

# Changing Seasons

JEFF PRICE

I was honored to be asked to write the summer 1995 Changing Seasons column. Writing it would be easier if one or more obvious patterns dominated the summer. Joseph Grzybowski, in reporting from the Southern Great Plains Region, summed it up by saying, "The comment of note could easily have been that no event clearly dominated, and no patterns were plainly evident during this season." However, there was plenty of interest for everyone, from the hard-core, rarity-chasing birder to the scientist interested in patterns of bird distribution.

## Weather, Climate, and Climate Change

A wise man once said, "Climate is what we expect, weather is what we get." The season began with above-average precipitation and lingering snow in many parts of the West. Another year of good precipitation in the Northern Great Plains continued to benefit water birds, while beginning to have a negative impact on grassland species. Over much of the Midwest and East summers are expected to be hot, but this one turned out to be exceedingly so, with record heat occurring during the latter part of the season. This was also the most active hurricane season in decades, yet very few instances of storm-related vagrancy were reported.

The impacts of weather on birds are not always easy to quantify. Lingering snow in the Rocky Mountains delayed or prevented nesting in many alpine and subalpine birds, especially ground nesters. Easy to quantify were the impacts of a storm system that destroyed many bird nests and young east of the Cascades in Oregon July 8 and 9. Also easy to quantify were the impacts of strong thunderstorms that destroyed many Bald Eagle and Osprey nests in north-central Minnesota.

More difficult to quantify were the impacts of the major heat waves this summer. Mid-June marked the start of record-setting heat in the northern United States and southern Canada. In many areas the monthly average temperatures were 2°–7° F above normal. After a brief break in early July, temperatures in much of the Midwest and East soared to record levels, with heat indices in the 110° to 125° range throughout most of the region. More than 125 heat-related human deaths occurred in Wisconsin alone. Many compilers commented on the heat, but there were very little data showing any impacts on birds. While some observers noted that the heat followed the nesting season and appeared to have very little impact. Compilers also noted little birder activity during this period, for good reason. How much of the impact of the heat on the local avifauna

might have been missed in the absence of observers going out into the field?

The moisture levels in parts of the prairies are such that it may be considered to be a slight change in climate (a wet period) rather than consistent wet weather. Herons and waterfowl have responded well to three wet years on the Northern Great Plains. Cattle Egrets were found in large numbers, with more than 1000 at Grass Lake, South Dakota and 300 at DeWald Slough, North Dakota. Ten Little Blue Heron nests were found at Sand Lake National Wildlife Refuge, South Dakota, and waterfowl reproduction there was good for the third consecutive year. Among other grassland species, the wetter conditions are a mixed blessing. Yellow Rails, Sedge Wrens, Baird's and Le Conte's sparrows, and Bobolinks all showed strong increases in the Northern Great Plains. On the other hand, Lark Buntings in North Dakota have declined drastically in the last three years. This is thought to be due, at least in part, to changes in habitat associated with increased precipitation. Where precipitation is associated with a decline in Lark Buntings in some parts of their range, it has also helped the species elsewhere. The 52 Lark Buntings found on Colorado's Rocky Mountain Arsenal Breeding Bird Survey route compared with only four found on the same route last year. This area is normally at the driest end of what Lark Buntings will tolerate. Increases in precipitation led to an increase in vegetation and an improvement in the habitat for this species. These same conditions are thought to have led to poor nesting success for Ferruginous Hawks in North Dakota, Swainson's Hawks in Colorado, and Burrowing Owls in both states.

Several current models continue to predict that anthropogenically mediated climate change is occurring and temperatures in 75–100 years are likely to be warmer than they are today. How much warmer? Consider the heat wave this season. Under some current climate change predictions, the weather of this summer's heat wave would become the average weather in those same areas. This is a very broad generalization that should give birders cause to wonder what might happen to bird populations. Research done at the Northern Prairie Science Center and the University of Michigan, among other places, has begun to provide clues as to the sorts of changes that might be expected. Bird distributions will change. Some species will undergo range expansions. Others will undergo severe range contractions/shifts, with some species facing potential extinction.

