

The Changing Seasons

*Some stimulating reflections
on various interesting aspects
of the Nesting Season, 1981*

Richard Brewer

TO BILL ROBERTSON, that expert practitioner of the occasional essay who often presides over these pages, looking at a new set of regional reports induces a sensation of *dèjà vu*: haven't I been here before? For one trying to look at the continental pattern of a breeding season after a good many years with his attention focused on narrower matters, the feeling is a bit different. It is more like visiting my old neighborhood and not being able to find the house where I used to live. Chuck-will's-widows are breeding hundreds of miles north of their former limits, but the Common Nighthawk, as typical of a small-town summer night as teen-agers at the drive-in, is Blue-listed. Other southern species like Mississippi Kites and Blue Grosbeaks have moved north, but at the same time Brown Creepers are breeding all over New Jersey and Tree Swallows have nearly reached the Mississippi line. Wilson's Phalaropes nest in locales where once the most exciting shorebird find of the summer was a Spotted Sandpiper. Thomas Wolfe was right: you flat can't go home again.

WEATHER AND OTHER SHORT-LIVED PHENOMENA

MOST OF THE continental regions had average temperatures and average or high rainfall, but it was dry in the Southeast and some parts of the West. The Hawaiian Islands were also dry but the West Indies were wet, especially early. Overall, the impression was that the weather was favorable for nesting. There were some exceptions.

Although the drought that began in the spring of 1980 abated slightly in the Southern Atlantic Coast Region, dry conditions were implicated in the

abandonment of a 6000-nest heronry in Georgia. Florida had its driest year since 1971 and the drought, compounded by chronic mismanagement of the water supply, hit nesting birds hard. Few Everglade Kites even tried to nest. Sixty per cent of 176 heronry sites were empty and most of the 40 per cent active were Cattle Egret colonies.

Wet weather also brought problems. In the Middlewestern Prairie Region, high water along the Mississippi River prevented Least Terns from nesting. Probable detrimental effects of heavy rains and floods on ground-nesting and riparian birds were mentioned in the Appalachian Region, the Southern Great Plains, and the West Indies. Two high tides along the Middle Atlantic Coast Region, the second associated with Tropical Storm *Brett*, wiped out large numbers of Laughing Gull, Black Skimmer, and tern nests in some colonies.

Large blocks of forest in the Northeast were defoliated by gypsy moths. Comments about the effects on birds were fascinating but skimpy. Boyle *et al.*, relayed impressions of fewer birds and lessened song. Vickery mentioned increased predation on nests of such species as Great Crested Flycatcher, Scarlet Tanager, and Rose-breasted Grosbeak. Although the defoliation occurred early in the summer, many birds would already have established territories. Did these birds leave and, if so, where did they go? Did the ones that stayed sing less? What happened later in the summer when the trees leafed out again? We might guess that visual predators, mostly birds, would be the ones to profit from the loss of cover, and it seems reasonable that

relatively flashy birds like tanagers and grosbeaks might suffer. But why Great Crested Flycatchers, relatively secure, one might suppose, in their cavities?

It is worthwhile for observers and Regional Editors to take their best shot at answering such questions, I think, although the evidence may be slim. By their nature, the regional reports and *The Changing Seasons* are not likely to be able to test many hypotheses but perhaps we can help formulate a few.

RANGE EXPANSIONS, AGAIN

WITH TWO REGIONAL reports unavailable, new state (or province) breeding records totaled about 25 cases involving 23 species. Three Blue-listed species were involved. The Double-crested Cormorant (of which, more later under "Good Years and Bad") was found nesting in Rhode Island, south of its recorded range. The Western Grebe, declining in Nevada and Oregon (*AB* 35 4), nested for the first time in Iowa. The newly Blue-listed Golden-winged Warbler nested for the first time in North Dakota.

Eared Grebes raised three broods in Cook County, Illinois, a range expansion that may be part of the same phenomenon as increasing populations and high production in the Prairie Provinces and Southern Great Plains. A potential for northward expansion may also exist; at Ft. McMurray, Alberta, Eared Grebes jumped from 6 to 60 pairs in 3 years.

