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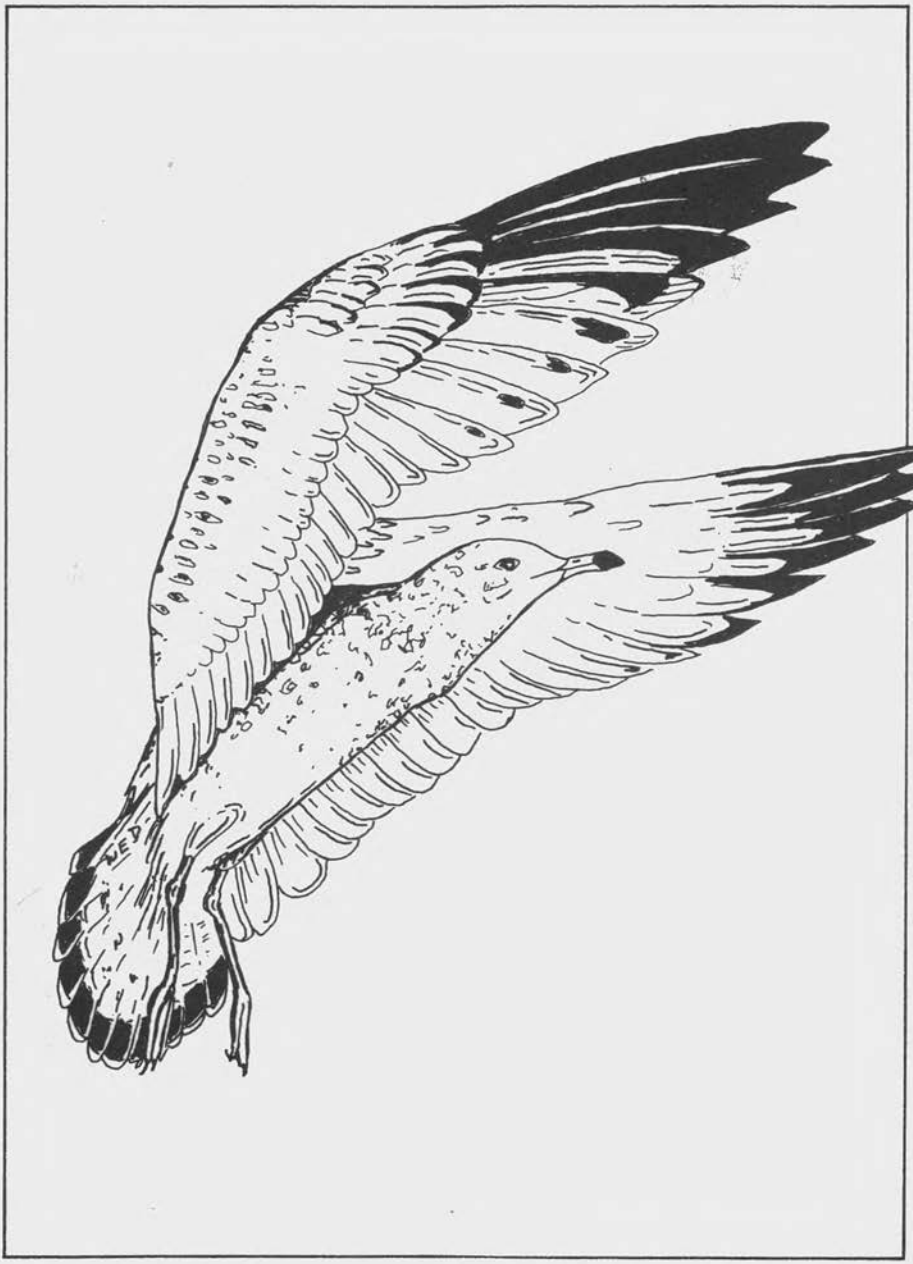

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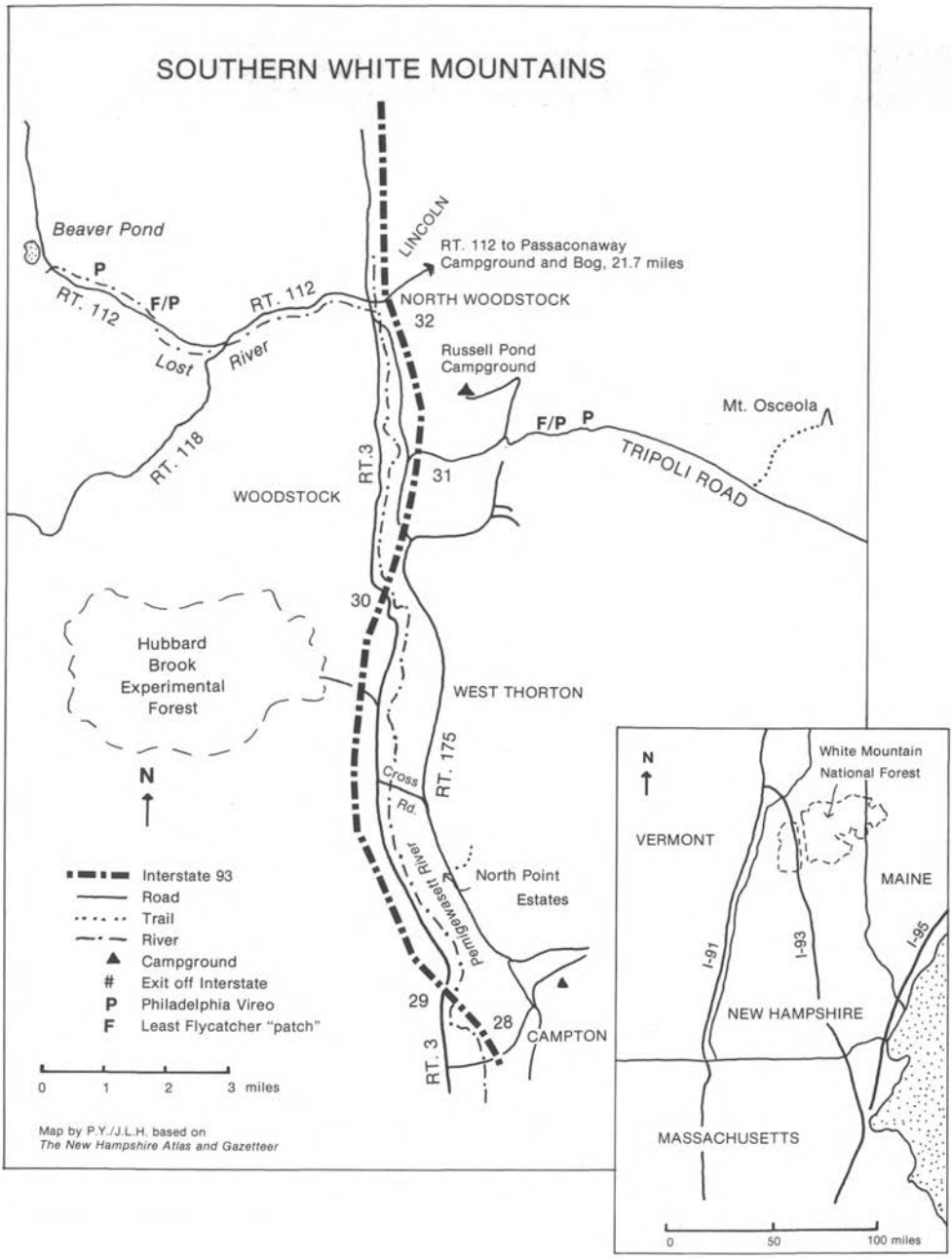
IN FOND MEMORIAM. Author of Lane guides and literate writer on diverse subjects, including social and political criticism and satire; 1986 recipient of ABA Ludlow Griscom award; generous friend to birders everywhere; energetic and kindly tour leader, famous for gourmet picnics; delightful raconteur; courageous Interferon guinea pig in a five-year struggle with cancer; details of his private life as elusive as the birds he led us to; and a very gentle man. JIM LANE died in the VA Hospital at Loma Linda, California, March 24, 1987.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Road
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P Philadelphia Vireo
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The New Hampshire Atlas and Gazetteer
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SUMMER BIRDING IN THE WHITE MOUNTAINS

by Peter H. Yaukey

The White Mountains of New Hampshire form the tallest mountain mass in New England. While their highest peaks reach above timberline, their upper slopes are covered by a dense forest of dwarf paper birch, spruce, and fir, and their lower slopes are cloaked in a northern hardwood forest of beech, yellow birch, and maple. These forest communities harbor a broad variety of bird species of interest to the Massachusetts birder.

Many migrant northern breeding species can be seen in greater numbers in the White Mountains during the summer than during migration through the Bay State. Other species, such as the Spruce Grouse, do not occur in Massachusetts at all. Observing familiar migrant birds on their nesting territories can be novel, since they reserve certain behaviors and vocalizations for this time of year. Such opportunities for finding birds, combined with scenic mountain vistas make the White Mountains a worthy destination during the summer months.

Based on my observations in a large stand of maple, birch, and beech during the last three years, the most common birds in this habitat are the Red-eyed Vireo, American Redstart, Ovenbird, and Black-throated Blue and Black-throated Green warblers. Other species that can be expected in a morning's birding include Hermit, Swainson's, and Wood thrushes, Veery, Yellow-bellied Sapsucker, Scarlet Tanager, and Rose-breasted Grosbeak. Along streams where a few conifers occur, Blackburnian Warbler, Solitary Vireo, Winter Wren, and Brown Creeper are similarly common. Less common but nevertheless likely are Pileated Woodpecker, Yellow-rumped Warbler, Golden-crowned Kinglet, and Purple Finch. The raptor most often detected in the northern hardwoods is the Barred Owl, which is often vocal by day.

Two specialized habitats worth investigating -- clear-cuts and beaver ponds -- are found locally within the hardwoods. Clear-cuts harvested within the previous two or three years harbor breeding Mourning Warblers. One clear-cut of this age that I observed also had numerous Chestnut-sided Warblers and Ruby-throated Hummingbirds. These areas are especially worth investigating during July or August, when birds of the closed forest such as thrushes, grosbeaks, and redstarts move in. The beaver pond habitat is favored by Northern Waterthrushes and Olive-sided Flycatchers. Canada and Magnolia warblers often reside along the edges of these ponds.

Interesting for its perplexing patchy distribution within the hardwoods is the Least Flycatcher. Whereas this species is absent from many apparently suitable sites, groups of up to fifty pairs pack together in other areas with each pair occupying but a tiny territory. Vigorous fighting and chasing is common in

these patches, and the morning chorus at first light is a treat. Each male contributes a rapid string of loud "chebeks" continuously from its territory, and together they produce a cacophony.

Above the northern hardwood forest, spruce, fir, and paper birch increase in abundance as the trees become progressively more stunted. Scattered within these areas are dense stands of spruce and fir with an open mossy ground cover. These high-elevation forests are home to several long-distance migrants that breed here close to their southern limits. The Blackpoll Warbler, Yellow-bellied Flycatcher, and Gray-cheeked Thrush seem to be present on most peaks where there is sufficient coniferous habitat. Blackpoll Warblers and Yellow-bellied Flycatchers occur down to about an elevation of 3000 feet, whereas the Gray-cheeks are found slightly higher. All three of these species, but particularly the Gray-cheeked Thrush, can be difficult to spot even where they are numerous because the vegetation of this habitat is so dense. Magnolia and Yellow-rumped warblers occur at their highest densities here, and Dark-eyed Juncos and White-throated Sparrows can also be numerous.

One treat of the conifer-clad mountains is the Boreal Chickadee, which I have found on most of my hikes in recent years. The spruce-fir habitat is also exciting because of the possibility of encountering a Gray Jay, Black-backed Woodpecker, or Spruce Grouse; though less widespread than the chickadee, they are worth looking for.

The northern hardwood and spruce-fir forest communities occur throughout the White Mountains and are accessible to the public as part of the White Mountain National Forest. Although good birding can be found along many roads and trails, the following road guide should nevertheless be useful for those with time constraints. Included are several sites where the Philadelphia Vireo may be found as well as Passaconaway Bog, a sphagnous area with breeding boreal species, including Lincoln's Sparrow.

Interstate 93 provides a direct conduit between eastern Massachusetts and the southern White Mountains. Take Exit 28 off this freeway, and drive about one mile east to the first traffic light, beyond which is a sizable wetland. This area is worth checking both from the road and from the back of a public campground located about one mile farther up the road. Tree, Bank, Barn, Cliff, and Rough-winged swallows are seen here frequently, and Alder Flycatchers and Yellow Warblers often sing. Look for Killdeer, Spotted Sandpiper, and Belted Kingfisher here during the breeding season, when Great Blue Heron, American Black and Wood ducks also occur. During shorebird migration in May and July, appearances have been made by Solitary and Least sandpipers, Semipalmated Plover, and Greater Yellowlegs.

Return to the traffic light and proceed north on State Highway 175. Along this road, Bobolinks can be found in the uncut fields, and bluebirds are a

possibility in open areas. Pine Warblers are scattered in the stands of white pine. After 2.7 miles, stop at North Point Estates. On the right here a dirt track about a half-mile long traverses an area of tall conifers mixed with young deciduous growth, home to Nashville and Magnolia warblers in surprisingly high density. Large numbers of White-throated Sparrows are present, with smaller numbers of Black-and-white, Yellow-rumped, and Canada warblers, Red-breasted Nuthatches, Scarlet Tanagers, and Rufous-sided Towhees. The start of this dirt road has proven a good site to find Whip-poor-wills at night, although they were sporadic here in 1986.

Returning to State Highway 175, drive north 1.4 miles to Cross Road. Proceed west 0.7 miles on this road, crossing the Pemigewasett River. Turn north onto State Highway 3. After 1.1 miles, Fuller's Market marks the start of Mirror Lake Road on the left. Along the first mile of this road, listen for summer resident Yellow-throated Vireos. Then bear left onto Hubbard Brook Road, which winds 5.8 miles through the uninhabited northern hardwoods of Hubbard Brook Experimental Forest. A wide variety of breeding birds can be found in this area, which is the site of long-term research in avian ecology.

After returning to Fuller's Market, head north 0.3 miles on State Highway 3 to a picnic area on the right shoulder. Louisiana Waterthrushes inhabit the wet areas on both sides of the road here, and a Yellow-throated Vireo may be singing. Proceed north 1.4 miles farther to I-93, and take it north to Exit 31, Tripoli Road. Turning right off the exit ramp heads you east on this road, locally pronounced "triple-I."

Its entire ten-mile length traverses good northern hardwoods habitat. A turnoff to Russell Pond Campground will be passed at 1.9 miles. Beginning exactly one mile beyond that and extending another four hundred yards down the road is a Least Flycatcher patch that held thirty-seven pairs in 1985. Two or more pairs of Philadelphia Vireos were also here that year, and others were found 0.8 miles farther east on Tripoli Road, two hundred yards up a dirt road that heads north.

The song of this species is very similar to that of the Red-eyed Vireo but comprises a smaller repertoire of phrases, frequently just two or three different types. Cues such as high pitch, slow speed, and "cheapness" (sounding as if produced by a poor quality tape player) are also helpful, but less dependable.

Four miles farther down Tripoli Road, the trail to Mount Osceola (elevation 4326 feet) starts on the left. This hike is very gentle, very birdy, and can be completed in a morning. Blackpoll Warblers, Yellow-bellied Flycatchers, and Gray-cheeked Thrushes are numerous, and Spruce Grouse have been seen on the higher slopes more than once. The summit, though below tree line, has a beautiful view and a cliff face off which echo the songs of high-elevation birds.

Returning on the Tripoli Road to I-93, head north to Exit 32 and take 112 west. You will quickly cross State Highway 3 in the community of North Woodstock and 2.6 miles after that pass a junction with State Highway 118. Proceed 1.3 miles farther to where the Lost River crosses under 112. Extending from this bridge five hundred yards farther up the road is another Least Flycatcher patch. Thirty-five pairs used this site in 1985, when it also held two or more summering pairs of Philadelphia Vireos. It is best to come here in the early morning, when traffic is light. Other Philadelphia Vireos have been found along the next two miles of 112. A particularly good site is across from two semicircular pullover areas above the National Forest wayside area.

Farther up 112, 2.2 miles above the Lost River bridge, the Appalachian Trail crosses the road. Park along the shoulder, follow the trail in to the left, and after fifty yards, turn right onto the unmarked footpath. This leads immediately to Beaver Lake, a tea-colored pond lined by small dense conifers and flanked by steep mountain slopes. Proceed left along the driftwood-strewn shoreline to look for Rusty Blackbirds. In 1984, I saw a pair feeding fledglings here.

Return and head back east on State Highway 112 to Passaconaway Campground, 21.7 miles past I-93. Bearing left inside the entrance, head to the back of the campground to the Church Pond Loop trail. After fording a stream and traversing some woods, the trail loops through Passaconaway Bog, a sphagnous area in which a variety of northern birds breed. On a visit here in 1984, I found Lincoln's Sparrows (in short coniferous growth surrounded by sphagnum), a singing White-winged Crossbill, and two moose.

