BIRD OBSERVER



Paul Donahue

VOL. 22 NO. 4 AUGUST 1994



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BIRD OBSERVER

· a bimonthly journal ·

To enhance understanding, observation, and enjoyment of birds.

VOL. 22, NO. 4 AUGUST 1994

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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 biref 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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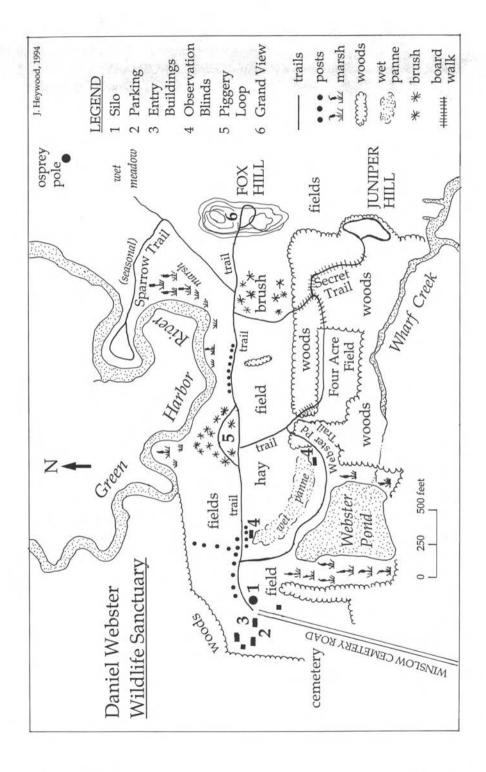
SIXTH ANNUAL MASSACHUSETTS BIRDER'S MEETING: NOVEMBER 19, 1994

The Massachusetts Audubon Society (MAS) and the Brookline Bird Club will cosponsor this event, which will also be the occasion of the MAS annual meeting. The event will be held at Bentley College in Waltham. The program will be in two parts—afternoon followed by reception and light refreshments, and an evening dinner with a speaker. The afternoon program will include talks on trends in Massachusetts herons, bird migration patterns, and searching for rails. Afternoon workshop subjects will include sparrows, little brown birds, and seabirds of the Northeast. Many art and book exhibits will also be on display. The banquet speaker will be Nobel Proctor, who will speak on birding at Attu. For more information, contact Media Department, Massachusetts Audubon Society, South Great Road, Lincoln, MA 01773. Telephone: 617-259-9500.

FALL HAWKWATCHES

The Eastern Massachusetts Hawk Watch (EMHW) is sponsoring coordinated hawkwatches on the weekends of September 10-11, September 17-18, October 22-23, and October 29-30. Hawkwatches will be conducted at Wachusett Mountain from September 1 through Ocotber 10. Anyone seeing a significant number of hawks at any time is requested to send a report to the EMHW at 254 Arlington Street, Medford, MA 02155. Anyone interested in participating in the hawkwatch or in a copy of the Fall 1993 EMHW report, please call Paul Roberts at 617-483-4263 (call between 8-9:30 PM).

BIRD OBSERVER



BIRD OBSERVER

BIRDING THE DANIEL WEBSTER WILDLIFE SANCTUARY

by David Clapp

Ted Dwyer did not spend a whole lot of money on his Marshfield farm. The cows were turned out into muddy lots, the fences were often made of sheet metal siding and barbed wire fragments, and the fields had thistle and burdock amid the fescue and orchard grass. The land was low, much of it four feet below mean sea level (MSL) (a storm tide will reach eleven feet above MSL), and the drainage ditches were often boggy. These ditches and the inability to get equipment onto the fields often spelled doom for the cows that got mired in the sloughs, ditches, and boggy spots. The farm, however, was great for birds.

Dwyer sold the farm to the Massachusetts Audubon Society (MAS) in the early 1980s. The residents of the region raised the more than \$500,000 needed to purchase and prepare the site, which became the Daniel Webster Wildlife Sanctuary (DWWS). To reach the DWWS from Boston, take Route 3 south to Exit 12 onto Route 139 east. Go 3.5 miles to Webster Street, which is on the right (Papa Gino's is at this intersection). Take Webster Street 1.5 miles (following signs for Daniel Webster's gravesite) to Winslow Cemetery Road on the left. Winslow Cemetery Road dead-ends in a few hundred yards at the sanctuary parking lot. Webster is buried in the cemetery on this road under a tamarack tree that has yet to produce any winter finches.

The open space here is more than just the 476 acres of the DWWS. About 258 acres of Marshfield Conservation Commission land, 28 acres of airport land, 69 acres of golf course land, and about 175 acres of privately owned wetlands are adjacent to the sanctuary. The Green Harbor River is a small river that starts in Duxbury and flows eastward to the dike under Dike Road (Route 139) in Green Harbor. (Marshfield has seven zip codes, and the various villages—Brant Rock, Green Harbor, Ocean Bluff, Marshfield Hills, North Marshfield, and Fieldstone—all have their own identity.) The water from the river flows into Green Harbor when the tide is low enough for the tide gates to swing open. The river exits its valley for about eight hours each day. The dike was built in the 1870s to "reclaim" tidal land for agricultural use. There is a two-square-mile polder inside the dike, and the DWWS is an integral portion of it. The history is rich and interesting—but let us get to the birds and birding.

The sanctuary is birded from mowed trails and boardwalks. Although access is somewhat limited, almost all of the sanctuary can be viewed from somewhere on the trail system. A spotting scope is very useful because many views are quite long-range. There are extensive fields of canary reed grass and other fields of mixed grasses. Patches of phragmites provide roosting spots for swallows, blackbirds, and European Starlings. Extensive red maple swamps are on the property, but surprisingly, no evidence exists that the property was ever a salt marsh. The sanctuary bird list is about 220 species, and 175 of these species appear each year.

To bird the site, I recommend that you follow a loop that will take you from the parking lot to Fox Hill, to Secret Trail, to Four Acre Field Trail, to Webster Pond Trail, and back to the parking lot (see map). This loop is less than two miles. If good birds are around, it will take half a day; otherwise it is a good forty-minute exercise. As you walk out to Fox Hill, stop at the first observation blind. Shortly after the blind, the Piggery Loop trail goes off to the left. It is a small loop trail through a brushy patch that returns to the Fox Hill trail and can be very worthwhile. Once back onto the Fox Hill trail, you will continue through fields, along field edges, and you will have a view out to a river to the left of the trail. From Fox Hill the vistas are long and rewarding. You should look for raptors here.

The Secret Trail is a boardwalk path through a gray birch grove that is good at any time of year. The trail wanders out onto a small hummock with a grove of white oaks that can be productive in all seasons. The Four Acre Field Trail passes through a red maple swamp, along the Four Acre Field, and back onto the big fields for a few yards before it becomes the Webster Pond Loop. The Webster Pond Loop passes over a dike, along an overgrown field, past the second blind, near a cattail swamp, and back to the parking lot. The trails are simple.

Spring and Summer

Spring and summer are very exciting times at the DWWS. The migration is usually very good here. The low wet areas can have southern vagrants, and the birches and woodlands will have a nice mix of warblers, vireos, and thrushes. The grasslands will be vibrant with sparrows and field-nesting birds. The pond and river will have egrets and herons, and the birds of prey will be giving chase.

The cattail marsh along Webster Pond is noisy with Red-winged Blackbirds, Common Grackles, and Marsh Wrens. Other species that are found well into the nesting season include Gadwall, Green-winged Teal, Blue-winged Teal, Black Duck, Mallard, Mute Swan, and Canada Goose. Teal and Gadwall have never successfully nested, but pairs of birds remain into mid-May. The cattails have been used by Least Bitterns as a nesting spot for many years, although it seems that 1992 and 1993 were off years. American Bittern is sometimes seen, but it has not nested here yet.

About fifty pairs of Bobolinks and a few pairs of Eastern Meadowlarks nest each year at the DWWS. Both migrant and resident Bobolinks use the sanctuary. They arrive in early May, and when both migrants and residents are on site it is just frantic. They can be found in the shrubs near Piggery Loop, on top of the swallow boxes, on fence posts, and on grass stems—they will be everywhere in mid-May. The Bobolinks can be seen in all the fields right up to the parking lot. The swallow boxes are the focal point of the fifty pairs of Tree Swallows that nest on the sanctuary. Occasional Eastern Bluebird pairs attempt to nest in the boxes as well, but so far the swallows have evicted all the bluebirds. Northern Harriers are often on the site at this time, but they are more common in all other seasons. They have attempted to nest in the past few years but have been unsuccessful due to nest predation. Predators of ground-nesting birds include crows, black racers, striped skunks, raccoons, mink, weasels, red foxes, and eastern coyotes. Harriers, Ring-necked Pheasants, and Northern Bobwhites probably suffer heavy losses each season. Most of the predators live on the abundant small mammals of the sanctuary, but they will take birds, especially in nesting season.

The two observation blinds, one at each end of the man-made panne just below the parking lot, offer a chance to watch the dabbling ducks, Tree Swallows. Song Sparrows, and nonbreeding herons, egrets, and ibis. These blinds have interpretive materials that depict most of the likely bird species of the wetlands to help the beginner. The blinds offer the experienced birder a comfortable place to observe behavior. Virginia Rail and Sora are usually in the panne, but they are not often seen. Glossy Ibises usually occur each spring. Great Blue and Green herons are common in the spring, and both Great and Snowy egrets are likely throughout the spring and summer. The water in the panne is deepest in the spring, but the bottom is terraced into five levels; thus, some mud is exposed at all times. These muddy patches can have shorebirds on them. In the spring likely shorebirds are Common Snipe, Spotted Sandpiper, American Woodcock, and Lesser and Greater yellowlegs. The spring is the best time for Wilson's Phalarope in the wet panne. The grasslands are regular stopping spots for Upland Sandpipers. These birds might be found in any short grass field during migration. There are a couple of old records from the mid-1970s of Upland Sandpipers nesting on the sanctuary.

The panne and the pond have a variety of ducks in the spring and summer. The pond will have nesting Mute Swan, Canada Goose, Mallard, and Black Duck. There will be Gadwall, Green- and Blue-winged teal, Bufflehead, occasional mergansers, and American Wigeon; none of these species nest. The panne will have Black Duck, Mallard, Canada Goose, both teal, and Gadwall. These birds can be studied quite easily from the observation blinds.

You should look and listen for Willow Flycatcher along Piggery Loop, White-eyed Vireo at the end of Secret Trail, and warblers in the birches and grassy area where Secret Trail and Four Acre Field Trail connect. Orchard Orioles are somewhere on the sanctuary each year, often near the parking lot or front fields. The thickets along the short path that connects the Four Acre Field and the big fields are also good places for birds. When you walk back on the Webster Pond Trail, stop along the raised path as you leave the big fields, and be alert as you proceed toward the cattail pond and the observation blind. This short stretch is good for thrushes, sparrows, and warblers. It is in this wet area that you have the best chance for southern overshoots and *Oporonis* warblers (e.g., Hooded, Mourning, Kentucky). The coarse field that you enter from this raised path and the wooded edge to your left as you walk toward the pond are good for sparrows (e.g., Savannah, Song, Lincoln's, Fox), Eastern Bluebird, and Willow Flycatcher. The cattail pond is good for the water birds mentioned previously; it also serves as a feeding spot in the spring for Cliff, Barn, Tree, Bank, and Rough-winged swallows. There are usually Chimney Swifts in the mix. Some spring days are very busy with swifts and swallows hawking insects over the water's surface.

Fall Migration

The fall migration begins in early July at DWWS. By then the groundwater has dropped, and the panne is showing lots of mud. Pectoral, Semipalmated, Least, and Spotted sandpipers arrive at this time. Greater and Lesser yellowlegs, some dowitchers, and the occasional White-rumped and Western sandpipers also arrive. The panne can be very attractive to migrant waders during July and early August. The population will change during the day, and one visit often misrepresents what is happening.

Bobolinks tend to disappear as soon as the young fledge in early July. The mowing of the fields begins in early July, and American Kestrel (which used to nest at DWWS), Merlin, and the less common Peregrine Falcon slash across the fields looking for meadow voles, jumping mice, and white-footed mice. In September as many as thirty kestrels may be on the sanctuary. The record high for kestrels is about sixty-five birds on one September day in 1991. The kestrels eat small mammals and large insects. In the spring they favor June bugs, the shiny castings of which pile up under favorite kestrel perches. Harriers, buteos, and accipiters feed over the fields as they pause on their southward passage. Yellow Rail is occasionally seen by the tractor drivers in the late summer and early fall when the back fields are mowed. These small and hard-to-see rails are usually in the damp fields way out back (east of Fox Hill) and not seen unless they are forced during mowing to fly out over a previously mowed area. They are not heard in the spring and are unlikely to be seen by a visitor. The back fields and all wet areas also contain Sora and Virginia Rail in the fall.

Four Acre Field is planted with pumpkins, which are harvested on a "pickyour-own" basis to raise funds. Pumpkin fields have weeds that attract birds, and in September and October sparrows love this area. Spend some time around the edges of this field in all seasons, but be sure to work it well in the fall. The panic grasses and ragweed provide most of the seed crop.

The woodland trails often have Philadelphia, White-eyed, and Red-eyed vireos. Many migrant warblers are often in the oaks at the end of Secret Trail, although it is sometimes difficult to leave the warblers in the birch grove to go

to the end of the trail.

A couple of late-summer and early-fall phenomena are of interest to birders. The evening flight of egrets out to the roost site in Boston Harbor originates from south of the DWWS in the Duxbury marshes, up the South River, over the North River mouth, along the Scituate coast, and eventually to Hull and the safety of the rocky islands in the harbor. The sanctuary will often have a nice passage of egrets in the evening. You usually will see more Great Egrets than Snowy Egrets. An American Robin roost is in the red maple swamp between the sanctuary and the golf course. As many as 5000 robins roost here; from any vantage on the sanctuary some robin movement can be seen toward dusk on a summer night. The robin roost continues to be used all winter, but by significantly fewer birds.

Falcons often can be seen chasing flocks of European Starlings over the back meadows. These flocks number up to 20,000 birds and flow across the grasslands like clouds of smoke, often balling up in the presence of a predator. Also look for Double-crested Cormorants roosting on the electric lines well to the east of Fox Hill. At dusk usually 400-500 birds sit on the wires that span the Green Harbor River. You can see some cormorants in and over the Green Harbor River throughout the day. The use of the phragmites patches by migrant swallows for roosting in late summer is not well documented. However, hundreds of swallows use the area for both feeding and roosting in late summer.

Winter

Winter birding is a bone-chilling but rewarding venture. The species list will be shorter than in other seasons, but is likely to include Rough-legged Hawk, Short-eared Owl, Eastern Meadowlark, Northern Harrier, a whole slew of feeder birds, and the occasional surprise.

The MAS residence is on the right as you approach the parking lot. Feeders are located along the post and rail fence, and the birds zip from the thicket back and forth to the seed. This is a reasonable place for the January Red-winged Blackbird, Common Grackle, or (unfortunately) Brown-headed Cowbird. There will often be Hairy Woodpecker and an occasional Red-bellied Woodpecker feeding with the more common Downy Woodpecker. The MAS residence is a private home with no access to a telephone or toilets (no telephone is on the site, but a "port-o-john" is near the parking lot). After parking, scan the fields for Northern Harriers, Red-tailed Hawks, and flocks of meadowlarks. The parking lot is good for Eastern Bluebirds year-round, and the trees nearby are favored for roosting and resting.

Before starting down the trail, look in all directions, especially toward the high tension lines, for birds such as Blue Jay, House Sparrow, House Finch, Black-capped Chickadee, Tufted Titmouse, Northern Mockingbird, and Northern Cardinal, perched in the brush. The fruit trees on Piggery Loop attract wintering birds such as American Robin, Cedar Waxwing, Northern Mockingbird, and finches. The main fields, on your right, are good for geese (usually Canada but occasionally Snow or White-fronted) and Eastern Meadowlark. Wintering Eastern Bluebirds may be on the row of swallow boxes that bisect the field.

At Fox Hill (you should be standing in a cold wind by now) scan in all directions for Rough-legged and Red-tailed hawks, Northern Harrier, and the less frequent Red-shouldered Hawk. It is also possible to watch American Crows, American Goldfinches, and other common birds as they move about in a rural setting. The Green Harbor River meanders through the property to the west, then north, and finally to the east. Look in the river-edge cherry trees for the various raptors or the Belted Kingfishers that stay until freeze-up.

Secret Trail goes through a grove of gray birches that often attract winter finches. The oaks at the end of the trail seem to be a good spot for the resident woodpeckers, owls, and raptors. As you enter Four Acre Field, you have a good chance to find sparrows and other ground feeders in the grasses along the field edge. Farther along, if the pond and the panne are not frozen yet, look for Swamp Sparrow, late Marsh Wren, Common Snipe, and the occasional Blackcrowned Night-Heron around the edges. The cold water is a reasonable place to locate Hooded and Red-breasted mergansers, Ring-necked Duck, Bufflehead, Common Goldeneye, and an occasional Pied-billed Grebe.

Many uncommon birds show up each year at the DWWS. Wilson's Phalarope, Black or Caspian tern, Barn Owl, Short-eared Owl, Northern Shrike, and Western Kingbird are as likely here as almost anywhere in eastern Massachusetts. The real rarities (e.g., Fork-tailed Flycatcher, Mississippi Kite) are not at all predictable, but DWWS is a good place to hope for a miracle. Some birds, such as the Loggerhead Shrike, can be expected here in the fall despite their relatively rare statewide populations.

The Daniel Webster Wildlife Sanctuary is valuable for wildlife every day of the year. The residents, the breeders, and the migrants all need this site at some point during their year. Trail maps and brochures, a bird checklist, and other bits of information are in the entry building adjacent to the parking lot. The entry building also has an honor-system fee arrangement for nonmembers of MAS and a place to fill out registration cards. A list of bird sightings and bird activity is in the first observation blind and in the entry building. The sanctuary is open from sunrise to sunset every day of the year.

DAVID CLAPP is the sanctuary director. He wishes to thank David Ludlow, who keeps good records for the sanctuary, Frances Garretson, who studies the Tree Swallows and keeps the bird bulletin boards, Simon Perkins, who did the checklist, and all others who have supported the sanctuary, left lists and notes about what they have seen, or otherwise enabled this site to remain valuable to wildlife.

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OYSTERCATCHER REDUX

by Lawry Sager

As I write this in mid-March, while still in the cold grip of winter, there are already reports of American Oystercatchers (*Haematopus palliatus*) returning to Massachusetts. To many of us, the oystercatcher is one of several southern avian species that have successfully expanded their range into New England over the past few decades, but for the oystercatcher, this apparent northward expansion is actually a reestablishment of its historical range.

In this article I discuss the historical and current distribution of the American Oystercatcher in Massachusetts, its general physical characteristics, and some results of my research on the bird's feeding behaviors. The American Oystercatcher is the largest and most distinctive shorebird breeding in Massachusetts. It is a member of a cosmopolitan genus and a superspecies complex (i.e., closely related species) of as many as eleven species. It is subdivided into five subspecies, most of which are Central or South American (Hayman et al. 1986). Our subspecies, *Haematopus palliatus palliatus*, is found along the eastern coast of North America and south to Colombia and Brazil (AOU 1957).

Historical and Current Status in Massachusetts

Virtually all species accounts of the American Oystercatcher written in this century begin with Audubon's 1840 assertion that they bred coastally as far north as Labrador. Some authors, however, contend that Audubon probably saw stragglers of the closely related European Oystercatcher, *H. ostralegus* (Bent 1929; Forbush 1912). Nonetheless, it is generally agreed that *H. palliatus* historically bred in Massachusetts and along the Maine coast wherever suitable habitat and resources were found.

By 1900 oystercatchers had been extirpated from their range north of Virginia, and only occasional sightings were reported during the next half century. As in the case of other shorebirds, most notably the Piping Plover, market gunning and indiscriminant sport hunting were assumed to be the primary reasons for this extirpation (Forbush 1912). I never found the oystercatcher mentioned in an impressive account of birds seen in and taken primarily from Massachusetts (McKay 1929). Writing specifically of oystercatchers, Bent (1929) states that "It is one of the shyest and wildest of our shore birds . . . I have never shot one and seldom have had half a chance to do so." In light of these accounts, it is perhaps more likely that human coastal activity and development or undetected environmental changes were major factors in the extirpation of these animals from their former range.