The Cattle Egret, the superstar of range expansion, is still traveling. It moved into Manitoba, providing the

first Prairie Provinces nest and, at the same time, added previously neglected Kentucky. Within the range where it is seemingly established, populations continue to grow. It is now the most common heron at Oklahoma City, where the comment was made that the increase has not been at the expense of native species. "Improved crops and less insect infestation of cattle have attended" the presence of a growing colony in an agricultural section of South Texas. Competition for nest sites or nesting material with other herons or for food with some terrestrial birds may yet prove to be a problem but for the moment the Cattle Egret seems to be a desirable alien.

A nesting of the Common Gallinule in New Brunswick was a northward range extension and one of the Semipalmated Plover in Alberta, a southern extension. Wilson's Phalarope, which expanded in five areas in the past 5 years, added another state, Arizona. The Little Gull, a European species with a handful of North American nestings, was found in Manitoba. A nest of Forster's Tern in New York added another state in the discontinuous eastern projection of its known range. Ring-billed Gulls and Turkey Vultures were new to the list of confirmed breeders for New Hampshire.

INTENSIVE WORK in south-central Wyoming added two species, Ashthroated Flycatcher and Plain Titmouse, to the breeding avifauna of that state. In the same area of juniper woodland were four other southwestern woodland species, that, if nesting is verified, will be new to the state. These were Gray Flycatcher, Scrub Jay, Bewick's Wren, and Blackthroated Gray Warbler. Kingery comments, "In huge areas of the Mountain West the potential for new information remains immense."

More surprising is how much new information intensive study can yield in areas that one might think were already well known. A case in point is Vermont, whose admirable Breeding Bird Atlas project has helped to add 12 new breeding species in the past 5 years (*AB* 34: 870) and where first nests of two more species—Short-eared Owl and Northern Three-toed Woodpecker—were found in 1981.

Minnesota also recorded its first nest of the Northern Three-toed Woodpecker (although Thomas Sadler Roberts was sure that it bred in the northern reaches of the state 80 years ago). The Vermont and Minnesota records combined with an Ontario nesting one hundred miles southwest of the closest previously known station suggest that this species may be increasing or edging southward over a fair part of its range.

Although the House Finch added only one new state, Michigan, it has not slowed down. Populations continued to grow—common in Pittsburgh, outnumbering House Sparrows at many localities in the Niagara-Champlain Region, 103 banded in just over a month at Fairfax, Virginia. New breeding localities were added at the borders of its range and single individuals were seen well beyond those borders (immature birds at Phenix City, Alabama, and Edgemont, South Dakota).

There is still a gap of 800 miles or so between the front of the expanding eastern population of House Finches and Temple, Texas, where birds were nesting this summer at the eastern edge of the western population's range. That gap may never be spanned but if it is, the cardueline golden spike driven, someone needs to be on hand with a well-designed study to see just what the members of the re-united flock think of one another. And, of course, if the advance of the eastern population stops short of Temple, Texas, another well-designed study to see what stopped it will be just as informative in its way.

The Alder Flycatcher was recorded in North Dakota, south of its previously known range but Boyle *et al.*, say that the species has "largely retreated from the northern part of New Jersey, where only 5 years ago it was rapidly expanding." There were new state breeding records for Black-and-white Warbler in South Dakota, and Yellow-throated Warbler in Iowa. Cedar Waxwings nested in South Carolina for the first positive record.

The first nest of the Lincoln's Sparrow in Massachusetts seems to be part of a general prospering along the southeastern edge of its range. Suitable wetlands have been increasingly occupied in Québec, and in southern Vermont the species is utilizing brushy upland sites as well.

Rounding out the list, Boat-tailed Grackle, long poised on the Jersey shore, was found nesting on Long Island for the first New York record

MORE ABOUT RANGE EXPANSION

RANGE EXPANSIONS seem to be rolling along at about the same rate as in the recent past. With two regions to be heard from (and allowing for the possibility of a new record or two failing to reach regional editors) the 25 new state records fit well with the 26 to 35 of the past 5 years (*AB* 34: 870). When I tally all obvious extensions, within states as well as new states, the list of species on the move runs to about 60.

