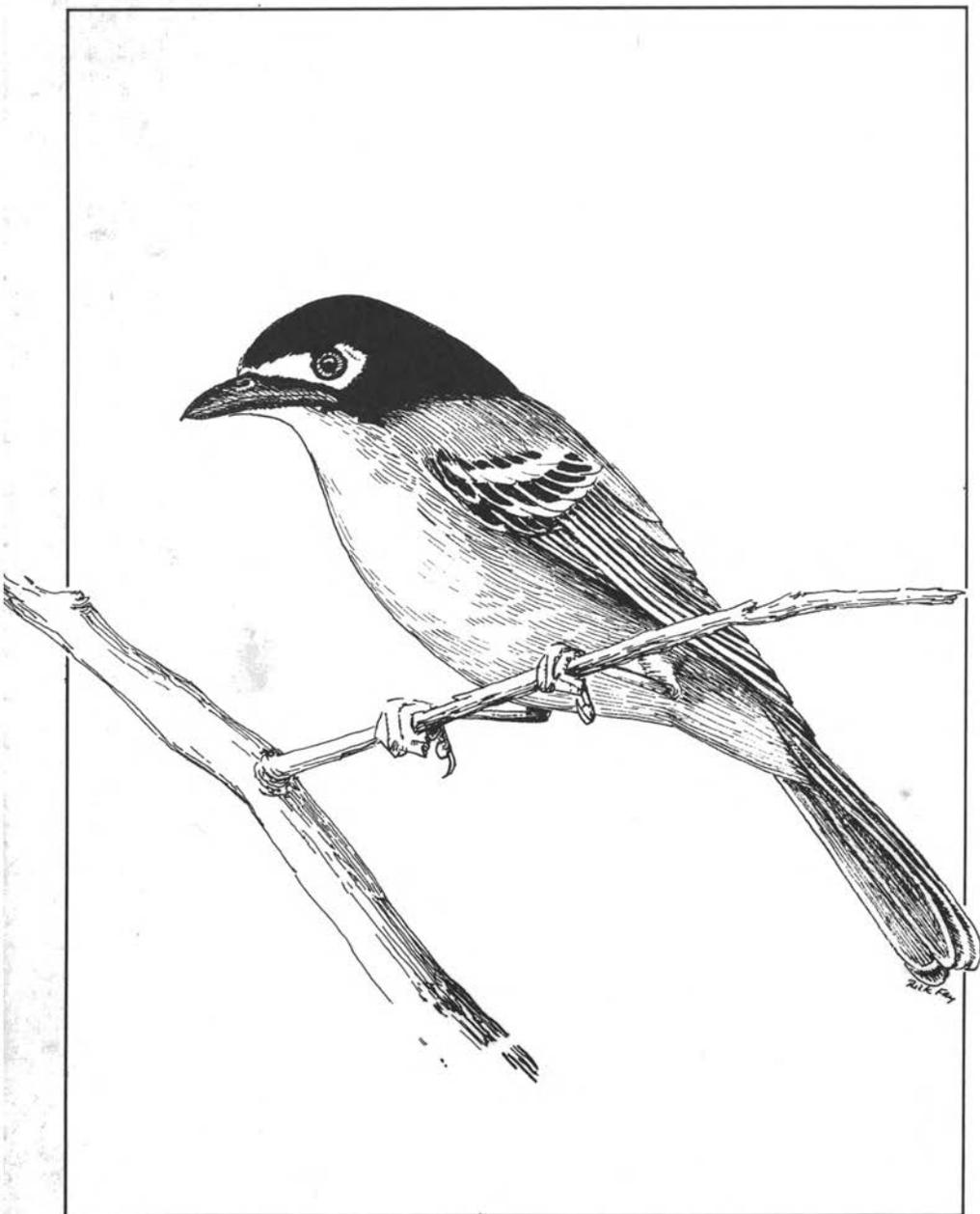


BIRD OBSERVER



VOL. 20 NO. 1
FEBRUARY 1992



BIRD OBSERVER

• a bimonthly journal •

To enhance understanding, observation,
and enjoyment of birds.

VOL. 20, NO. 1 FEBRUARY 1992

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POSTMASTER: Send address changes to
BIRD OBSERVER, 462 Trapelo Road, Belmont, MA 02178.

SUBSCRIPTIONS: \$16 for 6 issues, \$30 for two years in the U. S. Add \$2.50 per year for Canada and foreign. Single copies \$4.00. An Index to Volumes 1-11 is \$3. Back issues: inquire as to price and availability.

CHANGES OF ADDRESS and subscription inquiries should be sent to
Bird Observer Subscriptions, P. O. Box 236, Arlington, MA 02174.

ADVERTISING: full page, \$80; half page, \$40; quarter page, \$25. Send camera-ready copy to Bird Observer Advertising, P. O. Box 236, Arlington, MA 02174.

BIRD SIGHTINGS: Send reports of any given month in writing by the eighth of the next month to

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ISSN: 0893-4630

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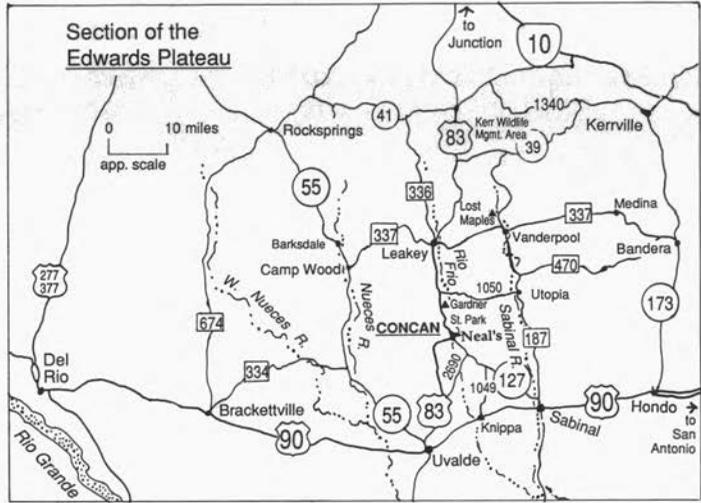
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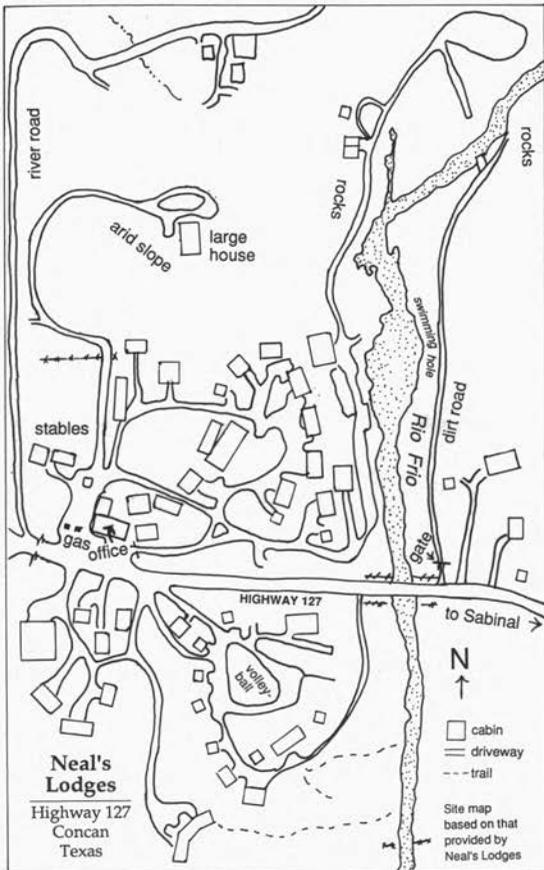
With this issue, *Bird Observer* changes the title of its monthly summaries of birds seen in eastern Massachusetts from "Field Records" to "Bird Sightings." The change was prompted by the recent establishment of the Massachusetts Avian Records Committee (MARC), which will be responsible for verifying unusual bird sightings. The MARC will also serve as a repository for the documentation supporting the occurrence of unusual birds within Massachusetts. *Bird Observer* will regularly publish the findings of the MARC and will continue to provide monthly summaries of bird sightings throughout the eastern Massachusetts region. More details on the establishment and function of the MARC will appear in a future issue of *Bird Observer*.

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Maps by J. L. Heywood, 1992



CONCAN ON THE EDWARDS PLATEAU, TEXAS

by John C. Kricher and William E. Davis, Jr.

The Edwards Plateau, part of the "Texas Hill Country," is a land of juniper-covered hillsides, limestone soils, scrubby oaks, diverse wildflowers, and canyons rich with picturesque riverine plant species. The entire area of the plateau is confined to central Texas, from Austin and San Antonio west to Fort Stockton and Midland. Annual rainfall is about thirty inches in the easternmost part of the plateau but is reduced to between ten to fifteen inches in the western parts. Because of low rainfall, the forests of the Edwards Plateau consist for the most part of small trees and scattered shrubs. The Edwards Plateau is ecologically unique, supporting at least seven endemic wildflower species as well as two endangered bird species, the Golden-cheeked Warbler and the Black-capped Vireo. Commonly seen mammals include nine-banded armadillo, white-tailed deer, fox squirrel, and Mexican free-tailed bat.

The Edwards Plateau is surely one of the most scenic and ecologically interesting areas in Texas, a state with no shortage of good areas for naturalists. The well-eroded limestone, found throughout the region, forms diverse landscapes of hills, flatlands, and sheltered river valleys. Waters are cool and clear, often densely shaded by overarching bald cypress and cedar elm. Exposed hillsides are baked in summer's heat, and only the hardy Ashe juniper and some associated shrubs can thrive. The forest is generally open and easy to walk through, although some areas of dense Ashe juniper and oaks can be essentially impenetrable. Terrain is almost always uneven, except in some areas largely given over to ranching.

The most characteristic tree of the Edwards Plateau is Ashe juniper, commonly called Mexican, mountain, or blueberry cedar. This tree ranges northward into Oklahoma, Arkansas, and Missouri, but is most abundant throughout the "Hill Country" of central and northeastern Texas. It shows a high affinity for limestone soils, to the extent that its presence indicates limestone. The tree is bushy, almost shrublike, and often grows in dense, clumped stands called "cedar brakes." The tree can survive for up to 350 years, producing abundant cones about every two or three years. Many bird and mammal species feed on juniper cones. Ashe juniper is tolerant of natural fires, but fire suppression, as well as forest clearance, has led to a reduction in Ashe juniper in many places on the plateau.

Several oak species form a major part of the vegetation of the Edwards Plateau. Two species, live oak and lacey oak, are both common, but other species such as post oak, Texas oak, bigelow oak, and chinquapin oak are often seen as well. Lacey oak is essentially confined to the Edwards Plateau, but live oak is common throughout the southeast, especially along coastal regions. Oaks of the Edwards Plateau tend to be small in stature (rarely reaching fifty feet) but

often widely spreading, somewhat like large shrubs. Oaks seem to attract air plants, also called epiphytes, and the inner branches in particular are frequently lined with attached plants. Most prominent on the Edwards Plateau is ball moss, which looks at first glance like a thick hairball, but is, in reality, a close relative of Spanish moss as well as the many bromeliad species that characterize tropical rain forests. Ball moss grows densely on oak branches but also attaches to telephone wires.

Leguminous plants, including trees, shrubs, and wildflowers, abound on the drier slopes of the Edwards Plateau. Honey mesquite is common, as are pink mimosa, catclaw acacia huisache, Texas redbud, and sensitive briar. This latter species is among the "sensitive plants," whose compound leaves seem to instantly wither when touched. The colorful Texas bluebonnet, which blooms from March through May, is one of the many leguminous wildflowers.

Agarita is among the commonly encountered shrubs on the plateau. At first glance agarita appears to be a small species of oak. The leaves are sharply lobed and oaklike. However, the plant is a desert-adapted shrub that blooms with yellow flowers from February to April, followed by bright red berrylike fruits. Leaves are compound with three to seven very sharply pointed leaflets, so sharply pointed, in fact, that they remind the careless walker of cactus. Do not grab an agarita.

A great attraction of the Edwards Plateau is the amazing diversity of wildflowers that carpet the plateau from early spring through summer. From colorful cactus, like prickly pear, to the unmistakable firewheel, the field botanist has an embarrassment of riches to sort through. Over 400 species of wildflowers have been found on the plateau including several endemics (Enquist 1987). These include sycamore-leaf snow-bell, Texas barberry, canyon mock orange, scarlet leatherflower, bracted twist-flower, plateau milkvine, and two-flower anemone.

The sharp geological relief of the Edwards Plateau includes valleys where clear streams and rivers flow. The vegetation along these riverine areas includes an abundance of bald cypress, cedar elm, Texas black walnut, Texas ash, sugar hackberry, and eastern cottonwood. Riverbanks are often draped with vines such as western white honeysuckle, saw greenbriar, winter grape, and sweet mountain grape. In the quiet shade of the river's edge, you may find Green Kingfisher.

Birds of the Edwards Plateau

The Golden-cheeked Warbler, which nests only in central Texas and mostly on the Edwards Plateau, depends on Ashe juniper for nesting material. This warbler uses bark strips taken from Ashe juniper to line its nest. Indeed, the bird often places its nest in a juniper, though other tree species may be used as well for nest sites. Golden-cheeked Warblers arrive in Texas in March and remain until breeding is completed in late July. They forage among mixed oaks and

Ashe juniper, often near water, frequenting broad-leaved trees such as Arizona walnut, cedar elm, and big-tooth maple (Oberholser and Kincaid 1974). You may have to search—a Goldencheek pair can have a territory of as much as twenty-five acres, although in more food-rich habitats territory size is closer to three acres (Pulich et al. 1989). After breeding season, Goldencheeks migrate along the Mexican Sierra Madre Oriental mountains to their wintering range in Nicaragua, Honduras, and Guatemala.

The Golden-cheeked Warbler is an endangered species that has seriously suffered both from habitat loss and nest failure due to parasitism by Brown-headed and Bronzed cowbirds, both of which abound in the region. In extreme cases, a Golden-cheeked Warbler pair may raise more cowbirds than warblers.

Another bird species, the Black-capped Vireo, also has been victimized by habitat reduction and cowbird parasitism (Grzybowski 1991). Like the Golden-cheeked Warbler, it too is federally listed as an endangered species. Black-capped Vireos range from Mexico and southern Texas north to parts of Oklahoma and Kansas, but they thrive on the Edwards Plateau, particularly among the dense oaks (Oberholser and Kincaid 1974). Unfortunately, much of this favored habitat has been cleared to make room initially for ranching and, more recently, for housing developments. This habitat loss, plus increasing pressures by both previously mentioned cowbird species, have made the future of the Black-capped Vireo precarious. The vireo is an active bird, singing its harsh warbling song while foraging. It can sometimes be hard to see, as it often remains among the dense, shaded branches of thick oaks.

The bird community of the Edwards Plateau represents a unique mixture of eastern and western species, plus several species, such as the Green Kingfisher, Olive Sparrow, and Long-billed Thrasher, each more typical of the Lower Rio Grande Valley. One species that has increased dramatically in recent years is Cave Swallow. This bird, which closely resembles the more widely spread Cliff Swallow, is identified by its pale throat and dark chestnut forehead (exactly the opposite of the pattern on the Cliff Swallow). Cave Swallows nest in many places on the plateau including roadside culverts, picnic shelters, and, as the name implies, caves.

Where To Visit

Several state parks across the Edwards Plateau afford ideal opportunities to see the natural history of the region. These include Garner, Meridian, Pedernales Falls, and Lost Maples parks as well as the Kerr Wildlife Management Area. Lost Maples is particularly recommended, as it not only includes all of the representative species mentioned above, but also contains a relict population of bigtooth maple, a close relative of eastern sugar maple. Bigtooth maple is widely distributed in the far west, but only a few small relict stands, believed to be remains from Ice Age climatic effects, occur in Texas and Oklahoma.

Concan and Neal's Lodges

Perhaps the best place to see nearly all that the Edwards Plateau has to offer the naturalist and birder is the diminutive town of Concan. Diminutive is the right word: there really is no town, just a little sign and a hospitable lodge, named Neal's. Neal's is most easily reached from San Antonio (the nearest place where commercial jets land) by traveling west on Interstate 90 to Sabinal and taking Route 127 north. The drive requires at most three hours, even with a birding stop or two to watch roadside Dickcissels, Scissor-tailed Flycatchers, or a Crested Caracara. As you drive north on Route 127, the Edwards Plateau will loom ahead, a green escarpment adding sharp relief to an otherwise flat, agricultural landscape. As you approach the plateau, scan the grassy fields for Grasshopper Sparrows and, in fields with scattered shrubs, listen for Cassin's Sparrows. Great-tailed Grackles and White-winged Doves are common roadside species. At scattered tree-lined ponds you should find Vermilion Flycatcher and possibly Black-bellied Whistling Duck.

Neal's Lodges is located on the banks of the Rio Frio, and has been a popular vacation spot since 1927. There are feeders located at the general store and registration area, and the first species you will likely see are Brown-headed and Bronzed cowbirds along with a few House Finches. This is, of course, an ecological disaster in the making, since the two cowbird species are brood parasites, and both have been implicated in contributing to recent dramatic reductions of Black-capped Vireo and Golden-cheeked Warbler populations. Since Neal's attracts and hosts many birders, the presence of these feeders and their parasitic clientele is both ironic and disturbing, suggesting that environmental education has a long way to go. Indeed, the proprietors of Neal's are quite aware of the exciting birdlife and will cheerfully inform the birder of where on the premises to find Black-capped Vireos and Golden-cheeked Warblers. But—they feed cowbirds.

Once settled in our cabin, we began our search for the Black-capped Vireo by taking a leisurely walk through the cabin area, ambling toward the Rio Frio. We found Golden-fronted and Ladder-backed woodpeckers as well as Scrub Jays in the oaks right around the cabins, and, in the scrubby thicket behind our cabin, there were Ash-throated Flycatchers (Great Crested Flycatcher is present in the area as well), Bewick's Wrens, Black-chinned Hummingbirds, Blue-gray Gnatcatchers, and the black-crested race of Tufted Titmouse. Although it took some patient searching, including seeing both Red-eyed and White-eyed vireos first, we finally got good views of a female Black-capped Vireo. Remember that both Black-capped Vireo and Golden-cheeked Warbler are federally endangered species, so using tape recorders is illegal. Black-capped Vireos are actually more common at Neal's than at most other areas on the Edwards Plateau, and, in our three days there, we found four or five pairs, many affording stunning views of singing males.

A short walk along Route 127 and across the Rio Frio produced Yellow-breasted Chat, both Painted and Indigo buntings, and the dark-backed form of Lesser Goldfinch. We observed a territorial pair of Black-capped Vireos in shrubs along the roadside. Northern Rough-winged, Barn, and Cliff swallows were joined by a few Cave Swallows at the river. We soon learned, however, that the best place for Cave Swallow was 0.5 mile west of the lodge at a roadside park on the left. Cave Swallows place their nests beneath the eaves of the roofs covering picnic table areas.

After crossing the Rio Frio on Route 127, we climbed over a metal gate (it is okay to do this—the owners do not object to birders) and followed a dirt road that parallels the river. We encountered several Black-capped Vireos in the oaks and dense shrubs, and found singing Yellow-throated Warblers and Hooded Orioles in the canopy of bald cypress and cedar elms that line the riverside. We observed Olive Sparrow skulking among the shady undergrowth, revealing its presence by its odd, distinctive song, with a cadence like a ping pong ball bouncing and coming to rest. An Acadian Flycatcher was also singing demonstratively. A walk of about a half-mile brought us to an open field. High on the tall trees lining the field, we found a singing male Golden-cheeked Warbler. Earlier, some birders had reported observing this bird feeding its young (among which there were no cowbirds). Golden-cheeked Warblers are not as abundant at Neal's as Black-capped Vireos, but there are other places nearby where they are more abundant (see below).

Across the highway from Neal's store are several dirt roads that wind through the cabin complex. The road nearest the Rio Frio passes a volleyball field with thick shrubs and dense trees around it. We found Long-billed Thrasher here. One road leads to an open savannalike habitat with grassy areas interspersed by small copses of trees. This area is real estate for Rufous-crowned, Lark, and Field sparrows. It is also littered with the partially decomposed bodies of old automobiles, if you should perhaps happen to need a radiator cap from a '59 Chevy truck.

Just behind Neal's store there is yet another dirt road that crosses a cattle guard and bears left, passing several stables and leading up a hillside to a large house (where birding luminaries such as Victor Emanuel get to stay). The habitat is arid and desertlike, and includes acacias, mesquite, and large clumps of prickly pear cactus. Birds found here included a persistently singing Bell's Vireo (and yet another pair of Blackcaps), Cactus Wren, Black-throated Sparrow, Curve-billed Thrasher, Canyon Towhee, Verdin, Summer Tanager, Pyrrhuloxia, and Greater Roadrunner.

From dusk through the evening hours, Chuck-will's-widows are vocal, and Common Poorwill sometimes joins the caprimulgid chorus. We heard only "widows."

We recommend a short drive just before dusk to see Mexican free-tailed

bats—lots of Mexican free-tailed bats. Drive south toward Sabinal on Route 127 for about five and one-half miles, and take Farm Road 2690 to the right. Drive about one mile and stop, looking to the north (on your right). You are at a ranch that contains a cave occupied by about ten million (!) Mexican free-tailed bats. At dusk they begin exiting the cave and stream like mammalian smoke trails across the darkening sky. The bats range widely over central and southern Texas, foraging on flying insects and returning to their cave at dawn. Despite their seemingly vast numbers, Texas populations of Mexican free-tailed bats are vulnerable to habitat loss (the caves) as well as deleterious effects of pesticides sprayed on fields and picked up by the bats' insect prey. Be aware that the bat cave itself is not easy to find and is located on private property. **DO NOT TRESPASS.** Texans generally view property rights somewhat differently from New Englanders and think nothing of hiding explosive devices containing poison for coyote control. Should you accidentally trigger such a device, you would strongly regret it, and, if you survived, you would still be legally in the wrong since you did, in fact, trespass.

There are several other outstanding birding areas within a reasonably short drive of Neal's Lodges. We drove north from Concan, taking Route 83 north to Leakey, turning right on Route 337 toward Vanderpool. We found a pair of Green Kingfishers nesting in the clay banks along a river just east of Leakey. You are advised to inquire about this species. It is sometimes along the Rio Frio at Neal's but may occur at various scattered locations from one year to the next.

At Vanderpool we turned left and followed Route 187 north for a few miles to Lost Maples State Natural Area on the left. At the headquarters we obtained a bird list and map showing dirt roads and hiking trails. For years the trailhead parking lot has been known as one of the best spots to find Golden-cheeked Warbler. We certainly were not disappointed, hearing the buzzy song of a male even as we exited from our car. If by chance you do not encounter a Goldencheek in this area, ask at headquarters, as the park personnel monitor where all the Goldencheek territories are located. Lost Maples lists about 200 bird species, including Black-capped Vireo, so a morning of birding here should be quite productive.

Another route we recommend is to drive to Leakey and turn left, heading west toward Camp Wood. The drive is extremely picturesque, taking you past hills of limestone laden with Ashe junipers. In the sky above, scan the vulture and Common Ravens with care, because this is a prime location for finding Zone-tailed Hawk, which flies very much like a Turkey Vulture, perhaps even acting as a vulture mimic. The country flattens into an arid landscape abounding with roadside birds such as Verdin, Eastern and Western kingbirds, scores of Scissor-tailed Flycatchers, Northern Bobwhite, Eastern Bluebird, Pyrrhuloxia, Blue Grosbeak, and Loggerhead Shrike.