One final word on timing your visit to the White Mountains. If you are intolerant of biting insects, you should visit after June 25. Black flies are most abundant May 25-June 15, when they can test even the most patient soul. Buy the strongest insect repellent available. After mid-June you will miss the peak period of bird song, but you can still find a great many birds through mid-July. Some species, such as Evening Grosbeak and Pine Siskin, may even become more apparent as the summer wears on.

PETER H. YAUKEY, a birder since his childhood days in Amherst, Massachusetts, is working for a graduate degree in geography at the University of Colorado in Boulder. He contributed an earlier "where-to-go" article to *Bird Observer*, "Relict of Days Past: West Quabbin" (14: 165, August 1986). Peter wishes to thank Keith Hadley and Robert Andrews for their helpful comments on an earlier draft of this article.

HUMAN "PSH-PSH-PSH" CALLS MIMIC AVIAN DISTRESS CALL

by William E. Davis, Jr.

It was a beautiful, crisp fall morning at the Massachusetts Audubon Society's Wellfleet Bay Sanctuary on Cape Cod on September 23, 1985. At 7:45 A.M., an immature Sharp-shinned Hawk darted out of a tree and unsuccessfully attacked one of the seven or eight Blue Jays that were mobbing it. It then drifted out over the marsh and, a few seconds later, attacked a Northern Flicker in flight, again unsuccessfully. The hawk lit on an open branch and waited. A Mourning Dove flashed across the marsh, and off went the Sharpie in pursuit: failure. The frustration of this young hawk became even more evident as it swooped low over the marsh and made a pass at a flock of about a half dozen Greater Yellowlegs. The birds flew up, and once again the hawk was left without breakfast. The hawk flew my way, and landed in a stand of pines, out of sight, perhaps a hundred feet from me. This was an unusual opportunity for me to test the attractive power of a "psh-psh-psh" call. Usually, a group of chickadees or Tufted Titmice responds to this sound, and it is difficult to tell whether subsequent birds are brought in by my calls or by the alarm notes or other vocalizations of the initially responding and agitated birds. This time no other birds were in sight. I called,"Psh-psh-psh," and up flew the Sharpie, landing less than thirty feet away, alert, looking at me, its head moving from side to side.

This was not the first time that a hawk had reacted dramatically to my pishing. On January 29, 1977, at 9:00 A.M., two Northern Goshawks flushed from a stand of pines about a hundred feet away as I pished. An adult bird flew directly overhead at treetop level, and an immature that flew in with it perched in a tree twenty feet directly above me (Davis 1978). On January 9, 1985, at 3:00 P.M., just north of San Francisco, California, a flock of Golden-crowned and White crowned sparrows, Chestnut-backed Chickadees, and Ruby-crowned Kinglets were responding to "psh-psh-psh" when a Cooper's Hawk flew in and perched, looked at me, and moved its head from side to side, clearly brought in by my vocalizations. A few days later (January 12, 1985) at 11:10 A.M. near my home in Foxboro, Massachusetts, two noisy chickadees and a Brown Creeper responded to pishing and then froze. When they stopped calling and moving, I looked around and saw a Sharp-shinned Hawk perched about thirty feet away, clearly interested in my calls, although perhaps initially curious about the fussing of the chickadees. The Brown Creeper remained motionless until I flushed it two or three minutes later, long after the Sharpie had disappeared into the forest.

There seems to be a wide range in the intensity of response. A low level of reaction was illustrated by several sandpiper species not long after the incident of the hungry Sharp-shinned Hawk at Wellfleet. A juvenile White-rumped and two Solitary Sandpipers, all within twenty-five feet, stopped their foraging activities when I pished and assumed an alert posture. After a few seconds they resumed feeding and did not respond to subsequent calls. Blue Jays, House Sparrows, chickadees, and Tufted Titmice, as typical examples, often pop up out of dense scrub and perch in full view, move their heads from side to side, vocalize, become agitated, and look at the source of the pishing sounds. The strongest reaction, as illustrated by hawks and many passerines, consists of flying in the direction of the caller before perching, sometimes emitting vocalizations, and demonstrating agitation that is similar to but often more intense than the intermediate levels of response. Why do birds react in this way to "psh-psh-psh?"

A number of suggestions have been made to account for this. Neal G. Smith (1975) defended the idea that this sound (he calls it "spshing") is effective because it mimics the vocalizations of certain birds that play a central bonding role in flocks of mixed species in Central and South America. Our migrant species wintering in the Neotropics are attracted to these foraging flocks, and thus the effectiveness of the calls is related to an adaptation of our migrant birds to unfamiliar environments. This argument is supported by the lack of response of European migrant birds to pishing, because they do not join mixed flocks on their wintering grounds in Africa. Also, Smith was not aware of any nonpasserine bird that is attracted by this call.

A later summary by James Tucker (1978) of published observations and thoughts of several authors on the subject of pishing and squeaking includes substantial rebuttal to Smith's ideas. The information in the article suggests that the origin of pishing goes back at least to the early 1930s. Charles Allen's list of responding species includes the Sharp-shinned Hawk and Hairy and Downy woodpeckers, which are all nonpasserine species that reacted to pishing (he calls it swishing). Steve West added exotic nonpassserines such as the Long-tailed Hermit and Slaty-tailed Trogon to the list of responders. In the Tucker article, Charles Allen in an analysis of Neal Smith's paper, points out that the response to pishing is more intense than one would expect from a bird merely attracted to a mixed foraging flock. In addition, Allen states that among the forty-seven species drawn in by his pishing were numerous species that never came close to visiting the tropics.

The idea that European birds are not attracted to "psh-psh-psh" was strongly questioned by P. William Smith (1986) in a letter in which he detailed his success at calling British birds into view with this method. In addition, he presented an interesting hypothesis to account for the attractive qualities of

pishing (which is the word he uses). Smith suggested that the great variety of bird species responding to this sound in widely separated regions of Great Britain did so because this vocalization mimics what Marler (1955, 1959) describes as the sounds emitted by birds involved in mobbing predators, and may be what Thielcke (1976) describes as "ground alarm calls." These calls, described by Marler (1955), are uttered when a bird of prey is perched, and the mobbing birds are conspicuous. The vocalizations are harsh and repetitive, and they contain a wide range of frequencies, all of which make the source of the sound easy to find (in contrast to the high-pitched, narrow-frequency alarm notes of many birds, which are very difficult to locate). Presumably, their function is to attract other birds to the mobbing scene and perhaps warn of a predator's presence. These "chink" notes, as Marler describes them for the Chaffinch, may well serve all the functions suggested, but I do not think that mimicry of these calls is responsible for a major part of the response elicited from birds by pishing. Rather, I think that the birds are reacting because the sound mimics distress calls in birds, calls that may be related to but are different from those produced by mobbing birds.

This idea is not entirely new. Kress (1981) refers to it as follows: "To attract land birds try imitating the generalized distress call, known as pishing, that many birds give when they are alarmed," although he later suggests that "songbirds are attracted to pishing and squeaking noises because these sounds are similar to the alarm notes that communicate the presence of a predator." Many birders have the intuitive thought that "psh-psh" represents some sort of distress situation to birds. But there is some confusion in the literature as to what constitutes distress calls. They are not the same as the "mobbing" calls of Marler or the variety of "alarm" notes uttered by birds on the ground or in the air. Distress calls, or screams, are vocalizations uttered by birds in extreme distress, as when attacked by predators or handled by bird banders as they remove them from mist nets or traps. These sounds, like the notes uttered by birds mobbing a predator, are harsh, repetitive, and span a wide range of frequencies (pitch), usually from very low notes to very high. They are given by a wide range of bird species of many orders and are similar in basic structure. Their apparent function (if any) is to call attention to the bird attacked, possibly eliciting a mobbing response by other birds, including other predators, that might distract the attacker and allow the bird to escape. That birds respond to playback recordings of distress calls of their own and other species has been well documented for White-throated, Swamp, and Song sparrows (Stefanski and Falls 1972). Leahy (1982) reports that crows also may be attracted by imitations of their distress calls.

That predators respond to distress calls has also been reported. Michael Perrone (1980) found that in tape playback experiments using distress calls of a

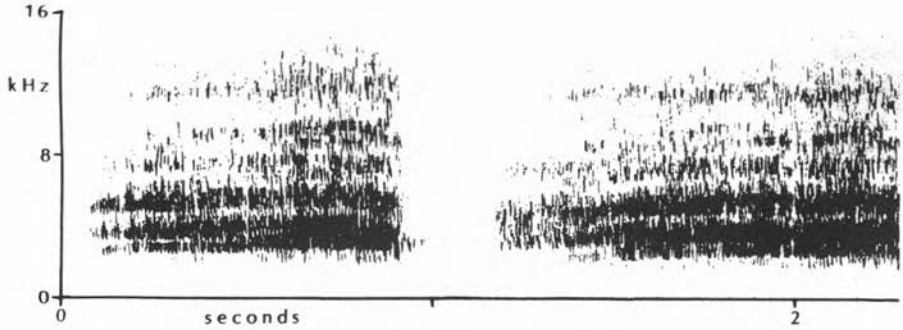


Figure 1. This sonagram shows a distress call emitted by a starling during its removal from a trap. The horizontal axis measures time in seconds, and the vertical axis is in kilohertz (or thousands of cycles per second). The latter is a measure of the frequency (pitch) of the sound. The darkness of the tracing is a measure of the amplitude (magnitude) of the sound. This distress call illustrates the wide range of frequencies typically produced in such calls and their repetitive nature. Harsh, repetitive sounds are easy to locate, and signal, "Here I am."

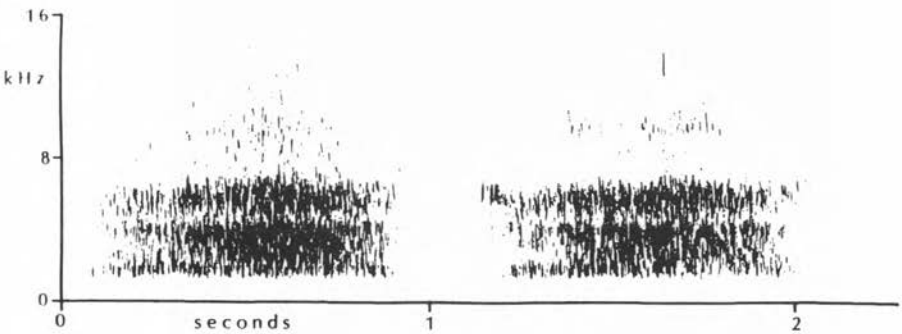


Figure 2. This sonagram shows the author's "psh-psh" call. Notice how similar in structure the sounds are to the starling distress calls. They are harsh, encompassing a wide range of frequencies, and are repetitive, making them easy to locate.

Varied Thrush and a Brown Towhee, seven trials attracted a Cooper's Hawk on one occasion, two Sharp-shinned Hawks at one time, and a Great Horned Owl on two occasions. Cade (1962) reports that a Northern Shrike attacked and grabbed a House Sparrow, which uttered "a series of squeals" (distress calls, I presume) that drew an immediate mobbing response from three other House Sparrows and two Downy Woodpeckers. The sparrow escaped from the distracted shrike! Stefanski and Falls (1972) reported that on separate occasions a Song Sparrow and a Blue Jay uttered distress calls when captured by Sharp-shinned Hawks. In the latter instance, other Blue Jays mobbed the hawk, and the captured Blue Jay escaped!

The structural similarities between distress calls (Figure l) and my pishing calls (Figure 2), together with the similarity between the responses of a variety of only distantly related bird species to both distress calls and pishing (e.g., House Sparrows, Blue Jays, and Sharp-shinned Hawks), suggests to me that the birds attracted to pishing may be reacting to a mimic of distress calls.

As usual, many questions remain unanswered. Are the squeaking noises that birders make to attract birds mimicking distress calls as well? Rohwer and colleagues (1976) and Thielcke (1976) suggest that they do, even though the squeaking often lacks the repetitive nature of either distress calls or pishing. Why do some bird species tend to respond more regularly to pishing than others? Why do some species utter distress calls commonly, whereas others do so infrequently or not at all? Is the frequency of response seasonal? Is there some threshold of stimulus that must be passed before a bird will respond to "psh-psh-psh?" Do other activities, such as foraging for food, tend to lower the response rate? Does territoriality affect the level of response? To account for the effects of all possible variables would require collecting under controlled conditions an enormous amount of data. At this time, we have more questions than answers.

REFERENCES

Cade, T. J. 1962. "Wing Movements, Hunting, and Displays of the Northern Shrike." *Wilson Bulletin* 74: 386.

Davis, W. E., Jr. 1978. "Maple-Pine-Oak Second-Growth Forest (Thirtieth Winter Bird-Population Study)". *American Birds* 32: 23.

Kress, S. W. 1981. *Audubon Society Handbook for Birders. Charles Scribner's Sons,* New York.

Leahy, C. 1982. *The Birdwatcher's Companion.* Hill and Wang, New York.

Marler, P. 1955. "Characteristics of Some Animal Calls". *Nature* 176: 6.

_____. 1959. "Developments in the Study of Animal Communition." In *Darwin's Biological Work: Some Aspects Reconsidered,* ed. P. R. Bell. Cambridge University Press, Cambridge, England.

Perrone, M., Jr. 1980. "Factors Affecting the Incidence of Distress Calls in Passerines." *Wilson Bulletin* 92: 404.

Rohwer, S., S. D. Fretwell, and R. C. Tuckfield. 1976 "Distress Screams as a Measure of Kinship in Birds." *American Midland Naturalist* 96: 418.

Smith, N. G. 1975. "'Spshing Noise': Biological Significance of Its Attraction and Nonattraction by Birds." *Proceedings of the National Academy of Science* 72: 1411.

Smith, P. W. 1986. "'Pishing' Technique." *British Birds* 79: 138.

Stefanski, R. A., and J. B. Falls. 1972. "A Study of Distress Calls of Song, Swamp, and White-throated Sparrows (Aves: Fringillidae): I. Intraspecific Responses and Functions." *Canadian Journal of Zoology* 50: 1501.

Thielcke, G. A. 1976. *Bird Sounds*. University of Michigan Press, Ann Arbor.

Tucker, J. T. 1978. "Swishing and Squeaking." *Birding* 10: 83.

WILLIAM E. DAVIS, JR. is professor of Physical and Biological Sciences at Boston University and has written many articles on bird behavior. He has regularly contributed essays and drawings to this publication and is now a member of our board of directors and chairman of the Cover Committee. Ted wishes to thank John C. Kricher for reviewing an early draft of this manuscript and Jean D. Allaway for proofreading the final draft.

WILSON'S WARBLERS

by Richard K. Walton

Cook's Petrels, Magellanic Penguins, and Darwin's finches -- bird names that conjure up images of faraway places. Less than fifty years ago such images would have remained mere fantasies. Nowadays the combination of a worldwide commercial airline network and a burgeoning nature-tour business allows birders to visit, in their spare time, the far-flung destinations of early explorers and pioneering naturalists. Armed with checkbook, credit cards, and binoculars, a modern-day bird-seeker can comfortably check off manakins and cotingas, bee-eaters and hornbills, or emus and cassowaries. Rivaling all these exotics is a family of birds that occurs, at least seasonally, in many of our own backyards, city parks, and local cemeteries. The North American wood-warblers (Parulidae) appear at the top of the list for many bird-aficionados, professional and amateur alike.

This family of diminutive passerines is both diverse and unique. The fifty-four species of nesting wood-warblers make this the second largest family of North American songbirds. Although the distribution of the various species favors eastern birders, there are many gems west of the Mississippi as well. The Colima, Golden-cheeked, and Red-faced warblers attract birders from the east just as Swainson's, Prothonotary, and Magnolia warblers are sought by westerners. Superlatives are commonplace in any description of the wood-warbler group: the rarest songbird in North America -- Bachman's Warbler; the most limited nesting range of any species in North America -- Kirtland's Warbler. Three warblers are among the top twenty-five on the American Birding Association's "most-wanted list" -- the two cited above as well as the Connecticut Warbler. Many birders consider one or another of the warbler species (the Blackburnian is frequently mentioned) to be the most beautiful of North American songbirds.

There is, however, a dark side to the warbler family's reputation. Many birdwatchers consider warblers difficult, if not impossible, to identify. While this position is scoffed at by the more capable field ornithologists (who like nothing better than a mute *Empidonax* flycatcher), some birders never get over the warbler hump. There are legitimate difficulties in the identification of warblers. Congeneric species such as Tennessee and Orange-crowned warblers or Mourning and Connecticut warblers can be a problem. Another problem is the fall plumage of many species. The Blackpoll, Bay-breasted, and Pine warblers that are confidently "called out" in spring, return to us in September a confusing blur of olive greens. One eminent Massachusetts ornithologist tells us that such inconveniences to identification "can't hold a candle to the Old World

warblers, which are confusing at all seasons," and then advises us to "check the soles of the feet which are yellow in the Blackpoll!"

Certainly one can forgive the occasional fall groan, but how is it that this group of strikingly marked birds can be a problem even in the springtime? The facts are that a large proportion of warblers are active feeders in the canopy. Many of them simply flit their way through the leaves, never to be identified. Other warblers are skulkers, bashful to a fault. So at times complaints concerning warbler identification are justified.