It is also possible that oystercatchers never bred in large numbers in Massachusetts. The paucity of locally collected specimens in many venerable collections provides indirect evidence for this possibility. For example, the Museum of Comparative Zoology at Harvard University, with almost 200 *Haematopus* specimens, has only a single American Oystercatcher from New England prior to 1955—a subadult male collected in Chatham, Massachusetts, in August 1899 (MCZ #291095).

In the late 1930s American Oystercatchers began expanding their range northward, reestablishing themselves wherever human encroachment and disturbance had failed to destroy or alter the beaches, marshes, and mudflats that they prefer. This expansion is part of the global increase in both range and numbers noted in most oystercatcher species by Safriel (1985).

During the 1950s and 1960s oystercatcher sightings became more common in Massachusetts. In 1969 a pair nested successfully on Chappaquidick, Martha's Vineyard (Finch 1970). By 1974 oystercatchers nested on Muskeget, Tuckernuck, Nantucket (Finch 1974) and Monomoy Island. A 1984 census recorded six pairs nesting on Nantucket (Melvin 1984). During a 1993 study on that island, I observed nineteen breeding pairs. At least four pairs nested in Boston Harbor in 1993—three at Logan Airport and one on Sheep Island (personal observation). These pairs currently represent the northernmost known breeding sites of the American Oystercatcher.

These northern populations are migratory, while those nesting from the Delmarva peninsula (located between Chesapeake and Delaware bays) and south are less migratory or sedentary. Oystercatchers breeding in Massachusetts are therefore subject to the additional energy requirements and stress inherent in migration. The wintering locations of these birds are not yet known. Breeding season food resources are likely to be important in determining their breeding success and the survival of juvenile birds about to undertake their first fall migration.

Physical Characteristics

Boldly patterned in black and white and sporting a large (six-to-nine centimeters) bill of bright orange-red, American Oystercatchers add to their conspicuousness with loud "kleep" calls and aggressive territorial displays. Still, for all their visibility, these large waders (averaging approximately forty-seven centimeters) can be shy and retiring. The black head and velvet brown back blend into the thick piles of wrack along the low sand dunes and salt-marsh margins of their preferred habitat. Only the careful observer will note the vigilant, lemon-yellow eye encircled by an eye ring, which is the same vivid color as the bill. Even during the behaviors known variously as "mock-brooding" or "mock-incubating" or when engaged in "pseudo-sleeping," oystercatchers are watchful and wary.

Sexing, like aging, of American Oystercatchers in the field can be difficult because the species is not highly sexually dimorphic. Females are slightly larger and have longer and brighter bills (Lauro et al. 1991). These differences may be small enough in some populations that it is difficult to tell the sexes apart even with a bird in hand (Durell et al. 1993) due to the size overlap between the largest males and smallest females.

Aging of oystercatchers after their first winter, when most of their juvenile plumage persists, is not easy, as most current literature reports attest (Hayman et al. 1986; Prater et al. 1977). Chandler (1989) states that bare parts (legs, bill, and eye cere) are transitional until the third winter plumage is attained, at which time the birds are sexually mature. This transition is from a dull reddish brown on the narrow eye ring and bill (the bill tip being brown) to the eventual bright orange-red color, and from dull green-gray legs to the pale pink legs of adult birds.

Feeding Behavior

Oystercatchers are perhaps the only shorebirds in the world that can eat bivalves. However, the literature contains conflicting information on the extent to which bivalves constitute the oystercatchers' diet, which also includes marine invertebrates and other prey items. For example, Wilcox (1947) reported that "... some of the various species [of oystercatchers], now widely dispersed along the sea margins all around the globe, may have departed somewhat from the ancient mode of feeding and now live on food not requiring this specialization and this skill..."

The fact that oystercatchers can eat bivalves does not necessarily mean that they do eat bivalves. Oystercatchers feed by several methods. They pick prey items detected by sight from the substrate or probe to a depth of about eight centimeters with the bill closed or slightly open. Hammering is the preferred method of gaining access to the flesh of bivalves by some oystercatchers. The bird lays the prey on either its side or on one valve on the substrate (it may be carried to an area of harder surface first) and strikes it with closed bill until the flesh within is exposed. Stabbing is a more complex method that requires the targeted mollusk, most commonly mussels (*Mytilus edulis*), be partially opened as normally occurs when immersed. The bird's bill is inserted quickly, and the abductor muscle severed or damaged. The valves are then pried apart and the flesh eaten (Norton-Griffiths 1967). The upper mandible of oystercatchers is wider than the lower mandible, allowing freedom of motion by the latter in the event that the bill has missed its mark and been held fast by the intended prey. However, a bill held fast may still lead to death.

Three major shapes of oystercatcher bill tips were described for European Oystercatchers by Swennen et al. (1983) and correlated with the three feeding techniques discussed above. They are pointed, blunt, and intermediate (or chisel-shaped), associated with probing, hammering, and stabbing, respectively. A recent study of museum specimens (Sager 1993) failed to find a distinct

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intermediate tip shape (that of the "stabber") in American Oystercatchers, strongly suggesting that intensive field study of prey and foraging method as well as bill morphology throughout the species range may be necessary to determine the scope and diversity of diet. But, for all the skill and dexterity displayed in obtaining food, oystercatchers are not, as species, feeding specialists (Safriel 1985). Individuals, however, tend to be specialists. Seasonal shifts in diet are common.

The reported disparity in the bird's diet led me to conduct a field study in July and August 1993 on various aspects of the American Oystercatcher's feeding behavior. In addition to investigating prey items taken, I also paid particular attention to inter- and intraspecific relations, which included feeding interference from conspecifics as well as interference by Herring Gulls and humans.

I studied seven breeding pairs and their nine chicks on Coatue peninsula on Nantucket. Coatue is a narrow barrier beach peninsula enclosing and defining Nantucket Harbor in a southwest to northeast alignment. When the study began, the chicks were about five to six weeks old, and all were self-feeding and fledged. Haematopodidea are unique among North American shorebirds in that they practice parental feeding and care of their precocial young for four to six weeks after the young are fledged. Old World *H. ostralegus* siblings are known to establish a strict social hierarchy (Safriel 1983). Observations of the Nantucket American Oystercatcher population feeding regimen and the outcome of the occasional sibling confrontation it engendered suggests that American congeners share this characteristic.

In my study, the sample population opportunistically captured and consumed a wide range of marine invertebrates (Table 1). All feeding bouts were primarily probing; in some cases, other methods were also used, varying with the type of prey encountered. Clam worms (*Nereis species*), other annelids of the intertidal zone, and sea cucumbers (mostly *Leptosynapta* species) made up the bulk of their diet. Except when prey were fed to chicks, individual items were not visible because the food was eaten at or below the substrate. At no time was hammering observed on Coatue. One juvenile, however, was seen to hammer ribbed mussels at Folger's Marsh, located across the harbor from Coatue peninsula. Stabbing was also observed at that time by one of the adult oystercatchers in the group. Peak feeding times extended from approximately two hours before to two hours following dead low tide.

Parental feeding was observed only when initiated by a chick, and then, only until the chicks were eight weeks old, when they were presumably independent of their parents. Adult rejection, either by turning away from or by chasing the chick was not observed prior to July 25, or twelve days after the start of my study and three days before family groups began to abandon feeding territories.

Prey Species	Number	Method	Bird Age	Determined
Marine "Worms" ¹	62 ²			
Mollusks				
bay scallop	3	S	U	с
transverse ark	1	S	U	с
knobbed whelk	1	SC	J	с
slipper shell	1	S	U	С
razor clam	2	н	U	С
common periwinkle	1	AT	А	0
ribbed mussel	2, 4	H, S	J, A	0, 0
soft-shelled clam	1	AT	J	0
false angel wing	1	н	A	0
Arthropods				
horseshoe crab	1	SC	J	0
lady crab	1	H, S	А	0
fiddler crab	2	Р	A, J	0

TABLE 1. American Oystercatcher Prey Species

¹ Includes Nereis, Leptosynapta, and Arenicola species.

² Number of feeding bouts; all other numbers in table are of numbers of individual prey taken.

Method: P = probe; H = hammer; S = stab; AT = attempt; SC = scavenge. Bird Age: A = adult; J = juvenile; U = unknown. Determined: O = observed; C = circumstantial; F = fecal sample analysis.

The study animals displayed strong territorial behavior on the two occasions when conspecifics intruded. On one such occasion, two adults, members of adjacent families, met at the common boundary and engaged in a brief "parallel run." The other incident was a skirmish involving fluttering jumps and bill jabs directed at the opponent. The jumps and jabs alternated with aerial displays by both pairs while a single chick watched from a crouched position nearby. I also saw interspecific territorial defense. An oystercatcher was supplanted by another species, a Herring Gull, on only one occasion. Piracy, also by a Herring Gull, was only successful one time. The lack of interaction between oystercatchers and the larger and (usually) more aggressive Great Black-backed Gull is unexplained and begs investigation. An estimated 2000 pairs of Great Black-backed and Herring gulls nest on Coatue (D. Evans, personal communication). My observations on the strong territoriality displayed by the study birds are consistent with literature reports on the American Oystercatcher (e.g., Lauro et al. 1991).

That the American Oystercatcher, a species so well adapted both morphologically and behaviorally to use a specialized niche, should prove to be a feeding generalist is interesting, but is it significant? It may well be, as nonspecialized feeding allows the birds to exploit a wide range of prey in response to changes in food type availability and in habitat. This generalized diet may be considered a factor in the present reestablishment of oystercatchers in New England where shellfish beds have been seriously depleted from historical levels. Past research has shown that birds feeding on marine worms and small crustacea by probing are able to raise offspring to independence more quickly than those employing the more difficult hammering or stabbing methods (six to eight weeks versus twenty-two to thirty-eight weeks in H. ostralegus) (Norton-Griffiths 1967). The shorter time frame is consistent with my observations, where the chicks gained independence at approximately eight weeks. It would be interesting to study and compare chicks, in terms of time to independence, raised on Coatue peninsula with those that foraged on the rock jetties extending into Nantucket Sound, where probing is not possible. I did not determine which, if any, of the study birds were those seen foraging regularly among the granite blocks.

All American Oystercatchers observed rearing young (sample size equal to eight pairs) on the salt marshes of Nantucket successfully raised two young, while of the seven pairs that I studied on Coatue, only two pairs successfully raised two young, and five raised one. The salt marshes may be less desirable habitat presumably because it is more difficult to feed and provide protection for the chicks simultaneously in a marsh than on the open beach (Nol 1989). At the same time, however, the topographical relief and tall vegetation may offer concealment from predators, such as gulls. Predation by gulls and mammals accounted for most chick loss in a Virginia study (Nol 1989), but because Coatue has no known mammalian predators, gulls were the most likely predator on the peninsula, as they were in a Monomoy Island study (Humphrey 1987).

Although conservation and management concerns were not the primary focus of this study, they are, nonetheless, intrinsic in work on marginal species. American Oystercatchers are, along with many other organisms, indicators of environmental quality. Their recent breeding success on Nantucket speaks well for the efforts of local conservation organizations to maintain and preserve suitable breeding habitat. I have no doubt that the signing, area closures, and dissemination of printed information by the various groups serve to mitigate the disturbances that would surely limit oystercatcher reproductive success.

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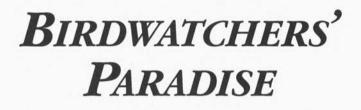
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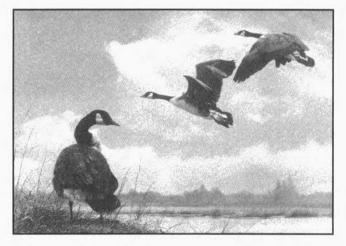
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BIRD OBSERVER

A PODICEPS PRIMER

by Matthew L. Pelikan

Wintertime grebes lack charisma. They swim like logs and fly like windup toys. Their spectacular courtship choreography is months and hundreds of miles away. In dull winter plumage, even an Eared Grebe has a sort of check-it-off, go-warm-up-in-the-car quality. The marine habits of wintering grebes make close observation difficult. But bizarre life histories and intriguing behavior make *Podiceps* grebes appealing —once you get acquainted.

Horned (in Europe known as Slavonia), Eared (i.e., Black-necked), and Red-necked grebes share similar characteristics. Stubby wings, dense bodies, and rear-mounted feet make them more deft in water than on land or in flight. They breed mostly on shallow, weedy ponds well to the north. Sometimes isolated, sometimes colonial, their floating nests are attached to vegetation. During fall migration, grebes group at staging areas, then disperse to winter on lakes and sea coasts. Their opportunistic diet comprises invertebrates and fish, the latter more important in winter. All these grebes display considerable variability in appearance and behavior. But each species shapes this basic pattern into a unique form.

The species of most interest to Massachusetts birders is the Eared Grebe (*Podiceps nigricollis*). Many readers no doubt enjoyed the very active Eared Grebe on Cape Ann during February 1994. Birders who missed the show should not despair: this species is a rare but nearly annual visitor with about thirty state records (Veit and Petersen 1993).

Reasonably, but without explanation, Harrison (1985) ascribes east-coast Eared Grebes to the North American subspecies (one of four worldwide), *P. n. californicus*. A study of banding recoveries showed Eared Grebes from the northeastern part of their North American range migrating south and east toward the Gulf of Mexico (Jehl and Yocum 1986); however, one bird banded in Saskatchewan turned up at Niagara Falls, on a route that would take it roughly to New York City.

But grebes can really travel (a Red-necked Grebe has turned up in Hawaii [Pile 1988]); and because Eared Grebe races can theoretically be separated in the field, birders experienced with this species might try to test Harrison's assumption. *P. n. californicus* differs from the nominate European race in having dusky, not white, inner primaries, a longer bill, and a shorter wing (Cramp 1977).

Most birders confront more fundamental identification problems. Whoever first noticed the Cape Ann bird is guilty of a nice bit of birding. Eared Grebes in basic plumage could easily be missed among the common Horned Grebes (*P. auritus*) that stud our coast each winter. But most experts agree that, with care,

the two species are safely distinguishable in the field.

Associating with a small group of Horned Grebes, the Cape Ann bird facilitated direct comparison between the two species. The Eared Grebe was marginally smaller; its head, neck, and beak were strikingly so (my impression was of a misfit between head and body). It carried its neck with more curvature, a trait that Cramp (1977) considers reliable. Its beak had, as one author puts it, ". . . a straight or even concave culmen and a distinctly angulated lower mandible . ." (Johnsgard 1987). Shape alone often distinguishes the two species under consideration, especially when direct comparison is possible.

The Eared and Horned grebes share a general pattern of coloration, with gray backs and light underpart. The Cape Ann Eared Grebe was typical in having a dusky throat and a triangular gray patch on the face. The effect that results—white areas at the chin and nape, separated by a point of gray—is markedly different from the white face and clearly defined, dark cap on basic plumage Horned Grebes. The face of a Horned Grebe, however, can look dusky under certain conditions: worn plumage, poor light, intermediate molt state (this species has a dark face in alternate plumage), or juvenile birds. Nonetheless, plumage characteristics, especially in the dead of winter, when intermediate molt states are not a problem, are diagnostic.

Structure differences make confusion of Eared and Red-necked grebes (P. grisegena) unlikely, but in winter both species do show gray-and-white patterns on the face. Red-necked Grebes generally show a white crescent behind a pale gray face, a surprisingly distinct field mark until it merges with the white face of alternate plumage. First-year Red-necked Grebes may have a wholly gray face, but they will lack the Eared Grebe's white on the chin and nape. If a bird looks like it could be either a Red-necked or an Eared, you are not seeing it well enough to justify calling it the rarer species.

Summer plumages of *Podiceps* grebes pose fewer problems than winter ones, but with only three summer Eared Grebe records (Veit and Petersen 1993) Massachusetts birders rarely get to exploit the fact. Alternate plumage Eared Grebes have very dark necks and short ear tufts (forming "ears") rather than long ones (forming "horns"); their foreheads rise steeply from the base of the upturned bill, whereas Horned Grebe heads appear much flatter. To me, an Eared Grebe's structure seems accentuated by summer plumage.

Even more than its relatives, *P. nigricollis* is bound to a distinct migration pattern. As the breeding season winds down, Eared Grebes descend in prodigious numbers on a limited number of staging sites. One staging site 'is Mono Lake, California, where about 750,000 birds converge as the autumn begins. Then a phenomenon occurs that Gaunt et al. (1990) document. Feeding on brine shrimp, the grebes double in weight. Shedding all their primaries at once, the birds lose the capacity to fly; unused, their flight muscles atrophy to a fraction of their former bulk.

Declining food supplies in late autumn prompt more physiological changes in the Eared Grebes. They burn up most of the 200 or more grams of fat they have stored, and as their feathers grow back the grebes begin to perform flapping exercises. On a regimen of three to ten bursts of flapping totaling five minutes a day (Gaunt et al. 1990), the birds completely restore their flight muscles in a couple of weeks and then take wing for their wintering grounds. This rapid loss and gain of muscle mass seems to be without precedent.

The mechanisms and especially the reasons behind this sequence of events have not been fully explained. But it is evident that Eared Grebes do not just use staging areas as convenient rest stops: their migration patterns and indeed their entire physiology have evolved around these rich food sources.

Their fondness for brine shrimp is not just seasonal: Eared Grebes eat more crustacea than do the other *Podiceps* species. Their preferred nesting sites feature muddy bottoms and rich vegetation, from which the grebes pick invertebrates. Of two dozen Eared Grebes observed at a North Dakota refuge in June 1994, all except one appeared to be feeding among dead cattail stubble inundated by high water. However, they have been observed picking insects out of the air, and their slightly upturned bills apparently work like an American Avocet's bill for sweeping food off the surface (Cramp 1977). These preferences may help explain why the Eared Grebe rarely turns up along the rocky and sandy Massachusetts coastline.

When I observed the Cape Ann Eared Grebe, it hopped fully into the air for each dive, plunging into the sea with astonishing zeal. The Horned Grebes with it dove much less dramatically. This behavior most emphatically is not an identification aid; Horned Grebes also sometimes leap. Cramp (1977) specifically mentions that *P. nigricollis* rarely does this, and jump-diving Eared Grebes merited a note (which I have not seen) in *British Birds* (Casselton 1986). But it occurred to me that this technique may be a way to get some momentum behind the dive: perhaps the Eared Grebe was diving deeper to reach a different food source, or perhaps heavy surf demands compensation for this bird's delicate build.

The unique foraging preferences of the Eared Grebe must often translate into distinct feeding behavior, and such differences might help an alert observer notice a bird that might otherwise be overlooked. If ten grebes dive one way and one grebe dives another, I would check that single bird twice.

However they dive, most grebes seen along the Massachusetts coast are Horned Grebes (P. *auritus*). Numbers of this species vary from day to day and year to year, but it is a rare winter trip to the coast that does not produce at least a few Horned Grebes, and sometimes they seem sprinkled every fifty yards along the entire shore.

North American Horned Grebes are said to be grayer and heavier than European ones. Cramp (1977) considers the variation clinal and lists no subspecies; Harrison (1985) distinguishes the North American P. a. cornutus from the nominate European race. A winter Horned Grebe's white cheeks, contrasting with a black cap, and its chubby gray-and-white body are familiar fieldmarks; in really good light, the upperparts can have a faint chestnut cast even in winter.

But as with the other *Podiceps* grebes, a variable molt schedule can confront a field observer with a morass of late-winter identification puzzles. Some Horned Grebes begin to molt as early as late February (although rarely before, in my experience); some may retain basic plumage until the end of April, and one frequently sees different molt stages represented in a single telescope field. Birds in intermediate plumage can be singularly void of distinctive field marks, but structure, behavior, and of course probability provide useful clues.

Horned Grebes, especially in winter, rely more on small fish than do the other grebes, but this species eats invertebrates at all times of the year. The species' feeding behavior includes a range of tactics such as synchronized group feeding and dives that average about thirty seconds but can last as long as three minutes (Cramp 1977).

On an unseasonably warm day in February 1994, I ate lunch on a piece of driftwood high up on the beach at Plum Island and watched a Horned Grebe feed in a nearly calm sea. The grebe, probably in water no more than four feet deep, made repeated dives of around forty-five seconds, remaining on the surface ten or twelve seconds between dives. It quite regularly traversed fifty yards of coast, progressing about twenty feet with each dive. Once I got the hang of it, I could come close to pointing the spotting scope at where my lunch date would reappear.

The grebe's movements along the shore centered near where I was sitting, leading to a fanciful notion that it was curious about me. But I eventually realized the bird occupied a lagoon, its water azure against the yellow of the sandbar that formed its seaward wall. It would be easy to imagine waves losing their energy over this trough and dropping tiny fish or invertebrates that are being carried. The pattern of protracted dives and leisurely movement suggests that the bird was grazing on, rather than pursuing, its prey.