Neal's Lodges features more than fifty guest cabins, RV hookups, and rustic

camping facilities. In the off-season (before Memorial Day) the cabins rent for \$25.00 (per person), \$32.50 (two persons), and \$40.50 (three or more persons) per night. April and May are the best months for breeding birds, especially the Golden-cheeked Warbler and Black-capped Vireo. Also during these months the number of vacationers is low, so the birding is less subject to "anthropogenic distractions." Our visit was from May 20 to 22, 1991. The lodge provides linens but not towels or blankets. Most of the cabins have kitchenettes but do not count on much in the way of utensils or dishes. The cabins contain either air conditioners or evaporative coolers, neither of which we needed as the nights are pleasantly cool. The general store has soft drinks and groceries, but you will probably want to buy your food along the way from San Antonio, or take your meals at Neal's rustic cafe, which includes both indoor and outdoor dining facilities. Prices for dinner range from \$6 to \$10, and the food is representative of good Texas cuisine. For information and reservations, call 512-232-6118, or write Neal's Lodges, Concan, TX 78838.

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JOHN C. KRICHER is an author and professor of biology at Wheaton College who has contributed many articles to *Bird Observer* and who serves as department head for feature articles and field notes. Part of this article was adopted from his forthcoming Peterson field guide to the ecology of western forests, which will be a companion volume to his field guide on eastern forests.

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FOREST FRAGMENTATION AND THE DECLINE OF MIGRATORY SONGBIRDS

by Robert A. Askins

During the summer of 1953 William Niering and Richard Goodwin initiated a study of the birds and vegetation in the Connecticut College Arboretum in New London. They surveyed plants and counted singing birds in two adjacent study sites: a shrubby old field that had been abandoned a few years previously, and an old, but storm-damaged, oak-hemlock forest. Their intent was to monitor the old field as it changed to a thicket and then to a young forest. The oak-hemlock forest would serve as a relatively stable "control," a baseline for comparison. How long would it take before these two distinctly different sites shared similar arrays of plants and animals?

Changes in the birdlife of the old field were predictably dramatic. The Ring-necked Pheasants, American Goldfinches, and Song Sparrows of the open grassland were replaced by Brown Thrashers, Prairie Warblers, Yellow-breasted Chats, and other thicket species, which in turn disappeared as the young forest was colonized by Black-capped Chickadees, Wood Thrushes, and Red-eyed Vireos (Askins 1990). Unexpectedly, the bird community of the mature forest displayed changes that were nearly as dramatic. By the early 1970s many voices had disappeared from the morning chorus of early summer in the forest. Eastern Wood-Pewee, Canada Warbler, American Redstart, and Black-throated Green Warbler were gone; and Red-eyed Vireo and Hooded Warbler had declined precipitously (Butcher et al. 1981). The forest had become more mature as the tree canopy closed, creating what appeared to be a more favorable habitat for at least some of these forest bird species, but they declined nonetheless.

This change was particularly alarming because it paralleled changes at many other forest sites in eastern North America. Many of the same species had declined at four sites near Washington, D.C., two sites in northern New Jersey, and one site in upstate New York (Askins et al. 1990). A particularly severe collapse in the diversity of forest birds was recorded at Greenbrook Sanctuary, a preserve on the Palisades above the Hudson River. Between the late 1940s and the 1980s, the following species disappeared from this study site: Eastern Wood-Pewee, Yellow-throated Vireo, Black-throated Green Warbler, American Redstart, Ovenbird, and Hooded Warbler (Serrao 1985). Most of the species that declined at Greenbrook Sanctuary and the other sites shared two characteristics: they are forest specialists (species that normally nest in the interior of forests, away from open habitats) and neotropical migrants (species that nest in the North American temperate zone and winter in the tropics).

What Caused The Decline?

Initially, these declines were attributed to destruction of winter habitat (Briggs and Criswell 1978; Morton 1980). During the winter neotropical migrants are concentrated in Mexico, northern Central America, and the northern West Indies, regions where forests and other natural habitats have been destroyed at a rapid rate since the late 1940s. Because migratory birds spend more than half of the year in their winter habitats, a severe reduction in the amount of this habitat potentially could have a major impact on their populations.

An alternative explanation emphasized a consistent characteristic of the sites where these declines have occurred; they are relatively small nature preserves or parks, "islands" of woodland in an urban or suburban sea (Whitcomb et al. 1981). In most cases these sites have become increasingly islandlike and increasingly isolated from other forests as residential and commercial areas have spread across the surrounding region. For example, between 1950 and 1985, the period in which forest birds declined at several sites near Washington, D.C., the amount of forest in the four counties surrounding the city was reduced by thirty to forty percent (T.W. Birch, personal communication). As the remaining patches of forest became more isolated, they may have been colonized by fewer birds dispersing from other forests. If a small population on one of these forest islands declined, it would not be replenished by immigrants from other sites (Brown and Kodric-Brown 1977). Consequently, the species restricted to these islands (i. e., the forest specialists) would suffer a high rate of extinction.

During the 1980s it became clear that high extinction rates in small forests had a much more immediate cause than their isolation from other forest bird populations. Although the interior of a small forest patch may look superficially similar to the interior of a large forest, it is a distinctly different, and much more hostile, environment for forest birds. Small forests are readily penetrated by an array of predators that thrive on the forest edge and in the surrounding rural or suburban habitats. Raccoons, feral cats, American Crows, and Blue Jays reach the heart of small forests and prey on the eggs and young of forest birds. Many species of forest birds are particularly vulnerable to these nest predators because they build open-cup nests on the ground or low in the shrub layer. Brown-headed Cowbirds may also be abundant near the forest edge (Brittingham and Temple 1983). They parasitize the relatively accessible nests of forest-interior birds, reducing nest success even further. In a study of six small woodlots in Illinois, Robinson (1988) found that eighty percent of the nests were destroyed by predators and sixty-five percent of the susceptible nests were parasitized by cowbirds. Recently, the reproductive rates of Ovenbirds were determined in a large tract of forest and in eleven small forest patches (fourteen to one hundred and eighty-three hectares) near Hawk Mountain, Pennsylvania (James Bednarz,

personal communication). Apparently because of high predation rates, only six percent of the males in the small forests fledged young. In contrast, fifty-nine percent of the males in the large forest were successful. Moreover, Temple and Cary (1988) showed that nest success rates were substantially lower near the forest edge than in the interior of large forests. Even the center of a small forest patch is close to the forest edge, so there may be no refuge from predators and cowbirds.

Two lines of evidence indicate that the severe population declines that have occurred in small forests are due to problems with the breeding site rather than to destruction of winter habitat. First, the severe declines documented in small forests generally have not characterized populations of neotropical migrants in extensive forests. Wilcove (1988) found no evidence for an overall decline in neotropical migrants in Great Smoky Mountains National Park between 1947 and 1983. Moreover, at two sites in the heavily forested White Memorial Foundation in Connecticut, the abundance of migrants increased significantly between 1965 and 1988 (Askins et al. 1990). In contrast, populations of some migrants declined at a site in the White Mountains of New Hampshire, but this was probably due to changes in forest structure and insect abundance (Holmes and Sherry 1988). Hence the consistent and severe decline of migratory bird populations in small preserves is not apparent in the few large forests where bird populations have been monitored.

The second line of evidence comes from surveys of numerous forests in the same region. Studies in Wisconsin, Maryland, Illinois, Missouri, Ontario, and Connecticut have revealed the same basic pattern: both the diversity and density of migratory forest birds is higher in large forests than in small forests (Askins et al. 1990). For example, Robbins and coworkers (Robbins et al., *Habitat Area*, 1989) surveyed birds in 271 forests in Maryland and surrounding states. All forests were surveyed in the same manner; birds were counted at a single survey point in the interior of the forest. The probability of occurrence was higher in larger forests than in smaller forests for twenty-six species, most of which are neotropical migrants. Moreover, some species, such as Cerulean Warbler and Black-throated Blue Warbler, occurred only in large forests. These results support the contention that small forest patches do not provide favorable breeding habitat for a large number of species of forest migrants.

During the 1970s the Connecticut College Arboretum fit this pattern very well (Butcher et al. 1981); several species of forest migrants had declined and disappeared during the 1960s and 1970s, a period when woods south of the study area were replaced with shopping centers and a highway interchange. When Margaret Philbrick and I revived this census in 1982, we fully expected to find that more species of forest birds had been lost from the study area. During the most recent census, in 1976, Red-eyed Vireo and Hooded Warbler had seemed to be on the verge of disappearing (Butcher et al. 1981). However,

we soon discovered that, far from going extinct at the study site, these species had increased (Askins and Philbrick 1987). Also, Eastern Wood-Pewee, which had disappeared from the site during the 1970s, was again present. The overall density of neotropical migrants had increased, and it remained high through 1991 (although never as high as in the 1950s) (Askins 1990). During the late 1970s and the 1980s, the study site was becoming less isolated due to the growth of forest on abandoned farmland to the west and north, a process that was well documented by the surveys of vegetation and birds in the adjacent old-field study area. Perhaps the bird populations in the forest study area have become buffered from nest predators and cowbirds by the bands of new forest along its western and northern borders.

Have Neotropical Migrants Shown An Overall Decline?

Forest fragmentation has probably resulted in the decline of migratory songbirds in Washington, D.C., northern New Jersey, and other regions where extensive suburban development has occurred during the past four decades. The total amount of forest has progressively increased in other regions of the Northeast, however (Birch and Wharton 1982; Brooks and Birch 1988), and this has probably resulted in a reduction in the amount of forest fragmentation. Hence it is not clear that forest fragmentation would have caused an overall decline in populations of neotropical migrants. Although forest fragmentation may be localized, the effect on bird communities would be highly conspicuous because the rate of fragmentation would be highest in heavily populated regions where observers are concentrated.

Studies in heavily forested areas such as the Great Smoky Mountains do not consistently show that neotropical migrants have declined, but unfortunately only a few long-term censuses have been maintained in such remote areas. A better source of information on general trends in migratory songbird populations is the Breeding Bird Survey (BBS), a system of more than two thousand roadside survey routes in the United States and Canada (Robbins et al. 1986). These routes are surveyed once each breeding season. Between 1966 and 1979, BBS results indicated that the populations of most species of forest migrants were increasing (Robbins et al. 1986), which is opposite to the trend displayed in many small forests during the same period. Between 1978 and 1987, however, most species of migrants that nest in forests were declining (Robbins et al., *Population Declines*, 1989). Population declines were particularly prevalent in species that winter in tropical forests rather than in second-growth habitats, suggesting that destruction of tropical forests caused the declines. Perhaps the dramatic population declines in suburban forests masked the much more subtle, but ultimately more important, declines due to loss of winter habitat.

Additional evidence for a long-term decline comes from the field notes of

Ludlow Griscom and Norman Hill for spring migration in eastern Massachusetts between 1937 and 1989 (Hill and Hagan 1991). Most species of migratory songbirds were detected progressively less frequently during this period. Most disturbing, the total number of migrants detected per hour fell by sixty-four percent between 1954 and 1987. In addition, counts of spring migrants at Long Point, Ontario, indicate that most species of migratory songbirds declined between 1961 and 1988 (Hussell et al. in press).

Although these results are alarming, they do not tell the entire story. Data on spring migrants caught at banding stations at Manomet Bird Observatory in Massachusetts and Powdermill Nature Reserve in Pennsylvania show that capture rates for most species of neotropical migrants have not declined during the past twenty years (Hagan et al. in press). Also the BBS, which covers a greater geographical area than any other monitoring program for breeding birds in North America, shows that densities of most species of forest migrants increased during the first thirteen years of the surveys and declined during the subsequent eleven years. The net result was that few species showed an overall decline between 1966 and 1989 (Sauer and Droege, in press).

Prognosis For The Future

Regardless of whether or not winter habitat destruction has already caused migratory bird populations to decrease, it seems inevitable that it will eventually have this effect. Tropical forests are being destroyed at a rapid, probably accelerating pace, in Mexico and Central America, where a large proportion of neotropical migrants are concentrated during the winter (Gradwohl and Greenberg 1988). Recent studies of migrants in their winter areas have shown that, although most species are found in a range of different habitats, many species achieve their highest densities in rain forest or tropical moist forest. For example, in a study of the distribution of wintering migrants in different habitats on the Yucatan Peninsula, Lynch (1989) found that several species were found primarily in mature moist and semi-evergreen forest. The "forest specialists" included Wood Thrush, Blue-winged Warbler, Black-and-white Warbler, Kentucky Warbler, Hooded Warbler, and Wilson's Warbler. In contrast, some other species that nest in forests were found in a wide variety of winter habitats, from old fields to tall forests. This group included Least Flycatcher, Northern Parula, and Magnolia Warbler. Species in the latter group may not be affected very much by tropical forest destruction because they are frequent in disturbed habitats. This assumes, of course, that the rates of survival for these species are similar in disturbed and undisturbed habitats (Rappole and Morton 1985), a factor about which we have little information. It is clear, however, that the species that concentrate in forests in winter are rapidly losing their preferred habitat in Mexico and Central America. It is difficult to see what would prevent their populations from falling.

In the West Indies observers often find large numbers of wintering warblers in disturbed habitats and gardens. For example, Emlen (1977) found that a number of species, including Yellow-rumped Warbler, Prairie Warbler, Palm Warbler, and Common Yellowthroat, occurred frequently in a wide range of habitats, including open habitats such as marshes and old fields. These species are probably not greatly threatened by habitat change in their wintering area. In contrast, a survey of different habitats in the U. S. Virgin Islands showed that many species were largely restricted to large tracts of woodland in Virgin Islands National Park, and that within these tracts they were concentrated in the relatively tall moist forest on mountain ridges and in deep valleys (Askins et al. in press). In particular, Black-and-white Warblers, American Redstarts, Ovenbirds, and Hooded Warblers were recorded almost exclusively in this habitat. Only Northern Parula and Prairie Warbler were frequent in dry woodland and gardens, and the former was most abundant in moist forest. Mixed flocks with several species of warblers were frequent in canopy and subcanopy of tall moist forest, but infrequent in all other habitats. Thus, most of the species that overwinter in the Virgin Islands would be negatively affected by destruction of moist forest, and in fact these species are substantially less abundant on the heavily developed island of St. Thomas than in the forests of Virgin Islands National Park on St. John (Askins et al. in press).

We still know surprisingly little about the ecology of migratory songbirds in their winter habitats, but there is growing evidence that a large number of species require tropical forests. The future of these species will depend upon whether the rapid conversion of tropical forest to pasture and marginal farmland can be slowed and stopped. Maintaining tropical forests will not only protect the rich diversity of plants and animals of the tropics, but will also help protect a large proportion of the songbirds that nest in the coniferous and deciduous forests of temperate North America.

Protection of lowland rainforests in Guatemala, Belize, and Mexico and mountaintop forests in the West Indies will not be sufficient, however; migratory songbirds also require suitable breeding habitat. Indeed, breeding habitat may have been the limiting factor for migratory birds during the past one hundred to one hundred and fifty years. Between 1800 and 1900, the forests of eastern North America were destroyed at a rapid rate (Terborgh 1989). Most of the tall deciduous forests of the Ohio River Valley were cut, and most of the woodland of southern New England was converted to an open landscape of fields, pastures, and tiny woodlots (Cronon 1983). This marked reduction in the amount of breeding habitat probably left an excess of winter habitat. Perhaps even today tropical countries have not caught up with the North in the destruction of habitat for migratory songbirds (Terborgh 1989).

During this century forests have grown back, as farms were abandoned in many regions of eastern North America. In more heavily settled areas the

regrowth of forests has been counteracted by the fragmentation of forests resulting from the rapid growth of suburban areas. The resulting patches of woodland generally are not favorable habitat for forest-interior birds. Although large areas of Canada, the northern Midwest, and northern New England are heavily forested, and in many cases the forests are becoming more mature and continuous (Brooks and Birch 1988), fragmentation may be important even in these areas. Forestry practices that create a patchwork of small clearings result in a substantial increase in forest edge, probably resulting in higher rates of nest predation and cowbird parasitism for birds in the surrounding forest. These clearings are generally temporary, however. As young forest grows in these areas, the forest edge disappears, and the openings are colonized by forest-interior birds surprisingly quickly (Mauer et al. 1981). In contrast to logging, residential and resort development is a much more serious problem because large forests are permanently fragmented. Widespread development of private forest lands in northern New England could result in an extensive degradation of habitat for migratory songbirds.

What Can Be Done?

Environmental problems such as acid rain, greenhouse warming, and ozone depletion can only be solved through international cooperation. The same is true for conservation of migratory birds. In the long term, many species can only be protected if their winter habitats in the West Indies and in Central and South America are protected. It is therefore crucial for us to support the efforts of conservationists in tropical countries who are working to protect natural habitats.

The prescription of maintaining viable breeding populations of migratory songbirds in the North is relatively simple: avoid fragmenting forests. For example, lumbering could be concentrated into a particular sector of a forest during a particular period, preventing a checkerboard pattern of scattered openings. Houses and resort buildings could be clustered to minimize disruption of continuous forest. Powerlines could be routed along the periphery of a forest rather than through the center. This would require major changes in current land-use practices, which are characterized by sprawling development that ignores the integrity and value of large, uninterrupted expanses of natural habitat.

Amateur ornithologists can make a major contribution not only by helping with efforts to protect winter and breeding habitats, but also by applying their expertise in some of the critical monitoring programs, particularly the BBS and surveys in the interior of large forests that are being initiated in several U. S. states and Canadian provinces. Some national forests have also started monitoring programs that depend on volunteers. The conservation and research efforts for migratory songbirds are being coordinated through the Neotropical

National Fish and Wildlife Foundation. This program involves a partnership among government agencies and private conservation organizations, and should increase the effectiveness of research programs and conservation efforts for migratory birds. Not incidentally, it should demonstrate to people in both the temperate zone and tropics that we can only solve the environmental problems of the Western Hemisphere by working together.

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THE PIPING PLOVER IN MASSACHUSETTS: STATUS OF RECOVERY AND RESEARCH EFFORTS

by David W. Rimmer

Efforts to protect and study the Piping Plover (*Charadrius melodus*), a small, ground-nesting shorebird endemic to North America, greatly intensified after January 1986, when the U. S. Fish and Wildlife Service joined Canada in listing the species as threatened or endangered throughout its range. Habitat loss, human disturbance, and predation have all contributed to the decline of the plover population in North America (Dyer et al. 1988). The current population, based on the results of the 1991 international census, is estimated at 2337 breeding pairs (Hecht 1991), representing a six percent increase since 1986. Along the Atlantic coast, results from the 1991 surveys indicated 987 pairs (742 in the U.S; 245 in Canada) breeding from the maritime regions of Canada to South Carolina (Hecht 1991), an approximate increase of 200 pairs since 1987. In Massachusetts the plover population remained stable (126 to 140 pairs) between 1986 and 1990, but increased to 160 pairs in 1991 (Melvin 1991). It is unclear whether any of these regional or local population increases are real or simply reflections of more comprehensive survey efforts.

Recovery Efforts

Since 1986 Massachusetts has become one of the leaders in the Atlantic coast Piping Plover recovery effort, utilizing protection techniques such as land conservation, legislation, land and species management, and education (Deblinger and Rimmer 1990). In addition, research designed to provide information on the reproductive ecology, limiting factors, habitat selection, effects of human disturbance, food habits, and innovative predator protection techniques has been conducted. This statewide recovery and research effort has been spearheaded by the Massachusetts Division of Fisheries and Wildlife, specifically, endangered species zoologist Dr. Scott Melvin and state ornithologist Brad Blodget. Untold numbers of dedicated individuals from the public and private sectors have assisted with countless hours of field work.

The public and private agencies responsible for Piping Plover protection in Massachusetts have worked closely with one another to develop comprehensive protection strategies. These groups included the U. S. Fish and Wildlife Service, the National Park Service, the Massachusetts Division of Fisheries and Wildlife, the Massachusetts Department of Environmental Management, numerous county and town agencies, and private, nonprofit organizations, such as The Trustees of Reservations, the Massachusetts Audubon Society, the Nature Conservancy, the Lloyd Center for the Environment, and the Sheriff's Meadow Foundation. Each breeding site has unique requirements. Some sites experience much human disturbance, while other sites experience high predation levels that

Table 1

**Distribution of Piping Plovers at Selected Sites in Massachusetts
1986-1991**

(Numbers Represent Piping Plover Pairs)

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
NORTH SHORE						
Parker River NWR, Newbury	3	2	1	3	10	5
Crane Beach, Ipswich	5	6	9	14	10	12
Other Sites	1	2	1	1	2	2
SOUTH SHORE						
Duxbury Beach, Duxbury	6	5	5	3	1	2
Plymouth Beach, Plymouth	4	3	2	2	2	1
Other Sites	4	2	2	2	4	5
BUZZARDS BAY						
Little Beach, Dartmouth	7	7	15	7	6	6
Barney's Joy, Dartmouth	2	1	2	2	-	6
Horseneck Beach, Westport	7	5	3	7	11	7
Other Sites	6	7	9	8	8	6
UPPER CAPE						
Scorton Creek, Sandwich	7	6	6	4	4	5
Sandy Neck, Barnstable	6	7	3	5	5	5
Other Sites	15	16	16	13	14	11
LOWER CAPE						
Nauset Heights, Orleans	2	4	5	4	4	7
Coast Guard Beach, Eastham	13	8	6	3	5	7
Marconi Beach, Wellfleet	2	2	2	2	2	6
Other Sites	25	23	18	25	20	30
ELIZABETH ISLANDS						
Cuttyhunk Island, Gosnold	4	6	6	5	4	7
Other Sites	5	2	2	4	6	5
MARTHA'S VINEYARD						
All Sites	4	4	7	9	9	11
NANTUCKET						
Great Point/Galls, Nantucket	4	2	7	8	7	8
Other Sites	7	6	7	6	6	6
TOTAL	<u>139</u>	<u>126</u>	<u>134</u>	<u>137</u>	<u>140</u>	<u>160</u>

Sources: Melvin, 1991, 1990, 1988, 1986; Blodget, 1989.

may limit nesting success. Therefore, protection efforts have included partial or total closures of breeding sites, limits on certain human activities, such as over-sand vehicle operation and boat landings, and predator control via fencing and removal.

Population Status

Between 1986 and 1990, the Piping Plover population in Massachusetts fluctuated from 126 to 140 pairs (Table 1), and annual mean productivity levels from 1987 to 1990 ranged between 1.07 and 1.59 fledglings per breeding pair (Melvin 1990, 1988, 1987, 1986; Blodget 1989). Prior to 1991 both of these critical indices (annual breeding pairs and productivity) failed to display a consistent upward trend despite increased statewide protection. The 1991 breeding season, however, appeared to indicate that the intensive statewide protection effort was producing positive results. Breeding plovers rose to 160 pairs (a fourteen percent increase over 1990), and productivity exceeded all other years at 1.72 chicks fledged per breeding pair (Melvin 1991). An increase from thirty-one to fifty pairs on Lower Cape sites (Table 1) was primarily responsible for the statewide increase. Census results from the next several years will indicate if the 1991 figure was the first step forward in the recovery process for the Piping Plover in Massachusetts or just another fluctuation. Regardless, the current population status is encouraging.