But as confusing as these birds may sometimes be, the present-day difficulties with warbler identification pale to insignificance when compared with the warbler problems faced by America's early ornithologists. One hundred and eighty years ago, men like Alexander Wilson and John James Audubon wandered the woods without any of the birding conveniences we consider essential. That they succeeded in writing the pioneering works on the North American wood-warblers is a credit to their persistence.

However, Wilson and Audubon had less success with this group than might at first be expected. Nowadays, a capable observer in Central Park, New York, or Mount Auburn Cemetery, Cambridge, Massachusetts, may see warbler species that were never seen by one or the other of America's two most famous ornithologists. In all his wanderings, Audubon never saw the Cape May Warbler and saw only one Chestnut-sided Warbler. Wilson missed Swainson's and Orange-crowned altogether and collected only one Mourning Warbler (the *first* one). Interestingly, these men described two warbler species that have *not* been seen since. Wilson published a bird he called the Blue Mountain Warbler *(Dendroica montana)*, and Audubon pictured and described the Carbonated Warbler *(Dendroica carbonata)*. Actually, twenty-five of the thirty-nine recognized species of eastern warblers had been described before the work of Wilson or Audubon. Men such as Mark Catesby and the Bartrams had provided pictures or skins for which Linnaeus and other Europeans wrote the first formal descriptions. However, Wilson and Audubon would, between them, add twelve new species and provide the first detailed information on the life histories of many of the other wood-warblers.

A chance meeting of Wilson and Audubon occurred on March 19, 1810, in Louisville, Kentucky. Although much of Audubon's work was in front of him and Wilson would be dead within three years, these men shared a passion for birds and a perspective of their adopted country that was unique. At the time of their meeting, Wilson was engaged in the frustrating business of selling subscriptions to his book, while Audubon, never one to mind the store, was doing just that. We know that the men shared their work with each other and perhaps spent a morning together looking for birds. Beyond this, the record of their meeting is clouded by subsequent disagreement, jealousy, and

recrimination between Audubon's and Wilson's supporters in Philadelphia. Wilson left Louisville on March 23 of that year.

Nearly two centuries have passed since that meeting, and Audubon has become a familiar figure. Such is not the case with Alexander Wilson. Posterity has been overly kind to the former and more or less forgotten the latter. In the matter of warblers, however, there is cause to celebrate Alexander Wilson.

Alexander Wilson (1766-1813) was born in Paisley, Scotland. Wilson's father was a smuggler, moonshiner, and sometime weaver. When "Alick" was thirteen, his mother died. This spelled an end to his schooling and set him on a round of jobs that included herdsman, apprentice weaver, and peddler. Wilson's avocation was writing verse. It was a combination of this poetic ability and a political conscience that landed him in the first significant trouble of his short life. In May of 1794, a satiric poem titled "The Shark, or Lang Mills Detected" appeared in Paisley. Wilson sent a copy to a certain Mr. Sharp, who owned the Long Mills. The implication was not lost on anyone. A libel trial was held, and although Wilson repeatedly "took the fifth" regarding authorship, he carefully explained that the sentiments expressed in the verse were his own. Although no one seems certain how much time the young poet spent in jail for this adventure, by the spring of 1794 Wilson had booked passage on a ship bound for America, and he arrived at New Castle, Delaware, that summer.

During his first years in America, Wilson was forced to return to the drudgery of weaving and peddling. This was followed by a series of teaching positions in New Jersey and Pennsylvania. In 1802 an unhappy, if not illicit, love affair prompted Wilson to leave Milestown, Pennsylvania, and move to Philadelphia. It was in this setting, during the last ten years of his life, that Alexander Wilson turned a sometime interest in birds into his nine-volume masterpiece, *American Ornithology*.

Happily for Wilson, in Philadelphia at that time was a circle of scholars and artists devoted to the exploration and publication of a young country's natural treasures. The center for this group was the Bartram botanical gardens established by John Bartram during the middle of the eighteenth century. Although John had died in 1777, his son William was continuing the tradition. Here, Wilson would meet the zoologist George Ord and the engraver Alexander Lawson. These last two men were to have important roles in Wilson's ornithological endeavors. By 1804 Wilson was resolved to expand his growing collection of American birds, make drawings and engravings of each species, and publish these with detailed accounts. Neither the economic hurdles of such a project nor Wilson's lack of ornithological knowledge (he was still learning the names of common birds) would deter him. In 1806 Wilson got the break he needed. He was hired as an assistant editor by the firm of Bradford and Inskeep, a Philadelphia publishing company. The job paid $900 per year, enough to allow

him to use all his spare time to work on his bird project. More importantly, Samuel Bradford expressed an interest in publishing Wilson's work.

Alexander Wilson's *American Ornithology* is an astonishing achievement. Wilson had arrived in America with no money or references and little schooling. The physical demands of the peddler's trade were his only preparation for the fieldwork that lay ahead of him. Available references on American ornithology were sketchy at best; more often they were confused or simply mistaken. Despite all this, Wilson prevailed. Perhaps his greatest asset was a willingness to take little on faith and instead, to do the careful and painstaking observations of the living birds that the project demanded. Wilson succeeded in compiling the first set of comprehensive life histories for most of the American birds then known. Wilson himself added nearly thirty new species to the list. Included among these were ten warblers previously undescribed.

Wilson was especially successful with those skulkers of the warbler world known by their generic epithet *Oporornis*. He was the first to describe three of the four species in this genus: Kentucky, Connecticut, and Mourning warblers. Those birders who have spent considerable time trying to coax these birds, particularly the last two, out into the open will appreciate Wilson's problem. He commented on the Connecticut Warbler that "it was found in every case among low thickets, but seemed more than commonly active, not remaining in the same position for a moment." The following is Wilson's account of the Mourning Warbler.

> I have now the honor of introducing to the notice of naturalists and others a very modest and neat little species, which has hitherto eluded their research. I must also add, with regret, that it is the only one of its kind I have yet met with. The bird from which the figure in the plate was taken, was shot in the early part of June, on the border of a marsh, within a few miles of Philadelphia. It was flitting from one low bush to another, very busy in search of insects; and had a sprightly and pleasant warbling song, the novelty of which first attracted my attention. I have traversed the same and many such places, every spring and summer since, in expectation of again meeting with some individual of the species, but without success. I have, however, the satisfaction to say, that the drawing was done with the greatest attention to peculiarity of form, markings, and tint of plumage; and the figure on the plate is a good resemblance of the original. I have yet hopes of meeting, in some of my excursions, with the female, and, should I be so fortunate, shall represent her in some future volume of the present work, with such further remarks on their manners, &c., as I may then be enabled to make.

> There are two species mentioned by Turton, to which the present has some resemblance, viz., *Motacilla mitrata,* or Mitered Warbler, and *M. cucullata,* or Hooded Warbler; both birds of the United States, or, more properly, a single bird; for they are the same species twice described, namely, the Hooded Warbler. The difference, however, between that and the present is so striking, as to determine this at once to be a very distinct species. The singular appearance of the head, neck, and breast, suggest the name.
>
> The Mourning Warbler is five inches long, and seven in extent; the whole back, wings, and tail, are of a deep greenish olive, the tips of the wings, and the center of the tail-feathers, excepted, which are brownish; the whole head is of a dull slate color; the breast is ornamented with a singular crescent of alternate, transverse lines of pure glossy white, and very deep black; all the rest of the lower parts are of a brilliant yellow; the tail is rounded at the end; legs and feet, a pale flesh color; bill deep brownish black above, lighter below; eye, hazel.

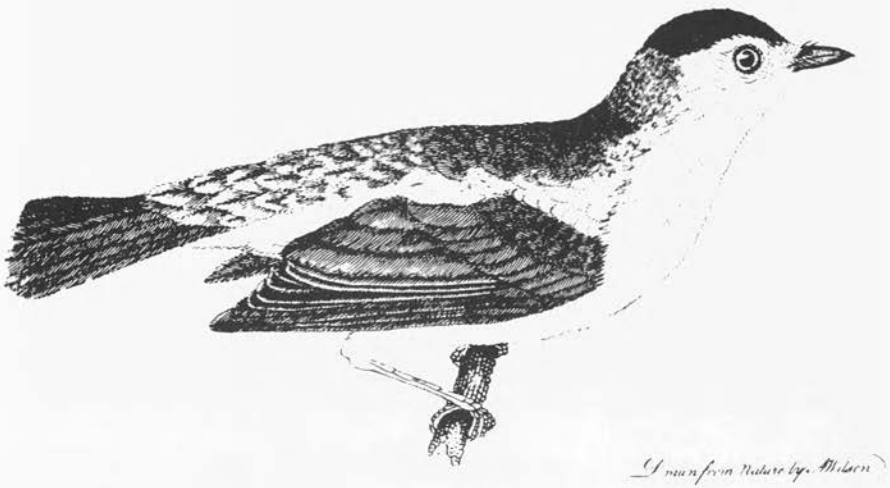
Wilson's careful descriptions did much to rectify the mistakes and confusions created by earlier authors. Of the Pine Warbler he wrote,

> Catesby first figured and described this bird; but so imperfectly as to produce among succeeding writers great confusion, and many mistakes as to what particular bird was intended. Edwards has supposed it to be the Blue-winged Yellow Warbler! Letham has supposed another species to be meant; and the worthy Mr. Pennant has been led into the same mistake; describing the male of one species and the female of another, as the male and female Pine Creeper. Having shot and examined great numbers of these birds, I am able to clear up these difficulties by the following descriptions, which will be found to be correct. . . .

Wilson's description resulted in his being credited with naming this species. Other warblers first described by Alexander Wilson are the Tennessee, Nashville, Magnolia, Bay-breasted, Cerulean, and of course, Wilson's. He left Audubon only two of the eastern species, Bachman's and Swainson's. Although most of the western warblers would remain undiscovered and undescribed for several decades, awaiting the work of men such as Townsend and Baird or their agents, by 1810 Wilson had completed most of the pioneering work on the eastern wood-warblers.

The mistakes that Wilson did make in his studies of the warblers are ones that can be fully appreciated by anyone who has tried to sort out this group.

Wilson described five separate species that are either winter-plumaged birds or females of species that he described elsewhere. For example, he gives the Autumnal Warbler full species status, whereas it is actually a Bay-breasted Warbler in winter plumage. The opening sentence in Wilson's description of the Autumnal Warbler (in fact, the name itself) offers, in hindsight, a clue to his problem. "This Plain, little species regularly visits Pennsylvania from the north, in the month of October, gleaning among the willow leaves; but, what is singular, is rarely seen in spring." In another instance Wilson gave two different species accounts for the Blackburnian Warbler, describing what is actually the female as the Hemlock Warbler. Unfortunately, Audubon repeated most of Wilson's mistakes in *Birds of America* and in *Ornithological Biographies.* In his account of the Hemlock Warbler, Audubon states, "It is to the persevering industry of Wilson that we are indebted for the discovery of this bird. . . . I visited the Great Pine Forest, where that ardent ornithologist found it . . . and had not spent a week among the giant hemlocks which ornament that interesting part of our country, before I procured upward of twenty specimens." Actually, Wilson was well aware of the plumage variations in many species. His difficulties arose mainly with those birds he experienced solely as migrants. Among the warblers, Wilson did make a start at clearing up some of the confusions occasioned by plumage sequences and differences. His accounts of Blackpoll and Yellow-rumped warblers indicate his knowledge of variations evident in adult female and immature plumages as well as seasonal differences.



Alexander Wilson's Green, black-capt Flycatcher (Wilsonia pusilla)

Wilson's energies were not directed solely to ornithological problems. Once he had completed the fieldwork for a given species, done a drawing, and written a species account, his work had just begun. The matters of engraving, printing, coloring, binding, promotion, and sales lay ahead of him. Although his engraver Lawson and publishers Bradford and Inskeep were responsible for production, the task of promoting and selling *American Ornithology* was mainly Wilson's. This involved long treks through the north and south from Maine to Louisiana. The fact that Wilson was trying to sell a work on birds for $120 per set didn't make his task any easier. After hard weeks on the road, Wilson the peddler, faced the prospect of dealing with men such as the Governor of New York, Daniel D. Tompkins. In response to Wilson's pitch, Governor Tompkins replied, "I would not give a hundred dollars for all the birds you intend to describe, even had I them alive." Despite such responses, Wilson obtained 450 subscribers. The responsibilities and pressures of all these duties may have contributed to his early death. Audubon in fact suggested that Wilson had succumbed "under a book seller's lash."

Alexander Wilson died in August of 1813, a month after his forty-seventh birthday. One version of his death has Wilson catching a chill after chasing a rare bird across an icy stream. More likely, he died of a combination of dysentery and tuberculosis. He completed eight volumes of *American Ornithology* before his death. George Ord, his apologist and editor, wrote the ninth volume.

It is doubtful that Alexander Wilson will ever achieve the legendary status of an Audubon. There can be no doubt, however, that Wilson deserves the title, "father of American ornithology." His enthusiasm for the task, detailed work, and persistence led to a work that helped to define America's nature and culture. A small wood-warbler, olive green above and bright yellow below, the male with a black cap, commemorates this man. Wilson's Warbler is a reminder of the pioneering days of American ornithology and of the man from Philadelphia who did much for future generations.

REFERENCES

Audubon, J. J. 1827-1839. *Birds of America.* Havell, London.

_____. 1831. *Ornithological Biographies.* Edinburgh.

Baird, J. 1986. "Tips for Tyros -- Confusing Fall Warblers: Blackpoll, Bay-breasted, and Pine." *Bird Observer of Eastern Massachusetts* 14 (August): 171.

Brewer, T. M. ed. 1840. *Wilson's American Ornithology.* Otis, Broaders and Co., Boston.

Cantwell, R. 1961. *Alexander Wilson -- Naturalist and Pioneer.* J. B. Lippincott and Co., Philadelphia.

Hanley, W. 1977. *Natural History in America.* Quadrangle: The New York Times Book Company, New York.

Leahy, C. 1982. *The Birdwatcher's Companion.* Hill and Wang, New York.

Peattie, D. C. 1936. *Green Laurels.* Garden City, New York.

Terres, J. K. 1980. *National Audubon Encyclopedia of North American Birds.* Alfred A. Knopf, New York.

West, S. 1979. "ABA's Most Wanted Birds." *Birding* 11 (April): 54.

Wilson, A. 1975. *American Bird Engravings . . . from "American Ornithology."* Dover, New York.

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WHITE-RUMPED SANDPIPER BILL COLOR: A CAUTIONARY NOTE

The recent note in *Bird Observer* "A Little-known Field Mark for White-rumped Sandpiper" by Leif Robinson and Ted Raymond (14: 292, December 1986) requires, I believe, some clarification. I am concerned that the article may convey to some readers the impression that all White-rumps have a pale base to the lower mandible and that, therefore, any sandpiper of that size and shape lacking the pale area is a Baird's Sandpiper. Such is not the case.

Most **breeding-plumaged** White-rumps do, indeed, have a relatively conspicuous orange or pinkish area at the base of the mandible. The extent and intensity of this pale coloration does vary however and on some individuals or under some circumstances can be very difficult to see. Additionally, this pale area is often faded and occasionally **absent** in worn adults as well as in juveniles during the late summer and fall. Thus, contrary to the authors' supposition, the utility of this field mark decreases during the late summer and is of limited use during the period when Baird's Sandpiper is most likely to be seen in the northeast. At this season, some White-rumps do have an entirely black bill as depicted in the illustrations referred to by Robinson and Raymond.

Although I have limited experience with Baird's Sandpiper, my impression is that their bill is all black in any plumage. However, in *Shorebirds* (Hayman et al. 1986), Baird's bill is described as "blackish, sometimes tinged greenish at the base." In fact, some of the other small calidrids show (though rarely) a bit of paleness at the base of the bill also, though the color tends to be very dull yellowish-brown or grayish rather than the distinct orange or pink, characteristic of White-rumped Sandpiper.

While the pinkish base to the mandible, when present, may be useful in identifying White-rumped Sandpiper, it should not be considered to be 100 percent diagnostic. Bill structure (slightly decurved and blunt-tipped in White-rumped; straight and relatively thin-tipped in Baird's) and various plumage characteristics (described in *Shorebirds* and elsewhere) remain more useful and reliable criteria for separating these two similar species.

Blair Nikula

ADDITIONAL COMMENT on Field Mark for White-rumped Sandpiper

In the process of proofing this piece for the December 1986 issue, the following editorial comment made by Richard Forster was inadvertently omitted in the final copy: "Many shorebirds show pale lower mandibles. Although it may be unique among peeps, this field mark is shared by Pectoral Sandpiper and, if relied on solely, could lead to misidentification of that species."

BOOK VIEWS by Brian E. Cassie

TWENTIETH CENTURY WILDLIFE ARTISTS by Nicholas Hammond. The Overlook Press, Woodstock, 1986. 224 pages; 125 color plates; 125 black-and-white illustrations. $60.

