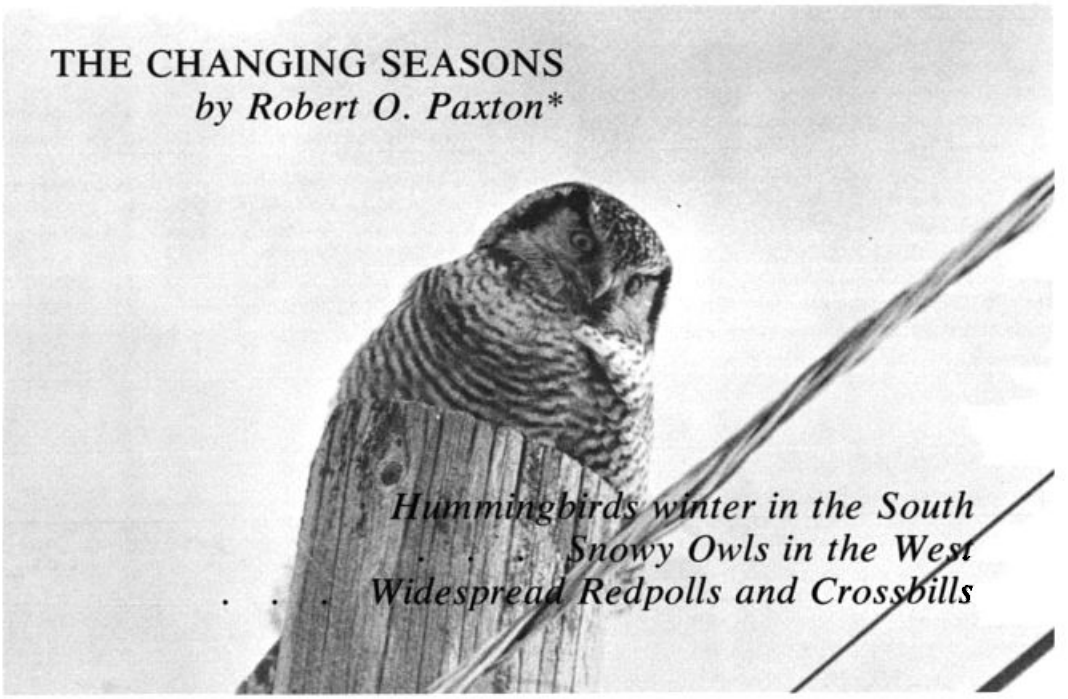
# THE CHANGING SEASONS

*by Robert O. Paxton**




Hawk Owl, near Vernon, N.Y. Dec. 18, 1973. Photo/ Andrew Grainger.

It was an incongruous season. One major feature was mild weather everywhere except in the northern plains. Moderate weather permitted an astonishing variety of birds to linger late or even survive far north of their normal winter ranges. The other major feature was a series of regional irruptions: a major but localized incursion of boreal raptors, and substantial flights of crossbills and redpolls. Barn Swallows had never lingered as far north in the East or Snowy Owls penetrated as far south in the West as they did in January 1974.

## EFFECTS OF A MILD WINTER

The season was the third mild winter in a row for most of the country, and, in some regions, the fourth. Only the Northern Great Plains reported record depths of snowfall, and record low temperatures in January. Except in the drought-stricken Southwest, high seed and fruit crops were available.

It may have been mild weather that kept Alcid numbers very low in the accessible parts of the Northeast. It was certainly the late freeze-up which moved this season's very good waterfowl populations south only later in the season, if at all. Northward movement began again very early. Above all, mild weather permitted the most bizarre array yet of hummingbirds, flycatchers, swallows, thrushes, vireos, and warblers to linger late in the most improbable places.