Many grassland bird species are nomadic, able to shift their distributions in response to the seasonal weather or changes in climate. These are the sorts of changes found in this issue of *Field Notes*. What about non-grassland birds? While the predicted changes in bird distributions are complex, one main generalization can be made: Many species' ranges will shift to the north. To look for early indications of potential range shifts in response to climate, observers should pay attention to the northern and southern edges of species' ranges. Observe shifts not just of the permanent residents, but of the migrants as well. How far north are some of the southern breeding warblers found now, compared with twenty years ago, and have any of these species disappeared from the southern edge of their range?

*Field Notes* reports provide some examples of possible range shifts that may be occurring among both migratory and non-migratory species. White-eyed Vireos this season were found nesting in perhaps two locations in Wisconsin, one location in Michigan, and a single individual was reported from Minnesota. Numbers of the "southern" warblers—including Yellow-throated, Worm-eating, Kentucky, and Hooded—were all found slightly north of their expected ranges in the Western Great Lakes Region. Non-migratory species were found north of their expected ranges as well. Northern Mockingbird nested in North Dakota, and at several locations on the Gaspé Peninsula and at Pointe-au-Père and Jonquière all in Quebec. Tufted Titmouse breeding in Quebec also provided a first record.

### What is happening to prairie bird populations?

That question, posed in the Prairie Provinces Regional report, should probably be extended to grassland birds overall. For years, there has been concern voiced about the plight of neotropical migrants, even while grassland bird populations have dwindled. The Prairie Provinces show continuing declines in the numbers of Horned Larks, Western Meadowlarks, and Chestnut-collared Longspurs. In the southeastern corner of the region, Upland Sandpiper, Willet, Sprague's Pipit, and Chestnut-collared Longspur are all reported to be more difficult to find. Is this related to climate or to continued habitat alteration?

The Burrowing Owl is a good example of a species in marked decline. There are now only *four* known pairs of Burrowing Owls in Manitoba, and the species is continuing to decline in Saskatchewan as well. An argument might be made that these

areas are on the edge of the species' range, except for the continuing long-term declines in North Dakota and Colorado. Before Congress placed restrictions on the listing of new species, the Burrowing Owl was being studied as a candidate for listing under the Endangered Species Act.

Swainson's Hawk is doing poorly in Saskatchewan, Manitoba, and parts of Colorado. While the poor reproductive success in Colorado is thought to be tied to vegetation height, what is happening in the Prairie Provinces? Ferruginous Hawks were reported as doing better in the Prairie Provinces, yet showed declines in the Northern Great Plains Region. Like Swainson's Hawk in Colorado, the decline of Ferruginous Hawk in the Northern Great Plains is thought to be tied to the increase in precipitation.

Consider the declines in Lark Bunting and the increases in Baird's Sparrow. In both cases these can be tied to degrading/improving habitat conditions linked to precipitation. While loss of habitat is important in declines of these species, climate also plays a large role in the year-to-year fluctuations of the populations. When looking at declines in grassland bird populations, considering the role of both habitat loss and climate in determining possible causal factors is important.

### A map is just a representation. . .

An old adage says maps in field guides are obsolete when they are published. It's true that birders constantly find places where birds have extended their distributions slightly beyond previously known range edges. With the increasing amount of Breeding Bird Atlas activity, the number of discoveries of new range changes are staggering. Even when not atlassing, birders regularly turn up instances where a species has colonized a new area, or where a species used to be present and is now gone. *Field Notes*, and its predecessor *American Birds*, have always been two of the best places to learn about the changes in bird distributions in North America. Compare the maps in your favorite field guide with the Regional reports to see how big some of the changes are.