Here is a volume that introduces the reader to the work, life, and artistic philosophy of a wonderful cross section of modern wildlife artists. Forty artists from eight nations (mainly English-speaking) are represented here, and even if you think you are quite the knowledgeable art critic, you are certain to make at least a few new acquaintances. The author, editor of the Royal Society for the Protection of Birds (RSPB) magazine *Birds* knows his stuff, and his choice of artists for inclusion in this beautifully produced book is first class. Here are the masters Tunnicliffe, Fuertes, Liljefors, and Thorburn side by side with the "youngsters" Jonsson and Ullstrom. I would like to have seen Keith Brockie, Guy Coheleach, and Glen Loates included, but I really have no argument with the author's selection. A nice extra is the inclusion of pictures of the artists themselves. Get this one and **read** it before plunking it on the coffee table..

A WORLD OF WATCHERS by Joseph Kastner. Alfred A. Knopf, New York, 1986. x + 241 pages; illustrations by Louis Agassiz Fuertes. $25.

The author, in this history of American birdwatching from about 1850 to the present, gives us a lively account of the personalities who were the principal players in the development of the American bird scene, both popular and scientific. Spencer Baird, William Brewster, Elliott Coues, Edward Forbush, and John Burroughs have chapters to themselves, but no less intriguing is a huge cast of other historical characters, and Kastner misses few. The author pulls no punches in his descriptions of the rivalries that developed during the famous Sparrow War and of the idiosyncrasies and indiscretions of some of our great nineteenth century ornithologists -- could Coues really have been that bad? But what of recent times? Where are the insights into the modern birders and ornithologists? Margaret Nice was considered the outstanding field ornithologist in America by her European counterparts, yet Kastner curiously tells us almost nothing about the woman, choosing instead to recount the comings and goings of Song Sparrows in the eleven pages of "The Scientist and Her Singer." The Roger Peterson anecdotes are the same I have been reading since I first started birdwatching -- certainly there must be something new to say about R.T.P.! Adding to the author's short-change treatment of modern birdwatching is the chapter "Listers and Savers," which is full of inaccuracies. For instance, who says the Cape May Warbler is rare at Cape May or that a Massachusetts Boreal Owl "was rudely taken from its roost and had some feathers plucked out as proof of the sighting"? I recommend that you enjoy the book for its first eighty years and grin and bear the rest.

FIELD NOTES FROM HERE AND THERE

SOLUTION TO HOUSE SPARROW PROBLEM?

On the evening of June 27, 1986, I was casually observing the feeding activity at my neighbor's seed feeder. At approximately 6:30 P.M., I noticed an adult male Common Grackle (*Quiscalus quiscula*) and a young House Sparrow (*Passer domesticus*) foraging on the ground beneath the feeder. As I continued to watch, the grackle suddenly moved over to the sparrow, grabbed it by the nape, and flew off when I moved outside to take a closer look.

During the preceding two days, I had noted some aggression on the part of the grackles toward the two young sparrows that had begun frequenting the feeder. This behavior consisted of the grackle chasing the young birds away from the immediate vicinity of the feeder, and then returning to forage. The entire chase was over a distance of no more than thirty feet. Initially I interpreted this display as defense of a food resource. Never had I witnessed anything resembling predation on the part of any member of the blackbird family. However, in *Song and Garden Birds of North America*, published by the National Geographic Society, Robert Storer mentions field mice, crawfish, minnows, small frogs, and eggs and young of birds as part of the diet of the Common Grackle. I would be interested to know if other birders have observed anything of this sort.

Vince Yurkunas, Arlington

Massachusetts Glamour Bird: Red-billed Tropicbird afloat in company of Great Cormorant off Gay Head, Martha's Vineyard, October 24, 1986.
Photo by Alan Brady, Newtown, Pennsylvania

SHRIKE STRIKES FEMALE FINCH AT FEEDER

Kelvin Kindahl whose family lives in Pelham, Massachusetts, writes that his parents have had a Northern Shrike hanging around their feeding station throughout January 1987. They've seen the bird repeatedly and resent its presence as the other birds vanish when the shrike is around. On Sunday, January 18, at 11:45 A.M., Kelvin saw the shrike catch a bird just outside the breakfast window. It apparently had been hiding up on the roof, came down and caught the bird, and flew off into the woods with the victim held in its beak. In the heat of the moment, only tentative identification of the prey was possible. It was thought to be a female House Finch. Many of us who have fed birds have attracted a hawk, often an accipiter, to our feeding station. But very few can claim to have attracted a Northern Shrike.

Andrew H. Williams, Northampton

TURKEY VULTURE AT SUET

On January 16, 1986, while driving on Summer Street near Route 3A in Marshfield, I observed a large bird passing over my car and heading northeast. I stopped to get a better look and realized that it was a Turkey Vulture *(Cathartes aura)*. It appeared to drop into a residential section adjacent to the Massachusetts Audubon South Shore Regional Center. After joining David Clapp, sanctuary director, we drove to the area where I thought the Turkey Vulture had landed and discovered it in someone's front yard. The bird was under a large spruce tree from which hung a chunk of suet on a string. The vulture jumped and fluttered up to the suet and knocked pieces of it to the ground. It then dropped down and fed on the scattered bits and pieces of suet. This was repeated three times with the bird using its bill on two occasions to split off chunks of suet. A house cat appeared on the scene, and the vulture eventually hopped onto a rail fence and then flew off down the road. It was seen regularly in the neighborhood for about a week after that but not again at the feeding station.

Kevin Ryan, North Easton

MARSH BIRD RESCUED FROM HARVARD SEWER

About 9:00 o'clock on the morning of Friday, October 3, 1986, Hugh Geoghegan of Cambridge was walking his three pet greyhounds along Memorial Drive. He had just crossed Boylston Street and walked past the main gate of Harvard's Eliot House when he noticed a small bird staggering across the sidewalk in front of him. The bird struggled over the grass on the left of the sidewalk and disappeared through the grating of a storm drain close to the main gate of Eliot House. Hugh tied his hounds to the gate, removed the grating, and plucked out the bedraggled bird. He then ran to the Charles River to look for similar birds, because he thought it might be part of a group. But no like bird was about. This good samaritan then gathered firmly in one hand three leashes (with dogs attached) and, with the bird gently secured in the other, walked for ten minutes to 44 Brattle Street, to the offices of Sert, Jackson and Associates. There he removed human hair and other debris from the bird's feet, placed it in a large xerox carton with holes for air, and left it in a quiet office to recover from the adventure, especially from the trauma of being sniffed over by three lively dogs. After two hours of peace, the patient then drank some water and was offered and tested a lunch of mixed bird seed, supplied by a person from the nearby E. R. Sage Co., birder Dennis Oliver (who unfortunately never got to see the survivor). Martha Vaughan of Gradient Corporation, another bird-person in the neighborhood, arrived and identified the bird as a Virginia Rail. She volunteered to drive it to the Natural History Services of the Audubon Society in Lincoln. In the offices there, the creature promptly escaped the confines of its carton, several naturalists in frantic pursuit, and was retrieved just at the point of disappearing (thin as a rail) into the haven of a narrow space behind a file cabinet. Firmly in hand once again, the rail was then examined, admired, declared fit, and was last seen being carted away by a delighted ornithologist (Richard A. Forster) for release in a quiet marsh nearby.

Joyce Wasson, Cambridge

COURAGEOUS CASSIN'S

In August of 1986, while traveling in southeast Arizona, some friends and I had driven to a spot near Globe intending to look specifically for Black-chinned Sparrows and Gray Vireos. We pulled off the road onto a turnout overlooking a hillside where we thought the sparrows might appear. During the wait, a Red-tailed Hawk flew leisurely past in front of us just about at eye level. At the same time, a Cassin's Kingbird zoomed up to intercept the hawk. I expected a little dive-bombing -- and that would be it. But this kingbird **landed** on the back of the Red-tail and started aggressively pulling at the hawk's nape feathers. The hawk's attitude suggested outrage that I felt was similar to mine when a greenhead fly lands on the back of my neck. The entire scene lasted only a few seconds until the kingbird returned to its perch. He was given a well-deserved ovation from the admiring onlookers.

Bruce Hallett, Brookline

NORTHERN HARRIER PROVIDES DATUM FOR LLOYD CENTER

On January 30, 1986 at 9:50 A.M., I flushed a female Northern Harrier from the grasses near the salt marsh surrounding Allens Pond in South Dartmouth, Massachusetts. Because my research project at the Lloyd Center for Environmental Studies (LCES) involves habitat utilization by Northern Harriers, I searched the immediate area for a possible kill. Feathers and a disarticulated bill were all that was left of the fresh kill. Some of the skull and facial plumage remained with the upper half of the bill. The research staff (Mark Mello, Robert Marshall, James Lyons, and I) and other avid birders at LCES (Bob Maker and Bob Deegan) concurred in the identification of the remains as that of a Sora. These remnants were kept and are available for further examination.

A weekly bird census of Allens Pond was initiated in March 1985, but this is the first recorded occurrence of the species at Allens Pond in that time.

Dave Christiansen, LCES Research Intern

LIVE ETCHINGS

As if etched in glass, details on seabirds this February day stood out with a clarity I don't remember having seen before. The air and water temperature were perfectly matched, about 41 degrees Fahrenheit, and the afternoon light at Andrew's Point was bright, though subdued by cirrus clouds running ahead of an approaching storm. So still was the view in my 45-power Spacemaster II that I would be startled whenever an atmospheric tremor wrinkled the image's perfection. (The usual power of a spotting scope is 20 to 30.)

Just how good was that view? The white flank patch of a distant Great Cormorant caught my attention. Later, Fred Hamlen determined that the bird was 1.7 miles away. And from the flight profile in Peter Harrison's *Seabirds*, I found that the patch covers about three by four inches. (I probably saw less than that because the bird was not squarely broadside and because the white patch may have been partially covered by black feathers.)

A simple calculation shows that the patch subtended an angle of seven arc seconds or less. Although this resolution is about three times less than the Spacemaster II's theoretical capability, I have no doubt that this scope can reach that level of performance. What amazes me is that the atmosphere can sometimes become so stable along horizontal lines of sight that such tests are possible.

Serendipity truly dogs the birdwatcher -- unexpected species sighted or sometimes just an unexpected sighting.

Leif J. Robinson

FIELD RECORDS

DECEMBER 1986

by George W. Gove and Robert H. Stymeist

December was mild, wet, and cloudy. The temperature averaged 35.5 degrees, 1.8 degrees above normal. The high mark was 64 degrees on December 3, and the lowest temperature at Boston was 15 degrees on the fourteenth. Christmas Day was abnormally warm with a high of 58 degrees, about 18 degrees above the normal for that date. Precipitation totaled 6.38 inches, 1.90 inches more than normal with measurable amounts of rain on eleven days. Snow totaled 3.4 inches, 4.3 inches less than average. A thunderstorm struck some suburban areas on December 3 with a very heavy rain. A glaze storm on the ninth caused hazardous road conditions, and the ice broke several limbs.

The highlight of December is the annual Christmas Bird Count (CBC). This year marked the eighty-seventh anniversary of the original twenty-one counts taken on Christmas Day, 1900. In eastern Massachusetts there are twenty-one CBC count areas. Rather than include the results in the December field reports that follow, the complete results of all the eastern Massachusetts CBCs, except Plymouth, which had not been received at press time, are tabulated elsewhere in this issue. R.H.S.

LOONS THROUGH RAPTORS

At Low Beach, Nantucket, high counts of both Red-throated and Common loons were noted all month. At this same location 23 Red-necked Grebes were also tallied on December 28. Northern Gannets were present in high numbers, with a high count of about 2100 individuals on December 22.

The **Greater White-fronted Goose** continued to be found all month at the Wachusett Reservoir in Clinton, where it associated with a single Snow Goose and a large number of Canada Geese. An immature male Eurasian Wigeon continued in Plymouth, and at Winthrop a pair of Harlequin Ducks and a drake King Eider could be found all month. The Canvasback population at Fresh Pond dropped to a single bird on the last day of the year. Off South Monomoy, over 25,000 Common Eider were present on December 7. Oldsquaw numbers built up early in the month off Nantucket, and large numbers of all three scoters could be found in Nantucket Sound. Common Mergansers were noted from many locations with a maximum number of 400 counted at Lake Chauncy in Westboro.

At least 4 Bald Eagles were noted early in the month at Quabbin, and others were seen at Great Meadows in Concord. Another adult eagle was seen feeding on a deer carcass in a claypit in Bridgewater. Red-tailed Hawks were obvious along the highways, and there were many reports of Rough-legged Hawks, especially in the Plum Island-Salisbury area. Peregrine Falcons were found in three locations, and a gray Gyrfalcon first seen in November was again seen well both in flight and perched on South Monomoy on December 7. R.H.S.

DATE	LOCATION	NUMBER	OBSERVERS	DECEMBER 1986
Red-throated Loon				
28	Nant. (Low Beach)	85	M. Litchfield	
Common Loon				
28	Nant. (Low Beach)	165	M. Litchfield	
Pied-billed Grebe				
7	Lakeville, Plymouth	8, 6	G. Gove#, W. Petersen#	
Horned Grebe				
6, 7	Westport, Lakeville	15, 25	SSBC (W. Petersen), G. Gove#	
7	Revere-Winthrop	35	BBC (R. Stymeist)	
18, 27	Cambr. (F.P.), Wachusett Res.	1, 2	J. Barton, M. Lynch#	

DATE	LOCATION	NUMBER	OBSERVERS	DECEMBER 1986
Red-necked Grebe				
6, 7	Rockport, Revere	2, 2	R. Bucci#, BBC (R. Stymeist)	
28	Nant. (Low Beach)	23	M. Litchfield	
Northern Gannet				
8, 13, 22	Nant. (Low Beach)	1400, 1150, 2100	F. Bouchard + v.o.	
Great Cormorant				
7	Nahant-Winthrop	225	BBC (R. Stymeist)	
Double-crested Cormorant				
6, 11	Arlington (Spy Pd)	1 imm	L. Taylor	
11, 15, 22	Everett	2 imm, 1 imm, 1 imm	J.Berry	
13, 24	Vineyard Haven, Revere	1, 1 imm	M. Lynch#, A. Williams	
American Bittern				
29	Salisbury	1	M. Murphy#	
Great Blue Heron				
6	Belmont, Westport	3, 7	L. Taylor, BBC (W. Petersen)	
7	E. Boston (B.I)	4	BBC (R. Stymeist)	
Greater White-fronted Goose				
thr	Clinton (Wachusett Res.)	1	v.o.	
Snow Goose				
14-27	Clinton (Wachusett Res)	1	M. Lynch + v.o.	
Canada Goose				
14, 27	Clinton (Wachusett Res)	619, 324	M. Lynch + v.o.	
Green-winged Teal				
7	S. Monomoy	15	B. Nikula	
American Black Duck				
6	Newburyport area	600	BBC (G. d'Entremont)	
14	Clinton (Wachusett Res.)	70+	M.Lynch#	
Northern Pintail				
6-13, 6	Arlington, P.I.	5, 23	L. Taylor, BBC (G. d'Entremont)	
7	S. Monomoy	15	B. Nikula	
Northern Shoveler				
7	S. Monomoy	6	B. Nikula	
Gadwall				
thr	Salem (from train)	15-18	J. Berry#	
7	Plymouth, S. Monomoy	33, 4	W. Petersen#, B. Nikula	
14, 21	Brockton, Nant.	2, 2	W. Petersen, M. Litchfield	
Eurasian Wigeon				
7	Plymouth	1 imm m	W. Petersen#	
American Wigeon				
7, 8	S. Monomoy, Cambridge	40, 11	B. Nikula, D. Flood	
14, 17	Brockton, Salem	4, 2	W. Petersen, J. Berry	
Canvasback				
thr, 7	Cambr. (F.P.), Lakeville	312 max 12/4, 45	J. Barton + v.o., L. Taylor#	
14, 21	Waltham (Cambr. Res.), Nant.	4, 12	R. Forster, M. Litchfield	
Redhead				
4-7	Lakeville (Little Quitticas)	1 m	D. Briggs + v.o.	
7, 21	Plymouth, Nantucket	5, 21	W.Petersen#, M. Litchfield	
Ring-necked Duck				
13, 14	M.V., Clinton (Wachusett Res.)		14, 3J. Cumming#, M. Lynch#	
28	Lakeville	3	G. d'Entremont	
Greater Scaup				
7, 21	Nantucket (2 loc.)	86, 65	M. Litchfield	
Lesser Scaup				
7	Lakeville	17	G.Gove#	
Common Eider				
7	S. Monomoy	25,000+	B. Nikula	
7	Revere-Winthrop	950	R. Stymeist#	
14, 28	Nant. (2 loc.)	400, 950	M. Litchfield	
King Eider				
thr; 14	Winthrop, Nahant	1 m, 1 m	J. Cumming + v.o., S. Perkins	