As Robertson pointed out a year ago, most of the movement is north or south; the ratio is more than three species extending their range latitudinally for every one showing longitudinal extension. Eastward expansion of land birds seems almost nil except when it accompanies a southward advance.

Some of the westward extensions might also be better thought of as northward or southward; nevertheless, all the following were found this summer at least somewhat west of their known breeding ranges (not always with definite evidence of breeding): Franklin's Gull, Eastern Kingbird, Gray Catbird, Blue Jay, Common Grackle, Eastern Meadowlark, Orchard Oriole (which may be the bird of the future since it is also expanding north in the Midwest and south in Florida), Scarlet Tanager, Swainson's Warbler, and Northern Parula. These are to be added to House Finch, Cattle Egret, Golden-winged Warbler and, possibly, Black-and-white Warbler from the state list. Also to be added, as being in a class by itself, is the Indigo Bunting with scattered territorial males all through the West and now outnumbering Lazuli Buntings in the middle Rio Grande Valley.

If there has been a slowing of range advances, it is in southern species moving north. Most of the regulars on that list (such as *AB* 34: 873) were mentioned in at least one region this summer but some of this may be more the momentum of bird-watchers following a known phenomenon than the momentum of northward movement of the birds.

Nearly twice as many species were noted as extending their ranges southward as northward. Not all were boreal; included were such mid-American species as Whip-poor-will, Chimney Swift, House Wren, Gray Catbird, American Robin, Scarlet Tanager, Indigo Bunting, and Song Sparrow. The most interesting group, though, is the definitely boreal species that now occur frequently, if not regularly, south of their A.O.U. Checklist ranges. Red-breasted Nuthatch, Brown Creeper, and Pine Siskin are the most notable examples, with summer occurrences south of their usual ranges in four or more regions apiece. The Red-breasted Nuthatch raised young, for example, in Tiffin, Ohio, the Brown Creeper in Maryland and at two sites in southeastern Pennsylvania, and the Pine Siskin near Chicago.

SHOWING THE SAME pattern but less dramatically are several other boreal forest species such as the Winter Wren (which seems not to have recovered from the severe winters of the late 1970s), Golden-crowned Kinglet, Solitary Vireo, and several wood warblers. In this category, the Tennessee Warbler may be worth some special attention next summer. Although no out-of-range nests were found, birds summering south of the known range were reported from eight regions (and north of the known range from one, in the central Yukon).

The factors limiting the ranges of animals—and thereby the factors underlying range expansion—are rarely obvious. In the wake of range shrinkages following the severe winters of the 1970s, it seems likely that some species, such as the Carolina Wren, have their northern limits set by low temperature extremes in the winter. The apparent lack of shrinkage by some other species that have expanded northward in the past half century, such as the Cardinal and the Tufted Titmouse, suggest that an interaction between low temperature and a dependable food supply has been the key. And, of course, both of these statements are probably oversimplifications (how much less might the decline in Carolina Wrens have been if feeders provided fat that is soft at low temperatures, rather than suet?).

If the steam is going out of northward expansions, it may be because the warming trend of the early part of this

century was reversed about 20 years ago and we have recently returned to a period of considerably colder winters (e.g., Diaz and Quayle, *Monthly Weath. Rev.* 108: 249-266) more like the climate of the Nineteenth Century. The continued northward expansion through much of the past 20 years despite the climatic reversal may be explained partly by winter temperatures being still above those of the early part of the century, even though becoming colder, and partly by human effects, especially winter feeding. What seems to be an increasing number of species nesting south of their former, or at least recent, ranges may be a response to the somewhat cooler summers that are part of the same phenomenon. In some cases, the southward trend may be a reoccupation of nesting ranges utilized during the colder climates of earlier days—the Northern Three-toed Woodpecker comes to mind.