Distribution

In 1991 Piping Plovers were distributed widely along the Massachusetts coastline except between Ipswich and Scituate, where no pairs were reported (Melvin 1991). One hundred and sixty breeding pairs of plovers were observed at fifty-five sites, and the mean number of pairs per site was 2.9 (Melvin 1991). Sites with the highest numbers of pairs were Crane Beach (12), Little Beach and Barney's Joy (each with 6), Nauset Spit (8), Coast Guard Beach (7), Cuttyhunk Island (7), Horseneck Beach (7), Parker River National Wildlife Refuge (6), Great Point, Nantucket (6), and Marconi Beach, Wellfleet (6). These ten sites accounted for forty-four percent of the state's population (Melvin 1991). Regionally, plovers were most abundant on Cape Cod, where seventy-one pairs (forty-four percent of state total) nested in 1991.

Table 1 provides a breakdown of plover distribution by region, and shows that nineteen pairs of plovers (twelve percent of the state total) nested at North Shore sites. The productivity level was 2.21 chicks fledged per pair. Crane Beach continued its successful management program, reporting nine or more pairs and high productivity (1.8 to 3.0 chicks fledged per pair annually) for the fourth consecutive year. On the South Shore, eight pairs of plovers (five percent of the state total) nested with a productivity level of 1.00 chicks fledged per pair. Human disturbance apparently continues to limit plover success in this region,

especially at Plymouth and Duxbury beaches.

Upper Cape sites supported twenty-one pairs of plovers (thirteen percent of the state total), with Sandy Neck Beach and Scorton Creek the critical nesting locations. This region had a productivity level of 1.95 chicks fledged per pair. The Lower Cape reported fifty pairs (thirty-one percent of the state total) and productivity levels of 2.35 chicks fledged per pair. Efforts to manage plovers on Cape Cod National Seashore lands have been increasingly successful and appear to be contributing to the growing number of plovers in that region.

Sites along the shores of Buzzards Bay had twenty-five pairs (sixteen percent of the state total) and 1.16 chicks fledged per pair. Little Beach and Barney's Joy continue to be the most significant sites in the region. The two sites consistently attract six or more pairs annually. Sites on the Elizabeth Islands and Martha's Vineyard combined to support twenty-three pairs (fourteen percent of the state total), while Nantucket reported fourteen pairs (nine percent of the state total). These two areas had productivity levels of 1.35 and 0.91 chicks fledged per pair, respectively.

Research Results

The research conducted in Massachusetts has provided valuable new information on Piping Plover ecology and management, with much of the data coming from Cape Cod. MacIvor (1990) reported that plovers typically arrive in the state in mid-March, lay eggs in late April and May, incubate the eggs for approximately twenty-seven days, hatch chicks in late May and June, and fledge chicks between June 30 and August 29. MacIvor (1990) also reported hatching success was only twenty-five percent and was limited primarily by predation. Research conducted at Crane Beach and on Cape Cod on the efficacy of predator exclosures to reduce predation on plover nests (Rimmer and Deblinger 1990; MacIvor 1990; Strauss 1990) has shown that predation rates can be decreased using this technique, resulting in hatching success greater than ninety percent. Strauss (1990) also reported from Cape Cod that plovers breeding in high disturbance areas had reproductive rates lower than plovers breeding in low disturbance areas. He suggested that plover chicks in high disturbance areas spend less time feeding and more time avoiding disturbance, thereby reducing their survival rate. Food habit studies have been conducted, and the results are being analyzed.

MacIvor (1990) and Strauss (1990) also investigated habitat parameters on Cape Cod. MacIvor (1990) reported that plovers use a wide variety of habitats, including the beach berm, foredune, interdune, overwash, and blowout areas. These habitats may be unvegetated or densely vegetated, primarily with American beachgrass. Although it is difficult to predict where plovers will nest, MacIvor (1990) suggested that nesting on the beach berm was observed most frequently in her study. Strauss (1990) found that plovers at his study site

(Sandy Neck Beach and Scorton Creek, Barnstable) preferred nesting habitats associated with dune blowouts and newly forming sandspits. These results underscore the fact that Piping Plovers appear able to nest in an array of beach habitats and will often respond to local changes in beach morphology, such as those created by the August 1991 Hurricane Bob and the 1991 Halloween northeaster.

Summary

Human destruction and disturbance of Piping Plover habitat combined with predation have contributed widely to the decline of this species, resulting in an endangered or threatened status throughout its North American range (Dyer et al. 1988). In Massachusetts, as well as other states and provinces, Piping Plovers are unlikely to recover to sufficient levels without the aid of intense management and protection programs. In 1991 the plover population in Massachusetts increased substantially, the probable result of comprehensive statewide protection programs implemented since 1986. However, the state continues to have sites that pose difficult management dilemmas. If this upward trend of the Piping Plover population in the Commonwealth is to continue, public and private agencies involved in Piping Plover protection, management, and research must remain committed. Ongoing communication must continue between plover biologists and coastal land owners and managers, particularly on important issues that may affect Piping Plovers, such as over-sand vehicle use, beach restoration efforts, and pedestrian and boater access to critical nesting areas. Balancing the need for coastal recreation with an expanding plover population may be the greatest challenge facing beach owners and managers in the future.

For more information on Piping Plovers in Massachusetts, contact Dr. Scott Melvin, endangered species zoologist, Natural Heritage and Endangered Species Program, Massachusetts Division of Fisheries and Wildlife, at 508-792-7270.

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DAVID W. RIMMER is a life-long Massachusetts resident who has been employed by The Trustees of Reservations (TTOR) since 1985, following his graduation from the University of New Hampshire with a B.S. in wildlife management. Dave has been principally involved in natural resource management at TTOR's five barrier beach properties. He concentrates his efforts at Crane Beach in Ipswich, where he has coordinated Piping Plover, Least Tern, and white-tailed deer management and research, Lyme Disease research, shorebird resting and feeding behavior research, and extensive sand dune restoration projects. Dave currently resides in Newbury with his wife and two young sons.



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**TAPE REVIEW: WESTERN BIRDING BY EAR:
A GUIDE TO BIRD SONG IDENTIFICATION**

by Bruce Hallett

Western Birding by Ear: A Guide to Bird Song Identification, by Richard K. Walton and Robert W. Lawson. 1990. Boston: Houghton Mifflin Company. \$35.00.

It is mid-June in Western Montana. It is clear but still cool as I work my way toward the river on a half-lit trail through some low brush. Hearing the water, I stop to set up my fly rod and choose a fly for the brown trout I think I will fool this morning. As the eastern sky brightens, the first Western Wood-Pee-wee starts its monotone call from the cottonwood grove to the left. A Warbling Vireo then starts singing from the willows by the stream, and a MacGillivray's Warbler scolds from the underbrush. On a rocky hillside across the river, a Rock Wren trills, and a Common Poorwill gives its last call of the evening. I have not actually seen any of these birds, but I know them nonetheless.

Recognizing songs and calls has always given me a sense of satisfaction, but it was not that way at first. Identification by sight was the way I started birding. Although I knew there were sounds all around me, I was not really paying attention. Soon it was apparent, especially in thick cover or foliage where the birds were not always visible, that seeing birds was not the only function of identification. It took years of bramble scratches and endless searching into leafy trees to track down and sort out birds, such as Black-headed Grosbeaks and Summer Tanagers. I did not have a system, which is why I wish that the Walton and Lawson tapes were available a dozen years ago. Just listening to the introduction by Dick Walton, where he talks about techniques for distinguishing and remembering songs, was enough for me to realize that my old trial and error methods could have used some refinements.

Western Birding By Ear is the second guide to bird song identification recorded by Dick Walton and Bob Lawson, and it follows the same format as its predecessor, *Eastern/Central Birding By Ear*. Ninety-one western species are organized by learning groups with similar vocalizations—name-sayers, whistlers, and trillers, to name a few—and by fourteen habitats ranging from urban parks to Pacific coastal forests. It is this organization of songs, calls, and "harsh vocalizations" into meaningful groupings, along with appropriate phonetics, comparative ideas, and mnemonics, that make the Walton and Lawson tapes unique and extraordinarily valuable for field birders.

The physical package itself consists of three cassette tapes with an instructional booklet, contained in a handy carrying case. The tapes are good quality and Dick Walton's voice is clear and unhurried. The booklet is well illustrated, has both habitat and voice descriptions, a place to make notes, and

page references to the *Peterson Field Guide to Western Birds*.

The purpose of *Western Birding By Ear* is to help the birder develop a basic vocabulary of bird songs through comparisons and pairings, and then to use these skills to characterize both familiar and unfamiliar songs and calls. Simple enough, but to do this, Walton takes us through two and one-half tapes carefully pinpointing various features of a particular song, so that the listener can develop a "handle." For example, once a handle is learned for the song of a House Finch, this can be applied to and compared with other birds that sound very similar, such as Purple and Cassin's finches and Warbling Vireos. The call notes of the birds are also discussed since they are just as important as the songs.

The last one-half tape is a review but with a different twist. Bird songs that were presented previously have been grouped by habitat. This is a helpful way to recall what has been learned, and to test and reinforce recognition according to the habitat where each of the species is most likely to be seen and heard. It is a particularly good feature, not only because of its teaching function, but also because it gives immediate value to the purpose of learning bird songs.

When I first went through the booklet, my reaction was that a number of species had been left out. Where were the Hepatic Tanagers when the Black-headed Grosbeaks were discussed, and what about comparing Hermit and Townsend's warblers with Black-throated Gray Warblers? Why not more trilly sparrows? As I listened to the introduction, however, I realized that the selection was correct. This is an introductory program, and the study groups were limited on purpose so that people would not be saturated with too many new songs. Blue Grosbeak or Savannah Sparrow would have been nice, but Walton and Lawson were correct in their philosophy.

In the June 1989 issue of *Bird Observer*, Dorothy Arvidson did a fine and complete review of *Eastern/Central Birding By Ear*. Her conclusion was to recommend it without qualification, and I agree with that recommendation for the western version. I also echo Dorothy's sentiments that Houghton Mifflin and the Walton and Lawson team should work on a "more advanced, side-by-side analysis of sound-alike birds across the continent."

I never caught anything that Montana morning, but I did hear lots of great birds.

BRUCE HALLETT, a resident of Brookline, Massachusetts, for eleven years, moved to Atlanta, Georgia, in August 1989. He is currently organizing and conducting birding tours in North America, primarily in Alaska, Florida, and the western United States. Although he still carries an emotional attachment to the boys of summer from Fenway Park, he now does the tomahawk chop with Jane and Ted Turner for the Atlanta Braves.



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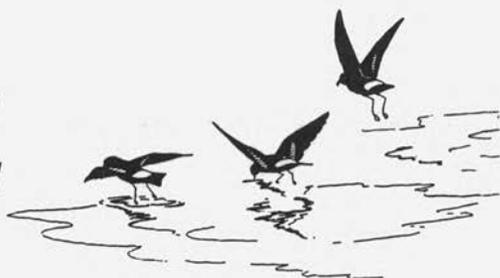
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BIRD SIGHTINGS

SEPTEMBER 1991

SUMMARY



by Glenn d'Entremont, George W. Gove, and Robert H. Stymeist

September was wet and cool, and the temperature averaged 63.7 degrees, 0.9 degree below normal. The high was 90 degrees on September 16, the low was 39 degrees on September 30. A cold front on September 19 brought an unusual and sudden drop in temperature. Rain totaled 6.32 inches, 2.91 inches above average. Measurable amounts fell on nine days, and the most in any 24-hour period was 2.44 inches on September 24-25. Some locally damaging winds were noted during the storm on the 25th, with a small tornado reported from Charlestown.

R. H. S.

LOONS THROUGH RAPTORS

If you were wondering where all the seabirds were this year, a trip to Cashes Ledge on September 8 answered the question. As everyone who went on a whale watch or a pelagic trip this summer to Stellwagen Bank and the waters off Cape Cod and Nantucket knows, seabirds were very scarce. However, possibly due to the productivity of the waters, Cashes Ledge and vicinity harbored many birds. All of the expected seabird species were represented, including 1200 Greater Shearwaters, 4500 Wilson's Storm-Petrels, and 300 Red-necked and 2200 Red phalaropes. Among the rarer species were a Northern Fulmar and two Cory's Shearwaters.

An early Red-necked Grebe was reported from Nantucket, and a Least Bittern was heard at Plum Island. Also at Plum Island, 81 Great and 586 Snowy egrets were counted, in addition to a Tricolored Heron.

Hawk migration was not very impressive this fall in Massachusetts, and counts of Northern Harrier were particularly very low. Counts of other raptors for the month included 173 Ospreys, 12 Bald Eagles, and 6409 Broad-winged Hawks at Wachuset Mountain, and 5440 Broad-winged Hawks at Mount Watatic, where an adult Golden Eagle was also reported.

G. W. G.

DATE	LOCATION	NUMBER	OBSERVERS	SEPTEMBER 1991
Common Loon				
2, 8	Wachuset Res., Stellwagen	5, 2	M. Lynch#, BBC (C. Corley)	
14	P.I., S. Monomoy	4, 3	BBC (D. Dillavou), P. Trimble	
14, 28	N. Scituate, Chatham	3, 3	R. Abrams, G. d'Entremont#	
Pied-billed Grebe				
1-12	P.I.	4 max 9/12	W. Drew# + v. o.	
3-24	Arlington	1 max	L. Taylor, C. Floyd	
8-28	S. Monomoy	4 max 9/8	SSBC (W. Petersen) + v. o.	
14-23	Nantucket	3	E. Ray#	
29	GMNWR	8	R. Stymeist#	
Red-necked Grebe				
27	Nantucket	1	T. Holden#	
Northern Fulmar				
8	Cashes Ledge	1	S. Perkins#	
29	15 miles east of Truro	3	R. Prescott	
Cory's Shearwater				
8	Cashes Ledge	2	S. Perkins#	
Greater Shearwater				
8	Cashes Ledge	1200	S. Perkins#	
Sooty Shearwater				
8	Cashes Ledge	2	S. Perkins#	
Manx Shearwater				
8	Cashes Ledge	2	S. Perkins#	
Audubon's Shearwater				
2-3	Hydrographer Canyon area	12	W. Petersen#	
Wilson's Storm-Petrel				
8	Cashes Ledge	4500	S. Perkins#	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Leach's Storm-Petrel 8	Cashes Ledge	4	S. Perkins#	
Northern Gannet 8	Cashes Ledge	8	S. Perkins#	
Great Cormorant 15	Provincetown	3 imm	K. Jones	
Double-crested Cormorant thr	Saugus	75 max	J. Berry	
14, 29	S. Dart. (Allens Pd)	58, 167	LCES (J. Hill)	
17, 22	N. Monomoy, Chatham	1500, 800	B. Cassie, P. Trimble	
21	Orleans	260 on wires	R. Stymeist#	
American Bittern 14, 15	S. Dart., Bolton	1, 1	LCES (J. Hill), BBC (M. Lynch)	
18, 22	Squantum, GMNWR	1, 1	G. d'Entremont, P. + F. Vale	
27-28, 28	Peabody, S. Monomoy	1, 1	R. Heil, T. Aversa#	
Least Bittern 28	P.I.	1 (voice)	T. Young	
Great Blue Heron thr	Saugus, P.I.	13 max, 37 max	J. Berry, W. Drew# + v. o.	
thr	S. Dart. (Allens Pd)	29 max 9/29	LCES (J. Hill)	
7, 14	P.I.-Rowley, Scituate	41, 25	BBC (S. Moore), R. Abrams	
2, 28	Ipswich, Eastham	23, 71	BBC (J. Berry), G. d'Entremont#	
Great Egret thr	P.I.	81 max 9/1	W. Petersen + v. o.	
thr	S. Dart. (Allens Pd)	34 max 9/29	LCES (J. Hill)	
6, 18	DWWS, Rowley	21, 88	D. Clapp, W. Drew#	
Snowy Egret thr	S. Dart. (Allens Pd)	21 max 9/14	LCES (J. Hill)	
thr	Squantum	40 max 9/21	G. d'Entremont#	
1, 14	P.I., Scituate	586, 150	W. Petersen#, R. Abrams	
14, 18	S. Monomoy, Rowley	44, 68	P. Trimble, W. Drew#	
Little Blue Heron 1, 11	N. Monomoy, Essex	1, 3 ad	M. Lynch#, T. Aversa	
1-14	P.I.	26 max 9/1	W. Petersen + v. o.	
Tricolored Heron 1, 19	P.I., N. Monomoy	1, 1	W. Petersen, B. Cassie	
Cattle Egret 2	P.I.	1	S. Perkins#	
10-13, 14	Essex	8 max, 3	T. Young, J. Hoye	
Green-backed Heron 3-21	Arlington	9 max 9/3	L. Taylor	
18-21	Naushon I.	2	C. Paine	
18, 21	Worc. (BMB), Plympton	1 imm, 1	M. Lynch#, K. Anderson	
Black-crowned Night-Heron 12, 28	Squantum, Eastham	10, 10	G. d'Entremont#	
21, 27	Provincetown, P.I.	21, 5	R. Stymeist#, T. Young	
Yellow-crowned Night-Heron 1-11, 1-22	P.I., M.V.	1, 2	v. o., V. Laux	
2-14	S. Monomoy	2 imm max 9/8	SSBC (W. Petersen) + v. o.	
3	Nantucket	1	K. Harte	
11, 13	Orleans, Norfolk	1, 1 ad	H. Coolidge#, B. Cassie	
14-23	Squantum	1 imm	C. Floyd + v. o.	
17	N. Monomoy	1 ad + 4 imm	B. Cassie	
Glossy Ibis 1, 7	P.I.	25, 13	W. Petersen, J. Berry	
22	S. Monomoy	2	W. Petersen#	
Mute Swan 2, 14	Westport, Ipswich	261, 5 imm	M. Boucher, J. Berry	
Canada Goose 21	Lakeville	928 (55 w/collars)	R. Turner	
Wood Duck 13, 14	Nantucket	1, 3	J. Papale, E. Ray#	
21, 22	E. Middleboro, GMNWR	20, 50	K. Anderson, P. + F. Vale	
Green-winged Teal 6, 12, 24	P.I.	134, 145, 192	W. Drew#	
7, 29	Arlington, S. Monomoy	35, 60	R. Stymeist#, B. Nikula#	
American Black Duck thr	S. Monomoy	120 max 9/21	B. Nikula#	
6, 12, 24	P.I.	40, 100, 160	W. Drew#	
Northern Pintail thr	S. Monomoy	150 max 9/8	W. Petersen# + v. o.	

DATE	LOCATION	NUMBER	OBSERVERS
Blue-winged Teal thr	S. Monomoy	120 max 9/14	B. Nikula# + v. o.
Northern Shoveler 8-30	S. Monomoy	40 max 9/29	B. Nikula# + v. o.
Gadwall thr	S. Monomoy, P.I.	30 max 9/29, 25 max	B. Nikula# + v. o., W. Drew#
Eurasian Wigeon 28, 29	S. Monomoy	1 m	T. Aversa#, J. Young#
American Wigeon thr	S. Monomoy	45 max 9/29	T. Aversa# + v. o.
thr	Arlington	34 max 9/18	R. Stymeist# + v. o.
Ring-necked Duck 7, 22	Arlington, W. Newbury	1 f, 18	R. Stymeist#, D. Morimoto
22, 29	Lakeville, Cambridge (F.P.)	60, 24	W. Petersen#, R. Stymeist#
Lesser Scaup 29	S. Monomoy	8	B. Nikula#
Common Eider 1, 27	N. Scituate	10, 14	G. d'Entremont
1, 8	N. Monomoy, Westport	40, 4	M. Lynch#, M. Boucher
Oldsquaw 21, 28	Nantucket, S. Monomoy	1 m, 1 m	M. Rines, T. Aversa#
Black Scoter 8, 20	Annisquam, Westport	15, 1 f	H. Wiggin#, M. Boucher
White-winged Scoter 14	N. Scituate	150	R. Abrams
Hooded Merganser 14	Quabbin (G45)	1 f	M. Lynch#
Red-breasted Merganser 1, 26	Chatham, P.I.	1, 1	M. Lynch#, C. Paine
Ruddy Duck 28	S. Monomoy	5	T. Aversa#
Turkey Vulture 1-30	Mt. Watatic	31 total	EMHW
7-22	Wachusett Mt.	66 total, 25 max 9/8	EMHW + v. o.
2, 7	Barre, Hardwick	14, 5	M. Lynch#
11, 29	Norfolk, S. Dartmouth	9, 7	K. Ryan, M. Boucher
1-29	Reports of 1 or 2 from 13 locations.		
Osprey 1-30	Mt. Watatic	135 total, 26 max 9/13	EMHW
1-24	Wachusett Mt.	173 total, 25 max 9/7	EMHW + v. o.
1-30, 2	Squamton, S. Carver	2 max, 2	G. d'Entremont, K. + J. Ebert
11, 15	Worcester, Dorchester	2, 2	M. Lynch#, J. Young
28	Mt. A., Peabody	2, 3	R. Stymeist#, R. Heil
29	Newburyport	5	S. Arena#
1-29	Reports of individuals from 9 locations.		
Bald Eagle 1-25	Wachusett Mt.	12 total, 4 max 9/20	EMHW
2, 7	Mt. Watatic	1, 1	EMHW
12, 14	Chatham, P.I.	2 imm, 1 imm	B. Nikula, S. Sweet
29	Provincetown	1 imm	J. Gordon#
Northern Harrier thr	P.I.	8 max 9/7	BBC (S. Moore) + v. o.
1-18	Wachusett Mt.	10 total	EMHW + v. o.
1-30	Mt. Watatic	16 total	EMHW
7, 14	Salem, N. Monomoy	1, 4 (1 m)	I. Lynch, P. Trimble
27, 29	E. Middleboro, Belmont	1, 1	K. Anderson, R. Stymeist#
Sharp-shinned Hawk 1-30	Mt. Watatic	393 total, 84 max 9/30	EMHW
3-19	Worcester	6 max 9/11	M. Lynch#
6-24	Wachusett Mt.	289 total, 95 max 9/18	EMHW + v. o.
21	Bolton, Shrewsbury	55, 33	EMHW
23, 28	Truro, Wellfleet	8, 6	R. Stymeist#, S. Arena#
7-29	Reports of 1 or 2 from 11 locations.		
Cooper's Hawk 1-30	Mt. Watatic	7 total	EMHW
1-24, 27	Wachusett Mt., Concord	14 total, 2	EMHW + v. o., S. Perkins
1, 2-27	Boston, E. Middleboro	1, 1 or 2	T. Aversa, K. Anderson
1-29	Reports of individuals from 11 locations.		
Northern Goshawk 7	Hardwick	1 ad	M. Lynch#

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Red-shouldered Hawk				
thr	E. Middleboro	pr	K. Anderson	
2, 9	Milton, Middleboro	1, 1	G. d'Entremont	
21, 27	Hanover, DWWS	1, 1	G. d'Entremont	
Broad-winged Hawk				
1-28	Wachusett Mt.	6409 total, 1852	max 9/13	EMHW + v. o.
1-30	Mt. Watatic	5440 total, 2441	max 9/13	EMHW
12, 13	Worcester, Rutland	339, 189	EMHW	
21	Bolton Flats, Shrewsbury	645, 202	EMHW	
Golden Eagle				
21	Mt. Watatic	1 ad	T. McCollough	
American Kestrel				
1-28	Wachusett Mt.	75 total, 13	max 9/7	EMHW + v. o.
1-30	Mt. Watatic	112 total, 18	max 9/22	EMHW
5, 6	Lakeville, Middleboro	3, 8	K. Holmes, P. Jarrobin	
11, 21	Worcester, Bolton	4, 24	M. Lynch#, EMHW	
Merlin				
7-18	P.I.	4 max 9/6, 11	v. o.	
2, 28	Wachusett Res., Nantucket	1, 2	M. Lynch#, BBC (D. Davis)	
9, 28	Mt. Watatic	1, 4	EMHW	
9-28	Reports of individuals from 17 locations.			
Peregrine Falcon				
1, 14	Boston, S. Monomoy	2, 1	R. Stymeist#, P. Trimble	
17, 28	Halifax, Norfolk	1 ad, 1	T. Aversa, B. Cassie	
21	S. Monomoy	2	W. Petersen	
7-28	Reports of individuals from 10 locations.			