We are used to lingering and overwintering "half-hardy" species such as mimids or Cardinals, or a few orioles surviving at feeders. This season it was "non-hardy" species — purely insectiverous feeders that normally winter in the tropics — that made news. A sample of choice records would have to include the moribund Least Flycatcher collected with a snowball in central Illinois on Dec. 15; the unidentified yellowish *Empidonax* flycatcher (unfortunately not collected) at Back Bay, Va., on Dec. 30; the Barn Swallow on Prince Edward I., in the Canadian Maritimes, on New Year's Day; two different Rough-winged Swallows, first regional records, in the San Francisco Bay Area; the Warbling Vireo on the Oakland, Calif., CBC; the Golden-winged Warbler at Danville, Va., on Dec. 23; the Connecticut Warbler on Bodie Is., N.C., on Dec. 30; and the second winter record for Coppery-tailed Trogon in Arizona. In the Southern Great Plains Region it was "the winter of the hummingbirds."

Such records regaled many a Christmas Count. Over 50 of the remarkable 114 species on the Long Point, Ont., CBC, for example, were late

lingerers. But significant numbers of such birds must survive in order to affect the species' population and range. The Yellow Warbler that overwintered at a feeder in Zion N.P. was no doubt an exception. Most of these birds merely postponed what Davis Finch calls pithily their "kill-off date."

The half-hardy survivors have much greater biological significance, though less glamor on a CBC tally. They are the colonizers of new range. A series of mild winters, the culmination of a generation of gradually moderating climate, shifts the survival line further north. It does not "cause" range expansion, but it permits successful species whose high populations are pressing at the frontiers of possible survival to take advantage of new areas of acceptable habitat.

And winter habitat is clearly improving for some bird species for additional reasons independent of climate. Suburbia, with its ornamental planting, its moderate temperatures, and its feeders is the fastest-growing favorable winter habitat for some species. Feeders are now abundant enough in some areas to affect whole populations rather than mere individual birds. Forty-three per cent of the households in Amherst, Mass., and 23 8% of the households of Boston feed birds. If the relatively low Boston rate is extrapolated to the whole state, 419,000 Massachusetts households feed birds, and spend $3,439,000 doing it.[1] Evening Grosbeaks adapted to feeders during their major range expansion of the 1940s-1950s (twelve Saskatchewan farmers this season were a soft touch for an Evening Grosbeak population that consumed two tons of sunflower seeds), and there are interesting reports of redpolls acquiring the habit this season. Garbage dumps are another warm and nourishing microhabitat. Even urban centers may facilitate winter survival. Consider the Yellow-breasted Chat that lasted until January 11 on the roof of a parking garage in New York City, and the Prairie Falcon that roosted at night all winter on the 10th or 13th floor of a building at the University of Calgary.

## EXPANDING SPECIES

Not all potentially "half-hardy" species are taking advantage of the opportunities offered by climate and habitat, however. Why should Red-bellied Woodpeckers and not Red-headeds expand, for example? Why should Carolina Wrens prosper while the eastern population of Bewick's Wren continues to decline? The reports that follow give a few indirect hints of the qualities possessed by species profiting most successfully by ameliorated winter conditions.

Successful species accept generalized diet and display considerable enterprise in finding it. Robins at Moose Jaw, Sask., obtained minnows at an open spring hole in river ice and swallowed them whole, head first. Colonizing marginal territory is a costly process, however, as reports of frozen Cardinals, Starlings, etc. at the survival line attest. Successful species must have massive reproductive success in the heartland of their range in order to replenish the repeatedly decimated colonizers pressing against the survival frontier. Cardinals, for example, are not only expanding spectacularly into northern New England and southern Canada but cause comment by their abundance in the Appalachians and the Middlewestern Prairie Region. We shall look now in more detail at species showing conspicuous success this past season.

*Gulls.* All gull species seem to be rising on the mounting tide of human detritus. The reduction of one Herring Gull population is attributed to a new practice of covering garbage dumps daily along Lake Superior. Great Black-backed Gulls continue to turn up on the Gulf Coast and western Great Lakes to Milwaukee. Glaucous Gull may be mentioned in more regions this season than any other bird (all regions except Alaska and the Southwest). Only in the Northeastern-Maritime Region does the Iceland Gull outnumber the far more cosmopolitan Glaucous among white-winged gulls. Davis Finch publishes some interesting ratios in that region's report. In Ontario, 24 Glaucous Gull reports were three times the previous maximum. A first specimen was taken in Montana.