Human effects may interact with climatic changes in the southward expansions, as in the northward ones. The tendency for many of the boreal forest species to migrate south in the winter is probably based on an evolutionary cost-benefit analysis that considers the profit (in survival and later reproduction) to be made from staying north versus that to be made from going south. The benefits of going south and, also, of staying there as long as possible have probably increased considerably in the past 20 years or so, because of feeders and increasing acreage of mature conifers. To take a specific example, Pine Siskins can stay north in an area they already know, a benefit, but where the costs are that food will grow scarce and temperatures will be very cold indeed. On the other hand, they may strike out south, into unknown territory. Currently, although not 50 years ago, the food supply south is generous and dependable and, with the advent of thistle feeders and the increasingly popular small sunflower seeds, highly nutritious and delectable. For these reasons, it seems possible that those birds that came south in recent years have prospered in comparison with the stay-at-homes. Whatever genetic factors set the balance between sedentariness and a readiness to migrate may be shifting to favor a lower threshold for heading south. (If they aren't, commented Ray Adams, who was kind enough to read these pages for me, they certainly ought to.)

FURTHERMORE, A BIRD returning north to breed comes back to a chilly and food-short landscape where cold snaps and late springs may delay nesting. The birds may find that the continued availability of feeders (many persons continue goldfinch feeders well into the spring to see the color change of the male) makes up for whatever deficiencies the northern Midwest had as a nesting area in the past.

We should remember, of course, that boreal species have bred here and there in the south before, and then stopped. Pine Siskins are one of the most prominent examples (Weaver and West, *Auk* 60: 492-504). The current tendency seems to have gone on long enough—possibly a dozen years, although the first signals were faint—to think it is something more than just an aberration.

As Robertson observed, most of the changes in geographical range seem to involve species of eastern North America; the bias is especially pronounced among the landbirds. Expansions of western birds within the west or eastward seem rare. Part of the difference is probably artifactual; extension of the northern limit of a bird range 200 miles along the Atlantic Coast might move the species across a couple of state lines and bring it into contact with thousands of potential observers. A similar jump in the west might not get it out of south Texas.

Even allowing for this, a large difference seems to remain. Some of it is probably related to the fact that the temperature trends mentioned earlier, the warming in the early part of the century and the later cooling, were much more prominent in the eastern United States (Diaz and Quayle *op cit.*). If so, we are left with several eastern species that have successfully penetrated the West (see, for example, Kingery's list, *AB* 34: 916) compared with almost no western species that have come east. And perhaps, with that residue, we should put an end to our speculating and repress temptations to think about such things as precipitation changes and the seeming discrepancy in the ability of the House Finch to move west from eastern North America versus moving east from western North America. It is probably just as well, too, not to worry at this point about range changes in the coming Warm Ages that may result from the CO₂ buildup in the earth's atmosphere.

GOOD YEARS AND BAD

SOMETHING ON THE order of a hundred species were specifically mentioned by someone as having higher populations or enjoying a good nesting season. Somewhat fewer than that were mentioned as having had an especially bad year. Red- and Blue-listed species are dealt with a little later, some of the others were as follows:

Yellow-crowned Night Herons had good years in at least a couple of regions. As a rough generalization, herons overall seemed to do fairly well in the northern parts of their ranges and poorly in Florida.

Waterfowl populations were high in western Canada and Alaska, apparently because of displacement of birds from the Dakotas and other more southerly areas where nesting habitat was still reduced as an aftermath of many months of drought. Several dabbling ducks were involved and also, spectacularly, the Redhead, whose numbers were 665% above the long-term average in Alaska.

Montana waterfowl populations were at normal levels, so plenty of birds were on hand for a massive spraying of Montana wheatland with the chlorinated hydrocarbon endrin. A reported 120,000 acres in the Fort Peck Reservoir area of northeastern Montana and another 140,000 acres spread over Wyoming, Colorado, and South Dakota were sprayed for cutworms. High tissue levels in waterfowl were what made the national news but the problem first surfaced in connection with the (Blue-listed) Sharp-tailed Grouse season. No one, as far as I know, was checking Lark Buntings and McCown's Longspurs.