The bird's technique illustrates Cramp's assertion that the density and nature of food, and not depth, determines dive length (Cramp 1977). But further observations I made suggest that one other factor figures in as well. As a stroller approached along the beach, walking along the surf and passing the bird within about fifty feet, the grebe's dives shortened to thirty-five and then twenty-five seconds, and it remained longer on the surface between dives. Grebes, it seems, are smart enough to remain alert.

The other common *Podiceps* in Massachusetts is *P. grisegena*, the Rednecked Grebe. Red-necked Grebes are somewhat larger and more elongated than the other grebe species. They generally ride low in the water, often looking like a neck sticking out of the sea, whereas the smaller *Podiceps* often hold their rumps high. (All three species, however, can adjust their buoyancy somewhat by trapping air in their feathers.) In any plumage, a Red-necked Grebe has a more robust head and bill than do its cousins. The American form, once known as Holboell's Grebe, is the larger of the two subspecies. It is also unique in having a distinctive, wholly grayish face on first-year birds (Cramp 1977). This bird is fairly common in winter, but is uneven in its distribution. I do not see it on every trip, and it seems like one sees either a single bird or a flock of thirty. Veit and Petersen (1993) point out that this species masses along our coast prior to migrating to the breeding grounds, at times yielding counts in the hundreds.

Such a flock offers a veritable catalog of grebes to study because the Rednecked Grebe is singularly irregular in its molt. Some birds begin molting in December, while a bird I saw near Cape May, New Jersey, retained its white facial crescent on May 14, 1994. It is possible to see basic and alternate plumages simultaneously (Cramp 1977). Alternate plumage, with its white face and rusty neck, is distinctive even in partial form—if you get a good look. But I find that a distant Red-necked Grebe can be a hard bird to identify, looking like a Horned Grebe one moment and some kind of loon the next.

Some peculiarities of the Red-necked Grebe, however, act to facilitate recognition. These birds are rather sluggish. A *Podiceps* that floats for several minutes without diving is likely to be a Red-necked Grebe. And Red-necked Grebes find sheltered water—bays and harbors—especially attractive; Newburyport, Folly Cove, Singing Beach, and Winthrop will generally yield a Red-necked Grebe or two in the winter, while the Horned Grebes are bobbing in more exposed water off Cape Ann or Plum Island.

But the secret to *Podiceps* identification resides in a sort of second tier of field marks. Although the bird was mostly in basic plumage, it had considerable red on its neck; the Horned Grebes I had seen that day were still in pure basic plumage. At about seventy-five yards, my scope revealed a yellow base on the bird's stocky bill, the color extending about halfway along the lower mandible (on some birds, this coloration is much more extensive). Both Horned and Eared grebes appear armed with little obsidian spikes. A distinct crest crowned the back of the head.

I saw the bird dive twice, once for a few seconds and then for over a minute. Periodically, it swam against the current briefly, then drifted, so as to stay in the same general area. But mostly, for the twenty minutes I watched it, it raked its bill through its threadbare wing feathers and basked in the anemic sun. These birds make winter look comfy.

It is fascinating that *Podiceps* grebes are at home both in weedy puddles and in crashing surf. Such versatility might be expected to make grebe populations safe. But Veit and Petersen (1993) show that the general trend is toward smaller Horned Grebe counts in Massachusetts, and all three species, although still common, seem to be declining elsewhere as well.

One possible culprit, predictably, is pollution. Like all predators, grebes concentrate toxins that accumulate in the food chain. A study of Manitoba Rednecked Grebes found that elevated DDE and PCB levels cause a fourth of eggs laid to be unviable (de Smet 1987). de Smet (1987) cites other research showing that these results are probably typical for other populations. The Manitoba grebes also lost many eggs and chicks to raccoons, a species whose fondness for swamps and rapidly expanding range make it a formidable threat to wetland nesters.

For the near term, however, it is likely that *Podiceps* grebes will continue their inscrutable wintertime movements along the Massachusetts coast. Do not let their homely looks fool you: these species offer area birders a bright spot in a cold season.

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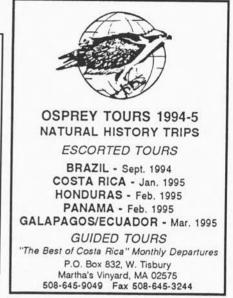
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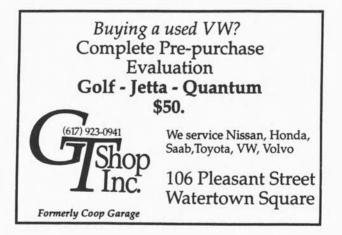
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BIRD OBSERVER

Fall-Winter Workshops

SNEAKY, STREAKY BROWN JOBS — a workshop on sparrows

Fall sparrows constitute one of the most challenging groups of birds regularly to confront Massachusetts birders. In large numbers, they occur seasonally in weed fields, gardens, and salt marshes, along woodland edges, and at bird feeders. Their conservative plumages and often furtive habits make them both a challenge to identify and a task to locate. Yet, their songs are among the richest in the bird world.

Workshop participants will be introduced to various facets of sparrow natural history, including habitat preferences, breeding behavior, status in Massachusetts, and both song and field recognition characteristics. A field trip to an area with a high sparrow density will provide direct field experience during the height of fall sparrow migration. Leader: Wayne R. Petersen.

Seminars: Friday, October 14, 1994 (7:30-9:30 P.M.). Field Trip: Sunday, October 16, 1994. Time and location will be announced at the seminar. Cost: \$35

AUTUMN MARINERS — a workshop on sea fowl and seabirds

The months of September through November witness huge movements of loons, grebes, gannets, cormorants, and sea ducks past the Massachusetts coast, while the offshore waters regularly host a variety of truly pelagic seabirds. The life styles, adaptations, and movements of these ocean travelers constitute some of the more spectacular examples in the avian world.

In this workshop, participants will be introduced to sea fowl and seabirds in the context of their environment, including how factors such as oceanography, geography, and weather interact to affect the lives of the birds. In addition, emphasis will be placed on field identification and on techniques for locating and viewing seabirds from shore. A coastal field trip will give students a chance to observe a variety of sea fowl and seabirds under field conditions. Leader: Wayne R. Petersen.

Seminar: Friday, October 28, 1994 (7:30-9:30 P.M.). Field Trip: Saturday, November 5. All day. Cape Cod. Cost: \$35.

RAPTORS IN WINTER — a workshop on birds of prey

In midwinter, weeks after the last migrants of fall have passed through, a surprising variety of raptors can still be seen in Massachusetts in suitable habitats. In fact, the study of raptors in winter is often easier than at any other time of year. Sometimes as many as eight or ten species of hawks and owls can be encountered in a single day at this season.

This workshop will focus on the role of predators in the environment, the dynamics of predation, the adaptations that make raptors such efficient predators, and the status, distribution, and identification of winter raptors in Massachusetts. A field trip to a high density raptor area will give participants a chance to study winter raptors under field conditions. Leader: Wayne R. Petersen.

Seminar: Friday, January 20, 1995 (7:30-9:30 P.M.). Field Trip: Sunday, January 22, 1995. Time and location will be announced at the seminar. Cost: \$35.

These workshops are cosponsored by *Bird Observer* and the Needham Bird Club.

Seminar sessions will be held in Needham, MA, from 7:30-9:30 P.M. Directions to the seminars will be sent to registrants. Details about the field trips will be announced at the seminars preceding them. If you have questions, please call 617-666-8934 (evenings). Workshops limited to 20 participants. Preregistration is required.

TO REGISTER

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



BIRD OBSERVER

BOOK REVIEW: Birds in Brazil

by John Kricher

Birds in Brazil by Helmut Sick, illustrations by Paul Barreul and John P. O'Neill, translated from the Portuguese by William Belton. Princeton: Princeton University Press, 1993, 703 pages with 47 plates, 38 of which are in color, \$125, cloth.

This volume is a welcome addition to the literature in neotropical ornithology. It is an English translation of what was a two-volume work, originally published in 1985 and written in Portuguese by the late Helmut Sick. Thanks to sponsorship from the International Council for Bird Preservation and from the Companhia Vale do Rio Doce, not only has Sick's work been translated and brought together in one volume, it has also been updated and somewhat enlarged. William Belton, the translator, is to be commended for making this book available to an English-speaking audience. It is not a small book. Those who seek a convenient field guide to Brazilian birds will be disappointed. They do not make backpacks sufficiently large to comfortably accommodate this 8.5" x 11", 4.5-pound tome. You will need to read it first but probably leave it home. It is also not meant to serve merely as an aid to identification. Rather, it is a comprehensive natural history of the diverse Brazilian avifauna.

And what an avifauna. Brazil boasts a total of 1635 species representing 91 families and 23 orders, approximately 55 percent of the bird species recorded in all of South America, and 18 percent of all species recorded in the world. Besides the obvious species richness, Brazil is home for an extraordinary number of fascinating species, each of which is discussed, though to varying degrees.

The first five chapters, referred to as Part One, provide a general overview, before launching into the details of the birds themselves. Chapter One provides a helpful introduction to the geography and ecology of the South American continent, with an obvious focus on Brazil. It introduces the principal habitat types, not surprisingly emphasizing the vast rain forest of Amazonia. Non-rain forest habitats, including montane forest, cerrado, campos, caatinga, and Pantanal, are also discussed with sufficient detail that the reader can easily grasp their unique characteristics along with a brief mention of some of their most distinctive bird species. Eight pages of black and white photographs illustrate the various major habitat types. Chapter Two discusses the history of Brazilian ornithology, and Chapter Three considers issues of conservation in Brazil. The major focus in this chapter is the array of conservation problems that have beset Amazonia, including deforestation, hydroelectric installations, infringement on Indian lands, loss of biodiversity, and increasing pollution. This chapter is not encouraging, though it tries to end on a positive note, claiming that new attitudes toward enlightened conservation practices are emerging within the

Brazilian government.

Chapter Four, Biogeography and Speciation, was contributed in part by Jurgen Haffer, well-known for his theory that various restricted rain forest refuges existed during the Pleistocene, helping to account for the extraordinarily high diversity patterns seen in various parts of Amazonia. Haffer's comments alternate with those of Sick throughout the chapter. This brief chapter provides a very clear explanation of the Refuge Theory, noting both its strengths and weaknesses. Chapter Five is a broad overview of Brazilian birds, with much attention given to the concept of endemism.

Chapter Six, comprising 549 pages (78 percent of the book), contains family and species accounts, order by order, beginning with the tinamous and ending with the waxbills. This chapter is the real strength of the volume. Anyone interested in acquiring a thorough knowledge of neotropical birds ought to read it through. Each order is considered family by family. Introductory comments detail (to varying degrees from one order to another) the following: morphology, special adaptations, identification, vocalization, feeding, behavior, population characteristics, mating, egg, parental care, young, reproductive potential, habitat, distribution, evolution, folklore, parasites, enemies, conservation concerns, and captive breeding. Not all of those topics are considered for each order, but those orders well represented in Brazil are treated in detail. Following the overall discussion is an annotated list of each species known from Brazil. These generally brief accounts detail the field marks (including voice), range, and degree of commonness or rarity of each species. These accounts are useful for anyone planning a trip to Brazil who is interested in which species to expect in a particular region. Unfortunately, range maps for each species are not included. Each order concludes with a brief, selective bibliography.

It is an understatement to say that there is a wealth of information here. Helmut Sick was, to put it mildly, an expert on the natural history of Brazilian birds. The book abounds with obscure but fascinating information. For example, cracids (chachalacas, guans, and curassows) suffer from roundworms beneath the nictitating membranes of their eyes. Sick points out that the means by which these parasitic worms infect guan eyes is, perhaps unsurprisingly, not understood, although he notes that domestic fowl have similar worms, traced to insects such as cockroaches that are consumed by the birds. We also learn that roosting cracids may on occasion have some of their blood devoured by a species of vampire bat that skillfully cuts the skin around the birds' feet or cloacal opening. Such is life in the jungle.

Next time you are wandering around South America, look sharply for pygmy-owls. Sick points out that many people believe these little owls, with "eye spots" on the backs of their heads, have the power to bring good luck. In Amazonia a small toucan species (*Ramphastos vitellinus culminatus*) looks

virtually identical to a larger, more aggressive species (R. tucanus cuvieri), both having white throats and yellow upper tail coverts. Elsewhere, where their ranges do not overlap, the smaller species has a yellow throat and red upper tail coverts. Sick believes that the convergence in appearance, where the large and small species are sympatric, is a case of "aggressive mimicry," where the smaller species is less apt to be expelled from a fruit-laden tree because it looks so similar to a larger, more aggressive species. I could go on, but these examples should suffice to give you a sense of the degree of information in this book.

The forty-three plates by Paul Barruel are quite splendid. All but nine are in full color, and the color reproduction is of the highest quality. Barreul's plates include 380 species. In addition, there are two color plates by John P. O'Neill that include twenty-two more species. The last two color plates are of an Indian's feathered collar and an ancient world map showing the Brazilian coast. Besides the plates, throughout the book there are many black-and-white illustrations, some quite detailed, as in the Racket-tailed Coquette plucking a spider from a web (page 346), and some rather crude, as in the Red-ruffed Fruitcrow mooing (page 513). Altogether, 327 figures are in the text, including drawings of nests, bill movements while processing food, territorial and mating flights, distributional maps for various genera (mostly based on Haffer's work), and unique anatomical characteristics (e.g., trachea of a limpkin).

In addition to the selected bibliography that concludes each order account, there is a general bibliography of 439 references. There are two species indexes, one to scientific names, one to English names.

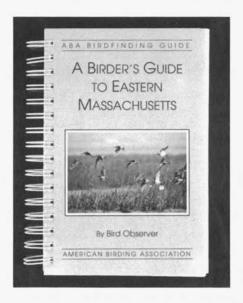
Many readers of Bird Observer may wonder if the relatively high price of this volume merits its purchase. The decision, of course, depends on what one is trying to learn about tropical birds. There is no field guide that provides comprehensive coverage of Brazil, and this book, as well, is not a field guide. However, I know of no other single volume that contains such extensive information on the natural history of virtually all groups of neotropical birds. The new series by Ridgely and Tudor on the birds of South America will eventually be five volumes and cost probably about \$400 for the set, maybe more. Currently, only two volumes in that set are published. The numerous books by Skutch are superb studies of selected species but lack the coverage provided within this single book. None of the various neotropical field guides (Venezuela, Colombia, Costa Rica, Panama) rival Birds in Brazil in terms of breadth of information. Birds of the High Andes compares favorably and, interestingly, costs just as much. Good, well illustrated, quality bird books are becoming increasingly expensive. Compared with handbooks such as the Cramp series on Palearctic birds, the Birds of Africa series, and the new series on the birds of Australia, New Zealand, and Antarctic, Birds in Brazil, at a mere \$125, is probably a bargain.

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Massachusetts. John has authored nine books on natural history, including A Neotropical Companion, A Field Guide to the Ecology of Eastern Forests, and A Field Guide to the Ecology of Western Forests. John serves as department head for feature articles and field notes for Bird Observer.



A Birder's Guide to Eastern Massachusetts

ABA Birdfinding Guide Series

A Birder's Guide to Eastern Massachusetts is now available to interested birders. This comprehensive guide to coastal and inland birding locales contains twenty-three chapters, each accompanied by at least one map. Barry Van Dusen has drawn the bird illustrations.

Two special sections cover hawkwatching and pelagic birding—both providing a thorough overview of each phenomenon as it occurs along the Massachusetts coast. A Specialties section directs the birder to the best sites for regional species. The seasonal abundance and relative occurrence bar-graphs cover each species recorded for the Eastern Massachusetts area. Lists of rare and accidental species are included also. The guide is fully indexed for locations and species with a time-saving abbreviated table of contents box on each pair of index pages to let you see immediately which chapter corresponds to each index entry.

The guide can be ordered through the American Birding Association. The guide's price is \$13.95 for ABA members and \$16.95 for non-ABA members (add \$3.50 shipping for one book, 60 cents for each additional book). Mail orders to ABA Sales, P.O. Box 6599, Colorado Springs, CO 80934-6599. The guide will also be available in local bookstores and through *Bird Observer*.

BIRD SIGHTINGS MARCH 1994 SUMMARY



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

March was very wet, snowy, and cloudy, a March most of us would like to forget. Temperatures were about the only normal climatological data, averaging 38.2° in Boston, just 0.4° below normal. The high was 67° on the 23rd, and the low mark was 18° on March 1 and 2. Rainfall was 7.49 inches, 3.80 inches above normal and the sixth greatest amount for March in 124 years. Snowfall totaled 14.8 inches, 6.9 inches above normal. The most snow in any 24-hour period was 7.1 inches on March 3-4. The snowfall for the 1993-1994 season stood at 96.3 inches for Boston, well above the former record of 89.2 inches set in 1947-1948.

The first significant movement of birds occurred on the 23rd, the day the temperature reached 67 degrees. The previous night the winds had shifted from the east to the northwest. Another migration pulse occurred on the 28th, when the wind was out of the southeast. R. H. S.

LOONS THROUGH WOODPECKERS

Both loons and grebes were well reported this month. In particular Common Loon sightings from the North Shore were well above normal. Horned and especially Red-necked grebes were also seen in good numbers. Red-necked Grebe reports were evenly distributed along the coast. The **Eared Grebe** at Rockport was a carryover from January.

Less than 10 years ago arbiters of these reports had to evaluate sightings of Arctic Loon and decide if they were not poorly seen or described Common or Red-throated loons. Recently, however, Arctic Loon has been split into two species: Pacific Loon, which breeds in the arctic regions of western North America and winters commonly along the west coast of the United States, and Arctic Loon, which breeds commonly throughout arctic regions of Eurasia and sparingly in northwestern Alaska. Differentiating between the two species even while in full breeding plumage is tricky except under the most optimal conditions. Only very recently has it been determined that individuals sporting a chin strap are Pacific Loons, and those displaying a prominent white flank patch are Arctic Loons. Admittedly these comments are a gross over-simplification of the identification problems involved, and other less obvious identification criteria exist. A **Pacific Loon** lacking a white flank patch was reported from Provincetown, and an **Arctic Loon**, carefully described by three observers, sporting an obvious white flank patch was seen in Dennis. Arctic Loon has been reported only two, or possibly three, times in the United States during the winter season.

Both herons and egrets began to appear by month's end as usual, but a Glossy Ibis at Nantucket was on the early side. Waterfowl are among the earliest migrants in spring, and thus much emphasis is placed on them in March. Wood Duck, Northern Pintail, and Green-winged Teal are the most numerous, and this month's reports tend to bear this out. Less common species such as Blue-winged Teal, Northern Shoveler, and Gadwall were reported in normal numbers. Of the two Eurasian Wigeons reported, the bird in Plymouth was a holdover from the winter, but the Plum Island bird was clearly a migrant. Reports from the remainder of the waterfowl were representative generally of wintering concentrations, although a Harlequin Duck in Osterville on the south side of Cape Cod was an unusual location. Only one migrant flock of Snow Geese was noted, and the Greater White-fronted Geese in New Bedford were birds that have wintered off and on at this location for several years.

Raptor reports were also typical for March. Red-shouldered and Red-tailed hawks were either migrating or returning to breeding locales by midmonth. Turkey Vultures were very widely reported and included some good counts of obvious migrants. The first Ospreys arrived in the Westport area by March 20, and Bald Eagles began appearing at more widespread locations which is typical of this season when ice recedes from inland lakes and rivers. There was a surprising scattering of Rough-legged Hawks following a winter in which they were particularly uncommon.

Each year shorebirds, both returning residents and migrants, figure prominently among our March reports. Piping Plovers and American Oystercatchers began arriving at breeding locations during the latter part of the month. Killdeer began arriving early in the month with sizable flocks reported after midmonth. Among early, but not unexpected, arrivals were a Pectoral Sandpiper at Provincetown and a Lesser Yellowlegs at Plum Island, where a dowitcher, most probably a Long-billed, was also seen. An excellent count of woodcock was made at Marshfield on March 23.

Gull reports were scanty. The only report of Bonaparte's Gull was of two birds at Newburyport after a winter of notable scarcity. Iceland Gulls were concentrated at traditional locations, while Glaucous Gulls were concentrated south of Boston including several inland locations. Reports of alcids were limited to Provincetown, where both Thick-billed Murre and the rare **Common Murre** were found, and Cape Ann, where reports included a rare winter Dovekie sighting and a good count of Black Guillemots.