DATE	LOCATION	NUMBER	OBSERVERS DECEMBER 1986
Harlequin Duck			
thr	Winthrop	pr	J.Cumming + v.o.
7, 8	N. Scituate, Wellfleet	1, 1	J. Center + v.o., R. Everett
14	Nahant	1 m.	S. Perkins
Oldsquaw			
8	Nantucket	5000	D. Brown#
Black Scoter			
18, 20	Lakeville, Rockport	2, 3	D. Briggs, J. Berry
28	Nantucket Sound	450	M. Litchfield
Surf Scoter			
28	Nantucket Sound	950	M. Litchfield
White-winged Scoter			
28	Nantucket Sound	1100	M. Litchfield
Common Goldeneye			
7, 13	Revere-Winthrop, M.V.	75, 60+	BBC(R. Stymeist), M. Lynch#
14, 22	Wachusett Res., Nant. Harbor	15+, 125	M. Lynch#, M. Litchfield
Barrow's Goldeneye			
7 on	Winthrop-E. Boston	1 m	J. Cumming + v.o.
7, 14	Scituate, Nant. Harbor	1 m, 2 m	G. Gove#, M. Litchfield
Bufflehead			
7	Revere-Winthrop area	145	BBC (R. Stymeist)
22	Nantucket Harbor	120	M. Litchfield
Hooded Merganser			
6, 7	Holliston, Lakeville	2, 35	R. Hildreth, L. Taylor#
13, 15	Arlington, Watertown	36, 8	L. Taylor, J. Paputseanos
31	Cambridge (F.P.)	5	D. Flood
Common Merganser			
1, 8	Westboro (Lake Chauncy)	400, 125	C.Quinlan
7, 20	Quabbin (G37)	63, 26	M. Lynch, S. Carroll
7, 14	Lakeville	25, 125	L. Taylor#, W. Petersen#
28	Lakeville	100	G. d'Entremont#
7. 14	Plymouth, Waltham	100+, 15	W. Petersen#, R. Forster
14, 27	Clinton (Wachusett Res.)	33, 43	M. Lynch, S. Carroll
Red-breasted Merganser			
7	S. Monomoy	1500	B. Nikula
Ruddy Duck			
7	Lakeville, Plymouth	30, 18	L. Taylor#, W. Petersen#
7	S. Monomoy, Southboro	15, 24	B. Nikula, C. Quinlan
12, 14	Nantucket, Waltham	14, 70	M. Litchfield, R. Forster
Bald Eagle			
7,11	Quabbin (G37, G40)	2 ad, 2 imm	M. Lynch, S. Carroll
17-18, 27	Bridgewater, GMNWR	1 ad, 1 imm	fide K. Anderson, W. Gette
Northern Harrier			
13, 14	M.V., Middleboro	5, 2	M. Lynch#, W. Petersen#
28, 29	Bridgewater, P.I.-Salisbury	4, 3	G. D'Entremont#, M. Murphy
Sharp-shinned Hawk			
thr	10 locations	11 ind	v.o.
Cooper's Hawk			
7, 9	E. Boston (B.I.), Newton	1, 1 ad	S. Perkins, O. Komar
22	Lincoln (DFWS)	1 ad	R. Forster#
Northern Goshawk			
11, 14	Quab. (G40), Paxton	1 imm, 1 ad	M. Lynch#, L. Taylor
14, 15 on	Middleboro, Brookline	2, 1 imm	W. Petersen#, H. Wiggin + v.o.
28	Bridgewater	1 ad	G. d'Entremont#
Red-tailed Hawk			
6	Hamilton-Newbury	6	J. Berry
14	P.I.-Salisbury	12	P. Roberts#
Many other reports of 1 or 2 individuals from a wide area.			
Rough-legged Hawk			
7	Halifax, Marshfield	2, 3	W. Petersen#
14	P.I.-Salisbury	7	P. Roberts#
20, 28	S. Dartmouth, Bridgewater	1, 2	T. Raymond, G. d'Entremont#
American Kestrel			
12	Newburyport area	4	M. Kasprzyk

DATE	LOCATION	NUMBER	OBSERVERS
Merlin			
13, 29	Vineyard Sound, Salisbury	1, 1	J. Cumming, M. Murphy#
Peregrine Falcon			
6	Cambridge (M.I.T campus)	1	W. Ebisuzuki
7, 14	S. Monomoy, N. Monomoy	1 ad, 1 ad	B. Nikula, B. Nikula#
13	E. Boston (Logan Airport)	1 ad	N. Smith
Gyrfalcon			
7	S. Monomoy	1 gray	B. Nikula

GROUSE THROUGH SHRIKES

A Western Sandpiper was found on the Cape Cod CBC making this the fifth December record in fourteen years. More rare, with only two records in fourteen years, was the White-rumped Sandpiper found at Acoaxet. A Long-billed Dowitcher was present at Hyannisport, and its calls were recorded. A Common Murre was found oiled at Nantucket.

Owls found on an "owl prowl" in the Middleboro area included 16 Eastern Screech-Owls, 10 Great Horned Owls, a Barred Owl, and a Long-eared Owl. Two Northern Saw-whet Owls were said to respond to taped calls. A red-phase Eastern Screech-Owl was found injured, nursed back to health on a diet of pet store mice, and released. Another Eastern Screech-Owl was not so lucky; it was found dead in Westport. Better red than dead, I guess.

A **Scissor-tailed Flycatcher** was still present through December 7 at Nantucket, having been first sighted on November 12. The **Eurasian Jackdaw** was still present there also. A number of Carolina Wrens were found in northern climes in addition to those usually present in December at southeast coastal locations. The March or April numbers of this species will be interesting after the cold and snowy winter. Winter Wrens were present in Holliston and in Nahant. Eastern Bluebirds were at three locations, and a Bohemian Waxwing was seen in Concord on one day only. Northern Shrikes made a considerable appearance this winter. G.W.G.

Ruffed Grouse			
1, 28	Hamilton	1, 2	G. d'Entremont
Northern Bobwhite			
22	Nantucket	26	M. Litchfield
Clapper Rail			
20	S. Dartmouth	1	T. Raymond
Virginia Rail			
21	E. Boston	1	J. Cumming
American Coot			
6, 11, 13	Arlington	16, 10, 19	L. Taylor
7, 21	Plymouth, Nantucket	100, 12	W. Petersen#, M. Litchfield
Ruddy Turnstone			
14	Nantucket	37	M. Litchfield
Sanderling			
7, 14	Nantucket	55, 120	M. Litchfield
14, 24	PI-Salisbury, Revere	6, 208	P. Roberts#, A. Williams
Western Sandpiper			
21	Eastham	1	CBC (W. Petersen)
White-rumped Sandpiper			
6	Acoaxet	1	SSBC (W. Petersen)
Purple Sandpiper			
6	Westport	90	SSBC (W. Petersen)
7	Revere	18	BBC (R. Stymeist)
21	Nantucket	100	A. Nickerson
Dunlin			
6	Westport	18	SSBC (W. Petersen)
7	Revere	82	BBC (R. Stymeist)
24	Revere	63	A. Williams
Long-billed Dowitcher			
thr	Hyannisport	1-2	S. Clifton + v.o.
Common Snipe			
13	Lexington	1	L. Taylor

DATE	LOCATION	NUMBER	OBSERVERS
American Woodcock			
20	Easton, Buzzards Bay	3, 1	T. Aversa, CBC
21, 27	Westport, Mid-Cape	1, 1	CBC
Common Black-headed Gull			
7	Winthrop	8	BBC (R. Stymeist)
22, 28	Nantucket	1(1W)	M. Litchfield
24	Revere; Winthrop	1 ad; 3 imm + 1 ad.	A. Williams
Bonaparte's Gull			
6, 20	Winthrop, Rockport	80, 20 ad.	J. Cumming, J. Berry
22,28	Nantucket	258, 625	M. Litchfield
Iceland Gull			
20, 26	Rockport, PI	6-8, 3 ad + 1(2W)	J. Berry
20, 28	Barre, Nantucket	3, 28	M. Lynch#, M. Litchfield
Lesser Black-backed Gull			
2, 4	Norton, Amherst	1 ad., 1 ad.	B. Blodget#
Glaucous Gull			
3, 20	Nantucket, Barre	1 ad., 1(1W)	M. Litchfield, M. Lynch#
Black-legged Kittiwake			
7, 28	Nantucket	40, 35	M. Litchfield
14	N. Monomoy	1000	B. Nikula
Common Murre			
13	Nantucket	1 oiled	M. Litchfield
Thick-billed Murre			
6, 14	Rockport, Marshfield	1, 1	R. Bucci#, J. Hassett
20, 23	Rockport, Marion	1 or 2, 1	J. Berry, W. Eville
Razorbill:			
8, 27	Nantucket, Scituate	9, 1	D. Brown, R. Forster
28, 29	Nantucket, Salisbury	29, 1	M. Litchfield, M. Murphy#
Black Guillemot			
6, 22	Rockport, P'town	6-8, 8	R. Bucci#, J. Baird#
28	Nantucket	5	M. Litchfield
Common Barn-Owl			
13	W. Tisbury	2	M. Lynch#
Eastern Screech-Owl			
1, 14	Easton	1 red, 1 red	K. Ryan
6, 12	Westport, Ipswich	1 dead, 2	W. Petersen#, J. Berry#
27	Lakeville-Middleb.-Bridgew.	16	K. Holmes
Great Horned Owl			
thr	Ipswich, Middleboro	2 pr, 4	J. Berry, D. Briggs
14, 20	Revere, Millis	1, 7	A. Salerno, CBC (M. Kasprzyk)
27	Lakeville-Middleb.-Bridgew.	10	K. Holmes
Snowy Owl			
10-18	Boston	18 max 12/13	N. Smith + v.o.
14-28	PI-Salisbury	4 max	v.o.
14, 11-31	N. Monomoy, Nantucket	2, 2 max 12/14	B. Nikula#, fide M. Litchfield
7, 17	S. Dartmouth, Malden	1, 1	T. Carrolan, W. Malatesta
Barred Owl			
13, 20; 21	Hamilton; Plympton	1, 1; 1	J. Berry, T. Lloyd-Evans
27	Lakeville	1	K. Holmes
Long-eared Owl			
27	Salisbury, Bridgewater	1 dead, 1 calling	B. Blodget, K. Holmes
Short-eared Owl			
6-29, 19	Salisbury, PI	1-2, 1	v.o., T. Aversa
2, 28	Halifax, Westport	3, 1	K. Anderson, T. Raymond
31	E. Orleans	1	A. Williams#
Northern Saw-whet Owl			
12, 20	Lexington, Millis CBC	1, 1	S. Perkins, M. Kasprzyk
27	Middleboro-Lakeville	2 calling	K. Holmes
Belted Kingfisher			
7, 14	Lakeville, PI	1, 1	K. Holmes, P. Roberts#
19	Holliston	1	R. Hildreth
Red-bellied Woodpecker			
2-29, 7-31		Easton, Pepperell	1 f, 1 K. Ryan, E. Armstrong
13, 21-31	M.V., Hamilton	1, 1 m	J. Cumming, fide J. Berry

DATE	LOCATION	NUMBER	OBSERVERS	DECEMBER 1986
Northern Flicker				
6, 12	Holliston, PI	1, 1	R. Hildreth, M. Kasprzyk	
19, 25	Millis, Framingham	1, 1	B. Cassie#, R. Forster	
Pileated Woodpecker				
15	Bedford	1	J. Brunner	
20, 26	Quabbin (G40), Petersham	2, 1	M. Lynch#	
Scissor-tailed Flycatcher				
7, from 11/12	Nantucket	1	M. Litchfield	
Horned Lark				
5, 6	Eastham, PI	20, 10	K. Holmes, J. Berry	
7, 14	Halifax, Rochester	75, 75	L. Taylor#, W. Petersen#	
American Crow				
13, 27	Hamilton	250	J. Berry	
Eurasian Jackdaw				
8	Nantucket	1	F. Bouchard#	
Common Raven				
11	Quabbin (G40)	1	M. Lynch#	
Red-breasted Nuthatch				
6, 13	Nahant, M. V.	1, 3	J. Cumming	
16, 20	DFWS, Petersham	2, 4	R. Forster, A. Williams#	
Carolina Wren				
thr	Brookline, Littleton	2, 2	H. Wiggin, C. Roth	
6, 11	Acoaxet, Holliston	5, 2	SSBC (W. Petersen), R. Hildreth	
28	S. Dartmouth	7	T. Raymond	
Winter Wren				
6; 7, 14	Holliston; Nahant	1; 2	R. Hildreth; J. Cumming,W. Drummond	
Golden-crowned Kinglet				
6, 19	Holliston	13, 4	R. Hildreth	
Ruby-crowned Kinglet				
13	Nantucket	1	M. Litchfield	
Eastern Bluebird				
13, 14	M.V., Rochester	6, 4	J.Cumming, W. Petersen#	
26	Hardwick	3	M. Lynch#	
Hermit Thrush				
3, 6	DFWS, Acoaxet	1, 1	R. Forster, SSBC (W. Petersen)	
10	Stoneham	1	M. Martinek	
American Robin				
11, 13	Marshfield, Lexington	148, 50	J. Hassett, L. Taylor	
28	Lakeville	150	G. d'Entremont	
Gray Catbird				
7, 28	Wellesley, S. Dartmouth	1, 3	C. Quinlan, T. Raymond	
Water Pipit				
6	Westport	1	SSBC (W. Petersen)	
Bohemian Waxwing				
9	Concord	1	R. Walton#	
Cedar Waxwing				
1-12, 12	Concord, MIddleboro	32 max 12/13, 150	R. Forster, fide D. Briggs	
Northern Shrike				
12	Salisbury, Lexington	1 ad., 1	M. Kasprzyk, S. Perkins	
20, 27	Petersham, GMNWR	1, 1	A. Williams, W. Gette	
19-29	P.I.	1	v.o.	

WARBLERS THROUGH GROSBEAKS

Orange-crowned Warblers were found in four locations, and late reports of lingering birds were a Nashville Warbler at Nahant and the Black-throated Blue Warbler continued from November in Lincoln. A Yellow-breasted Chat was seen off and on nearly all month at the Nahant Thicket.

Fox Sparrows were again scarce with only three individuals reported. The Harris' Sparrow continued at a feeder all month on Nantucket. Winter finch reports included some Pine Grosbeaks, single reports of White-winged and Red crossbills, and fair numbers of redpolls, siskins, and Evening Grosbeaks. R.H.S.

DATE	LOCATION	NUMBER	OBSERVERS
Orange-crowned Warbler			
6-31, 11	Nahant, Marblehead	1 or 2, 1	M. Lynch# + v.o., W. Haukes
14, 28	Nantucket, Woburn	1, 1	M. Litchfield, J. Cumming
Nashville Warbler			
6-14	Nahant	1	J.Cumming + v.o.
Black-throated Blue Warbler			
11	Lincoln (DFWS)	1 m (from Nov.)	H. Roddis
Yellow-rumped Warbler			
28	P.I.	30	D. Chickering
Pine Warbler			
8 on, 14	Acton, Rochester	1, 1	D. + M. Quimby, W. Petersen#
Yellow-breasted Chat			
7 on	Nahant	1	J. Cumming + v.o.
Rufous-sided Towhee			
3	Millis	1 m	M. Kasprzyk
American Tree Sparrow			
14	Milford	49	R. Hildreth
Field Sparrow			
13, 14	N. Middleboro, Assonet	6, 18	K. Holmes, W. Petersen#
"Ipswich" Sparrow			
21	Ipswich (Cranes Beach)	1	J. Berry#
Savannah Sparrow			
7	Halifax	4	L. Taylor#
Fox Sparrow			
4-8, 4	Worcester, Marshfield	1, 1	M. Lynch#, J. Hassett
14	Holliston	1	R. Hildreth
Song Sparrow			
14	Milford	7	R. Hildreth
Swamp Sparrow			
7	Marshfield	4	L. Taylor
Harris' Sparrow			
8-31 from Nov.	Nantucket	1	fide M. Litchfield + v.o.
Snow Bunting			
5, 7	Eastham, S. Monomoy	30, 175+	K. Holmes, B. Nikula
7, 14	Halifax, N. Monomoy	80, 50+	W. Petersen#, B. Nikula
20	Quabbin (G37)	11	M. Lynch#
Red-winged Blackbird			
6	Arlington	2	L. Taylor
Eastern Meadowlark			
6, 7	P.I., Salisbury	1, 3	J. Berry, R. Forster
30, 31	E. Orleans	3, 5	A. Williams
Rusty Blackbird			
19	Marshfield	36+	J. Hassett
Pine Grosbeak			
10	E. Orleans; Quab. (G40)	3, 5; 6	A. Williams; M. Lynch#
Purple Finch			
13, 30	N. Middleboro	2, 1	K. Holmes
13, 27	Lexington, Wachusett Res.	6, 5	L. Taylor, M. Lynch#
Red Crossbill			
7	Quabbin (G37)	8	M. Lynch#
White-winged Crossbill			
27	N. Andover	1	N. Flanders
Common Redpoll			
2, 14	Royalston, WBWS	65, 2	K. Hamilton, T. Carrolan
17, 20	Brighton, Petersham	50, 72	J. Paputseannos, J. Baird
20	Cambr. (Charles R.)	92	J. Heywood
Pine Siskin			
thr	Plympton, Middleboro	80, 1-4	C. Davis, D. Briggs
7, 18	Plymouth, Sudbury	20, 30	W. Petersen#, R. Forster
28, 29-31	P.I., Arlington	7, 20+	D. Chickering, L. Taylor
Evening Grosbeak			
thr	Middleboro, Plympton	30+, 100	D. Briggs, C. Chase
7, 20	Quabbin (G37)	32, 39	M. Lynch#
18, 20	DFWS, Petersham	10, 33	R. Forster, A. Williams#