Little Blue Heron is now resident in the San Diego area and is believed to have nested this year. Gull-billed Tern and Black Skimmer are both expanding their ranges in California. Gull-billies were found at their regular location at the Salton Sea, and at south San Diego Bay, and Bolsa Chica in Orange County. Black Skimmer, common at the Salton Sea and San Diego and Orange counties, is now regularly found as far north as San Francisco Bay. This year a

pair nested at Mountain View, just south of San Francisco Bay, and four individuals were found on Santa Catalina Island. With the probable restoration of Gilded Flicker to full species status, birders should be aware that it regularly occurs in parts of San Bernardino County, California. Birders in Alaska also added information on range expansions: Barred Owls were found in three locations, including a down-covered juvenile on Cape Prince of Wales Island, and Tree Swallows bred on the Pribilofs. A singing male Chestnut-sided Warbler was found in Klamath County, Oregon in early July, and was seen carrying food a short time later. Did this species breed in Oregon this year and, if so, was there a pair or was the male paired with a female of a different species? There is increasing evidence that Tennessee Warblers breed in North Dakota. Other findings include Northern Waterthrushes breeding again in Colorado, Magnolia Warbler breeding for the first time in Indiana, Palm Warblers breeding in more locations in New York, and Blackpoll Warbler continuing to breed in Pennsylvania. Botteri's Sparrows were found nesting in the Animas Valley, New Mexico, and Grasshopper Sparrows nested near Prescott, Arizona.

### Range expansions

Continuing to think about changes to bird distributions, consider what has happened to the House Finch. After years of regular reports of new sightings, this season produced almost no news. The best evidence suggests that the House Finch has now spread coast to coast, north into southern Canada and south almost to the Gulf Coast (it now breeds in New Orleans) and partially into Florida. While it may still be sparse in parts of the Great Plains, House Finch must now be considered as being widespread throughout the lower 48 and southern Canada.

House Finch is not the only species undergoing range expansions. Eurasian Collared-Dove is rapidly spreading beyond Florida. It was already well established in southeast Louisiana and has now reached the southwestern corner of the state. Arkansas reported its second record with three individuals in Jefferson. The Southern Atlantic Coast Region also mentioned new outposts and exploding population numbers, but no specifics were given. Other doves undergoing range expansions include White-winged, now reported as breeding in Cameron, Louisiana, and Inca, with a pair attempting to nest in Arkansas.

Brood parasites are also on the increase. In Louisiana, Bronzed Cowbirds have

begun to move south from their stronghold in New Orleans. Shiny Cowbirds were reported from western Tennessee, where one male and at least one female were found. They were also reported from South Carolina where a male was seen engaging in courtship behavior in front of a female. It now looks as if it is only a matter of time before this species is well established in the southeast. Consider the following from Alaska. A pair of Common Cuckoos was found engaging in active vocal display and courtship behavior, in suitable breeding habitat, on Popof Island. At least eight potential host species were in the same area. While this is probably an isolated incident, observers in Alaska should continue to be alert for the possibility of this species colonizing the area.

↘ Eurasian Tree Sparrows, long restricted to a small area around St. Louis, have now pushed up the Mississippi River as far as Des Moines. Great-tailed Grackles are expanding their ranges in several different directions. To the west, the colony at Benton Hot Springs, California, held 16 birds this season and a lone male was found as far northwest as Malheur National Wildlife Refuge, Oregon. To the north and east, one was found in Cass County, North Dakota for a first state record, and they continued to spread east across Missouri.

↘ A juvenile Cave Swallow was found at a Cliff Swallow colony in Nebraska. With the rapid expansion in the range and numbers of Cave Swallows in Texas, how long will it be before it is confirmed as a regularly occurring breeding species in Oklahoma or Arkansas? Observers in those states should start looking for the characteristic Cave Swallow nest within Cliff Swallow colonies and culverts near the Texas border.