While there were fewer far-flung European gull reports this season than in some recent winters (except in Florida, which had two Lesser Black-backeds, a Little, and a Black-headed), the main invading species continue to build their numbers in the Northeast. The species have developed strikingly different centers of abundance. Little Gulls are commonest on the eastern Great Lakes and along the Middle Atlantic Coast. An unprecedented 29 on the Niagara River, on Nov. 4, 18 on the Long Point, Ont., CBC, and 15 at Port Mahon, Del., on Apr. 1 were the season's high counts. Black-headed Gulls are commonest in the Maritime Provinces, shading off toward the South. This season about 110 were reported in Atlantic Canada (the second highest figure in the last six years), as against about 26 in New England. Only 6 Little Gulls were reported in the whole Northeastern-Maritime Region. Curiously, the Lesser Black-backed Gull fits the Lit-

[1] Richard M. DeGraaf and Jack Ward Thomas, "A Banquet for the Birds," *Natural History* 83:1 (January 1974).

tle Gull distribution pattern. They were reported most frequently this season, as usual, from the New York City region (6-10 birds).

Thayer's Gull may pose the most controversial field problem in North American field ornithology now. Reports of this newly-separated species this season reflect the distribution of observers trained on the West Coast rather than the distribution of the species, in all likelihood. Compare the doubts of P.A. Buckley (Hudson-Saint Lawrence Region) with the confidence with which this species is reported from the West Coast and the Western Great Lakes. Field characters of birds known to be Thayer's Gulls at successive ages still await public clarification.

*Raptors.* White-tailed Kites continue a gradual expansion eastward in Texas and northward along the Pacific coast following the great population explosion of the 1960s in both North and Middle America.[2]

After another strong fall flight, Goshawks were widely reported coast to coast for the third year in a row, suggesting that their increase is regular rather than cyclical. In the East, Goshawks appear to be filling in for declining Cooper's Hawks.

*Monk Parakeets.* Despite the efforts of a number of state game and agriculture departments to eradicate this hardy, fruit-eating exotic, Monk Parakeets turn up in ever more widespread localities in the East. Multiple releases are a more likely cause of spread than natural dispersal. Although Buckley stresses this species' resistance to cold (Hudson-St. Lawrence Region), this season's new reports come mainly from the Middle West and South. An unspecified number of birds at Davenport, I., in December and January constitute a new state record. A single bird was observed in western North Carolina on Mar. 21. A second state record was reported from Louisiana, and in Florida where previous observations have been restricted to the east coast, five were seen in St. Petersburg in early Jan.

*Anna's Hummingbird.* This species continues to profit by the spread of suburban gardens through the Southwest and West. One bird at a feeder in Fort Worth, Tex., for a month up to Jan. 5 and another at Houston in December-January raise the prospect of wintering birds sooner or later on the Gulf Coast east of the Mississippi. At the other frontier, thirteen were recorded on the Victoria, B.C., CBC and a male was photographed at a Sitka, Alaska, feeder on March 2.

[2]Eugene Eisenmann 1971, "Range Expansion and Population Increase in North and Middle America of the White-Tailed Kite (*Elanus leucurus*)," *American Birds* 25: 529-536.

*Passerines.* Carolina Wrens, after a decade of diminished populations within reduced ranges in the 1960s, are abundant again in the heart of their range and are pressing at new frontiers. Individual birds overwintered in upstate New York, New Hampshire, Quebec, Ontario and Michigan and were reported west to Iowa and West Texas

After several years of relative stability, Cardinals are colonizing new territory to the north and west. As is expected in a successful species, its numbers are very high in the heart of its range For example, the Seneca, O., CBC recorded double the previous maximum. At the frontiers, Cardinals successfully overwintered in the Maritimes and spread northward in a winter movement "of major proportions" into Québec and northern New England. There were 65 at one feeder in a recently colonized area at Norval, Ont. In the West, Cardinals moved into new territory in Nebraska and filled in around El Paso, Tex.