Reports of Snowy Owl were scarce away from Logan airport this winter. Thus the report of three Snowy Owls from Nantucket is even more interesting. Long-eared Owl sightings picked up, especially at the end of the month, and concentrations of Short-eared Owls were found at both Nantucket and Cumberland Farms. Two Yellow-bellied Sapsuckers found at the end of the month likely represented early migrants. R. A. F.

Date	Location	Numbe	er Observers	Date	Location	Number	r Observers
Red-thro	ated Loon			Double-c	crested Cormoran	t	
6	Gloucester	2	J. Hoye#	20	Westport	2	R. Forster
6	Marblehead	1	R. Forster	26	Somerville	$\overline{2}$	D. Brown#
13	Boston H.	11	TASL (M. Hall)	29	Essex	2	T. Young
27	Duxbury B.	3	G. d'Entremont#	America		-	1. Toung
Arctic L		-	o. a bha villonta	27	Bolton Flats	1	M. Lynch#
26	Dennis	1	E. Salmela#	Great Bl			IVI. Lynch#
Pacific I		÷	D. Sumeran	16	Westboro	5	E. Taylor
15	P'town (R.P.)	1 has	ic pl R. Forster#	30	Littleton	20	E. Taylor
Common		1 Ous	ie pr it. renstern	31	P.I.	5	K. Disney
6	Cape Ann	14	J. Hove#	Great Eg		5	K. Disney
6	Marblehead are		R. Forster	24	Harwich	1	K. Hamilton
13	Ipswich (C.B.)		J. Berry	25	Duxbury	1	D. Clapp
13	Newbypt area	18	M. Lynch#	25	Gloucester	2	C. Leahy
14	Osterville	15	R. Forster	26	Boston (B.I.)	1	
14	Dennis	25	R. Forster	28	Nantucket	1	L. Rogers
24	S. Carver	1	J. Shaw	28		1	D. Sutherland
Pied-bille		1	J. Snaw	31	Essex		T. Young
6	Lakeville	2	C Among		P.I.	1	K. Disney
12		2	S. Arena	Snowy E			D
23	Plymouth		H. Wiggin#	25	Falmouth	1	P. Trimble
	W. Bridgewater		K. Ryan	30	Harwich	2	K. Hamilton
24	Worcester	1	R. Quimby		owned Night-Her		
25	Belmont	2	M. Rines	30	Harwich	2	K. Hamilton
30	Winchester	1	M. Rines	Glossy Ib			
Horned C		10		31	Nantucket	1	H. Faria
5	Rockport	12	J. Berry	Whooper			
6	Swampscott	42	R. Forster	28	P.I.	1	F. Morrison
13	Plymouth	9	K. Anderson	30	Ipswich	1	C. Leahy
13	Boston H.	76	TASL (M. Hall)	Bar-head			
14	Dennis	40	R. Forster	6	Lynn	1	R. Forster
28	P.I.	12	J. McLaughlin		White-fronted Goo	ose	
Red-neck				16	New Bedford	2 ad	G. Mock
6	Cape Ann	27	J. Hoye#	Snow Go	ose		
6	Marblehead are		R. Forster	thr	Boston	1 imm	
13	Boston H.	23	TASL (M. Hall)	20	Newburyport	5	H. Wiggin#
14	Dennis	15	R. Forster	20	W. Bridgewater	1	W. Petersen#
14	Barnstable (lake	e) 2	R. Forster#	23	Hull	1	R. McCreedis
15	Provincetown	25	R. Forster#	23	Concord	50	R. Walton
20	Plymouth	20	K. Anderson	24	Easton	1	G. d'Entremont
Eared G				25	Lancaster	1	E. Salmela
1-7	Rockport	1	V. O.	28-31	Ipswich	1	T. Young
America	n White Pelican			Brant			
1	Hyannis	1 F	. + M. LeBaron#	5	Rockport	5	J. Berry
Northern	Gannet			13	P.I.	17	J. Berry
26	Westport	7	E. Nielsen#	13	Boston H.		TASL (M. Hall)
Great Con				20	Plymouth	40	K. Anderson
5	Halifax	1	W. Petersen	Barnacle		10	IX. Thirderboll
12	Lakeville	î	K. Anderson	1-20	S. Dartmouth	1	v. o.
12	Arlington	4	M. Rines	Wood Du			v. 0.
20	Westport		G. d'Entremont#	6	Rochester	8	M. LaBossiere
			S. S. Dintonta	0	Rochester	0	WI. L'aDOSSIEITE

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Wood Duc	k (cont.)	0	I Drown#
24	Wenham	8	J. Brown#
25	Wayland	33	N. Patterson
25	W. Roxbury	8	T. Aversa
26	Rutland Bolton/Oxbow	8 14	R. Jenkins# M. Lynch#
27	Bolton/Oxbow		
thr	Reports of 1-6 in	aiv. from	10 locations
Green-wir		120 max	T. Aversa
12-31	Cumb. Farms		W. Petersen
20, 27		12, 20 19	B. Nikula
23	Harwich P.I.	41	W. Drew#
23	Boston (B.I.)	18	L. Rogers
24 25		19	T. Aversa
	W. Roxbury Concord (NAC)		S. Perkins
30			S. FCIKIIIS
	" Green-winged T Concord (NAC)	1	S. Perkins#
30	Black Duck	1	5. I CIKIIIS#
	Boston H.	1351 TA	ASL (M. Hall)
13			W. Petersen
20	W. Bridgewater	600+	M. Lynch#
20 23	Westport P.I.	345	W. Drew#
		545	W. DICW#
Northern		21	K. Ryan
23	W. Bridgewater	21 17	W. Drew#
23	P.I.		L. Nachtrab
24	Concord (NAC)	5	R. Jenkins#
26	New Braintree Reports of 1-2 in		
thr	Reports of 1-2 If	idiv. from	o locations
Blue-wing	Wordend	2	K. Hamilton
24	Wayland	1	W. Petersen
26	W. Bridgewater Concord (NAC)	2	K. Hamilton
27 28	Rowley	3	J. Whittall
		2	K. Hamilton
30 31	Harwich P.I.	3	K. Disney
Northern		5	R. Disney
	Belmont	2 f	M. Rines
10	Easton	1 m	T. Aversa#
19		2 f	M. Rines
24-31 Codwall	Arlington Res.	21	IVI. IUIICo
Gadwall 15	Plymouth	6	T. Aversa
20	Newburyport	4	H. Wiggin#
23	DWWS	5	D. Clapp
23	P.I.	7	W. Drew#
26	Boston (B.I.)	2	L. Rogers
Eurasian		-	D. Rogers
1-14	Plymouth	1	v. o.
26	P.I.		Wicks $+ v. o.$
Americar		I m D	
9	Medford	6	M. Rines
12	Plymouth	200	W. Drew#
13, 20	· · · · · · · · · · · · · · · · · · ·	5, 3	L. Taylor
19, 20	Duxbury	22	D. Clapp
25	Wayland	2	N. Patterson
30	Concord (NAC)		S. Perkins
Canvasba		10	o. r oriento
5	Gloucester	1	J. Berry#
12	Lakeville	31	K. Anderson
15	Dennis	25	K. Hamilton#
20	S. Dartmouth		d'Entremont#
20	Westport		d'Entremont#
Redhead	resport	50 0	- Anter Villoutin
13	Easton	4	K. Ryan#
14	Plymouth	3	K. Hamilton#
19	Raynham	2	T. Aversa#
23	Nantucket	12+	C. Leahy
25	Falmouth	2	P. Trimble
	ked Duck	2	I. IIIIIOIC
	Groveland	27 max	S. Charette
thr 12	Plymouth	27 max 75	W. Drew#
12		120	W. Petersen
20	Halifax	120	W. I CICISCII

24	Framingham	36	J. Hoye#
25	Wayland	65	N. Patterson
27 29	W. Bridgewater Concord (NAC)	100+ 250+	W. Petersen S. Perkins
Greater S		2501	S. I CIKINS
12	Lakeville	250	W. Petersen
13	Boston H.	656	TASL (M. Hall)
20	New Bedford	130	M. Lynch#
26	Westport	147	E. Nielsen
Lesser S			
5	Lakeville	17	F. Garretson#
20	Acoaxet	4	M. Lynch#
20	New Bedford	3	M. Lynch#
26	Westport	10	E. Nielsen
scaup sp		(00)	D Trimble
25	Falmouth	600+	P. Trimble
Common 5		650	BBC (J. Nove)
13	Rockport Salisbury	210+	M. Lynch#
13	Boston H.	7993	TASL (M. Hall)
20	Westport	220+	M. Lynch#
25	Falmouth	200	P. Trimble
Harlequi			
6	Cape Ann	12	J. Hoye#
14	Osterville	1 m	R. Forster
26	Manomet	1	W. Petersen#
Oldsqua	w		
13	Newbypt/Salis.	200 +	M. Lynch#
20	New Bedford	1	D. Brown#
Black So	coter		
13	Plymouth	l m	K. Anderson
13	Boston H.	15	TASL (M. Hall)
20	P.I.	20+	J. Berry
20	Westport	2 m	G. d'Entremont#
Surf Sco		135	TASL (M. Hall)
13 20	Boston H.	20	M. Lynch#
	Westport vinged Scoter	20	WI. Lynch#
13	Boston H.	192	TASL (M. Hall)
	n Goldeneye	172	11100 (
6	Sudbury	10	S. Perkins#
13	Newbypt/Salis.	200+	
13	Boston H.	1221	TASL (M. Hall)
24	Winchester	21	M. Rines
25	Wayland	9	N. Patterson
Barrow'	s Goldeneye		
1	Winthrop	1	C. Paine
13	Newburyport	1	M. Lynch#
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12	Lakeville	35	K. Anderson
13	Newbypt/Salis.	350+ 1331	
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11	Merganser Newton	8	R. Tormey
12	Plymouth	6	W. Drew#
13	Medford	8	P. Roberts
19	Raynham	35	S. Arena
19	Winchester	14	N. Nash
31	Rochester	pr n	R. Turner
thr	Reports of 1-4 i		rom 8 locations
Commo	on Merganser		
thr	Worcester	30 m	
thr	Arlington	66 m	
12	S. Carver	25	J. Shaw
19	Belmont	24	H. Wiggin#
19	Raynham	25	S. Arena
25	S. Natick	35	T. Aversa
	easted Merganser	(0)	M Lunch#
13	Newbypt/Salis.		M. Lynch#
13	Boston H.	1096	5 TASL (M. Hall)

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Turkey Vulture S. Dartmouth W. Petersen 12 5 20, 28 Randolph 20, 27 N. Smith Lexington 21 7 T. McCullough 19 23 Mt. Watatic T. McCullough 26 Newburyport 4 H. Wiggin# 35 migr 26 Ouabbin M. Lvnch# Reports of 1-3 indiv. from 20 locations thr Osprey 15 Nantucket 1 B. Perkins G. d'Entremont# 20 Westport 2 23 Wareham 2 M. LaBossiere 23 DWWS 1 D. Clapp 25 Falmouth P. Trimble 1 26 Lakeville 2 K. Holmes Bald Eagle 9 Nantucket 1 ad S. Tiffney 10 N. Chelmsford B. Rufflard 2 ad, 2 imm 13, 26 K. Holmes Lakeville 1 ad, 1 imm M. Lynch# 20 Acoaxet 22 Wareham 1 M. LaBossiere 23 Haverhill 3 A. Hatfield 23 Mt. Watatic 1 T. McCullough 25 Concord 1 ad S. Clark 25 Norton D. Delare 1 ad 28 Newburyport J. McLaughlin 3 29-30 Concord (NAC) 1 ad. 2 imm S. Perkins Northern Harrier S. Dartmouth 2 T. Aversa 4 18 Cumb. Farms 5 K. Anderson 20 W. Bridgewater 2 W. Petersen 21 Lexington 2 T. McCullough 23 Nantucket 5 C. Leahy W. Drew# 23 P.I. 2 25 W. Roxbury 1 m T. Aversa Sharp-shinned Hawk 18 E. Gloucester 3 T. Aversa 23 Mt. Watatic T. McCullough 2 thr Reports of individ. from 15 locations Cooper's Hawk thr Reports of individ. from 14 locations Northern Goshawk 11 Holliston 1 R. Wolanin S. Natick 17 1 J. Miller 19 Concord 1 G. d'Entremont# 23 Easton 1 K. Ryan 26 Maynard 1 ad L. Nachtrab 26 Quabbin M. Lynch# 2 Red-shouldered Hawk thr E. Middleboro K. Anderson pr Acushnet 4 M. LaBossiere 4 12 2 Athol J. Mallet R. Forster# 16 Halifax 2 21 Lexington 17 T. McCullough Mt. Watatic 23 10 T. McCullough 26 S. Hanson 2 W. Petersen 31 Easton 4 K. Ryan thr Reports of individ. from 11 locations Red-tailed Hawk 19 5 Framingham M. Lynch# 19 Concord 6 G. d'Entremont# Lexington 21 31 T. McCullough 23 Mt. Watatic 15 T. McCullough 27 Mt.A. pr n R. Stymeist# Rough-legged Hawk 2 5 Salisbury J. Hove# 9 P'town (R.P.) 1 G. Martin C. Floyd K. Ryan# 12 Middleboro 6 13 W. Bridgewater 2 Newburyport 13 1 M. Lynch# 24 Boston (B.I.) L. Rogers

	dan merena		220223202
26	Westport	1	E. Nielsen
27	Middleboro	1	W. Petersen
30	Ipswich (C.B.)	1	D. Rimmer
	an Kestrel		722 - 223
thr	Essex	pr	T. Young
24	Taunton		G. d'Entremont
21	Lexington	2	T. McCullough
thr	Reports of indiv	viduals fr	om 6 locations
Merlin			
5	W. Roxbury	1 m	T. Aversa
26	Hyannis	1	E. Salmela#
28	Cambridge	1	J. Shetterly
	ne Falcon		
thr	Boston	2-3	V. O.
7	Saugus	1	J. Berry
Ruffed (Grouse		
1	Bridgewater	9	T. Aversa
6	Essex	3	T. Young
12	Halifax	3	W. Petersen
12	Ipswich	1-2	J. Berry
19	Easton	1	T. Aversa
20	N. Middleboro	2	K. Holmes
30	E. Boxford	1	K. Disney
Wild Tu	ırkey		
8	Lexington	2	G. West
13	Arlington	2	L. Madden
13	Middleboro	65	R. Turner
21	Sandwich	4	P. Trimble
26	E. Boxford	3	J. Brown#
27	Oxbow NWR	17	M. Lynch#
31	Worcester	2	F. McMenemy
31	Carver	1	K. Durman
Norther	n Bobwhite		
25	W. Roxbury	10	T. Aversa
Clapper	Rail		
24	Wareham	1	M. LaBossiere
America	an Coot		
thr	Brockton	14 max	M. Anderson
12	Plymouth	150	W. Drew#
13	Medford	6	L. Taylor
19	Raynham	2	S. Arena
Piping F	Plover		
13	P.I.	1	M. Pelikan
18-31	Westport	1-5	V. O.
24-31	Ipswich (C.B.)	1-5	D. Rimmer
27	Hyannis	2	S. Clifton#
28	S. Dartmouth	2	M. Boucher
Killdeer			
8	Whitman	1	K. Holmes
8	Fairhaven	1	M. Boucher
9	S. Dartmouth	1	L. Nachtrab
19	Easton	10	S. Arena#
19	Newburyport	10	R. Forster#
25	Duxbury	16	D. Clapp
27	Middleboro	16	W. Petersen
27	W. Newbury	33	J. Hoye#
America	in Oystercatcher		
25	Fairhaven	1	M. LaBossiere
25	N. Monomoy	1-2	J. Sones#
28	Falmouth	2	S. Hecker
29	Nantucket	2	J. Van Vorst
Greater	Yellowlegs		
23	P.I.	1	W. Drew#
27	Wellfleet	4	E. Banks
Lesser Y	ellowlegs		
27	P.I.	1	J. Hoye#
Sanderli	ng		
9	Dennis	360	K. Hamilton
13	Boston H.		ASL (M. Hall)
20	Westport		d'Entremont#
24-31		22-40	D. Rimmer
			CONSTRUCTION OF CONTROLS

Pectoral 15	Sandpiper P'town (R.P.)	1	R. Forster#
		2	
26 Dumla S	Newbury	4	H. Wiggin#
	Bandpiper	2	I Howet
6	Rockport (A.P.)	3	J. Hoye#
13	Lynn	200	C. Floyd
13	Boston H.	91	TASL (M. Hall)
20	N. Scituate	150	F. Bouchard
20	Westport	107	G. d'Entremont#
Dunlin			
9	Dennis	140	K. Hamilton
13	Boston H.	120	TASL (M. Hall)
20	Acoaxet	60	R. Forster#
dowitch	er species		
27	P.I.	1	J.Hoye#
Commo			o la coj en
3	Essex	1	T. Young
		1	
15	P'town (R.P.)	100 C	R. Forster#
27	W. Bridgewater	13	K. Ryan
26, 2		30, 7	0 T. Aversa
	in Woodcock	1211	
5	Nantucket	3	G. Perkins
13	Peabody	3	D. Hill
20	W. Bridgewater	3	W. Petersen
23	DWWS	28	D. Clapp E. Taylor
24	Sherborn	3	E Taylor
25	Mt.A.	3	R. Stymeist#
26	Wayland	3	J. Hoye#
26	E. Middleboro	10+	K. Holmes
		10+	K. Honnes
Laughin			
25	Fairhaven	1	M. LaBossiere
27	Chatham	6	J. Sones#
Commo	n Black-headed Gu		
thr	Winthrop	8 ma	X V. O.
thr	Newburyport	1	V. O.
Bonapar	te's Gull		
13	Newburyport	2	M. Pelikan
	led Gull		
13	Plymouth	500	K. Anderson
19	Winthrop	350+	M. Lynch#
Iceland		5501	IVI. Lynchw
7		1	I Oniglas
	Lynn	1	J. Quigley
13	Medford	1 ad	P. Roberts
14	Cambridge (F.P.		
15	Truro/P'town	5	R. Forster#
19	Newburyport	15	R. Forster#
Lesser B	lack-backed Gull		
14	Dennis	2 ad	R. Forster
14	Framingham	1 ad	M. Lynch#
Glaucou			
4	New Bedford	1 imm	n T. Aversa
12	Bridgewater	1	W. Petersen#
13		1	TACI (M Hall)
	Boston H.		TASL (M. Hall)
15	Truro	2	K. Hamilton#
19	Raynham	1 imn	
20	Lakeville	1	G. d'Entremont#
Dovekie			
5	Rockport (A.P.)	2	J. Hoye#
Commo	n Murre		100000000 #1800
27	P'town (R.P.)	1	E. Salmela#
	illed Murre		a. Summerun
thr	Rockport	1-2	v. o.
15	P'town H.	1-2	R. Forster#
15	I town II.		R. FOISICI#

27	P'town (R.P.)	2	E. Salmela#
Razorbill	1 101111 (11.1.)		
5	Rockport	2	T. Young
15	P'town (R.P.)	18	R. Forster#
Black Gui		1	
6	Marblehead	2	R. Forster
6	Cape Ann	17	J. Hoye#
13	Boston H.	2	TASL (M. Hall)
15	P'town (R.P.)	4	K. Hamilton#
Barn Owl		1	
26	Nantucket	1	E. Andrews
	creech-Owl	2.4	D C
thr	Mt.A.	2-4	R. Stymeist#
thr	Reports of indiv	. irom	9 locations
Great Hor		6	Q lesstions
thr	Reports of indiv	. irom	8 locations
Snowy Ov 7		1	NI Cmith
	Malden	1	N. Smith
9, 30 26	P'town (R.P.) Nantucket	3	G. Martin M. Litchfield#
28	Boston (Logan)		N. Smith
Barred Ov		+	IN. Shuth
4	Easton	1	K. Ryan
5	Bridgewater	1	F. Garretson#
5	Halifax	1	F. Garretson#
12	Quabbin	1	M. Lynch#
Long-eare		1	WI. Lynch#
l l	Cumb. Farms	1	G. d'Entremont
8	Sandwich	î	T. Aversa
20	Winthrop	î	fide L. Cocca
21, 23	Wayland	1, 1	S. Arena
25	W. Roxbury	1	T. Aversa
25	Mt.A.	î	M. Rines $+ v. o.$
Short-eare		•	WI. ININGS - V. U.
12	Cumb. Farms	4	S. Arena#
15	Nantucket	5	D Beattie#
26	Dennis	1	E. Salmela#
28	P.I.	2	F. Morrison
28	Boston (Logan)	1	N. Smith
Northern	Saw-whet Owl		
5	Lakeville	1	F. Garretson#
8-19	Wayland	1	S. Arena
13	Ipswich	1	J. Berry
26	Middleboro	2	T. Aversa#
Red-bellie	d Woodpecker		
8	Medford	pr	M. Rines
15	Acton	2	K. Castle
24	Holliston	2	J. Howe
29-31) 2	J. Barton#
thr	Reports of indiv.	from	4 locations
	llied Sapsucker		
30	Mt.A.	1 m	M. Rines
30	Chatham	1	W. Bailey
Hairy Woo			100 20
21	Easton	pr	K. Ryan
23	Lexington	4	M. Pelikan
	/oodpecker		
5	Manchester	2	W. Drew#
11	Wellesley	1	S. Frederick
13	Westford	1	S. Selesky
19	E. Boxford	1	J. Brown
20	Hamilton	1	D. Chickering
26	Quabbin	3	M. Lynch#

FLYCATCHERS THROUGH FINCHES

The first Eastern Phoebes generally get a birder's blood in motion for the spring migration. This year March 20 was opening day, although the general arrival of phoebes was not in full swing until the 24th. Tree Swallows, another hardy spring harbinger, arrived a little earlier on March 13, although good numbers did not appear until after the 24th. Other typical March arrivals and their general arrival dates included

American Robin on March 24, Red-winged Blackbird on March 18, Rusty Blackbird on March 18, and Common Grackle on March 16.

