitudes their main staple may be lemmings or ptarmigan.

Because of their fondness for poultry and game birds, they have been historically persecuted by farmers and sportsmen. For example, at one time there was a \$5 bounty on goshawks in Pennsylvania. Some populations showed eggshell thinning in the early 1970s but have recovered following the banning of DDT in the United States. Forest fragmentation and loss of old-growth forest may have a negative effect locally, and recent evidence suggests a decline in goshawk numbers, especially in western states. However, they have been increasing in numbers in Massachusetts since the mid-1950s, and their range has been expanding to the south and east. In the last three years the U.S. Fish and Wildlife Service has been twice petitioned to list the Northern Goshawk as threatened or endangered under the Endangered Species Act, and an analogy between this species and the Spotted Owl has been made due to the goshawk's preference of mature forest. A recent symposium volume published by the Cooper Ornithological Society has focused attention on this magnificent predator, and we can hope that enlightened forest management practices will reverse the population declines in many of our western states.

W. E. Davis, Jr.

ABOUT THE COVER ARTIST

This month's cover features the work of an artist who has contributed artwork to *Bird Observer* for the first time. Wildlife art is a relatively new field for Richard Salvucci of Brighton, Massachusetts. His earlier work included a children's book, two fully illustrated books for adults, and many book covers. A visit five years ago to an exhibit coordinated by the Society of Animal Artists and held at Boston's Museum of Science opened a door to a new world. Since then, Richard has really only wanted to paint or draw animals, particularly birds. His greatest satisfaction comes in attempting to capture the individual personality of any animal in a painting or drawing.

Richard's work has appeared in the Sanctuary magazine of the Massachusetts Audubon Society (MAS) and in the Manomet Observatory newsletter. He has exhibited at the Vermont Institute of Natural Science, the Prestige Gallery (Canada), the Norman Rockwell Museum, Great Meadows National Wildlife Refuge, and the MAS Broadmoor and Marshfield sanctuaries. The National Alliance for Animal Legislation commissioned him to create a drawing of two chimpanzees, which was presented to Dr. Jane Goodall as an award for her life's work. In 1995 he won third place in a "remarque" (drawing) contest sponsored by Wildlife Art magazine. This year the American Birding Association invited Richard to exhibit at their national convention in Park City, Utah. His work is also represented by the following galleries: The Aves Del Sol Gallery in Kerville, Texas, and The Nature Gallery in West Boylston, Massachusetts.

M. Steele

AT A GLANCE June 1996 Wayne R. Petersen

In keeping with the nesting season, June's mystery photo once again shows a bird at a nest. In the last issue, the nest characteristics of an Acadian Flycatcher were useful in identifying the bird. This month, however, the nest is somewhat less useful as an identification aid.

What the picture shows us is a small, heavily streaked bird with a thin pointed bill, prominent wing bars, a dark face patch, and a pale streak on the crown. Actually, the shape and pointedness of the bill and the delicate form alone are enough to reveal that the bird is a wood-warbler of some sort. But which one?

As a starting point when looking at wood-warblers, and sparrows as well,

try concentrating on the head and face pattern. Pretty nearly all species in these groups can be identified by head and face pattern alone. Using this approach, there are four notable features on the head of the mystery bird: an unstreaked white (?) throat, a black face patch, light crescents above and below the eyes, and a light patch on the crown.

Among the regularly occurring wood-warblers in Massachusetts, several exhibit a prominent dark face patch, but most of these can easily be eliminated on the strength of other obvious features that do not fit the mystery bird. Such warblers include Golden-winged, Cape May, Blackburnian, Bay-breasted, Black-and-white, and Common Yellowthroat. Check your field guide to see why. This only leaves Magnolia and Yellow-rumped warblers to choose from because no other New England wood-warblers have distinctive dark faces like the individual in the photograph.

Having narrowed the choice down to the Magnolia or Yellow-rumped warbler, the identification is simple. Only the Yellow-rumped Warbler has a light (yellow) crown patch, the feature from which it derives its Latin name, *Dendroica coronata*. As further backup to this identification, notice the white wing bars and heavy streaks on the back, breast, and flanks.

The Yellow-rumped Warbler in the photo is a male, which is not surprising given that most wood-warbler males participate in the feeding of their young. In Massachusetts Yellow-rumped Warblers are fairly common breeders in the higher hills of the western part of the state, are abundant spring and fall migrants, and are variously common in winter on the Cape and Islands.



Yellow-rumped Warbler

Photo by Hal H. Harrison. Courtesy of MAS.

Photo by Hal H. Harrison. Courtesy of MAS.



Can you identify this bird?

Identification will be discussed in next issue's AT A GLANCE.



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