↘ The range expansion of the Mississippi Kite is more subtle. In the eastern prairies, one or two birds were present near Des Moines; two adults and a juvenile were found in Indiana; and three pairs were present in the St. Louis, Missouri, area throughout the season. The first confirmed breeding of this species in North Carolina did not come from the site where the species has been frequently found, but from a site near Laurenburg. The frequency of occurrence is increasing in the Middle Atlantic Coast Region as well, with a high count of seven in Greensville County, Virginia and reports from four other areas in Virginia and one in Maryland. Several individuals were seen around Cape May, New Jersey, and one continued to be seen near Reading, Pennsylvania. Birders in New England also reported the species: Connecticut recorded its first with individuals seen at three different locations, and it was

reported from three locations in Massachusetts as well.

#### **The Endangered Species Act works**

↘ Contrary to what some members in Congress would like the public to believe, the Endangered Species Act does work. The news on threatened and endangered species this season was mixed, with some species doing very well, while others are not.

↘ The news on Piping Plover this season was discouraging. In Colorado, seven pairs attempted to breed but all of the nests failed. In Saskatchewan, high water prevented nesting at Quill Lakes and nests were flooded at Lake Diefenbaker. Flooding was also a problem along the Missouri River in North Dakota. Various efforts were undertaken to try to salvage part of the breeding season. An experiment using artificial nesting islands showed preliminary success in Saskatchewan. In North Dakota, some nests and young were moved to higher ground, while eggs were collected from other nests. Young from the collected eggs were captive reared and later released along the river. Nests were generally successful in the Middlewestern Prairie Region with the highest productivity in several years. Nesting success in the Hudson-Delaware Region was only fair owing to problems from predation and human impacts. To end on a positive note, Massachusetts showed a 27% increase in the number of breeding pairs from 1994.

↘ Bald Eagles are doing much better over most of their range. Numbers of nests and/or young were reported from fourteen states. This added up to almost 300 nests and more than 450 eagles fledged. By far the best state with reported numbers was Maryland, where 182 pairs raised 265 young. Peregrine Falcons also showed success. Three nest sites were found in both Calgary and Winnipeg and new breeding locations were found in eastern Washington and possibly along the Columbia River. In the east, the species is also continuing to increase, primarily nesting on manmade structures. Nesting was reported from eight states with more than 100 young fledged.

↘ The best news comes out of Michigan, where Kirtland's Warbler had one of its most successful years in recent history. Surveys there located 765 singing males, including a nesting pair and six singing males on the Upper Peninsula and an individual found in Wisconsin. Unfortunately, this encouraging news does not mean the species is out of danger. Current habitat conditions for the species are approaching optimum. As succession continues, the habitat will become increasingly less suit-

able. In the absence of regular fires in Jack Pine habitat, numbers of this species could very easily undergo a rapid decline. A cessation of the local Brown-headed Cowbird control program could also have negative impacts.

↘ Away from the mainland, the news on Hawaiian endemics is mixed. Hawaiian Coots and Hawaiian (Common) Moorhens had good breeding success while Hawaiian (Black-necked) Stilts had a poor year with few young fledged. There was good news. One Alala (Hawaiian Crow) chick was hatched successfully at the captive breeding facility. National Biological Service surveys in the Alaka'i region of Kaua'i turned up perhaps five pairs of Puaiohi, some with accompanying juveniles. The Kaua'i Nukupuu was sighted a few times this season, but none of the other endangered Kaua'i species have yet to be found.

#### **New identification problems**

↘ As birders in the east concern themselves with separating Bicknell's and Gray-checked thrushes, birders in the west should have a challenge, too. Along the West Coast, they should be especially cautious in their identification of Sandwich Terns. A tern found in Monterey County, originally thought to represent the region's first Sandwich Tern, is now thought to have been a two-year-old Sandwich x Elegant Tern hybrid. Another bird, also thought to be a Sandwich x Elegant Tern hybrid, was seen from late June into early July at the south San Diego Bay Elegant Tern colony. As if that weren't enough, a Sandwich Tern tending a downy chick in this colony was thought to be paired with an Elegant Tern. Sandwich Terns on the West Coast should be examined carefully to rule out the possibility of hybrids.