LIST OF ABBREVIATIONS

ad	adult
b	banded
br	breeding
dk	dark (phase)
f	female
imm	immature
ind	individuals
juv	juvenile
loc	location
lt	light (phase)
m	male
max	maximum
migr	migrating
n	nesting
ph	photographed
pl	plumage
pr	pair
S	summer (1S = first summer)
thr	throughout
v.o.	various observers
W	winter (2W = second winter)
w/	with
yg	young
#	additional observers
A.A.	Arnold Arboretum
A.P.	Andrews Point, Rockport
B.I.	Belle Isle, E. Boston
B.R.	Bass Rocks, Gloucester
Buzz.	Buzzards Bay
C.	cape as in Cape Cod
Cambr.	Cambridge
Corp. B.	Corporation Beach, Dennis
E.P.	Eastern Point, Gloucester
F.E.	First Encounter Beach, Eastham
F.H.	Fort Hill, Eastham
F.M.	Fowl Meadow
F.P.	Fresh Pond, Cambridge
G40	Gate 40, Quabbin
H.P.	Halibut Point, Rockport
I.	Island
M.V.	Martha's Vineyard
Mt.A.	Mount Auburn Cemetery, Cambridge
Nant.	Nantucket
Newbypt	Newburyport
P.I.	Plum Island
Pd	Pond
P'town	Provincetown
Quab.	Quabbin
Res.	Reservation
R.P.	Race Point, Provincetown
S. Dart.	South Dartmouth
S.N.	Sandy Neck, Barnstable
Stellw.	Stellwagen (Bank)
BBC	Brookline Bird Club
BOEM	Bird Observer of Eastern Massachusetts
CBC	Christmas Bird Count
CCBC	Cape Cod Bird Club
DFWS	Drumlin Farm Wildlife Sanctuary
DWWS	Daniel Webster Wildlife Sanctuary
FCBC	Felix Cutler Bird Club
GMNWR	Great Meadows National Wildlife Refuge
IRWS	Ipswich River Wildlife Sanctuary
LCES	Lloyd Center for Environmental Studies
MAS	Massachusetts Audubon Society
MBO	Manomet Bird Observatory
MNWS	Marblehead Neck Wildlife Sanctuary
NEHW	New England Hawk Watch
ONWR	Oxbow National Wildlife Refuge
PRNWR	Parker River National Wildlife Refuge
SRV	Sudbury River Valley
SSBC	South Shore Bird Club
WBWS	Wellfleet Bay Wildlife Sanctuary

THE 1986 CHRISTMAS BIRD COUNTS IN EASTERN MASSACHUSETTS

by Robert H. Stymeist

The Eighty-seventh Annual Christmas Bird Count (CBC) sponsored by the National Audubon Society was held from December 17, 1986 to January 4, 1987. In 1985, there were 1504 official CBC count areas in the United States and Canada, and the 38,346 participants counted 632+ species for a total of 74,169,620 individuals.

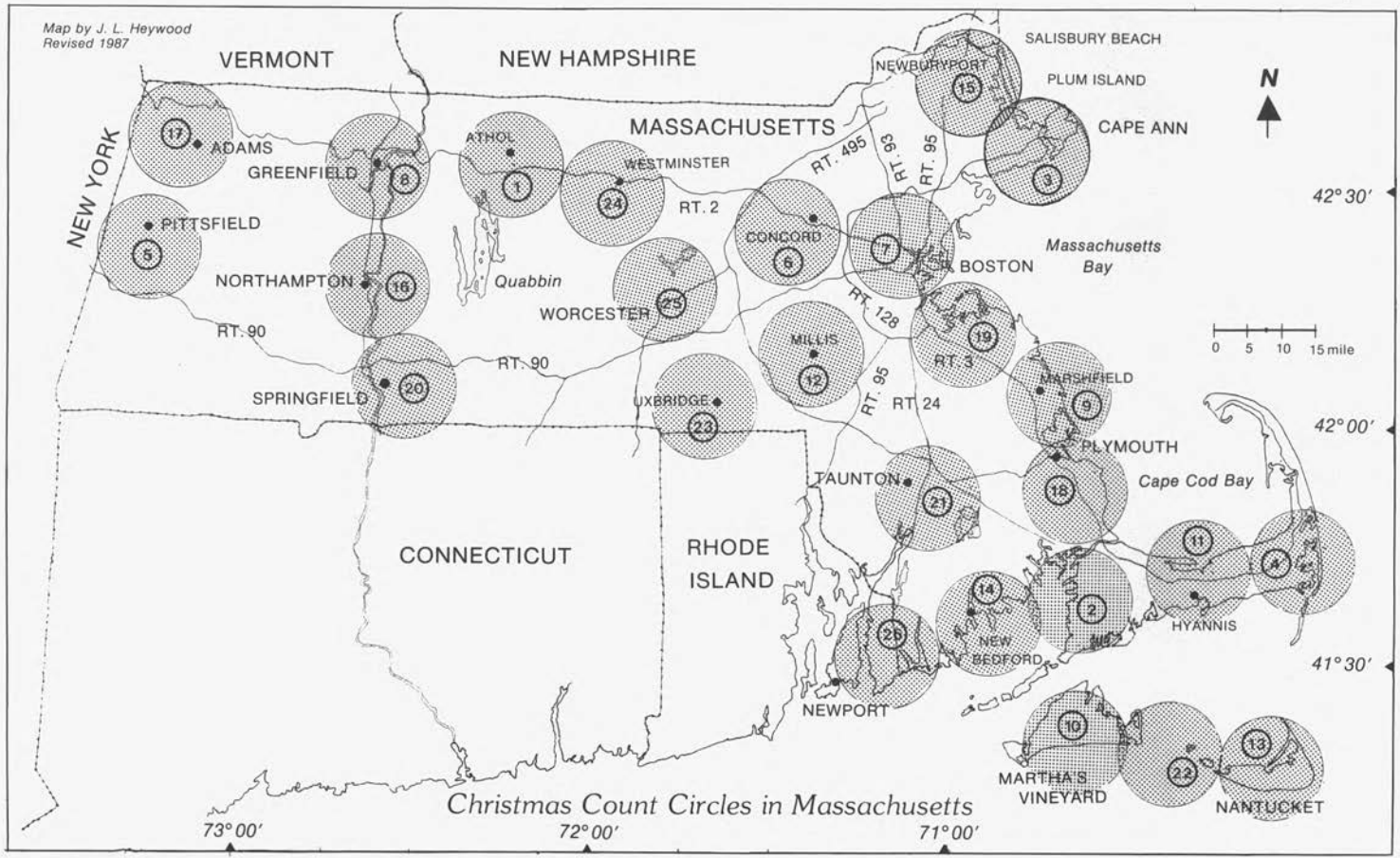
In eastern Massachusetts and a portion of Rhode Island, there are 21 count areas (see map). This summary includes the results of all the count circles with the exception of Plymouth, from which no results were received. A total of 180 species plus "Ipswich" Sparrow were recorded in our area during the three-weekend period.

The Newport, Rhode Island-Westport, Massachusetts CBC led all counts with 124 species. Cape Cod, usually the leader, came in second with 120 species. The Millis CBC boasted the highest number of participants. In 1985, Millis produced a total of 501 observers (60 field people and 441 feeder watchers), far and away the greatest number of participants in any count circle; the second highest was Greenwich, Connecticut, with 181 observers.

It was a lean year for rarities with just a few reported on the CBCs: Tundra Swan, Greater White-fronted Goose, Gyrfalcon, Thayer's Gull, and Harris' Sparrow.

The Oldsquaw count of 96,900 at Tuckernuck is probably an all-time-high count, surpassing 86,234 Oldsquaw tallied on the 1986 Nantucket CBC. The changing winter distribution of several species is dramatically revealed by the CBCs. Note especially Double-crested Cormorant with 92 individuals reported this year. In previous years compilers had to supply supporting details for such a rare winter bird. Another explosion is the Carolina Wren with no fewer than 343 individuals noted on fifteen counts. The bulk of these were reported from Newport (95), Buzzards Bay (89), and Martha's Vineyard (64).

Snowy Owls were reported on ten counts with a total of 44 individuals counted. The most, 21, in the Greater Boston CBC were chiefly found at Logan Airport. At Newburyport, 62 Great Horned Owls were counted on a calm night. Also, 10 Common Barn-Owls were tallied (6 on the Vineyard and 4 at Newburyport). A lack of snow cover and, in general, open water gave compilers reason to hope for the best. There was a mediocre winter finch flight, and there were few lingerers. On Cape Cod, Red-breasted Mergansers were down 90% from last years's record, and the count of Dunlin was the lowest since 1942! The


Map by J. L. Heywood
Revised 1987
VERMONT
NEW HAMPSHIRE
MASSACHUSETTS
NEW YORK
CONNECTICUT
RHODE ISLAND
ADAMS
GREENFIELD
PITTSFIELD
NORTHAMPTON
SPRINGFIELD
ATHOL
WESTMINSTER
Quabbin
WORCESTER
CONCORD
MILLIS
UXBRIDGE
TAUNTON
NEWBURYPORT
SALISBURY BEACH
PLUM ISLAND
CAPE ANN
BOSTON
Massachusetts Bay
MARSHFIELD
PLYMOUTH
Cape Cod Bay
HYANNIS
NEW BEDFORD
NEWPORT
MARTHA'S VINEYARD
NANTUCKET
RT. 2
RT. 90
RT. 90
RT. 495
RT. 93
RT. 95
RT. 128
RT. 3
RT. 95
RT. 24
N
0 5 10 15 mile
42° 30′
42° 00′
41° 30′
73° 00′
72° 00′
71° 00′
Christmas Count Circles in Massachusetts

Eurasian Jackdaw could not be found on a count day on Nantucket and was last seen in mid-December.

It requires years of experience with an area to properly compile and evaluate CBC records, and I wish to thank all of the compilers who contributed their expertise to prepare the results for this summary. They are as follows: **Robert Coyle**, Athol (December 20); **Richard Harlow**, Buzzards Bay (December 20); **John Nove**, Cape Ann (December 21); **Blair Nikula**, Cape Cod (December 21); **Richard Walton**, Concord (December 28); **Robert Stymeist**, Greater Boston (December 21); **Warren Harrington**, Marshfield (December 28); **Susan Whiting**, Martha's Vineyard (December 28); **Janet Aylward**, mid-Cape Cod (December 27); **Brian Cassie**, Millis (December 20); **Edith Andrews**, Nantucket (January 3); **Gil Fernandez**, New Bedford (December 29); **James Berry**, Newburyport (December 28); **Sibley Higginbotham**, Quincy (December 20); **John Kricher**, Taunton-Middleboro (December 27); **Marcia Litchfield**, Tuckernuck (January 1); **Richard Hildreth**, Uxbridge (January 4); **John Williams**, Westminster (December 27); **Dave Emerson**, Westport-Newport (December 20); **Fran McMenemy**, Worcester (December 20).

Robert H. Stymeist, a staff member since its beginning fourteen years ago and former president of *Bird Observer*, is currently the president of the Brookline Bird Club and treasurer of the Nuttall Ornithological Club. During the past year, Bob has spent his vacations birding in the tropics with trips to Costa Rica (second time), Peru, and two trips to Mexico. One highlight of these travels: he saw 52 different species of hummingbirds in 1986.

Map on facing page: Each Christmas Count Circle was located by the latitude and longitude (in degrees and minutes) of its center as given in the July-August 1984 issue of *American Birds*. (The Newburyport circle,15, was relocated in 1986 so that its center is 42°45′N, 70°54′W.)
Athol (1), Buzzards Bay (2), Cape Ann (3), Cape Cod (4), Central Berkshire (5), Concord (6), Greater Boston (7), Greenfield (8), Marshfield (9), Martha's Vineyard (10), Mid Cape Cod (11), Millis (12), Nantucket (13), New Bedford (14), Newburyport (15), Northampton (16), Northern Berkshire (17), Plymouth (18), Quincy (19), Springfield (20), Taunton-Middleboro (21), Tuckernuck Island (22), Uxbridge (23), Westminster (24), Worcester (25) and Westport, MA/Newport, RI (26).

species	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.
Red-throated Loon	0	2	2	20	0	0	2	119	0
Common Loon	0	49	69	32	0	4	44	494	19
Pied-billed Grebe	0	6	0	32	1	5	0	4	8
Horned Grebe	1	199	49	10	0	65	12	64	50
Red-necked Grebe	0	2	13	11	0	3	15	16	0
Northern Gannet	0	0	2	498	0	0	1	3	0
Great Cormorant	0	79	316	55	0	243	15	400	27
Double-crested Cormorant	0	16	0	15	0	10	0	1	4
Great Blue Heron	0	53	8	84	6	22	31	130	51
Green Heron	0	0	0	0	0	0	0	0	0
Great Egret	0	1	0	0	0	0	0	0	0
Black-crowned Night-Heron	0	0	0	12	0	1	0	1	2
Tundra Swan	0	0	0	0	0	0	0	3	0
Mute Swan	0	64	11	11	0	0	12	289	38
Greater White-fronted Goose	0	0	0	0	0	0	0	0	0
Snow Goose	0	0	0	0	0	0	0	2	0
Brant	0	493	0	334	0	278	59	93	167
Canada Goose	0	977	572	2691	2680	894	579	2540	801
Wood Duck	0	0	1	0	1	0	0	3	1
Green-winged Teal	0	1	0	6	1	3	0	19	17
American Black Duck	18	1243	699	3956	247	1420	1467	2106	1178
Mallard	9	388	493	97	469	1409	295	452	638
Northern Pintail	0	0	0	0	0	2	3	2	35
Blue-winged Teal	0	0	0	0	0	0	0	0	1
Northern Shoveler	0	1	0	0	0	0	0	1	0
Gadwall	0	0	10	0	0	0	3	24	6
Eurasian Wigeon	0	0	1	0	0	0	0	0	0
American Wigeon	0	11	0	10	0	40	1	29	8
Canvasback	0	190	0	142	0	3	0	56	276
Redhead	0	50	0	0	0	0	0	71	10
Ring-necked Duck	0	0	5	70	4	10	26	12	55
Greater Scaup	0	3209	0	118	0	1226	7	1532	275
Lesser Scaup	0	0	1	0	0	3	0	1	10
Common Eider	0	1592	171	3004	0	2524	12156	2214	877
King Eider	0	0	0	0	0	1	0	0	0
Harlequin Duck	0	0	0	1	0	2	0	20	0
Oldsquaw	0	275	47	60	0	7	29	9	27
Black Scoter	0	58	17	38	0	1	0	9608	5
Surf Scoter	0	353	16	7	0	0	6	103	20
White-winged Scoter	0	575	104	416	0	77	252	13950	98
Common Goldeneye	49	837	542	467	8	660	228	2479	542
Barrow's Goldeneye	0	1	0	2	0	2	1	0	0
Bufflehead	0	2081	291	1701	2	908	229	2132	920
Hooded Merganser	76	171	0	26	3	50	0	62	47
Common Merganser	48	100	17	426	45	83	1	35	110
Red-breasted Merganser	0	853	395	1154	0	941	305	2302	217
Ruddy Duck	0	1	0	13	0	90	0	42	0
Bald Eagle	2 ad	0	0	0	0	0	0	0	0
Northern Harrier	0	9	2	13	0	5	15	18	15
Sharp-shinned Hawk	1	8	1	12	3	5	3	9	5
Cooper's Hawk	0	0	2	1	0	1	1	1	1
Northern Goshawk	0	2	0	2	0	0	0	0	0
Red-shouldered Hawk	0	0	0	1	0	0	0	0	0

species	Millis	Nant.	N. B.	Newbpt.	Quin.	Tau-Mb.	Tuck.	Uxbr.	Westm.	Westp.	Worc.
RTLO	0	37	1	23	11	0	9	0	0	40	0
COLO	0	62	8	104	18	1	30	0	0	97	4
PBGR	0	8	0	0	1	1	0	0	0	3	2
HOGR	0	5	116	171	91	1	4	0	0	143	6
RNGR	0	39	1	7	13	0	6	0	0	6	0
NOGA	0	106	0	13	14	0	1	0	0	4	0
GRCO	1	141	1	3	434	3	25	0	0	3380	0
DCCO	1	13	23	0	2	0	0	0	0	6	1
GBHE	3	10	23	8	20	2	3	5	0	58	3
GRHE	0	0	1	0	0	0	0	0	0	0	0
GREG	0	0	0	0	0	0	0	0	0	1	0
BCNH	0	2	0	0	1	0	10	0	0	0	0
TUSW	0	0	0	0	0	0	0	0	0	0	0
MUSW	0	19	76	6	3	5	0	0	0	265	0
GWFG	0	0	0	0	0	0	0	0	0	0	1
SNGO	0	0	0	0	0	0	0	0	0	6	1
BRAN	0	57	59	0	889	0	0	0	0	34	0
CAGO	1406	263	1004	4103	463	1007	3	390	0	7258	1081
WODU	4	0	0	1	0	2	0	6	0	0	4
GWTE	0	6	0	1	23	0	0	0	0	19	0
ABDU	108	312	563	2648	1331	211	9	122	44	1346	136
MALL	937	351	531	509	464	241	0	262	70	245	330
NOPI	0	5	0	0	0	0	0	0	0	34	0
BWTE	0	0	0	0	0	0	0	0	0	4	0
NOSH	0	1	0	0	0	0	0	0	0	0	0
GADW	0	2	0	5	2	4	7	1	0	0	0
EUWI	0	1	0	0	0	0	0	0	0	0	0
AMWI	0	14	8	0	13	0	23	0	0	15	0
CANV	3	124	0	0	23	239	0	0	0	693	0
REDH	1	47	0	0	2	0	0	0	0	2	0
RNDU	31	9	0	0	24	11	0	0	0	0	3
GRSC	0	399	918	7	431	0	0	0	0	1799	22
LESC	0	21	1769	0	0	98	0	0	0	50	0
COEI	0	3673	57	54	2869	0	445	0	0	242	0
KIEI	0	0	0	0	1	0	0	0	0	5	0
HADU	0	8	0	0	0	0	0	0	0	44	0
OLDS	0	50323	63	163	119	0	96900	0	0	3	0
BLSC	0	378	2	46	0	0	26	0	0	134	0
SUSC	0	120	171	2	5	0	19	0	0	74	0
WWSC	0	1529	44	852	471	0	103	0	0	115	0
COGO	0	582	488	621	908	48	319	3	0	1052	28
BAGO	0	5	4	1	4	0	0	0	0	0	0
BUFF	6	317	610	235	795	55	17	0	0	568	0
HOME	3	15	4	0	40	24	0	0	0	13	3
COME	23	29	5	64	45	121	1	17	0	315	66
RBME	13	8636	251	450	1362	0	2890	0	0	1144	1
RUDU	0	9	1	0	44	5	0	0	0	243	0
BAEA	0	0	0	2 ad	0	0	0	0	0	0	0
NOHA	0	26	4	18	5	4	10	1	0	25	0
SSHA	8	3	1	9	4	1	0	2	1	6	5
COHA	0	1	0	1	0	0	0	0	0	1	0
NOGO	2	0	0	3	0	1	0	0	0	2	0
RSHA	1	0	0	0	0	1	0	1	0	0	0