GALLIFORMES THROUGH ALCIDS

Clapper Rails were seen at two locations, and a King Rail was found in Canton. Common Moorhens were noted at three locations, and a Sandhill Crane was seen on two occasions at Plum Island.

Among shorebirds, Lesser Golden-Plovers were seen throughout the month at many locations, and an American Avocet spent most of the month at Plum Island. Baird's Sandpipers were noted late in the month, and a juvenile Curlew Sandpiper spent eleven days at Squantum. Buff-breasted Sandpipers were noted throughout the month from many locations.

The boat trip to Cashes Ledge on September 8 reported, among its rarer species, an immature Long-tailed Jaeger and a Great Skua. Caspian Terns included one bird inland at Clinton, and Royal Terns were noted at three locations. Up to 2000 Common Terns were reported from Sandy Neck, and late Arctic Terns were noted at Monomoy and Nantucket. A Gull-billed Tern was also noted at Nantucket. G. W. G.

Ring-necked Pheasant				
12, 22, 29	Squantum, Peabody, Wayland	6, 8, 4	G. d'Entremont	
22	Essex	4	T. Young	
Ruffed Grouse				
14, 15; 14	Quabbin (G45), ONWR; Barnstable	1, 1; 1	M. Lynch#; P. Trimble	
21, 29	Middleboro, E. Middleboro	2, 1	K. Holmes, K. Anderson	
Wild Turkey				
21, 28	Middleboro, Ipswich	5, 2	K. Holmes, J. Berry	
Northern Bobwhite				
7, 28	Middleboro, WBWS	10, 5	G. d'Entremont, R. Campbell#	
20	E. Middleboro	15	K. Anderson	
Clapper Rail				
10, 16	Squantum, Eastham	1, 1	T. Aversa, S. Hecker#	
King Rail				
8, 9	Canton	1	R. + S. Donovan	
Virginia Rail				
15, 22; 15	Lynnfield; Bolton	2, 1; 1	D. Morimoto#; BBC (M. Lynch)	
22, 28	GMNWR, Peabody	1, 2	P. + F. Vale, R. Heil	
Sora				
1, 7	N. Monomoy, P.I.	1, 1	M. Lynch#, BBC (S. Moore)	
14, 15	Lexington, Bolton	1 ad, 1	C. Floyd, BBC (M. Lynch)	
14, 22	Nantucket, GMNWR	1 ad, 2	E. Ray#, P. + F. Vale	
Common Moorhen				
22, 28-30	GMNWR	1, 4 max	D. Morimoto + v. o.	
21, 29	Plympton, S. Monomoy	1, 1	K. Anderson, D. Reid#	
American Coot				
2	S. Monomoy	2	B. Nikula#	
Sandhill Crane				
14, 29	P.I.	1, 1	E. Nielsen#, BBC (I. Giriunas)	

DATE	LOCATION	NUMBER	OBSERVERS
Black-bellied Plover			
thr	Ipswich (C.B.)	95 max 9/4	D. Rimmer
thr	N. Monomoy	1400 max 9/29	B. Nikula#
15, 22	Newburyport, Chatham	500, 60	J. Berry, P. Trimble
12, 27	Squantum, Scituate	40, 62	G. d'Entremont
Lesser Golden-Plover			
thr	Nantucket	37 max 9/23	K. Hart + v. o.
6	Middleboro, Duxbury	31, 17	P. Iarrobino, D. Clapp#
7, 7-24	M.V., P.I.	58, 2 max 9/24	V. Laux, T. Aversa + v. o.
8; 12, 14	Westport; N. Monomoy, S. Monomoy	3; 3, 3	M. Boucher; B. Nikula#
21, 26	Bridgewater, Plumbush	8, 5	K. Holmes, J. Hoye
2-27	Reports of individuals from 7 locations.		
Semipalmated Plover			
thr	N. Monomoy	200 max 9/8	B. Nikula# + v. o.
thr	Ipswich (C.B.)	490 max 9/10	D. Rimmer
3, 16	Barnstable (S.N.)	350, 250	R. Scott#
6, 12, 24	P.I.	996, 203, 333	W. Drew#
Piping Plover			
1-9, 3	Ipswich (C.B.), Barnstable (S.N.)	1, 6	D. Rimmer#, R. Scott#
7-8	Nantucket	1	J. Papale
12; 8, 14	P.I.; N. Monomoy	1; 5, 14	W. Drew#; B. Nikula#
Killdeer			
2, 7	Ipswich, Lexington	28, 40	J. Berry, R. Stymeist#
8-21	Arlington	32 max 9/17	L. Taylor
22, 27	Hamilton, E. Middleboro	120, 100	J. Berry, K. Anderson
27, 28	Concord, Nantucket	90, 26	S. Perkins#, BBC (D. Davis)
American Oystercatcher			
thr	N. Monomoy	110 max 9/14	B. Nikula#
29	Nantucket	17	BBC (D. Davis)
American Avocet			
1-24	P.I.	1	W. Drew# + v. o.
Greater Yellowlegs			
thr	N. Monomoy	150 max 9/3	B. Nikula#
7, 24	P.I., Squantum	70, 125	BBC (S. Moore), G. d'Entremont
14, 29	S. Dart. (Allens Pd)	11, 16	LCES (J. Hill)
Lesser Yellowlegs			
1-14	N. Monomoy	25 max 9/8	B. Nikula#
2	Newburyport	175	S. Perkins#
6, 29	P.I., Cambridge (F.P.)	17, 2	W. Drew#, R. Stymeist#
Solitary Sandpiper			
1, 2-29	Arlington, Belmont	5, 4 max 9/29	C. Floyd, R. Stymeist# + v. o.
18, 29	Lexington, Cambridge (F.P.)	3, 2	R. Stymeist#
21	Bridgewater	2	K. Holmes
Willet			
thr	N. Monomoy	12 max 9/14	B. Nikula# + v. o.
8, 15	Westport, Quincy	2, 1	M. Boucher, J. Young
Spotted Sandpiper			
1, 2	N. Scituate, Randolph	1, 1	G. d'Entremont#
18, 26	Arlington, Wachusett Res.	3, 3	R. Stymeist#, C. Paine#
Upland Sandpiper			
7, 18	P.I., Harwich	3, 1	P. + F. Vale, B. Nikula
Whimbrel			
8, 14	Westport, N. Monomoy	2, 75	M. Boucher, W. Harrington
14, 22	S. Monomoy, Chatham	2, 2	P. Trimble
22	Ipswich (C.B.)	2	D. Rimmer#
Hudsonian Godwit			
thr	N. Monomoy	15 max 9/3	B. Nikula# + v. o.
1-18	Newburyport-P.I.	6 max 9/8	J. Berry + v. o.
5, 6	Squantum, Duxbury	25, 12	R. Donovan, D. Clapp#
15	Revere (Point of Pines)	2	P. + F. Vale
Marbled Godwit			
thr	N. Monomoy	7 max 9/12-14	B. Nikula# + v. o.
16	Eastham	2	S. Hecker#
Ruddy Turnstone			
1, 1-9	N. Monomoy, Ipswich (C.B.)	15, 7 max 9/7	M. Lynch#, D. Rimmer
6, 14	Duxbury, Squantum	20, 1	D. Clapp#, G. d'Entremont
Red Knot			
thr	N. Monomoy	200 max 9/8	B. Nikula#
1-15	Revere (Point of Pines)	12 max 9/15	P. + F. Vale
6, 11	P.I.	65, 70	W. Drew#, T. Aversa
Sanderling			
thr	N. Monomoy	1200 max	B. Nikula#

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Sanderling (continued)				
thr	Ipswich (C.B.)	277 max 9/21	D. Rimmer#	
6-24	P.I.	1115 max 9/6	W. Drew#	
6, 15	Duxbury, Revere (Point of Pines)	2000, 300	D. Clapp#, P. + F. Vale	
Semipalmated Sandpiper				
thr	N. Monomoy	150 max	B. Nikula#	
thr	Ipswich (C.B.)	620 max 9/21	D. Rimmer#	
6-24	P.I.	686 max 9/6	W. Drew#	
7-18	Squantum	325 max 9/7	G. d'Entremont + v. o.	
Western Sandpiper				
thr	N. Monomoy	5 max	B. Nikula#	
7-19	Squantum	5 max	v. o.	
7, 14	Arlington, S. Monomoy	1, 2	R. Stymeist#, P. Trimble	
27, 29	Scituate, Barnstable (S.N.)	1, 1	G. d'Entremont, H. Ferguson	
Least Sandpiper				
thr	N. Monomoy	80 max	B. Nikula# + v. o.	
1-21	Newburyport-P.I.	15 max	v. o.	
4, 14	Nantucket, S. Monomoy	9 banded, 10	E. Andrews, P. Trimble	
White-rumped Sandpiper				
thr	N. Monomoy	100 max 9/8	B. Nikula#	
thr	Ipswich (C.B.)	1-4	D. Rimmer#	
2, 8	Westport, P.I.	2, 6	M. Boucher, J. Berry	
Baird's Sandpiper				
14, 28	S. Monomoy, Newburyport	1 juv, 2	K. Jones, G. Gove#	
Pectoral Sandpiper				
6, 27	Duxbury, Orleans	28, 17	D. Clapp, K. Jones	
15, 26	Newburyport, Topsfield	11, 14	J. Berry#, J. Hoye	
28, 29	W. Newbury, N. Monomoy	120, 35	G. Gove, B. Nikula#	
Dunlin				
thr	Ipswich (C.B.)	14 max 9/22	D. Rimmer#	
thr	N. Monomoy	700 max 9/29	B. Nikula#	
5-30	P.I.	12 max 9/7	BBC (S. Moore) + v. o.	
Curlew Sandpiper				
5-20	Squantum	1 juv	R. Donovan + v. o.	
Stilt Sandpiper				
2, 8	Westport, P.I.	2, 1	M. Boucher, J. Berry	
7, 18; 29	Lexington; S. Monomoy	1, 1; 1	R. Stymeist#; B. Nikula#	
Buff-breasted Sandpiper				
1	Cuttyhunk	1 (from 8/31)	T. Raymond#	
1-13	N. Monomoy	4 max 9/10	D. Reid#	
3-23	Nantucket	3 max 9/9	S. Arena# + v. o.	
24, 26	P.I., W. Boylston	1, 1	W. Drew#, R. Bradbury	
1-19	Reports of individuals from 6 locations.			
Ruff				
5	Squantum	1	R. Donovan	
Short-billed Dowitcher				
1, 2	N. Monomoy, Newburyport	100, 250	M. Lynch#, S. Perkins#	
2, 27	Westport, Scituate	3, 1	M. Boucher, G. d'Entremont	
Long-billed Dowitcher				
thr	P.I.	120 max 9/8	J. Berry + v. o.	
Common Snipe				
27	Halifax	5	K. Anderson	
American Woodcock				
14, 20	Barnstable, Naushon	1, 1	P. Trimble, C. Paine	
21; 24, 27	Halifax; Plymouth	5; 1, 2	K. Anderson; G. d'Entremont	
Wilson's Phalarope				
14, 26	S. Monomoy, Newburyport	1, 2	R. Comeau#, J. Hoye	
Red-necked Phalarope				
8, 12	Cashes Ledge, N. Monomoy	300, 2	S. Perkins#, B. Nikula	
21-22	Peabody	1 juv	R. Heil#	
Red Phalarope				
8	Cashes Ledge	2200	S. Perkins#	
Pomarine Jaeger				
8, 9	M.V., Nantucket	1, 1	V. Laux, S. Arena#	
Parasitic Jaeger				
8, 9	Stellwagen, Nantucket	1, 2	S. Perkins#, S. Arena#	
15	N. Monomoy	5	B. Nikula#	
Long-tailed Jaeger				
8	east of Stellwagen (Wildcat Knoll)	1 imm	S. Perkins#	
Great Skua				
8	Cashes Ledge	1	S. Perkins#	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
skua species				
8	Cashes Ledge	2 or 3	S. Perkins#	
Laughing Gull				
1	P.I., N. Monomoy	2, 25	W. Petersen, M. Lynch#	
8, 22	Stellwagen, Chatham	10, 10	BBC (W. Drummond), P. Trimble	
29	S. Dartmouth	32	M. Boucher	
Franklin's Gull				
21	Newburyport	1	M. Kasprzyk	
Bonaparte's Gull				
15	Newburyport, Lynn	450, 150	J. Berry, P. + F. Vale	
Herring x Great Black-backed Gull				
30	Chatham	1 ad	B. Nikula	
Lesser Black-backed Gull				
1-16, 3	M.V., Barnstable (S.N.)	2, 1 ad	V. Laux, B. Nikula#	
6, 14	Great South Channel, N. Monomoy	2 (1W), 3 ad	S. Perkins#, K. Jones#	
15	Nantucket	1 ad	M. Leeholts#	
Sabine's Gull				
6	Stellwagen Bank	1 (1S)	M. Taylor#	
Black-legged Kittiwake				
8, 11	Cashes Ledge, Barnstable (S.N.)	3, 3	S. Perkins#, H. Coolidge#	
Caspian Tern				
21, 22	Peabody, Squantum	1, 3 ad + 1 imm	R. Heil, C. Floyd	
26	Clinton, N. Dartmouth	1, 1	F. McMenemy#, M. Boucher	
28	P.I.	1 ad	G. Gove	
Royal Tern				
1, 2	N. Scituate, Nantucket	1, 1	G. d'Entremont, N. Claflin#	
15	Manomet	1	T. Lloyd-Evans	
Roseate Tern				
1, 7	N. Monomoy, Squantum	100, 5	M. Lynch#, G. d'Entremont#	
15	Truro	40	R. Stymeist#	
Common Tern				
1, 1-18	N. Monomoy, Ipswich (C.B.)	400, 50 max 9/12	M. Lynch#, D. Rimmer#	
6, 14	Duxbury, S. Monomoy	800, 26	D. Clapp, P. Trimble	
15, 16	Newburyport, Barnstable (S.N.)	50, 2000	J. Berry, R. Scott	
Arctic Tern				
1, 3	N. Monomoy, Nantucket	1, 4	M. Lynch#, K. Hart	
Forster's Tern				
1, 2-14	N. Monomoy, Nantucket	1, 2	M. Lynch#, J. Papale	
15, 24	Squantum	17, 45	J. Young, G. d'Entremont	
16, 29	Barnstable (S.N.), WBWS	11, 10	R. Scott#, K. Jones#	
Gull-billed Tern				
3	Nantucket	1	K. Harte	
Least Tern				
1-9	Ipswich (C.B.)	30 max 9/3	D. Rimmer#	
15	Tuckernuck	5	D. + K. O'Brien	
Black Tern				
1, 6	N. Monomoy, Duxbury	1, 3	M. Lynch#, D. Clapp#	
8	Cashes Ledge	2	S. Perkins#	
Black Skimmer				
3, 22	Barnstable (S.N.), M.V.	2 ad, 36	R. Scott#, S. Perkins	
Razorbill				
29	15 miles east of Truro	1	R. Prescott	
Black Guillemot				
2	P.I.	1 juv	S. Perkins#	

CUCKOOS THROUGH WAXWINGS

Three Black-billed and 23 Yellow-billed cuckoos were reported. A Great Horned Owl was mobbed by 188 crows in Mount Auburn Cemetery. An early Short-eared Owl was in Newburyport, and one Northern Saw-whet Owl was calling at dusk on September 3 in North Middleboro. This year's latest Whip-poor-will report was on September 24 at the Myles Standish State Forest in Plymouth.

A lingering Chimney Swift was observed on September 29 in Wayland, and an immature Red-headed Woodpecker was seen in Truro. Only three sapsuckers were reported, and a Yellow/Red-shafted Flicker intergrade was netted at Manomet Bird Observatory.

An Eastern Wood Pewee was still calling on September 19. Seven Yellow-bellied Flycatchers were banded at Nantucket, while one Acadian Flycatcher was identified at the Glades in North Scituate. Many *empidonax* flycatchers were reported during the first week, but most were gone by the 15th. Eastern Phoebees were abundant but Great Crested Flycatchers were scarce. One Western Kingbird was observed at Quabbin (Gate 45).

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The only Horned Larks were reported from Plum Island. Tree Swallows were found in moderate-sized flocks but were widespread. An exceptionally late Northern Rough-winged Swallow was reported from Plum Island, and a late Bank Swallow was seen flying over a pond at the Beach Forest in Provincetown. A few Cliff Swallows lingered to the middle of the month.

A total of 91 Blue Jays was observed engaged in reverse migration over a two-hour period at the Glades in North Scituate on September 27. Several Common Ravens were seen farther east than normal. Only 3 Brown Creepers were reported, less than normal. Seven House Wrens were in Peabody on September 21, and Winter Wrens were seen from the middle of the month onward. One Marsh Wren was in Brookline (Leverett Pond), and ten were in Dorchester. Golden-crowned Kinglets were migrating by month's end, and small numbers of Ruby-crowned Kinglets were reported throughout the month. Gnatcatchers were scattered in small numbers.

Thrush reports were low. Just four Hermit Thrushes and only seven Wood Thrushes (six from one location) were reported. Gray Catbirds were abundant, and there were more Brown Thrashers than normal. American Pipit migration was underway by month's end. G. d'E.

Mourning Dove				
28	Nantucket	175		BBC (D. Davis)
Black-billed Cuckoo				
8, 21	S. Monomoy, Truro	2, 1		W. Petersen#, D. Morimoto
Yellow-billed Cuckoo				
9-27, 21	Chatham, Middleboro	1 or 2, 5		v. o., K. Holmes
	Reports of 16 individuals from 14 locations!			
Eastern Screech-Owl				
21	Middleboro-Bridgewater	8		K. Holmes
	Reports of 6 individuals from six locations.			
Great Horned Owl				
	Reports of 19 individuals from 12 locations.			
Barred Owl				
2, 3	Easton, N. Middleboro	1, 1		K. Ryan, K. Holmes
18, 21	E. Middleboro, Lakeville	1, 2		K. Anderson, K. Holmes
Short-eared Owl				
5	Newburyport	1		M. Boucher#
Northern Saw-whet Owl				
3	N. Middleboro	1 heard		K. Holmes
Common Nighthawk				
9, 10; 7	Westwood; Watertown	25, 8; 1		E. Nielson; R. Stymeist
10, 20	Boxboro, Eastham	4, 1		C. Paine, M. Murphy
21	N. Monomoy	1		D. Reid
Whip-poor-will				
10, 17, 24	Plymouth (MSSF)	6, 16, 3		G. d'Entremont#
Chimney Swift				
2; 10, 11	Natick; Worcester (BMB)	11; 2, 9		BBC (E. Taylor); M. Lynch#
13, 29; 27	P.I., Wayland; Concord	2+, 1; 10		G. d'Entremont; S. Perkins#
Ruby-throated Hummingbird				
1-22	Reports of 15 individuals from 9 locations.			
Belted Kingfisher				
2, 12	Ipswich, Squantum	9, 2		BBC (J. Berry), G. d'Entremont
18-19, 29	Worcester (BMB), Eastham	1, 2		M. Lynch#, G. d'Entremont#
Red-headed Woodpecker				
21	Truro (High Head)	1 imm		BBC (R. Stymeist)
Yellow-bellied Sapsucker				
21, 27, 28	P.I., Nant., Peabody	1 imm, 1, 1		S. Arena, BBC(D. Davis), R. Heil
Northern Flicker				
3-19, 14	Worc. (BMB), Dorchester	30+ max; 5		M. Lynch#, G. d'Entremont#
15; 28	Saugus; WBWS, Chatham	9; 5, 9		P. Vale#; G. d'Entremont#
Yellow/Red-shafted Flicker intergrade				
16	Manomet Bird Observatory	1 b		MBO Staff
Pileated Woodpecker				
2, 14; 22	Wachustt Res, Quab. (G45); Lincoln	1, 2; 1		M. Lynch#; BBC (J. Nove)
Olive-sided Flycatcher				
2	Truro (Pamet), Nantucket	1, 1		J. Young, J. Papale
Eastern Wood Pewee				
3-19, 2	Worcester (BMB), Nant.	6 max, 2 b		M. Lynch, E. Andrews#
5, 22; 16	Chatham; Wellfleet	2, 2; 3		v. o.; R. Stymeist
21, 30	Peabody, Boston (F.Pk)	4, 2		R. Heil, T. Aversa
Yellow-bellied Flycatcher				
	Reports of 11 individuals (7 banded) from 5 locations.			
Acadian Flycatcher				
2	N. Scituate (Glades)	1		D. Morimoto#