An exceptional report was an Eastern Kingbird on March 30, the earliest arrival of this species on record. The previous early date was April 5, 1969.

Several vagrants continued into March: the Boreal Chickadee in West Boylston, Varied Thrushes in Concord and Sudbury, Clay-colored Sparrow on Nantucket, Lark Sparrow in Bridgewater, and Harris' Sparrow in South Dartmouth. Other unusual reports included another Varied Thrush in Edgartown, a Northern Shrike in Wayland, as many as eight White-crowned Sparrows in South Dartmouth, and Yellow-headed Blackbirds from three locations.

Winter finches continued to be reported, although in significantly lower numbers than earlier in the winter. The great **Bohemian Waxwing** flight (described in the June 1994 issue of *Bird Observer*) subsided a bit in March, with reports from just seven locations.

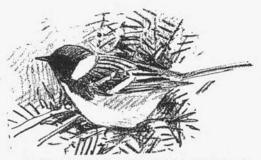
One disturbing note from the past winter is a dramatic decline in the number of Carolina Wren reports. The weather in both January and February was very cold and snowy, but perhaps more importantly, also featured several ice storms. In the two previous years Cape Cod and Bristol County, traditional Carolina Wren strongholds, had significant snowfall but no ice, and the wren population was high in the spring. In January and February of 1994 icing occurred on several days. This ice created a crusty glaze over the snow and vegetation, making it almost impossible for a Carolina Wren to acquire food among the dense and swampy thickets. I would be interested in hearing from observers who had Carolina Wrens in their neighborhoods last year but not this year. R. H. S.

							Observers
Eastern Pl	hoebe			26	Ouabbin	7	M. Lynch#
20	Rochester	1	M. LaBossiere	26	Milton	4	G. d'Entremont
20	Marlboro	2	B. Volkle	Carolina			o. a controllion
25	Wayland	7	N. Patterson	thr	Sherborn	1	E. Taylor
26	Waltham	8	L. Taylor	3	Westford	1	S. Selesky
26-31	Mt.A.	2-6	V. O.	4	Reading	1	E. Bell
24-31	General arrival			6	Natick	1	E. Taylor
Eastern K	ingbird			20	Westpt/Dart.	15	M. Lynch#
30	Eastham (F.H.)	1	G. Martin	24	Concord (NAC) 1	S. Perkins
Horned La		· ·		26	Maynard	î	L. Nachtrab
12	Middleboro	100	W. Petersen#	31	Lincoln	2	M. Rines
						2	M. Rines
13	Salisbury	9	M. Pelikan	Winter W			
13	Boston H.	10	TASL (M. Hall)	24	Revere	1	A. Sgroi
21	Sandwich	60	P. Trimble	26	Milton	1	G. d'Entremont
23	P.I.	20	W. Drew#	26	Quabbin	1	M. Lynch#
Tree Swal	llow			27	Rockport (H.P.) 1	S. Wheelock
13	W. Bridgewate	r 5	K. Ryan#	30	E. Boxford	î	K. Disney
19		10			wned Kinglet	1	K. Disney
	Sudbury		D. Diggins				
20	Cumb. Farms	8	J. Hoye#	26	Sandwich	1	E. Salmela
23	DWWS	8	D. Clapp	Eastern B			
25	Wayland	200	N. Patterson	5	Bridgewater	9	W. Petersen
27	Halifax	75	K. Anderson	6	Rochester	10	M. LaBossiere
31	Lakeville	200+	M. Boucher	7	Easton	3	K. Ryan
American		200.	M. Doucher	15	Concord	5	R. Walton
		2000	500 E. Taylor	20	Boxford	3	
5, 26	Framingham	2000,					H. Wiggin#
23	Lexington	220	M. Pelikan	23	DWWS	3	D. Clapp
Fish Crow				thr	Reports of 1-2	indiv. fro	m 10 locations
thr	Framingham	2	E. Taylor	American	Robin		
13	Marshfield	5	S. Perkins	24-25	Marshfield	234	D. Clapp
14	Plymouth	2	R. Forster#	26	Hardwick	100 +	M. Lynch#
26	Mt.A.	12-16		27	Halifax *	100	K. Anderson
27	DWWS		G. d'Entremont#	Varied T		100	R. Anderson
27	Holbrook	2	G. d'Entremont#	1-8	Concord	1	K. Fay
Common				1-18	Sudbury	1	J. Gobbi
12	Quabbin	3	M. Lynch#	15	Edgartown	1 f	J. Verner
Boreal Ch	hickadee			Gray Cath	bird		
1-12	W. Boylston	1	V. O.	4	Fairhaven	2	T. Aversa
	ted Nuthatch	^		Brown Th		~	
		7	T Assess				T Assesse
1	Bridgewater		T. Aversa	8	Sandwich	1	T. Aversa
11	Petersham	30	T. Aversa	27	Rockport (H.P.)) 1	S. Wheelock
12	Quabbin	21	M. Lynch#	American	Pipit		
31	Rochester	5	M. Boucher	29	Easton	6	T. Aversa
Brown Cro	eener		1000	Bohemia	n Waxwing		
25	Holliston	6	T. Aversa	thr	Halifax	50 max	x v. o.
			1. 11/0154	tin	L INFILMA	Jo ma	· · · ·

Bohemiar	Waxwing (con		
4	Lincoln	3	M. Rines#
9	P'town (R.P.)	36	G. Martin
9	Wellfleet	12	G. Martin
			G Martin#
9, 19 25	Truro	3, 80	
	Wayland	1	N. Patterson
28	Framingham	18	K. Hamilton
Cedar Wa			
4	Lincoln	60	M. Rines
5	Wayland	50	E. Taylor
11	Halifax	250	T. Cameron
20	Uxbridge	50+	M. Lynch#
Northern	Shrike		
19	Wayland	1 imm	G. d'Entremont#
Pine Wart		2430203855	A PARTICIPATION CONTRACTOR
31	E. Middleboro	1	K. Anderson
31	Rochester	î	M. Boucher
	ded Towhee	đ., 1	M. Doucher
		1	E Androme
1-20	Nantucket	1	E. Andrews
4	S. Dartmouth	4	T. Aversa
4	Fairhaven	2	T. Aversa
20	Acoaxet	2	R. Forster#
31	Rochester	1	M. Boucher
American	Tree Sparrow		
5	Cumb. Farms	28	F. Garretson#
19	Wayland	10+	G. d'Entremont#
25	Belmont	8	M. Rines
Chipping			
9	Yarmouthport	6	K. Hamilton
Charles States of Control of Cont	red Sparrow	U	K. Hammon
		1	F. Reed
1-12	Nantucket	1	r. Reeu
Field Span	row		
4	S. Dartmouth	6	T. Aversa
24	Boston (F.Pk)	1	T. Aversa
Lark Spar	row		
1-28	Bridgewater	1	K. Weinheimer
5	Petersham	1	B. Frageau
Savannah	Sparrow		
1-4	Nantucket	1	E. Andrews
	P.I.	3	H. Wiggin#
21	Sandwich	2	P. Trimble
25	W. Roxbury	ĩ	T. Aversa
27	DWWS	1	G. d'Entremont#
		1	0. uEntremont#
Fox Sparro			V Door
3	Easton	1	K. Ryan
25	W. Roxbury	6	T. Aversa
27	Wayland	4	J. Hoye#
27	Lincoln	3	D. Diggins
30	Medford	3 2	M. Rines
31	Waltham	2	M. Rines
31	Milton	25+	R. Abrams
	Reports of indi		n 12 locations
Swamp Sp			II I'D IOOUIIOIID
thr	Nantucket	1-3	E. Andrews
8	Sandwich	1	T. Aversa
24	GMNWR	4	A. Jones
	wned Sparrow	1	2010
thr	S. Dartmouth	8 max	T. Aversa
Harris' Sj			
1-20	S. Dartmouth	1	T. Aversa + v. o.
Lapland L	ongspur		
26	Cumb. Farms	5+	T. Aversa#
Snow Bun			
1	Bolton Flats	70	R. Walton#
9	Saugus	60-75	J. Berry
13			
	Salisbury Boston II	28	M. Lynch#
13	Boston H.	61	TASL (M. Hall)
15	Provincetown	3	R. Forster#
15	Beverly	20	J. Brown#
	P.I.	120	K. Hamilton
29	Cumb. Farms	1	T. Aversa

	ed Blackbird		
7	Cumb. Farms	75	K. Anderson
13	Marshfield	50	S. Perkins
18	Wayland	100	E. Taylor
20	Middleboro	200+	W. Petersen#
21	Lexington	476	T. McCullough
27	Bolton Flats	110 +	M. Lynch#
Eastern N	feadowlark		
15	Beverly	2	J. Brown#
20	Cumb. Farms	2	M. Lynch#
26	P.I.	2	N. Nash
26	New Braintree	2	R. Jenkins#
28	S. Dartmouth	ĩ	M. Boucher
	eaded Blackbird		WI. Doucher
10	Sandwich	1	R. Smith
15	Wellfleet	1 m	M. Rosenbaum
20	Rehoboth	1 m	B. MacDonald
Rusty Bla		100	
4	Wayland	8	S. Arena
5	Middleboro	26	F. Garretson#
18	Hamilton	14	T. Aversa
23	Sudbury	5	S. Perkins#
25	Medfield	25	T. Aversa
25	Lincoln	12	W. Petersen
14-31	Reports of 1-2 in		
Common		iuiv. 110	in io iocations
			V Anderson
7	Middleboro	1	K. Anderson
8	Medford	1	M. Rines
9	Whitman	2	K. Holmes
	Framingham	300, 11	
13	Braintree	40	S. Perkins
16	Dedham	800	W. Petersen
Brown-he	aded Cowbird		
5	Lincoln	40	S. Perkins#
14	Easton	150	S. Arena
15	Fairhaven	175	T. Aversa
Pine Gros		115	1. Aveisa
6		14	C Dhilling#
10.77.0	Leicester		C. Phillips#
6	Belchertown	5	M. Rines
12	Athol	7	J. Mallet
Purple Fir			
12	Halifax	2	W. Petersen
20	E. Boxford	2	J. Brown#
23	P.I.	2	S. Charette
25	W. Roxbury	2 2 2 7	T. Aversa
Red Cross			
6	Milton	6	D. Morimoto
		0	D. Mornhoto
	nged Crossbill	21	100
1-12	W. Boylston	2-6	V. 0.
20-31	Mt. A.	40 max	v. o.
Common			
	Holliston	31 max	J. Howe
Common	Holliston		
Common thr thr thr	Holliston Arlington	31 max	M. Rines
Common thr thr 13	Holliston Arlington Lakeville	31 max 50+	M. Rines K. Holmes
Common thr thr 13 15	Holliston Arlington Lakeville Pepperell	31 max 50+ 30	M. Rines K. Holmes R. Maloney
Common thr thr 13 15 20	Holliston Arlington Lakeville Pepperell Acoaxet	31 max 50+ 30 30	K. Holmes K. Holmes R. Maloney M. Lynch#
Common 1 thr 13 15 20 25	Hoîliston Arlington Lakeville Pepperell Acoaxet Wayland	31 max 50+ 30 30 43	K. Holmes R. Maloney M. Lynch# N. Patterson
Common 1 thr 13 15 20 25 29	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton	31 max 50+ 30 30 43 150-20	K. Holmes R. Maloney M. Lynch# N. Patterson
Common 1 thr 13 15 20 25	Hoîliston Arlington Lakeville Pepperell Acoaxet Wayland	31 max 50+ 30 30 43	K. Holmes R. Maloney M. Lynch# N. Patterson
Common 1 thr 13 15 20 25 29	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton	31 max 50+ 30 43 150-20 30	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown#
Common 1 thr 13 15 20 25 29 30 thr	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i	31 max 50+ 30 43 150-20 30	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown#
Common 1 thr 13 15 20 25 29 30 thr Pine Siski	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n	31 max 50+ 30 30 43 150-20 30 ndiv. fre	M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson U. Wright J. Brown# om 8 locations
Common 1 thr 13 15 20 25 29 30 thr Pine Siski 6	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick	31 max 50+ 30 30 43 150-20 30 ndiv. fro 2	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown# om 8 locations J. Berry#
Common 1 thr 13 15 20 25 29 30 thr Pine Siski 6 12	HoÎliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston	31 max 50+ 30 43 150-20 30 ndiv. fro 2 2	K. Holmes K. Holmes R. Maloney M. Lynch# N. Patterson U. Wright J. Brown# om 8 locations J. Berry# B. Volkle
Common 1 thr 13 15 20 25 29 30 thr Pine Siski 6 12 25	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston	31 max 50+ 30 43 150-20 30 ndiv. fro 2 2 9	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown# om 8 locations J. Berry# B. Volkle T. Aversa
Common 1 thr 13 15 20 25 29 30 thr Pine Siski 6 12 25 26	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston Quabbin	31 max 50+ 30 30 43 150-20 30 ndiv. fro 2 2 9 1	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown# J. Brown# D. Olkery# B. Volkle T. Aversa M. Lynch#
Common thr thr 13 15 20 25 29 30 thr Pine Siski 6 12 25 26 31	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston Quabbin E. Middleboro	31 max 50+ 30 43 150-20 30 ndiv. fro 2 2 9	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown# om 8 locations J. Berry# B. Volkle T. Aversa
Common thr thr 13 15 20 25 29 30 thr Pine Siski 6 12 25 26 31	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston Quabbin E. Middleboro	31 max 50+ 30 30 43 150-20 30 ndiv. fro 2 2 9 1 2	K. Holmes K. Holmes R. Maloney M. Lynch# N. Patterson U. Wright J. Brown# om 8 locations J. Berry# B. Volkle T. Aversa M. Lynch# K. Anderson
Common thr thr 13 15 20 25 29 30 thr Pine Siski 6 12 25 26 31	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston Quabbin E. Middleboro	31 max 50+ 30 30 43 150-20 30 ndiv. fro 2 2 9 1	 M. Rines K. Holmes R. Maloney M. Lynch# N. Patterson 0 L. Wright J. Brown# Jom 8 locations J. Berry# B. Volkle T. Aversa M. Lynch#
Common 1 thr 13 15 20 25 29 30 thr Pine Siski 6 12 25 26 31 Evening C	Holliston Arlington Lakeville Pepperell Acoaxet Wayland Groton E. Boxford Reports of 2-16 i n Natick W. Boylston Holliston Quabbin E. Middleboro rosbeak	31 max 50+ 30 30 43 150-20 30 ndiv. fro 2 2 9 1 2	K. Holmes K. Holmes R. Maloney M. Lynch# N. Patterson U. Wright J. Brown# om 8 locations J. Berry# B. Volkle T. Aversa M. Lynch# K. Anderson

BIRD SIGHTINGS APRIL 1994 SUMMARY



Bay-breasted Warbler, April 28, 1994, Princeton, MA Photocopy of Field Sketch by Barry W. Van Dusen

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

April was warm, dry, and sunny, quite a relief from the previous three months of snow and ice. The temperature averaged 51.4° in Boston, 3.3° above normal; it was the seventh warmest April in Boston in 155 years. The high was 88° on April 27, and the low was 34° on April 2. Rainfall totaled 2.25 inches, 1.35 inches below normal, and snow was totally absent. Winds were out of the southwest on five days and out of the south or southeast on six days. Days favorable to migrants occurred April 10, 24, 25, and 30. R. H. S.

LOONS THROUGH WOODPECKERS

Reports of loons and grebes were normal with no obvious influxes, and observations of Northern Gannets were seasonally typical. The most interesting report of the heron group was two sightings of **Little Egret**. It is uncertain whether these sightings represented two different individuals. Both sported the two long head plumes characteristic of Little Egret, and the bird in Essex had bright orange lores. Otherwise, notable counts of particular interest were American Bittern at Plum Island, Snowy Egret and Little Blue Heron in Essex, and Glossy Ibis in Ipswich. The only Yellow-crowned Night-Heron was at a nontraditional, inland locality. Green Herons were fairly well reported during the latter part of the month.

Among waterfowl, there was little out of the ordinary. There was virtually no semblance of a Snow Goose flight. Both teal species were widely reported, with Greenwings particularly numerous. Only a handful of shovelers and pintails were noted. The Harlequin Ducks and Eurasian Wigeons were holdovers from March, but the King Eider at Westport was most likely a migrant. There were two reports of inland Red-breasted Mergansers, and the report of a lone Ruddy Duck underscores the scarcity of this species as a spring migrant now.

The raptor migration was generally inauspicious except for the American Kestrel. One hundred kestrels were apparently grounded by adverse weather in Middleboro, and 209 were noted migrating at Plum Island on the 26th. There were two sightings of **Black Vultures** on Nantucket. Turkey Vultures are common enough now that they do not merit special attention. With only a few exceptions Northern Goshawks were reported from breeding locations. The scattering of Rough-legged Hawks signaled the departure of birds to the north. Peregrine Falcon and Merlin were poorly reported.

Marsh birds arrived during the later portion of the month with Virginia Rails typically most numerous and widespread. King Rails are so scarce now that one in Bolton is noteworthy. Four reports of Sandhill Crane included two in Essex. The shorebird migration involved the usual species but in reduced numbers. The highlight was clearly a Black-necked Stilt found on Nantucket early in the month. The presence of two American Golden-Plovers early in the month follows a consistent trend in recent years for individuals to appear a month or more in advance of their normal migration period. The only Ruff reported was from North Falmouth, a very unusual location. Willets appeared to be late in arriving and Pectoral Sandpipers, always erratic in their spring appearances, seemed to be scarce. Three Wilson's Phalaropes at Plum Island were a bit early. The presence of a single dowitcher in Newburyport Harbor, which was reported as both species, illustrates the difficulty of dowitcher identification.

Among the handful of gull reports were one or two elusive Little Gulls in Newburyport Harbor and an adult Lesser Black-backed Gull inland at Concord. Terns begin to put in an appearance at the end of the month, and this year proved no exception. Interesting reports included a Caspian Tern at Plum Island and four early Black Skimmers in Wellfleet. The beginning of the month found two Common Murres and two Thick-billed Murres in Provincetown. Somewhat surprising in terms of numbers were the 120+ Razorbills in Nantucket Sound.

A Snowy Owl lingered at Plum Island to midmonth, and a Northern Saw-whet Owl at Boxford could have been either a resident or a migrant. The two Whip-poor-wills were only slightly early. The Rubythroated Hummingbirds were overshooting migrants across the Gulf of Mexico that eventually made a landfall in the outer reaches of our coast. This phenomenon happens annually, and it is typified by Indigo Buntings, among others, that arrive here several weeks in advance of their normal migration schedule. A pair of Red-headed Woodpeckers was in residence in Sherborn, where they have nested for at least the past five years. The movement of Yellow-bellied Sapsuckers was light and spanned most of the month. R. A. F.