The eastern House Finch population is filling in its new range rather than pushing yet further afield, having recently reached southern Canada and Georgia from its point of release in New York City 34 years ago. In the South, it is building the highest numbers yet along the eastern foothills of the Appalachians into the Carolinas and down the coast (160 in one flock at W. Ocean City, Md., on Dec. 9, and 300 on 11 out of 29 CBC's in the Southern Atlantic Coast Region). They have crossed the mountains westward in Pennsylvania and West Virginia, and there is an unconfirmed first record for Ohio this season. The most interesting development in this species is apparent migratory behavior. Over 100 banded at Schenectady, N.Y., during the fall had mostly departed by December. While House Finches wander after breeding and depart from some northerly breeding grounds in California, "definite migratory movements" are " not apparent" in the native populations.[3] This now common species is ripe for study in the East.

## SPECIES CAUSING CONCERN

These reports do not include sufficient data to draw conclusions about wintering Brown Pelican populations.

Bald Eagle reports provide grounds for cautious optimism. There were 19 in one concentration in Sullivan Co., N.Y., and significant increases in South Dakota and Utah, all with encouraging proportions of immature birds Cooper's Hawk continues a steady decline in the East.

[3]Grinnell and Miller 1944, *Birds of California*, p. 453

The most anxiously watched species in North America is probably Peregrine Falcon. While not every region reported exact figures, there would appear to have been about fifty sightings in North America this winter outside the Pacific Northwest, the only region in which an observer could expect to see this species at all regularly. At best, this represents no further decline over the past four or five years. This species could be much more accurately monitored if the age of birds were also reported.

Brant have recovered well from the disasters of the past two years. The total East Coast population reached 88,000, an increase of 109%, including a heartening 60% yearlings.

Eastern Bluebirds were reported in good numbers in the Appalachians, although they have nowhere returned to pre-1958 levels.

## IRRUPTIVE SPECIES

*Waterfowl.* Fulvous Tree Ducks appear to be building up toward another major dispersal like that of a decade ago. So far they are turning up mostly along the Atlantic and Gulf coasts.

*Northern Owls.* Snowy Owls staged their most massive movement into the Far West since records have been kept. Sadie Brown's careful research indicates a total of 43 birds reported in California, more than twice all previous California records put together. Although most of them remained in the northern two counties, some penetrated farther south than ever before, one to the mouth of the Salinas River (Monterey Co.). There were also historic high counts from the Northern Pacific Coast, the Great Basin, Northern Rockies, and around Calgary.

The most striking feature of this Snowy Owl irruption was its restriction to the Far West. Eastern Snowy Owl reports ranged from low to average. In the past, Snowy Owl irruptions have been much rarer in the West than in the East. This was the fourth time in the 20th century (following 1908-9, 1916-67) that the species reached California By contrast, there have been nearly 20 irruption years in the East since 1900.[4] Western and eastern immigrations have coincided only once in this century (1966-67), nor have the far western irruptions coincided with invasions of European Russia.[5] I have found no data, unfortunately, on the timing of eastern Siberian irruptions whose comparison with far western North American irruptions would be interesting. At least it is obvious that the lemming population crashes to which all authorities attribute Snowy Owl invasions do not occur at once throughout the range. But we can only speculate about why Snowy Owls on rare occasions find their way across the Canadian Rockies or down the forested Canadian Pacific Coast rather than eastwards.

The northern forest owls were also much more widely reported than usual right across the accessible parts of northern North America. While a substantial proportion of Snowy Owls that reach settled portions of North America are observed in an invasion year, the forest owls are much less conspicuous. The numbers this season are therefore all the more impressive. Great Gray Owls may have reached the highest numbers ever in the Northern Great Plains, where 59 were reported from Manitoba alone. Near Lac du Bonnet, 23 were caught and banded, a probable record for this continent. From a color-banded sample of 11, it was estimated that 36 individuals hunted a 15-mile circle there — the equivalent of a CBC area. Furthermore, like the 1971-72 invasion but on an even grander scale, this irruption covered the whole northern tier. Ontario reported 13, Québec 10, Minnesota and the Northern Rockies Region each 3, and Wyoming 1

Other *Microtus*-feeding owls also moved south. Twenty-eight Hawk Owls were reported within 100 miles of Edmonton, Alta, another 17 from Manitoba, 12 in Ontario, 3 in Victoria, B C area, and 6 in the Northeastern-Maritime Region (the highest figure for the last six years). Boreal Owls also dispersed southward in good numbers A first record was reported from Washington State.