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Willow Flycatcher 13	Plum Island	2	G. d'Entremont#	
"Traill's" Flycatcher 1-22, 2	Nantucket, N. Scituate	6 b, 4	E. Andrews#, D. Morimoto#	
Least Flycatcher 2-21, 1	Nantucket, N. Scituate	6 b, 3	E. Andrews#, G. d'Entremont	
<i>Empidonax</i> species 5	Chatham (Morris Island)	7	R. Forster#	
Eastern Phoebe 14; 15, 29 21, 22	Quabbin (G45); ONWR Peabody, Lincoln	14; 16, 15 14, 13	M. Lynch#; BBC (M. Lynch) R. Heil, BBC (J. Nove)	
Great Crested Flycatcher 2; 3, 7 15, 28	Truro; Worc. (BMB), Quab. (G40) Wachusett Mt., Chatham	1; 1, 1 1, 1	J. Young; M. Lynch# J. Gordon#, G. d'Entremont#	
Western Kingbird 14	Quabbin (G45)	1	M. Lynch#	
Eastern Kingbird 3, 5; 8, 10 21; 21, 22	Worc. (BMB); Nant. Bridgewater; Truro, Cambridge	3, 1; 1 b, 1 b 1; 1, 1	M. Lynch#; E. Andrews# K. Holmes; R. Stymeist	
Horned Lark 18	Plum Island	3	T. Aversa	
Purple Martin 1, 2	Plum Island, Ipswich	2, 6-8 imm	BBC (W. Drummond), BBC (J. Berr)	
Tree Swallow thr thr 6 28 29	P.I. Ipswich (C.B.) Duxbury Beach Eastham, Chatham S. Monomoy	100000 max 2000-5000 max 1000+ 500, 275 5000+	v. o. v. o. D. Clapp G. d'Entremont# B. Nikula	
Northern Rough-winged Swallow 22	Plum Island	1	D. Morimoto	
Bank Swallow 7, 11 28	Plum Island, Wayland Provincetown	1, 5 1	BBC (J. Nove), R. Forster G. d'Entremont + T. Prince	
Cliff Swallow 11, 13	Wayland, Plum Island	2, 1	R. Forster, G. d'Entremont	
Barn Swallow 6, 8 11; 28	Duxbury Beach, P.I. Wayland; Truro, Chatham	20+, 50+ 50; 2, 5	D. Clapp, P. + F. Vale R. Forster; G. d'Entremont#	
Blue Jay 21-22 21, 22 27, 28	M.V. Truro, Chatham N. Scituate, Nant.	200 migr 150+, 90+ 91, 41	S. Perkins# BBC (R. Stymeist), P. Trimble G. d'Entremont, BBC (D. Davis)	
Common Raven 7; 7, 18 14, 17 28, 29	Ashburnham; Wachusett Mt. Quabbin (G45), Mt. Watatic Petersham, Harvard	2; 2, 2 1, 5 2, 2	D. Flood; E. Taylor M. Lynch#, L. Taylor M. Lynch#, M. Lynch#	
Red-breasted Nuthatch 1-27, 7 27, 28	Nantucket, Quab. (G40) P.I., Mt. Auburn	10 b, 23 3, 4	E. Andrews#, M. Lynch# T. Young, R. Stymeist	
White-breasted Nuthatch 3-19, 14	Worc. (BMB), Boston (F.Pk)	13 max, 13	M. Lynch#, T. Aversa	
Brown Creeper 7, 27	Quabbin (G40), Nantucket	2, 1 b	M. Lynch#, E. Andrews#	
Carolina Wren 1, 15 18-21, 19 21-22	N. Scituate, Wellfleet Naushon I., Brookline M.V.	5, 6 6, 5 25+	G. d'Entremont, R. Stymeist C. Paine, R. Stymeist S. Perkins#	
House Wren 3-19, 9-11 8-27, 21	Worcester (BMB), Boxboro Nantucket, Peabody	10 max, 4 5 b, 7	M. Lynch#, C. Paine E. Andrews#, R. Heil	
Winter Wren 13, 14; 18 22, 28; 27	P.I., Quincy; Worc. (BMB) Nantucket; Peabody	1, 1; 1 1, 3; 1	G. d'Entremont; M. Lynch# E. Andrews#, BBC (D. Davis); R. Heil	
Marsh Wren 14, 19 28	Dorchester, Brookline GMNWR	10, 1 5	G. d'Entremont#, R. Stymeist BBC (E. Tarry)	
Golden-crowned Kinglet 21 28, 30	Provincetown, P.I. Mt. Auburn, MBO	23, 15+ 30, 35	D. Morimoto, P. + F. Vale R. Stymeist, Staff	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Ruby-crowned Kinglet				
8-27, 14	Nantucket, Quab. (G45)	5 b, 3	E. Andrews#, M. Lynch#	
21, 29	Provincetown, ONWR	2, 3	D. Morimoto, M. Lynch#	
Blue-gray Gnatcatcher				
Reports of 11 individuals from ten locations.				
Eastern Bluebird				
3-18, 14	Worc. (BMB), E. Middleboro	4 max, 5	M. Lynch#, K. Anderson	
29	Weston, Wayland	5, 5	M. Rines#, G. d'Entremont#	
Veery				
2-11, 3-13	Nantucket, Worc. (BMB)	5 b, 2 max	E. Andrews#, M. Lynch#	
12, 21	Quincy, Boston (F.Pk)	2, 1	G. d'Entremont, T. Aversa	
Gray-cheeked Thrush				
13	Worcester (BMB)	1	M. Lynch#	
21, 29	Nantucket	1 b, 1	E. Andrews#, BBC (D.Davis)	
Swainson's Thrush				
8, 27; 27	Nantucket; Boston (F.Pk)	1 b, 1 b; 3	E. Andrews#; T. Aversa	
12, 22; 28	Squantum, MNWS; Peabody	2, 2; 3	G. d'Entremont; R. Heil	
Hermit Thrush				
15, 22	E. Middleboro, Chatham	1, 1	K. Anderson, P. Trimble	
29	ONWR	2	M. Lynch#	
Wood Thrush				
5-19, 15	Worcester (BMB), ONWR	6 max, 1	M. Lynch#, BBC (M. Lynch)	
Gray Catbird				
1-27, 1-19	Nantucket, Worc. (BMB)	58 b, 32 max	E. Andrews#, M. Lynch#	
16, 18; 21	Wellfleet, P.I.; Truro-P'town	42, 86; 65	R. Stymeist; BBC (R. Stymeist)	
21	Middleboro-Bridgewater	33	K. Holmes	
Brown Thrasher				
11-17, 18	Worcester (BMB), P.I.	2 max, 12	M. Lynch#, R. Stymeist	
27; 28	Peabody; Chatham, P'town	4; 1, 1	R. Heil; G. d'Entremont#	
American Pipit				
17, 18	Mt. Watatic, P.I.	7, 5	L. Taylor, T. Aversa	
21, 22	Truro, Orleans	2, 2	BBC (R. Stymeist), A. + B. Delorey	
27	Concord	10	S. Perkins#	
Cedar Waxwing				
7, 21; 3-19	Nantucket; Worc. (BMB)	1 b, 3 b; 80+ max	E. Andrews#; M. Lynch#	
7, 28	Milton (F.M.), Peabody	25, 182	BBC (G. d'Entremont), R. Heil	

VIREOS THROUGH FINCHES

Philadelphia Vireos were well reported. Thirty-eight individuals were sighted this September compared with just seven last year. A total of 33 species of warblers was recorded this month. Blackpolls, Tennessee Warblers, and American Redstarts were well reported. At month's end a big push of Yellow-rumped and Palm warblers occurred. Specialty warblers included 6 Orange-crowned Warblers, a Prothonotary Warbler on Nantucket, a Kentucky Warbler in Boxboro, an impressive 11 Connecticut Warblers, and 19 Yellow-breasted Chats, 11 of which were banded on Nantucket.

Blue Grosbeaks were present at the usual coastal locations, and Dickcissels were found at five locations. Unlike last year, when not a single Clay-colored Sparrow was noted, 9 individuals were seen. A Lark Bunting put in a brief appearance in Annisquam, and Lark Sparrows were found on Plum Island and in North Truro. It was an exceptionally good migration of Lincoln's Sparrows, with 49 being reported from a wide area.

Among the rarer finds were a Henslow's Sparrow from Concord and Yellow-headed Blackbirds from four locations. The European Goldfinch, first seen on August 30, continued at a Winchester feeder until September 9.

R. H. S.

White-eyed Vireo				
12, 18	Boston (F.Pk), Squantum	1 imm, 1 imm	T. Aversa, G. d'Entremont	
21, 22	M.V., E. Walpole	1 imm, 1 imm	S. Perkins#, J. Young	
Solitary Vireo				
7, 10	Quabbin (G40), ONWR	8, 1	M. Lynch#, T. Aversa	
12	Squantum, Nantucket	1, 1	G. d'Entremont, J. Papale	
18, 21	P.I., Peabody	3, 3	R. Stymeist#, R. Heil	
Yellow-throated Vireo				
7, 9	Quabbin (G40), Manomet	2 singing, 1	M. Lynch#, T. L. Evans#	
15, 17	Boxboro, ONWR	1, 1	C. Paine, T. Aversa	
18, 29	P.I., Nantucket	1, 1	T. Aversa, BBC (D. Davis)	
Warbling Vireo				
6, 9-13	Boston (F.Pk), Acton	4, 1	T. Aversa, R. Forster	
13	Framingham, P.I.	1, 1	R. Forster, G. d'Entremont	
19, 29	Brookline, ONWR	1, 1	R. Stymeist, M. Lynch#	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Philadelphia Vireo				
1-7	Reports of 18 individuals from 12 locations.			
8-14	Reports of 16 individuals from 9 locations.			
15	Saugus, ONWR	1, 2	P. + F. Vale, BBC (M. Lynch)	
16	Wellfleet, Bolton Flats	2, 1	R. Stymeist, C. Paine	
22	Brookline, MNWS	1, 1	F. Bouchard, G. d'Entremont#	
Red-eyed Vireo				
1-2, 2-27	N. Scituate, Nantucket	10, 20 b	D. Morimoto, E. Andrews#	
7	P.I., Waltham	8, 6	BBC (S. Moore), L. Taylor	
7	Quabbin (G40)	18	M. Lynch#	
15	Wellfleet, ONWR	7, 12	R. Stymeist, BBC (M. Lynch)	
28	WBWS, Chatham	2, 3	G. d'Entremont#	
Blue-winged Warbler				
8, 15	Nantucket, Boxboro	1 b, 1	E. Andrews#, C. Paine	
21	Wellfleet	1	BBC (R. Stymeist)	
Golden-winged Warbler				
14	E. Middleboro	1 m	K. Anderson	
Tennessee Warbler				
1-14	Reports of 8 individuals from 7 locations.			
21	Wellfleet, Naushon I.	1, 1	BBC (R. Stymeist), C. Paine.	
22, 29	Lincoln, ONWR	1, 1	BBC (J. Nove), M. Lynch#	
Orange-crowned Warbler				
1, 13	N. Scituate, Manomet	1, 1	D. Clapp, MBO Staff	
14, 22	ONWR, Bolton Flats	1, 1	C. Paine, M. Lynch#	
22	MNWS, Chatham (Morris I.)	1, 1	G. d'Entremont, P. Trimble	
Nashville Warbler				
13-27, 16	Nantucket, Brookline	5 b, 1	E. Andrews#, D. Morimoto	
21, 29	Truro, Cambridge (F.P.)	6, 2	BBC (R. Stymeist), R. Stymeist	
Northern Parula				
10-18, 18	Worcester (BMB), Quincy	6 max 9/18, 1	M. Lynch#, G. d'Entremont	
21, 30	P.I., Boston (F.Pk)	1, 3	S. Arena, T. Aversa	
Yellow Warbler				
13, 14	P.I., S. Monomoy	3, 4	G. d'Entremont, P. Trimble	
22, 29	Bolton Flats, Cambridge	2, 4	M. Lynch#, R. Stymeist	
Chestnut-sided Warbler				
14	Boston (F.Pk), ONWR	6, 3	T. Aversa, C. Paine	
21, 28	Nantucket, S. Monomoy	2 b, 1	E. Andrews, T. Aversa#	
Magnolia Warbler				
1-27, 1	Nantucket, Boston (F.Pk)	11 b, 4	E. Andrews, T. Aversa	
22, 29	Chatham, MNWS	1, 1	P. Trimble, R. Bradbury	
Cape May Warbler				
1-27, 2	Nantucket, Truro	11 b, 10	E. Andrews, J. Young	
3, 8	Nahant, S. Monomoy	3, 6	T. Aversa, W. Petersen#	
21, 28	P.I., S. Monomoy	2, 1	J. Berry#, D. Nyzio#	
Black-throated Blue Warbler				
12-27, 16	Nantucket, Brookline	6 b, 1	E. Andrews, D. Morimoto	
24	E. Middleboro, MNWS	1, 3	K. Anderson, T. Aversa	
Yellow-rumped Warbler				
7, 13	Quabbin (G40), P.I.	11, 2	M. Lynch#, G. d'Entremont	
22	Nantucket, Chatham	2 b, 10	E. Andrews, P. Trimble	
29, 30	S. Dartmouth, Arlington	50+, 50+	M. Boucher, M. Rines	
Black-throated Green Warbler				
1, 7	Princeton, Quabbin (G40)	3, 4	R. Bradbury, M. Lynch#	
11	Stoneham, Wayland	4, 2	T. Aversa, R. Forster	
13, 21	P.I., Peabody	6, 7	G. d'Entremont, R. Heil	
Blackburnian Warbler				
7-27, 8	Nantucket, S. Monomoy	5 b, 2	E. Andrews, W. Petersen#	
22, 27	P.I., Cambridge	1, 1	BBC (J. Center), M. Rines#	
Pine Warbler				
thr, 7	Nantucket, Quabbin (G40)	20 b, 36	E. Andrews, M. Lynch#	
21	Truro, P.I.	12, 1	R. Stymeist#, S. Arena	
28, 29	S. Monomoy, ONWR	1, 12	T. Aversa#, M. Lynch#	
Prairie Warbler				
13, 14	P.I., ONWR	1, 1	G. d'Entremont, C. Paine	
21	Middleboro, Bridgewater	2, 2	K. Holmes	
21, 28	Nantucket, S. Monomoy	1 b, 1	E. Andrews, T. Aversa#	
Palm Warbler				
10, 13	Manomet, Truro	1, 1	MBO Staff, H. Coolidge#	
14	S. Monomoy, Dorchester	4, 7	P. Trimble, G. d'Entremont	
28	S. Monomoy, Peabody	30, 11	T. Aversa#, R. Heil	
Bay-breasted Warbler				
2-17, 3	Nantucket, MNWS	5 b, 6	E. Andrews, T. Aversa	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Bay-breasted Warbler (continued)				
13, 18	Boston (F.Pk), Worc. (BMB)	8, 1	T. Aversa, M. Lynch#	
21, 28	P.I., S. Monomoy	1, 1	S. Arena, D. Nyzio#	
Blackpoll Warbler				
5-18, 8-27	Worc. (BMB), Nantucket	13 total, 13 b	M. Lynch#, E. Andrews	
11, 12	Wayland, Quincy	2, 3	R. Forster, G. d'Entremont	
18, 21	Manomet, Peabody	24, 10	MBO Staff, R. Heil	
24, 27	E. Middleboro, Boston (F.Pk)	15, 15	K. Anderson, T. Aversa	
29	ONWR, Cambridge	6, 17	M. Lynch#, R. Stymeist#	
Black-and-white Warbler				
2, 3	Nantucket, MNWS	6 b, 8	E. Andrews, T. Aversa	
13; 14, 29	P.I.; Boston (F.Pk)	4; 5, 3	M. Rines#; T. Aversa	
29	MNWS, P.I.	2, 1	R. Bradbury, BBC (I. Giriunas)	
American Redstart				
2-23	Nantucket	21 b	E. Andrews	
3-19	Worc. (BMB)	13 max 9/13	M. Lynch#	
16, 18	Brookline, Quincy	3, 5	J. Seamon, G. d'Entremont	
28	Chatham, Cambridge	2, 4	G. d'Entremont, R. Stymeist#	
Prothonotary Warbler				
28	Nantucket	1	BBC (D. Davis)	
Worm-eating Warbler				
9, 14	Manomet, S. Wellfleet	1, 1	MBO Staff, D. Reynolds	
Ovenbird				
2-21, 3-18	Nantucket, Worc. (BMB)	5 b, 3 total	E. Andrews, M. Lynch#	
19, 21	Brookline, Naushon I.	1, 1	R. Stymeist, C. Paine	
24	MNWS, Squantum	1, 1	T. Aversa, G. d'Entremont	
28, 29	S. Monomoy, Truro	1, 1	D. Nyzio#, J. Young	
Northern Waterthrush				
2; 3	Nantucket; MNWS, Nahant	6 b; 4, 2	E. Andrews; T. Aversa	
21	Truro, Chatham	2, 1	R. Stymeist#, D. Morimoto	
24, 29	MNWS, Cambridge	3, 1	T. Aversa, R. Stymeist	
Kentucky Warbler				
16	Boxboro	1 m	C. Paine	
Connecticut Warbler				
8, 18; 10	Nantucket; ONWR	1 b, 1 b; 2	E. Andrews; T. Aversa	
12, 13	Squantum, P.I.	1, 1	G. d'Entremont, J. Murray	
16, 18	Boston (F.Pk), Manomet	1, 2 b	T. Aversa, MBO Staff	
21	Bolton Flats, Peabody	1, 1	C. Floyd, R. Heil	
Mourning Warbler				
2, 10	Nahant, Westwood	1, 1	C. Floyd, S. Sweet	
13, 14	Boston (F.Pk), S. Monomoy	1, 1	T. Aversa, P. Trimble	
20, 21	Worc. (BMB), Peabody	1, 1	R. Bradbury, R. Heil	
21, 22	Nantucket	1 b, 5 b	E. Andrews	
Common Yellowthroat				
thr	Nantucket	48 b	E. Andrews	
1-18	Worc. (BMB)	14 max 9/18	M. Lynch#	
15, 22; 16	Bolton Flats; Wellfleet	15, 29; 18	M. Lynch#; R. Stymeist	
20, 22	P.I., Chatham	6, 8	T. Young, P. Trimble	
Hooded Warbler				
22, 24	MNWS	1, 1	G. d'Entremont, T. Aversa	
27-28, 27	Nantucket, Manomet	1 b, 1 b	E. Andrews, MBO Staff	
Wilson's Warbler				
3, 13	MNWS, P.I.	5, 6	T. Aversa, G. d'Entremont	
13-27, 15	Nantucket, Boxboro	8 b, 2	E. Andrews, C. Paine	
18	Squantum, P.I.	1, 4	G. d'Entremont, R. Stymeist	
Canada Warbler				
1, 2	Nantucket, MNWS	3 b, 6	E. Andrews, S. Perkins	
14, 15	ONWR, Boston (F.Pk)	1, 1	C. Paine, T. Aversa	
Yellow-breasted Chat				
1, 2	N. Scituate, S. Monomoy	1, 1	D. Clapp, B. Nikula	
2-27; 12, 14	Nantucket (3 locations)	11 b; 1, 1	E. Andrews; L. Swetland, J. Papale	
22; 29	Chatham; Saugus, MNWS	2; 1, 1	P. Trimble; C. Jackson, R. Bradbury	
Scarlet Tanager				
15, 19	ONWR, Worc. (BMB)	7, 5	BBC (M. Lynch), M. Lynch#	
28	Mt. A., S. Monomoy	5, 1	R. Stymeist, T. Aversa	
Rose-breasted Grosbeak				
8, 10	P.I., Worc. (BMB)	4, 5	J. Berry, M. Lynch#	
12, 21	Nantucket, S. Monomoy	2, 2	J. Papale, W. Petersen#	
23, 28	Milton (F.M.), Mt. A.	1, 3	G. d'Entremont, R. Stymeist	
Blue Grosbeak				
13-30, 21	Truro, M.V.	3 max 9/29, 2	K. Jones + v. o., S. Perkins#	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Indigo Bunting				
21, 22	Peabody, Belmont	8, 5	R. Heil, R. Stymeist	
28	Truro	10+	M. Rines#	
Dickcissel				
13, 15	Harwich, Concord	1, 1	B. Nikula, C. Paine	
21	S. Monomoy, Concord	1, 1	W. Petersen#, R. Bradbury	
22	Scituate, Chatham	1, 1	R. Abrams#, P. Trimble	
Rufous-sided Towhee				
15, 18; 18	Wellfleet, P.I.; Worc. (BMB)	57, 22; 17	R. Stymeist; M. Lynch#	
Chipping Sparrow				
14, 21	E. Middleboro, Topsfield	25, 10+	K. Anderson, J. Berry	
22	Bolton Flats, Lincoln	12, 14	M. Lynch#, BBC (J. Nove)	
Clay-colored Sparrow				
1, 15	Dorchester, Scituate	1, 1	S. + R. Donovan, R. Abrams#	
16; 21-27, 28	Squantum; Peabody	1; 1, 2	D. Morimoto; R. Heil + v. o.	
22, 28	Lakeville, Nantucket	1, 2	W. Petersen, BBC (D. Davis)	
30	Newton (Winchester St.)	1	J. Hoyer#	
Field Sparrow				
21, 28	Scituate, Wellfleet	4, 8	G. d'Entremont#	
Vesper Sparrow				
22	Bolton Flats, Wellfleet	2, 8	M. Lynch#, A. + B. Delorey	
Lark Sparrow				
11; 22, 28	P.I.; N. Truro	1; 1	T. Aversa; K. Jones	
Lark Bunting				
5	Annisquam	1 imm	H. Wiggin#	
Savannah Sparrow				
15, 22	Bolton Flats	150+, 80+	M. Lynch#	
21, 27, 28	Peabody	16, 27, 45+	R. Heil + v. o.	
27	P.I.	45	BBC (I. Giriunas)	
Henslow's Sparrow (details on file)				
15	Concord (N.A.C.)	1	C. Paine	
Sharp-tailed Sparrow				
7, 29	P.I.	8, 12	BBC (S. Moore), BBC (I. Giriunas)	
14	Dorchester, N. Scituate	9, 30	G. d'Entremont, R. Abrams	
Seaside Sparrow				
7; 14, 29	P.I.; S. Dart. (Allens Pd)	1; 1, 2	BBC (S. Moore); LCES (J. Hill)	
Song Sparrow				
3-27, 15	Nantucket, Bolton Flats	30 b, 75+	E. Andrews, M. Lynch#	
21, 23	Halifax, Milton (F.M.)	30+, 30	K. Anderson, G. d'Entremont#	
Lincoln's Sparrow				
3, 14	Manomet, Dorchester	1 b, 2	MBO Staff, G. d'Entremont	
15	Scituate, Boxboro	1, 1	E. Nielsen, C. Paine	
17; 18	Middleboro; P.I., Worc. (BMB)	1; 1, 1	T. Aversa; R. Stymeist, M. Lynch#	
20	Worc. (BMB), Squantum	4, 3	R. Bradbury, M. Rines	
21-22	Reports of 14 individuals from 8 locations.			
29-30	Reports of 20 individuals from 11 locations.			
Swamp Sparrow				
15; 15, 22	Lynnfield; Bolton Flats	14; 20+, 108	D. Morimoto; M. Lynch#	
20; 21, 27	Squantum; Peabody	12+; 11, 18	M. Rines; R. Heil#	
21, 22	Halifax, GMNWR	20+, 10	K. Anderson, P. + F. Vale	
23, 29	Milton (F.M.), Ipswich	11, 15+	G. d'Entremont, J. Berry	
White-throated Sparrow				
12, 13	Manomet, P.I.	1, 2	MBO Staff, G. d'Entremont	
14; 15, 22	Wellfleet; Bolton Flats	5; 3, 45	R. Stymeist; M. Lynch#	
15, 29; 17, 21	ONWR; Belmont	7, 18; 5, 11	M. Lynch#; L. Taylor	
27, 28	P.I., Peabody	8, 22	T. Young, R. Heil	
White-crowned Sparrow				
22, 27-28	Mt. A., Truro	1, 1	R. Stymeist, K. Jones + v. o.	
Dark-eyed Junco				
8, 14	Newton, Wachusett Mt.	1, 12	O. + K. Komar, E. Taylor	
18	Squantum, Peabody	1, 1	G. d'Entremont, T. Aversa	
20, 28	Nantucket, Belmont	1, 1	J. Papale, L. Taylor#	
Lapland Longspur				
21	M.V.	1	V. Laux#	
Bobolink				
thr, 7	Truro, Milton (F.M.)	25 max 9/2, 10	K. Jones + v. o., BBC (G. d'Entremont)	
15	Concord, Bolton Flats	16, 20	C. Paine, BBC (M. Lynch)	
28	Nantucket, Chatham	12, 3	BBC (D. Davis), G. d'Entremont	
Red-winged Blackbird				
15, 22; 29	Bolton Flats; ONWR	75+, 104; 50+	M. Lynch#	
27, 28	Nantucket, Orleans	55, 500+	BBC (D. Davis), G. d'Entremont#	

DATE	LOCATION	NUMBER	OBSERVERS	SEPT. 1991
Eastern Meadowlark 21	Newburyport	4	P. + F. Vale	
Rusty Blackbird 21, 28; 21 28	Peabody; M.V. Truro, Orleans	6, 15; 1 1, 2	R. Heil; S. Perkins# G. d'Entremont#	
Yellow-headed Blackbird 2, 14 20, late Sept.	N. Monomoy, S. Monomoy Whitman, Nantucket	1, 1 imm 1 m, 1 imm	B. Nikula, R. Comeau# C. Fuller, fide E. Andrews	
Common Grackle 7, 10 13, 17 21, 28	E. Middleboro, S. Dartmouth Nantucket, Concord Bridgewater, Orleans	100+, 3000+ 1800+, 200 1000+, 2000+	K. Anderson, M. Boucher J. Papale, G. d'Entremont K. Holmes, G. d'Entremont	
Brown-headed Cowbird 21, 23	E. Bridgewater, Randolph	350, 500	G. d'Entremont	
Northern Oriole 14 21, 28	P.I., S. Monomoy Nantucket, Chatham	5, 6 2 b, 2	BBC (D. Dillavou), P. Trimble E. Andrews, G. d'Entremont#	
Purple Finch 7, 27	Milton (F.M.), E. Middleboro	5, 3	BBC (G. d'Entremont), K. Anderson	
European Goldfinch 1-9 (from 8/30)	Winchester	1	B. Sammon	

HOW TO CONTRIBUTE BIRD SIGHTINGS TO *BIRD OBSERVER*

This publication prints monthly summaries of reports of birds seen in eastern Massachusetts. Space does not permit the inclusion of all material submitted. However, reports sent to *Bird Observer* are archived at Massachusetts Audubon Society. Our compilers select and summarize for publication sightings that document early and late dates for migratory species, maximum counts of migrants, high or low numbers of some common birds, and species found beyond their normal ranges.