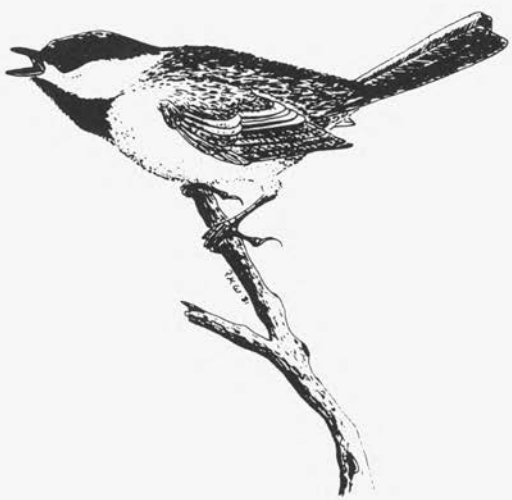
species	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.
Red-tailed Hawk	0	3	24	14	72	39	14	40	13
Rough-legged Hawk	0	1	2	0	2	1	6	4	1
American Kestrel	0	9	6	9	16	14	20	5	5
Merlin	0	0	0	3	0	1	0	0	1
Peregrine Falcon	0	1	0	0	0	0	0	1	0
Gyrfalcon	0	0	0	0	0	0	00	0	0
Ring-necked Pheasant	1	4	10	1	22	118	4	12	1
Ruffed Grouse	1	2	2	1	15	3	5	0	0
Wild Turkey	5	0	0	0	0	0	0	0	0
Northern Bobwhite	0	40	13	24	0	0	0	42	46
Virginia Rail	0	1	0	8	0	1	6	1	4
Sora	0	0	0	0	0	0	1	0	0
Common Moorhen	0	0	0	0	0	0	0	1	0
American Coot	0	4	0	16	0	22	2	0	7
Black-bellied Plover	0	0	0	5	0	0	2	56	0
Killdeer	0	4	0	0	0	1	2	0	1
Greater Yellowlegs	0	0	0	0	0	1	0	0	3
Ruddy Turnstone	0	0	0	0	0	0	0	0	0
Red Knot	0	0	0	2	0	0	0	5	0
Sanderling	0	35	9	43	0	0	1	131	33
Western Sandpiper	0	0	0	1	0	0	0	0	0
Purple Sandpiper	0	0	59	0	0	51	153	2	0
Dunlin	0	28	55	11	0	41	229	75	28
dowitcher species	0	0	0	0	0	0	0	0	1
Common Snipe	0	11	5	6	0	3	1	0	1
American Woodcock	0	1	0	0	0	0	0	0	1
Laughing Gull	0	0	0	0	0	1	1	0	0
Little Gull	0	0	0	0	0	0	0	0	0
Common Black-headed Gull	0	0	0	0	0	12	0	0	0
Bonaparte's Gull	0	40	147	14	0	2841	57	16	2
Ring-billed Gull	2	301	302	247	26	2332	252	261	407
Herring Gull	625	5332	24178	15510	1388	7338	9123	3780	2611
Thayer's Gull	0	0	0	0	0	0	0	0	0
Iceland Gull	0	0	14	5	0	3	0	1	0
Lesser Black-backed Gull	0	0	0	1	0	0	0	0	1
Glaucous Gull	0	0	2	0	0	0	0	0	0
Great Black-backed Gull	28	574	9597	1538	392	762	637	478	771
Black-legged Kittiwake	0	0	12	3137	0	2	0	0	0
Thick-billed Murre	0	0	1	0	0	0	0	0	0
Razorbill	0	0	8	2240	0	1	0	1	0
Black Guillemot	0	0	9	1	0	0	0	0	0
Rock Dove	322	334	359	113	922	3542	271	48	164
Mourning Dove	271	319	433	330	1520	228	239	624	146
Common Barn-Owl	0	0	0	0	0	0	0	6	0
Eastern Screech-Owl	0	7	16	2	32	31	15	30	3
Great Horned Owl	0	3	8	8	18	11	9	0	2
Snowy Owl	0	1	3	1	0	21	1	1	2
Barred Owl	1	0	1	0	2	1	0	0	0
Long-eared Owl	0	0	0	0	0	2	0	0	0
Short-eared Owl	0	7	1	4	0	2	0	4	0
Northern Saw-whet Owl	0	0	0	0	0	0	0	3	0
Belted Kingfisher	0	25	4	21	10	7	10	23	26
Red-bellied Woodpecker	0	1	1	0	1	0	0	7	0

species	Millis	Nant.	N. B.	Newbpt.	Quin.	Tau-Mb.	Tuck.	Uxbr.	Westm.	Westp.	Worc.
RTHA	50	24	6	45	16	25	2	15	2	30	11
RLHA	3	4	0	7	1	3	2	0	0	3	0
AMKE	20	13	5	17	9	14	2	7	0	34	4
MERL	0	4	0	1	0	2	0	0	0	1	0
PEFA	0	1	0	0	0	0	1 ad	0	0	0	0
GYRF	0	0	0	0	0	0	0	0	0	1	0
RNPH	93	22	2	11	7	0	2	0	1	10	7
RUGR	17	0	0	8	6	4	0	2	6	2	2
WITU	0	0	0	0	0	0	0	0	0	0	0
NOBO	20	0	0	0	0	0	0	0	0	0	0
VIRA	0	0	0	0	0	1	0	0	0	8	0
SORA	0	0	0	0	0	0	0	0	0	0	0
COMO	0	0	0	0	0	0	0	0	0	0	0
AMCO	0	14	5	2	68	0	0	0	0	57	0
BBPL	0	7	1	0	0	0	0	0	0	0	0
KILL	1	0	0	0	0	0	0	0	0	1	0
GRYE	0	0	0	0	0	0	0	0	0	0	0
RUTU	0	18	22	0	0	0	0	0	0	0	0
REKN	0	0	0	0	0	0	0	0	0	0	0
SAND	0	127	0	32	102	0	11	0	0	178	0
WESA	0	0	0	0	0	0	0	0	0	0	0
PUSA	0	35	0	0	235	0	0	0	0	81	0
DUNL	0	2	114	0	217	0	0	0	0	152	0
dow sp.	0	0	0	0	0	0	0	0	0	0	0
COSN	0	0	0	9	0	0	0	0	0	14	0
AMWO	0	0	0	0	0	0	0	0	0	1	0
LAGU	0	1	0	0	0	0	0	0	0	0	0
LIGU	0	0	0	0	1	0	0	0	0	0	0
CBHG	0	0	0	0	1	0	0	0	0	0	0
BOGU	0	600	71	206	1227	0	32	0	0	193	0
RBGU	380	49	627	361	820	460	2	42	42	1520	357
HEGU	4300	16535	3301	3951	6760	1311	537	370	1702	2695	14458
THGU	0	1	0	0	0	0	0	0	0	0	0
ICGU	0	49	0	28	3	0	0	0	2	1	1
LBBG	0	1	0	0	0	0	0	0	0	0	0
GLGU	0	4	0	1	0	0	0	0	0	0	0
GBBG	300	5534	176	562	788	320	458	135	406	357	2938
BLKI	0	122	0	6	5	0	91	0	0	3	0
TBMU	0	1	0	2	2	0	0	0	0	0	0
RAZO	0	15	0	1	0	0	35	0	0	0	0
BLGU	0	9	0	0	0	0	0	0	0	0	0
RODO	1030	11	460	420	340	431	0	624	169	304	468
MODO	1544	271	428	736	74	587	0	291	239	725	266
COBO	0	0	0	0	0	0	0	0	0	4	0
EASO	11	0	1	32	11	17	0	6	0	15	0
GHOW	25	0	7	62	2	10	0	11	0	11	1
SNOW	0	2	0	10	2	0	0	0	0	0	0
BAOW	4	0	1	1	0	1	0	0	5	2	0
LEOW	0	0	0	0	0	1	0	0	0	2	0
SEOW	0	3	0	1	0	1	1	0	0	1	0
NSWO	1	1	1	4	1	2	0	0	0	0	0
BEKI	3	1	5	6	3	7	0	6	0	11	3
RBWO	0	0	0	0	0	0	0	0	0	0	0

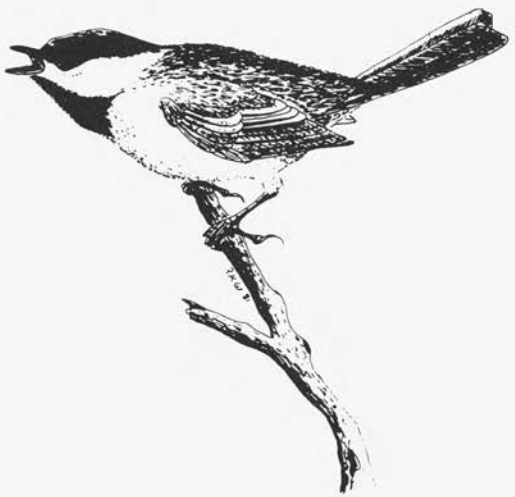
species	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.
Yellow-bellied Sapsucker	0	0	0	0	0	0	0	0	0
Downy Woodpecker	42	57	49	38	335	138	41	47	33
Hairy Woodpecker	19	13	9	5	93	22	9	6	3
Northern Flicker	0	48	19	111	9	13	18	174	53
Pileated Woodpecker	1	0	5	0	3	0	0	0	0
Eastern Phoebe	0	0	0	0	0	0	0	0	0
Horned Lark	0	4	81	33	12	23	48	0	15
Blue Jay	450	1104	658	436	1190	398	229	554	352
American Crow	137	605	655	353	1891	1247	260	997	456
Fish Crow	0	0	0	0	35	0	0	0	0
Common Raven	2	0	0	0	0	0	0	0	0
Black-capped Chickadee	867	1531	749	353	2557	887	360	838	489
Tufted Titmouse	28	183	151	35	630	198	84	0	48
Red-breasted Nuthatch	16	19	25	7	16	9	1	55	38
White-breasted Nuthatch	57	46	67	28	350	104	28	72	25
Brown Creeper	9	7	6	7	61	49	4	3	15
Carolina Wren	0	89	1	15	1	6	5	64	2
House Wren	0	0	0	0	0	0	1	0	0
Winter Wren	0	3	2	1	2	2	1	3	0
Marsh Wren	0	0	0	2	0	1	1	0	1
Golden-crowned Kinglet	46	219	61	42	153	204	36	32	34
Ruby-crowned Kinglet	0	2	0	2	0	0	0	0	1
Eastern Bluebird	0	0	0	0	0	0	0	3	0
Hermit Thrush	0	22	0	5	0	0	1	5	2
American Robin	4	433	22	397	4	112	168	415	413
Gray Catbird	0	6	0	7	1	0	1	27	2
Northern Mockingbird	10	136	81	90	188	131	40	58	55
Brown Thrasher	0	1	0	0	1	0	0	1	0
Cedar Waxwing	36	116	133	85	157	6	29	7	163
Northern Shrike	1	0	1	4	2	0	1	0	2
European Starling	853	1419	5511	6624	4443	165955	2096	3235	3542
Orange-crowned Warbler	0	1	0	0	0	1	0	0	0
Yellow-rumped Warbler	0	112	71	676	0	7	61	853	171
Pine Warbler	0	2	0	4	1	0	0	1	1
Palm Warbler	0	3	0	2	0	2	0	0	1
Common Yellowthroat	0	0	1	0	1	0	0	1	0
Wilson's Warbler	0	0	0	0	0	0	0	0	0
Yellow-breasted Chat	0	2	0	1	0	0	0	0	0
Northern Cardinal	39	290	101	186	307	136	36	111	111
Indigo Bunting	0	0	0	0	0	0	1	0	0
Dickcissel	0	0	0	1	0	0	0	0	0
Rufous-sided Towhee	0	11	0	5	1	0	1	8	0
American Tree Sparrow	115	73	162	33	511	279	70	39	49
Chipping Sparrow	0	1	0	1	0	0	0	0	0
Field Sparrow	0	61	1	1	14	15	9	26	3
Lark Sparrow	0	0	0	0	0	0	0	0	0
Savannah Sparrow	0	0	0	6	4	7	2	9	9
"Ipswich" Sparrow	0	0	1	5	0	1	3	6	2
Sharp-tailed Sparrow	0	0	0	1	0	1	4	0	9
Seaside Sparrow	0	0	0	1	0	0	0	0	0
Fox Sparrow	0	1	0	0	2	1	0	3	0
Song Sparrow	2	290	55	284	153	278	130	192	159
Swamp Sparrow	0	17	1	13	18	3	18	17	19

species	Millis	Nant.	N. B.	Newbpt.	Quin.	Tau-Mb.	Tuck.	Uxbr.	Westm.	Westp.	Worc.
YBSA	0	0	0	0	0	0	0	0	0	0	1
DOWO	396	1	45	125	28	52	0	70	63	44	51
HAWO	85	3	5	16	2	2	0	20	28	1	8
NOFL	15	38	22	35	9	23	12	4	0	96	1
PIWO	0	0	0	2	0	0	0	0	1	0	3
EAPH	0	0	0	0	0	0	1	0	0	0	0
HOLA	0	7	19	348	4	4	0	65	0	209	7
BLJA	754	16	350	1443	140	747	3	172	389	232	72
AMCR	1800	389	230	860	456	441	13	271	169	549	324
FICR	52	0	0	0	0	0	0	0	0	0	0
CORA	0	0	0	0	0	0	0	0	2	0	0
BCCH	3414	109	344	1412	278	540	7	631	765	311	688
TUTI	1001	0	152	233	60	246	0	189	32	47	106
RBNU	14	25	2	68	4	0	1	2	3	24	5
WBNU	443	0	62	140	27	60	0	92	101	21	87
BRCR	80	0	4	23	6	4	0	6	17	4	21
CAWR	4	0	37	1	2	19	0	0	0	95	2
HOWR	0	0	0	0	0	0	0	0	0	1	0
WIWR	0	0	0	0	1	0	0	0	0	2	1
MAWR	0	4	0	1	0	0	0	0	0	1	0
GCKI	247	1	19	148	54	32	0	133	30	43	22
RCKI	0	1	1	0	0	0	3	0	0	4	0
EABL	0	0	0	0	0	0	0	5	0	1	0
HETH	0	0	1	1	1	0	0	0	0	6	0
AMRO	3	657	150	136	28	106	1	13	1	660	1
GRCA	0	4	2	0	0	1	0	0	0	27	0
NOMO	133	7	50	138	45	66	0	43	7	141	30
BRTH	0	0	0	0	0	0	0	0	0	0	0
CEWA	142	32	96	248	0	53	0	50	15	0	48
NOSH	2	2	0	4	0	0	0	2	2	0	2
STAR	4900	6205	1624	7583	70000	4997	0	2249	872	16808	4392
OCWA	0	1	0	0	0	0	0	0	0	2	0
YRWA	1	367	55	52	88	118	41	15	0	242	0
PIWA	0	11	0	0	0	0	0	0	0	0	0
PAWA	0	4	0	1	0	0	4	0	0	2	0
COYE	0	0	0	0	0	0	1	0	0	2	0
WIWA	0	0	0	0	0	0	0	0	0	1	0
YBCH	0	0	0	0	0	0	0	0	0	0	0
NOCA	291	31	113	138	40	71	1	132	17	153	50
INBU	0	0	0	0	0	0	0	0	0	0	0
DICK	0	0	0	0	0	0	0	0	0	0	0
RSTO	1	0	4	0	0	0	0	0	0	22	0
ATSP	283	5	75	742	120	223	0	416	179	122	156
CHSP	0	0	0	0	0	0	0	3	0	1	0
FISP	8	0	14	6	13	54	0	31	3	47	2
LASP	0	0	0	0	0	1	0	0	0	0	0
SASP	1	13	7	1	3	7	12	2	0	61	0
IPSP	0	0	0	1	0	0	3	0	0	1	0
STSP	0	0	0	0	0	0	0	0	0	0	0
SESP	0	0	0	0	0	0	0	0	0	0	0
FOSP	6	0	2	0	0	0	0	1	0	1	0
SOSP	74	78	99	109	56	67	29	88	9	259	48
SWSP	13	0	0	5	3	5	1	1	0	79	2