Date	Location	Number	Observers
Red-throa	ated Loon		
17	Provincetown	16 G.	d'Entremont#
17	Westport		(R. Stymeist)
17	Truro	10	J. Young
23	P.I.	5	R. Forster
Common	Loon	2	IC. I OISTON
		15	M I unch#
2	Plymouth		M. Lynch#
8	Brookfield	2	R. Bradbury
10	Lakeville	1	K. Holmes
10	Wachusett Res.		M. Lynch#
17	Provincetown	18 G	d'Entremont
19	S. Carver	1	J. Shaw
Pied-bille	ed Grebe		
13	Wayland	3	K. Hamilton
1-26	Reports of indi-	v from 131	
Horned (. nom is i	oraciono
1	P.I.	25	M. Lynch#
		7	
2	Plymouth		M. Lynch#
8	Brookfield	1	R. Bradbury
16	Marblehead	25	M. Pelikan
22	Westport	12	M. Lynch#
23	S. Dartmouth	2 G.	d'Entremont#
24	Cambridge (F.I	P.) 1 br pl	J. Barton#
	ed Grebe		
2	Plymouth	12	M. Lynch#
2	P'town H.	15	B. Nikula
		1. Contraction 1. Con	
3	Newburyport	1.51	D. Chickering
14	Petersham	1	J. Baird
25	Dennis	15	K. Hamilton
Northern	Gannet		
17	Provincetown	150 G.	d'Entremont#
20	Salisbury	11+	I. Lynch
25	Dennis	475	K. Hamilton
27	Ipswich (C.B.)	2 ad	J. Berry
30	Stellwagen Bar		S. Arena#
	rested Cormoran		o. monum
			V Anderson
19	E. Middleboro	45 migr	
22	Westport	28	M. Lynch#
23	Newbypt/P.I.	39	M. Lynch#
24	Wayland	27	R. Forster#
26	Easton	125	S. Arena
27	Wellesley	48	R. Forster
American	n Bittern		
10-30		8 max W	Drew# + v. o.
12	WBWS	1	J. Sones
15	Brookfield	î	R. Bradbury
22		1	R. Dradbury
	Bolton		R. Bradbury
22	W. Newbury	1	P. + F. Vale
24	Wayland	1	K. Hamilton#
Great Blu			
1	W. Acton	15	M. Pelikan
9	Spencer	4 nests	M. Lynch#
9	GMNWR		S Perkins#
9	Wayland	11 migr	K Hamilton
12	P.I.	10	K. Hamilton W. Drew#
		8 DD	C (T. Walker)
24	W. Boxford		
30	Sudbury	11 nests	K. Hamilton
Great Eg	ret	100	
thr	P.I.	5 max	v. o.
3	Arlington	1	L. Taylor
8	S. Dart. (A.Pd)	5 L 2	CES (J. Hill)
16	Essex	2	R. Forster
1.515.1	C 100 C 100		

Date	Location	Number	Observers
22	Westport	8	M. Lynch#
Little Eg	ret		
18-20	S. Dart.(A.Pd)	I br pl E	Nielsen+v o
23		l ad alt pl	
Snowy E		i uu un pi	1. 1 010101
thr	P.I.	17 max	V. O.
8	Scituate	2	D. Clapp
8, 22	S. Dart. (A.Pd)	1, 5	LCES (J. Hill)
16	Newbury	11	R. Forster#
17	Westport	6 BB0	C (R. Stymeist)
23	Rowley	25	R. Forster#
27	Essex	95	J. Berry
Little Blu			
27	Essex	6-7 ad	J. Berry
Tricolore		0-7 au	J. Derly
	N Caitanta		D Alemana
16	N. Scituate P.I.	1	R. Abrams
29	P.I.	1	T. Blackman
29	Quincy	1	J. Tranicki
Cattle Eg	ret		
6, 16	Newbury	1	V. 0.
16	Ipswich	4	J. Berry
27	Hamilton	6	
		0	T. Young
Green He			
18	Middleboro	1	D. Briggs
20	Boston	1	T. Aversa
	Danvers	1	J. Brown#
23	Andover	1	S. Charette R. Forster#
24	Sudbury	1	R. Forster#
28	P.I.	2	W. Drew#
30	Halifax	1	S. Arena#
	owned Night-Her		o. monun
			D Clann
8	Plymouth	2	D. Clapp
12	P.I.	6	W. Drew#
23	Medford	4	M. Rines
Yellow-c	rowned Night-He	eron	
23	Medford	1 ad	M. Rines#
Glossy It	nis		
2	Nantucket	1	E. Andrews
2	Topsfield		BBC (G. Gove)
16	Ipswich	74	J. Berry
20		12	
	Newbury		
23	S. Dartmouth	1	S. Arena#
27	P.I.	12	L. Nachtrab
Whooper	Swan		
thr	Ipswich	3 ad, 3 i	mm J. Berry
Snow Go	ose		
thr	Newburyport	23 max	4/3 v. o.
1-16	Brookline	1 imm	v. o.
2	Bolton Flats	1	E. Salmela
3, 27	Ipswich	1 ad	J. Berry
17	Westport		C (R. Stymeist)
23	Salisbury	7	R. Forster#
Brant			
thr	Ipswich (C.B.)	6-99	D. Rimmer#
2	Plymouth	290+	M. Lynch#
17	Newburyport	300	M. Pelikan
17	Rowley	48	J. Berry
	Marblehead	110+	I. Lynch#
28			
Wood Du			
Wood Du 2, 23	Wakefield	14, 8	P. + F. Vale
		14, 8 17	P. + F. Vale M. Lynch#
Wood Du 2, 23	Wakefield	14, 8 17 28	

Wood Duck (cont.) **Bolton Flats** 10 13 M. Lynch# 23 Andover 12 T. Young 28 Wayland 34 S. Arena Green-winged Teal thr P.I. 76 max 4/8 W. Drew# W. Petersen# 2 Middleboro 40 P. + F. Vale 3 Lynnfield 35 3 W. Harwich 20 +B. Nikula 7 W. Bridgewater 30 G. d'Entremont 10 Bolton 100 +R. Bradbury 10 Concord (NAC) 165 R. Forster# 23 W. Newbury 46 M. Lynch# American Black Duck 8.28 P.I. 152, 18 W. Drew# Northern Pintail thr P.I. 38 max V. O. 2-5 Concord (NAC) 10 S. Perkins 8 Bolton 4 R. Bradbury Blue-winged Teal thr P.I. 21 max 4/8 W. Drew# + v. o. 5 Acushnet 4 M. Boucher 8 2 S. Dart. (A.Pd) LCES (J. Hill) 8 Bolton 4 R. Bradbury 10 Lakeville 2 K. Holmes 15 Topsfield 15 J. Brown# 24 **Bolton Flats** 4 M. Lynch# 30 Wayland 4 S. Perkins Northern Shoveler 2 f 3 Arlington Res. L. Taylor 7 2 S. Perkins Concord (NAC) 10 Wayland 1 m R. Forster# 20 P.I. 2 W. Drew# Gadwall 2 P.I. 16 BBC (G. Gove) 2 Plymouth 8 M. Lynch# 3 Wayland 2 S. Perkins 11 Arlington Res. 2 M. Rines 22 S. Dart. (A.Pd) 2 LCES (J. Hill) 30 Ipswich 14 BBC (J. Berry) Eurasian Wigeon Plymouth 2 M. Lynch# 1 m 8 P.I. W. Drew# 1 American Wigeon thr Arlington Res. 1-6 M. Pelikan 2 Plymouth 54 M. Lynch# 2 Concord (NAC) 10 S. Perkins 8 P.I. 37 W. Drew# 21 P. + F. Vale Wakefield 3 24 Cambridge (F.P.) 7 R. Stymeist# **Ring-necked Duck** thr P.I. 27 max 4/8 W. Drew# 2 S. Hanson 100 +W. Petersen# 3, 17 35, 23 L. Taylor Arlington Res. 3 Wayland S. Perkins 80 3 Wakefield 20 P. + F. Vale 4-5 Concord (NAC) 225 S. Perkins 8 W. Bridgewater 140+ G. d'Entremont 9 E. Brookfield 26 M. Lynch# Greater Scaup 17 Newburyport 55 D. Chickering 22 Acoaxet 39 M. Lynch# Lesser Scaup 1 P.L 1 M. Lynch# 2 Plymouth 4 M. Lynch# 18 Clinton 2 R. Bradbury Common Eider Salisbury/P.I. 72+ M. Lvnch# 2 Plymouth 650+ M. Lynch# King Eider 17-27 Westport 1 m E. Salmela + v. o.

	in Duck	•2777.	
2	Manomet	1 m	M. Lynch#
17 Oldsau	N. Scituate	6	W. Petersen
Oldsqua 17		700 BB(C (S. Charette)
25	Newburyport Dennis	950	K. Hamilton
Black S		150	K. Hailinton
17	Westport	50 BB((R. Stymeist)
29	P.I.	43	D. Chickering
Surf Sco		45	D. Chickening
2	Manomet	60+	M. Lynch#
17	Westport		(R. Stymeist)
23	P.I.	30	R. Forster
White-w	vinged Scoter	2.2	
2	Plymouth	100 +	M. Lynch#
23	P.I.	350	R. Forster
Commo	n Goldeneye		
1	Newburyport	400+	M. Lynch#
2	Plymouth	80+	M. Lynch#
9	Wayland	16	S. Perkins
Barrow'	s Goldeneye		
3	Newburyport	1 m	J. Johnstone
8	Newburyport	1 f	T. Aversa
Bufflehe	ad		
1	Newburyport	380+	M. Lynch#
2, 21	Wakefield	25,8	P. + F. Vale
2	GMNWR	18	S. Perkins
8	S. Dart. (A.Pd)	36	LCES (J. Hill)
9	W. Newbury	19	J. Berry#
Hooded	Merganser		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -
9	Petersham	4	M. Lynch#
10	Essex	1 f	T. Young
28	P.I.	6	D. Chickering
Commo	n Merganser		
3, 17		30, 1	L. Taylor
9	W. Newbury	60	J. Berry#
10	Southboro	100	E. Taylor
Red-brea	asted Merganser		
2	Plymouth	80	M. Lynch#
3	Squantum	450+ C	d'Entremont
9	Southboro	1	R. Bradbury
15	Brookfield	1	R. Bradbury
17	Rowley	55	J. Berry
22	Westport	99	M. Lynch#
22	S. Dart. (A.Pd)	71	LCES (J. Hill)
Ruddy D			
24-28		1 f	v. o.
Black V	ulture		
11	Nantucket	1	fide J. Papale
19	Nantucket	2	P. Dunwiddie
Turkey Y			
3	Barre	21	M. Lynch#
3	Quabbin (G40)	27	M. Lynch#
17	Plymouth	14 G.	d'Entremont#
17	Truro	20	J. Young
25	Randolph	18	S. Arena
4-24	Reports of 1-5 in	ndiv. from	15 locations
Osprey			
thr	Essex	pr n	v . o.
15	Brookfield	3	R. Bradbury
17	Westport	76 BBC	(R. Stymeist)
20	Mattapoissett	2	F. Smith
Bald Eag			
17	Lakeville	1 imm	W. Petersen
17	New Braintree	1 imm	M. Lynch#
17	Petersham	2 ad mig	r M. Lynch#
26	Concord	1	C. Bean
Northern		100	100000
8	P.I.	9	W. Drew#
23	Cumb. Farms	6	T. Aversa#
thr	Reports of indiv	from 4 lo	cations

Sharp shipped Unuk		
Sharp-shinned Hawk 3 Quabbin (G40)	4	M. Lynch#
Sharp-shinned Hawk (cont.		
17 Newbypt area	5	S. Charette
22 P.I.	14	P. + F. Vale
24 P.I.	11	D. Chickering
30 N. Truro	29	B. Nikula#
Cooper's Hawk		
thr Reports of 1-2 ir	ndiv. fr	om 11 locations
Northern Goshawk		
1 E. Middleboro	1	K. Anderson
 New Bedford 	1	T. Aversa
3 Boxford	1 ad	J. Berrv#
20 P.I.	1	W. Drew#
23 Weston	pr n	A. Sgroi
27 Lincoln	pr n	W. Petersen
29 Holliston	1	T. Aversa
30 N. Truro	1 imn	B. Nikula#
Red-shouldered Hawk		
thr Boxford	2+	V. 0.
9 E. Middleboro	pr n	K. Anderson
9 Milton	1 H	BBC (S. Olanoff)
9 Groveland	1	D. Chickering
17 Athol	2	M. Lynch#
18 Newburyport	2	D. Chickering
23 Barre	2	M. Pelikan
Broad-winged Hawk		
9, 10 Milton	1, 1	N. Smith
10 Lakeville	1	K. Holmes
15 Easton	1	S. Arena
15 Lincoln	1	W. Petersen
15 Wellesley	2	R. Forster
24 Harvard	20	M. Lynch#
17-30 Reports of 1-2 in	ndiv. fr	om 8 locations
Red-tailed Hawk		
9 SRV	18	BBC (S. Arena)
17 Provincetown		G. d'Entremont#
30 Ipswich	6	BBC (J. Berry)
Rough-legged Hawk		
2 Ipswich	1	BBC (G. Gove)
12 P.I.	1	W. Drew#
17 Cumb. Farms	1	W. Petersen
20 W. Newbury	1	S. Charette
American Kestrel		
14, 20 P.I.	27, 17	S. Charette
17 Eastham		G. d'Entremont#
23 Middleboro	100+	E. Salmela
24 Harvard	7	M. Lynch#
26 P.I.	209	E. Mair
		25. 111411
Merlin		
thr P.I.	1	v. o.
thr P.I. 17 Rowley	1	v. o. J. Berry
thr P.I. 17 Rowley 21 Newbury	1 1	v. o. J. Berry M. Rines
thr P.I. 17 Rowley 21 Newbury 24 Easton	1	v. o. J. Berry
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon	1 1 1	v. o. J. Berry M. Rines S. Arena
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston	1 1 1 pr n	v. o. J. Berry M. Rines S. Arena v. o.
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy	1 1 prn 1 ad	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.)	1 1 1 pr n 1 ad 1	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS	1 1 prn 1 ad	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse	1 1 pr n 1 ad 1 1	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro	1 1 1 pr n 1 ad 1 1 1-2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover	1 1 1 1 1 1 1 1-2 2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham	1 1 1 1 1 ad 1 1 1-2 2 2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury	1 1 1 1 1 1 1 1 2 2 2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv.	1 1 1 1 1 1 1 1 2 2 2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv Wild Turkey	1 1 1 1 1 1 1 2 2 2 2 . from -	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont# 7 locations
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv. Wild Turkey 5 Ipswich (C.B.)	1 1 1 1 1 1 2 2 2 2 2 from - 4 m	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont# 7 locations D. Rimmer
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv Wild Turkey 5 Ipswich (C.B.) 9 Boxford	1 1 1 1 1 1-2 2 2 2 . from - 4 m 4-5	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont# 7 locations D. Rimmer J. Berry#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv. Wild Turkey 5 Ipswich (C.B.) 9 Boxford 9 Petersham	1 1 1 1 1 1 1 1 1 1 2 2 2 5 from - 4 m 4-5 2	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# J locations D. Rimmer J. Berry# M. Lynch#
thr P.I. 17 Rowley 21 Newbury 24 Easton Peregrine Falcon thr Boston 9 N. Monomoy 12 Chatham (S.B.) 17 IRWS Ruffed Grouse thr E. Middleboro 1 N. Andover 9 Petersham 24 W. Newbury thr Reports of indiv Wild Turkey 5 Ipswich (C.B.) 9 Boxford	1 1 1 1 1 1-2 2 2 2 . from - 4 m 4-5	v. o. J. Berry M. Rines S. Arena v. o. B. Nikula J. Sones# M. Pelikan K. Anderson S. Charette M. Lynch# G. d'Entremont# 7 locations D. Rimmer J. Berry#

7	E. Middleboro	2	K. Anderson
17 King Rai	Eastham (F.H.)	2 G.	d'Entremont#
14	Bolton	1	R. Bradbury
Virginia I			ic. Dradoury
1	N. Middleboro	2	K. Holmes
14	Bolton	ī	R. Bradbury
15	Randolph	1 G	d'Entremont
24	Bolton Flats	7	M. Lynch#
27	W. Roxbury	4	T. Aversa
29	Milford	4	T. Aversa
Sora		1	
24	Bolton Flats	1	M. Lynch#
24	GMNWR	1	J. Mallet
30 American	Wayland	1	S. Perkins
2	Plymouth	171	M. Lynch#
	Concord (NAC)		rkins + v . o.
7	Sudbury	1	H. Parker
16	Boston		(R. Stymeist)
Sandhill		2 (778)	
15	Cumb. Farms	1 ad	T. Aversa
18-19	Plympton	1 K. An	derson + v. o.
21	Sherborn	1	M. Martinek
24	Essex	2 T.Y	oung# + v. o.
	lied Plover		
	N. Monomoy	60, 225	B. Nikula
	Golden-Plover	2	D Brown#
7 10-12	W. Bridgewater P.I.	3 1 T.	D. Brown# Young + v. o.
Piping Plo		1 1.	Toung + v. o.
thr	Ipswich (C.B.)	10-31	D. Rimmer#
8	P.I.	11	W. Drew#
8	S. Dart. (A.Pd)		CES (J. Hill)
9	Lakeville	1	S. Peak#
12	N. Monomoy	7	B. Nikula
22	Acoaxet	4	M. Lynch#
Killdeer	22.002.0000000000		
2	Newbypt area		BC (G. Gove)
6	Sharon	11	S. Arena
7	W. Bridgewater		D. Brown#
10	Bolton Flats	11	M. Lynch#
thr	Oystercatcher N. Monomoy	16 max	B. Nikula#
17	Edgartown	2	T. Young
17	Boston (Logan)	2	N. Smith
28	Fairhaven	2	M. Boucher
	cked Stilt	-	
2-3	Nantucket	1	J. Papale
Greater Y	ellowlegs		1.
8, 24	Newbypt 9, 16		sa, R. Forster
19	Cumb. Farms		C. Anderson#
19	Uxbridge	1	R. Bradbury
24	Topsfield	30	R. Forster
24	Bolton	1	R. Bradbury
24	Quincy	6	K. Ryan
30	Plymouth	5	S. Arena#
Lesser Ye		4 I	K. Anderson#
19 20	Cumb. Farms	1 1	M. Boucher
23-30	S. Dart. (A.Pd)	1-35	V. O.
23-30	Newburyport Squantum	1-35	K. Ryan
Solitary S	andpiper		is. Rydi
20	Sandwich	1	S. Miller#
23	Bolton	2	R. Bradbury
		ĩ	R. Forster#
23	Topsfield		
23 30	Topsfield W. Newbury		
30	Topsfield W. Newbury	5	T. Young
	W. Newbury	5	T. Young
30 Willet		5	

Spotted Sa	andpiper		
27 Upland Sa	Uxbridge	1	R. Bradbury
		1	D Chickering
17	Salisbury	1	D. Chickering
23	Middleboro	11	E. Salmela
28	Medford	1	M. Rines
30	Newburyport	2	P. + F. Vale
30	S. Dartmouth	1	F. Thurber
Sanderlin	g		
thr	Ipswich (C.B.)	8-42	D. Rimmer#
17	Westport		C (R. Stymeist)
23	P.I.	30	R. Forster
		50	1. 1 01500
Least San		1	D. Dec dlaure
27	Uxbridge	1	R. Bradbury
28	N. Monomoy	3	B. Nikula
29	W. Harwich	4	B. Nikula
29	S. Dartmouth	14	M. Boucher
30	Newburyport	15	P. + F. Vale
Pectoral S			
3	Newbury	3	E. Salmela
7	W. Bridgewater	12	D. Brown#
		100	
10	Concord (NAC)		M. Pelikan
23	Essex	10	R. Forster#
Purple Sa			
17	Westport	36 BB	C (R. Stymeist)
23	S. Dartmouth	15 G	. d'Entremont#
Dunlin			
8	S. Dart. (A.Pd)	69	LCES (J. Hill)
10, 17		80, 40	M. Pelikan
12, 28	N. Monomoy	150, 50	D. Nikula
Ruff			
27-29	N. Falmouth	1 m	I. Nisbet
Short-bill	ed Dowitcher		
8	S. Dart. (A.Pd)	2	LCES (J. Hill)
10	Concord (NAC)		E. Taylor
23	Newburyport	1	V. 0.
		1	v. o.
	ed Dowitcher	1 0	1177
24	Newburyport	1 G	. d'Entremont#
Common	Snipe		
2	Newbury	35	M. Rines
8	Topsfield	17	T. Aversa
8	Bolton	35	R. Bradbury
9	Cumb. Farms	35	T. Aversa
			S. Perkins
10	Concord (NAC)		
16	Newburyport	100 +	M. Lynch#
23	Essex	30	R. Forster#
American	Woodcock		
3	Lexington	3 BE	BC (S. Sanders)
3	Barnstable	8	H. Ferguson
	Phalarope	~	II. I O'Buoon
		3	W. Drew#
28	P.I.	3	w. Diew#
Little Gul			
3-22	Newburyport	1-2	V. O.
Common	Black-headed Gu	11	
1-24	Newburyport	1	V. 0.
Bonaparte		· · · ·	
17		100 BB	C (S. Charette)
1/		265	
24	Lynn	265	J. Quigley
Ring-bille			
16	Ipswich	400	R. Forster#
Iceland G			
6	Newburyport	9	N. Claflin
7	Lynn	2 ad	J. Quigley
17	Provincetown	1 G	d'Entremont#
	ack-backed Gull		register and sea
4-9	Concord (NAC)	1 ad	R. Fox $+ v. o.$
Caspian 7			
27	P.I.	1	L. Nachtrab
Common		120	
Common	10m		