*Hawks.* Gyrfalcons invaded for the third winter in a row, but they broke records only in the Northern Great Plains and Northern Pacific Coast Regions. Total reports reached about 40, well below the 60 of 1971-72, but by earlier standards a very impressive number. Rough-legged Hawks, whose irruptions often coincide with those of Snowy Owls, were in high numbers only on the Pacific Coast and moderately high in the middle South.

*Winter Finches.* There was a major redpoll movement. Common Redpolls were abundant in interior Alaska south of the Alaska Range throughout the season. Flocks appeared in the Northern Great Plains in December and January and developed eastward and southeastward from there, typically, in the late winter. They arrived in New England (but not in the Maritimes) and along the Middle Atlantic Coast in February and

[4] A O.Gross 1947, "Cyclic Invasions of the Snowy Owl and the Migration of 1945-46," *The Auk* 64: 584-601 records invasion years from 1833 to 1945.

[5] See G.P. Dement'ev, N.A. Gladkov *et al.* 1966, *Birds of the Soviet Union,* Vol I, p. 387.

**Table I**
**Recent history of some irruptive species**

| | 69-70 | 70-71 | 71-72 | 72-73 | 73-74 |
|---|---|---|---|---|---|
| **Rough-legged Hawk** | O | XX | X | O | X |
| **Snowy Owl** | O | O | XX | O | X |
| **Red-breasted Nuthatch** | XX | O | O | X | O |
| **Bohemian Waxwing** | X | O | XX | X | O |
| **Northern Shrike** | O | X | X | X | O |
| **Evening Grosbeak** | X | X | X | XX | X |
| **Pine Grosbeak** | X | O | X | XX | O |
| **Pine Siskin** | XX | O | X | X | X |
| **Common Redpoll** | XX | O | XX | O | XX |
| **Hoary Redpoll** | X | O | XX | O | XX |
| **Red Crossbill** | XX | X | X | XX | XX |
| **White-winged Crossbill** | X | O | X | O | XX |

**XX — irruption** **X — minor or localized incursion** **O — off year**

built up to a peak in late March. The outer limits of flight were Bodie Is., N.C. (3 on Feb. 9), Springfield,Mo., e. Kans., Bend, Ore., and Adak, Alaska.

More Hoary Redpolls were reported than in the redpoll irruption years of 1968-69 and 1969-70, though somewhat fewer than in 1971-72. Flocks of up to several hundred birds were around Fairbanks until January. Later in the winter, the highest numbers were 50 at Prince George, in interior British Columbia (Dec. 30), north and east in Ontario (90 with only 1 Common at Moosonee, Jan. 9, and 5% of all Redpolls banded at Hornepayne), and in Quebec (35 with Commons 100 miles north of Lac St. Jean in Jan.). There were single birds in New England, around the Great Lakes, and south to Hatfield, Pa It should inject the proper note of caution, however, to note that none of the pale redpolls among 700 banded by Darrel Ford on Long Island turned out to be a valid Hoary.

A Red Crossbill movement into the Southeast and Middle West was the third in a row. After passing down the Atlantic Coast and west of the Great Lakes last fall as the "invader of the season" (*AB* 28:27), they were reported during the winter mostly in the Appalachians and the southern Piedmont as far as Atlanta and northern Alabama, where they had "the best year yet," and west to El Paso, Tex. As is often the case with these true nomads that are likely to move only once a year "away from shortages,"[6] early spring nesting was reported from some areas of incursion (e.g. Crawford, Neb., Mar. 24). Absence of crossbills in eastern Canada and northern New England throughout the fall and winter and only localized down-mountain movement in the Far West support the speculation that these birds originated somewhere north and west of the Great Lakes. In the absence of subspecific determination of specimens, however, we are left with only speculation.