Sightings for any given month must be reported in writing by the eighth of the next month. Send to Bird Sightings, Robert H. Stymeist, 98 Boylston Street, Watertown, MA 02172. Organize reports by month and by species in current A.O.U. checklist order. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, number of observers, and information relevant to age, sex, morph, etc.

Reports of difficult identifications, vagrants, and rarities should include, in addition to the above information, time of day and light available, wind and weather conditions, the optics used and approximate distance from the bird, length of observation, the observer's prior experience with the species, and field guide or other reference used. Provide a description of the bird based solely on personal observation. Comment on the distinguishing field marks (observed and unobserved), vocalizations, activity, general behavior, the habitat in the immediate vicinity, and other birds present. Include with your report documentation such as copies of the observer's field notes and sketches.

WILDLIFE ART EXHIBIT COMES TO IPSWICH

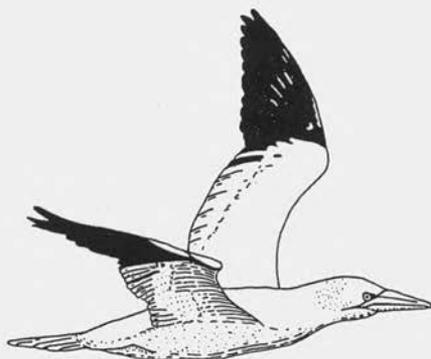
"Little Brother of the Sea"

The Quebec-Labrador Foundation's (QLF) Atlantic Center for the Environment hosts a travelling exhibit of wildlife art by award-winning artist Karen Allaben-Confer from January 16 through May 29, 1992. "Little Brother of the Sea" is an exhibit of North Atlantic seabirds and other avian life and includes thirty-three original works. The exhibit also includes a participatory display and an educational computer game. Many of the originals and a number of framed prints will be available for sale. The exhibit is at the QLF Office, 39 South Main Street, Ipswich, MA (across from Ipswich Town Hall), 10 A.M. to 5 P.M., Monday-Friday, January 16-May 29, 1992. Telephone: 508-356-0038.

BIRD SIGHTINGS

OCTOBER 1991

SUMMARY



by Marjorie W. Rines and Robert H. Stymeist

October 1991 was mild but wet. The temperatures averaged 56.4 degrees, 1.6 degrees above normal. The high mark was 80 degrees on the 2nd and the low mark was 34 degrees on the 29th. Rainfall totaled 4.27 inches, with measurable amounts on nine days. The greatest total was 1.54 inches on Halloween during a northeaster that was particularly devastating along the coast. Northeast winds started to batter the coastline on the 28th and continued through the final days of the month. The peak gust was 55 mph out of the northeast on the 30th. The strong winds brought with it many seabirds, notably, large numbers of jaegers, skuas, gannets, and kittiwakes.

R. H. S.

LOONS THROUGH WATERFOWL

The final four days of October saw an average wind speed of over 26 mph out of the northeast, making this the highest four-day average in many years. Seabirds were much in evidence during the last days of the month. Northern Gannets were estimated at over 10,000 in Cape Cod Bay, and 60 gannets were seen on Wequaquet Lake, 2.5 miles inland from the coast. At coastal birding hot spots, such as Sandy Neck in Barnstable, observers braving the storm counted over 300 Leach's Storm-Petrels and 8 Greater Shearwaters.

Hérons continued at Plum Island throughout the month, with high counts of 44 Great Egrets and 60 Snowy Egrets on the 4th. A Tricolored Heron was found on Martha's Vineyard, and late Cattle Egrets were reported from both Nine Acre Corner and Great Meadows in Concord.

A **Greater White-fronted Goose** was noted from Wachusett Reservoir in Clinton, and another individual was found in many areas around Concord throughout the month. Ring-necked Ducks peaked at about 600 individuals at Cherry Hill Reservoir in West Newbury on October 21, where over 300 Ruddy Ducks were also found. Other interesting waterfowl reports included a drake King Eider in Plymouth, and inland reports of Surf Scoters in Boylston and Red-breasted Mergansers in Sterling.

R. H. S.

Red-throated Loon			
20, 21	P.I., Duxbury Beach	15, 15+	T. Young, M. Lynch#
28, 31	Barnstable (S.N.), Wachusett Res.	16, 1	R. Forster
Common Loon			
5	P.I.	44	T. Young
19, 21; 25	Wachusett Res.; Duxbury	24, 11; 20	M. Lynch#; D. Morimoto
Pied-billed Grebe			
thr	P.I., Cambridge (F.P.)	3 max 10/27, 1 or 2	T. Young + v. o., v. o.
thr	GMNWR, Arlington Res.	10 max 10/20, 1	M. Lynch + v. o., v. o.
6, 8	Millis, Wakefield	1, 1	P. Iarrobino, P. + F. Vale
15-31, 16	Nantucket, W. Newbury	13, 4	J. Papale, R. Forster
19	Lakeville, S. Monomoy	14, 4	BBC (D. Davis), B. Nikula
22	Eastham, Chatham	4, 5	T. Aversa
Horned Grebe			
19-31	Wachusett Res.	10 max 10/19	M. Lynch# + v. o.
20, 26	P.I., Plymouth	5, 14	BBC (D. + D. Oliver), M. Lynch#
Red-necked Grebe			
19	Plymouth, Wachusett Res.	4, 5	W. Petersen#, M. Lynch#
26	Barnstable (S.N.), Duxbury	1, 2	H. Ferguson, D. Brown
Northern Fulmar			
31	P'town (Race Pt)	1 found dead	K. Jones
Cory's Shearwater			
27	Stellwagen Bank	1	BBC (G. d'Entremont)
Greater Shearwater			
27, 28	Stellwagen, Eastham	27, 1	BBC (G. d'Entremont), R. Forster
30, 31	Barnstable (S.N.), Rockport (A.P.)	8, 6	R. Abrams#, H. Wiggin#
Sooty Shearwater			
29	Dennis (Chapin Beach)	1	R. Forster#

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Manx Shearwater				
27	Stellwagen	2	BBC (G. d'Entremont)	
28	Barnstable (S.N.), Eastham	2, 1	R. Forster	
Leach's Storm Petrel				
20, 29	Barnstable (S.N.)	1, 2	H. Ferguson, R. Forster	
30, 31	Barnstable (S.N.)	6+, 300+	R. Abrams#, T. Aversa#	
30, 31	Newbury, Rockport (A.P.)	1, 2	T. Aversa, H. Wiggin#	
Northern Gannet				
12	Eastham	120	M. Lynch#	
14, 20, 26	P.I.	35, 20, 50	T. Young	
19, 25	Barnstable (S.N.), Duxbury	40, 42	D. Morimoto	
27	Stellwagen Bank	7000+	BBC (G. d'Entremont)	
28, 30	Cape Cod Bay, Yarmouthport	10,000+, 9000+	R. Forster, K. Hamilton	
30	Dennis, Centerville	4300+, 60	K. Jones, H. Ferguson	
Great Cormorant				
14, 20	Duxbury, P.I.	4, 8	S. Perkins#, BBC (D. + D. Oliver)	
27	Plymouth	25	BBC (G. d'Entremont)	
Double-crested Cormorant				
7, 16	P.I.	4000+ migr, 4700+ migr	P. Iarrobino, R. Forster	
7, 21	Dedham, Easton	650, 700	K. Ryan	
American Bittern				
thr, 5	P.I., Bolton Flats	1 or 2, 1	W. Drew# + v. o., M. Lynch#	
10-23, 12	GMNWR, Eastham	1, 2	S. Perkins + v. o., M. Lynch#	
20, 24	Concord, Boston (Logan)	1, 4	H. D'Entremont#, C. Leahy#	
26	Duxbury, Ipswich	1, 4	M. Lynch#, T. Young	
Great Blue Heron				
thr	P.I.	35 max 10/5	M. Lynch# + v. o.	
thr	Saugus	16 max 10/4	J. Berry	
5, 12	Ipswich, Eastham	10, 40	J. Berry, M. Lynch#	
15, 20	Nantucket, Westport	41, 23	S. Tiffney#, G. Gove#	
Great Egret				
thr	P.I.	44 max 10/4	W. Drew# + v. o.	
5, 11	Ipswich, New Bedford	20, 3	J. Berry, M. Boucher	
20	Westport, S. Dartmouth	3, 1	G. Gove#	
Snowy Egret				
thr	P.I.	60 max 10/4	W. Drew# + v. o.	
5, 6	Ipswich, Squantum	12, 10	J. Berry, G. d'Entremont	
Tricolored Heron				
4	Martha's Vineyard	1	V. Laux	
Cattle Egret				
20, 21	Concord (N.A.C.), GMNWR	1, 2	H. D'Entremont#, S. Arena#	
Green-backed Heron				
5, 12	P.I., Weston	1, 1	M. Lynch#, W. Petersen	
Black-crowned Night-Heron				
5, 13	Squantum, GMNWR	14, 1 imm	G. d'Entremont, R. Forster	
20	P.I.	10	T. Young	
Mute Swan				
20	Westport	63	G. Gove#	
Greater White-fronted Goose				
20-31	GMNWR, Lincoln, Concord	1 (Greenland)	S. Ells + v. o.	
26	Clinton (Wachusett Res.)	1	B. Blodget	
Snow Goose				
11-31	P.I.	48 max 10/19	H. Wiggin + v. o.	
15-26, 28	Lincoln, Wayland	2, 2	S. Perkins#, S. Arena	
"Blue" Snow Goose				
2-11, 14	Acton, P.I.	1 ad, 2	C. Paine + v. o., T. Young	
16	W. Newbury (Cherry Hill Res.)	2 ad	R. Forster	
Brant				
5, 14	P.I., Duxbury	1, 15	M. Lynch#, S. Perkins#	
19, 22	Manomet, Eastham	12, 195	W. Petersen#, T. Aversa	
22, 27	Duxbury, Plymouth	60, 442	B. Blodget#, BBC (G. d'Entremont)	
Canada Goose				
6, 13	Acton, W. Newbury	1000, 615	R. Forster, R. Stymeist	
14, 21	Danvers, GMNWR	500, 750	J. Brown#, S. Arena#	
thr	Wachusett Res.	1400 max 10/26	B. Blodget + v. o.	
Wood Duck				
thr, 13	GMNWR, Quabbin (G37)	60 max 10/10, 40	S. Perkins#, M. Lynch#	
15, 19	Halifax, S. Monomoy	51, 2	T. Aversa, K. Jones#	
19, 26	Manomet, W. Newbury	6 migr, 2	W. Petersen#, BBC (S. Charette)	
26	Uxbridge	10	R. Graefe	
Green-winged Teal				
thr	Arlington Reservoir	60 max 10/12	L. Taylor + v. o.	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Green-winged Teal (continued)				
thr	P.I.	335 max 10/24	W. Drew# + v. o.	
20, 23	GMNWR, S. Monomoy	25, 300	M. Lynch#, B. Nikula	
American Black Duck				
thr	P.I.	945 max 10/24	W. Drew# + v. o.	
12, 23	Eastham, S. Monomoy	120, 200	M. Lynch#, B. Nikula	
Northern Pintail				
thr	P.I.	50+ max 10/27	T. Young + v. o.	
thr	GMNWR	12 max 10/20	M. Lynch + v. o.	
19	S. Monomoy, Arlington Res.,	90, 1	B. Nikula, M. Rines	
Blue-winged Teal				
5, 13	P.I.	3, 3	M. Lynch#, D. Chickering	
13, 20	GMNWR	1, 3	R. Forster, H. D'Entremont#	
Northern Shoveler				
1, 10	E. Boston, Nantucket	2, 3	T. Aversa, K. Blackshaw#	
12-31	P.I.	5 max 10/26	BBC (S. Charette) + v. o.	
19	GMNWR, S. Monomoy	1, 50	P. + F. Vale, B. Nikula	
23	Nantucket (Hummock Pd)	2	B. Kitchens	
Gadwall				
thr	P.I.	10 max 10/4	W. Drew# + v. o.	
17, 23	Ipswich, S. Monomoy	48, 60	R. Forster, B. Nikula	
Eurasian Wigeon				
19, 23	S. Monomoy	2 m, 1 m	B. Nikula	
American Wigeon				
thr	Arlington Res.	105 max 10/14	L. Taylor + v. o.	
5-20, 15	GMNWR, Nantucket	40 max 10/20, 30+	M. Lynch# + v. o., J. Papale	
17, 19	Ipswich (Clarks Pd), S. Monomoy	150, 110	R. Forster, B. Nikula	
Canvasback				
19-31	Cambridge (F.P.)	223 max 10/30	J. Barton + v. o.	
19, 23	Nantucket, S. Monomoy	4, 1	M. Greenburg, B. Nikula	
Redhead				
21-25, 23	Southboro, Lincoln	1 f, 1	B. Blodget, M. Rines	
25	Nantucket	3	J. Papale	
Ring-necked Duck				
12, 13	Cambridge (F.P.), Quabbin (G37)	57, 142	R. Stymeist#, M. Lynch#	
13-31	W. Newbury (Cherry Hill)	600 max 10/21	T. Young	
19	Wachusett Res., Randolph	77, 38	M. Lynch#, G. d'Entremont	
23, 25	S. Monomoy, Southboro	150, 92	B. Nikula, B. Blodget	
Greater Scaup				
19	Wachusett Res., Randolph	3, 4	M. Lynch#, G. d'Entremont	
21	Worcester, P'town	9, 13	M. Lynch#, S. Arena	
Lesser Scaup				
13, 19	Quabbin (G37), Wachusett Res.	3, 1	M. Lynch#	
19	Southboro	5	E. Taylor	
scaup species				
23	S. Monomoy	200	B. Nikula	
Common Eider				
12, 13	Eastham, Scituate	160, 240	M. Lynch#, G. d'Entremont	
20, 26	Gloucester, P.I.	65, 35	BBC (J. Nove), BBC (S. Charette)	
27	Nantucket	400+	E. Ray	
King Eider				
19-31	Plymouth Beach	1 ad m	W. Petersen + v. o.	
Harlequin Duck				
19, 22	S. Monomoy, E. Orleans	1, 2	W. Harrington#, T. Aversa	
Oldsquaw				
25, 28	Duxbury, Barnstable (S.N.)	25, 152	D. Morimoto, R. Forster	
Black Scoter				
5, 13	P.I., Scituate	16, 15	M. Lynch#, G. d'Entremont	
20	Gloucester	6	BBC (J. Nove)	
Surf Scoter				
5, 19	P.I., Barnstable (S.N.)	35, 150	M. Lynch#, D. Morimoto	
24, 27	Boylston, Plymouth	2, 42	B. Blodget, BBC (G. d'Entremont)	
28	Barnstable (S.N.)	4000	R. Forster#	
White-winged Scoter				
thr	Nahant	2000 max 10/16	G. Wood + v. o.	
16, 25	Wachusett Res., Duxbury	20, 200	B. Blodget, D. Morimoto	
26, 28	P.I., Barnstable (S.N.)	250+, 400	T. Young, R. Forster	
Common Goldeneye				
12, 19	Eastham, Wachusett Res.	1 f, 1	M. Lynch#	
19, 20	Lakeville, P.I.	2, 4	W. Petersen, BBC (D. + D. Oliver)	
25, 26	Southboro, Lincoln	1, 2	B. Blodget, R. Stymeist#	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Barrow's Goldeneye				
30	Hull	2	R. Abrams	
Bufflehead				
10-26, 15	Arlington Res., Sherborn	1 f, 2	C. Floyd + v. o., E. Taylor	
16, 19	W. Newbury, Southboro	2, 2	R. Forster, E. Taylor	
19, 20	Squantum, Newburyport	35, 20	G. d'Entremont, R. Laubach	
20, 28	Westport, Salem	70, 15	G. Gove, J. Berry	
Hooded Merganser				
thr, 4	Sherborn, Sudbury	1 f, 3	E. Taylor, R. Forster	
21, 23	Stoneham, S. Monomoy	22, 5	T. Aversa, B. Nikula	
27	P.I.	3	R. Forster#	
Common Merganser				
16, 19	Sterling, Wachusett Res.	3, 16	B. Blodget, M. Lynch#	
23	Lincoln	3	R. Forster	
Red-breasted Merganser				
5, 14	P.I., Duxbury	6, 25	M. Lynch#, S. Perkins#	
16, 28	Sterling, Barnstable (S.N.)	1, 66	B. Blodget, R. Forster#	
Ruddy Duck				
10-31	Arlington Res.	55 max 10/26	L. Taylor + v. o.	
13-31	W. Newbury (Cherry Hill)	300 max 10/19	H. Wiggin + v. o.	
13-31	Southboro, Cambridge (F.P.)	54 max, 60 max	B. Blodget#, R. Stymeist#	
21, 23	Worcester, S. Monomoy	22, 80	M. Lynch#, B. Nikula	
23-31	Lincoln (Sandy Pd)	56 max 10/26	R. Forster + v. o.	

RAPTORS THROUGH SHOREBIRDS

Turkey Vultures and Ospreys were both widely reported during the month. At Mount Wataic in Ashburnham, volunteers from the Eastern Massachusetts Hawk Watch (EMHW) continued to monitor the migration through October. Impressive numbers of Sharp-shinned, Red-shouldered, and Red-tailed hawks were recorded. On October 17 during a northeast wind, 157 raptors were tallied. The Broad-winged Hawk flight was late, and Paul Roberts of the EMHW noted higher numbers in October than ever before. A maximum of eight Peregrine Falcons was noted from Monomoy on October 19. The total of 68 Peregrines reported for the month very likely included repeated sightings of some birds.

Common Moorhens, a species that is becoming less "common," were noted from only two locations, with a maximum of four at Great Meadows and one on Nantucket.

Over 100 Lesser Golden-Plovers were seen at Logan Airport on Halloween during the northeaster, one of the highest counts since 200 Lesser Golden-Plovers were recorded at Logan Airport on October 10, 1948. Monomoy continued to harbor great numbers of shorebirds all month. On October 5 the totals were impressive: 1000 Black-bellied Plovers, 70 American Oystercatchers, 5 "Western" Willets, 3 Marbled Godwits, 1200 Sanderlings, and 45 Pectoral Sandpipers. The storm on the 31st was responsible for the high counts of phalaropes seen at both Sandy Neck in Barnstable and First Encounter Beach in Eastham. R. H. S.

Turkey Vulture

5-20	Mt. Wataic	11 total	EMHW
5, 13	Ipswich, Quabbin (G37)	4, 8	J. Berry, M. Lynch#
20	Barre, Westport	6, 6	M. Lynch#, G. Gove#
5-21	Reports of 26 individuals from 15 locations.		

Osprey

5-20	Mt. Wataic	16 total	EMHW
8, 19	Dedham, Nantucket	3, 2	K. Ryan, M. Greenberg#
20	GMNWR	2	M. Lynch#
4-20	Reports of 10 individuals from 9 locations.		

Bald Eagle

9, 13	Wayland, Quabbin (G37)	1 imm, 3 ad + 1 imm	R. Forster, M. Lynch#
14	Beverly Airport	1 imm	J. Brown

Northern Harrier

12, 19	Eastham, S. Monomoy	3, 5+	M. Lynch#, B. Nikula#
20, 26	P.I., Duxbury Beach	10, 3	BBC (D. + D. Oliver), G. d'Entremont

Sharp-shinned Hawk

5-20	Mt. Wataic	321 total, 90 max 10/17	EMHW
8, 20	Nantucket (Mothball Pines)	2, 2	M. Greenberg#
12	Eastham, DWWS	4, 3	M. Lynch#, BBC (D.F. Oliver)
13, 14	Quabbin (G37), Belmont	5, 4	M. Lynch#, L. Taylor
19, 27	Wachusett Res., P.I.	3, 3	M. Lynch#, P. + F. Vale
5-27	Reports of 14 individuals from 9 locations.		

Cooper's Hawk

12, 13, 14, 17	Mt. Wataic	1, 3, 2, 2	EMHW
Reports of 16 individuals from 14 locations.			