	30	Stellwagen	50	S. Arena#
Bla	ack Skin	mmer		
	17	Wellfleet	4	J. Young
Co	mmon			
	1	P'town (R.P.)	2	C. Floyd
Th		ed Murre	-	e. rioja
111	1		1	C Floud
		P'town (R.P.)		C. Floyd
	2	P'town H.	1	B. Nikula
	3	Rockport (A.P.)	1	S. Charette
Ra	zorbill			
	10	Nant. Sound	120+	J. Sones#
	23	Marion	1	J. Hatch
Bla	ack Gui	llemot		
		Cape Cod Bay	4	S. Arena#
Gr		ned Owl		
	thr	Gloucester	pr + 1 yg 2 3	T. Young
		Wayland	2	S. Perkins
		Halifax	2	T. Raymond
			2 I	Chickering
	23	N. Andover	2 1	D. Chickering
~	30	W. Boxford	2 yg	S. Charette
Sn	owy Ov			
		P.I.	1	V. 0.
Ba	rred Ov	vl		
	thr	Sherborn	6	E. Taylor
	23	Boxford (C.P.)	2	I. Lynch
	30	Middleboro	1	D. Briggs
No		Saw-whet Owl	5	
	8	Boxford	1	T. Aversa
W				1. /1/0154
VV I	hip-poo		1	E. Libben
	16	Wellesley	-	
~	19	Littleton	1	J. Mitchell
Ch	imney !			
		N. Dartmouth	1	M. Boucher
	24	Easton	1	S. Arena
	27	Boston	1	T. Aversa
	27	Mt.A.	1	V. O.
	30	Ipswich	4	J. Berry
	30	Salem	3	I. Lynch
Ru		ated Hummingbi		
Itu		Mattapoisett	1	F. Smith
	21	Marblehead	1	S. Ingalls#
D -			1	5. Ingans#
Re		d Woodpecker	2	E Teules
-	thr	Sherborn	2	E. Taylor
Re		d Woodpecker		
	1	Acton	2	K. Castle
	1	S. Dartmouth	2	T. Aversa
	12	Boston (F.Pk)	1 f	T. Aversa
	22-30	Braintree	1 m G	d'Entremont
	27	Medford	pr	M. Rines
Ye		llied Sapsucker		
~	8	IRWS	1 m	T. Aversa
		Boston (F.Pk)	4	T. Aversa
	13, 25	Mt A		M. Rines
	15, 25	Trues	1, 2	
		Truro	1	S. Miller#
на		odpecker		
	thr	Boxford	2-3	J. Brown#
	9	SRV	4 BE	BC (S. Arena)
No	orthern			
	12	Boston (F.Pk)	46	T. Aversa
	14	Medford	19	M. Rines
	17	Westport		(R. Stymeist)
	24	Waltham	17	L. Taylor
Pil		Voodpecker		
	thr	Sherborn	4	E. Taylor
	thr	Boxford (C.P.)		
			1-2	V. O.
	9	Milton	1	S. Olanoff
	9	Quabbin (G41)	1	M. Lynch#
	17	Wellesley	1	R. Forster#
	30	Stow	1	M. Rines#

FLYCATCHERS THROUGH FINCHES

Passerine movement begins in earnest during April. Greater numbers of phoebes and swallows arrive early in the month, and typical April migrants begin arriving in mid-April. Unusual early migrants included a Northern Parula in Provincetown on April 12, two Black-throated Blue Warblers in Boxford on the 23rd, a Prairie Warbler at Great Meadows on April 16, a Bay-breasted Warbler in Princeton on April 28, and a Worm-eating Warbler at Salisbury on April 16. A Cerulean Warbler on April 25 and Kentucky and Wilson's warblers on April 29 were seen at Mt. Auburn Cemetery.

In Brewster holdovers from the winter season included a Painted Bunting and as many as 62 Bohemian Waxwings.

A Northern Wheatear was discovered on Jetties Beach, Nantucket, on April 1, where it remained until April 3. This is only the fifth spring record for wheatear in Massachusetts. The bird was probably a returning migrant from last fall's unprecedented flight.

A "White-winged" Junco was photographed and banded in Marion on April 1. The "White-winged" Junco (Junco hyemalis aiken) is generally found in the ponderosa pine forests of the northern Great Plains and the Black Hills of South Dakota. It is very similar to our "Slate-colored" but has much more white in the tail and two white wing bars. The Marion bird met these criteria and represents the first verifiable report of this subspecies in Massachusetts.

Winter finches continued to be reported, with both species of crossbills noted throughout the month in some locations. Most Common Redpolls departed by April 12. R. H. S.

Date	Location	Number	Observers	Date	Location	Numb	er Observers
Least Fly	catcher			Fish Cro	w		
30	Bolton	2	R. Bradbury	30	Mt.A.	4	E. Taylor
30	ONWR	2	M. Rines#	30	Ipswich	6	BBC (J. Berry)
Eastern H	Phoebe			thr		indiv 1	from 11 locations
1	Barre	5	M. Pelikan	Common			in the rooutions
5	Worc. (BMB)	14	M. Lynch#	1	Barre	1	M. Pelikan
10	N. Middleboro		K. Holmes	17	Petersham	pr	M. Lynch#
14	Waltham	5	L. Taylor		hickadee	pi	WI. Lynchin
30	Ipswich	3 nests	J. Berry	2	W. Boylston	1	BBC (E. Salmela)
	ested Flycatcher	5 110015	J. Dony	14	Truro	i	T. Carrolyn
28	Medford	1	M. Rines		sted Nuthatch	1	1. Cartolyn
Eastern k		1	IVI. IVIICS	3) 19	M Lunshill
	Reports of 1-2	india from	7 locations	9	Quabbin (G40) Freetown	19	M. Lynch#
Horned L		mary. non	i / locations	9		15	T. Aversa
		26	D Dimmon		Petersham	21	M. Lynch#
thr 24	Ipswich (C.B.)	2-6	D. Rimmer	Brown C			-
	W. Boxford	6 BE	BC (T. Walker)	8	Boxford	10	T. Aversa
Purple M				29	Holliston	5	T. Aversa
15-30		20 max	V. 0.	30	Ipswich	4	BBC (J. Berry)
Tree Swa				Carolina			
5	Sudbury	200	S. Perkins	2	Plymouth	3	M. Lynch#
8	Wayland	200	S. Arena	5	Worc. (BMB)	1	M. Lynch#
9	Brookfield	250+	M. Lvnch#	15	Malden	1	P. + F. Vale
16	GMNWR	300	M. Pelikan	16	MNWS	2	M. Pelikan
N. Rough	-winged Swallow	v		17	Westport		BBC (R. Stymeist)
5	Concord (NAC		S. Perkins	20	Medford	1	M. Rines
9	Wellesley	í	R. Forster	27	Lexington	î	L. Taylor
9	Milton	2	P. Fitzgerald	House W			D. Taylor
10	Topsfield	1-2	H. Wiggin#	17	Westport	1	M. Boucher
	General arrival		n. wiggin#	18	E. Middleboro	1	
Bank Swa				21			K. Anderson
7	New Braintree	0	M. Lemahili		MNWS	1	S. Ingalls
		8 2.8	M. Lynch#	22-30		1-2	V. 0.
	Wayland		R. Forster	29	Holliston	3 m	T. Aversa
23	GMNWR	3	M. Pelikan	30	Newton	3	G. d'Entremont#
23	P.I.	2	J. Brown#	Winter W			
Cliff Swa				thr	Boxford (C.P.)	4 ma	
21	Wayland	2	K. Hamilton	9	Quabbin (G40)	1	M. Lynch#
Barn Swa				14	Medford	1	M. Rines
3	Lincoln	1	M. Pelikan	15	Cambridge	1 m	H. Pratt
10	Topsfield	3	H. Wiggin#	17	Hardwick	1	M. Lynch#
10	Dorchester	1	J. Young	24	Westport	1	M. Boucher
10	Concord (NAC)	1	S. Perkins	27	Westminster		BBC (J. Kennedy)
15-30	General arrival			Marsh W			(v. rennou)
American				15	Wavland	1	R. Forster
9	Framingham	500	E. Taylor	30	Wayland	8	S. Perkins
		200	D. rayior	50	mayiana	0	5. I CIKIIIS

Golden-cr	owned Kinglet	10.	N. T
10	Wachuset Res.	15+	M. Lynch#
15 Dubu anau	P.I.	10	K. Disney
Kuby-crov	vned Kinglet Worc. (BMB)	1, 3	M. Lynch#
9	Boxford (C.P.)	2	R. Stymeist#
	Medford	1,7	M. Rines
15	P.I.	50+	K. Disney
15	Wellesley	4	R. Forster
22-30	Mt.A.	26 max	v. o.
Blue-gray	Gnatcatcher		
9	Boxford	1	M. Rines#
14	Medford	1	M. Rines
18-30	Mt.A.	5 max 4	
24	IRWS	10	F. Bouchard
24	P.I.	5	T. Young
28	Wayland	7	S. Arena
22	Boxford	10	T. Aversa#
17-30		naiv. Iror	n 12 locations
Northern 1-3	Wheatear Nantucket	1	J. Shagrin
Eastern B		1	J. Shagrin
5	Worc. (BMB)	5	M. Lynch#
23	Carlisle	5 BBC	D. Brownrigg)
24	W. Boxford	3 BH	BC (T. Walker)
27	Westminster	8 BB	C (J. Kennedy)
thr	Reports of 1-2 in		
Hermit Th			
3	Salisbury	1	E. Salmela
4	Sherborn	1	E. Taylor
10-30		8 max 4	
10	Boston (F.Pk)	8	T. Aversa
12, 20	Worc. (BMB)	1, 4	M. Lynch#
15	P.I.	24	D. Chickering
15	Wayland	4	K. Hamilton
23	Boxford	5	I. Lynch
Wood Thi			
15	Malden	2	$P_{.} + F_{.}$ Vale
27	Westminster		C (J. Kennedy)
29	Mt.A.	1	M. Rines
Gray Cath			
	Manomet	1 '	T. Lloyd-Evans
25			
28	Mt.A.	1	M. Rines
28 28	Mt.A. Wayland	1 3	M. Rines S. Arena
28 28 28	Mt.A. Wayland Marshfield	1 3 6	M. Rines S. Arena
28 28 28 28	Mt.A. Wayland Marshfield Essex	1 3 6 1	M. Rines S. Arena S. Arena T. Young
28 28 28 28 28 28	Mt.A. Wayland Marshfield Essex Wellesley	1 3 6 1 1	M. Rines S. Arena S. Arena T. Young R. Forster
28 28 28 28 28 28 28 29	Mt.A. Wayland Marshfield Essex Wellesley Boxford	1 3 6 1	M. Rines S. Arena S. Arena T. Young
28 28 28 28 28 29 Brown Th	Mt.A. Wayland Marshfield Essex Wellesley Boxford urasher	1 3 6 1 1 2	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown#
28 28 28 28 28 29 Brown Th 12, 29	Mt.A. Wayland Marshfield Essex Wellesley Boxford Irasher Lexington	1 3 6 1 1 2 1, 6	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines
28 28 28 28 29 Brown Th 12, 29 12	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB)	1 3 6 1 1 2 1, 6 1	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch#
28 28 28 28 29 Brown Th 12, 29 12 16	Mt.A. Wayland Marshfield Essex Wellesley Boxford urasher Lexington Worc. (BMB) P.I.	1 3 6 1 1 2 1, 6 1 3	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster#
28 28 28 28 29 Brown Th 12, 29 12 16 20	Mt. A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P. I. Medford	1 3 6 1 1 2 1, 6 1 3 4	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines
28 28 28 29 Brown Th 12, 29 12 16 20 27	Mt.A. Wayland Marshfield Essex Wellesley Boxford urasher Lexington Worc. (BMB) P.I. Medford Plymouth	1 3 6 1 1 2 1, 6 1 3 4 3	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston	1 3 6 1 1 2 1, 6 1 3 4 3 3	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 it	1 3 6 1 1 2 1, 6 1 3 4 3 3	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit	1 3 6 1 1 2 1, 6 1 3 4 3 0 1 0 1, 6 1 3 4 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa
28 28 28 28 29 Brown Th 12, 29 16 20 27 29 16-30 American	Mt. A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 i Pipit W. Bridgewater	1 3 6 1 1 2 1, 6 1 3 4 3 0 1 0 1, 6 1 3 4 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit	1 3 6 1 1 2 1, 6 1 3 4 3 0 mdiv. from	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown#
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms	1 3 6 1 1 2 1,6 1 3 4 3 ndiv. from 2 48 1	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa
28 28 28 28 29 Brown Th 12, 29 16 20 27 29 16 20 27 29 16 Bohemian 7, 9	Mt. A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 i Pipit W. Bridgewater Cumb. Farms Newbury a Waxwing Brewster	1 3 6 1 1 2 1, 6 1 3 4 3 0 mdiv. from 2 48	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemia 7, 9 Cedar Wa	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury a Waxwing Brewster txwing	1 3 6 1 1 2 1, 6 1 3 4 3 mdiv. from 2 48 1 62, 1	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa H. Wiggin# A. King
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemiaa 7, 9 Cedar Wa 5	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury a Waxwing Brewster txwing Worc. (BMB)	1 3 6 1 1 2 1, 6 1 3 4 3 4 3 0 0 ndiv. from 2 48 1 62, 1 45	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa H. Wiggin# A. King M. Lynch#
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemian 7, 9 Cedar Wa 5 10	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury a Waxwing Brewster Exwing Worc. (BMB) Lakeville	1 3 6 1 1 2 1, 6 1 3 4 3 4 3 0 0 1 3 0 0 1 1 2 4 8 1 62, 1 45 50+	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa G. d'Entremont T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes
28 28 28 28 29 Brown Th 12, 29 16 20 27 29 16-30 American 7 9 16 Bohemia 7, 9 Cedar Wa 5 10 16	Mt. A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 i Pipit W. Bridgewater Cumb. Farms Newbury n Waxwing Brewster txwing Worc. (BMB) Lakeville W. Roxbury	1 3 6 1 1 2 1, 6 1 3 4 3 ndiv. from 2 48 1 62, 1 45 50+ 75	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines G. d'Entremont T. Aversa G. d'Entremont T. Aversa D. Brown# T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes T. Aversa
28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemiat 7, 9 Cedar Wa 5 10 16 17	Mt.A. Wayland Marshfield Essex Wellesley Boxford urasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury a Waxwing Brewster uwing Worc. (BMB) Lakeville W. Roxbury Newbury	1 3 6 1 1 2 1, 6 1 3 4 3 4 3 mdiv. from 2 48 1 62, 1 45 50+ 75 25	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes T. Aversa M. Pelikan
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemiau 7, 9 Cedar Wa 5 10 16 17 17	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury Maxwing Brewster txwing Worc. (BMB) Lakeville W. Roxbury Newbury Cumb. Farms	1 3 6 1 1 2 1, 6 1 3 4 3 ndiv. from 2 48 1 62, 1 45 50+ 75	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines G. d'Entremont T. Aversa G. d'Entremont T. Aversa D. Brown# T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes T. Aversa
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemia 7, 9 Cedar Wa 5 10 16 17 17 White-eye	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 it Pipit W. Bridgewater Cumb. Farms Newbury n Waxwing Brewster txwing Worc. (BMB) Lakeville W. Roxbury Newbury Newbury Scale (BMB) States (BMB) Cumb. Farms	1 3 6 1 1 2 1, 6 1 3 4 3 4 3 6 1 1 2 1 3 4 3 6 1 1 3 4 5 50+ 755 25 20	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes T. Aversa M. Pelikan W. Petersen
28 28 28 28 29 Brown Th 12, 29 12 16 20 27 29 16-30 American 7 9 16 Bohemiau 7, 9 Cedar Wa 5 10 16 17 17	Mt.A. Wayland Marshfield Essex Wellesley Boxford trasher Lexington Worc. (BMB) P.I. Medford Plymouth Holliston Reports of 1-2 in Pipit W. Bridgewater Cumb. Farms Newbury Maxwing Brewster txwing Worc. (BMB) Lakeville W. Roxbury Newbury Cumb. Farms	1 3 6 1 1 2 1, 6 1 3 4 3 4 3 mdiv. from 2 48 1 62, 1 45 50+ 75 25	M. Rines S. Arena S. Arena T. Young R. Forster J. Brown# M. Rines M. Lynch# R. Forster# M. Rines G. d'Entremont T. Aversa n 7 locations D. Brown# T. Aversa H. Wiggin# A. King M. Lynch# K. Holmes T. Aversa M. Pelikan

Solitary V			
10	Burlington	1	R. Stymeist#
15	Middleboro	1	T. Aversa
22-30		8 max 4	
22	Boxford	6	T. Aversa#
27	Westminster		C (J. Kennedy)
27	Medford	4	M. Rines
28	Marshfield	4	S. Arena
	roated Vireo		C Millert
20	Sandwich	1	S. Miller#
	Provincetown	1	G. Martin#
Warbling		1	R. Forster#
24 27-30	Wayland	1	R. Forster
27-30	Wellesley Reports of 1-2 ir		
Red-eyed		icuiv. IIO	in 7 locations
27	Westminster	1 BB	C (J. Kennedy)
	ged Warbler	I DD	(J. Keinicuy)
29	Easton	1	K. Ryan
30	Bridgewater	1	K. Holmes
Nashville		1	K. Homies
28-30		1	v. o.
29	Holliston	1 m	T. Aversa
29	Wayland	1	S. Arena
30	ONWR	i	R. Bradbury
30	Boxford (C.P.)	i	H. Wiggin#
Northern		1	II. WIESHIM
	Provincetown	1	J. Sones#
24	Waltham	4	L. Taylor
25	Mt.A.	5	M. Rines
28	Boston (F.Pk)	2	T. Aversa
29	Holliston	2	T. Aversa
30	Boxford (C.P.)		H. Wiggin#
Yellow W		-	
21	Milton	1	C. Harrison
25	Wayland	1	R. Forster#
27	Halifax	4 m	K. Anderson
27	W. Roxbury	3 m	T. Aversa
28-30	Reports of indiv		
	oated Blue Warbl		
23	Boxford (C.P.)	2	I. Lynch
28	Essex	1 m	T. Young
Yellow-ru	mped Warbler		
8-30		0 max 4/	25 S. Arena
12, 14	Worc. (BMB)	6, 14	M. Lynch#
15	Ipswich	7+	J. Berry
16	Concord	15	M. Pelikan
16-30	Mt.A. 26	max 4/2	
17	Bolton	7	R. Bradbury
27	Medford	22	M. Rines
Black-thre	oated Green Wart	oler	
20	W. Barnstable	1	S. Miller#
23	Petersham	2	R. Bradbury
23	Boxford (C.P.)		I. Lynch
	Mt. A.	3 max	V. O.
29	Holliston	3 m	T. Aversa
30	Ipswich	4	BBC (J. Berry)
Blackburr	nian Warbler		
30	Boxford (C.P.)	1 m	L. Taylor#
30	Provincetown	1	B. Nikula#
30	MNWS	1	J. Center#
Yellow-th	roated Warbler		
27	Provincetown	1	E. + S. Miller
Pine Wart	oler		
3	Quabbin (G40)	2	M. Lynch#
3	E. Middleboro	2	K. Anderson
Contraction and the		0	I Deams
9-30	Boxford	2	J. Berry
Contraction and the	Freetown	15	T. Aversa
9-30		15 5	T. Aversa K. Holmes
9-30 9	Freetown	15	T. Aversa