White-winged Crossbills put in a separate appearance later in the winter, coinciding with what appeared to be a second wave of Reds in the upper Middle West. White-wingeds were even more far-flung than Reds, though not in really massive concentrations anywhere. Alaska, the only area where they were abundant last year, was nearly empty of White-winged Crossbills this season — a possible point of origin. Their center of abundance this season seem to have been the Northern Great Plains (more than in any of the last ten years in Manitoba), with considerable spill-over late in the season to the upper Middle Atlantic Coast (hundreds on Long I., N.Y., in February and March). Boundary records were Durham, N.C. (first regional record), Bartlesville, Okla. (second locality record), Salt Lake City, and Victoria, B.C., unusually far west. In some areas of Ontario and west of the Great Lakes, White-wingeds were more plentiful than Reds in late winter.

These winter irruptions raise questions of synchrony. The local character of many of this year's irruptions remind us that the food scarcities behind them do not often affect species throughout its range. Nor do any groups of species always irrupt together, since food demands and population dynamics differ slightly even as between the crossbills, for example. Red Crossbills moved without White-wingeds in 1972-73, for example And although redpolls and crossbills moved to-

[6]Ian Newton 1973, *Finches*, pp. 235-238.

gether this year as in the past (e.g. 1969-70 and 1971-72), Red Crossbills moved alone in 1972-3. Red-Breasted Nuthatches, frequent partners of crossbills in past years,[7] were almost uniformly low this past season. Siskins were up only in the Middle West and Southeast. Part of one species' population may irrupt, or varying combinations of species. This season displayed one of the more complex patterns of recent years, as the accompanying table shows.

## ACCIDENTALS

A quick look at an old Winter Season report suggests that the number of observers named in this issue is about double that of twelve years ago. As the number, the experience, and the competitive zest of observers increase, so does the apparently inexhaustible flood of extralimital surprises (along with risk of error). The following is a somewhat arbitrary selection of juicy items, not all of them fully confirmed with photographic or specimen evidence.

A Magnificent Frigatebird in Rhode Island on December 21 was the latest record ever in the Northeast.

A Cape Petrel 4.5 miles off Moss Landing, Calif., on Mar. 13 was the third record for the eastern Pacific north of the equator.

There is no way to be certain that the two Baikal Teal shot in Oregon and in Southern California are not escapes, although McCaskie observes that the species gets to Alaska apparently on its own. The same reserves apply to the two Smew records (second for Ontario and the second for Vancouver in the last four years) Smews were recorded in the central Aleutians for the sixth straight winter, with a count of four birds together the highest yet.

A Slaty-backed Gull filmed at Victoria, B C , on Mar. 1 appears to be a first for the Northern Pacific Coast Region. The Red-legged Kittiwake closely observed at Leadbetter Point, Wash , would be a second regional record if substantiated.

A Caribbean Coot was present in Broward Co., Fla., through the season and two others were discovered on Key Biscayne.

A pair of Blue Ground Doves (*Claravis pretiosa*) at Laguna Atascoso N.W.R. on Dec 29 appear to be a first record for North America, if not escapes. This unmistakable species normally ranges as far north as southern Tamaulipas

California's first Rufous-backed Robin was observed throughout the season at Imperial Dam. There were four others recorded in South Arizona where Ted Parker now considers it "a regular straggler." Another Clay-colored Robin was reported from south Texas.

For the second consecutive year a White Wagtail turned up in the Northern Pacific Coast Region, and was photographed.

A bird believed to be a European Siskin was carefully described in Wisconsin. There is no confirmed North American record for this species.

And finally, a Blue Tit at a feeder in Ontario presented another unsolved mystery.

[7]Carl E. Bock and Larry W. Lepthien 1972, "Winter Eruptions of Red-Breasted Nuthatches in North America, 1950-70.," *American Birds* 26: 558-561.