Populations of two large waterfowl, the Mute Swan and the Canada Goose, are growing rapidly in a few (swan) or many (goose) locations in eastern North America. The boom seems to start with birds introduced for recreational or quasi-aesthetic reasons. To Aldo Leopold, one skein of geese, cleaving the murk of a March thaw, was the spring. Human nature being what it is, some of the magic leaves when the birds are there year round, common as pigeons. In noting that broods were seen all the way south to Dalton, Georgia (in fact, the species is already nesting across the

line in Leon County, Florida), Hall commented that the Canada Goose "almost has a domestic status." And in several northern localities, including southeastern Michigan and Toronto, geese have "assumed pest proportions, fouling parks and beaches everywhere."

KNOWLEDGE OF the field marks of out-of-range gulls is now as much a distinguishing characteristic of the hot-shot bird-lister as alligator shirts and top-siders are of the prep-pie. As a part of the enormous success that gulls have enjoyed as a result of some of man's practices, improbable species are now reliably reported from unlikely places in—I lost track but I think—every region. There were, in addition, specific mentions of increases in breeding colonies of Ring-billed, Herring, California, Great Black-backed, and Laughing gulls.

It might be just as well to get the non-breeding shorebirds out of the way at this point. Faanes points out that "the Northern Great Plains can now boast the same problem the rest of the nation has—we can't tell which way they're going either!" I'm sure there are good ecological conclusions to be dredged from the mass of shorebird data in the various regional reports but it will take a better man than me. Just looking at it sets my head spinning like a flock of phalaropes.

Reports of a poor year for Swainson's Thrushes on each side of the Sierra crest in California and at Grande Prairie, Alberta, may indicate a problem. So also may two consecutive fall warbler migrations with low numbers and high adult: immature ratios (following an excellent 1980 spring migration) at Kalamazoo, Michigan. The fact is, though, that there is not enough information in the regional reports to say much about the fortunes of most forest species. The same is true for other habitats where the chance of finding a spectacular rarity is slight. Several regional editors lamented the dip in observational effort in the summer compared with the migration seasons and Armistead and Jackson have cogent comments on the slim reporting of "widespread, common, or pedestrian landbirds" and of forest and grassland habitats. One thing that

would help is a serious attempt by persons running Cooperative Breeding Bird Survey routes to get a brief summary of their results, with interpretations, to regional or sub-regional editors.

ENDANGERED, THREATENED, AND BLUE-LISTED SPECIES

THE INDIVIDUAL regional reports contain many nuggets of useful information. This is especially so for Blue-listed species. It is not always clear that facts generated on endangered and threatened species are making their way to the regional editors or, to be more forthright, it is perfectly clear that much of the information produced this breeding season on endangered species did *not* get into the regional reports. One need only compare the information on the Peregrine Falcon in the regional reports with the fall 1981 *Peregrine Fund Newsletter* (no. 9) to realize that a discussion here of red-listed species would probably be too incomplete to be useful. Anyway, the most crucial event of the season for many of these species probably occurred, not on their breeding grounds, but in Washington. The Reagan administration slashed funds for the endangered species program by 35% or more (so far) and completely eliminated money for cooperative programs with the state endangered species offices.

But some news was good. Most gratifying was the continuing increase in the Blue-listed Double-crested Cormorant, which showed favorable signs in at least 11 regions. It is tempting to speculate that the seeming recovery of this species in contrast to the continuing bad fortunes of some others may be the result of its wintering primarily in the United States. Over the past 8 years, the level of persistent pesticides in the food chains of raptors and fish eaters has dropped in this country because of the virtual ban on chlorinated hydrocarbons (not including endrin, as yet). Species that winter in tropical America, where DDT and dieldrin are used in great quantities, are still being exposed. But the correlation of United States wintering and a reversal of population declines does not always hold, and a recent study (White *et al.*, *J. Field Ornith.* 52: 23-28) showed no higher

dieldrin and DDT levels in Blue-winged Teal coming back after a winter in the tropics than in birds on their way there.

What happens to birds on their wintering grounds is unquestionably an important and, often, almost an unknown factor in their summer population levels. The 1981 Kirtland's Warbler census found 232 males, down 11 from 1980. Despite a surplus of suitable habitat and a fledging rate that has more than doubled since 1972 (because of cowbird control), the breeding population has increased only 15% in the past 10 years. Larry Ryel (*Jack-Pine Warbler* 59: 76-91) argues that food supply on the wintering grounds, as influenced by winter rainfall, may be the factor currently limiting the size of the breeding population.