Decisio V	Vorblas		
Prairie V 16	GMNWR	1	D Cooper
24	Westport	1	D. Cooper M. Boucher
28	MNWS	1	I. Lynch#
29	Holliston	1 m	T. Aversa
30	Halifax	1	
30	Boston (F.Pk)	1 m	S. Arena J. Young
30	Lakeville	1	K. Holmes
30	P.I.	1	T. Young
30	MBWMA	2	P. + F. Vale
Palm Wa		2	r, + r, vale
4	Lincoln	1	W. Petersen
8-30		2 max 4	1/29 S. Arena
9	Concord	2 max 4	M. Pelikan
10	Waltham	1	L. Taylor
10	Sudbury	1	R. Forster#
10	Wayland	1	R. Forster
10		2	M. Rines#
15	Burlington P.I.	35	
15		15+	J. Brown#
	Ipswich		J. Berry
25	Mt. A.	14	M. Rines
27 Bay have	Medford	21	M. Rines
	sted Warbler (de		
28 Comulator	Princeton	1	B. Van Dusen
Cerulean		1	M Diar
25-28		l m	M. Rines $+ v. o.$
	d-white Warbler		
	Mt.A.	1-5	V. 0.
17	Arlington Res.	1	M. Steele#
19	Manomet	1	T. Lloyd-Evans
20	Boston	l m	T. Aversa
27	Medford	6	M. Rines
28	Boston (F.Pk)	6 m	T. Aversa
30	Boxford (C.P.)	12	L. Taylor#
	n Redstart		
		6 max 4	/30 v. o.
17	tary Warbler Andover	1	I Cassing
		1 m	J. Greenspan
19	Milton	1	V. 0.
24	S. Orleans	1	C. McGinley
	ting Warbler	1	Ten denne i com
16-18	Salisbury	1 1.1	Henderson $+ v. o.$
Ovenbird		1 .	DO (I Varanta)
27	Westminster		BBC (J. Kennedy)
29	Mt.A.	1	M. Rines
30	Ipswich	13	BBC (J. Berry)
30	Boxford (C.P.)	6	D. Lange#
	Waterthrush	1	
24	E. Middleboro	1 m	K. Anderson
25	Wayland	1	S. Arena
27	Boxford	1 m	J. Berry
29	Holliston	9 m	T. Aversa
30	Ipswich	3	BBC (J. Berry)
	Waterthrush		
6-30	Boxford (C.P.)	1-4	V. 0.
17	Hardwick	1	M. Lynch#
17	Petersham	3	M. Lynch#
Kentucky		2	
29-30	Mt.A.	1 m	V. 0.
	Yellowthroat		
28	Wayland	2 m	S. Arena
30	Boxford (C.P.)	1	J. Center
30	Ipswich	1	BBC (J. Berry)
			1/ 11.1
30	N. Middleboro	2	K. Holmes
30 Wilson's	N. Middleboro Warbler		K. Holmes
30 Wilson's 29	N. Middleboro Warbler Mt.A.	2	K. Holmes v. o.
30 Wilson's 29 Scarlet Ta	N. Middleboro Warbler Mt.A. anager	1	v . o.
30 Wilson's 29 Scarlet Ta 27	N. Middleboro Warbler Mt.A. anager Brookline		
30 Wilson's 29 Scarlet Ta 27 Rose-brea	N. Middleboro Warbler Mt.A. anager Brookline Isted Grosbeak	1	v. o. H. Wiggin
30 Wilson's 29 Scarlet Ta 27	N. Middleboro Warbler Mt.A. anager Brookline	1	v . o.

Indigo Bu			
10-30		10	fide J. Sones
15	Yarmouthport	1	S. + E. Miller
18	Mattapoissett	1 m	F. Smith
23	Boxford (C.P.)	2	I. Lynch
30	Lakeville	ĩ	K. Holmes
			K. Hollines
Painted I		1.1	
1-11	Brewster	1 m	A. Furman
Rufous-si	ded Towhee		
1	Wayland	1	S. Arena
10	Westford	1	M. Rines#
10	Marshfield	1 m	D. Clapp
1775 16662			
12, 20		5, 11	M. Lynch#
17	Westport		BC (R. Stymeist)
27	Medford	15	M. Rines
American	Tree Sparrow		
5, 12	Worc. (BMB)	13, 2	M. Lynch#
28	Wayland	1	
		4	S. Arena
Chipping			
8	IRWS	1	T. Aversa
8-30	Mt.A.	11 m	ax 4/25 v. o.
9	E. Middleboro	1 m	K. Anderson
10	Boxford	1 m	J. Berry
11		1	
	Wellesley		R. Forster
18	Westport	20	M. Boucher
Field Spa	rrow		
5, 12	Worc. (BMB)	6, 11	M. Lynch#
9	Brewster	1	M. Eddy
9	MBWMA	1	P. + F. Vale
14	Boxford	3	T. Walker#
17	Woburn	4	BBC (D. Oliver)
Vesper Sp			
9, 16	Essex	1	T. Young $+ v. o.$
17	Wellfleet	3	G. d'Entremont#
22	Plympton	1	M. Lynch#
27	W. Roxbury	î	T. Aversa
		1	1. Aversa
Savannah			
4	Cotuit	2	S. + E. Miller
17	Cumb. Farms	48	T. Raymond
24	W. Boxford	20+	T. Young
27	W. Roxbury	43	T. Aversa
28		17	
	Boston (F.Pk)		T. Aversa
	Savannah Sparr		
9	N. Monomoy	1	B. Nikula
Sharp-tail	ed Sparrow		
8	S. Dart. (A.Pd)	1	LCES (J. Hill)
Fox Sparr	ow		
1	Wayland	3	C Arono
2			S. Arena
	Malden	1	P. + F. Vale
2	Waltham	7	L. Taylor
2, 28	Boxford	1, 1	J. Brown#
3	Easton	5	S. Arena
9	Concord	3-4	M. Pelikan
10	Billerica	1	
			R. Stymeist#
10	Wayland	1	R. Forster
27	P.I.	1	L. Nachtrab
Swamp Sp	barrow		
22	Salem	3	I. Lynch
24	P.I.	6	T. Young
24			
	Bolton Flats	11	M. Lynch#
30	Wayland	7	S. Perkins
	bated Sparrow		
25	Mt.A.	53	M. Rines
28	Boston (F.Pk)	112	T. Aversa
White-cro	wned Sparrow		
	Swammersett	1	C T====11-
thr	Swampscott	1	S. Ingalls
1	S. Dartmouth	5	T. Aversa
18	Truro	3	S. Lum
18-22	Watertown	1 ad	J. Heywood#
Dark-eyed		2220552	11111111111111111111111111111111111111
thr	Ipswich	6 max	J. Berry
			Justing

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	Junco (cont.)		
22	E. Middleboro	1	K. Anderson
23	Randolph	1	G. d'Entremont
24	P.I.	1	E. Salmela#
"White-w	vinged" Junco		
1	Marion	1 b (ph) W. Evill
Lapland L	ongspur		
15		3	T. Aversa
28	N. Monomoy	7	B. Nikula
Snow Bur			
19	Ipswich (C.B.)	1	D. Rimmer
25	Dennis	1	K. Hamilton
	feadowlark		
	Newburyport	1	M. Pelikan
24	W. Boxford	3 B	BC (T. Walker)
27	Essex	2	J. Berry
30	Halifax	2 4	K. Holmes
Rusty Bla			
3 24	Wayland 70, 3	30 S. Per	kins R Forster
2	Waltham	pr	L. Taylor
2	Wakefield	4	P. + F. Vale
2 2 5	Lexington	45	M. Pelikan
	Acton	5, 50	
	W. Roxbury	4	T. Aversa
	W. Boxford		BC (T. Walker)
	Westwood	290	E. Nielsen
Orchard (
	Wellesley	1 ad m	R. Forster
30	N. Dartmouth	1	M. Boucher
Northern		*	M. Douener
	Weymouth	2	R. Campbell#
24	Lexington	ĩ	C. Floyd
28-30	Wellesley	1	R. Forster
30	Mt A	2	M. Rines
Purple Fin		-	IVI. INITICS
rupiern	içii		

23	Carlisle 5		(D. Brownrigg)
24	SRV	5	R. Forster
24	P.I.	4 (G. d'Entremont#
29	Holliston	5	T. Aversa
30	Boxford (C.P.)	5+	L. Taylor#
thr	Reports of 1-3 in	ndiv. fro	m 10 locations
Red Cros	sbill		
1	Milton	6	D. Morimoto
3	Quabbin (G40)	24	M. Lynch#
9	Freetown	3	T. Aversa
9	Boxford (C.P.)	6	R. Stymeist#
9-30	Worcester	40	E. Banks
White-wi	inged Crossbill		
thr	Mt.A.	pr	V. O.
1	W. Boylston	6	G. Parker
Common	Redpoll		
1-3	Boxford	1-6	J. Brown#
4	N. Middleboro	1	K. Holmes#
4	Pepperell	60	L. High
4-7	Worcester	80+	E. Banks
9	Natick	2	E. Taylor
12	Lexington	1	M. Rines
Pine Sisk			
2	Boxford	1	J. Brown#
2	W. Boylston	20	E. Salmela
8, 13	Lincoln	1, 2	W. Petersen
	Grosbeak	1.000.000	
3	Barre	15	M. Lynch#
17	Hardwick	10	M. Lynch#
17	Petersham	20	M. Lynch#
19	E. Middleboro	1 m	K. Anderson
27	Boxford	2	J. Berry
29	Wellesley	4	R. Forster
30	Provincetown	10+	B. Nikula#



SPECIAL HAWKWATCH PROGRAM

Clay Taylor, renowned hawk bander at Cape May, New Jersey, and Braddock Bay, New York, will be the special guest speaker at the annual meeting of the Eastern Massachusetts Hawk Watch on Thursday, September 8, 1994. The meeting, which begins at 7:30 PM, will be held at the Nature Center of Massachusetts Audubon's Drumlin Farm Sanctuary in Lincoln. The public is invited, free of charge. For more information, call Paul Roberts at 617-483-4263 (call between 8-9:30 PM).

LIST OF ABBREVIATIONS

ad	adult
alt	alternate
b	banded
br	breeding
dk	dark (phase)
f	female
fl	fledged
imm	immature
ind	individuals
	juvenile
loc	location
lt	light (phase)
m	male
max	maximum
mi	mile
migr	migrating
n	nesting
ph	photographed
pl	plumage
pr	pair
S.	summer (1S = first summer)
thr	throughout
V.0.	various observers
W	winter $(2W = second winter)$
w/	with
H	Harbor
I.	Island
L.	Ledge
M.V.	Martha's Vineyard
Mt.A.	Mount Auburn Cemetery, Cambridge
Nant.	Nantucket
Newbypt	
P.I.	Plum Island
Pd	Pond
Ptown	Provincetown
Quab.	Quabbin
Res.	Reservoir
R.P.	Race Point, Provincetown
S.B.	South Beach, Chatham
S. Dart.	South Dertmouth
S.F.	State Forest
S.N.	Sandy Neck, Barnstable
S.P.	State Park
S.F. Stellw.	
	Stellwagen Bank
Worc.	Worcester
BBC	Brookline Bird Club
BMB	Broad Meadow Brook, Worcester
CBC	Christmas Bird Count
CCBC	Cape Cod Bird Club
DFWS	Drumlin Farm Wildlife Sanctuary
DWWS	Daniel Webster Wildlife Sanctuary
EMHW	Eastern Massachusetts Hawk Watch

yg	young
#	additional observers
A.A.	Arnold Arboretum
A.P.	Andrews Point, Rockport
A.Pd	Allens Pond, S. Dartmouth
Arl.	Arlington
B.	Beach
B.I.	Belle Isle, E. Boston
B.R.	Bass Rocks, Gloucester
Buzz.	Buzzards Bay
Cambr.	Cambridge
C.B.	Crane Beach, Ipswich
Corp. B.	Corporation Beach, Dennis
C.P.	Crooked Pond, Boxford
Cumb. Fa	arms Cumberland Farms,
	Middleboro-Halifax
E.P.	Eastern Point, Gloucester
F.E.	First Encounter Beach, Eastham
F.H.	Fort Hill, Eastham
F.M.	Fowl Meadow
F.P.	Fresh Pond, Cambridge
	Franklin Park, Boston
G40	Gate 40, Quabbin
G45	Gate 45, Quabbin
GMNWF	Great Meadows National Wildlife Refuge
HRWMA	High Ridge Wildlife Management Area,
	Gardner-Westminster
IRWS	Ipswich River Wildlife Sanctuary
LCES	Lloyd Center for Environmental Studies
MARC	Massachusetts Avian Records Committee
MAS	Massachusetts Audubon Society
MBO	Manomet Bird Observatory
MBWM	A Martin Burns Wildlife Management Area, Newbury
MDFW	MA Division of Fisheries and Wildlife
MNWS	Marblehead Neck Wildlife Sanctuary
MSSF	Myles Standish State Forest
NAC	Nine Acre Corner, Concord
NBC	Needham Bird Club
NEHW	New England Hawk Watch
ONWR	Oxbow National Wildlife Refuge
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
TASL	Take A Second Look Harbor Census
USFWS	US Fish and Wildlife Service
WBWS	Wellfleet Bay Wildlife Sanctuary
WMWS	Wachusett Meadow Wildlife Sanctuary

ABOUT THE COVER: YELLOW-CROWNED NIGHT-HERON

The Yellow-crowned Night-Heron (*Nycticorax violaceus*) is more secretive, less gregarious, and much less common in Massachusetts than the Blackcrowned Night-Heron. Adult Yellowcrowns are very distinctive gray birds with contrasting black heads with white crowns (sometimes with yellow or rusty foreheads) and white cheeks. Their eyes are orange or red, and their legs are yellow. Sexes are similar in plumage, but males are slightly larger. They have a more upright posture, longer, thinner necks, and shorter but deeper bills than Black-crowned Night-Herons. Most individuals seen in Massachusetts, however, are immature birds, which are much more difficult to distinguish from immature Blackcrowns. Immature Yellow-crowned Night-Herons have the same posture and shape as adult birds, and appear less spotted and are more bluishgray than immature Blackcrowns. Perhaps the best distinguishing character is the fact that the feet and legs protrude well beyond the tail in flying Yellowcrowns.

The Yellow-crowned Night-Heron is placed in its own genus (Nyctanassa) by some taxonomists, and recent DNA-DNA hybridization work suggests that the Yellow-crowned Night-Heron and Black-crowned Night-Heron, although



Yellow-crowned Night-Heron

Illustration by W. E. Davis, Jr.

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similar in appearance, are as genetically divergent from each other as each is from most day-heron species. There are six subspecies generally recognized, only one of which, *N. v. violaceus*, occurs within the United States. They breed from Massachusetts (rare but regular) south along the Atlantic and Gulf coasts, and inland along the Mississippi River system as far north as Wisconsin, and west to Oklahoma and Texas. Breeding Yellowcrowns are found along both coasts of Mexico, Central America, and as far into South America as southern Ecuador, Galapagos Islands, and Brazil.

They are uncommon spring migrants in Massachusetts, and scattered pairs probably begin nesting in April. The first Massachusetts nest was found in Ipswich in 1928, and breeding occurred in Marshfield for several decades beginning in the late 1930s. Recent breeding has taken place at Plum Island, Westport, Martha's Vineyard, and Nantucket. Like many heron species, they have a pronounced postbreeding dispersal, which probably accounts for many of the late summer and fall sightings, including those inland as far as Berkshire County. They winter from North Carolina south along the Atlantic and Gulf coasts and possibly as far south as Panama.

Yellow-crowned Night-Herons in much of their range breed in small to large colonies, but tend to be solitary nesters at the limits of their range. They are presumably seasonally monogamous and single brooded. Most nest near coastal marshes, or in trees or shrubs near water. They generally roost in tall trees.

They give the familiar quock or quack when flushed from a marsh, slightly higher in pitch than the call of the Black-crowned Night-Heron. They utter a wide variety of calls during courtship and nesting, including woks associated with nest relief ceremonies, and whoops with the spectacular stretch displays where birds stand with tail and partially open wings pointing up, neck curved back and bill pointing up, while scapular plumes are fanned into a forward directed ruff. Circle fights, pursuit flights, and supplanting attacks accompany pair formation. Yacks, scaups, quorks, and guchs are also associated with nesting behavior, and ahh-ahhs and squawks with aggression. Bill clappering and feather nibbling are common between members of a nesting pair. Also, at the height of courtship, bills turn glossy black, lores change from yellowish to dark green, irises to scarlet, and legs to scarlet or bright orange.

The nests are placed from near to the ground to 40 feet or so up willows, pines, or cypress, in some areas mangroves, or even in prickly-pear cactus on dry Caribbean islands. They may reuse old nests or dismember them for nesting material. Nests are characteristically thick structures several feet across of large sticks, lined with rootlets or leaves. The usual clutch is four to five smooth bluish green eggs. The incubation period is three to four weeks, and by the sixth week the young can fly short distances—by eight weeks to the foraging grounds.

Both parents feed the young, usually by regurgitation on to the nest floor.

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They feed in coastal marshes, tidal mudflats, stagnant backwaters, bayous, swamps, and mangroves. They are more diurnal in their feeding than Blackcrowned Night-Herons, but their large eyes are probably adaptations for crepuscular and nocturnal foraging. The tide cycle may affect their feeding schedule. Their prey are mostly crustaceans, with crabs and crayfish preferred items. They also eat mollusks, snails, frogs, snakes, and young birds. They will feed opportunistically on an abundant resource (e.g., grasshoppers). They rarely eat fish. They usually forage by standing or walking slowly, and are often seen head swaying and neck swaying as they stalk their prey. Their status has remained largely unchanged in Massachusetts during the past half-century. During the nineteenth century in North America their range was reduced to largely coastal areas, but they have expanded their range in the twentieth century up to and beyond their former range. They were not hunted for plumes. but are reported to be, or have been, a favored food item in parts of the south. They have adapted well to human habitation, and are often seen in campgrounds or parklands in much of their range. W.E. Davis, Jr.

ABOUT OUR COVER ARTIST

Paul Donahue's artwork last appeared on *Bird Observer*'s cover in June 1993. Paul can be reached at P.O. Box 554, Machias, Maine 04654.

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

AT A GLANCE June 1994 _____ Wayne R. Petersen

Perched hawks! What a tough and often humiliating experience they can create for even the most avid and experienced hawk watchers. Unlike the dot in the sky that is usually going away and mercifully seldom allows a second look, a perched hawk leaves little room for retreat when a controversial identification is involved.

June's mystery hawk is entirely typical of the problem—a lone individual with only tree branches for comparison; an immature, as suggested by the streaked underparts (a condition found in only a few adult North American hawks); and no obvious flight behavioral characteristics to lend a clue. Given these realities, it is necessary to carefully analyze the bird—its shape, structure, and pattern-in order to determine its correct identity.

Structurally, the bird is very heavy across the chest, and it appears to have a fairly long tail. On the basis of the bird's heftiness, one might be tempted to think *Buteo*; however, the tail length is much longer than is typical of these otherwise chunky birds. Furthermore, the largest and heaviest of the Massachusetts *Buteos*, the Red-tailed and the Rough-legged hawks, both have distinctive underpart patterns. Redtails normally display a white, unpatterned chest, no matter how much belly streaking they possess. Roughlegs, on the other hand, usually show a variably dark belly band and a pale head with a necklace of dark streaks when in their light morph. Furthermore, Roughlegs often perch on the tops of trees or bushes and not as often on a branch in the center of a tree the way the pictured bird is doing.

Returning to the bulkiness of the bird and its long tail, we are ultimately left with the possibility of the bird being either a large *Accipiter* or a large falcon. Gyrfalcons and Peregrine Falcons are somewhat disinclined to perch in trees, especially the Gyrfalcon, which normally breeds in treeless environments and prefers to perch on or close to the ground or on high, cliff-like perches. Accipiters, however, typically perch in the middle of a tree much like the bird in the photo.

Important features of the mystery bird are a prominent eyebrow stripe, fine ventral streaks that seem to include the flanks and the midbelly, wavy (rather than straight) tail bands, and noticeably pointed tips to the central tail feathers. The combination of these features, along with the absence of a whitish, unstreaked belly and clearly rounded tail feathers lacking white terminal tips, suggest that the bird is not an overly robust female Cooper's Hawk. In addition,



the rather flat-headed, and not roundheaded, appearance and the lack of any obvious facial stripes or fine banding on the tail indicates that the bird is unlikely to be a Gyrfalcon or a Peregrine Falcon.

The inevitable conclusion is that the bird is an immature Northern Goshawk (Accipiter gentilis). The goshawk in the picture was photographed during the winter in Tiverton, Rhode Island by Linda M. Gray.

AT A GLANCE



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



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