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Northern Goshawk				
2, 12	Truro, Milton (Blue Hills)	1 ad, 1	T. Aversa, N. Smith	
14, 17	Mt. Watatic	2, 1	EMHW	
20	GMNWR, Sandwich	1 imm, 1	H. D'Entremont#, P. Trimble	
21	Martha's Vineyard	1	V. Laux	
Red-shouldered Hawk				
5-20	Mt. Watatic	55 total, 17 max	10/17 EMHW	
14, 15	Petersham, W. Roxbury	1, 1	B. Blodget, T. Aversa	
19, 23	N. Middleboro, Lincoln	1, 2	K. Holmes, R. Forster	
Broad-winged Hawk				
12, 19	Milton (Blue Hills), Mt. Watatic	33, 1	N. Smith, EMHW	
Red-tailed Hawk				
5-20	Mt. Watatic	102 total, 36 max	10/20 EMHW	
13, 20	Quabbin (G37), GMNWR	6, 6	M. Lynch#	
Rough-legged Hawk				
5, 27	Manchester, P.I.	1, 1 dk + 1 lt	BBC (G. Hotz), M. Boucher	
30	Ipswich	1 dk	T. Aversa	
American Kestrel				
6, 8	Framingham, Worcester (BMB)	5, 3	R. Stymeist#, M. Lynch#	
14, 17, 20	Mt. Watatic	1, 13, 3	EMHW	
Merlin				
5, 27	P.I.	2, 1	M. Lynch#, P. + F. Vale	
6, 13	Acton	1, 1	R. Forster	
5-27	Reports of 18 individuals from 16 locations.			
Peregrine Falcon				
thr	Boston	2	v.o.	
2, 3	Nauset, S. Wellfleet	4+, 4	R. Clem, P. Trull#	
5, 10	N. Monomoy	5+, 5	B. Nikula#	
6, 12	P.I.	3, 2	J. Hoye, P. Iarrobino	
19, 23	Monomoy	8+, 7	W. Harrington#	
1-27	Reports of 30 individuals from 16 locations.			
Ruffed Grouse				
4, 8	N. Middleboro, Worc. (BMB)	1, 1	K. Holmes, M. Lynch#	
13	N. Dartmouth, Quabbin (G37)	1, 1	M. Boucher, M. Lynch#	
14, 26	Ipswich, Petersham	1 drumming, 1	J. Berry, B. Blodget	
Northern Bobwhite				
22, 28	Eastham, Yarmouthport	20+, 18	T. Aversa, K. Hamilton	
29	Medfield	10	T. Aversa	
Clapper Rail				
12, 18	Eastham, Nantucket	1, 1 heard	M. Lynch#, J. Papale	
Virginia Rail				
1, 21	Sterling, GMNWR	1 found dead, 4	fide B. Blodget, S. Arena#	
19, 20	Nantucket (2 locations)	8+, 1	J. Moore#	
Sora				
5, 10	Peabody, GMNWR	1, 2	M. Rines, S. Perkins#	
12, 13	Eastham, DWWS	1, 1	M. Lynch#, G. d'Entremont	
14, 15	Scituate, Nantucket	1 imm, 1	S. Perkins, J. Papale	
Common Moorhen				
1-23, 15	GMNWR, Nantucket	4 max 10/6, 1	I. Giriunas#, J. Papale#	
American Coot				
13, 20	W. Newbury	6, 7	J. Berry, J. Brown#	
20, 23	GMNWR, S. Monomoy	17, 25	M. Lynch#, B. Nikula	
Black-bellied Plover				
thr	N. Monomoy	1000 max 10/5	B. Nikula	
12, 13	Eastham, Revere	120+, 100	M. Lynch#, J. Center	
19, 20	GMNWR, W. Newbury	14, 85	S. Perkins#, BBC (D. + D. Oliver)	
26, 30	Barnstable (S.N.), Yarmouthport	200, 420	H. Ferguson, K. Hamilton	
Lesser Golden-Plover				
14, 17	N. Scituate, Rowley	2, 2	S. Perkins#, R. Forster	
19, 27	Newburyport, Newbury	20, 8	H. Wiggin#, R. Forster#	
24, 31	Boston (Logan)	50+, 100+	C. Leahy#, N. Smith	
Semipalmated Plover				
thr	N. Monomoy	70 max 10/5	B. Nikula	
1	Barnstable (S.N.), Revere	125, 20	R. Scott#, T. Aversa	
16, 23	P.I., Duxbury Beach	30, 23	T. Aversa, R. Abrams	
26, 28	Barnstable (S.N.), Eastham	25, 2	H. Ferguson, R. Forster	
Killdeer				
7, 12	Concord (N.A.C.), Sterling	136, 45	R. Forster, B. Blodget	
15, 17	Middleboro, Rowley	70, 44	T. Aversa, R. Forster	
American Oystercatcher				
5, 11	N. Monomoy	70, 45	B. Nikula	
20, 27	Nantucket	1, 8	J. Papale, E. Ray	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Greater Yellowlegs thr 6, 19 12	P.I.-Newburyport Squantum Eastham	300 max 10/5 100, 50 62	S. Perkins# + v. o. G. d'Entremont M. Lynch#	
Lesser Yellowlegs 6, 16 27, 30	Squantum, P.I. Newburyport, Rowley	2, 1 11, 1	G. d'Entremont, T. Aversa R. Forster#, T. Aversa	
Solitary Sandpiper 6, 14	Outer Cape, Belmont	3, 1	BBC (R. Timberlake), L. Taylor	
Willet (western race) 5	N. Monomoy	5	B. Nikula	
Spotted Sandpiper 12, 13 16, 19 20, 22	Nantucket, Quabbin (G37) W. Newbury, Wachusett Res. Centerville, Martha's Vineyard	1, 1 1, 1 1, 1	F. Bouchard, M. Lynch# F. Vale#, M. Lynch# H. Ferguson, V. Laux	
Hudsonian Godwit thr 1, 12 13	Newburyport E. Boston, Eastham Revere	14 max 10/27 3, 1 1	R. Forster# + v. o. T. Aversa, K. Jones J. Center	
Marbled Godwit 6, 13 5, 11	E. Boston, Revere N. Monomoy	1, 1 3, 3	S. Zendej, J. Center B. Nikula	
Ruddy Turnstone 27	Plymouth	1	BBC (G. d'Entremont)	
Red Knot 5, 23 12, 13	N. Monomoy Orleans, Revere	100, 50 1, 5	B. Nikula M. Lynch#, J. Center	
Sanderling 5, 23 16, 29 20, 26 26, 30	N. Monomoy Nahant Beach Nantucket, Barnstable (S.N.) Duxbury, Yarmouthport	1200, 600 527, 550 175+, 750 100+, 380	B. Nikula G. Wood E. Andrews#, H. Ferguson G. d'Entremont, K. Hamilton	
Semipalmated Sandpiper 5, 18, 28 25	Nahant Beach Duxury Beach	130, 7, 1 2	G. Wood D. Morimoto	
Western Sandpiper 23	Duxbury Beach	2	R. Abrams	
White-rumped Sandpiper 5, 11, 23 13, 16 26, 28	N. Monomoy Revere, Newbury Barnstable (S.N.), Nahant	5, 5, 1 30, 5 5, 3	B. Nikula J. Center, R. Forster H. Ferguson, G. Wood	
Pectoral Sandpiper 5, 23 12, 16 19 19, 20	N. Monomoy Eastham, P.I.-Newburyport Middleboro, Nantucket Lexington, GMNWR	45, 80+ 12, 52 25, 17 11, 11	B. Nikula M. Lynch#, R. Forster BBC (D. Davis), M. Greenberg# S. Perkins#, M. Lynch#	
Purple Sandpiper 28	N. Scituate, Duxbury	35, 2	T. Aversa	
Dunlin thr 2, 12 12, 13 24, 26	N. Monomoy Newburyport, Eastham Orleans, Revere P.I., Duxbury Beach	800 max 10/23 97, 150+ 120+, 70 205, 50+	B. Nikula J. Hoye#, M. Lynch# M. Lynch#, J. Center W. Drew#, G. d'Entremont	
Stilt Sandpiper 13, 15 22	Newbury, Middleboro P.I.	1, 1 1 juv	BBC (W. Drummond), T. Aversa S. Perkins	
Short-billed Dowitcher 20, 21 27	P.I., S. Dartmouth Newburyport	10, 1 2	J. Brown#, M. Boucher E. Nielson	
Long-billed Dowitcher 1, 14 27, 31	E. Boston (B.I.), Scituate P.I.-Newburyport, Eastham (F.E.)	3, 1 juv 97, 4	T. Aversa, S. Perkins# E. Nielson, S. Perkins#	
Common Snipe 12, 19 19 27	Concord (N.A.C.), Peabody Newton, W. Newbury P.I.	32, 2 1, 25+ 1	R. Forster, G. d'Entremont O. Komar, K. Disney M. Boucher	
American Woodcock 5, 26 26 27	Ipswich, N. Truro Hingham, Uxbridge N. Middleboro	2, 1 1, 1 1	J. Berry, J. Young R. Campbell, R. Graefe K. Holmes	
Red Phalarope 29, 31; 31	Barnstable (S.N.); Squantum	1, 4; 1	R. Forster#, A. Strauss#, R. Donovan	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Red Phalarope (continued)				
31	Eastham (F.E.), P'town (R.P.)	1, 4	B. Nikula, K. Jones	
phalarope species				
29, 31	Barnstable (S.N.), Eastham (F.E.)	2, 105	A. Strauss#, B. Nikula#	

JAEGERS THROUGH ALCIDS

The four-day ocean storm at the end of the month apparently coincided with the southbound migration of jaegers. On Halloween birders tallied over 1100 jaegers, nearly all of which were Pomarines, from First Encounter Beach in Eastham. Simon Perkins researched this count and concluded that this may be one of the largest single-day counts of Pomarine Jaegers ever recorded in the world! Many birds were resting on the beach, clearly exhausted from the storm. Also at First Encounter Beach, at least three Great Skuas were carefully identified, and another nine skuas of unidentified species were also noted. Jaegers were also noted from Cape Ann during the storm, and Sabine's Gulls were noted there on both October 30 and 31.

Lesser Black-backed Gulls were reported from Monomoy, Nahant, and Barre. Caspian Terns were reported from five locations early in the month, and Forster's Terns lingered through most of the month. All alcid reports coincided with the storm and consisted of 2 Dovekies and several large alcids.

R. H. S.

Pomarine Jaeger			
27	Stellwagen Bank	3	BBC (G. d'Entremont)
28, 30	Barnstable (S.N.)	11, 400	R. Forster#, R. Abrams#
28, 31	Eastham (F.E.)	2, 1100	R. Forster#, B. Nikula#
30, 31	Sandwich, Dennis (Corp. B.)	8, 2	M. Boucher, K. Jones
31	P'town (R.P.), Rockport (A.P.)	1, 1	K. Jones, H. Weisberg#
Parasitic Jaeger			
27	Stellwagen Bank	3	BBC (G. d'Entremont)
28, 30	Barnstable (S.N.)	2, 25	R. Forster#, R. Abrams#
31	Rockport (A.P.), Eastham (F.E.)	10, 13+	H. Wiggin#, B. Nikula#
31	Provincetown (R.P.), Squantum	1, 1	K. Jones, R. Donovan
jaeger species			
28, 29; 30, 31	Barnstable	4, 6; 135, 7	R. Forster#; R. Abrams#, A. Strauss
30	Yarmouthport	420	K. Hamilton
31	Dennis (Corp. B.), Rockport (A.P.)	8, 140	K. Jones, C. Leahy
Great Skua			
31	Eastham (F.E.)	3	B. Nikula + v. o.
skua species			
31	Eastham (F.E.)	9	B. Nikula#, S. Perkins + v. o.
Laughing Gull			
5, 12	Squantum, Eastham	31, 3	G. d'Entremont, M. Lynch#
12, 13	Orleans, Boston Harbor	1, 10+	M. Lynch#, J. Berry
24, 27	Revere, Plymouth	1, 2	J. Quigley, BBC (G. d'Entremont)
Little Gull			
29	Barnstable (S.N.)	1 imm	R. Forster#
Common Black-headed Gull			
26, 31	Duxbury, E. Boston	1, 1 ad	D. Brown#, J. Quigley
Bonaparte's Gull			
5, 17	P.I., Lynn	50+, 150	M. Lynch#, J. Quigley
19, 24	Lakeville, Nahant	2, 600	W. Petersen#, G. Wood
Ring-billed Gull			
16	Nahant Beach	262	G. Wood
Herring Gull			
16, 26	Nahant, Barre	399, 305	G. Wood, B. Blodget
Iceland Gull			
27, 29	Stellwagen, Harwich	1, 1	BBC (G. d'Entremont), B. Nikula
30, 30-31	Sandwich, Barnstable (S.N.)	1, 1 (1W)	M. Boucher, R. Abrams#
31	Wachusett Res., Nantucket	1 (1W), 1 (1W)	R. Forster, J. Papale
Lesser Black-backed Gull			
5, 11; 15	N. Monomoy; Nantucket	2, 3+; 1 ad	B. Nikula; K. Blackshaw#
15-18; 20-26	Nahant; Barre	1 ad; 1 ad	G. Wood; M. Lynch# + v. o.
Black-legged Kittiwake			
27	Stellwagen	175	BBC (G. d'Entremont)
28, 31	Eastham (F.E.)	26, 1500+	R. Forster, B. Nikula
31	Barnstable (S.N.)	40	A. Strauss
Sabine's Gull			
30, 31	Rockport (A.P.)	1, 1	J. Murray, H. Wiggin#
Caspian Tern			
1, 2	GMNWR, Marion	3, 1 ad + 1 yg	T. Aversa, W. Evill
5	Newburyport, P.I.	3, 1	P. + F. Vale, M. Lynch#
5	Nahant Beach	2	G. Wood

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Common Tern				
10	Nantucket	100+	K. Blackshaw#	
25, 31	Duxbury, Dennis (Corp. B.)	5, 3	D. Morimoto, K. Jones	
Forster's Tern				
5, 11	Squantum, N. Monomoy	6, 4	G. d'Entremont, B. Nikula	
13, 24	Revere	5, 5	J. Center, J. Quigley	
19, 24	Manomet, Nahant Beach	7, 4	W. Petersen#, G. Wood	
26, 27	Duxbury, Plymouth	5, 21	G. d'Entremont#, BBC (G. d'Entremont)	
Dovekie				
31	Eastham (F.E.)	2	B. Nikula	
alcid species (large)				
30, 31	Barnstable (S.N.), Dennis (Corp.B.)	8, 3	R. Abrams#, K. Jones	
31	Eastham (F.E.)	1	B. Nikula	

CUCKOOS THROUGH FINCHES

Twelve Yellow-billed Cuckoos were reported this year compared with just one last October. Two Snowy Owls arrived on the 29th, the earliest report in thirty years. A Boreal Owl was found on Long Island in Boston Harbor on October 30.

Strong southwest winds and 80 degree temperatures (13 degrees above normal) undoubtedly were responsible for many "blow-backs" (reverse migration) of Common Nighthawks, Chimney Swifts, and several warbler species.

October passerine highlights were numerous. A Fork-tailed Flycatcher was found in Wellfleet on October 3. In Peabody one or two Sedge Wrens were present for many days. The second state record of Sprague's Pipit was established in Worcester County, where a very cooperative bird was found along the dike at Wachusett Reservoir in Clinton. A MacGillivray's Warbler, a fourth state record, was banded at Manomet on October 21, and a Chestnut-collared Longspur, also a fourth state record, was present at Duxbury Beach for three days. Unfortunately it disappeared on a Friday night and could not be found on the weekend.

Among the uncommon migrants, Yellow-bellied Sapsuckers, Vesper Sparrows, and Lincoln's Sparrows were well reported. There was a movement of Sharp-tailed Sparrows at midmonth with reports from three inland locations, including 12 birds seen at Great Meadows in Concord. Late reports included an Eastern Wood-Pewee on the 16th, a Great Crested Flycatcher on Plum Island, an Eastern Kingbird on Nantucket, several Wood Thrushes, a Black-and-white Warbler, three Northern Waterthrushes, and a Canada Warbler.

Uncommon but regular fall visitors included five Western Kingbirds, several Orange-crowned Warblers, a Yellow-throated Warbler on Nantucket, two Connecticut Warblers, at least six different Blue Grosbeaks, seven Dickcissels, and seven Clay-Colored, three Lark and four Grasshopper sparrows.

The roost of blackbirds in Methuen just off Route 93 was outstanding, with perhaps millions of birds, mostly Common Grackles, European Starlings, and Red-winged Blackbirds.