The White Pelican presented an odd picture. Although noted by Tate (*AB* 35: 4) as a prime candidate for Federal endangered or threatened status, it turned up in an amazing number of places. At its breeding colonies it had both good (Mountain West Region) and bad (South Texas Region) years. But there were summer records away from breeding colonies in about 10 regions, including birds in Washington, Alaska, New Mexico, Virginia, California, Louisiana, Alabama, and Georgia. Of several possible explanations, ranging from incipient range expansion to widespread failure to nest, the less optimistic ones are more likely to be right.

Reddish Egrets seemed to have edged up in Florida but Wood Storks continue at a low ebb. Hawks in general may be a little better off but regional editors of the Southeast remained discouraged about the American Kestrel.

PIPING AND SNOWY plovers continue to suffer from human disturbance, especially invasion of their nesting areas by three-wheelers and similar ORVs. According to the Michigan Natural Features Inventory, fewer than 20 pairs of Piping Plovers plus a few single birds remained anywhere on the Great Lakes.

Common Terns seem to have had a

bad summer in the Midwestern colonies. Least Terns had their problems, including floods, tides, human disturbance, and predators from Fish Crows to mongooses; nevertheless, several colonies had at least a moderately successful season. Reports continue of the nesting of Least Terns on the flat roofs of large buildings (Roseate Terns and Killdeers were also mentioned). Observations came from three regions, so the activity, or the reporting of it, seems to be spreading. How successful such attempts are and what factors influence success are topics well worth study. If shopping malls provide satisfactory nest sites for Least Terns, it would be some compensation, even if sadly inadequate, for the other habitats that they obliterate. Meanwhile, that other rooftop denizen, the Common Nighthawk, continues in trouble.

Trends for the rare woodpeckers were not obvious but Peterjohn suggests that woodpeckers will need our careful attention to assess the effects of greatly increased cutting of trees for firewood.

The Cliff Swallow evidently had a good summer in parts of the eastern United States. The Loggerhead Shrike, on the other hand, gave little cause for optimism.

Many of the species (not all Blue-listed) that suffered during the severe winters of the 1970s have rebounded to some degree. Examples are Bobwhite, Mourning Dove, House Wren, Carolina Wren, Golden-crowned Kinglet, and Mockingbird. For the Bobwhite and the Carolina Wren—perhaps for most of them—populations in the northern parts of their breeding ranges are still below the levels of the early 1970s. Relatively few editors commented on the Ring-necked Pheasant but it too seems not to have returned to earlier numbers. It may be that some of these species will never regain their former levels as long as the trend toward cooler winters persists.

ALSO . . .

AS A LONG-TIME parid fancier, I was intrigued by mixed matings

and possible hybridization between Mountain and Black-capped chickadees in two localities (in the Mountain West and Southwest regions) where Black-capped Chickadees have recently invaded. Does this suggest that where the two species occur in the same geographical area elsewhere, mixed mating is prevented by reproductive isolating mechanisms that have evolved (or been reinforced) in the Mountain Chickadee?

A male Northern Parula at Santa Barbara, displayed to a female Yellow-throated Warbler but, according to McCaskie, her lack of response killed California's best chance for a Sutton's Warbler.

A female Cattle Egret had the right species but the wrong place when she became interested in a male at the Fort Wayne, Indiana, zoo. The male egret was, however, unable to gain egress, thus his confinement led to no confinement for the female. If you tolerated that, you can turn to Peterjohn's description in the Middlewestern Prairie region for more of the same.

The scale on which the opportunistic capabilities of some of the large raptors operate may be shown by the movement of Great Gray Owls (radio-tracked) to Atikokan, Ontario, from St. Cloud, Minnesota, following a crash in vole populations.

Finally, Grünberg describes an interesting defensive maneuver of Snow Geese against an arctic fox. As the fox approached, a large group of adults and downy young drew up into a tight group and made threatening gestures and calls. It is an appealing scene from the 1981 season, the Snow Geese drawn up like a bunch of miniature muskoxen and the fox, somewhat daunted, angling away across the mudflat.

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