#### **And finally, the rarities**

↘ What qualifies as an exciting find in one region may merely be ho-hum in another. Consider the birds in Alaska. Most mainland birder's hearts would race at the mention of such birds as Common Sandpiper or Mongolian Plover. Both were seen in Alaska this season, but the bird that should attract more attention was the Virginia Rail found along the Stikine River. In some parts of Alaska, Common Sandpipers are almost common, while the rail provided only the third record of this species for Alaska. It's all a matter of perspective.

↘ Imagine the excitement of seeing a light-colored albatross with very long, thin, black bordered wings on any pelagic trip in the United States. Now, imagine seeing the same bird in *New Mexico* and you will get an

idea of what must have been going through the minds of two birders there. While Laysan Albatross would be the most likely species (if any albatross in New Mexico can be considered likely), there are several other possibilities as well. Other pelagic excitement away from the ocean came from two Cook's Petrels at the north end of the Salton Sea, California. This is the third time this species has been found there. Pelagic species seen on pelagic trips included Cape Verde Petrel seen on three different trips off the North Carolina coast, and Herald Petrel on two. This was also a very good year for tropicbirds off the North Carolina coast, with fourteen White-taileds and two Red-billeds. These sightings lead to speculation about whether the water temperature off the North Carolina coast might have been warmer than average.

Black-tailed Gulls were found on both coasts this season. This follows a sighting in Virginia earlier in the year. A nearly adult bird showed up in Middletown, Rhode Island and stayed throughout the season, while a sub-adult was present on the Homer Spit, Alaska. Other rarities from Alaska included Falcated Teal, Tufted Duck, Gray-tailed Tattler, and Oriental Turtle-Dove. Not to be outdone, the rarities in southeastern Arizona kept birders busy from spring into the summer. The Streak-backed Orioles, Flame-colored Tanagers, and Rufous-capped Warblers from the spring report continued to be seen throughout the summer season. Other birders were lucky enough to find Eared Trogon and White-eared Hummingbird in the Huachuca Mountains and Berylline Hummingbird in the Chiricahuas.

#### **An appreciation**

I'd like to close with a big "thank you" to the compilers and observers who report their sightings to *Field Notes*. Those who regularly read the magazine know their value. Rarities are reported that sometimes demonstrate patterns leading to hypotheses about the mechanisms of vagrancy. Even if the rarities are ignored there is a tremendous wealth of information on the distributions, and changes in distributions, of North American birds. This information is useful to avian biogeographers, bird conservationists, land managers, and anyone who cares about North American birds. That much of this information is gathered incidentally while people participate in their hobby is decidedly an asset.

—Jeff Price is director of the United States Important Bird Areas Project for The American Bird Conservancy based in Washington, D.C. ▶

# Birders of a feather flock together!

Share fascinating birding news with friends by giving gift subscriptions to National Audubon Society Field Notes! They'll find reports on sightings from the field, notes on avian migration and population trends, and the latest bird conservation news:

White-winged Crossbills exploded into action this summer because of a heavy cone crop in the Atlantic provinces of Canada ...  
Saskatchewan birders noted a continuing decline of grassland species such as Horned Larks and Chestnut-collared Longspurs ...  
Common Cuckoos were seen in potential breeding habitat in Alaska ...

Despite a grueling 10-mile round-trip hike, dozens of birders in Arizona saw a singing Rufous-capped Warbler; a few paid dearly for the experience with broken or sprained ankles and smashed binoculars ... Peregrine Falcons continued their success in eastern cities with a first nesting in Washington, D.C.

A one-year gift subscription — four quarterly issues of Field Notes magazine plus the Christmas Bird Count issue — is only \$25.00. Or save \$10.00 with the special two-year rate of \$40.00. To order, call 1-800-338-7531.

**Place your order today!**

## FieldNotes

National Audubon Society 700 Broadway New York New York 10003