species	Athol	B. B.	C. Ann	C. Cod	Conc.	Gr. Bos.	Marsh.	M. V.	Mid C.
White-throated Sparrow	6	279	27	186	136	117	25	159	68
White-crowned Sparrow	0	1	0	0	0	2	0	0	0
Harris' Sparrow	0	0	0	0	0	0	0	0	0
Dark-eyed Junco	135	181	191	12	829	496	118	23	21
Lapland Longspur	0	0	1	0	0	9	0	0	0
Snow Bunting	3	0	84	88	0	30	7	0	5
Red-winged Blackbird	0	6	0	2	1	14	43	0	2
Eastern Meadowlark	0	9	0	8	0	10	12	32	11
Rusty Blackbird	0	0	1	0	0	0	45	0	0
Common Grackle	1	2	1	0	3	6	5	3	2
Brown-headed Cowbird	0	0	0	1	3	1	3	0	0
Northern Oriole	0	0	0	1	1	0	0	0	2
Pine Grosbeak	0	0	0	0	6	0	0	0	0
Purple Finch	19	22	34	11	64	4	13	2	1
House Finch	166	740	476	736	658	424	299	535	230
Red Crossbill	0	1	0	0	0	0	0	0	0
White-winged Crossbill	0	0	1	0	0	0	0	0	0
Common Redpoll	323	14	9	19	12	135	1	26	0
Pine Siskin	8	4	21	7	232	41	28	47	8
American Goldfinch	38	225	229	138	602	255	92	219	209
Evening Grosbeak	1124	86	46	22	360	35	90	1	29
House Sparrow	364	972	832	353	1171	768	246	142	386
number of species	48	110+	98+	120+	75	112+	102	114+	107+
total birds	6381	30507	49770	50348	25132	201014	22683	56160	18814



species	Millis	Nant.	N. B.	Newbpt.	Quin.	Tau-Mb.	Tuck.	Uxbr.	Westm.	Westp.	Worc.
WTSP	20	22	135	51	25	41	7	8	10	264	8
WCSP	1	0	0	0	0	0	0	0	0	12	0
HASP	0	1	0	0	0	0	0	0	0	0	0
DEJU	1012	19	98	316	77	288	0	411	123	171	136
LALO	0	1	0	69	0	0	0	0	0	0	0
SNBU	0	1	0	131	2	0	0	0	1	19	1
RWBL	1	16	0	0	2	0	0	0	1	5	2
EAME	1	14	0	1	0	24	8	0	0	65	0
RUBL	1	0	0	0	0	0	0	0	1	1	0
COGR	1	16	0	4	0	0	0	0	0	181	2
BHCO	1	1	0	0	2	10	0	0	2	100	0
NOOR	0	0	0	0	0	0	0	0	0	0	0
PIGR	0	0	0	0	0	0	0	0	0	0	0
PUFI	53	2	71	28	1	5	0	14	1	1	1
HOFI	817	74	294	457	169	161	0	229	181	549	458
RWCR	0	0	0	0	0	0	0	0	0	0	0
WWCR	0	0	0	1	0	0	0	0	0	0	0
CORE	0	17	0	24	47	0	2	26	365	4	97
PISI	38	115	137	90	12	2	5	91	34	1	43
AMGO	523	15	99	585	74	116	0	150	67	608	213
EVGR	144	0	69	102	11	115	0	183	925	14	207
HOSP	1080	108	196	888	148	423	0	498	416	223	371
# of species	75	113	85	100+	99	76	54	58	47	124+	68
total birds	28209	99622	16723	33419	93684	14407	102191	8635	7521	47903	27882



Results of 1986 Cape Cod Waterfowl Survey by Township

	Provincetown	Truro	Wellfleet	Eastham	Orleans	Chatham	Brewster	Harwich	Dennis	Yarmouth	Barnstable	Sandwich	Mashpee	Falmouth	Bourne	TOTALS	% change
Common Loon	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	5	-38
Pied-billed Grebe	0	1	5	0	13	13	3	5	0	3	7	1	9	3	0	63	+11
Horned Grebe	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
Tundra Swan	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
Mute Swan	0	0	0	4	0	0	0	0	11	8	12	4	38	38	3	118	+57
Canada Goose	0	8	0	0	12	28	39	28	266	88	192	156	16	332	0	1165	-23
Wood Duck	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	
Green-winged Teal	0	0	0	0	0	0	0	5	0	7	16	0	0	4	0	32	-16
American Black Duck	12	3	1	65	166	18	187	17	33	128	105	35	9	227	0	1006	-04
Mallard	8	33	0	2	95	21	16	45	58	226	290	329	106	255	133	1617	-07
Northern Pintail	0	0	0	0	0	0	0	0	0	64	0	3	0	0	0	67	-26
Northern Shoveler	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Gadwall	0	0	0	0	0	0	0	0	0	4	0	14	0	0	0	18	+82
American Wigeon	0	0	1	8	0	3	0	0	0	0	3	3	0	20	0	38	+65
Canvasback	0	0	0	8	0	0	73	4	248	576	13	0	5	56	0	983	-16
Redhead	0	0	0	0	0	0	3	0	0	10	0	0	0	24	0	37	+1750
Ring-necked Duck	0	6	0	54	9	2	0	0	0	13	18	29	0	16	8	155	-08
scaup species	23	0	0	3	7	3	73	91	0	104	94	0	3	2930	0	3331	
Greater Scaup	0	0	0	0	0	0	0	0	125	125	116	1	0	1	0	368	+32
Lesser Scaup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Common Goldeneye	0	0	9	0	0	1	9	41	0	0	9	23	83	59	0	234	+31
Bufflehead	39	0	2	28	12	39	62	75	58	213	136	37	48	395	5	1149	+40
Hooded Merganser	0	0	0	18	9	2	0	0	0	16	17	0	0	50	0	112	-65
Common Merganser	1	0	0	0	1	0	46	28	0	0	0	4	1	3	0	84	-71
Red-breasted Merganser	0	0	0	0	0	0	0	0	0	5	8	0	0	49	0	62	-24
Ruddy Duck	0	0	0	4	2	0	8	0	0	0	0	0	0	0	0	14	-22
American Coot	0	0	0	0	1	7	1	0	1	0	0	20	1	7	0	38	-55
Total number of birds	83	51	18	196	327	137	521	343	800	1590	1038	660	319	4470	149	10702	+02
Number of ponds	8	13	11	6	10	8	12	22	15	18	38	14	10	47	7	239	
Average birds per pond	10.4	3.9	1.6	32.7	32.7	17.1	43.4	15.6	53.3	88.3	27.3	47.1	31.9	95.1	21.3	44.8	+02
Total species	5	5	5	11	11	11	13	11	8	15	16	15	11	18	4	25	-14
Number of observers	2	2	2	2	2	1	1	3	3	4	5	4	1	6	2	26	-16

1986 CAPE COD LAKE AND POND WATERFOWL SURVEY

by Blair Nikula

The Cape Cod Bird Club's fourth annual waterfowl survey was conducted on the weekend of December 6-7, 1986, with twenty-six observers censusing 239 ponds and recording 10,702 birds of twenty-five species.

Despite the impression among participants that numbers were low, the totals were essentially the same as in 1985. A large increase in scaup numbers (+897 birds), however, was responsible for maintaining the level in 1986. Except for scaup, most species were somewhat diminished. The most notable declines were recorded in Canada Goose (-23%), Hooded Merganser (-65%), Common Merganser (-71%), and American Coot (-55%). Substantial increases were recorded for Mute Swan (+57%), Redhead (+1750%), scaup (+32%), Common Goldeneye (+31%) and Bufflehead (+40%). As usual, Falmouth was far ahead of all other towns with a total of 4470 birds (53% of which were scaup) on forty-seven ponds for an average of 95.1 birds per pond. Yarmouth was a distant second with 1590 birds on eighteen ponds and an 88.3 birds per pond average.

Unlike last year, Falmouth also had the best variety -- eighteen species, whereas Barnstable fell to second place with sixteen species. Lowly Wellfleet again brought up the rear with a meager total of 18 birds of five species and a microscopic 1.6 birds per pond average.

Among the the individual ponds, Cedar Lake in North Falmouth took top honors with 2021 birds, due to a massive flock of scaup estimated at 2000 birds. Swan Pond in Dennis (690 birds) and Salt Pond in Falmouth (623 birds) were next on the list. Three ponds, Shawme Pond in Sandwich, Pilgrim Lake in Orleans, and Herring Pond in Eastham tied for the best variety with ten species each. The overall average was 44.8 birds per pond, a slight increase over last year's 44.1 birds per pond.

Two Tundra Swans reported from Great Pond in Eastham were by far the rarest species reported. A Northern Shoveler in Falmouth and a Horned Grebe in Brewster were also somewhat unusual. The most disturbing trend this year was the drop in the number of participants, down from thirty-one to twenty-six with the result that a handful of people performed yeoman service to insure complete coverage. This census becomes more valuable with each passing year, and it is hoped that adequate coverage will be maintained in the future. A town-by-town summary is presented in the table.

NATURAL HISTORY FIELD SCHOOLS AT WELLFLEET BAY
SUMMER 1987

NATURE PHOTOGRAPHY: (1) June 20-27; (2) July 25-Aug. 1 **John Green**
Includes excursions to Monomoy and Stellwagen Bank.

CAPE COD NATURAL HISTORY: July 18-25 To be announced
Includes excursions to Monomoy and Stellwagen Bank.

FIELD ARCHAEOLOGY: August 1-8 **Fred Dunford**
Field site is Middle Woodland Indian, 400-800 AD, at MAS WBWS.

REPTILES AND AMPHIBIANS OF CAPE COD: August 8-15
Tom Tyning and **Robert Prescott**
Identification and radio-telemetry of land, aquatic, and marine forms including rare (in Massachusetts) diamond-backed terrapin and endangered Kemp's Ridley marine turtle.

COASTAL BOTANY: August 15-22 **Richard LeBlond**
Features botanical identification, and plant ecology.

NATURE DRAWING: Aug. 22-29 **Louise Russell, Clare Walker Leslie**
Designed for both beginner and advanced artist or naturalist. Provides lessons in field sketching and watercolor.

COASTAL ORNITHOLOGY: September 12-19 **Blair Nikula**
Includes excursion to Monomoy, seabird and marsh cruises.

CAPE COD JOURNAL JOURNEY: September 19-26 **J. Parker**
A reflective and meditative experience led by a naturalist and former professor of English.

SPONSOR: Massachusetts Audubon Society

FEES: $350 ($300 for members of MAS)

HOUSING: Dormitory-style in a secluded house with small kitchen overlooking Nauset Marsh at $75 per week (due 30 days prior to start of program). Participants must supply own transportation and car-pooling and are responsible for their own meals except dinners on the first and last evenings. Housing alternatives will be supplied on request, and there are many nearby restaurants.

REGISTRATION: Send $50 nonrefundable deposit (payable to MAS with balance due 30 days prior to program starting date) to **WBWS, P.O. Box 236, South Wellfleet, MA 02663 (Telephone 617-349-2615).**
Information to include with your registration request: (1) name, (2) address, (3) home and work telephone numbers, (4) course and session you are registering for, (5) whether you desire housing, and (6) whether you are a member of MAS.

MEET OUR COVER ARTIST

WILLIAM E. DAVIS, JR. is a Professor of Physical and Biological Science at the College of Basic Studies, Boston University. He is a trustee and member of the Bird Observer staff and a frequent contributor of artwork and articles. Specializing in pen-and-ink, he has published artwork in the *Naturalist Magazine, American Birds,* and *Colonial Waterbirds.* He currently has available for purchase two 8" x 10" matted prints of pen-and-ink drawings, one of Atlantic Puffins and a second of a Tufted Titmouse. Inquiries should be addressed to his home: 127 East Street, Foxboro, MA 02035.

THE COVER ILLUSTRATION Ring-billed Gull

Back in 1925 Edward H. Forbush *(Birds of Massachusetts and Other New England States)* described this species *(Larus delawarensis)* in New England as an uncommon migrant and an irregular winter resident along the coast and a locally and irregularly common to rare or casual migrant inland. Its status then was apparently due to the fact that it was easily driven off its breeding grounds by human activity and seemed to prefer to breed in more remote and unsettled regions. That scenario six decades ago has obviously changed, for Ring-billed Gulls have enjoyed over the past several years a large population increase and range expansion. In Massachusetts now, they are considered an abundant migrant and locally common winterer along the coast.

In the northeastern part of their range, Ring-billed Gulls breed on grassy and sandy inlets or on islands in fresh water lakes locally from Lake Ontario, Lake Champlain (NY), and Lake Umbagog (NH) to Maine, New Brunswick, and Newfoundland. They winter along the Atlantic Coast from the Gulf of St. Lawrence to Florida.

Although many of us now associate Ring-billed Gulls with fast-food parking lots and, foggy athletic and agricultural fields, Arthur C. Bent in his 1921 account in *Life Histories of North American Gulls and Terns* seemed to regard this species more ethereally when he wrote

> The ring-billed gull is a highly gregarious species, . . . congregating in large flocks of its own species and associating with a variety of other species, with all of whom it seems to live in perfect harmony. Except for its cowardly, egg-robbing habits, it is a gentle and harmless creature. . . . During the winter months much of its time is spent at sea following the coastwise vessels in company with other gulls in search of such morsels as it may pick up, hovering in clouds about our harbors where garbage is dumped, or resting in large flocks on sand bars or mud flats at low tide -- a season of rest and recreation, with freedom to roam where it will.

Bruce Hallett

To lead off the 1987 **At a Glance** series, we see a soaring raptor as February's mystery bird. The hawk's broad wings and broad tail immediately identify it as a *Buteo*. Although accipiters may also exhibit a dark-and-light-banded tail, their longer tails and relatively shorter wings serve to eliminate members of that genus.

Concentration on the tail pattern clearly reveals the presence of at least two whitish crossbands that are narrower than the adjacent dark bands. At the same time, the tail is relatively long and constricted for a *Buteo* species. Only two Massachusetts buteos have white-banded tails -- adults of the Broad-winged and the Red-shouldered hawks.

At this point, examination of the underwings helps us distinguish between these two species. Clearly, the secondary feathers on the trailing edges of the wings are prominently checkered with light and dark. Additionally, there appears to be a pale, crescent-shaped marking at the base of the outer primary feathers. And finally, the forward thrust of the wings, which brings the leading edges of the wings to a plane with the tip of the bill, provides a distinctive and characteristic silhouette.

Collectively, these features point to the bird's identity as an adult Red-shouldered Hawk, Buteo lineatus. The superficially similar Broad-winged Hawk would display only one wide, clearly observable white tail band on its rather short and ample tail. In Broad-wings, the light and dark bands are of nearly equal width. Also, the underwings of an adult Broad-wing are pale (whitish) with a distinct, thin, dark trailing border.

The pictured Red-shoulder (of the pale Florida race *alleni*) was photographed in the Everglades National Park.

Wayne R. Petersen

Red-shouldered Hawk

Photo by Wayne R. Petersen

AT A GLANCE

Photo by Roger Everett

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

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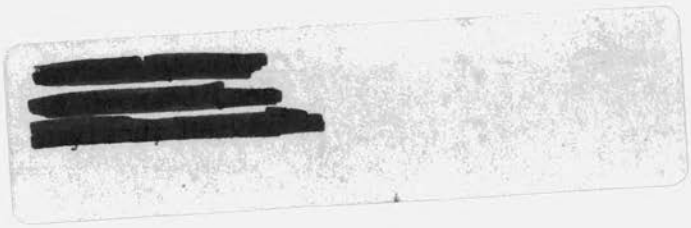

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Cover Illustration: Ring-billed Gull by William E. Davis, Jr.