R. H. S.

Black-billed Cuckoo				
13	P.I., Peabody	1, 1	S. Bolton, D. F. Oliver#	
13, 14	Newton, Provincetown	1, 1	O. Komar, J. Hoye#	
Yellow-billed Cuckoo				
5; 6, 8	Brookline; Nantucket	1; 1, 1	R. Stymeist; J. Papale	
7, 20, 26	Truro	1, 3 (2 dead), 1	B. Cassie, S. Perkins#, J. Young	
11, 13	Peabody, P.I.	1, 1	M. Rines#, J. Nove#	
20, 23	Sandwich, Duxbury	1, 1	P. Trimble, R. Abrams	
Great Horned Owl				
12, 27; 19	N. Middleboro; Newton	2, 2; 1	K. Holmes; O. Komar	
19, 20-27	S. Monomoy, P.I.	2, 2	B. Nikula, T. Young	
Snowy Owl				
29	Quincy, Boston (Logan)	1 imm, 1 imm	fide N. Smith	
31	N. Dartmouth, Ayer (Ft. Devens)	1, 1	M. Boucher, M. Olmstead	
Barred Owl				
3-10, 6	MNWS, Easton	1, 1	L. Sager + v. o., K. Ryan	
Short-eared Owl				
28	Squantum	1	T. Aversa	
Boreal Owl				
30-31	Boston (Long I.)	1	R. Donovan	
Common Nighthawk				
2, 7	Boston, Jamaica Plain	3, 1	O. + N. Komar, J. Young	
Chimney Swift				
2, 5	Boston, Newton	1, 2	O. Komar, O. Komar#	
18	Walpole, Nantucket	1, 1	O. + K. Komar, J. Papale	
Belted Kingfisher				
5; 19	Newton, P.I.; Wachusett Res.	2, 3; 4	O. Komar#, M. Lynch#; M. Lynch#	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Red-headed Woodpecker				
13	M.V.	1	V. Laux	
19, 29-31	Wachusett Res., Princeton	1 ad, 1 imm	M. Lynch#, J. Choiniere + v. o.	
Red-bellied Woodpecker				
14	Squantum	1 m	J. Hoye	
Yellow-bellied Sapsucker				
4	Sudbury, Boston	1, 1	R. Forster, T. Aversa	
5, 8	Nahant, P.I.	1, 3 imm	D. F. Oliver#, G. Wood	
4, 10	Worcester (BMB)	1 imm + 1 ad f, 2	M. Lynch#	
7-15	Nantucket	5 (3 b)	E. Andrews#	
12, 19	N. Truro, Wachusett Res.	1, 1	K. Jones, M. Lynch#	
Downy Woodpecker				
4, 8, 10	Worcester (BMB)	7, 6, 6	M. Lynch#	
Hairy Woodpecker				
4, 8, 10	Worcester (BMB)	3, 1, 1	M. Lynch#	
19, 27	Wachusett Res., Nantucket	6, 1	M. Lynch#, E. Ray	
Northern Flicker				
4, 8, 10	Worcester (BMB)	15, 12, 14	M. Lynch#	
5, 20	P.I., Gloucester	14, 7	M. Lynch#, BBC (J. Nove)	
Pileated Woodpecker				
5, 14	Concord, Hardwick	1, 1	F. Bouchard, B. Blodget	
15, 19	Lincoln, Wachusett Res.	1, 2	W. Petersen, M. Lynch#	
22, 26	Acton, Petersham	1, 1	R. Forster, B. Blodget	
Eastern Wood-Pewee				
4, 5	Boston (F.Pk.), Nantucket	1, 1	T. Aversa, M. Greenberg	
16	P.I.	1	R. Forster#	
Yellow-bellied Flycatcher				
4	Worcester (BMB)	1	M. Lynch#	
Eastern Phoebe				
4, 8, 10	Worcester (BMB)	9, 19, 11	M. Lynch#	
13, 14	Cuttyhunk, Cambridge (F.P.)	4+, 3	B. Nikula, R. Stymeist#	
16, 28	P.I., W. Roxbury	2, 1	T. Aversa	
Great Crested Flycatcher				
16, 27	P.I.	1, 1	R. Forster, E. Nielson#	
Western Kingbird				
10, 19	P.I., Chatham	1, 1	M. Rines + v. o., R. Clem	
19	N. Truro, Martha's Vineyard	1, 2	R. Comeau#, V. Laux	
28	Quabbin (G45)	1	D. Brownrigg	
Eastern Kingbird				
5, 17	Peabody, Nantucket	1, 1	I. Giriunas#, J. Papale	
Fork-tailed Flycatcher				
3	Wellfleet	1	C. Goodrich	
Horned Lark				
19, 24	Peabody, P.I.	1, 15	G. d'Entremont, W. Drew#	
Tree Swallow				
6, 8	P'town, P.I.	800+, 300	BBC (R. Timberlake), G. Wood	
12	Eastham, Orleans	90+, 120+	M. Lynch#	
13	Nantucket, Naushon	3500, 1200	F. Bouchard, B. Nikula#	
14	N. Truro, Scituate	1200, 2500	B. Nikula#, S. Perkins#	
19	Monomoy, Middleboro	700+, 335	B. Nikula#, BBC (D. Davis)	
Barn Swallow				
9, 14	Nantucket, Eastham (F.H.)	20, 2+	L. Van Duyne, B. Nikula#	
15, 25	Halifax, Wakefield	1, 1	T. Aversa, J. Young	
Fish Crow				
12-26	DWWS	2+ max 10/13	G. d'Entremont + v. o.	
13, 24-25	Scituate, Brookline	2+, 1	G. d'Entremont, H. Wiggin	
Common Raven				
12, 13	Brookline, Quabbin (G37)	1, 2	H. Wiggin, M. Lynch#	
14, 15	Hardwick, Boylston	3, 3	B. Blodget	
21, 27	Wachusett Res., Quabbin (G40)	2, 1	M. Lynch#, R. Bradbury	
Blue Jay				
13-14	M.V.	300-400	C. Floyd#	
Black-capped Chickadee				
4, 8, 10	Worcester (BMB)	24, 24, 17	M. Lynch#	
Brown Creeper				
8, 13	Nantucket, Quabbin (G37)	3, 2	J. Papale, M. Lynch#	
19, 20	Wachusett Res., GMNWR	2, 2	M. Lynch#	
27	Salisbury	4	R. Forster#	
Carolina Wren				
thr, 7-31	Cambridge (F.P.), Nantucket	2 or 3, 6+	R. Stymeist, J. Papale#	
9, 11	Peabody, Wayland	2, 2	R. Bradbury, R. Forster	
19, 20	Newton, Gloucester	2, 5	O. Komar, BBC (J. Nove)	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Carolina Wren (continued)				
20	Sandwich, Westport	4, 22	P. Trimble, G. Gove#	
House Wren				
10, 22	Worc. (BMB), Truro	1, 1	M. Lynch#, T. Aversa	
Winter Wren				
4, 12	Worc. (BMB), P.I.	4, 2	M. Lynch#, J. Hoyer	
12, 29	W. Gloucester	1	T. Young	
14, 15	Petersham, Boylston	1, 1	B. Blodget	
20, 27	N. Middleboro, P.I.	2, 1	K. Holmes, T. Young	
Sedge Wren				
4-11	Peabody	1 or 2	M. Rines + v. o.	
Marsh Wren				
4, 19	Peabody	2, 1	M. Rines, G. d'Entremont	
5	P.I., Newton	1, 1	M. Lynch#, O. Komar#	
13, 20	Cuttyhunk, GMNWR	2, 1	B. Nikula#, H. D'Entremont#	
Golden-crowned Kinglet				
4, 13	P.I., Quabbin (G37)	65, 24	T. Young, M. Lynch#	
20, 27	Gloucester, Salisbury	28, 10	BBC (J. Nove), R. Forster#	
Ruby-crowned Kinglet				
4, 6	Worc. (BMB), Westport	13, 5	M. Lynch#, M. Boucher	
6-20, 13	Nantucket, P.I.	9, 6	J. Papale, D. Chickering	
13, 19	Scituate, Peabody	2, 2	G. d'Entremont	
Eastern Bluebird				
3	Lincoln	10	L. Wilson	
4, 5	Sudbury, Carlisle	3, 11	R. Forster, D. + L. Stokes	
13	Belmont, Quabbin (G37)	6, 5	C. Taylor#, M. Lynch#	
13, 19	Acton, Peabody	4, 3	R. Forster, G. d'Entremont#	
23, 26	GMNWR, DWWS	7, 9	R. Forster, G. Gove#	
28, 29	Gardner, Medfield	10, 7	B. Blodget, T. Aversa	
Gray-cheeked Thrush				
1, 8	Nahant, Boxford	1, 1	T. Aversa, J. Brown#	
Swainson's Thrush				
1, 8	Nahant, Millis	1, 1	T. Aversa, P. Iarrobino	
14	Cambridge (F.P.)	1	R. Stymeist#	
Hermit Thrush				
4, 8	Worcester (BMB)	3, 4	M. Lynch#	
13	Quabbin (G37), Belmont	10, 4	M. Lynch#, L. Taylor#	
16, 20; 20	P.I.; Westport	3, 4; 3	R. Forster, T. Young; G. Gove#	
23, 27	Waltham, Belmont	3, 3	L. Taylor	
Wood Thrush				
1, 4	Nantucket, Worc. (BMB)	1 b, 1	E. Andrews, M. Lynch#	
8, 9	Nantucket, Cambridge	1, 1	M. Greenberg, F. Bouchard	
11; 12, 13	Nantucket; P.I.	1; 1, 1	J. Papale; D. Chickering	
American Robin				
27	Easton	1120+ (roost)	K. Ryan + D. Clapp	
Gray Catbird				
4, 8, 10	Worcester (BMB)	22, 8, 7	M. Lynch#	
12	Eastham	6	M. Lynch#	
Brown Thrasher				
12, 20	DWWS, PI.	1, 1	BBC (D. F. Oliver), BBC (D. + D. Oliver)	
American Pipit				
5	P.I., Concord (NAC)	12, 25	M. Lynch#, F. Bouchard	
6, 12	Lincoln, Sterling	50, 35	S. Perkins, B. Blodget	
16, 19	Newbury, GMNWR	60, 22	R. Forster, S. Perkins#	
20, 27	Middleboro, Topsfield	280+, 40+	L. Taylor#, M. Boucher	
Sprague's Pipit (details submitted)				
26-31	Wachusett Res. (Clinton)	1 ph	B. Blodget + v. o.	
Cedar Waxwing				
4, 8, 10	Worcester (BMB)	5, 40, 41	M. Lynch#	
12, 15	DWWS, Wayland	30, 25	BBC (D.F. Oliver), R. Forster	
28	Bolton	20	R. Forster	
Northern Shrike				
26	P.I.	1	J. Linguina	
shrike species				
13	Scituate (Driftway)	1 fly over	G. d'Entremont	
Solitary Vireo				
3, 8	Bolton, Worc. (BMB)	3, 3	R. Bradbury	
13, 14	Quabbin (G37), Ipswich	5 (1 singing), 2	M. Lynch#, J. Berry	
1-27	Reports of 17 individuals from 16 locations.			
Philadelphia Vireo				
12	Peabody	1	R. Bradbury	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Blue-winged Warbler				
5	Nahant	1	I. Giriunas#	
Orange-crowned Warbler				
13-14, 26	Cambridge (F.P.)	1, 1	A. Dasinger#, R. Stymeist#	
14	Duxbury, Peabody	2, 1	S. Perkins#, D. Morimoto	
15, 16	W. Roxbury, P.I.	1, 2	T. Aversa, R. Forster	
20, 22	Nantucket, Eastham (F.H.)	1, 1	J. Papale#, T. Aversa	
Nashville Warbler				
14	Nantucket	1 b	E. Andrews	
20, 26	Sandwich, Boston (F.Pk.)	1, 1	P. Trimble, T. Aversa	
Northern Parula				
4, 10; 5	Worc. (BMB); Nahant	5, 1; 2	M. Lynch#; I. Giriunas#	
13, 16	Nantucket, P.I.	1, 1	F. Bouchard, R. Forster	
Yellow Warbler				
1, 4	Peabody, Worc. (BMB)	1, 1	T. Aversa, M. Lynch#	
5, 6	Nahant, P.I.	1, 1	I. Giriunas#, J. Hoye#	
Chestnut-sided Warbler				
1	Nahant	1	T. Aversa	
Magnolia Warbler				
5, 14	Squantum, Holden	1, 1	G. d'Entremont, B. Blodget	
Cape May Warbler				
6, 6-9, 15	Westport, Nant., M.V.	1, 9, 1	M. Boucher, H. Mellon#, V. Laux	
Black-throated Blue Warbler				
12, 14	Cambridge (F.P.)	1 f, 1 m	A. Dasinger#, J. Heywood#	
12-13, 20	P.I.	1, 1 m	D. Chickering + v. o., T. Young	
15-19	Nantucket (Quidnet)	1 m, 1 f	L. Van Duyn	
Yellow-rumped Warbler				
4, 5	Nantucket (Mothball Pines)	38 b, 30 b	E. Andrews#	
4, 8, 10	Worcester (BMB)	20, 72, 31	M. Lynch#	
5, 5-20	Ipswich, P.I.	20+, 200 max 10/13	J. Berry, M. Lynch# + v. o.	
12, 14	Cambridge (F.P.), N. Scituate	52, 250	R. Stymeist, J. Hoye#	
14, 19	Squantum, Wachusett Res.	50, 70	J. Hoye#, M. Lynch#	
14, 19, 21	Nantucket	91, 72, 111	E. Andrews	
19, 20	Newton, Gloucester	30, 45	O. Komar, BBC (J. Nove)	
Black-throated Green Warbler				
20, 24	Westport, Boston (F.Pk.)	1, 1	J. Gordon#, T. Aversa	
Yellow-throated Warbler				
13	Nantucket (Lily Pond Sanctuary)	1	F. Bouchard	
Prairie Warbler				
5, 13	Nahant, Scituate	1, 1	I. Giriunas#, G. d'Entremont	
16	Nantucket	1	J. Papale	
Palm Warbler				
4-14	Reports of 28 individuals from 8 locations.			
4, 8, 10	Worcester (BMB)	9, 15, 14	M. Lynch#	
6; 8, 9	Westport; Weston	15; 3, 6	M. Boucher; D. Morimoto	
12	Nantucket, Cambridge (F.P.)	12, 7	F. Bouchard, R. Stymeist	
19, 20	Newton, Sandwich	4, 45	O. Komar + v. o., P. Trimble	
Blackpoll Warbler				
1; 4, 8	Nahant; Worc. (BMB)	7; 4, 3	T. Aversa; M. Lynch#	
5	Petersham	36 b	J. Baird	
14	Cambridge (F.P.), Boylston	1, 1	R. Stymeist#, B. Blodget	
16, 19	P.I., Peabody	1, 1	T. Aversa, G. d'Entremont	
Black-and-white Warbler				
5, 13	Nahant, P.I.	1, 1	I. Giriunas#, BBC (W. Drummond)	
American Redstart				
4, 11	Worc. (BMB), Nantucket	3, 1	M. Lynch#, J. Papale	
12, 16	Cambridge (F.P.), P.I.	1, 1	R. Stymeist#, R. Forster	
Ovenbird				
1, 4	Nahant, Boston	3, 1	T. Aversa, J. Loring	
8	Millis	1	P. Iarrobino	
Northern Waterthrush				
5, 12, 14	Nahant, N. Truro, Duxbury B.	1, 1, 1	I. Giriunas#, K. Jones, E. Nielson#	
Connecticut Warbler				
3, 19	Bolton Flats, Peabody	1, 1	R. Bradbury, G. d'Entremont	
Mourning Warbler				
4	Sudbury	1	R. Forster	
MacGillivray's Warbler				
21	Manomet (MBO)	1 b	MBO staff	
Common Yellowthroat				
4, 8, 10	Worcester (BMB)	7, 2, 5	M. Lynch#	
12, 14	Cambridge (F.P.), Peabody	9, 2	R. Stymeist, D. Morimoto	
20, 22	Wayland, Truro	1, 1	G. d'Entremont, T. Aversa	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Wilson's Warbler 1, 12	Nahant, Nantucket	1, 1	T. Aversa, F. Bouchard	
Canada Warbler 19	Boston (F.Pk.)	1	T. Aversa	
Yellow-breasted Chat 12	Eastham, Nantucket	1, 1	M. Lynch#, F. Bouchard	
12	Princeton	1	B. Van Dusen	
Scarlet Tanager 8, 12	Nantucket	1 f b, 1 m	E. Andrews	
13	P.I., Cambridge (F.P.)	1, 1	D. Chickering, A. Dasinger	
Rose-breasted Grosbeak 2, 4	Truro, Worc. (BMB)	1, 1	T. Aversa, M. Lynch#	
12	Cambridge (F.P.)	1	R. Stymeist	
Blue Grosbeak 2, 12, 14	N. Truro	2, 1, 2	T. Aversa, K. Jones, B. Nikula#	
8-12	Nantucket	1 imm, 1 f	E. Ray#	
8, 12	Wellesley, Arlington Res.	1, 1	C. Ewer#, L. Taylor	
Indigo Bunting 2-25	N. Truro	12 max 10/2, 10/12	K. Jones + v. o.	
20, 29	Sandwich, Medfield	2, 1	P. Trimble, T. Aversa	
Dickcissel 5, 13	P.I.	1, 1	P. + F. Vale, J. Berry	
12, 15-19	Arlington Res., Nantucket	1, 2	L. Taylor, L. Van Duyn#	
10-14	N. Truro	1	P. Trull + v. o.	
12-13, 20	Boxford, Belmont	1, 1	J. + V. Kousky + v. o., C. Floyd	
Rufous-sided Towhee 4, 8, 10	Worcester (BMB)	19, 6, 6	M. Lynch#	
19, 20	Peabody, P.I.	1, 1	G. d'Entremont, BBC (D. + D. Oliver)	
American Tree Sparrow 23, 27	GMNWR, Salisbury	1, 1	R. Forster, R. Forster#	
30	Wayland	10	S. Arena	
Chipping Sparrow 5, 8	P.I., Weston	9, 12	M. Lynch#, D. Miromoto	
13, 20	Scituate, Concord	1, 1	G. d'Entremont#	
Clay-colored Sparrow 2-22, 5	N. Truro, P.I.	1, 1	T. Aversa + v. o., M. Lynch#	
8, 12	Peabody, Orleans	1, 1	R. Bradbury, K. Jones	
15-16, 20	Lincoln, Sandwich	1, 1	C. Floyd, P. Trimble	
Field Sparrow 4, 8, 10	Worcester (BMB)	13, 15, 16	M. Lynch#	
20	Sandwich	20	P. Trimble	
Vesper Sparrow 1-12	Peabody	max 4 10/5-12	J. Hoye + v. o.	
2-6, 4	Wellfleet, P'town	5, 1	T. Aversa + v. o., J. Hoye	
6, 12	Framingham, Cambr. (Mt. A.)	1, 1	R. Stymeist	
12, 12	Concord, Arlington Res.	3, 1	R. Forster, L. Taylor	
15, 16	W. Roxbury, P.I.	2, 1	T. Aversa, R. Forster	
20	Forestdale	1	P. Trimble	
Lark Sparrow 5	P.I.	1	H. Wiggin#	
7, 26	N. Truro	1 imm, 1	B. Cassie, R. Comeau#	
Savannah Sparrow 5, 26	P.I.	21, 11	M. Lynch#, BBC (S. Charette)	
6, 9	Framingham, Wayland	75+, 8	R. Stymeist#, S. Arena	
20	Newbury, Sandwich	20, 42	J. Brown#, P. Trimble	
"Ipswich" Savannah Sparrow 26, 27	Duxbury, Salisbury	1, 1	M. Lynch#, K. Hamilton#	
Grasshopper Sparrow 6; 8, 10	N. Dartmouth; Worc. (BMB)	1; 1	M. Boucher; K. Mills#	
20	N. Truro, Provincetown	1, 1	B. Nikula, S. Perkins#	
Sharp-tailed Sparrow 5	P.I., Ipswich	6, 10+	M. Lynch#, J. Berry	
5, 12	Dorchester, GMNWR	2, 12	G. d'Entremont, G. Gove#	
12	Peabody, Cambr. (F.P.)	1, 1	R. Heil, R. Stymeist + v. o.	
13, 18	Scituate, Nantucket	4, 3	G. d'Entremont, J. Moore#	
Seaside Sparrow 5, 19	P.I.	1, 2	M. Lynch#, H. Wiggin#	
Song Sparrow 4, 8, 10	Worcester (BMB)	34, 24, 45	M. Lynch#	
5, 20	P.I., Sandwich	24, 30	M. Lynch#, P. Trimble	
20	GMNWR	50+	M. Lynch#	

DATE	LOCATION	NUMBER	OBSERVERS	OCT. 1991
Lincoln's Sparrow				
2, 7, 22, 25	Truro	3, 1, 1, 1	T. Aversa + v. o.	
2, 8	Newton, Weston	3, 3	O. Komar, D. Morimoto	
4, 8, 10	Worcester (BMB)	4, 2, 5	M. Lynch#	
12, 14	Cambridge (F.P.)	2, 1	R. Stymeist	
2-26	Reports of individuals from 13 locations.			
Swamp Sparrow				
4, 8, 10	Worcester (BMB)	14, 11, 14	M. Lynch#	
5	Ipswich, Bolton	20, 15	J. Berry, D. Morimoto	
12	DWWS, Cambridge (F.P.)	7, 58	BBC (D. F. Oliver), R. Stymeist	
14, 20	N. Truro	20, 30	B. Nikula#	
White-throated Sparrow				
1	Nantucket (Mothball Pines)	6 b	E. Andrews#	
4, 8, 10	Worcester (BMB)	65, 38, 29	M. Lynch#	
8, 13	Weston, Quabbin (G37)	22, 14	D. Morimoto, M. Lynch#	
White-crowned Sparrow				
1, 5	Weston, Ipswich	2 imm, 3 imm	D. Morimoto, J. Berry	
5; 8, 10	P.I.; Worc. (BMB)	2 imm; 3, 1	M. Lynch#	
10, 12	Arlington Res., Cambr. (F.P.)	3, 2	C. Floyd, R. Stymeist	
14, 15	Beverly, M.V.	2, 20+	J. Brown#, V. Laux	
5-24	Reports of 17 individuals from 15 locations.			
Dark-eyed Junco				
4, 19	P.I., Wachusett Res.	25, 15	T. Young, M. Lynch#	
20, 22	Gloucester, N. Middleboro	38, 25	BBC (J. Nove), K. Holmes	
24	Sherborn	24	E. Taylor	
Lapland Longspur				
13, 14	Peabody, N. Scituate	1, 4	R. Stymeist#, S. Perkins#	
27, 31	P.I., Eastham (F.E.)	3, 6	R. Forster, S. Perkins#	
Chestnut-collared Longspur				
23-25	Duxbury Beach	1 imm ph	R. Abrams + v. o.	
Snow Bunting				
23, 25, 26	Nahant Beach	5, 5, 2	G. Wood	
23, 29	Duxbury, Barnstable (S.N.)	17, 30	R. Abrams, R. Forster#	
29, 31	Clinton, Eastham (F.E.)	60+, 45	B. Blodget, S. Perkins#	
Bobolink				
5, 6	Dorchester, Framingham	3, 26	G. d'Entremont, R. Stymeist#	
6, 14, 19	Peabody	6, 4, 4	I. Giriunas + v. o.	
Red-winged Blackbird				
5, 6	P.I., Rowley	120+, 1000	M. Lynch#, I. Giriunas	
19, 20	Bridgewater, GMNWR	510, 600+	BBC (D. Davis), M. Lynch#	
20	Wayland, Sandwich	500, 120	G. d'Entremont, P. Trimble	
24-31	Methuen	"thousands"	J. Hogan# + v. o.	
Eastern Meadowlark				
5, 9	P.I., Framingham	3, 6	M. Lynch#, R. Forster	
12	Eastham, Concord (NAC)	2, 5	M. Lynch#, R. Forster	
13	Ipswich, DWWS	1 m singing, 2	J. Berry, G. d'Entremont	
Rusty Blackbird				
10; 12, 14	Arlington Res.	15; 30, 40	C. Floyd; L. Taylor	
11, 19	Wayland	133, 151	R. Forster	
23, 26	GMNWR, Wakefield	40, 30+	T. Aversa, P. + F. Vale	
Common Grackle				
5, 6, 17	Weymouth	600, 2000+, 2500	D. Morimoto	
19, 20	Bridgewater, Westport	3007, 10,000+	BBC (D. Davis), G. Gove#	
24-31	Methuen	"millions"	J. Hogan# + v. o.	
Brown-headed Cowbird				
12	Concord (NAC), Sudbury	500, 400	R. Forster, G. Gove#	
27, 30	Salisbury, Rowley	175, 60	R. Forster#, T. Aversa	
Northern Oriole				
20	Gloucester, Sandwich	1, 1	BBC (J. Nove), P. Trimble	
25, 28	Nantucket, E. Orleans	2, 1	J. Papale, E. Williams	
"Bullock's" Northern Oriole				
4	Provincetown	1	J. Hoyer	
Purple Finch				
5, 11	Ipswich, Sudbury	2+, 1 m	J. Berry, R. Forster	
19	Peabody, Wachusett Res.	1, 6	G. d'Entremont, M. Lynch#	
19; 22, 25	Concord; Truro	1; 4, 2	R. Forster; T. Aversa, J. Young	
Pine Siskin				
13, 19	Quabbin (G37), Wachusett Res.	1, 4	M. Lynch#	
26	Quabbin (G40)	2	B. Blodget	

LIST OF ABBREVIATIONS

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

ABOUT THE COVER: BLACK-CAPPED VIREO

The perky, diminutive Black-capped Vireo (*Vireo atricapillus*) is one of North America's most sought after and attractive vireos and one of its most endangered species. The male is striking, with a jet black cap and contrasting white spectacles. The female is similar but duller, with a gray cap. Both sexes are whitish below, largely green above, with yellow feather edgings, distinct wing bars, and yellowish flanks.

Black-capped Vireos formerly bred from southern Kansas in a wide band through Oklahoma and Texas to southern Coahuila, Mexico. Their range has contracted markedly in recent years. The species is extinct in Kansas, breeds in only two areas of Oklahoma, and has become local and patchy in Texas and Mexico. The Edwards Plateau of Texas is one of its remaining strongholds, but even there it is diminishing and threatened. The factors that led to its addition to the federal Endangered Species List in 1987 involve both habitat deterioration and brood parasitism by Brown-headed Cowbirds.

Black-capped Vireos prefer a scrubby successional habitat, often on rocky hillsides, of predominantly oaks and junipers. Overgrazing by sheep and goats, control of wildfires (which ultimately produce good vireo habitat), and agricultural and urban development have reduced the vireo's habitat. However, there now seems to be more good habitat than birds to use it, and the major culprit appears to be the Brown-headed Cowbird. Recent studies conducted in prime vireo habitat report that nearly all Black-capped Vireo nests at Oklahoma study sites, and more than seventy-five percent at Texas sites, were parasitized by cowbirds. The recent expansion of the Bronzed Cowbird to favored habitat in the Edwards Plateau makes the picture even bleaker.

The vireos arrive in April from their wintering grounds along a narrow strip of western Mexico, and by mid-April, most nesting is underway. The males are highly territorial and persistent singers. Even through the heat of the day their distinctive song is described as harsh and hurried, restless, and with an angry quality, somewhat reminiscent of the songs of Bell's or White-eyed vireos.

Males often follow females while courtship singing, and have a wing-fluttering courtship flight. In this monogamous species the female typically incubates at night while sharing these duties with her mate in the daytime. After the young hatch the female does most of the brooding and the male most of the food gathering. The nest, usually three or four feet above ground in the center of an oak thicket, is a typical cup-shaped pendant vireo nest, about three inches wide and suspended from a forked twig. Coarse grass and bark strips are tightly bound with spiderweb silk, and the cup is lined with fine grass. The usual clutch is four pure white eggs.

Unfortunately for Black-capped Vireos, they have a protracted incubation period of up to seventeen days. Thus, the presence of cowbird eggs, which take only ten to twelve days to hatch, virtually ensures that no vireo young will

fledge from a parasitized nest. Vireo young fledge in ten to twelve days, but sometimes receive extended parental care for over a month. The male will often continue to care for the fledged young after the female has started raising a second brood. Black-capped Vireos are insectivorous, preferring caterpillars gleaned from leaves. They are active foragers, sometimes hanging upside down, like chickadees, from leaf clusters.

Local cowbird control programs have been fairly successful in reducing brood parasitism in several study areas in Texas and Oklahoma, but these measures are expensive and only locally effective. One can only hope that habitat preservation and brood parasitism controls will be widely applied, allowing birders to continue to enjoy these magnificent little vireos into the indefinite future.

W. E. Davis, Jr.

MEET OUR COVER ARTIST

Bird Observer welcomes Rick Frey of Norman, Oklahoma, as the artist of this issue's cover, the Black-capped Vireo. A native Oklahoman, Rick's works are on permanent display at the Artisan 9 gallery in Norman. He is a self-taught artist who began drawing wildlife at an early age. His first love is birds, and he spends as much time observing birds as he does drawing birds. He says, "I believe it is very important to become as familiar as possible with your subject, especially if the artist chooses a realistic type of expression." George Miksch Sutton was a major influence on Rick's work with birds and paintings.

Rick also works with western themes, alone and in combination with wildlife. He enjoys commercial success mostly through his paintings and prints, but also does graphic design work, such as logos, silk screen printing, and special design projects for nature and wildlife organizations. Rick can be reached at P.O. Box 720576, Norman, OK 73070.

M. Steele

Pointed wings and a long pointed tail, a black cap, and a slender pointed bill all indicate that December's mystery bird is a tern. Four medium-sized tern species regularly occur in Massachusetts: Roseate, Common, Arctic, and Forster's. As adults, all four species have complete black caps in breeding plumage. The slightly smaller and similarly patterned Least Tern has a white forehead in corresponding plumage.

Identifying terns in breeding plumage involves looking closely at the primary pattern, wing to tail ratio, bill coloration and shape, leg length, and overall shape. Because the pictured bird's wings are raised, the reader can see both the upper and underwing primary patterns, which provide sufficient information to identify this bird.

A careful examination of the underwing shows a neatly defined series of dark tips to the outer primary feathers, giving the impression of a narrow dark border along the trailing edge of the outermost portion of the wing. The top view of the opposing wing gives a similar impression, and neither wing surface has a wedge of dusky coloration protruding into the white or the gray. Thus, all of the black coloration is well defined and limited to the trailing edge of the wing. In the Common Tern, the black is much more extensive and less well defined beneath the wing, while on top, a conspicuous blackish wedge typically runs into the primaries. The much whiter and frostier Roseate and Forster's terns show very little dusky on either wing surface and look much paler overall than the bird in the picture.

In addition to its characteristic primary pattern, the mystery tern is noticeably gray below with a whitish line just below the black cap, and it appears to have a uniformly colored bill. In high breeding plumage, the very white-looking Roseate Tern may possess a uniformly black bill, just as the grayer Arctic Tern usually displays a uniformly red bill. In shape, however, the Roseate Tern's bill is longer and slightly thinner than that of the Arctic Tern. Likewise, Roseate Terns have significantly longer tarsi than Arctic Terns, so that a standing bird would normally display a "leggier" look than the pictured bird. Both Common and Forster's terns have bicolored bills, and their bills are normally thicker than those of an Arctic Tern.



Arctic Tern Photo By Wayne R. Petersen
Plymouth Beach, May 1991

A final feature worth highlighting in the photograph is the rounded, rather than flattened, appearance of the bird's head. This distinctive head shape, when combined with the bird's short legs, gray underparts, white facial stripe, uniformly colored bill, and distinctive primary pattern, all indicate that the bird is an Arctic Tern (*Sterna paradisaea*).

AT A GLANCE



Photo by David Rowell

Can you identify this bird?

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

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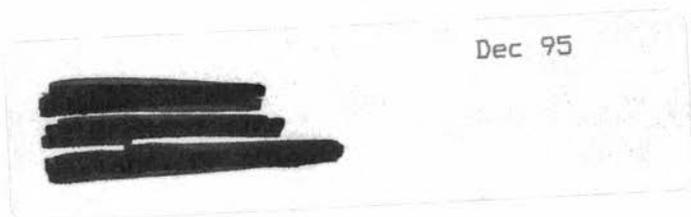
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